



## 'FUTURE OF MOBILITY: STRIVING FOR SUSTAINABLE GROWTH'

*18h30 - 22h00 Dinner Debate - Members' Salon  
Wednesday 6 November 2019*

### European Parliament





Nicolás GONZÁLEZ CASARES MEP, (S&D, Spain), Industry, Research & Energy Committee

I am pleased to welcome you to the European Parliament this evening.

Thank you to the European Forum for Manufacturing and CLEPA (European Association of Automotive Suppliers) for organising this event.

As a member of the ITRE committee focused on industry and energy, I am aware that we have the important task of tackling the decarbonisation and implementing the digitalisation of the Union economy.

At the same time, we must design a new European industrial strategy that allows us to take advantage of the ecological transition, to transform the industrial sector into a more efficient, competitive, innovative and cleaner sector with a view to increasing its weight in the European GDP.

For this reason, I am grateful that we can have here today to address these issues, the manufacturing sector, which employs 34 million people, with a great capacity for innovation. As Europeans, we face great challenges, but I believe that we start from a good position thanks to the efforts made by the industry.

We know that the fight against climate change cannot be delayed. It is imperative to replace polluting energy sources based on fossil fuels with renewable energy sources.

Yesterday, a report backed by more than 11,000 researchers declared clearly that our planet is facing a climate emergency. And today the European Parliament Environment Committee hosted the presentation of two IPCC Special Reports; on Climate Change and Land, and on Oceans. And they warn of worse consequences to come, even if emissions of greenhouse gases start to fall.

We must be prepared to make progress in reducing emissions, but also in adapting to climate change.

In this sense, the transport sector and the associated industry are in the process of transformation to address these main challenges: decarbonisation, digitalization and maintaining competitiveness in Europe.

I know the industry is committed to reducing its ecological footprint.

In fact, yesterday the Commission published the recommendations to boost Europe's competitiveness and global leadership in six strategic industrial sectors, including Clean, connected and autonomous vehicles, being these recommendations based on proposals submitted by over 100 organizations of this sector.

However, currently, as you know, the transport sector is responsible for a quarter of Europe's greenhouse gas emissions (GHG). Besides, it is the only sector where emissions have grown over the last 25 years (25%) and that continues to suffer an alarming dependence on fossil fuels (93%). Given this situation, we need to rethink our transport model.

Transport is also the main cause of pollution in cities. It is necessary to remember the cost of air pollution: more than 400,000 premature deaths per year in Europe (30,000 in Spain).





Therefore, the transport sector has an important role to play in decarbonisation. The measures, in my view, go through:

- establishing new medium-term emission standards (such as those agreed by the EU)
- promoting clean, renewable energy sources (through biofuels, hydrogen, renewable electricity, etc.)
- making transport more efficient by incorporating intelligent systems, introducing cooperative transport systems and promoting multimodal transport,

We know that by 2050, transport must be decarbonized. Undoubtedly, in future zero-emission mobility, the electric vehicle powered by a mix that tends to be 100% renewable will have great importance. Electric mobility matches well with the impulse of storage (and batteries), key technology, along with increased interconnections, to facilitate the deployment of renewable energy.

But not only electric, we do believe in clean mobility that includes other clean energy sources like hydrogen or renewable gases.

At present, countries such as China and Korea are promoting and investing in zero-emission vehicles (mainly electric). The European car industry must prepare to develop the technology if we want to maintain the leadership we have today. In this sense, the European Battery Alliance is in the right direction.

I come from Galicia (in the northwest of Spain), where the car industry is very important. In total, it has created some 22,300 jobs. The automotive sector of Galicia accounts for 13,5% of the region's GDP. In Spain, the automobile assembly represents 10% of the Spanish GDP and employs 9% of the active population.

I therefore understand very well the importance of the car industry; not only for the economy, but also for the people. Employment in the automotive industry has an added value, not only in terms of higher wages, but also in terms of knowledge and technological development.

The automotive industry has an important multiplier effect on the economy, being important for steel and other metals, chemicals and textile industries, as well as industries such as ICT, repair and mobility services.

