



Projet
SCOOP
véhicules et routes connectés
connected vehicles and roads

SCOOP – Del. 2.3.6.3

SCOOP approach on C-ITS Business models

Sept. 21, 2016



Project SCOOP@F

- 1st wave : 2014-2017
 - Priority services
 - ITS-G5 communications
- 2nd wave : 2016-2018
 - New services
 - Hybrid cellular/ITS G5 communications

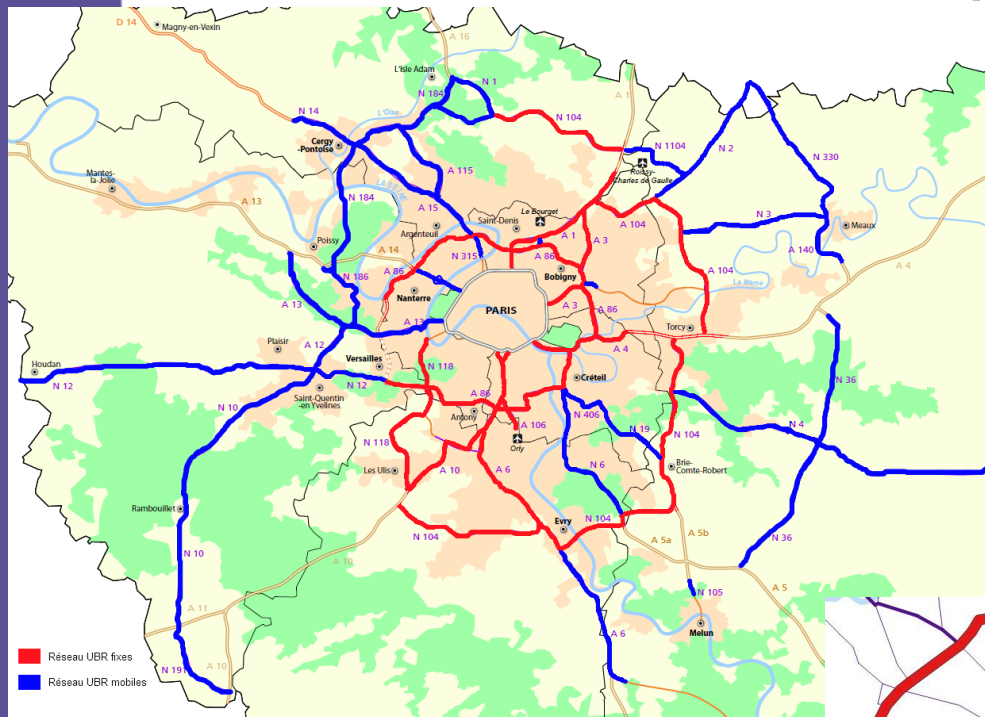


Priority services deployed in the 1st wave

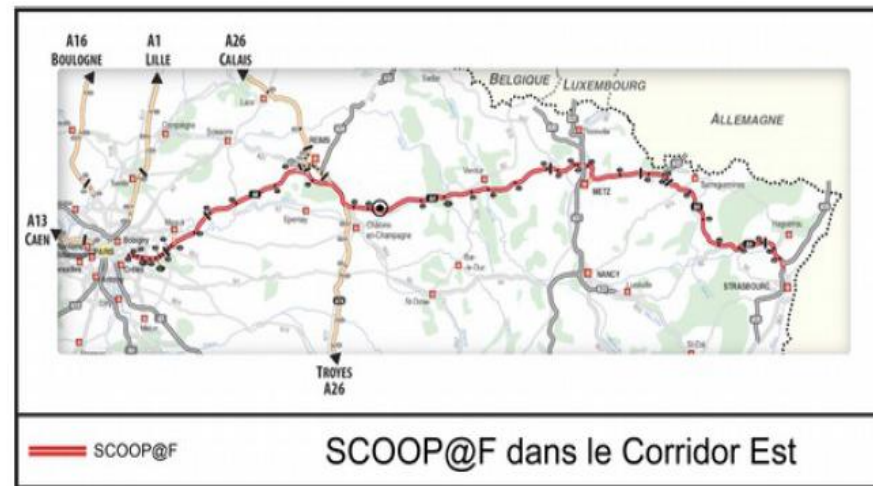
- **Data collection:** position/speed/direction, events detected, events declared
- **Road works warning:**
 - Planned road works,
 - Slow moving maintenance, winter maintenance,
 - Road operator vehicle approaching, rescue and recovery work in progress
- **Hazardous location notification:**
 - Slippery road, bad visibility, extreme weather condition
 - Animal on the road, human presence on the road, obstacle on the road, unmanaged blockage of the road
 - Accident, emergency brake, stationary vehicle, end of queue



