SIP-Adus Workshop 2022
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The European Experience

A Structured Approach to Cooperative, Connected and Automated Mobility (CCAM)

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European Commission Policy context

Europe on the Move

European Green Deal

THE EUROPEAN DATA STRATEGY — SHAPING EUROPE'S DIGITAL FUTURE

SUSTAINABLE & SMART MOBILITY STRATEGY

May 2018	December 2019	February 2020	December 2020
▪ 3rd Mobility Package and Com „On the road to automated mobility" ▪ Revision of the **General Safety Regulation** ▪ Revision of **Infrastructure Safety Management** (road assessment**,** performance for road markings and road signs for CCAM roll out.	▪ Increasing the uptake of **zero-emission vehicles** ▪ Making **sustainable alternative solutions** available to the public & businesses ▪ Supporting **digitalisation & automation** ▪ Improving **connectivity &** access	▪ Establishment of EU-wide common, interoperable data spaces including a **Common European mobility data space** ▪ Review of the ITS Directive and its Delegated Regulations ▪ Stronger coordination mechanism **federating National Access Points**	▪ Making the EU transport system sustainable, smart and resilient ▪ Automated mobility deployed at large scale by 2030 ▪ 82 initiatives in 10 key areas ▪ Deployment and management of ITS and connected and automated mobility, facilitate cross border AV, recharging

Tools: CCAM Single Platform, CCAM Partnership and Strategic R&I Agenda (SRIA), 5G cross-border corridors, C-ITS, C-Roads,…

Cooperative Connected and Automated Mobility (CCAM)

has the potential to

- Bring us on the path towards near zero road fatalities
- Increase accessibility of mobility services
- Help reducing harmful emissions from transport by making traffic more efficient

Our objective

Accelerate the deployment of innovative CCAM systems and services for passengers and goods

Our vision

We want CCAM systems, which

- **are fully integrated in the transport system, accompanied by the right support measures of the public sector**
- **support new mobility concepts, shifting from a driver-centred to mobility-user oriented approach**

European Partnership on CCAM

Main Goal:

- Support the development and market uptake of connected and automated mobility and logistics services and systems.
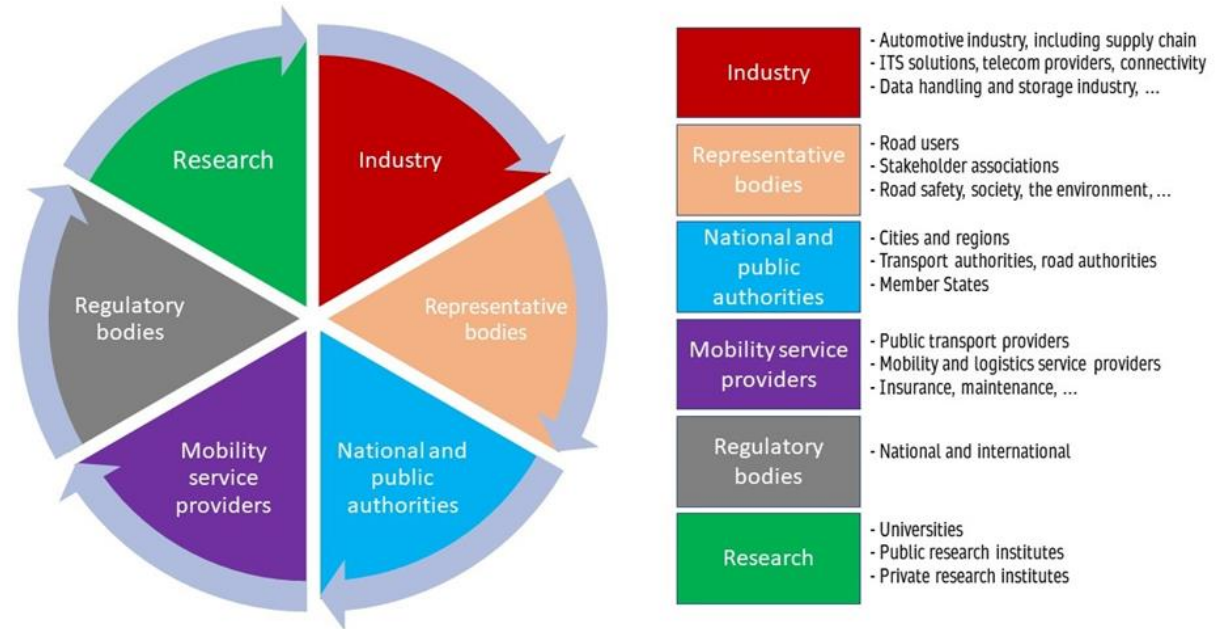
European partnership allows to

- 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)

