

# Petrol PLAZA

## Aral envisions the gas station of the future

German fuel retailer Aral has published a new report by the DLR Institute of Transport Research predicting mobility trends in the urban area. It has also created its concept of a city filling station for 2040.



Aral's concept for a city gas station in 2040 | © Aral

The need for mobility will grow, according to the study. On the roads alone, experts estimate that the number of kilometres travelled in 2040 will increase by around 24% compared with 2010.

Despite a growth in alternative fuels and hybrid vehicles, two thirds of vehicles will run on advanced petrol and diesel fuels.

City filling stations will experience a major make over due to the inclusion of new services for autonomous vehicle fleets, air taxis, and a growing number of electric cars, in addition to the continuous development of the shop business.

This is the conclusion of the new Aral study "Filling Station of the Future", which was presented by

Prof. Dr. Barbara Lenz, Director of the Institute for Transport Research of the German Aerospace Center (DLR) and Patrick Wendeler, CEO of Aral, at a press conference in Düsseldorf.

### **Higher mileage despite declining population**

According to DLR's analysis, Germans will travel 900 billion kilometres a year in 2040 with cars and commercial vehicles - around a quarter more than in 2010. This means a significant increase in mileage, although the population will decline by 4.7 million people in the same period.

By 2040, commercial vehicles will have doubled their mileage - even in the big city. This is mainly due to the growing e-commerce business and the increasing mileage of freight traffic (more than 87%). Private car traffic is the only segment that will fall (5%).

### **A new fuel mix**

According to DLR, passenger cars will increasingly be powered by hybrid systems in 2040. In this segment, gasoline and diesel hybrids will be the most popular new passenger car registrations with 68 percent. Plug-in hybrids will also increase their sales by 28%. According to DLR calculations, petrol or diesel-powered vehicles, including those with hybrid drive, will continue to play an important role in the overall vehicle population, accounting for two-thirds of the total.

Electrification will continue to make progress with 1.3 million EVs expected to be on German roads in the future. Of the rapidly growing number of commercial vehicles, 13% are to be powered by electricity in 2040.



**Where are the opportunities for retailers?**

"The filling station will certainly continue to play an important role in our mobility in the future. With new functions, it can become a hub in our everyday lives," summarized Prof. Dr. Lenz.

The three classic pillars of the gas station business (fuel, shop and car wash) will remain, but they will adapt to technological changes and changing customer needs.

Sites will see the number of fuel pumps reduced in favour of charging stations, particularly ultra fast charging (UFC) columns with up to 350 kW that can charge cars in five minutes for a range of up to 145 kilometres. Also, we can expect tank robots being used for refuelling and charging. Natural gas and LPG will have offer additional fuel options.

"We will continue to score points in the coming decades with further developed high-quality fuels that increasingly contain bio-components or synthetic fuels and thus be able to make an important contribution to the growing mobility of our society," says Aral CEO Patrick Wendeler.

The shop business will continue to develop in line with customer requirements. Autonomous vehicles could deliver goods from the shop to the home via "home delivery". In integrated café areas, customers receive an offer of fresh, ready-to-eat food before continuing their journey in a pooling vehicle provided at the filling station.

#### **The fourth pillar - new mobility service**

Completely new lines of business will also be created at the filling station in the big city. An important trend for the future are services for autonomous vehicles, specially in big cities. These vehicles from fleet operators would be available on call at the filling station and could also be serviced and cleaned there. The space required for this would be covered by a multi-storey construction.

The changeover from an autonomous fleet vehicle to a rented e-bike or even air taxis is also part of DLR's vision for the big city. For the growing number of e-bikes and e-scooters there will be battery changing machines at the filling stations. Private drivers and commercial delivery services could exchange empty batteries for fully charged ones. Another change in the context of increasing logistics could be the expansion of parcel stations. Meeting rooms and mobile offices could be another service.

With a nationwide network of 2,450 petrol stations in Germany and around two million customers every day, Aral sees itself well positioned for the coming changes. "As long as people move around, there will be a role and potential for the filling station," explains Wendeler.

In spring 2019, Aral and DLR will present the overall report of their study. It will also contain results on filling station models in urban and rural districts and motorway stations.

*Check Aral's video concept for the gas station of the future and more information on the study [here](#).*