SHOW 1ˢᵗ Pan-European Workshop
"How to make CCAM in cities a reality"
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CCAV in Cities: Opportunities, challenges and expectations

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❑ Part of the 3rd Mobility Package (17 May 2018)

❑ Comprehensive EU approach to support the development and deployment of connected and automated vehicles in Europe

What needs to be done?

SAFETY → **APT LEGAL FRAMEWORK**

SOCIETY → **SOCIETAL & ETHICAL ASPECTS**

COMPETITIVENESS → **INVESTMENT IN RESEARCH & INNOVATION**

H2020 - Calls on "Automated Road Transport"
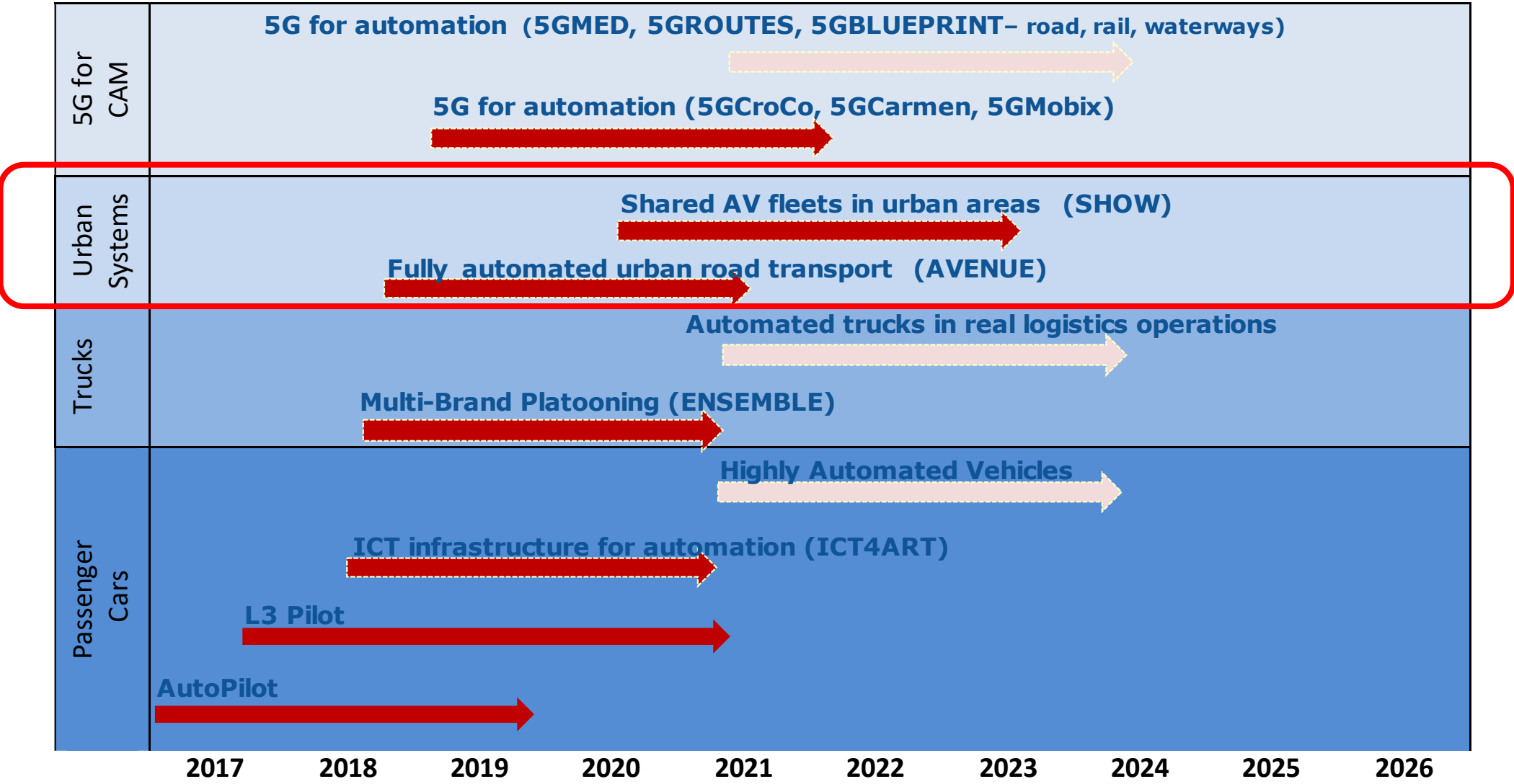

