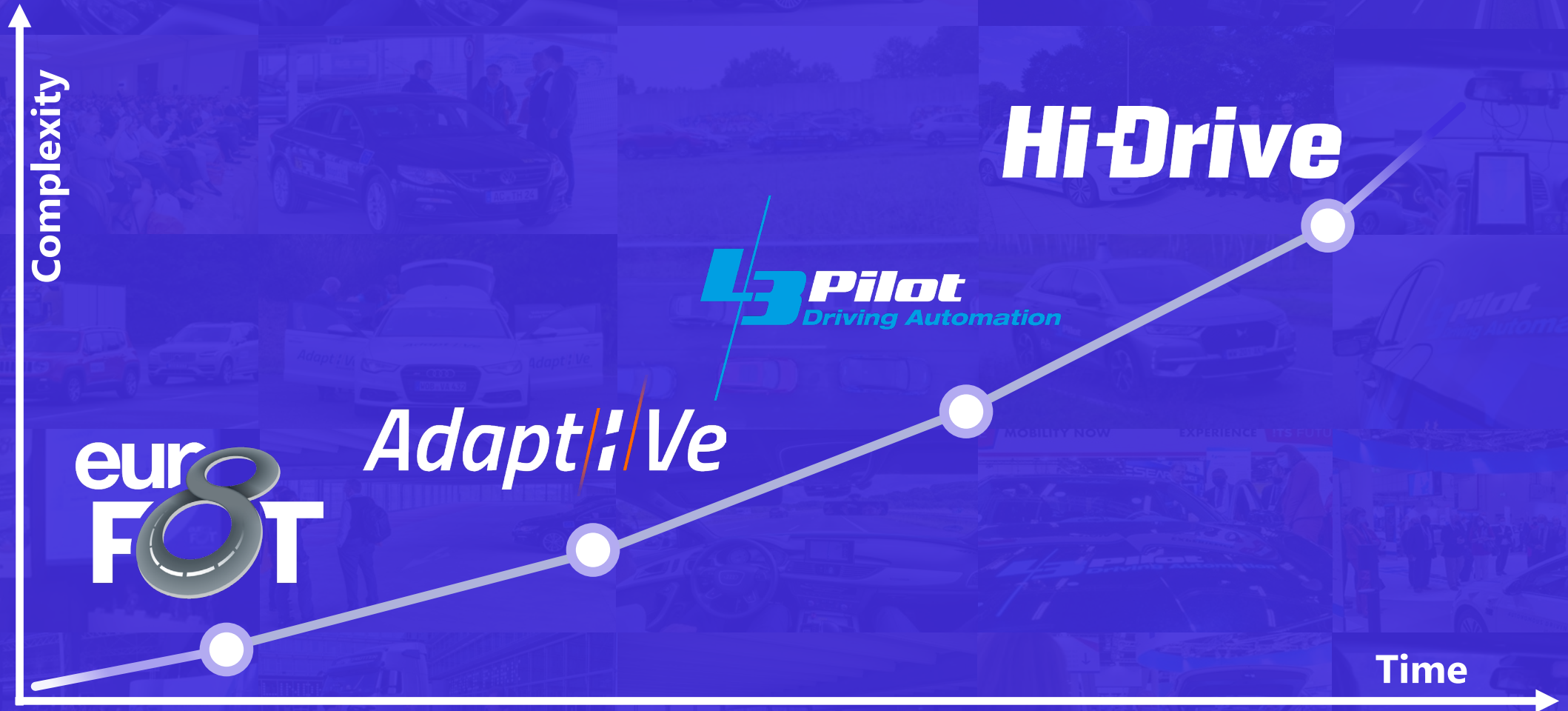


Hi-Drive Project Overview

ITS European Congress Lisbon, 24 May 2023 | SIS72

Aria Etemad | Volkswagen AG

Our history of automated driving: carrying the legacy forward





© Volkswagen

Hi-Drive
Designing Automation

PUSH TOWARDS HIGHER AUTOMATION

- Robust and reliable automated driving
- Extended and defragmented ODDs
- Interoperability across countries and brands