In my region, we are proud of the research centers that the industry brings; like the CETAG (Automotive Technology Centre of Galicia).

It is also necessary to stress the importance of the industry in not leaving anyone behind in this transition process. This includes both the most vulnerable citizens as well as those sectors and regions that need help for reconversion. It is necessary, for example, to manage reskilling and upskilling to mitigate against job losses and talent shortages.

The Government of Spain has taken steps to address the transition in transport. The draft Spanish Law on Climate Change and Energy Transition specifies, among others, that:

- The sales of vehicles that emit CO<sub>2</sub> will no longer be allowed by 2040. It offers a roadmap with more than 20 years of conversion time: it is orderly and predictable. It is in line with what other countries such as the United Kingdom, France, Denmark, Ireland, Germany and the Netherlands are proposing



- It will establish the obligation to install electric charging points in fuel supply facilities
- All municipalities with more than 50,000 inhabitants must have “low emission zones”

Sending these kinds of signals is essential to drive and accompany manufacturers, and make zero-emissions vehicles affordable and accessible.

In conclusion, the EU must seize this opportunity and work towards achieving the EU’s agreed commitments under the Paris Agreement while stimulating both innovation in new technologies, digitalization and business models, and more efficient use of all modes for our industry jobs.



### FUTURE OF MOBILITY: STRIVING FOR SUSTAINABLE GROWTH

Stefaan VERGOTE, EUROPEAN COMMISSION, DG CLIMA , Adviser for Emission Reduction Strategies, Research & Innovation

*Stefaan Vergote made an off-the-record presentation.*

Ondřej KOVAŘÍK MEP, (Czech Republic, Renew Europe) Economic & Monetary Affairs Committee

Last week, I participated in the V4 Automotive Summit in Budapest. We discussed the future of mobility there and I will share some conclusions with you later in my speech.

Manufacturing and automotive industry has a long tradition in the Czech Republic It has become one of the key sectors of the Czech economy, driver for innovation, important employer, tax payer and principle industry

Here are a few facts and figures from last year:

- The automotive industry employs directly 160,000 people and between 400,000 and 500, 000 if we include the indirect suppliers
- It produces nearly 10% of the Czech Republic’s GDP
- The automotive industry is responsible for about one quarter of all the country’s exports
- It is the biggest investor in research and development. Over 25% of people working in R/D are working on research in this sector
- In 2018 1.4 million cars have been produced in the Czech Republic. About 1.3 million have been exported.



It is obvious that the industry is currently facing a rising pressure from number of reasons, such as environmental challenges, digital and technological transformation, global trade pressure, competitiveness challenge or safety requirements. It has to react to all of them, simultaneously, which presents a very difficult situation.



In order to meet new challenges rising without losing its position, there should be a joint approach developed which would take above mentioned issues into consideration. It is a matter of a shared responsibility.

We need to boost research and innovation, including using of public, European and national, funds. We need to invest in deployment of new technologies, not only when it comes to functioning of vehicles, but also in developing and introducing new solutions providing mobility.

New measures need to be taken with full respect of technological neutrality, that is the horizontal principle that should govern our thoughts on the measures to be put forward. There are various technologies that are better fit than others in addressing specific mobility needs.

Many areas are already highly regulated. When it comes to any new legislation, I can say here, that as an MEP I will always work to make any new piece of legislation predictable.

There are two guiding principles, which I believe are absolutely necessary - acceptance and managing the transition.

Acceptance: from the industry part, but also from consumers and other stakeholders. For that we need to be active and communicate those issues one with another, so that it is rather a common cause, not a divisive and controversial issue.

Transition: measures that we would need to discuss in order to reach the goals and also to make sure we are moving in the right direction. Including regulatory framework to be reviewed and made fit for purpose. A number of measures could be envisaged. One of the outstanding problem which is typical for central and east European countries is an extremely high age of fleets. It is some fifteen years in the case of the Czech Republic. In this regard, we need to make sure that we have measures in place that would facilitate to speed up fleet renewal and, quite important as well – to ensure that old cars are not shifted from west to east in the EU. The renewal has to be done in a sustainable way.