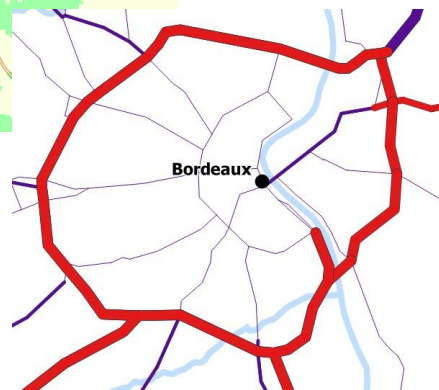
Five pilot sites



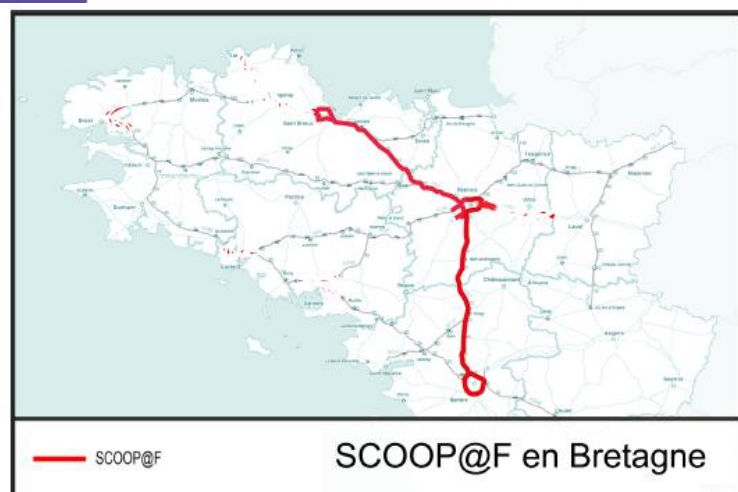
SCOOP@F en Ile-de-France



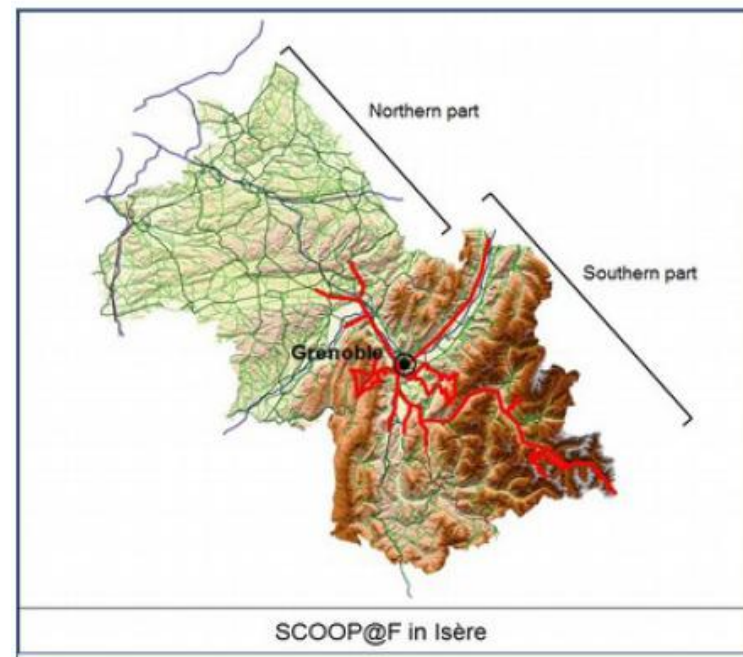
SCOOP@F dans le Corridor Est



SCOOP@F à Bordeaux



SCOOP@F en Bretagne



SCOOP@F in Isère

SCOOP@F partners

- **French Ministry of Transport**
- **Local authorities**
 - Département de l'Isère
 - ITS Bretagne with Départements des Côtes d'Armor, du Finistère, d'Ille et Vilaine, Région Bretagne, Saint-Brieuc Agglomération)
- **TEN-T road operators** (3 DIRs, Sanef)
- **Car manufacturers** (PSA, Renault)
- **Universities and research centers** (Cerema, IFSTTAR, GIE RE PSA-Renault, Université de Reims Champagne-Ardenne, Institut Mines-Télécom).
- **A telecommunication operator** : Orange
- **A provider of trust services** : IDNomic
- Austrian, Spanish and Portuguese partners

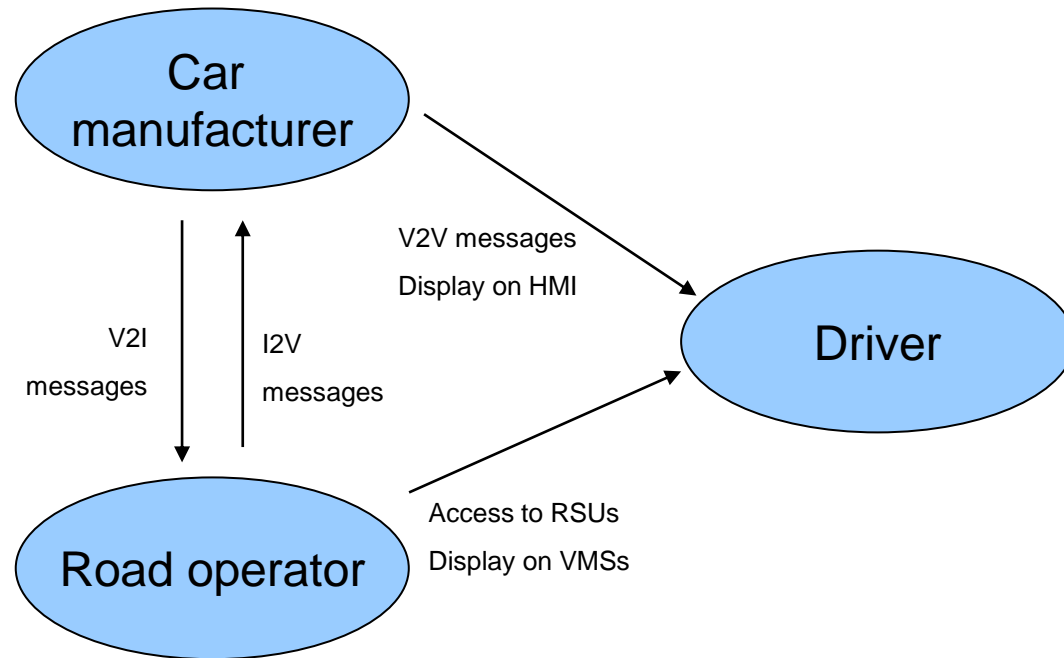


SCOOP@F components

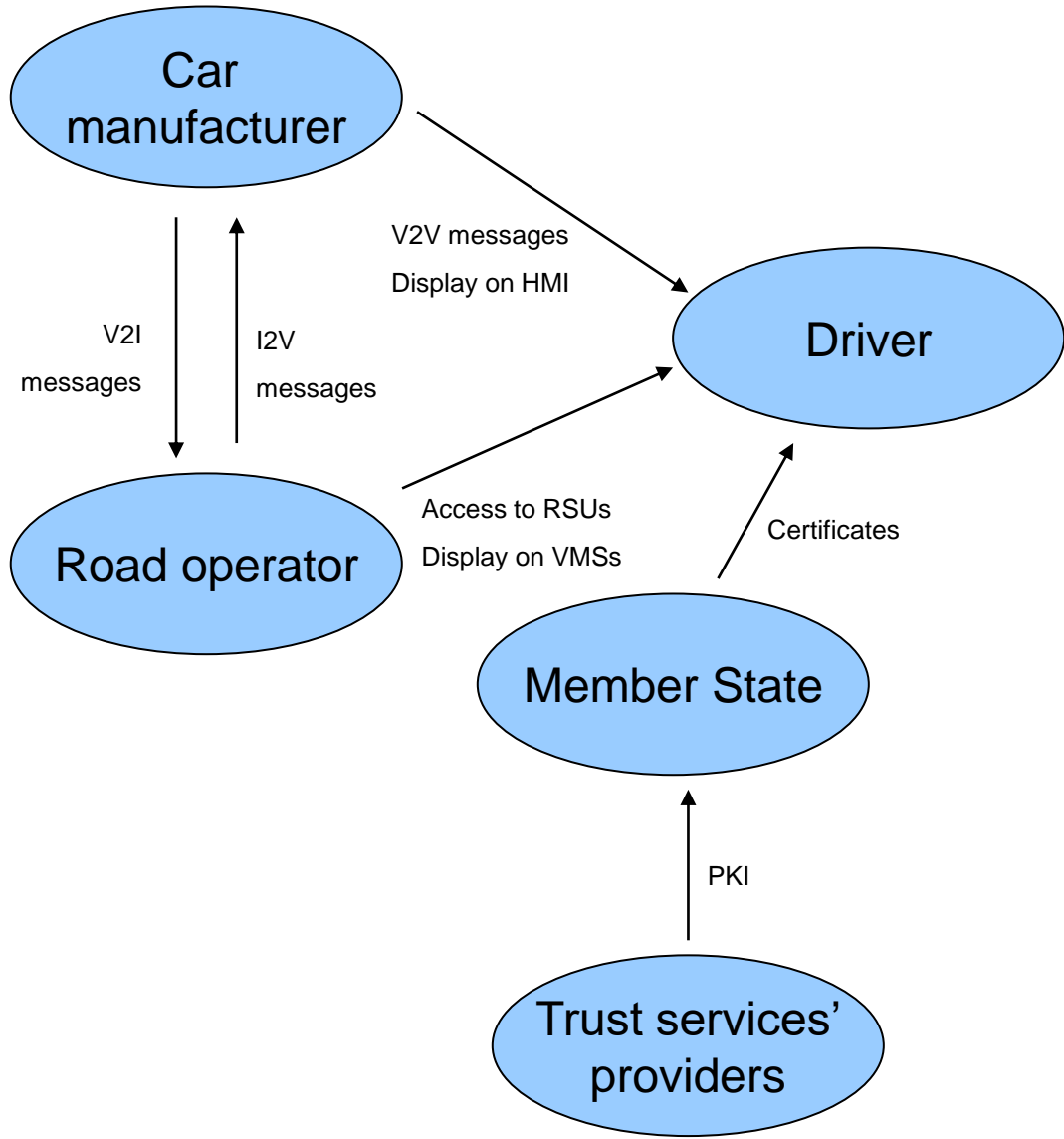
- ITSS-C : the SCOOP@F platform, connected with the road operator's traffic management system
- ITSS-R : road-side units
- ITSS-V : on-board units. 3 categories
 - Renault
 - PSA
 - For road operators (retrofitting) : with a RSU function
- A PKI-based security system



