CVIS

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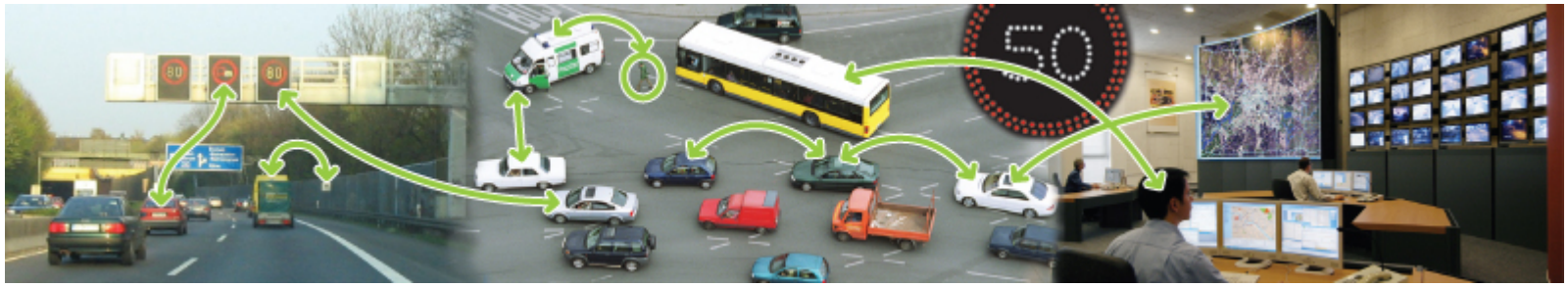
CVIS Chief Architect
Dallas 14. November 2006



European R&D projects supported by DG INFSO

- Coordinator: **ERTICO**
- Total budget: € 41 Million
- EC contribution: € 22 Million
- Consortium: 61 partners - 12 countries

- Coordinator: **Fiat Research Centre**
- Total budget: € 38 Million
- EC contribution: € 20,5 Million
- Consortium: 51 partners - 12 countries

- Coordinator: **Austria tech**
- Total budget: € 16,8 Million
- EC contribution: € 9,6 Million
- Consortium: 37 partners - 14 countries

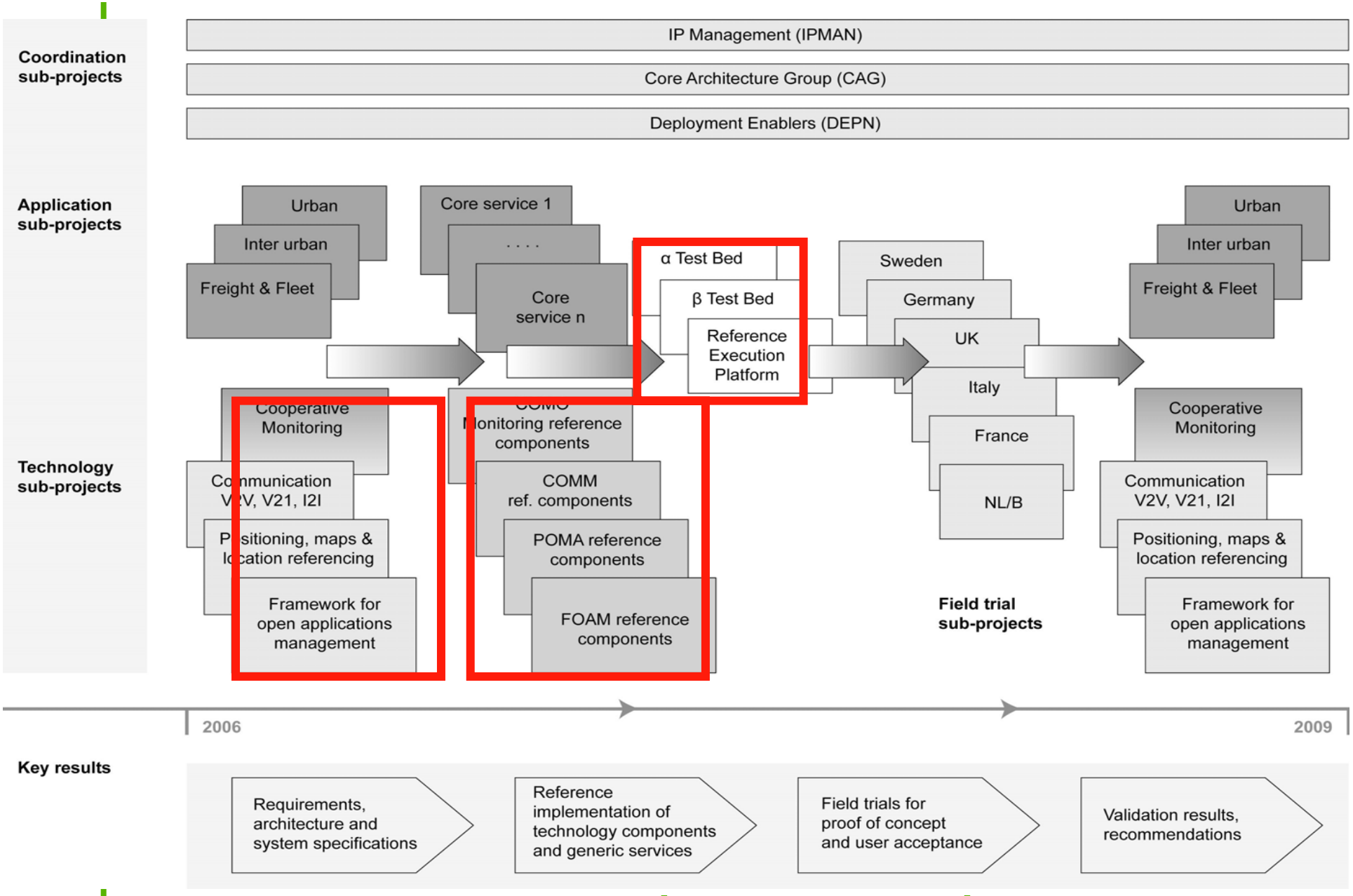
- Co-operating projects also includes: **SEVECOM, COMeSafety, Car-2-Car Communications Consortium (C2C-CC), Network on Wheels (NoW), INVENT, ACTIV (Germany), CVHS (UK), IVSS (Sweden)**

CVIS Project Objectives

- **Create pre-requisite conditions for widespread take-up of cooperative vehicle-infrastructure systems & services**
  - open, standards-based communications/ positioning/networking platform for both in-vehicle and RSU
  - use all suitable comms infrastructure (existing & new)
  - continuous (IP) connection V2V, V2I
  - 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 Partners

