Autonomous Valet Parking Project

What's the context?
While COVID-19 has caused a shift to remote working many still commute every day. Even while congestion is temporarily eased by lockdown restrictions, road traffic remains a problem: **the average commuter in Paris and London lost 88 and 69 hours respectively in traffic last year**. In many cities, finding somewhere to safely park is a challenge for many commuters, contributing to congestion and air pollution.

What did we do?
Expleo works with Valeo on its Autonomous Valet Parking (AVP) solution which makes driving in cities quicker, more convenient and safer. Using our deep experience across the automotive value chain, AVP harnesses the power of AI and computer vision, so that **virtually any car can enter, exit and park itself in an underground or multi-storey car park, improving driver safety and saving time**.

What's the impact?
The use of autonomous driving technology will address road congestion in cities by helping people park, getting cars off the road quicker than ever before. Drivers will no longer need to enter deeper levels of car parks, addressing concerns around safety and time-wastage that see only the spaces nearest entrances and exits used. Furthermore, by improving parking space efficiency – **75% of multi-storey parking spaces in Paris are empty despite being one of Europe's most congested cities** – the overall cost of parking can be reduced for consumers. In the future, cars with AVP technology will be able to be serviced, cleaned and more safely and easily when parked.

What's next?
The second version of AVP is already in production, addressing some of the shortfalls of the first-generation technology. AVP 2 makes use of sensors in parking infrastructure as opposed to just those in cars. This removes 'blind spots' and 'dead zones' in **computer vision mapping used in autonomous driving to make it even safer and more widely applicable**. Manufacturers hope to deploy this technology by 2022. AVP technology has also been earmarked to improve the jockeying process of cars on the factory floor.

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