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Corporate Leaders Group Europe

The European industry framework and lead markets

Driving innovation, competitiveness and strategic autonomy in the EU

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Executive summary

Europe is at a decisive turning point. Global competition in clean technology is intensifying, industrial systems are being reconfigured and geopolitical disruption increases by the day. Europe already has a €100 billion pipeline of industrial decarbonisation projects ready to move, yet many remain stuck before final investment decisions due to uncertain market demand and insufficient de-risking. The challenge is no longer technological readiness in many cases, but market certainty and scale.[1] Concurrently, ongoing policy debates and signals of policy rollbacks risk creating uncertainty that could slow investment and undermine the EU's ability to respond to unpredictable and repeated energy price shocks.

The EU's long-term competitiveness will depend on how quickly and coherently it can scale low carbon and circular production, reduce external vulnerabilities and sustain domestic prosperity. The Clean Industrial Deal (CID) and the Industrial Accelerator Act (IAA) together represent the EU's most comprehensive industrial framework in years, aiming to create lead markets that drive investment, decarbonisation, industrial resilient amid volatile energy costs. However, in this complex context, do these proposals go far enough? How do lead markets work and what lessons can be learned from businesses? This report examine policy design considerations for decision-makers and the role of companies in enabling and scaling clean and circular technologies, particularly in reducing fossil fuel dependency.

Lead markets are regions where new innovative designs and/or products are adopted early and at scale, enabled by effective policy frameworks that turn pioneering innovations into competitive, widely used solutions and generate first-mover advantages in global markets.[2] By creating predictable demand, they lowers investment risk, accelerates technology learning and enable a virtuous cycle of scale-up, cost reduction, performance improvements, allowing solutions to compete with high-carbon incumbent. They also strengthen industrial resilience and economic security by anchoring domestic and trusted-partner supply chains. However, success depends on careful policy calibration to manage early movers risks as latecomers may benefit from lower costs, reduced uncertainty or regulatory easing.

Europe has demonstrated the power of this dynamic, for instance with renewable electricity, where a combination of demand-pull measures, innovation support and infrastructure investment helped wind and solar scale rapidly and transform the energy system. Lead market dynamics have also supported the update of energy-efficient products and solutions, particularly where clear standards and market signals have helped steer innovation and deployment.[3] A similar approach is now essential across industrial value chains such as steel, cement, aluminium, chemicals, transport components and advanced recycling.

Electrification is at the heart of this transformation. Most cost-effective decarbonisation pathways for industry rely on clean electricity for heat, processes and production of key inputs. But electrification requires major investment in grids, renewable capacity, storage and flexibility. Lead markets and electrification are therefore inseparable: strong, credible demand for clean industrial products provides the certainty system operators, investors and regulators to plan grid upgrades, renewable deployment and infrastructure expansion with confidence. Without robust lead markets, Europe will struggle to electrify at the scale needed to remain competitive.

In practice, clean production premiums are small in final product prices, typically only 1 to 2 per cent, but even these modest differentials can halt investment when demand is unclear, infrastructure constrained

and financing expensive. They can also amplify upstream costs and disrupt value distribution in the supply chain. Lead markets can address these barriers by providing long-term clarity for producers and investors, speed up supply chain development, and enable the large-scale uptake of clean materials across sectors.

The EU already has strengths it can build on, from engineering expertise to proven leadership in circular economy innovation, renewable energy deployment, industrial standards and early-stage technology development. Business leaders have experience and tools that can support this vision, and can partner with public authorities to deliver on a successful transformation of the EU industry – one which enables competitive sustainability[4] and generates benefits for all citizens. By aligning demand creation with infrastructure investment and innovation support, the EU can respond strategically to global disruption and create the conditions to capture value in rapidly growing markets for clean technologies.

But time is running out. The CID and the IAA offer opportunities to turn Europe's momentum into stronger domestic lead markets, fast electrification and a renewed industrial investment. Yet, the IAA lacks ambition and clarity in key areas, including the role of decarbonisation, materials targets and supply chains security. Without decisive implementation, Europe risks falling behind global competitors that are quickly securing scale, supply chains and clean technology leadership. As the EU institutions debate the IAA, these five principles must remain central to securing lasting competitiveness and economic resilience:

1. Ensure policy coherence, predictability and alignment

Clear long-term direction is essential, with transparent impact assessments, sector-tailored transition pathways, long-term decarbonisation and circularity targets, and data-driven standards that evolve with supply capacity and maintain credibility, while strengthening energy security.

2. Generate strong, reliable market demand across value chains and market types

A coherent lead market strategy should strengthen reliable demand for clean products by improving consumer awareness, building trustworthy data systems, and using IAA procurement rules to create demand signals with definitions that minimise uncertainty. This reduces reliance on carbon-intensive imports and external suppliers of strategic materials. In practice, it requires embedding clear low carbon performance and EU-origin criteria in public procurement and support schemes under the IAA, and using procurement reform to normalise non-price criteria across value chains.

3. Enable competitive, scalable supply

Policymakers should support competitive supply by backing innovation from early-stage to commercialisation, lowering financing and energy cost barriers, streamlining permitting and improving risk-sharing tools, so business can scale clean technologies without jeopardising financial stability.

4. Build an environment that supports clean and circular lead markets

A comprehensive enabling environment is needed to make EU industry future-proof, including investment in skills, infrastructure and performance-based standards, as well as measures to lower the cost of clean electricity and hydrogen, to ensure low carbon production remains viable as demand grows.

5. Foster collaboration

Effective lead markets depend on collaboration across buyers, industry, trade partners and regulators to effectively implement legislation, harmonise data and metrics, aggregate demand and reduce costs. IAA discussions represent a great opportunity to advance shared sustainability standards with trusted partners, shielding Europe from negative impacts of global disruptions.

1 Introduction

The Clean Industrial Deal (CID)[5] was launched in February 2025. It outlines the European Commission's commitment to delivering a comprehensive strategy to ensure EU industry remains competitive amid intensifying global competition, while also capturing the benefits of decarbonisation in line with the 90 per cent greenhouse gas emissions reduction target for 2040. The CID aims to align with Mario Draghi's report *The Future of European Competitiveness*,[6] placing competitiveness and decarbonisation at the core of Europe's industrial transformation. It covers areas such as affordable energy, lead markets for clean products, public and private investment, circular economy and resource management, global markets and international partnerships, and skills and quality jobs. Its objectives are due to be pursued through a series of legislative proposals and measures in 2025 and 2026.[7]

This has since been followed by the long-awaited Industrial Accelerator Act (IAA),[8] which is focused on resolving three core issues for European industry: reducing supply chain vulnerabilities, increasing demand for low carbon products and materials, and de-risking the investments needed to scale up clean industries and technologies. Its core objective is to increase the contribution of the EU's manufacturing sector.

However, concerns are mounting that the IAA proposal does not yet contain the full direction needed to achieve this. Some of its core aims have been divisive, for example whether it should support local origin of material and products. This aspect has attracted a lot of political attention, as it holds potential for jobs and local value creation as well as supporting the scale-up of small and medium-sized enterprises (SMEs) and startups. However, it may be problematic for companies with complex supply chains and for the EU's trade partnerships. It could also have various and hard-to-anticipate consequences at the local level, with impacts on the acceptability of certain policy aspects if specific job markets or product prices were affected – and indeed should not be divorced from ensuring preference for decarbonised products. If definitions are unclear or if quotas are poorly designed, there could be ripple effects further down value chains, which calls for consulting stakeholders, including on sectoral and social aspects, to better understand all the effects of this new generation of policy instruments.

It will be critical to address the contribution of the CID and the IAA, as the development of lead markets for clean and circular products is a central feature of the European industry strategy, intending to improve the EU's competitiveness, resilience, independence and prosperity by revitalising its essential industries. The proposals, still to be further refined and strengthened by co-legislators (European Parliament and Council of the EU) are addressing one of the greatest challenges to decarbonisation: businesses need clear and predictable demand signals to scale up the necessary investments in innovation, improved circularity and electrification. Uncertainty of future demand growth bears the risk of limiting the incentive to invest in clean production methods, potentially undermining the EU's global leadership in the clean transition.[9]

In recent years, the idea that lead markets could accelerate industrial decarbonisation while enhancing competitiveness has attracted growing interest across Europe.[10] Building on CISL's previous publications,[11] this briefing adds to that evidence base by combining a conceptual overview of lead markets and how they function with a strong, cross-sectoral business perspective. It adopts the end-to-end value chain approach[12] to examine how a combination of demand-creating and supply-enabling policies[13] could unlock investment in clean products and technologies among various stakeholders across product value chains. A system drivers framework is applied to illustrate how policy interacts with key enablers – such as infrastructure, finance and skills – to support industrial decarbonisation at scale.

A well-designed policy framework can create favourable conditions for accelerating and scaling mass decarbonisation solutions including electrification, by de-risking investments and establishing economic incentives for companies and consumers to make more sustainable choices. Such frameworks can also enhance security of supply for critical materials, technologies and energy inputs. The analysis highlights policy design considerations for decision-makers, while underscoring the role of companies in enabling the emergence and scaling of clean and circular technologies, particularly in transitioning away from fossil fuel dependency. By linking theory and policy analysis with practical insights into business activities in real-world contexts, this briefing complements existing research.

Chapter 2 begins with the concepts of lead markets and technology learning, explaining the rationale for targeted policies to support clean and circular products. Chapter 3 sets out three core principles for effective lead market design and a set of considerations for designing effective lead market policies within the EU context. Chapter 4 highlights examples of actions already undertaken by businesses to supply, and stimulate demand for, clean and circular industrial products and technologies. Chapter 5 provides an overview of the European response, with the CID and IAA, outlining the approach to competitiveness and the role of lead markets. Chapter 6 concludes with remarks on turning Europe's clean industrial ambition into a real competitive advantage.

2 Lead markets: key concepts and how they work

This section provides an overview of what lead markets are, the underlying concept of technology learning, and why they are needed for clean products and technologies.

2.1 The concept of lead markets

Lead markets are geographical areas where new innovative designs and/or products are adopted early and at scale, allowing them to develop from pioneering innovations into competitive, widely used solutions and to generate first-mover advantages in globally growing markets.[14]

These seek to address and overcome the barriers to clean technology adoption and scaling by:[15]

- Reducing market barriers through streamlining regulations and standards. This will make it easier for new products and services to enter and gain acceptance in the market.
- Implementing policies to create demand for clean products and technologies. Certainty of future demand will reduce the risk of investing in research and development (R&D) and new production technologies by increasing the likelihood of returns on investment. Lower risk perception among financiers will also reduce the cost of capital.
- Providing policy consistency. Clear standards, predictability, stability and long-term policy frameworks further reduce investment risk for investors and manufacturers.

- Encouraging collaboration by fostering partnerships between government, industry and other stakeholders to develop and implement initiatives to support market growth.

In theory, well-designed lead market policies can spur innovation, open new economic opportunities and speed up the transition to cleaner industrial production, with the hope it would benefit EU producers and possibly trusted trade partners as well. The expectation is that these policies will strengthen productivity, competitiveness, resilience and the EU's attractiveness for investment.

The factors that enable and support lead markets to develop are typically specific to one jurisdiction or a closely interconnected group of countries, but their longer-term impacts are global. Some of the best examples of successful lead markets include information technology and e-commerce in the United States, consumer electronics in Japan, mobile telecommunications in the Nordics, and renewable electricity in Germany (see Box 1 for a case study on solar photovoltaics (PV)). In all these cases, governments played a crucial role in enabling and supporting a specific industry to grow and mature. At the same time, factors such as a skilled workforce and consumers' ability and willingness to adopt the new technologies advanced both innovation and uptake.

