ASECAP DAYS
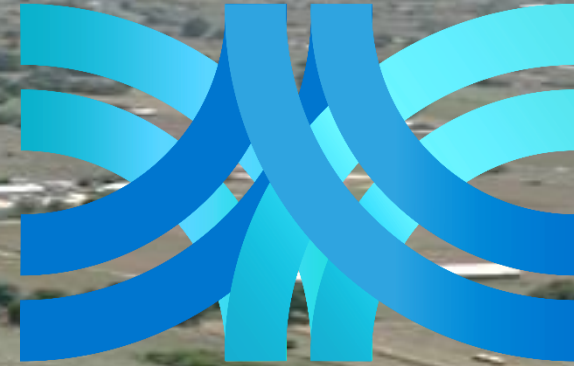
COSTA NAVARINO **2019**

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Tomorrow's Mobility…Is Here Today!

ASECAP DAYS

COSTA NAVARINO 2019

Transition Areas for Infrastructure-Assisted Automated Driving (TransAID)

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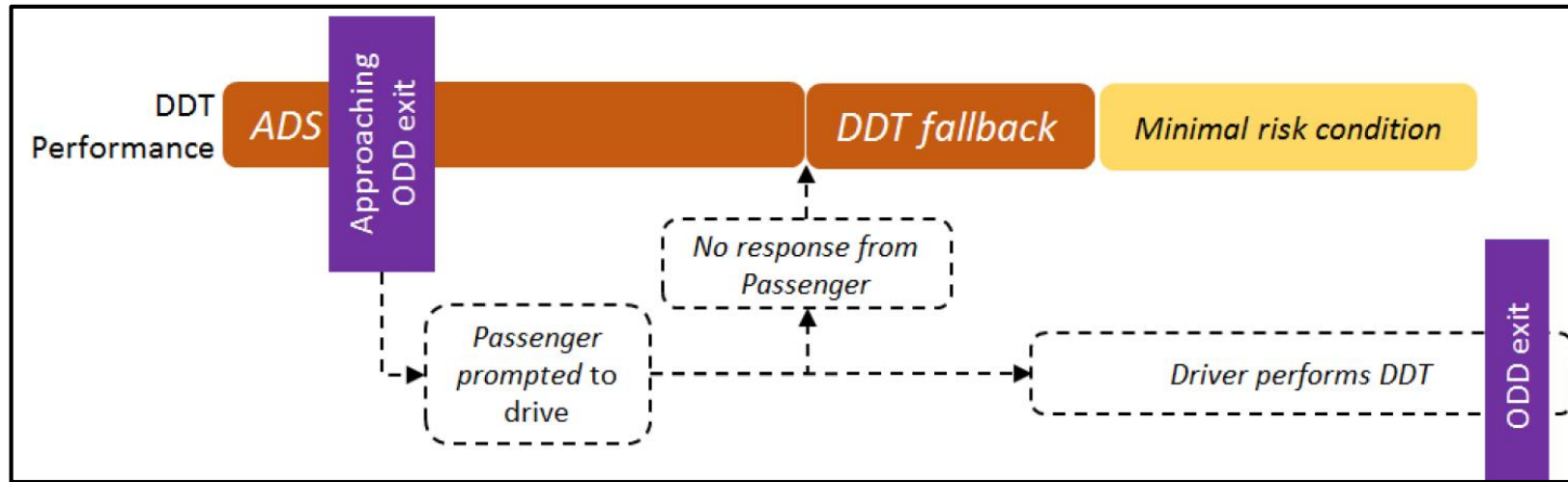Universidad Miguel Hernandez (UMH), Spain

Project Overview

❑ **TransAID (ART-05)**

- ✓ Transition Areas for Infrastructure-Assisted Driving
- ✓ 01-09-2017 ~ 31-08-2019
- ✓ Budget: EUR 3.836.353,75
- ✓ Seven partners from 6 countries: DE, UK, BE, NL, EL, ES

AV Disengagements

- ❑ Case: Level 4 automated vehicle
- ❑ DDT: Dynamic Driving Task
- ❑ ADS: Automated Driving System
- ❑ Minimum risk condition: stop safely

Transition of Control Areas

❑ …what if the automated vehicle cannot deal with upcoming situation?