Public Auth.	Road/ Telco/ PT Operators	Service Providers	Application Software Developers	Traffic Equipment Suppliers	Equipment Suppliers	OEM	R&D	Others
Rijkswater- staat	ASF	Mizar Media Service	Ramsys	Siemens	NAVTEQ	Renault	FEHRL	ERTICO
Transport for London	Infoblu	RACC	Technolution	Mizar	Bosch	Volvo	TNO	POLIS
SRA	Telecom Italia		Gatespace Telematics	Peek	Siemens VDO	Daimler Chrysler	DLR	Thomas Miller
DfT	Vodafone		PTV	Vialis	Ericsson	BMW	LCPC	
City of Lyon	Highways Agency		LogicaCMG	MIZAR	Tele Atlas	CRF	LCPC	
Vlaamse Gemeenschap	HSVV		Telcordia	Kapsch Traficom	Alcatel Space	DAF Trucks	SINTEF	
Provincie Noord-Brabant	5T		Thetis	Efkon	BAE SATC		HTW-Saarland	
City of Stockholm	ATC Bologna		Mapflow	Q Free	Ericsson Microwave		INRIA	
			Trialog	Lacroix Trafic			ISMB	
			Telcordia	Elcon Mobility			HDS/ UTC/ CNRS	
			MMLab				AVVC	
			Intempora					