Lead markets entered EU policy discussions in 2006 with the Aho report,[16] which highlighted the importance of demand in driving innovation and competitiveness in high-growth or strategic sectors. This led to the 2007 Lead Market Initiative (LMI),[17] which aimed to stimulate demand, mainly through public procurement, in areas such as eHealth, recycling, renewable energy, sustainable construction, protective textiles and bio-based products. Its outcomes were mixed.[18]

The CID, followed by the IAA, takes a more targeted approach, focusing on clean and circular products, materials and technologies, with an increasingly large lens focused on the origin, in an attempt at stimulating domestic production. Together, they aim to shift supply and demand away from polluting options towards low carbon, circular alternatives, while improving competitiveness and prosperity.

2.2 Technology learning

The idea of lead markets is based on **technology learning** through deployment: as technologies are produced and used at greater scale, companies gain experience that improves performance and reduces costs. This creates a virtuous circle in which early demand enables learning-by-doing and cost reduction, gradually narrowing the price gap between conventional products and newer, cleaner alternatives.[19]

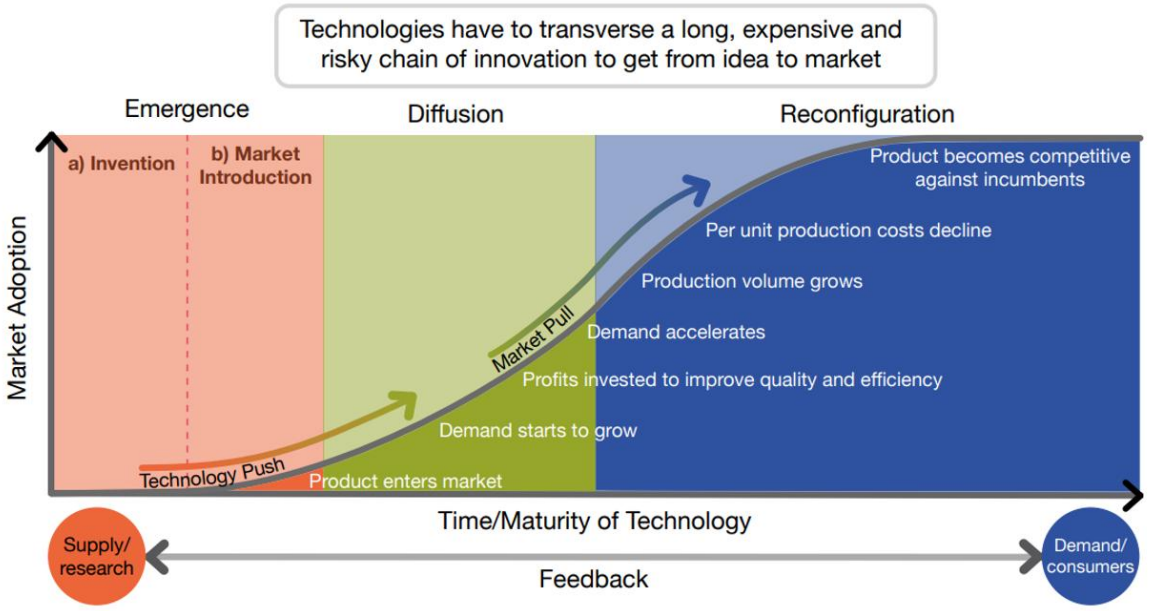
The path from innovation (new ideas, products or applications) to commercialisation is long, complex and costly. Proving a concept works is only the first step; even promising technologies often fail to reach the market. The shift from early-stage technology push (research, development, demonstration) to market pull (commercialisation and wider adoption) is especially challenging and can take decades. Yet only successful commercialisation allows innovations to scale, diffuse, and generate returns.

Once technologies begin to diffuse through markets, these learning effects become self-reinforcing. Revenues from early sales can be reinvested to improve performance and efficiency. Better quality boosts demand; rising demand increases production volumes; higher volumes reduce per-unit costs through economies of scale; lower costs further increase appeal. In short: falling prices drive adoption, and

adoption drives further price declines. This loop can eventually make new technologies competitive with, or superior to, incumbents.

Reaching this positive feedback loop is slow, risky and expensive. New technologies often struggle with higher upfront costs, unfamiliarity among users or the need for new infrastructure. To attract market pull, they must offer better functionality, lower operating costs or superior efficiency – especially if their purchase price is higher. When shown graphically, the journey from early innovation to widespread market uptake typically forms an S-curve (see Figure 1).

Figure 1. *Technology learning and market uptake*



Source: Adapted by authors from Grubb et al. (2014, p. 325)[20] and Murphy et al. (2025, p. 8).[21] A more detailed graphic is available in Annex 2.

Strong marketing that makes a new product appear trendy, convenient or aspirational can boost early uptake. This, along with other factors, helped smartphones quickly overtake basic mobile phones in advanced economies. Their adoption was also accelerated because, unlike landlines or early mobile phones, smartphones did not require new infrastructure. Existing power and telecommunications networks were already in place.

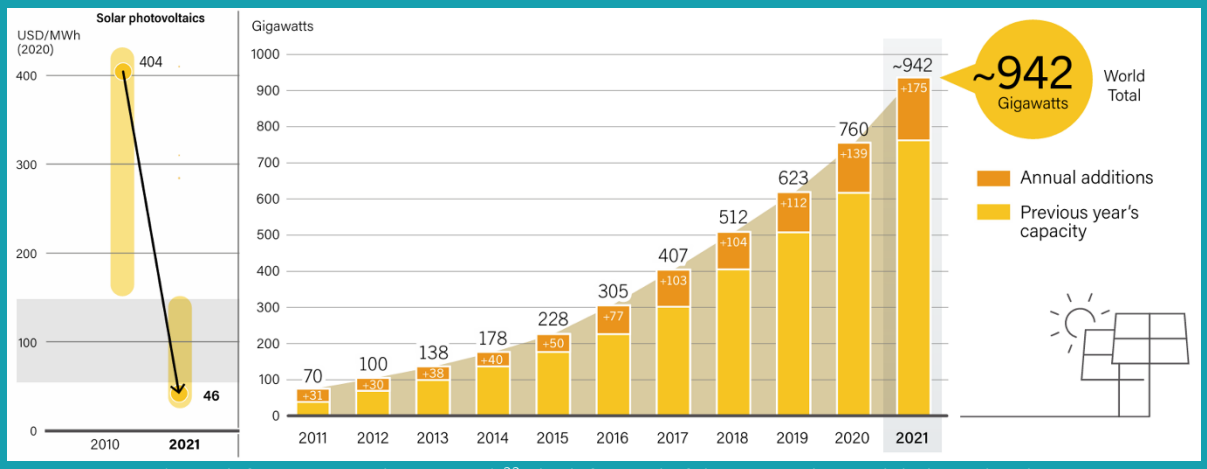
Solar PV is a clean technology that has clearly benefited from the technology learning process. As global installations increased, costs fell and efficiency improved, which in turn drove further adoption. Solar PV also shows how lead markets work. Its rapid growth was not spontaneous; it was driven by national and EU policies that created strong, predictable demand for renewable electricity and encouraged a shift away from fossil fuels. This support enabled solar PV to achieve economies of scale and enter the technology learning feedback loop, boosting innovation, deployment and competitiveness.

However, as global demand expanded, countries such as China, benefiting from lower labour costs and abundant raw materials, gained a major competitive advantage. As a result, German manufacturers, despite their early lead, were eventually priced out of the market.

Box 1. *Solar photovoltaics – a lead market success story*

The remarkable growth of the solar PV industry between 2010 and 2020 serves as a key case study for how lead markets cultivated through strategic policy interventions can accelerate the development and deployment of green technologies. As illustrated in Figure 2, as the globally installed capacity started to grow, the levelised cost of solar PV technology decreased while efficiency improved, further accelerating uptake.

Figure 2. *How technology learning brought down cost and pushed up adoption of solar PV*



Source: REN21 (2022;left – p. 154, right – p. 126).[22] The left panel of the image shows global weighted-average levelised cost changes between 2010 and 2021, and the right panel the capacity additions between 2011 and 2021.

Policy as the catalyst: Solar PV adoption was driven by policy interventions that created market demand for solar PVs, particularly within the EU. Several key EU-level and national policies were instrumental to this process:

- **The Renewable Energy Directive (RED):** Adopted in 2009 and subsequently revised, it established mandatory national targets for renewable energy, creating a guaranteed market for technologies like solar PV across the bloc.[23] The most recent revision in 2023 set a binding EU target of a minimum of 42.5 per cent for renewable energy by 2030.[24]
- **The EU Emissions Trading System (ETS):** By putting a price on carbon, the ETS increased the operational cost of fossil fuel-based electricity generation, thereby improving the relative cost-competitiveness of solar power.[25]
- **Feed-in Tariffs (FITs):** Widely adopted in the early stages, particularly in Germany, it offered long-term, guaranteed payments for electricity generated from solar PV, providing investors with revenue certainty and a strong financial incentive to invest in the technology.[26]
- **Quota systems and green certificates:** Many Member States implemented systems that mandated a certain percentage of electricity come from renewable sources, often facilitated by tradable green certificates.
- **Investment and tax incentives:** National governments provided a variety of financial tools, such as tax credits and grants, to encourage investment in solar.

- **Auctions and public procurement:** As the market matured, competitive auctions became a common mechanism for awarding large-scale solar projects, further driving down costs.

A prime example of a coherent national strategy is the German **Energiewende** ('energy transition').[27] Landmark legislation like the Electricity Feed-in Law of 1990 and the **Renewable Energy Sources Act (EEG) of 2000** laid the groundwork for Germany to become an early global leader in solar PV deployment.[28] It is credited with driving a rapid uptake of renewable energy by guaranteeing grid access, priority dispatch and a fixed feed-in tariff for 20 years.

Globalised benefits and manufacturing shifts: An important dimension to consider when assessing the impact of solar PV lead markets in the EU is the global distribution of the resulting economic benefits. While European policies created the demand, in the past decade the manufacturing dominance has shifted from Europe and the United States to Asia. By 2022, China had invested over US$50 billion in new PV supply capacity – ten times more than Europe – reflecting large-scale investment by manufacturers under strongly supportive government industrial policies.[29] Today, China's share in all the key manufacturing stages of solar panels exceeds 80 per cent,[30] resulting in significant supply chain vulnerabilities and hindering the EU's efforts to increase self-sufficiency, reduce supply chain emissions and create local jobs.[31]

Additional lessons and caveats: Basing private and public procurement on only lowest cost offers can be problematic. Long-term cost efficiency, the origin of materials used to enable circular economies, social aspects such as fair working conditions, and the role of state subsidies should be borne in mind – as these deliver a more resilient industrial future. In that spirit, the story of how Europe lost its early lead in solar PV should serve as a cautionary tale: because Chinese manufacturers achieved far greater scale, dramatically lower production costs and aggressive price reductions (panel prices fell by 42 per cent in 2023 alone), European producers became overwhelmed as they needed to embed higher energy, labour and capital costs.[32] At the same time, Europe failed to build sufficient domestic manufacturing capacity and became dependent on cheap Chinese imports. By 2023, Chinese modules stockpiled in Europe equalled an entire year of EU demand, pushing European output from 9 GW in 2022 to about 1 GW in 2023 and driving multiple firms into insolvency.

The solar PV story is a testament to the power of lead markets in accelerating the transition to greener technologies: strategic and stable policy support successfully drove down costs and spurred mass adoption. However, it also serves as a crucial lesson for policymakers on the importance of integrating industrial strategy, longer-term considerations and supply-side support into lead market policies to ensure that the economic and social benefits are realised domestically, and that supply chains are resilient.