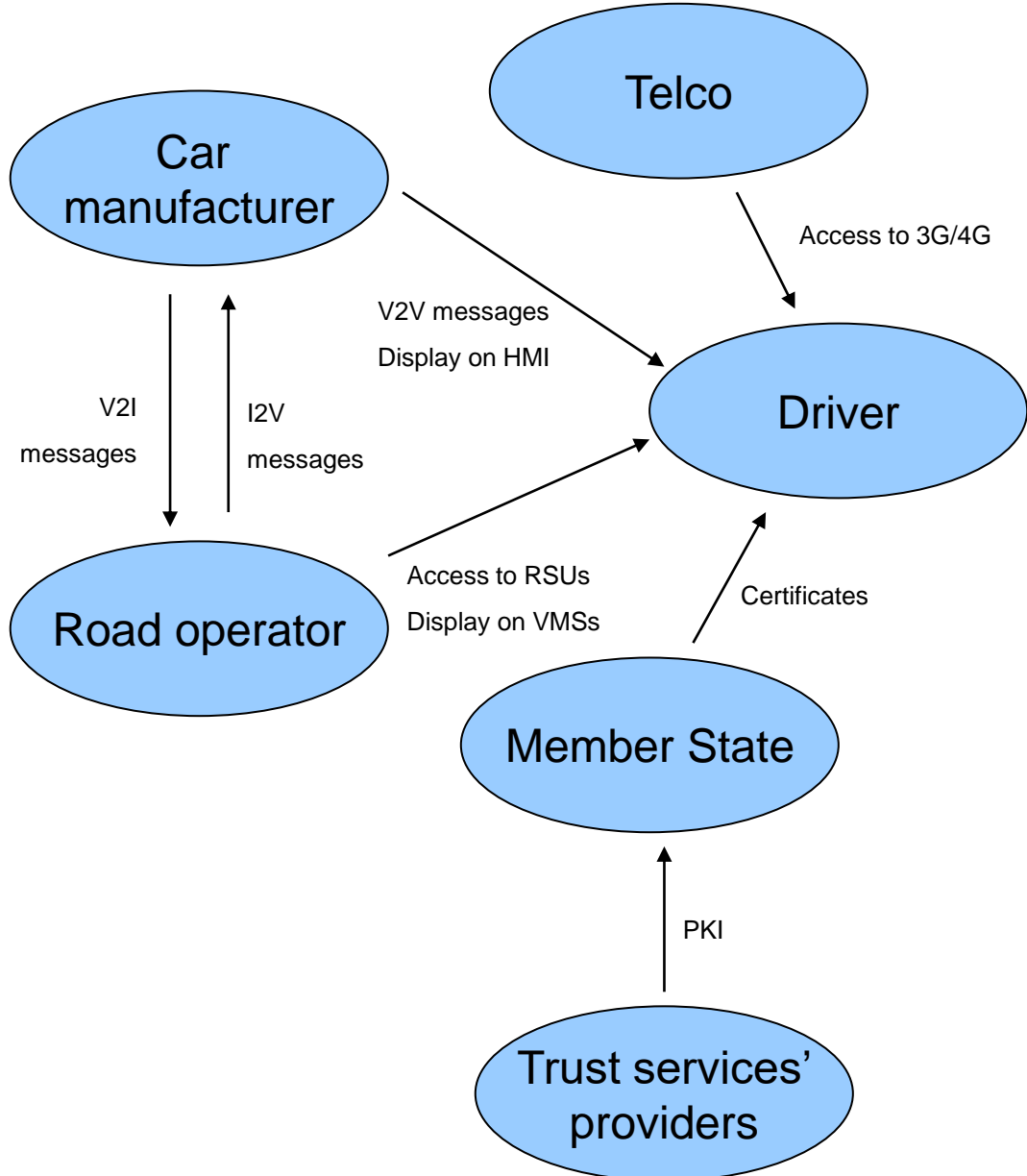
General scheme



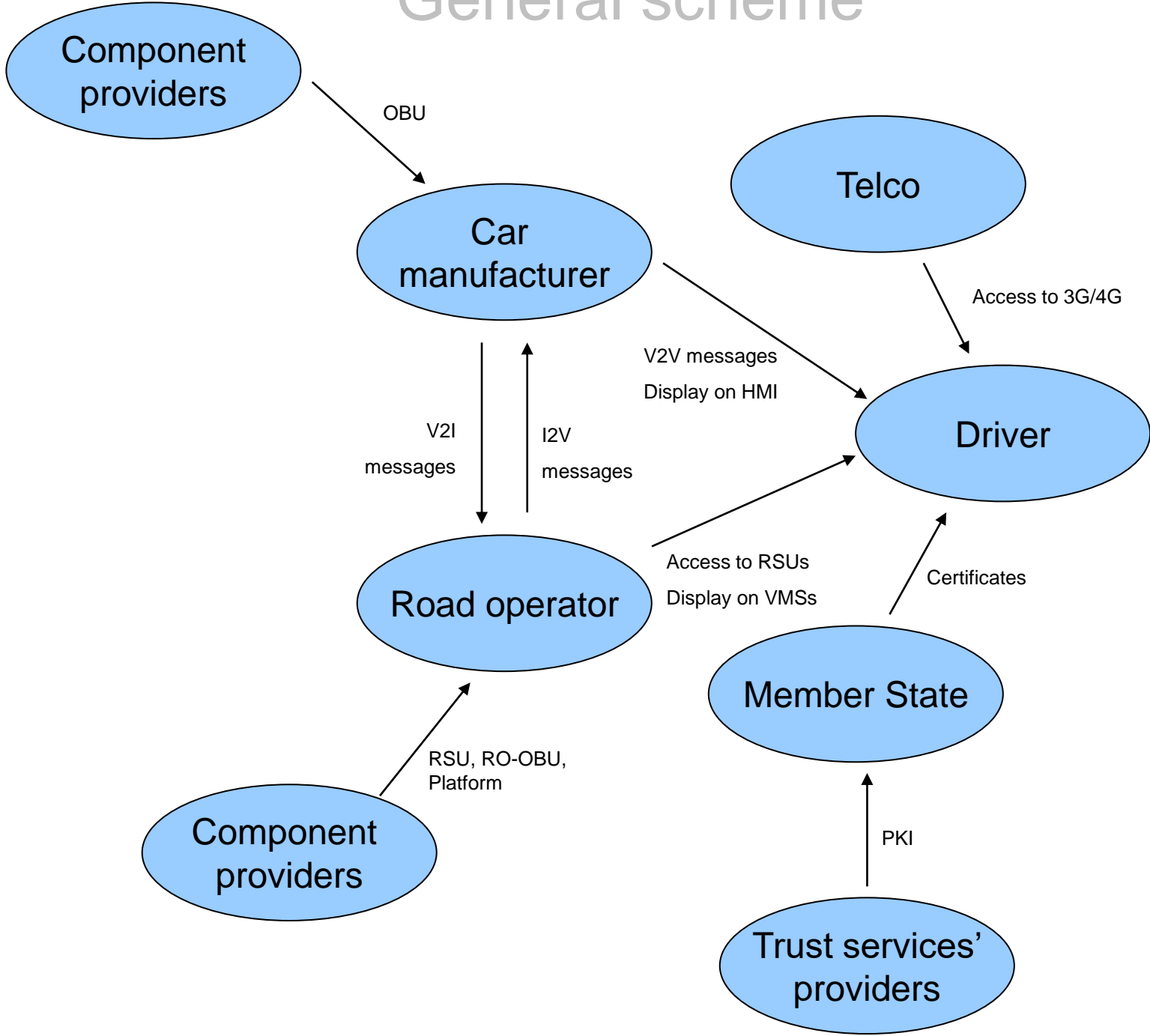
