EU Vision and Strategy for CCAM

L3Pilot Final Event, Hamburg, 13 October 2021

Tom Alkim
DG Research & Innovation
European Commission

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Sustainable and Smart Mobility Strategy

Milestones for a smart and sustainable future

All transport modes need to become more sustainable, with green alternatives widely available and the right incentives put in place to drive the transition. Concrete milestones will keep the European transport system's journey towards a smart and sustainable future on track:

By 2030:

- at least 30 million zero-emission cars will be in operation on European roads
- 100 European cities will be climate neutral.
- high-speed rail traffic will double across Europe
- scheduled collective travel for journeys under 500 km should be carbon neutral
- automated mobility will be deployed at large scale
- zero-emission marine vessels will be market-ready

Frans **Timmermans**, Executive Vice-President for the European Green Deal, said: "*To reach our climate targets, emissions from the transport sector must get on a clear downward trend. Today's strategy will shift the way people and goods move across Europe and make it easy to combine different modes of transport in a single journey. We've set ambitious targets for the entire transport system to ensure a sustainable, smart, and resilient return from the COVID-19 crisis.*"

10 key areas for action to make the vision a reality

To make our goals a reality, the strategy identifies a total of 82 initiatives in 10 key areas for action ("flagships"), each with concrete measures.

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Sustainable and Smart Mobility Strategy

Flagship 6 **Making connected and automated multimodal mobility a reality**

56. **The EU needs to take full advantage of smart digital solutions and intelligent transport systems (ITS)**. Connected and automated systems have enormous potential to fundamentally improve the functioning of the whole transport system and contribute to our sustainability and safety goals. Actions will focus on supporting the integration of transport modes into a functioning multimodal system.

57. Europe must seize the opportunities presented by **connected, cooperative, and automated mobility** (CCAM). CCAM can provide mobility for all, give back valuable time and improve road safety. The Commission will drive research and innovation, possibly with a new European partnership on CCAM envisaged under Horizon Europe and through other partnerships focusing on digital technologies. Such partnerships are important when it comes to developing and implementing a shared, coherent and long-term European research and innovation agenda, by bringing together actors from the entire value chain. The EU needs to make sure that efforts are well coordinated, and that results reach the market. For instance, the lack of harmonisation and coordination of relevant traffic rules and liability for automated vehicles needs to be addressed. The vision is to make Europe a world leader in the development and deployment of CCAM services and systems and thereby provide a significant contribution to European leadership in safe and sustainable road transport.[41]

https://ec.europa.eu/transport/sites/default/files/2021-mobility-strategy-and-action-plan.pdf

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Connected, Cooperative and Automated Mobility

CCAM has the potential to make transport:

- Safer: bring down the number of road fatalities and accidents
- Greener: help to reduce harmful emissions from transport by smoothening traffic flow and avoiding unnecessary trips
- More accessible: ensure inclusive mobility access for all

Connected, Cooperative and Automated Mobility

However, a number of challenges have to be addressed:

- Key technologies are still being developed: they need to be safe, tested, validated
- The right legal framework has to be set up and adopted at Member State and EU-level
- CAVs will have to be integrated into the broader transport system and interact with other forms of mobility
- Acceptance and trust in CCAM technology, by users and society, has to be nurtured every step of the way

Horizon Europe, cluster 5

* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

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Horizon Europe, cluster 5

Pillar II - Clusters

GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS:

boosting **key technologies** and solutions underpinning **EU policies & Sustainable Development Goals** (6 clusters and JRC – non-nuclear direct actions)

Cluster 1	€8.246 billion (including €1.35 billion from NGEU)
Cluster 2	€2.280 billion
Cluster 3	€1.596 billion
Cluster 4	€15.349 billion (including €1.35 billion from NGEU)
Cluster 5	€15.123 billion (including €1.35 billion from NGEU)
Cluster 6	€8.952 billion

https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/cluster-5-climate-energy-and-mobility_en

