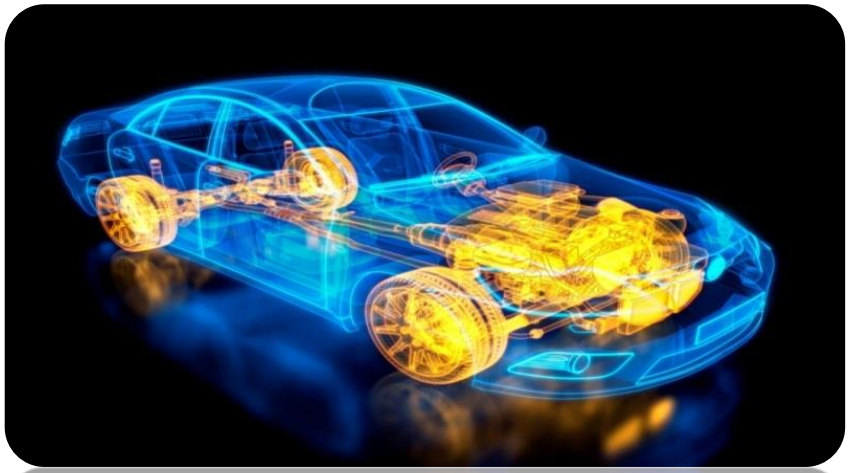
CLEPA
European Association of Automotive Suppliers

# IN-VEHICLE TELEMATICS PLATFORM

**Stefan Deix, R&I Director**

# Agenda

- CLEPA Research & Innovation
- Current Situation
- Open Telematics Platform
- Challenges
- Architecture



# CLEPA RESEARCH & INNOVATION

## Mission

*"CLEPA and its members play a key role in **innovating** and **adapting** the automotive industry to meet **global societal challenges** while **strengthening competitiveness** through technological development, research and innovation."*

- ✓ Contact point to the EC and to other European research associations such as EUCAR, EARPA, ERTICO, etc.
- ✓ Represent CLEPA in European Technology Platforms (ETP) such as ERTRAC, iMobility Forum, etc.

# CLEPA Research Priorities

# CURRENT SITUATION

- Market uptake for communicating vehicles is slow;
- Rolling out new infrastructure is expensive, slow, and incomplete in coverage;
- Regional differences may hinder interoperability;
- Accompanying measures to **bridge the communication gap** towards increased penetration of systems is required;

# OBJECTIVES

- Increase market penetration with interoperable communication (DSRC and 4G-LTE) units;
- Ensure **safety, reliability, privacy** and **security;**
- Enable **realtime** ITS service provision;
- Enable a **vivid ecosystem** of ITS services by third parties;
- Enable early deployment recognizing customer interest;
- Focus on functionalities build on solid business cases;
- Enable access to sensor data by appointed authorities.

*Increase market share of connected and communicating vehicles*

***Open in-vehicle platform architecture***

# OPEN TELEMATICS PLATFORM

**Objective**

*Demonstrate advanced in-vehicle platform architecture*

- *including **cloud connectivity**,*
- *combining benefits of **DSRC** and **4G-LTE**,*
- *providing a **standardised** open vehicle interface,*
- *suitable for **future requirements** and **ITS applications**.*

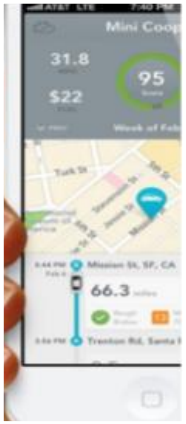
# OPEN TELEMATICS PLATTFORM

## Develop

- an advanced secure in-vehicle platform architecture for real-time ITS services and mechanisms to provide seamless connectivity and interoperability

## Combine

- communication technologies for digital short range (ITS G5) with 4th generation mobile communication technologies (LTE).




# Open Telematics Plattform

## Support

- innovative solutions for cooperative network management, multimodal transport services, safety applications and hazard warnings.

