DIGITAL ASSISTANT 14.03.23 ITU

We transform automotive mobility



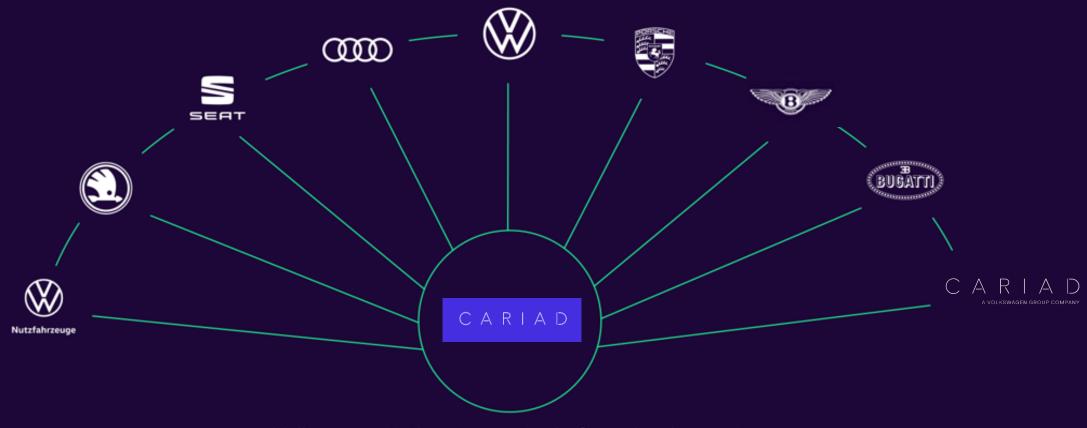
Hotspots

Cariad

- Automation Architecture
- ► FAS suitability
- Outside Speech recognition



Platform is key.



Volkswagen is the pioneer in platform development

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CARIAD has a clear vision paving the way to achieve our purpose



Seamless, convenient, and digital mobility experience enabled through our automotive ecosystem and flagship experiences available to all users and developers in our digital mobility ecosystem achieved via one scalable tech platform and game-changing in-house tech & team – always sustainable



2022 | Germany | CARIAD PUBLIC | CSD class: 2.2 – max. 7 years

One software platform. Three layers.

and the second

Innovative applications

This layer enables all the automotive features and services that shape the great experience of millions of customers.

Future-proof hardware

This layer consists of cameras, sensors, actuators – and a very powerful and scalable computing platform.

Unified software

This layer features <u>VW.OS</u> – our groundbreaking Volkswagen Operating System. This in-vehicle software is constantly connected to our global Volkswagen Automotive Cloud <u>VW.AC.</u>



At CARIAD, we bring sustainable change to one of the largest enterprises on the planet. We are gathering the brightest digital minds.

5,000 colleagues 360

teams

/ nationalities

100 job profiles

of software developed in-house by 2025

60%

15 code languages



2022 | Germany | CARIAD PUBLIC | CSD class: 2.2 – max. 7 years

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With our global presence we ensure proximity to key markets, tech clusters, tech talents & end user.

NAR	
USA CARIAD Inc.	
PARTNERSHIP Microsoft	

EUROPE

GERMANY

CARIAD SE (Wolfsburg, Ingolstadt, Mönsheim, Berlin, Munich, Bochum, Kassel)

ESTONIA

CARIAD Estonia

GERMANY e.solutions diconium VW Infotainment FFS Valtech Mobility ASTech Quartett mobile

RELAND Cubic Telecom SWEDEN **NIRA Dynamics** WirelessCar

CZECH REP.

Digiteq Automotive ISRAFI CyMotive Ltd.