2.3 The need for lead markets for clean industries

Unlike solar PV, many clean and circular products have not benefited from strong policies that would help them enter a technology learning feedback loop. While adoption varies by sector and country, many technologies are still immature or have low market penetration. Without sufficient and predictable demand, companies struggle to justify investment in research and development, new production methods or new business models. This slows learning-by-doing, delays cost reductions and constrains the

development of broader supply chains, particularly in sectors characterised by long investment cycles and high capital intensity.

Clean and circular technologies that are not yet produced at scale also face higher upfront costs than established alternatives. Their lower maturity increases risk, often resulting in higher borrowing costs and a higher cost of capital, which further raises the cost of deployment and scaling, especially in capital-intensive sectors such as energy and heavy industry, which also face global competition. In some cases, clean options are further disadvantaged by higher operating costs, particularly where low carbon energy is more expensive than fossil fuels (regardless of the cause), or where electricity markets lack mechanisms that reward flexibility services, such as demand response, storage or load-shifting capabilities. National tax regimes do not necessarily reflect the strategic imperative of the transition, which can reinforce existing price differentials.

These factors contribute to what is often described as a 'green premium'. Importantly, this premium does not have a single cause and does not apply uniformly across sectors. In some cases, higher costs are primarily scale-related and tend to decline, or even reverse, as deployment increases and learning effects accumulate. In others, cost differentials are shaped by structural or regulatory conditions that may not diminish automatically with scale. Lead markets therefore respond to a combination of demand, cost and co-ordination issues whose relative importance varies across technologies.

Early technological leadership also entails specific risks. First movers often bear higher research, development and capital costs, while competitors can imitate improved processes at lower cost. In sectors where policy timelines shift, such as back and forth in internal combustion engine phase-out, latecomers may benefit from regulatory leniency while frontrunners absorb the losses. Such dynamics weaken incentives for early investment, even where long-term transition objectives are broadly accepted.

An automotive industry recent example illustrates how, in parts of Europe, early investment in electric vehicle (EV) production exposed manufacturers to financial risks when market conditions and policy signals changed. By contrast, jurisdictions that maintained more consistent industrial and regulatory frameworks – most notably China – enabled faster scaling, lower unit costs and stronger competitive positions. Historical experience also shows that sustained policy clarity can support innovation-led competitiveness: earlier efficiency and emissions standards in Europe and Japan helped manufacturers outperform US competitors operating under weaker regulatory signals. Recent analysis suggests that Europe's current lag behind China in EVs is not irreversible. Europe can regain global EV leadership if it maintains its 2035 CO_2 targets, highlighting the importance of policy credibility and long-term visibility in sustaining private investment and enabling industrial catch-up.[33]

These dynamics point to a series of trade-offs. Lead markets can be understood as one policy approach to addressing learning externalities, co-ordination failures and first-mover risks that affect certain clean and circular industries, particularly at early stages of development. By providing demand visibility and reducing uncertainty, lead markets can help accelerate scale and cost reductions, increasing the likelihood that clean and circular products will be available at sufficient quantities needed to meet the EU's medium- and long-term climate targets.

3 Making lead markets work

This section outlines three key principles for creating effective lead markets.

3.1 Stimulate both supply and demand

Lead markets seek to accelerate the deployment of new products and services. If the focus of such an intervention is aimed at either supply or demand it will likely fail to deliver the required impact and enable scaling for clean and circular products and technologies. New product adoption is held back by the 'catch-22' where new supply is looking for potential demand to justify investment, and new demand is waiting for reliable, commercially available supply to ramp up.

The manufacturing of clean and circular products requires sustainably mined raw materials, large volumes of renewable electricity, electrified production technologies, green hydrogen, carbon capture and storage (CCS), energy distribution and waste-management infrastructure, circular-economy services, and disassembly and decontamination technologies – many of which remain at an early stage of development. Ramping up the supply of many of these 'enabling' products, services and technologies is slow and capital intensive, meaning that it can take a long time for the supply to respond to demand signals. At the same time, demand for such enabling products is contingent on the scaling of the consumer-facing end-products, which can only happen when the supply is available on a reliable and commercially viable basis.

For example, investment in production of clean hydrogen will grow only when there is confidence in future demand for the product. This means there needs to be a reason to be confident that clean hydrogen demand will either become cost competitive with more established production pathways (which currently looks unlikely) or that there will be demand for materials and products specifically produced with clean hydrogen. However, demand for these materials and products requires adequate supplies of clean hydrogen. This illustrates the catch-22: investors in products made with clean hydrogen require supply, and investment in clean hydrogen production requires demand. The uncertainty this creates undermines investment in clean hydrogen production facilities and related infrastructure, which itself acts as a disincentive to clean hydrogen demand.

Lead market policies can avoid supply–demand mismatches and the resulting drag on circular and clean production by introducing support mechanisms for innovation and scaling alongside demand-side measures, which can be phased in over time. For example, subsidies to expand clean hydrogen production can be coupled with measures that incentivise industrial transformation, such as requirements for material manufacturers to cut emissions, financial disincentives for continued fossil-fuel use, and demand-side instruments that ensure a market for lower carbon materials such as those produced with hydrogen. Such demand measures should be designed around the outcomes required – not around specific technology pathways – so there remains the opportunity for new innovative solutions to outcompete the existing options and accelerate the pace of change.

By embedding clear transition measures and timelines into policy frameworks, and signalling a consistent direction of travel, the EU can reduce investment risk and enable both supply and demand to develop, minimising delays. While timelines for introduction of demand-side measures such as recycled content quotas or procurement rules are crucial to mitigate investment risk, these must be designed in a way that

allows some flexibility in the event of supply shortages. Such flexibility is particularly important in areas where a fully functioning internal market has not yet emerged. In the case of secondary raw materials, for example, availability and prices are expected to evolve over time, which calls for procurement rules that allow companies to anticipate and adapt to these changes. This is essential to maintain viable business cases while at the same time incentivising suppliers to provide reused and recycled materials. Equally, strategic objectives and market realities evolve over time, and procurement rules should retain the flexibility to reflect these changes.

3.2 Consider interdependencies across value chains

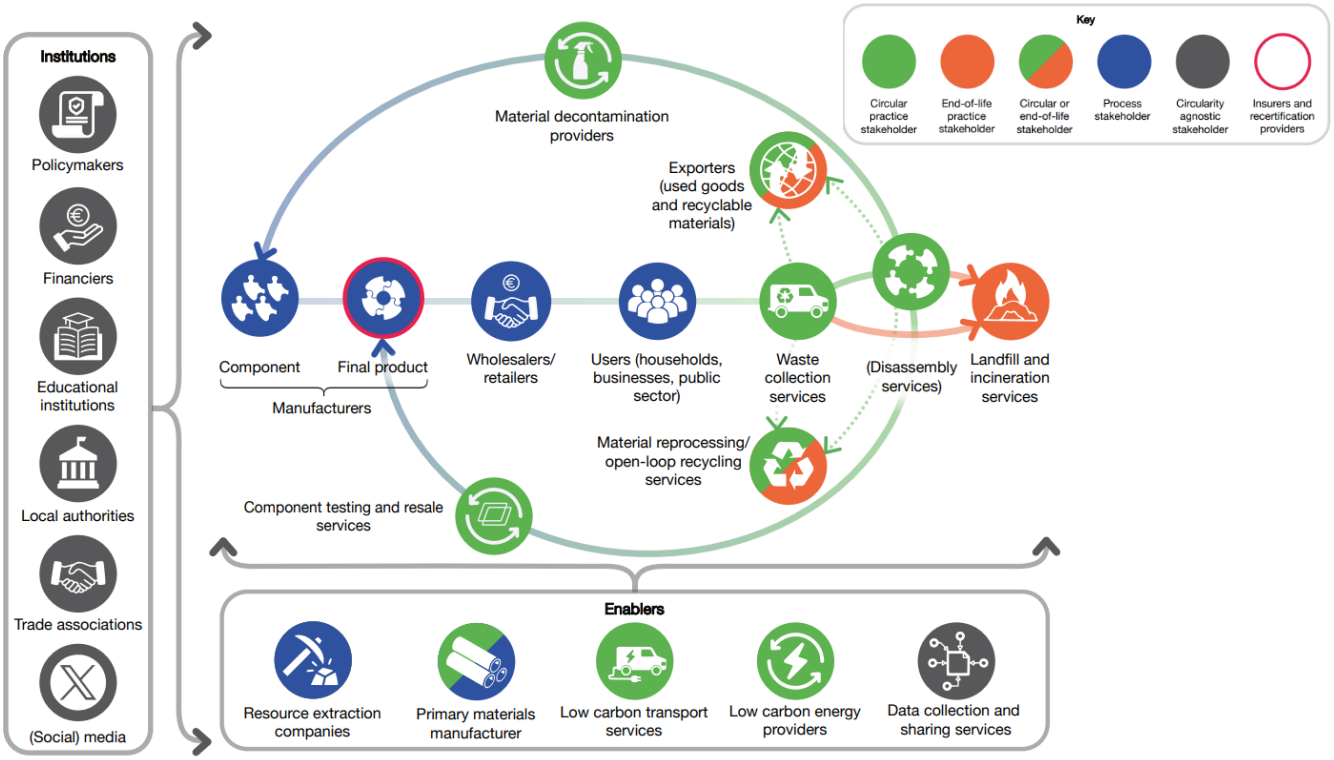
To be effective, lead market policies need to gain traction among all stakeholders across a value chain. This will not happen if one set of stakeholders is being supported by a policy that disadvantages stakeholders further up or down the value chain by increasing costs or causing supply bottlenecks.

The end-to-end value chain approach (illustrated in Figure 3)[34] can be applied to various product value chains to illustrate how supply and demand interact across value chains. Transitioning to more sustainable production requires change and collaboration – supported by a coherent policy framework – by stakeholders across the entire value chain. In addition to stakeholders along a specific product value chain (horizontal line and related loops), the end-to-end value chain graph includes external stakeholders (on the left and below the value chain) whose actions impact the operations and performance of the stakeholders across a product value chain. These are divided into institutional actors (on the left) and 'enablers' (below). The 'enablers' provide goods and services that enable various product value chains to decarbonise through fuel switching and adoption of cleaner and more circular materials and technologies.

Each stakeholder along the horizontal value chain acts as a consumer of upstream products (to the left) and a producer for downstream operations (to the right). Demand signals flow upstream (from right to left), from the final consumer product, through the intermediate product producers, all the way up to the basic materials producers, mining of raw materials, and clean energy and fuel production.[35] The actions of each stakeholder are constrained by the supply of required inputs from upstream stakeholders, and the demand signals from the downstream stakeholders. Demand and supply both need to be addressed to avoid the adverse impacts of a supply–demand bottleneck as described in the previous section.[36]

The loops from right to left (above and below the horizontal value chain) indicate stakeholder categories that need to emerge and grow to facilitate the transition from a linear to a more circular economy where materials and products retain value and functionality for longer in a way that reduces their environmental impact. Many of the circular stakeholders may be able to operate across multiple product value chains that use similar materials, or produce them for reuse and recycling.

