



CVIS-CORTECH

Core Technologies and Architecture

CVIS-Forum

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Coordinator: **ERTICO**

Total budget: € 41 Million

EC contribution: € 22 Million

Consortium: 61 partners - 12 countries

Core Technologies



Coordinator: **Fiat Research Centre**

Total budget: € 38 Million

EC contribution: € 20,5 Million

Consortium: 51 partners - 12 countries

Car<->Car



Coordinator: **AustriaTech**

Total budget: € 16,8 Million

EC contribution: € 9,6 Million

Consortium: 37 partners - 14 countries

Car<->Infrastructure

Cooperation links to: **SISTER (EC-Proposal), SEVECOM, COMeSafety**

Car-2-Car Communications Consortium (C2C-CC), Network on Wheels (NoW), INVENT

ACTIV (Germany), CVHS (UK), IVSS (Sweden)



Synergies at *technology* SP level

- Complementing knowledge and capabilities
- Joining resources to increase development depth
- Avoid proliferation of proprietary solutions

Synergies at *application* SP level

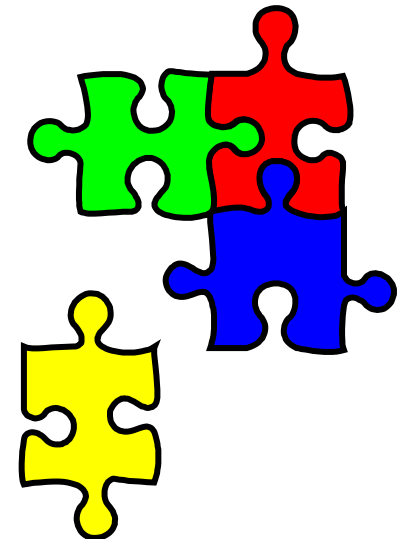
- Creating a wider picture of a real “Cooperative World”
- Strengthen the own core competence

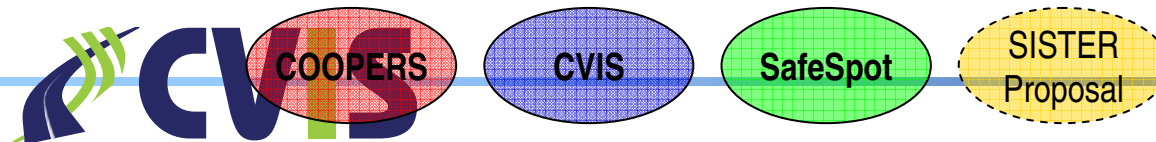
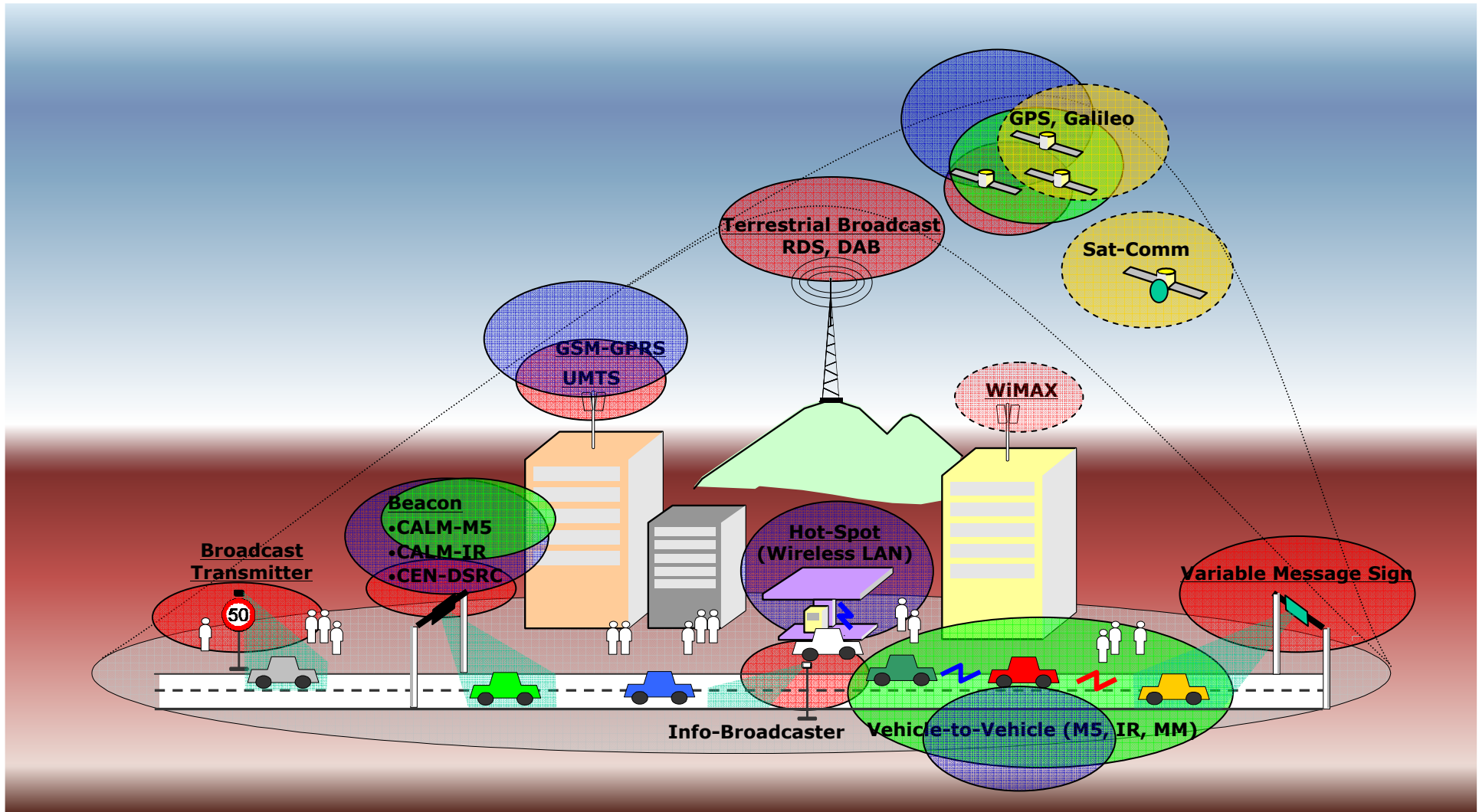
Synergies at *test site* level

