CLEPA
European Association of Automotive Suppliers

The Road Ahead:

CLEPA Sustainability Manifesto

#TheRoadAhead

Message from our Secretary General

Our Vision for a sustainable automotive supply industry

In an era defined by unprecedented challenges and transformative opportunities, the European Association of Automotive Suppliers (CLEPA) is spearheading sustainability initiatives in the automotive industry. Our commitment transcends mere compliance with regulatory or customer requirements – it embodies our shared responsibility to shape the future of mobility.

As automotive suppliers, we are more than providers of advanced automotive components and systems, we are catalysts for change. We bridge the gap between aspiration and implementation, acting as critical intermediaries and leading solution providers between vehicle manufacturers (OEMs) and the upstream value chain.

As leaders in sustainable production and mobility solutions, the automotive supply industry unites around the following vision for the road ahead:

→ **Champion the goals of the European Green Deal and Paris Agreement**
while ensuring Europe's automotive supply industry remains globally competitive

→ **Advocate for a technology-neutral regulatory framework**
that balances environmental responsibility, social equity, and economic growth

→ **Empower local and regional communities**
by cultivating vibrant auto clusters, securing skilled jobs, and fostering diversity, equity, and inclusion

→ **Drive innovation and cross-sector collaboration**
to deliver affordable, sustainable mobility solutions for all society

Navigating challenges

The road ahead is not without its challenges. We operate in an industry characterised by complex, interdependent and global value chains. Moreover, the sector is confronting growing global competition and a rapidly evolving regulatory landscape. Perhaps most significant, is the substantial investment required to develop and implement sustainable practices. The transition demands a careful balancing act between maintaining economic viability in order to finance our ambitious sustainability goals as well as to protect employment.

The road ahead

Despite these hurdles, we remain steadfast to our vision. We are dedicated to navigating the intricate balance between innovation, sustainability, and economic viability. Our goal isn't perfection, but progress. Every component we design, every process we improve, and every partnership we forge brings us closer to a sustainable and accountable automotive industry. We are realistic about the challenges but optimistic about our capacity to overcome them through a collective effort.

As the driving force in sustainable, accessible, and innovative mobility solutions, the automotive supply industry is at the forefront of the transformation. Join us on the road ahead, as we turn challenges into opportunities and incremental changes into transformative progress. Together, we can build a future where mobility serves both society and the planet.

We are dedicated to navigating the intricate balance between innovation, sustainability, and economic viability.

Benjamin Krieger

Benjamin Krieger,
Secretary General of CLEPA

CLEPA's sustainability pillars

Our Sustainability Manifesto underscores our industry's ambition built on four key pillars:

Climate Action

Reducing emissions across Scope 1, 2, and 3, enhancing climate resilience, and ensuring sustainable water management

Circular Economy

Promoting circular product design, reuse, remanufacturing, and end-of-life recycling to minimise environmental impact and resource dependence

Responsible Supply Chain

Protecting human rights, ensuring environmental due diligence, sustainable procurement, and supply chain resilience

Just Transition

Preserving employment, fostering talent and inclusive work environments, and contributing to local communities

The automotive supply industry's contribution to the EU

Why Europe must remain a hub for manufacturing, innovation and employment

The products created by automotive suppliers provide essential mobility solutions that enable social and economic prosperity, and are crucial for delivering essential goods and services, ensuring that daily necessities reach consumers and businesses alike.

75% of the value of a vehicle comes from its parts, components, and systems

€30b are invested yearly in research and development

+39k new patents are registered each year

32% of total R&D investment in the EU comes from automotive, making the sector the top private investor

1.7m direct jobs generated across the EU

€26.7b trade surplus generated in 2023

Executive Summary

Introduction

Automotive suppliers are at the forefront of shaping the future of mobility. The green mobility transition should aim to enhance, not hinder, accessible and cost-effective mobility solutions through digitalisation, skill development, and a technology-open policy framework. As industry leaders, we are committed to creating climate-neutral mobility and manufacturing, adopting circular economy principles, ensuring a just transition, contributing to local communities, and maintaining the highest standards of corporate social responsibility.

This manifesto does not supersede individual sustainability strategies of our members. It provides a broad vision of a sustainable automotive supply industry and identifies a non-exhaustive set of complementary measures for its realisation. Our members' sustainability strategies may differ due to diverse operational challenges and product portfolios. This document targets policymakers, civil society, and industry stakeholders in a B2B context. It presents our industry's vision and should not be used for B2C communication or to claim that the products or services of our industry are more sustainable than those of competing industries. The manifesto creates no binding commitments or obligations for CLEPA members. Corporate plans can be obtained from members directly.

Sustainability ambitions

The following ambitions reflect our commitment to sustainable practices across different aspects of our industry, from production processes to workforce development and community engagement. They guide our efforts to build a more sustainable, resilient, and inclusive automotive supply sector. The ambitions outlined in this manifesto apply to our members' operations across the EU. For further detain and context, please refer to the section on Pillars.

Climate Action

- Strive towards climate neutrality in European operations by 2040 (Scope 1 and 2)
- Aim for Scope 3 climate neutrality across the value chain by 2050
- Adopt targets to reduce water withdrawal in areas facing severe water scarcity

Circular Economy

- Increase revenue share from circular designed components
- Invest in remanufacturing for EV components
- Work towards zero production waste to landfill by 2030

Responsible Supply Chain

- Adhere to international guidelines and principles for responsible business conduct, including OECD Due Diligence Guidance and UN Guiding Principles on Business and Human Rights
- Support the EU's goal of sourcing 25% of critical raw materials through recycling and processing 40% of consumed materials within the continent

Just Transition

- Aim to have 5% of workers participate in up- or re-skilling annually by 2030
- Improve representation and adopt fair and equal talent acquisition strategies
- Expand involvement throughout the value chain to support affected stakeholders and local communities in areas of new industrial operations related to the green transition

The challenges

The green transition introduces entirely new value chains yet to be fully developed in Europe, while digitalisation is reshaping production and labour. Amidst these changes, we face fierce global competition, escalating business costs, increasing protectionism, and geopolitical uncertainties. Our complex, cross-border value chain demands collaborative efforts to implement uniform sustainable practices. Balancing this with economic viability requires significant upfront investments without guaranteed returns. Compliance with evolving regulations and rapid technological advancements also pose ongoing challenges. Tackling these obstacles to drive meaningful progress requires a holistic approach.

The automotive value chain

A modern vehicle consists of over 30,000 parts, components and systems, requiring a global operational approach and diverse business relationships. CLEPA represents over 3,000 companies and 120 corporate members, from multinationals to SMEs, each facing unique challenges in energy intensity, raw material usage and carbon footprint management. The broad scope of products and services within CLEPA's membership demands tailored approaches to address diverse challenges, from energy-intensive production to stringent safety requirements and cost considerations.

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Progress to date

European automotive suppliers have made significant strides in pursuing green and circular strategies throughout the value chain. Key achievements include:

Emissions Reductions →

The largest 29 automotive suppliers achieved a 8.4% reduction in Scope 1 & 2 between 2022 and 2023[1]. This brings the total emissions reduction, compared to CLEPA's base year of 2020, to 11.8% across the group of companies analysed.