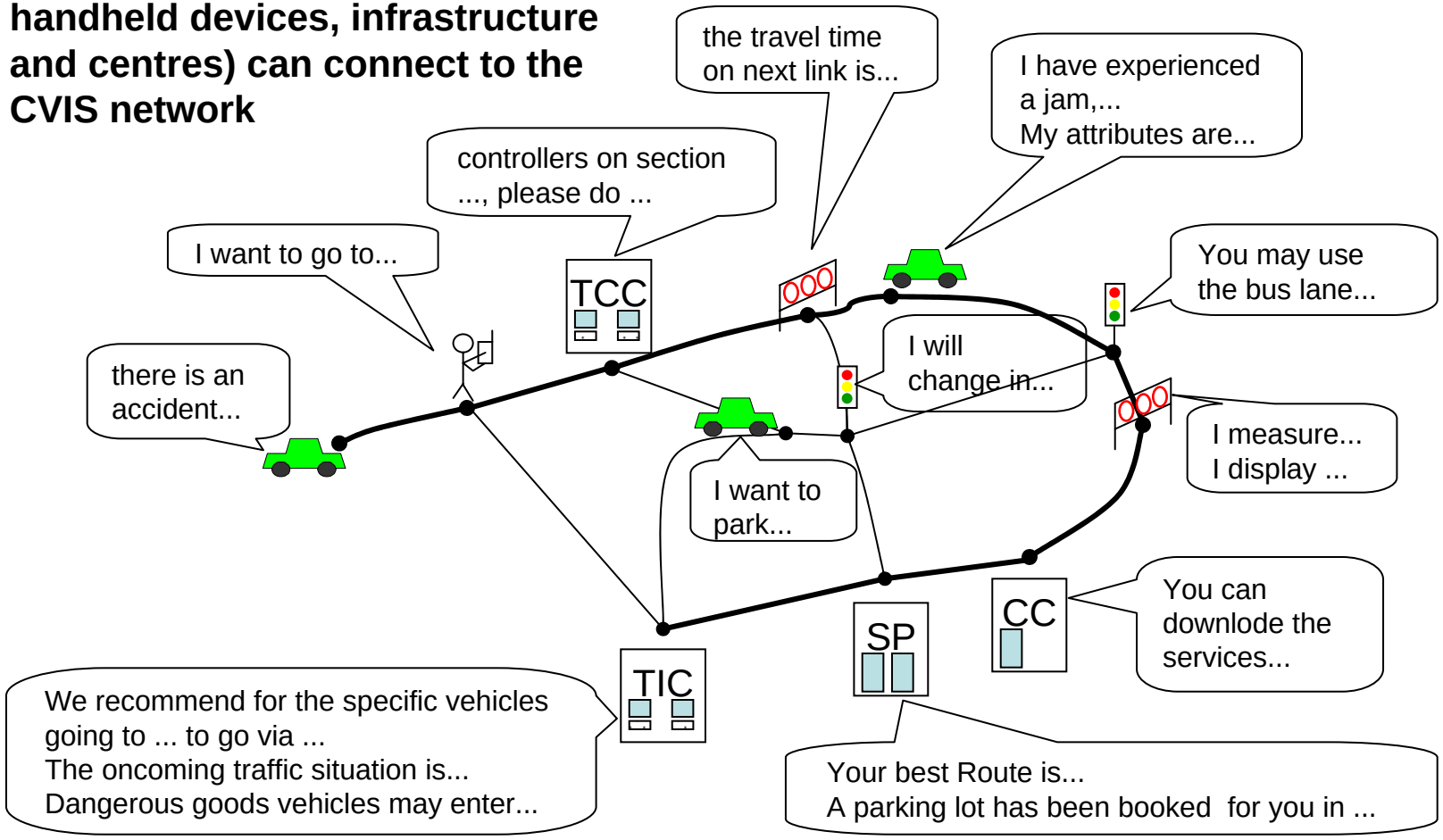
CVIS Project Overview

Dallas, 14 November 2006

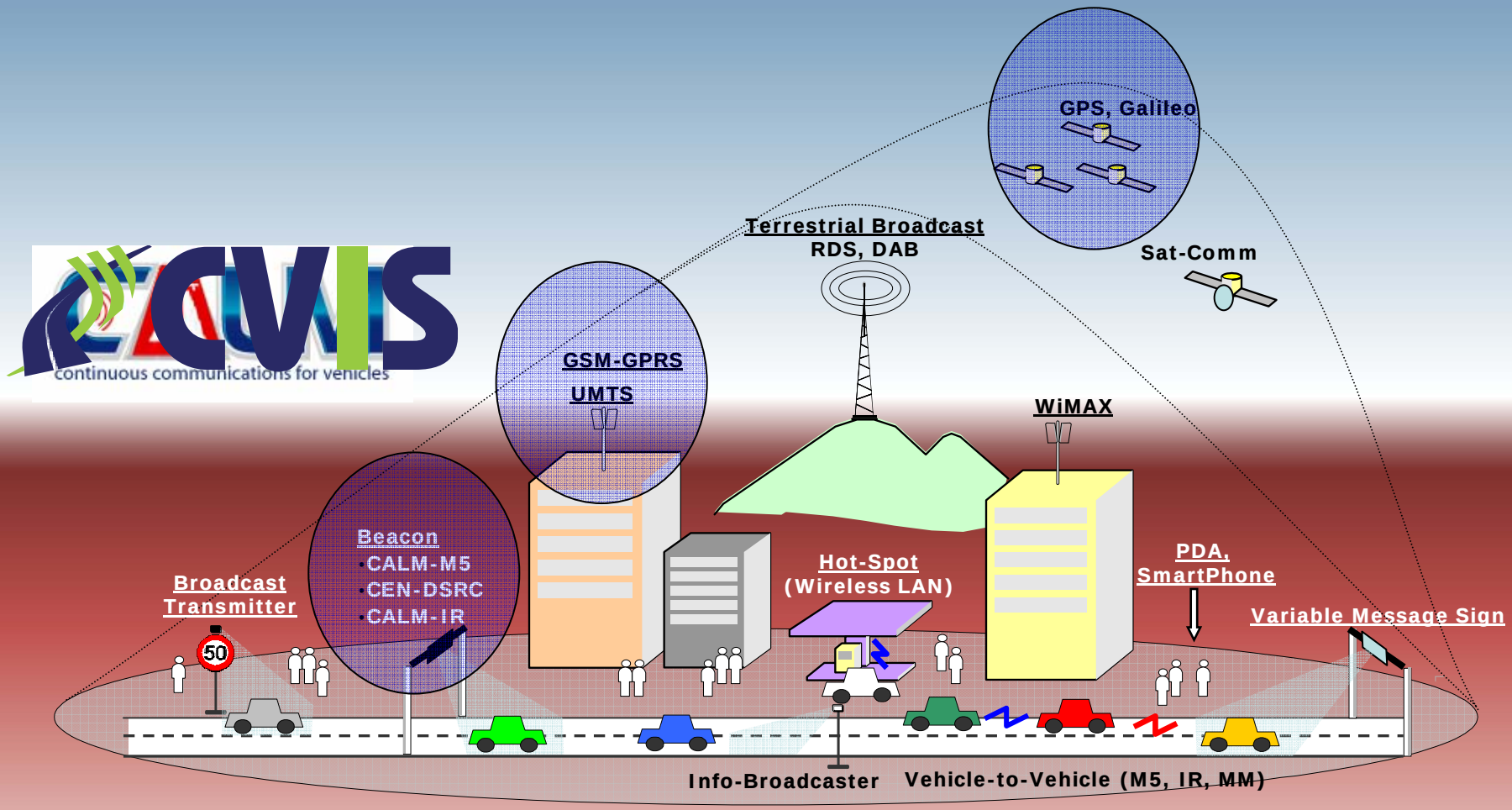
Presentation to IEEE 802

