EUROPEAN AUTOMOBILE INDUSTRY REPORT

07/08

ACEA

EUROPEAN AUTOMOBILE MANUFACTURERS ASSOCIATION

THE EUROPEAN AUTOMOBILE INDUSTRY
BACKBONE OF THE EUROPEAN ECONOMY

- 13 major international players: BMW, DAF, DaimlerChrysler, FIAT, Ford of Europe, General Motors Europe, MAN Nutzfahrzeuge, Porsche, PSA Peugeot Citroën, Renault, Scania, Volkswagen and Volvo
- Source of mobility, the key to economic, social and cultural activity
- More than 12 million EU families depend on automobile employment, with 2.3 million direct jobs and another 10 million in related sectors
- Production of 18.6 million passenger cars, trucks and buses per year, 27% of worldwide vehicle manufacturing
- One third of all passenger cars are manufactured in the EU
- Technology edge with yearly investments of € 20 billion in R&D, 4% of turnover
- Leading EU export sector with a € 41.6 billion net trade contribution
- Vehicle taxes deliver € 360 billion in government revenues yearly, 3.5% of European GDP

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FOREWORD

José Manuel Barroso
European Commission President

"The European automotive industry remains one of the most important employers on the continent"

Life in Europe would be difficult to imagine without the mobility provided by the vehicle industry and its products: 85% of passenger transport and 70% of goods transport on our continent are carried by road.
From the economic perspective, the European automotive industry is a powerhouse at the centre of the global marketplace. In addition to the automotive value chain's sizeable contribution to European GDP, this industry remains one of the most important employers on the continent with 2.2 million people directly employed and another 10 million in related industries and services. The sector also is the largest private R&D investor in Europe. Most of the value-added in vehicle production comes from automotive manufacturers and suppliers with a combined turnover of around € 700 billion, while the retail and repairs sector comprises another 350,000 small and medium-sized enterprises with a turnover of € 520 billion spread across a wide range of regions in Europe.

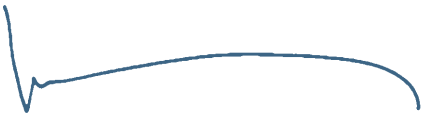
The European Automobile Manufacturers Association performs a key role in representing this sector and I am delighted to have this opportunity to set out the role of the European Commission in supporting a vibrant automobile industry in Europe.

The automotive industry is very well aware of the trends which are reshaping the world of the early 21st century. Rapid globalisation has meant that it is facing near-universal competition in virtually all markets, while the ongoing technological revolution is transforming this industry into an increasingly knowledge-based one. The increased need to protect the natural environment, safeguard human health and learn to cope with higher energy prices has created additional challenges for vehicle producers. I am glad to note that despite a tough competitive environment, the European car industry is adjusting to change and has successfully retained its global competitiveness.
What can public policy do to help? The strategies pursued by individual companies largely determine the industry's ability to face the changing world. The role of public policy is to create an environment in which industry can thrive. Public policy also has to address concerns of general interest: such as protecting the health and safety of citizens, and safeguarding the natural environment. I believe that our policy should be predictable and consistent – but it also has to evolve, to reflect the increasingly complex demands of society and anticipating trends in world markets.

The 'Better Regulation' initiative of the Commission underlines our belief that co-ordinated and predictable policy frameworks need a policy-making culture grounded in continuous dialogue and consultation. In order to develop such a framework for the automotive industry, the Commission initiated a comprehensive regulatory and policy review by setting up the CARS 21 High-level Group, which brought together all the main automotive stakeholders to advise the Commission on future policy options. I would like to thank ACEA and its members for their active participation in CARS 21. The Commission issued its response to the CARS 21 final report in February of this year. Not only do I hope that the results will boost the automotive industry's competitiveness, but also that this marks the start of a regularly updated policy process developed in close co-operation with all stakeholders.

The European Union is celebrating its 50th anniversary this year. Never has Europe been as peaceful and prosperous. The automotive industry has been among the many who have benefited from our policies on the internal market and enlargement. We cannot, however, afford to rest on our laurels: Europe has to be forward-looking and evolve continuously. It is for this reason that this Commission has put growth and jobs - including long-term environmental sustainability and secure and competitive energy – at the heart of its agenda. I believe that our ability to address these three priorities in a comprehensive and balanced manner will be crucial for Europe's well-being in the 21st century.

It will be difficult for us to achieve our aims in any of these areas without the active participation of the automotive industry. I have already referred to the major contribution which the vehicle industry plays in ensuring growth and jobs in Europe. Furthermore, vehicles and mobility are deeply embedded in the fabric of European life: so the automotive industry is one of the keys to enabling the achievement of our broader societal goals concerning the environment, energy security and safety in particular. The automotive industry has been instrumental to the significant progress we have made already and I am sure that once again it will rise to the challenge.



José Manuel Barroso
European Commission President

INTRODUCTION

Sergio Marchionne
President of ACEA & CEO of FIAT

Ivan Hodac
Secretary General of ACEA

"A prerequisite for improving the global competitiveness of the European automotive industry is a transparent and balanced regulatory framework"

The automotive industry is a key element in the fabric of the European economy and society. Our industry contributes enormously to the health and wealth of the EU, and it is vital for the future of its near 500 million inhabitants that the sector retains its competitive and innovative edge. Today's market place is fiercely competitive and this entails that the automobile industry must retain technological leadership and open-mindedness. Society needs to nurture the sector's many strengths to the greatest extent possible. Only then can the automobile industry truly remain the "engine of Europe".

This year, the EU is celebrating the 50th birthday of the Treaty of Rome. The founding of the Internal Market is a cornerstone of Europe's prosperity and has affected citizens and businesses alike. The Internal Market has opened up greater opportunities for producers and consumers, fostered economic integration between European regions and ensured higher levels of growth and cohesion. Having said that, it is important to realise that we still do not have a fully functioning Internal Market for motor vehicles. This can be seen for example in Member States applying unalike taxation rates or enforcing EU regulation such as the Directive for End-of-Life vehicles in different ways. This has to change!

Another memorable event in the year 2007 is the addition of two new Member States to the EU, Romania and Bulgaria. It is fair to say that the automotive industry has witnessed the transition of the Central and Eastern European Countries from very close by. Today, automotive production in these countries amounts to 13% of overall vehicle manufacturing in the EU and that share is still growing. Almost 18% of automotive-related employment in the EU is located in the new Member States. The automobile industry is as essential for the enlarged Europe as it was and is for the EU-15.

Need for a better regulatory framework

It is crucial that the EU institutions establish a regulatory framework in which the automotive industry can continue to

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"The CO_2 dossier will prove to be key for many years to come"

develop and fulfil its economic and societal role. The automotive industry is one of the most regulated sectors in Europe, due to the technological complexity of the automotive product itself and to the implications of the use of motor vehicles with regard to the environment, safety and mobility. Today, there are roughly 80 European directives and 115 UN/ECE pieces of legislation that concern motor vehicles. This is a burden that should not be underestimated. As a consequence, we are often so tangled down in regulatory and technical issues that we forget to communicate our achievements and the many challenges the automotive industry has taken up.

With regard to road safety, for example, the number of traffic casualties has been halved in the last two decades, while road transport has tripled. This dramatic progress is mainly due to improved vehicle safety. The introduction of seatbelts, airbags and ABS alone has reduced by 80 % the number of fatal or serious injuries to vehicle passengers; and all this with car manufacturers' efforts beyond the legislative requirements. Clearly, better road safety is a never-ending battle, and the 40,000 casualties occurring each year on European roads are still an unbearable toll for our societies, but the automotive industry cannot be considered the only actor in this area. If we want to win the challenge, we need an "integrated approach" that also addresses infrastructure flaws, enforcement of traffic law and driver behaviour.

Our environmental track record is impressive

Our environmental track record is equally impressive. The European automobile manufacturers have drastically reduced the impact of their products on the environment. Noise levels of motor vehicles have been reduced by 90 % since 1970. And staying with the 1970s for another moment: one average car built back then produced as many pollutant elements, like NOx and other toxics, as one hundred cars manufactured today. It is fair to say that the problem of pollution has been solved in modern vehicles, but that this will only be visible in 10 years from now when the various generations of older vehicles have started to disappear from our roads. We have also made tremendous progress in the recycling of our products. And we have significantly improved our industrial processes, in terms of waste management and savings of water and energy.

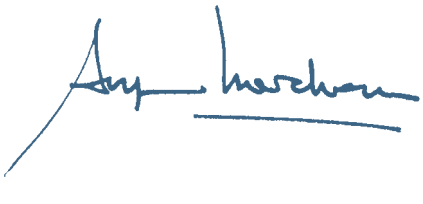
The automobile manufacturers want to be clear about an issue on everybody's mind: CO_2 emissions and their relation to climate change. Our industry is fully aware of the challenges posed. We have signed the 1998 Commitment to reduce CO_2 emissions from cars, we have delivered CO_2 reductions and we will continue to deliver. We fully support the EU objective of reducing CO_2 emissions to an average of 120 g/km by 2012. Crucial for the future of the industry, however, is to implement an integrated approach to achieve this ambitious target, combining vehicle technology, alternative fuels, infra-

structure adjustments, influencing driving style and CO_2-related taxation.

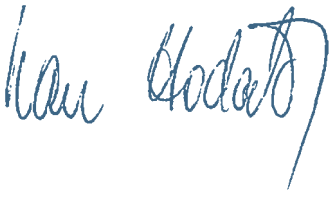
Vehicle technology cannot be only focus point

Vehicle technology alone will not solve the problem, and should therefore not be the only focus point of future policy framework. CO_2 emissions from new cars have decreased significantly. The majority of emissions are caused mainly by an aging car fleet on Europe's roads, by growing congestion, by a lack of traffic management and by a rise in mileage. It is very important that governments and the public at large understand these opposite developments and design a policy that addresses the true challenge, maximising results in the most cost-effective way. The main focus of this ACEA Industry Report is dedicated to precisely this topic, along with competitiveness and "CARS 21".

We live in a world of many challenges. The European automobile manufacturers are responsible companies with a long-standing tradition of innovation and sustainability in social and environmental terms. Our industry wants to play its full part in society and contribute to future prosperity. The EU has a fundamental interest to nurture this important sector. Not least in this respect, the CO_2 dossier will prove to be key for many years to come.



Sergio Marchionne
President of ACEA & CEO of FIAT



Ivan Hodac
Secretary General of ACEA

ACEA


Apple Green (Mica) 15U
Denim Blue (Mica) 31U
HIGHWAY Y
Electric Yellow (Metallic) 16U
Jazz Blue (Solid) 19U
Sports Blue (Mica) 33U
KANDINSK
Teal Blue (Metallic) 22M
MINT GREEN (METALLIC) 35U
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CO_2 EMISSIONS

Combining efforts to achieve larger, cost-effective reductions

The European automobile manufacturers support the EU objective of further reducing average car emissions to 120 grammes carbon dioxide (CO_2) per kilometre by 2012. Crucial for the future of the industry, however, is how this target is achieved. Controlling climate change is a complex and global challenge and needs concerted efforts embracing all areas of society. Placing the burden mainly on the car industry, as the European Commission has proposed in its February 2007 CO_2 Communication, is the most expensive strategy. It will lead to a diminished level of vehicle manufacturing in Europe with, as yet, unclear economic consequences. The appropriate solution to reduce CO_2 emissions from cars and to safeguard jobs and investments in Europe is an integrated approach, combining further improvements in vehicle technology, an increased use of alternative fuels, improved infrastructure and traffic management, a more economic driving style and harmonised CO_2-related taxation. This requires a partnership involving the automotive industry, the fuel industry, policy makers at all EU government levels and consumers. A vehicle-related target of 130 grammes CO_2 per kilometre by 2012, as proposed by the Commission, is not feasible. The car industry, often called "the engine of Europe", needs a sound policy framework as a basis for investment decisions and long-term planning security. The Commission's proposal is not in line with its own "better regulation" agenda, the "Lisbon" agenda and with "CARS 21", the automotive regulatory project aimed at improving the industry's competitive strength.

Excessive focus on vehicle technology

The European vehicle industry is committed to reducing CO_2 emissions from cars and signed a voluntary agreement in 1998 to contribute to the EU Kyoto protocol objectives. This agreement has, through improved vehicle technology, reduced CO_2 emissions from cars by an average 13% (EU monitoring report 2004). The European car manufacturers are thus contributing significantly to reducing CO_2 emissions and they will continue their efforts. It is crucial, however, to select the most cost-effective approach to reducing CO_2 emissions from cars.

The February 2007 strategy proposal from the European Commission on CO_2 emission reductions from cars does not meet this demand. The Commission considers it a self-evident truth that cuts in CO_2 emissions from cars will have to be delivered mainly through vehicle technology. This one-sided approach could have severe consequences for European manufacturing and employment levels in the EU. Reducing CO_2 emissions through vehicle technology is up to ten times more expensive than similarly, or even more, effective measures such as the increasing use of biofuels, better infrastructure and traffic management, and adopting an economic driving style or "eco-driving" *(see text box on costs)*.

The European vehicle manufacturers cannot and do not want to carry a burden that is neither balanced nor necessary. A strategy that focuses excessively on vehicle technology, with a target of 130 grammes CO_2/km by 2012 as the Commission proposes, will lead to a price increase per car of up to € 2500 on average. It will be practically impossible to pass these significant additional costs on wholly to the consumer, because of fierce competition within Europe and abroad. European manufacturers will be forced to look for cost cuttings in their production and this could lead to a relocation of manufacturing outside Europe and a loss of jobs in the EU. For many consumers, cars could become unaffordable. The resulting side effect – an even slower renewal of the existing car fleet on Europe's roads - is detrimental to improving the environmental performance of road transport.

What is CO_2?

CO_2 is a naturally occurring gas present in the earth's atmosphere. It is colourless, inert and slightly acid. CO_2 emissions occur naturally in the sea and landmass - and very visibly from volcanoes and forest fires. CO_2 is also a result of the burning of fossil fuels in industrial processes, energy plants, households and in combustion engines such as those presently used in cars. On a global scale, passenger cars emit 5% of man-made CO_2, according to figures from the European Commission and the IPCC. Within that global share, the European passenger car fleet accounts for 2%.

Are CO_2 reductions from cars and fuel economy two of a kind?

Cars emit CO_2 when burning fossil fuels, such as petrol, diesel or gas. This means the less fossil fuel a car uses, the less CO_2 is produced. Hence, fossil fuel economy is a major key to reducing CO_2 emissions from cars. Fuel-economy, or fuel-efficiency when calculated in kilometres per litre, can be achieved in several ways.

– Technology-linked solutions, such as improved engine efficiency, vehicle weight reduction or better aerodynamics, and, on the longer term, engines on non-fossil fuels like hydrogen;

– Fuel-based solutions, using low or even zero carbon fuels;

– Infrastructure-related solutions, ensuring traffic flows and avoiding congestion;

– Car use-related solutions, concerning means of transport, choice of car, "eco-driving" or driving style, and the amount of kilometres driven.

Integrated approach to CO_2

The European car manufacturers advocate a cost-effective approach to cutting CO_2 emissions from cars, combining further vehicle technology improvements with efforts from all other relevant parties - the fuel industry, policy makers and car users – and involving CO_2-related taxation to influence consumer demand for CO_2-efficient solutions *(see also text box on the elements of an "integrated approach").*

In such a holistic, comprehensive approach, measures will not only affect new cars, but also existing cars on the roads or, in other words, traffic as a whole. That is essential, as CO_2 emissions from new cars have decreased significantly and the majority of emissions are caused mainly by an aging car fleet on Europe's roads, growing congestion, increasingly dense traffic, a lack of traffic management and a rise in mileage.

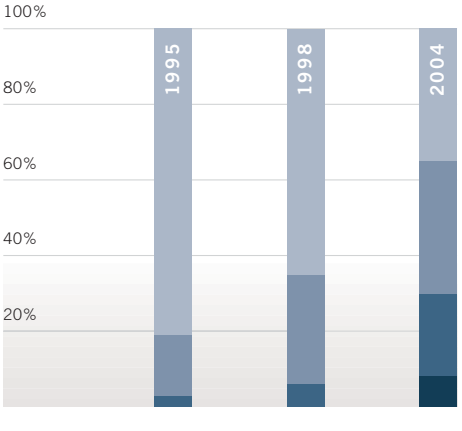
Sharing efforts and responsibilities will result in larger, cost-effective CO_2 emission reductions from road transport. This has been recognised by several bodies, including the CARS 21 group*, the 2006 EU Energy Efficiency Action Plan and the European Conference of Transport Ministers from January 2007. Meeting environmental and economic interests will keep cars affordable and safeguard jobs and production in Europe, which is key to the future health and wealth of the EU.

Learn from experience

Reducing CO_2 emissions is a complex challenge. It is important to learn from previous experiences, in particular the 1998 ACEA Commitment on reducing CO2 emissions from cars. Between 1995 and 2004, this Commitment *(see also "what does the 1998 Commitment say?")* has decreased emissions from new cars by 13% through vehicle technology only. But these results could have been larger, had there not been the counter-productive effect of competing EU regulations, a weak demand for fuel-efficiency and consumer preference for larger and safer cars.

Cars have become heavier and larger within their own different model segments, due to regulations on safety and air quality, and due to consumer preferences. Buyers have opted for larger and safer cars, due to factors such as an increasingly dense traffic, changes in lifestyle, demographic trends and driver physique. Further, a majority of consumers do not (yet) want to pay for fuel-efficient solutions: they have not defined this a priority. Several highly CO_2-efficient cars, brought

% of new registrations



CO_2 Emissions

- =/> 160 gco_2/km
- < 160 gCO_2/km
- < 140 gCO_2/km
- < 120 gCO_2/km

Newly registered cars averaged CO_2 emissions of 161 g/km in 2004, down from 185 g/km in 1995 (the reference year), a reduction of 13%;
The volume and share of cars emitting 140 gCO_2/km or less (petrol + diesel) totalled 29.6 % of new registrations, up from 2.6% in 1995.
Sales of models emitting less than 120 g/km came close to 1 million cars, or about 8%;
As a proportion of total ACEA registrations, the percentage of cars with CO_2 emissions of more than 160 gCO_2/km decreased to 36.4 from 80.8 in 1995.

into the market in line with the 1998 Commitment, met with very low demand despite considerable marketing efforts. Various CO_2-efficient applications, such as the stop-and-go feature, are confronted with hesitance.

Together with EU regulations, in particular on safety and air quality, this has had a huge impact on cars: within car segments, models have increased by an average 16% in weight. Cars are an additional 10 cm longer, as a consequence of pedestrian safety measures. For any further CO_2 reductions in the future, the results of the current Commitment need to be fully analysed and the counter-productive effects need to be taken into account. This was agreed in the 1998 Commitment and signed by both the industry and the European Commission.

"Failed to act"

It is often stated that the automotive industry "failed to act in the past". This is not supported by facts. The industry invests € 20 billion (4% of turnover) per year in research and development, a great part of which goes to improved fuel-efficiency and other technologies that enhance the environmental performance of cars. Over the last decade, ACEA members implemented more than 50 new, CO_2-cutting technologies into their vehicles.

The European car manufacturers are world leaders in many fields of expertise, based on a long tradition of innovation and fulfilling consumer demand. The industry continuously strives to remain at the top. Preserving the environment has a high priority, as have improving road safety and other important areas of development. That

What does the "1998 Commitment" say?

The 1998 Commitment was the outcome of concise, intensive negotiations between the automotive industry's trade association, ACEA, and the European Commission's directorate-general Environment. Its most highlighted feature is the agreement to reduce CO_2 emissions from passenger cars to 140 gCO_2/km by 2008 through vehicle technology mainly.

Less known: Much less known is that the Commitment is part of a three-pillar strategy of the EU Community, with the longer-term goal of reducing car CO_2 emissions to 120 gCO_2/km by 2012, by means of a more comprehensive package of measures besides vehicle technology.

Other pillars: The other two pillars were meant to shape consumer demand through taxation measures and a labelling scheme informing consumers. As the European Commission has now repeatedly acknowledged, only the first pillar – the 1998 Commitment – has yielded real results, the other two have not. Regrettably, this has negatively impacted the achievements of the car industry.

1998 Commitment objectives: The voluntary agreement involves a number of objectives, notably to collectively achieve, "mainly by technological developments and market changes linked to these developments", a CO_2 emission target of 140 g/km by 2008 for the average of new cars sold in the EU. Other objectives were the launch of new car models emitting 120 g/km or less by 2000, achieving an intermediate CO_2 emission target of 165-170 g/km CO_2 by 2003, the review of the potential for additional CO_2 reductions until 2012, and setting up a joint monitoring process with the Commission.

1998 Commitment conditions: The 1998 agreement stipulates explicitly that external factors, such as regulation, market changes and the economic environment may influence the progress in CO_2 reduction and states that these factors should be taken into account when assessing the Commitment and the performance of the car industry. This has not been the case up till now.

What are the costs of CO_2 reductions to the industry and society?

Within the European Climate Change Programme, the independent scientific institute TNO assessed in 2006 the costs and CO_2 reduction potential of different measures, including vehicle technology, biofuels and infrastructure. The costs of moving towards 120 gCO_2/km by 2012 through vehicle technology were calculated to be around € 3600 on average per vehicle. The costs of going to 130 are still prohibitively high with around € 2500 per vehicle, endangering production in Europe.

Societal costs: Taking into account the price of technology and the fuel savings for consumers, the TNO institute set the societal costs of emission cuts through vehicle technology at between € 132 and € 233 per reduced tonne of CO_2, depending on the oil price. This is up to ten times more expensive than other traffic-related measures.