State of play

- Strategic Research and Innovation Agenda (SRIA) finalised
- MoU between the Commission and the partners signed in 2021
- Projects resulting from first HE Calls starting these weeks
- WP 23/24 being finalised now

CCAM Partnership Sectors and Stakeholders

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

Moving towards 200 members

Partnership website:

https://www.ccam.eu/
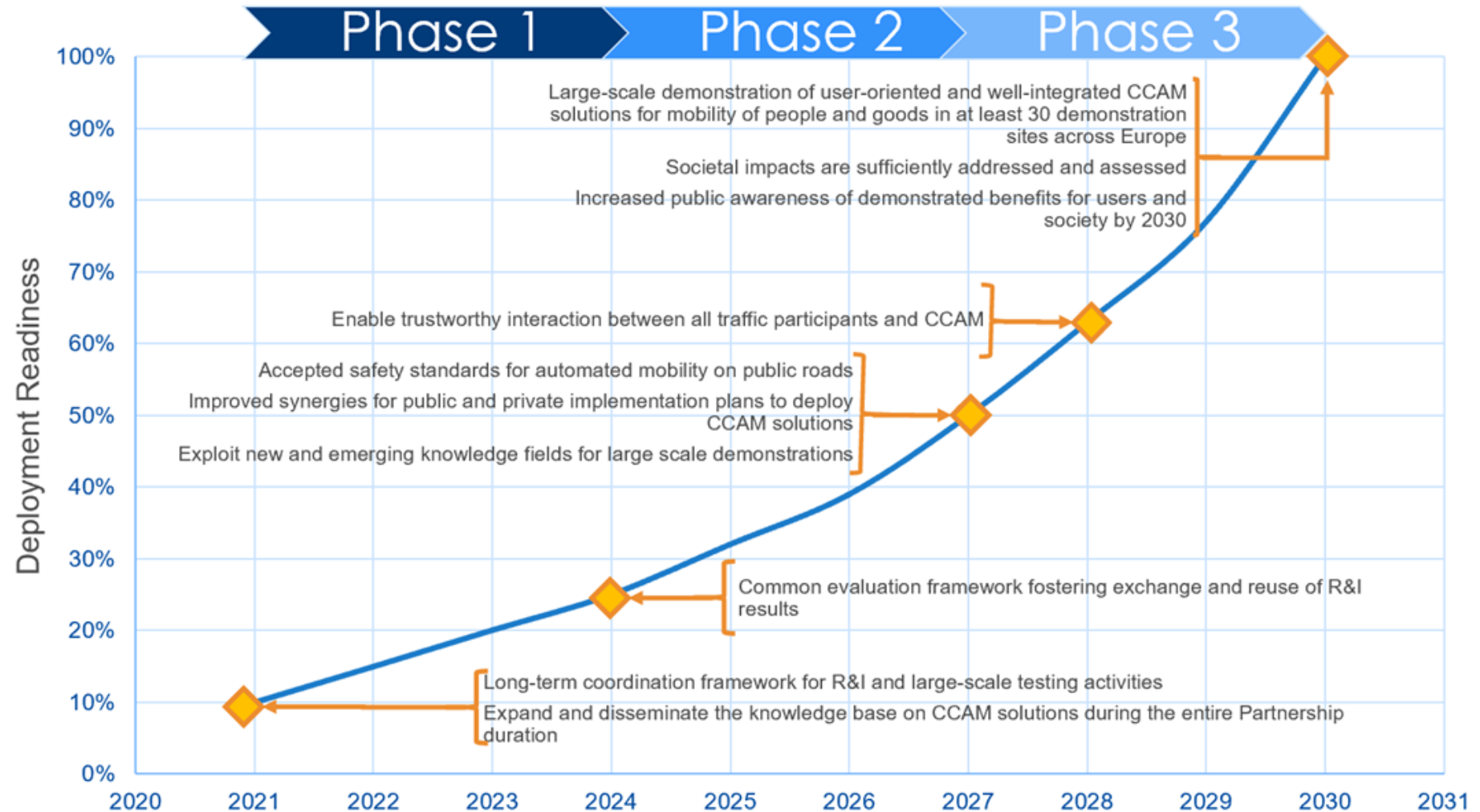
CCAM: 3 phases of implementation

- ❑ Phase 1 – Developing the building blocks
- ❑ Phase 2 – Advancing technical maturity
- ❑ Phase 3 – Trials and living labs all over Europe

Phase 1 | Phase 2 | Phase 3

Deployment Readiness

Large-scale demonstration of user-oriented and well-integrated CCAM solutions for mobility of people and goods in at least 30 demonstration sites across Europe

Societal impacts are sufficiently addressed and assessed
Increased public awareness of demonstrated benefits for users and society by 2030