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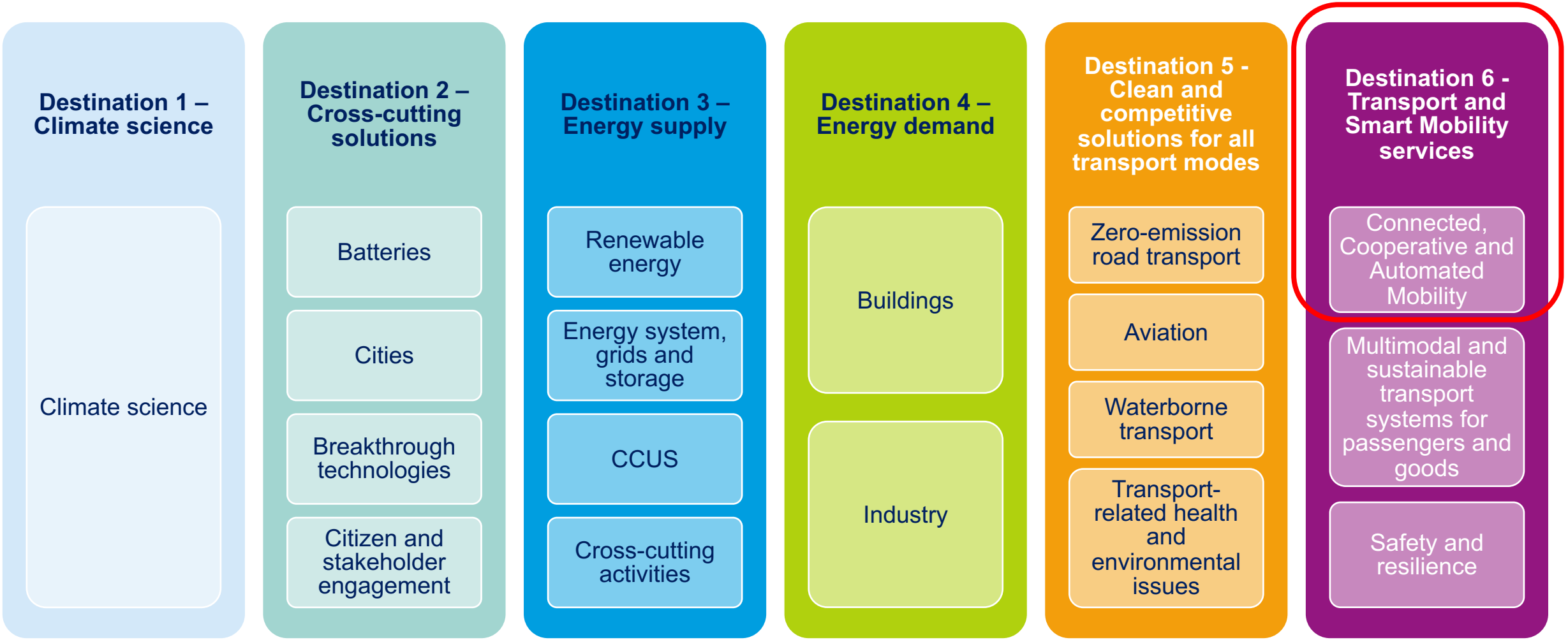
Cluster 5 Work programme - overview



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HE Cluster 5 – First calls on CCAM

For CCAM – 11 topics (budget € 162 mio)

- First call open: 24 June 2021 – Call deadline: 19 October 2021
- Second call open: 14 October 2021 – Call deadline: 12 January 2022

For more information on the open topics, please go to the:
EC funding & tenders portal

Main objective

- Accelerate the implementation of innovative connected, cooperative and automated mobility (CCAM) technologies and systems

CCAM topics will cover a broad range of R&I actions

- Vehicle technologies (to improve the performance and safety of AV in complex environmental conditions)
- Tools for the safety validation of AVs
- Physical/Digital Infrastructure and connectivity supporting AVs
- Integrating CCAM services in traffic management systems
- Key Enabling Technologies for CCAM (AI, Cybersecurity)
- Understanding user needs and impacts of CCAM
- European demonstrators for integrated shared automated mobility solutions for people and goods

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HE Cluster 5 – First calls on CCAM 2021 & 2022

VEHICLE TECHNOLOGIES	• On-board perception and decision-making technologies, addressing complex environmental conditions **(2021)** • Reliable occupant protection technologies and HMI solutions to ensure the safety of highly automated vehicles **(2022)**
VALIDATION	• Common approaches for the safety validation of CCAM systems **(2021)** • Human behavioural model to assess the performance of CCAM solutions compared to human driven vehicles **(2022)**
INTEGRATING VEHICLE IN THE TRANSPORT SYSTEM	• Physical and Digital Infrastructure (PDI), connectivity and cooperation enabling and supporting CCAM **(2021)** • Integrate CCAM services in fleet and traffic management systems **(2022)**
KEY ENABLING TECHNOLOGIES	• Cyber secure and resilient CCAM **(2021)** • Artificial Intelligence (AI): Explainable and trustworthy concepts, techniques and models for CCAM **(2022)**
SOCIETAL ASPECTS AND USER NEEDS	• Analysis of socio-economic and environmental impacts and assessment of societal, citizen and user aspects for needs based CCAM solutions **(2021)**
COORDINATION	• Framework for better coordination of large-scale demonstration pilots in Europe and EU-wide knowledge base **(2021)**
LARGE-SCALE DEMONSTRATIONS	• European demonstrators for integrated shared automated mobility solutions for people and goods **(2022)**