Cost-effectiveness is key: The most relevant question is: what is the most cost-effective way to achieve the maximum result in reducing CO_2 emissions from cars? Cost-analysis of independent researchers shows that reducing CO_2 emissions through vehicle technology only is most expensive and least cost-effective for the industry and for society as a whole, that is, including the environment. For less money, larger CO_2 emission reductions can be achieved. That is why the industry proposes to combine different methods, including changing driver behaviour, infrastructure measures, alternative fuels, CO_2-related taxation and vehicle technology.

is precisely why the European manufacturers form one of the most stable pillars of the EU economy, providing employment to 2 million people and supporting the jobs of 10 million other workers in the EU.

Engine adjustments are hugely complicated and expensive operations. Developing engines and vehicles needs ample preparation, up to 5 years at minimum. New technologies often need even longer to enfold their full market potential. A car in Western Europe is on average 8 years old, and up to 14 years in the news EU Member States. Car fleet renewal is an important tool in cutting CO_2 emissions from traffic.

Furthermore, and this is often overseen, the objective of 120 by 2012 was never defined as a target to be reached trough vehicle technology only. To the contrary: the 1998 industry Commitment on CO_2 was one of three “pillars” to achieve the overarching EU objective of 120 grammes CO_2/km by 2012. The car industry target was 140 grammes CO_2/km by 2008 through technological adjustments mainly; while the two other pillars, taxation and information through “labelling”, would help shape consumer demand for fuel-efficiency to reach the 2012 political objective of 120 grammes CO_2/km. These last two policy instruments were never properly implemented and did therefore not yield any result, to the detriment of the achievements of the car industry which did deliver significant CO_2 reductions. The original strategy reflected the foreseeable

technological limits, the need to include the existing car fleet and infrastructure, and the obvious "demand" challenge: cars are bought and driven by consumers.

Cost-effectiveness key

The multidisciplinary CARS 21 group, which convened in 2005 and included the European Commissioners Dimas, Barrot and Verheugen, plus representatives from the car industry, the European Parliament and other stakeholders, concluded that an integrated approach should be implemented to further reduce CO_2 emissions from cars. Such an approach would ensure environmental and economic interest are balanced, all relevant actors are involved, and use cost-effectiveness as guiding principle. The CARS 21 recommendations were fully in line with the "better regulation" agenda of the Barroso Commission, aimed at enhancing industry's global competitiveness and growth in Europe.

The February 2007 CO_2 reduction proposal from the European Commission is not in accordance with this goal. To put the burden mainly on the vehicle manufacturers is not only damaging for the EU economy, it denies the complex and global nature of climate change and the important role all other relevant parties can and should play as well.

The EU objective of achieving average car emissions of 120 grammes CO_2/km by 2012 is possible if the appropriate measures are put in place and all parties are involved: car industry, fuel industry, policy makers - to adjust infrastructure and introduce CO_2-related taxation - and car users. That is the challenge Europe faces.

What is happening in Japan?

The Japanese government has set new goals for CO_2 emission reductions from cars in 2006. For the automotive industry, this translates into a vehicle technology target of 138 gCO_2/km by 2015, within a system based on a "top-runner" approach whereby future standards for each vehicle sector are based on the best current performer, and targets are continiously adjusted for the effects of conflicting regulations. The Japanese goals are ambitious, but at least there is clear respect for the need for lead-time and planning security for the industry. For comparison: the EU is aiming at setting an even more ambitious target (130 gCO_2/km by 2012), without the details being known before 2009 at the earliest. Significantly, Japan has decided to meet its passenger car CO_2 goals through an integrated approach, with 52% of reduction coming from measures other than vehicle technology.

How much CO_2 does the European car fleet emit?

In Europe, passenger cars contribute to 12% of man-made CO2, according to figures from the European Commission regarding the EU-25. The share of transport is 26%, of energy plants 39%, of industry 16% and of households 19%. On a global scale, passenger cars are responsible for 5% of CO_2 emissions, according to the IPCC. Within that share, the European passenger car fleet accounts for 2%.

Emissions come from usage:

Despite the fact that new cars emit significantly less CO_2, emissions from road transport keep rising. This is due to increasing freight transport, the aging car fleet, a lack of traffic management and increased mileage. Between 1995 and 2003, motorists in the EU-25 increased their annual mileage by 16.4%.

Aging car fleet: Furthermore, the ownership of cars rises faster than the sales of newly produced cars. The average age of cars in the EU-15 is now 8 years and up to 14 in the new EU Member States, to the detriment of the environmental performance of the car fleet. It is obvious that a strategy to reduce CO_2 emissions from cars should not only focus on new cars and on vehicle technology. Climate change is a complex and global problem that can only be tackled when efforts are combined.

Integrated Approach

How can infrastructure measures contribute?

Infrastructure measures have an enormous potential to reduce CO_2 emissions. Traffic jams are major source of carbon emissions. Better road design and intelligent traffic management provide effective solutions. ACEA investigated the yearly CO_2 reduction potential and costs of substituting 50% of current traffic lights with modern dynamic lights, generating an optimal traffic flow. Annual savings of 2.4 million tonnes CO_2 are possible, around 16% of the aimed reduction from cars. Adjusting road surface can reduce rolling resistance by up to 40%, delivering 5% of CO_2 reductions.

Japan: A recent study in Japan showed the impact of traffic-flow improvement on CO_2 reduction. The new "Oji section" of the Tokyo Metropolitan Expressway, opened in December 2002, has reduced annual CO_2 emissions in central Tokyo by between 22,000 and 31,000 tonnes. This corresponds to the annual gasoline consumption of around 10,000 cars. In its recently adopted CO_2 strategy, Japan allocates 52% of CO_2 reductions from cars to infrastructure measures.

Continuous improvements in vehicle technology

There is no single technological solution to further reducing CO_2 emissions from cars. Most likely, the future will see a number of technological combinations entering the market, tailored for different usage, driving circumstances and consumer preference. Between 1995 and 2008, ACEA members will have introduced more than 50 new, CO_2 cutting technologies into their vehicles, and many more are in the pipeline. The industry invests 20 billion (4% of turnover) per year in research and development.

Fields of research: Research and development include refining conventional engine technologies, improving the aerodynamics of cars, reducing rolling resistance and decreasing the mass (weight) of cars. Alternative technologies are maturing as conventional engineering solutions become harder to find and more costly to implement. The industry is developing hybrid vehicles and combustion and fuel-cell hydrogen engines in various forms, which will contribute to cutting CO_2 in the long-term future. The use of alternative fuels is another essential development. The vast majority of R&D effort is done independently, with each manufacturer pursuing its own initiatives. Manufacturers do cooperate in the pre-competitive stage, through EUCAR, the R&D organisation of the European vehicle manufacturers.

Biofuels play an essential role

Biofuels can significantly help reducing CO_2 emissions from cars. Car manufacturers have made considerable efforts to develop and adjust engines in order to use different kinds of alternative fuels or a combination of lubricants. The importance of alternative fuels has long been underestimated, and still doesn't seem to get the prominent place in CO_2-related policies it should have. Alternative fuels should be developed and made available on a much larger scale.

Labelling at the pump: From a technology point of view, the automotive industry does need enough time to adjust engines and particulate matter filters to higher biofuel blending requirements in order to reduce the negative effects of blending for the car's engine and for the vehicle's fuel-efficiency. The industry stresses the need for a separate availability of "old" fuels (up till 5,75% bio blending) at the fuel stations for some time to come, to enable filling-up of the existing car fleet.

CO_2-related taxation of cars and alternative fuels is key

CO_2-based taxation of cars and of alternative fuels has a significant CO_2 reduction potential by shaping consumer demand and setting economic incentives to which vehicle manufacturers and fuel suppliers will respond. A CO_2-based taxation system raises customer awareness and gives a political signal that society attaches a priority to reducing CO_2 emissions. Recent experiences in some EU member states (the UK, the Netherlands and Sweden, for example) show that consistent taxation measures can have a significant influence on consumer behaviour and demand.

Eleven EU countries took action: Currently, eleven EU Member States have based elements in their car and/or fuel taxation systems on the car's CO_2 emissions and /or fuel consumption; a year ago they were only nine. Yet, the current systems differ strongly across the EU and therefore fail to send clear market signals. Manufacturers face a fragmented EU market and are unable to exploit economies of scale. The European car manufactures advocate a harmonised taxation of cars and of alternative fuels in the EU and have defined clear principles *(see chapter Taxation for more details)*.

What is "eco-driving"?

Fuel-efficient driving, or "eco-driving", can significantly reduce fuel consumption and lower CO_2 emissions. Eco-driving is easy to apply.

- Shift into a higher gear early; maintain a steady speed at highest possible gear; anticipate traffic flow; switch off the engine at short stops
- Check and adjust the tyre pressure regularly
- Make use of in-car fuel saving devices such as on-board computers and dynamic navigators
- Get rid of surplus weight and unused roof racks

Highly cost-effective: Eco-driving training leads to a fuel economy of up to 25 %, with a significant long-term effect of 7% under everyday driving conditions. Eco-driving could be part of the learning package for new drivers. Training could also cover professional, experienced drivers. The European Climate Change Programme calculated that the reduction potential of CO_2 emissions from eco-driving would be in the range of 50 million tonnes of CO_2 emissions in Europe by 2010. Other research also clearly indicates that eco-driving is highly cost-effective. The independent research institute TNO estimates cost savings of up to 128 per tonne CO_2 saved.

What is CARS 21 and Why is it important?

CARS 21

On 13 January 2005, Commission Vice-President Günter Verheugen (Enterprise) launched a High-level Group on the competitiveness of the automotive industry in the 21st century, called CARS 21. The group brought together representatives of the European Commission, including the Commissioners Dimas (Environment) and Barrot (Transport), the European Parliament, Member States, manufacturers, environmentalists, trade unions, consumers, suppliers and the oil industry.

Enhancing competitiveness: The aim of CARS 21 was to make recommendations on the regulatory framework of the European automotive industry "enhancing global competitiveness and employment while sustaining further progress in safety and environmental performance at a price affordable to the consumer". The CARS 21 initiative was a crucial recognition of the fact that regulation does affect the competitiveness of the industry and that this effect should be minimised in the interest of society as a whole.

Roadmap: On 12 December 2005, CARS 21 adopted its final report and a roadmap identifying the public policy measures for the next ten years. Commissioner Verheugen said: "Today's recommendations will contribute to a vibrant and dynamic European automotive industry, which produces and sells clean and safe cars world-wide".

Main recommendations:

- Simplification and better regulation, through impact assessments and adopting cost-effectiveness as a guiding principle; replacement of 38 EU directives by UNECE regulations.
- Environment: endorsement of an integrated approach to CO_2 reductions, combining policies covering vehicles, fuels, infrastructure measures and drivers. The responsibility for CO_2 reductions cannot rest with the automotive industry alone.
- Road safety: endorsement of an integrated approach involving vehicle technology, infrastructure, traffic law enforcement and road users. Improving road safety is a shared endeavour.
- Better market access in third countries: multilateral and bilateral trade agreements should increase the competitiveness of EU industry.

Follow-up: In February 2007, the Commission sent a Communication on the CARS 21 to Council and Parliament. Regrettably, all main recommendations were watered down and the roadmap was not included. The CO_2 dossier will be the first true test to see how seriously the EU takes its "better regulation" principles and the Lisbon Agenda.

Engine of Europe: The automotive sector is key for the European economy, with at least 12 million employees and their families depending on manufacturing, research and development of vehicles in Europe. The car industry is essential for sustaining and improving the economic strength of the European Union and ensuring future prosperity of its citizens. There is a clear need to establish a policy framework that fosters the EU automotive sector.

.02 CARS 21

Strengthening competitiveness, shaping the regulatory framework

The automotive sector is key for sustaining and improving the economic strength of the European Union, ensuring future prosperity of its citizens. There is a clear need to establish a policy framework that nurtures the automotive industry, the "engine of Europe". CARS 21 (Competitive Automotive Regulatory System for the 21ST century), a multi-party project to improve EU automotive regulation, has put an important process in motion. Now, it is time to implement its outcome with precision and care.

Revitalising EU Growth

The European Commission has put growth and jobs at the heart of its re-launched Lisbon strategy and recognised that, in order to revitalise the EU's economic performance, "the EU and Member States need to further develop their approach to regulation to ensure that the defending of public interests is achieved in a way that supports and does not hinder the development of economic activity"[1].

This important statement underlines that acknowledgement is rising regarding the fact that the cumulative cost of regulation considerably affects the competitiveness of the automotive industry. Two years ago, it was decided that urgent action was needed to address this issue. Since then, a High-level Group on the competitiveness of the automotive industry and the Commission's DG Enterprise, have worked towards establishing a better regulatory framework. By the end of 2005, the High-level Group had concluded a set of recommendations and a roadmap.

Optimism alongside doubts

In February 2007, the Commission sent a Communication on CARS 21 to the EU Council and the European Parliament to take the recommendations from the CARS 21 High-level group a step further into the institutional process. The Commission's Communication gives many reasons for optimism but also sheds some doubts.

The Commission clearly emphasises the necessity of sharing responsibility when dealing with important societal challenges such as road safety and improving the environment. The right policy framework should entail that all relevant stakeholders – whether the industry, legislators, road users or drivers – have to play their part to achieve an effective, and more importantly, a cost-effective result.

Therefore, the acknowledgment that an integrated approach is needed to CO_2 emission reductions and to road safety improvements is of particular importance. This acknowledgement forms the heart of the CARS 21 High-level group recommendations, together with the aimed further simplification of legislation, improvement of third market access, enforcement of intellectual property rights and prioritisation of R&D activities towards renewable fuels, clean and intelligent vehicles.

Cost-effectiveness key

Still, the Commission's Communication has not fully incorporated the recommendations of the High-level Group CARS 21. It does not consistently adopt cost-effectiveness as guiding principle, and the proclaimed integrated approaches are not holistic in a true sense. Too often, policies focus in essence on vehicle technology only, without having a factual basis for this choice.

Also, and despite their critical weight in the context of a competitive regulatory framework, "better regulation" principles have not been given enough importance in the February 2007 Communication. These principles provide industry with a coherent and transparent policy process. While the Commission has made better regulation one of its priorities, in the field of the automotive regulatory framework, this is not accurately reflected. Too many examples show that, in spite of what is being claimed, policy measures do not build on methodical assessments of their potential impact on the competitiveness of European economy.

Because of long development, investment and production cycles, planning certainty and proper lead-time are of crucial importance to the automotive industry. The ten-year regulatory road map, developed by the High-level Group, meant to provide a

sound basis for policy-making over the upcoming years. It is difficult to comprehend why the roadmap was not adopted as an integral part of the Commission Communication.

Balancing interest

The CO_2 emissions dossier is one of the most important challenges the automotive industry faces today. The CARS 21 recommendations from the High-level group sketched a framework to balance economic and environmental interests. These interests are not opposite ones: they should and can be addressed in a comprehensive, cost-effective way, leading to the results society demands.

Regrettably, the integrated approach to CO_2 emission reductions, as adopted by the High-level Group, is reduced in scope by the February 2007 Commission proposal on CO_2. This proposal focuses mainly on vehicle technology and does not respect the inherent elements of the integrated approach, namely infrastructure measures, fiscal incentives and eco-driving. An integrated approach involving all stakeholders would lead to larger cost-effective CO_2 reductions, delivering more for the environment at lower costs to society. There is no doubt that CO_2 will be a major test for the overall value of the CARS 21 process, with implications for the credibility of High-level groups as such.

Similarly unbalanced, and therefore not genuinely holistic, is the approach adopted for road safety, with its focus on vehicle improvements and underestimation of the role infrastructure measures can play. Translating the integrated approach into real-world improvements requires the balanced implementation of vehicle technology, infrastructure measures and education, information and enforcement.

Affordability at risk

Cars need to remain affordable if the desired environmental and safety improvements are to be achieved. The CARS 21 recommendations stressed that affordability of new vehicles and, consequently, fleet renewal are key to achieving environmental and safety improvements. This is because the main environmental and safety challenges arise not from new vehicles, but from the large aging fleet on the road. The annual fleet renewal rate in Europe is already lower than 10% and this fact is not sufficiently taken into account.

Overall, the Commission's actions should be consistent with the Lisbon strategy: one cannot fight for jobs and growth at the one hand and propose, on the other, solutions that endanger the competitiveness of an industry supporting 12 million jobs in the EU. The industry should not be put in a position in which it could lose strength vis-à-vis its major trading partners. External aspects of regulation must be evaluated and impact assessments are of utmost importance.

Vital tool

It is vital for the international competitiveness of the automotive industry that the recommendations, agreed in 2005 by the High-level Group members of the Council, Commission, European Parliament, automotive industry, environmentalists, trade unions, suppliers, consumers and the oil industry, are implemented by all stakeholders. A mid-term review of the CARS 21 recommendations and of the roadmap should be conducted in 2009.

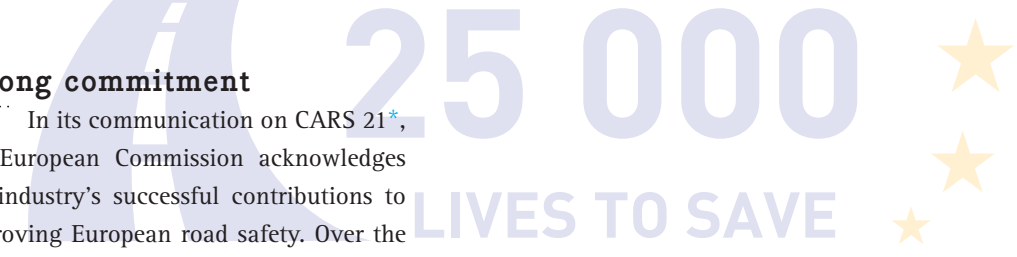
1. Commission's Communication on "Better Regulation for Growth and Jobs in the EU, COM (2005) 97

.03 ROAD SAFETY

Working together to reduce casualties

The safety of all road users - car and truck drivers, passengers, motorcyclists, cyclists and pedestrians - is a prime concern of European vehicle manufacturers. Thanks to constant improvements in vehicle safety, traffic casualties have been significantly reduced over the last three decades. Vehicle makers will continue contributing vigorously to the EU target of further halving road fatalities by 2010. It is clear though, that increasing vehicle safety is only one element of the integrated approach necessary to achieve further progress.

Safety on the road is a shared, societal responsibility, involving all participants including road users, governments and vehicle manufacturers



Strong commitment

In its communication on CARS 21*, the European Commission acknowledges the industry's successful contributions to improving European road safety. Over the last 30 years, the number of traffic casualties has been cut by half, whilst the number of motor vehicles on the road has risen three-fold. This has largely been achieved through a combination of increased driver and passenger protection, improved crash test standards and heightened consumer awareness.

To underline its long-standing, on-going commitment and efforts, the industry has, through ACEA, signed the European Road Safety Charter last year. In this important charter, the European automobile industry pledges to progressively continue to equip passenger cars and trucks with seatbelt warning systems. As a result of this, an overwhelming majority of new vehicles will be fitted with this important life-saving tool by 2010. In particular the installation of seatbelts has contributed to an 80% decrease in fatal or serious injuries in road accidents in the past three decades. However, many serious injuries still find their origin in not using seatbelts. Warning car users not to forget to put their seatbelts on is an effective way to combat this trend. Secondly, European manufacturers will progressively build coaches with electronically controlled stabilising systems.

Sharing responsibility

The European Road Safety Charter is an element of the EU strategy to cutting the number of road deaths in Europe by a further 50% by 2010. The European vehicle manufactures fully support this ambitious goal and stress that achieving the target is possible if all relevant parties work together. Needed is an integrated approach, as defined by the CARS 21 Final Report from 2005. This means combining improvements in vehicle technology, road infrastructure, driver behaviour and enforcement of existing traffic regulations.

Such an approach addresses the fact that safety on the road is a shared, societal responsibility, involving all participants, including road users, governments and vehicle manufacturers. Regrettably, the European Commission focuses in its 2006 CARS 21 Communication too much on vehicle improvements while underestimating the effect infrastructure measures can have. Improving road safety requires the balanced combination of vehicle technology, infrastructure measures and education plus enforcement.

* CARS 21 or "Competitive Automotive Regulatory System for the 21st century", was initiated by the European Commission in 2005. A multi-stakeholder project, CARS 21 produced key recommendations and a road map. Please turn to page 16 to find out more.

Safety

- Implementing an integrated approach requires a balance between vehicle technology, infrastructure measures and education, information and enforcement.
- The integrated approach adopted for road safety is unbalanced and not genuinely holistic: focus on vehicle improvements and underestimation of infrastructure measures.
- The continued delays in adopting Phase II of the Pedestrian Protection Directive impinge manufacturers' lead time and planning predictability.

Cars 21

Increasing awareness

The European automotive industry spends some € 20 billion a year on research and development and a large proportion of this investment is dedicated to developing enhanced passive and active safety technologies for new vehicles. These advanced technologies, applied to vehicles and infrastructure, can greatly contribute to improved road safety and prevent or lessen the severity of accidents. But even when the latest safety technology is available, consumers do not necessarily realise the benefits that such additional safety options can bring. It takes time, therefore, for new features to be picked up by the market.

According to a 2006 Eurobarometer study, European motorists attach high importance to automotive safety, but price remains the most important factor in the purchase of a car. Affordability is key to consumers and additional electronic safety equipment often competes with comfort features for the consumer's limited budget. In an effort to help raise consumer awareness of the benefits of investing in safety options, European automotive manufacturers have joined the European Commission in launching the "eSafetyAware" campaign. The eSafety initiative aims to increase the development, deployment and use of intelligent safety systems to improve road safety.

Driver behaviour

While much has been done to improve vehicle safety, more than 95% of all accidents involve human error. Inappropriate speed, driving under the influence of alcohol or medication and not wearing seatbelts are major factors in accidents today. For this reason, driver behaviour is one of the key components of the integrated approach required to further dramatically reduce traffic casualties.