Circular Economy →

The largest 29 automotive suppliers increased their recycling and recovery of production waste to 85.8% in 2022[2]. Additionally, 1.5 million remanufactured components are sold annually in Europe, saving 807 kilotons of CO_2e emissions[3].

Innovation →

Over €20 billion invested annually in upgrading facilities, equipment, and R&D for climate-neutral mobility, developing cutting-edge powertrain technologies[4].

Resource Management →

Proactive water risk assessments and implementation of recycling measures. Progress in lightweight materials engineering and sustainable material use.

Supply Chain Responsibility →

Support for initiatives like the Responsible Supply Chain Initiative (RSCI) and participation in Drive+, addressing supply chain challenges.

Workforce Development →

67% of CLEPA members planning worker re-skilling, with half already implementing programs. Active involvement in the Automotive Skills Alliance for up- and re-skilling projects.

Community Engagement →

Strong connections with local communities and educational institutions, contributing to regional development.

Today's European automotive suppliers have evolved into innovative solution providers, designing components and systems for circularity. This transformation, coupled with substantial investments in new technologies, paves the way for a comprehensive approach to sustainable production and mobility. While these achievements demonstrate significant progress, we recognise the need for continued investment, innovation and collaboration to meet our ambitious sustainability goals.

67%

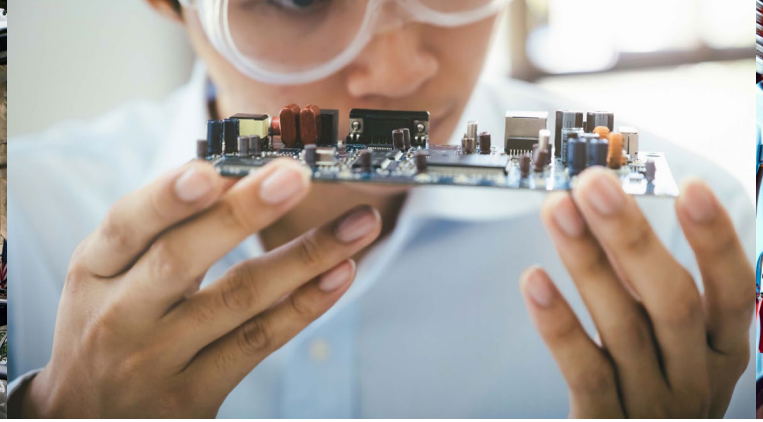
of CLEPA members planning worker re-skilling, with half already implementing programs.

1 CLEPA analysis, based on 29 automotive supply companies representing the different production activities of the sector

2 Ibidem

3 https://clepa.eu/wp-content/uploads/2022/01/CLE09_European-remanufacturing-market-study_v6_public-view-.pdf

4 https://clepa.eu/advocacy-priorities/energy-environment/eu-taxonomy/


Methodology

In response to the urgent need for a sustainable industrial transition, CLEPA conducted a sustainability materiality assessment in 2023, collecting input from 55 corporate members across Europe. Responses were received from across 10 EU member states and approximately 10% from outside the EU. This first-of-its-kind strategic exercise at CLEPA aimed to deepen the understanding of the specific sustainability topics most relevant to our diverse industry, leading to the four strategic pillars and sub-topics identified in our manifesto.

Sustainability matters were assessed following the double materiality principle as defined in the Corporate Sustainability Reporting Directive (CSRD). This approach considered both the environmental and societal impacts of our members' activities, as well as the financial risks and opportunities they face.

This assessment was a pivotal step in shaping the CLEPA Sustainability Manifesto, a landmark document developed by our Sustainability Strategy Taskforce in collaboration with the broader membership, and fully aligned with the Board of Directors and the President's mandate to enhance the sustainability performance of the industry.

This manifesto outlines a set of ambitions that can only be achieved through continued investments and a flexible regulatory framework, allowing the industry to leverage its innovative strengths.

First-of-its-kind strategic exercise at CLEPA aimed to deepen the understanding of the specific sustainability topics most relevant to our diverse industry

Sustainability matters were assessed following the **double materiality principle** as defined in the Corporate Sustainability Reporting Directive (CSRD)

55

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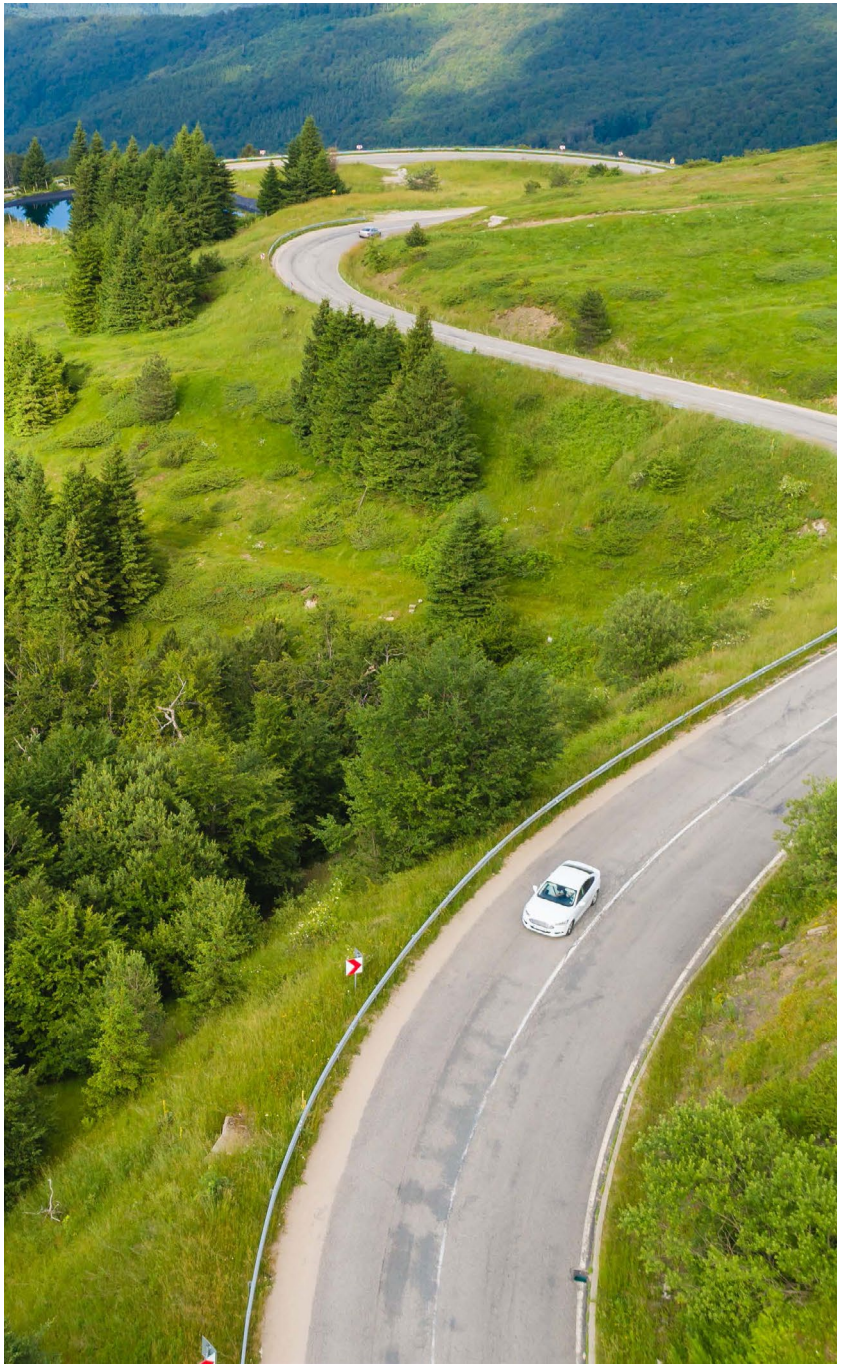
CLEPA convened an **Advisory Board** workshop to gather insights and feedback from key stakeholders across the mobility ecosystem



