



## Published Databases

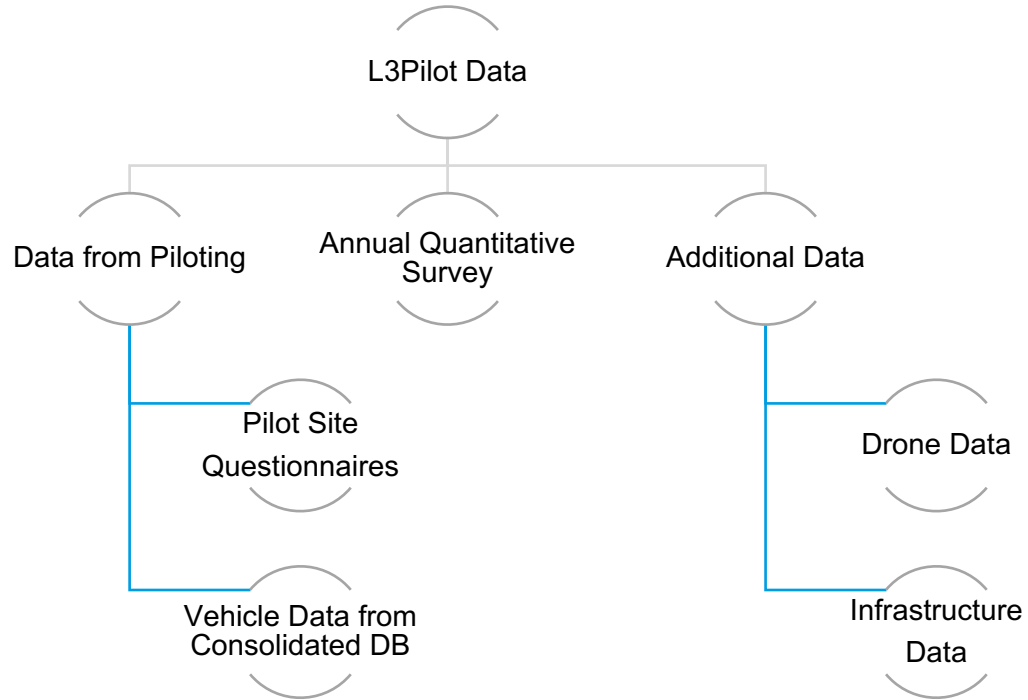
### L3Pilot Final Event

**Hendrik Weber**

ika RWTH Aachen University

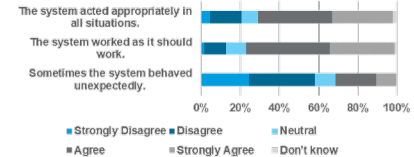
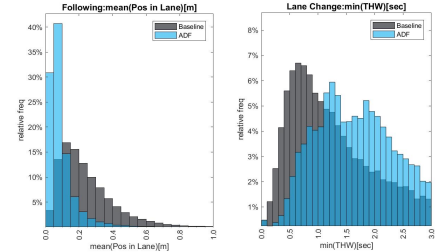
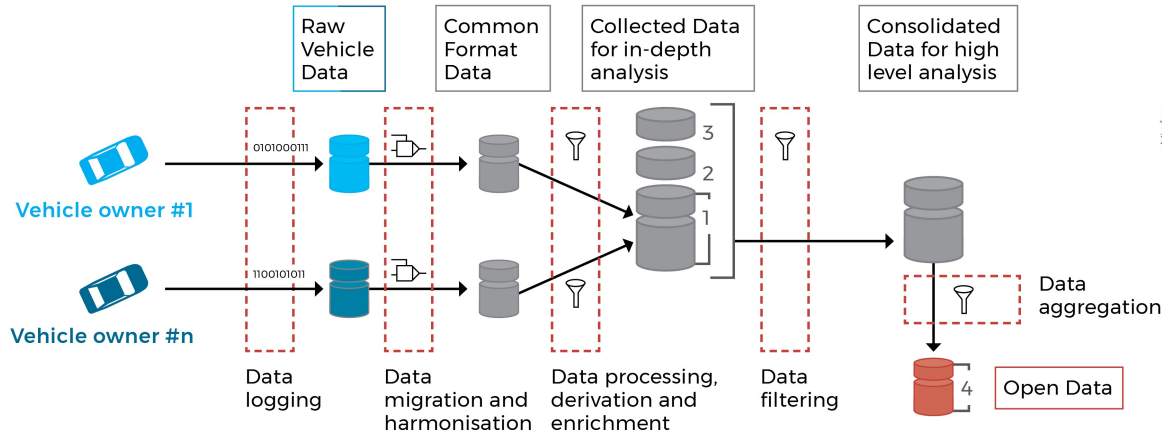