Driver behaviour can be positively influenced through better driver education and training, as well as stricter enforcement of existing traffic rules and regulations. As the European Commission found in its CARS 21 final report, better enforcement of existing traffic legislation is an efficient and cost-effective means to help cut the rate of traffic fatalities on European roads.

Road infrastructure

Along with vehicle design and technology and driver behaviour, road infrastructure is the other key component of the integrated approach to road safety. EuroRAP, the European Road Assessment Programme supported by ACEA, points out that road infrastructure improvements are essential to achieve the EU target of a 50% cut in road deaths by 2010. Roads, des-

Better enforcement of existing traffic legislation is an efficient and cost-effective means to help cut the rate of traffic fatalities on European roads

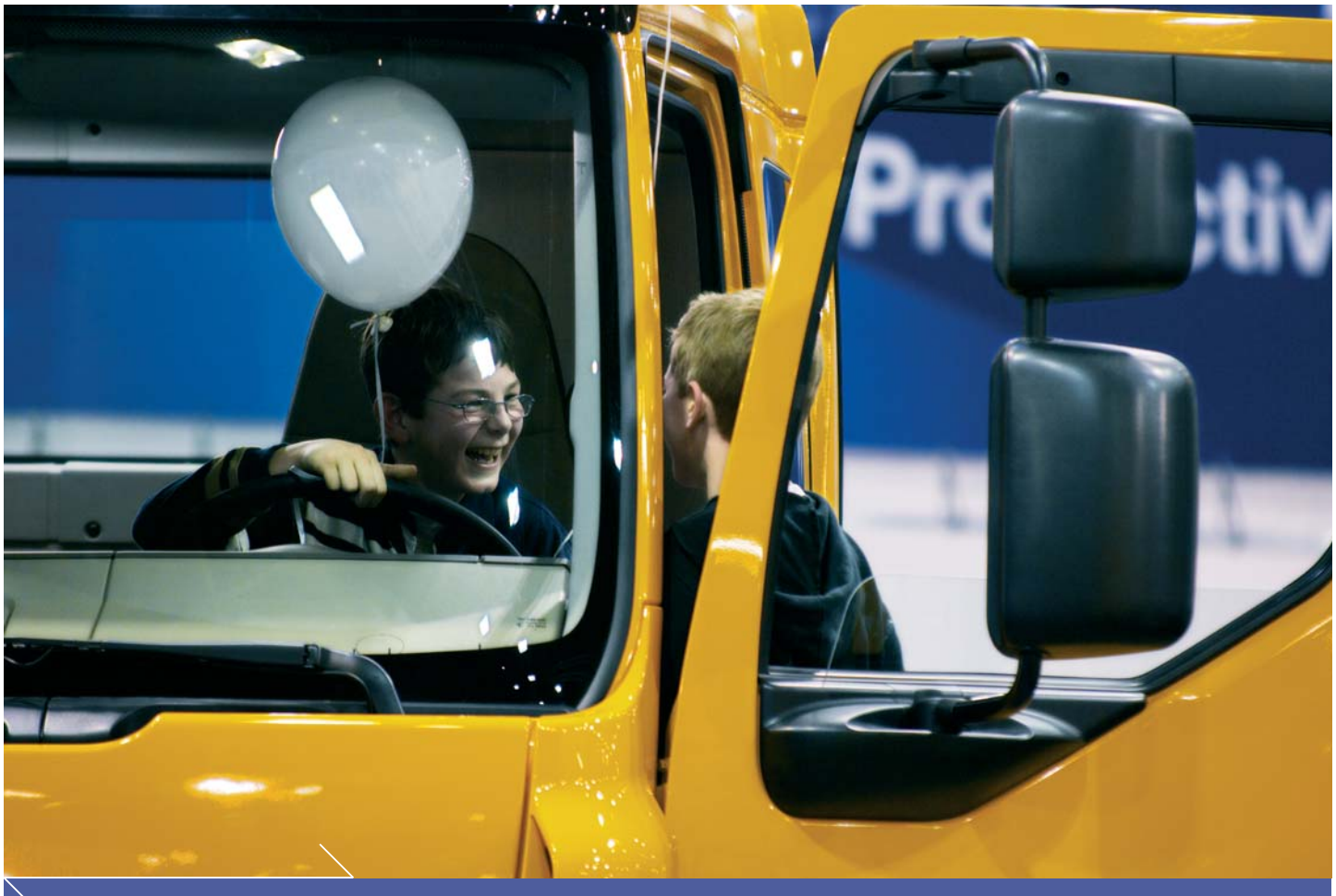
25 000 LIVES TO SAVE
European Road Safety Charter

EU Transport Commissioner Jacques Barrot and Ivan Hodac, Secretary General of ACEA, signing the European Road Safety Charter, NOVEMBER 2006, VERONA

igned to minimise bottlenecks and ensure better traffic flow, can have a significant impact on road safety. Investments in construction and maintenance of roads infrastructure are crucial. Unfortunately, in its road safety strategy the European Commission tends to overlook essential infrastructure measures, such as road safety audits, impact assessments and safety mappings. Yet, the quality of infrastructure is a key determinant of road safety for vehicle occupants, motorcyclists and the most vulnerable road users such as pedestrians and cyclists.

Commercial vehicles

While trucks are often perceived as a road safety concern, commercial vehicles are involved in only about 10% of fatal road accidents. Over the past two decades, the number of fatalities involving trucks in Europe has declined at a faster rate than the overall downward trend in road accidents and fatalities. This is because commercial vehicle manufacturers are making important contributions towards improving road safety by devoting significant resources to building safety into their vehicles. As with passenger cars, to harness the full potential of the improvements in commercial vehicle safety, an integrated approach must be pursued, combining vehicle safety systems with well-trained, responsible drivers, and an upgraded, well-maintained road infrastructure – because road safety is a shared responsibility



.04 AIR QUALITY

Cost-effectiveness must guide progress

Europe's passenger car and commercial vehicle manufacturers have made significant progress in reducing pollutant exhaust pipe emissions. Over the last 25 years, they have cut nitrogen oxide (NOx) and particulate matter (PM) emissions from cars and trucks by over 90%. Further progress should be obtained in a cost-effective manner, taking into account the interests of the consumer, the industry and society as a whole.

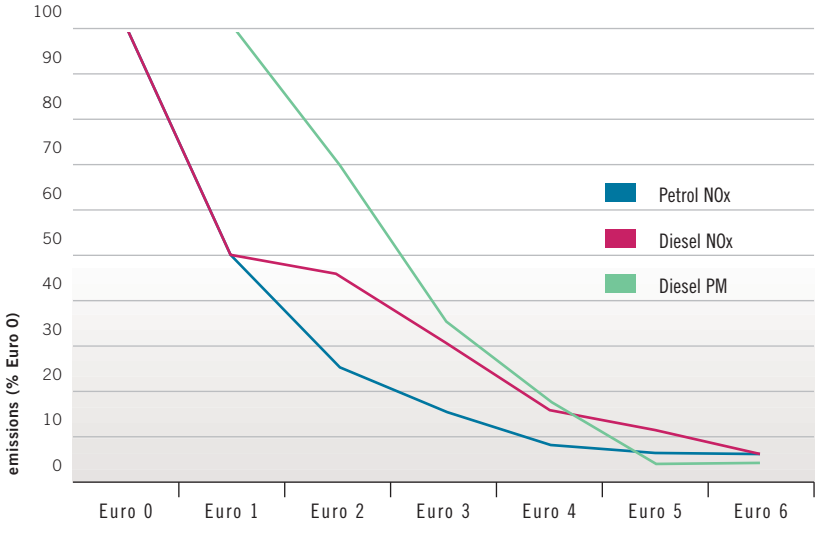
Emission Standards

The European automotive industry is committed to reducing pollutant elements from passenger cars and commercial vehicles and has actively participated in the deliberations with regulators over the next generation of "Euro" emissions standards. Euro 5 and 6 standards for passenger cars were agreed by the end of 2006, and will come into force in 2009 and 2014, respectively.

The Euro V emissions standards for heavy-duty commercial vehicles take effect in 2009, as well, while the Euro VI limit values for trucks are expected to be known by the end of 2007. Meeting the expected challenging limits will put to the test the world-leading technological innovation of Europe's automotive industry and must not be at the expense of the industry's competitiveness.

Further progress in tackling Europe's air quality problems must be addressed in a cost-effective manner, taking into account the interests of the consumer, the industry and society as a whole

Passenger cars – Euro 0 to Euro 6



Euro 5 and 6

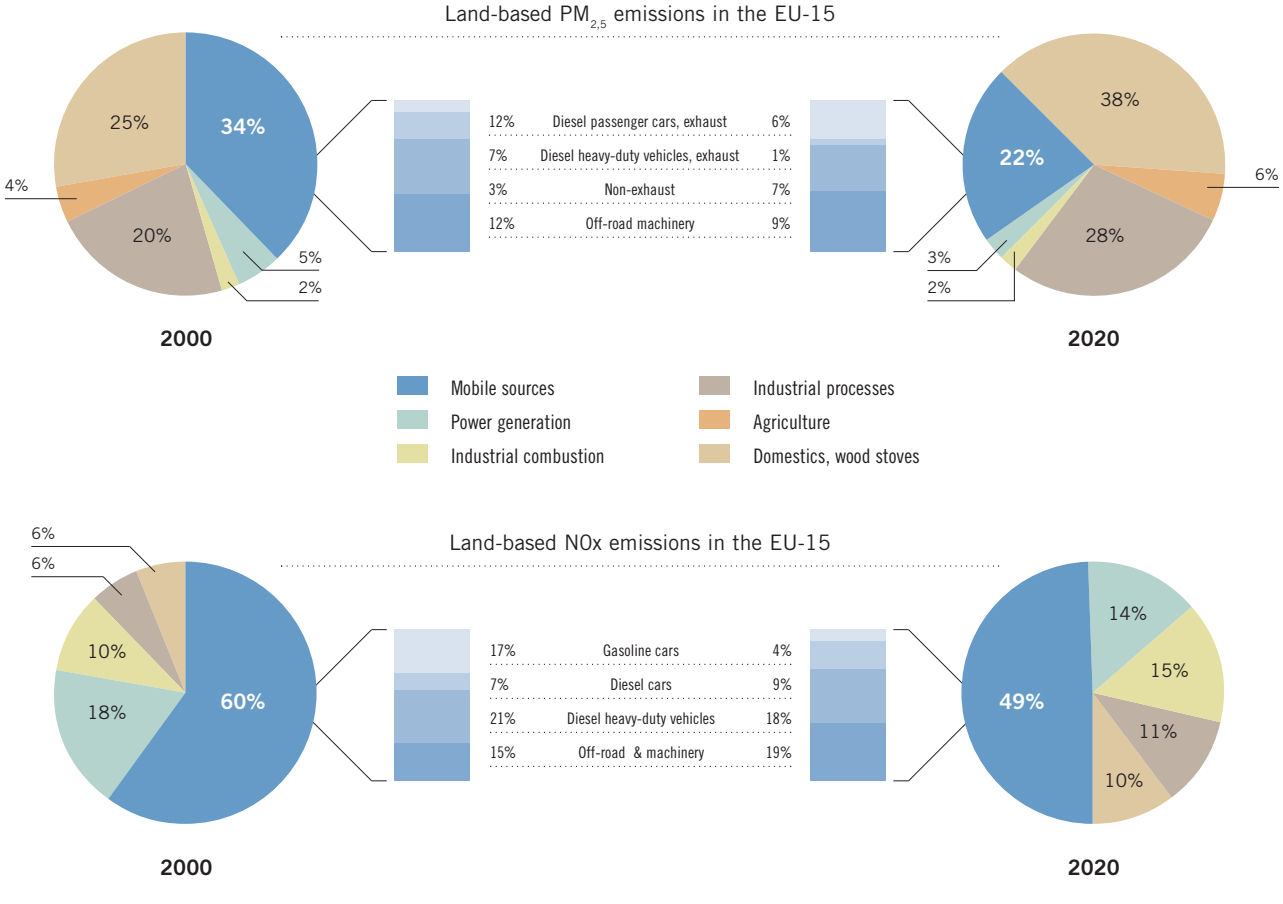
The new Euro 5 and 6 emissions standards for passenger cars will further reduce vehicle emissions of carbon monoxide (CO), hydrocarbons (HC), nitrogen oxide (NOx) and particulate matter. European car manufacturers are in the process of incorporating diesel particulate filters across the range of diesel vehicles, as required by Euro 5. They will also do their utmost to meet the strict limits regarding NOx emissions within the set timeframe. With Euro 5 and 6 coming into force, NOx levels for diesel cars will go down to 180 milligrammes per kilometre by 2009 and to 80 by 2014 respectively. For gasoline cars, the NOx level will fall to 60 milligrammes per kilometre in one step, by 2009.

The industry remains concerned about measures that are not derived from a transparent impact assessment or proper cost-effectiveness analysis. The Euro 5 and

6 levels were supposedly based on the findings of the Clean Air for Europe (CAFE) Programme – the European Commission's strategy to address air pollution –, which was completed in 2005. However, despite cost-effectiveness being one of the basic principles of the CAFE Programme, no such analysis of these vehicle measures was undertaken within the programme.

Impact assessments

The lack of a proper impact assessment has led to a significant underestimation of Euro 5 and 6 related costs for manufacturers and consumers. The European Commission estimated in CAFE that Euro 5 and 6 would raise the cost of a diesel car by € 202. However, an independent panel set up by the European Commission concluded that the actual price of diesel cars will rise by up to € 900 as a result. This is certain to hit diesel car and light commercial vehicle sales. A market shift to gasoline cars will, in turn, have a significant impact on CO_2 emissions (ACEA estimates an increase of 6%). This is in addition to the more obvious harm done to the competitiveness of Europe's diesel manufacturers. Assumptions by both the Commission (and the independent panel) for a drop in precious group metal (PGM) prices (an essential component of petrol and diesel exhaust catalysts) now also appear to be suspect based on forecast PGM market activity. This will contribute further to the underestimation of Euro 5 and 6 costs.



Replacing aging vehicles with new ones meeting Euro 4 will do more for the environment than any further tightening of limits

SOURCE: *Baseline Scenarios for the Clean Air for Europe (CAFE) Programme -Final Report* | February 2005

Air Quality

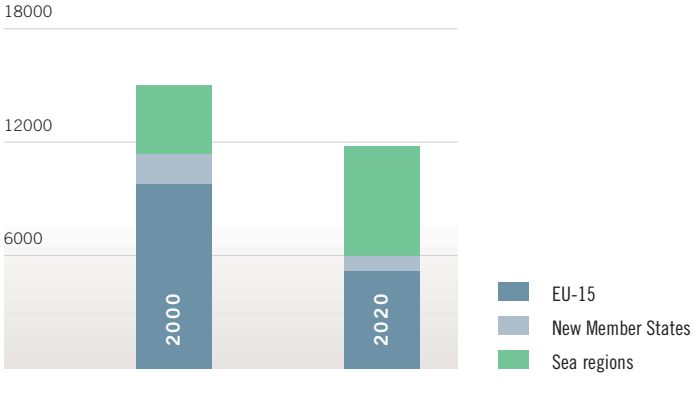
- Impact assessment of regulation should be based on transparent and realistic cost assumptions.
- The Euro 5 related impact assessments featured significant data misuse, leading to underestimated costs.
- Affordability of vehicles, essential for fleet renewal and thus for its environmental and safety performance, and the impact on CO_2 emissions should have been taken into account.
- Further vehicle measures must be consistently analysed using the research models that have been developed specifically for this purpose.

Cars 21

Had the Commission accepted the cost-effectiveness analysis of the independent panel, it would have concluded that the proposed vehicle measures were not justified. As a result, the contribution from the road transport sector towards emissions reductions is actually greater than warranted.

The CAFE Programme shows that, by 2020, even without Euro 5 and 6 limit values applied, passenger cars will be responsible for less than 5% of the total NOx emissions related to road transport. By that time, sources other than passenger cars (such as shipping, domestic heating, industrial processes) will become the main contributors to the emissions of air pollutants (see tables). As for particulate matter, road transport contributes much less than domestic heating, while heavy duty diesel engines are only responsible for 1% of primary PM.

Emissions from ships will surpass land-based EU sources



A rapid replacement of older vehicles on the road with newer models meeting the Euro 4 norms will contribute more to reducing emissions levels than any further tightening of limits could achieve

Affordability

Thus, the environmental challenge becomes one of keeping vehicles affordable in order to promote faster fleet renewal, rather than mandating further reductions in emissions levels for new vehicles. This, along with the safety implications of an aging car fleet, is why affordability is one of the overriding concepts of CARS21*. A rapid replacement of older vehicles on the road with newer models meeting the Euro 4 norms will contribute more to reducing emissions levels than any further tightening of limits could achieve.

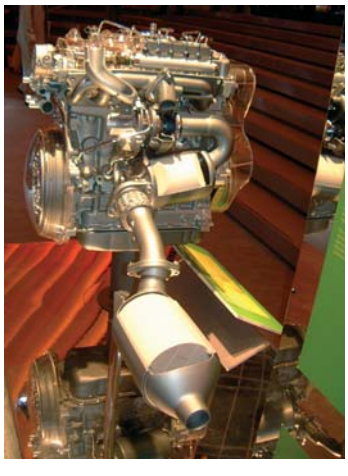
This is especially true for gasoline cars and is supported by the findings of the CAFE Programme, which foresees a reduction in NOx and VOC emissions from gasoline vehicles of more than 90% by 2020, even without Euro 5. With an average vehicle age in some of the new EU Member States of 16 years, imposing costly requirements on new cars is clearly not the right way forward, since it does not help getting older cars off the road.

* CARS 21 or "Competitive Automotive Regulatory System for the 21st century", was initiated by the European Commission in 2005. A multi-stakeholder project, CARS 21 produced key recommendations and a road map. Please turn to page 16 to find out more.

Biofuels

The European Commission is also looking at introducing alternative fuels, such as 'biodiesel' or 'biopetrol' (i.e. petrol-ethanol mix), as a further means to help reduce CO_2. (see also the chapter on CO_2 Emissions in this Industry Report). But the Commission's recent initiatives are cause for concern because of the hastiness of the approach and lack of broader coordination. The introduction of biofuels must be coordinated with manufacturers, in order to ensure that both old and new vehicles can use these fuels effectively. Vehicle manufacturers have to be able to design-in compatibility of new vehicles with biofuels which otherwise may pose a problem for engine components as well as particulate filters. The swapping of today's fuel by tomorrow's biofuel at the filling station must be avoided and new fuels need to be distributed separately and clearly labelled at filling stations to avoid confusion amongst consumers and damage to the existing car fleet. Coordination on the international level, with the aim of achieving common worldwide standards, is also essential.

Coordination on the international level, with the aim of achieving common worldwide standards, is essential



Heavy-duty vehicles

The heavy-duty vehicle industry has been working with the Commission to achieve better regulation, cost-effectiveness, and international harmonisation (at the United Nations Economic Commission, or UN/ECE, level) with regard to emissions regulations. Thanks to their global technological lead, European truck makers succeeded in meeting the Euro IV standards, now in effect. This technological advantage will be even more important when it comes to finding innovative ways to meet Euro V standards in 2009.

With regard to Euro VI, the Commission must use the findings of the CAFE Programme as the basis for a proposal which is expected to be finalised during the course of 2007. It is also essential that the Commission bears in mind the CARS 21 recommendations, including the principles of better regulation, with the aim of achieving emissions standards at the global level, through UN/ECE in Geneva.

History and levels of Euro standards

Euro standards	Entry into force		Emission limits		
	NEW CAR TYPES	ALL NEW CARS	PETROL NOx	DIESEL NOx	DIESEL PM
Euro 0	1 October 1991	1 October 1993	1000 mg/km	1600 mg/km	(no limit)
Euro 1	1 July 1992	31 December 1992	490 mg/km (-51%)	780 mg/km (-51%)	140 mg/km
Euro 2	1 January 1996	1 January 1997	250 mg/km (-75%)	730 mg/km (-54%)	100 mg/km (-29%)
Euro 3	1 January 2000	1 January 2001	150 mg/km (-85%)	500 mg/km (-69%)	50 mg/km (-64%)
Euro 4	1 January 2005	1 January 2006	80 mg/km (-92%)	250 mg/km (-84%)	25 mg/km (-82%)
Euro 5	1 September 2009	1 January 2011	60 mg/km (-94%)	180 mg/km (-89%)	5 mg/km (-96%)
Euro 6	1 September 2014	1 September 2015	60 mg/km (-94%)	80 mg/km (-95%)	5 mg/km (-96%)

NOTE: Euro 1 and 2 NOx values are developed from HC+NOx limits
Euro 0, 1 and 2 limits are converted to the new test cycle introduced in Euro 3

.05 TAXATION

Towards CO_2 emissions as the main criterion

Passenger car taxation regimes and rates vary widely across Europe, resulting in price distortions and a higher cost of manufacturing. Convergence between European car tax systems is therefore an economic necessity with harmonisation as a final goal. It is equally important to make CO_2 emissions the main criterion of this harmonised taxation scheme. CO_2-related taxation of cars and of alternative fuels can help influencing consumer demand for environmentally-friendly solutions.

Convergence

Vehicle tax bases and levels vary significantly across the European Union, with different member states taxing cars based on either power (kW), price, weight, cylinder capacity, or a combination of these criteria. This fragmented EU market forces car manufacturers to adapt vehicles to meet the requirements of individual national tax structures, hindering economies of scale, harming competitiveness, raising the cost of the vehicles, and leading consumers to base their purchases on strained criteria. Registration taxes also have the counter-productive effect of slowing car fleet renewal, by keeping older, less environmentally friendly vehicles on the road longer.

