



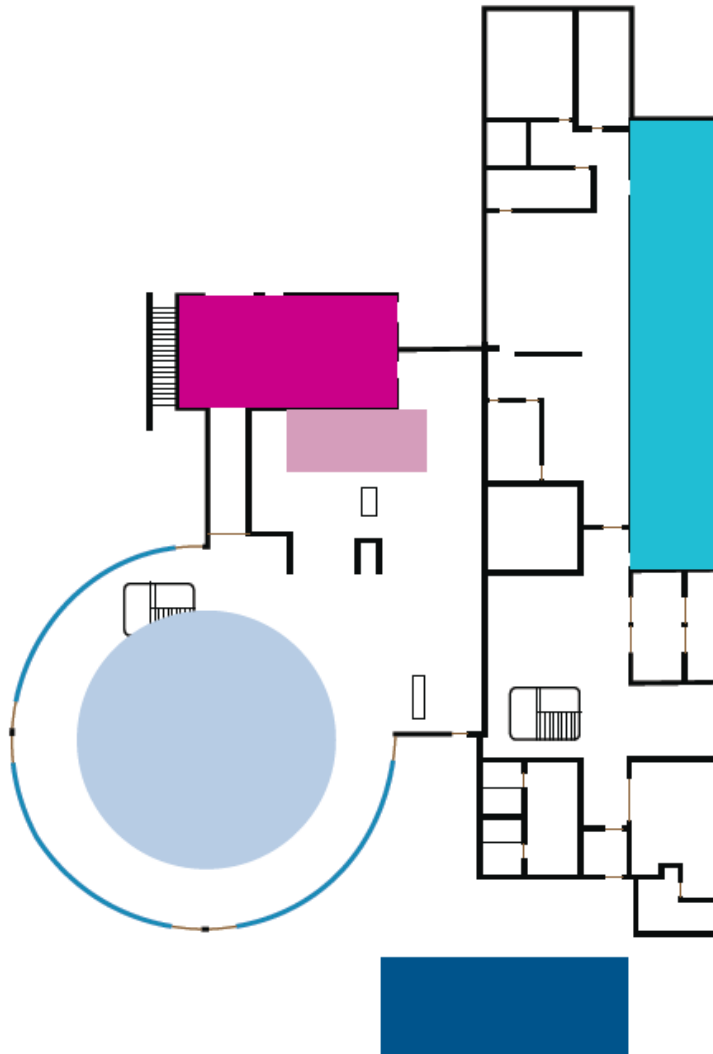
## Demonstration and Exhibition

Werner Ritter, Daimler  
Ulm, Germany



Your final event will continue after lunch with

- ▼ **An exhibition:** Watch videos detailing project results, deep-dive and discuss posters, get your hands on the new hardware and enjoy a live-stream from Berlin.
- ▼ **An exploitation workshop:** Join in, create and develop new applications and fields of use for the RobustSENSE sensor platform.  
Workshop start at 13:45 and 16:30 hours.
- ▼ **Driving demonstrations:** Experience the RobustSENSE sensor platform in action in driving demonstrations showing various central aspects of the projects results.