## Demonstrate

- tailor-made solutions for heavy duty vehicles, integrating as much as possible tachograph, tolling, inspection and (dynamic) route guidance functions, etc.

# Open Telematics Plattform

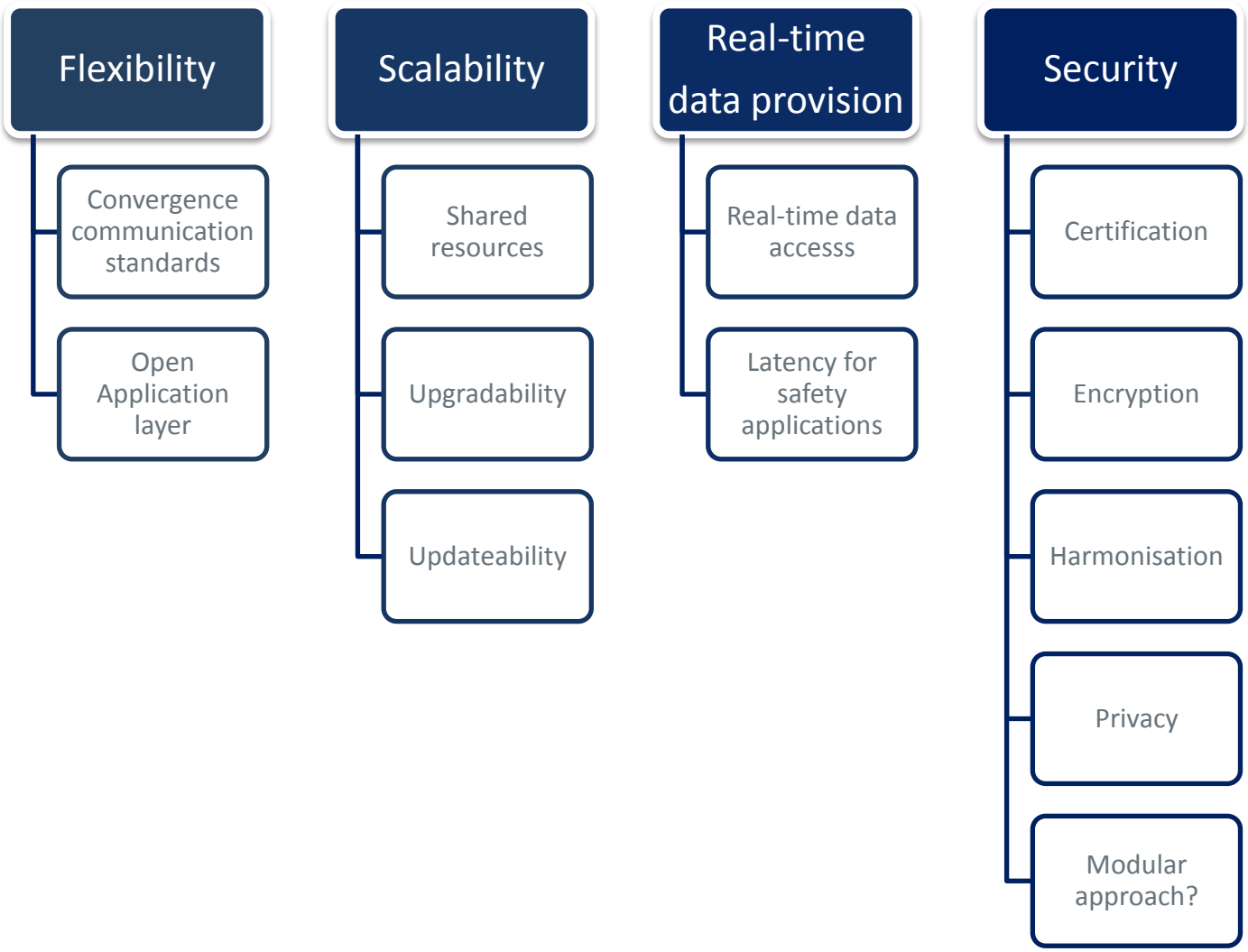

## Provide

- SDK and Open API enabling third party development of applications and vivid ecosystem of cooperative use cases