It is high time to abolish registration-based taxes and replace the current variety of criteria with a harmonised car taxation system across the EU. This harmonised system should be based on a standard that reflects the impact that different types of vehicles have on the environment. This would provide a stimulus to consumers to choose "environmentally friendly" cars and alternative fuels, reducing levels of CO_2 from traffic.

Registration taxes have the counter productive effect of slowing car fleet renewal, by keeping older, less environ mentally-friendly vehicles on the road longer

A future of many fuels? It is essential for a driver of an aging, new or future vehicle to be able to spot quickly and clearly which pump delivers the fuel required by his engine, to avoid any problem.

Harmonised CO_2 incentives

CO_2-based taxation of cars and alternative fuels can reduce CO_2 emissions by providing economic incentives to which consumers, vehicle manufacturers and fuel suppliers will respond. For this reason, CO_2-related taxation was included in the recommendations of the CARS21* Final Report, as part of the integrated approach to cut CO_2 levels from cars (see also the chapter on CO_2 emissions).

Currently, eleven EU Member States (Austria, Belgium, Cyprus, Denmark, France, Italy, Luxembourg, the Netherlands, Portugal, Sweden and the UK; two more than in 2005) have CO_2 emissions-based elements in their car and/or fuel taxation systems. This proves that the effectiveness of CO_2-related taxation is recognised politically. But the current systems differ significantly throughout the EU and fail to send clear market signals. The European Member States should adopt a harmonised system of taxation of cars and of alternative fuels in the EU, based on the following criteria:

- All existing car taxes/fees should be substituted by a circulation tax to send simple and clear signals to consumers
- CO_2 should be the key criterion for taxation, thus providing incentives to buy lower CO_2 emitting cars
- Taxation should be technology-neutral to allow competition for the best CO_2-efficient solutions to find their way to the consumer
- There should be no discrimination against certain types, segments or classes of vehicles
- A linear system should be adopted, in which the tax rate is based on a per gramme rate of CO_2 emissions, while allowing for the flexibility of individual states to set their own levels of taxation within this linear system
- Tax revisions should be budget neutral

Significant CO_2 emission reductions can be achieved through CO_2-based taxation of cars and of alternative fuels

Taxation

- Conditions for granting financial incentives related to Euro 5/6 limit values are regulated and separated in time.
- The EU is lacking a common framework for coordinated, but preferably harmonised, technology-neutral fiscal incentives.
- The Commission has proposed to link car taxation partly to vehicles' CO_2 emissions, recognising that such a scheme can contribute significantly to creating demand for fuel-efficiency and hence reducing CO_2 emissions from road transport.
- The EU does not pursue implementation of such a scheme rigorously enough.
- CO_2 emissions are not the main criterion chosen by the EC and the system lacks inclusion of CO_2-related taxation of alternative fuels. Both are strongly recommended by the car industry.

Cars 21

The European Commission and national governments should encourage CO_2-efficient alternative fuels through a fuel taxation system based on the following principles:

- CO_2 performance should be the main criterion, thus providing incentives for CO_2 reductions
- Taxation of conventional fuels should provide a maximum ceiling. The tax rate for alternative fuel should then be lowered according to the CO_2 advantage of the alternative fuel in question
- Certification of alternative fuels is required to indicate their net CO_2 performance
- The tax rate of an alternative fuel should be proportionate to its net CO_2 emissions in comparison to the conventional fuel it substitutes

Currently, 11 EU Member States have CO_2 emission-based elements in their car and/or fuel taxation systems. A more detailed description per country can be found on **www.acea.be**

Fuel "Well to Wheel"

Alternative fuel tax rates should also be based on CO_2 performance levels, as determined by an official certification process. Better CO_2 ratings should be reflected in a proportionate reduction in the tax rate, creating a transparent incentive to increase the relative demand for lower-emission fuels.

* CARS 21 or "Competitive Automotive Regulatory System for the 21st century", was initiated by the European Commission in 2005. A multi-stakeholder project, CARS 21 produced key recommendations and a road map. Please turn to page 16 to find out more.

.06 TRANSPORT POLICY

Facing up to reality, investing in the future

Transport of goods and passengers is fundamental to economic prosperity and social activity in Europe. Transport needs are expanding: following EU Commission forecasts, passenger transport in the EU-15 will grow by 42% and freight transport by 63% between 2000 and 2030. For the New Member States, the forecast figures are 81% and 71%, respectively. Europe's transport policy has to react and to allocate investments accordingly.

Bottlenecks

Employing over 10 million people and contributing hundreds of billion euro to government revenues, the road transport sector is a major contributor to the economy. While road transport demand is surging, Europe's transport infrastructure, especially its road network, is falling behind what is required for a dynamic economy. Investments in road infrastructure in the EU have declined to seriously low levels, dropping from 1.5% of gross domestic product (GDP) in the 1980s to less than 1% in 2004, or roughly € 95 billion. Compared to the estimated € 350 billion in fiscal revenues generated annually by the sector, spending on road transport infrastructure looks small indeed. More investment in road infrastructure is vital to tackle harmful bottlenecks and the worsening problem of congestion.

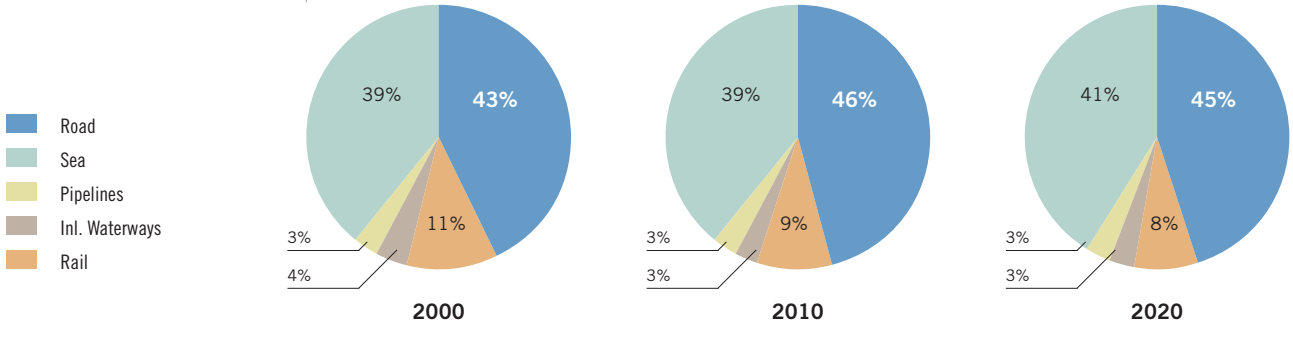
European transport policy is challenged to take account of the rapid rates of growth and redress the infrastructure shortcomings. Road transport is the lifeblood of the European economy, fulfilling the overwhelming majority of the transport needs of companies and individuals in Europe. The approach taken by the European Commission in the 2001 Transport Policy White Paper did not reflect reality and contributed little to improving the economic strength of Europe. However, the EC mid-term review of the White Paper, launched in the second half of 2006, provides an opportunity to remedy these policy failings.

Road transport is the lifeblood of the European economy, fulfilling the overwhelming majority of the transport needs of companies and individuals in Europe

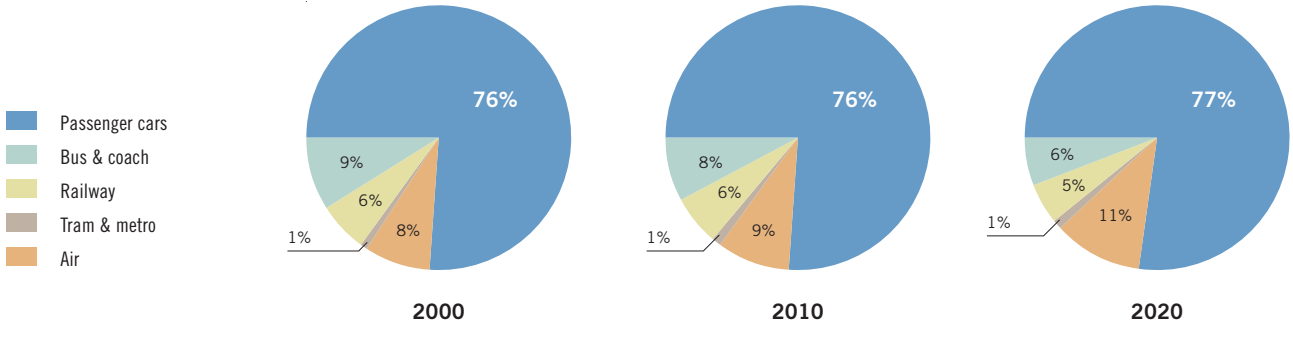
Policy shift

The original objective of the White Paper, promoting sustainable transport to meet society's needs, was laudable. However, the means of the White Paper – a "decoupling" of economic growth and

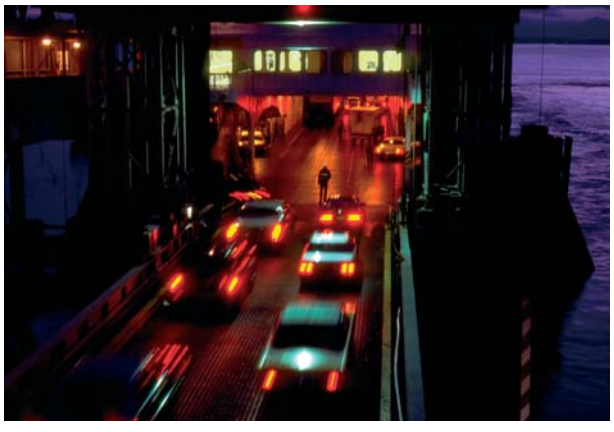
Evolution of freight transport modes 2000-2020



Evolution of passenger transport modes 2000-2020



SOURCE: EC mid-term review of White Paper on Transport Policy, 2006



Road transport, as the most flexible, efficient and economical mode of transport, already accounts for three-quarters of inland freight and 80% of passenger travel in the EU

demand for transport, and promoting a "modal shift" from road transport to other forms of transportation, such as rail – were neither realistic nor pragmatic. Road transport is the most flexible, efficient and economical mode of transport. It accounts for three-quarters of inland freight and 80% of passenger travel in the EU. Its inherent advantages and infrastructure needs must not be ignored by European transport policy.

The 2006 mid-term review of the White Paper takes a more realistic approach to resolving the European transport challenges. Entitled "Keep Europe Moving – Sustainable Mobility for Our Continent", it underlines that each mode of transport – road, rail, air and water – has its role to play in a complementary scenario, choosing the most efficient mode for each particular purpose.

With regard to safety and environment, the industry's achievements are not fully appreciated in the mid-term review. The enormous improvements that have been made in vehicle safety and environmental performance, and the costs that have been absorbed, are not given due recognition.

It is encouraging that the contribution that so-called Intelligent Transport Systems (ITS) could make to efficient, effective and safer transport is now being recognised. The ITS concept envisages road infrastruc-

Transport Policy

- EU car related legislation should be largely harmonised with UN/ECE regulations
- Europe's transport infrastructure, especially its road network, is falling behind what is required for a modern economy.
- Compared to the estimated € 350 billion in fiscal revenues generated annually by the sector, spending on road transport infrastructure looks small indeed.
- The mid-term review of the White Paper takes a more realistic approach to resolving the European transport challenges.
- In terms of safety and the environment, the industry's achievements in these areas are not fully appreciated in the mid-term review of the White Paper

Cars 21

ture and vehicles communicating with one another in order to maximise transport efficiency and safety. The Member States will now have to carry the potential of ITS forward and invest in the relevant infrastructure measures.

Freight logistics

European vehicle manufacturers support the development of sophisticated logistics or systems for moving a product or service from supplier to customer. Efficient logistics is important to the European automotive industry, both as a supplier of vehicles for logistics companies and as a customer of logistics services, as the industry needs to get components to plants on a just-in-time basis and finished vehicles to customers within demanding timeframes. Many vehicles and components are transported to and from factories by train or ship, and finished vehicles are then transported from distribution centres by road in smaller batches.

In a follow up to its White Paper mid-term review, the Commission issued a Communication on Freight Transport Logistics in which it states that advanced logistics solutions have a vital role to play in promoting Europe's mobility, sustainability and competitiveness. The Commission proposes to set up a group composed of industry, Member States and other interested parties to help identify and address bottlenecks in freight logistics. While freight logistics should remain a matter for industry, automotive manufacturers support the Commission's efforts to develop an efficient logistics system for Europe.

A step ahead

Overall, European transport policy has taken a step towards a more enlightened, fact-based and holistic approach. It is now time for governments, parliaments and others to join forces.

Transport activity growth in EU-25 2000-2020

GDP	52%
Overall freight transport	50%
Overall passenger transport	35%
Road freight transport	55%
Rail freight transport	13%
Shor Sea Shipping	59%
Inland navigation	28%
Private car	36%
Rail passenger transport	19%
Air transport	108%

SOURCE:
EC mid-term review of White Paper on Transport policy, 2006

.07 TRADE

Creating new market opportunities through free trade

The global trading framework has become increasingly important to European passenger car and commercial vehicle manufacturers, as they put more emphasis on exports and investment abroad. European manufacturers are confronted with a number of tariff and non-tariff trade barriers the European Union needs to address. The European Commission's stance, that "rejection of protectionism at home must be accompanied by activism in creating open markets and fair conditions for trade abroad", is fully shared.

Ensuring Market Access

For dynamic competitive industries such as Europe's car and truck industry, global trade agreements tend to be the most beneficial. However, when progress is no longer possible or not sufficient at global level, complementary regional and bilateral routes must be pursued to gain and ensure market access.

The 2005 final report on CARS 21* echoes this sentiment. It recommends that the European Union complement its multilateral trade policy with a bilateral approach, in order to ensure much needed improvements in export opportunities for EU producers. This is urgent, the report states, given a multitude of bilateral free trade agreements between other regions and certain growth markets, particularly in Asia, that would effectively exclude European vehicles from these markets. This would have highly negative repercussions on export opportunities from the EU, production in the EU and the competitiveness of European manufacturers. The approach taken by the Commission in its 2006 Communication on CARS 21 - to assess the potential and the impact of bi-lateral agreements with priority countries - is a logical follow-up. But it is of utmost importance that the impact of proposed EU policy measures on the European industry and its domestic and foreign markets are properly assessed before trade negotiations are launched.

Examples of Import Duties (2006)

	Parts	Passenger Cars	Light Commercial Vehicles	Trucks
	8708	870322	870421	870422
Korea	8%	8%	10%	10%
Thailand	30%	80% (CKD=30%)	40% (CKD= 30%)	40%
Malaysia	25%	30% (CKD=10%)	30% (CKD= 10%)	30% (CKD= 10%)
Indonesia	15%	65,7 or 45% (CKD= 25%)	40% (CKD= 20%)	80% (CKD= 40%)
India	13,5%	101%	13,5%	13,5%
Ukraine	0	25%	20%	20%
Russia	0	25%	10%	15%
Mercosur	18%	35%	35%	35%

NOTE: Market Access Database

Free Trade Agreements

Regional and bilateral free trade agreements should be based on economic criteria including the size of the market, potential growth of the market, market access and levels of tariff and non-tariff barriers and a thorough assessment of the impact on the EU sector. These are also the criteria put forward by the European Commission in its 2006 policy paper, "Global Europe: Competing Against the World." There is a clear need for proper consultation on all issues involved with the European automobile manufacturers along the process.

The European automotive sector fully supports free trade and the gradual dismantling of EU import duties, provided that this is undertaken in a mutually beneficial, "win-win" manner. This includes ensuring better access for European automotive products, as well as a better environment for investments into non-EU countries. The elimination of EU import tariffs will increase the level of passenger car imports, while EU export potential to low-cost countries will remain modest in comparison. Given that the European automotive industry directly employs more than 2 million people in the manufacturing of motor vehicles and components and supports a total of 12 million jobs (or 35 % of total EU manufacturing employment), it is critical that the impact of potential free trade agreements on jobs and investment in Europe be assessed in advance.

* CARS 21 or "Competitive Automotive Regulatory System for the 21st century", was initiated by the European Commission in 2005. A multi-stakeholder project, CARS 21 produced key recommendations and a road map. Please turn to page 16 to find out more.

Trade

- The potential and impact for the EU industry and markets of bi-lateral Free Trade Agreements with priority countries will be assessed.
- Countries and regions of priority in should be chosen by economic criteria: large and growing markets.
- Free Trade Agreement with South Korea is highly questionable: fairly small and downsizing market, no commitment to remove non-tariff barriers and unfair conditions on the domestic market.
- The industry needs to be kept informed and consulted in advance and during the negotiating process.

Cars 21

The EU's new trade strategy towards China is sensible and consistent with the priority areas identified by the Commission in its Communication, "EU-China: Closer Partners, Growing Responsibilities". Access to the Chinese market needs to be substantially improved by the elimination of distorting non-tariff barriers, regulatory barriers and investment restrictions. The European automotive industry should be involved as early as possible in negotiations on the new EU-China Partnership and Cooperation Agreement, launched in September 2006, to ensure that all of its concerns are addressed.

China

ACEA's Beijing office continues to work closely with both local representatives of member companies and the Chinese authorities, in order to resolve the many complex issues surrounding the opening of the Chinese market to both car imports and inward investment in local manufacturing. The Chinese government is currently developing a full set of regulations relevant to the automotive industry, parts of which raise some concern to European manufacturers. The fact that China has not yet implemented its WTO commitments across a wide range of areas in a timely fashion is also a matter of serious concern. Likewise, some regulations, both implemented and proposed by Chinese authorities, create non-tariff barriers to trade.

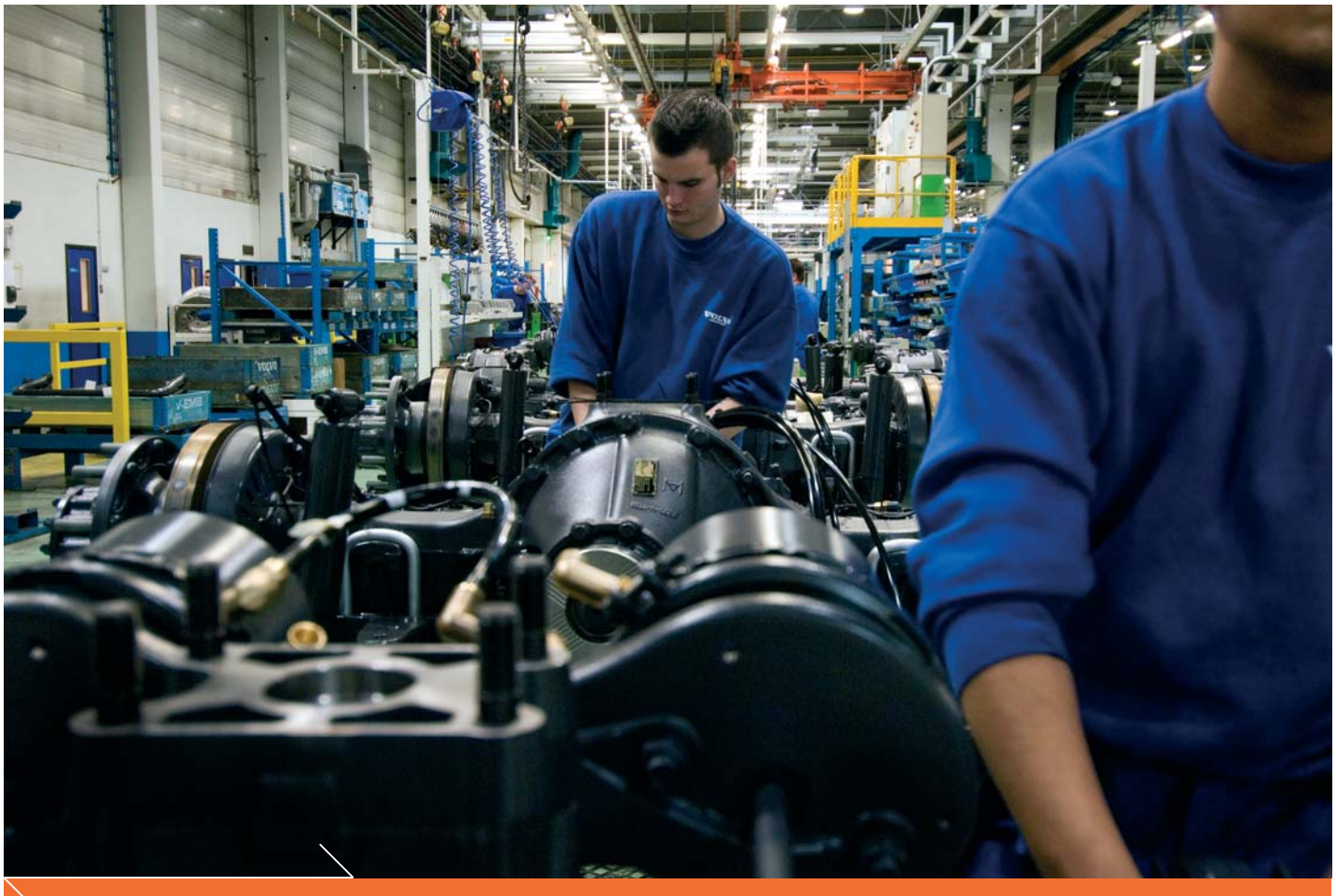
Access to the Chinese market needs to be substantially improved by the gradual dismantling of distorting non-tariff barriers, regulatory barriers and investment restrictions

Market size and growth
New car registrations (in thousands)

	2006	2001	change
South Korea	1218	1468	-17%
ASEAN	1893	1167	62%
India	1750	818	114%
Ukraine	371	75	395%
Russia*	2129	1272	67%
MERCOSUR	2389	1778	34%

SOURCE : VDA, Global Insight

* light vehicles (Global Insight)



.08 HARMONISATION OF REGULATION

Lowering costs, boosting competitiveness

As the automotive industry becomes ever more globalised, world markets are becoming increasingly important to European car and truck manufacturers. Common standards and regulations reduce costs and improve economies of scale and are thus essential to the competitiveness of the European industry. The international and global harmonisation of regulations is a high priority for the European automotive industry.

