



Automotive Industry Workshop

Future of the Automotive Industry in Europe, Competitiveness, Innovation and Impact on Suppliers

The workshop started with a welcome note from **Eric Desomer**, EMEA Automotive Industry Leader of Deloitte, followed by a presentation of **Björn Willemsens**, Automotive Industry Director of Deloitte. His speech was focused on the future of mobility. In his point of view, current problems of the automotive industry are widely caused by lack of innovation. The automotive industry does not change fast enough and is limited by trade barriers (e.g. high import tariffs in China). The industry is slowly recovering from the crisis and soon it will get back to normal levels. However, emerging markets are not growing, but “exploding”. Huge increase is expected by 2050. The futuristic vision for the car industry should be “self-driving cars”, manageable by a smartphone. The cars are able to notice the traffic jam and “talk” to each other. This vision is based upon existing technology, but it will take years to make it happen. Saved time, which is not spent in traffic jams, should be capable of increasing welfare and GDP.

However, this change in cars would have many implications regarding other businesses – e.g. there would be less need for taxis or insurance (these cars do not crash). Also, car sharing is becoming popular - people less and less need to own a car. It also brings more efficient use of cars – a vehicle is used more hours each day. This influences the product cycle. Advanced societies increasingly prefer hybrid or electronic vehicles, but they are less willing to pay for them. The car of the future is simple, smaller and cheaper – operated by intermediate companies. This means brand new business models.

In response to questions, speakers highlighted the need for more collaboration on testing platforms. Also, the development of intelligent cars goes along with the evolution of engines. Public transport will also be affected. Clever cars will network with public vehicles and optimize travel inside the network. However, this development requires the cooperation of many actors and in this respect the European Commission can play an important coordinating role.

The second presentation of the panel was by **Yves Toussaint**, General Manager of Green Propulsion. He spoke mostly about different types of innovative car engines. In his point of view, alternative fuels are easy to use in principle but difficult in everyday reality. Storage needs high pressures and refilling takes quite a long time. Regarding their availability, some gases are by-products of oil, but some have to be produced from oil. Regarding biofuels, these are ethanol and petrol ICE. They pose a problem with storage, caused by their low energy density. Therefore volumes need to be larger. Also the production capacity is limited. Purchasing from developing countries creates ethical problems.

Electric engines seem to have good performance, but the problem is the battery technology. They have to be refilled quite often and it takes a lot of time. Currently polymers are used and new car models allow speed up to 250 km/h. Beside the good acceleration, electric cars are also safe and reliable. However, regarding electricity, it is hard to track their real emissions. They depend on how the energy is actually made. The battery problem may be solved by hydrogen – but it has to be manufactured and that produces CO₂. Hybrids seem to have the



brightest future and high possible market share. They have well balanced performance and smaller engines. "Plug-in hybrid" cars are also popular, very quiet, and with fast acceleration. In addition, they may use cheap off-peak electricity.

In reply to questions, it was agreed that regulation is necessary to deal with the problem of used batteries. This, however, can make cars more expensive. Also, it was noted that buying a hybrid is more expensive but it is much cheaper to run.

Prof. Paul Nieuwenhuis, Co-Director, Centre for Automotive Industry Research, Cardiff Business School, dealt with the consequences of new technologies and highlighted the speed of technological progress. He mentioned that "electronic vehicles" are still incentive-driven cars and the car itself costs as much as the battery does. But why do these incentives exist? Emission technology introduces innovation. The EU has a competitive advantage in relation to technologies for complying with environmental regulation. Earlier it was California that had the lead in green regulation, but this has changed – now the EU leads. Other countries are copying EU regulations. The value chain is also influenced by different perceptions of risk at its different stages. He mentioned structural costs of innovation – for example, Audi changed from steel to aluminium structure. The latter was costly and difficult to produce and needed brand new manufacturing processes. BMW recently introduced an electric car where the batteries influence significantly its functionality and structure. Since they are first, they had to set up completely new manufacturing processes.

The workshop was concluded with a presentation by **Michal Kadera**, External Affairs Director of SKODA Auto. He described SKODA's expansion in emerging markets and underlined its importance for overall Czech exports and R&D. About 5% of the Czech working population is actually working in the automotive sector. Central Europe is an important location for the car industry. He mentioned that the "green future" does not include only just cars, but also manufacturing and selling. Production itself can cause more environmental damage than the operation of cars.

It seems that currently also older people are interested in new technologies and e-mobility or car sharing. However it is expensive to build new fast-fuelling electronic vehicles. Regarding car sharing, people often do not treat the shared cars carefully because they do not own them. We have to change people's behaviour (also regarding parking in city centres). He further explained that EU legislation is sometimes cumbersome (e.g. CO2 regulation, quantitative targets) and adds about EUR 2800 to 3600 in extra costs per vehicle. Maybe it would be better to ask companies to invest part of their profits to green innovation, rather than impose quantitative limits. Excessive regulation motivates SKODA to move to the East. It is building production plants in China, Russia and India.

The final discussion was devoted to the liberalisation of world trade and new ways of regulation in the EU. Governments should carefully think about each piece-meal regulation simply because haphazard rules hinder growth.