- ❑ Budget: € 350 Mio (2014-2020)
- ❑ Focus
  - ➢ Large-scale demos of automated driving systems for passenger cars, trucks and urban transport
  - ➢ Safety and end user acceptance
  - ➢ Road infrastructure to support automation
  - ➢ Traffic management solutions
  - ➢ Connectivity for automation
  - ➢ Testing and validation procedures
  - ➢ Assessment of impacts, benefits and costs of CAD systems
  - ➢ Support for cooperation and networking activities
  - ➢ Human centered design of AV

5 Calls for proposals

| 2016 | 2017 | 2018 | 2019 | 2020 |

More Info on all H2020 ART projects:

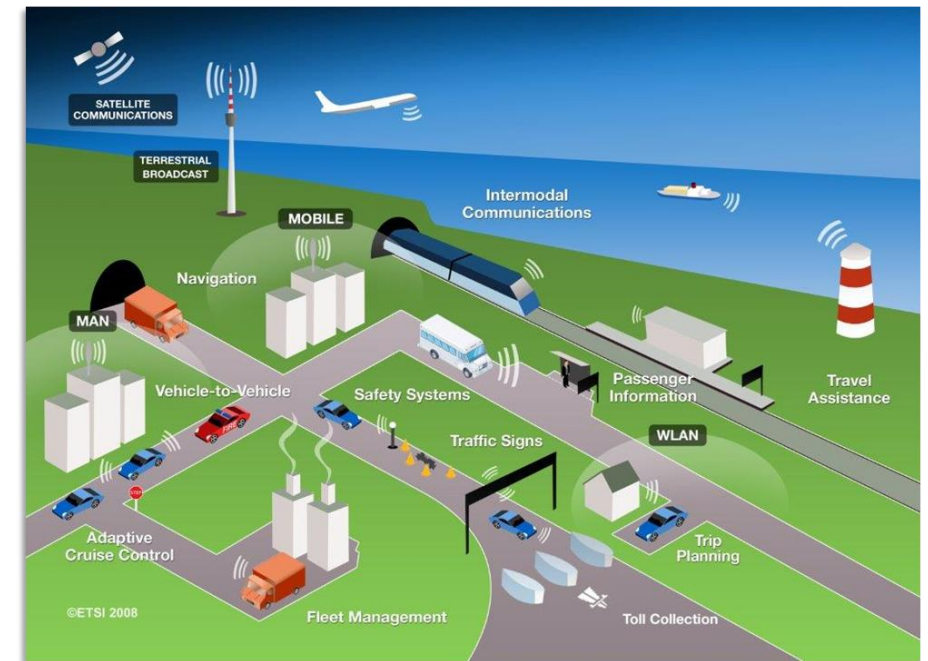https://ec.europa.eu/inea/en/horizon-2020/h2020-transport/projects-by-field/automated-road-transport

H2020 - Overview of Large-scale Demo Projects

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |

5G for CAM

5G for automation (5GMED, 5GROUTES, 5GBLUEPRINT– road, rail, waterways)

5G for automation (5GCroCo, 5GCarmen, 5GMobix)

Urban Systems

Shared AV fleets in urban areas (SHOW)

Fully automated urban road transport (AVENUE)

Trucks

Automated trucks in real logistics operations

Multi-Brand Platooning (ENSEMBLE)