Figure 3. *End-to-end value chain (sector/product agnostic illustration)*



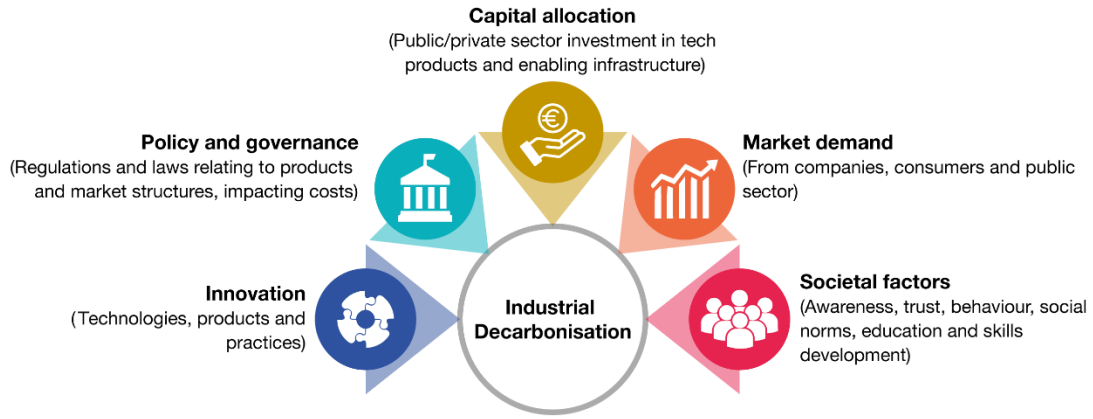
Sources: Building on previous versions by Markkanen et al (2023)[37] and CISL, IfM Engage and E.ON (2024)[38]

In the transition to a more circular economy, traditional 'end users' (such as individuals, households and government agencies) become proactive 'suppliers' of products for reuse and recycling. Circular loops (Figure 3) link 'late' value chain stages, such as consumers and waste management services, with 'early' stages, including raw material or product manufacturers using second-hand materials or components to reduce their product carbon intensity. To meet the EU's ambition to reduce important dependency through circularity, these services (eg material decontamination and disassembly) must scale significantly, supported by enabling measures, such as data collection, data sharing and insurance products.

3.3 Activate all system drivers

The effectiveness of lead market policies depends on their ability to generate buy-in from companies and consumers, and to mobilise sufficient capital to transform the EU industry. By applying a system drivers approach (Figure 4), we can explore how the transformation of a sector or a system – such as the EU industry – is driven and enabled by five key drivers: innovation, capital allocation, market demand, policy and governance, and societal factors. These system drivers, which both shape and are shaped by one another, are all crucial to enable clean products and technologies to be developed, adopted and scaled through the interconnected actions of various stakeholders across the product value chains.

Figure 4. *System drivers approach*



Sources: Building on previous versions by Ball-Burack, Salas and Whyatt[39] and CISL (2024)[40]

Although policy is only one of the five system drivers, its role is critical because it can mobilise (or slow down) action across the other system drivers. For example, policy can direct public sector capital to innovation, skills development, awareness and enabling infrastructure provision. It can also be used to support market introduction and commercialisation of new inventions, de-risking the allocation of private sector capital to their development, manufacturing and consumption.

To be effective, lead market policies must activate all system drivers towards transforming and revitalising the EU industry: just one of them being misaligned is enough to prevent meaningful progress (see Box 2 on page 18 for some examples). Innovation of new technologies, products and practices is the necessary first step since carbon-intensive activities cannot stop until low carbon alternatives exist and are available in the market.[41] However, the other system drivers play a vital role by enabling (or hindering) innovative activity and the users' *ability* and *willingness* to adopt new solutions, creating market demand.[42]

As discussed in Chapter 2, market demand is a key factor in driving technology learning and enabling economies of scale to develop. Market demand for clean and circular products originates from a range of 'users', including businesses, households, individuals and the public sector. These 'users' influence the allocation of private capital by directing their spending to things they want or need, while allocation of public sector funding is determined by policy priorities and can be directed to support research and innovation, incentivise demand from the private sector or create demand through public sector procurement. In a circular economy, demand for disassembled product components and decontaminated scrap material comes from companies that can use these as inputs in their production processes.

Market demand will only grow if users of low carbon energy, production technologies, materials or products are willing and able to choose clean or circular options over more carbon-intensive ones. Users need both awareness of the benefits of these products – supported by education campaigns and the integration of key concepts into school curricula – and access to high-quality, standardised data collected and shared across the value chain to identify products meet these standards. To maximise the impact and build demand across multiple markets, these standards should be developed and adopted together across sectors, value chains and major regions such as the United Kingdom, the United States and Asia.[43]

The users must also be able to afford the new products, know how to operate them, and have **trust** in their quality. Especially in the early stages of product development, lack of familiarity may erode users'

trust in the product, while a higher price, higher operating cost or insurance reasons may disincentivise adoption. Financial incentives and disincentives, such as subsidies and taxes, can be deployed by policymakers to nudge user behaviour (at all stages of the value chain) in the desired direction. However, these quickly become unsustainable without users' ability or willingness to change their behaviour, for example due to factors such as lack of data, trust or inability to insure products. This is particularly important when it comes to circular products and materials, where users play a key role as the producers of the material inputs into the circular economy.[44]

As the solar PV example in Section 2.2 shows, effective lead markets depend on policies that create the right conditions for supply and demand to grow together. This requires enough capital to build the infrastructure and skills needed for clean and circular production to emerge and scale. Public investment is essential for education, upskilling and circular economy infrastructure. As part of a wider policy framework, governments may also need measures that encourage recycling and discourage waste, for example by setting requirements for commercial operators. In the energy sector, the development of low carbon infrastructure is just as important as the policies that encourage its use. This includes expanding low carbon electricity and hydrogen production and distribution, and deploying carbon capture and storage for sectors with unavoidable process emissions. Box 2 (below) gives two examples to illustrate what happens when not all system drivers are aligned to deliver a shared goal.

Box 2. *Examples of how system drivers interact to help or hinder decarbonisation*

In sectors such as **steel and aluminium**, different technologies to decarbonise production processes and enhance circularity already exist, but their adoption (**market demand**) has been slow due to concerns over operating costs (such as high electricity prices) and the availability of high-quality scrap to use as material input. The limited scrap supply is due to **societal factors**, such as ability and willingness to recycle, inadequate infrastructure and logistics to make recycling easier, and a lack of regulation such as recycling requirements for commercial operators in sectors such as demolition, construction and manufacturing. For the portions that can be electrified, directly and indirectly, access to renewable energy should be facilitated and will require investments. Single Market completion is also a necessity to prevent market distortions and unfair competition which hamper scaling up the cleanest technologies. Because of these concerns, companies are reluctant to invest in the available technologies (**private sector capital allocation**) without substantial government subsidies (**public sector capital allocation**) that would reduce the investment risk. In a context where companies' willingness to invest is constrained by concerns over downstream market demand for their products, policy measures can be used to 'create' such demand through incentives and regulation.

In sectors such as **cement manufacturing**, innovation is urgently needed to develop more sustainable production methods and practices. However, innovation has been deterred by regulatory barriers (**policy and governance**), such as strict technology standards relating to clinker content. As a result, **capital** has been **allocated** primarily to develop and enhance CCS technologies, which many companies consider the most viable decarbonisation pathway for the sector, alongside a diverse portfolio of solutions such as clinker-substitution technologies. Replacing cement product standards with performance standards and directing more support (financial aid and mechanisms to improve knowledge sharing and collaboration) for innovation could potentially open more avenues for decarbonisation beyond the use of CCS.

4 The role of business

Businesses play a central role in expanding both the supply of and demand for clean and circular production across value chains. They can act on their own through investment and procurement decisions, but collective action is often more effective in increasing demand, developing solutions and overcoming systemic barriers. Through approaches such as buyer coalitions, companies can co-ordinate their procurement to shape markets more effectively, lower investment risks and push for the conditions needed for clean and circular technologies to scale. Collaboration through bilateral or multilateral partnerships also allows companies to pool expertise and resources to develop low carbon solutions together. This section highlights the actions companies are already taking, individually and collectively, to support lead market development for clean and circular materials, products, technologies and services. As the examples show, momentum is growing across many sectors and stages of the value chain.

4.1 Action at company level

Across Europe, businesses are stepping up as technology adopters and market shapers, actively creating the conditions for industrial decarbonisation to succeed. These efforts demonstrate that decarbonisation can be a source of industrial strength and competitiveness.

In the energy sector, company-level commitments are accelerating investment in renewable infrastructure, reinforcing the strategic role of corporate buyers in the energy transition. Several technology companies are using their purchasing power to scale renewable energy markets, which illustrates the effect that market action and demand levers have on supply. For example:

- Google has signed clean energy power purchase agreements totalling over 700 MW across Europe.[45]
- Amazon has expanded its partnership with Iberdrola to supply an additional 476 MW of clean energy across Spain and Portugal.[46]
- Ingka Group, the largest IKEA retailer, has committed €7.5 billion to renewable energy innovation by 2030 and published a Net Zero Transition Plan that outlines a clear roadmap to halve emissions by 2030 and reach at least 90 per cent by 2050.[47]
- Through collaboration with BayWa r.e., VELUX has enabled the development of two large-scale solar parks in Spain that generate more than the equivalent of the renewable electricity needed to power its European operations.[48]

On the supply side, companies are investing in cleaner and greener production technologies in several energy-intensive industries, which form a backbone of the EU's economy. For example:

- Hydnum Steel is developing Spain's first green steel plant powered entirely by renewable energy. With an investment close to €1.65 billion, this site is expected to generate more than 500 direct jobs in phases I and II (2026–29).[49]
- Holcim's Go4ECOPlanet project aims to transform its Kujawy cement plant into one of Europe's first net zero facilities, capturing 1.2 million tonnes of CO_2 annually.[50]

- In Amsterdam, EMC Cement and HES International are planning a fully electric, zero-carbon cement plant that will operate at less than 10 per cent of the energy intensity of conventional facilities, cutting emissions by 1 million tonnes annually.[51]
- In Norway, Heidelberg Materials has launched a CCS project for cement, supported by the Norwegian government and expected to capture 400,000 tons of CO_2 annually, which recently started operating.[52]
- As part of its objective to reduce Scope 3 emissions by 25 per cent by 2030, VELUX has established partnerships with Hydro, ArcelorMittal and Novelis to secure low carbon aluminium and steel, and to drive the uptake of low carbon material in construction products. The aim is to significantly reduce the embodied carbon of its products and contribute to the decarbonisation of the built environment.[53]
- Ecocem has developed a new cement solution, which replaces 70 per cent of clinker (the cement ingredient leading to a high carbon footprint) with low carbon supplementary cementitious materials while achieving the same concrete application features of strength, durability and workability. This solution saves approximately 400 kg eqCO_2/t when compared to conventional cement.[54]

These examples and others[55] demonstrate that industrial decarbonisation is technically feasible and aligned with long-term business strategy. By shaping demand for low carbon and circular products and materials, and building the capacity to meet it, businesses are helping to overcome barriers to adoption and contributing to the development of more resilient and competitive industrial ecosystems in Europe.

Box 3. *Addressing hard-to-recycle polyester streams in packaging and textiles*

Through its innovation investment engine,[56] Coca-Cola Europacific Partners (CCEP) has invested in CuRe Technology, a Dutch high-tech startup on a mission to revolutionise how hard-to-recycle polyester streams in packaging and textiles are recycled competitively. The technology will help CCEP make progress on its long-term goal to stop using virgin oil-based plastic in its bottles. Data from CuRe Technology suggests that, once scaled throughout the EU, their technology has the potential to avoid 1.7 litres of oil for each kilogram of polyester that is recycled and to do this with a significant reduction in CO_2 footprint, thus boosting the EU's circularity, resource efficiency and decarbonisation goals.

Josse Kunst, Chief Commercial Officer for CuRe Technology, says: "For clean-tech start-ups such as CuRe Technology, the EU could help us pass through the Innovation 'Valley of Death' faster by creating clarity on future policy direction and consistency and connectivity in policy implementation. This is essential for levelling the playing field as emerging technology commercialises. For example, a major new Regulation entered into force in 2022 for regulating food safety in relation to the use of chemical recycling (Regulation (EU) 2022/1616). This Regulation is a critical enabler for the scaling of our technology. However, delays in a formal assessment of our technology by the European Food Safety Authority (EFSA) has created an implementation hurdle for us with this Regulation, the impact of which is to stall further investment. In contrast, we received the non-objection letter of the US Food and Drug Administration (FDA) in a matter of months."