- Comparison of results
- Sharing resources

Synergies at *dissemination* level

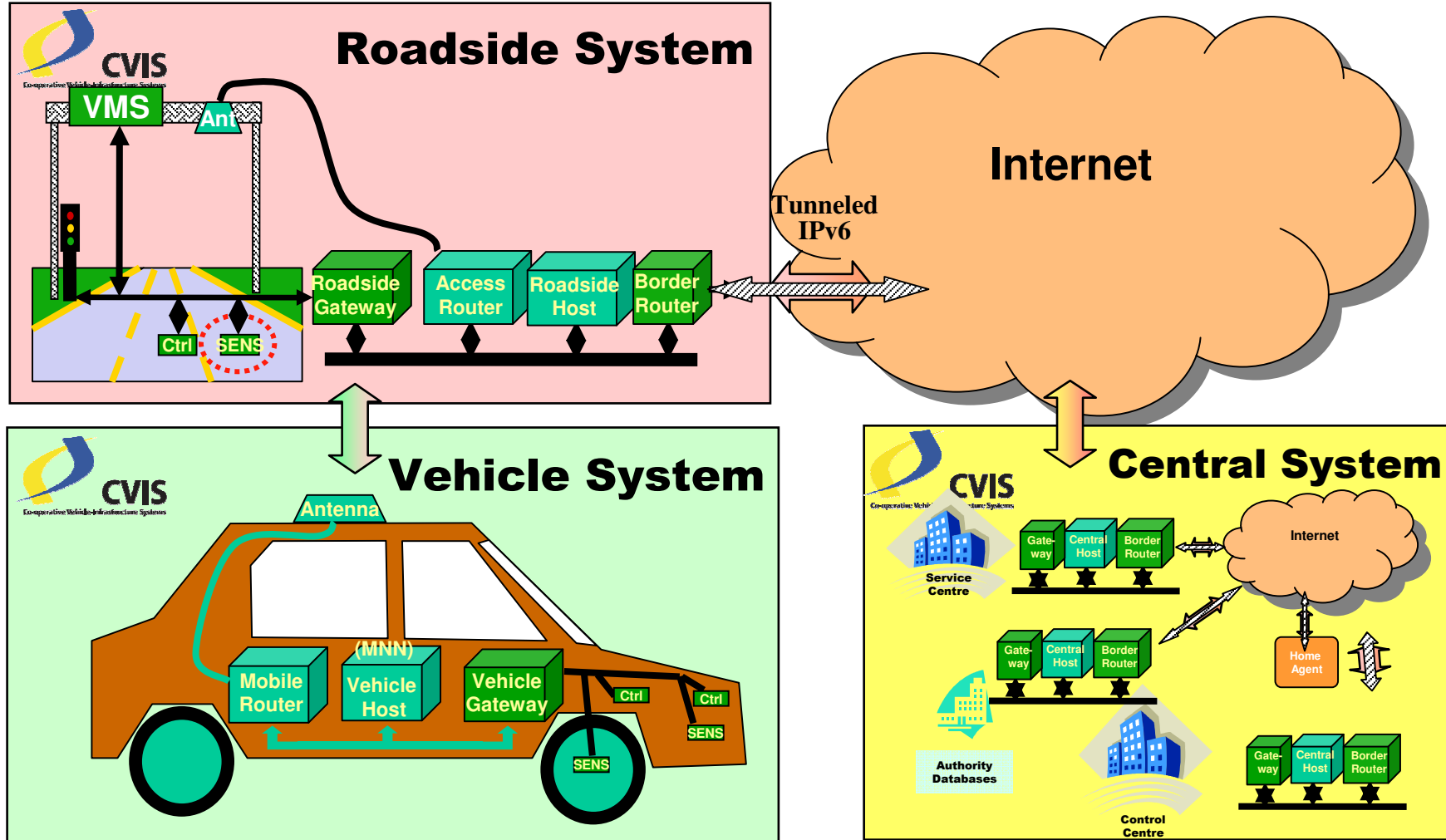
- Avoid confusion at the marketplace

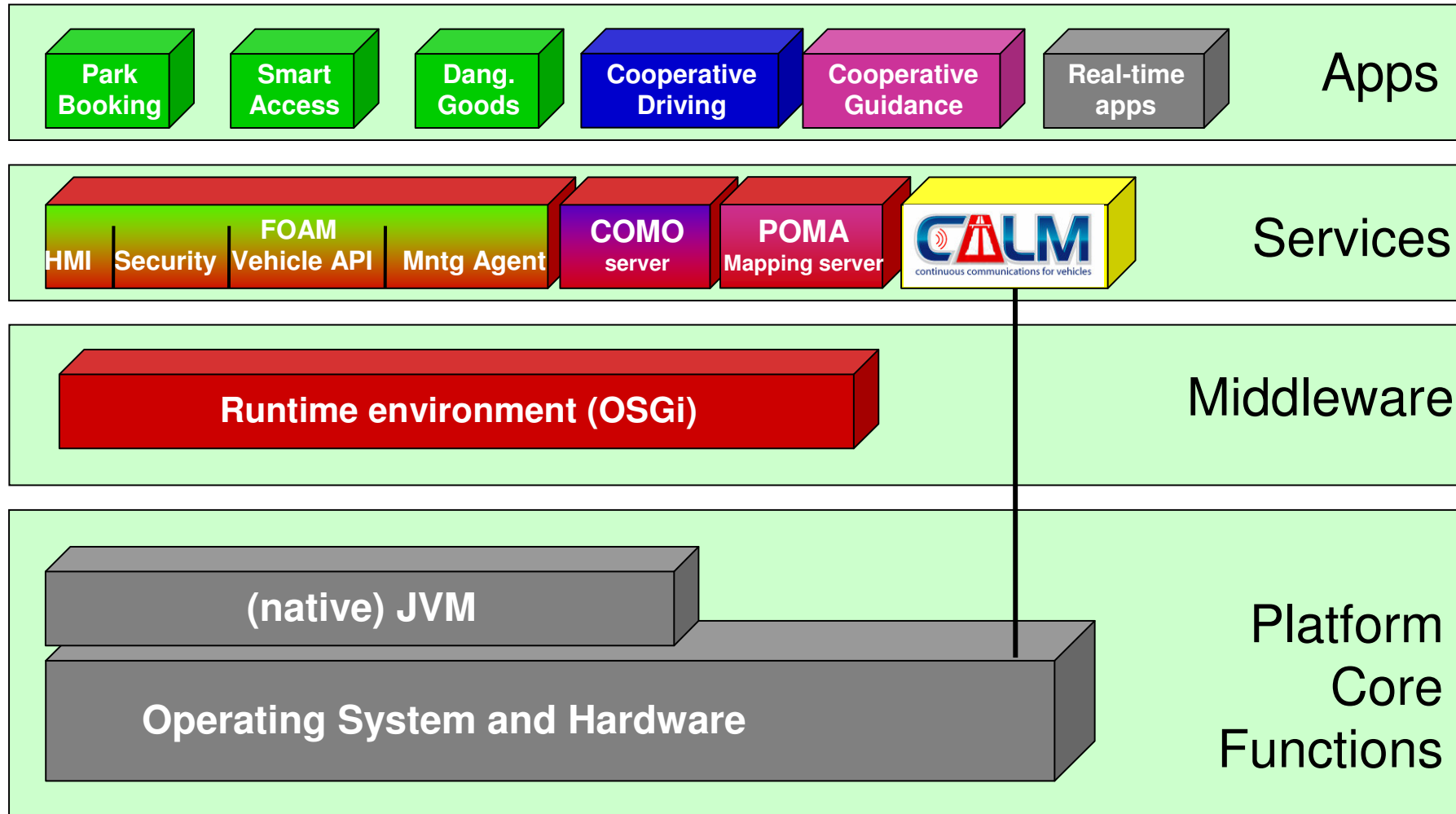




Create pre-requisite conditions for a widespread cooperative vehicle-infrastructure systems & services

- open, standards-based communications/positioning/networking platform
- for in-vehicle and road-side use
- use all suitable comms infrastructure (existing & new)
- continuous connection V2V, V2I and I2I
- harmonised core application/service software
- range of attractive services - safety, efficiency, user
- positive business case for authorities, operators, service providers, manufacturers - and for user
- sustainable deployment road-map, no show-stoppers