## EMISSIONS REDUCTIONS IN A TECHNOLOGY\_NEUTRAL FRAMEWORK



Kai LÜCKE, ZF, Head of Global External Affairs

For passenger car and powertrains, ZF focusses on electrification, which comprises a broad portfolio of technological solutions: from mild hybrids to pure battery electric vehicle (BEVs).

Strong market growth in electrification will go hand in hand with long-term co-existence of different powertrains – already due to the challenges of customer acceptance of pure-electric vehicles as the sole solution. Policy-makers should adhere to the principle of technology-neutrality. Competition for the best solutions drives innovation; and using different technology paths in parallel helps achieve ambitious climate targets.

To avoid misguided incentives and encourage additional CO<sub>2</sub> reduction through climate-neutral fuels, the rationale of regulation should move from a pure tailpipe logic to a holistic approach. If compared on a lifecycle basis, for example, plug-in hybrids with a high share of electric driving (enabled by a battery for 80-100km e-range) perform very well. Plug-in hybrids are key for other



reasons as well: they can help electrification achieve a market breakthrough (no range anxiety); are one answer to the charging infrastructure challenge (fewer public charging points needed); and industrially facilitate the transformation of existing value chains.

Main messages:

- For passenger car powertrains, ZF focusses on electrification, which comprises a broad portfolio of technological solutions
- Strong market growth in electrification will go hand in hand with long term co-existence of different powertrains – if only due to the challenges of customer acceptance of pure-electric vehicles as the sole solution
- Policy-makers should adhere to the principle of technology-neutrality. Competition for the best solutions drives innovation; and using different technology paths in parallel helps achieve ambitious climate targets
- To avoid misguided incentives and encourage additional CO<sub>2</sub> reduction through climate-neutral fuels, the focus of regulation should move from a tailpipe logic to a holistic approach
- In a lifecycle approach, plug-in hybrids with a high share of electric driving perform very well; they can moreover help electrification achieve a market breakthrough (no range anxiety) and, industrially, facilitate the transformation of existing value chains
- A supportive political framework relies on incentives rather than prohibitions, which ultimately threaten to call individual mobility into question.

Simon Godwin, BORGWARNER, Delegate for European Government Affairs

BorgWarner Inc. is global automotive supplier and a leader in propulsion systems for combustion, hybrid and electric vehicles. A growing share of our sales is in electrification, supported by recent acquisitions that bring electric motors and power electronics into our portfolio. We recently entered into a joint venture to expand our expertise into battery modules, packs and management systems.



Lifecycle Consideration For Vehicle Greenhouse Gas Emissions

Main message

Lifecycle emissions represent all emissions related to the vehicle and its use. Regulating vehicle lifecycle emissions can potentially control emissions most effectively

We proposed methods to account for Well-to-Tank emissions and give credit for low carbon fuels. Detailed work is continuing to identify methodologies to measure and regulate lifecycle emissions

Concept

EU targets for fleet average CO<sub>2</sub> emissions per km of passenger cars and vans are in place for 2021, 2025 and 2030. These targets apply to emissions from the exhaust pipe (Tank-to-Wheel), when the



vehicle is tested using the standard Worldwide Harmonised Light Vehicle Test Procedure (WLTP) cycle.

To be fully consistent, all emissions that are directly associated with the vehicle and its use should be taken into account in CO<sub>2</sub> measurement and regulation. In the first instance, “Well-to-Tank” CO<sub>2</sub> emissions from the extraction, production and transport of the energy source can be included as they are directly related to the use of the vehicle. This approach includes the emissions from production of liquid or gaseous fuels and from generation of electrical energy, resulting in “Well-to-Wheel” emissions.

Taking a further step, significant additional emissions that arise from the production, transport and end-of-life disposal of vehicles can be considered. These are “embedded” emissions. When added to the Well-to-Wheel part, the total is referred to as Lifecycle emissions. They represent all the greenhouse gas emissions that are directly associated with the vehicle throughout its lifetime. It represents an extension of the concept of real emissions measurement.