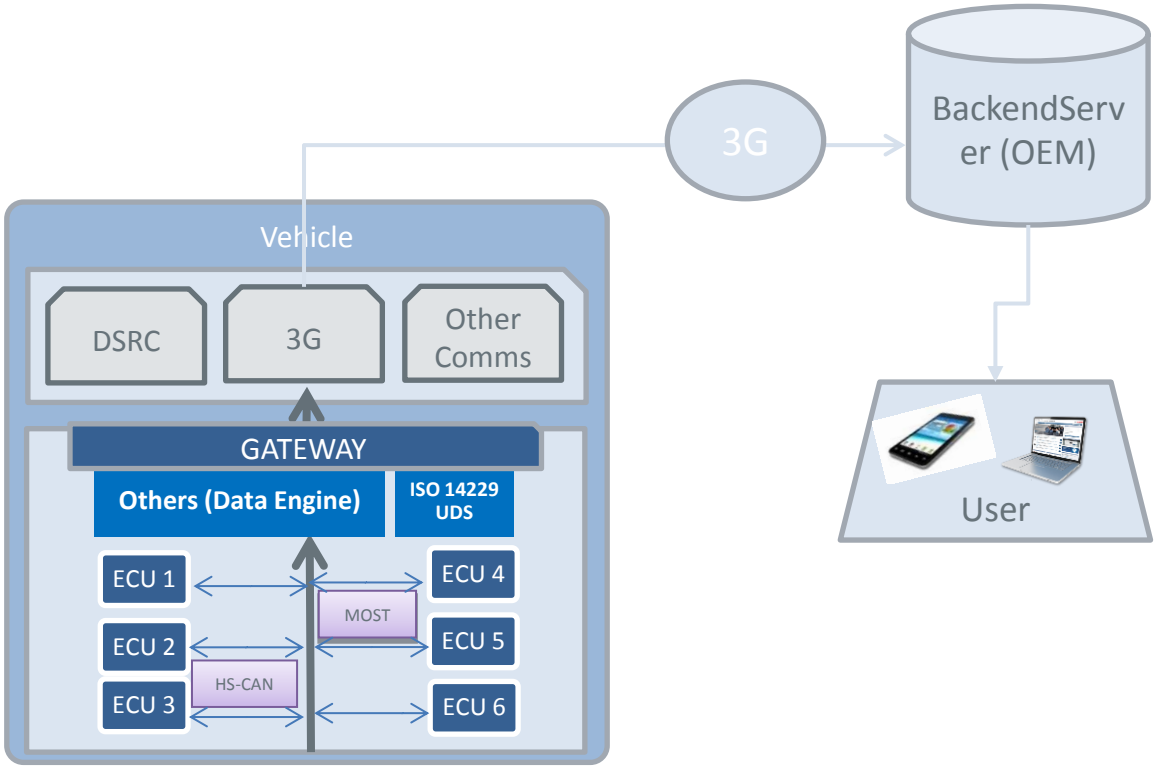
## Certify

- Testing and certification of all apps to ensure high quality by an **independent entity**

