
Media information

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Volkswagen Group teams up with Microsoft to accelerate the development of automated driving

- **Volkswagen Group's Car.Software Organisation and Microsoft will build an Automated Driving Platform for the agile development of automated driving functions**
- **With the cloud-based platform, Car.Software Organisation will simplify its development processes on Microsoft Azure to bring automated driving solutions to the Group's cars even faster**
- **With the Volkswagen Automotive Cloud, the automated driving functions can be tested, deployed and operated**

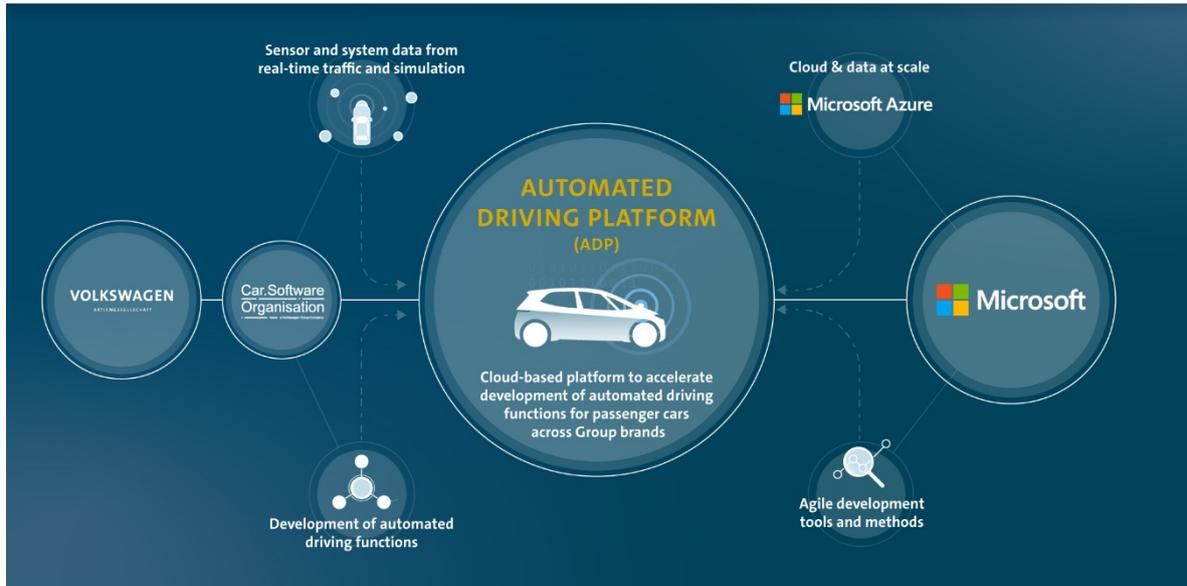
Wolfsburg (Germany) / Redmond, Wash. (USA), February 11, 2021 – Volkswagen Group further strengthens its capabilities in the development of automated driving (AD) solutions. The Group's software company Car.Software Organisation will collaborate with Microsoft to build a cloud-based Automated Driving Platform (ADP) on Microsoft Azure and leverage its compute and data capabilities to deliver automated driving experiences even faster at global scale. With ADP running on Azure, Car.Software Organisation will increase the efficiency of the development of advanced driver assistance systems (ADAS) and AD functions for passenger cars across Volkswagen Group brands. Volkswagen and Microsoft have been strategic partners on the Volkswagen Automotive Cloud since 2018, which will span all of Volkswagen's future digital services and mobility offerings.

“As we transform Volkswagen Group into a digital mobility provider, we are looking to continuously increase the efficiency of our software development. We are building the Automated Driving Platform with Microsoft to simplify our developers' work through one scalable and data-based engineering environment. By combining our comprehensive expertise in the development of connected driving solutions with Microsoft's cloud and software engineering know-how, we will accelerate the delivery of safe and comfortable mobility services,” said Dirk Hilgenberg, CEO of the Car.Software Organisation.

“This is the next evolution of our foundational work with the Volkswagen Group to enhance their transformation as a software-driven mobility provider,” said Scott Guthrie, executive vice president, Cloud + AI at Microsoft. “The power of Microsoft Azure and its compute, data and AI

capabilities will enable Volkswagen to deliver secure and reliable automated driving solutions to their customers faster."

VOLKSWAGEN GROUP TEAMS UP WITH MICROSOFT TO ACCELERATE DEVELOPMENT OF AUTOMATED DRIVING SOLUTIONS



Build AD and ADAS solutions faster with one development platform

ADAS and automated driving vehicles can help improve passenger safety while reducing congestion and making mobility even more comfortable. Building these solutions requires large-scale computational capabilities. Petabytes of data from road and weather conditions to obstacle detection and driver behavior need to be managed every day for the training, simulation and validation of AD functions. Machine learning algorithms that learn from billions of real and simulated miles driven are key to connected driving experiences.