Common standards and regulations reduce costs, improve economies of scale and are thus essential to the competitiveness of the European industry

Europe at the forefront

Europe has been at the forefront of international harmonisation efforts ever since the establishment of the 1958 Agreement of the United Nations Economic Commission for Europe (UN/ECE) on technical harmonisation in the motor vehicle sector. A complementary 1998 Global Agreement further enhanced international harmonisation efforts through global technical regulations. The European industry is working actively with its counterparts in North America and Japan to promote the international and global harmonisation of regulations, particularly in the areas of road safety, gaseous emissions, fuel quality and intellectual property rights.

CARS 21* supports efforts to achieve increased global harmonisation of regulation, as part of its objective to promote a regulatory framework for the European automotive industry that would enhance its global competitiveness. This also means that there should be no deviation from existing UN/ECE rules unless justified with appropriate facts and data.

Global regulations

For commercial vehicles, as well, internationally harmonised regulations and test procedures are crucial to the rapid introduction and deployment of cost-effective new technologies to reduce emissions, increase energy efficiency and promote further vehicle safety devices in the future. European, North American and Japanese heavy-duty vehicle and engine manufacturers, meeting in Hanover, Germany, in September 2006, urged their respective governments to adopt, as soon as possible, fully harmonised Global Technical Regulations on Emissions Certification Testing, On-Board Diagnostics and on Off-Cycle Emissions, thereby benefiting the environment, consumers and vehicle manufacturers.

Fuel Quality

As air quality emissions requirements become more stringent, the link between market fuel quality and the introduction of new emissions technologies in vehicles becomes more critical. Many developing countries are discussing and, in some cases, already implementing ambitious emission control schemes for vehicles. The locally available fuel quality, an important denominator for exhaust pipe emissions, is often not taken into account when deciding these measures.

Internationally harmonised regulations and test procedures are crucial to the rapid introduction and deployment of cost-effective new technologies to reduce emissions, increase energy efficiency and promote safer vehicles in the future

This underscores the importance of achieving global fuel regulations, in parallel with ongoing efforts to establish global automotive technical regulations. The United Nations should make this issue a priority and future fuel regulations should focus first on lower sulphur limits for both gasoline and diesel fuels. The global automotive industry communicated an official request to UN/ECE in September 2006 to take up the fuel regulation issue.

Intellectual property rights

Respect for intellectual property rights not only protects the interests of the rights holders, but also serves to promote economic development and protect consumers. Counterfeiting of products increases rapidly on a global scale and the adoption of effective countermeasures is urgently required. ACEA and its counterpart organisations in North America and Japan are working together on specific measures for automotive counterfeit issues that can be implemented globally. (Please also see the chapter on *Intellectual Property Rights*).

International Harmonisation

- EU car related legislation should be largely harmonised with UN/ECE regulations
- There is an urgent need to adopt fully harmonised Global Technical Regulations on Emissions Certification Testing, On-Board Diagnostics and on Off-Cycle Emissions, benefiting the environment, consumers and vehicle manufacturers, through their application in the Euro VI stage for heavy duty vehicles
- Unacceptable deviation occurs from existing UN/ECE rules without justification from appropriate facts and data

Cars 21

Global road safety

Road safety is one of the most urgent societal issues around the world. Manufacturers are actively involved, individually or collectively, in initiatives that support an integrated approach to road safety, such as the Global Road Safety Partnership (GRSP). The GRSP brings together regulators, industry and civil society to address road safety issues in low and middle-income countries, providing advice on good practices and facilitating projects. One of the most effective methods of reducing traffic-related injuries and casualties is the applying of seatbelts and today, almost the entire worldwide production of passenger cars is equipped with safety belts, whether required by law or not. As part of their effort to work with public and private entities to improve road safety at the global level, the European automotive industry, along with their counterparts in North America and Japan, agreed in 2006 to install safety belts on vehicles sold anywhere in the world by July 2008.

* CARS 21 or "Competitive Automotive Regulatory System for the 21st century", was initiated by the European Commission in 2005. A multi-stakeholder project, CARS 21 produced key recommendations and a road map. Please turn to page 16 to find out more.

.09 INTELLECTUAL PROPERTY

The fight against counterfeiting

European vehicle manufacturers suffer considerable economic damage as a result of counterfeiting, in terms of lost profit, brand image and competitiveness. A robust intellectual property rights regime, backed up by enforcement, is a necessary pre-condition for fostering investment in innovative industries including the automotive sector.

A robust intellectual property rights regime, backed up by enforcement, is a pre-conditionfor fostering investment in innovative industries such as the automotive sector

Unfair competition

The counterfeiting of automotive products is a major and rapidly growing problem, affecting automotive parts, accessories, packaging – and even entire vehicles. The bulk of the problem consists of trademark and design rights infringement with products from other regions – mainly Asia (especially China), the Middle East and South America – but also in southern and Eastern Europe. Counterfeit copies of intellectual and industrial property devalue the original investment, constitute an unfair competitive threat and can, in the case of the automotive industry, also pose safety hazards.

The European automotive industry is acting at European and global levels to safeguard its interests, including with regard to China where the problem of counterfeit automotive products is particularly acute. Together with their counterparts in the US and Japan, the European manufacturers urge all World Trade Organisation (WTO) members to fulfil their obligations to uphold intellectual property rights.

China

To a large extent, the problem of counterfeit automotive products in Europe concerns parts produced in China. The Chinese government has finally issued regulations on better enforcement of IP protection for automotive products, but these have yet to be implemented properly. The European industry will continue encouraging Chinese authorities to make progress on this issue.
In a bid to increase their effectiveness in the area, European automotive manufacturers set up a group of experts in 2006 to exchange information and promote a collaborative approach to tackling counterfeiting. This group organised a joint awareness-raising campaign at the 2006 Beijing auto show and plans similar actions in future.

IPR in Europe

The European Union is actively and effectively promoting intellectual property rights, through harmonising trademarks and patents in Europe, and through enforcement. The EU recognises the importance of intellectual property rights for the competitiveness of European industry and energetically promotes its protection in multilateral and global forums, encouraging the strengthening of protection in countries where this is weak.

It is therefore difficult to understand why the European Commission is proposing to abolish design rights in the EU for visible spare parts (such as bumpers, fenders, bonnets, radiator grills and headlights). This proposal threatens to harm industry and consumers.

The Commission's proposal will be damaging to the European automotive industry, depriving an innovative sector of proper returns on investment. Its implementation threatens to eliminate 50 000 jobs and, at the same time, weaken the industry's innovative capacities and competitive position in the market. The abolishing of design rights is also not in the consumer interest, delivering little if any savings. The Commission itself has concluded, "the final consumer will not necessarily benefit from liberalisation in terms of lower prices."

Credibility gap

The Commission's proposal contradicts the EU policies on protecting intellectual and industrial property rights, including the EU Directive on the Enforcement of IPR. By lifting design protection on visible spare

Intellectual Property Rights

- The Commission is committed to promoting and enforcing intellectual property rights
- These rights should be promoted and enforced globally, but also within the EU home market
- Abolishing design protection rights, as the Commission proposes, will have important negative effects on the competitiveness of the European vehicle industry
- The proposal does not deliver great advantages for customers
- The proposal weakens the quest for respecting intellectual property rights in third markets such as China

Cars 21

parts, the EU would suffer a serious loss of credibility in its efforts to persuade countries such as China to adopt and enforce protection of intellectual property rights.

The proposal is also in direct conflict with the Directive on Pedestrian Safety, which requires a series of new tests to ensure compliance of original equipment with pedestrian safety standards. Copied parts do not face the same safety requirements in the EU, even though their use can negate

By lifting design protection on visible spare parts, the EU would suffer a serious loss of credibility in its efforts to persuade others to adopt and enforce IPR legislation

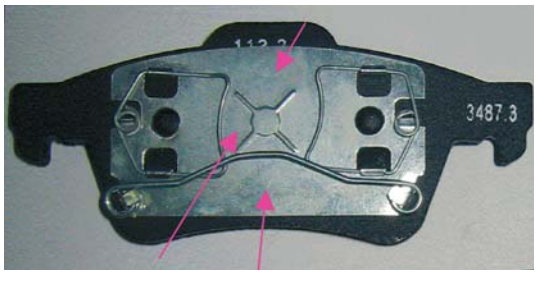
vehicle compliance with pedestrian safety legislation. It is therefore encouraging that, due to the automotive industry's insistence, the EU is now considering establishing specific requirements and tests for safety-relevant aftermarket parts such as bonnets.

So far, this issue has divided Member States, with two thirds preferring to retain design rights protection for visible spare parts, and no progress has been made in the Council of Ministers. In 2007, the European Parliament will complete its first reading on the proposal before sending it back to the Council. European automotive manufacturers are calling upon the EU institutions to review the proposal and to grant a minimum of 10 years protection for design rights over visible spare parts across the EU.

Example of counterfeit brake lining

GENUINE

COUNTERFEIT



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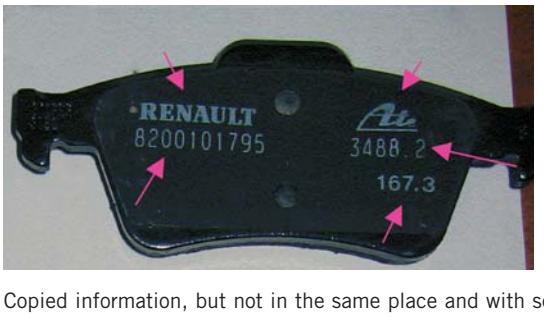

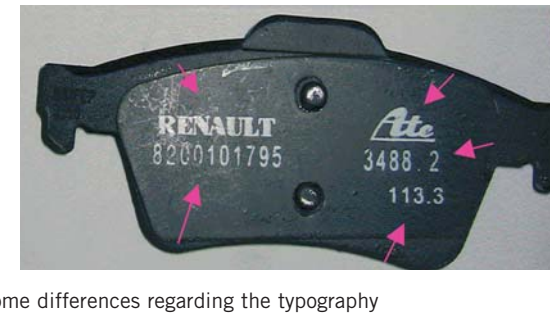

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.10 RESEARCH AND DEVELOPMENT

Technology leaders through persistent investments

The European automotive industry is a global technology leader, largely thanks to its innovative research and development. In 2006, European car and commercial vehicle manufacturers invested a total of some €20 billion in R&D, or 4% of turnover, both in collaborative programmes and technologies, as well as s in company-specific proprietary activities. Collaborative R&D efforts are carried out under the auspices of the European Council for Automotive Research and Development (EUCAR), focusing on pre-competitive issues of mutual interest.

R&D

- Prioritisation of R&D activities towards clean-renewable fuels and intelligent vehicles and roads indicated in the Commission's Communication on CARS 21 is welcome.
- The FP7 Programme should be strengthened regarding short and medium term horizon issues for CO_2 reduction.
- Today the infrastructure side is lagging behind the vehicle technologies in an unsatisfactory way: there is a need to further embrace Integrated Approach to road safety in the FP7 Programme

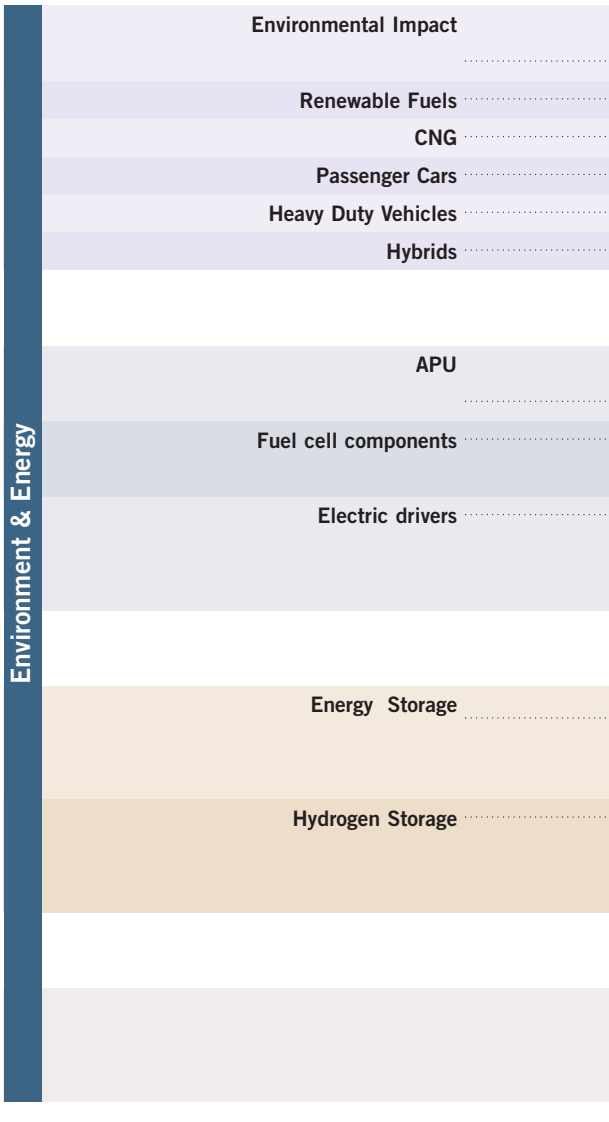
Cars 21

EUCAR research priorities reflect the industry's efforts to respond to and anticipate the major societal concerns associated with the road transport system

CO_2 emissions

Because R&D is inherently a longer-term process, results of programmes initiated today can only be expected to reap benefits in a medium-long term. EUCAR research priorities reflect the industry's efforts to respond to and anticipate the major societal concerns associated with the road transport and mobility system. To this end, the automotive industry's project portfolio (and EUCAR working group composition) is structured around three key research areas: 1) Fuels and Powertrain, 2) Materials, Processes and Manufacturing, and 3) Integrated Safety and Mobility

A common note running through these research areas is, as recommended by CARS 21*, integrated approach to CO_2 emission reductions. Many of the collaborative projects deal with issues such as alternative fuels, more efficient powertrains, better traffic management and lighter vehicles. In 2006, this was substantiated through the initiation of research on eco-driving, advanced traffic management using information communication technologies, and vehicle technologies. In addition, EUCAR contributed by highlighting the automotive needs for collaborative road transport research for future European and national R&D programmes.



Fuels and Powertrain

Carrying this work forward in 2007, some of the actions in the fuels and powertrain area include further developing and harnessing the concept of the integrated approach to CO_2 emission reductions, and encouraging deeper involvement of other stakeholders, such as the fuel industry, transport operators and road and traffic authorities. New R&D activities are focusing on biofuels, powertrain, hybrid technologies and hydrogen & fuel cells, as illustrated in the following tables.

Materials, Processes and Manufacturing

In the area of materials, processes and manufacturing, EUCAR is focusing on

Fields of research

Research Needs: Internal Combustion Engines & Fuels

- Well-to-Wheels Analysis
- Road transport emission models
- Energy efficient fuel production and engine technology
- Compressed Natural Gas engines for passenger cars and light duty vehicles
- Internal combustion engine vehicles with advanced fuels
- Future propulsion systems for heavy duty vehicles and rail application
- Integrated powertrain with advanced hybrid technologies and components

Research Needs: Fuel Cells & Hydrogen

- New vehicle architectures and auxiliary solutions
- Fuel cell Auxiliary Power Unit with fuel reformer
- Materials and technologies for bipolar plates and Polymer Electrolyte Membrane
- Next generation Polymer Electrolyte Membrane and Membrane Electrode Assembly components
- Advanced fuel cell for broad temperature operation
- Electric drivers and power electronics in fuel cell and hybrids vehicles
- Vehicle fleet demonstration and test Facility

Research Needs: Energy & Hydrogen Storage Systems

- Lithium based high power energy storage systems
- New components batteries ageing modelling
- Assessment and evaluation of batteries and supercapacitors
- Advanced and unconventional hydrogen storage
- Hybrid hydrogen storage solutions
- Compressed and cryogenic liquid hydrogen storage

Research Needs: Vehicle

- Energy management and quality
- Enhanced Mobile Air Conditioning for Cars, Trucks and Buses
- Reduced drag and resistance for low consumption vehicles

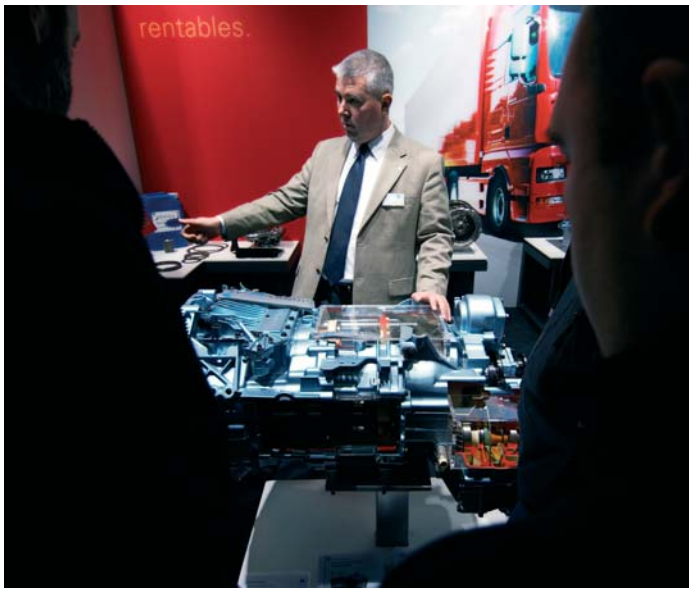
* CARS 21 or "Competitive Automotive Regulatory System for the 21st century", was initiated by the European Commission in 2005. A multi-stakeholder project, CARS 21 produced key recommendations and a road map. Please turn to page 16 to find out more.

A common note running through these research areas is the CARS 21 integrated approach to CO_2 emission reductions, with a focus on alternative fuels, more efficient powertrains, better traffic management and lighter vehicles

high performance materials and surfaces, lightweight materials and multipurpose component integration. EUCAR will also strengthen its activities focusing on integrated production systems and new materials and components, as well as extended distributed development environments and product life cycle simulation.

Safety and Mobility

In the field of safety, EUCAR is aiming to strengthen the integrated safety concept, as championed by CARS 21, through stronger engagement of various stakeholders, including suppliers, infrastructure partners (telecom and road operators) and public authorities. Establishing high quality research on the complex road traffic and transport system is also on the agenda. New R&D activities will focus on accidentology, human-machine interaction and active safety.



On mobility, EUCAR will be looking to support the R&D coordination of all stakeholders engaged in developing more efficient and effective mobility systems. In addition, the organisation will seek to strengthen efforts and contributions through the Commercial Vehicle R&D Forum with the contribution of five European commercial vehicle manufacturers. EUCAR will also work more closely with the national, regional and local traffic authorities, city road planners and freight operators in an effort to provide sustainable innovations.

The road ahead

EUCAR is looking to harness the European Commission's 7th EU Framework Programme, covering the period 2007-2013, to further boost its research capabilities in the key areas outlined above. EUCAR members are submitting proposals in five programme areas of the Framework Programme including transport, energy, nanosciences, nanotechnologies, materials and new production technologies, information & communication technologies and security. These project proposals will be evaluated during 2007 and EUCAR expects to be able to start on some of the selected projects already late 2007. EUCAR will continue in its endeavour to shape the future of the European automotive industry through collaborative R&D.

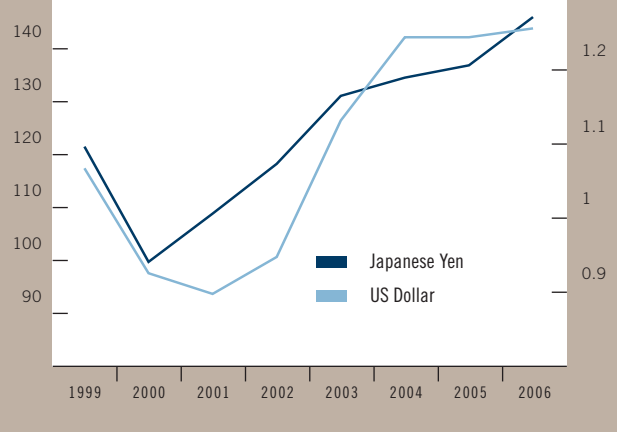
.11 AUTOMOBILE MARKET AND ECONOMY

Slight upturn in 2006 stems from growth recovery in main EU markets

The European automotive industry ended 2006 with a slight upward trend in new vehicle registrations (+1.4%) compared to 2005. Positive developments, notably a better overall economic performance in the EU, contrasted with challenging factors such as high interest rates, overall fiscal tightening, a firm Euro weighing heavily on exports, a slowing of global economic growth and oil prices fluctuation. Economic, political and fiscal developments in specific markets also had their impact on the evolution of new vehicle registrations. For the first time after their accession, the new EU Member States enjoyed growth in new car registrations in 2006, with the Baltic countries leading the way and Poland reversing its downward trend. Bulgaria and Romania posted sizeable growth one year before joining the EU in 2007. Long-term challenges for automotive demand are mainly embodied in climate change, debt position of households, globalisation, a much-needed structural reform in some home markets and a burdensome regulatory framework wich imposes technical requirements that considerably increase the price of vehicles, making them less affordable for consumers.

Japanese Yen & US Dollar against Euro

1999-2006



European markets substantially enhanced their economic performance in 2006. The GDP growth in the euro zone (+2.7%, EU +2.9%) was the highest since 2000 and is projected to remain robust in 2007 (+2.4% euro area, +2.7% EU). Growth was on the one hand mainly driven by investment and private consumption strengthened by improving labour markets, and on the other hand by healthy exports.
However, the net trade impact was limited with growth in imports exceeding growth in exports because of the firm Euro. Between 2000 and 2006 the Euro steadily appreciated against the USD and the Japanese Yen. High energy prices kept inflation above 2%. The interest rates were raised four times by the ECB in the course of 2006, reaching 2.5%, 3.5% and 4.5% on the deposit facility, the minimum bid on main refinancing operations and the marginal lending facility, respectively.

