

CARS 21 High Level Group

on the Competitiveness and Sustainable Growth of the Automotive
Industry in the European Union

Interim Report 2011

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Executive Summary

The European automotive industry¹ is a key sector for the European economy, providing over 12 million jobs and a positive contribution to the trade balance of around € 70 billion, which is essential for continued European prosperity. It provides the means of transport for the large majority of passenger and freight movements.

In the coming decade, important changes are expected in the global automotive industry in several areas that are likely to profoundly reshape the industry and its markets worldwide. While the European market has a low-growth perspective, third markets are growing fast, changing the trade flows and the automotive value chain. The intense competitive pressure is growing further and EU companies are increasingly being challenged on their home market. To meet long-term greenhouse gas targets as well as air quality objectives, the internal combustion engine will be further improved and the development of breakthrough technologies, such as electrified propulsion, will happen. Sizeable efforts will also need to be made with the further development and distribution of alternative fuels to traditional diesel and gasoline fuels.

In order to analyse these challenges and develop a joint strategy for decision makers from the private and public sectors, the Commission decided at the end of 2010 to re-launch the CARS 21 High Level Group, which was originally set-up in 2005. It was one of the actions listed in the Commission Communication for a "European strategy on clean and energy-efficient vehicles²", adopted on 28th April 2010. The objective of the group is to make policy recommendations to support the competitiveness and sustainable growth of the European automotive industry. A network of strong, well diversified and competitive enterprises along the entire value chain must be at the heart of this strategy.

This Interim Report covers the group's consensus³ on a number of selected topics discussed so far. Some may be further elaborated and further topics will be added in the rest of the CARS 21 process, leading to the adoption of the Final Report.

Ensuring a favourable business environment

CARS 21 confirms the need to ensure reliable and favourable framework conditions for the European industry as such and a need to continue implementing basic horizontal principles agreed during the first round of the CARS 21 initiative

Key messages:

1. Ensuring **reliable and favourable framework conditions and continuous improvement of those conditions** are a prerequisite to ensure the long-term competitiveness of the European automotive industry.
2. The **cumulative effects** of the different pieces of legislation affecting the automotive sector should be scrutinized in order to have an overall assessment of their economic, social and environmental impacts.

¹ The term automotive industry, used extensively in this report, is meant to cover the entire supply chain, covering vehicle manufacturers, suppliers, distribution and after-market services

² COM(2010)186 final, 28.04.2010

³ Unless otherwise indicated

3. In order to achieve ambitious goals in relevant policy areas a **real integrated approach** must be fully implemented. Measures to be taken must be proportional and in line with the **principles of cost-effectiveness and better/smart regulation**.

Fostering business adaptation and employment transitions

CARS 21 has analysed the current market and industrial position of the European automotive industry, its competitiveness on the global stage, and has reflected upon the future evolution of the automotive manufacturing base. It has also considered the impact this evolution will have on employment in automotive sector.

This analysis clearly shows that the *status quo* for the European automotive industry cannot be maintained: current production capacities will have to be adapted, new production methods devised, further sources of raw materials secured, and new clusters and business models developed. Importantly, new skill profiles are required and possible changes in employment needs will have to be tackled. In this context, it is particularly important to ensure a smooth and balanced economic and social transition via the anticipation of change, which will foster business adaptation and employment transitions.

Key messages:

4. The economic crisis underscored the **importance of the industry for the European economy** and the need to **keep the automotive manufacturing base in Europe**. Policy makers on all levels can contribute to this by **a close coordination of the different policy areas** having an impact on the sector and by taking into account their impact on competitiveness and sustainable growth.
5. **Anticipation of change and restructuring is vital**, it should be holistic and respect all factors influencing the competitiveness and the long-term perspective of companies. It should be reflected effectively in companies' long-term strategies with due attention paid to human resources skills and availability. The Commission should encourage more policy coordination, utilisation of dedicated instruments of social policy and the development of mechanisms of forward planning of employment and skills needs, like the **European Automotive Employment Skills Council**.

Improving environmental & market performance

In the coming years, a number of legislative initiatives are planned concerning vehicle regulations, aimed, in particular, at improving the environmental performance of vehicles and strengthening the internal market. Their underlying objective is an ambitious regulatory framework on environmental, safety and consumer protection standards. They should be elaborated in a balanced way to underpin the competitiveness of the European automotive industry, worldwide.

In recent years, it has become clear that the current procedures used for measuring pollutant, CO₂ emissions and fuel consumption of light-duty vehicles (cars & vans) are not sufficiently representative of real-world driving. A revision of the driving cycles and the test procedure is therefore envisaged and currently being prepared on a global level, based on data collected about real-world driving behaviour. Improvement and clarification of the test-cycle is important in order to deliver the expected reductions from regulatory measures and provide better information to consumers.

The discrepancy between the type-approval test results and real-world emissions of certain pollutants is substantially bigger, particularly for diesel vehicles. The reduced limits from the

successive euro stages are considered not to have delivered the full extent of the emission reductions that were expected. Many Member States are still struggling to meet air quality objectives, particularly in urban areas.

While CO₂ emission performance standards have been adopted in recent years for cars and vans, it is now necessary to address CO₂ emissions for heavy-duty vehicles (HDVs), taking into account the specificity and diversity of the sector. It is estimated that HDVs account for about 26% of CO₂ emissions from road transport in the EU, which is about 5% of total CO₂ emissions. In the present type-approval legislation, CO₂ emissions and fuel consumption will be measured starting from Euro VI only for the engine, but not from the entire vehicle.

Key messages:

6. A **new driving test-cycle and test procedure** should be developed that is more representative of real-world driving. The modalities for its inclusion into the EU legal framework, including the adaptation of the CO₂ targets established on the basis of the old cycle and procedure, and the timetable for introducing them need to be properly addressed, minimising the burden for all stakeholders.
7. This should be complemented with **measures controlling vehicle emissions in use**, based on a thorough analysis, with the aim of delivering a timely reduction of real-world pollutant emissions, hence, contributing to improved air quality.
8. To reach the long-term CO₂ reduction objectives, **a comprehensive approach should be developed** for the reduction of CO₂ emissions from HDVs, covering a wide range of measures. As a first step **an appropriate methodology for evaluating the CO₂ emissions of the entire vehicle** should be put in place. In considering different measures, it should be acknowledged that different types of vehicles have different levels of societal utility.

Further, the legislation on noise emissions from vehicles should be reviewed, based on an impact assessment. A new test procedure has been developed and tested in recent years. This procedure is more representative of real-world driving and can now be implemented. This, together with more stringent limit values, can contribute to a reduction in road traffic noise levels.

An important objective of vehicle regulation is also to strengthen the EU internal market for motor vehicles. This requires, for example, coordination of the demand measures put in place by Member States, such as the financial incentives for clean and energy efficient vehicles. A revision of the procedures for the surveillance of the automotive products placed on the EU market is also needed, in order to make sure that citizens can fully trust the regulatory framework put in place.

Key messages:

9. As part of an integrated policy approach to ambient noise reduction, **vehicle noise emission regulation should be amended**. The new test procedure should be implemented to better reflect real-world emissions. A further reduction of vehicle noise levels is feasible and will be proposed. Appropriate 'lead-time' should be provided to industry, consistent with the extent of the required technical adaptations.
10. **Financial incentives** for clean vehicles put in place by Member States **should be coordinated more strongly** in order to maximise their effectiveness and limit the fragmentation of the market. They should **avoid being technology-specific**, instead

relying on objective and commonly available performance data, such as the CO₂ emissions from the vehicle.

11. In order to ensure vehicles and their components are safe and compliant with relevant legal requirements, **the type-approval framework should be enhanced to include provisions for market surveillance** in areas where a need has been identified. This will contribute to establishing a level playing field among all actors and to increased trust of consumers in effective product regulation, while limiting administrative burdens.

Improving competitiveness on global markets

The CARS 21 group has looked at how EU trade policy can contribute at improving the competitiveness of the EU automotive industry worldwide. The group has underlined the need for EU trade policy to be closely coordinated with the new EU industrial policy.

Concerning the various trade instruments, the group has stressed the importance of Free Trade Agreements to improve market access in third countries. It has highlighted that acceptance of international regulations under the 1958 UNECE Agreement⁴ is the best way to remove non tariff barriers to trade and has pointed to the need to strengthen bilateral regulatory cooperation with third countries, with a view to eliminating non tariff barriers in the automotive sector.

Key messages:

12. EU trade policy should take full account of the importance of maintaining a strong and competitive automotive manufacturing base, using both multilateral and bilateral tools. Both should tackle key issues of **removing tariff and non tariff barriers. FTAs should aim at full tariff dismantling** and removal of Non-Tariff Barriers. The overall impacts of each trade negotiation should be assessed.
13. It is necessary to **reform the 1958 UNECE Agreement** with a view to make it **more attractive for third markets**. As part of this reform, the introduction of an **International Whole Vehicle Type-Approval system** should be promoted by all relevant stakeholders.
14. Multilateral regulatory cooperation under the UNECE framework should be complemented with **bilateral regulatory cooperation** in particular with emerging countries, but also with, for example, the United States - under the Transatlantic Economic Council - and with Japan.

Preparing tomorrow's mobility solutions

Europe needs to diversify the energy sources used for transport, in order to meet climate goals and to reduce its dependency on oil. Although there will be oil for several decades to come, future oil supply will not be able to provide for additional global demand, particularly in developing countries and regions, and will become more expensive. This requires alternative fuels to come into the market, including electricity, hydrogen, biofuels, methane (natural gas and biomethane), LPG and others. For the overall policy framework, the merits of each fuel and powertrain combination should be assessed on a well-to-wheel basis, and including also life cycle aspects.

⁴ The 1958 Agreement of the United Nations Economic Commission for Europe (UNECE) on international technical harmonisation in the motor vehicle sector

Market penetration of alternative fuels requires the build-up of the appropriate infrastructure. The roll-out of alternative fuel infrastructure should be in step with technology development and market penetration rates of vehicles powered by alternative fuels. Different forms of public support for infrastructure are possible: pilot projects, standardisation, investment support and legislation. Public policy can support market introduction but afterwards markets must decide on the best solutions, within the given policy framework.

Innovation will be a key factor for maintaining the competitiveness of the automotive sector and sustainability of the road transport. Public funding should foster innovation in the automotive industry. This has been recognised in past European research programmes, where funding has mainly been used for pre-competitive research. Also other technological development programmes, major support programmes of the EIB for industry investment and support for market introduction by Regional and Structural Funds are available. For the coming years, EU policy should support the whole product development and innovation chain from research to market introduction in a more integrated approach. Also efforts are underway to simplify administrative procedures, which is essential for industrial and other players.

Key messages:

15. **A portfolio of alternative fuels**, covering electricity, hydrogen, biofuels, methane, LPG and others, **is necessary to meet the policy objectives**. Given the novelty of many fuels, their performance should be kept under continuous review. The roll-out of alternative infrastructure should be in step with the technological development to enable the market penetration of vehicles powered by these alternative fuels.
16. In view of the National Renewable Energy Action Plans, **the freedom of movement and the integrity of the Internal Market should be ensured to avoid different biofuel blending rates to be used** in different Member States. This should be kept under review. Compatibility with vehicles and clear information for consumers should be ensured.
17. **Charging of electric vehicles** is expected to be performed mainly at home/work, but there will be also **a need for publicly accessible recharging infrastructure**. In order to ensure interoperability across the EU, **standardisation on the European level is needed**. Based on the current EU electricity mix, **substantial CO2 savings** can already be obtained. In the longer term, the **progressive decarbonisation of electricity** generation, complementary to the roll-out of electric vehicles offers the perspective of a growing number of zero-emission vehicles.
18. In view of the importance of the industry for the EU economy, there should be **significant RDI support** for a broad range of automotive issues and critical future technologies in the new EU policy framework for research and innovation (Horizon 2020 with the proposed budget of € 80 bn). In addition, a specific and **major initiative on breakthrough technologies** (including, among others, electrification of combustion engines, hybrid and electric vehicles, fuel cells, electrical and electronic systems) should be envisaged, in parallel with the continuous EIB support to the automotive sector as well as to infrastructure and services.

Next steps

The CARS 21 process will continue and address additional topics. These will include international regulatory cooperation, eCall and ITS, electro-mobility, biofuels, CO2 from cars and vans, CO2 labelling for cars and Integrated Approach, road safety, vertical agreements in the sector, etc. The group intends to deliver its final report in spring 2012.

Chapter 1: The vehicle industry at a crossroads

Context of unprecedented challenges

The European automotive industry – vehicle manufacturers, suppliers and aftermarket - is a **key sector for the European economy**, providing over 12 million jobs and a positive contribution to the trade balance of around € 70 billion, which is essential for continued European prosperity. It provides the **means of transport** for the large majority of passenger and freight movements.

The **continuous evolution** of the global automotive industry **has recently accelerated**. In the coming decade, important changes are expected in several areas that are likely to profoundly reshape the industry and its markets worldwide. While the European market is relatively mature, **automotive markets outside the OECD countries have grown very strongly** in recent years. This development is likely to continue, which will underline the economic importance of these markets for the competitiveness of the EU automotive industry. At the same time, the recent economic crisis underscored the importance of the industry for the European economy and the need to **keep the automotive manufacturing base in Europe**.

The **established ambition of the EU to protect the environment and to fight climate change** has recently translated into **new goals for greenhouse gases reduction – also in transport**. To meet those new long-term greenhouse gas targets as well as **air quality objectives**, the internal combustion engine will have to be further improved. In addition, the introduction of new and cleaner vehicle technologies, such as electric and hybrid propulsion, will have to be stepped up. These technologies can be expected to make significant inroads into the global vehicle market by 2020. It is clear that **sizeable efforts will also need to be made with the further development of alternatives for fossil-based motor fuels**. This will require the industrial structure and its workforce, transport systems and infrastructure to be transformed in order to adapt to new market situations and technologies. At the same time, road transport safety should remain a top policy priority.

The outcome of the first CARS 21 process: smart regulation

The CARS 21 (A Competitive Automotive Regulatory System for the 21st century) High Level Group was originally launched in 2005 and played a major role in defining European policy and legislation on the automotive sector with a view to strengthening the industry's competitiveness.

The principles of smart regulation, which play an important role in the competitiveness of the industry, were a **prominent deliverable of the first CARS 21 report of 2005**. Since then, it has been acknowledged that much has been done to improve the EU regulatory process. The Commission now systematically carries out **impact assessments** for all significant policy proposals, in the automotive and other fields. The importance of **stakeholder consultations** is clearly recognised and implemented. Adequate **lead times** and **long-term targets** are part of the new legislation. Attention is still required to further improve these elements of policy-making, such as the competitiveness proofing of policy initiatives.

Automotive **legislation has been substantially simplified**. This has been achieved by reducing the number of EU regulations and directives and by **referring instead to international regulations**, as developed under the UNECE framework. In particular, as a direct follow up to the recommendations of the first CARS 21 report, **more than 40 EC**

Directives have been replaced by the corresponding UN Regulations, thus avoiding duplication of European and international technical requirements and administrative procedures, to the benefit of both industry and national authorities. CARS 21 also prepared the ground for significant internal market legislation that has been adopted in recent years improving the safety and environmental performance of vehicles.

Smart vehicle regulations and environmental and safety challenges continue to be important and this report will therefore deal with **a number of legislative initiatives concerning vehicle regulations** that the Commission is planning to take in the coming years and where it wants to apply the smart regulation principles agreed so far, notably lead-time, integrated approach and cost-effectiveness principles.

The re-launch of CARS 21

The **future performance** of the European automotive industry, and its impact on the economy, jobs, the environment and society at large, will depend on the **choices that European businesses, consumers and public authorities make** when faced with a changing context. For that reason, an intensive dialogue, joint analysis and precise understanding of key issues, among decision makers in the private as well as the public sector, is paramount.

On that premise a **realistic vision for "a competitive EU automotive industry and sustainable mobility and growth in 2020 and beyond"** and a **set of operational recommendations** is needed to guide policy makers at the European Union and national level, as well as the industry and civil society organisations as regards the relevant policies in the years to come. This has been the goal for the re-launch of the CARS 21 High Level Group. The re-launch was announced in the **Communication on "A European strategy on clean and energy efficient vehicles"**⁵, adopted by the Commission in 28 April 2010. Since then, both Parliament and Council have reacted favourably to the Communication in general and to the re-launch of CARS 21 in particular. The group was formally established by Commission Decision of 14 October 2010⁶. The first high-level meeting took place on 10 November 2010 and endorsed the terms of reference (see Annex 3) and the list of key topics.

