Piloting Automated Driving on European Roads

Automated Vehicle Symposium

Orlando, 16 July 2019

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L3Pilot Driving Automation

1,000 drivers

100 cars

10 countries

Pilot across Europe

COUNTRY / REGION / PARTNER	
BE / Brussels	Toyota
DE / Aachen	Ford / ika
DE / Munich	BMW
DE / Offenbach	Honda
DE / Wolfsburg	VW
DE / Ingolstadt	Audi
FR / Paris and other regions	REN / PSA
IT / Turin and Trento	CRF
LU / NL	Aptiv
SE / Gothenburg	Volvo
UK / Coventry	JLR
+ Cross-border activities	
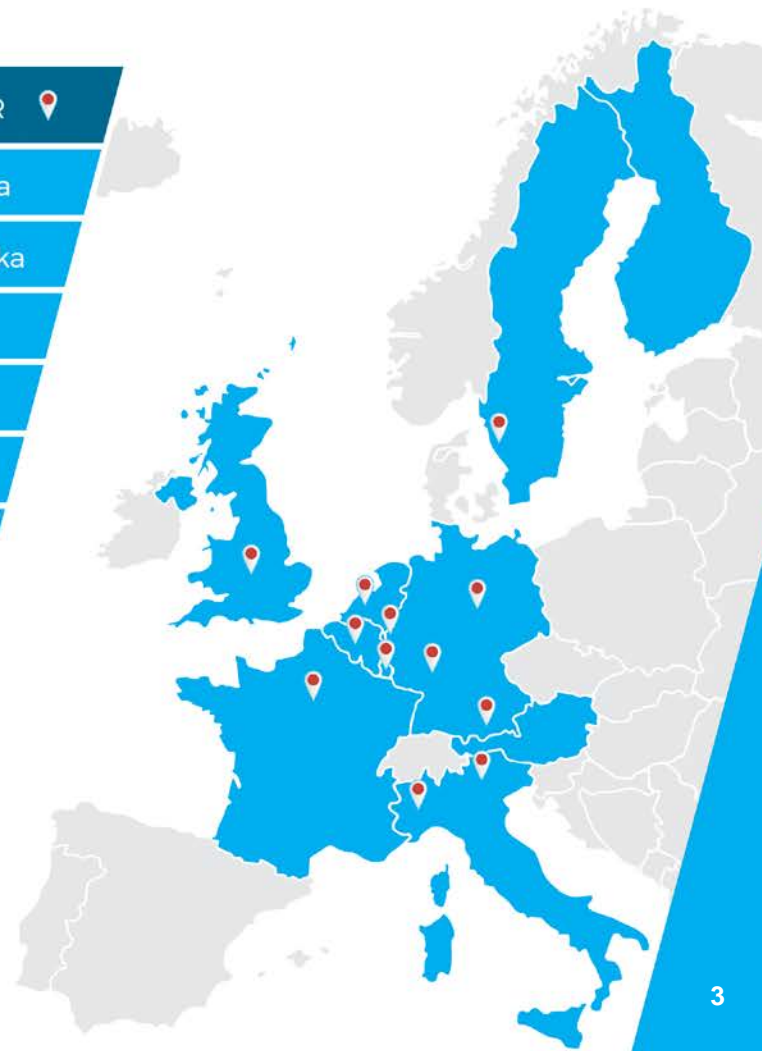
Facts

€68 million BUDGET
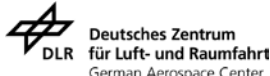
48 months DURATION, starting in September 2017

€36 million FUNDING

34 PARTNERS, among them OEMs, suppliers, research, SMEs, insurers, authorities and user groups

12 COUNTRIES involved: Austria, Belgium, France, Finland, Germany, Greece, Italy, Netherlands, Norway, Sweden, Switzerland, UK

L3Pilot
Driving Automation

Partners

OEMs

VOLKSWAGEN AKTIENGESELLSCHAFT · Audi · BMW GROUP · BMW · MINI · FCA FIAT CHRYSLER AUTOMOBILES · CRF · DAIMLER · Ford

PSA GROUPE · GROUPE RENAULT · HONDA The Power of Dreams · JAGUAR · LAND ROVER · Opel · TOYOTA · VOLVO

Suppliers

APTIV · FEV · veoneer

SMEs

ADAS_Management-Consulting Advanced Driver Assistance and Safety · eict

Researchers

bast · DLR Deutsches Zentrum für Luft- und Raumfahrt German Aerospace Center · ΕΠΙΣΕΥ ICCS · ika | RWTH AACHEN UNIVERSITY