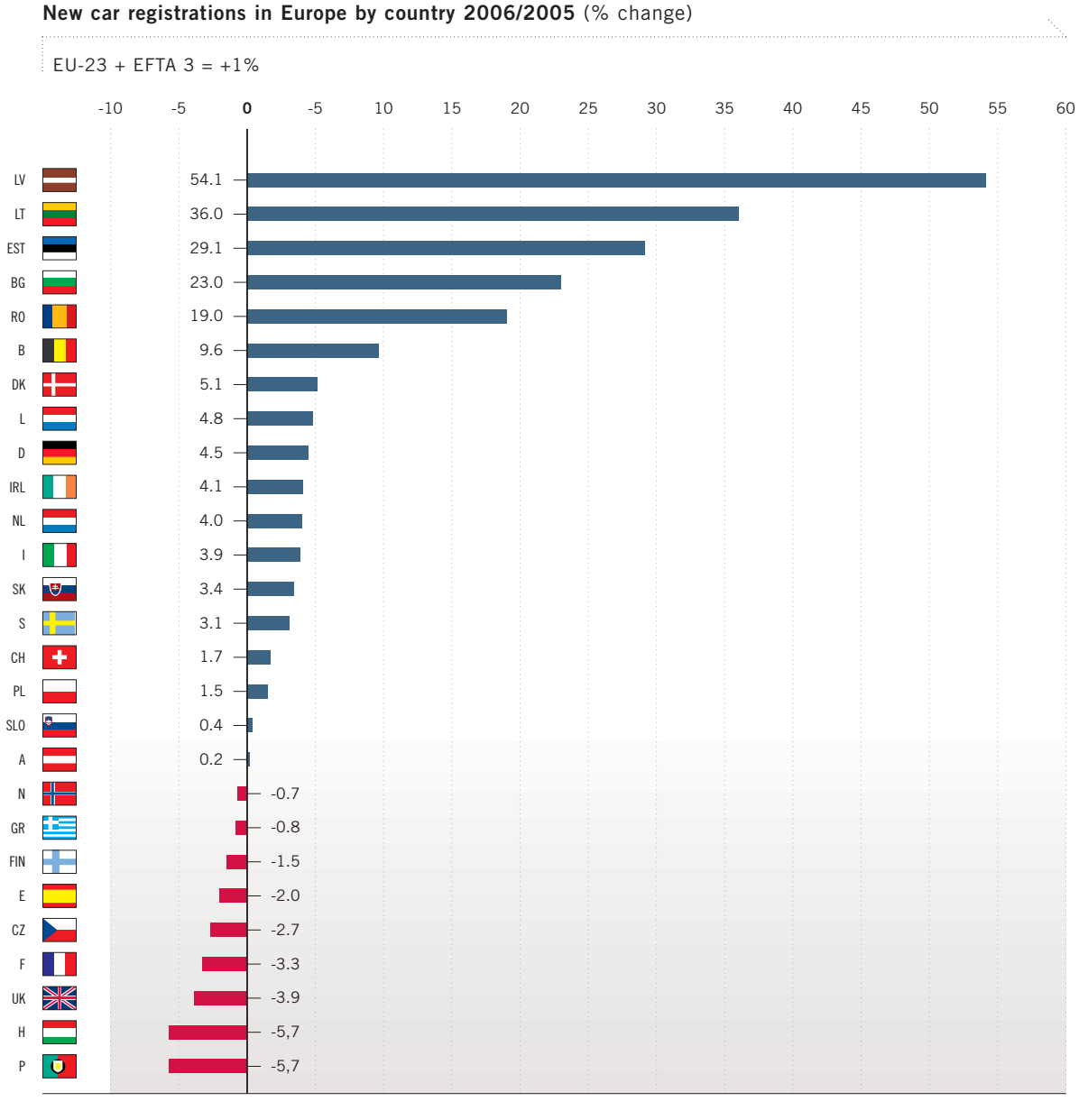
Automobile market for new vehicles

Worldwide automobile demand rose by 2.5% in 2006 compared to the year before. Almost 62.6 billion new motor vehicles were registered worldwide and over 29% of this demand came from the EU, where registrations increased by 1.4%. Emerging markets, such as China (+23.4%), India (+21.4%), Russia (+30%) and Mercosur countries (+12.8%) remained on a fast growth track whereas USA (-2.3%) and Japan (-1.9%) saw their markets downsize.

Passenger cars in Europe

With 15.4 million (+0.9%) new cars registered in Europe (EU23 + EFTA), 2006 ended slightly better than 2005. With 14.6 million cars sold, Western Europe remained however well below the record year 1999 level of 15.1 million units. Two of the main markets, namely Italy (+3.9%) and Germany (+4.5%) ended 2006 on an upturn track, while the UK (–3.9%), France (–3.3%) and Spain (–2%) saw their markets downsize. Except for Portugal (–5.7%), Finland (–1.5%) and Greece (–0.8%), the remaining EU15

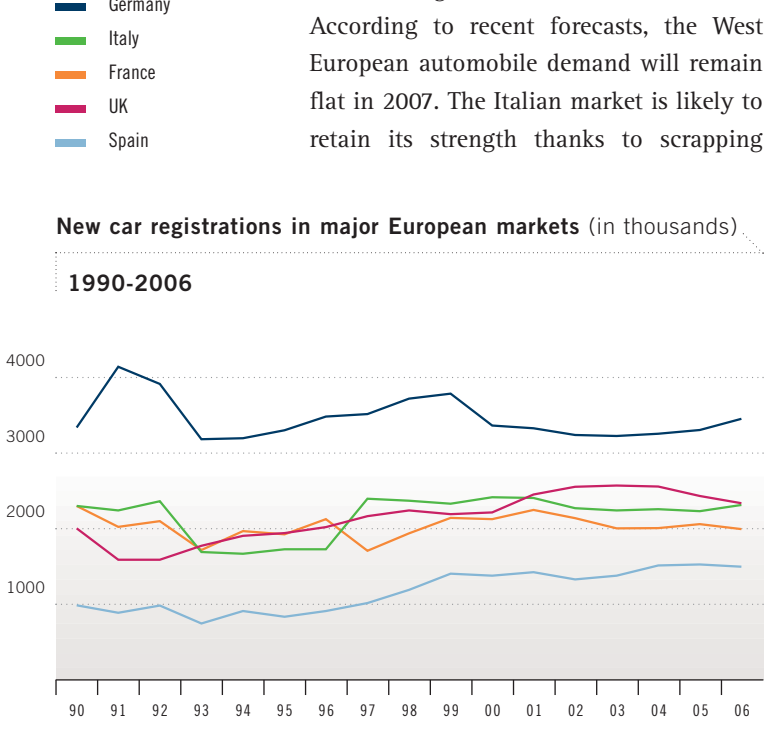
New car registrations in Europe by country 2006/2005 (% change)



countries performed better than during the same period last year. On the one hand, buyer uncertainty, fed by fuel price fluctuations and rising interest rates, were – in addition to a lack of new models – the most frequently evoked general factors affecting these markets in 2006. On the other hand, the VAT rise in Germany (1.1.2007) gave an expected impetus to the new car registrations at the end of 2006, while the Italian market performance was boosted by a surge in sales of the Grande Punto. Specific factors (relevant to given markets), such as structural problems in France, a weak private demand in the UK and consumer debt in Spain, contributed to reducing their car sales in 2006. According to recent forecasts, the West European automobile demand will remain flat in 2007. The Italian market is likely to retain its strength thanks to scrapping incentives and France is expected to mildly recover. Meanwhile, Germany will be bearing the consequences of the VAT raise, reflected in hesitant purchases, and the performance of the Spanish and British markets will likely slow below the trend.

New car registrations in major European markets (in thousands)

1990-2006



Main European markets

New car registrations in **Germany** rose by 4.5% in 2006 ahead of the three-percentage point increase in VAT introduced in January 2007. The end of 2006 was characterised by a spectacular 18% monthly growth, though registrations drastically slowed down in the first quarter of 2007 (-10%). New car sales should nevertheless revive in the remainder of 2007 and 2008 thanks to the introduction of new models and expected tax incentives prior to the implementation of Euro5 emission standards by 2009.

In 2006, the demand for new cars in the **UK** slumped to 2.345 million units (-3.9%). This slowdown appeared partly as a result of the hike in 2005 figures for company cars ahead of a diesel waiver.

In spite of relatively weak economic conditions and feeble household consumption, **Italy** was one of the most successful markets in 2006 in Europe, reaching 2.325 million new cars registered (up 3.9% from 2005). With a scrapping incentive scheme introduced at the end of 2006 (deadline for registrations 31st March 2008) new car sales may well remain on the upswing trend in 2007.

A very low level of new registrations was recorded in **France** (2 million, 3.3% less than in the previous year), with the market share of domestic brands falling to 54.3%. Apart from structural problems, such as a rigid labour market, fragile industrial competitiveness and weak public finances, the French market is also affected by particular factors, such as a new company car tax system and government's efforts to discourage car ownership in big city centres.

1.499 million new cars were registered in **Spain** in 2006, a decline by 2% compared to the previous year. However, including SUVs as the Spanish Automotive Association (ANFAC) is doing since 2007, the 2006 result would show a decrease by 0.9%, as the sales of SUVs increased by +12.6% to 135,563 units registered.

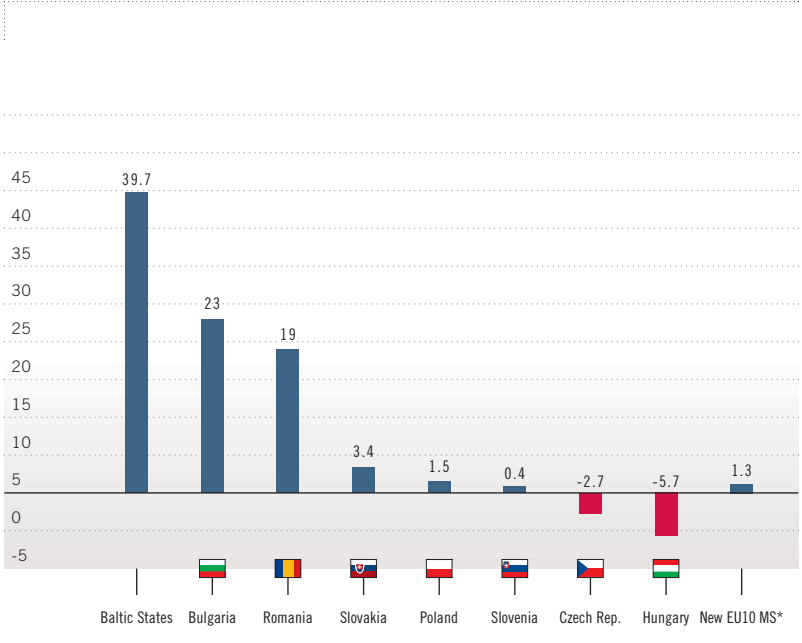
New EU member states

After two years of declining new car sales, the new EU member states rebounded. Almost 735,000 units were sold in 2006, an increase by 1.3%. The largest market in Central and Eastern Europe, **Poland**, managed to reverse its downturn trend in 2006 (+1.5%) mainly thanks to company car sales. These accounted for 47% of the 239,000 newly registered cars, 30% more than in the previous year. The level of the imports of used cars remained very high (817,000), although it decreased in 2006 by 6% as compared to 2005.

An unstable political situation and proposals for fiscal reforms negatively affected private consumption in **Hungary**. New car registrations fell by 5.7%, reaching 187,676 units.

The **Czech Republic** suffered a downsize of 2.7% in new car registrations (124,000), mainly stemming from second hand car imports and VAT loopholes allowing to register passenger cars as LCVs after slight modifications. The appearing **Slovakian** recovery (+3.4%) was partly attributable to changes in VAT rules intended to reduce the shift from cars to LCVs. The demand for new cars in **Slovenia** barely moved in 2006 (+0.4%). In this country, which has one of the strongest economies of the new EU Members, car density reached a level compared to Belgium (474 and 471 cars per 1000 people, respectively). New cars are bought as replacement for existing models and demand follows a cyclical pattern rather than an upturn trend.

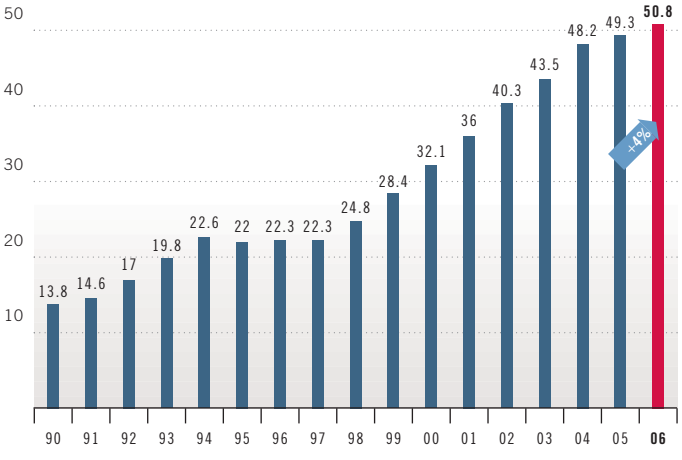
New car registrations in new EU member states 2006/2005 (% change)



* Malta and Cyprus data not available

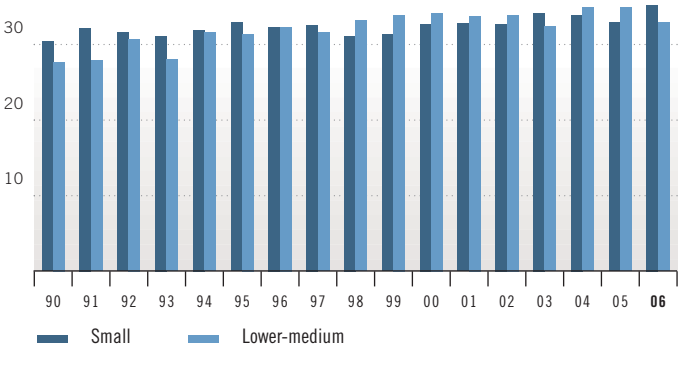
Quite to the contrary, the three Baltic states all posted two-digit growth in new car registrations: **Latvia** increased by 54%, **Lithuania** by 36%, and **Estonia** by 29%. In volume terms, however, they are the smallest markets in the region and 90% of all

Diesel penetration in Western Europe*
(% of new car registrations)

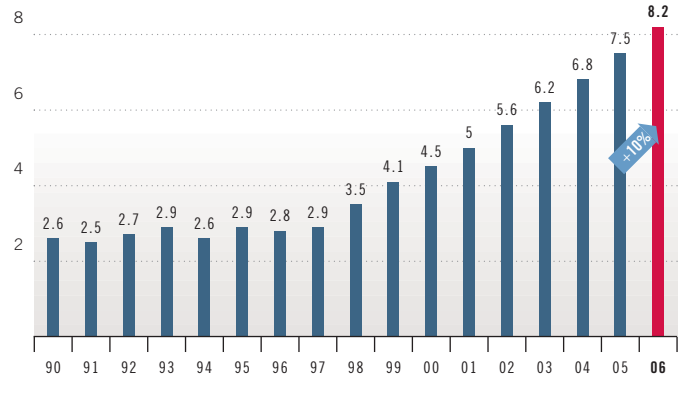


* EU-15 + EFTA

Small and lower-medium segments in Western Europe
(% of new car registrations)



Penetration of 4x4 vehicles Western Europe
(% of new car registrations)



registrations are still accounted for by imported used cars. This situation nevertheless leaves considerable room for new car sales yet to come. In 2007, Bulgaria and Romania joined the EU. The demand for new cars developed remarkably well in 2006 in these countries. **Romania**'s 19% growth made it the largest market in the region in 2006: 256,364 new cars were registered, 40% of which Dacia models. The significantly smaller **Bulgarian** market also performed better than in the previous year, with new car sales up by 23%. Both countries are expected to experience a post-EU accession effect with increasing imports of used cars. This effect might nonetheless be eased by the new Dacia Logan model arrival in Romania and expansion of credit opportunities and leasing schemes in Bulgaria.

Trend toward diesel cars sustained

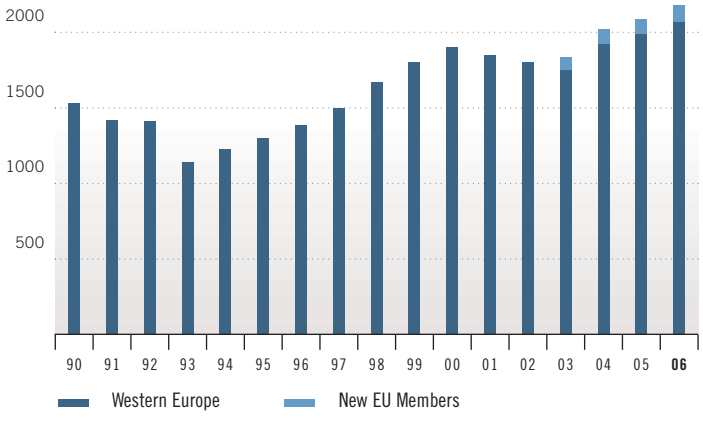
For 2006 as a whole, the share of diesel-powered cars out of total new registrations reached 50.8%, for the first time in Western Europe surpassing the number of cars registered running on gasoline. Over 7.4 million diesel cars were sold, 4% more than in 2005. By contrast, new registrations of petrol-powered vehicles fell by 2% to 7.2 million units. The continuous rise in demand for diesel cars is explained to a large extent by new engine technology, significant increases in fuel prices and greater consumer demand for fuel efficiency.

As for new passenger car registrations by market segment, the highest share remains in the so-called 'small' segment (35.2% of total new registrations) followed closely by the 'lower medium' segment (32.9% of total new registrations).

The 4x4 segment saw a steady increase in demand (10% in 2006 compared to 2005), accounting for 8.2% of new registrations in 2006 against 7.5% in 2005.

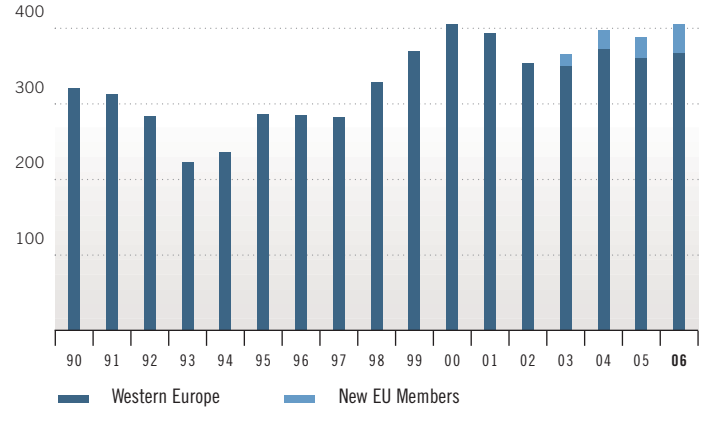
New van registrations in Europe (in thousands)

*Light commercial vehicles up to 3.5 tonnes



New trucks & buses* registrations in Europe (in thousands)

*Commercial vehicles, including buses & coaches over 3.5 tonnes



Commercial vehicles in Europe

Distorted throughout the year, the European truck market was overall stronger in 2006. Over 2 million new Light Commercial Vehicles (vans) were registered in 2006 in Western Europe, rising 5.6% above last year's result. Fourth quarter acceleration in registrations (+10%) was linked to the 1.1.2007 deadline for new vans to comply with Euro IV emission standards. On the whole, 2006 was better than 2005 in terms of van registrations for all European countries except for the Netherlands (–2.2%), Belgium (–2.8%) and Portugal (–3.2%). Amongst the main markets, Germany was the strongest performer (+12.5%), followed by Italy (+8.3%), Spain (+5.9%), France (+4.8%) and the UK (+1.3%).

Although new truck registrations plummeted by 16% in Western Europe in December 2006, the market remained on a positive trend as regards the yearly result (+4%). Monthly registration figures were distorted throughout the year by deadline effects of new legislation coming into force (digital tachograph in May, Euro IV standards in October). The situation on the national markets was mixed: Italian registrations remained flat, France (–4.2%) and the UK (–5.6%) declined while Germany (+4.8%) and Spain (1.1%) improved their results.

New bus and coach registrations remained flat in 2006 in Western Europe. As regards the main markets, France (+7.5%), Germany (+5.2%) and the UK (+0.8%) remained on a positive trend, while Italy (–4.1%) and Spain (–5.7%) slowed down.

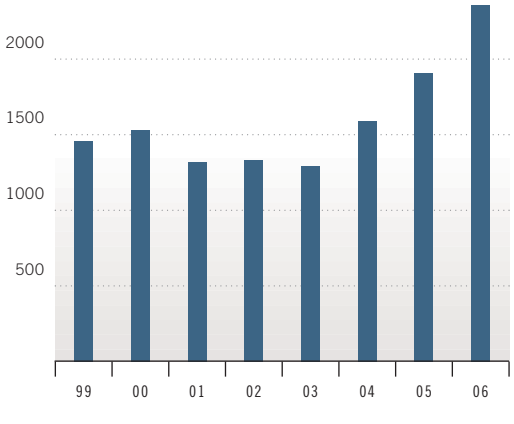
Production of new motor vehicles

Over 69 million passenger cars, vans, trucks and buses were produced worldwide in 2006, up 4% from 2005. Almost a third of all automobiles were produced in Europe (27% in the EU), which makes it the largest vehicle producer in the world. The European passenger car production is even larger as a share of global manufacturing. Nearly 50 million of passenger cars were produced worldwide with the EU accounting for 33% of the total figure. Over 15.6 million vans were produced in the world in 2006 (EU 1.8 million). Roughly 19% of globally produced 3.2 million trucks and 9% of 479,000 buses came from Europe. After some dynamic growth in the first three months of 2006 (+6%) and a decline in the second quarter (-2%) as compared with the same period in 2005, the production of motor vehicles in Europe stagnated in the third and fourth quarter. In total, 18,6 million vehicles were produced in

2006 in Europe, 1% more than previous year. All vehicle categories positively contributed to the EU production increase: heavy trucks and buses showed a growth of 5% and 4% respectively while production of passenger cars and light commercial vehicles went up by 1% and 3%, respectively.