✓ …what, if this happens not to single vehicles only, but to several?

✓ …what, if it always happens on the same spot?
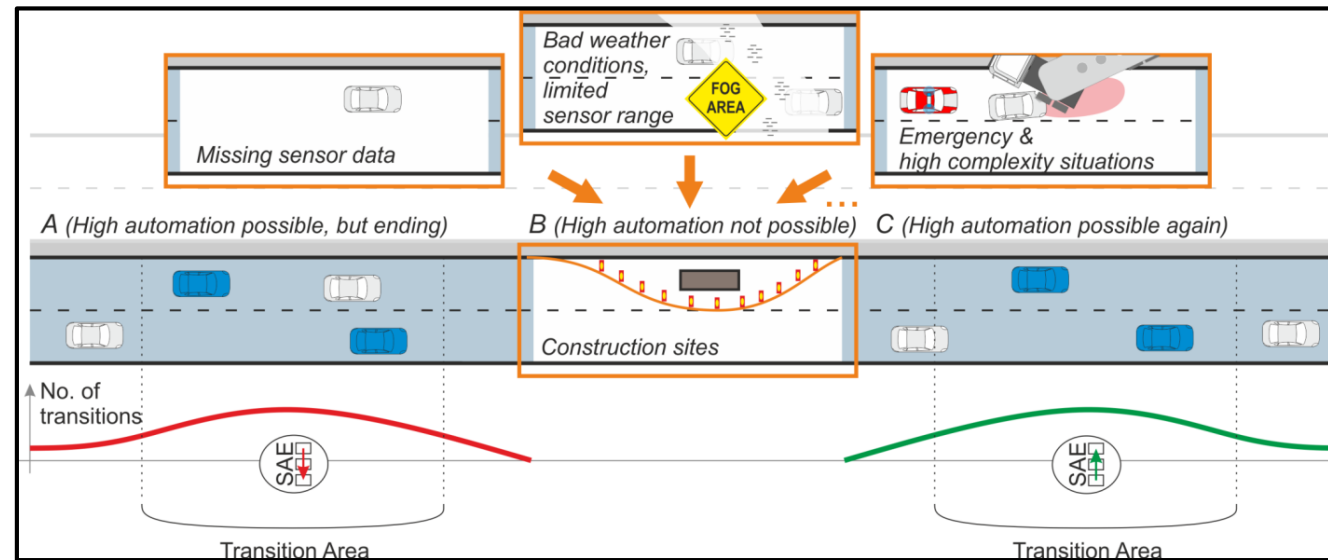
Project Objectives

To develop and demonstrate **infrastructure-assisted traffic management procedures, protocols and guidelines** for smooth coexistence between automated, connected and conventional vehicles especially at Transition Areas.

Evaluation and modelling of current automation prototypes and their drivers' behaviour.

Assessment of the impact of Transition Areas on traffic safety and efficiency. Generate requirements on enhanced traffic management procedures.

Development of infrastructure-assisted management procedures and protocols to control connected, automated and conventional vehicles at Transition Areas.

Definition of V2X message sets and communication protocols for the cooperation between connected/automated vehicles and the road infrastructure

Development of procedures to enhance the detection of conventional vehicles and obstacles on the roads and to inform/influence conventional vehicles.

