ITRE COMMITTEE REFLECTION PAPERS

epp group in the european parliament

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FOREWORD, MANFRED WEBER MEP

Manfred Weber MEP
Chairman of the EPP Group
in the European Parliament

Dear friends,

European industry is facing unprecedented challenges that are both complex and interlinked - geopolitical uncertainty, global competition, and rising energy prices. The EPP Group is the force for competitiveness and has long called to re-industrialise Europe. It is now time for the Union to place industrial competitiveness where it belongs - at the very heart of its policies. The EPP Group wants a Europe where companies can prosper and create quality jobs; we want to deliver a true European competitiveness deal.

It is with great pride that I present this publication on the important work of EPP Group Members in the ITRE Committee, who have drafted eight working papers focused on our policy priorities across Europe's key industrial sectors such as steel, digital manufacturing, energy systems, biotech, and more. These papers were developed with the clear understanding that in a rapidly changing world marked by technological innovation and the need to decarbonise, the EPP Group is fully committed to strengthening Europe's industrial competitiveness.

Building on this foundation, the authors presented their work at the EPP Group Competitiveness Summit on 5 March 2025 in the presence of CEOs from Europe's leading energy-intensive and clean technology industries. This high-level gathering provided a valuable opportunity to exchange views, deepen our understanding of the challenges ahead, and capture key insights, which have been summarised in this publication. With the knowledge and perspectives gained through this process, we in the EPP Group are better equipped to contribute to the shaping of future sector-specific legislation and policy, helping to secure Europe's industrial leadership in a global context.

I would like to thank the EPP Group Members in the ITRE Committee for their dedicated work in drafting these papers, as well as all those who contributed to the Competitiveness Summit and supported this valuable initiative.

We stand ready to ensure that Europe remains a global leader in innovation, technology, and economic growth - a beacon of competitiveness in a changing world.

Dolors Montserrat MEP
Vice-Chair of the EPP Group and Chair of the Working Group on Economy and Environment

INTRODUCTION BY DOLORS MONTSERRAT MEP

Dear colleagues,

We are at a pivotal moment. Europe's competitiveness has been declining for two decades - GDP growth, R&D investments, and productivity are lagging behind both the US and China. The EPP Group is committed to reversing this trend through a smart and lean policy mix with a clear focus on competitiveness. To create a more business-friendly environment, we need to urgently address the challenges faced by Europe's industry, such as compliance costs, energy prices, and administrative burdens. Competitiveness must be our guiding principle in this effort.

The EPP Group is the driving force to ensure long-term competitiveness of European industry - and we will continue to champion policies that support innovation, reduce bureaucratic burdens, and create quality jobs. In this endeavour, close cooperation with industry stakeholders will be key to ensuring effective and pragmatic solutions to make sure Europe regains its competitive edge. We must close the innovation gap, reduce bureaucracy and create quality jobs without neglecting our climate ambitions.

The publication of the ITRE working papers is the EPP Group's response to the current decline in European industrial competitiveness and to set out concrete actions to secure a stronger, more innovative, and resilient economy. We need to ensure a stable regulatory framework for long-term planning and investments, consistently apply the technology-neutral principle, and permanently lower energy prices for our European companies.

In my capacity as Chair of the Working Group on Economy, Jobs and the Environment, I want to thank all those involved in the drafting of the working papers, the organisation of the EPP Group Competitiveness Summit, and the work on this publication. The EPP Group has always been - and will continue to be - the voice and defender of European industry.

Together we can bring about a true competitiveness deal for Europe.

FOREWORD
BY CHRISTIAN EHLER MEP

Christian Ehler MEP
EPP Group Coordinator of the Committee on Industry, Research and Energy (ITRE)

Dear readers,

In an era of intensifying global competition and rapid technological transformation, Europe stands at a crossroads. The strength of our industrial base has long underpinned not only our economic prosperity but also our social model, environmental ambitions, and geopolitical influence. Yet today, our competitiveness is under pressure. Geopolitical turmoil, increased global competition, and a regulatory environment that too often stifles rather than encourages entrepreneurship all pose significant challenges to our industrial - and thereby societal - model. These challenges are structural, urgent, and interconnected, and we must tackle them head-on to retain our prosperity and global standing.

In recent decades, Europe has led in setting high standards for sustainability, social responsibility, and innovation. But good intentions must be matched by enabling conditions. Without a strong industrial backbone, our goals risk becoming unachievable. The Green Deal has delivered strong climate and environmental commitments, but it has so far not delivered a business case for European industry. It's now more obvious than ever that a one-size-fits-all approach to industrial policy does not work, and we must take a different angle: sectoral policies addressing ecosystem-specific challenges, bottlenecks and market failures. We cannot afford to see our industries relocate, our energy systems falter, or our supply chains become excessively dependent on third countries. If Europe is to remain a global standard-setter rather than a rule-taker, we must restore the conditions for competitive and resilient industrial development - across the continent, and across sectors.

The good news is that competitiveness is back at the heart of the European agenda. The EPP Group is delivering on this priority. As the political family of the social market economy, we understand that prosperity must be built on a foundation of innovation and entrepreneurship. This series of policy papers, developed by the EPP Group Team in the Committee on Industry, Research and Energy (ITRE), outlines concrete and actionable policy imperatives to restore and protect the competitiveness of eight key industrial sectors in Europe - from clean tech to Critical Raw Materials, from digital infrastructure to advanced manufacturing.

These proposals are not abstract visions. They are grounded in the real needs of European businesses, workers, and communities. They reflect our firm belief that reindustrialisation is not a return to the past but an investment in the future: in strategic autonomy, in high-quality jobs, and in the technologies that will define the next generation of economic leadership.

The coming years will be crucial and, in many ways, represent a true make-or-break moment for the European Union. We must act with clarity and conviction. Restoring Europe's industrial competitiveness is not a partisan issue - it is a generational task. And we, in the EPP Group, stand ready to lead it.

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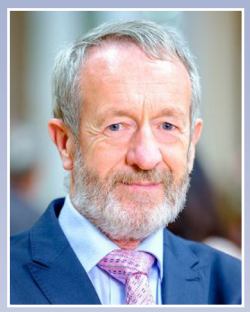

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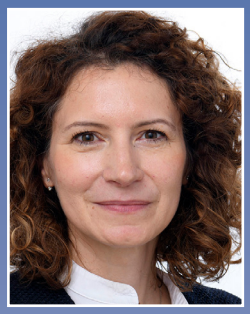

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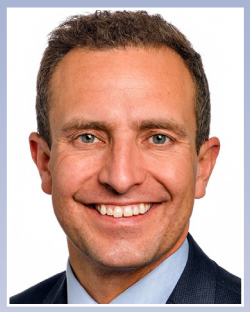

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EPP ITRE Industrial Policy Paper

Industrial Financing and Investment

Authors: Eva Maydell and Fernando Navarrete Rojas

Executive Summary:

Unlocking the EU's potential for a competitive environment that fosters economic growth, job creation, and enhances security and defence is critical. However, attracting, and nurturing investment to propel these aims forward presents numerous challenges. Any industrial financing strategy requires political will, reliable and predictable policies, a shift in thinking towards regulatory simplification, targeted and non-discriminatory incentives, and strengthened public-private partnerships - taking a horizontal approach to address global challenges.

The Draghi report comprehensively outlines these challenges, highlighting the significant gaps we need to address. Its publication must mark the beginning of a new era where we launch a strategic shift in how we source and allocate funding to meet the mounting current and future challenges. The competitiveness of the European Union would be significantly enhanced through an industrial policy that focuses on:

i. fostering innovation,

ii. creating new industrial and technological capacities and

iii. strengthening strategic sectors in a horizontal manner across EU regions.

This approach would involve a comprehensive analysis of financing options available for this industrial policy - taking into consideration the supply of funding and the demand of investments.

Chapter I: The Challenges

Europe's overall investment rate lags behind other regions, particularly in the industrial sector. The Draghi report emphasised the catalysing role of public investments to spur private corporate investments. It also concludes that the investment ratio in Europe would have to increase by 5 percentage points of GDP to raise sufficient funds for the necessary digitalisation and decarbonisation of the European economy, while also increasing the EU's defence capacity. The EU budget (MFF) and European instruments should be designed to set and prioritise key objectives, ensuring that existing resources are efficiently allocated and targeted through these mechanisms to maximise impact and minimise distortion in the Single Market. The EU budget must therefore establish clear priorities for achieving the EU's industrial policy objectives, with significant investments in research, technology development, and location attractiveness.

The EU has still not delivered on its long-standing objective to annually invest 3% of GDP in R&D. This is largely due to lower industrial R&D spending than needed[1]. The rise in R&D investments in Europe have come from the public sector, while in the US and China the trend goes in the opposite direction. In 2018, the private sector funded 58.6% of R&D investments in Europe. In China this was 76.6% and in the US 64.1%. In 2021, investment in Europe declined to 57%, while in China and the US it rose to 78% and 68.9%, respectively.

[1] https://sciencebusiness.net/news/eu-heading-towards-its-rd-goals-not-certain-meet-2030-delivery-deadline

Industrial Financing and Investment

Europe's industrial structures in the most innovative sectors (like tech) are under-developed, and therefore, contribute to a cycle of low investments and low innovation. Limitations in accessing international markets, a lack of innovation, and restricted financing, further contribute to these challenges.

Signs of distress are evident: discussions about industrial plant closures (e.g., Audi[2], VW[3]) and the withdrawal of key investments (e.g., Intel[4]) illustrate our precarious position. China produces 80% of the world's solar panels and two-thirds of electric vehicles[5], while the US dominates private AI investment[6]. From 1990 to 2019, R&D investment grew 4.9 times in Europe versus 9.5 times in the US, resulting in a €25 billion investment gap by 2022[7].

Although the EU has significant private savings, fragmentation, an incomplete internal market, and a different approach to risk, prevents this capital from stimulating investment demand. European supply of capital faces three main barriers: i) ability of investment funds to attract capital from investors (whether professional or retail), ii) ability of fund managers to operate cross-border - which damages scaling-up enterprises, and iii) public capital is not well-oriented to mobilise resources from EU to rapidly growing and innovative businesses. While US industrial policy initiatives such as the Inflation Reduction Act (IRA) are quite similar in overall scope, European initiatives are often too complex and cumbersome to implement. The Capital Market Union (CMU) is still not fully realised, leading to barriers in cross-border investment. It is illiquid and differences in national financial regulations, such as securities laws, reporting requirements, and corporate governance standards lead to a poor channelling of available capital. As a result, the major European economic success stories of the future struggle to scale into global giants.

Currently, European companies lack access to equity, which would enable them to reach the optimal scale to compete successfully on a global scale. Financing of EU businesses suffer from a high rate of debt-equity bias in comparison with other regions like the US. In the US, Americans invested $4.60 in equity, investment funds, and pension or insurance funds for every dollar invested by Europeans in those funds in 2022[8]. European venture capital investment in early-stage technology companies is just one-twentieth of that in the US.

In 2023, venture capital investment in the EU27 represented 0.1% of GDP (EUR 8.4 billion), six times lower than that in the US (0.6% of GDP or EUR 150 billion). While private equity investment stood at 0.3% of GDP

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[2] https://www.euronews.com/business/2024/09/06/audi-brussels-plant-risks-closure-as-car-model-ceases-production-after-2025

[3] https://www.theguardian.com/business/article/2024/sep/02/volkswagen-vw-germany-plant-closures-cars-electric-vehicles

[4] https://www.politico.eu/article/intel-germany-chips-plant-competitiveness-eu-ambition/

[5] https://www.washingtonpost.com/world/2024/03/29/china-clean-green-energy-technology-trade/

[6] https://www.axios.com/2024/07/09/us-ai-global-leader-private-sector

[7] https://www.euractiv.com/section/health-consumers/news/eu-needs-to-catch-up-with-us-in-research-and-development-lobby-warns/

[8] https://www.politico.eu/article/europe-10-trillion-euro-gamble-saving-investment-economy/#:~:text=But%20%E2%80%9CEurope%20has%20fragmented%20capital,year%2C%20mainly%20in%20the%20U.S.

(EUR 50.7 billion) compared with 2.5% of GDP in the US (EUR 639 billion)[9]. Approximately €300 billion in European savings are invested abroad annually, primarily in the US.

Comparing both US and EU markets, they both exhibit similar sizes in the early stages, which include business angels, equity crowdfunding, and early-stage venture capital. However, the gap widens significantly in later stages of venture capital and private equity. In fact, the United States boasts venture capital funds over seven times larger compared to the European Union.

Moreover, more than 50% of the latest-stage tech financing rounds in the EU originate from outside the region. This scarcity of risk capital investment is a contributing factor to the notably small number of unicorns in Europe. For instance, in 2023, approximately 66% of the 122 unicorns were situated in the US and China, while only 7% (or 9 unicorns) emerged from Europe. Furthermore, within the EU, the majority of activity is concentrated in four Member States: Germany, France, the Netherlands, and Sweden. Collectively, these four Member States account for 65% of all unicorns from 2008 to 2023[10].

Remaining friction points within the Single Market inhibit business growth and scalability, causing private capital to seek opportunities in non-EU areas with higher risk-reward profitability. Market fragmentation and a lack of legislative harmonisation raise compliance costs, creating barriers to transnational operations and hampering the expansion of existing innovation hubs and the emergence of new ones. As a practical example, while the EU is developing a unified green taxonomy to classify sustainable economic activities, Member States may still have their own interpretations and additional criteria.

Smart and simple regulation can drive innovation and safeguard consumers, holding companies accountable and providing clarity and a level playing field. Continuing existing strategies will not meet the EU's ambitious goals for revitalising its industrial and tech sectors. A highly focused, comprehensive, and horizontal agenda will need to be pursued.

Chapter II: The Solutions

This chapter outlines key proposals aimed at bolstering the financing of EU industrial policy that would lead to a more competitive region, grouped into thematic areas that address the most pressing needs:

i. **strengthening investment mechanisms,**
ii. **streamlining regulations,**
iii. **promoting innovation,**

[9] Lannoo, K., Thomadakis, A. and Arnal, J. (2024), *Staying ahead of the curve: Shaping EU financial sector policy under von der Leyen II*, Task Force Report, Centre for European Policy Studies, European Capital Markets Institute and European Credit Research Institute, Brussels. https://cdn.ceps.eu/wp-content/uploads/2024/09/VWEB-TF-Report-FM-2024-Formatted.pdf

[10] Lannoo, K., Thomadakis, A. and Arnal, J. (2024), *Staying ahead of the curve: Shaping EU financial sector policy under von der Leyen II*, Task Force Report, Centre for European Policy Studies, European Capital Markets Institute and European Credit Research Institute, Brussels. https://cdn.ceps.eu/wp-content/uploads/2024/09/VWEB-TF-Report-FM-2024-Formatted.pdf

iv. **upgrading infrastructure, and**

v. **expanding Europe's global investment presence.**

1. Strengthening investment and financing for industrial growth.

This block focuses on enhancing financial instruments and increasing investment to support European industrial competitiveness.

I. **Strengthen the European Investment Bank (EIB) and European Investment Fund (EIF) in pan-European projects:** making the EIB more accessible to businesses so that they can gain access to debt and equity, as part of pan-European projects. The EIB's role in financing European horizontal projects might be crucial to foster EU competitiveness.

Expand the capacity of the European Investment Fund (EIF) and the European Investment Bank (EIB): to channel more resources and venture capital into innovative businesses. Encourage the EIF to develop a fund-of-funds to better attract institutional investment across the EU. Projects in regions that could offer a competitive edge, but are lagging behind, should be considered.

Encouraging responsible investment risk: The European Investment Bank (EIB) business model has so far neglected the intermediary steps of projects between the first level of readiness (often referred to as the research or development phase) and market readiness (commercial deployment) for too long. The blending of traditional lending instruments with 'first hit' instruments (like guarantees) taking inspiration from the European Fund for Strategic Investments (EFSI) and its legacy InvestEU, which can reduce merchant and insurance risks in industrial sectors, may provide a way forward. Public-Private Partnerships (PPPs) should be incentivised to support sustainable and digital transitions.

II. **Complete the Savings and Investment Union:** Redirect EU citizens' savings to productive investments and reduce over-reliance on bank financing by increasing and diversifying access to funding sources for European businesses. The securitisation market: Securitisations can transfer business loans to the capital market, particularly aiding small and medium-sized enterprises (SMEs) that lack direct access. To promote this, the EU should develop product standardisations to reduce transaction costs and simplify cross-border securitisations.

III. **Reducing fragmentation within the financial system:** Reducing fragmentation in stock markets and post-trade infrastructure to enhance market depth and liquidity to ensure that investors can buy and sell larger quantities of stocks while reducing transaction costs. Foster access to better valuations for encouraging investor participation in a unified EU stock market to drive up demand. Reducing fragmentation in stock markets and shifting a higher share of trading towards lit regulated markets leads to a more efficient capital allocation.

IV. **Addressing venture capital gaps:** Widen the existing venture capital regime (EuVECA) to allow all venture and growth funds supporting start-ups and scale-ups to operate more easily cross-border. Europe's bank-based financial system is ill-equipped to finance high-risk start-ups. Start-ups often rely on intangible assets, which banks are often unable to assess as collateral. European pools of private capital are smaller and more fragmented compared to the US, where equity investments significantly outpace Europe. The fragmentation of markets, driven by national regulations and tax laws,

discourages cross-border investment consolidation, capital raising and risk sharing. Greater venture capital investments could enhance productivity and innovation in the EU.

V. **Unlocking pension funds:** Take down barriers that prevent pension funds and insurers from financing innovation and company growth. Promoting private pension schemes, taking inspiration from the USA's 401(k) tax-incentivised private account and channelling savings into innovation and business growth.

VI. **Flexible funding instruments:** President von der Leyen announced a new European Competitiveness Fund. We need an integrated approach across the forthcoming Multi-annual Financial Framework and the existing capital market structures to ensure that 'competitiveness' is a guiding element and that regulatory fragmentation in the capital market is reduced. Any proposal for a new funding instrument needs to be based on a comprehensive assessment, which clearly outlines the industrial funding and market needs identified in collaboration with the private sector and evaluates the need and added value of such a fund, as well as the possible integration into the next MFF. Any centralisation of existing EU funds in a new Competitiveness Fund must be thoroughly assessed to safeguard specific objectives of the existing funds like investments in science and research across the Union as well as existing industry funding objectives. The European Parliament's competences in budget issues need to be fully respected.

VII. **Demand visibility and guarantees**: Encourage state-owned enterprises and public administrations to communicate demand forecasts to the private sector, enhancing investor confidence through offtake agreements that effectively guarantee demand for innovatively produced products. These agreements already spur investment globally across multiple sectors, but they have been widely used through Power Purchase Agreements to build renewable energy plants.

VIII. **Providing knowledge support on financial instruments:** Establish advisory services through the deployment of Technical Support Instruments to guide regions in identifying funding opportunities and aligning projects with EU priorities, thus improving the efficiency of already available funding EU programs.

2. Regulatory simplification and coherence.

These proposals aim to reduce bureaucratic barriers and to improve consistency of regulation across the EU, fostering a more investment-friendly environment.

I. **Regulatory Simplification:** Conduct a comprehensive review of EU legislation to simplify and reduce unnecessary regulatory friction, including zero-based regulatory reviews in financial services legislation and a full review of overlapping and interlocking reporting overlaps and regulatory guidance including secondary legislations such as delegated acts. Review legislation to avoid any legislative obstacles to business capacity to grow and therefore be more suitable for additional venture capital investments.

II. **Simplifying and speeding-up administrative procedures:** To streamline access to EU funding by establishing one-stop shops for investment programs. Reducing red tape should be a priority, especially for SMEs struggling to access financing. Information sharing and partnerships among public

authorities can accelerate administrative simplification. The IPCEI framework should be reformed to improve the speed, effectiveness, and predictability of the application process.