Advisory Board

In April 2024, CLEPA convened an Advisory Board[5] workshop to gather insights and feedback from key stakeholders across the mobility ecosystem. The workshop aimed to:

- Align on material ESG topics
- Obtain insights on enabling conditions & policy recommendations
- Enhance stakeholder engagement & accountability
- Establish a platform for ongoing exchange

In preparation for the workshop, CLEPA conducted an external materiality assessment with Advisory Board members to validate the findings from its internal materiality assessment conducted in 2023. During the workshop, Deloitte facilitated breakout sessions focusing on the four sustainability pillars identified as most relevant to the automotive supply industry: **climate action, circular economy, responsible supply chain and just transition**. These sessions allowed stakeholders to discuss the challenges and opportunities associated with the transition to sustainable practices.

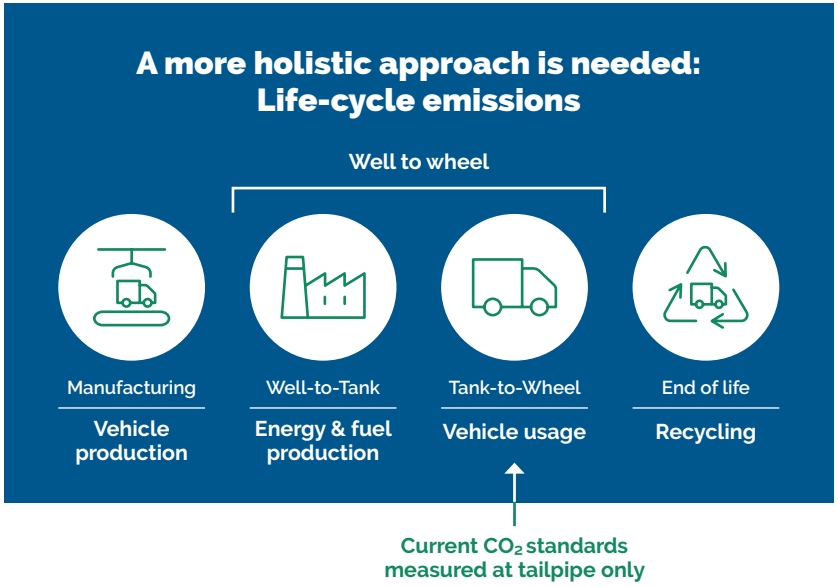
The external materiality assessment largely confirmed the findings of CLEPA members, though differing views on certain topics were carefully considered and integrated into the manifesto where feasible and appropriate.

Overall, the workshop reinforced the importance of collaboration and continuous stakeholder engagement in advancing sustainability within the mobility ecosystem.

5 Advisory Board Members: CSR Europe, EFAA, Transport & Environment, EFRAG, D-Carbonize.eu, FIGIEFA, FIA Region I, Politecnico di Torino, Orano, Ricardo, University of Stavanger, EUROFER, European Aluminium, ECODES, CEFIC, and Automotive Skills Alliance

PILLAR ONE
CLIMATE ACTION

Addressing climate change is a critical challenge for the industry, requiring both emissions reductions and adaptation to environmental changes, such as water shortages and flooding. **With transport accounting for 25% of the EU's total greenhouse gas (GHG) emissions – three-quarters of which come from road transport – automotive suppliers are heavily investing in technologies to reduce emissions in both road transport and manufacturing.**



Technologies like battery electric vehicles (BEVs) and the transition from fossil fuels to hydrogen and other renewable fuels are key to reducing emissions, particularly in the use-phase, which is currently the largest contributor to a vehicle's life-cycle emissions[6]. Automotive suppliers are investing over €20 billion a year[7] in upgrading production facilities, equipment, and research and development (R&D) for e-mobility, marking a fundamental shift in the long-established business model.

As emissions from the use-phase decrease with the adoption of zero- and low-emission vehicles, the focus will increasingly shift to the entire value chain. While the production phase currently accounts for only 10% of the life-cycle emissions in traditional internal combustion engines[8], it can account for 50% or more in BEV emissions[9] due to the energy-intensive nature of battery production. Standardised approaches to calculating CO_2e emissions, such as the Catena-X initiative for a common LCA methodology, are crucial for fair comparison and competition in our industry's sustainability efforts. To address climate action, we focus on reducing emissions across three scopes:

Scope 1 (direct) →
CO_2e emissions from company-owned or controlled sources

Scope 2 (indirect from energy) →
CO_2e emissions from purchased energy consumption

Scope 3 (other indirect in value-chain) →
CO_2e emissions throughout the value chain, including material production logistics, use-phase, and end-of-life

To meet the Paris Agreement and EU Green Deal targets, the automotive supply industry must act across all three emission scopes while also enhancing Europe's climate resilience. A critical aspect of this resilience is responsible water management in our production processes. Water is essential to life, ecosystems, agriculture, and economic activities, and automotive suppliers rely on it for production. Water usage varies significantly across the industry. While some assembly sites primarily use water for sanitation, the production of batteries and semiconductors is notably water-intensive. We must therefore adapt our approach to the specific requirements of each facility and local environmental conditions.

6 https://www.greenncap.com/european-lca-results/
7 CLEPA analysis
8 https://www.greenncap.com/european-lca-results/
9 https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/why-the-automotive-future-is-electric

Scope 1 and 2

Background

The automotive supply industry's diversity means not all suppliers can progress at the same pace. Climate neutrality depends on the availability of renewables, nuclear energy, and carbon-neutral fuels to power production processes. Geographical differences across member states necessitate a market-based approach, allowing compensation of local grid emissions through renewable energy certificates (RECs) and power purchase agreements (PPAs). While electrification is possible for many processes, several key operations, such as forging metals or producing glass, still rely on gas for heat. Forecasts suggest an inadequacy in the supply of the carbon-neutral fuels that could replace gas[10]. The industry recognises that the journey to sustainability is not uniform and requires flexibility in strategies tailored to specific operational needs.

Ambition

We strive towards climate neutrality[11] in our European operations by 2040, contingent on sufficient availability of affordable renewable energy, nuclear energy and carbon-neutral fuels. Our strategy includes optimising energy efficiency, investing in on-site clean power generation, and procuring green electricity or renewable fuels. Measures to obtain climate neutrality include market-based solutions for renewable energy procurement, and the use of carbon offsets[12] as well as insets[13] for residual emissions from operations. CLEPA encourages members to adopt science-based targets for CO_2e reduction.

