French Automotive & Mobility Network
Smart & Green

Minutes : FAMN Roundtable – Decarbonising the Automotive Industry

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Moderator : Mathieu SARAIVA, FAMN

Speakers : Jürgen TIEDJE, European Commission DG RTD ; Hugues BOUCHER, FIEV ; Vincent CHAILLOU, ID4CAR ; Vincent CHAULET, CETIM

This European roundtable was organised by French Automotive & Mobility Network (FAMN). The objective of the discussion was to present the innovations of the mobility ecosystem in terms of decarbonisation of the industry, to evoke the possible barriers to the deployment of such innovations and to highlight the expectations of our ecosystem regarding a political intervention of the EU, and to raise the awareness of the European Commission with a view to making the concerns of the French actors appear in the work in progress.

1. Introduction by FAMN

➢ Mathieu SARAIVA – *FAMN, EU Correspondent in Brussels*

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, more connected, and safer mobility and industry. The decarbonisation of industry is one of these key areas. FAMN is carrying out concrete actions at European level to increase the visibility of French industry, particularly with European institutional interlocutors.

2. European Commission perspectives

➢ Jurgen TIEDJE, *European Commission Head of Unit (RTD.E.3)*

Three points are addressed:

- PPP Made in Europe;
- The 2030 Materials Manifesto;
- Industry 5.0

The co-programmed European public-private partnership Made in Europe, launched in 2021, is led by the European Commission's RTD.E.3 and CNECT.A.4 services, and implemented in collaboration with the EFFRA association, which brings together the stakeholders (industry, SMEs, research, etc.). It has a total budget of 1,800 million € (of which 900 from the EC + 900 from the partners).

The Made in Europe partnership aims to be the main European flagship and driver of this change, bringing together the main players in manufacturing and the relevant European industrial ecosystems. Based on common expertise and resources, the Made in Europe Partnership will be

the voice of sustainable manufacturing in Europe. It will stimulate European manufacturing ecosystems towards global technology leadership, circular industries and flexibility. The partnership will contribute to a competitive, green, digital, resilient and people-centered manufacturing industry in Europe.

The European manufacturing industry is very important in advanced manufacturing technologies. The sector employs over 28.5 million people and the EU27 accounts for 22% of global manufacturing output.

The ambition for 2030 is to strengthen the global position of European manufacturing in terms of competitiveness, productivity and technological leadership, and to increase the number and attractiveness of jobs, while ensuring environmental, economic and social sustainability for future generations in Europe.

To achieve this, the PPP is based on 4 general objectives:

- Ensuring European Leadership & manufacturing excellence;
- Achieving Circular and climate-neutral manufacturing;
- Mastering the Digital transformation of manufacturing industry;
- Creating Attractive added-value manufacturing jobs.

Concerning the Manifesto 2030 Materials, several challenges and opportunities are identified. Firstly, it is about preserving Europe's technological lead, with a need to access better performing, cost-competitive and sustainable advanced materials, while mastering their integration into the technologies of Europe's strategic value chains. Secondly, it is about reducing the environmental footprint by using advanced materials. Thirdly, it is about ensuring strategic autonomy, considering the strategic importance of advanced materials for strategic value chains. Fourthly, it is about targeting innovation markets for advanced materials, which must be sustainable and use collaborative business models, thus stimulating an open engagement of the industry.

Concerning Industry 5.0, the Commission notes the power of industry to achieve societal goals beyond jobs and growth to become a resilient provider of prosperity, ensuring that production respects the limits of our planet and placing the well-being of the industrial worker at the centre of the production process. The three key aspects are: people-centred; resilient; sustainable.

A study by Eurofound and CEDEFOP indicates that people-centred practices (work organisation, human resource management, skills development and employee engagement) contribute to the well-being of workers and the economic performance of the company (ECS 2019). On this basis, the EU is making it one of its priorities for the coming years, dedicating an entire unit to this topic.

3. Vision of the French automotive industry

➢ Hugues BOUCHER, *FIEV Technical and Public Affairs Manager*

The FIEV is the sectorial association defending the interests of all companies that manufacture and design road vehicle equipment. FIEV is a founding member of CLEPA and PFA.

As foreseen in the French climate and resilience law (2021-1104, 22.08.2021), the main industrial sectors are required to define a roadmap before January 2023. For the automotive sector, 5 working groups have been set up, including **WG1 *Carbon footprint of products***.

This WG, which was launched only a few weeks ago, is providing initial results on the importance of defining a direction, a methodology and a database to support the supply chain. 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 CO2 price to support investment.

Decarbonisation of product content is a priority for the automotive industry to comply with corporate decarbonisation targets. To achieve this, there is a need to consider 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 the tenders of vehicle manufacturers and suppliers. **A common methodology, guidelines and tools are needed**:

- To enable a fair comparison of suppliers' CO2 footprint calculations;
- To support supply chain actors with a simple approach;
- To make the skills and costs of LCA accessible to SMEs.

At the French level, recommendations have already been produced in terms of support for the value chain by the PFA and the DGE via a study. There is now a need for harmonisation at European level to be able to respond to customers in the same way. This could be the role of the PPP *Made in Europe*.

While the carbon footprint of vehicles equipped with internal combustion engines is mainly due to use, the carbon footprint of a BEV is mainly due to production (battery and vehicle), as is the case for H2. The weight of the vehicle also has an impact on the carbon footprint. It is therefore necessary to quickly determine the priorities for the decarbonisation of materials, bearing in mind that the decarbonisation of materials will have an impact on costs and will require significant investment. The sector now needs proposals to offset the extra cost and maintain competitiveness, which could be the role of the PPP Made in Europe or the Material 2030 manifesto.