# Data in L3Pilot



# *Pilot Data*

# Open Piloting Data



***To be published soon after the final event.***

# The L3Pilot Open Dataset Overview

## Vehicle data

- Excerpt of consolidated database
- Motorway & urban piloted vehicles
- Driving Scenarios:
  - Free Driving
  - Lane Change
  - Car Following
  - Traffic Jam
- Up to 18 performance indicators per scenario
- ~ 600,000 rows of data

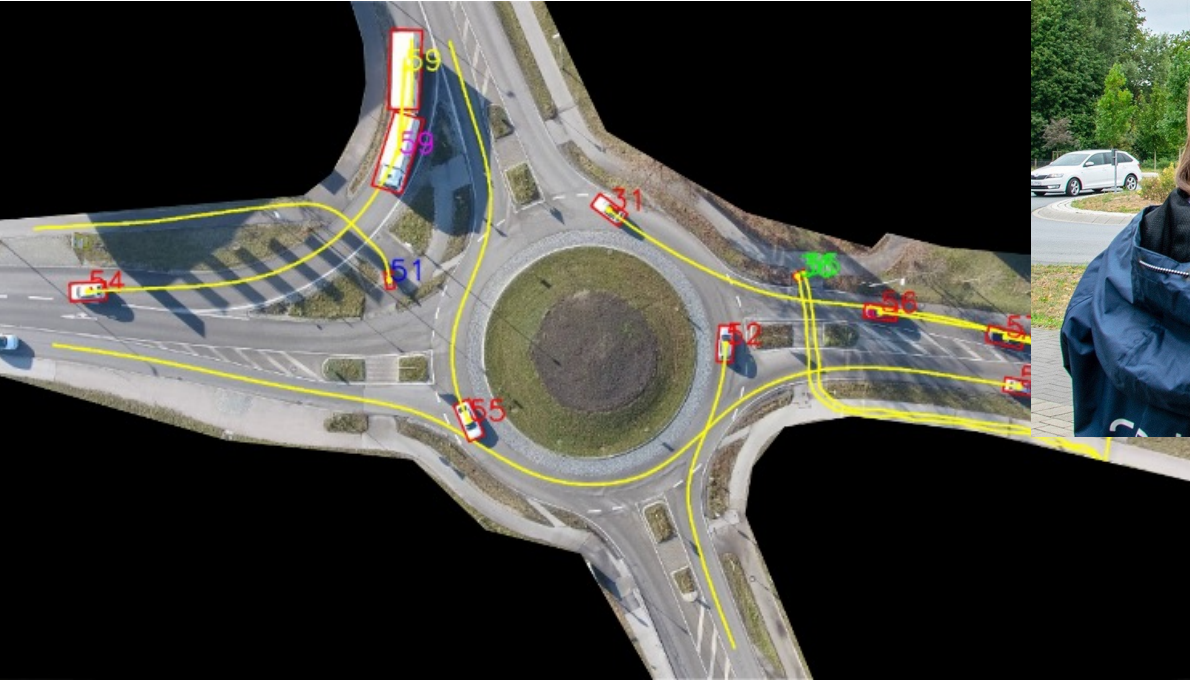
## User data

- 22 questionnaire items from L3Pilot pilot site questionnaire
  - Demographics Information
  - Travel behaviour
  - Willingness to use
  - Non-driving related activities
  - Possible change in travel behaviour
- ~ 500 rows of data