Integration, test and evaluation of the TransAID infrastructure-assisted traffic management protocols and procedures in a simulation environment. Validation and demonstration of them by means of real world prototypes at test sites.
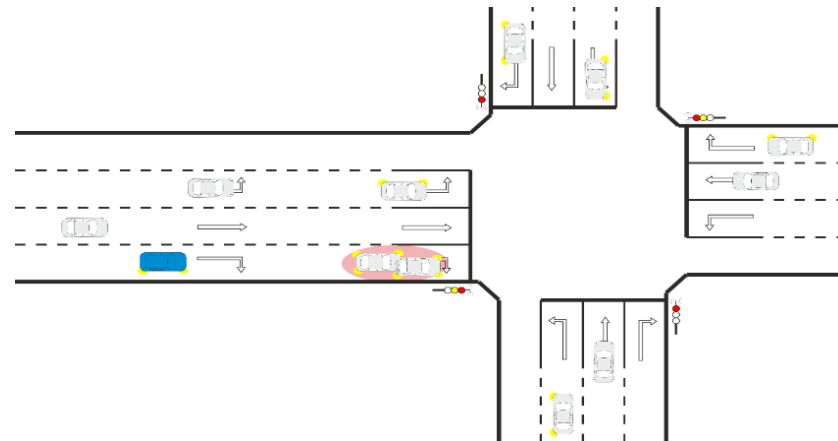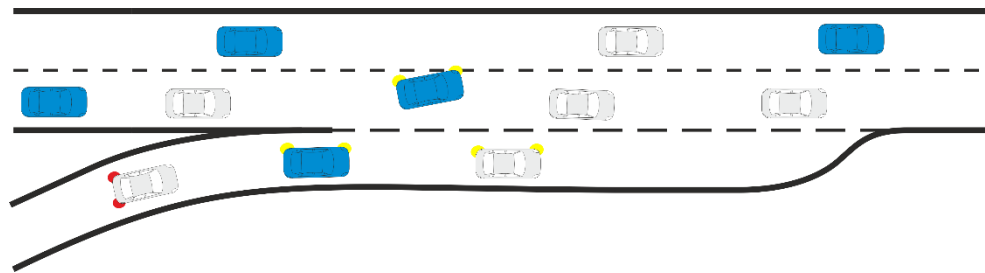
Provision of a guideline/roadmap to stakeholders regarding the requirements on traffic infrastructure and traffic management in order to cope with Transition Areas considering mixed traffic.

TransAID use cases (1/3)

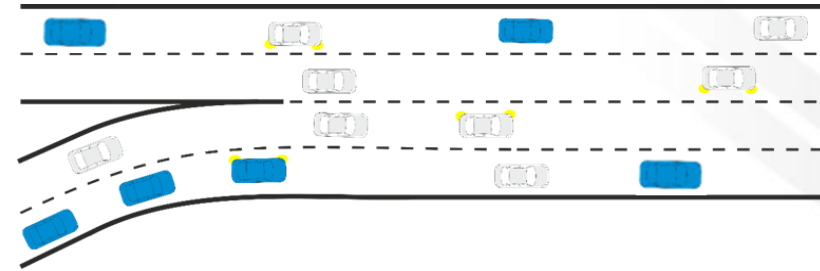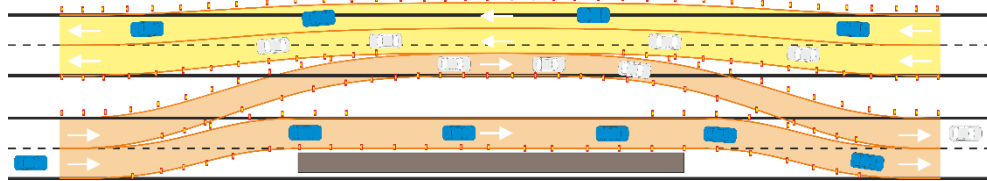1. Prevent ToC/MRM by providing vehicle path information
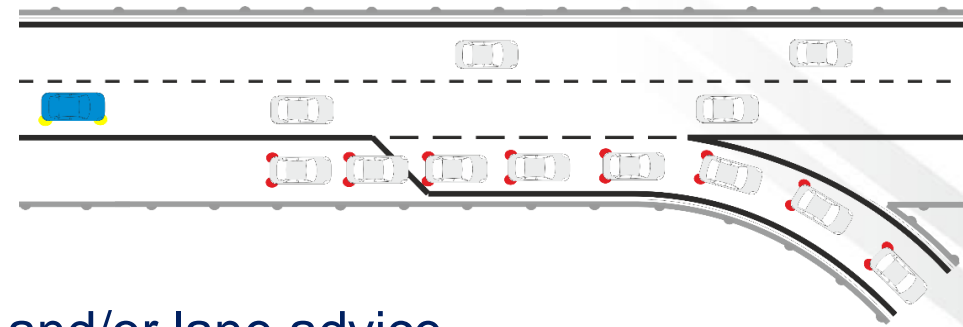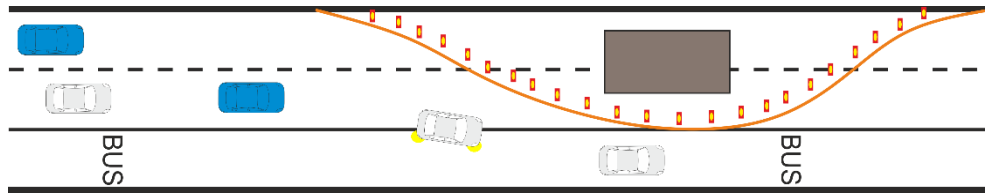
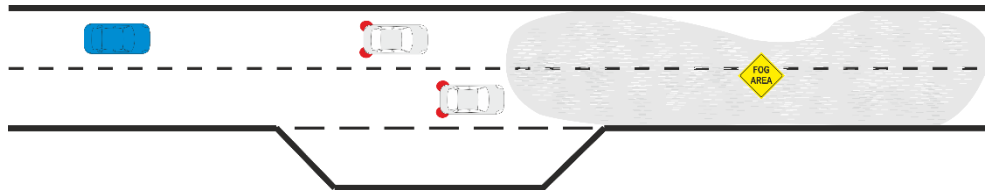2. Prevent ToC/MRM by providing speed, headway and/or lane advice