By considering lifecycle emissions in the relevant standards, all technologies can be compared on an equivalent basis and regulation can most effectively be directed to controlling total emissions. This concept was in fact addressed by the European Parliament during the negotiations on the future car and van CO<sub>2</sub> standards, recognising that Tank-to-Wheel emissions are not fully representative. There are practical hurdles regarding measurement of lifecycle emissions and methodologies for regulating them, on which we are working.

#### Technical overview

All greenhouse gas emissions from vehicles can be mapped to understand the sources. The emissions associated with each part in the cycle can be investigated for any product.

The evaluation of lifecycle emissions is imprecise (as is the measurement of exhaust emissions) and relies on assumptions and estimates. For example, to compare embedded and in-use emissions, information about the lifetime of the vehicle is necessary. The calculation of embedded emissions remains subject to high uncertainties, especially for batteries.

It should be noted that the emissions estimated could be very different depending on the source of the energy. This applies for example to low carbon liquid fuels such as e-fuels for diesel and gasoline vehicles and to low carbon electricity for battery electric vehicles.

#### Policy and regulatory implications

In principle a well-designed regulation can be targeted at lifecycle emissions, with the objective to limit all emissions from and associated with the vehicle.

In 2017 BorgWarner and CLEPA presented a proposal to the European Commission for how to regulate the well-to-wheel CO<sub>2</sub> emissions of passenger cars. It introduced a CO<sub>2</sub> emissions per km offset for non-conventional vehicles such as battery electric, to account for the Well-to-Tank emissions. At the time, we did not consider Lifecycle to be sufficiently well developed. The Commission decided not to include any such provision in its legislative proposal later that year.

The European Parliament adopted an amendment on the CO<sub>2</sub> legislation that required manufacturers to report on the full lifecycle emissions of new vehicles, based on procedures to be determined by



the Commission. It would have required the Commission to report on Lifecycle emissions and to present an analysis of possible regulatory measures by 2026. The final agreed text of the legislation included a similar but less explicit provision to evaluate the possibility of a common methodology by 2023, and potentially to follow up with legislative proposals.

The Parliament also debated, but did not adopt, amendments that would give manufacturers CO<sub>2</sub> credit for the use of low carbon automotive fuels. Such fuels, including biofuels and e-fuels, emit lower greenhouse gases over their lifetime as their production involves extracting CO<sub>2</sub> from the atmosphere. This extraction occurs either directly (e-fuels produced by electricity) or via plants (biofuels). A Well-to-Wheel or Lifecycle Regulation would recognise the lower carbon content of such fuels, therefore encouraging their use and reducing total emissions.

As well as advantages of Well-to-Wheel or Lifecycle Greenhouse Gas regulation, there are challenges to their application. A particular issue is the question of emissions responsibility. Manufacturers can take responsibility for the emissions per km of their vehicles measured using a standard method and for the embedded emissions in vehicle production and disposal. However, the responsibility for emissions from fuels and electricity lies with energy companies. It is possible to devise regulation that accounts for these, for example by providing CO<sub>2</sub> credit to fuel suppliers in our proposal above.

A further challenge is the accurate calculation of lifecycle emissions, in particular the embedded part. A number of ongoing investigations are ongoing to improve the methods and understanding.

#### Ongoing work

In 2017, the European Commission announced a tender for an in-depth study on lifecycle emissions of vehicles. The objective was to determine a robust and consistent methodology for measuring lifecycle greenhouse gas emissions and health impacts for light and heavy duty vehicles with various propulsion systems, and to estimate the level of the impacts for the timeframe 2020-2050.

The study was awarded to Ricardo, started in mid-2018 and is due to end next month. Ricardo has consulted on the methodology with the expert community and has received contributions from CLEPA and its members. This is expected to be a high quality work, which will inform effectively about the comparative emissions of different vehicle types and propulsion systems, and will feed into decision making about potential future policy measures, including regulations.

**Vlad Marius BOTOȘ MEP, (Renew Europe, Romania), Internal Market & Consumer Protection Committee**

First of all, I want to thank the organizers for inviting me to this event. It is an honour to be here in such a select company.

Until five months ago, I used to present myself as the production coordinator for the Romanian and Bulgarian plants of a large international automotive company.







I must tell you that I never thought I would be invited to talk about cars and sustainability in the same event because the public perception is that cars and car industry in general is not very interested about the environment.