Enlarged scope and composition

The mandate of the re-launched group has been enlarged. Whereas the first CARS 21 exercise was strongly focused on competitiveness and regulatory policy, the current group clearly has a **double objective of ensuring the competitiveness of the EU automotive industry and its sustainable growth**. This double objective translates the recognition that competitiveness in the medium term can only be ensured if the industry resolutely takes the path of developing clean vehicle technologies. It also calls for an **enlarged and rebalanced composition** of the group, as the development and market uptake of these technologies relies on the decisive involvement of different actors along the value and service chain, as well as of authorities and civil society.

The process towards the Interim Report

The CARS 21 High Level Group, at its meeting of 10 November 2010, decided to organise its work in two steps. The first step would consist of an **Interim Report**, to be adopted in 2011, followed by a **Final Report** in 2012. The Interim Report covers policy recommendations on a number of issues which have been identified as priority issues by the members of the Group.

⁵ COM(2010)186 final, 28.04.2010

⁶ OJ C 280, 16.10.2010, pp. 32-34

Some will be further elaborated and other topics will be added to the Final Report. In order to develop the Interim report, four Working Groups have been set-up on the following themes:

- **Innovation, infrastructure energy supply and use** (results presented in Chapter 5)
- **Trade and international harmonisation** (results presented in Chapter 4)
- **Industrial, social and territorial aspects of competitiveness** (results presented in Chapter 2 and Annex 1)
- **Internal market, emissions and CO₂ policies** (results presented in Chapter 3).

A total of 10 meetings of the Working Groups took place in the first half of 2011 in order to gather the input from the members on the selected topics. In addition, a public hearing was organised on 13 May 2011 to gather views from other stakeholders. Consensus was built in the meetings of the Sherpa group and the Interim report was finally adopted by the High Level Group at its meeting on 2 December 2011.

Chapter 2: Fostering business adaptation and employment transitions

Introduction

One of the tasks of CARS 21 has been to **analyse the current market and industrial position** of the European automotive industry, **its competitiveness on the global stage and to reflect upon future evolution of the automotive manufacturing base as well as the impact it will have on automotive employment.** The Group's agreed analysis of the crisis recovery, of the current economic situation and of the competitiveness factors is presented in Annex 1.

This analysis clearly shows that the *status quo* for the European automotive industry cannot be maintained: current production capacities will have to be adapted, new production methods devised, further sources of raw materials secured, and new clusters and business models developed. Importantly, **new skill profiles are required.** In this context, it is particularly important to ensure a smooth **and balanced economic and social transition** via the **anticipation of change, which will foster business adaptation and employment transitions.**

Analysis

The EU has managed to **safeguard the industrial base** of the automotive industry through the worst years of the economic downturn. But with the uncertain current macro-economic conditions, the ability of the European automotive industry to preserve its manufacturing base and jobs in Europe will depend more and more on its **capacity to increase its competitiveness** through **innovation** as well as **quick and smooth adaptation to change.** This change is due to technological progress, shifting trade patterns, evolving regulatory framework (including ambitious long-term environmental and safety targets), changing business models and consumers' behaviour and urbanisation. The EU, through its actions in different policy areas, needs to support its automotive industry in this regard.

The scale of economic restructuring and social change triggered by the deep adaptation required by environmental, economic, technological, market and societal challenges is immense. From an employment viewpoint, it will **imply both job creation and job destruction**, as well as, and above all, **job transformation** (in terms of new tasks, new skill profiles and new working arrangements). While the qualified labour force is one of the key **competitiveness factors** of the EU automotive industry, it cannot be taken for granted and sustaining this factor requires a proactive approach.

Smooth adaptation to change in the automotive industry clearly necessitates anticipation of skills needs and availability of human resources. It is essential to **ensure that the automotive industry has the suitably skilled workforce in order to avoid skills shortages and mismatches – likely in the context of higher proliferation of new and environmentally friendly technologies.** While production of electric vehicles will obviously necessitate new skills and competences, improvement of combustion engines' performance and emission control will also represent a major challenge in terms of new skills and competences. This will also support the competitive position of the EU industry in export markets. Anticipation

of future skill requirements and consequent adaptation of school curricula and retraining in the context of life-long learning of workers already active in the sector is also crucial for maintaining the high employment in the automotive industry (currently 12 million).

THE CARS 21 GROUP THEREFORE CONCLUDED THAT:

- 1. Reinforcing of the competitiveness of the sector constitutes the only way to preserve and develop employment in the EU in the long term.** The joint efforts to be deployed should always aim at preserving future competitiveness rather than trying to defend existing jobs. In this respect it is important to ensure the predictability of the regulatory framework and regular exchanges between the social partners of the sector.
- 2. Anticipation of change and restructuring** is vital, it should be holistic and respect all factors influencing competitiveness and long-term perspective of companies (including regulatory framework development, trade relations and others). It should be integrated effectively in **companies' long-term strategies**, with due attention paid to **human resources' skills and availability**.
- 3. Increased skills and competence levels** contribute to the creation of an adaptable and mobile workforce, enhancing the employability of workers in the sector and facilitating employment transitions. These are necessary pre-conditions of a successful and socially acceptable strategy for the anticipation of change and for inevitable restructuring. Members States, regions, companies and employees share the competence and responsibility for increasing skills and competence levels.
- 4. Automotive companies in cooperation with relevant stakeholders should develop mechanisms for forward planning of employment and skill needs.** That requires a **proper identification of skills needs** and full co-operation between the public sector, industry and educational establishments in ensuring that the training being offered is in line with the needs of companies and the innovation process. The **networking** of existing industrial, employment and skills observatories through a **European Automotive Employment and Skills Council** will be a useful tool in order to share and disseminate economic intelligence in those fields.
- 5. As during the crisis, social dialogue should continue to constitute a crucial tool for dealing with employment, skills and, in general, adaptation issues.** Social dialogue demonstrated, throughout the crisis, that it encouraged the adaptation of companies to difficult situations. These included development of innovative instruments (such as short-time work, and variation of employment conditions in accordance with production needs and market demand, etc.), as well as by more fundamental restructuring. Moreover, the utility of social dialogue is likely to be further confirmed in the near future when dealing with disruptive technologies and a changing distribution of market growth and potential.
- 6. Necessary restructuring cannot be resisted but in order to minimise its social impact, widely recognised good practices in this field should be followed⁷ while**

⁷ See 'Checklist for Restructuring Processes' presented by the Commission in its Communication of 3 June 2009 'A shared commitment for employment', COM (2009)287 final.
<http://ec.europa.eu/social/main.jsp?catId=101&langId=en>. The Checklist can be found on
<http://ec.europa.eu/social/main.jsp?catId=782&langId=en&moreDocuments=yes>

paying attention to the specifics of individual national industrial relations system and of economic and social contexts. This means:

- a. **reflecting restructuring into companies' long-term strategies**, while respecting all possible factors affecting competitiveness and long-term perspective (including regulatory framework development, trade relations and others). These strategies should include human resources, employment and skills objectives aimed at developing, on a permanent basis, the skills and competences of the workforce;
 - b. **developing**, in cooperation with employees' representatives and, as appropriate, with other relevant stakeholders, **mechanisms of forward planning of employment and skills needs**;
 - c. **preparing restructuring operations as much in advance as possible** with all the concerned stakeholders;
 - d. **explaining and justifying restructuring operations** on the basis of a clear business rationale, justifying it on grounds of either long-term strategic goals and requirements or short-term constraints;
 - e. **making available, to the employees concerned, measures aimed at re-enforcing their employability** and helping them to re-enter the labour market as quickly as possible.
7. Partnership between all the actors is essential. The **European Partnership for the Anticipation of Change in the Automotive Sector** constitutes a useful platform allowing vehicle manufacturers, automotive suppliers, regions and trade unions to exchange information and jointly anticipate the changes taking place in the industry, thus contributing to the sustainability of the European automobile industry.
8. **EU funds** (and in particular the European Social Fund and the European Globalisation Adjustment Fund) should continue to be mobilised and targeted to ensure that the **necessary skill levels** required for the future competitiveness of industry are retained in the industry and further developed, as well as to **complete companies' own actions with regard to softening the impact of adjustment on employment**.

Chapter 3: Improving environmental & market performance

The CARS 21 group has discussed **a number of legislative initiatives concerning vehicle regulations** that the Commission is planning to take in the coming years, aimed in particular at **improving the environmental performance of vehicles and strengthening of the internal market**. The underlying objective is an ambitious and effective regulatory framework on environmental, safety and consumer protection standards. These are components that should be proposed and implemented in a balanced way to underpin the competitiveness of the European automotive industry, worldwide.

The effect of road transport on the environment has long been on the policy agenda and has led to the adoption of EU emissions legislation for different types of vehicles.

In recent years, it has however become clear that **the current procedures** used for assessing emissions and fuel consumption of light-duty vehicles **are not sufficiently representative of real-world driving**. A revision of the driving cycle and test procedure is therefore envisaged as well as the development of additional procedures to control real-driving emissions of pollutant emissions. Additional steps are also considered necessary to reduce emissions further. Whereas regulations have been adopted in recent years for CO₂ emissions from cars and vans (which are to be reviewed in the next years), it is now important to address **CO₂ emissions of heavy-duty vehicles** whilst taking into account economic, social and environmental impacts. Also the **legislation on noise emissions** from vehicles has to be reviewed

An important objective of vehicle regulation is also to **strengthen the EU internal market for motor vehicles**. This requires a **coordination of** the demand measures put in place by Member States, such as the **financial incentives** for clean and energy efficient vehicles. It also requires revision of the procedures for the **surveillance of the automotive products placed on the EU market** in order to make sure that all vehicles meet the regulatory requirements put in place and pose no safety risk to consumers, while limiting administrative burdens.

The **smart regulation principles** will apply to the regulatory process leading to adoption of the above measures. Indeed, smart vehicle regulations, which take into account the legitimate interests of all parties involved and carefully assess the different ways forward, will continue to be an important factor for the industries' competitiveness. Particular consideration of the application of smart regulation principles and the impact of regulatory burdens must be given to small and medium enterprises (SMEs), who may require delays or exemptions, under the principle of proportionality. Especially when **sustainability and competitiveness** are to be achieved simultaneously, smart regulation is a must for all levels of public policy and has to be further developed in coherence with the process initiated in the first CARS 21 exercise.

In addition, it will be important to consider the **cumulative effects** of the different pieces of legislation affecting the automotive sector in order to have an overall assessment of their economic, social and environmental impacts. Existing and future policy initiatives, including potential conflicts between their objectives, should be carefully studied and a balanced approach should be found.

a. Improving emissions measurement

Introduction

The World Light duty Test Procedure (WLTP) process focuses on the development of a "Global Technical Regulation (GTR)" comprising a complete set of test procedures for light duty vehicles under the 1998 UNECE global agreement.

In parallel and independently from the WLTP process the EU has legal obligations and a political commitment resulting from Regulations (EC) No 715/2007 (Euro 5/6) and No 443/2009 (CO₂ emission standards on passenger cars) and from the 2010 Communication on a European Strategy on Clean and Energy Efficient Vehicles to propose a new, more realistic test cycle and procedure by 2013 at the latest. In principle this objective could be achieved through an EU process; however, defining common procedures at UNECE remains the preferred option, if all requirements can be fulfilled, since it would lead to worldwide harmonisation of test requirements with obvious advantages for the automotive industry.

The envisaged timetable of the WLTP process for adoption of the GTR in 2013 is very ambitious and the strong commitment from all parties, including third parties, would be needed to meet it.

Options and recommendations

1. Commission, Member States, industry and all other relevant stakeholders are strongly committed towards a successful outcome of the WLTP process and support the defined ambitious calendar.
2. The new test cycle and procedure should satisfy the following expectations:
 - the current gap between CO₂ value measured at type-approval and those representative of real world driving of a vehicle type should be minimised by the introduction of new type-approval test cycle and procedures that are representative of real world driving;
 - good (intra-lab) repeatability;
 - (inter-lab) reproducibility;
 - the current gap between regulated pollutant emissions measured on the current European test-cycle and real world driving emissions should be minimised by the introduction of new type-approval test cycle and procedures that are representative of real world driving; for an appropriate control of real driving emissions of regulated pollutant the use of complementary and specific cost-efficient procedures is necessary (e.g. not-to-exceed testing).
3. The issue of regional differences should be carefully addressed. Variants should be limited to the extent possible to preserve the benefits of overall harmonisation, while avoiding to compromise the representativeness of the procedure in view of the regional environmental management requirements.

4. In parallel to the work at UNECE, a process at European level should start now without delay on the options for introducing the new test cycle and procedures into the EU legal framework with the aim of finalising this process by 2014 at the latest. Noting that Article 13 (7) of Regulation No 443/2009 sets out that “Measures shall be adopted to provide for the necessary adaptation to the formulae of Annex I in order to reflect any change in the regulatory test procedure for the measurement of specific CO₂ emissions”, an assessment needs to be carried out on how that adaptation should be implemented along with a clear timeline for implementation. In particular, in order to provide industry with stability, consideration should be given to the appropriate timing for the implementation of the new test-cycle for the measurement of regulated pollutant emissions and to whether an overlap would be needed between the NEDC and WLTP for a transitional period. Such need should also be balanced against the current challenges that member states face in meeting standing air quality standards and other environmental obligations set to protect EU citizens and the environment. Solutions should be found that minimise the burden on all stakeholders as far as possible in accordance with the principles of cost-effectiveness and better regulation, taking into account the competitiveness of the automotive industry.
5. It should be clarified whether, in addition to the requirements of the WLTP, further requirements at EU level (e.g. emissions from mobile-air conditioning systems and other optional and/or energy using equipments, eco-innovations, etc) have to be amended or developed to ensure representativeness of type-approved values, particularly with respect to CO₂/fuel consumption and sufficient lead-time should be provided for any changes. This needs to be aligned with the implementation of the WLTP test procedure.
6. Representativeness of type-approved values is crucial to ensure improved environmental protection while also providing more accurate consumer information and facilitating the Member States in designing and implementing efficient taxation and incentive systems.

b. Delivering real-life pollution reductions

Introduction

Overall, air quality in the EU has improved over the past decades. Emissions of most pollutants have decreased significantly in particular in the 1990s. The automotive industry has contributed significantly to this improvement via the introduction of technologies necessary to meet the increasingly strict emission limits as set by the Euro-standards. For particulate matter (PM₁₀, PM_{2.5}), nitrogen oxides (NO_x/NO₂) and ozone, however, the situation is less favourable. There persist still significant challenges in meeting air quality standards. Further cost-effective measures need to be identified across all sectors to meet air quality standards and protect human health and the environment.

Specifically in urban areas, no clear trend towards improved air quality can be observed, while a significant percentage of the urban population is still exposed to PM and NO_x/NO₂ concentrations above the limit and target values set by Directive 2008/50EC (Ambient Air Quality Directive). The emission reductions achieved by introducing tighter standards have, at least partially, been offset by higher transport volumes as well as higher shares of diesel cars (in particular for NO_x) and less than expected reductions of on-road "real driving emissions".

Following the requirements of the EURO 5/6 Regulation (EC) 715/2007, the Commission (JRC) has performed a study on the real driving emissions of Euro 5 vehicles in 2010⁸. One of the findings was that real driving emissions, in particular NO_x emissions of EURO 5 diesel vehicles, significantly exceed regulatory emission limits, by a factor of 2 – 4 for entire test routes (covering a distance of up to 120 km) and even more for a single cycle. These findings are supported by several other studies performed in Member States, e.g. UK and NL.

For heavy-duty vehicles, a number of measures to improve the real world emissions have been introduced in the implementing Regulation for Euro VI pending adoption by the Commission. This includes the introduction of the World Harmonised Test procedure developed under UN Global Technical Regulation No 4, the introduction of the off-cycle provisions from the UN Global Technical Regulation No 10 and a procedure for testing emissions from heavy-duty vehicles on the road using portable emission measurement systems (PEMS). Euro VI is considered a more robust package of measures than previous steps.

