

# Institut du Véhicule Décarboné Communicant et sa Mobilité

*Institute for the carbon-free and connected  
vehicle and its mobility*



***Institut pour la Transition Energétique***  
*Institute for the Energy Transition*



*a new institute, federating industrial & academic research*



- ➡ Automotive competitiveness cluster

[www.pole-moveo.org](http://www.pole-moveo.org)

*created in March 2006 : «advanced and safe automobiles and transports for mankind and for environment »*

340 members



- ➡ Public-private foundation

[www.moveotec.com](http://www.moveotec.com)

created in 2010 by 10 partners

UVSQ, IFSTTAR, IFPEN, CETIM, ESTACA, ESIGELEC, Peugeot-Citroën, Renault, Safran, Valeo

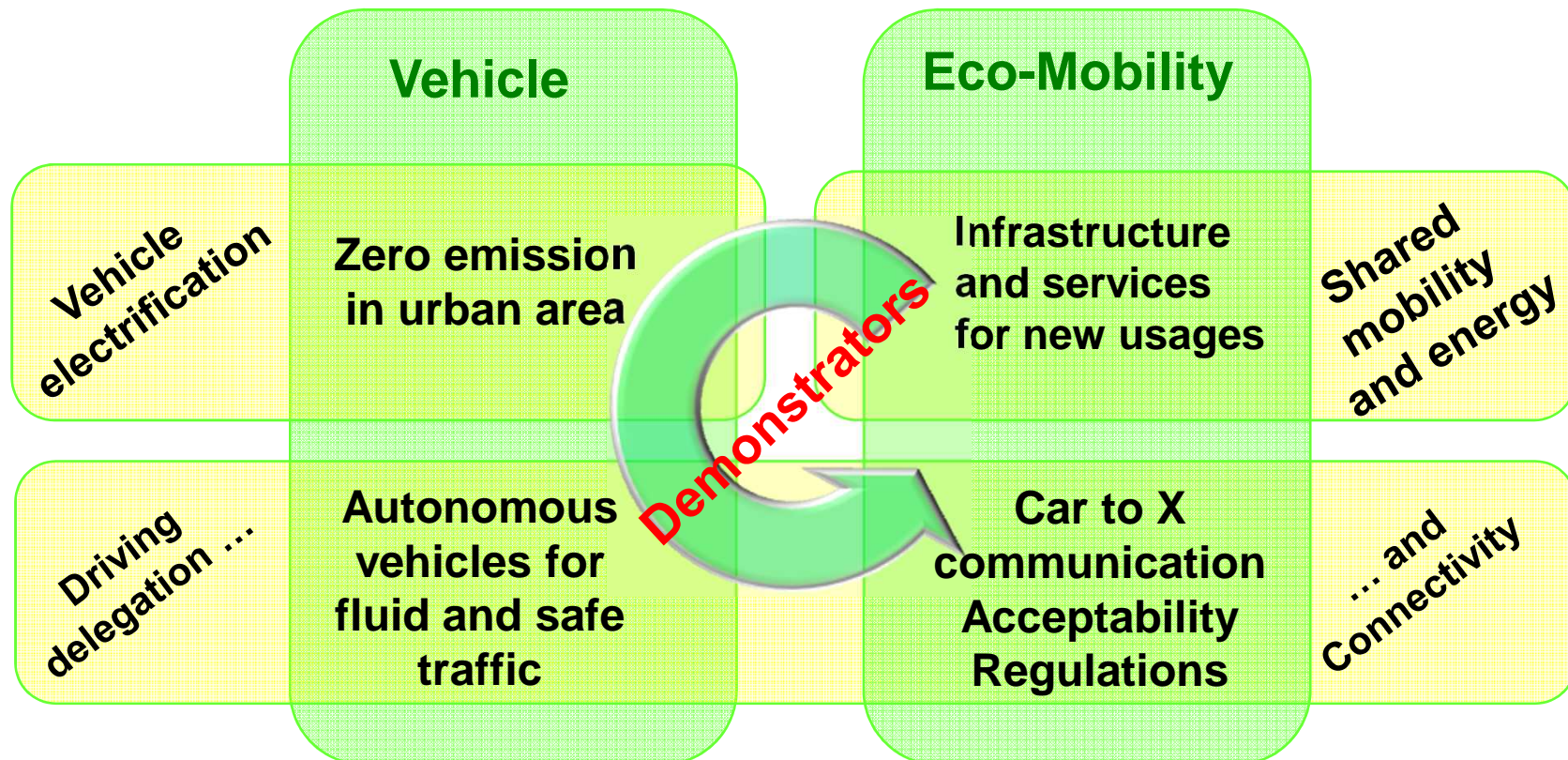
- ➡ Public-Private-Partnership as a research institute for the carbon-free connected vehicle and its mobility

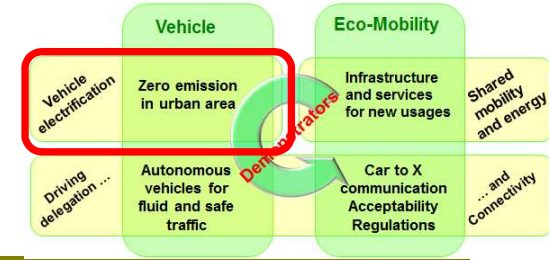
[www.vedecom.fr](http://www.vedecom.fr)