Partners



THE CONCEPT

Enablers

Vehicles

Operations

Effects

Methodology

Users

Phase 1

Phase 2

Phase 3

Outreach

Standardisation, User Education, Acceptance Survey, Business Models, Showcases

Collaboration

Code of Practice for the Development of ADF and Road Testing Procedures

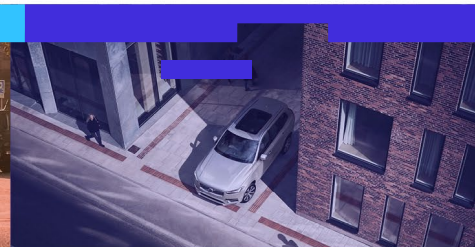
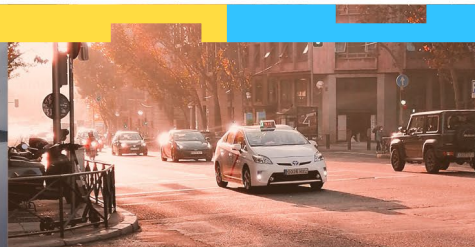
Motorway Chauffeur

Urban Chauffeur

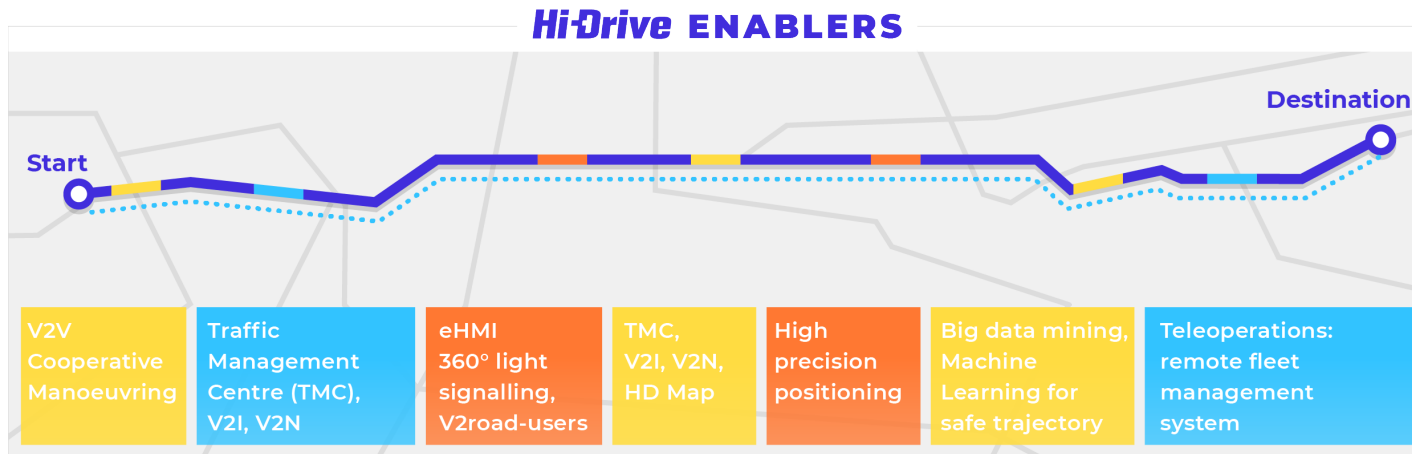
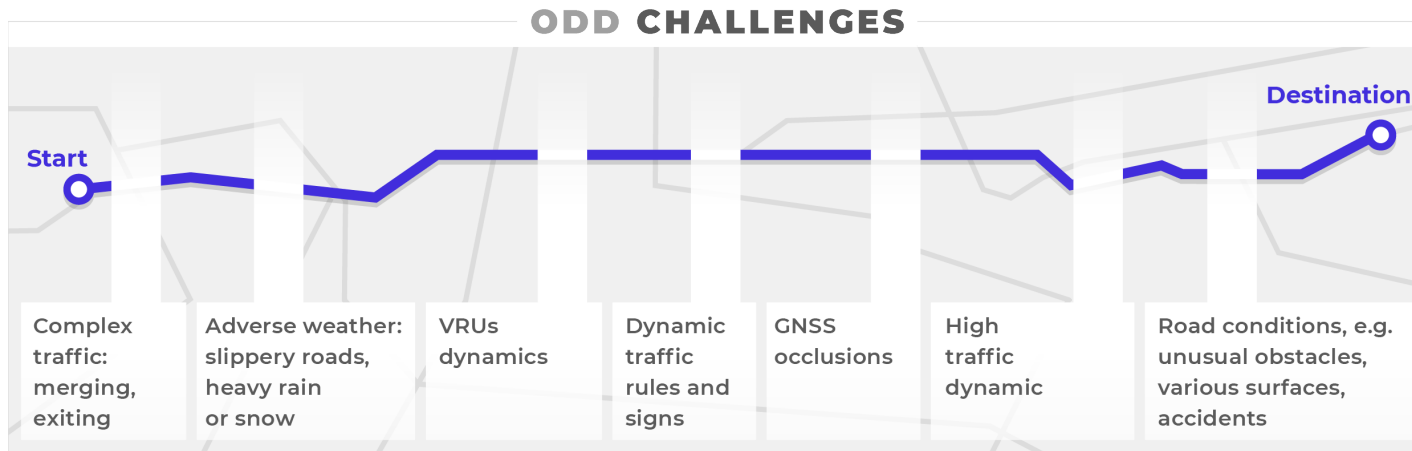
Cross-border Scenarios