4.2 Buyer coalitions

Market demand for low carbon energy and basic materials such as hydrogen, steel, cement and concrete, as well as more complex clean products and industrial value chains that rely on them, remains underdeveloped, which slows progress on industrial decarbonisation. Through collective action, including buyer coalitions, companies can pool their procurement power and send a clear signal that demand for clean and circular materials is growing. This shared demand signal helps manufacturers justify the capital needed to shift to cleaner production methods, such as electrified steelmaking or cement production supported by carbon capture. Over time, confidence in stable and rising demand allows producers to access finance on better terms and benefit from economies of scale, strengthening the overall business case for decarbonisation.

Buyer coalitions are especially important in sectors such as energy and basic materials, where shifting to clean and more circular production requires large capital investment. Clean energy, including clean hydrogen and low carbon electricity, is essential for most low carbon production pathways by allowing producers to reduce their reliance on fossil fuels. In the power sector, renewable electricity technologies already hold a strong position, supported by successful market policies between 1990 and 2020.

However, many industrial processes still rely on coal and gas as feedstocks or require high heat levels that current electric technologies cannot deliver. This creates a need for more investment in clean fuels and technologies, including clean hydrogen. Although clean hydrogen could replace fossil fuels in several industrial applications, current markets remain small due to its lower efficiency and higher cost relative to coal or natural gas. Subsidies and regulatory changes can improve investor confidence, but producers will not invest in new capacity and infrastructure without certainty that demand will grow ahead of project completion. Buyer coalitions can help create this confidence. For example, H2Global Stiftung develops solutions to speed up the use of clean hydrogen in difficult sectors by bringing together decision-makers and industry partners.[57] Similarly, the World Economic Forum's First Movers Coalition brings together large corporate buyers committed to purchasing low carbon materials and fuels, helping signal future demand and reduce investment risks across heavy-emitting industrial sectors.[58] Platforms like RE-Source further illustrate how structured buyer aggregation and standardised procurement frameworks can reduce demand uncertainty and support investment in clean energy supply chains.[59]

Buyer coalitions are also expected to play a key role in creating demand for green steel, which the steel industry needs in order to invest in the technologies already available for reducing emissions. SteelZero, a global demand-side initiative led by the Climate Group in partnership with ResponsibleSteel, aims to address low demand by securing commitments from companies to use 100 per cent net zero steel by 2050, with an interim goal of 50 per cent responsibly produced steel by 2030.[60] By bringing together demand from construction, automotive, shipping, renewable energy and other sectors, SteelZero sends a strong market signal that supports investment in low carbon steel production. ResponsibleSteel certification helps companies meet these commitments by providing a widely recognised standard for responsible sourcing and production across the value chain.

A similar approach is being used in the concrete sector through ConcreteZero. This initiative, also led by the Climate Group, focuses on accelerating the shift to net zero concrete by increasing demand and improving transparency.[61] Participating companies commit to using 100 per cent net zero concrete by 2050, with interim goals of 30 per cent low-emission concrete by 2025 and 50 per cent by 2030. A core part of the initiative is its focus on data. Companies report the volume and carbon intensity of their concrete use through a shared digital platform, which helps create benchmarks and guide future

standards. By supporting collaboration and consistent reporting, ConcreteZero contributes to the development of a global definition of low-emission concrete and helps create the conditions for scaling low carbon solutions in construction.

These examples show how co-ordinated efforts among downstream companies can strengthen demand and reduce risk in capital-intensive industries such as clean energy and basic materials. When companies across borders align their procurement strategies, they send clearer and more powerful signals to the market, helping unlock investment in clean production technologies. For producers, the assurance of stable and rising demand reduces the financial risks linked to shifting to low carbon manufacturing. Because raw materials are usually only a small share of final product costs, the shift to low carbon inputs is also unlikely to cause significant price increases for consumers.[62]

By lowering uncertainty and sharing risk, buyer coalitions offer a practical way to reduce the risk of investment in clean technologies and speed up their deployment. They help overcome structural barriers and align industrial transformation with climate and competitiveness goals. However, voluntary initiatives alone have not been sufficient to shift markets at the scale required, as underlined by the CID, which highlights the need for lead market policies to grow the supply of and demand for clean and circular products and production technologies.

4.3 Partnerships

Collective or collaborative action can also focus on one specific product or value chain through co-ordinated bilateral or multi-stakeholder involvement. Product-specific partnerships involve aligning production, demand and infrastructure – sometimes with the help of supportive policies – to enable the development and adoption of clean technologies in a specific value chain. These partnerships can take two forms:

- Two or more players across one specific product value chain choosing to collaborate for perceived mutual advantage (most commonly to avoid the risk of supply–demand imbalance by scaling up supply and demand in line with each other).
- Companies that have specific needs that they cannot solve on their own joining forces to pool resources to develop and scale solutions. This will often involve joint investment in innovation, piloting etc (ie the early stages of technology learning).

This approach is particularly relevant for materials such as steel, where the transition to near-zero emissions production requires significant capital investment, regulatory clarity and access to clean energy. The Nordic Near-Zero Emissions Steel initiative exemplifies how such co-ordination can be structured. It convenes leading steel manufacturers, downstream users and energy producers to develop a shared vision for near-zero emissions steel and bring it to policymakers' attention, supported by proposals for enabling conditions such as harmonised standards, streamlined permitting and infrastructure planning.[63] This reflects a growing recognition that sector-wide collaboration is essential to overcome systemic barriers and unlock investment. With many industries and companies working on cutting their own emissions and having set ambitious goals to reduce their climate impact from materials, their choice of materials can be a significant contributor to achieving these.

Another example of a steel sector partnership for a case study could be the Saarstahl and Deutsche Bahn partnership for green steel in rail infrastructure.[64] Also, Ørsted has secured early access to lower-emission steel through a long-term agreement with Dillinger, enabling the company to decarbonise its offshore wind supply chain while supporting Dillinger's transition to cleaner production.

Other multi-stakeholder initiatives target particular challenges such as those within road transport or aviation. For instance, the Fleet Electrification Coalition collaborates with shippers, logistics providers, fleet operators and other stakeholders to accelerate the electrification of heavy-duty trucks through demand aggregation, aiming for 30 per cent zero-emission road freight by 2030.[65] The Aviation Impact Accelerator brings together cross-disciplinary teams to develop specific solutions for sustainable aviation related to fuels, aircraft, propulsion technologies, airports, non-CO_2 emissions, economics and policy.[66]

Beyond sector- or product-specific initiatives, some multi-stakeholder alliances focus on overcoming common structural barriers across industries. One of these examples is the Q-Zero Alliance for the decarbonisation of thermal demand in Spain (Alianza Q-Cero).[67] This Alliance, made up of more than 150 industries (in agri-food, paper, chemical, manufacture of non-metallic minerals, metallurgy and steel sectors) and manufacturers of decarbonisation technologies focuses its activity on identifying the needs of the industry and proposing solutions in the fields of regulation, innovation and knowledge sharing to promote decarbonised processes and products taking advantage of this transition as a competitiveness factor.

There are also examples of direct partnerships between companies aimed at closing materials loops and supporting low carbon steel production. For example, Volvo Cars entered into a supply agreement with Swedish steelmaker SSAB to begin sourcing recycled, near zero-emissions steel from 2025, which will help retain and reuse scrap steel in a closed-loop system for the production of some of its cars.[68] In addition, SSAB and Vattenfall have partnered to deliver fossil-free steel for the construction of a dam gate at Vattenfall's Stornorrfors hydropower station, demonstrating the potential for low-emission materials in large-scale infrastructure projects.[69]

In the aluminium sector, Ball Corporation, Novelis and Alcoa have jointly developed a low carbon aluminium cup, combining 90 per cent recycled content with primary aluminium produced using ELYSIS's carbon-free smelting technology. Ireland-based Kingspan is taking internal action by introducing a carbon fee of €70 per tonne of CO_2 equivalent, starting next year. The company aims to reduce Scope 1 and 2 emissions by 90 per cent by 2030 and cut Scope 3 emissions by 42 per cent, requiring key suppliers to halve their emissions intensity within a decade, demonstrating how downstream actors can drive upstream transformation.

Product-specific initiatives complement other forms of collective business action by addressing challenges that cannot be solved through market signals alone. They highlight the importance of aligning industrial decarbonisation with broader policy frameworks and infrastructure development, offering a pathway for replicable models across other high-emitting sectors. Coalitions of climate leaders, such as the Mission Possible Partnership, help amplify the impacts of buyer coalitions and product-specific partnerships by developing transition plans in collaboration with businesses and policymakers across multiple sectors.[70]

5 The European response

5.1 The EU's strengths in an increasingly competitive world

With around 77 per cent of global gross domestic product (GDP) being covered by net zero targets,[71] the markets for 'clean' products and technologies are expected to grow rapidly. (Despite a significant drop from 90 per cent before the US pulled away from UNFCCC, it is noteworthy that such a large share of global GDP remains covered by ambitious targets, which displays an unmistakable direction of travel.[72]) According to the International Energy Agency (IEA), the global market for key clean technologies such as solar PV, batteries, wind, electrolysers and heat pumps could reach US$640 billion per year by 2030.[73] The market for a broader range of 'clean' technologies and products will be even bigger, possibly exceeding US$1.8 trillion by 2030.[74] In this context, companies' ability to adapt to the new competitive sustainability paradigm will determine their survival and ability to thrive in changing global markets (see definition below).[75] Companies that are among the first to develop cost-effective ways to produce materials and products with lower embodied carbon content will be able to avoid the impact of expected increases in carbon price, capture a share of growing markets for these products and benefit from selling their intellectual property to others.

Competitive sustainability represents the ability of an economy, its companies and industrial ecosystems to excel relative to international peers in a competitive transition to a sustainable economic model through investment in purposeful innovation.[76]

Increasingly, countries are beginning to recognise the economic benefits and competitive advantages that investment in clean technology innovation and adoption can deliver. In China, clean energy sectors (including renewables, nuclear power, electricity grids, energy storage, EVs and railways) were the largest driver of the country's economic growth in 2023, accounting for 40 per cent of the expansion of its GDP.[77] In the United States, industrial decarbonisation strategies have evolved unevenly in recent years, with periods of strong federal support followed by policy uncertainty. By contrast, Pakistan has seen rapid solar PV adoption driven mainly by severe electricity price shocks and falling global technology costs, which made clean alternatives economically compelling for households, farmers and businesses.[78] In Latin America, Brazil also illustrates how demand for clean technologies can scale rapidly when price gaps narrow and policy frameworks support uptake. In 2024, electric car sales in Brazil more than doubled to around 125,000 vehicles, with the market share rising to over 6 per cent. This acceleration was driven in part by a sharp reduction in price premiums for electric cars as a result of more availability and targeted fiscal incentives.[79] These examples highlight how different policy mixes can accelerate the uptake of clean technologies, while underscoring the importance of credible demand creation for scaling clean industries. The CID is a strategic chance for the EU to build on its strong industrial base and innovation background to compete in the global race for clean innovation and technology, while reducing its external vulnerabilities.[80]

The EU has many strengths it can build on. It is already strong in some areas of green innovation, such as wind energy, heat pumps, offshore operations (for installation of renewables), and heating and cooling networks. Additional sectors, such as hydrogen production and electrolysers, have a high potential for growth. In 2019–21, the EU accounted for over 25 per cent of global exports in eight green technology

solutions, and in 2016–20, investment in several green technology sectors grew faster than EU GDP.[81] The existing pipeline of decarbonisation of some key industrial sectors (namely ammonia, aluminium, cement and steel) represents an approximately €100 billion investment opportunity for the EU.[82] Adoption of circular economy solutions could also significantly improve the EU's trade balance by reducing demand for fossil fuel and material imports.[83]

Historically, the EU's predictable climate and energy framework has been one of its greatest competitive assets. By prioritising the implementation of that framework and, in a second step, considering targeted reforms that make the low carbon transformation easier and clean investment more attractive – with a practical, forward-looking set of immediate priorities – the CID can help to improve investors' confidence, accelerate progress and drive industrial revitalisation. However, policy proposals following the strategy must systematically address all the key challenges to accelerated action, from infrastructural and regulatory barriers to sluggish demand and high investment costs. This is why lead market creation is so essential for the CID's success and for the EU's ability to achieve its climate targets while retaining industrial activity within its borders. The EU is already strong in innovation and the early stages of technology development,[84] but commercialisation and scaling are key to maximising the gains from expected global market growth for clean and circular products in the coming decades.