General scheme



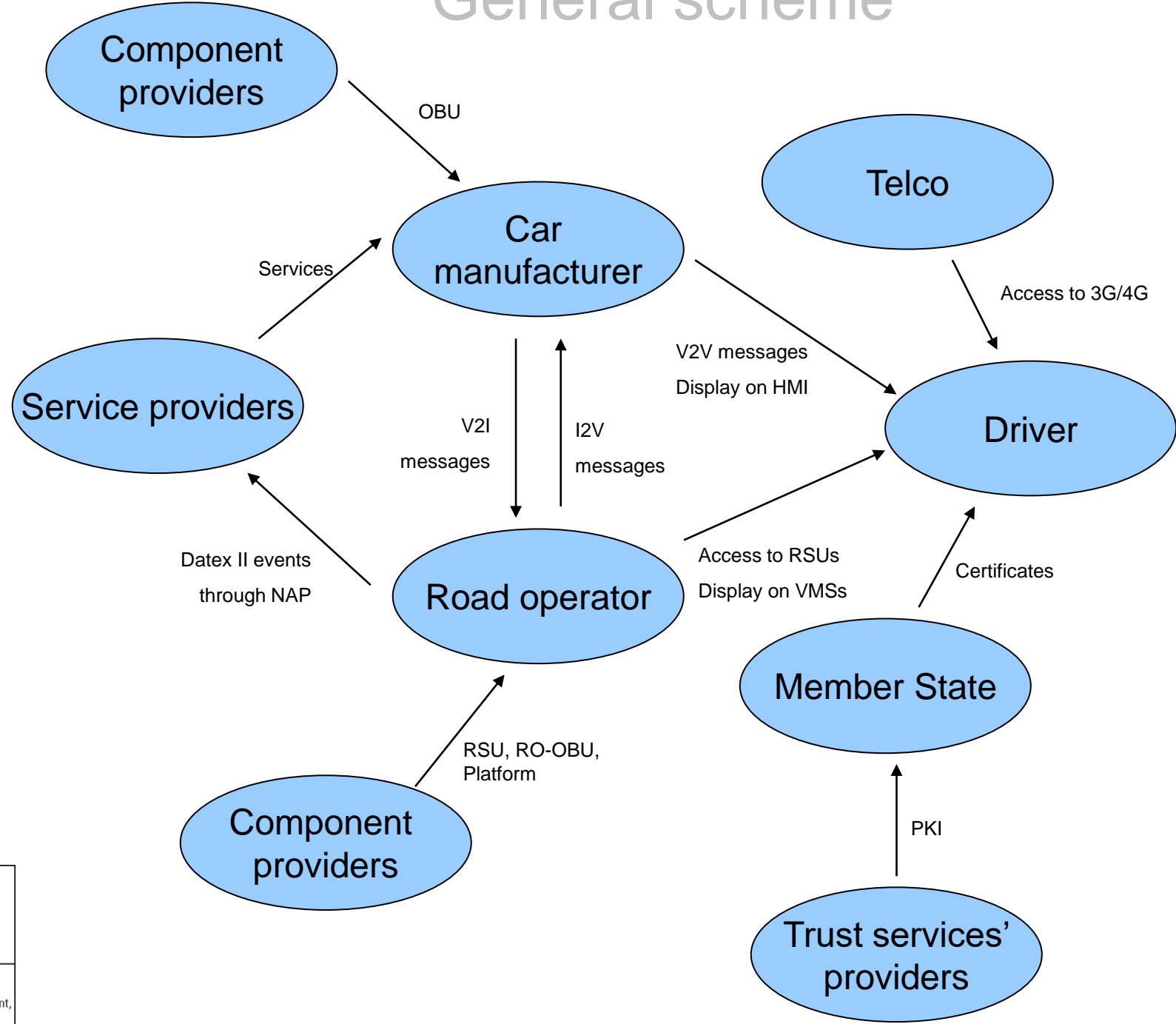
General scheme



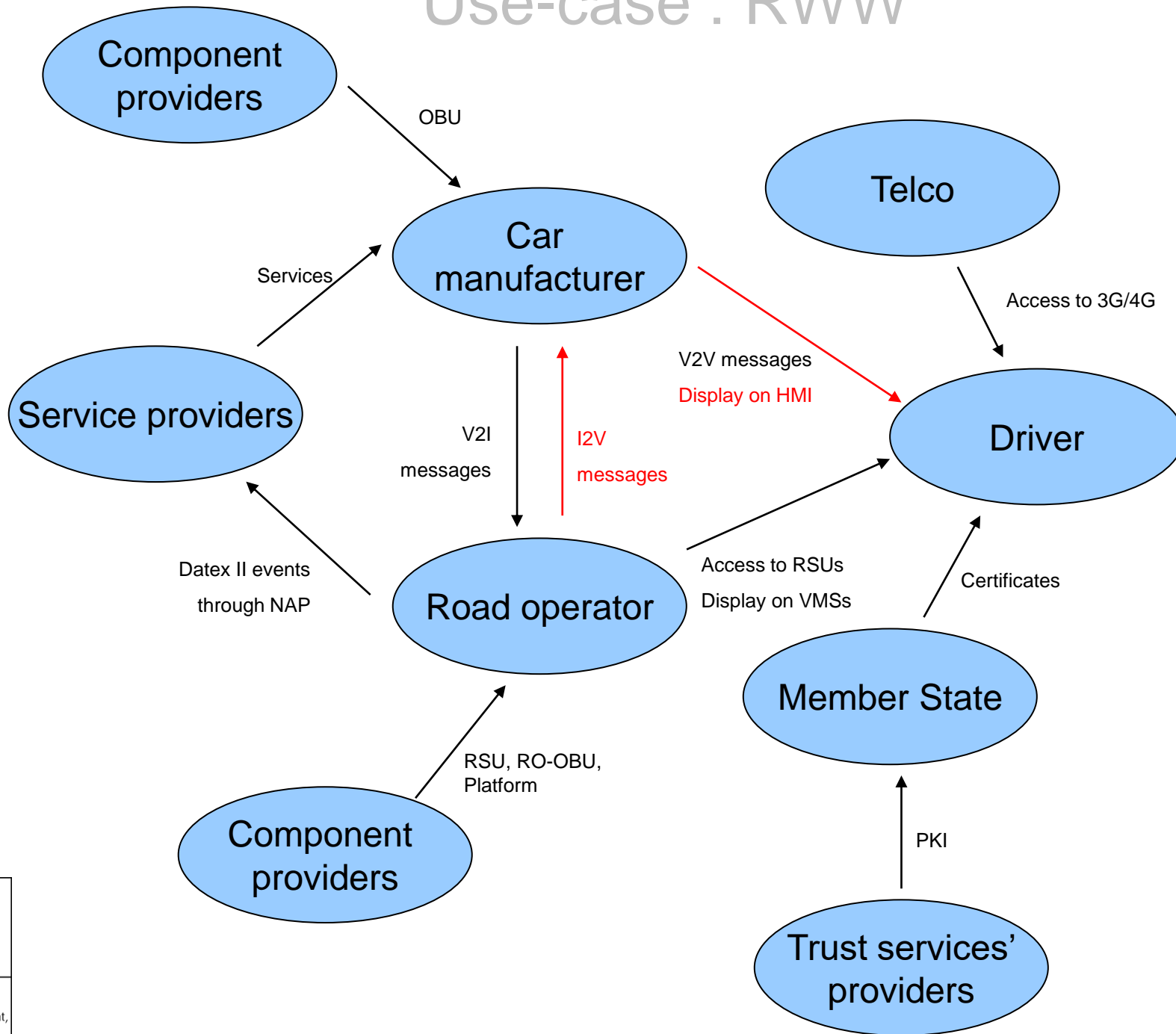