For light-duty vehicles, test procedures for controlling "real driving emissions of light duty vehicles" (RDE-LDV) are being developed by the JRC with the support of a RDE-LDV working group composed of stakeholder experts. The group has been established in January 2011 and should deliver draft procedures by the end of 2012, with a view to apply the resulting test procedures from the mandatory EURO 6 dates.

Options and recommendations

1. It is acknowledged that **air quality has improved** for certain pollutants over the past decades, **mostly thanks to efforts by the automotive industry** required to meet the successive Euro-standards for light-duty and heavy duty vehicles and other measures. However, there are remaining concerns for PM, NO_x and ozone concentrations, particularly in urban areas, and many **Member States are unable to meet their respective air quality or emission ceiling targets**.
2. Several factors explain this lack of progress. One of the reasons is that **emissions in real driving conditions are significantly higher compared to those measured on the test cycle**. As a result per vehicle emissions have not decreased as was expected from the Euro standards, particularly for NO_x emissions of diesel engines. An additional reason may be that other industrial sectors have higher than expected emissions.
3. Whereas measures have been defined to address real-world emissions of heavy-duty vehicles, similar **measures need to be elaborated for light-duty vehicles**, particularly for NO_x emissions of diesel cars. Given the pressing air quality problems cities are facing and the perceived lack of delivery of the recent Euro-standards, there is an **urgency to identify cost-effective measures** as soon as practically possible and to ensure their robustness.
4. Several measures can help alleviate the problem. The **new test cycle**, as developed in the WLTP process, can reduce to some extent for light-duty vehicles the discrepancy between emissions on and off cycle. However, the improvement is expected to be constrained by the limits inherent to any pre-defined test cycle. Regular and proper maintenance and measures to support fleet renewal could also provide some benefit.

⁸ M. Weiss, P. Bonnel et al. "Analyzing on-road emissions of light-duty vehicles with Portable Emission Measurement Systems (PEMS)", EUR 24697 EN - 2011

5. **Retrofitting** can provide some benefit for older heavy-duty vehicles, if adaptation of engine management can be foreseen. For light-duty vehicles, most stakeholders do not expect that retrofitting will offer very cost effective solutions for reducing real-driving emissions. Great concern must be taken to avoid negative environmental effects through improper technical solutions.
6. Type-approval measures **controlling vehicle emissions in use**, using not-to-exceed concepts, similar to those foreseen for heavy-duty vehicles, have to be evaluated for light duty vehicles application as well. The Portable Emission Measurement System (PEMS) method is one of the candidate methods considered by the RDE-LDV working group. The alternative candidate procedure is the random cycles approach derived from the EU-WLTP driving data collection. Both candidate methods/procedures have to be evaluated according to a list of assessment criteria, including cost/effectiveness, reliability and repeatability for regulatory purposes, to examine the possibility for implementing Euro 6 and onwards. Authorities and vehicle industry need to cooperate in this effort.
7. It has to be taken into account that time will be needed to adapt to these new procedures and to see their complexity, effects and costs. The completion of open issues in the Euro 6 emission legislation should be done in a timely manner, allowing industry sufficient leadtime. This concern could also be alleviated through a **progressive application of the measures**. This could be done by starting with relatively high compliance factors, taking out the so-called outlying emitters first, and progressively strengthening of these factors over time.
8. **Harmonised measures** to control real-driving emissions of diesel cars also aim to **strengthen the single market**, by avoiding national measures being taken. It is also important for strengthening the image in EU and third markets of diesel technology, which is key for tackling climate change and energy efficiency. As such, measures to be taken must be proportional and in line with the principles of cost-effectiveness and better/smart regulation, taking into account the competitiveness of the automotive industry and the environmental benefits.

c. Reducing CO₂ from heavy-duty vehicles

Introduction

In the context of necessary reductions according to the Intergovernmental Panel on Climate Change (IPCC) by developed countries as a group to be compatible with the goal of limiting temperature increases to below 2°C from pre-industrial times, the EU needs to reduce its GHG emissions by 80-95% below 1990 levels by 2050⁹. Reductions in crude oil use can also help to improve energy security.

Commission analysis¹⁰ shows that while deeper cuts can be achieved in other sectors of the economy, the cost effective level of reduction from the transport sector is around 60% of GHG emissions by 2050 compared to 1990. By 2030, the goal proposed by the Commission for transport¹¹, currently discussed by Council and Parliament, will be to reduce GHG

⁹ As mentioned in the Presidency Conclusions of the European Council, 29/30 October 2009

¹⁰ COM(2011) 112; http://ec.europa.eu/clima/documentation/roadmap/docs/com_2011_112_en.pdf

¹¹ COM(2011) 144 final; http://ec.europa.eu/transport/strategies/2011_white_paper_en.htm

emissions to around 20% below their 2008 level. It should be noted that economically priced, rapid and flexible transport of goods is of great importance for the competitiveness of the European industry and its prosperity.

It is estimated that heavy-duty vehicles (HDVs) account for about 26% of CO₂ emissions from road transport in the EU, which is about 5% of total CO₂ emissions. The demand for freight transport is growing continuously and road haulage forms the biggest share of inland freight transport. HDVs are the second biggest transport source of CO₂ emissions, roughly equivalent to the sum of air and water transport CO₂ emissions (international and domestic aviation and shipping). The volume of road freight transport is expected to continue to grow at or above the rate of economic growth (GDP). Due to worldwide highest fuel prices and highest mileage performance, European trucks are already highly competitive in terms of fuel efficiency. However, with business as usual, fuel consumption and CO₂ emissions from HDVs are expected to continue to grow in the future in absolute terms and as a proportion of total emissions. Although energy prices, demand and other policy responses will influence these projections, it underlines the importance of further improving the CO₂ and fuel efficiency of road freight transport from the economic, environmental and climate perspectives.

In the European Strategy on Clean and Energy Efficient Vehicles¹², the Commission announced that it will propose a strategy improving fuel consumption and CO₂ emissions from heavy-duty vehicles. The expected improvement of fuel efficiency of HDVs due to market forces is estimated at 1% per year, a rate which is also incorporated into the latest business-as-usual projections in the TREMOVE model.

In order to better understand the specificities of the HDV sector, the Commission has recently published a report on the EU HDV market structure which identifies a series of policy options for reducing CO₂ emissions from HDVs¹³.

The analysis carried out for this project shows that even under most ambitious technology uptake levels starting immediately, total GHG emissions from HDVs may only reduce to levels slightly below today's levels by 2030. A comprehensive strategy therefore needs to be developed covering a wide range of measures and actors addressing CO₂ emissions from HDVs. Should there be significant delay in lowering HDVs CO₂ emissions, the potential future GHG emissions would be significantly higher.

Taking into account the findings of the study, the following potential policy instruments for reducing CO₂ emissions from HDVs and their operation have been identified:

(a) Measures primarily related to HDV CO₂ performance and/or purchase decisions by fleet operators

- Monitoring HDV CO₂ emissions, through the implementation of a measurement methodology for CO₂ from HDVs
- Labelling of vehicles, components, bodies, trailers or transport services,
- Legislation to set performance requirements for vehicles, components, bodies and trailers,
- Direct stimulation of development and deployment of CO₂ reducing technology by HDV manufacturers and their suppliers,
- Public procurement rules relating to HDV procurement,

¹² COM(2010)186 final

¹³ http://ec.europa.eu/clima/studies/transport/vehicles/docs/ec_hdv_ghg_strategy_en.pdf

- The development and diffusion of more efficient vehicles (including by means of changes to weights and dimensions legislation),
- Vehicle purchase taxes or incentives,
- Alternative fuels.

(b) Measures affecting the operation of HDVs

- Review of cabotage rules,
- Dissemination of best practices,
- Improved logistics and fleet management,
- Driver training,
- Speed reduction,
- Road user charges,
- Fuel taxes.

(c) Other measures

- Emission trading scheme(s).

Options and recommendations

1. The policy options to reduce CO₂ emissions and increase fuel efficiency in HDVs should reflect the heterogeneity of the transport sector as well as the role of the various actors and build on the experience gained from regulating CO₂ emissions from cars and vans. It will be important to recognise the specificity and the diversity of HDVs and specifically the cost sensitivity of the commercial vehicle sector. Also the fact that different types of vehicles perform different societal utility needs to be taken into account. Regular reviews of the development of the fleet need to be included as well.
2. Taking into account the conclusions from the EU HDV study on market structure and policy options, the Commission should develop an integrated strategy based on:
 - **Evaluation of current emissions of vehicles** (Implementing a methodology for measuring CO₂ emissions from HDVs);
 - **Improvement of system efficiency** (e.g. alternative fuels, intelligent transport systems, co-modality, taxation, cabotage, green procurement, fleet renewal, speed limits, driver training, consumer information, weights and dimensions of vehicles);
 - **Improvement of the efficiency of vehicles** (e.g. more efficient engines and alternative powertrains, improving air resistance, weight, tyre pressure control, rolling resistance¹⁴ and on-board energy using devices of whole vehicles);
3. When evaluating the efficiency and feasibility of CO₂ reducing measures, an extensive impact assessment should be undertaken, evaluating the cost-effectiveness of possible measures concerning HDV emissions.

d. Tackling vehicle noise emissions

Introduction

¹⁴ Any new legislation with the aim of curbing CO₂ emissions from HDVs should take into account the recent efforts of the tyre industry to meet the rolling resistance requirements set out in Regulation (EC) 661/2009

As more information about the health impacts of noise became available in the past years, the need for a higher level of protection of EU citizens through further EU-wide measures became more imminent. Based on information from Member States, the European Environment Agency has estimated, that half of the population in urban areas is exposed to noise levels above 55 dB(A) as a result of ambient road noise.

Noise emissions of four-wheel motor vehicles (light-duty and heavy-duty) are addressed by Directive 70/157/EEC and the equivalent UN Regulation No 51. The noise limits have been reduced several times, the most recent being in 1995. It has been recognised that the latest reduction did not produce the expected benefits, partly because the current test method does not reflect real world driving behaviour.

In order to reduce this discrepancy, the UNECE Working Group on Noise has elaborated a new test method which was published in 2007. This new protocol has since been carried out during type-approval, although for monitoring purposes only. Specific noise requirements for tyres have recently been strengthened through the General Safety Regulation (EC) 661/2009 and UN Regulation No 117.

As mentioned in the European strategy on clean and energy efficient vehicles, the Commission intends to present a proposal in 2011 to amend the respective legislation to reduce the noise emissions of vehicles. In order to prepare this proposal, the Commission has contracted a study carried out by TNO. The study recommends the implementation of the new test method and proposes to reduce noise limits in two subsequent steps based on compared values. The first step is expected to be met essentially by add-on measures, such as insulation, requiring only limited technical adaptations of the vehicles. The possible second step would need more significant measures in the technical concept of vehicles, such as engine adaptations and modifications to the vehicle structure.

Finally, the market introduction of a number of vehicles with electric propulsion has prompted concerns about potential safety risk that those quiet vehicles would pose, in particular for the visually impaired. The question has been raised whether a minimum noise level of electric or hybrid electric vehicles should be required, for those driving situations where potential dangers exist, and if so, should it be extended to quiet conventional vehicles.

Options and recommendations

1. The reduction of road transport noise nuisance for citizens needs to be tackled through an Integrated Approach. Industry, authorities from EU, national and local level and infrastructure operators need to contribute to implement the most cost-effective solutions. Vehicle measures need to be complemented by measures to influence driver behaviour, tyre/road surface improvements, traffic management, noise source isolation and other infrastructure measures.
2. The new test protocol for measuring vehicle noise emissions has been evaluated positively, as confirmed through an impact assessment, and should be used for type approval. Provisions for off-cycle noise emissions may be added.
3. In order to contribute to the reduction of noise nuisance, a further reduction of noise limits for heavy-duty and light-duty vehicles is technically feasible and will be proposed, underpinned by an impact assessment.

4. A two-step approach, based on compared values, with the first requiring only limited technical adaptations, followed by a second step, requiring more substantial abatement measures implemented on the vehicles, seems to be supported. The need for industrial leadtime has to be considered, taking into account the extent of technical adaptation needed.
5. The new legislation for vehicle noise emissions should duly take into account the efforts made by the tyre industry to meet the noise requirements set out in Regulation (EC) No 661/2009 and should avoid double legislation for tyres.
6. Regarding the noise of quiet vehicles, awaiting the development of a global regulation, only adequate sound generating devices should be used. Including legal requirements in the proposal aims to lead to a harmonisation of the applied technology. The installation as such and its sound characteristic should not be mandated but remain an option for the vehicle manufacturer. Technology is likely to evolve and a further assessment may be needed at a later stage.

e. Making incentives for clean & energy-efficient vehicles effective

Introduction

In past years, **many Member States have put in place financial incentives** to promote the purchase and use of clean and energy-efficient vehicles. These incentives have been targeting mainly light-duty vehicles and in some cases also heavy-duty and L-category vehicles (motorcycles). **Guidelines¹⁵ have already been issued** by the Commission for incentives for motor vehicles that comply in advance with mandatory emission limits (**for pollutants**). For this reason and because the majority of incentives put in place recently by Member States are targeted towards CO₂ or energy-efficiency, it seems logical to **focus the new guidelines on CO₂ and energy-efficiency**. It is acknowledged that vehicle incentives may also aim for both CO₂ and pollutant reductions or for other policy objectives, such as the improvement of road safety.

When one compares the different incentives put in place by Member States or regional authorities, **a large variety appears**. Several are reserved for a certain technology (such as electric or hybrid vehicles), or have different criteria depending on the technology used (for gasoline and diesel). Others use CO₂ performance criteria, however a multitude of threshold values are used throughout the EU. This leads to an **additional fragmentation of the internal market**, as vehicles may need to be specifically adapted to an incentive in a particular market. Also, **the efficiency of the incentive may therefore be limited** as certain technical development may not be worthwhile for a manufacturer as the potential market reward is too limited to cover the costs. With a **greater coordination of the incentives**, a larger market potential can be created for clean and energy-efficient vehicles.

Financial incentives are applied to create price signals for customers and **act in addition to the existing framework conditions** in place in the market concerned. Also these framework conditions, including car and energy taxation schemes, show a large variety among Member States, leading to a certain fragmentation of the market. The overall effect of an incentive is thus also depending on the fiscal system in place. In addition, although some financial

¹⁵ SEC(2009)1589 final/2

incentives apply only to a small proportion of the market, others apply across the entire market. It will therefore be difficult to separate financial incentives from the car taxes applied. For that reason, the guidelines could be formulated, in full respect of subsidiarity, in such a way as to allow that they can be taken into account in car taxation schemes as well.

Options and recommendations

1. Demand measures by national authorities are useful to complement regulation and other supply measures and enable the successful market penetration of clean and energy-efficient vehicles. In particular financial incentives can be very positive and should be covered by the Commission guidelines, although other measures targeting energy supply, city access and parking facilities can also be effective.
2. There is a clear need for EU guidelines, going beyond the strict legal requirements for incentives, aiming at limiting the fragmentation by providing reference design principles
3. Financial incentives should be technologically neutral and avoid singling out one technology or creating counter-productive environmental effects, instead setting the criteria based on an objective environmental performance criterion.
4. The CO₂ figure from type-approval seems for light-duty vehicles currently the most appropriate measure of performance to be used for granting financial incentives. Although well-to-wheel performance is an important consideration for assessing the overall transport system, in order to avoid displacement of emissions, it is neither a convenient nor a suitable measure for the performance *of the vehicle* with respect to CO₂ efficiency.
5. Where threshold values are set for granting incentives, steps should be taken to avoid the risk of perverse impacts on the market. In order to avoid vehicles with similar environmental performance being treated unfairly, it is recommended that the threshold be set at a point at which there is clear separation between vehicles with superior CO₂ performance and others. The risk of market distortion could be further mitigated by either having several steps with small increases in the incentive. However, as this is a consumer demand measure, the benefits of these steps to mitigate theoretical market distortion needs to be balanced against the additional complexity this presents for consumers, which may actually reduce the incentive effect.
6. In order to reduce the risk that the incentive is used for subsidising manufacturers, the size of the incentive should as a general rule not exceed the additional cost of technology. In practice, it is recognised that there is a very wide variety of technologies that can be used to improve the vehicle's energy efficiency, which makes the additional cost difficult to estimate.
7. With a view to increase their effectiveness, it is important that incentive schemes are predictable for industry and consumers with regard to their timeframe and requirements. This could include a phase-in and/or a phase-out period, as well as a revision date to adapt the scheme to changing circumstances.

f. Checking the products on the market

Introduction

Until now market surveillance has not been specifically addressed in the technical harmonisation legislation governing the automotive sector and no particular attention has been given so far to the co-ordination of automotive related market surveillance issues between Member States and the Commission services.