Passenger Cars

Highly Automated Vehicles

ICT infrastructure for automation (ICT4ART)
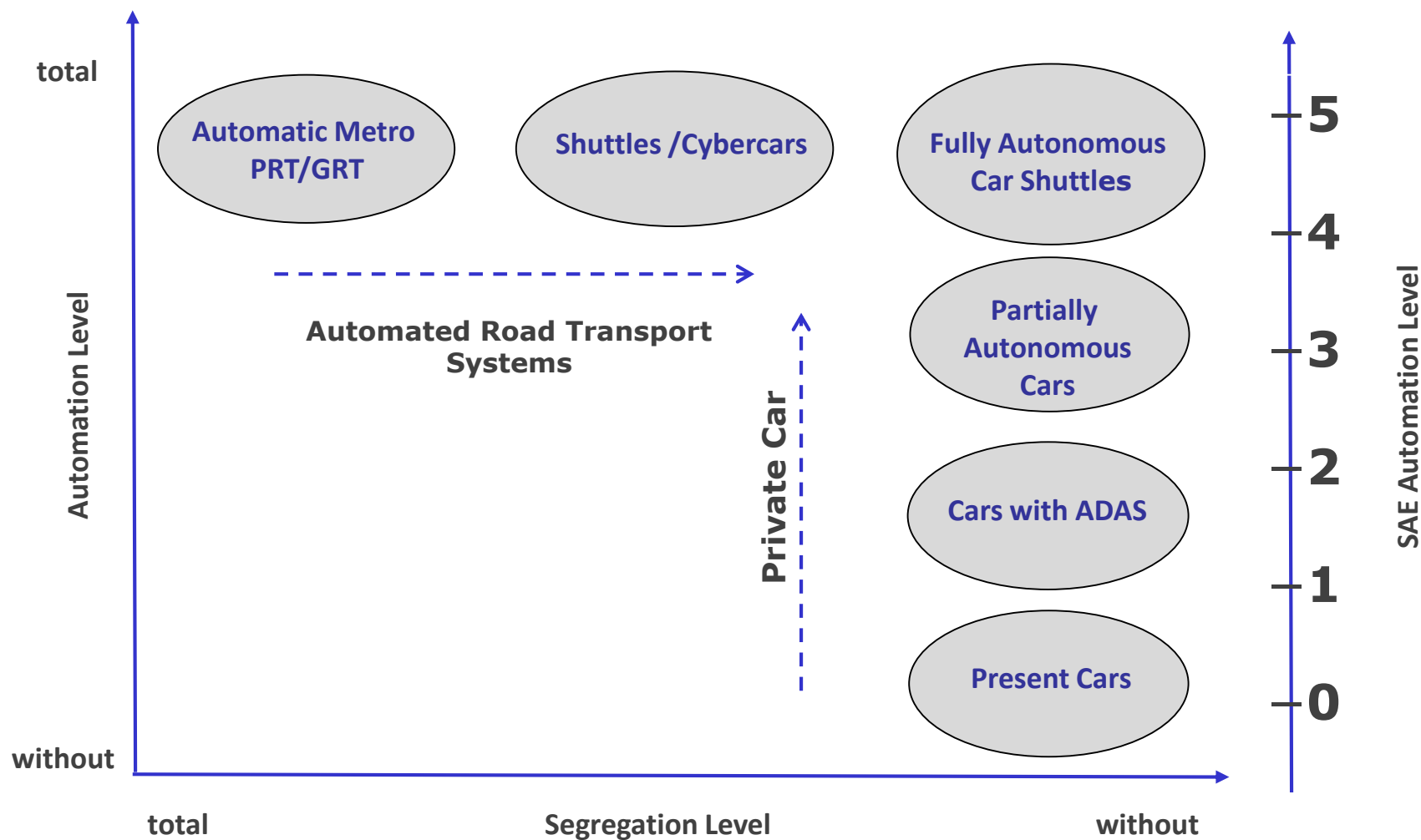
L3 Pilot

AutoPilot

Moving towards a more sustainable urban mobility: A Growing concern to European citizens with 72% of the population