III. **Streamline reporting requirements:** The *only report once* principle should be pursued to lessen the burden for companies and to rapidly build up the European Single Access Point (ESAP) to give investors a one-stop-shop for financial information.

IV. **Investment Coherence:** Strengthen existing funding mechanisms without undermining grants. Coordination between grants and financing instruments is essential for long-term investment planning. A long-term vision is necessary to support industrial competitiveness.

V. **Reforming EU's Foreign Direct Investment (FDI) rules:** The EU needs to attract international investments in EU strategic interests, while supporting the competitiveness race. Harmonisation at Member States level is much needed to simplify and soften the investment process. FDI rules need to be harmonised and fully implemented in all Member States keeping a good balance not to deter investors and not to overwhelm authorities with screening tasks.

VI. **Alleviating insolvency procedures to encourage cross-border operations:** Creating a flexible European opt-in insolvency model, where companies with a European focus could choose a European universal insolvency scheme as an alternative to their national model. The market and investors could then promote this choice of corporate set-up and insolvency model, with the aim of creating an integrated EU regime by market demand.

VII. **Un-silo Financial Thinking:** Ensure that all EU, national, and regional levels do not create undue barriers to corporate and industrial growth. The aim would be to promote a more efficient management of European funding programs by facilitating connections among ministries, agencies, and the private sector, to address the appropriate level of financing competence at horizontal level and avoid duplications. Such a system could also prioritise the financing of European common interest projects and create an ecosystem where ideas can be connected at pace with investors.

3. Enhancing innovation and technological competitiveness.

This block focuses on boosting technological innovation in the EU to improve its global competitiveness.

I. **Combining big & small and Clean Tech & Traditional industries:** Foster collaboration between established companies and start-ups. Large corporations can benefit from the agility of SMEs, while small businesses can leverage the resources and infrastructure of larger firms. The synergies between new technological companies in Clean Tech and breakthrough technologies and traditional core industries should always be encouraged. This necessitates ambitious EU investment policies focused on innovation.

II. **Increasing R&D Spending:** Public R&D spending in the EU is only 2% of GDP, compared to 3% in the US and Japan.[11] Increasing this investment, especially in technology, is vital for Europe to catch up and stimulate private sector innovation. This effort needs to be shared between public and private sectors with the help of non-discriminatory and efficient tax deductions. Debt-Equity Bias Reduction

[11] https://sciencebusiness.net/news-byte/horizon-europe/eu-rd-spending-rose-eu331b-2021-research-intensity-fell

Allowance (DEBRA) proposal (once approved by Council) could get rid of the debt-equity bias in taxation of corporate financing activities.

III. **Tax Deductions:** Encourage Member States to develop tax policies that incentivise IT investments and support technology-focused SMEs. Foster additional tax and legal incentives to attract wealth capital to EU long-term asset classes. Other areas to be examined include the offer of corporate tax reductions, exemptions, reduction of levies and duties on energy, and duty-free imports for essential assets (such as equipment, critical raw materials), to boost investment.

4. Infrastructure and production support.

These proposals focus on improving infrastructure and supporting local production in the EU to enhance industrial efficiency and attractiveness.

I. **Infrastructure support:** Promoting public and private investments in physical and technological infrastructure. This would provide long-term savings for businesses and incentivise inward investment. Particular attention should be given to energy infrastructure and vulnerable Critical National Infrastructure (CNI), for example subsea cables.

II. **Investing in data collection:** Promoting a more efficient data strategy to enable companies to access better quality data to develop our innovation ecosystem and new technologies.

III. **EU production investment & incentive scheme:** Create a scheme rewarding companies for incremental production and investment in strategic sectors, the promotion of domestic manufacturing, and addressing regional disparities. These schemes could offer, for example, exemptions on land rent and corporate tax for projects located in a certain geographical area.

IV. **Supply chain development**: Support SMEs with local incubators to help them compete for state contracts and integrate into supply chains.

5. Fostering global investment and market presence.

This block covers strategies to attract international investors and increase Europe's visibility in the global market.

I. **Unlock EU public instruments:** To expand the growth of European industry beyond its borders by strengthening the European Investment Bank's role.

II. **Public investments through common financial instruments**: The European Union should introduce common financial instruments and avoid fragmentation of public investment between Member States to ensure efficient resource allocation and maximise impact. Fragmentation leads to duplication, incompatible standards, and imbalanced support across states, with larger economies able to provide more generous backing than smaller ones, undermining the Single Market. A coordinated approach would help pool resources for large-scale investments, particularly in breakthrough innovations and industrial goals like decarbonisation and digitalisation, which require significant capital. Additionally, it would reduce administrative complexity, making funding more accessible to private enterprises and fostering competitiveness on a global scale.

Industrial Financing and Investment

III. **Investor support systems:** Implement investor support mechanisms similar to Singapore's Economic Development Board, which provides loans and attracts investment, acting as an industrial bank.

IV. **Elite investor experience:** Create the world's best investor journey where major global investors are supported. Reduce bureaucracy and increase regulatory transparency and stability across all 27 Member States.

V. **Establishing a Global Presence:** Many national Investment Promotion Agencies (IPAs) have established offices abroad to engage potential investors effectively. EU offices and embassies should support and build on this work, and provide investment representation to Member States without IPAs. These should be supported by a high-level advertisement campaign and political-level investment conferences. International offices should be established to enhance global presence and engagement with investors. This could include the promotion of "Made in Europe" products globally.

VI. **Tracking Investment Outcomes:** The EU, in close collaboration with Member States and stakeholders, should track both effort-based and outcome-based metrics, to refine investment strategies and optimise attraction activities, including improving investor relations and streamlining processes.

VII. **Comprehensive Investment Screening:** Reform investment screening and export restriction programmes at EU level to ensure critical technological transfers to geopolitical rivals do not occur. Investments into European innovation must not result in the outsourcing of Europe's critical sectors or technological edge.

EPP Group ITRE Industrial Policy Paper

European Steel Pact

Authors: Christian Ehler and Susana Solís Pérez

Immediate measures for a strong European steel industry

"Steel production is an indispensable sector for Europe. Clean steel is the future; it must and will have its place in Europe."

Ursula von der Leyen, President of the European Commission, April 30, 2024

A competitive steel industry in the EU is essential for prosperity, the resilience of industrial value chains, employment, economic security, and the green transition. The European steel industry provides over 300,000 employees with good industrial jobs, supported by collective agreements and co-determination. Steel is systemically important as the backbone of industrial value creation in Europe, with numerous integrated value chains relying on it as a basic material. Moreover, as a high-tech material, steel is paving the way for the green transformation. Without steel, no wind turbine would turn, no kilowatt-hour of electricity could be transported, and no electric car would drive even a single kilometre.

Green steel, as a fundamental material for the mobility and energy transition as well as security and defence, will play a key role in ensuring a secure and sustainable supply of essential resources in the future. European steel producers are already investing billions, with government support, in low-carbon steel production and are implementing innovative decarbonisation strategies to lead this transformation.

However, the European steel industry is facing a historic crisis, with a slow process of deindustrialisation underway. Europe is the only region in the world where the steel industry is shrinking, which poses a threat to its strategic autonomy and defence capability. Over the past decade, the EU has lost one-fifth of its production capacity and more than 20,000 jobs. Once boasting a trade surplus of 16 million tons in 2012, the EU now faces a significant deficit of 10 million tons in 2023. As a result, capacity utilisation in European steelworks has dropped below 65%.

The reasons for this development are the following structural challenges:

- **Rising import pressure from countries with overcapacity**, particularly from Asia: increasing low-priced, often CO2-intensive steel imports threaten value creation and jobs in the EU. The market share of imports has almost doubled between 2012 and 2023. While the EU is pushing ahead with the green transformation of its industry, Asian countries, particularly China, are expanding their overcapacity without limitation. According to the OECD, **a steel capacity of 80 million tons could come on stream worldwide in the next three years alone.**[1] Although production capacity already exceeds demand today, by 2026, it is expected to increase to 630 million tons[2] - five times the total European steel production. The decline in domestic steel demand in China, combined with massive government-supported excess steel capacity[3], is causing Chinese steel to flood non-Chinese markets, including the EU internal market, fuelling unprecedented export surges that are disrupting markets worldwide. This pressure from Chinese overcapacity is particularly intense in third markets like Asia, where price decreases force producers to seek new demand, further intensifying pressure on the European market. As a result, the share of steel imports in the EU's total supply continues to rise.

- **Unfair trade practices**: Dumping, subsidies and the circumvention of trade defence measures create an uneven playing field. In the steel sector alone, the European Commission has taken around 180 trade defence measures against dumping and subsidies - and the trend is rising. No other industry is more affected. Other countries are also reacting to unfair competition. Outside the EU, the number of trade defence measures for steel rose from under 50 to over 450 between 2013 and 2023. These figures make it clear that there is no level playing field on the global steel market.
- **The decline in European demand for steel,** combined with overcapacity and unfair trade practices, could lead to the collapse of the European steel industry or leave it fighting for its survival, as the Trade Defence Instruments (TDI) and safeguard mechanisms prove insufficient. On the one hand, most exporting countries are not covered by the TDIs today, and the lower end of the applied duty ranges is inadequate, allowing imports to undercut EU domestic prices. On the other hand, the drop in internal demand makes existing tariff rate quotas (TRQ) ineffective. As domestic demand decreases, the same volume of imports represents a larger percentage of European demand, reducing the share contributed by EU producers. Additionally, the temporary nature of these safeguards leaves the sector vulnerable, as it faces a long-term and worsening crisis without sufficient protection. If this import pressure and price depression cannot be reversed quickly and structurally, EU steel capacities that are currently idled[4] will run the risk of being closed permanently, destroying thousands of direct jobs and depressing regional economic activity and prosperity. Furthermore, a prolonged crisis would leave the EU steel industry without the necessary resources to contribute to the EU's climate goals, jeopardising any goal of strategic autonomy.
- **Rising CO2 costs**: EU measures to reduce CO2 emissions are necessary but will reduce the competitiveness of European steel producers as long as other countries continue to fail to take comparable measures. While CO2 prices in the EU have increased fivefold in some cases since 2018, there are either no CO2 prices outside the EU or they are mostly below 20€/tCO2[5]. This is particularly relevant as potential buyers outside the Union market are not required or mandated to pay the CO2 premium for European-made steel, making European steel significantly less competitive on global markets.
- **High energy prices**: European steel companies bear significantly higher energy costs than their competitors in most other regions of the world. Electricity retail prices in Europe are currently two to three times those in the US and China[6]. High energy prices are not only a burden on competitiveness, but also make it difficult to invest in decarbonisation, which requires large quantities of electricity and hydrogen produced with electricity. As for CO2 prices, buyers on international markets are not required or mandated to pay the energy price premium for European-made steel, implying a competitive disadvantage for European steel on global markets.

The EU must urgently address these structural problems and competitive disadvantages in order to halt the loss of industrial value creation and prevent increasing import dependencies. A strong, Clean Industrial Deal must supplement the Green Deal.[7] This should include a bold shift in industrial and trade policy to meet the rapidly changing world with new geo-economic and geopolitical challenges. The EU must develop a response to competitors that are aggressively attempting to internalise large portions of industrial value chains through localisation strategies, such as subsidies and local content requirements, often in violation of international agreements. To support the Clean Industrial Deal with concrete measures for maintaining a strong European steel industry, the European Commission, under the leadership of its President, should promptly launch a European Steel Pact. This pact would involve key steel-producing countries (such as Germany, France, Italy, Spain, Poland, Sweden, and Belgium), the European Parliament, companies, and trade unions, and should be initiated without delay. This alliance should first develop short- and medium-term political measures to

urgently address the immediate challenges threatening the industry's survival while also tackling the short-, medium-, and long-term threats to its competitiveness. However, the EU must simultaneously work towards addressing the fundamental underlying market issues, as constant policy interventions are neither desirable nor sustainable in the long-term.

1. Urgent Measures to Safeguard and Prevent the Collapse of the European Steel Industry:

- **Trade Defence Instruments (TDI)** must be reviewed and strengthened to restore their original protective capacity and prevent circumvention. Additionally, measures should be expanded to cover a broader range of steel-exporting countries.
- The existing **anti-dumping and anti-subsidy** procedures must be utilised more efficiently and effectively against unfair trade practices. To this end, the existing scope for action under WTO and EU law must be used. As a first step, the European Commission should identify the possibilities in the first quarter of 2025 to adapt its practices to the escalating geo-economic and geopolitical challenges. Where appropriate, the Commission must examine the possibility of initiating new anti-dumping and anti-subsidy procedures to ensure trade defence is implemented effectively and without gaps. All existing Trade Defence Instruments must be reviewed and strengthened to restore their original protective capacity and prevent circumvention. Additionally, the introduction of a “Melt & Pour” regime, as well as an increase in the lower end of the duty ranges, should be considered.
- The review of the current **Steel Safeguard** to stop the flood of imports, tailored to the overcapacity situation of each country in the context of weak market demand, is essential. The review should be tailored to each country’s specific circumstances, with reduced tariff rate quotas and higher tariffs than those currently in place, where appropriate, or applying tariffs from the first imported ton. This safeguard should also ensure that all imports above the quota effectively pay the full tariff by reviewing the first-day dilution rule. Any carry-over of unused quotas should be removed. Additionally, the EU urgently needs to work on enhanced safeguard measures to protect the European steel industry beyond 2026, when the existing safeguard measures are set to expire. Future safeguard measures should expand the use of country-specific quotas and take into account the share of green steel in third-country steel production, thereby reducing market volatility and increasing stability for the EU market.
- In response to the structural capacity crisis, the EU could consider the safeguard approach with a more streamlined categorisation of steel products for a comprehensive **tariffication** across all countries and steel products, including semi-finished steel. This would allow a better approach as the excess capacity and its spillover are now truly global.
- **EU-USA Steel Agreement (GSSA):** The conclusion of a steel agreement between the EU and the USA should be pursued. This agreement aims to reduce trade barriers and promote cooperation in the steel sector, thereby strengthening the competitiveness of both regions. This agreement should serve as the basis for a broader framework to establish international alliances with a shared commitment to decarbonisation, thereby coordinating market behaviour for economic and geopolitical security.

The remaining measures to enable the competitiveness of the industry will be based on the following goals:

2. Ensure the effectiveness of CBAM

- **The Carbon Border Adjustment Mechanism (CBAM)** is a crucial tool for protecting companies in the European Union that are committed to achieving climate neutrality from relocating to third countries. It is encouraging to see that, partly due to the introduction of CBAM, several third countries are now implementing their own emissions trading systems. However, urgent improvements are needed to ensure the mechanism's full effectiveness. The following enhancements are therefore necessary:
- **Preventing carbon leakage and disadvantages for exports**: To ensure that steel made in Europe remains competitive on international markets, the European Commission must closely monitor the implementation of CBAM for the steel sector, particularly regarding the risk of carbon leakage and potential disadvantages for European steel destined for export. Imagine any risk of carbon leakage or competitive disadvantage for European industries is determined or any loopholes are created related to scrap metal within the CBAM - in that case, the Commission must take immediate action. The EC should also assess exemptions or rebates for steel destined for exports to countries with higher product carbon footprint while remaining WTO-compliant.
- **Electric Arc Furnace import quota**: A quota system for Electric Arc Furnace (EAF) steel imports should be considered. The European Commission must, therefore, evaluate - at the latest during the review of the Steel Safeguards - whether the introduction of such a quota system is necessary, feasible, and economically sensible. The potential impact of higher prices for EAF steel imports must also be taken into account. If the assessment is positive, the EAF import quotas should be implemented as quickly as possible. If imports exceed the volumes that were imported before the introduction of CBAM, these excess volumes would be subject to a levy. Without such a safeguard, there is a concern that non-European steel producers may intentionally increase the supply of EAF steel to Europe while diverting more CO2-intensive blast furnace steel to other regions of the world.
- **Tough sanctions**: Importers should be banned from importing products subject to CBAM in the event of serious breaches of the applicable CBAM rules.
- **Review of the scope of application**: To prevent products that are essentially made of steel from being manufactured exclusively outside Europe after the introduction of CBAM, a review of the scope of application is necessary, taking into account bureaucratic, economic, and trade policy hurdles. In addition, for more complex or composite products, a simplified mechanism for calculating embedded emissions is essential to ensure feasibility while avoiding any form of circumvention. Default values should be part of the review to ensure they accurately represent the carbon emissions and thereby encourage companies to decarbonise.
- **Simplifying reporting and verification**: Create a single EU-wide method for calculating carbon emissions and improve international cooperation on standards. Utilise integrated secure software for streamlined reporting and leverage technology solutions to simplify the monitoring process, reducing duplication and complexity.

The adjustments mentioned above must be implemented before CBAM comes into force, as otherwise, no adequate protection against carbon leakage can be ensured. It is necessary to closely monitor and improve the system's design, as well as consider postponing the phase-out of free emission allowances under the ETS for energy-intensive industries if the CBAM proves ineffective.

3. Secure demand for basic materials "Made in Europe" in the EU

- Europe's competitors, such as China and India, as well as traditional allies like the USA, are pursuing **aggressive localisation strategies**, in some cases linked to compliance with social standards (e.g., the USA's IRA). Without swift action by the EU, heavily subsidised imports from countries with overcapacity will increasingly flood the European market, forcing companies to reduce or relocate their production capacities due to the resulting cost pressure. Therefore, in addition to more effective trade protection instruments (points 1 and 2), regulatory measures are needed to **promote demand for products manufactured in the EU** ("European content").
- As an immediate measure, a minimum **proportion of "European content"** must be set for publicly funded projects, including the European Hydrogen Bank. In addition, **countries that have not signed the WTO Government Procurement Agreement (GPA) should be excluded from public tenders.** While important markets are closed to the EU steel industry, the EU market is transparent and open to foreign suppliers in accordance with the rules of the WTO Agreement[8] on Government Procurement. In the case of non-members, such as China, the existing options for sanctioning a lack of reciprocity should be fully exploited.
- The Regulation of the Net-Zero Industry Act (NZIA) should be implemented to include binding origin criteria for basic materials in public procurement and auctions through the Commission's Implementing Act, which will formulate minimum requirements for sustainability and resilience in the award of public contracts and auctions by the end of March 2025.
- Steel plays a significant role in public tenders. The upcoming **revision of the public Procurement Directive** can provide an opportunity to support the European steel sector by incentivising the usage of green European steel in Public Procurement. This opportunity should be carefully assessed, including the introduction of **low-carbon criteria** when applying the principle of the most economically advantageous tender.
- European companies have invested billions in switching to climate-neutral production methods, but in many areas, there is little demand for these products due to a lack of differentiation. As a first step, **EU-wide labelling** is therefore required to distinguish climate-friendly products clearly. To further support this differentiation, the definition of a carbon footprint should be harmonised across the Single Market, leveraging existing methodologies to avoid multiple standards and reporting obligations and based on an internationally recognised standard. Promoting digital product carbon footprints through digital product passports could streamline data collection along supply chains, harmonise information requirements, and reduce administrative burdens while optimising sustainability practices and material flows.