5.2 Lead markets in the EU industry framework

The CID seeks to deploy various regulatory, financial and fiscal tools to address the market disadvantages that clean and circular materials and products currently face. The idea behind lead market creation under the CID is that higher adoption rates of clean and circular production technologies and products would reduce the per-unit production costs over time. Alongside measures that increase the cost of emission-intensive production – such as carbon pricing under the EU ETS – lead market policies can help clean and circular products to achieve cost parity with incumbent technologies (or significantly reduce the cost discrepancy), enabling them to absorb a growing market share. Lead market policies that accelerate demand for clean and circular products, such as the non-price criteria requirement in public sector procurement, can effectively alter market dynamics even if achieving cost parity with incumbents is not possible. Overall, the IAA has the potential to materially strengthen EU industrial decarbonisation and competitiveness by mobilising demand-side pull, faster permitting and strategic openness to investment, but its success will hinge on whether quotas, definitions and Foreign Direct Investment (FDI) controls are calibrated tightly enough to avoid cost inflation, legal uncertainty and uneven social and regional outcomes.

The CID does not introduce any specific policy instruments to support lead market creation. Instead, it outlines plans for regulatory reviews and amendments, acts, frameworks and funding mechanisms that will be introduced in 2025–27 to deliver the CID's vision of lead markets for clean and circular products and technologies (see further details in Annex A).

Released on 4 March 2026, the Industrial Accelerator Act aims to provide the legal instruments hinted at in the CID, including by setting the ambition to increase the share of industrial manufacturing in EU GDP to 20 per cent by 2035. It proposes to strengthen Europe's ability to build lead markets by introducing demand-side rules in procurement and support schemes that prioritise low carbon and 'Made with EU' products in strategic sectors, with a local content dimension. All these criteria will require further work on

definitions, sectoral scope and implementation, to ensure that the IAA supports competitive sustainability rather than creating unintended barriers, as well as having clear timelines, which should consider gradual or sequenced introduction depending on sectors and position in the value chain.

The Commission's proposal introduces minimum content and low carbon performance requirements for sectors such as steel, cement (concrete and mortar), aluminium, chemicals, vehicles and key net zero technologies like batteries, solar PV, heat pumps, wind systems and nuclear components. These provisions have the potential to significantly strengthen sustainability by embedding low carbon criteria into purchasing decisions, thereby stimulating early demand, lowering investment risk and reinforcing a positive supply–demand loop for cleaner materials.

However, targeted policy measures need to be underpinned by clear definitions and labelling, and with the IAA proposal the question remains on how 'low carbon' is defined in this context. The Ecodesign for Sustainable Products Regulation (ESPR) framework is an appropriate place to set product requirements, and define and classify decarbonised steel. It is important that a robust definition and labelling framework to support lead markets is put in place without delay.

At the same time, the rules on 'Made in/with Europe', based on production location and extended to trusted partners, remain sensitive, with stakeholders and Member States highlighting that further clarification is needed on where these requirements will apply, how trusted partners will be identified, and how to avoid crowding out sustainable imports or distorting supply chains.

It will be critical to ensure that procurement measures integrate clear low carbon thresholds and performance standards through delegated acts. Without this, there is a risk that local content requirements are rewarded without delivering meaningful decarbonisation gains, while well-designed standards would also allow for flexibility to adopt a more gradual approach where appropriate.[85] Industry and civil society feedback stresses that open, consensus-driven dialogue is essential to calibrate these rules so that they create credible demand signals, prevent market fragmentation, and ensure that sustainability criteria rather than protectionism remains the core driver of European lead markets under the IAA.

6 Policy recommendations

As reflected in the Commission's decision to include lead market creation as a specific objective under the CID, additional policy interventions are needed to establish and grow financially viable clean and circular industrial activity within the bloc. Business examples can inform and build confidence in the success of such policies. Decisive and swift action by government and industries can prevent the EU economy from missing out on the benefits that will accrue to those who develop and deploy cost-effective ways to produce materials and products with a lower environmental footprint. To benefit from the first-mover advantage in a competitive context, time is of the essence.

This section outlines how European policymakers can support effective lead market development for clean and circular products in a way that enables economic growth, wellbeing, competitiveness, strategic autonomy and progress towards the EU's climate goals all at once. It outlines key considerations for effective lead market policies in the EU context, acting as guiding ideas for the design of policy portfolios. It then looks into the interaction between lead market policies with instruments that support innovation or phase out carbon-intensive products and production technologies, in the interest of coherent and comprehensive policy frameworks. Finally, it sets out strategic recommendations for policy development.

6.1 Adjusting the approach to market readiness

The purpose of lead market policies is to support a product or technology from market introduction to market diffusion, addressing the key challenges to its adoption, scaling and mass deployment. The clean and circular products and technologies covered in the CID are at different stages of development, and more than one solution may be needed for the key sectors covered in the CID and the IAA.

Policies should be developed in line with the S-curve economics framework. This will guide the zero-carbon transition and adapt the policy instruments according to how market-ready the technology, product or service is, helping ensure success and reducing the risk of failure.

This approach, illustrated in Annex 2, divides the technology development process into four stages along the technology learning curve: invention, market introduction, diffusion and reconfiguration. Each stage is associated with its own challenges, which inform the policy choices and the key principles to guide policymaking. However, specific policy instruments and regulations need to be adapted to each product category.

At the invention stage, the focus is on encouraging research and development of new technologies and products, and new ways of meeting society's needs. Policies at this stage centre on supporting and de-risking innovation and piloting, clarifying desired performance standards and facilitating knowledge sharing and collaboration.

- The key principles informing policy development at the invention stage include technology neutrality, building on existing strengths, and developing a clear vision for the future to reduce uncertainty and reassure investors.
- Getting the policy framework right at the invention stage is crucial to enable new clean and circular products and technologies to emerge.

At the market introduction stage, the focus is on creating early market demand to kickstart the positive feedback loop of technology learning. Policies at this stage centre on early demand and enabling supply despite higher production costs, with a view to identifying the most promising solutions for scaling and any regulatory barriers that may impede this.

- The key principles informing policy development at this stage include concentrating efforts on solutions that have the greatest potential to meet the long-term needs of a given sector, and complementing policies to incentivise demand with measures to encourage and enable supply.
- Lead market policies such as grants and concessional lending, production and purchase subsidies, public sector procurement and content quotas – followed by mandates and standards – can support many existing clean and circular products and technologies to achieve commercialisation.

At the diffusion stage, the focus is on capitalising on technology learning and economies of scale to improve the relative attractiveness of the clean or circular alterative and creating enabling conditions for its adoption at scale. Policies at this stage centre on improving the new product's competitiveness, scaling up demand and supply, and addressing infrastructural and societal barriers to its large-scale deployment.

- In addition to continuing and strengthening the lead market policies designed at the market introduction stage, policymakers must ensure that the enabling infrastructure and regulatory framework are supportive of their growth. This may involve amendments to pricing policies that reduce the competitiveness of clean and circular alternatives to incumbents, and setting up new institutions and regulatory bodies to govern and oversee new services, business models and other operations to enable scaling.
- This requires policymakers to prepare plans and precise timelines for the phasing out of fossil fuel reliant technologies, for the sectors that can operate effectively using the emerging solutions.

At the reconfiguration stage, when the transformation is progressing, the focus is on expanding the market reach to more remote or slower-moving market segments and phasing out emission-intensive practices with minimal disruption to consumers. Policies at this stage centre on completing the required reforms to market structure, regulation and infrastructure, and supporting workers, communities and regions where the economic impact of the transition may otherwise be negative.

- The key principles informing policy development at the market reconfiguration stage include capitalising on the benefits from cross-sectoral applications, integrating the transition into broader governance strategies and economic development plans, and dealing with distributional issues.

Although lead market policies are required primarily to support product development through market introduction and diffusion, it is useful for policymakers to plan for market reconfiguration at the very start of the process. Having long-term objectives for phasing out emission-intensive technologies – such as a date for a sales ban for gas boilers or internal combustion engine (ICE) vehicles, or for the phase-out of free ETS allowances – can reduce the risk of investing in new clean and circular product development and associated services and direct more capital to innovation, R&D and commercialisation. A clear vision supported by sectoral roadmaps for decarbonisation and greater circularity indicate predictability, commitment and stability that will encourage the private sector to develop its own transition plans to benefit from the lead market policies.

6.2 The role of public and private finance instruments

Creating European lead markets will provide predictable offtake for clean and circular materials, bring down costs through scale, and make Europe a more attractive target for investment capital. There are several ways in which public and private financial flows can support this development in Europe:

Public procurement: This accounts for 15 per cent of EU GDP, meaning it can play a major role in creating early demand for clean products. Governments can set minimum quotas or standards for low carbon and recyclable materials – such as steel, cement, construction products and vehicles – and use EU-level financial tools like the Competitiveness Fund, the Decarbonisation Bank and InvestEU to help cover the extra cost of cleaner options, especially in countries with limited budgets. Procurement rules should include strong sustainability requirements, address long-term cost efficiency, and consider where products have strategic EU industrial value or are produced with key trade partners. Private sector purchasing can also accelerate the uptake of clean technologies in key industries.

Price stability mechanisms: To unlock investment in clean and circular industry projects, companies need predictable demand and lower financial risk. EU guarantees, subordinated debt and other de-risking tools can reduce financing costs. EU-level offtake mechanisms – such as contracts for difference or guaranteed purchasing agreements – will be especially important for hard-to-abate sectors, and would be a meaningful complement to demand creation.

Finance for downstream demand: Scaling industrial investment also requires strong demand from end users. Retail finance tools like green mortgages, soft loans and renovation loans – supported by InvestEU and the Competitiveness Fund – can help households, SMEs and social-economy actors adopt clean solutions. Demand aggregators, such as energy communities, can pool smaller buyers to help them access finance and create scale in fragmented markets.

Criteria and safeguards: Clean and circular markets only work if 'low carbon' and 'circular' are clearly defined, measurable and verifiable. Public funding should strengthen EU value chains and support social fairness. This requires strong safeguards and conditions to ensure that investments genuinely support a fair and sustainable industrial transition. EU financial tools should recognise certified clean products in risk assessments, and sustainability, circularity and Union origin criteria (when they consistently drive domestic industrial capacity, jobs and decarbonisation) should be embedded across state aid, procurement, renewable auctions, EV bonuses and other public finance mechanisms. EU and national funding should also support regions with limited fiscal capacity to avoid widening inequalities.

