

French Automotive & Mobility Network

Smart & Green



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FAMN Position Paper

Proposals for the European agenda on decarbonisation of industry



INTRODUCTION

This document is published by the [French Automotive & Mobility Network](#) (FAMN). Its objective is to present mobility ecosystem innovations in terms of industry decarbonisation of the industry, to address the possible obstacles to the deployment of such innovations and to highlight the expectations of our ecosystem regarding EU policy intervention.

FAMN brings together the French Automotive Platform (PFA) - including the major French groups in the sector - as well as 4 competitiveness clusters located on French territory (CARA, ID4CAR, NextMove, Pôle Véhicule du Futur). In total, FAMN has more than 1,450 members including SMEs, large companies, universities, research centres and local authorities.

FAMN is involved in various fields of action with the ambition to support the transition towards a greener, better connected and safer mobility and industry. Industry decarbonisation is one of these key areas. FAMN carries out actions at European level to raise awareness among its institutional contacts on the issues raised by its members.

CONTEXT

Industrial players in the EU must reduce their CO₂ emissions, thus contributing to the objectives of the European [Green Deal](#) which aims at achieving climate neutrality for the continent by 2050. The French automotive industry is fully committed to this.

The European Commission launched in 2021 the co-programmed European public-private partnership **Made in Europe**. Bringing together the main players in manufacturing and the relevant European industrial ecosystems, it implements a strategic agenda through the development of calls for projects. It is therefore a driving force for sustainable manufacturing in Europe.

In February 2022, industry and research stakeholders signed the [2030 Materials Manifesto](#)¹, which suggests establishing a consolidated strategic roadmap in the short term (3-4 months), launching an agile and inclusive governance of advanced materials at EU level (6 months), and translating the consolidated roadmap into a new European strategic agenda for a sustainable society through the next generation of advanced materials.

Finally, the Commission puts forward the concept of **Industry 5.0**². This concept aims at moving towards production chains that are more in line with the limits of our planet, by addressing the transition with a human-centric approach.

¹ Alessandro CREMONESI (STMicroelectronics N.V.), Nicole GROBERT (University of Oxford), Peter GUMBSCH (Fraunhofer), Laurence PIKETTY (CEA), Lars MONTELIUS (INL), Kurt VANDEPUTTE (Umicore), Isabelle VERIHLAC (BEDA), *Materials 2030 Manifesto*, "Systemic Approach of Advanced Materials for Prosperity – A 2030 Perspective", 2022.

² European Commission, Directorate-General for Research and Innovation, *Industry 5.0: towards a sustainable, human-centric and resilient European industry*, 2021.

OBSERVATIONS & RECOMMENDATIONS

Enhance the role of partnerships (e.g. Made in Europe) and support innovation

The funding of innovations that promote the decarbonisation of industry is an essential parameter for achieving the objectives set at political level. **Changing industrial processes and materials to reduce their carbon footprint requires expensive investments**, which need to be supported in order to preserve the competitiveness of European industrial companies.

In a context of the twin transition (digitalisation and decarbonisation), **industry must adapt through innovations, product/process disruptions and address several challenges:**

- Conciliate legislation to implement transitions and industry's consideration of their impact (need for time and support);
- Mitigate the external shocks faced by the industry;
- Accelerate innovations scale-up and market entry;
- Coordinate all levels (from local to EU) with a perspective of competitiveness;
- Invest in processes and buildings.

FAMN brings together competitiveness clusters (CARA, ID4CAR, NextMove, Pôle Véhicule du Futur) that are working in this direction. For example, ID4CAR has led and is leading key projects on decarbonisation in the context of this dual transition of the industry. These projects address three major challenges of decarbonisation: the supply of renewable energy (the "H2 Loire Valley" project brings together an ecosystem for the production, storage and distribution of H2 coupled with R&D concerning their production processes in particular); the management of consumption (reduction of consumption by 25% on several industrial production sites in the West) and the digitisation of environmental data to facilitate impact monitoring. Another example is Loamics, which was chosen by the Renault Group to accelerate the decarbonisation of its industrial sites by proposing the creation of a tool to measure plant consumption in real time..

On this basis, FAMN makes a set of recommendations to stimulate European industry by joining forces on key issues that require joint efforts:

- Ensure the success of ambitious legislation through appropriate funding;
- Ensure that adaptation to transitions does not lead to more dependency, with full support for 'made in Europe' processes and products;
- Accelerate support for innovation to markets in EU R&I programmes;
- Facilitate cooperation between ecosystems to create larger markets.