4. Ensure competitive energy prices

- The EU must step up its efforts to achieve **internationally competitive energy prices**; for this, the energy measures outlined in the energy position paper must be implemented. Additionally, specific measures tailored to the steel sector will be required.
- Develop guidelines to remove barriers for **Power Purchase Agreements (PPAs)**, allowing and encouraging industrial consumers to pool demand for low carbon energy through corporate PPAs. Pooling demand would reduce risks and lower PPA prices. Financial guarantees may be necessary to further de-risk this market.
- Establish clear and harmonised rules considering **temporary electricity price relief on a temporary basis.**
- Existing **relief mechanisms** particularly for energy-intensive and trade-intensive companies, such as indirect CO2 cost compensation, must be maintained beyond 2030, keeping a level playing field among EU Member States and compared to third countries.
- **Hydrogen** will be a key energy source of the future, especially for energy-intensive industries such as steel. As the projected availability for green hydrogen remains low until 2030 and beyond, massive increases in certainty for investors is needed. Therefore, the delegated act on green hydrogen should be revised to avoid over-complicating regulations, focusing on scaling the market and reducing emissions. There should also be financial support for hydrogen infrastructure (cf. Connecting Europe Facility, EU Hydrogen Bank). Low-carbon hydrogen will be crucial to bridge the market until green hydrogen is available in the necessary scale, therefore the Delegated Act to be released by the Commission by mid-2025 on low-carbon hydrogen should be fit for this need and designed less restrictive than the current draft in terms of upstream emissions and criteria for green electricity.
- A **technology-open approach** to supporting the transformation of industry, especially the steel industry, must be ensured.
- In the long term, a competitive energy supply can only be ensured through a **genuine European energy market**. To this end, the transport infrastructure for electricity, hydrogen and CO2 in particular must be consistently expanded beyond national borders. Energy partnerships with resource-rich countries outside the EU are also essential.
- There is a need to analyse **harmonisation of network charges** for energy-intensive industries. The reform of network charges should consider the specific technical requirements of energy-intensive industries, such as the steel industry.

5. Reward investments in the transformation of EU ETS sectors more strongly

- For steel producers that are already investing in the transformation before 2030, the financial scope for investing in further transformation steps should also be expanded through adjustments to the EU ETS/CBAM. The existing **incentive mechanisms**, such as free allocation for low-carbon production processes, are not sufficient. Since the adoption of the Fit-for-55 package, the economic situation and outlook have deteriorated dramatically due to multiple crises (such as the Russian war of aggression on Ukraine and Chinese overcapacity). These changed framework conditions are also making investments in decarbonisation more difficult. The bonus system for companies that invest in decarbonisation at an early stage needs to be strengthened to receive additional free certificates.

- In the next legislative period, the European Commission must present a further reform of the European Emissions Trading System to i**nclude technical sinks such as direct air capture in emissions trading**.
- EU ETS revenues from the steel industry should be invested in decarbonisation projects in the sector. **Allocating ETS revenues in the steel sector** could help **cover additional decarbonisation costs, including both CAPEX and OPEX,** such as plant upgrades, and other key investments in cleaner technologies. In this context and beyond, a competitive bidding system using quality and competitiveness criteria should be established at the EU-level to allow decarbonisation of industries to happen through a competitive and market-based bidding process.
- The creation of **targeted financial instruments for technological upgrades and cost-bridging solutions** should be explored on a European level. These financial instruments should aim to enhance cooperation between heavy industry and Clean Tech industries, thereby harnessing the potential of technological advancement and breakthrough technologies. They could provide significant progress towards reducing the transaction costs of such partnerships as well as regaining the competitive edge in technology.

6. Market-oriented regulatory framework for CCS/CCU/DACCS/BECCS

With the expiry of ETS allowances in 2039, there is practically an informal climate neutrality target for all ETS I sectors well before 2050. However, as things stand today, **emissions cannot be reduced to zero in every sector by 2039.**

- **A market-oriented regulatory framework** for technological solutions, such as CCS, CCU, or DAC, is needed as soon as possible. The first steps have been taken with the reform of the ETS, the Carbon Management Strategy and the Carbon Removals Framework.
- A convincing **business case** for these technologies must be developed, thereby providing companies with investment security and facilitating the scaling up of the technology. The existing rules for CCUs should also be made more flexible.
- A **regulatory package for CCUS** is therefore necessary in a similar form to the gas and hydrogen package. Issues related to the structure of infrastructure ownership, access for third parties, and grid fees must be resolved quickly in the interest of investment security and scalability. Synergies between operators of gas, hydrogen and CO2 pipelines must be exploited.
- **A coordinated strategy** is essential to boost competitiveness, improve economic efficiency, and accelerate the decarbonisation of the steel industry. This requires better alignment across multiple policies, including environment, climate, energy, critical raw materials, trade, and employment. Policy coherence must be at the centre of the Commissions, Parliaments and Councils agenda for the next five years.
- **Effective planning,** including thorough impact assessments, stakeholder engagement, and monitoring, is crucial for ensuring the timely execution of actions in these areas. To support decarbonisation investments, provisions on **simplifying and streamlining permitting processes**, such as those adopted in the NZIA, should be used as best practices and expanded to other sectors and

industries. Any possible measure of administrative simplification must be assessed to combat the high regulatory burden in Europe.

7. Circularity to reduce costs

- **Monitor scrap metal exports** and analyse the potential impacts of measures, such as restricting exports to third countries that do not have our same environmental or climate standards and obligations, to ensure adequate supply within the EU. This should be accompanied by effective, robust enforcement of regulations, **such as** the Waste Shipment Regulation, to avoid possible circumventions of CBAM.
- **Improve recycling quality and rates** by enhancing the recovery of end-of-life materials, supporting better waste management and improving the separate collection of high-quality scrap metals, as well as creating incentives to develop and deploy sorting and recycling technologies.
- **Creating a Single Market for circularity** by harmonising rules and standards - i.e. extending EU-wide end-of-waste and by-product criteria to more materials and green-listing non-hazardous waste streams while balancing resource savings and environmental risks.

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[6] The future of european competitiveness — part b In-depth analysis and recommendations | section 1 | chapter 1. September 2024

[7] Antwerp Declaration for a European Industrial Deal (https://antwerp-declaration.eu/)

[8] The GPA is a plurilateral treaty under international law that aims to achieve non-discriminatory and transparent competition in public procurement at international level.

EPP ITRE Industrial Policy Paper

DIGITAL MANUFACTURING, ELECTRONICS AND ICT

Authors: Pilar del Castillo and Oliver Schenk

1. INTRODUCTION

A strong digital industry is crucial for Europe. As we focus our policies on the competitiveness of our industries, we must place the pursuit of a strong digital industry at the centre. We must ensure that the sector is competitive in global markets and consider the measures needed to achieve open strategic autonomy, especially in critical technologies.

In a time when a competitive Europe is at stake, **innovation is key** to **our competitiveness** and a **strong tech sector is crucial for innovation**. In fact, **lagging behind in the tech sector isone of the main factors explaining the productivity gap between Europe and the US**, according to the Report on the Future of European Competitiveness. In this regard, **digitalisation presents a unique opportunity for innovation**.

Electronic communication networks (e.g. 5G, 6G, Satellite, and Low-Power Networks) **and digital and computing infrastructures (e.g. High-Performance-Computing), along with materials and components relevant for infrastructure buildup, (e.g. semiconductors) are essential for the full development of digital technologies (e.g. AI, cloud, and quantum).**

The Digital Single Market will be critical in making Europe more competitive in the global economy.

Moreover, **strengthening the EU's cybersecurity is imperative** to support and protect the growth of our digital infrastructure. In this rapidly evolving landscape, **a secure digital environment will be key for growth and innovation**, ensuring that Europe can be competitive in a complex geopolitical scenario.

The main resource of these technologies is data. The usability of data will be key to boosting growth and remain competitive. By improving data sharing, companies can foster innovation and enhance decision-making. Furthermore, unlocking access to industrial data will optimise existing business models and unlock business models of the future, such as applied AI.

Finally, fostering innovation in Europe will require **boosting digital skills across the European labour market**. A workforce equipped with strong digital capabilities is crucial to take advantage of all the opportunities presented by cutting-edge technologies.

2. ELECTRONIC COMMUNICATION INFRASTRUCTURES

The EU's competitiveness will increasingly depend on the digitalisation of all sectors, supported by solid digital infrastructures. In this context, the **Digital Single Market is a vital asset** since it can enable companies to grow and scale up.

Investments are essential for the deployment of electronic communication networks (5G and 6G) that are advanced enough in terms of transmission speed, storage capacity, edge computing power, and interoperability.

Both the White Paper on the Future of Connectivity in Europe and **the Draghi Report underlined that telecom market players have lacked the conditions necessary to scale up the massive investments** needed. Currently, the EU has a very fragmented market. The EU has 34 mobile network operators, while the US has three. Furthermore, per capita investment in Europe is half of that in the U.S.

The consequence of all of this **is Europe falling behind in both 5G and fibre deployment.** The European Commission estimates that closing the investment gap to meet our connectivity objectives will require at least **€174 billion, and €300 billion additionally**. This is essential for reachingthe **EU's Digital Decade 2030 goals**.

On the one hand, a **common framework and** a reduction in regulatory burdens would support market consolidation and therefore **create better conditions for companies to scale up and increase investment in infrastructure**.

At the same time, **the spectrum policy in the EU has had a very weak coordination across Member States.** In most Member States, the spectrum was mostly designed to maximise frequencies' pricing.

To advance towards a Digital Single Market, Europe should:

- **Reform its regulation and competition approach** to one that is more supportive of companies scaling up in global markets, **as indicated in the mission letter from President Von der Leyen to the Executive Vice-president designate for a Clean, Just and Competitive Transition**. **Nevertheless, any reform of competition policy should consider the quality of services and evaluate the impact on prices for end users.**
- **Reduce and simplify regulatory burdens** to leverage investments and speed up connectivity infrastructure deployment. For example, by reducing country-level ex ante regulation and favour ex post competition enforcement in cases of anticompetitive conducts.
- **Work on an enhanced coordination on spectrum** by harmonising the release of new frequencies bands to allow investments across Member States by EU players. We should start with 6G frequencies and progressively harmonise all other frequency bands by 2035.

The upcoming ***Digital Networks Act*** legislative proposal is an opportunity to tackle all these challenges.

3. DIGITAL INFRASTRUCTURE

Strong European digital Infrastructures, such as high-performance computing systems (HPC) and data centers, which are crucial for the development of technologies like cloud, artificial intelligence or quantum, will have a key role in next-generation digital ecosystems.

European Digital Infrastructure is today largely reliant on foreign operators. This holds true for many areas: network infrastructure, cloud and edge computing, high-performance computing, and top-layer infrastructure and applications. To reach our goal of technological sovereignty, we need **urgent European action on Digital Public Infrastructure**. A horizontal initiative for the development and deployment of EU capacities on above-mentioned next-generation digital ecosystems is needed.

Developing these technologies **requires vast computational resources and critical components like semiconductors and quantum chips.**

In December 2023, twenty-six Member States signed the 'European Declaration on Quantum Technology', recognising the strategic importance of quantum technologies for theindustrial competitiveness of the EU and committing to develop a quantum technology ecosystem across Europe, to make the EU a 'quantum valley'. **The development of quantum technologies is inextricably linked to the existence of a strong and**

resilient value chain in Europe, from semiconductor and quantum chips manufacturing and cluster-building to market application.

For example, robust infrastructure such as very high-performance supercomputers is also essential for developing and training advanced AI models, ensuring they can be deployed across all sectors and integrated into industry value chains

In the same manner, **we need to strengthen our digital infrastructures to foster cloud technology**, which is absolutely dominated by US-based players.

When it comes to cl**oud technology**, **Europe should also take strategic policy action**, as outlined in Mario Draghi's report. These include **creating an EU-wide policy for procurement of cloud services.** Public procurement processes should be aligned across Member States, standardising tenders and encouraging collaboration among EU companies to scale commercially and support consolidation within the EU.

Overall, **policy action at the European level together with the deployment of a strong digital infrastructure (HPC systems and a robust European supply chain of semiconductors, chips, and quantum chips) will be key for advancing on these technologies**. This will open new opportunities for the EU's **industrial competitiveness** and reinforce our **digital sovereignty.**

Finally, a strong EU-wide infrastructure must extend to even the most peripheral areas and island regions, ensuring they are equally connected and not left behind due to their geographical location.

Regarding High Performance Computing (HPC)

In recent years, the European Union (EU) has made significant progress in enhancing its digital infrastructure, and in particular, **high-performance computing systems.**

The Digital Europe Programme (with a budget of €7.5 billion dedicated to upgrade technological infrastructures such as supercomputing) and the launch of the **Euro-HPC Joint Undertaking in 2018** made this progress on HPC possible. As a result of this, the EU now has several supercomputers: LUMI in Finland, Leonardo in Italy, and Mare Nostrum 5 in Spain.

However, the U.S. and China still host many of the world's most powerful HPC systems. Furthermore, in the EU, HPC capabilities have been mostly applied to scientific purposes.

To improve the EU's computing infrastructure and capabilities to develop AI, quantum and cloud technologies, the EU should:

- **Boosting Computational Capacity:** Regularly increase the computing power at EU high-performance computing (HPC) centres to enhance the training of AI models and prepare for future advancements in supercomputing.
- **Establish a legal and financial framework that allows public institutions to share their computing resources** with innovative small and medium-sized enterprises (SMEs) in exchange for financial returns, such as equity options or royalties, which can then be reinvested into these facilities.
- **Link HPC centres with Quantum Labs:** create quantum labs linked to all EU HPC centres and initiate public-private partnerships with leading EU tech companies to invest in cutting-edge technologies.
- **Ensure that HPC centres are accessible to developers and deployers of AI Foundation Models,**

Generative AI, and Applied AI: the Euro-HPC Centres should be workable for this use case and particularly SMEs, start-ups, and scale-ups. This is essential to developing European technological sovereignty. This must be seamlessly complemented by initiatives to enable the development and deployment of AI in the EU, such as adjustments to the GDPR.

Regarding chips and semiconductors

Regarding chips and semiconductors, Europe currently **produces less than 10% of the world's semiconductors**, and **U.S. and Chinese companies supply much of its needs** for these components. This means **Europe heavily relies on non-European providers** for the design, manufacturing, test, assembly, and advanced packaging.

As global demand for semiconductors continues to rise, **the industry requires massive scale-up for development and manufacturing.** In other words, **the scale of investment in the European semiconductor industry is insufficient to meet growing demand**.

In sum, **the EU's semiconductor industry is not investing enough to meet future demand of European industries, most notably automotive, renewables, communication, and electronics**.

Furthermore, lengthy processes and a lack of coordination among Member States slow the management of Chips investments in the EU.

The EU Chips Act was introduced to address these challenges and to enhance Europe's position in key segments of the semiconductor value chain, **attract significant investments**, **increase domestic production** capacity, and implement mechanisms to **monitor and respond to supply disruption.** The **European Chips Act also includes measures to foster the manufacturing of quantum chips in the EU**, so that they can power a whole range of innovative quantum devices.

The EU should stimulate its innovation potential of mainstream chips, which plays a critical role in ensuring Europe's industrial competitiveness and resilience across multiple sectors (e.g. automotive, automation, robotics, IoT).

Additionally, the EU should boost innovation in quantum chip development. This is a must if the EU is to accelerate the time-to-market for EU industrial innovation in quantum technology which requires a reliable and scalable supply chain that allows for small volume production and high R&D flexibility and made accessible to the entire quantum ecosystem.

Furthermore, the EU should strengthen innovation in the development of other next-generation semiconductor technologies and processes (e.g. photonic chips, wide-bandgap chips as well as design, manufacturing, test, assembly, and advanced packaging**) within the EU.**

Now, it is time to closely follow the ongoing implementation and progress of the Chips Act to ensure that its objectives are met. **The Chips Act is a starting point to giving EU Member States the necessary competitive edge they need to support strong industrial policies in the race for semiconductor production and technology locations.**

While monitoring the implementation of the Chips Act, the EU must reduce its strategic dependencies and enhance its capabilities in chips and semiconductors, focusing on segments of the supply chain where it can build a competitive advantage. **Furthermore, it is crucial to acknowledge the interdependence between the**

success of a strong semiconductor industry and the effectiveness of a cluster strategy. There are only a few efficient networks and clusters in Europe, and it will take several decades of patience and strategic perseverance before they reach the critical point of becoming self-supporting systems. The success of these clusters also depends on the development and implementation of European coordination for clusters including and beyond semiconductors.

The chips and semiconductors industry keeps emphasising the importance of close interaction between research, training, suppliers, and a robust public infrastructure to accelerate the path from research, development, testing and finally full-load production. Therefore, in addition to other measures, strengthening the entire network structure must be a key focus in the future. Furthermore, industry must boost its investments into market-oriented research.

This requires the development of a **new EU Semiconductor Strategy**, with specific actions including:

- **Establishing an EU semiconductor budget to complement Member States' investments** and support long-term growth. This semiconductor budget should be specifically tailored to crowd-in and leverage private investments along the entire value chain, as the investment needs cannot be met by public funding alone. The crowding-in should focus on both industrial companies as well as institutional investors.
- **Coordinating demand requirements across the EU** to strengthen the semiconductor supply chain.
- **Reform the regulatory framework of Projects of Common European Interest** (IPCEI) including a fast-track process to speed up approval and investment processes, while ensuring member's level playing field.
- **Strengthening the overall network structure** by implementing a strategic approach to regional and cluster policy, building on the initiative of Competence Centres from the Chips Joint Undertaking.
- **Developing a long-term approach to address the shortage of skilled labour in the microelectronics and semiconductor industry.** This will require improvements to the transfer of knowledge between research and industry, ensuring the availability of the necessary skills and expertise. On semiconductor trade policy, the EU needs to adopt a clear, comprehensive, and forward-looking strategy vis-à-vis the US and China, as well as India and other potential emerging large market players in the future.

4. STRENGTHENING CYBERSECURITY

In a fast-changing global scenario, ensuring a secure digital environment will be crucial for fostering growth and innovation in Europe.

Strengthening cybersecurity across the European Union is essential for the development of all strategic sectors, as outlined in this Policy Paper, from the deployment of robust infrastructure to the reinforcement of ICT manufactures.

Regulations approved over last term, such as the Cyber Solidarity Act, the Cyber Resilience Act or the Revision of the NIS Directive constitute significant steps towards stronger cybersecurity in Europe.

The Cyber Resilience Act, approved in March 2024, introduces mandatory requirements for connected digital products and imposes obligations on manufacturers, importers, and distributors. If a product is

hacked, manufacturers will be required to report it to the relevant national authorities as soon as possible, who will then notify ENISA. The Commission must consult industry stakeholders through a continuous process in the implementation of the Cyber Resilience Act.

Meanwhile, the Cyber Solidarity Act, approved in April 2024, strengthens the identification of and response to cyber threats by creating new mechanisms such as the Cybersecurity Alert System and the Cybersecurity Reserve. The new Alert System creates incentives for Member States to better exchange information on cyber threats and cyberattacks. The Cybersecurity Reserve, consisting of incident response services from private service providers ('trusted providers'), can be deployed if attacked entities cannot respond to a cyber-attack on their own.

Alongside enhancing cybersecurity infrastructure, it is key to continue harmonising the EU's cybersecurity architecture across borders. In that sense, the NIS Directive establishes a framework to improve the resilience of EU networks and information systems against cybersecurity risks. The Directive sets security and incident notification requirements for specific entities. The revision of the Directive (NIS2), approved in December 2022, adds new sectors and categorises entities into 'essential' -crucial for the EU's economy and society and 'important' - which are significant for overall functioning.

There is no doubt that a unified approach to cybersecurity is essential to Europe's ability to effectively respond to evolving threats, such as those endangering personal and industrial data.

The urgency to act is even greater now, as the computing power of quantum computers poses a serious threat to traditional cryptographic algorithms, which currently protect digital communications, and sensitive data across the EU's public and private sectors. This potential vulnerability must be proactively addressed.

To ensure a harmonised approach to EU's cybersecurity ecosystem, the new term should focus on consistent implementation of the legislative measures that were approved in the previous term.

Moreover, the European Commission should present an evaluation report on the Cybersecurity Act, approved in 2018, and present a legislative proposal to review the Cybersecurity Act, focusing, among others, on strengthening the European Union Agency for Cybersecurity (ENISA) and accelerating the adoption process of European cybersecurity certification schemes.