- Better meet the diverse urban transport and mobility needs of citizens, businesses and industry; offer more and more attractive choices for liveable cities
- Contribution to economic growth and access to jobs
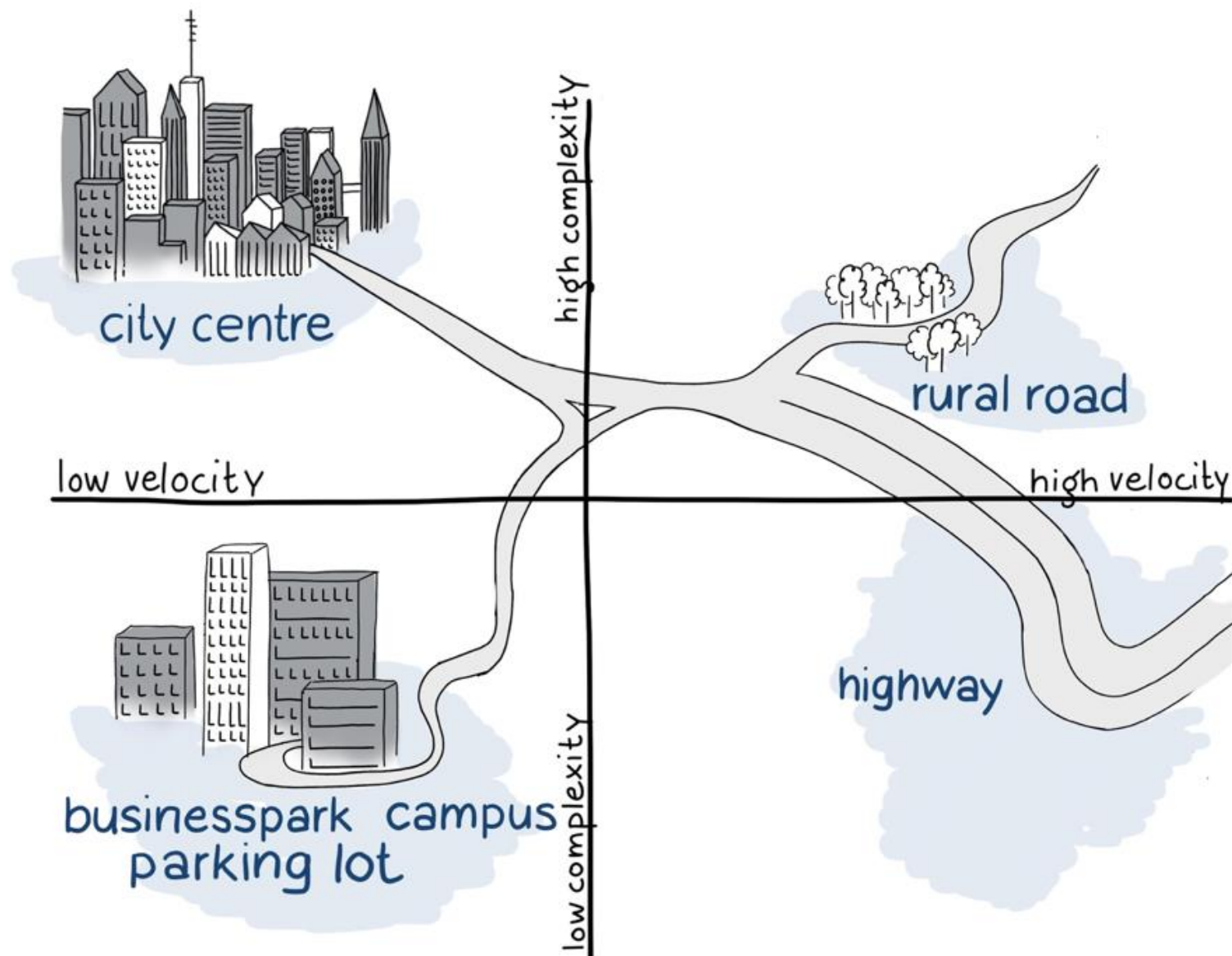- Reduce the negative impacts of urban transport

… and the challenge to integrate **new mobility paterns and innovations**: Mobility as a Service (MaaS), e-scooters, car sharing/ridesharing, IoT, big data, Uber, e-deliveries, C-ITS, autonomous vehicles, …