Streamlined and co-ordinated EU/national funding: Access to public funding must be simpler and more co-ordinated. Today's complex and fragmented procedures slow down clean industry investment. Simplified applications and reporting requirements, if implemented in a balanced way, could further improve permitting efficiency. A more standardised approach – such as a one-stop shop – would make it easier for companies to access support. The next EU budget should better align national and EU funding through the National and Regional Partnership Plans (NRPP) and the European Competitiveness Fund, while the Competitiveness Coordination Tool should ensure national support matches EU-wide lead market goals. EU funds would be strategically used if a larger share was allocated to the green transition through research and innovation, and scale-up of fossil-free processes and technologies. Public investments have a key role to play to support the enabling infrastructure for a competitive and resilient

economy, for instance through building key infrastructure, such as energy production, grids, railways and ports, which are horizontal and benefit all businesses.

If Europe wants to lead in clean industrial production, it must build markets that make clean investments financially viable. By combining strong demand-side measures, targeted finance tools, and consistent sustainability and EU-preference criteria, the EU can unlock its €100 billion clean industry pipeline, accelerate project deployment, create high-quality jobs, and strengthen its position in the global cleantech race. Of course, a part of this will be following through on wider recommendations of reports like the Draghi report and implementing plans like the Capital Markets Union – measures to improve European competitiveness by creating larger, more liquid capital markets are critical to enable clean innovation investment as much as other parts of the economy.

6.3 Strategic recommendations for policy development

Supporting the emergence and scaling of clean and circular industrial activity requires a coherent approach to lead market design within the broader context of decarbonising the EU economy. Below, we outline five strategic considerations to guide policymakers in developing effective lead market policies with lasting impact.

1. Ensure policy coherence, predictability and alignment

- Assess how each policy affects various stakeholders in the value chain, so no group is unfairly impacted. To avoid problems caused by supply shortages, demand-side tools like content quotas should be flexible when supply is tight. As many key policy files are under development, EU institutions should ensure proper impact assessment, carefully consider the consultation outcomes, and maintain an open and transparent stakeholder dialogue during the legislative process.
- Set a clear long-term direction for the transition, with sector-specific plans that support both decarbonisation and competitiveness. Both overarching goals and sectoral, adapted and sequenced plans are needed to deliver on decarbonisation at scale, while maintaining the necessary competitiveness, in alignment with long-standing existing instruments such as carbon pricing. When electrification is technically possible, policies should make it the most cost-effective option and prevent perverse incentives favouring fossil-based solutions.
- Create long-term emissions, low carbon and circularity targets, including phase-out dates for high carbon technologies. The IAA can support this by embedding long-term low carbon performance criteria in procurement and investment frameworks, stabilising expectations for manufacturers.
- Introduce mandatory data reporting and clean/circular content standards and labels. These should support a gradual shift to cleaner production through tiered categories rather than binary thresholds. Content standards for materials like clean aluminium or plastics must align with supply-side measures to avoid shortages. The IAA can help deliver this through its low carbon product criteria and requirement that supported production meets defined sustainability and origin standards, provided these definitions are transparently developed and in close co-ordination with supply-side measures.

2. Generate strong, reliable market demand across value chains and market types

- Help consumers and businesses choose cleaner, more circular options by improving their awareness, skills and motivation through education, training, financial incentives and tools like insurance products. The upcoming Circular Economy Act will be an important moment to advance these measures.
- Create strong, reliable systems for collecting and reporting data to enable credible labelling and product information, underpinning the identification of genuinely clean and circular products.
- Use the IAA to pilot demand for low carbon industrial products, by embedding minimum low carbon performance criteria and Union-origin content rules in government-led procurement and public support schemes for sectors such as steel, cement, aluminium, chemicals, vehicles and net zero technologies. These rules, if designed with clear definitions and transparency, can help build early demand and send long-term signals that anchor investment.
- Make strategic use of the upcoming revision of the Procurement Directive, which can be a strong enabler for clearer, harmonised rules, as part of a consistent legislative framework that paves the way for a successful implementation of sectoral legislation like the Circular Economy Act. Making non-price requirements the norm holds strong potential for the uptake of more clean and/or local products and materials.
- Ensure that ongoing negotiations clarify where and how these criteria apply, since definitions of 'Made with Europe' and trusted partners are still under discussion. Decisions about scope, exemptions and phase-ins will require consensus with industry to avoid unintended consequences and maintain the integrity of sustainability objectives. As much as possible should be clarified within the primary legislation to avoid additional years of market uncertainty caused by delegated acts.

3. Enable competitive, scalable supply

- Support innovation from early ideas to commercialisation through pilot funding, partnerships, mission-oriented collaborations and regulatory sandboxes. Financing tools such as the Innovation Fund and the European Competitiveness Fund should integrate this early-to-late-stage support.
- Simplify access to finance by providing low-cost loans and government guarantees that reduce risk for capital-intensive industrial projects.
- Ensure the legal framework is clear and easy to understand, to enable company uptake of financial incentives and new market rules.
- Fix structural cost gaps that hinder competitiveness of electrification, especially in globally traded sectors. The Affordable Energy Action Plan and the Grids Package are central to this, and the IAA can complement them by lowering market uncertainty for low carbon industrial products, helping companies justify electrification investments by strengthening future demand signals.
- Leverage the IAA's accelerated permitting and Industrial Acceleration Areas to reduce delays for strategic manufacturing and industrial decarbonisation projects. This can shorten time-to-market for low carbon technologies and improve the competitiveness of EU supply.
- Help companies bring clean and circular products to market without risking their financial stability. This includes de-risking big investments with public funds, and encouraging co-operation between policymakers, insurers and regulators so new technologies can be insured. These actions are not classic lead market policies, but they are essential for scaling clean innovation.

4. Build an environment that supports clean and circular lead markets

- **Increase public investment in skills, awareness, infrastructure and enabling systems for clean and circular production.** This includes renewable electricity and hydrogen systems, CO_2 transport and storage for unavoidable emissions, and more effective recycling and reuse systems.
- **Simplify permitting for large, strategic infrastructure.** The Grids Package already proposes accelerated procedures for energy infrastructure; the Circular Economy Action Plan should extend similar support to circular systems. The IAA's 'one project, one submission' permitting approach can also reduce bottlenecks for industrial projects needed to supply clean materials.
- **Replace prescriptive technology standards with performance standards** where possible, and update these regularly to reflect innovation.
- **Lower the cost of using electricity and clean hydrogen,** including through ancillary markets that fairly reward flexible loads. Over time, this will make electrified industrial processes more competitive and better aligned with the demand created by lead market policies.

5. Foster collaboration

- **Invest in joint efforts on the demand and supply side,** such as buyer coalitions and partnerships (see Chapter 4). These help aggregate demand, improve offtake certainty and strengthen lead markets.
- **Work with industry and trade partners to harmonise** data collection, improve interoperability, and develop shared definitions and metrics for clean and circular materials (for example 'low-emission steel'), ideally using tiered levels, in policies related to EU industry.
- **Look for trade partners and opportunities for joint initiatives** that benefit both them and EU countries by lowering costs, improving resilience and supporting global decarbonisation. Examples include Clean Trade and Investment Partnerships (CTIPs),[86] Just Energy Transition Partnerships (JETPs)[87] and sectoral initiatives.[88]
- **Use IAA discussions to advance these collaborations,** since the Act's approach to trusted partners, reciprocity and trade-aligned procurement rules provides an opening to shape common sustainability standards with like-minded economies.

7 Concluding comments

Europe can turn its clean industrial ambition into a real competitive advantage. Heavy industry has a large investment pipeline, but many viable projects are stalled because markets for clean materials are still uncertain, among other reasons. Clean production costs add only a small premium to finished products, yet even this slows investment without clear demand or financial support.

The Clean Industrial Deal needs to be more than a policy package. It should be Europe's strategic answer to rising global competition and build on the insights of the recent Draghi,[89] Letta[90] and Niinistö[91] reports, as well as fully capitalise on the opportunities of the sustainability transition.[92] The Green Deal and Fit for 55 have driven major progress in renewable electricity. The EU must now ensure that other sectors and value chains meet the conditions to scale clean and circular production. The world today is even less stable and faces more risk than it did at the time of the invasion of Ukraine, calling for an even stronger response. Against a backdrop of accelerating geopolitical fragmentation, war-driven instability and unprecedented fossil fuel price volatility, the EU faces a clear imperative to massively increase domestic security, predictability and resilience, through greater industrial capacity and strategic autonomy. Policies must address the barriers that persist, including high-end consumer power prices, missing infrastructure, regulatory hurdles and weak market signals.

With the CID and related legislation like the IAA, the EU and Member States can support industry to cut emissions, strengthen economic security and improve competitiveness. These goals can align, but they require a much more coherent policy framework, significant investment and a long-term outlook backed by near-term action. The EU must give clear direction and regulatory stability so that businesses can plan investments and manage supply chains with confidence.

A strong target of at least 90 per cent emissions cuts by 2040, alongside a robust EU emissions trading scheme provides important guidance for business and investment choices, and supports industrial competitiveness. Stable rules and full implementation of existing policies will help retain companies in Europe and attract new investment. This will also reassure firms already investing in clean and circular production that Europe is the right place to scale.

As has become abundantly clear in the early months of 2026, the EU must invest strategically to ensure its security against future energy price shocks and to guard strategic value chains. This calls for decisive action rooted in policy certainty and steady implementation. Softening legislation rather than ensuring flanking measures to help achieve clean industry and energy goals will backfire, causing future dependencies and exposure to volatility.

Europe must now take a strategic approach to building lead markets, focusing on sectors where it already has strengths and future potential. Circular economy innovation is a particular opportunity. Progress will require a strong policy mix that rewards high-value circular solutions and stimulates demand for circular materials. The Circular Economy Act, along with clearer rules on secondary materials and stronger procurement standards, will help frontrunners grow once it has been adopted, and ideally swiftly implemented.

Effective lead market creation will require serious investment. On the supply side, this includes funding for research and demonstration, as well as infrastructure for renewable electricity, energy storage and clean

fuels such as hydrogen. Public finance will also be needed for technologies like carbon capture and direct air capture so they can mature in time for wider deployment. These measures must be matched with demand-side tools such as sustainability criteria in public procurement, carbon intensity labelling, certification, insurance products for circular business models and financial incentives for consumers.

European industry has an opportunity to lead globally in clean and circular production, but its impact will depend on bringing other regions along. In a more competitive world, the EU should work through strategic trade partnerships and global coalitions. Strong trade policy, effective implementation of the Carbon Border Adjustment Mechanism and initiatives such as the Just Energy Transition Partnerships can help ensure fair competition. Co-ordinated action with global partners on standards, trade rules and investment can raise global climate ambition and secure resilient supply chains for Europe.

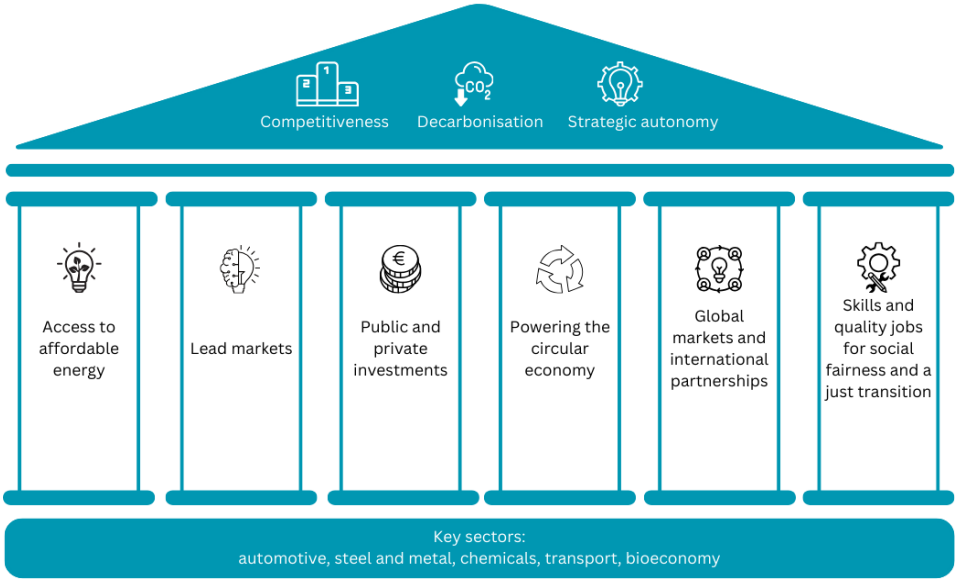
Annexes

Annex 1. Summary of the CID and related policies

The Clean Industrial Deal (CID)[93] is a high-level strategy to revitalise the EU's industrial activity in a way that contributes to the full implementation of the bloc's 2050 climate neutrality target and addresses concerns about the bloc's competitiveness against large economies with cheaper energy and labour, and less stringent regulation. It positions decarbonisation as a strategic economic priority, a source of competitive advantage, an energy and resource security imperative[94] and an economic growth strategy. By incentivising large-scale investments for infrastructure and industrial decarbonisation, the CID seeks to accelerate reindustrialisation and reinforce the business case for clean technology development, from early-stage innovation to large-scale production and deployment.