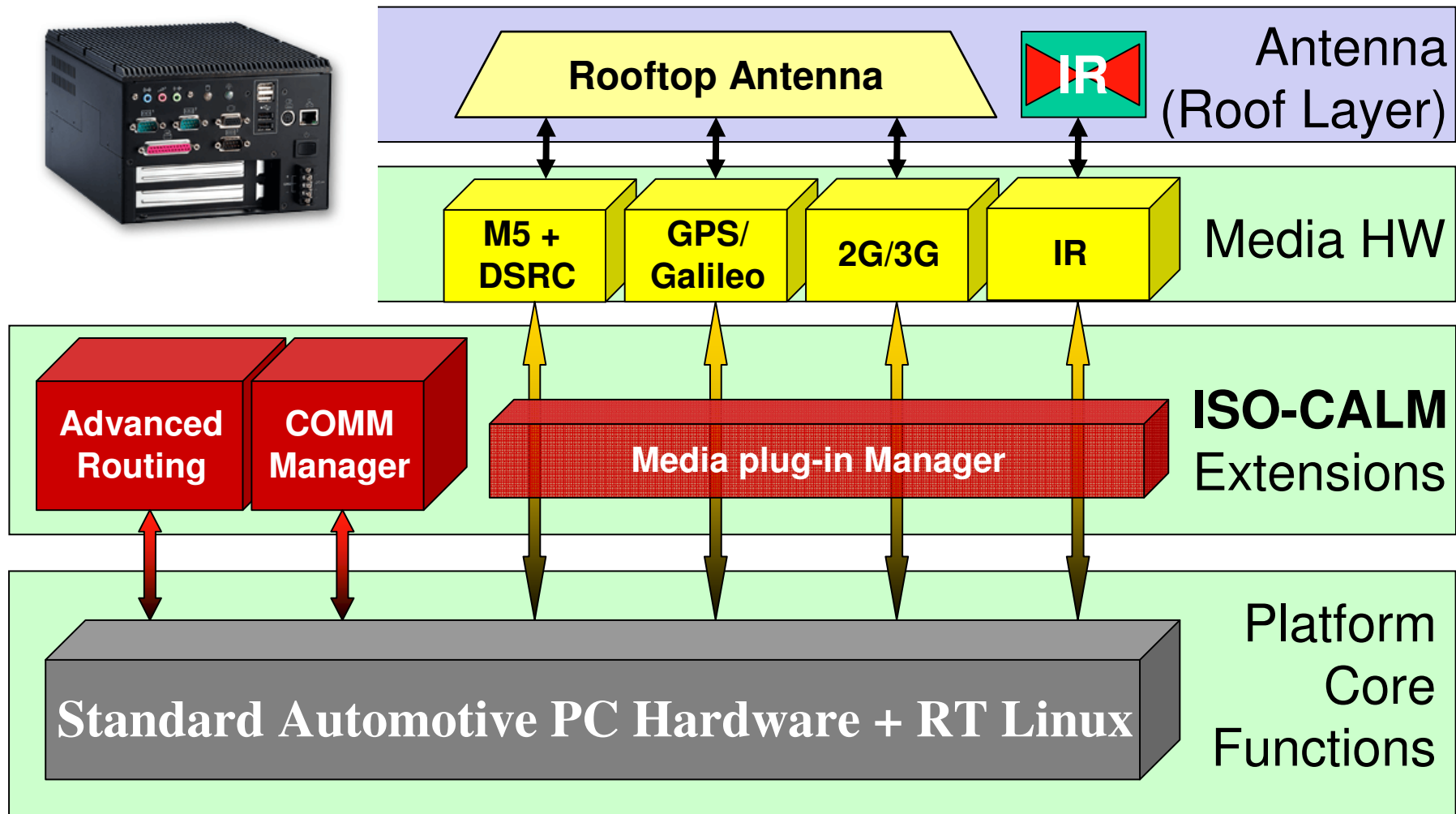


- CVIS Platform is intended to be (re)used in all relevant European Project
- Will be based on Open Software/Open Design as far as possible
- Designed as a very flexible R&D meta-platform rather than a commercial product