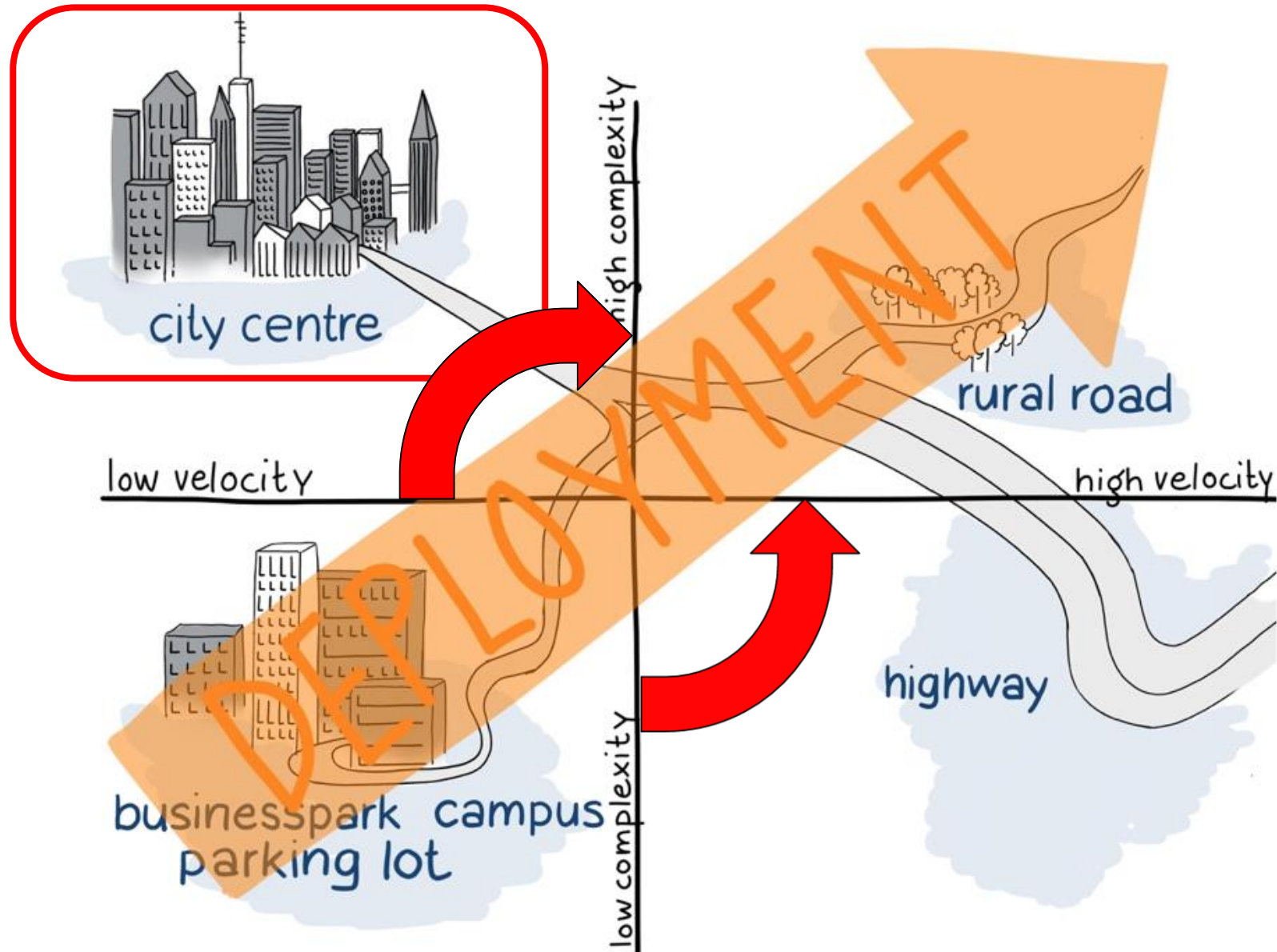