I know that is only because the automotive industry is the most scrutinized industry. If you talk about the copper industry, not everyone will have an opinion, but when you talk about cars, everybody knows brands, consumption, horsepower, which car will last longer and a lot of other details.

Unfortunately, when people talk about pollution, they are talking mostly about cars. We have to face the fact that the more cars are on the roads, the more pollution in the air. It is not just the toxic emissions, but we also talk about the carbon print of the car: the whole process of production, the life span and process the cars go through after being out of use. This carbon print is the biggest problem of sustainability in the car and machinery industry. This is where we need to work. This is where the car industry needs to improve, especially in the last part. How long is a car safe to drive, safe for the driver, safe for the others and, very important, safe for the environment?

What do we do with the cars after this period? Where does the waste go? How does the industry deal with this problem? Well, at this moment, we do not deal with it. We leave it to somebody else. Is it the best method? Could we do something more? We have to find solutions.

The other very important problem is the emissions. How much is OK? If you talk to the passionate ecologists, they will tell you no emission is the only way. Sure, but what do we do with the millions of people using the cars? Do they, do we, want to give up our cars?

Yes. I know we should. We should have better public transport all over the world, although it is also using a lot of cars, only bigger. Even so, we love our cars and I can guarantee that not everybody will give up their car.

There is another problem to the extreme solution of giving up the cars. There are millions of people working in this industry, there are towns with an economy based on the car industry and there are all the horizontal services and economy depending of this it. If we are being realistic, we know giving up our cars is not the solution ... yet.

So, I was thinking of all these problems and nothing came in mind, no clear solution, no brilliant way to solve them all. But, then I thought of all those lunatics who thought that a carriage can go without a horse, or a donkey or some sort of an animal. There were a lot of them and then Benz came up with the best idea. He made his three-wheeled, gas-powered horseless carriage and it worked.

I remembered all the progress of the cars during the years. We wanted more power. The car industry came with more power. We wanted cheaper cars. The car industry came with cheaper cars. We wanted safer cars. The industry came with safer cars. We wanted to go faster, so the cars are going faster.

This is one of the industries that is so much in tune with the consumers. This is one of the industries that always found a way to adapt to the needs of the society. With a bit of vision, the car industry solves the problems we did not even knew we had. (We did have horses back then.)

All we need is to remember that the industry can do it. If Benz dared to build his carriage without a horse, I am sure you will find somebody to build the solar car and adapt it for mass production. I am sure this industry, given the right amount of time and help, will come up with the best solution.



There is no secret in the fact that I love cars and I am telling you that I will give my full support to the car industry, as long as the car industry will give its full support to the environment.



Utimia Madaleno, EUPPORTUNITY/DRIVES,  
Senior Consultant for Innovative Research & International Cooperation

Enabling Young Talent and Prioritising the Needed Skills for the European Workforce

The entry in the era of highly complex technology, able to simplify citizens life, shaped the society lifestyles in a wide variety of sectors modifying settled values and traditions.

The overall transport sector, namely, the automotive industry, was confronted by the shifting of personal mobility to a collective social commodity.

- The aging workforce in the sector call for young talent to be attracted by recent advancements and skill needs in research, advanced engineering, digital or design. Awareness of these job profiles in the automotive sector can appeal the missing young talent, both men and women.
- Work on skills anticipation for early informing education and training policy is fundamental to adapt curricula of formal and informal education. As national education systems are distinct, the support for joint training programmes fostering close cooperation between providers and industry, research and vocational training is essential.
- Fast technical evolution entails swift adaptation of education and vocational systems and request collective effort from public and private educational structures to create flexible procedures to improve and match curricula to immediate market apprenticeship needs.
- Upskilling and reskilling is fundamental to adapt current automotive workforce to the rapid technological change.
- As much education and training in the sector require advanced technical skills, therefore, higher graduation, also technical specialists, problem-solving and team-working staff are needed. Mentoring becomes a clear predominant requirement to work based learning.
- All formats of training and VET approach need common and recognised qualifications as well equivalent job description across the EU. This will interest and mobilise talent to perceive automotive as offering better career perspectives and mobility.
- All above recognised efforts are not achievable without private and common funding initiatives. The Commission Blueprint for sectoral cooperation on skills addressing short and medium-term skills needs for EU strategic sectors can have the required impact. Automotive sector was within the pilot ones. DRIVES (*Development and Research on Innovative Vocational Education Skills*) was the awarded project starting in 2018. In 2019, decarbonisation and batteries for e-mobility was targeted, awarding a new partnership - ALBATTS (*Alliance for Batteries Technology and Training*).