Alongside ensuring coherent implementation, the EU needs to permanently adapt for evolving cyber threats and tackle its cybersecurity talent shortage. As cyber threats continue evolving, Europe must ensure it has the talent and expertise necessary to protect its digital infrastructure effectively.

5. DATA SHARING AND INDUSTRIAL DATA

Data, in general, is key for the digital infrastructure of the EU, and industrial data, in particular, for the competitiveness of our economy.

Data is the main resource of digital technologies. The development of the cloud, AI or quantum is inextricably linked to the availability of data. However, until now, the EU harmonised rules on how this data is accessed and used have been missing.

With the Data Act, applicable from 2025, the EU aims to create such common rules.

Industrial data has become a growing asset that must be optimised. This is of paramount importance for the **EU's competitiveness at a time where data comes from connected devices and anything that can be connected will be connected**. However, we know from the European Commission that most of industrial data is underused, which is due to the lack of a proper regulation governing the access and use of industrial data. **SMEs and start-ups face special access difficulties.**

In that regard, the Data Act has the potential to be an absolute game changer as it can create a data-agile ecosystem that enables easy access to an almost infinite amount of industrial data. This will contribute to optimising existing business models and processes, boost the development of new ones, create new value, structures, and partner networks.

The 'landing' of the **Data Act requires vertical regulation** in specific areas such as **the automotive industry.** The European Commission has announced a sectorial regulation on access to **in-vehicle data**, functions, and resources for the second quarter of 2023, which is still to be presented. **There is an urgent need to deliver this regulation, and to identify other sectors in need of such vertical regulations for industrial competitiveness.** Building on the Data Act, we must continue creating a path to develop industries of the future which are dependent on data in the EU. One such example is the usage of Applied AI, where the EU has a competitive advantage due to large amounts of data already collected.

Regarding the Data Governance Act, applicable since 2023, it is clear that sharing data across different industrial sectors, public administrations, and other institutions will be crucial for innovation. In the last term. The Data Governance Act aims to build the foundation for an efficient trustworthy exchange of data in the EU.

This legislation establishes 'data intermediaries' which certify that the data is secure and reliable. The law also aims to create **clear rules for these intermediaries**, formalising the role of **data mediation service providers** in the emerging common market within the EU.

The implementation of the rules for data intermediaries must provide a clear framework, security and predictability while not overburdening data intermediaries, to not endanger the attractiveness and uptake of the role of data intermediary. We also need to **closely follow up the implementation of the Data Governance Act in its entirety** to see what its real impact is, to ensure its full enforcement as well as identify and fill any potential gaps or overlaps identified.

Beyond that, we need to pave the way for building up the **Data Union.**

6. BOOSTING DIGITAL SKILLS ACROSS THE EU

The EU's competitiveness and success in the digital transition rely on having a workforce equipped with the necessary digital skills.

While Europe has high-quality talent, there is a shortage of adult population with intermediate digital skills. This gap in skills hinders innovation and business growth, impacting the EU's productivity and competitiveness. Furthermore, **adult learning is not yet effectively integrated into the EU's education and training systems**, which limits opportunities for workers to develop the skills they need in a digital economy. **Consequently, digital skills shortages hinder the EU's competitiveness**, slowing progress in emerging

technologies and strategic business development. **The lack of skilled workers limits investment and weakens company performance.**

To address the skill gap, the EU should:

- Update educational curricula to align with evolving Digital and STEM skills demands
- Standardise and improve skills certifications across all EU Member States
- Enhance adult learning opportunities by ensuring adequate funding from bothMember States and private organisations, and encouraging companies to invest more in training through different incentives.

7. STANDARISATION AND INTEROPERABILITY

The importance of standards is growing in view of increasing technological competition across the world, most notably from the US and China. **Promoting interoperability and EU standards is key to foster competitiveness in the tech sector.** Both interoperability and common technological standards pave the way for the functioning of the Single Market. The utilisation of standards ensures regulatory compliance in a cost-efficient way, especially for SMEs, start-ups, and scale-ups.

Intensifying European action on standardisation is urgently needed. The existing EU legal framework and the working structures of the European standardisation system are a solid basis to deliver standards in a timely and efficient manner. However, further engagement, especially improvements of its implementation by the Commission are necessary.

The Data Act is a good example for interoperability in cloud technology. This regulation introduces new provisions to facilitate change of cloud service providers and enhance data portability. The Data Act eliminates bottlenecks, enhances transparency, and reduces the time needed to switch between service providers.

The EU must keep working on standardisation, which is a **vital for competitiveness in the tech sector as it ensures products can connect and work together**, fostering innovation and open markets.

8. CONCLUSIONS

In conclusion, **Europe's competitiveness requires fostering innovation through a robust tech sector.** Closing the productivity gap needs **strengthening digital infrastructures** while **consolidating the Digital Single Market**.

Strengthening strategic sectors like **semiconductors and HPC computing** is essential, alongside **investing in digital training** to equip the workforce with the necessary skills.

Additionally, ensuring **strong cybersecurity** is crucial for **protecting our capacity to compete globally.**

Finally, to address the challenges of digital transformation, **the EU must be aware that strong international collaboration is key to advancing technological progress.**

In that sense, the Trade and Technology Council (TTC) serves as a key framework for partnership between the European Union and the United States, both committed to cooperate on advancing digital transformation with shared democratic values.

This transatlantic partnership should continue providing opportunities for collaboration in areas such as cybersecurity, interoperability, and knowledge sharing, rooted in our common fundamental principles.

In addition, the EU should maintain an element of flexibility regarding potential partners in other world region.

EPP ITRE Industrial Policy Paper

Energy systems and renewables

Authors Prof. Dr. Virgil-Daniel Popescu and Prof. Dr. Andrea Wechsler

For a competitive energy market with affordable, secure, and sustainable energy

Executive Summary

The EPP Group envisions a competitive and sustainable European energy market that balances affordability, security of supply, and decarbonisation. These efforts aim to secure Europe's energy resilience, strengthen its global competitiveness, and support the transition to a net zero-carbon economy.

To achieve this vision, the EPP Group outlines the challenges we face, their interconnections, and the path forward to meet our objectives:

Address High Energy Costs: We must tackle the issue of high energy costs, which creates imbalances for our industries and households.

Ensure Security of Supply: We must secure the supply of energy, raw materials, and clean energy technologies, avoiding the risks of dependencies.

Foster Innovation and R&D: We must promote innovation, research, and development to create and produce clean energy technologies, enhancing Europe's resilience in the pursuit of decarbonisation.

Protect Infrastructure: We must safeguard our infrastructure against threats and challenges to ramp up energy security.

Enhance Energy Infrastructure: We must improve energy infrastructure to support the integration of renewable energy and bolster energy security. An interconnected and smart energy infrastructure is essential for achieving Europe's climate goals.

Simplify European Legislation: We must streamline and implement European legislation, particularly the "Fit for 55" package, to strengthen European competitiveness.

Achieve EU Climate Targets: We must aim to meet EU climate targets while respecting the principle of technological neutrality and maintaining competitiveness, particularly through the ramp-up of renewable energies.

Advance Energy Storage and Flexibility: We must promote energy storage solutions, energy efficiency and flexibility to enhance grid responsiveness, increase consumer participation, and ensure that energy systems can adapt to the fluctuating supply of renewable sources.

Support Workforce Transition and Training: We must support Member States on training programmes for workers transitioning from fossil fuel industries to the low-carbon and renewable energy sector.

1. Introduction

A competitive European energy market that ensures affordable and clean energy is essential for the wellbeing of both citizens and industry across the European Union (EU). Such energy access is not only vital for maintaining industrial competitiveness and economic resilience but also for advancing sustainable growth and driving innovation. The energy sector is at the heart of the EU's ambitions to combat climate change and

foster a robust economy that benefits all its citizens. The EU's commitment to achieve climate neutrality by 2050 sets a clear vision.

2. Challenges

Challenges to the European energy market are enormous and manifold impacting the EU's ability to maintain a competitive edge in global energy transition and to compete with global players.

High energy costs

Even though energy prices have fallen considerably from their peaks, electricity prices in the EU are 2-3 times higher and gas prices are up to five times higher than in other industrialised countries. There are also significant discrepancies between the EU Member States.[1] This imbalance **places European industries at a severe disadvantage**. As the short-term (day-ahead and intraday) market mechanisms in Europe are based on marginal spot pricing, natural gas remains a key driver of energy prices. The marginal pricing system should be used to ensure efficient balance in the energy system. Energy-intensive industries, such as steel, aluminium, cement, and glass production, are particularly vulnerable to high-energy prices, which erode profit margins and drive up the cost of goods produced in Europe. This imbalance has posed enormous risks to European competitiveness as it hampers its attractiveness for strategic investments in the European market. High-energy prices also place a significant burden on households across the EU, leading to higher living costs, energy poverty for vulnerable populations, and possibly social unrest as more people struggle to afford basic utilities like heating and electricity. Furthermore, the lack of uniformity of the internal energy market is leading to major disparities on energy prices across Member States.

Increasing energy, supply chain and infrastructure dependencies

The European energy sector faces significant challenges related to its ***dependency on external energy sources***, on critical raw materials and on infrastructure, making it vulnerable to supply disruptions and price volatility. Europe's transition to clean energy technologies has increased its reliance on raw materials critical for renewable energy infrastructure, such as lithium, cobalt, and rare earth elements, which are essential for the production of batteries, solar panels, and wind turbines. The supply of these materials is concentrated in a few countries, with China dominating the processing of rare earth elements and several African nations providing key minerals like cobalt. Moreover, the European energy market is interconnected through a network of pipelines, power grids, and energy terminals, many of which extend beyond the EU's borders.

Decreasing industrial and technological competitiveness

Europe's shift towards clean energy technologies, such as wind, solar, geothermal, and electric vehicles, is heavily reliant on advanced technologies. Many of these technologies, particularly in the fields of energy storage (e.g., batteries), smart grid systems, and advanced nuclear energy, are developed or manufactured outside the EU, with China increasingly leading in innovation and production. ***This dependence on foreign***

[1] European Commission, The Future of European Competitiveness (2024), p. 2.

technology makes Europe vulnerable to supply disruptions, intellectual property constraints, and price fluctuations, especially in times of geopolitical instability or trade conflicts. The EU needs to contribute towards keeping industries and SMEs competitive and ensure a level-playing field for European industries globally. The European Union has brilliant minds; however, in total EU research and development expenditure relative to GDP stood at only 2.27% in 2022.[2] The decreasing industrial and technological competitiveness hampers cost-effective decarbonisation as well as the pathway of Europe to the leading technology provider in the realm of clean tech.

Power network infrastructure deficiencies

With the **increasing electrification and an unbalanced deployment of renewable and low-carbon production facilities, massive infrastructure investments into the power network infrastructure, including distribution grids, are necessary.** Administrative hurdles and regulatory barriers, such as lengthy permitting processes, further complicate the deployment of technologies such as smart grids, delaying investments especially for SMEs and discouraging widespread adoption. A strong power network infrastructure, cross-European interconnection, including connections to energy islands and storage, will be key drivers of the energy transition. Thus, deficiencies in the grid infrastructure and the pressing need for implementation and supervision of existing regulation poses a huge threat to the furthering of a more interconnected, decentralised, and flexible electricity system. Without substantial upgrades to existing infrastructure and the development of smart grids, capable of handling advanced communication technologies, integrating renewables will be limited. Additionally, existing grid infrastructure constraints make it difficult to manage decentralised generation, which requires digitalisation and smart grid implementation. The existing grid is partially outdated and not fully equipped to handle the variable nature of renewable energy. Moreover, energy storage limitations also persist, as large-scale storage remains expensive, despite decreasing battery costs, and long-duration storage technologies like flow batteries and solid-state batteries are still under development. Europe must coordinate strategic filling of storage for upcoming winters.

Reporting burdens

One of the overarching challenges in the EU is **massive regulatory and reporting burdens** - especially in the realm of sustainability reporting. Particularly in terms of reporting and calculating carbon footprints, the reporting burdens weigh heavily on companies and industry. It follows that coherence of existing legislation is missing, causing an increase in reporting costs. Unless synergies between regulatory flexibility and reporting requirements are created, European competitiveness is at risk.

Delay of decarbonisation in industry and energy sector

The EU targets are set to achieve a reduction of CO2 emissions by 55% by 2030 while increasing the share of renewables by 42.5% by 2030 which includes synthetic fuels and renewable non-biological fuels. However, lack of technology openness together with high investment costs and administrative hurdles have left the EU to **lag behind its timeframe for decarbonisation**. Therefore, technology openness will be crucial, particularly

[2]Eurostat, R&D expenditure (2024), online.

as the market is moving from production to demand flexibility. In this context, it is noticeable that the underdevelopment of long-term contract solutions (inter alia PPAs) prevent benefits from increasing renewable energy sources to be realised. The recent Electricity Market Design Reform already encouraged Member States to promote the uptake of PPAs. This included removing unjustified barriers and disproportionate or discriminatory procedures or charges, including with respect to renewable energy, while preserving competitive and liquid electricity markets and cross-border trade. The decarbonisation and energy transition particularly for regions heavily reliant on coal and traditional energy will be difficult, time consuming and costly. Moreover, Europe's hydrogen strategy is still in its early stages. The scaling up of hydrogen production is essential for European industries, but so far it has fallen short of the required targets. Ultimately, the decarbonisation targets will only be achievable in a joint effort that includes industries, SMEs, and the citizens of the European Union. The decarbonisation of certain industry sectors - such as steel, cement, and chemicals - will require openness towards Carbon Capture and Storage (CCS), Carbon Capture and Utilisation (CCU), direct air capture and hydrogen usage.

Declining energy security

The EU's energy infrastructure faces enormous challenges in relation to energy security. Those challenges are grounded in **infrastructure deficiencies, threats of cybersecurity and challenges due to the climate crisis**. This includes addressing cybersecurity and data privacy concerns that arise with the deployment of smart grids. In addition, a rising number of cyberattacks on European infrastructure together with climate challenges caused by flooding, among other challenges, are affecting European energy security.

3. The EPP`s Vision for Energy Systems and Renewables

Based on an understanding that

Energy policy is key for the well-being of people in the EU,

energy policy is a core industrial policy,

energy policy is a core element for re-establishing Europe's competitiveness, and

energy policy is key for achieving the EU`s climate targets

the EPP works towards the establishment of an internationally competitive European energy market with affordable, secure, and sustainable energy.

4. Measures towards the EPP's Vision

To address its acute energy crisis, the European Union must decisively tackle the pressing challenges and structural disadvantages detailed above. To this end, it is imperative that the following comprehensive set of strategic measures and targeted actions be developed, adopted, and implemented without delay in order to mitigate the current issues and ensure the EU's long-term competitiveness and sustainability.

4.1. Implementation

Key for the attainment of the EPP Group's vision for the European energy system will be implementation. The successful implementation of adopted legislation and in particular the 'Fit for 55' package is now the top

priority for the European energy sector. It provides the necessary framework to create a clear business case and secure long-term investments in renewable energy and infrastructure. By prioritising implementation without introducing further regulations, we can give the industry a breath of relief.

We propose:

- Member States must be held accountable through the timely submission and execution of their National Energy and Climate Plans (NECPs), which are essential for tracking progress and ensuring that EU-wide objectives are met.
- Member States need to swiftly transpose legislation into national law and ensure timely and effective execution, in particular for acceleration permitting times for renewables and grids through a one-stop-shop approach with clear timelines across Member States.
- Market-based solutions like power purchase agreements (PPAs) and two-way contracts for difference (CfDs) should be adopted across all Member States.

4.2. Simplification

To achieve a competitive and sustainable European energy market, the simplification of environmental regulations and reporting requirements is essential. Currently, businesses face an overwhelming array of overlapping rules, such as the Corporate Sustainability Reporting Directive (CSRD), the Taxonomy Regulation, and the EU Emissions Trading System (ETS).

We propose:

- A comprehensive proposal on better regulation to address overlapping, redundancies, and over-boarding reporting duties.
- Omnibus proposal to make fast permit procedures and make the principle of overriding public interest the norm across all sectors.
- Reforming the Regulatory Scrutiny Board into an independent Regulatory Control Council would further enhance the quality of energy legislation. This council would focus on assessing bureaucratic complexities in the energy sector, ensuring that legislation remains efficient and does not overburden companies, especially SMEs. Early impact assessments with a new focus on cost-effectiveness could help identify unnecessary administrative obstacles and promote innovation without increasing compliance costs.
- Creation of a unified portal for national and EU-level reporting and financing opportunities would significantly ease administrative burdens on businesses by centralising all necessary templates and information.
- Simplifying European procurement processes at the regional level would also contribute to a more business-friendly environment.
- Ensure a pragmatic approach for all upcoming DA/IA.

4.3. Integration

Achieving a true European Energy Union is essential to ensure energy security, reduce costs, and foster a resilient energy system across the EU. By creating a highly interconnected and integrated energy market, Europe can harness the full potential of cross-border energy flows, driving down prices and enhancing supply

security. A fully integrated energy union not only reduces price disparities among Member States but also delivers substantial savings for consumers and industry alike for electricity alone, market integration has already brought estimated annual savings of EUR 34 billion, underscoring the economic benefits of deeper integration.[3] The Letta report states that: "The more the EU advances towards a decarbonised energy system, the greater is the need for market integration. The benefits of integration, in absolute terms, grow with the increase of renewables in the system, strengthening the value of its flexibility and overall resilience." In 2023, every Member State benefitted from imports at times being part of Europe's integrated electricity market, showing the importance of cross-border capacity being available for trading with neighbours. Also, the Draghi report emphasises the need to develop the governance needed for a genuine Energy Union.

We propose:

- The ACER's (Agency for the Cooperation of Energy Regulators) mandate and resources will help to ensure that the benefits of market integration are fully realised and that regulatory barriers are minimised. The ACER must prioritise the completion of the Energy Union by having oversight over the development of energy interconnections and expanding cross-border energy infrastructure. Enhancing interconnectivity between EU Member States is crucial for ensuring energy security, economic resilience, and sustainability across the Union. The EPP wants to structurally integrate energy markets.
- The European Commission together with ACER needs to oversee horizontal implementation, particularly in areas such as energy interconnections and the European grid infrastructure, which are vital for a unified and resilient energy market.
- Reduce dependency on external sources, and achieve the EU's climate goals, while fostering greater integration within the single market.

4.4 Acceleration

To ensure Europe's energy transition and maintain technological leadership, the acceleration of research and innovation in low-carbon and clean energy technologies is paramount. The EPP Group is committed to fostering a robust innovation ecosystem, with a focus on energy, climate, and material sciences. To this end, Europe must solidify its role as a global hub for advanced energy research, particularly in areas like nuclear fusion, hydrogen, energy storage technologies, smart grids, along with other renewable energies and digitalisation, which are critical to achieving climate goals and improving competitiveness.

We propose:

- The EU must introduce minimum quotas for investments in competitiveness within the revision of the multi-annual financial framework. This will ensure that a substantial portion of EU funds is directed toward innovation, research, and development in key energy technologies. Simplifying fund structures and reducing administrative burdens, making it fit for purpose, is also crucial to making these investments more accessible and attractive.

[3] European Commission, The Future of European Competitiveness (2024), p. 14.

- Research should be directed towards advanced energy technologies, such as Generation IV reactors and Small Modular Reactors (SMRs), to advance nuclear technology as a low-carbon energy source.
- The EU must establish partnerships to support hydrogen's role in energy storage and decarbonising hard-to-abate sectors.
- The EU should ensure the implementation blending targets for hydrogen and green gases in the gas grid and increase funding to facilitate its integration into existing energy systems.
- Safe and sustainable nuclear waste disposal through geological repositories and the exploration of advanced reprocessing technologies are also essential for maintaining nuclear as a viable energy option.
- Meeting the EU's commitment to annually invest 3% of GDP in research and innovation is essential. The InvestEU programme needs to be strengthened to attract private capital into competitive, clean energy technologies, ensuring that Europe remains at the forefront of the energy transition. To create effective synergies, IPCEI projects should be coordinated horizontally.
- Guidance to Member States for training programs for workers transitioning from fossil fuel industries to renewable energy sectors is essential for ensuring a just and inclusive transition. The European Commission should give guidance to support affected regions and communities, helping to create new economic opportunities and mitigate potential social impacts. The shift to renewable energy and low-carbon alternatives should not disproportionally affect livelihoods of workers in this sector.