Enable trustworthy interaction between all traffic participants and CCAM

Accepted safety standards for automated mobility on public roads
Improved synergies for public and private implementation plans to deploy CCAM solutions
Exploit new and emerging knowledge fields for large scale demonstrations

Common evaluation framework fostering exchange and reuse of R&I results

Long-term coordination framework for R&I and large-scale testing activities
Expand and disseminate the knowledge base on CCAM solutions during the entire Partnership duration

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031

Outcomes CCAM related topics Call 2021

Cluster	Acronym		Budget	start date	Int
Vehicle Technologies	EVENTS	ReliablE in-Vehicle pErception and decisioN-making in complex environmenTal conditionS	5,5M€	01/09/22	
	ROADVIEW	Robust Automated Driving in Extreme Weather	6,6M€	01/09/22	
Validation	SUNRISE	Safety assUraNce fRamework for connected, automated mobIlity SystEms	13,4M€	01/09/22	US
Integration	AUGMENTED CCAM	Augmenting and Evaluating the Physical and Digital Infrastructure for CCAM deployment	8,9M€	01/09/22	
	PoDIUM	PDI connectivity and cooperation enablers building trust and sustainability for CCAM	8,9M€	01/10/22	
Key Enabling Technologies	SELFY	SELF assessment, protection & healing tools for a trustworthY and resilient CCAM	5,9M€	01/06/22	JP-AU
	CONNECT	Continuous and Efficient Cooperative Trust Management for Resilient CCAM	5,6M€	01/09/22	
Societal aspects	Move2CCAM	MethOds and tools for comprehensive impact Assessment of the CCAM solutions for passengers and goods	2,5M€	01/09/22	US
	SINFONICA	Social INnovation to FOster iNclusIve Cooperative, connected and Automated mobility	3,7M€	01/09/22	
Coordination	FAME	Framework for coordination of Automated Mobility in Europe	5,6M€	01/07/22	

Outcomes CCAM related topics Call 2022

Cluster	Acronym		Budget	start date	Int
Demonstrators	MODI	A leap towards SAE L4 automated driving features	23M€	01-10-22	
	ULTIMO	Advancing Sustainable User-centric Mobility with Automated Vehicles	24M€	01-10-22	
Vehicle Technologies	AWARE2ALL	Safety systems and human-machine interfaces oriented to diverse population towards future scenarios with increasing share of highly automated vehicles	8M€	01-11-22	
Validation	i4DRIVING	Integrated 4D driver modelling under uncertainty	8M€	01-11-22	CN US
Integration	CONDUCTOR	Fleet and traffic management systems for conducting future cooperative mobility	4.5M€	01-11-22	
Key Enabling Technologies	AI4CCAM	Trustworthy AI for CCAM	6M€	01-11-22	
	AITHENA	AI-based CCAM: Trustworthy, Explainable, and Accountable	6M€	01-11-22	

Work Programme 2023-24

- Date of publication NOV/DEC 2022

- Main Focus Areas:

    - Large scale projects on Cities combined with zero emission mobility

    - Scenario generation and validation for Road Transport automation

    - Optimisation and inclusiveness of on-board experience and of CCAM solutions

    - Mixed traffic orchestration

    - Artificial Intelligence

    - Impact on Jobs and education

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International Cooperation for CCAM

Many opportunities for international collaboration

CCAM topics strongly encourage International Cooperation

Rationale:

- share experiences, knowledge and data collected in research projects and large-scale demonstration pilots
- identify common research areas and fields of cooperation to exploit synergies.
- In the longer term: cooperation can lead to harmonised approaches in terms of testing, methodologies and standards.

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Examples of EU-JP collaboration between projects

Research Theme	EU project	Japanese project
Safety assurance	HEADSTART SUNRISE	DIVP / SAKURA Safety Assurance KUdos for Reliable Autonomous Vehicles
Human Factors	HADRIAN	SIP
Shared Automated Mobility Services	SHOW AUTOMATED URBAN MOBILITY	ITS Japan / mobi
Field Operational Tests	Hi-Drive	SIP

Upcoming EU events

TRA22 (https://traconference.eu/registration)

- 14-17 November 2022 in **Lisbon** – European transport event that covers all transport modes to bring experts together and discuss the newest innovations and future of mobility and transport.

- "Moving together – reimagining mobility worldwide"

- **Key themes:** Smart Solutions and Society, Green Mobility and Decarbonisation, Innovative Infrastructure for Europe 2030, Policies and Economics for a Competitive Europe.

EUCAD2023

- 3-4 May 2023 in **Brussels** – 4th edition of the European Conference on Connected and Automated Driving aiming to take stock of R&I activities in the field of CCAM to discuss if technology and society are ready for the large-scale deployment of sustainable and inclusive mobility solutions.

Thank you for your attention

European Commission