The current legal system in place is based on ex-ante compliance verification through type-approval combined with verification of conformity of production and has led to a substantial progress in terms of vehicle safety. However, problems encountered with automotive products placed on the market, such as the problems of non-compliance identified in the tyre and motorcycle sector, demonstrate that there is scope for enhancing the implementation and enforcement of the legislative framework for the free movement of automotive products by focusing on market surveillance.

The Commission identified the re-launch of the single market as one of the strategic initiatives in its work programme for 2010, and the wider implementation of the market surveillance principles of the New Legislative Framework has been singled out as one of the corner stones on which this re-launch of the single market should be based. Within this overall policy context, the Commission envisages reviewing the automotive technical harmonisation legislation in this respect. The main objective of this review is to assess whether and to what extent the market surveillance provisions of the New Legislative Framework can be used to address the specific market failures that may be encountered in the automotive sector.

The New Legislative Framework - adopted in July 2008 - provides inter alia clear legal provisions for the organisation of market surveillance by the Member States and for coordination of market surveillance activities between the Member States and the European Commission.

In addition, some legislative initiatives relating to the automotive regulatory framework have been initiated, with a view to provide a sectoral contribution to the Commission's strategy for the re-launch of the single market.

A first initiative is the proposal for a new framework legislation on L-category vehicles, in which a number of market surveillance provisions of the New Legislative Framework will be included. This proposal has been adopted by the Commission on the 1st of October 2010.

A second sectoral initiative has been scheduled for the Commission's legislative work programme for 2011, and envisages introducing enhanced market surveillance provisions in the framework directive for the type-approval of motor vehicles, and their systems and components.

Options and recommendations

1. There seems to be a need to improve/strengthen the implementation and enforcement of the type-approval legislation through complementing this legislation with market surveillance provisions. This would be in the interest of the EU industry as it will ensure that through the setting up of surveillance procedures products not conforming to requirements and/or dangerous for safety or environment, as well as counterfeits, can be identified, and being prevented to enter the EU market or can be quickly withdrawn when found on the market.

2. After a thorough impact assessment, market surveillance provisions should only be introduced to the extent necessary to complement the existing type-approval legislation for automotive products, whilst at the same time avoiding overlapping requirements as well as disproportionate costs and administrative burdens. The market surveillance provisions should be designed so to ensure that the main responsibilities and obligations of the authority responsible for issuing the type-approval are recognised and strengthened where appropriate to improve confidence that corrective actions are fully implemented.
3. The current legal provisions on the recall of vehicles and automotive products should be enhanced to ensure that they will be properly enforced. In particular, the exchange of data between type-approval authorities on the application of the safeguard clauses set out in the automotive type-approval legislation should be streamlined with the principles of the New Legislative Framework.
4. Consideration should be given to establishing different provisions respectively for components or spare parts subject to type-approval on the one hand and for components or spare parts not being subject to such type-approval on the other hand to take into account the respective differences in stringency and details of the ex-ante control procedures.
5. As, following the General Safety Regulation, EC type-approval of a number of items will be replaced by UNECE type-approvals necessary provisions should be adopted at EC level to ensure that products holding a UNECE approval are actually in compliance with the relevant UNECE requirements. In addition, a parallel process should take place within the UNECE to consider improvement of the current provisions in the 1958 Agreement.
6. Taking into account current Member States' budgetary constraints, public-private cooperation with a view to enhance market surveillance mechanisms should be supported.

Chapter 4: Improving competitiveness on global markets

1. Introduction

The European automotive manufacturers, being global players, are paying increasing attention to trade policy matters, as both multilateral and bilateral trade agreements are determinants of the global competitiveness of this highly export oriented sector. While the European market will not grow substantially in the coming years, the long term global outlook for the automotive industry is promising: world-wide new car sales, for example, are projected to increase by more than 10% in 2020, when compared to 2008, mainly as a result of the motorisation of emerging markets. **It is therefore crucial for the future competitiveness of the EU automotive industry to ensure market access to emerging economies and fair trading conditions**, in order to benefit from such expected growth.

Trade is therefore a key policy area for the competitiveness of the European automotive industry and its sustainable growth. In an economic context where the **motor vehicle markets of the emerging countries** – with China in the first place – **are increasing** at an exponential rate, it is crucial to adopt policies that **facilitate the European producers' access and operations on these markets**, in order to seize the opportunity for higher levels of growth. In addition, a key policy question is to what extent the growth in such emerging markets will be addressed more by European **exports** or by **production established by foreign direct investment into the new markets**. In this respect, trade is a key policy area for helping to keep the manufacturing base in Europe.

As a principle, **EU trade policy** as a major element of the industrial policy, **has to be closely coordinated** with relevant policy areas, in particular **with the new EU industrial policy**.

2. Analysis: How to improve market access in third countries

The following elements have been identified as necessary to improve market access in third countries:

1. Tariff elimination

With the modalities currently negotiated under the Doha Round, emerging economies will still be able to maintain their peak tariffs on automotive products. The automotive industry is clearly opposed to such a possible outcome of the negotiations. In the meantime, bilateral negotiations, namely through **Free Trade Agreements (FTAs)**, can have an added value, insofar as they aim at full tariff elimination, which is more difficult to achieve through multilateral trade negotiations.

2. Removal of Non-Tariff Barriers (NTBs)

NTBs in third countries represent a major trade problem for the EU automotive industry. The maintenance or introduction of new NTBs hamper market access and growth for EU exports of motor vehicles and their components. NTBs include national automotive standards and technical regulations, national and local administrative procedures and restrictions, technical procedures (e.g. factory audits or product testing), marking, customs valuation and related border disruption, IPR violation, import licensing and quotas, restrictions on investments and

public procurement, discriminatory taxes, lack of transparency, restrictions on access to raw materials, divergences from international standards, etc.

With regard to technical NTBs, worldwide acceptance of technical requirements and conformity assessment procedures developed under the **UNECE 1958 Agreement** would improve access of European companies to third countries' market. It would allow manufacturers to design and produce safer and cleaner vehicles for international markets, without wasting resources on diverging legal requirements and administrative procedures. **FTAs** are a good opportunity to invite third countries to accede the 1958 Agreement, and should generally include commitments towards acceptance of UNECE approvals as equivalent to domestic approvals. In addition, NTBs can be removed through strengthening the instruments set up by the Commission under the **Market Access Strategy** and the various **regulatory and industrial dialogues** with main trading partners.

3. Rules of origin and duty drawback

Prohibition of duty drawback for both parties and a retention of thresholds for Rules of Origin guaranteeing a significant value added to be brought in the partner country have been requested by industry as means to ensure fair competition and transparency. Coherence of rules of origin must be preserved to the maximum possible extent between the different FTAs.

4. The UNECE 1958 Agreement

The 1958 UNECE Agreement has proven its effectiveness as the **main international framework for the adoption of technical regulations for vehicles and their components** and for the reciprocal recognition of vehicle approvals granted on the basis of these regulations. The Agreement was revised in 1995 and it is clear that, given the changing shape of global automotive industry and the expanding automotive industry in third countries, a further **revision and updating is timely and appropriate**. As emerging countries are becoming the most important sales markets for automotive products, the recognition and implementation of the 1958 Agreement by them could contribute to preserving and enhancing the competitive position of the European automotive industry on the global market.

In addition, following regulatory developments at EU level, where for a large number of items, EC type-approval directives will be replaced by UNECE regulations, it is important to ensure that the international regulatory framework under the UNECE 1958 Agreement is as rigorous and reliable as that operated at Union level. Without such safeguard, there may be a risk that the EU type-approval system for motor vehicles will no longer ensure the level of safety and environmental protection that is required to meet the legitimate expectation of EU citizens and the Union as a whole.

The World Forum for Harmonisation of Vehicle Regulations (WP.29) agreed in March 2010 on the need to review and update the 1958 Agreement, along with a view to introduce the concept of "**international whole vehicle type-approval (IWVTA)**", based on the successful implementation of this concept in the EU technical harmonisation legislation. This IWVTA concept would offer the benefit to vehicle manufacturers of using a "one-stop shop" type-approval procedure for their motor vehicles, instead of having all the vehicle's systems and components separately approved by each country applying the WVTA, and therefore would considerably simplify the regulatory burden on vehicle manufacturers and enhance the free movement of motor vehicles.

3. Options and recommendations

FTAs

1. EU trade policy should take full account of the importance of maintaining a strong and competitive manufacturing base. It should create new export opportunities for EU vehicles and their components. Import barriers in third countries are - *inter alia*- a factor enticing companies to manufacture locally, and not in the EU. They may therefore distort business decisions.
2. Each trade negotiation with a potentially significant economic, social and environmental impact should be preceded by an assessment of such impact. In addition, where appropriate, an ex-post evaluation of main trade agreements should be also undertaken.
3. FTAs should produce reciprocal benefits and aim at full tariff and NTBs dismantling. Concerning tariffs, concessions should be balanced and bring significant market access in third countries, whilst at the same time preserving the EU market against unfair competition. Industry can accept longer transition periods which, in some cases, might be asymmetrical, insofar as the final target is full tariff dismantling on both sides – “zero for zero”.
4. At multilateral level, international harmonisation within the UNECE framework of the 1958 Agreement would be the best way to address technical NTBs. In the context of FTAs, EU should promote the acceptance by its trading partners of approvals in accordance with UNECE regulations under the 1958 Agreement as equivalent to their own approvals, as this has been agreed to a large extent under the EU-Korea FTA.
5. Trade negotiations should tackle all NTBs, including restrictions to investments and public procurement, infringement of intellectual property rights, restrictions on access to raw material, discriminatory taxation systems, etc.
6. Thresholds for Rules of Origin guaranteeing a significant value added to be brought in the partner country should be retained as a means to ensure fair competition and transparency. For the sake of the same principles, any decision on duty drawback should be based on an economic analysis on the FTA concerned, which takes into account arguments from industry.
7. Stakeholders do not prioritize among the above elements as it is felt that they are complementary and that fair market access can only be achieved by a combination of all of them. The question remains, however, whether, with regard to specific trade negotiations, some sort of prioritization would be desirable in order to make the EU negotiating strategy more effective.
8. To ensure proper enforcement of the commitments undertaken by the parties, FTAs should systematically foresee effective and swift dispute settlement procedures. In addition, where appropriate it should be considered the introduction of bilateral safeguard mechanisms to deal with potential surge of imports which would cause, or threaten to cause, injuries to the EU industry.

9. As far as geographical priorities are concerned, there is a general agreement that bilateral trade negotiations should be conducted with countries whose market is potentially of high importance for the EU economy, including the EU automotive industry. In particular, attention shall focus in the years to come on the emerging economies as the most promising ones, due to both their strong growth performance, and the low rate of vehicles per capita. In this regard, the automobile industry (OEMs) does not support FTAs with Japan or the US, but rather favors enhanced regulatory cooperation with these two countries.

Market Access Strategy and regulatory cooperation

1. Stakeholders consider that the instruments set up under the Market Access Strategy are very useful in so far as they allow sharing information among all partners (Commission, including Commission's delegations in third countries, Member States and industry), establishing concrete priorities and setting up specific strategies for the removal of individual trade irritants. In terms of possible options for the future, big potential is seen for the Market Access Strategy. In particular, enhanced participation of Member States, as well as better coordination with industries' initiatives in third countries should be encouraged. In addition, targeted agendas, more specific follow up by all actors involved and more frequent meetings could help keeping momentum on main trade irritants and thus increasing the effectiveness of EU action.
2. The analysis on the identification and nature of main trade barriers is largely shared by all stakeholders. Regulatory cooperation under the UNECE framework is identified as the best means to address technical NTBs and deal with diverging administrative procedures. Thus, increased bilateral cooperation with countries which are contracting parties to the UNECE 1958 Agreement should be promoted which should also include joint actions to promote accession to the UNECE 1958 Agreement and wider acceptance of UNECE regulations by countries which are not signatories to this Agreement.
3. It is important that whenever the EU has concluded an FTA with a third country, appropriate monitoring is put in place in order to ensure that the contracting parties fully abide with the automotive provisions set up in that FTA; such monitoring should include, for example an analysis of the consequences that any new automotive legislation in the third country may have on EU exports.
4. As far as geographical priorities are concerned, as this is the case with respect to general trade negotiations, there is a general agreement that bilateral regulatory dialogues should be set up and/or enhanced with emerging countries whose market is potentially of high importance for the EU economy.
5. In addition, the momentum should be kept under the Transatlantic Economic Council (TEC) with the aim to strengthen bilateral cooperation with the US on automotive issues. E-mobility and electric vehicles have been identified as areas where EU-US regulatory cooperation could deliver most. It is, however, important to establish a clear link between such bilateral cooperation, standardisation activities and the regulatory activities concerning electric vehicles and their batteries carried out under the UNECE 1998 Agreement. A reinforced regulatory cooperation with Japan is also supported, with a view to eliminate NTBs in the automotive sector.

6. New technologies, and in particular those related to e-mobility, are generally identified as areas where bilateral cooperation with key EU trade partners could be more fruitful. As these are areas where domestic regulations do not exist yet or are at early stage of development, the possibilities of developing common rules are higher than in areas which have been regulated for long time.
7. Industry should be closely involved in the bilateral regulatory dialogues between the Commission and third countries, should be regularly consulted by the Commission in advance of main meetings and should actively contribute to follow up actions. The well established tools of the Market Access Strategy, whereby industry assists the Commission in identifying trade obstacles, analyzing issues at stake, providing technical expertise and following up actions to remove the identified barriers to trade are an example of good cooperation. Joint projects between Commission and industry aimed at enhancing regulatory cooperation with third countries should be promoted.

Reform of the 1958 Agreement

1. There is a need to reform substantially the 1958 Agreement to reflect the increasingly global constituency of Contracting Parties and globalisation of the automotive industry, thus turning it into an extended global system. Reforming the 1958 Agreement should be the short to medium term priority; the possibility of having an effective global system that can also be used by countries applying self-certification should be a long term aim provided it can be achieved without undermining the ability of Governments to enforce standards effectively through type-approval.
2. Further involvement of third countries can be obtained by changing the rules of governance of the Agreement. In the short term, this might be achieved by a better involvement of third countries at early stages of the development process of new UN Regulations and amendments to existing UN Regulations, by introducing greater transparency in managing the Agreement, by engaging potential new contracting parties in participating in and eventually chairing informal and expert groups, by a more inclusive distribution of responsibilities for the development of working documents. In the medium to long term, it may be necessary to envisage modifying the quorum to adapt and/or amend the regulations developed under the 1958 Agreement. The EU should give a clear signal to emerging economies that it is engaged in this modifying process.
3. The Commission, Member States and industry should join efforts in promoting the 1958 Agreement and its regulations, especially in countries with a developing automotive market.
4. The attractiveness of the 1958 Agreement would be increased by the introduction of an international whole vehicle type-approval system. However, the introduction of such system should be gradual and made conditional upon a reform of the Agreement which addresses the following elements: ensure quality assurance of type-approval; improve transparency in the application and interpretation of the Agreement and its regulations; introduce minimum requirements for competence of technical services; enhance procedures for ensuring conformity of production and rules for the withdrawal from the market of non-compliant products, etc.