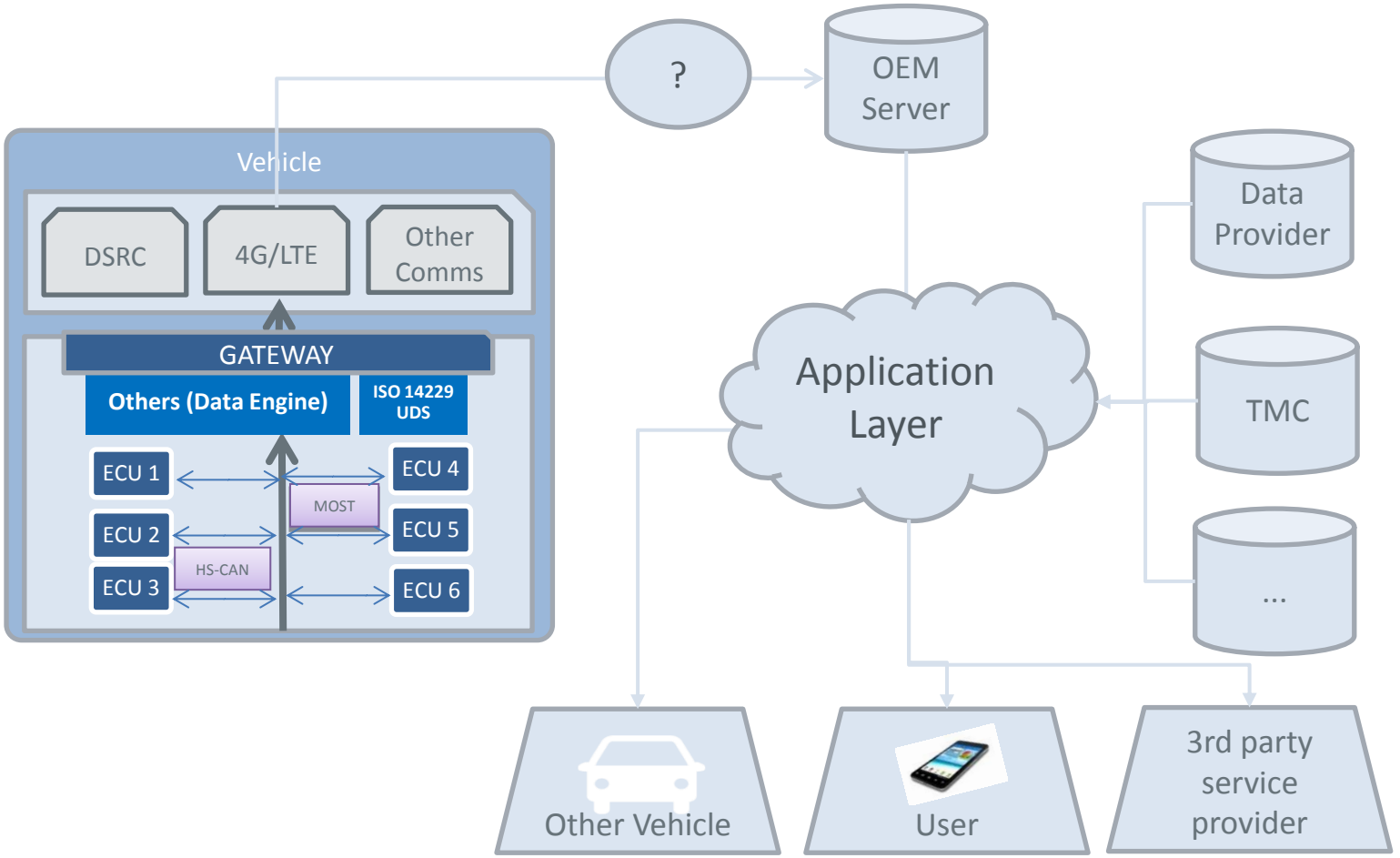
# CHALLENGES



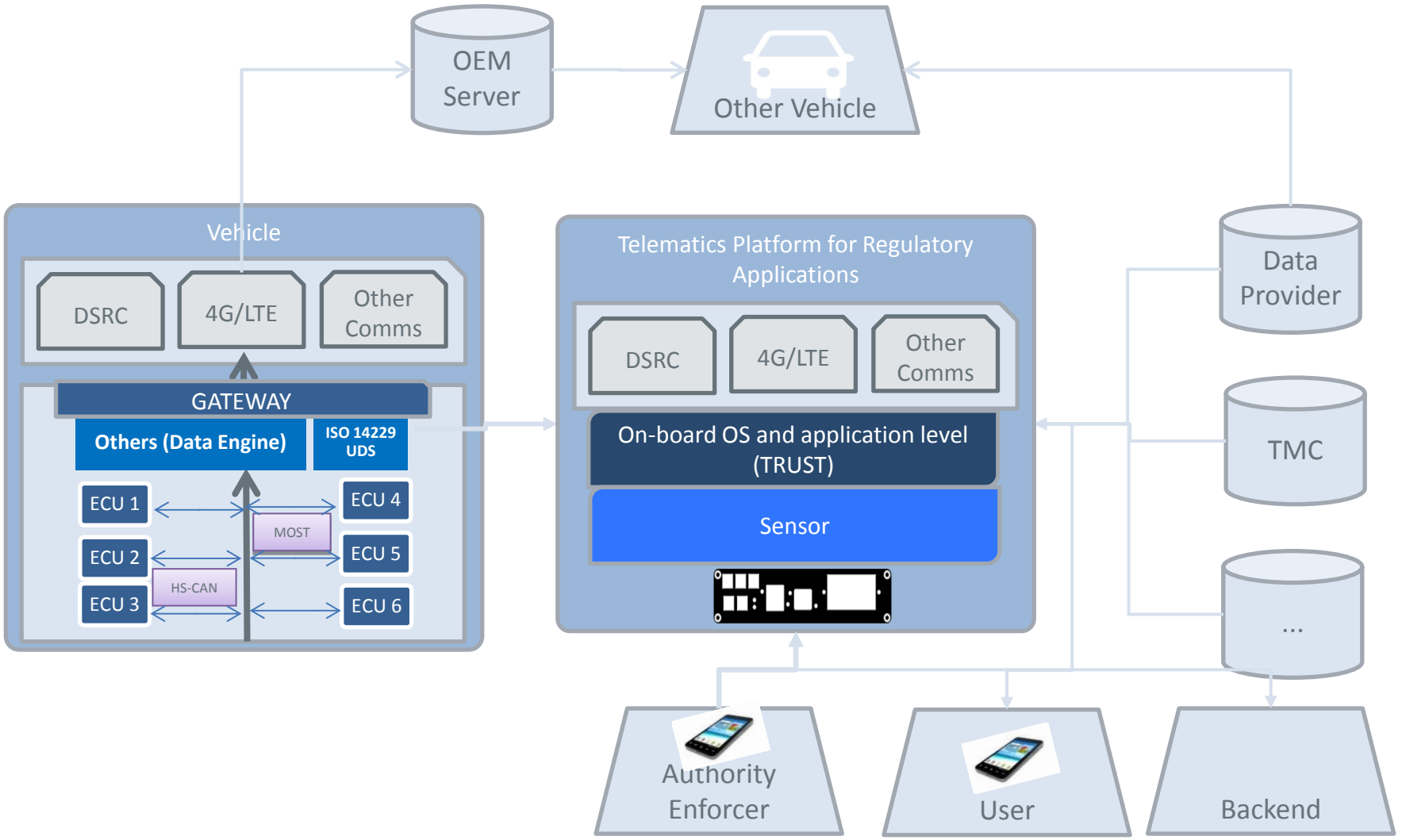
# ARCHITECTURE



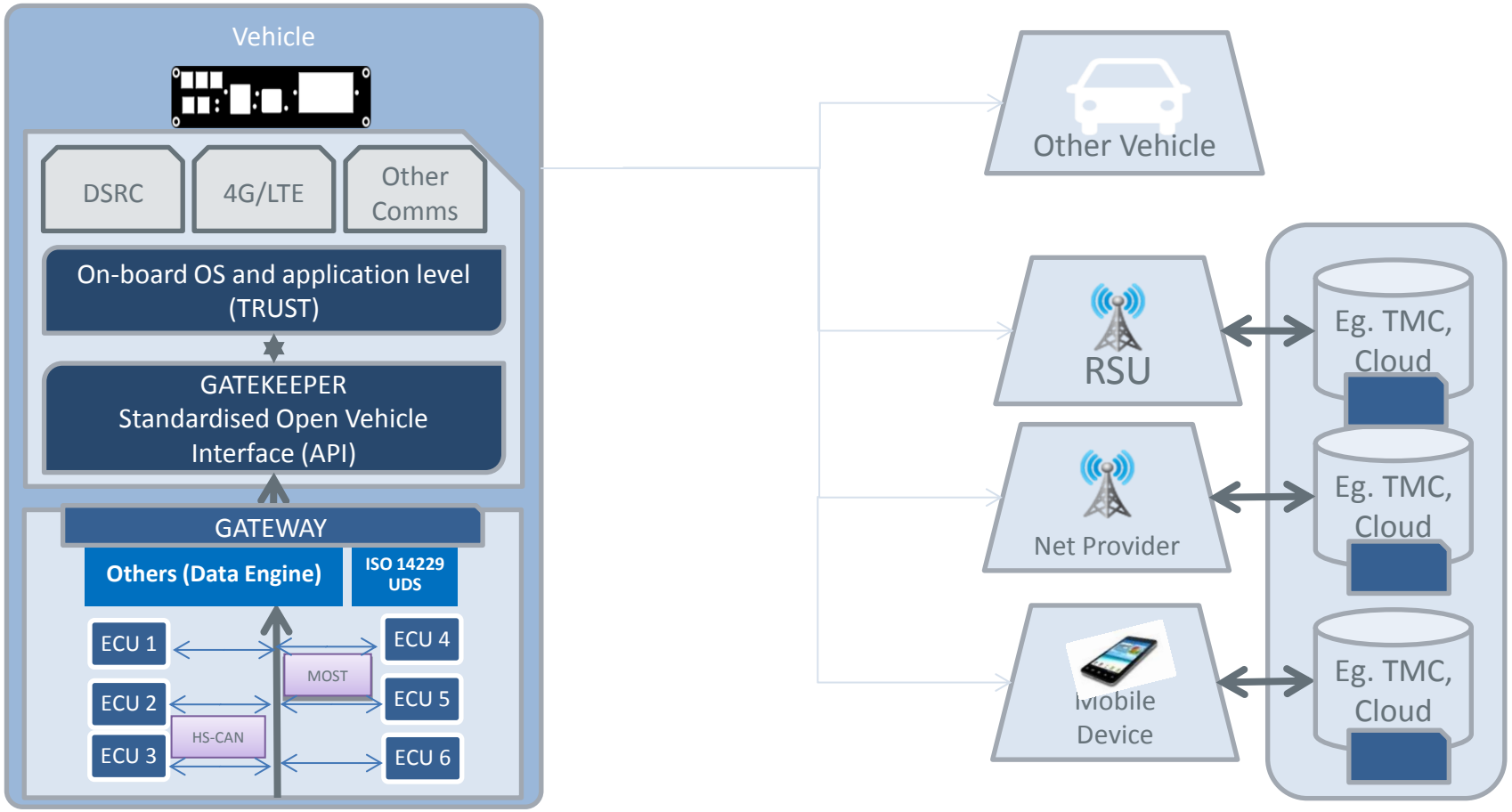
# ARCHITECTURE (CLOUD)



# ARCHITECTURE (BOXED)



# ARCHITECTURE (ON-BOARD)



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# DISCLAIMER

*The slides in this presentation are used as a discussion background to illustrate the challenges for C-ITS and different in-vehicle platform architectures with their strength and weaknesses.*

*They are not representing an official CLEPA postion.*