Policy recommendations

- Accelerate wind and solar park deployment for sufficient, affordable renewable energy, strengthen grid capacity and accelerate deployment of interconnectors
- Support nuclear energy as a critical element in stabilising the energy supply, where appropriate and aligned with the country's national energy strategy
- Support the production of carbon-neutral fuels, including hydrogen, both domestically and abroad, to replace natural gas in industrial processes

10 International Energy Agency, September 2023, lagging policy support and rising cost pressures put investment plans for low-emissions hydrogen at risk

11 The European Commission defined climate neutrality in its 2018 communication as net-zero GHG emissions. CLEPA understands climate neutrality, as allowing carbon off-setting and in-setting as means to tackle residual emissions, which would typically account for 5-10% of a company's emissions

12 Refers to a reduction in GHG emissions – or an increase in carbon storage (e.g., through land restoration or the planting of trees) – that is used to compensate for emissions that occur elsewhere. A carbon offset credit is a transferrable instrument certified by governments or independent certification bodies to represent an emission reduction of one metric tonne of CO2, or an equivalent amount of other GHGs

13 In-setting refers to the financing of climate protection projects along a company's own value chain that demonstrably reduce or sequester emissions and thereby achieve a positive impact on the communities, landscapes and ecosystems associated with the value chain

Scope 3

Background

For zero-emission vehicles (ZEVs), the production phase accounts for 50-90% of life-cycle emissions[14], with the main contributors being aluminium (35-50%), steel (15-25%), battery materials (10-20%) and plastics (4-7%)[15]. The impending reduction of free allowances under the Emissions Trading System (ETS) and the introduction of the Carbon Border Adjustment Mechanism (CBAM) will incentivise these industries to decarbonise.

The use-phase contributes the most to Scope 3 emissions in conventional fossil-fuel engines. A comprehensive strategy that includes carbon-neutral fuels and retrofit solutions will help decarbonise the existing fleet while ensuring affordable mobility for European citizens.

Ambition

We strive to collaborate with upstream industries to reduce CO_2e emissions in material production and logistics. Our approach including transitioning to renewables and nuclear energy, employing direct carbon capture, redesigning for low-carbon materials, adopting circular principles such as frugality, and increasing recycled content and end-of-life recyclability. Collaboration across value chains and take-off agreements are crucial to securing sufficient investment for circular and low-carbon raw materials. **Automotive suppliers aim for Scope 3 climate neutrality across the value chain by 2050, aligning with the Paris Agreement,** provided public policy and investment allow for a competitive supply of low-carbon inputs. CLEPA encourages its members to set science-based targets for Scope 3 emissions, focusing on reducing CO_2e in material hotspots. CLEPA members aim for Europe to play a leading role in developing retrofit technologies to decarbonise the existing fleet beyond 2035, further reducing use-phase emissions.

Policy recommendations

- Scale up industrial renewable energy production and form partnerships for competitive hydrogen production
- Support innovation in complementary technologies for current early-stage technological innovations

14 Highly dependent on size of vehicle, composition of grid as well of manufacturing process of materials used in production. Current EU grid would suggest that the use phase will be responsible for 54% of life cycle emissions, this could drop to 5.8% if the full energy grid were renewable. https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/why-the-automotive-future-is-electric

15 https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/why-the-automotive-future-is-electric

Water resiliency

Background

Electrification and digitalisation depend on complex technologies such as batteries and semiconductors, which have higher water requirements during production, often in highly purified forms to ensure product safety and quality. As the automotive industry increasingly adopts these innovations, the water demand per manufactured vehicle is projected to increase. This shift presents significant challenges that require a strategic approach to water resilience to ensure sustainable manufacturing practices.

Ambition

In pursuit of sustainable water management, automotive suppliers commit to analysing their facilities to identify those situated in areas of potential or severe water scarcity, as identified by organisations like the European Drought Observatory. **For high-risk locations, companies aim to adopt targeted water withdrawal reduction goals, achievable through decreased usage and/or increased recycling rates.** Additionally, the industry is exploring the use of rainwater as a substitute for freshwater in certain applications. In response to changing climate conditions, automotive suppliers intend to regularly update their water scarcity assessments to account for seasonal fluctuations. The primary goal is to optimise water conservation, promote responsible water usage practices across the industry, and eliminate the risk of groundwater contamination from operations.

Policy recommendations

- Invest in water retention and management, including new water reservoirs to accommodate for changing precipitation patterns
- Develop optimal water management strategies crucial to prevent rationing that could disrupt essential manufacturing activities and minimise flooding risks
- Foster collaboration between the European automotive sector and government on supply chain resilience against water-related disruptions

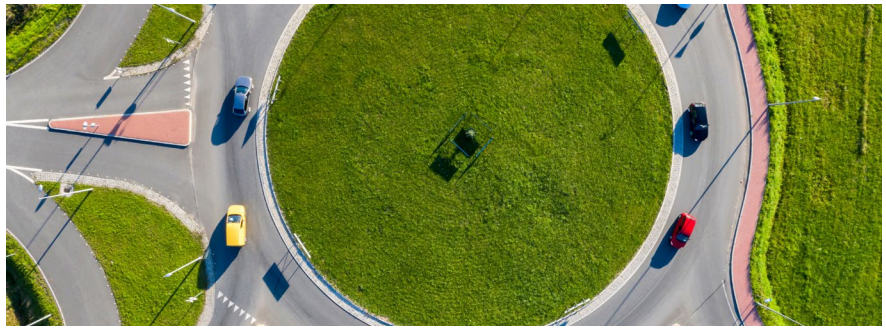
PILLAR TWO
CIRCULAR ECONOMY

The European automotive industry relies heavily on mined and processed raw materials, significantly impacting our environmental footprint. Many of these materials are scarce, from battery materials to rare earths, or sourced from regions with a high risk for human rights violations or environmental degradation[16]. Circularity offers an important part of the solution to many of these challenges. It can reduce environmental impact, address scarcity, and foster innovation while bolstering Europe's global competitiveness. Europe's dependency on a limited number of geopolitically sensitive for its resources further underscores the importance of circularity.

The CSRD reporting standard defines circularity as an "economic system in which the value of products, materials and other resources in the economy is maintained for as long as possible. The goal is to maximise and maintain the value of the technical and biological resources, products and materials. We do so by creating a system that allows for durability, optimal use or reuse, refurbishment, remanufacturing, recycling and nutrient cycling[17]."
To achieve circularity in the automotive sector, several aspects are essential. Circular product design should prioritise modularisation to facilitate repairs, upgrades, and vehicle disassembly. The focus must be on lifetime optimising product lifetimes to keep materials within circular loops for as long as possible. Additionally, the use of secondary materials must increase, along with the replacement of fossil fuel-based and non-renewable materials with bio-based alternatives.

To achieve these objectives, suppliers face significant challenges, including balancing circularity with restrictions on certain chemical substances needed to meet safety and quality standards, where even minor changes would require new testing and certification.