So what are Cooperative Systems?

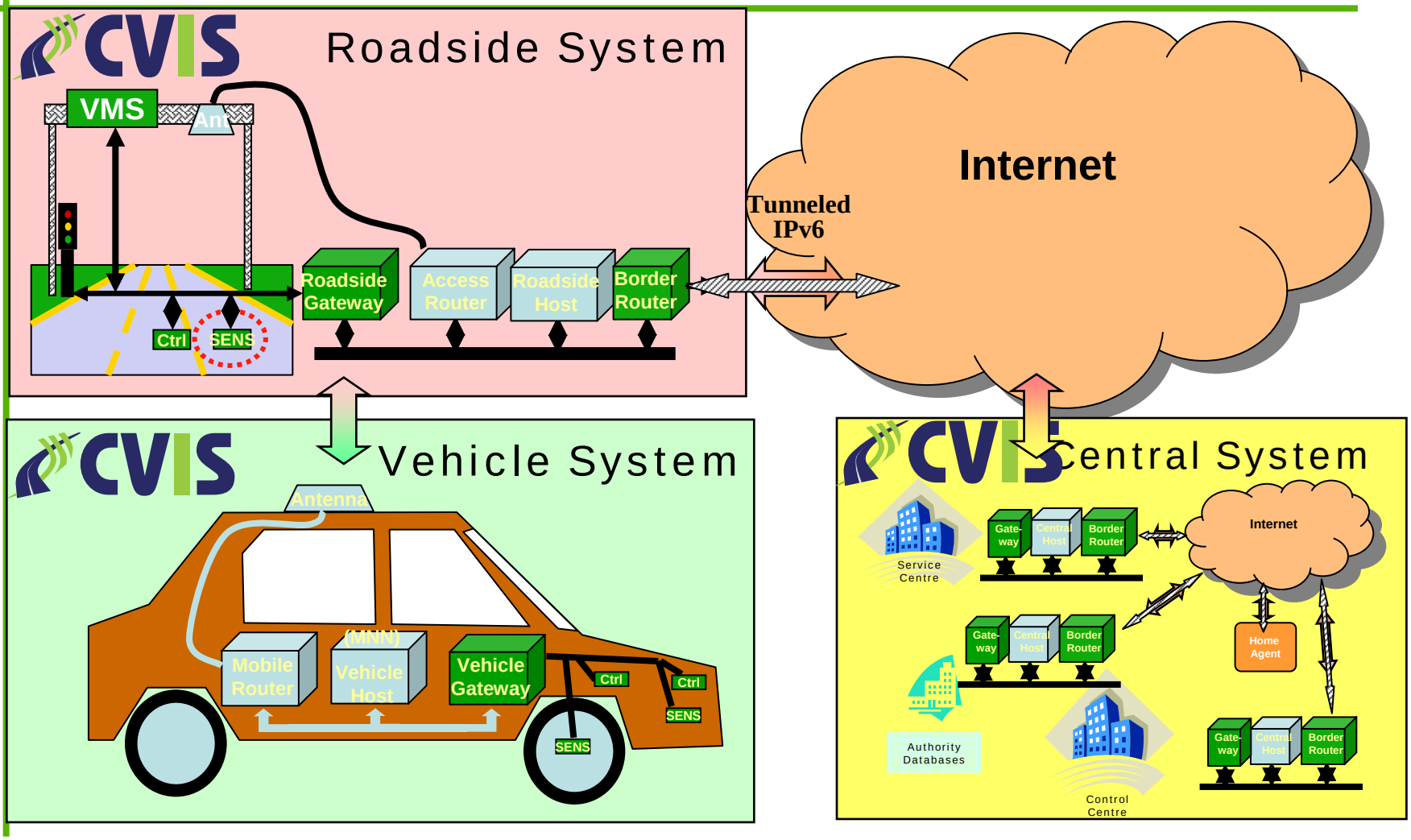
any clients (e.g. vehicles, handheld devices, infrastructure and centres) can connect to the CVIS network