Car.Software Organisation will address these challenges together with Microsoft by simplifying the developer experience and leveraging the "learnings from miles driven" through one database comprising real traffic data from the Group's vehicles as well as simulation data. Microsoft Azure compute, data and machine learning services as well as Microsoft's know-how in agile software development will enable one development environment for Car.Software Organisation's developers globally. ADP will help reduce the development cycles from months to weeks and efficiently manage the huge amount of data. The companies will start working on ADP immediately and are looking to continuously expand the functional scope of the development platform.

Both companies intend to enable technology partners to build tools and services that integrate with the platform to enhance the creation of AD and ADAS solutions.

Volkswagen Group increases in-house development of software in the car

The Volkswagen Group is driving forward the digitalization of the car rapidly. By 2025, the Group will invest around EUR 27 billion in digitalization and increase the proportion of in-house development of software in the car to 60 percent from 10 percent today. Founded last year, the Car.Software Organisation plays a key role in the transformation of the Volkswagen Group towards a software-driven mobility provider. It bundles and continuously expands the Group's software competencies, including the development of high-performance driving functions for passenger cars that will be integrated into future models of Volkswagen Group's brands.

Deploy and operate ADAS and AD solutions with Volkswagen Automotive Cloud

Since 2018, Volkswagen and Microsoft have been collaborating on the Volkswagen Automotive Cloud (VW.AC), which is focused on integrating all the digital services and mobility offerings across the Group brands and models in the future. VW.AC's engineering team, based in Seattle, has enabled data to be exchanged between the vehicles and the cloud through Azure edge services. The cloud connectivity is also enabling Volkswagen to deliver vehicle updates and new features independently of the vehicle hardware to continuously improve the customer experience.

The first VW.AC connected test fleets are expected to hit the road in 2021. Production rollout is planned for 2022. Car.Software Organisation will integrate ADP and VW.AC as the company moves toward further integrating their software solutions, tools and methods to empower its engineering teams, customers, and partners globally. With VW.AC, the AD and ADAS functions developed on top of ADP can be tested, deployed and operated across the Group's vehicle fleet.

Note:

This text and image as well as an interview with Dirk Hilgenberg, CEO of Car.Software Organisation, are available at www.volkswagen-newsroom.com.



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About Car.Software Organisation:

Car.Software Organisation is an automotive software company in the Volkswagen Group that bundles and further expands the Group's software competencies to transform automotive mobility. Founded in 2020, it develops the leading tech stack for the automotive industry with the mission to make the automotive experience safer, more sustainable and more comfortable in a new way – for everyone, everywhere. Around 4,000 engineers and developers around the world are building a uniform software platform for all brands of Volkswagen Group, which includes a unified architecture, an operating system and automotive cloud. The new software platform will first come to play at the end of 2024. In addition, it works on outstanding digital automotive features, including AD and ADAS solutions, one infotainment platform, software functions for linking powertrains, chassis and charging technology as well as new ecosystems and digital business models in and around the vehicle. The Car.Software Organisation operates in software competence centers in Wolfsburg, Ingolstadt, the area of Stuttgart, Berlin and Munich, as well as Seattle.

About the Volkswagen Group:

The Volkswagen Group, with its headquarters in Wolfsburg, is one of the world's leading automobile manufacturers and the largest carmaker in Europe. The Group comprises twelve brands from seven European countries: Volkswagen Passenger Cars, Audi, SEAT, ŠKODA, Bentley, Bugatti, Lamborghini, Porsche, Ducati, Volkswagen Commercial Vehicles, Scania and MAN. The passenger car portfolio ranges from small cars all the way to luxury-class vehicles. Ducati offers motorcycles. In the light and heavy commercial vehicles sector, the products range from pick-ups to buses and heavy trucks. Every weekday, 671.205 employees around the globe produce on average 44,567 vehicles, are involved in vehicle-related services or work in other areas of business. The Volkswagen Group sells its vehicles in 153 countries.

In 2020, the total number of vehicles delivered to customers by the Group globally was 9.31 million (2019: 10.97 million). Group sales revenue in 2019 totaled EUR 252.6 billion (2018: EUR 235.8 billion). Earnings after tax in 2019 ended amounted to EUR 14.0 billion (2018: EUR 12.2 billion).

About Microsoft:

Microsoft (Nasdaq "MSFT" @microsoft) enables digital transformation for the era of an intelligent cloud and an intelligent edge. Its mission is to empower every person and every organization on the planet to achieve more.