4.5 Technology Neutrality

A technology-neutral approach is crucial for driving innovation and ensuring flexibility in Europe's energy transition. The EPP Group advocates for an open and neutral approach to energy policy that allows various technologies to compete on equal footing and ensuring price competitiveness and cost-effectiveness are the key determinants. This guiding principle encourages innovation, ensuring that the best solutions—whether in renewable energy, low-carbon technologies, or electrification—emerge through market dynamics rather than prescriptive regulations. Instead of a prohibitive Europe, we envision an innovative Europe that prioritises the economic, financial, and social needs of its citizens.

We propose:

- The Energy Taxation Directive should support all low-carbon energy technologies on equal terms and address levies and tariffs.
- In the upcoming revision of the Fit for 55 package, technological neutrality should be ensured by also promoting all low-carbon energy sources. Research and the commercialisation of advanced biofuels derived from non-food feedstocks will enhance both sustainability and energy security. This will provide a reliable low-carbon energy source. Biomass sourcing needs to be possible. Emerging renewable technologies like geothermal including lithium production, hydropower and marine energy must be tackled.
- Moreover, in some areas, such as nuclear energy or the use of gas as a transitional fuel, maintaining a diverse technological mix remains essential to ensure both economic and technical feasibility.
- No technology should be discriminated. Therefore, the European Commission should review the classification of geothermal energy applications to put geothermal on an equal regulatory footing with wind and solar. The European Commission should present an EU geothermal strategy. This strategy should give concrete guidance to Member States and local administrations on how the deployment of geothermal energy can be accelerated.
- Long-term investments in green gases needs to be insured.
- 100-day electrification plan should be balanced and cost-efficient and not represent the next one-sided approach to the energy transition.

4.6 Decarbonisation

Decarbonising Europe's economy is a key priority in line with the Paris Agreement and achieving this requires bold action across multiple sectors. Hard-to-abate industries such as transport, chemicals, and metals must transition to low-carbon energy sources, with hydrogen and biogas playing a critical role. However, challenges such as high production costs driven by electrolyser CAPEX, OPEX and power prices, along with the need for extensive infrastructure development, pose significant obstacles to hydrogen's widespread adoption.

We propose:

- The European Hydrogen Bank must be significantly strengthened and the tendering volume expanded to foster a competitive hydrogen strategy that supports industries.
- While low-carbon fuels will serve as a bridge to a hydrogen-based future, renewable fuels of non-biological origin (RFNBOs) are crucial for long-term decarbonisation. The European Commission must accelerate its impact assessments on RFNBO availability and affordability, ensuring timely revisions to policies if targets are not met.
- The Delegated Act on low-carbon hydrogen should maintain a technology-neutral stance and a pragmatic definition of low-carbon hydrogen, supporting all methods capable of achieving greenhouse gas reductions, while also enabling imports and the inclusion of various low-carbon electricity sources through power purchase agreements (PPAs) and CfDs.
- The EU should encourage flexibility, storage systems especially those dedicated to renewable energy and storage solutions of a range of durations to suit varying circumstances by

recognising energy storage as a distinct asset class and adjusting market rules to enable aggregators to offer demand response services. Increase consumer participation and ensure that energy systems can adapt to the fluctuating supply of renewable sources.

- Market-based measures remain essential for driving decarbonisation. The EU Emissions Trading System (EU-ETS) should become more flexible, particularly in accommodating Carbon Capture and Utilisation (CCU), Carbon Capture and Storage (CCS) and negative emissions technologies like Direct Air Carbon Capture and Storage (DACCS) and Bioenergy with Carbon Capture and Storage (BECCS). There should be a proposal to include negative emissions in the ETS in order to create a basis and business case for taking care of unavoidable emissions from 2039 (when certificates expire).
- Free allowances for companies investing in decarbonisation measures and utilising ETS revenues to support industries and infrastructure expansion are necessary steps.
- The EU should promote renewable energy by streamlining permitting processes for wind energy projects through standardised, simplified procedures and involving local stakeholders early in planning with community benefit-sharing mechanisms
- Remove barriers to renewable technologies such as rooftop solar and support emerging renewable technologies like geothermal and marine energy.
- Temporary exemptions for construction emissions in decarbonisation projects should be introduced.

4.7 Efficiency

As Europe transitions away from fossil fuels, energy efficiency must become a central pillar of its strategy to build a resilient and sustainable energy system. Achieving the EU's ambitious climate and energy goals will require not only the electrification and automation of the economy but also significant improvements in energy efficiency across all sectors. Enhancing energy efficiency helps reduce dependence on energy imports, cut emissions, and create jobs, driving sustainable economic growth across the Union. A key area of focus must be energy efficiency in residential buildings, which account for a large share of Europe’s energy consumption.

We propose:

- Member States should simplify energy-efficient renovations, by adopting accelerated permitting processes into national legislation. Reducing bureaucratic hurdles is essential to making renovations more accessible, ensuring that efficiency gains are realised faster, and reducing energy bills for consumers.
- The EU must engage all consumers, in particular industrial ones, in energy efficiency initiatives and demand-side measures to reduce consumption and operational costs.

The State of the Energy Union Report 2024 published in September underlined that during year 2023, 10.6% of the EU population declared that they were not able to keep their home adequately warm. The EU should monitor that the EU-level emergency measures on retail price included in the new energy market design are correctly applied in case of price crisis. EU Member States should ensure that other policies and measures have no adverse effect on those individuals and households.

4.8 Infrastructure Building

The European Grid Action Plan highlights the importance of upgrading and expanding Europe's grid to avoid bottlenecks that could hinder the accelerated deployment of renewable energy. Without the necessary grid improvements, the benefits of clean energy investments will be undermined, as the system will struggle to handle increased demand and intermittent supply. It is estimated that for every Euro spent on clean power between 2022 and 2040, EUR 0.9 will be required for grid investments, amounting to approximately EUR 90 billion per year.[4]

At present, around 40% of Europe's distribution grids are over 40 years old and require modernisation to meet the demands of the future. Investing an estimated EUR 375-425 billion in distribution grids by 2030 is necessary to address these challenges and prevent grid constraints.[5]

We propose:

- Achieve EU´s set interconnection targets as soon as possible.
- Public financing through initiatives like the 'Connecting Europe Facility' must be reinforced under the MFF to support projects of common interest within TEN-E and supplemented by significant private investments.
- Short-term incentives are needed, alongside long-term financial strategies, such as completing the Capital Markets Union. By building a more interconnected and flexible energy network, Europe can ensure the security and sustainability of its energy supply while meeting its climate ambitions.
- Enhance manufacturing capacities for renewable technologies within the EU or allied countries to reduce dependency on external suppliers and strengthen the domestic energy industry.
- Efficient new transmission lines across the EU.
- Accelerate the deployment of smart meters and advanced metering systems for real-time energy management.
- To increase acceptance and address concerns regarding renewable energy projects, the EU must develop community benefit-sharing mechanisms and involve local stakeholders early in the planning process, ensuring local participation and support.

4.9 Stability for Investments

Achieving the EU's ambitious climate and energy goals requires significant and stable investment across the energy sector. To create the necessary conditions for large-scale investments, clear long-term targets and a stable regulatory environment are essential. Investors need certainty to commit capital to the complex and lengthy projects that underpin the energy transition, from renewable and low-carbon energy generation to grid expansion and storage solutions. This stability will enable Europe to maintain its competitiveness while meeting decarbonisation objectives.

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[4] European Commission, The Future of European Competitiveness (2024), p. 22.

[5] European Commission, The Future of European Competitiveness (2024), p. 15.

We propose:

- The EU should support energy projects, prioritising investments under the Multiannual Financial Framework in innovation and competitiveness also for renewable energy, energy efficiency, and infrastructure, storage, as well as distribution modernisation. We must coordinate strategic filling of storage for upcoming winters.
- The Capital Market Union needs to be deepened. The EU legal framework for securitisations needs to be revised, harmonising insolvency laws across Member States, and enhancing coherent EU supervision, such as adjusting the mandate of the European Securities and Markets Authority (ESMA). By improving access to venture capital and expanding investment opportunities for pension funds and insurance companies, Europe can unlock the private capital needed to finance the energy transition.
- The Commission should utilise the amounts of unused commitment appropriations and decommitted appropriations under the MFF to lower energy prices effectively by redirecting the finances towards the appropriate programs. The Commission should closely monitor the implementation by Member States in the case of under-implementation and low absorption rates throughout all programmes.
- The Commission and the Court should accelerate the discharge process to N+1.

4.10 Digitisation

Digitisation is a cornerstone of the EU's energy transition; driving the development of a more interconnected, efficient, and resilient energy system. The integration of smart grids, AI, and data sharing is crucial to managing the complexities of an energy system increasingly reliant on fluctuating renewable energy sources. Smart grids, which can adapt to real-time changes in energy demand and supply, are important for maintaining stability and optimising energy distribution across the European Union. The EU should therefore accelerate the deployment of smart grids and advanced metering infrastructure.

We propose:

- A fully digitalised and interconnected Energy Union will not only enhance the resilience of Europe’s energy networks but also unlock new opportunities for innovation and efficiency.
- The creation of a comprehensive EU Energy Data Space, which facilitates interoperability and data sharing between Member States, is key to achieving this goal. Sharing best practices and insights will help ensure that all regions benefit from technological advancements and system efficiencies, leading to a more cohesive and reliable energy system across Europe.
- Artificial intelligence (AI) has vast potential to accelerate the transition to a cleaner, more decentralised energy system. AI can enhance energy efficiency, improve system reliability, and optimise energy planning by enabling predictive maintenance, real-time grid management, and better integration of renewable sources. However, AI deployment also poses challenges, particularly regarding cybersecurity risks and the increasing energy consumption of data centres, which are expected to see a 28% rise in demand by 2030.[6] Addressing these challenges

[6] European Commission, Commission adopts EU-wide scheme for raiting sustainability of data centres (2024), online.

will require research and investment focus on artificial int[6] ligence in electricity trading, power consumption, the power grid, and areas such as the integration of electro mobility for energy storage and stabilising the grid.

4.11 Sovereignty and Resilience Building

Building a resilient and sovereign energy system is essential for the EU to confront a range of emerging challenges, including climate change, cybersecurity threats, and geopolitical instability. The increasing frequency of extreme weather events, such as droughts and floods, coupled with the risks of war and cyberattacks, demands that Europe strengthens its energy infrastructure to ensure both security of supply and long-term sustainability.

We propose:

- Empowering regional and local actors to manage energy resources and infrastructure in a way that is adaptable to specific environmental and security conditions. Coordinating drought management and incorporating climate adaptation strategies into energy planning are critical to maintaining Europe's competitiveness and sustainability in the long term.
- EU-level support to Member States in the implementation and transposition of the Directive on the Resilience of Critical Entities, protecting energy infrastructure both from physical and cyber threats.

4.12 Internationalisation

The European Union must adopt a robust international energy strategy that not only secures its energy supply but also strengthens its global leadership in clean energy technologies.

We propose:

- The EU must forge international energy partnerships with regions such as Africa and Southeast Asia. By collaborating on clean energy projects, the EU can help these regions transition to cleaner energy systems while opening new markets for European companies. These partnerships should focus on mutual benefits—advancing global decarbonisation efforts and expanding economic opportunities for EU businesses in clean energy technology, infrastructure, and services.
- The EU must leverage its economic power to negotiate green trade agreements that promote the export of its world-leading clean energy technologies. These agreements should create favourable conditions for European businesses, including tariff reductions on clean energy products, intellectual property protections, and investment security. Europe's international energy strategy should aim to diversify energy imports, reducing reliance on geopolitical rivals while securing stable energy flows from trusted partners. This includes agreements for importing hydrogen, natural gas, or other clean fuels from regions rich in renewable resources, ensuring the stability of European energy supplies.

Mining and extraction

Authors: Hildegard Bentele and Susana Solís Pérez

Raw materials are the backbone of Europe's industrial sector, crucial for technological and economic advancement. With global demand for critical raw materials (CRMs) rising due to climate-neutral technologies, industrialisation, digitisation and advancements in defence and aerospace, the EU faces intensified competition for access. By 2030, the demand for minerals in clean energy technologies is projected to double. Europe risks replacing its dependence on fossil fuels with dependence on CRMs, many of which are highly concentrated in countries such as China. This situation endangers Europe's strategic autonomy, particularly for policies such as the European Green Deal, REPowerEU, the European industrial strategy and the Digital Strategy.

The EU's Critical Raw Materials Act (CRMA), which came into force in April 2023, aims to strengthen the EU's strategic and material resilience by improving preparedness and monitoring, promoting diversification and domestic resource exploitation, and enhancing recycling, waste collection, substitution, and innovation. Key to this is the setting of the benchmarks for an increase of domestic production, processing and recycling capacities until 2030, a list of strategic raw materials, the identification of Strategic Projects benefitting from streamlined and accelerated permit procedures and improved political ("overriding public interest"), administrative ("single point of contact") and financial support (finance group at European level) as well as national exploration programmes, stress tests and a potential joint purchasing system.

The mining sector in Europe

Europe has experienced a sharp decline in mineral production, contributing only 5.2% of the world's output by 2020, down from 25% in 1984[1]. This decline is driven by the gradual ending of coal mining, high investment and energy costs, planning insecurity and strict regulations. A lack of exploration and public resistance—despite Europe's rigorous environmental and social standards—have further hindered mining efforts, increasing the reliance of Europe on external sources. In recent years, Europe has also faced unprecedented geopolitical challenges, including an energy crisis, price volatility of raw materials, export bans by China on key materials and equipment, and a short-term oversupply of certain battery materials.[2] As a result, half of the EU's metals capacity and many planned raw material projects are now at serious risk of being outsourced or lost.[3]

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[1] World Mining Data, Total World Production. Link online: https://www.world-mining- data.info/?World_Mining_Data___Data_Section

[2] China's battery metal markets, particularly for lithium, cobalt, and nickel, are facing challenges due to oversupply in 2024. Despite growing global demand for electric vehicles and renewable energy storage, supply has outpaced demand, causing prices to drop. This has led to market volatility and potential slowdowns, with Chinese producers grappling with excess capacity and increased competition. Link online: https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/metals/010224-chinese-battery-metal-markets-face-headwinds-in-2024-amid-oversupply

[3] Eurometaux. Raw materials 2030: A Rallying call for European Resilience. Link online: https://eurometaux.eu/content/files/landing-pages/rm2030/2030%20resilience%20manifesto.pdf

Meanwhile, investment in US manufacturing has doubled since late 2021 due to the US Inflation Reduction Act. Over the past year, Japan, South Korea, Canada, and Australia have all announced their own critical minerals investment packages. Furthermore, companies think access to raw materials is given and price can be the only indicator when purchasing raw materials and not so much long-term supply security. Additionally, the skilled labour force, even in historical mining strongholds, is declining, as is geological expertise.

Strengthening Europe's raw materials supply: key policy proposals

1. Re-establish confidence in EU Regulation and policy coherence for a conducive investment environment

CRMA has established “strategic priority” and “overriding public interest” regarding the increase of Strategic Raw Materials (SRM) capacities. The EU Commission needs to be held accountable for identifying, avoiding, and correcting policy inconsistencies relating to water, soil, industrial emissions, waste treatment, Union environmental law, taxonomy, methane, chemicals etc. paying special attention to delegated acts.

2. Identify and ensure the success of strategic projects

The EU Commission has received an initial wave of applications. It is essential to ensure that streamlined and expedited permit-granting procedures are effectively implemented, along with improved access to financing. Additionally, political support at all levels and transparency measures must be in place to facilitate the project implementation process.

3. Modernise and Europeanise national mining codes

In the absence of a European mining code, the harmonisation of national regulations is nevertheless recommended and should be part of the CRM Board’s work (“best practice” sharing). National mining codes date back centuries and should be adapted and modernised. Regions with mining operations, for example, should permit flexible land usage and the development of new business models.

4. Secure administrative capacities in Member States

Member States need to provide a “single point of contact”, electronic treatment of documents, clear feedback deadlines and national exploration programmes. If implemented, these would be important improvements for the sector.

5. Boosting mining exploration in the EU

Implement defined timeframes and streamlined processes for exploration projects, revoking licences if development does not begin in a set period to ensure active pursuit of exploration rights. Exploration projects should also benefit from simplified and streamlined Environmental Impact Assessment and permitting processes.

6. Substantially improve financing conditions in Europe

Mining and refining projects in Europe face significant financing challenges due to their high risk, long timelines, and susceptibility to market volatility. The EU must establish dedicated funds for SRM and CRM projects, using pooled resources from Member States and Institutions. While these dedicated funds are being created, unspent funds may be redirected, subject to scrutiny of the individual fund and situation. Additionally, financial guarantees should be offered through the European Investment Bank to de-risk investments, following the EBRD's mining guidance model. The idea of equity investments in European CRM projects should be promoted and supported.

7. Counter price volatility and market failure

Contracts for Difference could stabilise the prices of CRM materials produced by companies vulnerable to global pricing distortions from China's market dominance. Agreements and alliances with like-minded partners, such as the US and Canada, could also help. If available, a minimum EU-sourced material content requirement in public procurement could stimulate internal demand alongside other market incentives to promote the use of low-carbon materials or locally produced raw materials.

8. Analyse the creation of a European critical raw materials organisation

The EU could explore models like Japan's JOGMEC[4] to identify potential lessons learned. This body would provide financial support, guarantees and coordination across the raw materials value chain while providing expertise and reassurance to financiers to secure project funding. It would provide time-limited output-based support, applicable both to operating and capital costs, facilitate joint purchases, stockpiling with strict data confidentiality and anonymity for the companies involved, and promote recycling.

9. Vertical integration for investment and competitiveness

The EU should allow vertical integration of requirements across the supply chain to secure investment and public support while fostering ecosystems and clusters that enhance resource efficiency and competitiveness.

10. Enhance social acceptance & local engagement

To foster trust and educate the public on the importance of CRMs for job creation and everyday life, best practice benefit-sharing models that integrate local communities into mining operations should be promoted, while also addressing their possible concerns, engagement requirements across different legislations should be streamlined, stakeholder involvement through external expertise, and ensure transparency in decision-making should be enhanced. Additionally, Europe's high environmental and social standards in mining and

[4] OGMEC (Japan Organisation for Metals and Energy Security) identifies the needs of Japanese industry and supports the securing of essential supply chains. The organisation has strong intelligence capabilities, enabling it to assess potential supply projects worldwide. JOGMEC provides financial support to Japanese companies for the development of mining, smelting, refining, and recycling projects, while also conducting targeted exploration and managing the purchase and stockpiling of critical minerals. Link online: https://www.jogmec.go.jp/english/

refining operations should be highlighted and promoted to raise public awareness of the EU's commitment to sustainable and responsible mining and refining practices.

11. Streamline for all raw materials

Streamlined permitting processes from the CRMA, such as the one-stop shop with defined timeframes, should be applied to all raw materials, not just strategic ones. This will help avoid delays and reduce reliance on international supplies, while still maintaining the prioritisation of strategic raw materials.