Maria Luisa Soria, SERNAUTO, Public Affairs and Innovation Director

The Role of SMEs on the EU Economy: How to Manage the Transformation to Support EU Competitiveness

Key figures of the automotive suppliers' sector in Spain

- 17 manufacturing plants of Original Equipments Manufatcurers (OEMs), 2.8 million vehicles manufactured (2<sup>nd</sup> EU manufacturer), 2.3 million vehicles exported
- 1000 supplier companies. € 37,170 million turnover, 58% exported (€ 21,415 million), 230,100 direct employees. R&D&I investment € 1,545 million, with a turnover of 4.2%
- 50-60% SMEs, approx. 20% employment and approx. 10% turnover



The transformation of the automotive sector

The automotive sector is facing disruptive trends that impact on the companies' business models. The sector is undergoing a substantial transformation in three key areas:

- The product: vehicles and their components and systems are evolving to cope with the decarbonization and digitalization trends, and with more and more stringent regulatory frameworks and social demands: climate change and air quality, "the 0 victims" safety vision, connectivity and automated driving.
- How the vehicles and their components are manufactured: impact of digitalization on the production processes
- The supply chain, with new actors, new relationships with customers and suppliers and new business models, more focused towards the final customer in the new mobility paradigm.

The role of SMEs in the automotive value chain

The automotive value chain has usually been represented as a pyramid, where SMEs are usually at the basis, in the lower tier levels of the supply chain. OEMs are the main customers of component manufacturers, and they are on top of the pyramid. SMEs are usually Tier 2 to Tier 4 suppliers.

In this integrated value chain, component manufacturers in each step provide:

- technology and innovation
- quality
- cost and efficiency
- continuous competitiveness improvement

SMEs are therefore key actors in the automotive value chain. They are specialists on specific products and technologies, and they must evolve together with their customers, the larger Tier 1 and Tier 2 suppliers.



Competitiveness of the whole value chain relies on the capability of all actors to evolve together and provide technological solutions for the future vehicles: more efficient, safer, connected and automated.

And there are also SMEs as parts manufacturers for the independent aftermarket (approx. 15% of the sector turnover). They supply components according to EU and international regulations and their products must technologically evolve, as well, according to the vehicles in the market.

#### Flexibility: an inherent SME strength

SMEs operate in a lean and flexible set-up focusing on immediate business and market needs, with typically low overhead. SMEs have an innovation role to play, complementing the needs that mayor players may have in developing a number of technological fields and registering patents, contributing with technical solutions to the priorities of today and becoming part of global value chains.

#### SMEs Competitiveness Factors:

- Strategic vision: how the sector and the market is evolving, and which strengths could be the basis to update the product portfolio according to the new vehicles
- Cooperation: in a sector where the supply chain is evolving and should be highly integrated. SMEs have difficulties to tackle ambitious new projects alone
- Product and process innovation: which new products / technologies are required and how they can be manufactured in an efficient and competitive way
- Digitalization: take advantage of digital enablers and their implementation in the internal processes (collaborative robots, data analytics, additive manufacturing, predictive maintenance, ecosystems integrating customer-supplier, cybersecurity)
- Internationalization: in a sector that plays in a global market
- Access to Finance: to support investments in innovation, digitalization and upgrade of manufacturing facilities and internationalization. The threat of disruption is even bigger for smaller companies than for big corporations, and therefore a global and European competitive level playing field should be guaranteed, to support the new mobility ecosystem and EU manufacturing by providing legal certainty to the smaller players. They need special support in the research and development area, since SMEs may face difficulties to finance large projects
- Access to new skills: attraction of young talent and continuous training for re-skilling and up-skilling the existing workforce
- Support of their customer: Tier 1 and Tier 2, to grow and follow them in their globalization proces
- Responsible Business Strategy: SMEs need to develop their own strategy, due to the concern of the higher levels of the supply chain on sustainability policies (environment, social, etc).