General scheme



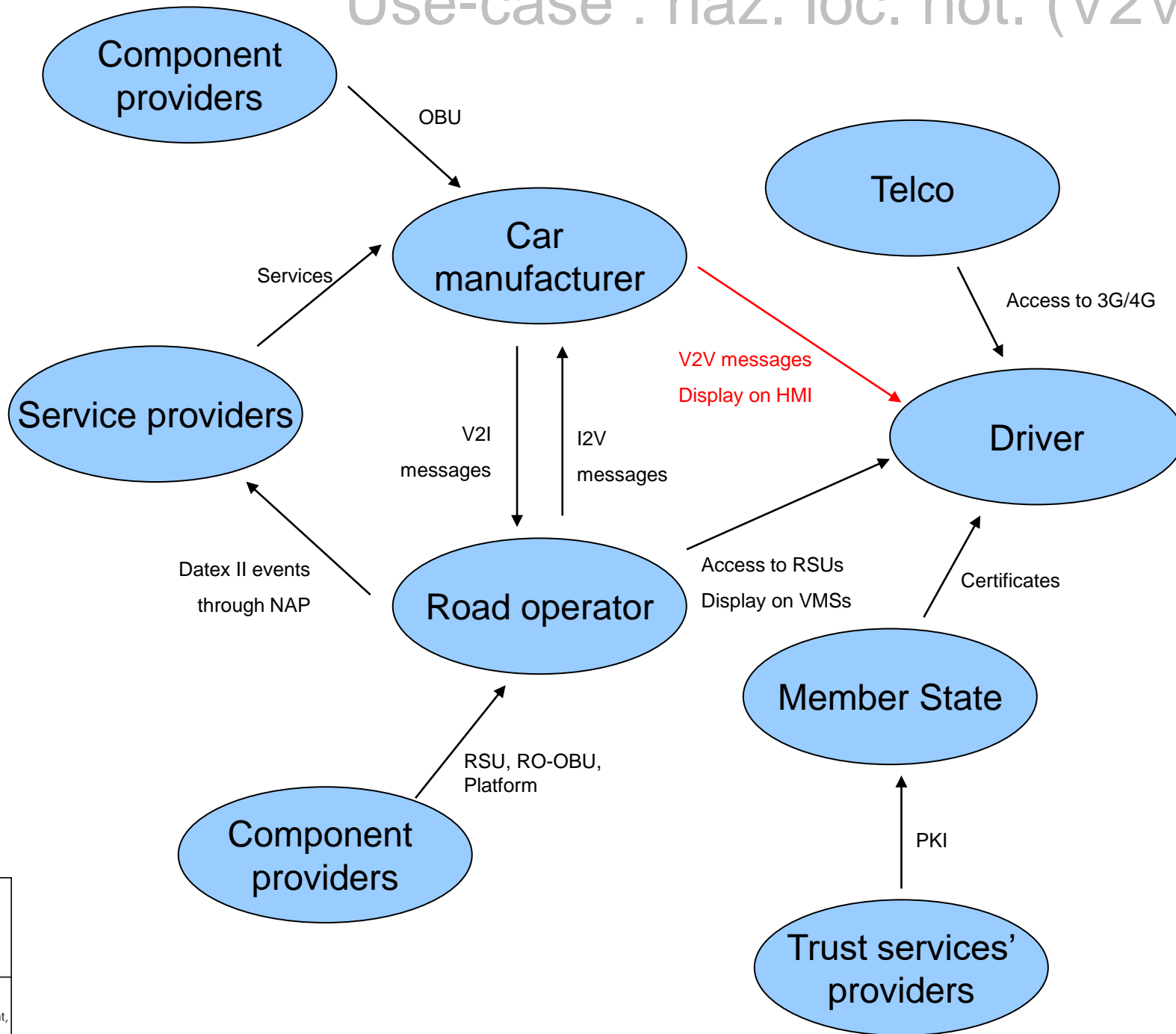
General scheme



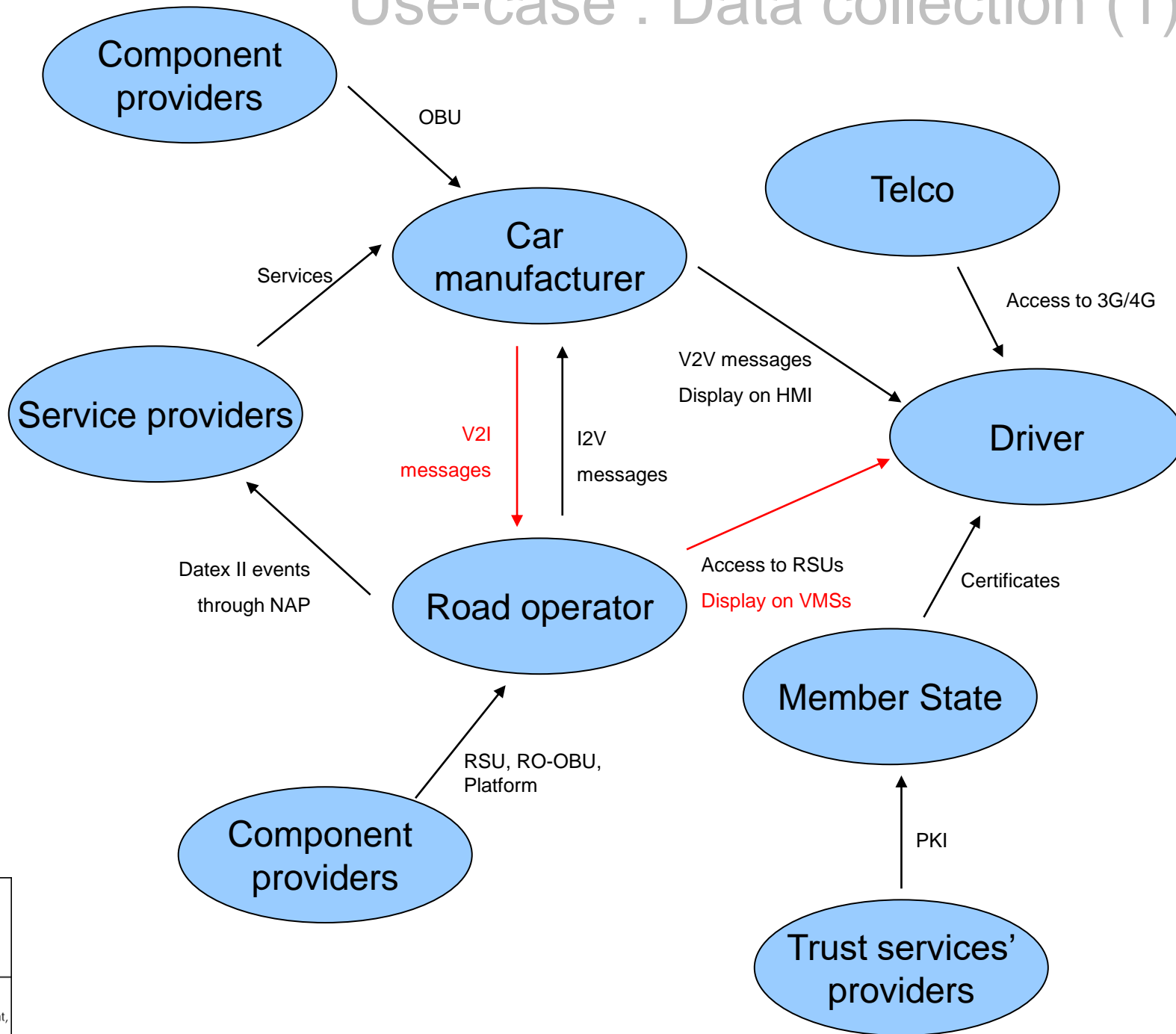