- Still open for requirements – but the window is closing!
- Will provide feedback to ISO TC204-WG16

CVIS invites interested parties to take contact

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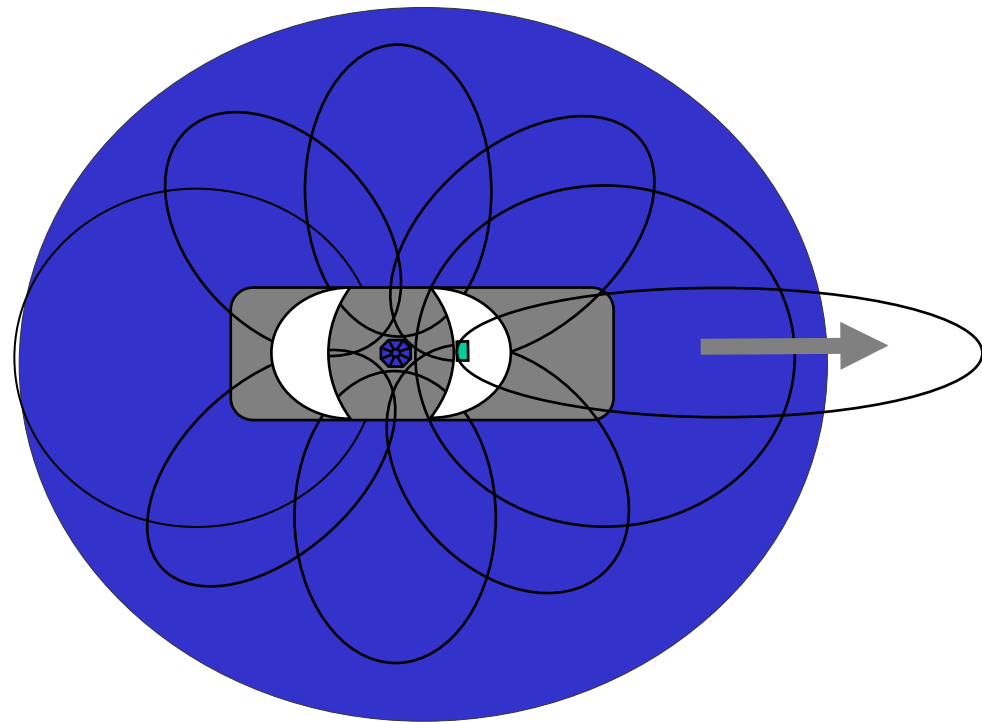


CALM-M5 can be seen as Superset of the US-WAVE.