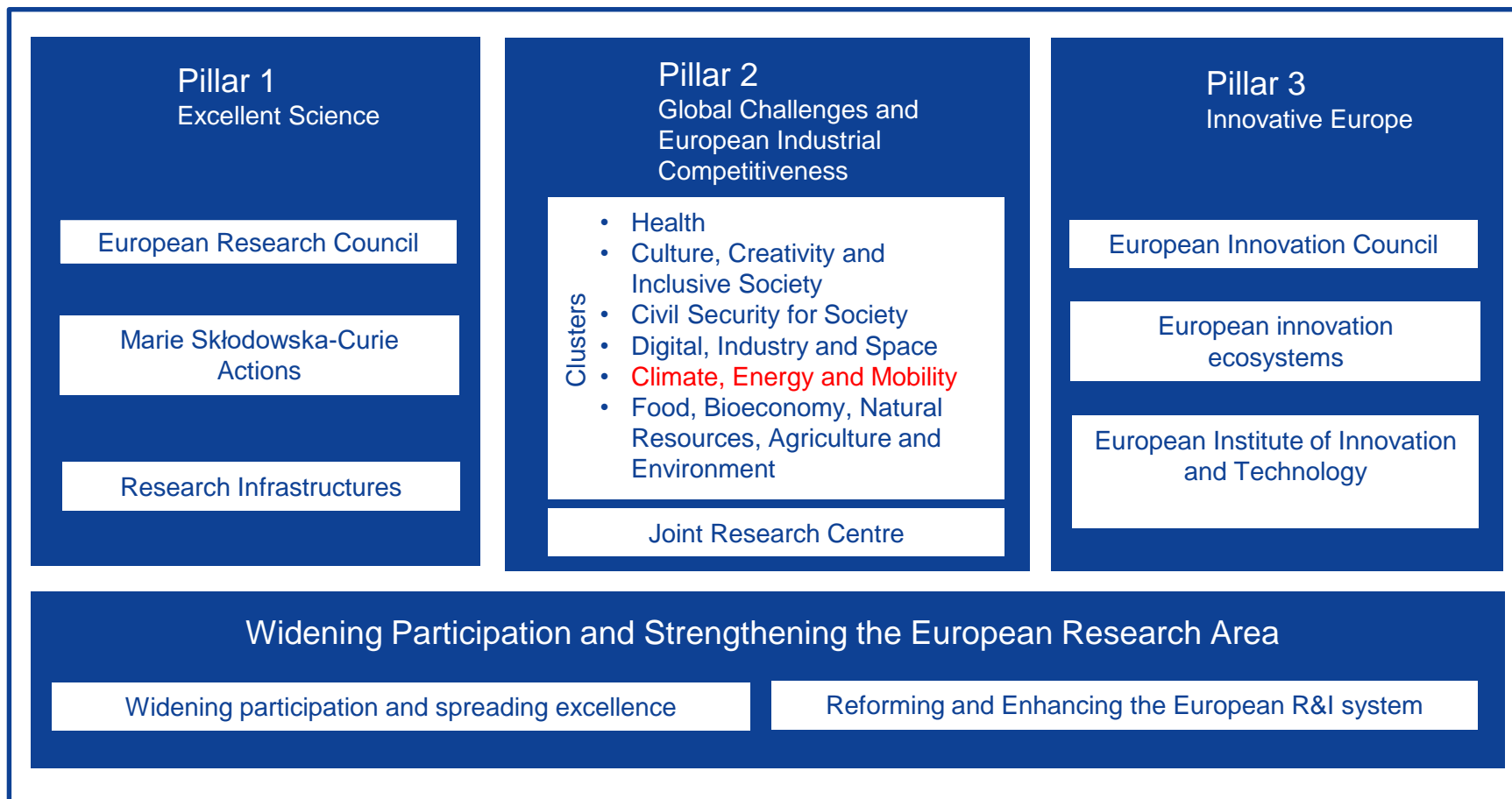# Two main trends in road automation