Use-case : RWW



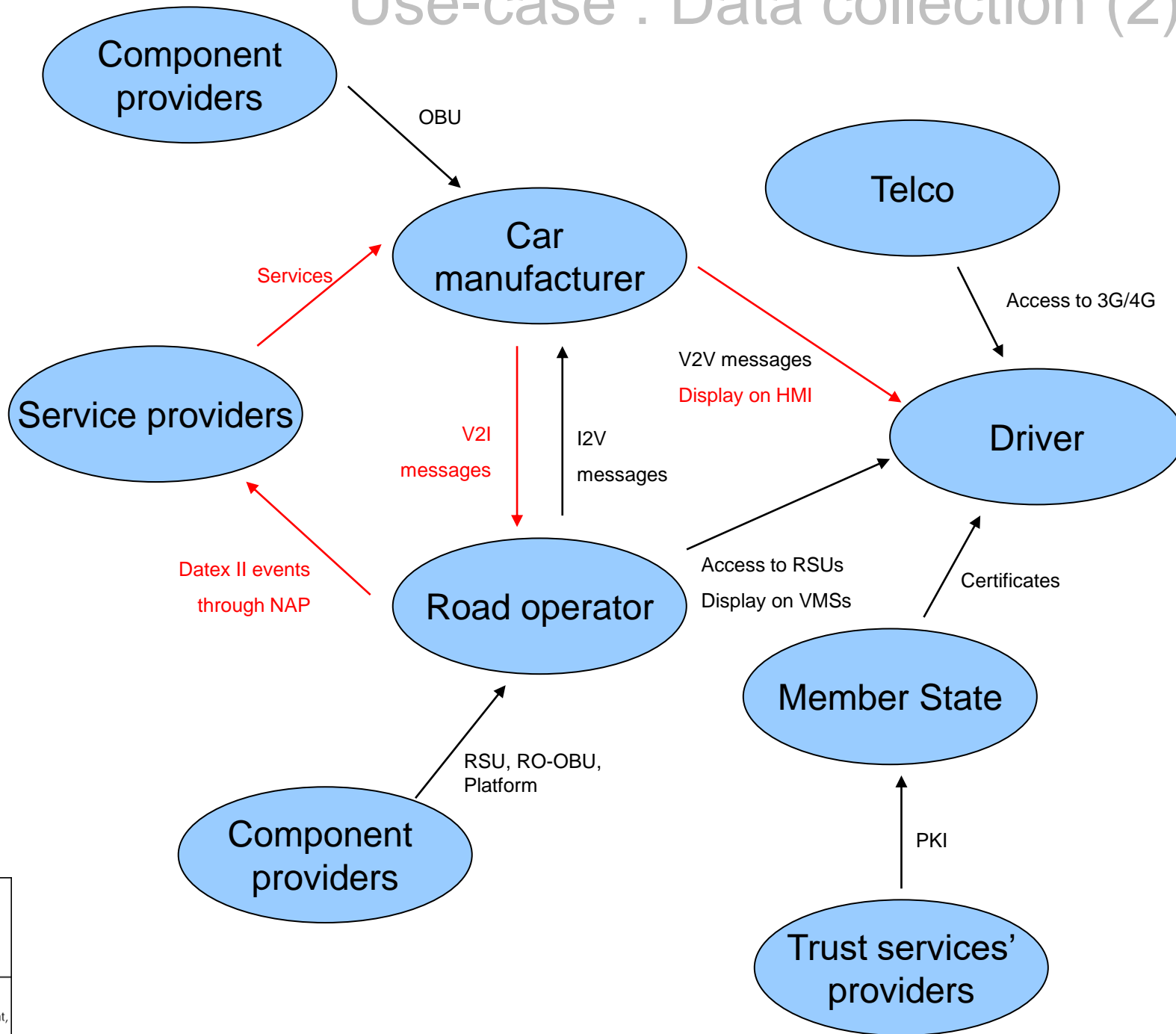
Use-case : haz. loc. not. (V2V)