12. Daunting task: increase of refining capacities

The EU's energy-intensive mining and refining sectors are struggling with high operational costs, especially in the face of competition from regions with lower environmental standards. Expanding Europe's processing capacities up to 40% of annual consumption will be the most difficult benchmark. To boost the competitiveness of EU mining companies, a portion of Emissions Trading System (ETS) funds may be allocated to sustainable transformation projects of the related industry. Additionally, the mining and refining industries should be integrated into broader energy policies to ensure access to affordable, clean energy and reduce operational costs. We should reintroduce our proposal to allow refined SRM from reliable partners to be counted on the EU quota, this would also significantly increase the credibility of the partnerships we are offering.

13. International level playing field

The EU should closely monitor the implementation of the Carbon Border Adjustment Mechanism (CBAM) during its transitional phase, as suggested in the Draghi report. If the framework fails to prevent carbon leakage, adjustments should be made. Extending CBAM to additional sectors should be deferred until the measure has been proven effective in protecting against both carbon leakage and environmental degradation. Producers of globally traded commodities, who are price-takers, require robust protection since they cannot pass on carbon costs to consumers.

14. Recycling and circular economy

To meet future demand for critical minerals, the EU must strongly enhance its recycling capacity by developing a single market for circularity, including a single market for waste. This involves harmonising regulations,[5] improving the legislative framework to facilitate better collection, sorting, and classification of secondary raw materials (hazardous or non-hazardous), eliminating bureaucratic barriers, and enhancing waste stream treatment.

[5] Public policy that sets common standards, sustainable product standards and end-of-waste criteria is key to creating stable circular markets by ensuring reliable material flows and business confidence. If not fully and equally implemented in the EU Member States, regulations like the EU Waste Shipment Regulation can hinder rather than facilitating cross-border recycling, limiting economies of scale needed for profitability.

The EU should provide financial incentives for recycling infrastructure and the use of secondary raw materials and facilitate intra-EU waste shipments to increase recycling efficiency. Attention needs to be paid to the definition of "waste" and waste exports as well as to the fact that 90% of black mass (a key battery component) currently leaves the EU. Compliance with the agreed new higher standards for recycling facilities in third countries needs to be examined.

15. Advancing innovation and research in the EU

Invest in innovation and research to drive advancements in the EU's raw materials sector. Support the development of new technologies for efficient and environmentally friendly extraction and processing methods. Encourage training programmes and skill development to create a highly qualified workforce. Support public-private partnerships involving industry, academia, and governments to fund innovative projects and accelerate the adoption of sustainable practices throughout the value chain.

Conclusion

Securing a stable supply of raw materials is critical to safeguarding the EU's industrial base and competitiveness, and the transition to a sustainable economy. While the Critical Raw Materials Act (CRMA) provides a solid foundation, it is essential to look beyond its scope and current measures to address future challenges. Policy coherence will be crucial and upcoming delegated acts will have to reflect the strategic priority of SRM and CRM and necessary flexibility. Additionally, fostering synergies with other strategic initiatives, such as the EU's broader industrial and energy policies, will be crucial. Addressing price volatility remains the greatest challenge, and bringing more players into the mining scene as foreseen in the CRMA might help. A coordinated, comprehensive approach that strengthens domestic production, fosters strategic partnerships with resource-rich countries from strategic regions, and promotes recycling, coupled with reduced regulatory burdens, access to affordable energy and enhanced financing options, is the recommended way to improve the EU's industrial resilience and to make the EU a responsible resource manager on the global stage.

EPP ITRE Industrial Policy Paper

Biotech and Life Sciences

Authors: Eszter Lakos and Letizia Moratti

Proposal to make EU Biotech & Life Sciences more competitive

Summary

The life sciences sector will be a key sector for growth in the EU in the coming years. The largest market within the life sciences sector is the pharmaceutical market, which is one of the largest global markets (EUR 1.2 trillion in 2022 and expected to grow to EUR 1.8 trillion by 2027). It is a sector of strategic importance because of the ageing of the EU population and public health threats, such as the possible onset of new pandemics, infections and the continuing increase of new drug-resistant microorganisms. After a century of drug production by chemical processes, which remains significant in Europe, the pharmaceutical sector has changed transformatively in the last two decades with the arrival of biotech medicines, new biological drugs produced in living cells with biotechnological methods, and new Advanced Therapy Medicinal Products (ATMPs) based on gene-cell- or RNA-therapies. Beyond pharmaceuticals, biotechnology spans multiple sectors, including agri-food, industrial applications and environmental solutions, driving innovation across these diverse fields. The potential of AI in the life sciences and biotech sectors so far remains largely untapped, therefore urgent action needs to be taken to harness this potential towards competitiveness of the European economy.

Data on the global biotechnology & life sciences industries reveals a need to address a competitiveness gap in the EU ecosystem in these sectors. The US is by far the country with the highest share of biotechnology patents, the EU lags behind (with an increasing gap to the US), while China seems to have started to close the gap to the EU. At the same time, about 50% of the biotechnology patents in the EU are concentrated in about 7% of the Member countries.

Compared to the US, the EU has a competitive number of researchers with European universities relatively well positioned in biotech and life sciences research as demonstrated by their scientific publications. However, this knowledge is currently not translated into growth of the sector, pointing to limitations of the technology transfer (TT) process, suboptimal attractiveness for the Venture Capital (VC) market, significant industrial scale-up bottlenecks, and financing issues and problems with access to capitals for startups and for small- and medium-sized enterprises (SMEs). In addition, the current European regulatory frameworks are fragmented across the 27 Member States, often not incentivising the development and innovation of innovative pharmaceutical and biotech products. To harness this potential, the European biotechnology and life sciences sector needs specific measures to enable the laboratory and the technology transfer (TT) processes, in scale-up and factory-scale production, as well as in capital markets. Biotechnology was identified as one of the ten critical technology areas for European economic security by the European Commission and has been included as one of the prioritised technologies in the Strategic Technologies for Europe Platform (STEP) regulation. Given its transformative nature, the potential risks of civil and military fusion of some biotechnologies, the Commission together with the Member States are assessing proportionate risk mitigation measures. The European Commission should ensure that the biotech sector has the capacities needed and environment for adequate research, funding, technology transfer, biomanufacturing, distribution capacity and capabilities for new biotech medicines and other biosolutions. In the upcoming mandate, the

Commission should also prioritise unlocking the potential of biotech across a range of sectors to reach the EU's long term strategic and industrial goals.

Assessment of EU competitiveness in the Biotech sector compared to the US

To assess the competitiveness of the Biotech sector in the EU compared to the US, it is necessary to dissect the Biotech value and look at specific areas for action. These areas are notably:

i. University education;

ii. Public and private investment in Research & Development (R&D);

iii. Technology transfer into startups and Venture Capital (VC) investments;

iv. Industrial scale up and access to capital markets;

v. Updating and harmonising regulation to foster innovation in Europe.

1. University Education:

The technology transfer process is particularly complex in the life sciences and biotechnology sectors. Only by acquiring new skills and technological innovation will the next generation of graduates be able to meet the changing needs of patients and society, reducing the existing gap between the skills typical of the biomedical and biosolutions world and those required by a fast-evolving professional and working environment. To accelerate technology transfer, fostering stronger collaboration between researchers, universities and the productive world is essential. This can be achieved through partnerships, knowledge-sharing platforms, and joint innovation projects, ensuring that scientific advancements are effectively translated into practical, market-driven applications.

The need for interdisciplinary academic formation is increasingly critical as modern science and technology become more integrated across fields. AI will radically change the pharmaceutical sector via so-called "combination products" – therapeutic and diagnostic products combining drugs, devices and biological components – which integrate medicine delivery systems with AI algorithms and process feedback data in real time.

Universities are one of the central actors in innovation ecosystems as they produce a highly skilled workforce, generate breakthrough research, and help to turn fundamental research into practical innovation. High-tech innovation clusters typically form around first-class higher education institutions. A lack of these institutions in the EU and weak interaction between universities and businesses limit technology transfer, innovation capacity and ultimately economic growth.[3]

2. Public and private investment in R&D:

EU investments in all R&D activities are lower than the US. The Union still has not delivered on its long-standing objective to annually invest 3% of GDP in R&D. This is largely due to lower industrial R&D spending than needed. In 2021, the EU spent 2.3% of its GDP on R&D, while the US spent 3.5% of its GDP.[4] Sectioning these percentages show that the quantitative gap is due to lower private R&D spending in the EU. **The public R&D investment in the EU was about 0.7% of GDP and it was comparable to that of the US, while** private

R&D investment in the Business sector is 1.3% of the GDP in the EU and 2.4% in the US.[5] At the same time, the functioning of public investment in the EU must be addressed. The recent Draghi Report revealed the complexity and fragmentation of the European public R&D system. Horizon itself is often under-dimensioned and in general difficult to access. Furthermore, the poor coordination of public investment in R&D between the various Member States makes EU spending less efficient and thus less effective than in the US. The public European investment in the biotech/medical areas is twofold. On the one hand, in 2022 there are about EUR 13.5 billion[6] invested through centralised EU initiatives such as the Horizon 2027 programme (which support competitive proposals from all health areas) and in part by the Health Emergency Preparedness and Response (HERA) programme that focuses on preparedness for public health emergencies (such as new pandemia or multidrug resistant microorganisms). On the other hand, **each Member State finances its own biotech & life sciences R&D programmes without EU-level coordination,** which leads to an inefficient framework with duplications in project financing and to an unequal level playing field among Member States. In contrast, in the US, there is a centralised and coordinated public funding programme for health R&D, which amounted to around EUR 44 billion in 2022.[7] This budget depends largely on the NIH intramural and extramural funding of competitive proposals and on the BARDA programme (for preparedness to public health emergencies).

The private R&D investment (by large multinational and mostly publicly listed companies) expressed as a percentage of GDP is 90% higher in the US than in the EU. As reported in the 2024, in the Draghi document on the Future of European competitiveness: "*Although the R&D intensity of US pharmaceutical companies relative to net sales (14.5%) is slightly higher than that of EU companies (13.2%), the United States' dominance in R&D investment is mostly due to the larger overall market presence of US companies (demonstrated by 86% higher global sales). Over the last two decades, the EU's share of global pharmaceuticals, R&D remained at around 20%, while that of the US stood at 40%*" .[8]

3. Technology transfer into startups and VC investments:

Eurostat data show that in 2022 there were a total of 2.1 million researchers employed in the EU, while the US researchers were 1.55 million.[9] Concerning these researchers output, data from the Directorate General for Research and Innovation of the European Commission in 2020 show that **the EU research output is of similar quantity but of lower quality compared to the US**. Indeed, EU researchers publish 21% of the world's scientific papers and this percentage is identical to that of the US. However, US researchers publish 40% of the top 1% publications (in terms of impact factors) while EU researchers contribute only 20% of the world's top 1% scientific papers.[10] **The US is also leading in the development of biotech patents** (39% of total biotech patents in 2020), followed by the EU with a 18% share.[11]

A quantitative assessment of how much of research derived publications and patents are translated into entrepreneurial activity is shown by the amount of VC money invested in all sectors. **In 2023, VC investors put 29 billion US dollars into European companies, while there were 146 billion US dollars invested by VC in US companies**.[12] These numbers mean that on average **each European researcher attracts $14500 while each US researcher attracts $94200**. This 6.5-fold difference in VC money attractiveness of the EU researchers is a clear indicator of the gap in the scaling-up of European vs. US-based research.

4. *Industrial scale-up and access to capital markets:*

Industrial scale-up of biotech drugs and of ATMPs require regulatory expertise and technology development (TD) know-how that are scarce in the EU, since most European companies` experts have been trained in chemical drug production. Moreover, university curricula often do not reflect state-of-the art scientific knowledge, resulting in an insufficient number of graduates skilled in the process of searching, developing and producing biological drugs and ATMPs. Furthermore, the current European regulatory system is not fit for purpose. Biotechnology products are often subjected to many overlapping regulations, none of which is specifically designed for the application. In the EU, it takes up to three times longer to obtain approval for biological plant protection products than in the US, and trial and approval processes are fragmented across member states. Investments in life sciences, particularly in R&D for new products, often incurs higher risks than those in more established industries.

When the EU biotech sector is compared to the US one, it is certainly true that the flow of capital into biotech has been far greater in the US than in the EU. This difference is probably due to the US early start in biotechnology and to the academic and financial support to high-tech firms in the US, contrasting with the generalised weaker development of the EU academic and financial institutions for emerging sectors such as Biotech. In 2023, the global investment in the Biotech sector was about $160 billion. The US biotech firms attracted $57 billion (35%) while European firms attracted $11.5 billion that is about 7.2% of the worldwide funding. The average funding per company in the US was almost two times larger than that the average in Europe.

In fact, the 229 European biotech companies got funded an average $50 million each, while the 583 US biotech firms got funded an average $97 million per company[13].

Biotechnology is also a priority in other regions worldwide. For example, it is a key sector for development under China's 'Made in China 2025' industrial strategy. Biotechnology is a focus area in the American Inflation Reduction Act, issuing an 'Executive Order on Advancing Biotechnology and Biomanufacturing Innovation for a Sustainable, Safe, and Secure American Bioeconomy.' The Draghi report highlights the EU's strengths in green and biotechnologies, advanced manufacturing, advanced materials, and the automotive industry. This underscores the need for the EU to prioritise the entire biotechnology sector.

5. *Updating and harmonising regulation to foster innovation in Europe:*

EU regulations on intellectual property, clinical trials and data protection are key drivers for biotech and pharmaceutical investors. While the EU historically offers strong IP protection for patenting new technologies, protection timelines are often shorter compared to the US. Given the long development times of medicines, stability in the incentives offered by this framework is needed. In addition, approval procedures with the European Medical Agency are slow, while national differences in patenting and market access rules pose additional costs. Cross-country regulatory fragmentation also hinders multi-country clinical trials. Without the ability to conduct critical trials in the EU, companies may choose to patent and manufacture their products abroad. Overall, regulatory burden and fragmentation deters innovative companies to invest in R&D within Europe.

Intellectual Property (IP) significantly boosts EU GDP, investments, productivity, and export. IP-intensive sectors are responsible for 68% of total EU exports. The EU is a knowledge-intensive economy and therefore

IP Rights are crucial to us and strong and reliable IPR in the EU FTAs make EU economy more resilient and strengthen our export performance. But this logic is often ignored when Member States make priorities for new trade negotiations and what outcomes they want trade policy to generate. EU must work much more strategic and united to support growth, competitiveness, and resilience by protecting and harmonising IPR where needed while working towards a level playing field for EU IPR with IPR in third countries, specifically focusing on US IPR. As IPR is crucial for the life sciences Industry, the EU must strengthen IPR and ensure a level playing field of IPR duration, on par with US IPR. Moreover, the EU should make trade diplomacy more efficient on the front scene and boost the awareness and legitimacy on the back scene in between MS and across sectors.

Many start-ups and SMEs (that are the main sources of innovative medicines) rely heavily on IPR, but there is a need for EU Industry strategies and policies to help SMEs boost their exports and connect deeper with global value chains.

The low IPR-awareness in EU calls for action. One could develop and invest in a simplified reporting for the IP-intensive industries in order to provide a transparent and evidence-based dataset for sector-specific IPR provisions while safeguarding company-sensitive information and other measures that make EU Pharma Industries grow more and attract investment for R&D and manufacturing, while ensuring patient access to drugs.

6. Availability of strategically important primary and intermediary materials:

Certain primary and intermediary materials, including chemical substances like PFAS are necessary to keep the European life sciences industry (as well as other strategic industries, including green energy and automotive) competitive as well as to reach wider EU policy goals, such as those set as part of the green and digital transition. To secure Europe's competitiveness and resilience, it is essential to ensure the production and availability of strategically important and/or irreplaceable substances in Europe. The aim must be to ensure that environmental legislation and other restrictions are balanced out with considerations for the need for and availability of such substances. Specifically, it should be examined to what extent regular monitoring of such substances can take place. Such substances should be subject to regular monitoring and any restriction procedures initiated by the European Commission should be based on individual risk-assessments for specific use cases, avoiding simplistic substance-based certification schemes and therefore taking a balanced view with respect to the strategic relevance of primary and intermediary materials for Europe.

In addition, proactive support for the development of strategic technologies to support industrial competitiveness is needed. The bioeconomy will be essential to meet EU objectives for the green transition across different industrial sectors, as it can provide renewable materials and feedstock for various industries, including chemicals, textiles, and construction. The biotechnology sector currently faces a significant regulatory burden, hence the upcoming Life Sciences Strategy as well as any legislative initiatives should simplify the regulatory framework and reduce the administrative burden.

Biotech and Life Sciences

Actions needed to boost competitiveness of the EU Biotech sector to close the gap with the US

The EU needs to unleash its growth potential in the biotech and life sciences sectors. To create value, it needs to overcome major bottlenecks which include the fragmentation of public R&D investment and suboptimal investment in private sector, the limited access to risk-tolerant venture capital, the limited tech-transfer specialised support, an insufficient availability of funding for EU SMEs and scale up businesses and facilities for biotechnologies and life sciences**.** In addition, it needs to harmonise and update relevant regulations. The following suggestions detail how the EU could resolve and mitigate these bottlenecks:

- Public R&D investments are not very focused and poorly coordinated. European action to coordinate biotechnology programmes between the different Member States is needed, or a more efficient and non-discriminatory allocation of the European funding resources, for instance through the **creation of European Biotech Centers of Excellence. Geographically clustered innovation hubs,** akin to the Silicon Valley or the Cambridge Cluster, established through incentives and targeted funding will reap the benefits of agglomeration effects.
- **Public-private partnerships** continue to be promising instruments for R&D in the life sciences sector. Existing programmes should be strengthened and new programmes further incentivised as part of the upcoming relevant EU funding tools. This should be accompanied by targeted initiatives to facilitate the scaling of the results of public-private partnerships, ensuring they reach the clinical trial stage.
- There is a suboptimal R&D investment in the private sector. **European policies should guide and facilitate private R&D programmes through co-financing,** and incentivising the private sector to finance European initiatives.
- Not enough VC money is invested in EU start-ups. To attract more capital, investments, and liquidity in the European markets, it could help to have **an EU venture capital initiative to coordinate activities that facilitate and simplify the VC market across the different EU States.** Venture capital could be further supported by the **European Investment Bank and the European Investment Fund. Further initiatives need to tap the significant potential of pension funds and retail investors for the biotech & life sciences sectors.**
- The EU has an insufficient number of people skilled in Technology Transfer, and in the whole pipeline for developing and producing biological drugs and ATMPs. To improve on these points, it may help **having a few EU Biotech & Pharmaceutical Incubator Centers that could serve to concentrate and thus** help facilitate skilled workforce in this sector and **to create a critical mass of expert people** that would form others in a structured manner. Beyond training, the **retention of skilled workers** should also be a priority.
- There is insufficient availability of private sector funding for EU SMEs, and scale-up businesses, partially resulting from the comparatively shallow capital markets. The Draghi report proposes measures to create a Capital Markets Union by reducing regulatory fragmentation. The CMU could foster the creation of a **unique EU tech stock exchange (i.e., a European Nasdaq)**, to have a larger integrated high-liquidity tech stock market with more funding for venture capital.