Edge Cases

Transition to



Defragmentation of the Operational Design Domain (ODD)



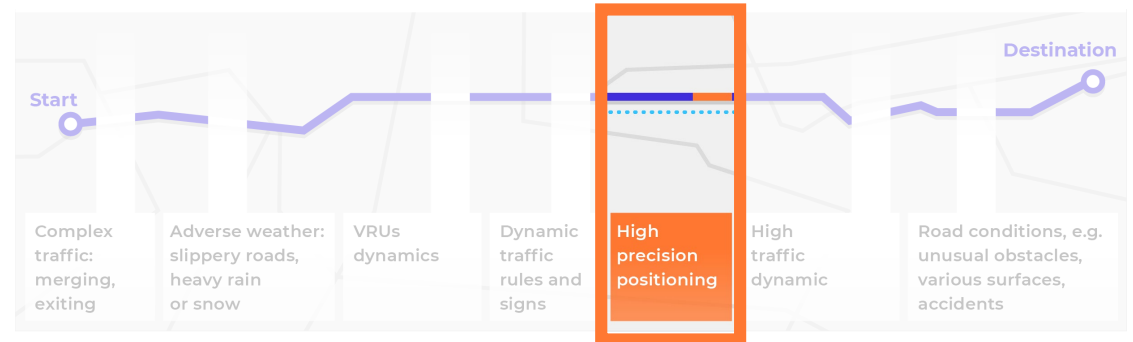
ODD

MANUAL DRIVING

AUTOMATED DRIVING

Cybersecure, interoperable, interactive and user-aware vehicles

Roadshow 2 - Rennsteigtunnel



- **Use case:**
Vehicle enters, drives and leaves in AD mode at ~80km/h without GNSS signal available
- Driving demonstrations + Video production
- **Participation of Belgian Ministry for Mobility**

>> in preparation with **Valeo** - 20-21 June 2023

Knowledge sharing

The image shows a laptop displaying the Hi-Drive website on the left and a Zenodo record page for '3DHD CityScenes: High-Definition Maps in High-Density Point Clouds' on the right. A large blue banner with the URL 'www.hi-drive.eu/data' is overlaid on the bottom right of the laptop screen.