Chapter 5: Preparing tomorrow's mobility solutions

Europe needs to diversify the energy sources used for transport, in order to meet climate goals and to reduce its dependency on oil. Although there will be oil for several decades to come, **future oil supply will not be able to provide for the additional global demand**, particularly in developing countries and regions, and will become more expensive. This could boost market potential for alternatives, in addition to their desirability for sustainability reasons. That also requires that the alternative fuels, including electricity, hydrogen and gaseous fuels, are distributed to the vehicles through appropriate infrastructure. **Significant investments are needed for that.**

Innovation will be a key factor for maintaining **the competitiveness for the automotive sector and sustainability of the road transport**. Innovation (technological and behavioural) will help to answer both the energy supply and infrastructure challenge, and to meet the ambitious new targets on road safety and reducing congestion and its economic impacts. **Public funding** plays a key role in fostering the innovation in the automotive industry. This has been recognised in past European research programmes and in the preparation of new programmes the allocation of public funding for automotive research has to be carefully considered.

a. Promoting alternative fuels

Analysis

In the next decades, transport faces the **challenges** of progressively decarbonising and ensuring secure long-term sustainable energy supply while, at the same time, maintaining and strengthening its competitiveness. The objectives of transport decarbonisation alongside the decarbonisation of energy in the low-carbon economy in 2050 perspective will translate as of this year and the future years in **key political initiatives** of the European Commission that will later be discussed with the EU Institutions. The greenhouse gases emissions reduction will be sought from all sectors. While decarbonisation of transport is challenging, this does not justify shifting the effort to other sectors, especially that **transport is responsible for 32% EU's final energy use and 21% of GHG emissions**. The decarbonisation of **road transport** while maintaining and strengthening its competitiveness will be a major challenge considering that it represents 80% of the energy used by all transport modes in the EU.

In order to tackle this challenge, the EU has developed the **integrated approach** covering all elements in the emissions chain, including vehicle technology, fuels, consumer information, taxes, infrastructure and overall transport efficiency. **One part of the integrated approach has already been implemented¹⁶** in recent years, in capping vehicles CO₂ emissions with **the Regulation on CO₂ emissions from cars¹⁷, tyres¹⁸ and recently adopted Regulation on CO₂ emissions from light commercial vehicles¹⁹**. In a complementary manner, European

¹⁶ Commission's progress report on implementation of the Community's integrated approach to reduce CO₂ emissions from light-duty vehicles, COM(2010)656 final, 10.11.2010.

¹⁷ Regulation (EC) 2009/443

¹⁸ Regulation (EC) 2009/661 and Regulation (EC)2009/1222

¹⁹ Regulation (EU) No 510/2011

and national research funding have been used. In order to apply the integrated approach in a coherent manner, all its elements need to be fully implemented,

Concerning EU road fuel policy, the following key elements have been established: single market for road fuel, fuels fit for purpose (enabling the correct operation of vehicles and their necessary emission control technologies to meet regulatory requirements), progressive decarbonisation and security of supply. The recently revised **Fuel Quality Directive**²⁰ implements the first three of these objectives through setting mandatory minimum fuel specifications across the EU and requiring fuel suppliers to reduce by 6% (by 2020) the GHG intensity of energy supplied for road transport.

In addition, the “**Biofuels Directive**”²¹ set an indicative target for a minimum proportion of biofuels and other renewable fuels to be placed on the markets in 2010. A subsequent step to the “Biofuels Directive” was taken with the “**Renewable Energy Directive**”²², which establishes a 10% target for each Member State for the share of energy from renewable sources in transport in 2020. The analysis of National Renewable Energy Action Plans (NREAPs) submitted by Member States in June 2010 reveals **that Member States intend to slightly overshoot the 10% target**. To meet the 10% target, they intend that 8.5% comes from the first generation biofuels, 1% from the second generation biofuels and 1% from renewable electricity, most of the latter in railways rather than in cars. One Member State expects some hydrogen from renewables to be used in transport by 2020. As in their national plans, Member States seem to be mostly counting on first generation biofuels, their sustainability is a key issue.

Both the Renewable Energy Directive and the Fuel Quality Directive establish **sustainability criteria** that must be met by biofuels if they are to count towards the targets of those Directives or receive public support. In addition both Directives refer to the impact of **indirect land use change** (ILUC). The Commission is scheduled to complete an impact assessment on this subject.

The **limits on certain biofuel components** contained in the Fuel Quality Directive are established to ensure compliance with health and other environmental objectives. The biofuel growth planned by MS is, in principle, achievable within the Fuel Quality Directive specifications for petrol and diesel²³. The Fuel Quality Directive provides **consumer safeguards** for petrol blended with ethanol and diesel blended with FAME. These safeguards consist of the provision of appropriate information on the biofuel content of petrol and diesel to be ensured by Member States. Furthermore should petrol be provided with a 10% ethanol content, Member States shall require suppliers to also market petrol with a 5% ethanol content²⁴.

In the light of Member States’ NREAPs, possibility of fuels internal market fragmentation is indicated and therefore **continued harmonisation of the fuels across the internal market remains very important** for the benefit of the industry and the consumer who must have

²⁰ Directive 2009/30/EC

²¹ Directive 2003/30/EC, repealed by the Directive 2009/28/EC

²² Directive 2009/28/EC

²³ which are respectively a maximum 10% v/v ethanol content (coupled with a maximum oxygenates content of 3.7% v/v) and a nominal maximum 7% FAME content. Article 4(1) allows MS to go further than this FAME limit – at least up to the legal definition of diesel fuel which is 70% hydrocarbon content.

²⁴ Until at least 2013 as a protection grade that all cars can use.

access to fuels suitable for their vehicles whilst moving across the EU. Timing of the introduction and maximum blending levels should ensure customer acceptance. Several second generation, fully fungible, biofuels offer promising routes in this context. This matter should continue to be kept under review by the Commission.

The Commission continues to analyse issues relating to fuel and has received a number of recent reports of relevance. These include the JEC consortium work²⁵ on meeting the Renewable Energy and Fuel Quality Directive targets and the **Future Transport Fuels report**²⁶, which assesses market potential, technological issues, economic viability, industrial implications, social and demographic aspects, environmental impacts, and safety of the different fuels considered as part of a **long term oil substitution for transport fuels** and recommends actions and policy measures supporting the introduction of alternative fuels. The report also proposes allocation of different fuels per specific use. The report provides input to the ongoing development of the strategic initiative of the Commission on **Clean Transport Systems**, which has the objective of establishing a comprehensive European alternative fuels strategy for all transport. A report on the same topic was also provided to the Commission by the Joint Expert Group Transport & Environment of national experts²⁷

As a general principle, all measures to be taken must be proportional and in line with the principles of cost-effectiveness and better regulation, taking into account the protection of the environment and the competitiveness of the automotive and fuel supply industry.

Options and recommendations

For the period up to 2020

1. With the EU objectives of transport decarbonisation and security of energy supply, alternative fuels will play a more prominent role in the decade to come. **A portfolio of alternative fuels** is necessary to meet the policy objectives. Given the novelty of many fuels, their performance should be kept under continuous review and be fed into the policy making process so that objectives can be adjusted as appropriate. The sustainability and consumer acceptance of these fuels are of key importance.
2. In 2020 perspective, the **dominant powertrain will continue to be the internal combustion engine (ICE)** - increasingly using **alternative fuels** (LPG, methane, biofuels and synthetic fuels as a technology bridge) but **electric vehicles** (including plug-in hybrids) are expected to increasingly penetrate the market. **Hydrogen vehicles** are also expected to enter the market in this time perspective. For the broad policy framework, **Well-to-Wheels analysis** should be considered as the basis for assessing GHG emissions and energy use of combination of fuel and vehicle technologies

For heavy duty vehicles ICEs remains the backbone of possible power train solutions (even beyond 2020). Thus, suitable alternative fuels need to be explored taking into account specific requirements of the commercial vehicle business.

Methodology of life cycle analysis for fuel supply and vehicle production and disposal should also be considered.

²⁵ Please provide reference

²⁶ See: http://ec.europa.eu/transport/urban/vehicles/road/doc/2011_01_25_future_transport_fuels_report.pdf

²⁷ See: http://ec.europa.eu/transport/urban/vehicles/road/clean_transport_systems_en.htm

3. In the light of the NREAPs submitted by Member States under the Renewable Energy Directive, **there could be a challenge to respect the blending limits of the Fuel Quality Directive**. The Commission is keeping this under review. **“Protection grade” fuels are required to be available** and clearly marked at pumps so that consumers have access to blending levels compatible with the vehicle technologies represented in today’s vehicle park. Any future revision of blending limits needs to be assessed in the light of vehicle compatibility, the definition of harmonised standards applied consistently across the EU and be followed by adequate industry lead times.
4. In addition, **fungible (second generation) biofuels, including from waste and other residues, should be promoted** via research and demonstration and market introduction programmes. Sustainability, supply availability and quality of those biofuels must continue to be carefully examined. Member States could play a role in ensuring that second generation bio-fuels contribute more to reaching the 10% target by promoting the necessary investment and research.
5. **Concerning gaseous fuels:**
 - a. **Methane** represents a mature technology available for all types of vehicles and has a high potential already in medium term.
A concrete possibility for further decarbonisation is provided by **injection of (sustainably produced) bio-methane**, which does not necessitate a change in infrastructure.
 - b. **LPG** is currently the most wide-spread alternative fuel and there is infrastructure already established in several Member States. A possibility for further decarbonisation in longer term could be provided by **injection of bio-propane**.

Both gaseous fuels could be considered by Member States to play a more important role improving sustainability of transport also considering their role in diversification of energy supply.

Looking beyond 2020

6. Alternative **long-term options for substituting oil** as energy source for propulsion in transport are electricity, hydrogen, liquid biofuels and bio-methane; methane (liquid and gaseous) as a complementary fuel; and LPG as a possible supplement. In the next decades, **electric vehicles are expected beyond a niche market status** with electric drive train evolution benefiting both electric and hydrogen/fuel cell vehicles. Concerning electricity and hydrogen (in fuel cells) as an energy carrier for road transport, their main advantage currently lies in the **high efficiency of electric motors** whereas the main handicaps are the **low energy density of batteries** as well as the **high price of batteries and fuel cells**, respectively. Moreover, batteries, hydrogen and fuel cell technology could play an important role for the storage of energy and efficient use of energy in vehicles.

While the overall well-to-wheels energy efficiency is not different than the one of comparable conventional ICE vehicle, the **electric vehicle enables diversification of**

primary energy supply and substantial (around 30% at present) saving of CO2 emissions taking into account the current CO₂ intensity of the EU electricity mix²⁸.

7. Knowing that the electricity sector is subject to ETS and that the EU electricity industry is committed to decarbonisation towards 2050, **electro-mobility can offer, in the longer term, a possibility of zero-emission vehicles** (for CO₂, pollutants and noise). **Decarbonisation** of the electricity generation (by renewable and other electricity sources, depending on national policy) and **the roll-out of electric vehicles** are in fact the two activities **complementary in the decarbonisation** effort and should take place in parallel.

Forecasts on the market penetration of electric vehicles vary strongly. Even with the fastest penetration rates projected, **demand for electricity coming from electric vehicles can be met with existing power generation facilities**. However, careful coordination between energy and transport policies is needed to enable the larger deployment of electric vehicles to be accommodated by the distribution grid. It is therefore important that the roll-out of the electric vehicles should be accompanied by the **deployment of smart grids** (enabling cost-effective smart charging solutions and electricity demand management). Smart grids will also increase the benefits of electric vehicles (e.g. storage potential and higher integration of renewable electricity in the grid).

8. It is **too early in technology development to determine “winning” fuels or allocate fuels to specific uses**. In the longer term, this allocation and dominance of certain fuels should be, as far as possible, **established by the market forces** responding to the decarbonisation policy of the EU (reducing CO₂ emissions at lowest cost for consumers in order to guarantee affordable mobility). Inevitably, however, the public authorities’ decisions on infrastructure, taxation and possible incentives will have a powerful influence.

b. Developing alternative fuel infrastructure

Analysis

One of the key policy objectives for the EU is the progressive decarbonisation of the transport sector and, in parallel, the reduction of oil dependency of the whole economy. This will require the adoption of compatible solutions on vehicle and fuel side. **Accelerating the market uptake of alternative transport fuels** is one of the means leading to this objective. The **development of refuelling/recharging infrastructure for alternative fuels and powertrains** - with an established technological viability and a market potential - **can substantially accelerate market uptake**.

The development of infrastructure for alternative fuels has been mainly **led and supported by the Member States** (often deploying State-aid for that purpose) and so far, Member States have taken **very different approaches** with regards to support for infrastructure roll-out. This has produced a **“patchwork” development** of different alternative fuel infrastructure in the different Member States.

²⁸ Future Transport Fuels report

While the EU has a good track record in the promotion of the alternative fuels and alternatively fuelled vehicles, this is not the case concerning the infrastructure for those alternative fuels. The **direct role of the Commission has been so far limited to R&D and pilot projects**. Other tools have only marginally been used for this purpose, such as **TEN-T funding** for the key European networks and the **deployment of Structural and Cohesion Funds**. The result of the current policy on the European level is **fragmented Internal Market for transport** and thus sub-optimal situation for the consumers. The **lack of an EU-wide harmonised alternative fuel infrastructure** clearly hampers the market introduction of vehicles using alternative fuels and **delays their environmental benefits**.

In addition to uneven action of public authorities', problems also exist for **private actors engaging in roll-out of an alternative fuels infrastructure**. Firstly, **initial cost** for alternative fuel infrastructure is high and, due to a lack of critical mass on the consumer side, private actors are reticent to invest into infrastructure. Secondly, **alternative fuels have, in some cases, not yet reached sufficient maturity**, which means that infrastructure established now could only be utilised on economic terms in the future. In some cases, **standards are missing** on the vehicle technology, infrastructure and fuel side or interfaces.

The 2011 Commission's **White Paper on Transport**, currently discussed with the EU Institutions, outlines a short-, medium- and long-term transport action programme. Among others, it defines the overall framework for EU action in the field of transport infrastructure by announcing EU efforts on “a sustainable alternative fuels strategy including also the appropriate infrastructure”. It is now a **clear political priority of the European Commission that the EU should take a leading role by working with Member States at national and regional levels on the gradual roll-out of recharging and refuelling infrastructures for alternative fuels** with an established technological viability and a market potential. The key objectives for this policy are stimulating the market uptake of the alternatively-fuelled vehicles as well as ensuring interoperability, reliability and convenience for the European consumers. Those objectives **justify public intervention on the European level**, which could take form of **standards, financial assistance as well as legislative action – respecting subsidiarity principle**.

Options and recommendations

1. In the medium- and long term, a **basket of alternative fuels** is expected to play a growing role in the road transport, leading to progressive transport decarbonisation. This is why a roll-out of **multiple alternative infrastructures** is necessary in order to create favourable conditions for deployment of vehicles powered by those different alternative fuels. The roll-out of those infrastructures has to be **in step with technological developments (technological viability) and market penetration (economic viability)** of a given fuel. Complete life-cycle performance of different fuels and propulsion systems and the scale effects and systems analysis of infrastructure costs (build-up and energy costs) should also be considered at the same time and kept under review.
2. The roll-out of alternative infrastructure should not develop to the detriment of existing infrastructure as public and businesses must continue to have access to fuels appropriate for the current vehicle fleet for a significant time after new fuels are introduced (e.g. E10 petrol and protection grade of the Fuel Quality Directive). This process must be continued in future years if new fuels are introduced.

3. Whereas alternative fuels should be given **public support** in the development phase and for market introduction, **eventually the market will have to decide whether a given option is economically viable and which options will prevail**. Public policy should aim at supporting alternative fuels uniquely in order to bring them into a position where they can compete on their own merits once the proper market conditions are in place.
4. The roll-out of alternative fuels infrastructure has been so far stimulated on the European level only **indirectly**, by **regulatory measures** for vehicles, fuel suppliers and public procurement instruments²⁹, or via pilot projects. **In the next decade a dedicated public framework and support for roll-out of multiple infrastructures is necessary and justifies policy action** – on the conditions specified below. This could be done via the possible measures of co-financing (or public guarantees) for investments led by the private sector, via direct regulatory measures (e.g. common requirements as to characteristics of filling pumps or requirements of minimum coverage), pilot projects or introduction of standards.
5. At the early stages of market introduction, the EU should take a more active role in the standardisation for ensuring safety and interoperability and co-financing of pilot projects. Public support or requirements of minimum coverage for new infrastructure should in line with the subsidiarity principle and be reserved for **technically mature** fuels, for which there is an outlook for **viable business models of vehicles sales or usage**. Such forms of **public support for infrastructure should intervene only when expected market penetration rates** indicate the potential for a mass market for vehicles using given fuel. Infrastructure development supported/mandated by public authorities, should be an **enabling factor for the market deployment** rather than a stimulus for technology development, the latter more effectively stimulated by the research and pilot projects.
6. A legislative approach aiming at providing **common requirements as to the characteristics of the filling pumps/charging stations is justified and minimum coverage requirements** could also be considered in order to prevent internal market fragmentation and enable free movement of alternatively-fuelled vehicles across Europe.
7. **Local authorities are important actors for the roll-out of infrastructure** and often have **key competences** in this field. They are however confronted with budgetary restraints and uncertainties about technology development. From the regions perspective, **more pilot projects are needed together with the European support for exchange of experiences and best practices as well as cross-border cooperation**. The role of **Structural Funds** and TEN in co-financing fuel infrastructure can be important and further provisions for this should be created. The mobilisation of technical assistance facility such as ELENA could facilitate the preparation of investment programme in electro-mobility infrastructure. The EIB financing is also a potential complementary funding source to accelerate the deployment of this type of infrastructure at local or regional level.