Given the global integration of the automotive supply chain, policymakers should prioritise global harmonisation, such as through ISO and UNECE standards.



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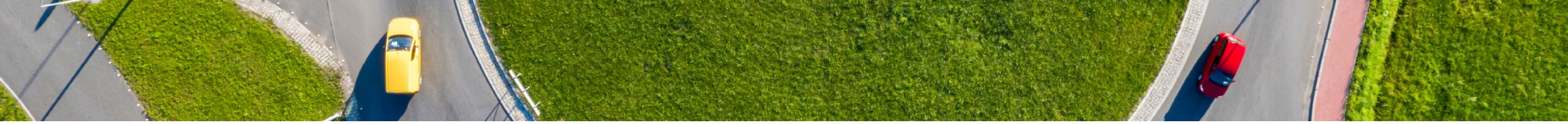
16 https://adelphi.de/system/files/mediathek/bilder/211209_Adelphi_Raw_Materials_in_Focus_A4_EN_web.pdf
17 ESRS E5



Circular product design

Background

Design choices significantly impact the recyclability of automotive materials. Complex designs such as multi-layer materials, the limited recyclability of certain materials like composites, and the use of additives or welding techniques all pose challenges to effective recycling. Circular design aims to overcome these hurdles by creating products that are durable, reusable, repairable, and recyclable, ultimately generating zero waste. This approach ideally allows for product upgrades over their lifetime, reducing replacement needs while meeting consumer expectations.

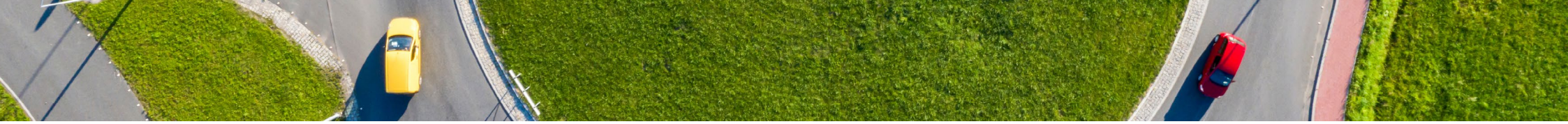
To achieve circular design, several key elements are crucial. These include industry-led standardisation[18], improved digital labelling of vehicles and components, and the use of predictive maintenance to extend vehicle lifespans. Balancing recycling capabilities with the protection of product design is also essential, requiring collaboration across the entire automotive industry, particularly in determining appropriate product labelling information.

Concrete measures for circular design in the automotive sector enable easy dismantling and selective part substitution to improve or maintain performance in areas like safety, durability or value retention. Modular design facilitates recycling after mechanical dismantling without significant pre-processing. Design for remanufacturing allows defective components to be dismantled in a standardised industrial process, restoring them to same-as-new or better condition and performance. Material substitution design enables the use of bio-based materials[19], recycled materials, and low-carbon virgin raw materials in manufacturing components. Furthermore, design for recycling facilitates the recovery of materials at the highest possible quality by enabling easy separation and avoiding leakage of substances of concern.

The successful implementation of these principles and practices requires a concerted effort across the automotive industry, emphasising collaboration and innovation to overcome existing challenges and pave the way for a more circular and sustainable automotive sector.

18 Suppliers, OEMs and dismantlers

19 Bio-based feedstocks are raw materials of biological origin grown and naturally replenished at a human time scale, excluding materials embedded in geological formations and/or fossilized. It can be produced from grown crops (first-generation, such as maize, rapeseed, etc.) or organic residuals and waste (second-generation, such as agricultural waste, frying oils, manure, etc.)



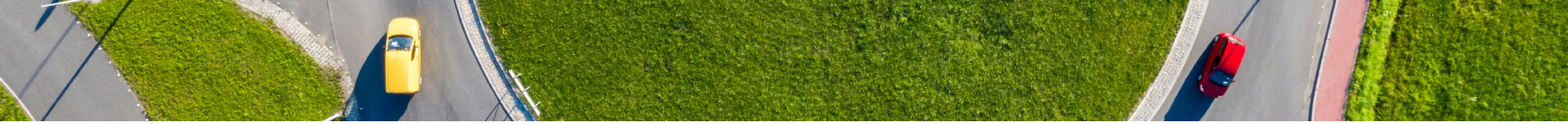
Circular product design

Ambition

The automotive supply industry aims to increase investment in circular design, with the goal of raising the revenue share from circular designed components. The industry pledges to innovating in ways that ensure these components meet or exceed current quality and safety standards.

Policy recommendations

- Boost Research and Innovation (R&I) funding for circular design, integrating it into public procurement tenders (e.g., bus fleets) and setting ambitious yet feasible circularity targets in purchasing incentives
- Collaborate with stakeholders to enhance the End-of-Life Vehicles Regulations (ELVR), ensuring it effectively promotes circularity adoption in the automotive sector
- Revise EU Taxonomy to properly recognise and incentivise components designed for circularity, thereby directing investments towards sustainable activities
- Develop and implement market incentives to accelerate the adoption of circular products, Positioning the automotive sector as a model for circular economy practices
- Enhance the ELVR with harmonised rules for calculating and verifying chemically recycled content, utilising a standardised mass balance approach



Use, reuse and remanufacturing

Background

A thriving automotive aftermarket has significantly extended the lifespan of vehicles on European roads. At the heart of this success is remanufacturing – a process that transforms used and worn products (cores) into fully functional components with performance equivalent to new ones, providing a sustainable alternative to newly manufactured parts. Currently, over half of remanufactured components are specific to internal combustion engine (ICE) vehicles. However, with ICE powertrains comprising around 1,400 components compared to just 200 in a BEV powertrain, the nature of remanufacturing is set to change.

The nature of component failures is also changing. ICE components primarily suffer from mechanical wear, whereas BEV components are more prone to electrical faults. Consequently, future remanufacturing efforts will focus on fewer, but higher-value and more complex systems and components.

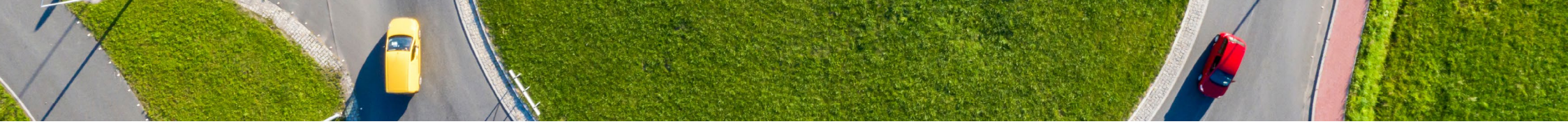
To adapt to this evolving landscape, it is critical to invest in developing remanufacturing capabilities for EV components and climate-neutral propulsion technologies. This includes Li-ion batteries, electric motors, inverters, 48-Volt systems, E-axles, E-boosters, and xEV transmission components, and any other technology that may support climate-neutral mobility. This shift presents both challenges and opportunities for the remanufacturing sector, requiring new skills, technologies, and approaches to maintain its vital role in the circular economy of the automotive sector.