The CID has two key focus areas, including: (1) *energy-intensive industries*, which need urgent support to decarbonise, electrify and remain competitive despite high energy costs and regulatory complexity; (2) *cleantech manufacturing*, which is essential for industrial transformation, circularity and Europe's leadership in climate technologies. It is built around six key pillars, as illustrated in Figure 5.

Figure 5. *An overview and key pillars of the Clean Industrial Deal*



Source: CISL

The CID builds on the previous Commission's Green Deal Industrial Plan (2023) with two notable divergences. First, the rhetoric in the CID places renewable energy, industrial decarbonisation and circularity firmly in the context of competitiveness and self-sufficiency: domestically produced energy, clean industrial production and a circular economy can improve economic security and provide growth opportunities for EU industry. China's economy has profited substantially from catering for global demand for electric vehicles (EVs) and solar panels (PVs). The EU must identify sectors where market leadership remains attainable, and strategically position itself to capture these opportunities while growing domestic demand for them through the implementation of lead market policies.

The CID reflects the realities of a post-Covid world marked by geopolitical crisis, trade tensions, security concerns and diminishing support for ambitious climate policy. In addition to climate, the CID and its associated files address issues such as social inequalities, the cost of living crisis, industrial competitiveness, jobs and high energy costs affecting households and businesses. While renewable energy is central to the Affordable Energy Action Plan, it also includes measures to secure cheaper natural gas. Electrification and circular economy are framed primarily as strategic to reduce import dependency manage price volatility and secure access to critical raw materials. Industrial decarbonisation and trade instruments such as the Carbon Border Adjustment Mechanism (CBAM) are presented as tools to strengthen EU competitiveness, revitalise industry and retain manufacturing jobs in the EU.

Some specific plans and existing regulations that can be expected to play a significant role in lead market creation for clean and circular products include:[95]

- The recently adopted Clean Industrial Deal State Aid Framework (CISAF), which allows Member States to funnel money into strategic electrification, decarbonisation and cleantech manufacturing projects until the end of 2030, and encourages the use of a reasonable share of EU preference criteria in procurement.[96]
- The recently published Affordable Energy Action Plan, which outlines immediate measures to reduce energy costs, complete the Energy Union, boost energy efficiency, attract investment and strengthen resilience against future energy crises.[97]
- The recently published European Grid Package, which aims to modernise and expand the EU's electricity infrastructure by tackling grid congestion, streamlining permitting and improving renewable energy integration.[98]
- The implementation of the 2024 Ecodesign for Sustainable Products Regulation (ESPR), which aims to improve the circularity, energy performance, recyclability and durability of products placed on the EU market.[99] The associated Ecodesign Work Plan 2025–2030,[100] published in April 2025, intends to expand sustainability requirements to a broader range of products (eg steel and aluminium, textiles, furniture, tyres, mattresses, energy-related products), ensuring they are more durable, repairable and recyclable, further supporting the supply of circular inputs. This is closely connected to the Construction Products Regulation (CPR), which lays down harmonised rules for the marketing of construction products in the EU.
- The Industrial Accelerator Act (released on 4 March 2026), which will support energy-intensive sectors in transitioning to low carbon and domestic production by streamlining permitting, promoting breakthrough technologies and electrification, and fostering lead markets for sustainable industrial products, looking at particularly strategic sectors and value chains.[101]
- The new Circular Economy Act (CEA) (expected in September 2026), which will advance industrial transformation by establishing a Single Market for secondary raw materials and waste. It seeks to enhance the quality and competitiveness of recycled and circular products, promote reuse and sustainable design, and reduce resource dependency and emissions, with the goal of doubling Europe's circularity rate to 24 per cent by 2030.[102]
- The review and revision of the Public Procurement Framework (expected in June 2026), which will aim to simplify procurement procedures and ensure greater consistency with sectoral legislation (IAA, CPR, ESPR, CEA, etc). It is also expected to better align its provisions with the EU's sustainability objectives, alongside strengthening the bloc's economic sovereignty and resilience through 'Made in EU' criteria.

- Revisions to EU Emissions Trading System (ETS) (expected second half of 2026), which will detail its implications for lead markets for clean and circular materials and products.
- Simplification and expansion of Important Projects of Common European Interest (IPCEI), to improve support for cross-border EU projects that advance strategic innovation and industrial development.
- The establishment of a Critical Raw Materials Centre (expected in Q2 2026).
- The EU Heating and Cooling Strategy (expected in May 2026), which will focus on accelerating the deployment of clean technologies such as heat pumps, district heating and waste heat recovery. It will support integrated energy planning and infrastructure development, and promote energy efficiency and renewable heat sources in buildings and industry.
- Sectoral plans, such as the recently published Steel and Metals Action Plan[103] and Automotive Industry Action Plan.[104]

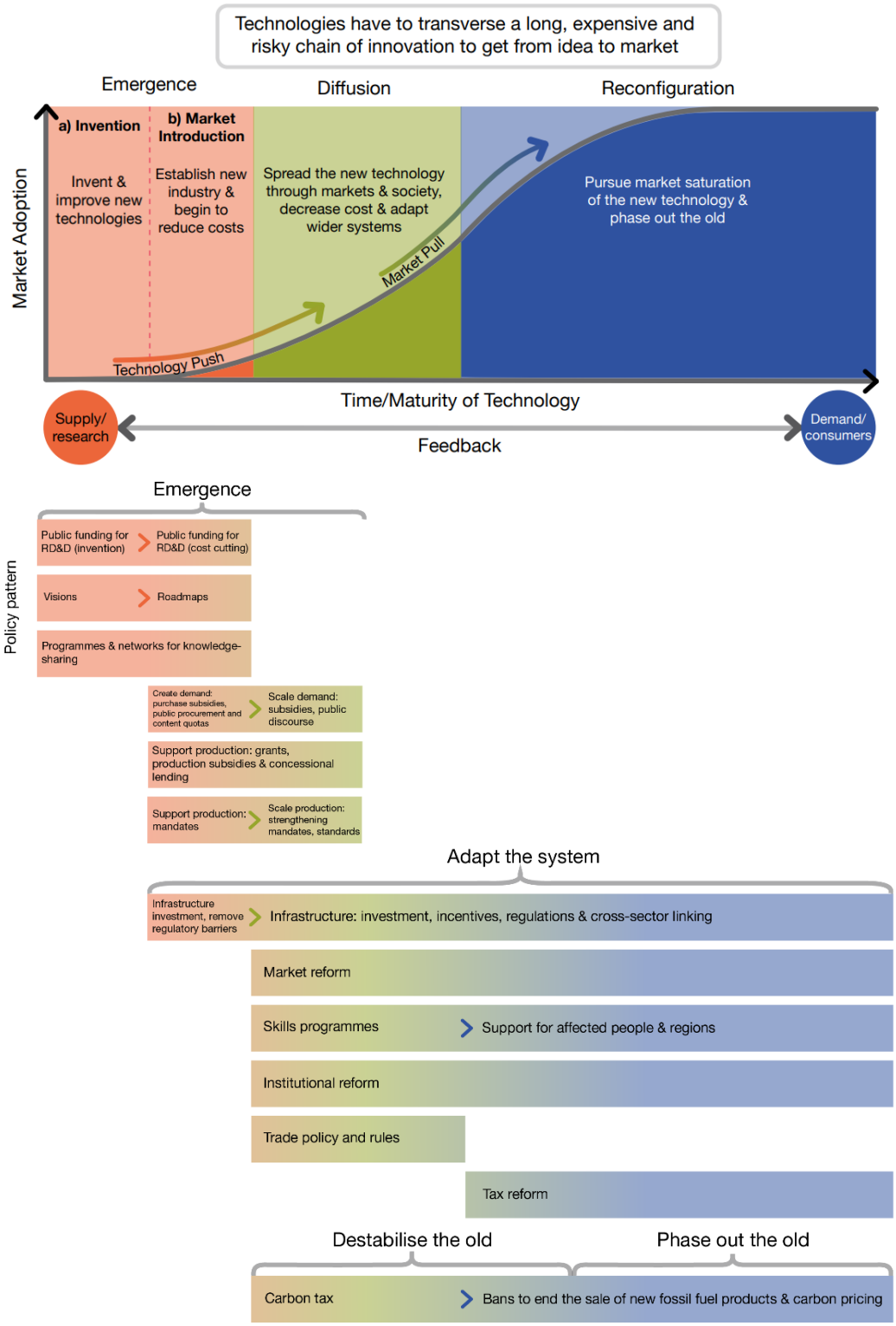
The Clean Industrial Deal is supported by a set of financial instruments, including:

- The next Multi-annual Financial Framework (MFF), particularly the European Competitiveness Fund (which will support development, scaling and manufacturing of strategic technologies across the entire innovation cycle, including clean technologies, to strengthen Europe's competitiveness).
- Support from the Innovation Fund.
- Leveraging of more private investment through amendments to the InvestEU Regulation.
- Direct support from Member States allowed under the revised State Aid Framework.
- The Industrial Decarbonisation Bank, which aims to mobilise €100 billion in funding for large industrial projects by pooling resources from the Innovation Fund, InvestEU, ETS revenues and Member State co-financing. It will support high-impact projects across sectors, using tools like carbon contracts for difference to de-risk investments and incentivise deep decarbonisation. The first step was made in October 2025, when the EU Innovation Fund announced a competitive auction for industrial process heat decarbonisation, with a budget of €1 billion.[105]
- The Clean Industrial Deal State Aid Framework (CISAF)[106] (adopted in June 2025), which aims to streamline approval processes for public support for clean energy, industrial decarbonisation and clean technology manufacturing. It replaces the Temporary Crisis and Transition Framework and provides Member States with a flexible toolkit to accelerate investment while de-risking private investments and maintaining fair competition.

Figure 6. *Timeline of legislative proposals and revisions under the CID in 2026*

Initiative	Expected	Category
Electrification Action Plan, Heating & Cooling Strategy	May	Electrification
Omnibus to simplify energy product legislation	Q2	Electrification
Public Procurement Act	Q2	Lead markets
Industrial Decarbonisation Bank	Q3	Finance
Circular Economy Act	Q3	Lead markets
European Product Act	Q3	Lead markets
Post-2030 Climate and Energy Framework / Energy Union package	Q3	Cross-cutting
Energy Efficiency framework post-2030	Q4	Cross-cutting
Grids Package	Q4	Electrification
Renewables framework post-2030	Q4	Cross-cutting
European Climate Resilience Package	Q4	Cross-cutting

Annex 2. Creating lead markets for clean and circular products



Source: Adapted from Murphy et al. (2025, p. 8)[107]

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