CALM-M5 is developed as close as possible to WAVE, but it takes care on the European and International requirements

Microwave enables omni- and semidirectional Communication!

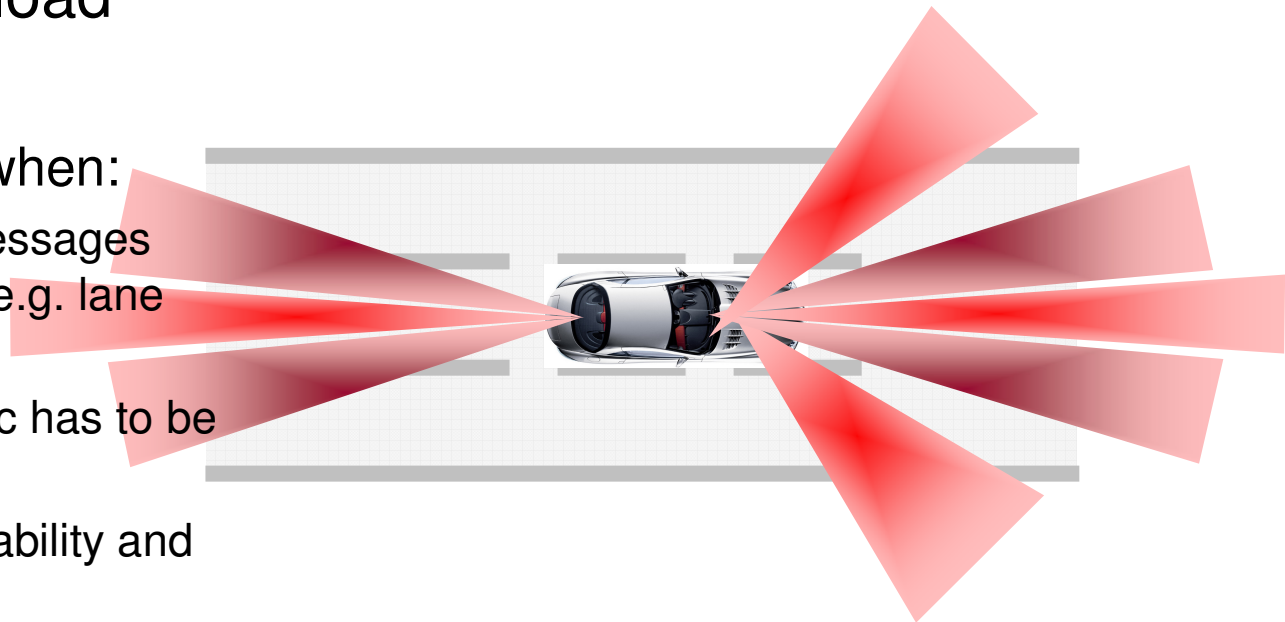
Microwave Communication Devices are needed if we shall also communicate “around the corner”