Total vehicle production in the new EU member states

(in thousands)



With 2.4 million cars produced, new EU Members account for 13% of total EU production and this share is growing (+23.3% between 2005 and 2006)

Motor vehicles in use in the EU

According to latest ANFAC (Spanish Automobile Association) report on motor vehicles in use in the EU (January 2007 edition), the European vehicle fleet reached 247 million units in 2005, an increase of 1.8% compared to the previous year. With 218 million vehicles, passenger cars accounted for the highest share of the vehicle fleet (88%). The European car fleet is highly concentrated in five main markets (Germany, Italy, France, UK and Spain) and is characterised by a high diesel penetration (30%).

In terms of car density, the ratio of cars to population was 1:2 in Western Europe while in Eastern Europe this proportion was much lower (186 cars on a population of 1000). On the mature and saturated West European market, car demand stems mainly from replacement whereas in the new EU Members there is still large room for winning genuinely new customers.

Employment in the European automobile industry

Employment in automobile manufacturing in the enlarged EU (Romania and Bulgaria included) reached 2.3 million workers in 2005. Employment growth in the new EU Member States has been significant in the last five years, due essentially to the large investment efforts of automobile manufacturers in this region already prior to the EU enlargement. In the EU 15, total employment in the automobile sector has been slightly declining over the last five years, due mainly to significant restructuring efforts that are currently taking place in the region. In total, employment in the motor vehicle sector represents almost 7% of total employment in the EU manufacturing industry.

Indirect employment linked to the motor vehicle industry covered an estimated additional 10 million workers in the EU.

This figure includes activities such as recycling, sales, maintenance and repair of motor vehicles, road transport (passenger transport, taxi operations, freight transport), manufacture of tyres, the construction of highways and roads etc. Yet, many more jobs in other sectors depend on a healthy automobile industry. The data presented above do not report employment in raw material sector (e.g. steel, aluminium, glass, plastic), textile, driving schools, licensing activities, renting of automobiles, vehicle testing, insurance and financing, etc.

Trade

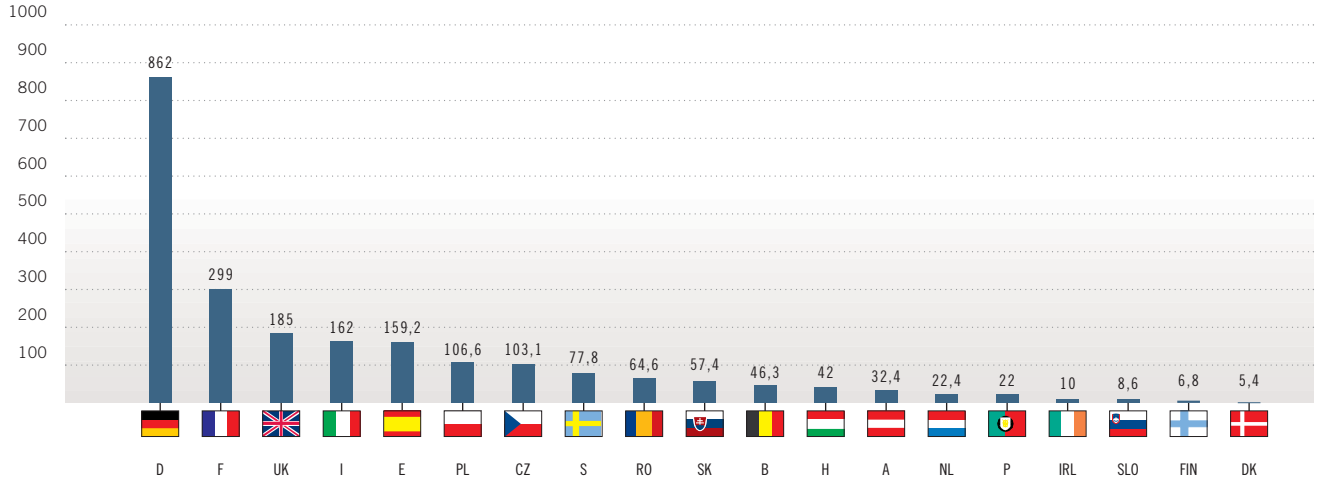
In 2005, the automotive sector further increased its net contribution to the EU trade balance. The value of imported motor vehicles to the EU was more than 29.5 billion € while exports accounted for more than double that figure (71.1 billion €). The EU trade surplus amounted to 41.6 billion € in 2005 compared to 36.5 billion € the year before (14% increase). Passenger cars accounted for a 35.6 billion € and trucks (including buses and coaches) for a 7.1 billion € surplus while a deficit of 1.1 billion € was registered as regards Light Commercial Vehicle trade.

Automobile trade (million €)

	Imports	Exports	Trade Balance
2004	28,779	65,301	36,522
2005	29,550	71,139	41,589

The most important EU trading partners in the automotive sector in 2005 were NAFTA, Japan, South Korea, EFTA, Eastern Europe and Turkey. More than half of the EU automotive trade surplus value came from the EU exports to NAFTA countries. This situation contrasts with import and export of motor vehicles to and from Japan, South Korea, Turkey and Brazil. The value of imports from these countries is much higher than the value of exports and therefore the EU has a trade deficit with them. Import from Japan accounts for 38% of total EU imports while this relation in exports is more than five times lower. Similarly, steadily increasing imports from South Korea reached 21% of the EU automotive imports value in 2005 while EU exports barely attained 1% of total EU exports in this sector. Switzerland and Norway accounted for 9% and Eastern Europe (including Russia, Romania, Bulgaria, Croatia) for 8% of the EU automotive export value.

Direct employment in the automotive sector in the EU in 2005 (in thousands)



ACEA represents the "engine of Europe"

The European automotive industry is a key player in the European Union of the 21st century. It provides direct employment to more than 2.2 million people and supports, directly or indirectly, another 10 million jobs. Apart from the sector's own contribution to the overall EU economy, the automotive industry generates significant activity for other industries and sectors, such as components, electronics, informatics, telecom, healthcare and logistics. The vehicle manufacturers contribute to the strength and competitiveness of Europe through fiscal revenue, external trade, research and innovation.

Motor vehicles are an indispensable part of the everyday life of most Europeans. Automotive products and manufacturing entail a number of duties and responsibilities vis-à-vis the customer and society as a whole, in areas such as mobility, safety, the environmental and many others. In today's modern and complex society, this can only be achieved by working in partnership with public authorities, regulatory bodies, other industries and public organisations.

ACEA, the European Automobile Manufacturers Association established in 1991, represents the 13 major European car, truck and bus manufacturers. **ACEA** was established as a response to the gradual shift to Brussels of government responsibility for many of the complex economic, social, technical and legal issues resulting from closer European integration. The origin of **ACEA** largely arose from the need to represent the technological, industrial and commercial efforts and interests of its member companies. Often, the vehicle manufacturers are asked to provide information and share their specialist knowledge.

The automotive industry is one of the most regulated sectors in Europe. Many of the regulations are very technical in nature.
The Association readily provides its expertise as an input during the regular dialogues it maintains with legislators and other stakeholders

ACEA also provides clear and factual information on the many complex aspects of the automobile industry. This permits effective interaction with decision-makers, partner organisations and the public-at-large and encourages understanding of the industry and its contribution to the EU society.

ACEA is an Economic Interest Grouping. Its headquarters are based in Brussels and made up of the Secretary General and the Secretariat. In 1995, **ACEA** opened a second office in Tokyo and in 2004, a third representation in Beijing.

The Board of Directors is composed of the Chief Executive Officers (CEOs) of the automobile companies that are members of the association. The Board has authority to take decisions on all relevant issues and elects, within its circle, a President for one year, with the possibility of re-election once.

THE **ACEA** MEMBERS

BMW Group
www.bmwgroup.com

DAF TRUCKS NV
www.daftrucks.com

DAIMLERCHRYSLER AG
www.daimlerchrysler.com

FIAT SpA
www.fiatgroup.com

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www.gmeurope.com

MAN NUTZFAHRZEUGE AG
www.mn.man.de

Dr Ing. h.c.F. PORSCHE AG
www.porsche.com

PSA PEUGEOT CITROËN
www.psa-peugeot-citroen.com

RENAULT SA
www.renault.com

SCANIA AB
www.scania.com

VOLKSWAGEN AG
www.volkswagen-ag.de

AB VOLVO
www.volvo.com

THE **ACEA** ASSOCIATED ORGANISATIONS

FFOE _AUSTRIA
Fachverband der
Fahrzeugindustrie Österreichs
www.wk.or.at/fahrzeuge

FEBIAC _BELGIUM
Fédération Belge des Industries
de l'Automobile et du Cycle
Belgische Federatie van de
Automobiel-en tweewielerindustrie
www.febiac.be

UIAB _BULGARIA
Union of the Importers of Automobiles
in Bulgaria
www.svab.bg

AIA CR (SAP) _CZECH REPUBLIC
Automotive Industry Association
of the CR
www.autosap.cz

OEB _CYPRUS
Employers & Industrialists Federation
T +357 22 66 51 02

DK BIL _DENMARK
De Danske Bilimportorer
www.bilimp.dk

AMTEL _ESTONIA
Union of Estonian Car Sales
and Service Enterprises
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AUTOTUOJAT ry _FINLAND
www.autotuojat.fi

CCFA _FRANCE
Comité des Constructeurs Français
d'Automobiles
www.ccfa.fr

VDA _GERMANY
Verband Der Automobilindustrie
www.vda.de

AMVIR _GREECE
Association of Motor Vehicle
Importers-Representatives
www.amvir.gr

AHAI (MGSZ) _HUNGARY
Association of the Hungarian
Automotive Industry
www.gepjarmuipar.hu

BILGREINASAMBANDÖ _ICELAND
www.bgs.is

SIMI _IRELAND
The Society of the Irish Motor Industry
www.simi.ie

ANFIA _ITALY
Associazione Nazionale Fra Industrie
Automobilistiche
www.anfia.it

LAADA _LATVIA
Latvian Authorized Automobile
Dealers Association
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LAA _LITHUANIA
Lithuanian Autoenterpreneurs
Association
www.laa.lt

ACIM _MALTA
Association of Car Importers Malta
T +356 21 23 65 00

RAI _NETHERLANDS
De Rijwiel en Automobiel Industrie
Vereniging
www.raivereniging.nl

B.I.L. _NORWAY
Bilimportörenes Landsforening
www.bilimportorenes-landsforening.no

PZPM _POLAND
Polski Zwiazek Przemyslu
Motoryzacyjnego
www.pzpm.org.pl

ACAP _PORTUGAL
Associaçao do Comércio Automovel
de Portugal
www.acap.pt

ACAROM _ROMANIA
Association of Automobile
Manufacturers in Romania
www.acarom.ro

AIA SR (ZAP) _SLOVAKIA
Automotive Industry Association SR
www.zapsr.sk

ADS _SLOVENIA
Association of Automobile
Manufacturers and Authorised
Importers
www.ads-slo.org

ANFAC _SPAIN
Asociación Española de Fabricantes
de Automoviles y Camiones
www.anfac.com

BIL Sweden _SWEDEN
www.bilsweden.se

AUTO-SUISSE _SWITZERLAND
Association Importateurs Suisses
d'Automobiles
www.auto-suisse.ch

OSD _TURKEY
Automotive Manufacturers Association
www.osd.org.tr

SMMT _UNITED KINGDOM
The Society of Motor Manufacturers
and Traders Ltd
www.smmt.co.uk

PHOTOGRAPHY **ROGER JOB**

This paper is made in an environmentally friendly way and according to FSC certification

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The automotive industry is a major contributor to EU growth, employment and wealth

Production	Total motor vehicles (Worldwide)	2006	Mn units	69,2	
	Total motor vehicles (EU27)	2006	Mn units	18,6	= 27% of worldwide MV production
	Total passenger cars (Worldwide)	2006	Mn units	49,9	
	Total passenger cars (EU27)	2006	Mn units	16,2	= 33% of worldwide PC production
	-o/w ACEA members	2006	Mn units	13,2	= 26% of worldwide PC production
New Registrations/Sales	Total motor vehicles (Worldwide)	2006	Mn units	62,6	
	Total motor vehicles (EU25)	2006	Mn units	18	= 29% of worldwide MV registrations/sales
	Total passenger cars (Worldwide)	2006	Mn units	46,6	
	Total passenger cars (EU25)	2006	Mn units	15,4	= 33% of worldwide PC registrations/sales
	-o/w ACEA members	2006	Mn units	12,1	= 26% of worldwide PC registrations/sales
Employment	Motor vehicles production EU27	2004	Mn people	2,3	
	Total (incl. indirect*) EU27	2004	Mn people	ca. 12.6	
Turnover	ACEA members worldwide	2005	Bn EUR	ca. 560	
Investment	ACEA members worldwide	2005	Bn EUR	ca. 40	= 7% of turnover
R&D	ACEA members worldwide	2005	Bn EUR	20	= 4% of turnover
Value Added	in EU15 (Manufacturers + Suppliers)	2004	Bn EUR	8%	of manufacturing sector
Exports	Extra EU25	2005	Bn EUR	71,1	
Trade Balance		2005	Bn EUR	41,6	
Motor Vehicles in use (Western Europe**)	Total	2005	Mn units	224	
	Passenger Cars	2005	Mn units	196	
	Average Age	2005	Years	ca. 8	
	Density	2005	per 1000 inhab.	508	
New PC Registrations - Specifications (Western Europe)	Average CC	2006	Cm3	1733	
	Power	2006	(KW)	85	
	Diesel	2006	% Share	51%	
	4x4	2006	% Share	8,2%	
Tax Revenue from Motor Vehicles		2006	Bn EUR	360	= 3,5% of EU15 GDP

SOURCE: ACEA, VDA, AAA, GLOBAL INSIGHT, EUROSTAT

* Data do not report employment in raw material sector (e.g. steel, aluminium, glass, plastic), textile, driving schools, licensing activities, renting of automobiles, vehicle testing, vehicle insurance and financing, etc

** Western Europe = EU15 + EFTA

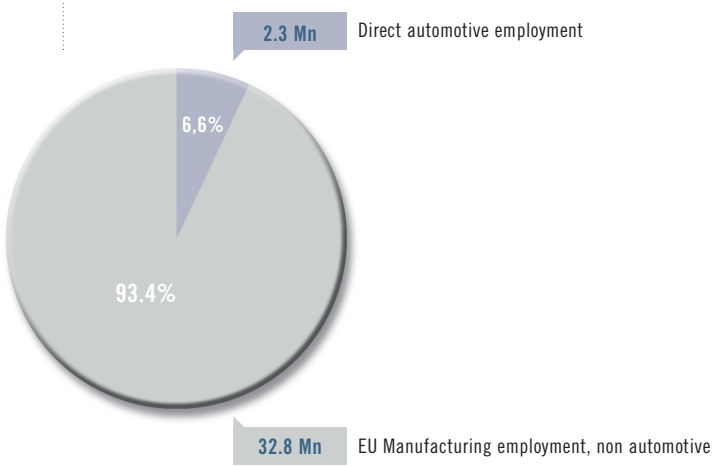
EMPLOYMENT

- More than 2.3 million people are employed directly in the manufacture of motor vehicles and components
- This corresponds to almost 7% of all manufacturing employment in the EU27... or 1% ot total employment in the enlarged EU
- In total, the automobile industry supports more than 12 million European jobs. Increasingly, these are highly skilled jobs.

Employment in the EU automobile industry, 2004

Direct employment	2,3	Mn people	(= 7% of total employment in EU manufacturing)
Total employment (Direct + Indirect)	12,6	Mn people	(= 36% of total employment in EU manufacturing)
EU27 employed population	209,6	Mn people	
EU27 population employed in manufacturing sector	35,1	Mn people	

EU manufacturing industry, share of automotive employment, 2004



Automobile sector: direct and indirect* employment

Automotive Industry (production operations)

Automobile manufacturing
Equipment and accessories
Bodywork, trailer, caravans

2.26 Mn jobs

Other manufacturing activites

- Manufacture, retreading and rebuilding of rubber tyres and tubes
- Manufacture of bearings, gears, gearing and driving elements
- Manufacture of cooling and ventilation equipment
- Manufacture of electric motors, generators and transformers
- Manufacture of electrical equipment for engines and vehicles (not elsewhere reported)

Automobile use

- Sale and distribution of motor vehicles
- Maintenance and repair of motor vehicles
- Sale of motor vehicle parts and accessories
- Vehicule testing
- Sale of motor fuels
- Automotive recycling activities

Transport

- Road transport (passengers and freight, outsourced and in-house)
- Construction of highways, roads, airfields and sport facilities

10.38 Mn jobs

12,6 Mn jobs

SOURCE: EUROSTAT

* Indirect employment data do not report employment in raw material sector (e.g. steel, aluminium, glass, etc), textile, driving schools, licensing activities, renting of automobiles, vehicle testing, vehilce insurance and financing, etc

PRODUCTION

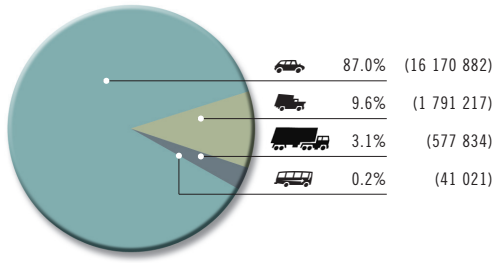
.06

- Europe is the world's largest motor vehicle producer
- Of the nearly 50 million passenger cars produced in the world in 2006, over 32% were produced in the EU
- In Western Europe, ACEA members account for 90% of the production of passenger cars.

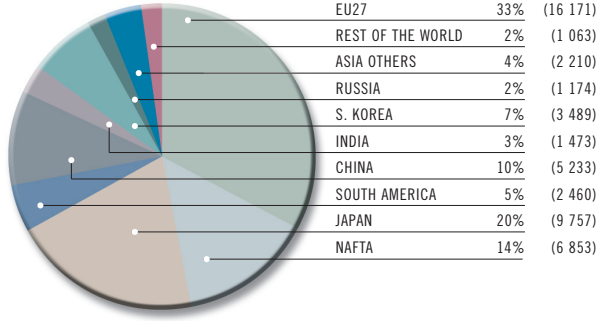
Motor vehicle production in Europe

	2006
	16 170 882
	1 791 217
	577 834
	41 021
TOTAL	18 580 954

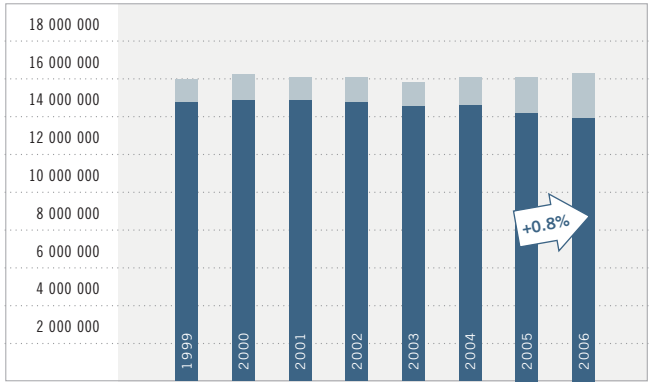
European production by vehicle category › 2006