- Establish an **EU Life Sciences Office** within the Commission (akin to the AI Office) to oversee and coordinate relevant work across various EU institutions and Member States.
- Cut red tape by **harmonising intellectual property regulation** in a strong and predictable legal framework and speeding up approval procedures by the **European Medical Agency. EMA should aim to match the US FDA approval times for new medicines, without compromising patient safety.**
- Simplify and speed-up the procedures for the registration, approval and funding of biotechnological solutions across all sectors, in particular those that accelerate the green transition. This is especially crucial for SMEs and would involve adjusting approval processes.
- **Mandatory Competitiveness Checks for forthcoming primary and secondary legislation** must continuously evaluate the impact of policy and legislative instruments on the EU's biotech and life sciences sector. These Competitiveness Checks should go beyond evaluation of the regulatory burden and include assessments of long-term trends in investment for both R&D and manufacturing in Europe in the global context. Competitiveness Checks should also be conducted for the existing regulatory framework and legislation currently in the co-legislative procedure.
- Incentivise cross-country data sharing through the careful implementation of the **European Health Data Space** (EHDS) in close cooperation with industry stakeholders. HDS should also be used to tackle screening and treating rare diseases more efficiently.
- **Clinical Trial Regulations across Member States and the EU should be harmonised and simplified**. Significant fragmentation currently disincentivises clinical trials from taking place in the EU and bring significant and unnecessary regulatory burden for sponsors of clinical trials. Therefore, harmonisation and simplification should be part of a wider effort of keeping Clinical Trials in Europe, exploiting wider societal benefits including increased financing, jobs, and skills development. Harmonise and **simplify clinical trial regulations** across Member States for multi-country trials.
- Introduce regulatory sandboxes to allow innovative biotech and life sciences companies to experiment with innovative products, services, or business models under a relaxed regulatory framework but within a supervised setting and by using real-world evidence, to ensure market access for these innovative technologies.
- Facilitate European Pilot Facilities to provide start-ups and scale-ups with the necessary infrastructure for transitioning from R&D to market

Conclusions

In conclusion, the EU needs a robust and competitive biotechnology and life sciences industry. Biotech and life sciences are vital strategic assets for European economic sovereignty and security: they are essential to strengthen and protect our public health and be prepared for future pandemics. They are also key to protecting European jobs and prosperity by maintaining our competitive edge in the exports of biotech and pharmaceutical products. To achieve this objective, the **EU needs to create European infrastructures across Member States** to improve the EU capabilities and capacity of discovering, transferring into enterprises, funding, manufacturing, and distributing newer and better biotech and pharmaceutical products, including medicines and vaccines. **Such a biotech & pharma programme would span through six different European**

Biotech and Life Sciences

Commissioners (Tech sovereignty; Health and animal welfare; Preparedness and crisis management; Startup, Research, and Innovation; Economy and Productivity; Industrial Strategy) so adding complexity to the development and implementation of a unique programme. To ensure EU competitiveness in this strategically important sector, it would be appropriate to **develop strategic policies, legislation, and funding.** To ensure the EU's competitiveness in this strategically vital sector, the Commission should establish a regulatory framework that benefits all sectors. We need a "comprehensive European Biotech and Life Sciences Strategy" that follows a holistic approach and includes relevant actions in all relevant policy fields, including regulatory harmonisation, simplification and streamlining.

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EPP Group ITRE Industrial Policy Paper

Aerospace and Defence

Authors: Massimiliano Salini and Tomas Tobé

"Protecting Europe is first and foremost Europe's duty. And while NATO must remain the centre of our collective defence, we need a much stronger European pillar"[1]

Von der Leyen, President of the European Commission, 30 August 2024

The current geopolitical situation is alarming; Europe is experiencing the most dangerous security environment since the end of the Cold War. Russia's war of aggression against Ukraine could escalate to directly involve EU Member States. Authoritarian regimes, such as China, are pursuing an increasingly aggressive foreign policy to advance their interests worldwide, by political and economic means, but also by military means. Beyond Russia's war in Ukraine, numerous global conflicts and threats, not least the dire situation in the Middle East, fuelled by the Iranian-sponsored terrorist attack by Hamas on Israel, and the ongoing occupation of Cyprus by Turkey, require Europe to undertake strong and swift action to ensure its security.

Threats also include the targeted use of disinformation, as well as cyber and hybrid attacks with the aim of undermining the stability of our democratic societies.

Yet, Europe's defence manufacturing capacity and capabilities in space do not match this serious geopolitical landscape. European defence and space industries are lagging behind due to decades of underinvestment and certain structural issues. Europe must take on the role of 'enabler' to strengthen the European security and defence industry as a whole. Our European technologies and innovation in these sectors are globally competitive. Now is the time to use this for Europe and to promote and secure Europe's industry in this area through targeted harmonisation and investment.

To this day, however, less than half of Member States who are also in NATO spend 2% or more of GDP on defence, in line with their commitments.

A fragmented Single Market poses significant challenges, especially for European start-ups and scale-ups developing innovative and strategically relevant technologies. They face significant hurdles in accessing capital and securing exclusive procurement tenders. Innovation cycles in Europe regarding defence innovation take years and are therefore significantly longer than, for example, in Ukraine, where such cycles occur in mere weeks. Additionally, today, a clear set of norms regulating space devices and their interoperability is missing, which represents a real question mark for the future of space policy.

The EU and Member States have directed significant funds to defence and space investments in recent years, especially since Russia's full-scale invasion of Ukraine. That said, it will take time to get Europe's defence industry back on its feet and strengthen the EU's presence in space. Moreover, it will take more than simply increased investments.

There is an urgent need to expand the European Defence Technological and Industrial Base (EDTIB) on the way to a true European Defence Union. Several important initiatives, notably PESCO, EDIDP, EDF, ASAP, EDIRPA

[1] EU must step up arms production, play stronger role in defence, Commission chief says - https://www.reuters.com/business/aerospace-defense/eu-must-step-up-arms-production-play-stronger-role-defence-commission-chief-says-2024-08-30/

and EDIP, are already in realisation. The European Space Programme and the European Space Strategy for Security and Defence both recognise the critical role of space. There are, however, no quick fixes, and the EU and its Member States need to address several structural challenges in the way the defence and space sectors are organised in order to credibly withstand the security and competitiveness challenges of today and tomorrow. Our objective remains to achieve meaningful European open strategic autonomy.

In this paper, we will delve into different thematic areas to identify the topics that require the most attention in order to meet and fulfil the necessity of a stronger European Aerospace and Defence programme.

Insufficient investment: Europe's market for defence products is lagging behind. It is estimated that total EU defence spending is about one-third that of the US, and the EU has recently been overtaken by China. And not only are public funds insufficient - structural problems in the capital market, including the incomplete EU common capital market, hinder access to private financing to a sufficient extent. The EU taxonomy should direct public and private investments to companies and projects aimed at strengthening our military defence. Misinterpretations of sustainability frameworks divert investment away from the defence sector, ultimately threatening our collective security. In this context, the European Investment Bank (EIB) currently has a negative standard-setting effect on private financers by excluding core defence companies.

Fragmented market: Europe's defence is only as strong as the industry that supports it. Simply increasing defence spending will not be sufficient to improve Europe's defence capabilities in time. Europe must invest more effectively. One reason why the US, for example, has a more efficient defence market than Europe is that the EU does not exploit the potential of the Single Market for defence products, but instead largely organises the defence sector along national borders. The same difficulties can be seen in spending structures, where the US spends 3,5% of GDP on defence and thereby more than twice as much as the EU's 1,5%. Additionally, a mere 7,2% of EU defence R&D spending is coordinated across Member States**,** revealing the magnitude of impact which the fragmentation of the single market poses. The result is smaller, fragmented, and less efficient markets, which ultimately reduces Europe's defence capability.

Overcoming this fragmentation is particularly pertinent to preparedness and defence readiness. Europe remains at the forefront of technological leadership, but the lack of a scalable market hinders companies from scaling and, therefore, becoming competitive. Urgent action must be taken to remove national barriers to defence procurement, as well as increase EU funding for implementation and scale-up projects.

Lack of standardisation: The fragmented European defence market leads to unnecessary duplication of capabilities, which is not only expensive but also weakens our overall defence capability and operational effectiveness, as systems are not interoperable. Some overlap and duplication strengthen resilience; however, a lack of coordination leads to unnecessary difficulties, not least in production, maintenance, and development. For instance, the EU has over ten main battle tank types, whereas the US, which spends three times as much on defence, has only one. Initiatives to streamline the European defence industry should be in line with NATO military standards. The EU needs to use the potential of existing project frameworks to achieve standardisation and unified production of military assets.

Technology of tomorrow: There is a clear demand for a common European ambition in technological innovation within the defence sector. The current architecture makes it difficult for European defence companies to grow and compete globally. Equally, the EU is not doing enough to lay the foundations for new innovative systems: compared to the US, for example, the EU spends less than a tenth as much on defence

research. In 2022, EU Member States allocated only 1.5% of their defence budgets to research and development, significantly below the 2% benchmark and a decrease from the previous year**.** At a time when digital defence tools are more important than ever, this illustrates the urgent need for increasing investments in the development of digital defence tools and capabilities. Moreover, SMEs are largely excluded from defence supply chains, and the path from research to application is long and complicated. This is particularly challenging as regards digital defence capabilities, which will play an essential role in making European defence fit for the future. To defend itself, the EU needs to invest not only in today's defence capabilities but also in planning for future threats.

Establishing a Network of EU Innovation Hubs focusing on prototyping and scaling dual-use technologies could significantly enhance Europe's defence readiness, preparedness and innovation capacity. As a collaborative project between the EU and Member States, these hubs would implement regular evaluation processes and a *flexible "fail-fast" approach* to shorten innovation cycles. Model learnings should be taken from similar programmes that are already successful, such as DARPA and DIANA.

Public-private collaboration: As more than 85% of all new disruptive technologies (IoT, robotics, nanotechnology, quantum computing, AI) are driven by private initiatives, closer collaboration and coordination between the private and public sectors is essential. This includes, among other things, setting up a permanent platform of dialogue and cooperation among representatives of the governments and companies of the Member States. Defence Innovation Accelerators could be valuable tools in addition to existing efforts, such as BRAVE1, EDF, and DIANA, to provide easy entry mechanisms for dual-use technology innovators into defence scale-up and procurement procedures.

To address the problems in Europe's defence industry, a systematic market overhaul is needed. As previously mentioned, many initiatives are already being pursued; in particular, EDIP is expected to address many issues in Europe's defence market. At the same time, some proposals need to be sharpened. For the EPP Group ITRE Committee, this means pursuing the following defence industrial reforms:

Key activities - Defence

1. Creating a European Single Market for Defence

- **Swift implementation of EDIP**

  This programme represents a welcome and needed addition to the tools deployed by the European Commission to stimulate the competitiveness and preparedness of the EU's Defence Technological and Industrial Base in a momentous geopolitical conjuncture. As recognised by Mario Draghi's report on the future competitiveness of the EU, the EDIP addresses several pressing issues in Europe's defence market. The proposal has been shared with Parliament and needs to be finalised urgently, including with Ukraine, as extensively as possible. The proposal features several elements that can prove conducive to this objective, particularly the focus on joint procurement and, therefore, early commitment from end-users. This factor will prove essential in providing long-term visibility to the industry as a whole and particularly to those sectors, such as the naval sector, whose products require costly R&D and lengthy industrialisation

times. An EU-wide interoperable certification framework for defence technologies will be an indispensable part of creating a European single market for defence. Standardising technologies will be the first step towards standardising compliance mechanisms, increasing digitalisation, and enhancing the scalability of technologies, as well as, most notably, interoperability across EU Member States. Thinking beyond EDIP, a long-term Joint Procurement Framework for defence would enhance scaling and consolidate funding for defence, including early-stage dual-use technologies. Currently, national procurement procedures widely do not account for the scaling and flexibility needs of dual-use technologies and the barriers currently hindering these needs. The EU and its Member States should learn from existing and successful programmes, such as DIANA (NATO), Brave1 (Ukraine), and HEDI (EDA).

- **Realisation of EDIS**

When considering focal areas for EU capability development, it will also be essential to build on the sectors identified by the EDIS, such as naval and underwater protective assets. Indeed, the increasing sophistication of submarine and seabed warfare operations, made even more effective using unmanned underwater systems, has turned the protection of both military and civilian assets, such as critical infrastructures including pipelines, communication networks, internet cables, offshore wind farms, and deep-sea mining facilities, into a key EU priority.

- **Consolidation, in accordance with market principles**

  The fragmented, often national, structure of EU defence companies limits the sector's global competitiveness. Consolidation should be encouraged; however, it is essential that consolidation follows a market logic and comes about as a result of demand and removed barriers to integration, rather than by 'picking winners' - for example, through off-take agreements, which Member States already utilise, e.g., ammunition, with defence companies, which stabilises long-term planning and stability and boosts consolidation.

- **Increased joint procurement**

To achieve the objectives of EDIS, Member States should build on the principles of EDIRPA and increase joint procurement. Such mechanisms furthermore need to be extended beyond temporary instruments.

- **Involving SMEs in supply chains**

SMEs are crucial to innovation in the defence sector. However, smaller companies often face significant barriers to entering the market. In order to integrate SMEs into supply chains, the regulatory burden, especially for small and medium-sized defence companies, should be simplified.

- **Exemptions from certain labour law requirements for defence companies**

As was initially intended for the ASAP file, in some cases, it can be justified for defence companies to derogate from certain labour law rules to increase manufacturing capacity and speed up production, e.g., allowing Member States to permit expansion of working shifts, hence facilitating continuity of production in the field of relevant defence products.

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- **Safeguarding market access and export opportunities, while decreasing international dependencies**

The ability of European defence companies to export to other markets strengthens Europe's defence capabilities, as it increases manufacturing capacity, generates revenue, leads to technological development and builds dependencies. The EU should not expose itself to security risks through international dependencies but still recognise that market access is crucial.

- **Ensure effective military mobility**

Facilitating the movement of military troops and assets is crucial for the security of European citizens and for building a more effective, responsive, and integrated Union while promoting greater EU coordination with NATO. In this sense, the development of military requirements for transport infrastructure and geographical data is the starting point for an effective and coordinated approach to military mobility across the EU. The EU should continue its work on the PeSCO Military Mobility (MM) project, enhance the cooperation framework established with third countries and NATO, and achieve an effective and coordinated approach to military mobility, with infrastructure and geographical data as the cornerstone of the PeSCO MM.

- **Harmonised European export regulations**

A harmonised internal market and joint procurement also mean that national export control regulations should be harmonised at the European level in order to promote the internal market and create fair competitive conditions.

- **Improve the engagement on digital defence tools**

Digital defence tools will play an essential role in the future of European defence. The Union needs to focus on harnessing the potential of digital defence tools, such as AI, data analytics, autonomous systems, and space-based tools. Dual-use technologies distinguish themselves by their critical potential for both civilian and military applications. They can also add to our preparedness by protecting citizens and critical infrastructure, and a European approach can add significant value to Member States' efforts. This approach should entail efforts on scalable procurement and increased investments.

To this end, the EU needs to increase engagement on interoperability of digital defence tools, standardisation and common engagement between Member States on investment and procurement. Digital defence tools need to be urgently integrated into existing and future funding and purchasing instruments, such as EDIP.

Building resilient and secure networks is more important than ever, given the increasing cyber threats in the Union. The Union should also deploy autonomous threat-detection systems for critical infrastructure using Artificial Intelligence. To this end, the EU should work in partnership with telecommunications and technology companies to set up and protect these networks. Funding should prioritise systems for critical sectors to increase preparedness and ensure operationality during emergency situations. Armed forces should be equipped and trained with dual-use technologies to contribute to the preparedness and protection of critical infrastructure against conventional, hybrid and asymmetric threats.

Strengthening digital defence skills across the EU is essential to support these efforts further. Partnerships with private sector leaders and universities could also provide hands-on training, ensuring defence personnel are well-prepared and equipped to operate emerging technologies effectively.

2. *Ramp up defence industry investments*

- **Amend the EIB's governing documents**

The EIB should be allowed to invest in core defence projects, including "defence-only" projects. The partial liberalisation, introduced earlier this year, is a step in the right direction. However, the EIB should be a catalyst for private investment in the European defence industry, and there should not be arbitrary limits on which defence-related projects it can invest in. To this end, ammunition, weapons and equipment dedicated to military use need to be removed from the EIB's exclusion list.

- **Simplified regulatory framework for dual-use investments and research**

Military innovation has significant spillover effects, benefiting society at large. However, the opposite is also true, and spillovers from public sector innovation to the defence sector have become ever more relevant in recent times. For this reason, the regulatory framework governing companies dealing in dual-use projects and dual-use research should be flexible, especially for Small and Medium-sized Enterprises. The EU should foster military-civilian cross-fertilisation, particularly with disruptive technologies, including IoT, cloud, quantum, and AI, and their integration into military capabilities, such as Naval Cloud and Naval Digital Twin. In the upcoming discussions on the next Multiannual Financial Framework, the needs of the defence industry to ensure our European security and defence capability must play an important role.

- **Adopt a risk-tolerant innovation culture**

A risk-tolerant approach to innovation is essential for ensuring European technological competitiveness, encouraging technological innovators to 'fail fast' and learn from their mistakes. Educational programs for EU officials and defence professionals should build skills and knowledge in this domain, familiarising the professionals with the understanding of innovation processes and the importance of innovation for defence. Additionally, a Defence Innovation Rewards Program could incentivise innovative projects by awarding funds to exemplary initiatives that meet critical defence needs.

- **Modify the taxonomy**

All available normative tools - from direct investments to those targeting the defence sector - need to be applied. While EU sustainable investment criteria do not explicitly rule out defence investments, the framework should be updated to clarify that defence investment products are not considered unsustainable.

- **Ensure a strong focus on maritime priorities within the CSDP framework, in line with the Strategic Compass (2022) and the revised Maritime Security Strategy (2023)**

While the EU has been involved in several maritime activities over the past decade, mostly centred on counter-piracy and 'blue crimes' (organised crime at sea), it wasn't until the Rea Sea crisis that a European mission was involved in a true combat scenario. Both financial investments (EDF/EDIP) and operational frameworks (i.e. CSDP missions, Coordinated Maritime Presences/CMP) should aim at providing the EU navies with combat-ready naval units with advanced technologies (such as anti-submarine warfare systems, new effectors, unmanned systems), concepts of operation and doctrines suited for both hybrid and high-end warfare.

- **Minimise administrative burden**

To increase the number of companies interested in the EDF and EDIP, the whole process, from the first call of interest to the disbursement of funds, must be as swift and straightforward as possible. We must use standardised procedures, reduce redundant documentation, or eventually implement automated systems for contract management and compliance tracking.

3. Defence R&D

- **R&D in order to maintain Europe's advantage**

Increase funding at the European level for defence research, dual-use research and security research. Member States should allocate at least 0.1% of their GDP to defence, specifically to an EU Fund focusing solely on defence research and development (R&D) projects. Such projects carried out at the EU level contribute to knowledge and technology sharing and increase interoperability and interdependencies between EU countries. Hybrid warfare on seabed networks and underwater cables needs to be considered, as nearly 98% of global internet traffic and data run through these networks, as well as potential threats against ports and offshore renewable energy installations.

- **The role of the European Defence Fund (EDF)**

In the short to medium term, it is essential to ensure some degree of continuity between the European Defence Fund (EDF) and the EDIP. In fact, the most significant EDF projects, which are expected to reach adequate development maturity during the current EDF ('Flagships'), could be considered as an initial testbed for the instrument, particularly to streamline funding and ensure maximum effectiveness. This type of approach can also provide a blueprint for EDF and EDIP successor programmes (i.e. beyond 2027), which should ideally encompass research, development, industrialisation and joint procurement under a single instrument. In the long term, it is essential to ensure that the programmes that will follow EDF and EDIP (in the next MFF) receive adequate funding to fulfil the level of EU ambition. A holistic approach, from R&D to procurement, is needed: there is no business case for companies based solely on R&D without sales. To this end, the EU should learn from successful US programmes, which integrate R&D and implementation/procurement to create a holistic process.

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Key activities - Space

Space is a robust and fast-growing economic sector with profound impacts on various technological, financial and industrial sectors. The space sector, with its broad and innovative start-up and SME segments, plays a pivotal role in advancing technology, science, resilience, defence, security and environmental protection. The European Union is at an inflection point when it comes to its level of ambition in the global technology arena and, more broadly, in the geopolitical landscape. Its position, as well as its credibility as a reliable international interlocutor, will depend on the availability of assets and technologies capable of protecting the EU's interests and critical infrastructures (including those related to space) and enjoying operational autonomy in the global context, both in terms of sovereignty and strategic independence.