Horizon Europe European Partnership on CCAM

- Initiative where the Union, together with private and public partners commit to support jointly the development and implementation of a Research & Innovation programme in the area of CCAM

- European partnership aims to

  - ✓ better align EU R&I efforts in the field of CCAM

  - ✓ increase the effectiveness of R&I and accelerate market take-up of innovative solutions, contributing to maintaining and extending industrial leadership.

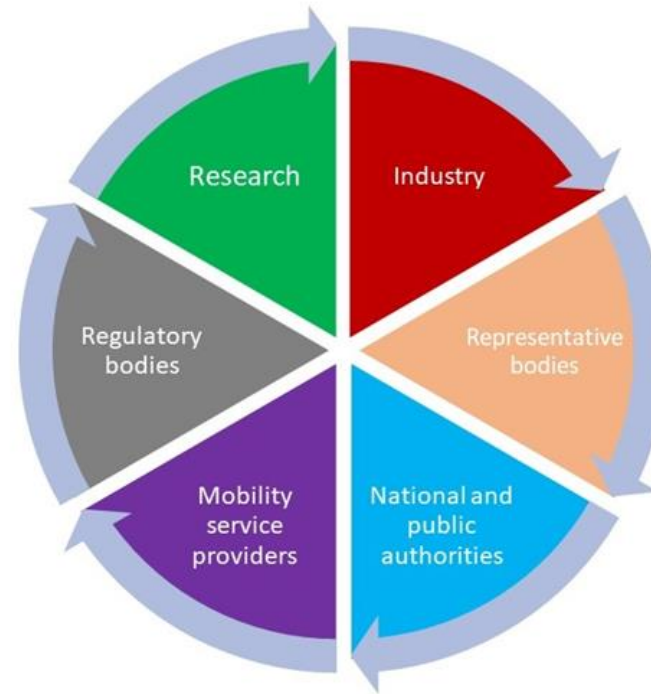 - ✓ develop a common Strategic Research and Innovation Agenda (SRIA)

European Commission

European Partnership on CCAM - State of Play

- Potential partners:

  - ✓ The EU, represented by the Commission

  - ✓ Wide range of stakeholders

    - ▪ Industry, Representative bodies, Member States & regional and local authorities, Mobility service providers, Regulatory bodies, Research organisations
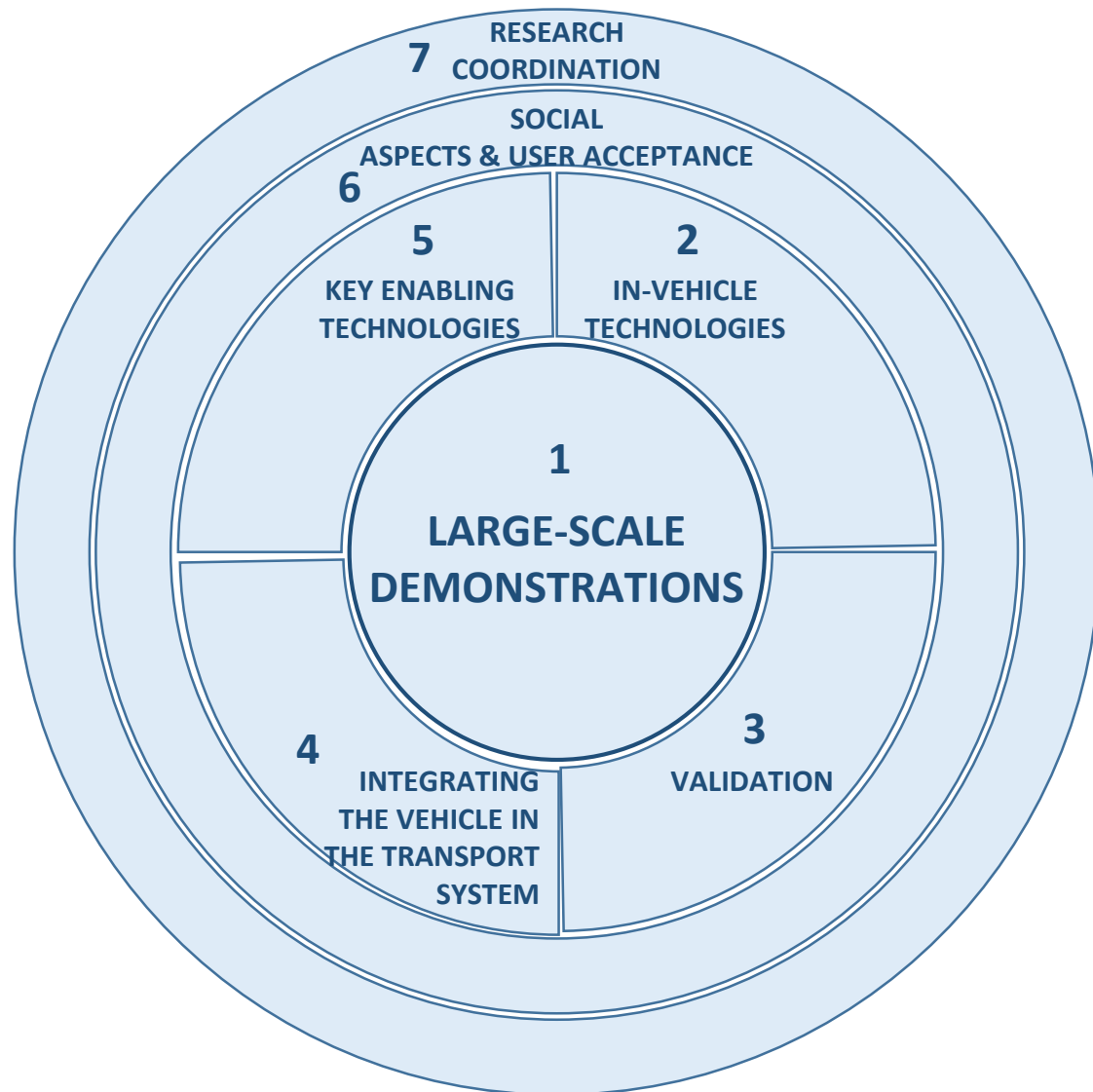
- Preparations to set up a European Partnership on CCAM have started