# *Drone Data*

# The openDD Dataset

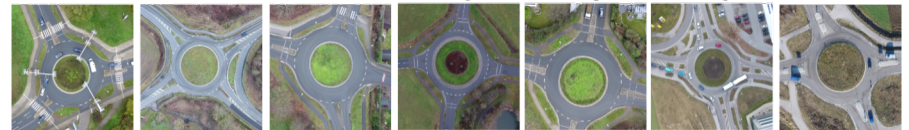
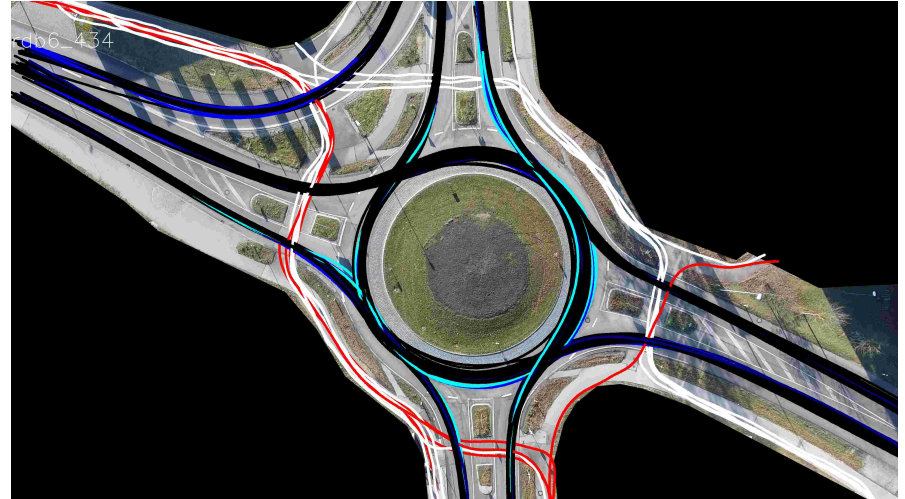
## A Large-Scale Roundabout Drone Dataset



# The openDD Dataset

## A Large-Scale Roundabout Drone Dataset

- *Provided by Volkswagen Group Innovation*
- 7 roundabouts
- 62.7 h of data recorded
- 84,774 trajectories extracted
- Object classes:
  - Cars, vans, trucks, busses, pedestrians, trailers, motorcycles, bicycles

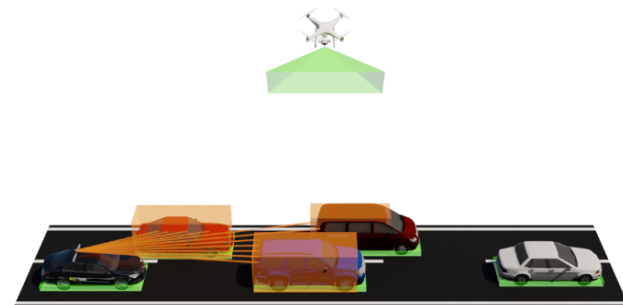




# The Drone-based Reference Dataset



- *Provided by fka*
- Combination of vehicle data and drone data
  - Vehicle data from fka urban Pilot vehicle
  - Drone data as reference data for in vehicle perception