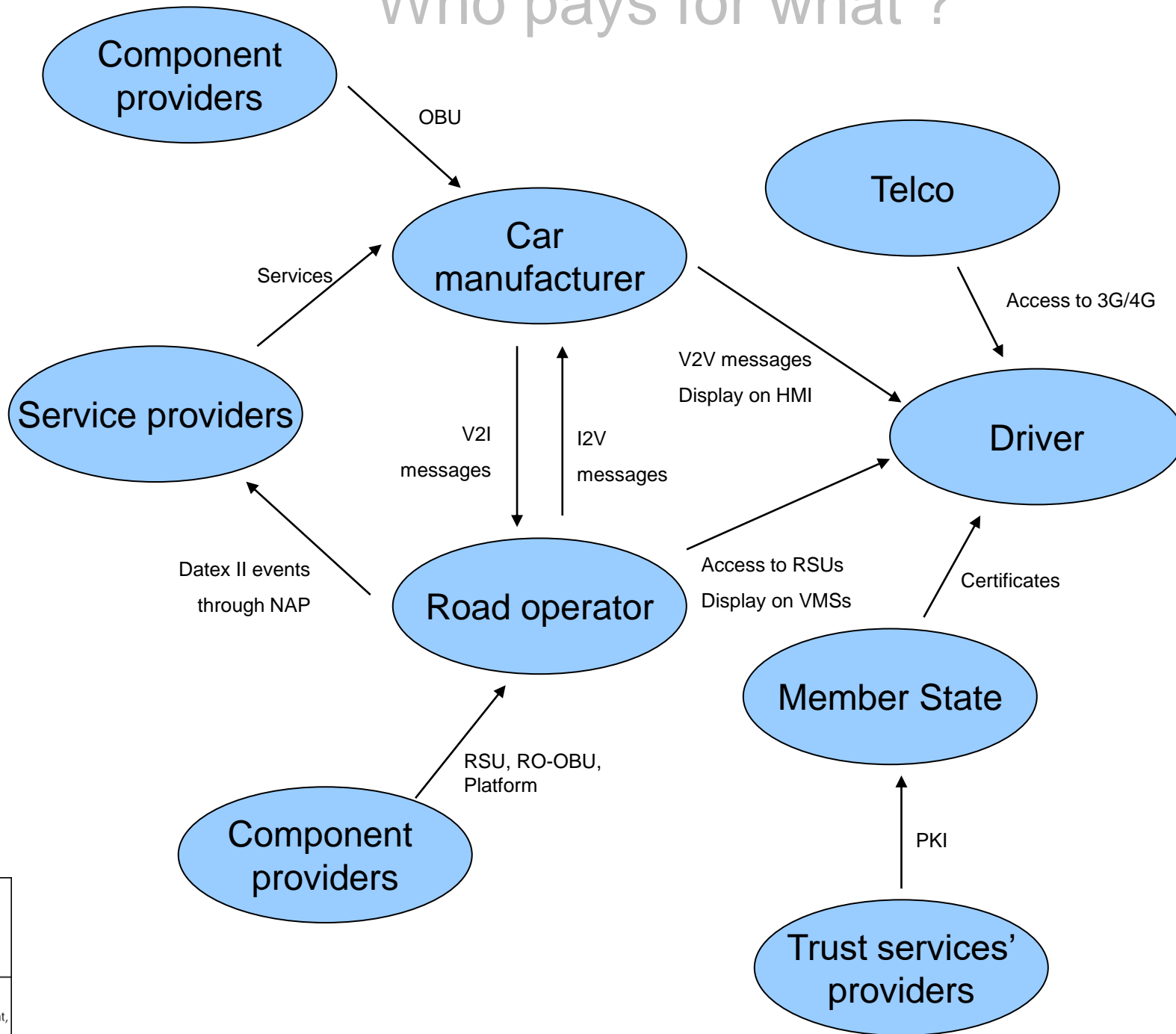
Use-case : Data collection (1)



Use-case : Data collection (2)

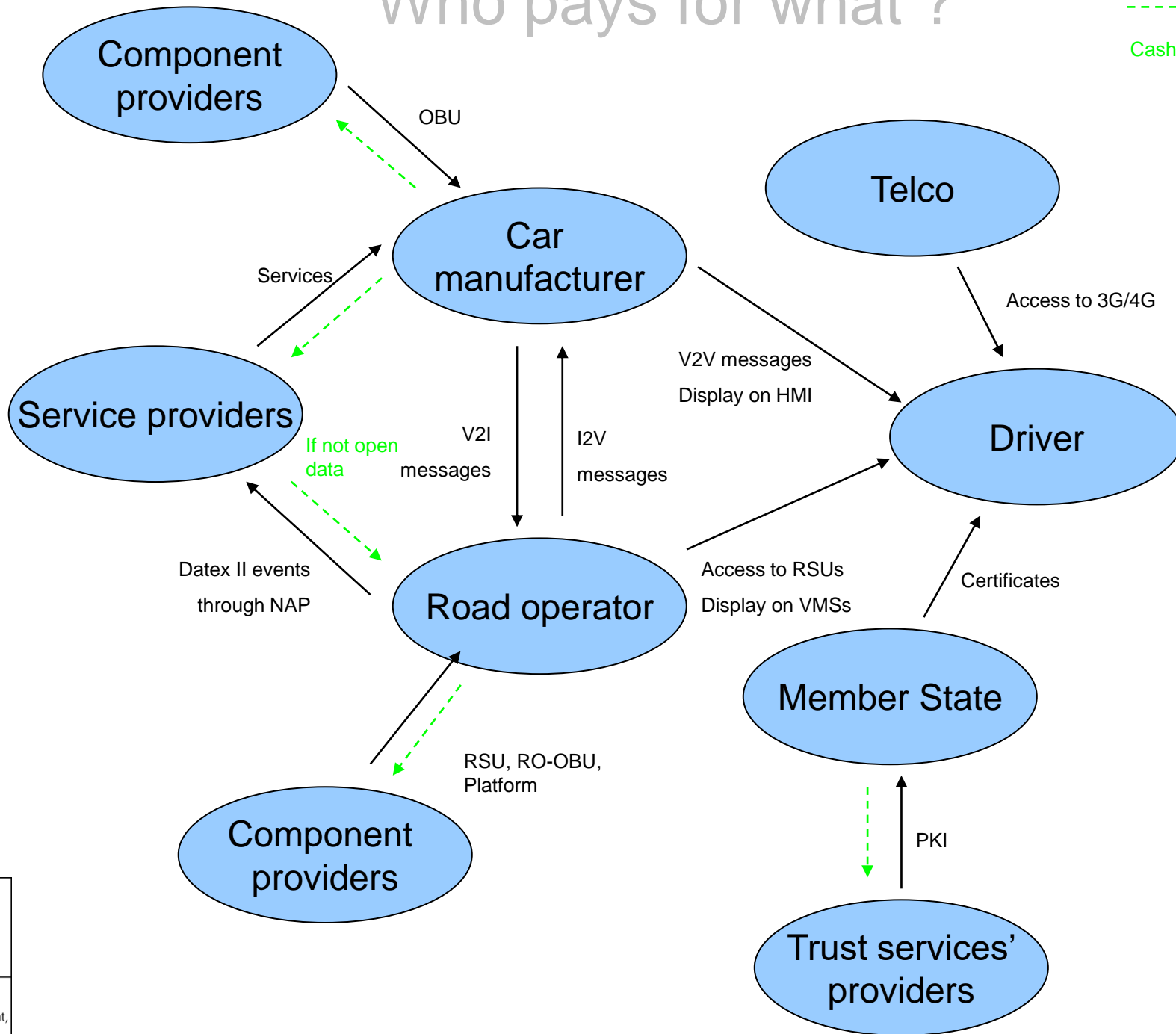


Who pays for what ?