ASIA

LOCAL TEAMS Mobility Asia (China) Embitel (India)

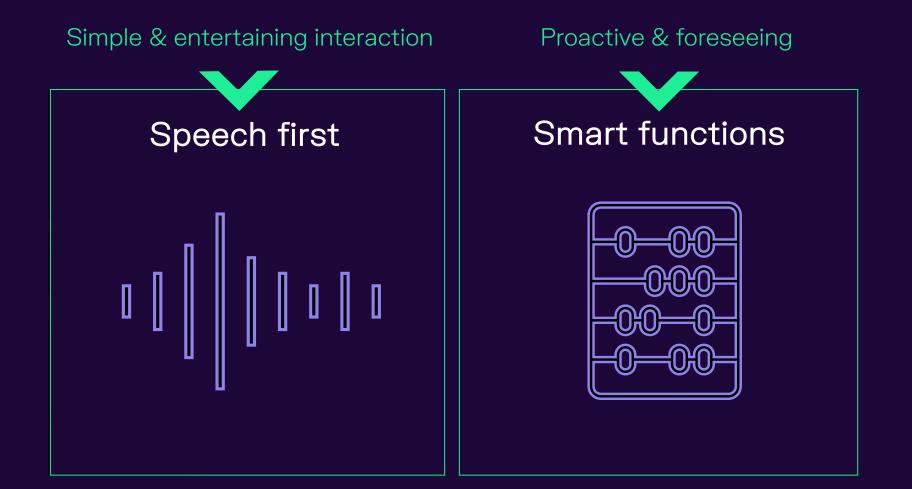
PLANNED ENTITY CARIAD at China

not complete overview



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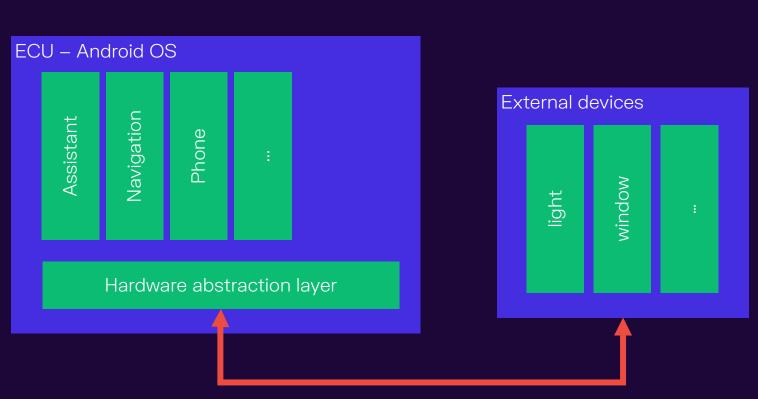






October 19th, 2021 | Location | Dept.

1. Automation architecture





Trigger source information needed to be able to distinguish:

- system vs. user actions
- Haptic vs. Speech

Solution: API Service with command and state including source information



2. Speech command for FAS reliability



"Hey VW, turn off the lane departure warning"

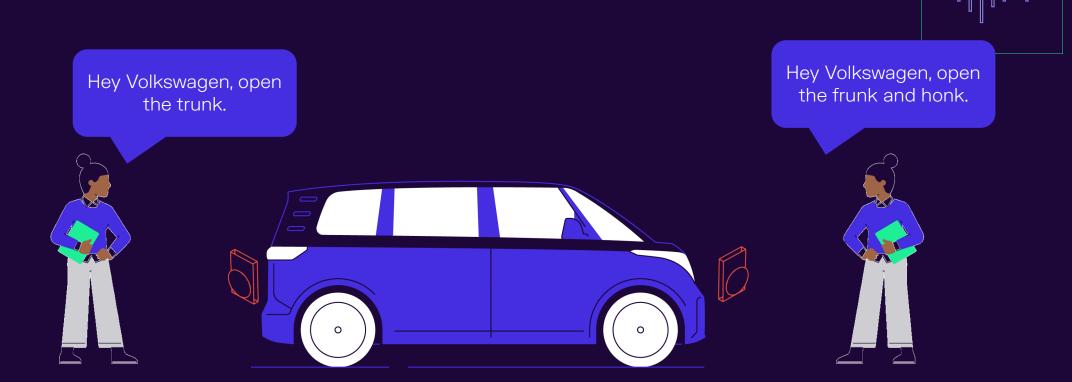
"only" 96% accuracy

Functional safety measures needed for the capability of controlling all actors.



March 26th, 2021 | Location | Dept.

3. Outside speech recognition



Outside speech recognition shall be reflected witin the standard.



Speech first

March 26th, 2021 | Location | Dept.

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Thank you!

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