Ambition

Automotive suppliers strive to invest in the development of remanufacturing for electric vehicle components and other climate-neutral propulsion technologies. Core EV components, such as batteries and electric motors, should be designed with remanufacturing in mind, requiring close collaboration with vehicle manufacturers.

Policy recommendations

- Enhance EU legislation to fully recognise and facilitate reuse, repurpose and remanufacturing, including appropriate exemptions in the ELVR for remanufacturing of components
- Adopt a standardised EU-wide definition of remanufacturing that clearly distinguishes between end-of-life components and cores suitable for remanufacturing
- Revise waste shipment regulations to classify remanufacturing cores separately from waste, facilitating cross-border transportation for industrial-scale remanufacturing



End-of-life: recycling of materials

Background

While nearly 90% of end-of-life vehicles are reused or recycled[20], new cars on average contain only one-third of secondary materials[21]. High safety standards limit material reuse, as certain polymers and metals degrade or become contaminated during scrapping. For example, traces of copper in recycled aluminium can make it corrosive and unsuitable for automotive use.

The emphasis on lightweight materials to increase vehicle energy efficiency has increased plastic usage in electric vehicles. but end-of-life vehicle treatment currently recovers metals more effectively than small plastic parts[22]. The transition to BEVs reinforces the need for better recovery and recycling of materials, as EV battery production emits up to 100 kg of CO_2e equivalent per kilowatt-hour[23] and requires scarce minerals such as lithium, cobalt, and nickel. Improving battery recycling rates and reducing production emissions is crucial.

However, automotive suppliers have limited control over material recovery and recycling. Optimising recovery rates and increasing the use of recovered materials in production will require collaboration between OEMs, Tier 1 suppliers, recyclers and other operators.

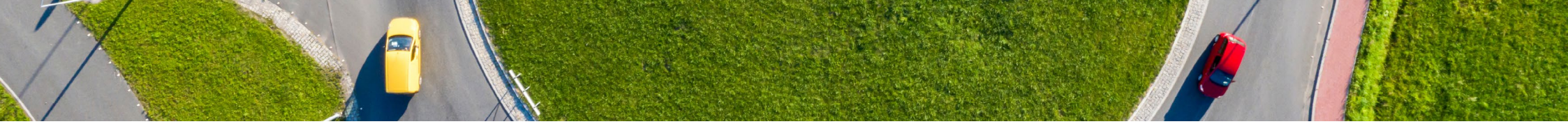
The transition to BEVs reinforces the need for better recovery and recycling of materials, as EV battery production emits up to 100 kg of CO_2e equivalent per kilowatt-hour and requires scarce minerals such as lithium, cobalt, and nickel.

20 https://ec.europa.eu/eurostat/statistics-explained/index.php?title=End-of-life_vehicle_statistics&oldid=555195#Compliance_with_targets_on_reuse.2Frecycling_and_reuse.2Frecovery_for_end-of-life_vehicles

21 Secondary materials include scrap and residuals from production processes and products that have been recovered at the end of their useful life.

22 https://op.europa.eu/en/publication-detail/-/publication/0980feaf-2146-11ee-94cb-01aa75ed71a1/language-en

23 https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/the-race-to-decarbonize-electric-vehicle-batteries



End-of-life: recycling of materials

Ambition

Automotive suppliers aim to increase the recycling or recovery of production waste (scrap), with a trajectory towards zero-waste to landfill by 2030. Achieving this requires cross-sector collaboration and investment in Europe's waste management and recycling capacity. Circular design will help boost the proportion of recycled waste, and suppliers strive to increase the use of secondary materials in new vehicle components by working closely with all partners across the value chain.

Policy recommendations

- Support private sector development of a robust recycling industry through incentives to stimulate the market and facilitation of cross-sector collaboration
- Implement technology-neutral recycled content requirements in the ELVR, reflecting realistic availability of recycled materials
- Restrict mandatory removal of end-of-life vehicle components in the ELVR to those with viable downstream reuse markets
- Harmonise the ELVR with the Battery Regulation and the Critical Raw Materials Act (CRMA) to ensure regulatory coherence
- Develop policies to retain near end-of-life vehicles within the EU, fostering a strong secondary materials market and improving control over dismantling and material recovery

PILLAR THREE
RESPONSIBLE SUPPLY CHAIN

PILLAR THREE: **RESPONSIBLE SUPPLY CHAIN**

The automotive supply industry is supported by a complex, multi-tiered global supply chain that has delivered significant cost advantages to consumers and contributed to global prosperity. However, limited visibility and oversight within this deep supply chain pose risks to human rights, environmental sustainability, overall supply chain resilience.

Recent global events, such as the COVID-19 pandemic, the chip shortage, and the invasion of Ukraine by Russia have exposed vulnerabilities in the automotive supply chain. The industry faces a new reality of growing competition between economic trading blocs, necessitating greater diversification to ensure supply security and enhance resilience.

The sector must now balance the benefits of global integration with the need for greater supply chain responsibilities and resilience. This involves reassessing sourcing strategies, increasing transparency, and implementing robust due diligence processes. As we move forward, the automotive supply industry must adapt to these new realities, developing strategies that maintain competitiveness while prioritising sustainability, ethical practices and supply chain resilience.

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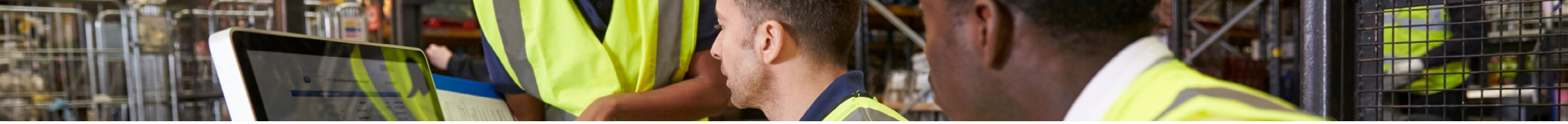


Human rights and environmental due diligence

Background

Due diligence in human rights and environmental sustainability is essential for mitigating adverse impacts, alongside sustainable procurement practices that consider not only quality and cost but also sustainability. Once suppliers are selected, companies have a duty to conduct risk-based due diligence across their supply chains.

The Corporate Sustainability Due Diligence Directive (CS3D), along with other sector-specific initiatives such as those governing conflict minerals, batteries, deforestation-free products, and forced labour, creates an ambitious regulatory framework. This framework demands continuous risk assessments, stakeholder engagements, and risk mitigation across deep, often opaque supply chains. Significant risks to human rights and the environment typically occur deeper in the supply chain, particularly in high-risk activities like mining and mineral processing, where deforestation, biodiversity loss, and poor labour conditions are common. While companies have control over their operations, and some influence over direct suppliers, influence diminishes with indirect suppliers.

The United Nations (UN) Guiding Principles on Business and Human Rights distinguish between risks caused directly by a company and those further up the supply chain, with appropriate measures based on proximity to risk. In the automotive supply industry, most risks lie upstream, particularly in the sourcing of raw materials. Downstream risks related to the use of vehicle technology are managed through existing regulations like the export control regime for dual-use items.