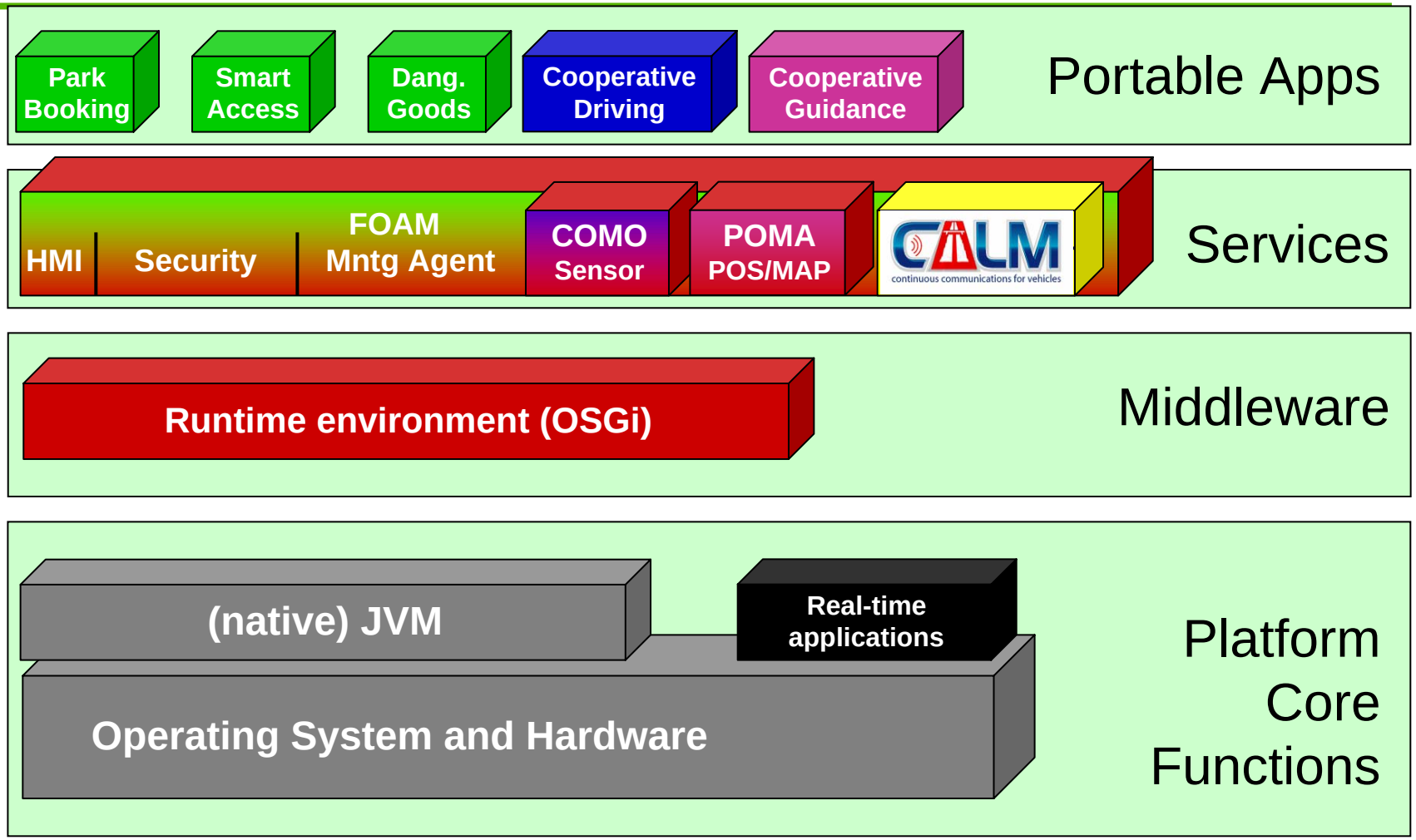
Communications



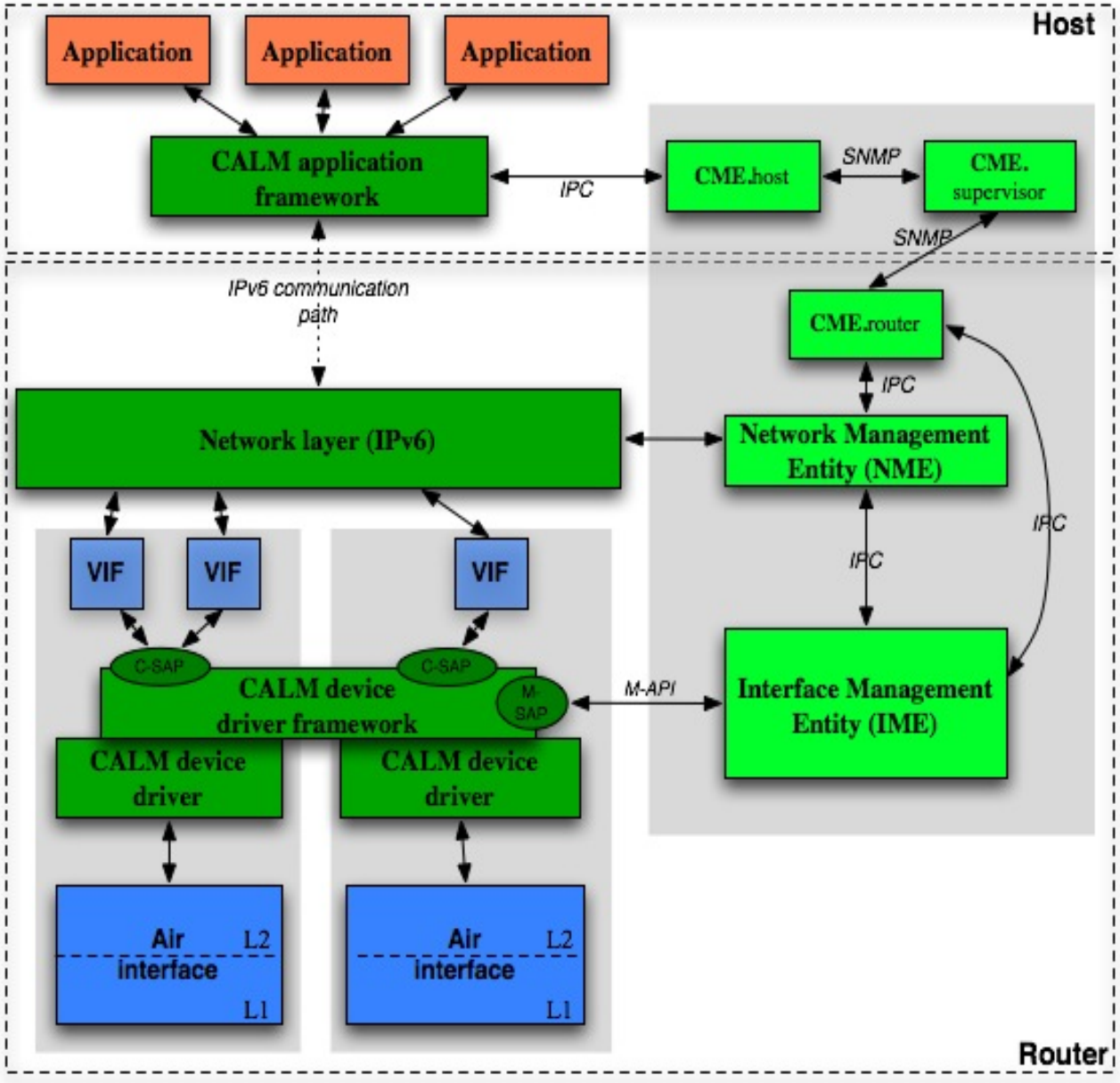
The three CVIS technical subsystems



CVIS Host Platform Layers

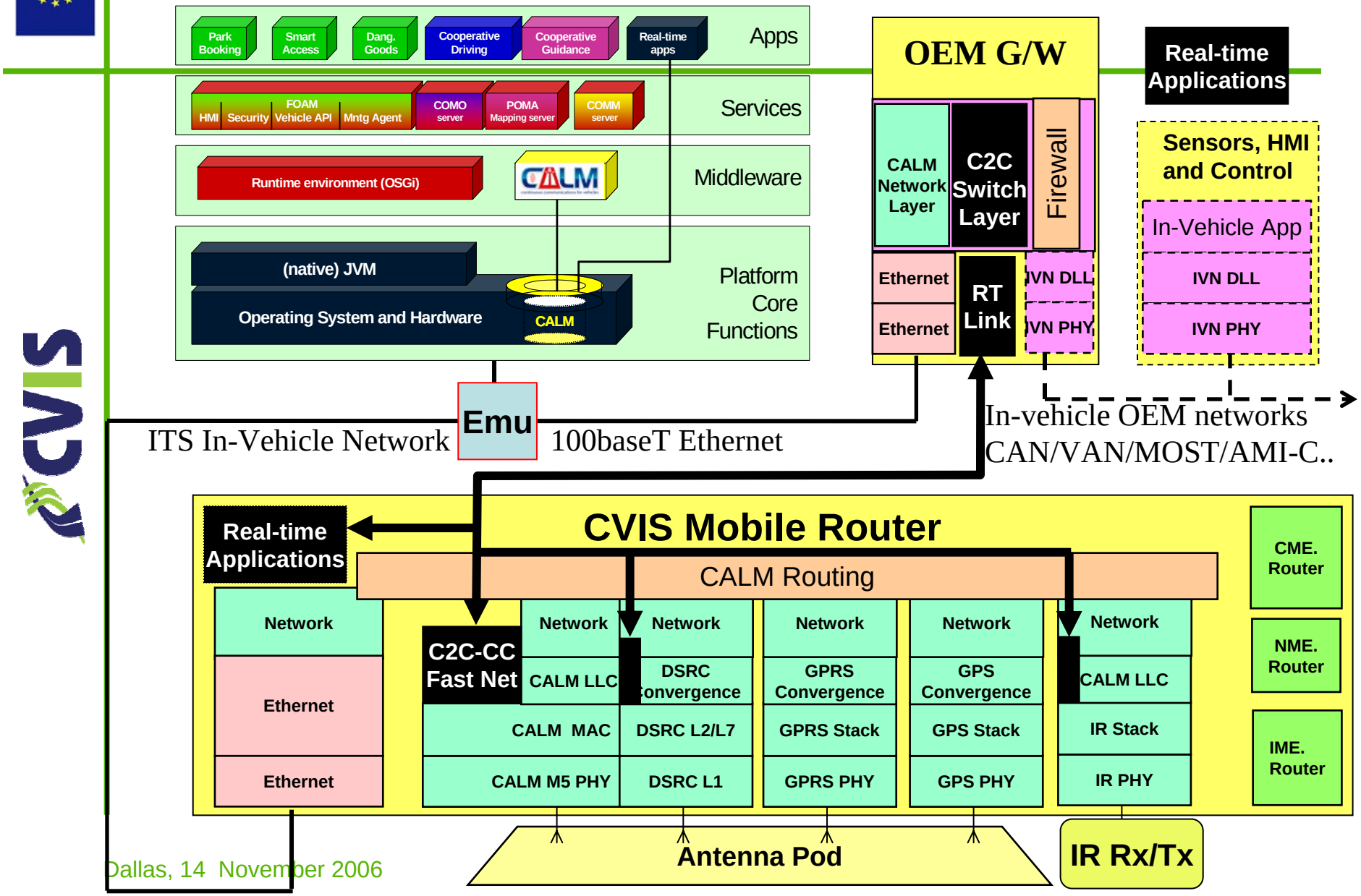


Full CALM stack in CVIS