²⁹

Dir 2009/33/EC

8. Concerning **recharging infrastructure for electric vehicles**, the technology development, business models currently established, market penetration rates and successful pilot project indicate electric vehicles are a viable technological and market option. Consequently **public support for infrastructure roll-out would be justified – especially in urban areas**. An, important pre-condition is already in place – the electricity distribution. The key actions are **standardisation of the charging interface (hardware and software)** and **support for installation of the charging spots in homes, offices and, in publicly accessible areas**. The need for fast charging infrastructure currently is not yet clear but market demand needs to be continuously monitored.

To enable a fast development of electric vehicles, a harmonised approach for a charging system must be found across Europe as quickly as possible. The course for a common European infrastructure must be set now. The European Commission has mandated the European standardisation organisations in June 2010 to develop or review existing standards to ensure interoperability in this field. All relevant actors, both from the industry and from the Member States, should support a common solution that best meets requirements regarding safety, robustness, availability and performance.

9. While the fast charging raises questions about **the capacity of electricity distribution network**, normal charging is not posing any problems of this type. The **progressive electrification of vehicle park** as currently forecast **does not entail an excessive demand for electricity**. Development and integration of **smart grids** in the charging infrastructure for electric vehicles will enable not only to better adapt to this new demand but also to use more electricity from renewable resources in recharging of electric vehicles.
10. **Needs for hydrogen refilling infrastructure** should also be considered in the light of technology and market potential. Hydrogen refilling infrastructure will most likely necessitate, more than other alternative fuels, a **high and upfront investment**, which could entail a bigger involvement of public authorities – on the European level. At the same time, the hydrogen vehicles have at present **very low market penetration rates** and public intervention is more likely to cover the pilot projects in the near future. Several aspects should be addressed by standards (e.g. hydrogen quality, fuelling connector, fuelling protocol).
11. **Vehicles using methane represent a mature technology, available for all types of vehicles** and methane pumps (CNG and L-CNG), are already well established in some Member States and benefited from public support already for the past years. The density of the infrastructure is, however, not yet adequate and public support should continue. There are also concerns over homogeneous quality of methane across the EU.

c. Setting the framework for innovation

Introduction

Research, development and innovation (RDI) activities play an increasing role for the competitiveness of the automotive industry. Companies invest large amounts of capital to

bring to the market an increasing **diversity of products**, with ever shorter development and product cycles. In addition, **regulatory requirements and customer expectations** have strengthened the need to develop new technologies and systems, for increasing comfort, environmental and safety performance. These drivers push the EU automotive industry to invest yearly over 25 billion Euros in RDI activities, making the sector the largest private RDI investor in absolute terms. The prospect of **profound technical changes in the coming years** further strengthens the need for these investments.

Public funding for RDI is available at EU, national and sometimes regional level to support the industry in its efforts. The amounts available are **relatively modest in absolute size** compared to the sums invested by the sector as a whole. However, public funding is often used for the early development of innovative technologies and concepts and **plays a key role for the transfer of knowledge** between different actors in the sector. The **Framework Programmes (FP) for R&D represent a major instrument** for RDI funding on EU level. The average annual spending from FP7 on automotive/road transport R&D amounts to around 200 M€.

The latest programmes, up until the current FP7, have led to the emergence of **ever larger projects** (Integrated Projects, Joint Technology Initiatives, Public-Private Partnerships), sometimes with a great number of partners. This development has also led to complaints about increasing **administrative complexity**. It is commonly acknowledged that, in the automotive field, EU funding is currently used mainly for pre-competitive research activities. A strong emphasis has also been put on the **involvement of stakeholders in the programming**, for example through the use of Technology Platforms such as ERTRAC. This development is widely seen as positive.

An important stimulus to the EU automotive R&D was given with the **European Green Cars Initiative (EGCI)**, which was launched as part of the European Economic Recovery Plan³⁰ in the context of the economic crisis. The EGCI established a dedicated financial envelope for FP7 research grants and the EIB loans for automotive research and development of clean technologies as well as smart energy infrastructure. For the FP7 activities, the EGCI proved successful in providing dedicated funding and a close coordination between the research actors on a small number of key priorities, on the basis of a **public-private partnership**. Several substantial RDI initiatives have been launched in recent years by other regions (such as Japan, US, China), aiming to develop industrial leadership on new vehicle technologies, with often a particular focus on electric vehicles.

As a follow-up to FP7, the Commission is currently **preparing the future Horizon 2020 programme** for research and innovation. A public consultation was completed earlier this year and as part of the package for the EU's 2014-2020 Multiannual Financial Framework, the Commission proposed on 29 June a budget for Horizon 2020 of € 80 bn. An all-comprising **Strategic Transport Technology Plan (STTP)** is also currently under development, which is the equivalent to the SET plan for energy and should be adopted by the Commission by the end of 2011. It should cover all steps from research to market introduction of various key technologies. Finally, several **Innovation Partnerships** are under preparation, which should include the whole value chain from research to market introduction.

³⁰ COM(2008) 800 final, 26.11.2008.

Options and recommendations

1. It has to be recognised that **RDI is essential for the competitiveness of the automotive industry**. Public support for these activities plays a key role for pioneering new (often high-risk) technologies and for the cross-fertilisation of knowledge between different actors. Given the importance of the sector for the EU economy, increasing international competition in technological leadership and the high number of automotive companies in the EU, **public support to RDI should continue** to be directed to this industry in order to strengthen its competitiveness and address societal challenges, including environmental sustainability. The budget proposed by the Commission for Horizon 2020 is € 80bn. The proportion of the budget dedicated to automotive R&D should be commensurate with the automotive sector's economic and social importance to the EU.
2. In order to make the best possible use of public money in a time of severe budget constraints, EU and national authorities are strongly encouraged to ensure complementarity of funding programmes for automotive RDI instruments, including by better coordination. The recent joint call of ERANET+ on electromobility provides a good practice in this sense. As mentioned in the recent Communication on Industrial policy, the concept of national industries is out-dated in a globalised 21st century economy and the minimum level of coordination should be the EU level. This certainly is true for the automotive industry as well.
3. In order to make **EU funding through the Framework Programmes** more attractive and thereby more effective by enlarging the pool of projects and partners, **a far-reaching simplification of administrative procedures** is absolutely key, as pointed out in several evaluation reports. Likewise, a room for cooperative projects of smaller size is necessary. This is in particular true for innovative SMEs and other new actors, which can provide valuable input, especially for the innovative concepts and breakthrough technologies needed in the coming years. The current efforts by the Commission are strongly welcomed and further implementation is encouraged. In particular, time-to-grant for FP projects can be reduced significantly by optimising each part of the process. Additionally, while no new instruments seem necessary at this stage, the potential of "fast-track" R&D funding should be explored for the time-critical areas of research.
4. Taking into account the importance of the sector for the EU economy, **provisions should be made in the future Horizon 2020 for research and innovation, to support a broad variety of RDI topics** in the automotive sector and for mobility in general. The planning should build on the successful approach of the recent years, making use of stakeholder involvement through the Technology Platforms, including the public sector and road users. Topics should cover the full range of automotive R&D areas, including:
 - Mobility and transport in urban areas, interurban corridors and interfaces
 - Enhanced ICE powertrains and alternative fuels
 - Electrification of the vehicle
 - Safety applications, such as those in co-operative systems and in advanced technologies for tyres
 - Suitable materials (including substitutes)
 - Ecological and efficient manufacturing, including recycling
 - Any other area where potential for significant improvement can be demonstrated.

5. In addition to the above and given the enormous challenge of identifying and developing alternative or breakthrough technologies that industry is facing for the coming years and the fact that global competitors are investing heavily in this field, there is sufficient justification for preparing the **launch of a specific major initiative on breakthrough technologies** (including, among others, electrification of combustion engines, hybrid and electric vehicles, fuel cells, electrical and electronic systems), taking into account the possible development of the European Innovation Partnerships on Smart Mobility and Smart cities and other relevant initiatives. This also needs to be accompanied by complementary RDI efforts for technologies for low-carbon electricity generation and smart grids. Given the experience with the EGCI, it seems to be that the PPP model would be more suitable than the Joint Technology Initiative model for such an initiative in the automotive sector.

6. In order to increase the effectiveness of EU RDI funding, it is important that EU support is enlarged to **include more RDI activities beyond research**. It is acknowledged that much more is needed to achieve successful innovation in the market place. By supporting also RDI activities of later stages in the innovation cycle, such as product development, production of test fleets, public procurement, standardisation, international harmonisation and demonstration activities, the EU action can be expected to have a more concrete impact on competitiveness. It has to be borne in mind, however, that these activities usually necessitate significant budgets. **The current R&D instruments should be evaluated to see what changes could be made to attract more RDI activities closer to the market**. It should also be investigated to what extent the use of other EU instruments, namely the EIB lending facilities, the CIP and Structural Funds, as well as Member State participation could also provide a contribution for these activities in order to reach an appropriate level of investment.

Chapter 6: Next steps

The CARS 21 process, as re-launched in October 2010, is set to run for a maximum of two years. With the adoption of the Interim Report, the first period is concluded. The group will now enter the second round of discussions, with the aim of preparing the adoption of its Final Report by mid 2012. Several topics covered in the Interim Report will be revisited and deepened. Other topics, not yet covered, will be addressed in order to fulfil the group's Mandate and Terms of Reference.

In particular, the following topics will be addressed in the group's discussions during the second phase:

- Current economic situation and competitive position of EU automotive industry
- International regulatory cooperation
- eCall and other ITS applications
- Electro-mobility
- Future market for biofuels, advanced biofuel and support policies
- CO2 policy on light-duty vehicles:
 - o Review of the Regulation for passenger cars and light commercial vehicles
 - o CO2 labelling of cars
 - o Implementation of the integrated approach
- Road safety
- Vertical agreements

Annex 1: Industrial, social and territorial aspects of competitiveness

The analysis below is the outcome of the Working Group 3. This group set off to agree on lessons to be drawn from the recent crisis, a common diagnosis of the industrial and market situation of the European automotive industry, its competitive position vis-à-vis global competitors and the underlying competitiveness factors. An attention was also paid to territorial aspects of economic situation and competitiveness factors.

I. IMPACT AND LESSONS FROM THE CRISIS, EVALUATION OF RECOVERY PACKAGE, LESSONS FROM THE CRISIS

MARKET, INDUSTRIAL AND EMPLOYMENT SITUATION

The EU automotive industry was severely affected by the financial and economic crisis as of Q3/2008 when passenger car and commercial vehicles **sales started to fall rapidly**. With some six months delay, the collapsing demand triggered **production cut-backs**. With the car sales stabilising in 2009 (only 1.3% decline was registered (y/y)) and commercial vehicles sales declining by 32.4% (y/y)³¹, the **EU production of motor vehicles** in 2009 was 30% lower compared to pre-crisis levels in 2007. In absolute terms, production has dropped to 1997 levels. Despite, however, a massive reduction in production volumes, the **impact of the crisis on production capacity remained limited**. During the crisis, two OEM plants were closed: Antwerp and the Termini Imerese plant, which will cease car production at the end of 2011.

The **powered two-wheelers** market was also severely affected by the crisis, which in 2008-2010 experienced the deepest depression over the last 15 years - losing some 0.25 m units of sales every year. As result some of the smallest European players went into the definitive business closure and several production plants were closed.

For the **automotive suppliers**, difficult situation of the OEMs very quickly translated into collapsing new orders, longer payments deadlines and further pressure on price reduction. The condition of the automotive OEMs also reflected on the credit ratings of the suppliers and, combined with the effects of financial crisis, resulted in a very difficult access to credit and credit insurance. Although not as visible as OEMs and Tier 1 suppliers, **small- and medium sized automotive suppliers in lower tiers of the supply chain were having the biggest difficulties. Heavy losses were recorded and** a number of suppliers became insolvent.

The consequence of production cut-backs and financial losses were the **job cuts**. The employment in the automotive industry in EU-27 at the end of 2009 was **12% lower than at the beginning of 2008**. Significant job losses took place in the supply chain and in the aftermarket, although in the latter the declining trend already continues since 2005³². It is also noted that **a significant share of automotive jobs are “atypical”** (covering temporary contracts) and in the periods marked by a remarkable decrease in production, majority of job losses happens in this category. **Labour market segmentation due to atypical contracts**

³¹ The commercial vehicle segment (vans, trucks, buses), following investment goods pattern, has seen a much sharper and longer downturn as registrations were declining throughout 2009. Commercial vehicles sales reacted very negatively to low trade and manufacturing volumes, low freight prices and high diesel prices.

³² The declining trend in employment but also in the number of dealers and repairers is due to increasing quality of cars and extension of maintenance intervals.

results in difficulties retaining skilled workforce and higher exposition to the consequences of demographic change.

RESPONSE OF PUBLIC AUTHORITIES

Taking into account the importance of the automotive industry for the EU economy, shortly after the onset of the crisis, the **governments across the EU stepped in to support demand with scrapping schemes** of varying duration and amount of the bonus. Those schemes visibly helped to stabilise the car market³³.

Furthermore, several **Member States engineered packages of support measures** including soft loans and state guarantees, labour policy measures (aimed at preserving employment and ensuring that skills were retained) and additional funding enabling to maintain the investment – especially in R&D programmes. In high profile cases, several governments have offered support to designated automotive producers. **A number of regional authorities** also introduced integrated approaches in support of local industry.

The EU has also been quick to react to the crisis of the automotive sector that has been identified as “requiring strong policy response” in the **European Economic Recovery Plan**³⁴. A complete set of measures targeted at the automotive sector – **the Green Cars Initiative** - was presented in the framework of the Plan. This policy response was later detailed in the Commission’s Communication “Responding to the crisis in the European automotive industry”³⁵. The key components of the recovery package were: guidance on national scrapping schemes, the EIB loans, R&D funding, the use of the European Globalisation Adjustment Fund and the Temporary Framework for State-aid (applying horizontally) – majority of these instruments will continue to be applied in the next years³⁶.

THE CARS 21 GROUP DREW THE FOLLOWING CONCLUSIONS:

- The European automotive industry demonstrated the **resilience under the impact of the crisis** as mass insolvencies and bankruptcies were avoided and the core workforce (with permanent contracts) was mostly preserved. The combined national and European-level support measures (**amounting to over €30bn**) considerably **softened the impact of the crisis**, enabled the industry to gain a “breathing space” for reorganisation, **preserved a number of jobs** and enabled the companies to **maintain the investments in green technologies** necessary for preserving the competitive position in times of recovery and increased global competition.
- While significant job losses did take place, **results of collective bargaining** allowed companies to deal with reduction of production levels by **adapting working conditions** differently than through massive redundancies. For the automotive employment, different

³³ Neither commercial vehicles sales or the premium models have benefited from scrapping schemes and suppliers only indirectly, the latter actually struggling to cope with a sudden surge in a demand in the second half of 2009.

³⁴ COM(2008)800 final, 26.11.2008.

³⁵ COM (2009) 104 final, 25.02.2009.

³⁶ The R&D funding will continue till 2013 with the annual envelope of ca. € 100 m. The EIB’s automotive lending will continue beyond the closed ECTF; however, lending volumes are expected to decrease in parallel with market recovery and renewed access to finance for the industry. The EIB will integrate the objectives of the ECTF, which was a temporary crisis measure, under the EIB normal lending policy. The bank will maintain a technology-neutral approach to technologies but will dedicate a special effort to infrastructure and services for electro-mobility.

labour market measures enabled to **keep skilled workers** and thus **preserve the company know-how** as well as ability to quickly react on the demand recovery. Those measures (applied only by some MS) proved to be a clear factor boosting competitiveness of the national automotive industry.

