



CONNECT

CCAM TRUST & RESILIENCE

Never trust, always verify

CONTINUOUS AND EFFICIENT
COOPERATIVE TRUST MANAGEMENT
FOR RESILIENT CCAM



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the European Union

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About

In most cases, there is a certain level of mistrust in terms of safety when it comes to autonomous driving. Beyond the needs of functional safety, trustworthiness management should be included in CCAM's security functionality solution. The project establishes a trust management framework centred on zero-trust which expands by assessing dynamic trust relationships based on who is involved in providing the information. Combining the vehicle's systems with information available in the cloud, expands the knowledge on the environment required for decision making, outsources the calculations in a trustworthy way to the backend of the cloud and helps in this way to make faster decisions, cooperatively and without delay increasing the safety of autonomous driving. The features of CONNECT facilitating next generation ITS solutions enable it addressing challenges in the era of personal mobility and environmental sustainability.





Vision

The vision of the project is to address the convergence of security and safety in CCAM by assessing dynamic trust relationships and defining a trust model and trust reasoning framework based on which involved entities can establish trust for cooperatively executing safety-critical functions. The CONNECT Trust Ma-

agement framework is the basis that models and captures the trust relationships of the next generation CCAM systems. CONNECT's new safety paradigm is a key element in bringing autonomous driving to a completely new level of trustworthiness and is expected to lead to long-term consumer acceptance as a result.



Motivation

The 5G C-V2X technology is expected to greatly enhance autonomous driving through perception sharing, path planning, real-time local updates, and coordinated driving. These features facilitate the next generation of solutions for cooperative autonomous driving applications (e.g., intersection movement assist, cooperative routing, and parking services), and greatly reduce emissions.

The core of the smart transportation vision revolves around an integrated communication and transportation network that promotes several societal benefits, and shapes a new era of advanced road safety, enhanced personal mobility, and environmental sustainability. Security and trustworthiness are key properties of such a system.



Mission & Objectives

Mission and objectives (74-140 words)
CONNECT's main objective is to build a trust management framework improving the quality and speed of decision making through the assess-

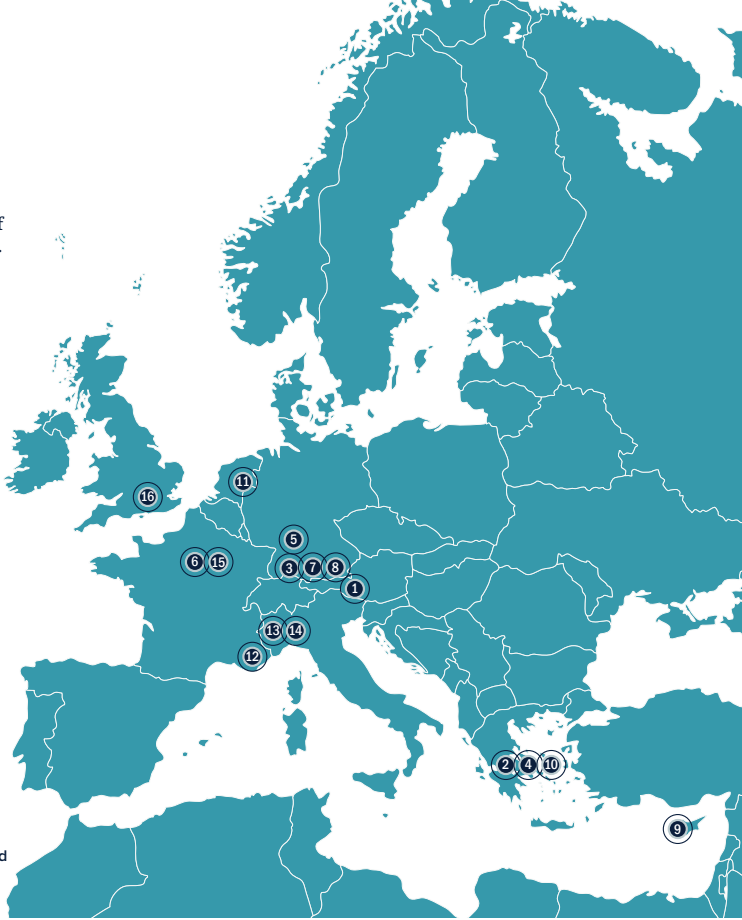
ment of dynamic trust relationships utilising knowledge and processing capacity at the backend of the cloud to make faster and safer decisions.

- Novel trust modelling framework for CCAM
- Context Aware Continuous Trust Assessment in Zero Trust CCAM
- Extending the stand-alone vehicle domain to safe and security solutions distributed from vehicles to MEC and Cloud
- Secure "Chip-to-Cloud" assurance solutions for enablement of trustworthy and resilient safety-critical automotive services
- Shape the ethical dimensions of trust management in the Next-Generation CCAM technologies
- Simulation, Validation & Evaluation of CONNECT Framework in Inter- and Intra-Vehicle Real-Case Safety-Critical Scenarios in the context of Connected Cars and Autonomous Driving

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Partners

The CONNECT consortium consists of 16 partners from 8 different countries.



1 **TECHNIKON**

Technikon Forschungs- und Planungsgesellschaft mbH
Austria [Villach]

2 **UBITECH**

Ubitech Ltd
Greece [Athens]

3 **HUAWEI**

Huawei Technologies
Germany [Munich]

4 **ICTCS**

Institute of Communication and Computer Systems, I-SENSE
Research Group
Greece [Athens]

5 **UNIVERSITÄT ULM**

University of Ulm - Institute of Distributed Systems
Germany [Ulm]

6 **TRIALOG**

Trialog
France [Paris]

7 **DENSO**

DENSO AUTOMOTIVE
Deutschland GmbH
Germany [Munich]

8 **INTEL**

Intel Deutschland GmbH
Germany [Munich]

9 **Suite5**

Suite5 Data Intelligence
Solutions Ltd
Cyprus [Limassol]

10 **uni.systems**

Unisystems
Greece [Athens]

11 **UNIVERSITY OF TWENTE**

University of Twente, Department of Philosophy
Netherlands [Twente]

12 **FSCOM**

FSCOM
France [Antibes]

13 **STELLANTIS**

Centro Ricerche Fiat SCPA
Italy [Turin]

14 **POLITECNICO DI TORINO**

Politecnico di Torino
Italy [Turin]

15 **SystemX**

Institut de Recherche Technologique SystemX
France [Paris]

16 **UNIVERSITY OF SURREY**

University of Surrey, Department of Computer Science
United Kingdom [Guildford]

Facts



Budget

€ 5.7 Million
100% EU-funded



Consortium

16 Partners
8 Countries



Duration

36 Months
09/2022 - 08/2025

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Find out more about this Project:
<https://horizon-connect.eu/>