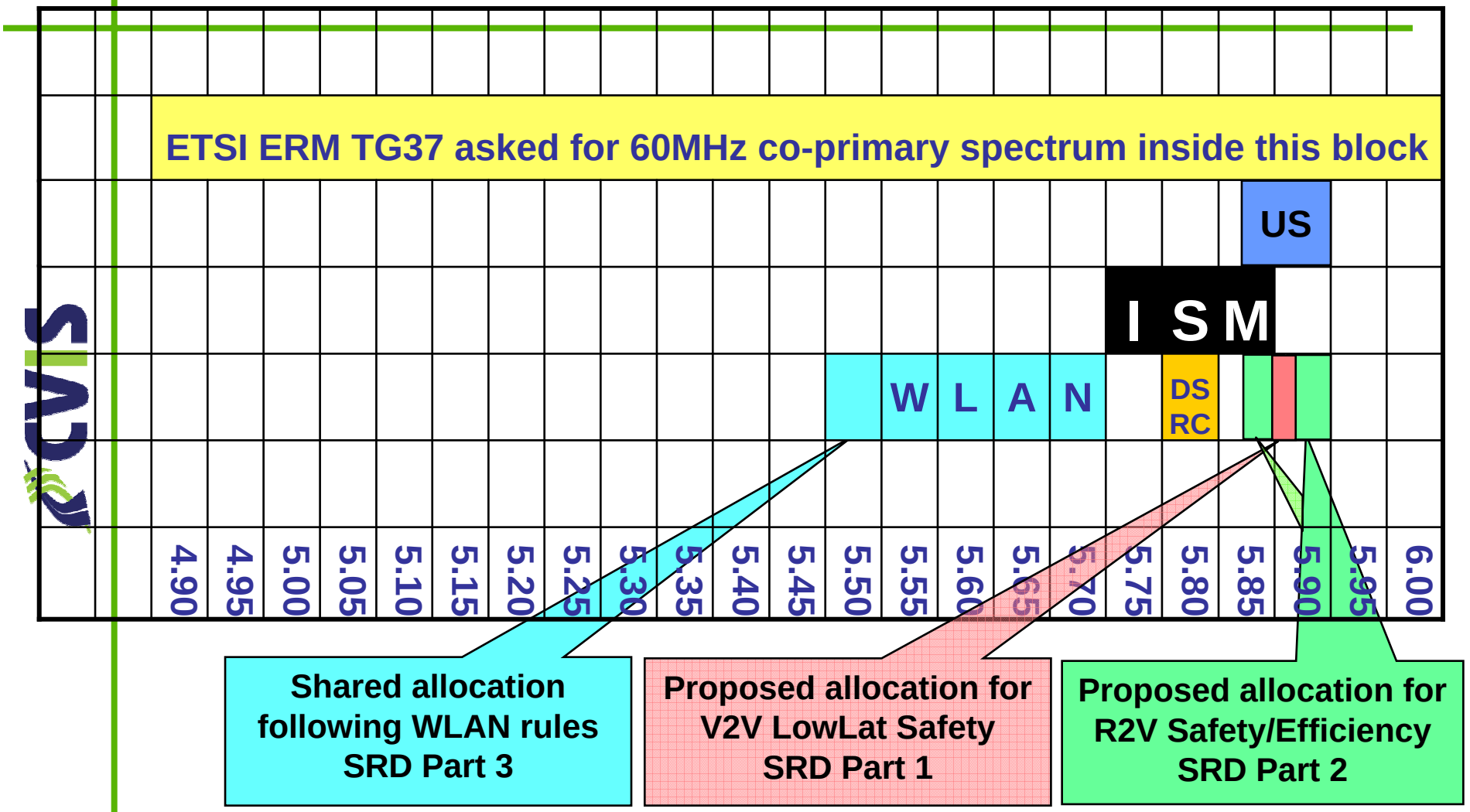


CVIS Router Platform Layers

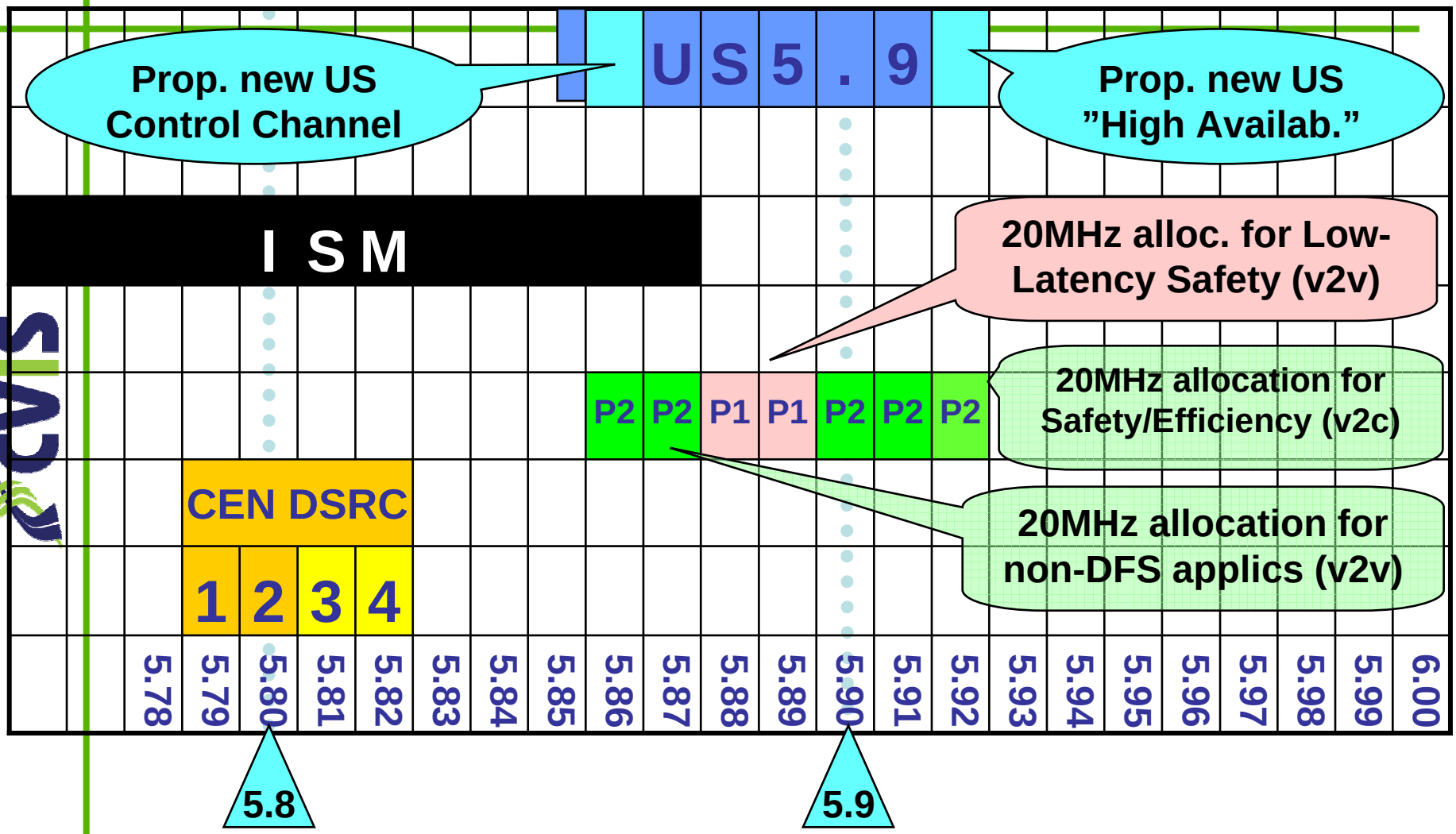
CVIS β-γ Vehicle Architecture



Proposed European Spectrum



Proposed Spectrum Details



CONCLUSION