Competitiveness factors are similar for all types of companies; however, SMEs are the weaker steps of the value chain in terms of accessibility to skills and finance, in case of scarce resources.



Two examples:

- Zanini: wheel trim manufacturer, world leader, >80 million units, new product; metallized plastic parts with new functional devices (sensors)
- FAE: New applications for the thin layer ceramic deposition process: FC, heating devices.

### Talent as Competitiveness Factor

Due to the fast technology evolution and the disruptive trends, the automotive sector needs a highly skilled labour force:

- Education offer should be aligned with the industrial demands at all levels
- Lifelong-learning: the existing workforce should be continuously re-skilled and up-skilled, in new technologies for the vehicles, production processes and new business models
- Increasing importance of soft skills
- Promote interest for the sector and the professional careers (vocational training)
- Recognition of titles and qualifications
- Promote dual training models (vocational and university levels).

### Conclusions

- The European automotive sector faces important challenges ahead, due to decarbonization targets and the opportunities provided by digitalization
- All actors in the supply chain are essential for the competitiveness of the whole sector
- SMEs, as weaker actors, should be on the focus of specific measures to support their strategic positioning in the new automotive value chain, the access to skilled labour force and to financial resources to allow investments in innovation, digital investments and internationalization.



Roberto Vavassori, CLEPA, President, Member of the Management of Brembo Italy

Thank you for inviting us for this interesting evening. It is so important that we continue to talk and to foster a dialogue between various partners of industry.

From the various speakers we get clearly a concept that we are talking about a complex subject. Not complicated but complex in the sense that there are many faces that are composing a complex scenario. I want to talk about mobility.



Mobility is what brought our civilisation to the point we are today. Mobility is an essential and fundamental right of every European citizen. Mobility of people, private and public, mobility of goods. One day without trucks, the city like Brussels is starving, we forget this. 2/3 of worldwide populations is living in urban area thanks to logistics. Logistics is mobility of goods and data. Because more and more we are living in mobility of data.

On the other side we are talking about manufacturing because one ingredient of region of the world that wants to continue to survive and to know success, create employment and innovation and wellbeing for its citizens: it means manufacturing. This is so essential to our companies that we continue to repeat this to every session. I am glad that today we will bring today the complexity of mobility with forum for manufacturing together. We gave up manufacturing to some extent to Asia, to China in particularly.

We have to continue to find the European way to succeed in manufacturing in innovating in mobility. We are in raise against other superpowers China and US.

Well beyond 2030 we will use different types of mobility. We need to invest in every technology of mobility. We need to continue to have manufacturing in Europe, guaranteeing a 20% GDP coming from our factories.

Private mobility is not only about propulsion, even if we do not take into account the drivetrain, there are several components (brakes, steering wheels, several others) in which Europe is the technology leader, and this should not be given away to other regions in the world.

Innovation is fundamental to continue to create the best options for mobility. Services (car sharing, Uber) are also important, but they need a vehicle that support its operability. A vehicle that is adapted to the mobility needs, also in terms of adapting the different powertrains options to the different environment and needs.

Complexity is part of our industry and the current political debate. Mobility and energy are both part of a complex cycle where the CO<sub>2</sub> emissions are involved. The way forward is technology neutrality, there is a need to ensure a regulation that guarantees the analysis of this complex situation, to guarantee the European sustainability and competitiveness, preserving employment and fostering innovation. A holistic approach is the way forward, specially in times of uncertainty where regions of the world are no longer committing to the decarbonisation targets from the Paris agreement. We see how technologies that are being disregarded in Europe (diesel) are being promoted in the USA.

These regions will continue to invest in the development of a wide range of powertrains, and Europe should not move away from that competition. Europe needs to be competitive in every area and be able to deliver the technology excellence to the different needs and customers. An holistic approach should guarantee that the whole system is doing its part of the equation, and electric cars will not contribute to decarbonise if there is not available renewable energy able to supply the increasing demand.