- At the **receiving end** of the recovery package, the **vehicle manufacturers evaluate the recovery package positively** although highlight that the national measures have differed and had therefore varying effects on the OEMs and suppliers. The **supply chain actors** highlight that public support has been provided late and has not been sufficient as suppliers benefited from majority of recovery measures only indirectly (except for major suppliers, which had access to the EIB loans) and were thus more affected by the crisis.
- Some of stakeholders share the conclusions that there has been a missed opportunity as the **crisis did not spur the long outstanding restructuring (notably reduction of overcapacity in some companies)** and anticipation of change in the industry and may therefore result in a **prolonged period of weakness**. The consolidation that happened during crisis was not sufficient and many suppliers and dealers lack scale and/or profitability.
- It is also visible that while the crisis affected in a synchronised manner all EU markets, **not all the Member States and industry actors tackled the crisis in the same manner** and were equally affected. The lower tiers of supply chain were the worst hit alongside the after-market (dealers and repairers). The lasting impact of the crisis also seems to concern the **temporary workplaces** which are in some cases permanently lost.
- The issue of **EIB lending for projects creating new or modernising existing manufacturing capacity for smaller vehicles** within or outside the EU was raised at the CARS 21 meeting. When supporting this type of projects, the EIB carefully considers - as part of the due diligence process - whether the investment is consistent with the objectives set by EU policies, notably regional or external policies. At the same time, the bank assesses – on a case by case basis - the risk that the new capacity might contribute to overcapacity in the respective segments of the EU car market. The call was made for the EIB to consider the potential relocation effect and social consequences in the EU of financing of new capacity.
- While the **overall effect of the scrapping schemes was positive**, the current “pay-back” effect is visible on several markets masking the signs of natural demand recovery. In the most MS, where scrapping schemes were put in place, the **car park has been significantly renewed** (which is an important environmental benefit) and the schemes helped the car manufacturers and suppliers to **maintain production**. On the other hand, with a number of older cars scrapped, the repair sector might be seriously affected in a long term.
- It should be also noted that the **automotive sector crisis was global in its nature but affected the industry in unequal measure and profoundly changed the international competitive environment for the years to come**. The impact of the crisis was indeed bigger in the EU (and in the US) than elsewhere and the situation was further altered by the different recovery measures employed by the EU, US, China, Japan, Russia and Canada. The lasting effect of the crisis will be most likely most pronounced in the EU

since the US government took radical steps in restructuring of the industry. In the EU the remaining overcapacity is likely to hamper competitiveness of the industry in several MS.

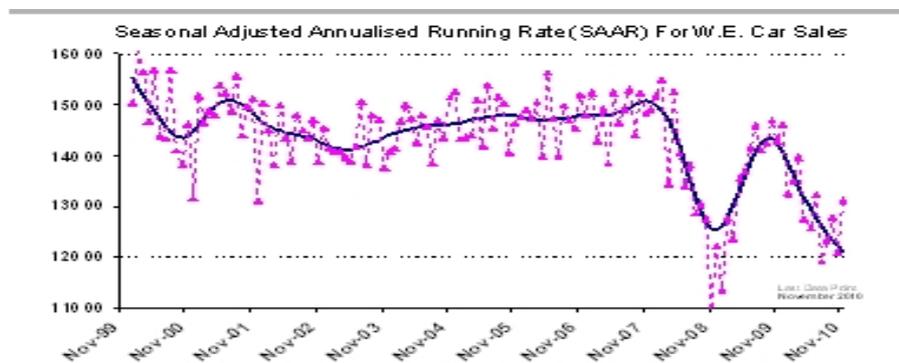
II. CURRENT ECONOMIC SITUATION AND FORECASTS FOR NEXT YEARS

The text below reflects the discussion of the group that were held early 2011.

DOUBLE DIP IN CAR SALES AND RECOVERY IN COMMERCIAL VEHICLES SALES

In the first months of 2010 a vigorous growth in several EU car markets was registered – mostly due to effects of scrapping schemes still in operation. Starting however with the second half of 2010, the European automotive industry has been experiencing a largely anticipated “double dip” in the car sales on the domestic markets.

Western European SAAR



Source: Global Insight

The current slow-down in sales is mostly due to the **withdrawal of scrapping schemes** and macro-economic conditions of sluggish recovery marked by austerity measures, high unemployment and resulting downward pressure on wages. In this context, **the car sales on EU markets declined by 5.5% in 2010** – reaching 13.4 m Units. For **2011, the demand is forecast to remain at similar levels** (around 13.1 m units). Market conditions remain uncertain for 2012 but improving consumer and business confidence should boost the level of car demand. **It is still expected that markets return to pre-crisis level around 2014-2015.**

For commercial vehicles, following six successive quarters of decline, the **demand growth on finally returned into positive territory in Q2 2010**. By the end of 2010, a **slow recovery was registered in the European markets** due to improving macro-economic conditions. The industrial confidence, key for the truck demand is again growing very strongly in Europe. The **full-year sales of trucks (GVW>6t) rose by 7% in 2010 (to 225k units)** and forecasts indicate even stronger recovery from 2011 onwards (over 20% growth (y/y) in 2011). It is, however, unlikely that European sales levels will reach **pre-crisis levels (of 420k units) before 2013-2014.**

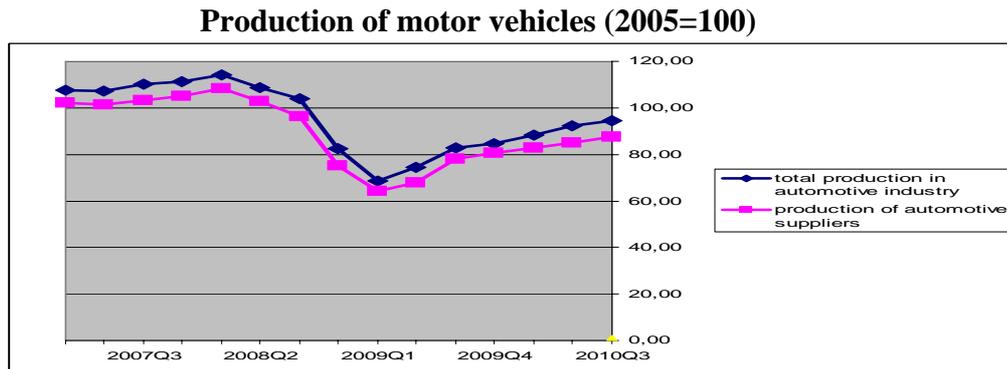
MOTOR VEHICLE PRODUCTION

With the vigorous growth of the production in the early months of 2010 driven by the rebuilding of inventories, **production levels for the whole 2010 grew visibly.**

For passenger cars the production grew by almost 8% (in comparison to depressed 2009 levels) to 15 m units. At the beginning of 2010, the growth was driven by **rebuilding of inventories** in the wake of successful scrapping schemes. In the second half of the year the

momentum was lost and production **recovery depended heavily on the exports outside the EU**. The forecast for the next years indicate small decline in 2011 (3.7% y/y) and slow recovery starting in 2013. The return to pre-crisis levels (17 m units in 2007) is unlikely before 2014 - the underlying reasons being **stagnating European markets** and the fact that **part of demand in 3rd markets will be met by the production established in those regions**.

For **trucks (GVW>6t)**, the growth in assembly was much more vigorous: **53% in 2010** but this in comparison to depressed levels of 2009. The production in 2010 reached 310k units – far from 540k units assembled in 2007. The return to those pre-crisis levels should be however faster than in passenger cars sector and is forecast for 2012-2013.



Source: Eurostat

In 2010, **export opportunities provided a convenient outlet for the production largely exceeding the domestic demand** – even though the European exports declined by 32% in 2009 as a result of recession. The situation varies between MS and companies but **overcapacity is still a problem for some OEMs and many suppliers**.

SITUATION OF SUPPLIERS

Despite improving production levels of the OEMs and robust demand in third markets, not all automotive suppliers experienced an improved situation in 2010³⁷ and consolidation in the automotive supply is anticipated in 2011.

Although some biggest suppliers (mostly supplying high-end vehicle manufacturers) post record 2010 results, hundreds of SMEs and medium-size suppliers went bankrupt and insolvencies are still ongoing. Most suppliers are still hampered by drained financial resources and poor access to finance in a context where massive investment is needed.

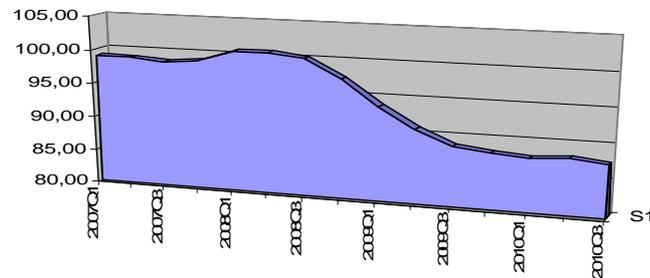
With the production levels recovering and a visible surge in exports, the suppliers can count on an **increase in new orders** but this may not be sufficient to **counterbalance further pressure on price reduction and ever more fierce competition** on the global level. Against this general background, **several specific markets are having high growth potential** and attractive profit margins – notably in relation to electric power-train, battery manufacturing, infotainment, safety technologies as well as entry and volume segments of passenger cars.

EMPLOYMENT

³⁷ European tyre industry in particular is visibly recovering.

Very severe job losses were mostly avoided during the 2008-2009 recession thanks to labour policy measures directly and, indirectly, thanks to other measures supporting demand and supply. In 2010, the **employment in the automotive industry stabilised at the levels roughly 12% lower than before the crisis.**

Employment in the automotive industry (2005 = 100)



Source: Eurostat

Whether these developments in Q4/2010 signal a reversal of the trend in automotive employment remains an open question since some **consolidation in the supply chain still seems overdue, the forecasts for the domestic EU market are fairly pessimistic and the overcapacity problem of some market segments has still not been solved.**

THE CARS 21 GROUP DREW THE FOLLOWING CONCLUSIONS:

- The EU has managed to safeguard the industrial base of the automotive industry through the worst years of the economic downturn but the industry is not yet completely out of crisis. While the macro-economic conditions are visibly improved, risks remain associated with availability and prices of raw materials, industrial energy prices, danger of carbon leakage, availability of skilled workers, financial market uncertainties, increasing regulatory requirements and overall macro-economic conditions.
- In addition, in several Member States, some structural issues remain, notably overcapacity, growing dependence on third country markets, growing cost of production, cost of regulation and technological challenge, which necessitates significant investment: in improvement in ICE technology and in alternative powertrains. While, the automotive industry is traditionally research intensive, the current challenge related to investment is unprecedented.
- In those conditions, it is an essential policy task to strengthen the international competitiveness of the European automotive industry so that it is able to operate in a sustainable way in the EU. Continuously improving framework conditions (notably via smart regulation and focusing on implementation of existing regulations) in the EU is essential. From international perspective, third markets have to be open (notably by including automotive sector in the FTAs) in order to prevent providing grounds for manufacturers to produce abroad, in addition to the fact the EU is already an expensive production location.
- Another key issue from the international perspective is access to raw materials since the EU is a net importer of almost all automotive raw materials and therefore its industry depends on a sufficient supply at competitive costs. The removal of trade distortions should be a priority in raw material policies so that a level-playing field is restored,

planning reliability for industry is increased, and a sufficient supply for regions lacking resources is safeguarded.

- To some extent, the locomotive of the 2010-2011 resurgence of the European automotive industry is **Chinese market**, where mainly high-end vehicles are sold at healthy margins. While the short term benefits are clear, there are doubts over the prospects of the Chinese market in the longer run, as it is felt that future sales may be hampered by possible import restrictions. Whilst the **other BRIC and ASEAN countries** represent quite low volumes today, their market potential for the future is interesting, allowing lowering the dependence on Chinese sales.
- Concerning **overcapacities**, it is very much a **cyclical phenomenon**, following the business cycles of the industry. Two approaches are seen in the European context: certain manufacturers try to follow very closely business cycles with employment adjustments, using labour market as a reservoir for skilled workforce. Others invest into a skilled and experienced workforce retained during adverse business circumstances and considered as an asset in the event of an expected upturn. **No unilateral labour-market approaches must be encouraged but actions should be taken to support anticipatory measures** that help industry to choose quality production, technological innovation and right qualifications and thus support domestic sustainable growth. Some MS are not concerned by the issue of overcapacity and although restructuring has been taking place, it was aimed at strengthening competitiveness, not reduction of capacities.
- In 2010, the employment in the automotive industry seems to be **stabilising** or even in some MS **regaining momentum**. While the temporary positions lost in the crisis will not be recovered in the near future, companies which did retain their workers and engineers throughout the crisis not only maintained their expertise but also have less problems finding additional experts and workers in times of a shortage of qualified personal.
- It should be noted that while some companies make an effort to **turn remaining temporary contracts into permanent ones**, to **improve work conditions and raise salaries** (also in compensation for the difficult conditions during the crisis and in the recognition of the relevant skills and talent shortage in the years to come), other companies renegotiate **working conditions oriented towards cost-reduction only**. Recent developments on collective bargaining may help the industry to adapt to economic cycles.
- **It should be investigated whether in longer-term, the automotive industry might become less labour intensive as the electric vehicle (requiring less parts and therefore less labour input³⁸) increase their market penetration**. The new drive-trains will also require skills not yet available on the labor market. In the perspective of technological change and the expected emergence of new skills needs in the sector, the use of the **New Skills for New Jobs agenda³⁹** should be investigated to foster training and education efforts.

³⁸ Electrification brings with it a reduction of powertrain complexity (from ca. 1400 parts in a conventional driveline to ca. 200 parts in an electric one).

³⁹ COM(2008) 868, 16.12.2008

- The upcoming electrification is also likely to see new entrants in the supply industry and increased competition. Nonetheless some new opportunities will appear for existing suppliers or newcomers e.g. noise generation for EVs, build-up of charging infrastructure, etc. This technological change is rationale for the EU's strategic approach to **anticipation of change and management of the transition**. Examples from past experiences and other industrial sectors should be used to prepare the social and employment effects of this change.

III. COMPETITIVENESS FACTORS

The competitiveness of any industry is **influenced by a host of factors**: a process and product innovation, production costs (including the costs of raw materials), a macro-economic situation and a regulatory framework, the latter particularly relevant for the automotive industry, which is one of the most regulated in the EU and in the third countries. The recent evolutions of these influencing factors have brought about **substantial changes in the competitive position of the European automotive industry**. Several factors have in fact a **game-changing character**: the global economic crisis, the strong growth of the emerging economies, tariff liberalisation in the context of trade negotiations, the EU legislation (e.g. the CO₂ standards and safety requirements) and the introduction of alternative powertrains, notably electric vehicles. In the longer term, the evolving attitude towards mobility of consumers in mature markets and big cities, who become less inclined to purchase their own vehicles, may also indicate a trend of “demotorisation”.

For the European Commission, in order to implement the most efficient policies supporting the competitiveness of the automotive industry, it is of key importance to **identify the current factors of competitiveness**.

THE CARS 21 GROUP IDENTIFIED THE FOLLOWING COMPETITIVENESS FACTORS:

High innovation capacity

The **technology leadership has clearly remained the key competitive factor** of the European industry on the global scale just as the superior performance in design and style. Underpinning this technology leadership, the automotive **R&D expenditure remains very high** (both among other industrial sectors in the EU and in comparison to the global partners). Despite the economic crisis, the EU automotive industry was the biggest investor in R&D in 2009 (€ 28bn/year), followed by Japan and the US. The high investment in the R&D is supported by the spending by public authorities: regions, Member States and the EU. It is however the case that public funding is less intense and operated in a dispersed manner – in comparison to global competitors. Significant improvements in the innovation capacity could be therefore achieved by **stronger efforts and coordination of the public funding for the R&D&I in Europe**.

High investment in R&D&I is a strong contributing factor to the innovation performance of the European automotive companies. The clear areas of competitive advantage are: **safety technology, environmental performance** (strongly linked to the ambitious regulatory framework) as well as **performance in design, style and comfort**. With the environmental and safety performance already strong, the design and style concepts could also be used to influence customers towards more sustainable mobility. Innovation, meaning not only **exploitation of new or improved products and services** but also **optimisation of business**

processes leads to higher value added of the products and - with an unchanged labour input - **improved productivity**.