# The Drone-based Reference Dataset

## Sample of Drone Data as Reference



# The Drone-based Reference Dataset

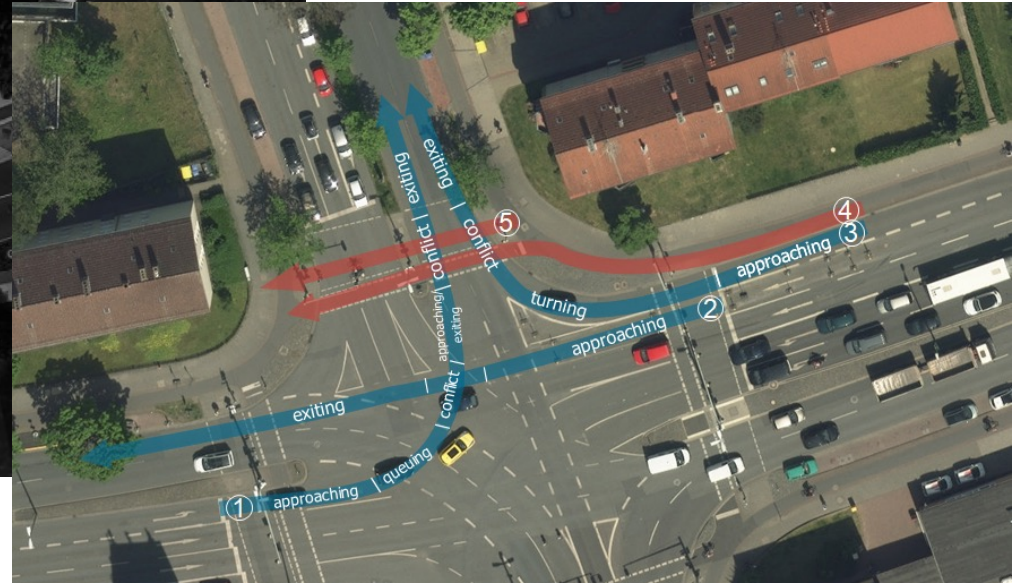
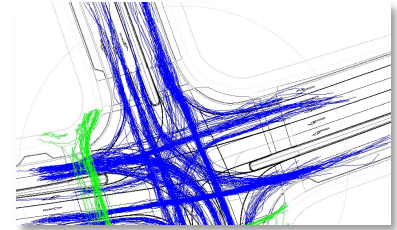
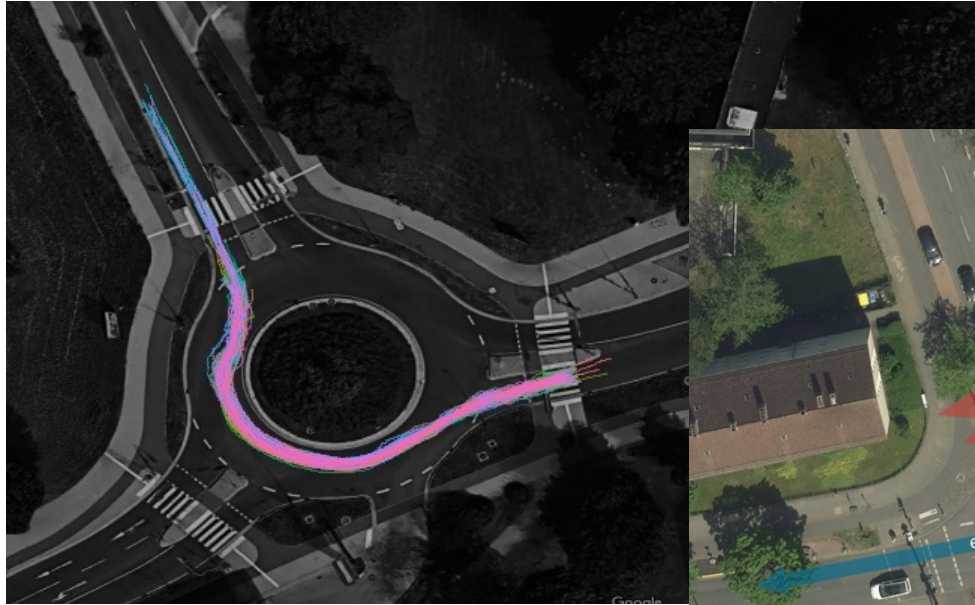
## Drone following the Vehicle under Test



