

Petrol PLAZA

Jacob Schram's vision of the future of mobility

Vehicles will become fully autonomous, connected spaces where people will be able to enjoy entertainment, rest or work, improving general productivity, safety and city structures. Former President of Circle K Europe Jacob Schram looks into the future of mobility.



Jacob Schram speaking at NACS Convenience Summit Europe in London

The mobility industry will undergo radical changes over the next 30 years and forecourt retailers better be ready, warns Jacob Schram, Senior Advisor at McKinsey & Company and former President of Circle K Europe.

Speaking in front of international retailers and suppliers at the NACS Convenience Summit Europe 2019, Schram made a passionate analysis of the development of the mobility sector, speaking of the opportunities that will arise as well as the dangers for those who do not innovate.

Global investment in future mobility start-ups has significantly increased over the last decade. Since 2010, North America has seen a \$79 billion investment in new mobility projects. China and the United

Kingdom follow with \$50 billion and \$34 billion, respectively; other major investors are Israel (\$18.5bn), Singapore (\$6bn), Japan (\$2.8bn), Canada, Hong Kong and France.

Four major disruptor spaces

Mobility in modern economies will be shaped by four disruptive trends based on technology: Autonomous Driving, Connectivity, Electrification and Shared Mobility (ACES). Despite the marginal presence of electric vehicles in most countries, **electrification continues to be one of the hottest topics of discussion** with major oil companies now also dipping their feet in the market.

China will lead the electric vehicle revolution. By 2030, it is expected that 35-50% of new light duty vehicle sales will be electric, 30-40% in the European Union, and between 15% and 30% in the U.S. A country that offers a view into the future is Norway, where the Government heavily subsidized the EV industry (exemption from VAT, no road taxes etc.) and now 58.4% of new car sales are electric – the country expects that number to raise to 100% by 2025. Circle K decided to use Norway as its “laboratory” for the service station business.

“What Norway has proven is that when there is price parity between the two, people prefer to buy an electric car,” said Schram. For him that is key point that will see the tide changing from internal combustion engines (ICEs) to EVs – the moment both vehicles are offered for the same price.

National bans on ICE sales over the next two decades, local bans for circulation in a number of cities, stricter regulations forcing car manufacturers to develop [emission free vehicles](#) as well as increasing driving range and new technologies such as wireless charging will continue to boost the EV industry.

The estimated public **benefits of autonomous vehicles** in the U.S. alone will exceed \$800 billion a year in 2030, according to Schram and McKinsey. The economic benefits will mainly come from reduced congestion, increased safety and better use of real estate by freeing up parking space. With five levels of autonomy recognised (not foot needed; no hands needed; no eyes needed; no focus needed; and no brain needed), data from McKinsey predicts that once cars reach level 5 (after 2030) they will be able to circulate on all roads, even those rural areas not fully registered by high quality maps.



Once again, China will probably take the first steps into the autonomous world. The overwhelming majority of Chinese customers (72%) are interested in trying AVs, compared to 35% of Germans or 33% of North Americans.

Higher levels of **vehicle connectivity** based on artificial intelligence and predictive technologies will allow cars to connect to a driver's digital ecosystem, offer personalized content to all occupants of the car, multisensory interactions and, eventually, to make intelligent decisions. McKinsey has established a framework with five levels of connectivity. By 2030, 45% of global new car sales could be level three or above in connectivity, offering from personalized controls to all occupants to a virtual chauffeur. This would allow for full entertainment, personalized advertisement and other activities in the vehicle.

The fourth element will be the **expansion of the sharing economy** with young generations and Asian countries its biggest supporters. By 2025, self-driving, shared electric "taxis" could provide people with on-demand, door-to-door mobility at a lower cost than a private car. A self-driving EV pooled with 2.5 persons would cost \$0.17 per mile, significantly less than the private EV's \$0.43 per mile, according to data from Bloomberg New Energy Finance and Future of Mobility. This type of mobility will rapidly grow in big cities but will take time to reach rural areas.

What role will gas stations play in this future scenario?

The former President of Circle K Europe believes there are plenty of opportunities for fuel retailers if they act fast and keep an open mind: "Continue to develop fuel solutions as you will continue to sell fuel for the next 10 or 20 years but be ready and have a plan for the future."

The number of forecourts will decrease generally with most sites located in the outer areas of cities

and along highway corridors. They will require more space to offer a wide range of services such as fuels, charging infrastructure, food offerings etc. Circle K decided to become the leader when it came to offering the best EV charging experience. Another major European player, Shell, [acquired the owner of one of Europe's largest EV charging networks](#), NewMotion, in 2017.

In urban areas stations will be able to provide car sharing services, both for ICEs and EVs, bicycle points, car rental and others while having a convenience store on site.

The vision of a future forecourt provided by Schram and McKinsey is similar to that [imagined by German fuel retailer Aral and the DLR Institute of Transport Research](#) last year. Despite the three pillars of the gas station business (fuels, shop and car wash) remaining by 2040, a fourth pillar will be added around new mobility services.

One hundred years ago society went through a radical change as we shifted from horse carriages to the first combustion engine vehicles. Interconnectivity and autonomous vehicles could provide mobility's second biggest revolution. Retailers and suppliers will have to be ready for the impending rapid changes. "The future is bright if we take the opportunity," believes Schram.