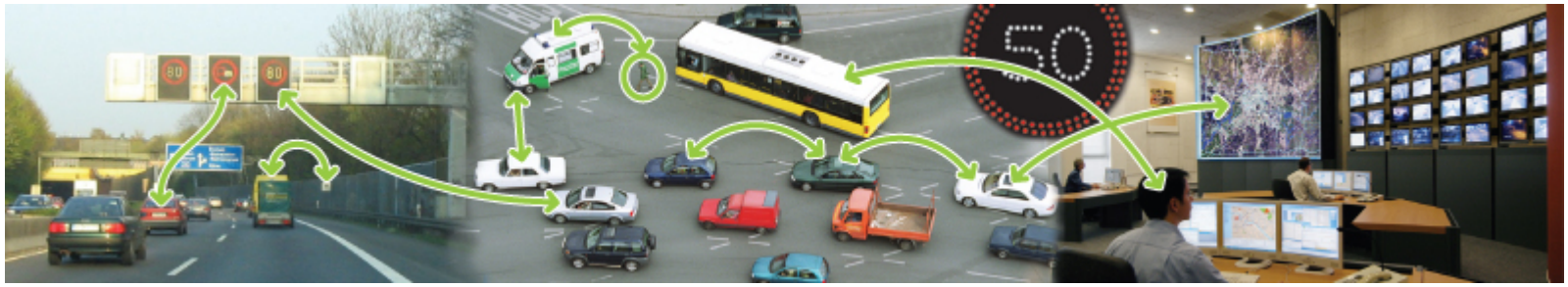
- CVIS Platform is intended to be used in all relevant (European) Projects
- Based on Open Software/Open Design as far as possible
- NOT a commercial product – designed as a very flexible R&D platform