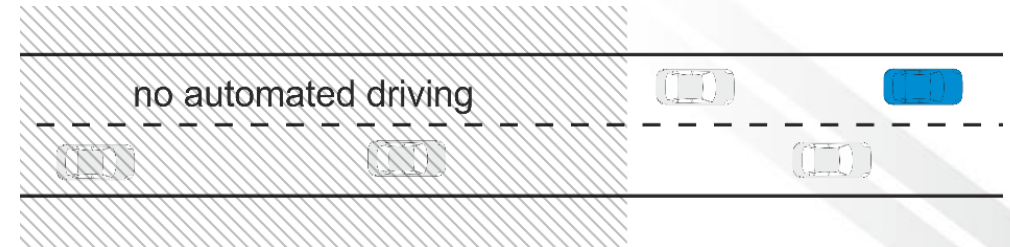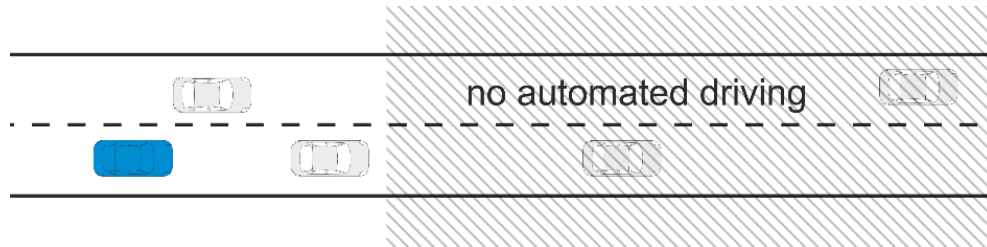3. Prevent ToC/MRM by traffic separation

4. Manage MRM by guidance to safe spot

TransAID use cases (3/3)

5. Distribute ToCs upstream of no AD zone

Simulation Activities
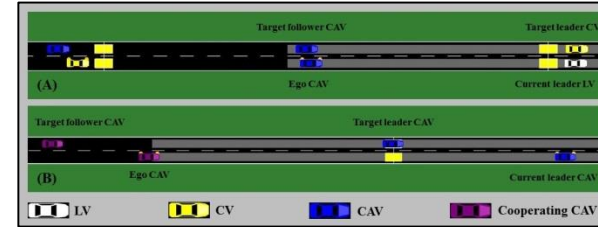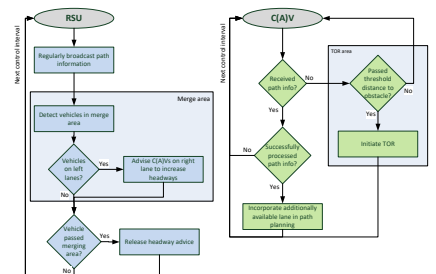
Applications
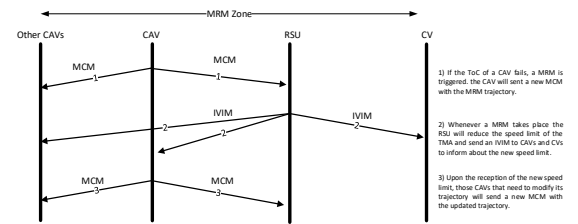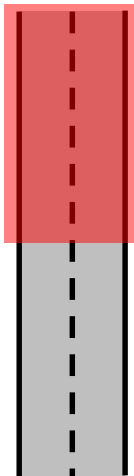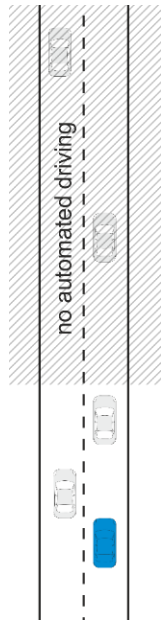
❑ Distribute ToCs upstream of no AD zone