Hi-Drive Website Content:

- Navigation: CONCEPT, PROJECT, DOWNLOADS, NEWS & EVENTS
- Section: DATA
- Text: "This section is dedicated to the publication of publicly released research data, including Common Data Format (CDF), Open Data, Drone Data, OpenDD..."
- Section: 3DHD CityScenes: High-Definition Maps in High-Density Point Clouds
- Image: A 3D visualization of a city street scene with point clouds and various colored markers.
- Text: "Available here: <https://zenodo.org/record/7085090> [External link]"
- Text: "Applications: 3D Object Detection, Map Deviation Detection"
- Text: "Description: 3DHD CityScenes is the most comprehensive, large-scale high-definition (HD) map data to date, annotated in the three spatial dimensions of globally referenced, high-density LiDAR point clouds collected in urban domains. Our HD map covers 127 km of road sections of the inner city of Hamburg, Germany including 467 km of individual lanes. In total, our map comprises 266,762 individual items."
- Text: "Please note: The corresponding DevKit will be expectedly be released by the end of October 2022 on GitHub: https://github.com/volkswagen/3DHD_devkit (date: Sept. 18th, 2022)"

Zenodo Record Content:

- Record ID: 7085090
- Title: 3DHD CityScenes: High-Definition Maps in High-Density Point Clouds
- Authors: Christopher, Sertoli, Benjamin, Fricke, Jenny, Klingner, Marvin, Fingscheidt, Tim
- Views: 0, Downloads: 0
- Indexed in: OpenAIRE
- Publication date: September 16, 2022
- DOI: 10.5281/zenodo.7085090
- Keywords: autonomous driving, high-definition (HD) maps, map deviation detection, map verification, point clouds, LiDAR, traffic signs, traffic lights, poles, roadlines, lanes, construction sites
- Meeting: Intelligent Transportation Systems Conference (ITSC 2022), Macau, China, 08-12 October 2022
- License (for files): Creative Commons Attribution 4.0 International
- Version 1.0 (Sep 16, 2022)
- Share: Facebook, Twitter, LinkedIn, etc.
- Cite as: Plachetka, Christopher, Sertoli, Benjamin, Fricke, Jenny, Klingner, Marvin, & Fingscheidt, Tim. 2022. 3DHD CityScenes: High-Definition Maps in High-Density Point Clouds (1.0) [Data set]. Intelligent Transportation Systems Conference (ITSC 2022), Macau, China.

Knowledge transfer

Hi-Drive

**CODE of PRACTICE
LIVE WEBINAR**

**Friday, 17 February 2023
10:00-12:00 UTC+1**

CoP

Hi-Drive

**1ST SUMMER
SCHOOL**

**September
06 + 07 | 2023**

**AKS Hotel
PORTO HELI, GREECE**

eucar
EUROPEAN COUNCIL FOR AUTOTIVE R&D

Co-funded by the European Union under Horizon 2020 programme Grant Agreement No. 101006654

Example | Automated Driving Risks and Coverage Interaction with Mixed Traffic

Category	Subcategory
Overall Guidelines & Recommendations	
ODD Vehicle Level	
ODD Traffic System & Behaviour Design	
Safeguarding Automation	
Human-Vehicle Integration	

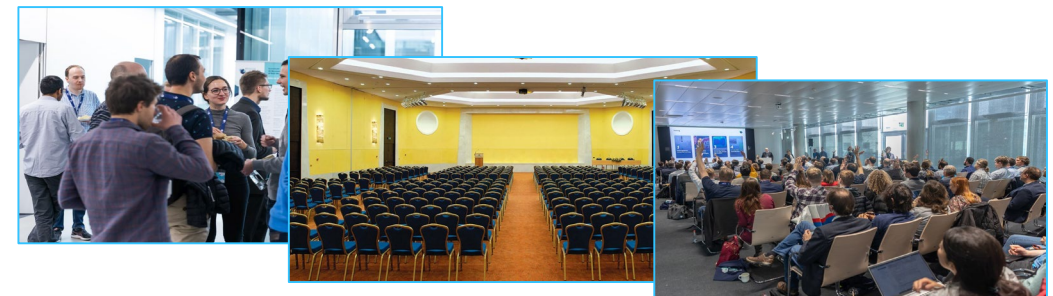
Expressing the multiple dimensions of a CoP question

Contact

Felix Fahrenkrog (BMW Group)
felix.fahrenkrog@bmw.de

Michele Giorelli (APTIV)
michele.giorelli@aptiv.com

Download all webinar presentation here:
www.hi-drive.eu/downloads





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THANK YOU FOR
YOUR KIND ATTENTION.