World passenger car production (% share)› 2006

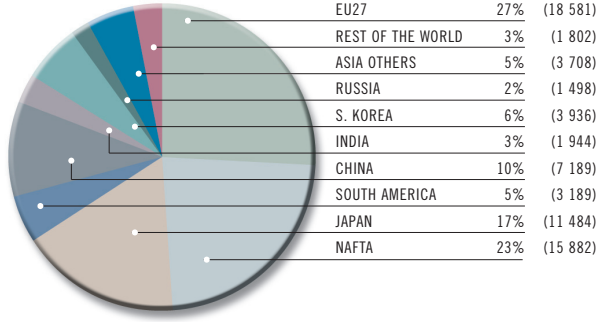


Passenger car production in the EU, 1999 › 2006



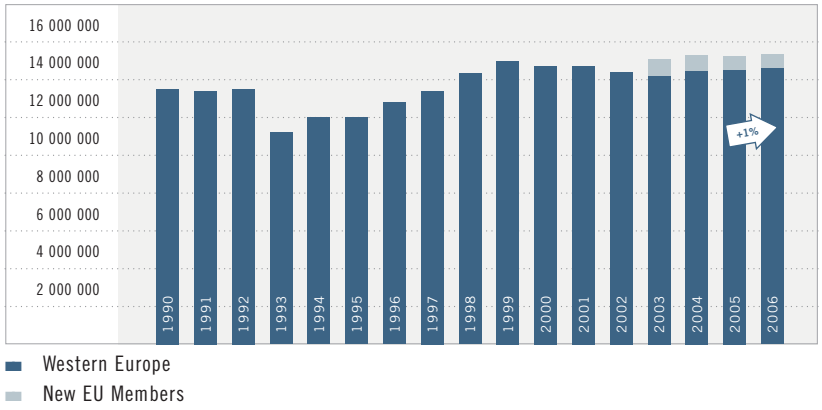
SOURCE: OICA 2006

World motor vehicle production (% share)› 2006

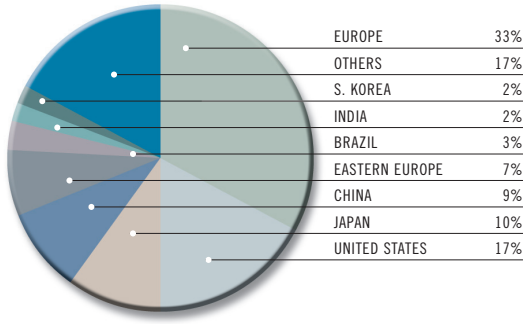


MOTOR VEHICLE REGISTRATIONS

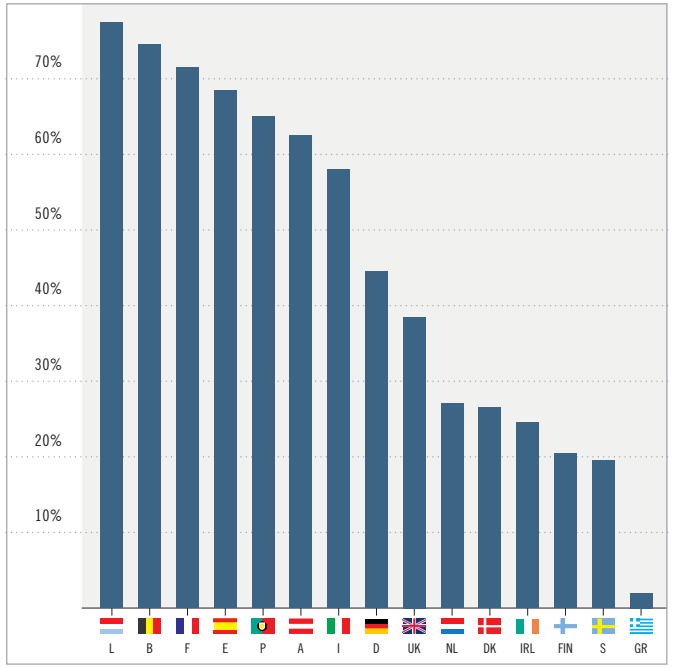
New passenger car registrations in Europe, 1990 › 2006



New passenger car registrations worldwide (% share) › **2006**



Shares of diesel in EU15 in 2006 (% of new cars registered)



SOURCE: ASSOCIATION AUXILIAIRE DE L'AUTOMOBILE, ACEA

New vehicle registrations in Europe by country › 2006

		UP TO 3.5T	OVER 3.5T
AUSTRIA	308 594	30 379	8 414
BELGIUM	526 141	60 393	11 686
CZECH REPUBLIC	123 987	49 491	10 760
DENMARK	154 374	65 349	6 470
ESTONIA	25 582	3 717	1 674
FINLAND	145 659	16 561	4 380
FRANCE	2 000 549	439 273	59 122
GERMANY	3 467 961	197 548	106 885
GREECE	267 669	23 774	2 617
HUNGARY	187 676	21 604	n.a.
ICELAND	17 129	2 520	549
IRELAND	178 766	39 609	7 245
ITALY	2 324 635	217 775	40 143
LATVIA	25 582	2 624	2 237
LITHUANIA	14 234	4 296	3 214
LUXEMBOURG	50 837	3 083	1 592
NETHERLANDS	483 979	63 850	20 911
NORWAY	109 164	42 716	6 527
POLAND	238 993	40 119	15 896
PORTUGAL	194 702	64 482	5 990
SLOVAKIA	59 084	19 504	4 931
SLOVENIA	59 578	6 064	2 194
SPAIN	1 499 032	409 465	44 550
SWEDEN	282 766	39 702	7 492
SWITZERLAND	269 452	23 536	5 396
UNITED KINGDOM	2 344 864	329 691	59 805
TOTAL	**15 360 800**	**2 217 125**	**440 680**

SOURCE: ACEA

New motor vehicle registrations in selected regions
(in thousands)

	2004	2005	2006	%
EUROPE*	19 680	20 928	21 446	2,5
EU15	16 355	16 420	16 618	1,2
EFTA	463	465	477	2,6
EU10	954	880	922	4,8
Eastern Europe (1)	1 919	3 163	3 429	8,4
AMERICA	21 886	22 356	22 283	-0,3
NAFTA	19 993	20 239	19 894	-1,7
of which USA	17 298	17 445	17 048	-2,3
Mercosur	1 893	2 117	2 389	12,8
of which Brazil	1 581	1 715	1 928	12,4
ASIA	15 003	16 122	17 161	6,4
Japan	5 853	5 852	5 740	-1,9
South Korea	1 131	1 184	1 218	2,9
China	4 574	5 314	6 560	23,4
India	1 344	1 441	1 750	21,4
Others (2)	2 101	2 331	1 893	-18,8
REST OF THE WORLD (3)	1 503	1 657	1 709	3,1
TOTAL WORLD	**58 083**	**61 063**	**62 599**	**2,5**

SOURCE: SOURCE: ACEA, VDA

* Europe = EU15 + EU10 + EFTA + Eastern Europe
(1) Eastern Europe = Romania, Russia, Turkey, others
(2) Others: Indonesia, Malaysia, Philippines, Taiwan and Thailand
(3) Rest of the world: Australia, NewZealand and South Africa

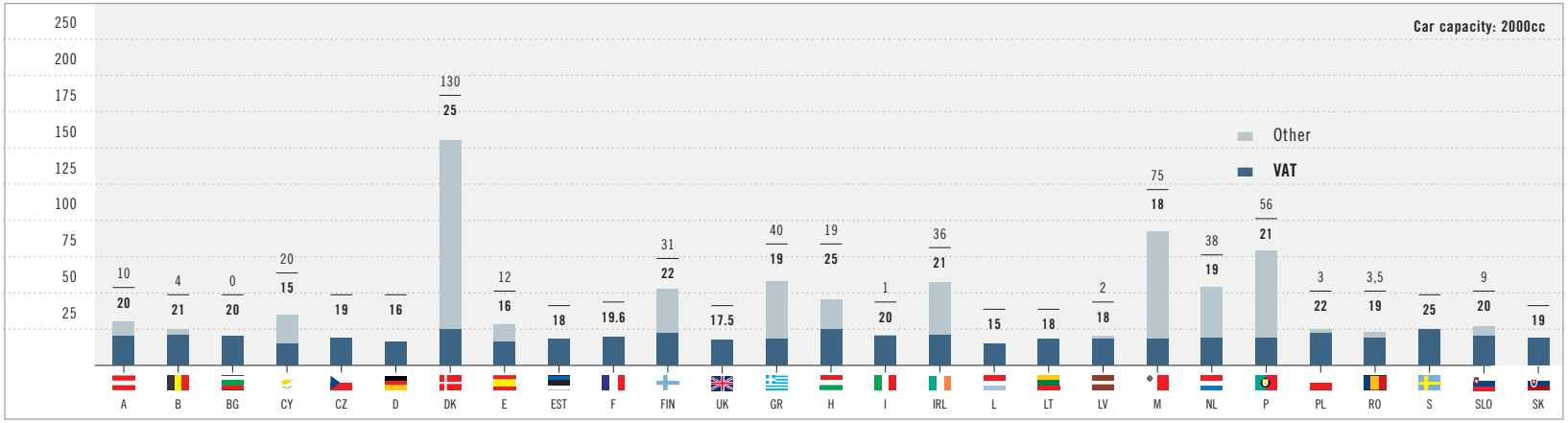
TAXATION

- In 2005, taxes associated with the purchase and use of motor vehicles contributed over EUR 360 bn to the revenues of the EU15 member state governments. This represents 3.5% of the EU15 gross domestic product.
- In 2006, eleven EU member states (Austria, Belgium, Cyprus, Denmark, France, Italy, Luxembourg, the Netherlands, Portugal, Sweden, the UK) levied passenger taxes that are totally or partially based on the car's CO_2 emissions and/or fuel consumption.

Excise duties on fuels in €/1000 litres

	A	B	BG	CY	CZ	D	DK	E	EST	F	FIN	UK	GR	H	I	IRL	L	LT	LV	M	NL	P	PL	RO	S	SLO	SK	MINIMUM RATES
UNLEADED PETROL	417	592	271	305	400	655	508	396	288	589	588	682	313	413	564	443	442	287	276	474	668	558	356	328	366	360	398	**359**
DIESEL	297	328	220	250	336	470	404	294	245	417	319	693	260	339	413	368	278	245	236	332	365	339	290	260	394	303	373	**302**

Motor vehicle taxation levels in the EU (Tax as a % of the net price of the car)



Fiscal income from motor vehicles in the EU15

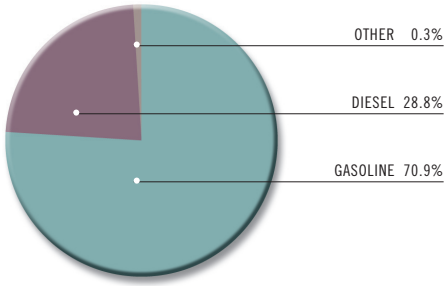
	AUSTRIA	BELGIUM	DENMARK	GERMANY	SPAIN	FRANCE	GREECE	IRELAND	ITALY	NL	PORTUGAL	FINLAND	SWEDEN	UK
	€ bn	€ bn	DKK bn	€ bn	€ bn	€ bn	€ bn	€ bn	€ bn	€ bn	€ bn	€ bn	SEK bn	£ bn
	2004	2004	2005	2005	2005	2005	2005	2005	2004	2003	2005	2004	2006	2005
Purchase or transfer														
VAT on vehicles, servicing/repair parts, tyres	2.143	4.291	N.A.	25.000	5.868	12.477	N.A.	0.058	19.340	2.037	1.279	1.250	15.000	12.83
New vehicle sales		1.176		18.200	3.535	7.079				0.748		0.750		
Second-hand vehicle sales		0.074		2.030	0.070	0.611				0.085				
Services and repairs + tyres		1.416		3.550		4.787				1.204		0.490		
Accessories and spare parts		0.865		1.220	2.261	N.A.								
Fuel & lubricants	4.270	5.765	14.775	41.100	16.801	32.087	2.357	2.339	32.337	5.855	3.428	3.074	46.600	23.346
Sales & registrations taxes	0.440	0.319	21.109		1.374	1.536	0.878	1.712	2.067	2.874	1.211	1.310		
Annual ownership taxes	1.400	1.463	8.693	8.673	2.169	1.207	0.702	0.802	5.500	2.108	0.136	0.513	10.700	4.871
Driving license fees		0.007		0.065	0.078									0.07
Insurance taxes	0.280	0.449	2.040	3.330	0.699	4.057			4.300			0.219		
Tolls	1.215		0.456			7.666	N.A.	0.039	1.050					
Customs duties		0.093		0.445							0.119			
Other taxes	0.550	0.520		0.287	0.351	1.266	0.019	0.136		0.107	0.089		6.500	3.709
TOTAL	10.298	12.148	47.073	78.900	27.344	60.296	3.956	5.086	64.594	12.981	5.918	7.606	78.800	44.826
EURO	10.3	12.1	6.3	78.9	27.3	60.3	4.0	5.1	64.6	13.0	5.9	7.6	9.8	65.6
	GRAND TOTAL = € bn 360													

VEHICLES IN USE

Did you know ?

- The average age of the European car fleet is about 8 years.
- About 70% of the cars on EU roads are less than 10 years old.
- The average annual distance travelled by a car in the EU is about 15 000 km/year.
- Car density per 1000 inhabitants in Western Europe in 2006 was 508, in the new EU Members 186 (source: Global Insight)
- About 30% of the European car fleet is diesel powered.

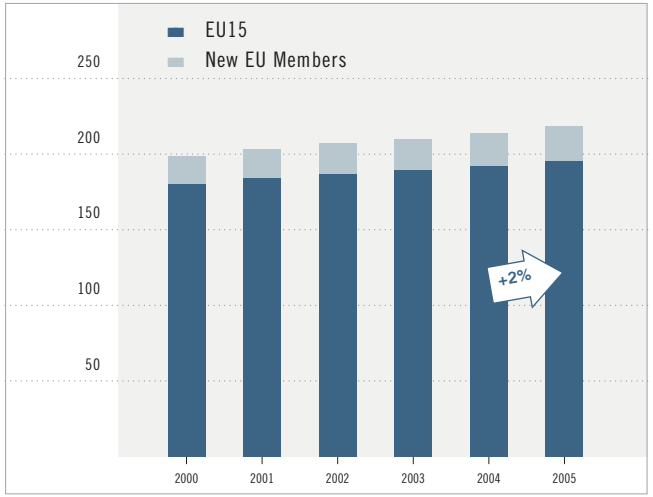
European car fleet by fuel type, 2005



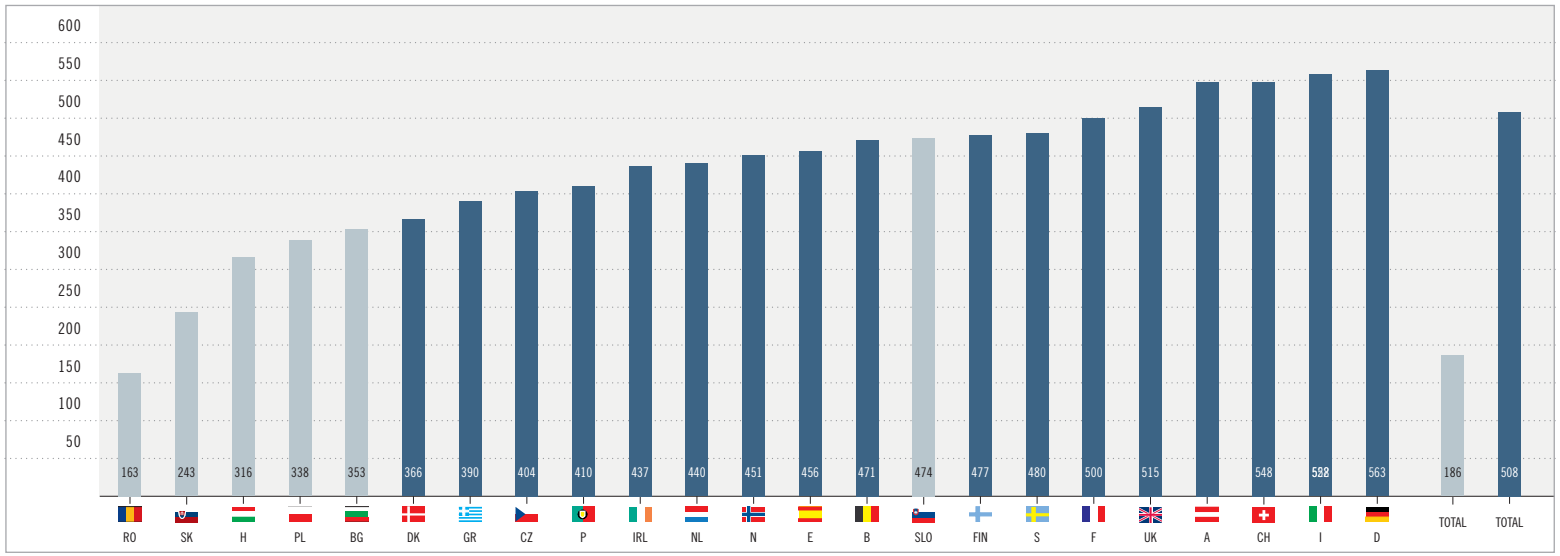
Vehicles in use, 2005 (in thousands)

	Cars	Vans	Trucks	Buses
AUSTRIA	4 157	282	76	9
BELGIUM	4 861	507	153	15
CZECH REPUBLIC	3 959	n.a.	200	20
DENMARK	1 961	421	49	9
FINLAND	2 414	5 549	566	83
FRANCE	30 100	5 549	566	83
GERMANY	46 090	2 016	1 033	84
GREECE	4 204	731	237	27
HUNGARY	3 120	n.a.	n.a.	n.a.
IRELAND	1 665	250	38	n.a.
ITALY	34 667	3 258	1 070	94
LATVIA	742	42	59	11
NETHERLANDS	7 299	893	166	11
POLAND	12 339	n.a.	587	80
PORTUGAL	4 200	1 170	138	15
SLOVAKIA	1 310	n.a.	n.a.	n.a.
SLOVENIA	940	n.a.	n.a.	n.a.
SPAIN	20 250	4 397	453	58
SWEDEN	4 154	385	76	13
UNITED KINGDOM	29 748	3 152	563	101
TOTAL (EU20)	**218 182**	**23 325**	**5 551**	**642**

EU25 car fleet 2000 › 2005 (in millions)



Car density in 2006 (per 1000 population)



Western Europe
New EU Members

SOURCE: GLOBAL INSIGHT

EU25 automobile trade (in million €)

	2004			2005			Trade Balance 05/04
	Imports	Exports	Trade Balance	Imports	Exports	Trade Balance	% change
	24 972	56 315	31 342	25 208	60 820	35 612	14
	3 005	1 836	-1 169	3 257	2 155	-1 102	-6
+	801	7 149	6 348	1 085	8 164	7 079	12
TOTAL	**28 779**	**65 301**	**36 522**	**29 550**	**71 139**	**41 589**	**14**

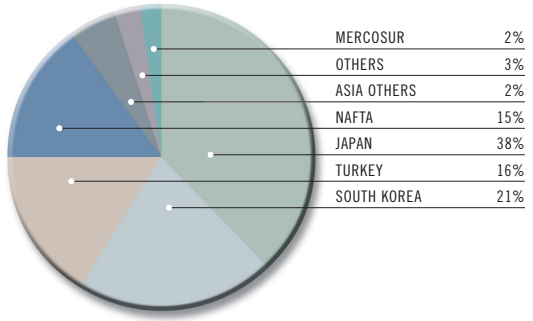
Origin of extra EU25 imports (in € millions)

	Motor vehicles			Passenger cars		
	2004	2005	05/04 % change	2004	2005	05/04 % change
EXTRA-EU25	28 779	29 550	3	24 972	25 208	1
Japan	12 351	11 101	-10	11 671	10 625	-9
South Korea	5 138	6 169	20	5 077	6 101	20
Turkey	4 015	4 658	16	2 099	2 358	12
NAFTA (1)	5 058	4 462	-12	4 865	4 225	-13
Asia Others (3)	1 228	1 395	14	546	458	-16
Others (5)	807	873	8	604	688	14
Mercosur	85	539	++	31	425	++

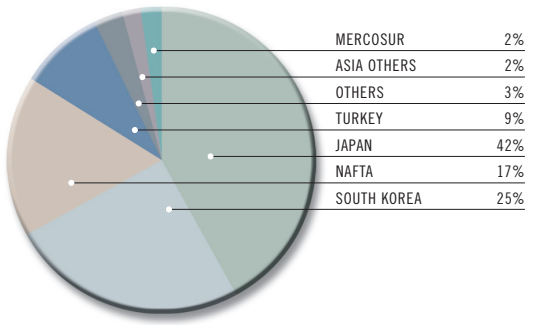
SOURCE: EUROSTAT, CCFA / Data 2006 not available at time of printing

(1) NAFTA includes US, Canada, Mexico
(3) Asia (Others) include Australia, India, Indonesia, Malaysia, Philippines, Taïwan, Thailand, Honk-Kong, Singapour
(5) Others include remaining world wide regions not mentioned in any of the regions above-stated

Motor vehicles › 2005
Origin of extra EU25 imports (value)



Passenger cars › 2005
Origin of extra EU25 imports (value)



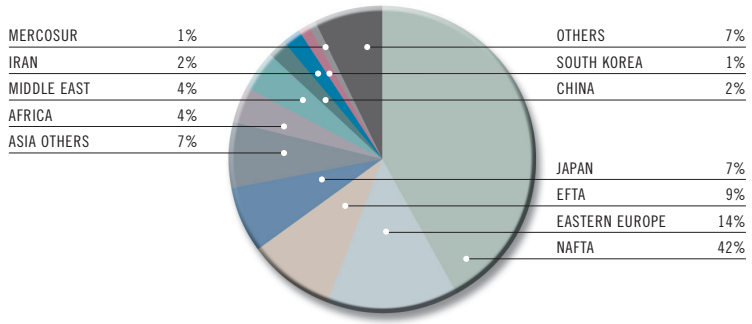
Destination of extra EU25 exports (in € millions)

	Motor Vehicles			Passengers Cars		
	2004	2005	05/04 % change	2004	2005	05/04 % change
EXTRA-EU25	65 301	71 139	9	56 315	60 820	8
NAFTA (1)	27 974	30 388	9	27 283	29 437	8
Eastern Europe (2)	8 901	9 696	9	6 702	6 982	4
EFTA	6 276	6 568	5	5 014	5 179	3
Asia Others (3)	4 762	4 661	-2	2 575	4 534	76
Japan	4 719	4 797	2	4 608	4 713	2
Africa	2 505	2 911	16	1 437	1 822	27
Middle East (4)	2 167	2 783	28	1 483	1 982	34
Iran	1 627	1 521	-7	908	670	-26
China	1 472	1 568	7	1 330	1 397	5
South Korea	513	730	42	386	643	67
Mercosur	272	402	48	245	370	51
Others (5)	4 114	5 114	24	4 344	3 091	-29

SOURCE: EUROSTAT, CCFA / Data 2006 not available at time of printing

(1) NAFTA includes US, Canada, Mexico
(2) Eastern Europe includes Turkey, Russia, Romania, Ukraine, Bulgaria
(3) Asia (Others) include Australia, India, Indonesia, Malaysia, Philippines, Taïwan, Thailand, Honk-Kong, Singapour
(4) Middle East includes Israel, Saoudi Arabia, Emirates
(5) Others include remaining world wide regions not mentioned in any of the regions above-stated

Motor vehicles › 2005
Destination of extra EU25 exports (value)



Passenger cars › 2005
Destination of extra EU25 exports (value)