



# ARCADE Y1 deliverable

Technology/Services/Society



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# Topics

- Introduction to Deliverable 3.1 (1 slide)
  - What is the Deliverable/Task about
- Which Thematic Areas that are part of this Task (1 slide)
- What are the prioritized actions per TA and why (2 slides)
- What are the major conclusions/outcomes of this deliverable for Y1 (1 slide)

# What is Deliverable 3.1 about

The thematic areas of vehicles and technologies are defined in ARCADE to be:

- **In-Vehicle Enablers** (driving functionality, technologies like AI and V2x but also components, EE Architectures and safety and security concepts)
- **Human Factors** (studying human behaviour in relation to particular environments, products, , behavioural models, interaction design and test procedures)
- **Connectivity** (between vehicles, with other vehicles and/or the infrastructure for automated driving in terms of safety, traffic efficiency and comfort)
- **Deployment** (bringing technology to users and society, facing the innovation lifecycle, fears and expectations)

# Prioritized Actions per TA-1

## In-vehicle enablers:

- Harmonize definition of operational domains and functionalities
- Develop technologies supporting vehicle's own understanding of these domains
- Standardize perceptions systems
- Develop technologies for fail-operational architectures, robust and scalable perception systems as well as validation concepts and methods, research technologies to maintain system integrity and well-functioning once in the field.



## Human Factors:

- Collect real-world experience
- Research integrated active and passive safety with new vehicle concepts and usage
- Feed and inspire controlled scoped studies
- Standardize internal and external user interfaces
- Define new roles and task of operators in remote control.

# Prioritized Actions per TA-2

## Connectivity:

- Define Day 2 and Day 3 C-ITS services and connectivity requirements for AD functions
- Promote hybrid connectivity solutions
- Create roadmap and policy framework
- Standardize security in V2X technologies
- Establish safety integrity levels.

## Deployment:

- Deploy L3 further incl. studies with customers
- Enforce large simulation studies
- Support L3 field operational tests and natural driving studies
- Prepare large scale L4 piloting programs on highways and in urban environment.

# What are the major conclusions/outcomes for Y1

- The 3 Deliverables 3.1, 3.4 and 3.7 had been decided in the project to cover the three different layers of technologies and vehicles, systems and services as well as users and society.
- When it comes to research and innovation, technologies will come as soon as they are available and will be applied in vehicles connected to the cloud and used by humans. That is why the scenarios don't differ strongly in D3.1.
- But with growing understanding of the capabilities of vehicles with such technology systems will be able to be defined clearer and clearer and new services will lead to new businesses around them and for the sake of their providers. This leads to the clear differentiation of the scenarios in D3.4.
- Depending on how these systems and services are controlled and rolled out, there will be huge differentiation for the individual user and his needs of comfort and time efficiency, but even more for the society and its needs of safety and environmental efficiency in D3.7.
- For the defined actions to be taken per Thematic Area, the next steps should be discussed with the stakeholders.



# Thank you for your attention



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