Aria Etemad | Hi-Drive coordinator
Volkswagen Group Innovation
aria.etemad@volkswagen.de

www.hi-drive.eu

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Hi-Drive

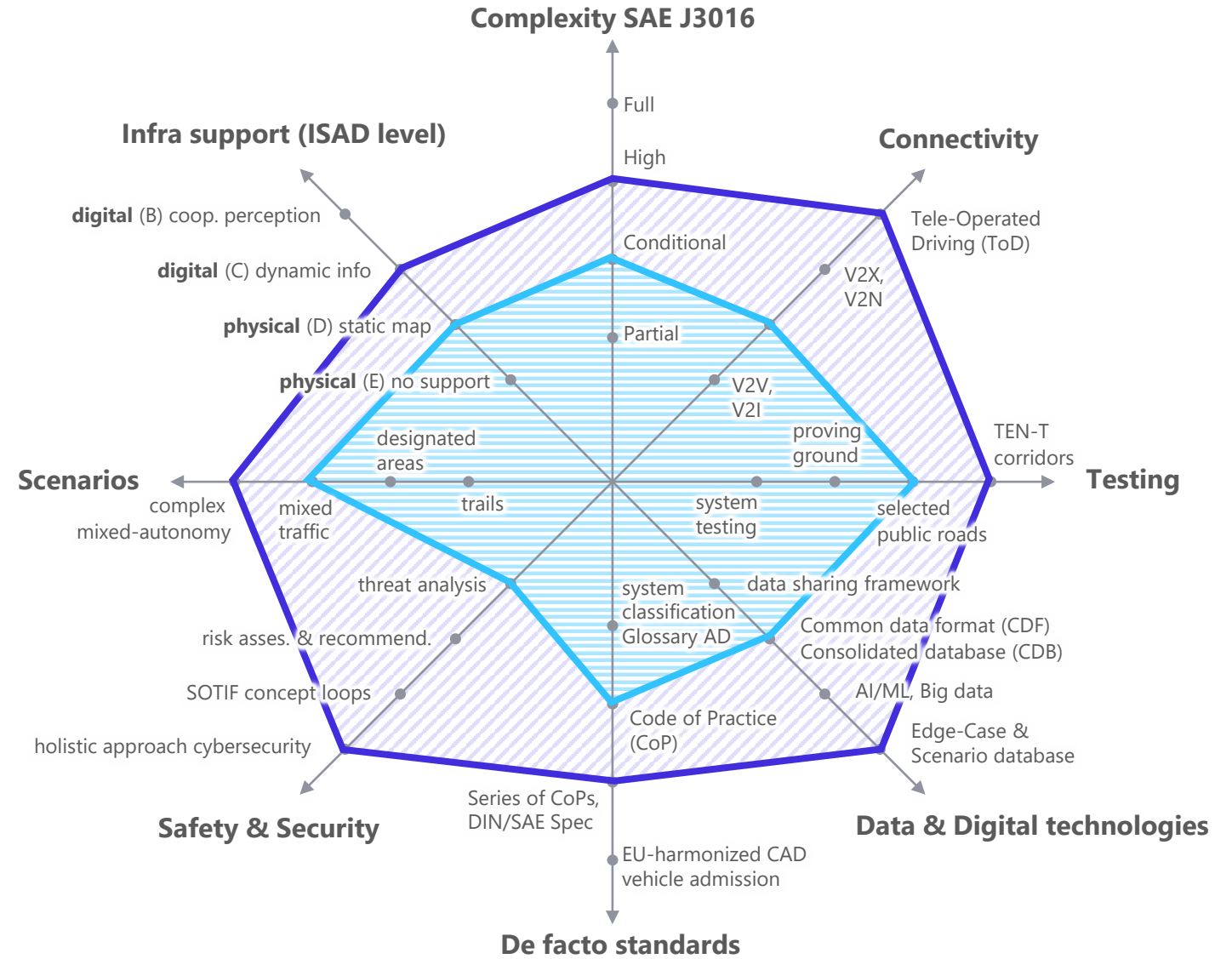
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006664.



Challenges: technology



Hi-Drive



Hi-Drive