UC5.1 Preliminary Results
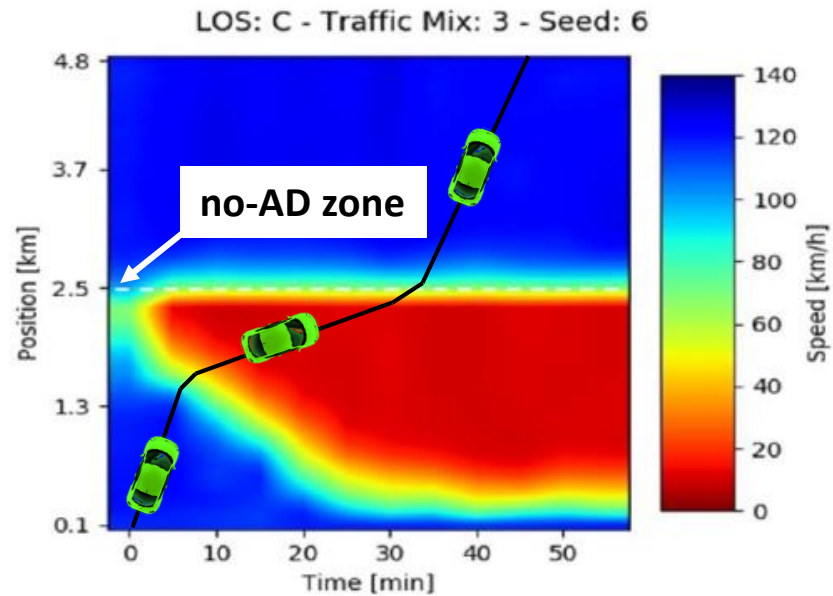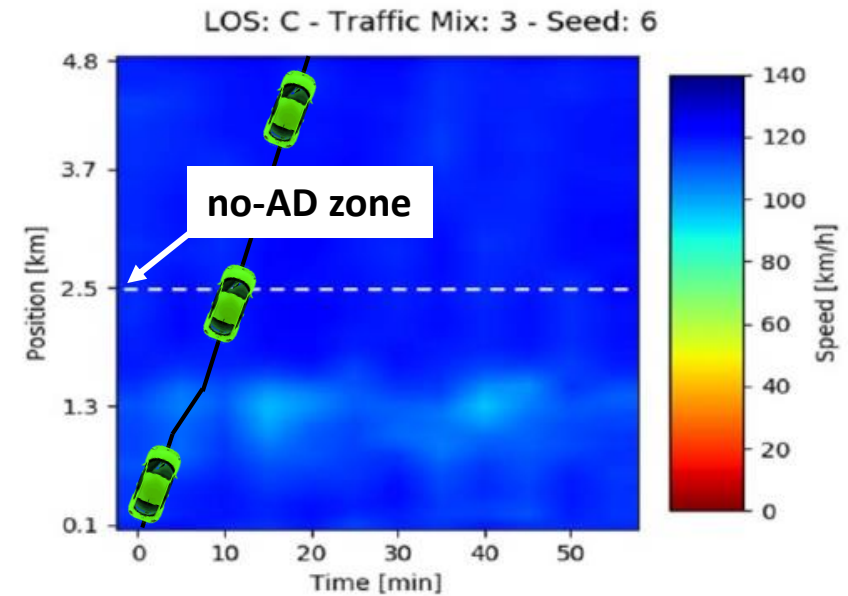
Real World Prototype
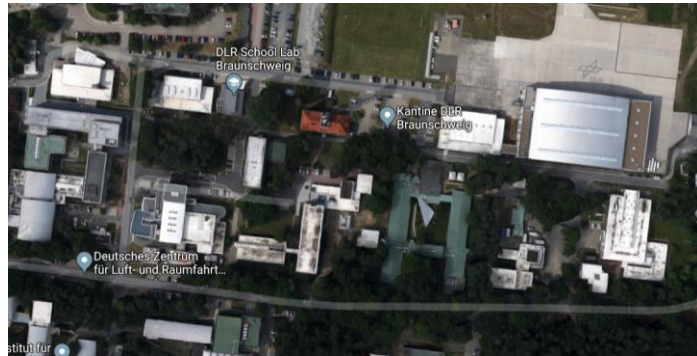
Questions - Remarks?