# *Infrastructure Data*

# AIM Dataset

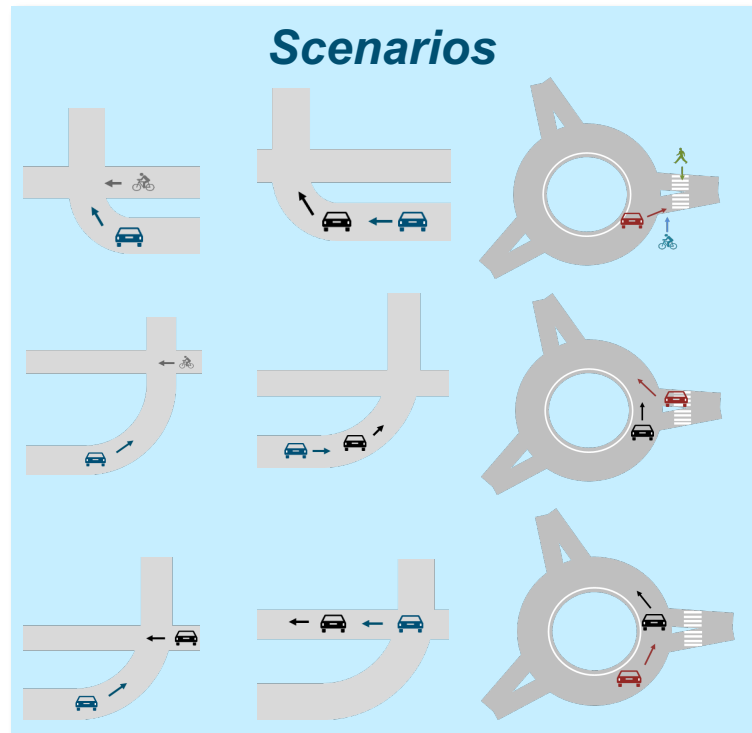
## Application Platform for Intelligent Mobility



# Infrastructure Data

## The Dataset

- *Provided by DLR*
- Data acquired using the AIM
- 9 analysed driving scenarios
- 160,850 instances of scenarios analysed
- Various performance indicators characterising the scenarios:
  - Longitudinal acceleration
  - Speed
  - Traffic flow
  - Interaction



# *Annual Quantitative Survey*



71 questions

3 waves in one survey

27,970 car drivers responded

75% have heard of automated cars

57% intend to use L3

*Tomorrow – 17:15*



# L3 Pilot Global User Acceptance Survey

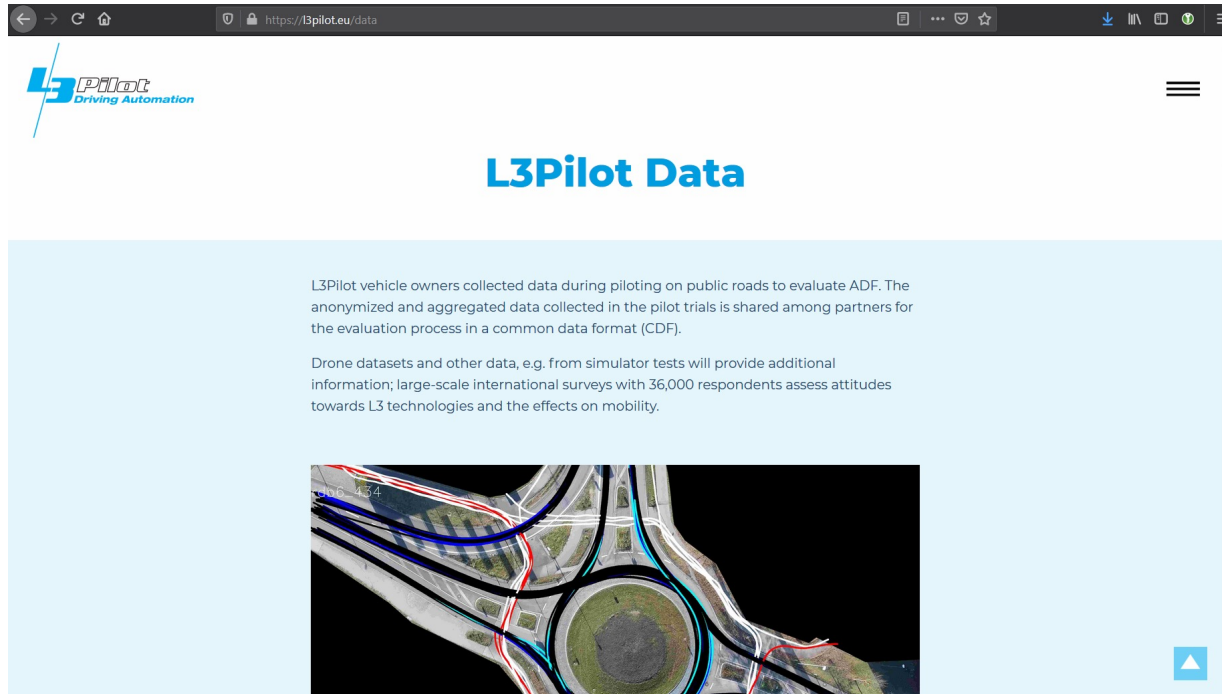
Tanja Kessel, Final Event, October 14, 2021