Strong position in trade and responsiveness for foreign demand

Strong position on the third markets and the trade performance was identified as the second key competitiveness factor of the European automotive industry. From the beginning of the previous decade, the EU manufacturers held dominant world market shares in most automotive market segments. In 2010-2011, **exports to third markets have constituted the important sources of revenue and profit** – against the background of the double dip in sales currently experienced on the EU market and the fact that **several emerging economies have been hardly touched by the crisis** and experience rapid growth in the vehicle demand. Currently, almost all EU manufactures are present in the key automotive market of the **emerging economies** (i.e. BRIC, ASEAN and Mercosur) as well as keeping their market share in the **mature markets** of Japan and the US. The key market segments where the European manufacturers hold the dominant position is the premium cars segment. European manufacturers are also technology leader in the segments of **heavy-duty commercial vehicles** and diesel vehicles. **Balanced trade agreements, regulatory cooperation and tackling the non-tariff trade barriers** will have a vital role in supporting the competitive position of all EU vehicle exports. Impact of increasing imports from 3rd countries to the EU should also be considered.

The EU automotive industry is also increasingly **investing in leveraging knowledge, customer and market information from** abroad by operating on site and thus also cutting transport costs and risks related to exchange rate fluctuations. The **engagement via FDI continues to open new trade opportunities** for vehicles manufacturing as well as intermediate products and parts originating in the European home base. At present, the EU manufacturers hold a strong position in the key BRIC markets, mostly via the direct presence in the region and majority of light vehicles sales on the third markets comes from the production directly established in the region. Forecasts indicate that this trend will only intensify although the development of policies to support local industries might have negative effects. The automotive industry should take the opportunity of new markets to seek access also for small and fuel-efficient vehicles.

Cost control

During the economic crisis, the automotive industry demonstrated **flexibility and capacity for quick and far-reaching cost-cutting exercise and cost control** even at a time when the EU continued introducing new environmental and safety requirements. Combined with the recovery package engineered by the Member States, cost control enabled the industry to get through the worst economic conditions and maintain its position in the increasing tough international competition. While the substantial part of cost control is under the direct responsibility of the industry, the **public policy also plays an important role** by ensuring that the new regulatory requirements do not impose an excessive cost but rather create a stable investment context. The **further development of the smart regulation agenda** for with its main features of the **lead times, long-term targets and careful impact assessments** is therefore of key importance for competitiveness of the European automotive industry.

Social dialogue

The economic crisis demonstrated how important it is for the European automotive industry to use **existing instruments of social dialogue** to adapt employment levels and working conditions to changing market contexts and companies' needs. If **used in a dynamic and**

proactive way and if **adapted to particular circumstances**, those tools become of paramount importance to productivity increases, skills adjustment, business and workforce adaptation to technological and market changes and thus competitiveness of the automotive industry.

Regional clusters

The regional dimension of the automotive industry operations has become increasingly important for competitiveness over the last years. **Regional automotive clusters** composed of companies, research bodies and related services, supported by public authorities have **demonstrated their role in resisting the economic crisis and now play a key role in anticipation of technological change**. The clusters have been traditionally performing research and innovation activities, training, search for new markets and technological intelligence. Recently they also become more active in the **international cooperation and anticipation of technological change**. Importantly, regional clusters are less in danger of delocalisation and therefore have a key role in **maintaining the industrial base** in Europe.

Large home market, key segments and sales value

At the beginning of the previous decade, the EU was clearly **the largest single market for passenger cars**, the close second for light commercial vehicles and third market for heavy trucks. Since then the **EU sales have been stagnating**, while the **attractive growth rates appeared in the emerging economies**. While the EU is still the largest passenger car market, China is the close second (in addition to being already the biggest vehicle market since 2009).

It is important to note that even with current depressed sales levels, the European automotive industry is still well positioned to leverage **economies of scale** on the domestic EU market. Furthermore, the EU market is expected to return to pre-crisis levels in 2014-2015.

The European market in addition to **sales potential of over 17 million units** of light vehicles also features **consumers fairly loyal to European brands** (although less loyal than those in Japan or Korea), which results in relatively **static market shares** and **dominance of the European brands**. In the large volume market, **small and medium energy-efficient and diesel vehicles** are a growing market share, along with the key **premium segment** with high profit margins and **light commercial vehicles**, corresponding to the strengths and specialisation of the European automotive industry.

Strong value chain

The automotive value chain in Europe remains the **key driver of innovation and R&D activities** in the automotive industry and the **excellence in the management and quality** enabled it to weather the worst time of the economic crisis despite dramatically reduced new orders and price pressures from the OEMs. The challenges that remains relate to the questions of how fast the supply chain can recover from the crisis, whether **restructuring** will happen in time and how will it **benefit from opportunities created by the new technologies**, prospects on emerging markets and new legislation. In order to maintain the value chain as the competitive factor, attention has to be paid to innovation processes (especially in alternative materials) and intellectual property protection, continuous improvement and qualification of manpower including polyvalent qualifications (e.g. me-chem- tronic), long-term valorization of EU companies sustainability and corporate social responsibility, protection of FDI in fast growing economies and better market surveillance.

Qualified labour and cost of labour

The automotive industry is not only **labour intensive** but also needs **qualified personnel to produce highly complex, high-performance, quality products**. Today, the automotive products are more complex and sophisticated than ever requiring a strong know-how base – also for technological and organisational innovation. The **availability** of well qualified labour force and the **human capital already employed** remain one of the competitiveness factors.

While currently, the employment figures are depressed following the crisis and the production cuts, there are, however, also first signs of the shortage of skilled workers and engineers in the automotive industry. Perceived **shortage of qualified labour** has been the motivation of several automotive companies to **improve remuneration of workers** and provide them with **extra guarantees of employment** over the next years. In the long term, the lack of qualified workers may have a serious hampering effect on the industry.

At present, the **labour costs** in Europe are no longer compared between the “new” and “old” Member States but rather with those in emerging economies and in the years to come, the global competitiveness of the EU automotive industry will be increasingly challenged by the lower labour (and other) cost locations and dependent on **labour specialisation**, which may become more scarce in Europe. The trends call for **anticipation of change** and **dedicated instruments of the social policy**.

Annex 2: Composition of the High Level Group

Commission (7)

- Antonio Tajani, Chairman, Vice-President of the Commission, Commissioner for Industry & Entrepreneurship
- Siim Kallas, Vice-President of the Commission, Commissioner for Transport
- Neelie Kroes, Vice-President of the Commission, Commissioner for Digital Agenda
- Janez Potočnik, Commissioner for Environment
- Connie Hedegaard, Commissioner for Climate Action
- Karel de Gucht, Commissioner for Trade
- Günther Oettinger, Commissioner for Energy

Member States (9)

- Martin Kocourek, Minister of Industry and Trade, Czech Republic,
- Philipp Rösler, Federal Minister of Economics and Technology, Germany
- Miguel Sebastian Gascon, Minister for Industry, Tourism and Commerce, Spain
- Eric Besson, Minister for Industry, Energy & Digital Economy, France
- Corrado Passera, Minister for Economic Development, Infrastructure and Transport, Italy
- Reinhold Mitterlehner, Federal Minister for Economy, Family and Youth, Austria
- Waldemar Pawlak, Deputy Prime Minister, Minister of Economy, Poland
- Annie Lööf, Minister for Enterprise, Sweden
- Vince Cable, Secretary of State for Business, Innovation and Skills, United Kingdom

Other institutions (2)

- Jean-Yves Le Drian, Member of Committee of Regions, President of Bretagne region
- Virgilio Ranocchiaro, Member of European Economic and Social Committee

Industry - Manufacturers and aftermarket (7)

- Dieter Zetsche, President of the European Automobile Manufacturers Association (ACEA), CEO Daimler
- Olof Persson, President and CEO Volvo Group
- Sergio Marchionne, CEO FIAT SpA and Chairman FIAT Group Automobiles
- Philippe Varin, Chairman of the Board of Management PSA Peugeot Citroen
- Didier Leroy, President of Toyota Motor Europe
- Hendrik von Kuenheim, President of the European Association of Motorcycle Manufacturers (ACEM), General Director BMW Motorrad
- Jean-Paul Bailly, President of the European Council for Motor Trades and Repair (CECRA), chairman Bailly Group

Industry – component and energy suppliers (6)

- Peter Tyroller, President of the European Association of Automotive Suppliers (CLEPA), Board Member Bosch
- Giuliano Zucco, Vice President of CLEPA, CEO DYTECH Group
- Francesco Gori, President of the European Tyre and Rubber Manufacturers Association (ETRMA), CEO Pirelli

- David Prest, President of the Association for Emissions Control by Catalyst (AECC), Managing Director Johnson Matthey
- Josef Wlatl, President of the European Petroleum Industry Association (EUROPIA), former Executive Vice-President Shell
- Fulvio Conti, President of the Union of the Electricity Industry (EURELECTRIC), CEO and General Manager ENEL

Trade Unions, NGOs and Users (5)

- Ulrich Eckelmann, General Secretary of the European Metalworkers' Federation (EMF)
- Ulla Rasmussen, President of the European Federation for Transport and Environment (T&E)
- David Baldock, Executive Director of the Institute for European Environmental Policy (IEEP)
- Jean Todt, President of Fédération Internationale de l'Automobile (FIA)
- Herman De Croo, Chairman of the European Transport Safety Council (ETSC)

Annex 3: Terms of Reference

of the CARS 21 High Level Group on the Competitiveness and Sustainable Growth of the Automotive Industry in the EU (as adopted on 10 November 2010)

Context

The CARS 21 High Level Group was originally launched in 2005 and played a major role in defining European policy and legislation on the automotive sector in view of strengthening the industry's competitiveness. Its re-launch was one of the actions listed in the Communication on "A European strategy on clean and energy efficient vehicles"⁴⁰, adopted by the Commission on 28 April 2010. Since then, both Parliament and Council have reacted favourably to the Communication in general and to the re-launch of CARS 21 in particular. The group is formally established by Commission Decision of 14 October 2010⁴¹.

Rationale

The continuous evolution of the global automotive industry has recently accelerated its pace. In the coming decade, important changes are expected in several areas that are likely to profoundly reshape the industry and its markets worldwide. Within the next 10 years, sizeable efforts will need to be made with the further development of alternatives for fossil-based motor fuels. Moreover, while the European market is relatively mature, automotive markets outside the OECD countries have grown very strongly in recent years and this development will continue, underlining the major economic importance of these markets for the sector. To meet long term greenhouse gas reduction and air quality objectives, the internal combustion engine are further improved and new and cleaner vehicle technologies, such as electric and hybrid propulsion, are being introduced. They can be expected to make significant inroads into the global vehicle market by 2020. This will require the industrial structure, transport systems and infrastructure to be transformed to adapt to new market situations and technologies.

The future performance of European industry, and its impact on the economy, jobs and society, will depend on the choices that European businesses, consumers and public authorities will make, faced with the changing environment. For that reason, an intensive dialogue, joint analysis and precise understanding of key issues, among decision makers in the private as well as the public sector, is paramount and the underlying objective for the re-launch of the CARS 21 High Level Group. The Group should give impetus to future directions of policy making in order to create a sustainable foundation for the European vehicle industry and for the use of vehicles in our society.

Mission statement

In the framework of the Europe 2020 strategy⁴² and notably its flagships on resource efficiency and industrial policy⁴³, and on the basis of the above-mentioned EU strategy for clean and energy efficient vehicles, the group shall develop a realistic vision for **"a competitive EU automotive industry and sustainable mobility and growth in 2020 and beyond"**.

⁴⁰ COM(2010)186 final, 28.04.2010

⁴¹ OJ C 280, 16.10.2010, pp. 32-34

⁴² COM(2010) 2020

⁴³ COM(2010) 614

Based on this vision, the group shall sketch out the recommended actions and policies to realise the vision, taking into account the likely changes in technologies and framework conditions.

A particular focus will be to support and advise the Commission in the development of an effective European industrial policy for the automotive sector and the implementation of the EU's strategy for clean and energy efficient vehicles. The HLG group shall develop proposals to further the most effective **development and take up** of clean and energy efficient vehicles in Europe and beyond, covering both supply and demand measures. The group shall identify main barriers for the development and uptake of clean and energy efficient vehicles and propose ways to overcome them.

Working method

- The group shall bring together the most relevant interest groups and experts necessary for carrying out its mission.
- The group shall analyse different key policy areas, investigate several policy actions and aim to build consensus amongst stakeholders around the necessary present and future policies in the automotive sector.
- The group shall take into account the outputs of other Commission expert groups, according to the topics discussed.
- The group shall adapt its working methods in order to ensure that it contributes in those areas where it adds most value. The group can for instance decide that other working groups than those outlined below should be set up.

Deliverables

The group is expected to deliver a **Final Report** that will present the vision for a 2020 and beyond perspective. This would *inter alia* include assessments of the appropriate types of products, technologies, industrial structure, business models, energy types and refuelling infrastructure, role in global markets and international benchmarks. Moreover, the report will propose a list of policy recommendations for consideration at the EU and international level, national or regional level, by authorities, private sector or civil society organisations.

The recommendations shall refer to relevant policies in the following fields: the internal market, smart regulation, climate change and environmental protection, transport and mobility, road safety, competitiveness, research and innovation, standardisation and other regulatory issues, trade, skills, energy and other infrastructures, possibly consumer initiatives, public procurement, car taxation and other economic incentives as outlined in the clean and energy efficient vehicles strategy and develop such initiatives further.

The group will also have the possibility to adopt and issue statements, progress reports or any other intermediate publications that are deemed necessary. The publication of an Interim Report with recommendations on priority issues in summer 2011 will be aimed for.

Composition of the high-level group

The Communication mentions specifically that the group needs "extended stakeholder involvement to in particular address the barriers to market uptake of alternative technologies". The nature of these technologies goes beyond the automotive sector and policy, as elements such as infrastructure and energy supply form an important part of the puzzle.

The following stakeholders are participating in the group:

- Several Member States

- European Parliament
- Committee of the Regions and Economic and Social Committee
- Trade Unions
- Non-Governmental Organisations in the field of environment and road safety
- Distribution and aftermarket sector
- Consumers/Users/Car buyers
- Manufacturers of different types of vehicles (cars, trucks, buses, two-wheelers)
- Suppliers of vehicle components and energy suppliers

The Commissioners responsible for relevant policy areas will attend the meetings of the group.

Operational structure

The CARS 21 process will be composed of a **three-level structure**:

- **the High Level Group** (Ministers, CEOs and Presidents of associations, etc.) lending political visibility and authority
- **the “Sherpa” group** responsible for preparing the input to the HLG and for steering the working groups.
- the **Working groups**, responsible for more technical aspects according to specific topics.

The high level group will appoint a group of sherpas to carry out more operational work. The exact mandate and composition of working groups would need to be adopted by the Sherpa group. The working groups will report to the Sherpa group, which would be responsible for consolidating the workstreams and preparing the input for the high-level group. Working groups will be set-up to address the following themes:

- Innovation, infrastructure energy supply and use
- Trade and international harmonisation
- Industrial, social and territorial aspects of competitiveness
- Internal market, emissions and CO₂ policies

The participants in the Working Group meetings are either representatives from organisations present in the High Level Group or additional participants following specific issues and/or representing specific expertise (participating on a permanent or an ad-hoc basis), nominated by the Sherpa Group or the Commission.

The Commission services⁴⁴ will provide the **secretarial support**. The policy content will be prepared by the relevant Commission services.

Indicative timetable

- Informal and preparatory Sherpa meeting: 19 October 2010
- Official launch of CARS 21 High Level Group meeting: 10 November 2010
- Sherpa meeting : December 2010
- WG meetings: starting as of January 2011, in between 3 and 6 meetings in 2011
- Two High Level Group meetings (mid and end 2011) and four Sherpa meetings in 2011
- Two Sherpa meetings for finalisation in 2012
- Final High Level Group meeting and adoption of report in spring 2012

⁴⁴ Contact point is DG ENTR – Unit D5, e-mail entr-cars21@ec.europa.eu

The Commission can extend the duration of the group beyond the initial period of 2 years, if this is considered appropriate.