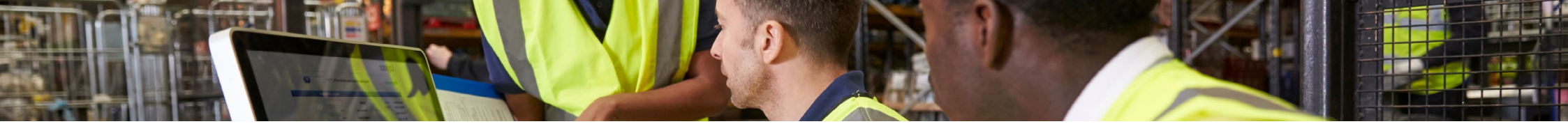
24 As defined in the OECD Due Diligence Guidance for Responsible Business Conduct

Ambition

Automotive suppliers aim to ensure that human rights and environmental interests are respected throughout the supply chain. Due diligence and sustainable procurement[24] are key to promoting sustainable development and preventing adverse impacts.
We adhere to international standards such as the OECD Due Diligence Guidance for Responsible Business Conduct, UN Guiding Principles on Business and Human Rights, the UN ILO Conventions and recommendations on labour rights, and the UN Guidelines for Consumer Protection.

Policy recommendations

- Harmonise and review EU supply chain due diligence regulations to enhance coherence and legal certainty, and reduce complexity
- Establish comprehensive support mechanisms for companies implementing key requirements, including CS3D, Conflict Minerals Regulation, Forced Labour Regulation, EU Deforestation Regulation (EUDR), and EU Batteries Regulation (EUBR)



Supply chain resilience

Background

The globally integrated automotive supply chain has driven cost savings, innovation, and contributed significantly to economic prosperity, providing tens of millions of jobs in automotive manufacturing and related industries[25]. However, this global integration has also created dependencies and vulnerabilities. With up to 30,000 parts required to produce a car, a single missing component can halt production, highlighting the need for a more resilient supply chain.

The EU's reliance on a single country for many processed raw materials presents significant risks. The semiconductor shortage of 2021–2022, for instance, led to millions of unproduced cars and substantial financial loses, stalling investments in the green and digital transition. While diversifying raw material sources is essential, the semiconductor crisis demonstrated the difficulty of quickly adapting to supply chain fluctuations.

Looking ahead, climate change and geopolitical instability suggest a future marked by unpredictable disruptions. Strengthening supply chain resilience through diversification is crucial but requires coordinated efforts across the sector and with its stakeholders.

Ambition

Suppliers strive to strengthen the resilience of the European automotive supply chain by reducing dependencies, diversifying sourcing, applying circularity principles, and substituting scarce materials with alternatives. Critical raw materials, especially those essential to the digital and green transition, will be a focus. **We support the EU's objective of sourcing 25% of critical raw materials through recycling and processing 40% of consumed materials within Europe to avoid singular dependencies on third countries.**

Policy recommendations

- Invest in the development of technologies for material substitution and recycling to reduce reliance on critical raw materials
- Promote trade agreements and economic partnerships that align with the EU's raw material needs and support diversification
- Enhance the Net-Zero Industry Act (NZIA) and Critical Raw Materials Act with a dedicated EU funding instrument to support these efforts

25 Global direct automotive manufacturing employment is estimated at 14 million, while every job in automotive manufacturing is likely to support 2 to 3.7 further jobs in supplying industries. International Labour Organisation, COVID-19 and the automotive industry, March 2020 and Centre of Automotive Research, Automotive Employment Contribution United States, January 2015

PILLAR FOUR
JUST TRANSITION

PILLAR FOUR: **JUST TRANSITION**

The transition to a climate-neutral economy is one of the most significant challenges and opportunities of our time. It is reshaping industries across Europe, and the automotive supply industry is at the heart of this transformation. While the move toward sustainability brings opportunities for growth, innovation, and technological advancement, it also presents significant challenges, especially for the millions of workers and communities who depend on the automotive sector for their livelihoods. A just transition ensures that this shift is fair, inclusive, and leaves no one behind. It aims to provide new opportunities for workers, protect vulnerable regions, and ensure that the benefits of a green economy are shared widely. This means that the move towards sustainability should create opportunities for all stakeholders, particularly the workers, communities, and regions most affected by the shifts in technology and production processes.

The European automotive supply industry has long been a cornerstone of Europe's economic prosperity, directly employing 1.7 million people and significantly contributing to value creation across the continent. However, as the industry moves toward EVs, digitalisation and climate-neutral technologies, the traditional skill sets and production processes that have defined the sector for decades are evolving. The workforce must adapt, and it is essential that this transition happens in a way that supports workers, regions most affected and local communities.

Key contributions of the automotive sector in 2023[26].

Value creation →

€650 billion (automotive suppliers), €385 billion (vehicle manufacturers), and €695 billion (downstream activities)

Employment →

1.7 million direct jobs (automotive suppliers), 1.2 million jobs (vehicle manufacturers), and 9.7 million (downstream activities)

Economic impact →

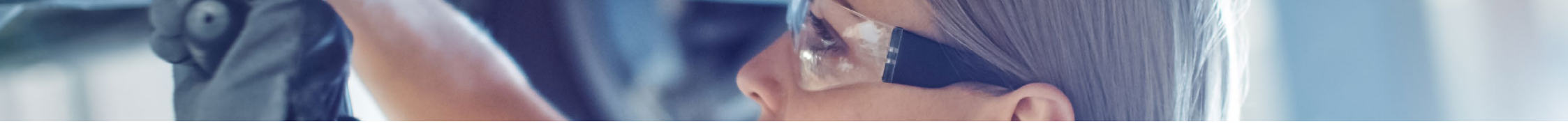
Each job in automotive sector creates 2.7 jobs in other sectors

Employment share →

11.5% of total EU manufacturing employment, with some regions and countries approach 20%

Automotive suppliers are committed to up- and re-skilling its workforce to meet demands of the transition. However, there are critical limitations to consider. Many new jobs require skill sets that differ significantly from those of the current, largely mechanical, workforce. Career changes can be daunting, especially for those nearing retirement. To ensure a smooth transition, collaboration between industry, governments, and public authorities is essential. Public policies must provide the infrastructure for education and training, while efforts across the entire value chain are needed to support workers and regions most impacted. The transition should not only safeguard jobs but also create new opportunities for growth and innovation in a more sustainable economy.

26 The Boston Consulting Group, 5 September 2023, European Auto Industry Is At A Crossroads | BCG



Preservation of employment

Background

The automotive supply industry is a well-recognised, high-quality employer, accounting for 1.7 million jobs in Europe. The sector is vital to the economic growth and social fabric of numerous EU communities and regions. Automotive suppliers have become integral to local communities, forging strong ties with civil society.

However, the industry faces unprecedented challenges due to the twin transition. A PwC Strategy & study commissioned by CLEPA in 2021 reveals that an EV-only approach would eliminate 500,000 jobs related to combustion engines, with the majority (359,000 jobs) disappearing in just a five-year period between 2030–2035. While the EV supply chain is expected to create 226,000 new jobs, primarily before 2030, these positions will require a drastically different skill sets focused on chemical processes and data analysis.