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European Partnership on CCAM

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

Main Objective:

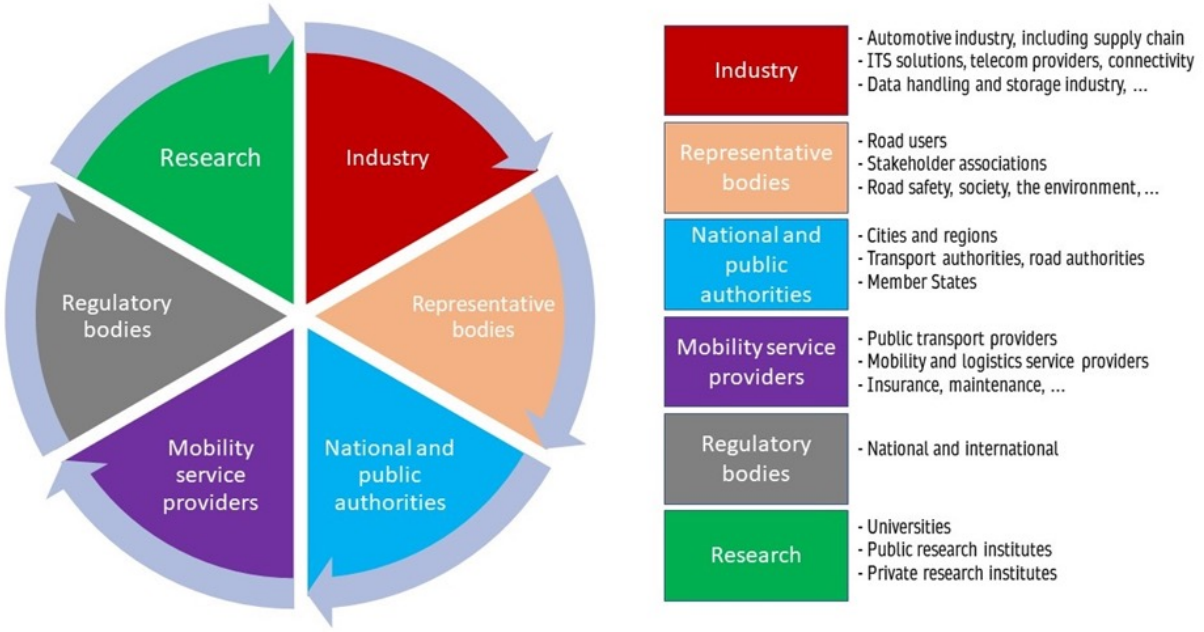
- Support the development and market uptake of connected and automated mobility and logistics services and systems.

European partnership will

- Better align EU R&I efforts in the field of CCAM
- Develop and implement a coherent long-term agenda to coordinated investments in R&I and pre-deployment (SRIA)
- Implement large number of demonstrations of inclusive and user-oriented CCAM solutions for mobility of people and goods across Europe by 2030.

Budget: 1 Billion € (500 M€ EC contribution)