## FLOORPLAN

**REGISTRATION AND COFFEE** / 1st floor / hall

**CONFERENCE ROOM** / 1st floor / room 1.1.015

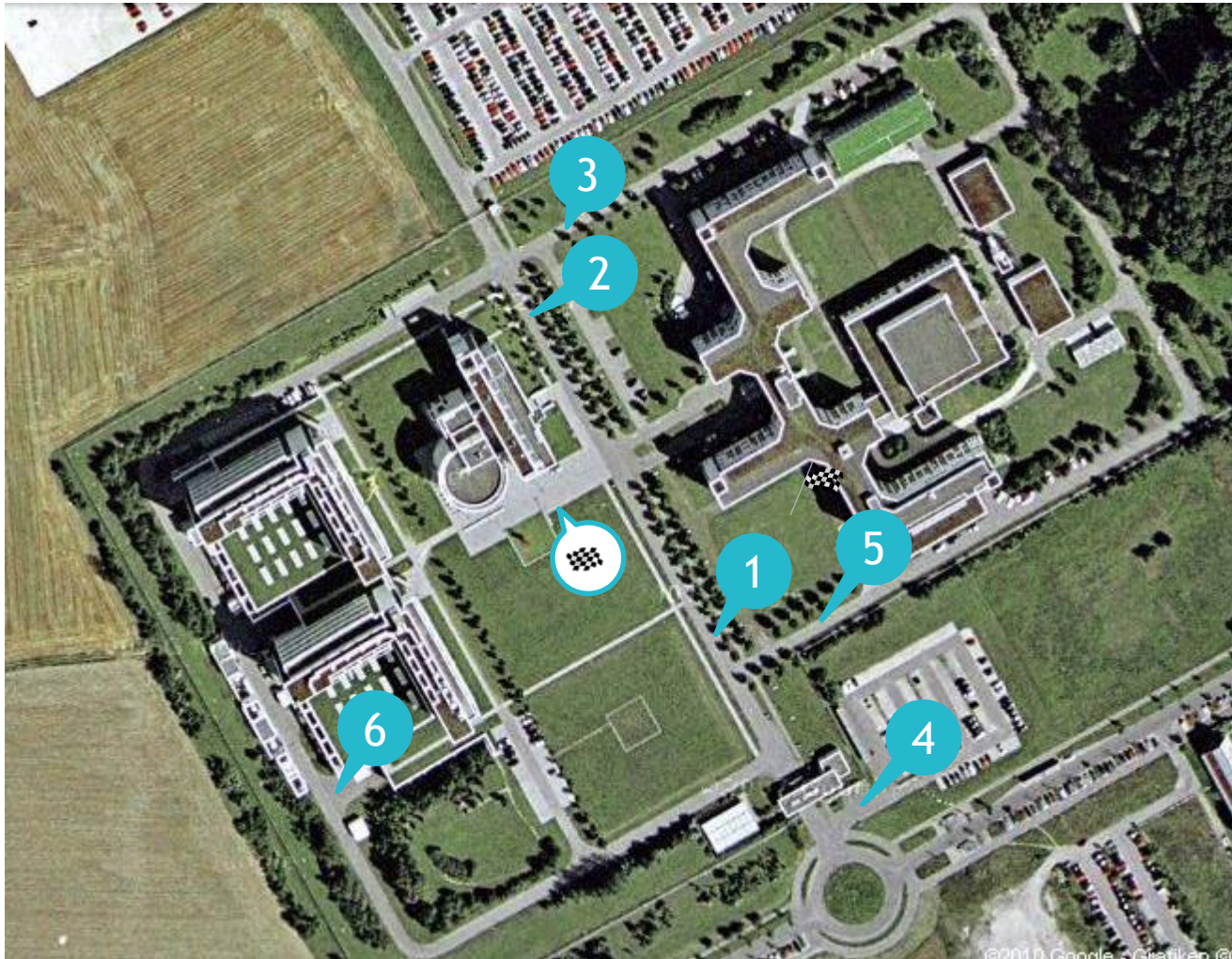
**EXHIBITION, EXPLOITATION WORKSHOP** / 2nd floor / room 2.2.028

**LUNCH** / ground floor / canteen

**DRIVING DEMONSTRATION** / ground floor / in front of building 5

Entrance

# Driving Demonstrations



## Use Cases

- Initial Start/Stop of demos
- 1 Automatic road surface condition determination, Daimler
- 2 Stereoscopic environment perception (FZI), Bertha
- 3 Coping with non-compliant behaviours (FZI), CoCar
- 4 Real-world vehicle demonstration (UULM) (Actual demonstration outside)
- 5 Pedestrian detection in foggy conditions (VTT), Marilyn
- 6 Lane change assist & Soil detection (CRF)

# Driving Demonstrations Vehicle Overview



# Driving Demonstrations Use Cases

	Demonstration	Vehicle	Partner
1	Automatic road surface condition determination	Mercedes S-Class	DAI
2	Stereoscopic environment perception	Mercedes E-Class (BerthaOne)	FZI
3	Coping with non-compliant behaviours	Audi Q5 (CoCar)	FZI
4	Autonomous driving adjustment by sensor performance degradation	Mercedes E-Class S212	UULM
5	Pedestrian detection in foggy conditions	Marilyn 2.0	VTT
6	Lane change assist and soil detection	Jeep Renegade	CRF

# Introduction to Demonstrators

1

## Automatic road surface condition determination



### RobustSENSE Modules:

- ▼ Scene Understanding
- ▼ Situation Prediction

2

## Stereoscopic environment perception



### RobustSENSE Modules:

- ▼ Environment Modules
- ▼ High-Level Fusion
- ▼ Scene Understanding
- ▼ Situation Prediction
- ▼ Behavior Planning
- ▼ Trajectory Planning

3

## Coping with non-compliant behaviours



### RobustSENSE Modules:

- ▼ Scene Understanding
- ▼ Situation Prediction
- ▼ Behavior Planning
- ▼ Trajectory Planning
- ▼ Overall Performance Assessment

# Introduction to Demonstrators

4

Autonomous driving  
adjustment by sensor  
performance degradation



RobustSENSE Modules:

- ▼ Ego-Motion Estimation
- ▼ Grid Mapping
- ▼ Localization
- ▼ Object-Tracking

5

Pedestrian detection in  
foggy conditions



- ▼ Validate and evaluate performance of the SWIR LiDARs
- ▼ Evaluation of the LiDAR prototype
- ▼ Validation of the LiDAR performance assessment module

6

Lane change assist and soil  
detection



RobustSENSE Modules:

- ▼ Scene Understanding (*Driver Monitoring*)
- ▼ Situation Prediction
- ▼ Behavior Planning (*strategies, taking into account the driver's status*)
- ▼ Trajectory Planning (*off-line*)



# End of part one - Conference

Enjoy your lunch and the afternoon programme.

▼ See you here again at 17:30 hours for closing the Final Event and Farewell.



Thank you.



Tekes



Co-funded by  
the European Union