The transition to electric mobility should also count on a reliable supply chain of materials and avoid dependency from other regions in the world.

Automotive suppliers are leading the race towards electrification. In the last four years, our industry has invested more than € 200 bn to offer customers a complete portfolio of electrified



powertrain. All the needed innovation are coming from suppliers, we should not forget that the 75% of the value of a vehicle comes from suppliers.

But all these investment needs to be accompanied by an increasing customer demand. Customers do not necessarily decide upon the most sustainable alternative and we need to ensure that the lighter, best consuming performing are being picked by the final users.

We need a competitive transition that can bring onboard all these elements, providing the best of the choices for our customers that should be able to decide upon their different needs.

Moving from the current 2% of battery electric vehicles to the expected 30% by 2030 will not be easy, and the uptake should not rely on subsidies but on a real market demand. The average use of a European car is 11 years, therefore we should encourage customer to opt for the best of the alternatives that would be a sustainable solution for their needs.

Dialogue is the key element to bring this transition forward. From our side, we are doing all the necessary efforts to use technology and industrial strength to its maximum potential, without necessarily having the guarantee that the financial investment will ever pay off.

Transition should include the support and uptake of the different available technologies, that goes from the even further improvement of the internal combustion engine (ICE) to the electrification of the powertrain in its various forms (mild, full, plug-in hybrid, full battery-electric and fuel cells) as well as through the use of low and zero carbon fuels.

We are seeing European vehicle manufacturer companies heavily investing in Asia, up to 130€ billion, to guarantee the supply of batteries in the next 10 years. We should guarantee that these investments can be done in Europe in the future, preserving the European technology and industrial leadership.

Again we encourage dialogue, analysing all the factors that are affecting the sector, from a scientific approach. We need to move from tribalism to realism. We need to have our voices heard as the credibility of the industry has being damaged in the last years. We are calling to the new members of the institutions: European Commission, Parliament and Council for an open, transparent, trustworthy dialogue to design a competitive environment for Europe. We need to continue to lead the world with technology that solves all the open and upcoming challenges.

We should not disregard the European leadership in technologies related with manufacturing. As example, the machinery that ensembles the electric motors that are being build in China. We also produce the best electric performing motors in the world. These are only two examples of how several of our European companies are the world leaders in their fields.

Upcoming proposals, such as the green deal, need to take all these elements into account, and ensure that every decision is backed up with a clear action roadmap based on facts and taking into account other elements, as the role of SMEs in the sector value chain or the need of having an skilled workforce able to manage the transition. We do not yet have the people with the skills that will be needed for the future and this needs to be added to the equation.

What is the most realistic way to continue to have Europe leading the mobility world? Automotive suppliers will be there irrespectively of the technology that will be used, innovation is in our DNA and its has been the industry driver along all this years, and it will continue to be.

Let us continue the necessary open dialogue with institutions and all actors involved to ensure the best for the future.



Antony Fell, EUROPEAN FORUM FOR MANUFACTURING, Secretary General

The next EFM meeting will focus on the Future of the Machinery Directive and take place in the European Parliament on Thursday 5 December. It will be chaired by Maria Grapini MEP, Vice Chair of the Internal Market Committee.

As you may know, the European Commission is currently carrying out an impact assessment to examine a possible revision of the Machinery Directive. One of the main aspects being examined is the possible need to update the Directive to adapt to new developments in digitalisation, including the Internet of Things, Artificial Intelligence and possible Cybersecurity threats.



This Briefing will focus on machinery for the B2B sector. The Machinery Directive is the core piece of EU legislation for the mechanical engineering industry. It covers a wide range of products from robots to complete automated industrial production lines.

Speakers will include: Barbara Bonvissuto, Head of Advanced Engineering and Manufacturing Systems, DG GROW, at the European Commission, MEPs, manufacturers and Dr Massimo Carboniero, Chair of the CECIMO Technical Committee.

I would like to thank all our speakers and the excellent team at CLEPA and at EFM who contributed in a major way to the success of this European Forum for Manufacturing.



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