CCAM Partnership Sectors and Stakeholders

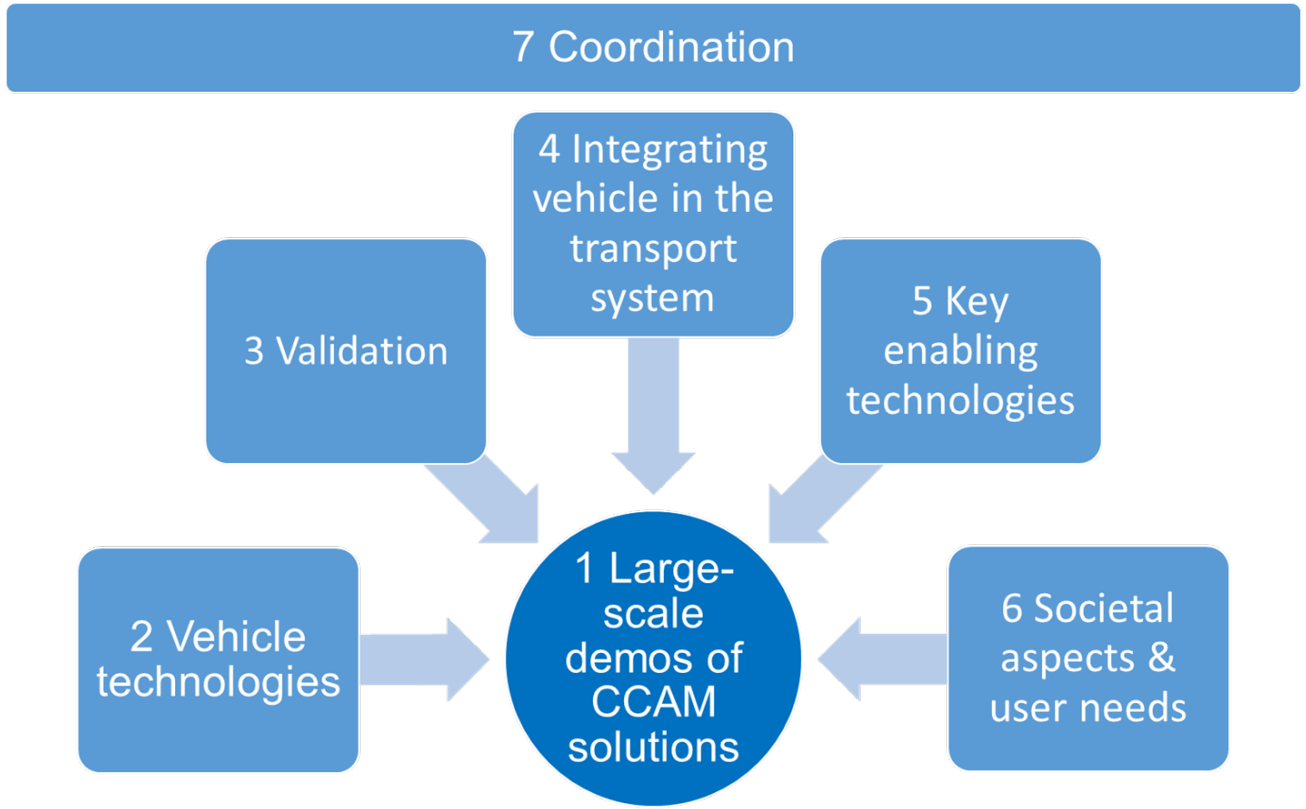


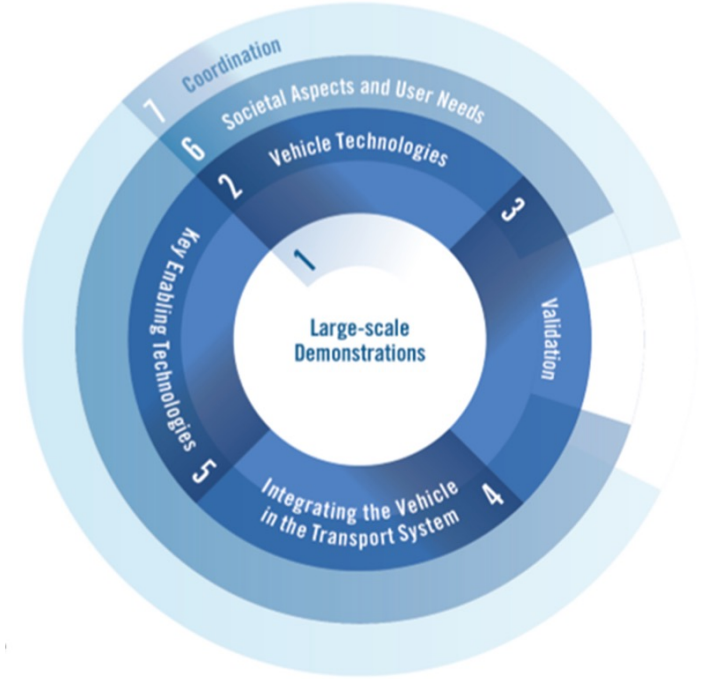
Partnership website:
https://www.ccam.eu/

CCAM Partnership – R&I Agenda

Multiannual roadmap, guiding the CCAM Partnership.

Describes the portfolio of activities, resources, and timeline for 7 main R&I areas.





Importance of real life demonstrators

Mariya Gabriel
@GabrielMariya

Connected, Cooperative & Automated Mobility #CCAM has enormous potential to make mobility safer & more efficient.

@EU_H2020 funded project @L3Pilot tests the viability of #AutomatedDriving on 🇪🇺 roads, including here in Brussels!
➡️l3pilot.eu
#EUTransportResearch

Rosalinde van der Vlies
@RosalindeEU

Excited to have experienced #AutomatedDriving in reality! @toyota_europe has been testing here in Brussels for @_L3Pilot_ a #H2020 funded project that tests the viability of #AutomatedDriving on European roads ➡️l3pilot.eu 🚗🇪🇺
#HorizonEU #EUTransportResearch #CCAM

https://audiovisual.ec.europa.eu/en/video/I-204877

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