CHALMERS UNIVERSITY OF TECHNOLOGY · SNF CENTRE FOR APPLIED RESEARCH AT NHH · TNO innovation for life · UNIVERSITÀ DEGLI STUDI DI GENOVA

UNIVERSITY OF LEEDS · VTT · WIVW · WMG THE UNIVERSITY OF WARWICK

Insurers

Allianz · Swiss Re

Authority

RDW

User group

FIA

L3Pilot Driving Automation

Applications

TRAFFIC JAM

MOTORWAY

PARKING

URBAN
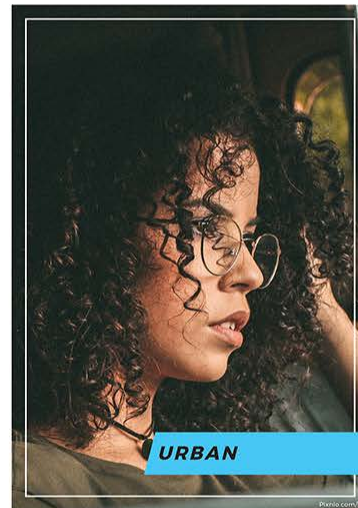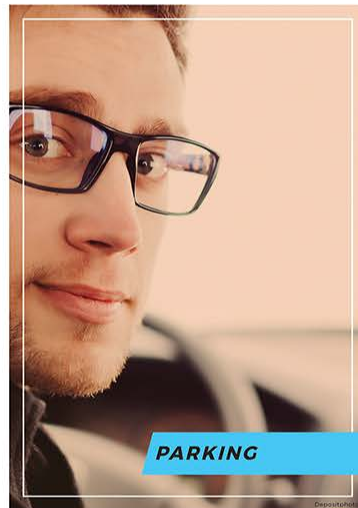
1,000 drivers   **100** cars   **10** European countries

Timeline
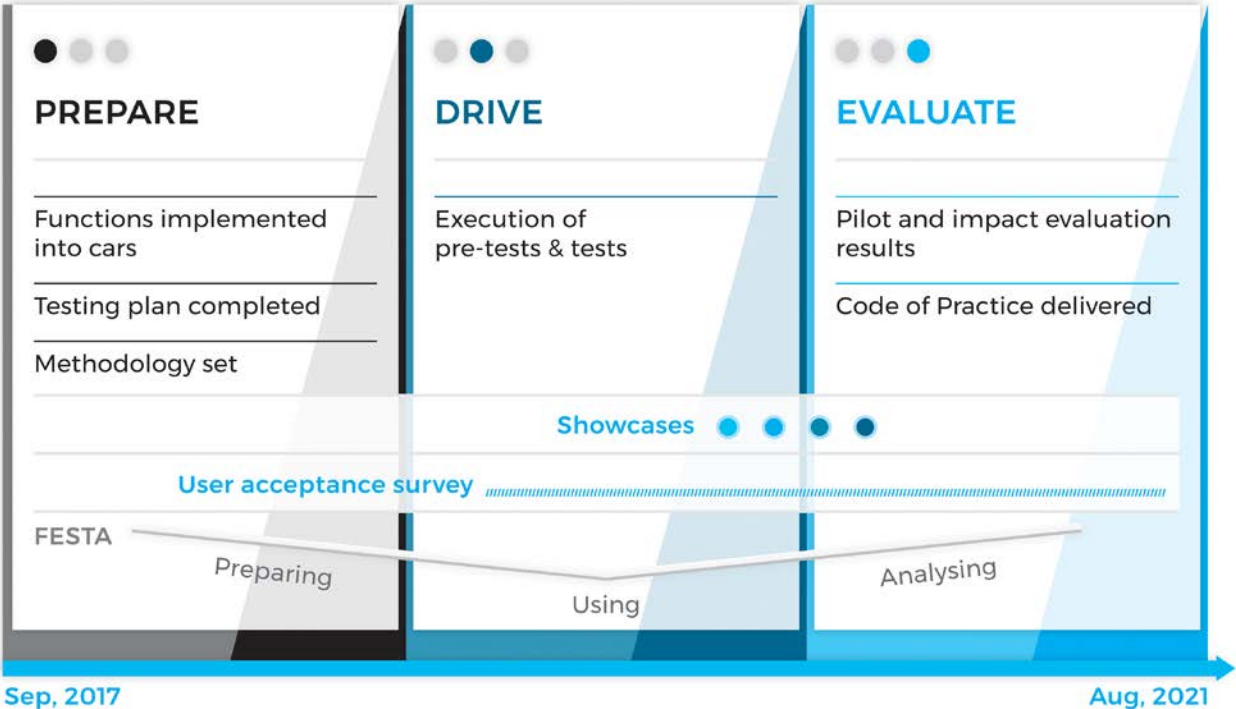
FESTA Implementation Plan adapted to L3PILOT