These challenge extends beyond mere numbers. Companies must consider their employees' career stages and design re-skilling programmes that align with both business needs and broader social contexts. Emerging technologies, such as connectivity and autonomous driving, will generate tens of thousands of new jobs, each demanding skills distinct of current automotive workers. Addressing this shift requires collaboration among companies, social partners, sector initiatives, and public authorities to re-skill workers and facilitate transitions between companies and sectors.

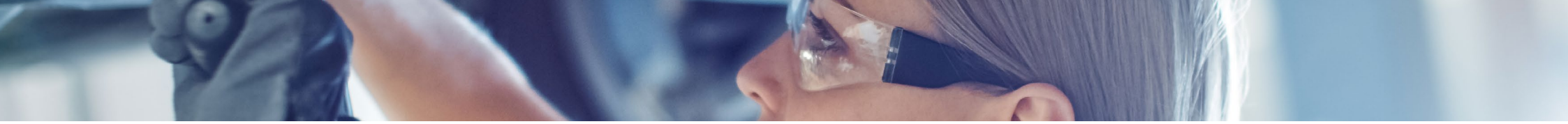
Ambition

Automotive suppliers aim to maintain their position as a major source of employment in Europe by supporting up- and re-skilling initiatives and facilitating employee relocation for those affected by the twin transition. **The Automotive Skills Alliance's pact aims to have 5% of workers in the automotive ecosystem participate in up- or re-skilling programmes annually by 2030, reflecting a €7 billion commitment from both private and public authorities[27].**

Policy recommendations

- Allocate dedicated budget for skills development within EU strategies and industrial plans
- Simplify access to re- and up-skilling funds, particularly for vocational schools, targeted projects, and smaller companies
- Implement measures to promote diversity and gender balance to ensure a just transition
- Foster closer partnerships between automotive companies and educational institutions to develop industry-relevant curricula, thesis programmes and internship opportunities

27 https://pact-for-skills.ec.europa.eu/document/download/eebd8643-45ab-42c5-9785-c9d4cc4162a1_en?filename=LSP%20Commitments%20ASA-2024-03-07.pdf



Fostering talent and inclusive work environment

Background

Today's challenges in the automotive sector require the highest levels of talent and creativity. Enhancing workforce diversity, equity, and inclusion (DEI) is crucial for the sector to address these challenges effectively. While progress has been made, more effort is needed, particularly in higher management positions. We must ensure that our industry is an attractive workplace for all, regardless of gender, cultural background, sexual orientation or minority status. Over the years, automotive suppliers have implemented DEI measures to prevent discrimination based on gender, age, nationality, or background in recruitment and career advancement.

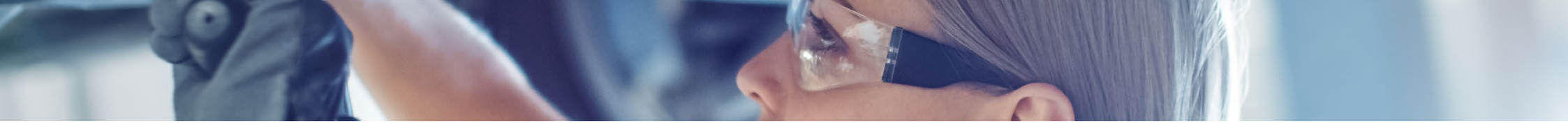
The automotive supply industry recognises that a diverse workforce is not just a moral imperative but also a business necessity. Studies consistently show that diverse teams drive innovation, improve decision-making, and enhance problem-solving capabilities. As our industry navigates complex challenges such as electrification, autonomous driving, and sustainability, the varied perspectives and experiences of a diverse workforce become invaluable assets. Moreover, as we compete globally, a workforce that reflects the diversity of our customers and markets gives us a competitive edge in understanding and meeting changing consumer needs.

Ambition

Suppliers aim to foster a work environment where everyone feels valued and can be their true selves. **We pledge to improve representation and adopt fair and equal talent acquisition strategies without prejudice to background, gender, religion, sexual orientation or disability.** The industry will prioritise inclusion, monitor DEI performance, and expand connections with the education system to align skill development with market needs.

Policy recommendations

- Facilitate dialogue between industry and academia to quickly adapt educational programmes to the rapid changes driven by the green and digital transition
- Develop and fund STEM programmes that encourage underrepresented groups to pursue careers in these fields, with a focus on the automotive sector



Contribution to communities

Background

The automotive supply industry not only employs 1.7 million people across the EU but also contributes significantly to local communities through wealth generation, local procurement, and social dialogue. Collaborations between automotive supply companies, academic institutions, and research centres promote knowledge exchange and talent development, enriching the region's intellectual capital. These partnerships often lead to the creation of high-tech clusters, fostering entrepreneurship and attracting further investment to local areas.

Beyond community benefits, automotive suppliers strengthen mobility and connectivity. Our products, such as spare parts, ensure that cars remain well-maintained and operational, keeping mobility affordable. Similarly, buses and other public transportation systems rely on parts supplied by CLEPA members.

However, manufacturing can negatively impact local communities through environmental factors, such as noise, light pollution and emissions. As a result, active environmental management is essential to not only to limit and mitigate these effects but to safeguard the long-term health and well-being of the communities where we operate.

Ambition

Automotive suppliers aim to strengthen their role as integral members of local communities by encouraging employees to actively engage with and support local initiatives, particularly through partnerships with local and educational institutions. **The industry has the ambition to expand its involvement across the value chain, ensuring support for stakeholders and communities affected by the green transition, especially in regions where new industrial operations, such as mining, will be needed.**

Policy recommendations

- Involve affected communities in decision-making processes to build strong relationships, foster trust, and ensure local voices are heard
- Strategically prioritise EU competitiveness in value creation and resource independence, particularly in key areas like green energy, recycling and sustainable mining
- Ensure early stakeholder engagement and risk communication with expert input to address community concerns, build support, and promote understanding of new industrial developments

Conclusion

The automotive supply industry stands at a pivotal moment, with the twin transitions of digitalisation and sustainability reshaping the future of mobility. As key players in this transformation, automotive suppliers are not only adapting but leading the charge towards a more resilient, innovative, and sustainable future. By committing to climate action, fostering a circular economy, ensuring a just transition for workers and communities, and upholding responsible supply chain practices, we are setting the foundation for long-term success and societal benefit.

Our ambitions are clear: we aim to reduce our environmental footprint, support the workforce, and create value across the entire supply chain while maintaining competitiveness. However, we recognise that these goals cannot be achieved in isolation. Close collaboration with policymakers, stakeholders, and communities is essential to ensure a balanced approach that addresses environmental, social, and economic challenges.

The road ahead requires bold action, but with the ambition of our members and the support of partners across the value chain, we are confident in our ability to drive meaningful change. Together, we can build a sustainable future that benefits not only the industry but also the people and communities who depend on it.

We aim to reduce our environmental footprint, support the workforce, and create value across the entire supply chain while maintaining competitiveness.

CLEPA
European Association of Automotive Suppliers

www.clepa.eu

#TheRoadAhead

CLEPA – European Association of Automotive Suppliers
Cours Saint-Michel 30g | 1040 – Brussels
+32 2 743 91 30
info@clepa.be

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