The next steps identified:

- Supply chain analysis and localisation proposals;
- Traceability of CO2 content. For example, RENAULT's XCEED project (Industry 5.0);
- Certification of CO2 content to ensure fair competition.

➢ Vincent CHAILLOU, *ID4CAR Competitiveness Cluster President*

ID4CAR competitiveness cluster federates an ecosystem allowing innovators to meet and cooperate. It includes 400 members, 60% of which are SMEs, 60 R&D laboratories and large companies, with a territorial anchorage in the western regions of France (Brittany, Pays de la Loire, New Aquitaine).

In a context of double transition (digitalisation and decarbonisation), industry must adapt through innovations, but these innovations can increase costs and therefore accelerate dependence on non-EU countries. The impact of these transitions is visible in particular in the transition to new energies. For example, the strength of materials for H2 use and their industrialisation processes make them expensive.

The vehicle sector is currently facing several challenges:

- Reconciling the legislation governing the implementation of transitions and the industry's consideration of their impact (need for time and support);
- Mitigate the external shocks facing the industry;
- Accelerate the uptake of innovations by the market;
- Coordinating all levels (from local to EU) with a view to competitiveness.

In that sense, French clusters can point to several major successes. For example, the clusters have major key projects on digitisation of processes for a resilient industry. They have also implemented breakthrough technologies for electronics and embedded systems. Finally, with the support of the

French government's recovery plan, ID4CAR has launched key projects to diversify production in the mechanical industry, with the aim of bringing together complementary ecosystems to expand innovation markets (automotive, aeronautics, rail and maritime) in major joint projects and thus move away from silo approaches.

ID4CAR has led and is leading key projects in the field of decarbonisation of industry. 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 Smart Factory project, involving the company Mann+Hummel, concerned the upgrading of industrial facilities in terms of digitalisation. A stimulus investment for Carosserie Cantin enabled the foundry to adapt to new requirements, transforming an SME dedicated to car bodywork into an agile industrial company able to follow the evolution of vehicles.

ID4CAR formulates some recommendations to stimulate the European industry by joining forces, on key issues that require joint work:

- Adapting financial support to the scale of the impact of ambitious legislation;
- Ensuring 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&D programmes;
- Facilitate cooperation between ecosystems to create larger markets.

At its level, ID4CAR has already initiated or is planning several actions:

- Focus on cooperation and alignment of strategies at all levels;
- Further support its members to turn innovation into markets;
- Providing feedback through a presence in Horizon Europe PPPs via FAMN

➢ Vincent CAULET, *CETIM Global Aerospace & Automotive Market Manager*

CETIM – Centre technique des industries mécaniques – is an organisation driven by mechanical engineering companies under the supervision of the French government, with a turnover of €150 million, 20% of which is exported.

Although many scenarios are envisaged, CETIM considers that the electrification of road vehicles will be unavoidable. Thus, urban mobility will be electric, and long-distance mobility will use hydrogen or sustainable fuels.

CETIM supports the French automotive industry in various projects, particularly in relation to the theme of the factory of the future. The transition of the sector requires the transformation of factories: decarbonisation of industries, internalisation, digitalisation/modelling (digital twin).

Among the next challenges, CETIM insists on the circular economy, the reduction of the dependence on raw materials and the availability of components. This includes offering products and services aligned with social and environmental awareness and designing differentiated solutions through the concept of eco-innovation.

4. Questions & answers

The question of the articulation between the different initiatives implemented by the Commission was addressed. Indeed, the European Commission's RTD.E.3 unit (Industrial Transformation) is leading, in collaboration with EFFRA, the implementation of the Made in Europe PPP, while another unit is dedicated (RTD.E.4) to Industry 5.0. Jürgen explained that these are two completely separate initiatives. Made in Europe is an industry-led initiative that the Commission is leading. Industry 5.0

is a new concept which is not intended to go into the field of Made in Europe (development of funding programmes).

The question of the interest of the Commission's tools is addressed to the French players. Regarding the priorities of French industry, to what extent can DG RTD's tools/measures be an accelerator of decarbonisation? According to Hugues, one of the key issues today is the traceability of the carbon footprint along the value chain in the automotive industry. It will be interesting to address this in the 2023-2024 Horizon Europe calls labelled Made in Europe. The three speakers from the French industry agreed that this is a pivotal moment to discuss these priorities, a point also emphasised by the Commission. The initiatives led by the Commission must above all be supports for the transition, considering its feedback.

The climate ambition of the Fit For 55 package on road vehicles implies a recomposition of the value chains for the automotive industry, requiring new materials and components. Most of the carbon footprint of the vehicle will no longer come from its use, but probably from its production (manufacturing/recycling of batteries, production/storage of H2, heavier vehicles, etc). The French industry expects the Commission to propose levers to decarbonise a production chain that is becoming increasingly complex. The recent publication of the EU Chips Act is a step in this direction, the idea being to support European industrial sovereignty via funding and mechanisms that benefit European suppliers.

This roundtable could be a starting point for synergies between the Commission and the French automotive industry, two parties that are working on respective roadmaps for the modernisation and decarbonisation of the industry.

For further information, please contact our representative in Brussels:

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