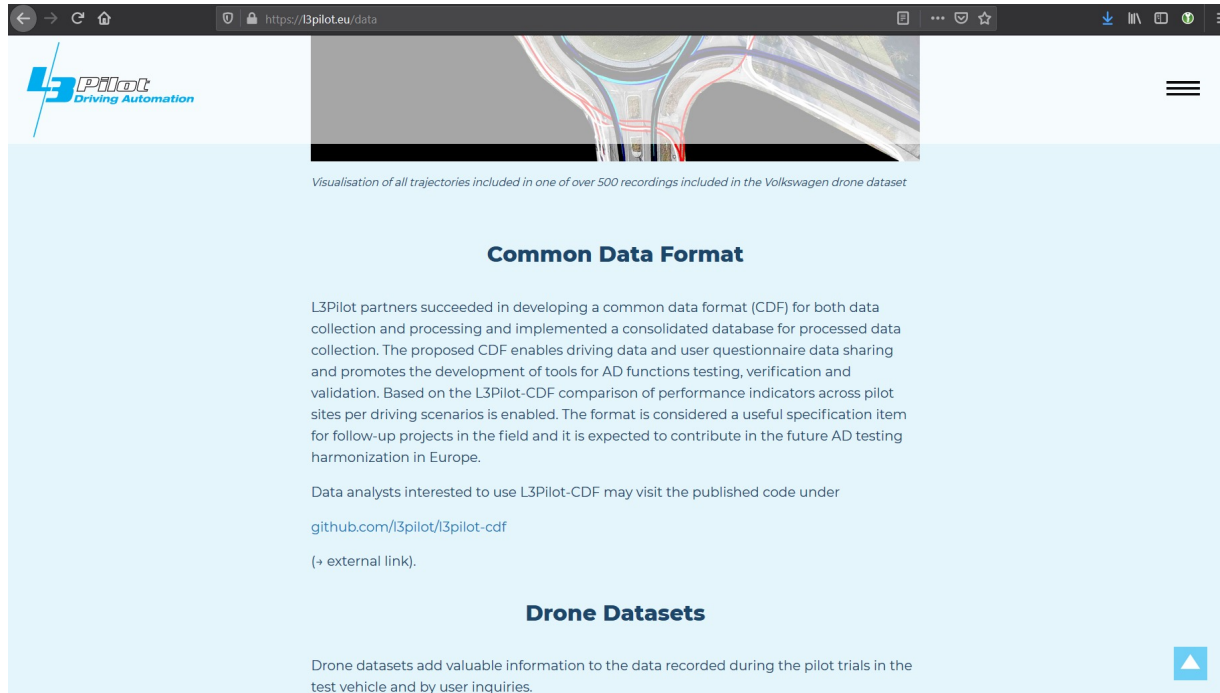
# *How to find the datasets?*

***L3pilot.eu/data***

# L3pilot.eu/data - The Central Access Point to All Datasets



# L3pilot.eu/data - The Central Access Point to All Datasets



The screenshot shows a web browser window with the URL <https://l3pilot.eu/data>. The page features the L3Pilot logo in the top left corner and a navigation menu in the top right. The main content area has a light blue background and includes a header image of a road intersection with overlaid trajectory lines. Below the image is the text: "Visualisation of all trajectories included in one of over 500 recordings included in the Volkswagen drone dataset". The page is divided into two main sections: "Common Data Format" and "Drone Datasets".