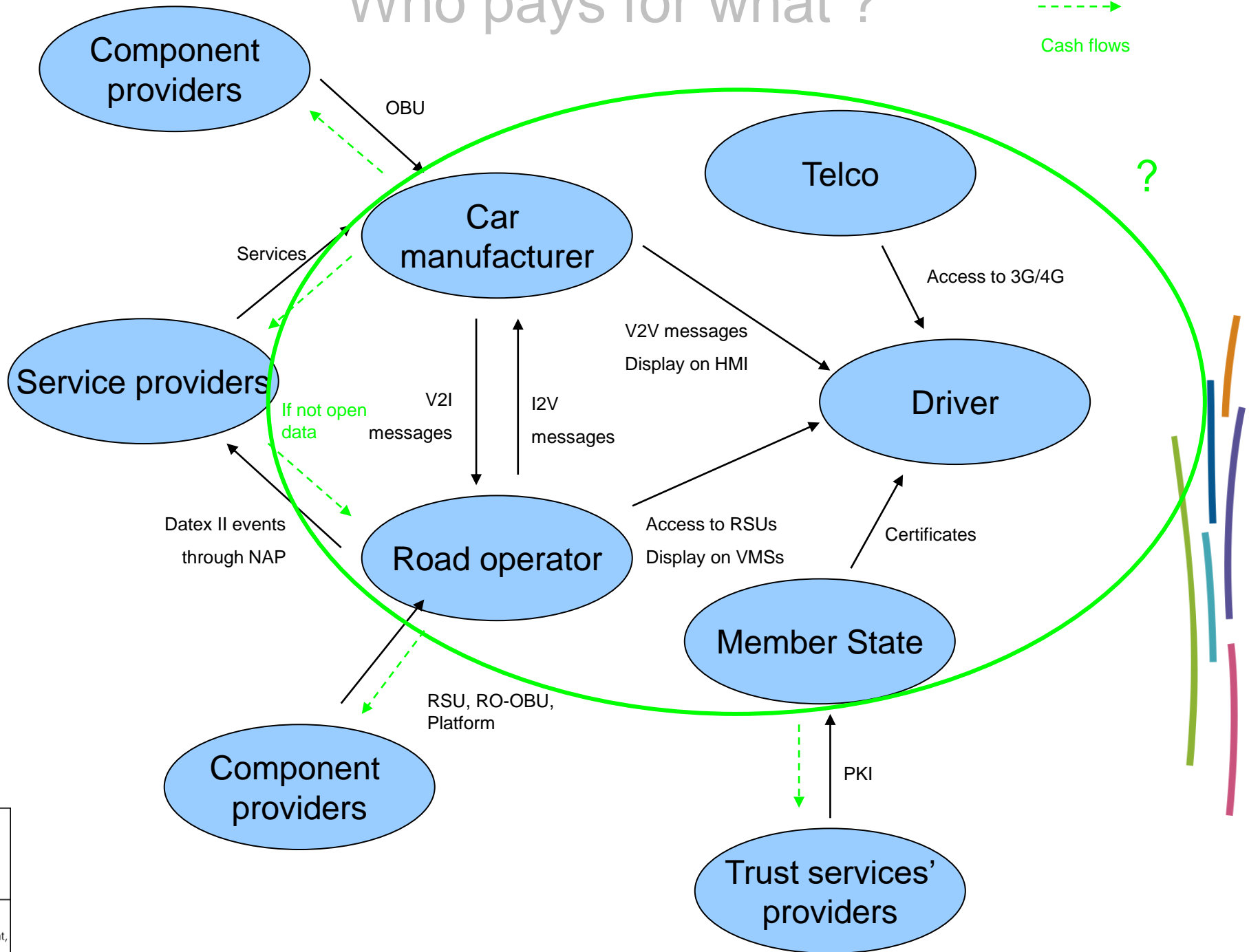
Who pays for what ?

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Cash flows



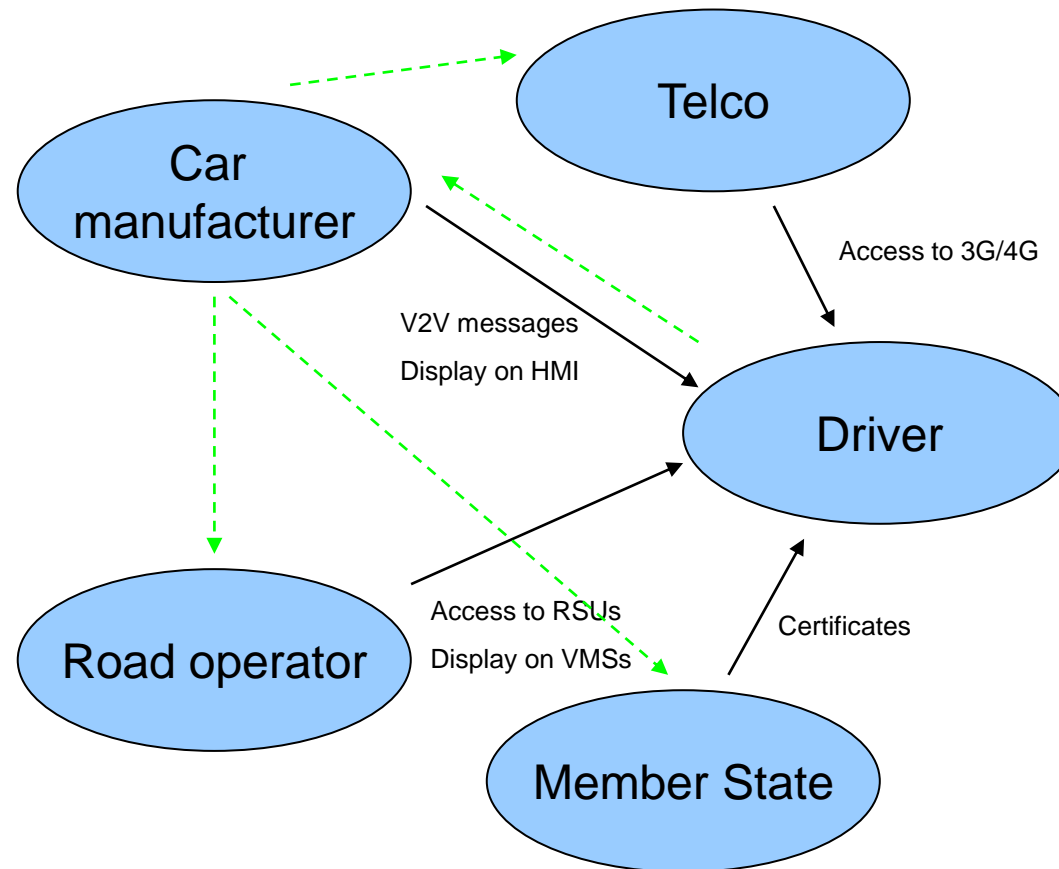
Who pays for what ?

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Cash flows



Who pays for what ? 1 solution

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Cash flows



Open issues

- What services are drivers ready to pay for ? « Road safety does not sell »
- Distinguish between « public interest » free services and others => Freemium pricing model ?
- How to ensure that road operators cover their expenses ? Including investment + maintenance of the infrastructure
- Access to 3G/4G network : fixed price or subscription ?
- PKI access : fixed price or subscription ?
- Some services are more interesting at high penetration rates: once the driver has started to have them free, how to get him to start to pay ?