Simulation Videos: https://www.transaid.eu/videos/

Hierarchical traffic management
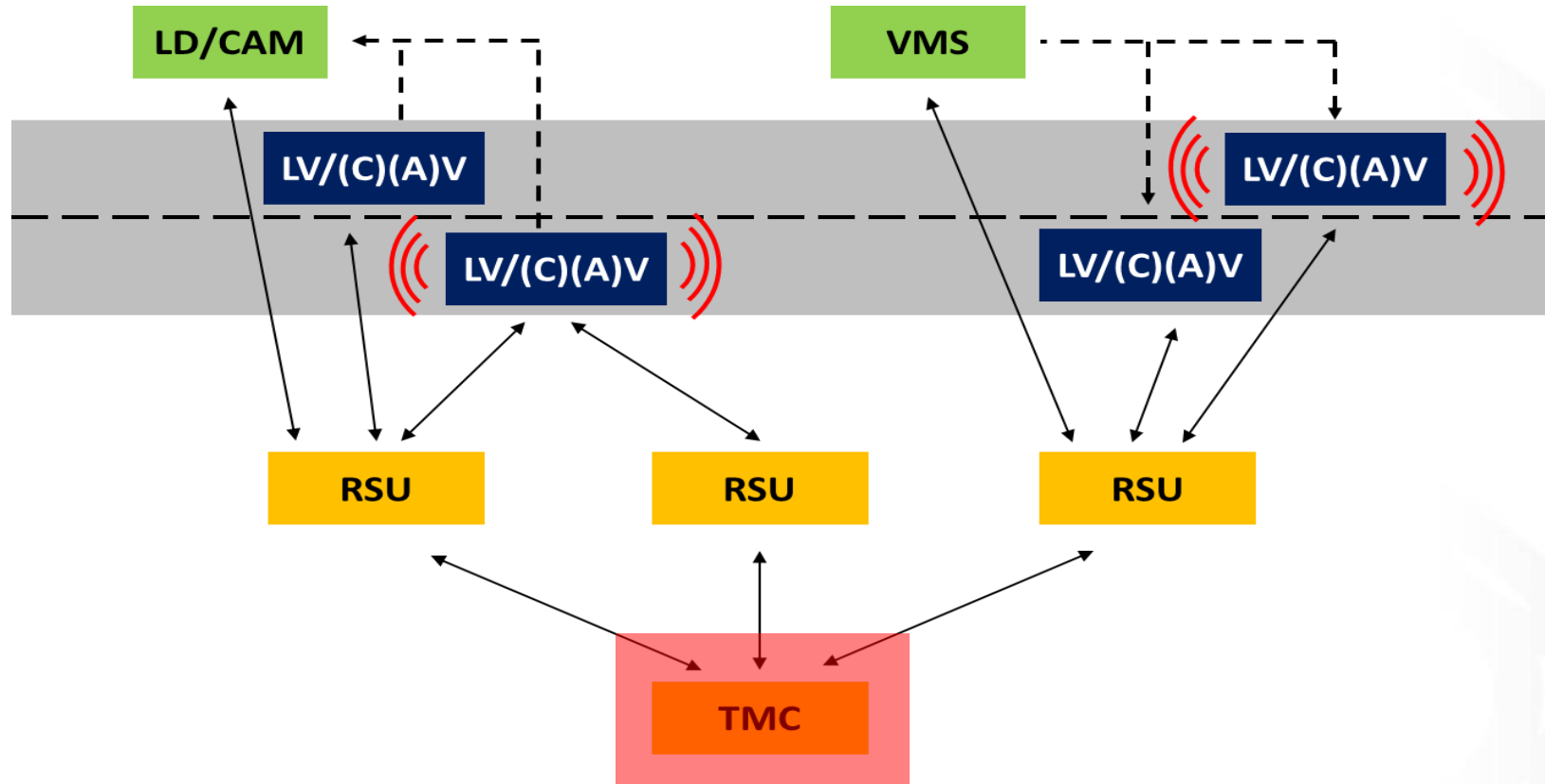
Intermediary service provider
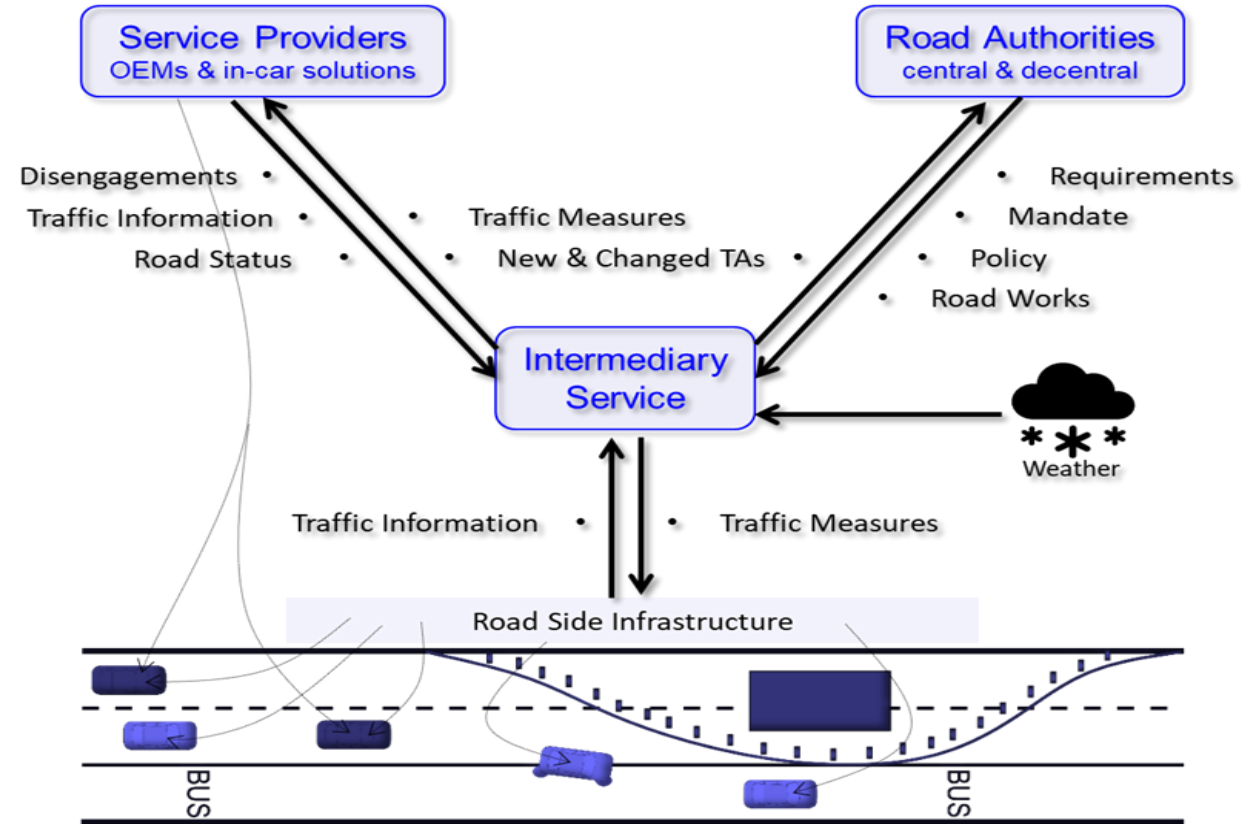
V2X Message Set

TransAID interim message set

| CAM | DENM | MCM | CPM | MAPEM | IVIM |

Extensions needed   Proposal   Optimization

Approach: standard-compliant, backward compatibility and interoperability.