**Common Data Format**

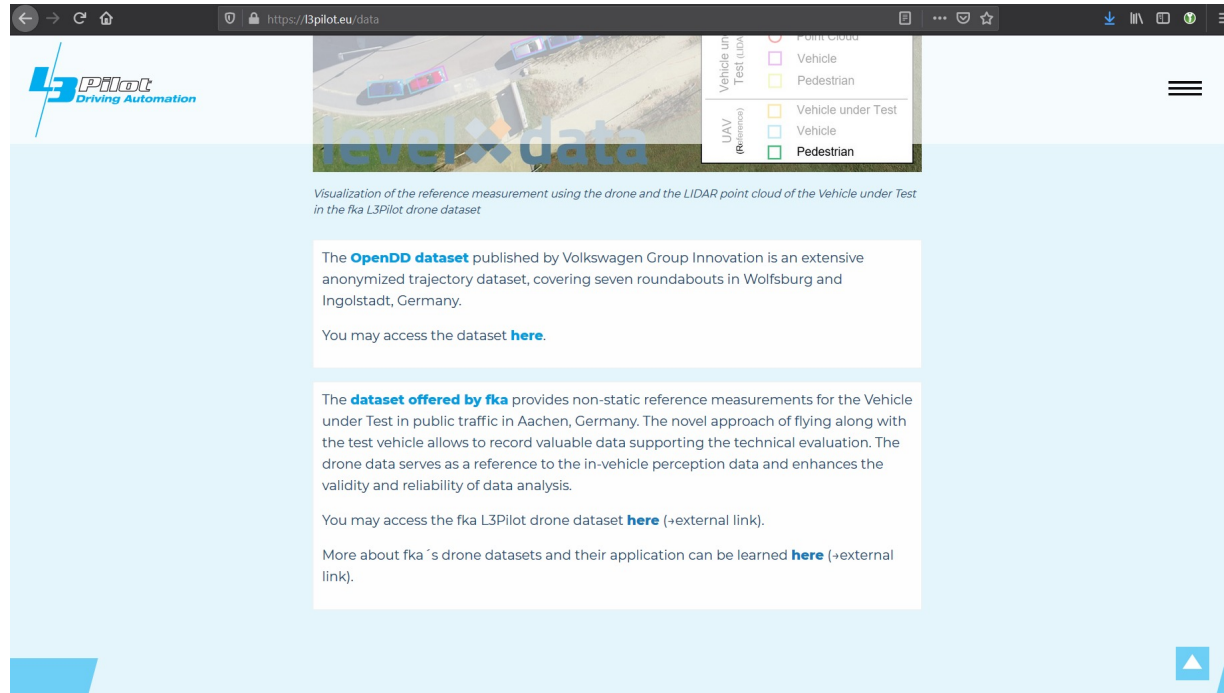
L3Pilot partners succeeded in developing a common data format (CDF) for both data collection and processing and implemented a consolidated database for processed data collection. The proposed CDF enables driving data and user questionnaire data sharing and promotes the development of tools for AD functions testing, verification and validation. Based on the L3Pilot-CDF comparison of performance indicators across pilot sites per driving scenarios is enabled. The format is considered a useful specification item for follow-up projects in the field and it is expected to contribute in the future AD testing harmonization in Europe.

Data analysts interested to use L3Pilot-CDF may visit the published code under [github.com/l3pilot/l3pilot-cdf](https://github.com/l3pilot/l3pilot-cdf) (-> external link).