- **CVIS invites interested parties to contact**

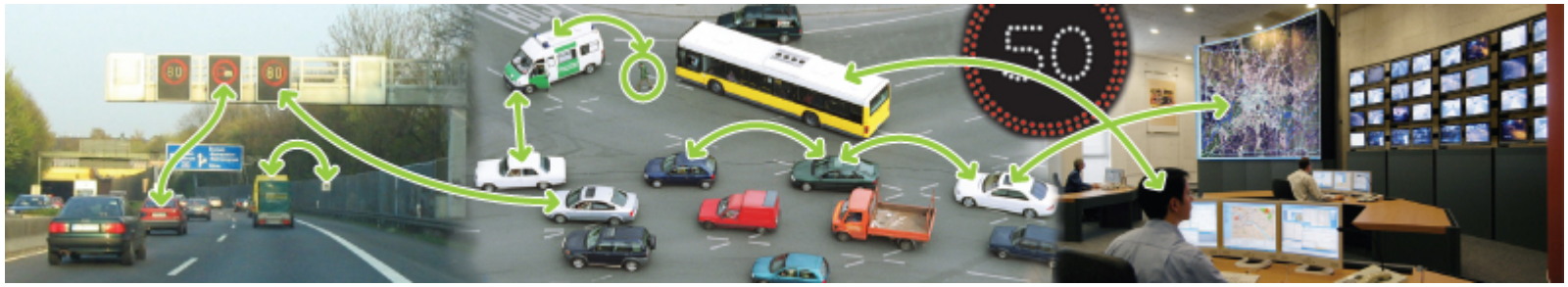
www.cvisproject.org

Thanks for your attention…

www.cvisproject.org

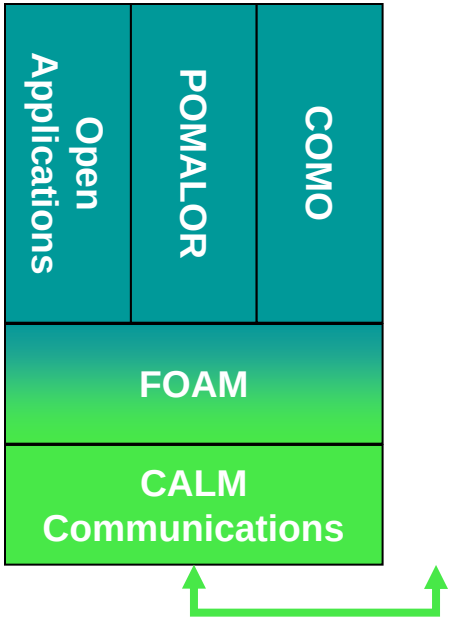


Backup slides

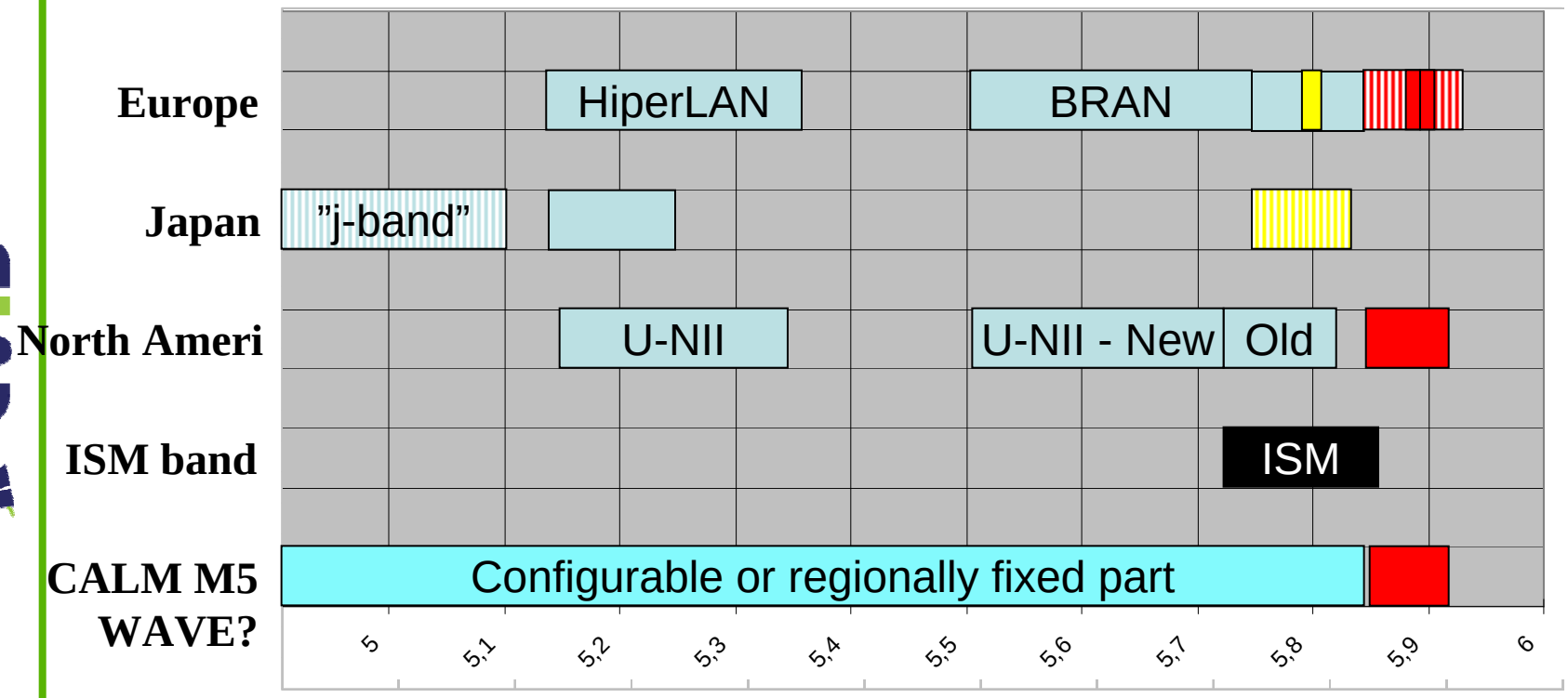


CVIS Core Tech services

- CVIS will provide four **Enabling Services**
  - **CALM**: Standard seamless wireless communications with Internet access
  - **POMA**: Positioning, map services and location referencing
  - **COMO**: Cooperative Monitoring. Vehicle and Infrastructure standard data sets for local or central fusion
  - **FOAM**: Open end2end framework linking in-vehicle systems, roadside infrastructure and back-end infrastructure



5 GHz Spectrum (not exact!)



Dedicated ITS (DSRC)

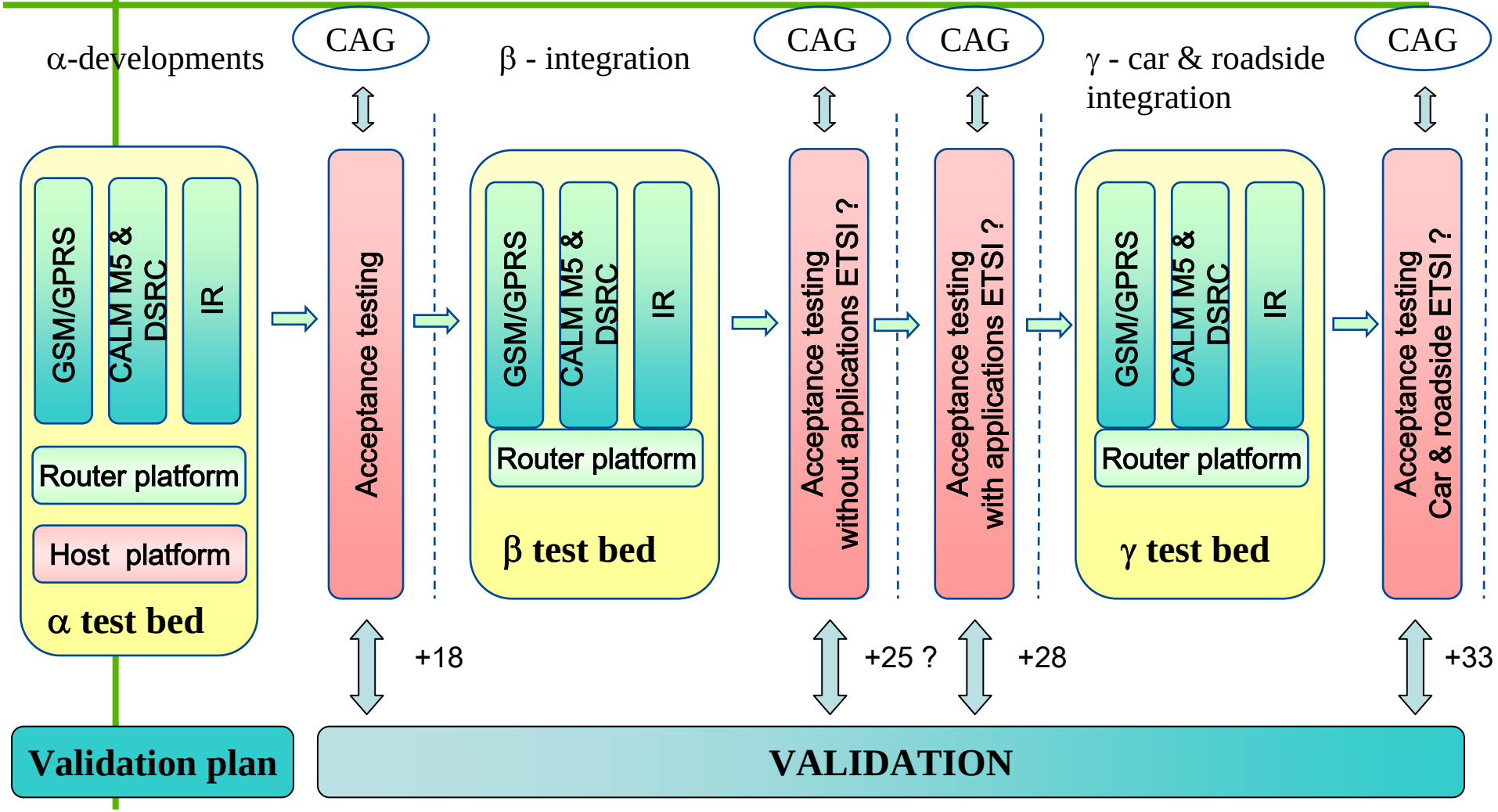
Requested : Global
ITS Safety allocation 5.85-5.925

ETSI ERM TG37

- 2G/3G standards, eCall, Testing standards,…
- European frequency selection
- System Reference Document (SRD) in three parts:
  - Critical Safety - 2*10MHz bandwidth
  - Safety & Efficiency - 5*10MHz
  - Mobile use of unlicenced 5 GHz bands
- Allocation likely in 5.9 GHz band.
- Process involves several steps with ETSI – CEPT – national authorities.

Possible allocation of 5GHz frequencies early 2007?

CoreTech timeline



CVIS end-to-end service concept