PREPARE (i)

COVER

- Functions & use cases
- Research questions & hypotheses
- Performance indicators & measures
- Data collection tools
- Study design
- Test site set-up

LEGAL ASPECTS & CYBER-SECURITY (iv)

EVALUATE (iii)

LAY FOUNDATION

- Societal impacts
- Impact on safety, mobility, efficiency and environment
- Driving & travel behaviour
- User acceptance
- Technical performance & cyber-security
- Data processing
- Test site wrap-up

Pre-tests

Tests

DRIVE (ii)

See FESTA Handbook Version 7, " FOT-Net Data FIELD OPERATIONAL TEST NETWORKING AND DATA SHARING SUPPORT",
see also http://fot-net.eu/Documents/festa-handbook-version-7/

Methodology

Outcome Methodology	Expected
Report D3.1 From research questions to logging requirements Process for data collection	2018
Report D3.2 Experimental procedure Detailed testing plan	2019
Report D3.3 Evaluation methods Evaluation plan for automated driving impacts	2019
Report D3.4 Evaluation plan Detailed evaluation procedures	2020

The Cars are ready for Pilot.
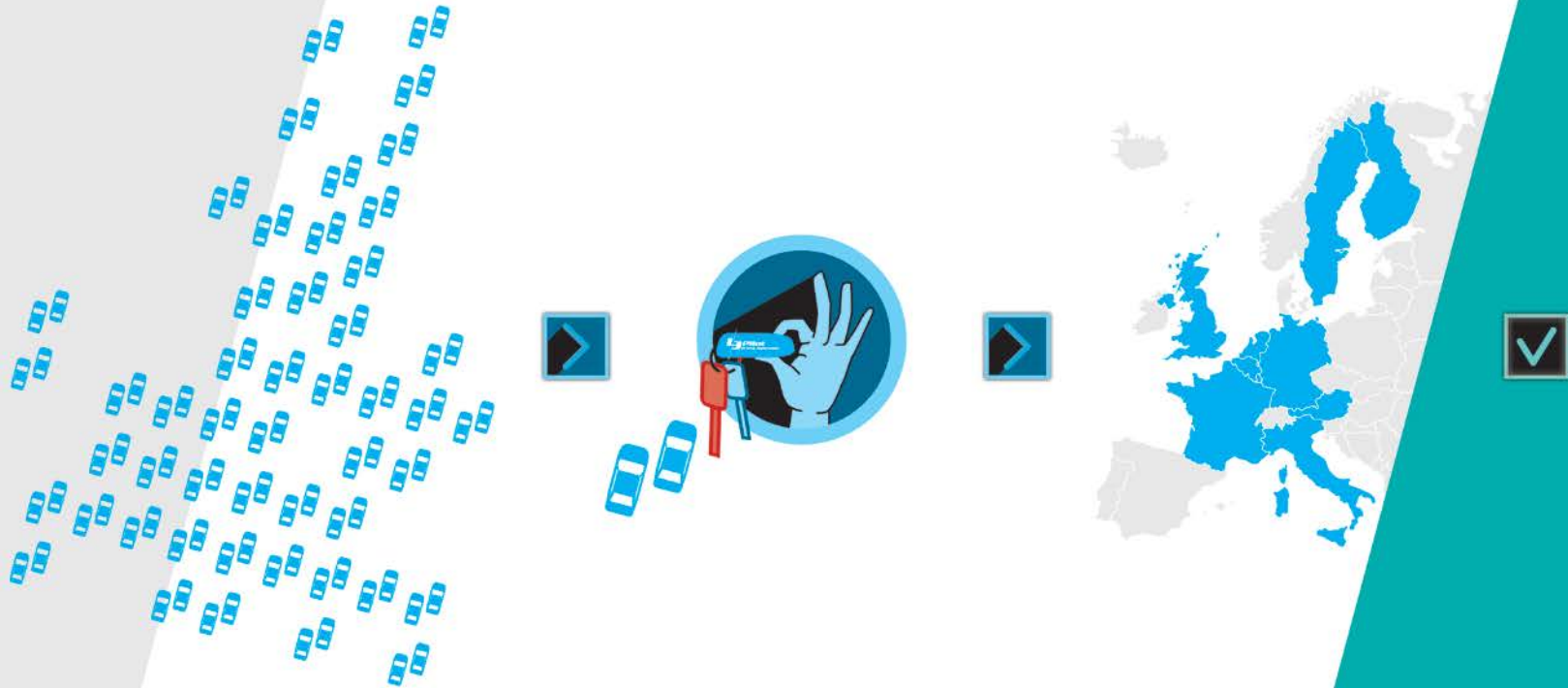
Outcome Fleet	Expected
Report D4.1 Description and taxonomy of automated driving functions Automated driving functions detailed	2018
Report D4.2 Legal requirements to automated driving piloting Legal constraints and requirements	2019
Report D4.3 Summary Summary of the work of the sub-project *Fleet*	2021