**Drone Datasets**

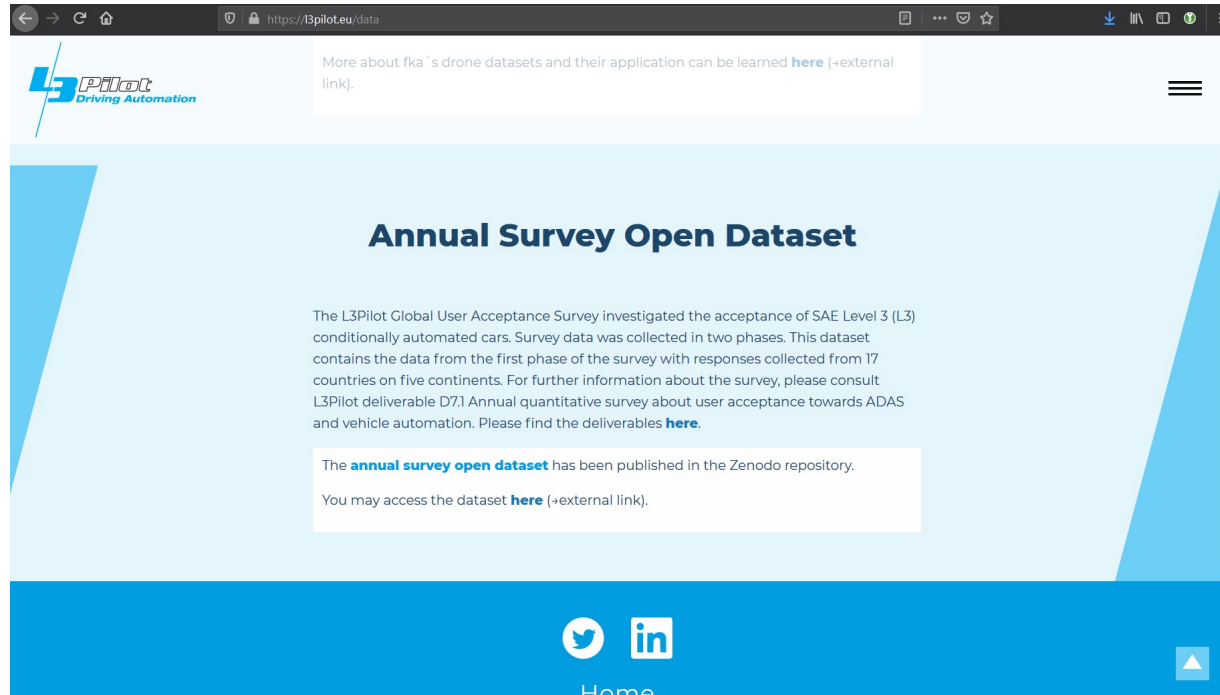
Drone datasets add valuable information to the data recorded during the pilot trials in the test vehicle and by user inquiries.

# I3pilot.eu/data - The Central Access Point to All Datasets



The screenshot shows a web browser window with the URL <https://i3pilot.eu/data>. The page features the L3Pilot logo and a header image of a drone over a road with a legend overlay. The legend includes categories for 'Vehicle under Test (UAT)', 'UAV (reference)', 'Point Cloud', 'Vehicle', 'Pedestrian', and 'Vehicle under Test'. Below the image, there is a caption: 'Visualization of the reference measurement using the drone and the LIDAR point cloud of the Vehicle under Test in the fka L3Pilot drone dataset'. The main content area contains three text blocks: 1) 'The **OpenDD dataset** published by Volkswagen Group Innovation is an extensive anonymized trajectory dataset, covering seven roundabouts in Wolfsburg and Ingolstadt, Germany. You may access the dataset [here](#).' 2) 'The **dataset offered by fka** provides non-static reference measurements for the Vehicle under Test in public traffic in Aachen, Germany. The novel approach of flying along with the test vehicle allows to record valuable data supporting the technical evaluation. The drone data serves as a reference to the in-vehicle perception data and enhances the validity and reliability of data analysis. You may access the fka L3Pilot drone dataset [here](#) (->external link).' 3) 'More about fka's drone datasets and their application can be learned [here](#) (->external link).' A blue triangle with an upward arrow is in the bottom right corner of the page content.

# L3pilot.eu/data - The Central Access Point to All Datasets





Thank you for your kind attention.

Hendrik Weber  
ika RWTH Aachen University  
hendrik.weber@ika.rwth-aachen.de



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