Space technology and services are horizontal by nature, and they serve many sectors, including defence, preparedness, disaster management, autonomous driving, agriculture, and weather forecasts. Globally, the space economy is growing at a rate of 8-10% per year. Europe is at significant risk of being marginalised in an increasingly competitive environment dominated by major US industry giants and emerging Chinese companies. Europe's (EU + ESA Member States) public investment in space is only about 1/6 of the US' space investment. Europe needs to take urgent action to ensure its space industry thrives and does not miss out on rapid developments in the space sector. There are three key steps to achieving these objectives: (i) increase public funding, (ii) defragment governance and establish a clear structure of responsibility between the EU and ESA, and (iii) de-bureaucratise space governance. This will create a more dynamic and risk-taking market, thereby attracting risk capital and private investments to the growing market. A competitive space industry can only be achieved through the deepening of the internal market and the attraction of private actors. There is no shortage of risk capital and risk appetite to invest if the boundary and framework conditions above are met. These recommendations are also at the core of the Draghi Report.

Today, the ESA budget (€ 7.8 billion in 2024) is approximately twice the EU budget for space. The EU delegates 24% of ESA's budget to implement its flagship missions, in particular Copernicus and Galileo. There is an essential need for the ESA and EU funding mechanisms to be better aligned and coordinated following the ESA's next Ministerial Conference and the new EU Multi-Annual Financial Framework (MFF) from 2028 onwards. Strengthening the sector, making it leaner and less risk-averse and increasing strategic independence shall be a key goal.

Looking ahead, it is important to align key policy and legislative initiatives with the preparation of the next MFF for space. Addressing fragmentation to establish growth through the Single Market will be essential. Therefore, the forthcoming Space Law should focus on establishing a true Single Market for Space, assessing security, safety, and sustainability while avoiding duplication of existing and new standards and processes. In contrast, the Space Law should also take concrete steps to de-bureaucratise the space sector. The Single Market for Space should build on existing capacities and take into account the broader European space perimeter, including Norway, the UK and Switzerland. The upcoming policy initiative on the space data economy should also address this issue and take concrete steps to promote the utilisation of space data.

Given the multiple synergies, the EU could consider integrating space into the newly-launched concept of the "Defence Union," thus aiming for a "Defence and Space Union."

Aerospace and Defence

1. Space economy

- The EU Single Market for Space should be established as a key driver of growth for the space sector as well as other sectors that can benefit from the use of space.
- The use of space data (uptake) is not yet maximised, and a concrete action plan is needed to ensure the uptake of EU space data by public administrations, economic sectors and academia to benefit EU economic growth, resilience and prosperity.
- The EU should swiftly implement concrete actions to enhance the size and competitiveness of its space market and foster European growth. The forthcoming Strategy on the Space Data Economy should define legislative, policy and financing proposals. Specific measures should also target upstream enabling technologies and systems, as well as the resilience and sustainability of European supply chains to ensure European autonomy in critical space infrastructure.

2. European autonomy in critical technology supply chains

- The EU space ecosystem is highly competitive, but rapid technological advancement, as well as the need to reinforce the resilience of the space supply chain, mandates the EU to reinforce its strategic autonomy for key technologies such as launchers, for instance, through public investments that stimulate institutional demand/purchase, and with mechanisms that facilitate the aggregation of demand itself. The highly innovative start-up and SME space sector should play a particularly significant role in the rapidly evolving developments in space.

3. European resilience systems

- The US, via Starlink, currently dominates the satellite communications market. The EU is preparing an answer in IRIS2. Efforts on IRIS2 need to be accelerated as too much time has been spent in the industrial preparation phase. It is crucial that IRIS2 starts on the right foot so that Europe does not fall further behind in satellite communications competition.
- The next domain of global competition after launchers and telecommunications will be Earth observation. Europe has a competitive and strategic advantage in this sector, given its dominance in the domain thanks to Copernicus, as well as operational meteorology and other strong European and Member State programmes. The US and China are building very high-resolution constellations in Earth observation to ensure sharp eyes on our planet, anywhere, anytime.
- Europe has the potential to become a global leader in this domain, combining its industrial excellence and established market position. Swift action needs to be taken to ensure this competitive advantage is extended and not lost. To this end, the EU should take measures to promote a cost-effective and efficient space market, focussing on enabling operators to decrease manufacturing and operating costs.

4. Access to space

- Access to space must be viewed as a critical infrastructure for Europe, as the utilisation of space is crucial for many key sectors; hence, insufficient access to space would create a competitive disadvantage. Building on the European Space Agency's achievements in access to space, the EU should support demand aggregation for both civil and military actors and join forces to accelerate European innovation and leadership in this critical domain. This action may include OPEX support for access to space, monitoring of the European launcher market and addressing the issue of captive markets.

5. Space exploration, capturing the low Earth orbit economy

- On the global stage, a new 'rush to the Moon can be observed with the capture of the low Earth orbit. The US, China, India and Japan have presented concrete strategies and milestones on their progress. Europe must not miss out on this race. A sustained European presence in low Earth orbit coupled with solid space transportation can unlock commercial opportunities. Through ESA, Europe has initiated specific projects (Argonaut, Moonlight) and participates in the US Artemis programme; however, bold steps are needed to develop a European human capacity for Low Earth Orbit and, eventually, the Moon.
- It is a sector that could offer relevant opportunities, both for technological advancements and the supply of raw materials, which are scarce today (and when available, often non-European), with interesting perspectives linked to the exploitation of microgravity. In addition, it will enhance the role of the EU as truly space power.

Finally, a further reflection on governance is needed, with a new Space Programme to be adopted and with roles to be assigned in a balanced way between the Commission, European Space Agency (ESA) and the EU Agency for the Space Programme (EUSPA), on the basis of their competences and capacities aiming for efficiency at European level.

The policy and legislative initiatives should then be adequately reflected in the space programmatic priorities for the next EU MFF. In the current critical budgetary context, such priorities should be carefully planned, ensuring synergies with priorities subscribed in the context of the ESA ministerial conferences starting in 2025 as well as with commercial and national systems.

In this context, the following proposals should play a key role in boosting the space sector:

1. Ensuring the continuity of current EU space systems

- The EU has ownership and responsibility for critical space systems, notably Galileo, Copernicus and the upcoming IRIS2. They serve as the basis for European ambitions in space, and hence, their continuity in the next Multi-Focal Financial Framework (MFF) is of high importance. The EU should utilise ESA's expertise in Earth observation, PNT, and connectivity and closely align space priorities in the MFF with programmes funded by the ESA ministerial conferences. A space

economy initiative should be initiated to support these efforts and launched in the next Medium-Term Financial Framework (MFF).

2. Reaping the benefits of the space economy in Europe

- The initiatives taken to ensure the continuity of the EU space systems should be designed to foster the European space economy, particularly incentivising private actor participation.
- The EU should address the commercialisation (ensuring the use of space resources in other sectors) and industrialisation (ensuring supply chains for critical space technologies and systems) of space activities. The EU programmes should also decidedly incentivise the creation of new business models, the development of public-private partnerships, and the enhancement of Europe's space infrastructure to encourage private sector participation in space ventures.

3. Dual Use for EU Constellations (Galileo, Copernicus, GOVSATCOM and IRIS2)

- EU Constellations, albeit under civil control, either have dual-use potential (Copernicus) or are dual-use by design (Galileo, IRIS2). The systems should be exploited for even more dual-use, increasing their security/defence role as feasible (up to including secondary payloads explicitly dedicated to defence-oriented tasks), supported by appropriate funding to ensure a seamless transition. This approach enhances the versatility, effectiveness and full exploitation of these constellations.

4. Downstream services

- There is a need to leverage Europe's technological leadership (e.g., the constellations mentioned above) and accordingly increase investments in the development of space services and applications, both in the civil and military domains. The forthcoming Strategy on the Space Data Economy should define legislative, policy, and financing proposals that are able to boost space services and applications. Space Start-ups and SMEs should play a crucial role in the EU's Space Programmes. Therefore, it should be examined how and if quotas could ensure that a sufficient number of start-ups, SMEs, and innovative companies participate in the EU Space Programmes. A dedicated downstream programme and its own budget should be developed and launched within the forthcoming Space Programme for 2028-2034.

5. Establishment of Space Defence Programmes

- Space Defence Programmes should be established with a dedicated and adequate budget to jointly develop:
- Space Situational Awareness (SSA) capabilities and a reinforced EU SST (space surveillance and tracking).

- In Orbit Services (IOS) for upgrade and/or removal of out-of-service satellites and resilience and protection of space-based systems and services.
- A European resilience system with space-based early warning and tracking in support of Information, Surveillance and Reconnaissance (ISR). Such a system will serve users in the domains of resilience, disaster management, external relations, border control and security. It should combine very high-resolution sensors with encrypted satellite communication and build on existing commercial and national systems. A coherent architecture needs to be built, combining Earth Observation, Secure Telecommunications, Navigation and Positioning, and Edge Computing, including AI as well as quantum technologies, to boost resilience and early warning capacities.

6. Access to space

- Building on the achievements of the EU Space Programme under the current MFF, the EU should consider allocating increased support to European access to space as a critical infrastructure for European leadership, both in space as well as space-dependent sectors. The initiative should be coordinated with ESA and pay particular attention to harnessing the potential of new and emerging technologies such as mini and macro launchers in the EU as well as Norway, Switzerland and the UK,
- As with other EU space systems, in the long-term, the EU should sustain recurrent use in space and ground for access to space. The forthcoming MFF can prepare this through a step-by-step approach:
- Contribution to the exploitation of European launchers via adequate institutional support for launch services, including ground-based facilities to ensure such services.
- Contribution to the evolution of European access to space, including for space and ground facilities
- Aggregation of demand, including for civil and military users.

The development of a space-based early warning and tracking system and a space-based ISR (information, surveillance and reconnaissance) constellation will enhance defence capabilities in all domains.

The EU should address the commercialisation of space activities. A programme will support the creation of new business models, the development of public-private partnerships, and the enhancement of Europe's space infrastructure to encourage private sector participation in space ventures. It will also address the regulation of space resource utilisation and ensure the sustainable and secure use of space assets.

7. Participation of SMEs and innovative companies

- To accelerate the development of new space technologies, support for the participation of SMEs and innovative companies is essential. This requires measures such as the implementation of innovative procurement schemes fostering public demand and the setting of a specific minimum participation percentage of SMEs under the EU-funded component of the new Space Law, access

to testing facilities and coordination with higher education institutions and research organisations.

- Specific measures should also be foreseen in the EU programmes under the forthcoming Multi-Focal Financial Framework (MFF) to increase and incentivise investments by the private sector and trigger more participation from new and smaller players, as well as the scaling up of start-ups.

Key activities - Civil aeronautics

The civil aviation sector is subject to both strong demand for innovation and extensive regulation by national and international laws, ensuring safety, security, and minimal environmental impact.

The EU's ambition is a competitive and sustainable aviation sector. US and Chinese competition is fierce, and US stakeholders receive a significant amount of public funding support via dedicated R&D programmes and state aid. The EU needs to launch a new EU Aviation industrial and R&I Strategy and establish a large public-private partnership building on the existing Clean Aviation Partnership with the mandate to implement an EU-wide aviation R&D Strategy and coordinated approach between the EU and the MS. This initiative should be at the core of next MFF and FP10 and is essential to overcome the so-called 'valley of death' in aviation from research to market application and to maintain European industrial leadership, critical manufacturing capabilities and high qualified jobs in Europe. The future programme should also support and capitalise on dual-use technologies.

In light of this, the EU should support Aeronautics Industry competitiveness, specifically addressing Research and Development:

1. Support to R&D for the development of new generation of aircraft and rotorcraft – design and manufacturing:

- The EU should focus on the development of advanced technology and design in rotary-wing and vertical take-off and landing (VTOL) aircraft, thereby boosting its world market leadership in this segment.
- Public-private partnership initiatives in the aeronautic sector (Clean Aviation and SESAR JU), as well as the collaborative research, should continue in the next Research Framework Programme under one roof, an “EU competitive and sustainable Aviation Programme” and the pros and cons of the possible creation of a dedicated Agency could be assessed. They should receive an increased share of EU funding, considering the extraordinary challenges that the entire ecosystem faces in introducing new and disruptive technologies, such as those for the sector’s decarbonisation and competitiveness. The PPP should foster synergies to support the demonstration and prototypes of new commercial aircraft (including support for start-ups on small aircraft), promote market uptake of new products, clean manufacturing, and increase efficiency in EU spending while triggering large private investments.

2. Support to R&D for the development of new generation of aircraft and rotorcraft – engines and fuels

- There is a critical need to support the development of new propulsion technologies for aircraft utilising new energies for aeronautics. The current drive towards a future hydrogen-based power generation is important, but we also need to pursue more easily achievable short-term solutions, such as SAF as well as hybrid electric and full electric technologies. The forthcoming R&D activities within FP10 should clearly support with dedicated budgets and projects the rotorcraft sector and the development of SAF industries.

3. Simplification and a balanced approach between collaborative research and PPPs should be pursued

- Low TRL research and innovation activities should be carried out through collaborative research within the integrated public-private partnership under FP10 in order to support the exploration and maturation of technologies and ensure, via the PPP, their connection and possible industrial exploitation as well. The funding cost of institutional PPPs JU should be controlled and reduced. The governance of these PPPs should be simplified. Funding rates for RD&I research projects should remain attractive (at least 70% of the total cost) for SMEs and large industries.

KEY TAKEAWAYS FROM THE EPP GROUP COMPETITIVENESS SUMMIT
5 MARCH 2025

On 26 February, the European Commission presented one of this legislature's landmark initiatives - the Clean Industrial Deal (CID). The Deal aims to reverse the ongoing trend of declining competitiveness of European industry. The EPP Group, the largest Group in the European Parliament, is the driving force to ensure the long-term competitiveness of European industry. The CID delivers the first building block to regain productivity, prosperity and resilience of European industry and the creation of quality jobs in Europe. In order to bring this ambition to fruition, the EPP Group presents below a set of key lessons learnt from the EPP Competitiveness Summit to ensure the CID and further political action bring about a true competitiveness deal for Europe:

- The Commission must urgently provide clarity on the **2040 climate target**. Existing commitments to be put into legislation must be accompanied by **clear sectoral transition pathways and the deployment of enabling conditions**.
- The Commission must swiftly begin **sectoral dialogues beyond those already announced**. Key sectors in transition have so far been left unaddressed, including fuels and cement. These dialogues must establish **sectoral transition pathways** in close cooperation with industries and develop into permanent platforms, which involve stakeholders more closely in regulatory processes. The Commission must deliver a strongly sector-focused transformation and smart regulatory approach on the basis of regular reality and competitiveness checks. Regulatory processes must be made significantly more flexible and adaptable to the current transformative situation and must be the basis for practical and functional regulation.
- **Policies on Carbon Capture and Utilisation (CCU), Carbon Capture and Storage (CCS), as well as the use of sustainable feedstock,** which will play a prominent role in achieving climate neutrality and circularity, must urgently be recognised in the regulatory framework. This must include an initiative for the deployment of a CO2 storage and transportation system.
- The Commission must urgently review the **Hydrogen regulation in place**, namely the Delegated Act on Renewable Hydrogen (RFNBO), as they are too detailed and restrictive, effectively hindering the hydrogen ramp-up in the Union. The forthcoming Delegated Act on Low-Carbon Hydrogen must present a pragmatic and technology-neutral approach. Supply of hydrogen, regardless of its colour, must be enabled and incentivised.
- Next to the simplification efforts, the Commission must **present a comprehensive solution to preventing carbon leakage and resource shuffling as well as closing the export gap under the Carbon Border Adjustment Mechanism (CBAM).** However, CBAM is not a one-size-fits-all solution: supply chain structures differ significantly across sectors, and some sectors would even lose competitiveness if CBAM were expanded. For those sectors, the Commission must explore and propose alternative carbon leakage protection measures as soon as possible. Until then, free allocation under the ETS should be continued.
- The feedstock policy for sustainable biofuels must be made **coherent across transport policies** (Renewable Energy Directive, ReFuelEU Aviation, FuelEU Maritime). To reach the ambitious targets, the list of eligible feedstock should be less restrictive and promote greater access to a variety of sustainable raw materials. These include waste and residues (such as used cooking oil) for sustainable aviation fuels (SAF) and industrial CO2 for e-SAF.
- **Electrification** must play a more prominent role as an available solution to reduce exposure to fossil-fuel costs, especially for low-temperature industrial heat processes.
- The Commission must deliver a clear commitment to **keep the wholesale energy market intact, with the choice of financing instrument remaining a business decision** and not centrally steered. **Energy prices must be reduced structurally and long-term** by completing the Energy Union, and short-term by **reducing taxes and levies**.
- While we welcome the **initiative for European lead markets**, the Commission must look beyond public procurement and into **encouraging demand for European-made products in all downstream and consumer sectors** while closely monitoring additional costs for downstream sectors.
- The forthcoming MFF must **acknowledge and provide solutions to the financing and investment needs of industrial decarbonisation**, building on the success of the **Innovation Fund**.

EPP GROUP COMPETITIVENESS SUMMIT 5 MARCH 2025
MEETING MINUTES

Introduction

European Parliament President Roberta Metsola opened the Summit by stressing the urgent need for action to reverse the ongoing trend of declining competitiveness of European industry. Chairman Manfred Weber underlined that the EPP is the party of competitiveness, standing for innovation and cutting red tape. Europe cannot afford to opt out of the global race on competiveness as our future prosperity depends on it. Dr Christian Ehler underscored that we must now make difficult decisions in order to regain European competitiveness and economic prosperity. We must ensure the decarbonisation of European industry is economically feasible and cost-effective. A permanent consultation process between the Commission and industry, sectoral transition pathways, will be key in this regard. Maroš Šefčovič, Commissioner for Trade and Economic Security, reiterated that the Commission has set out competitiveness as the overarching priority and principle for action during this legislative term. We need more realistic trade quotas, and a plan to ensure the European grid system is able to transport three times more energy to reach the 2050 climate targets. Moreover, the Carbon Border Adjustment Mechanism (CBAM) poses several dilemmas, and likely WTO-compatible export adjustments will be needed.

CEO interventions

The CEOs from clean tech and energy-intensive industries underlined the need to accelerate the recognition of new technologies, address shortcomings of the CBAM such as resource shuffling, and urgently review the Hydrogen regulation in place and called for more carbon leakage protection. Additional sectoral dialogues must be established with strategic sectors that have so far been left unaddressed, including fuels and cement. The Commission must deliver a sector-focused transformation with flexible and adaptable regulatory processes on the basis of regular reality and competitiveness checks. Moreover, the CEOs stressed the importance of providing clarity on the 2040 climate targets, safeguarding the technology neutrality principle, and simpler funding mechanisms with more money available primarily in the Innovation Fund. Carbon Capture and Storage (CCS) was considered to be important, but as a CO2 abatement technique, it is still too expensive. Wholesale energy markets need to be kept intact and energy prices, including network charges must be structurally and long-term reduced. Grid investments by distribution system operators (DSOs) and transmission system operators (TSOs) are equally important. Members welcomed the interventions of the CEOs and underlined the importance of meaningful stakeholder consultations with industry. Members asked follow-up questions on the issues addressed by the CEOs, including the viability of different colours of hydrogen, permitting procedures, and interconnectivity of grids between Member States. CEOs also stressed the importance of fair trade policies.

Conclusion

Chairman Manfred Weber concluded the Summit by declaring 2025 the year to act and improve competitiveness. The EPP is the voice and defender of industry, and we need a comprehensive strategy to boost Europe's competitiveness. We need to ensure the Clean Industrial Deal and further political action bring about a true competitiveness deal for Europe.

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