  - ✓ Strategic Research and Innovation Agenda (SRIA) under preparation

  - ✓ Contractual arrangement/MoU between the Commission and the partners under preparation

  - ✓ First calls for proposals will be open early 2021 (based on the SRIA priorities)

Industry
- Automotive industry, including supply chain
- ITS solutions, telecom providers, connectivity
- Data handling and storage industry, …

Representative bodies
- Road users
- Stakeholder associations
- Road safety, society, the environment, …

National and public authorities
- Cities and regions
- Transport authorities, road authorities
- Member States

Mobility service providers
- Public transport providers
- Mobility and logistics service providers
- Insurance, maintenance, …

Regulatory bodies
- National and international

Research
- Universities
- Public research institutes
- Private research institutes

European Commission

CCAM European Partnership: 7 Clusters

7 RESEARCH COORDINATION

6 SOCIAL ASPECTS & USER ACCEPTANCE

5 KEY ENABLING TECHNOLOGIES

2 IN-VEHICLE TECHNOLOGIES

1 LARGE-SCALE DEMONSTRATIONS

4 INTEGRATING THE VEHICLE IN THE TRANSPORT SYSTEM

3 VALIDATION

1
- Shared automated mobility solutions (11)
- Highly automated passenger vehicles (13)
- Automated commercial/freight vehicles (14)

2
- Environment perception (1)
- Passive & active safety (3)
- On-board decision making (4)
- Human Factors requirements (6.1)

3
- Validation of CCAM systems (5)
- Validation of Human Factors (6.2)

4
- Remote operation and surveillance (7)
- Physical and digital infrastructure (8)
- Connectivity / Cooperative Systems (9)
- Fleet and (mixed) traffic management (12)

5
- Cyber-secure electronics (2)
- Artificial Intelligence (10)
- Data Storage and sharing (21)

6
- Societal needs analysis (15)
- Socio-economic and environmental impact analysis (16)
- Workforce development (22)

7
- European framework for testing on public roads (17)
- Data exchange platform (18)
- EU-wide knowledge base (19)
- Common evaluation framework (20)