Expected Data Flow

Vehicle owner specific – activities in SP6 ⟷ SP6 data management – SP7 analysis
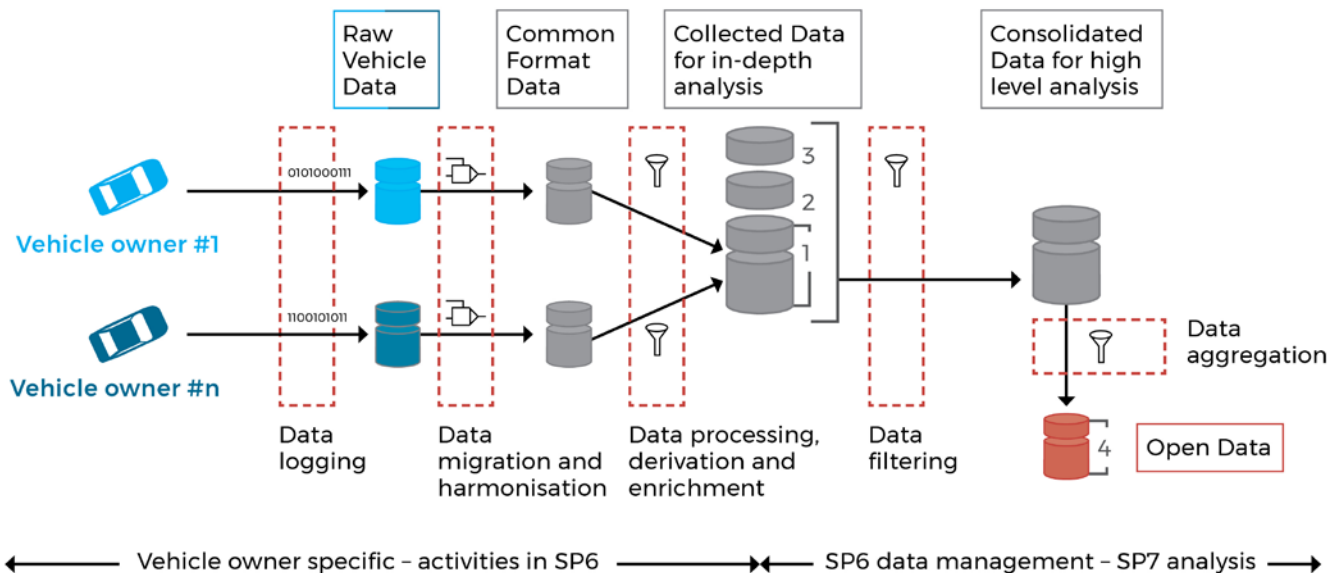
Categories of data:

1 Derived Vehicle Data (CAN, GPS, PIs, video, and/or video annotations)
2 Subjective Data (interviews, questionnaires, simulator studies)
3 External Data (weather, map, infrastructure, other traffic participants, ...)
4 Open Data (aggregated data)