FAMN has already initiated or is planning several actions in this direction:

- Focus on cooperation and alignment of strategies at all levels;
- Further support its members in turning innovation into markets;
- Consolidate its involvement in Horizon Europe PPPs via a Brussels-based representative.

Define a common methodology for monitoring the CO₂ footprint

As foreseen in the [French climate and resilience law](#)³, the main industrial sectors are required to define a roadmap before January 2023. For the automotive sector, 5 working groups have been set up in this perspective, including **WG1 “Carbon footprint of products”**.

This WG, which was launched a few weeks ago, has shared its first results. The definition of a direction, a methodology and a database to support the supply chain is key to achieve decarbonisation.

In terms of carbon footprint monitoring, materials and components will be the main contributors in France. There is also a need for clear visibility of the price of CO₂ to support investment.

Set a common methodology

Decarbonisation of product content is a priority for the automotive industry in order to comply with corporate decarbonisation targets. For this, there is a need to take into account scope 1 (process), 2 (energy source) and 3 (third party, logistics, recycling, etc.) to decarbonise products. The calculation of the carbon footprint of components and systems is becoming a requirement in calls for proposals from vehicle manufacturers and suppliers. **A common methodology, guidelines and tools are needed for several reasons:**

- Enable a fair comparison of suppliers' CO₂ footprint calculations;
- Support supply chain actors with a simple approach;
- Make the skills and costs of LCA accessible to SMEs.

At the French level, recommendations have already been produced by the PFA and the Directorate General for Enterprise (DGE) to support the value chain. These recommendations encourage us to create a reference database of the carbon weight of each material. Some players in our industry already use a fixed price per tonne of carbon for their global industrial projects, including R&D.

FAMN and its members would like to see the emergence of a common methodology at the European level, which is applicable to our industry to measure its carbon footprint.

- FAMN welcomes the efforts of the European Commission and the co-legislators to establish a border carbon adjustment mechanism (CBAM) as part of the Fit For 55 legislative package, encouraging the establishment of carbon pricing policies with EU partner countries and thus preventing possible carbon leakage.
- FAMN wants to emphasise the importance of creating spaces for exchange and collaboration in the EU, in order to define together (stakeholders and institutions) a common calculation process. To support such projects could be the role of the PPP Made in Europe (e.g. coordination and support actions).

Identify priorities

While the carbon footprint of vehicles with internal combustion engines is mainly due to use, the carbon footprint of a battery electric vehicle is mainly due to production. The same is true for hydrogen fuel cell electric vehicles. The weight of the vehicle also has a significant impact on the carbon footprint.

³ LOI n° 2021-1104 du 22 août 2021 portant lutte contre le dérèglement climatique et renforcement de la résilience face à ses effets

FAMN recommends that priorities for decarbonisation of materials be determined rapidly, considering the impact on costs and the volume of investment required. The industry now needs proposals to compensate extra cost and remain competitive.

- First, FAMN welcomes EFFRA's work in implementing the Made in Europe PPP, which fully integrates the materials dimension (see [SRIA](#)⁴ : *Specific objective 2 'Circular products & Climate-neutral manufacturing'*).
- Second, FAMN shares the findings of the 2030 Materials Manifesto, and the challenges and opportunities identified therein: (1) preserve Europe's technological lead, with a need to access better performing and cost-competitive advanced materials; (2) reduce the environmental footprint by using more sustainable advanced materials; (3) ensure strategic autonomy, by securing critical raw materials (CRMs) in order to master our value chains; (4) target markets for innovation in advanced, sustainable materials based on collaborative business models.

KEY RECOMMENDATIONS

1. **Ensure the success of ambitious legislation through appropriate funding**, implying a need for transition to decarbonised activities through costly investments
2. **Guarantee adaptation to transitions that does not lead to additional dependencies** through full support for "made in Europe" processes and products, in line with the EU's desire to preserve its strategic autonomy
3. **Facilitate cooperation between ecosystems to create larger markets**, moving beyond silo approaches
4. **Define a simplified methodology for comparing the CO₂ footprint calculations** of the players in the automotive sector, in order to make the skills and costs related to the decarbonisation of the content of products and industrial processes more accessible, especially to SMEs

⁴ European Commission, EFFRA, *Made in Europe Strategic Research and Innovation Agenda (SRIA): "The manufacturing partnership in Horizon Europe (2021 – 2027)"*, 2021.