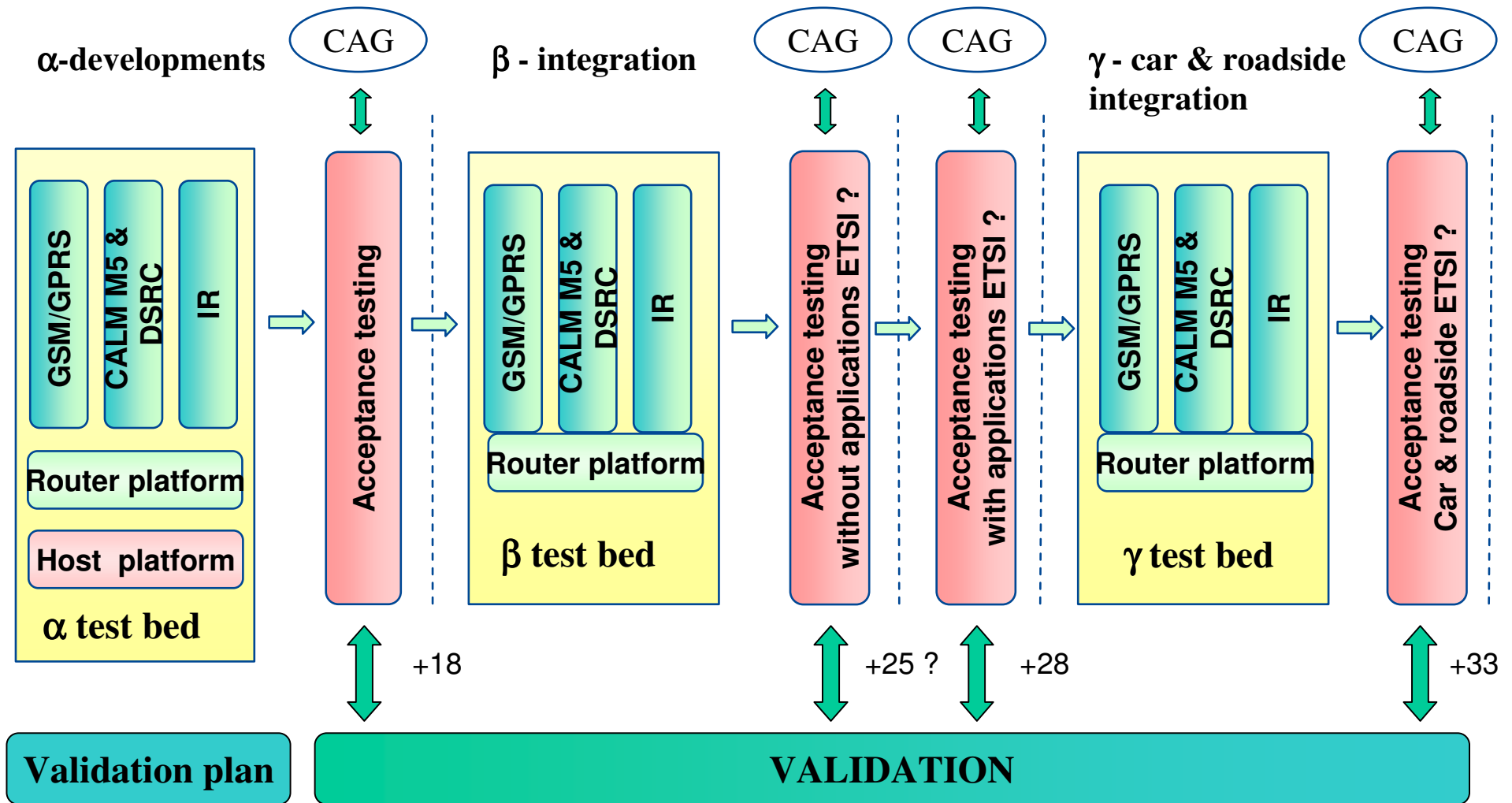
CALM-IR adds beaming capabilities to the communications and is a strong complement to the M5 and will take away most of the heavy workload

Infrared is in favour when:

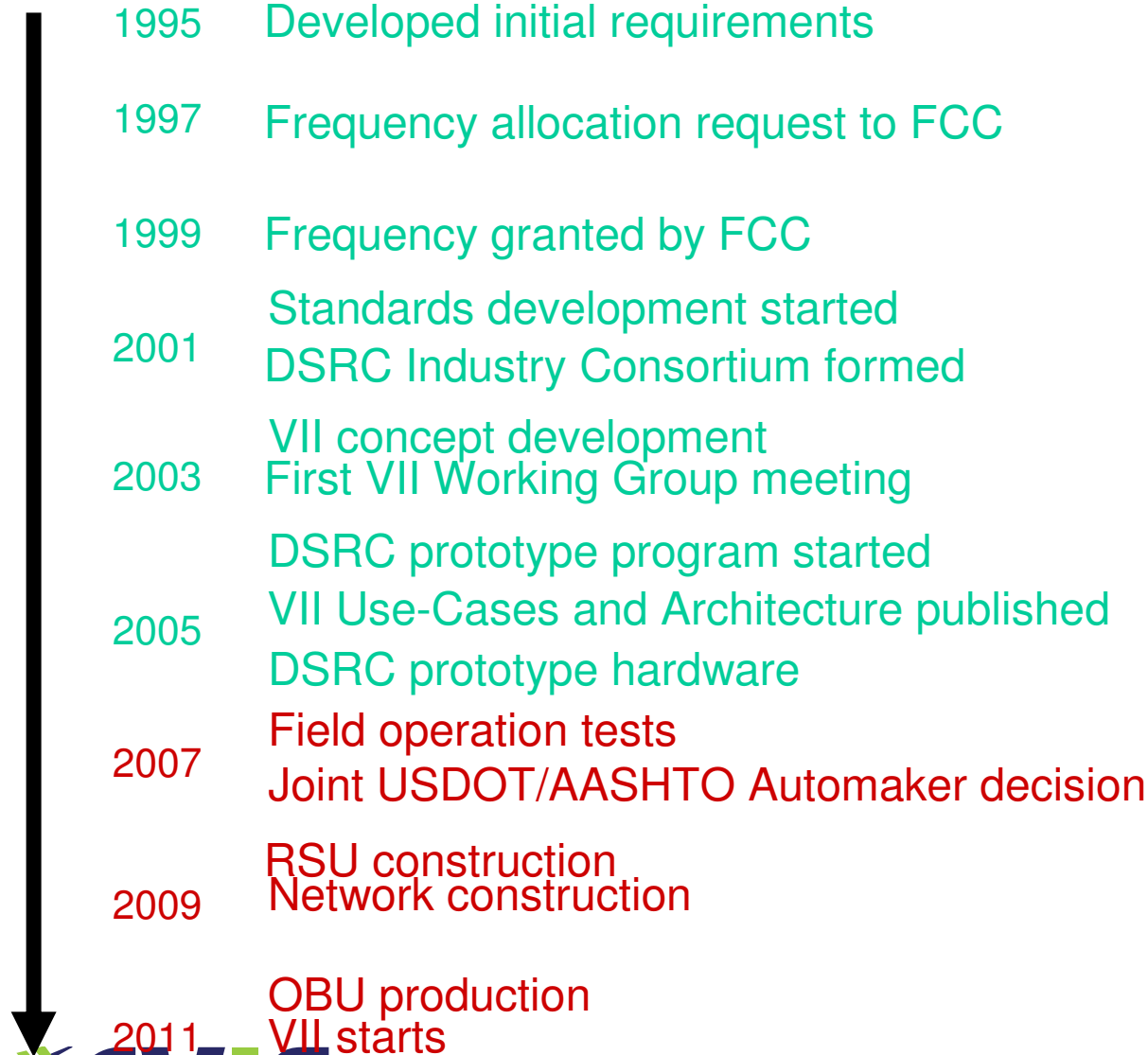
- Position-dependent messages should be transmitted (e.g. lane selective)
- High volume data traffic has to be transferred
- High Transmission reliability and privacy is an issue and
- IR has a build in **direct distance measurement!**



Active Infrared-Systems are in operation worldwide
e.g. in Japan (VICS – 20Mill), Taiwan, Korea, India, Malaysia, Germany (Truck-Tolling, 1Mill), Netherlands



- **VICS (Vehicle Information and Control System)** is a second generation system (active P-P), deployed since 1995 with 30 Million users based on Infrared (18Mill OBUs, 40.000 Beacons) Radio-broadcast and Microwave. Multiple Media, very positive business-case!
- **WAVE (Wireless Access in Vehicular Environment)** is a US-centric initiative for fast take-off of wireless connectivity in vehicular environment based on IEEE802.11p and ASTM1609.
WAVE represents a third generation system (active P-MP).
Deployment plan 2010/2012
- **CVIS, SafeSpot and COOPERS** represents the mainstream European Cooperative ITS-Projects. CVIS is a fourth generation system (active multiple medium P-MP, an future-proof open implementation. Deployment plan 2010/2012





Thank you!

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References:

www.ertico.org

www.iso.org

www.calm.hu

www.efkon.com

www.q-free.com