Tools provided by SP5

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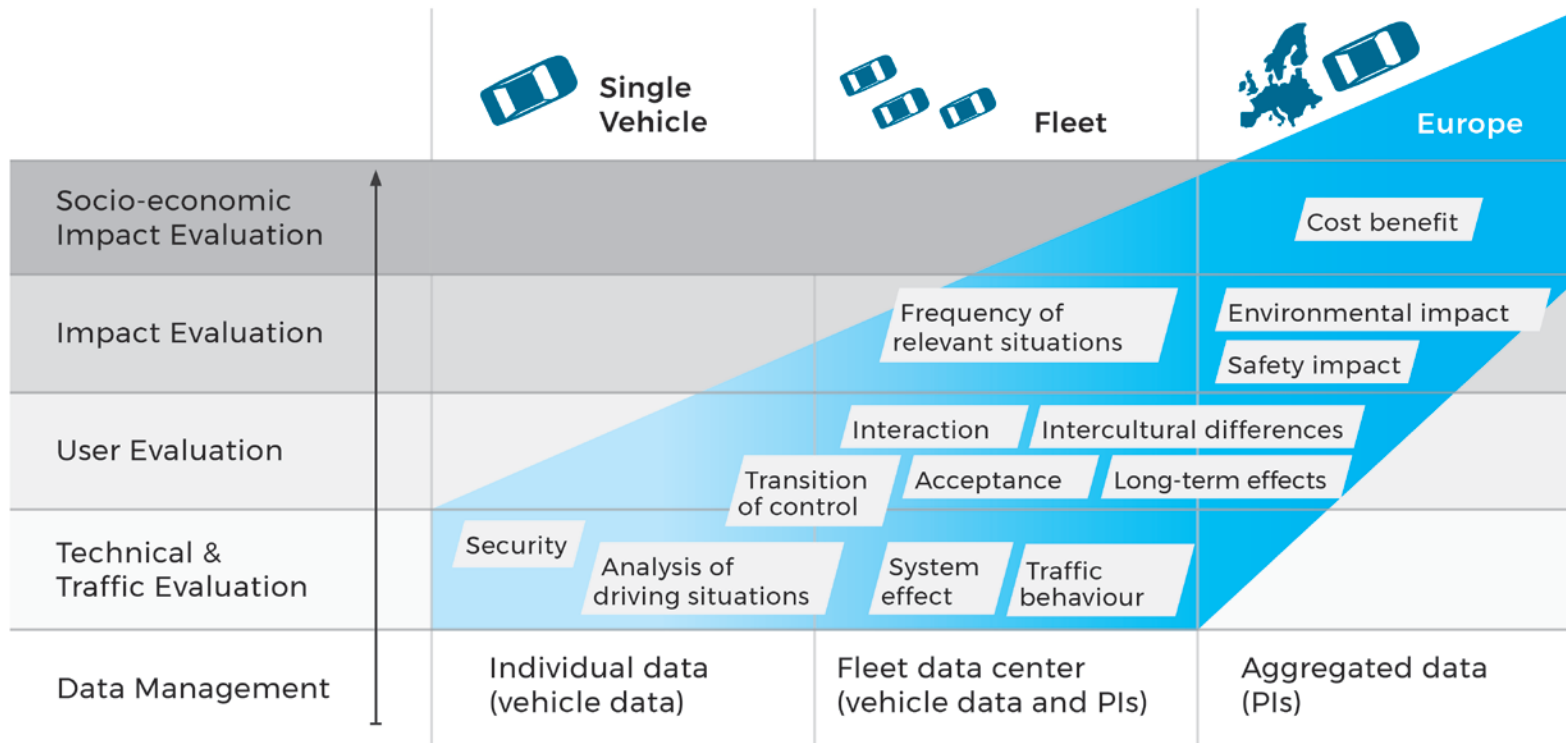| Outcome Data	Expected
Report D5.2 Guidelines and lessons learned Set of guidelines and lessons learned about data logging, storage and management	2021

Evaluation

Outcome Evaluation	Expected
Report D7.1 Annual quantitative survey about user acceptance towards Advanced Driver Assistance Systems (ADAS) and vehicle automation Survey will provide longitudinal quantitative data	2019 – 2021
Report D7.2 L3/L4 long-term study about user experience Results of the long-term study about user experience	2019
Report D7.3 Pilot evaluation results Results on technical, traffic and user evaluation	2021
Report D7.4 Impact evaluation results Impact of the automated driving function concerning traffic safety, emissions and traffic flow	2021

Code of Practice

Objective to provide a comprehensive guideline with best practices for the development of functions: **Code of Practice** for automated driving.

- Collect best practices on relevant topics.

- Describe a typical process for an automated driving function.

- Include hands-on checklists.

- Include safety aspects and methods to confirm a safe operation of automated driving functions.

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Driving Automation

Thank you for your kind attention.

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