born from Mov'eoTec → 45 members



***Energy efficiency in personal transportation  
by addressing all mobility challenges as one combined issue***



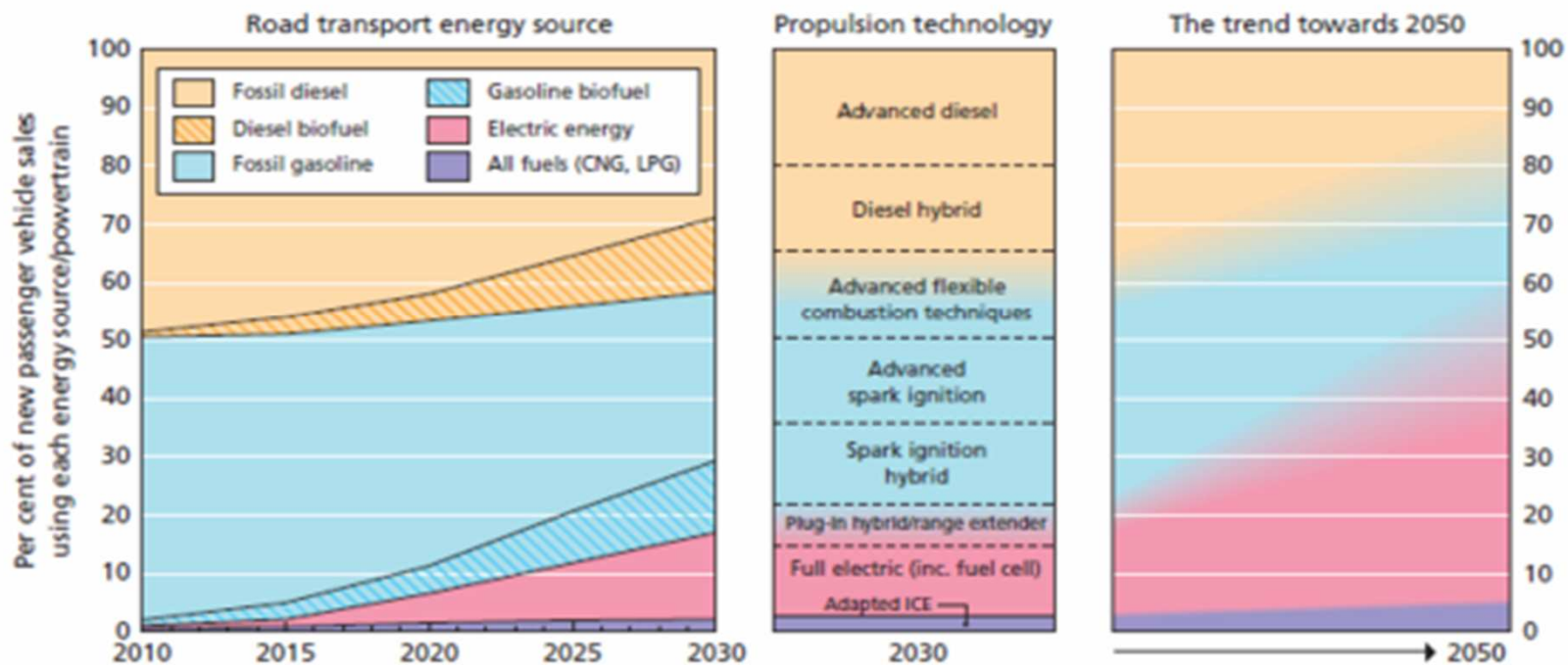


## 1- To address vehicle electrification challenges

- ➔ *volume x 100, cost / 5, vehicle variations*
- ➔ *wide spread application of mechatronics*
- ➔ *independence in light of natural resource rarefication*



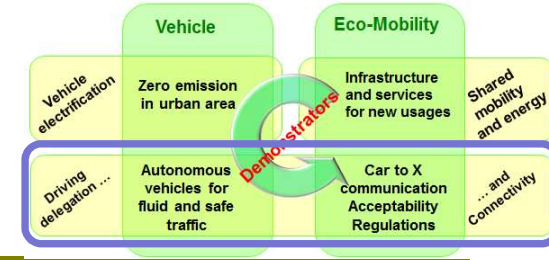
The evolution of passenger road transport energy source and propulsion technology, towards 2050



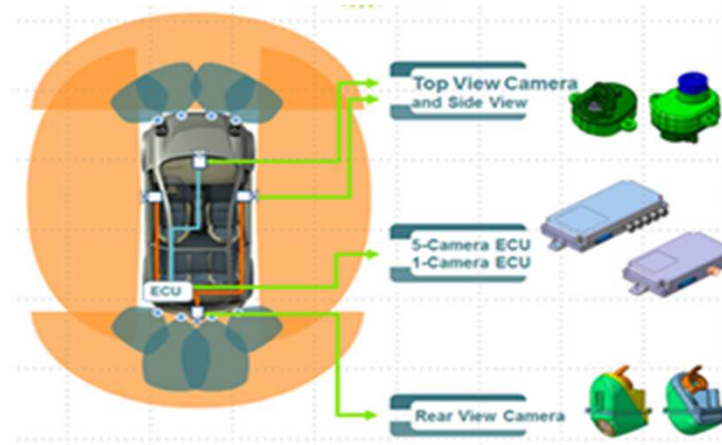
Source : ERTRAC Strategic Research Agenda 2010



# Driving delegation and Connectivity

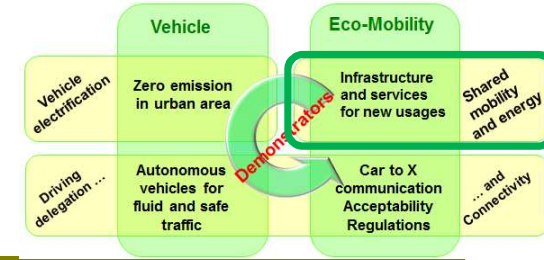


## ➡ 2- To develop connectivity and driving delegation solutions

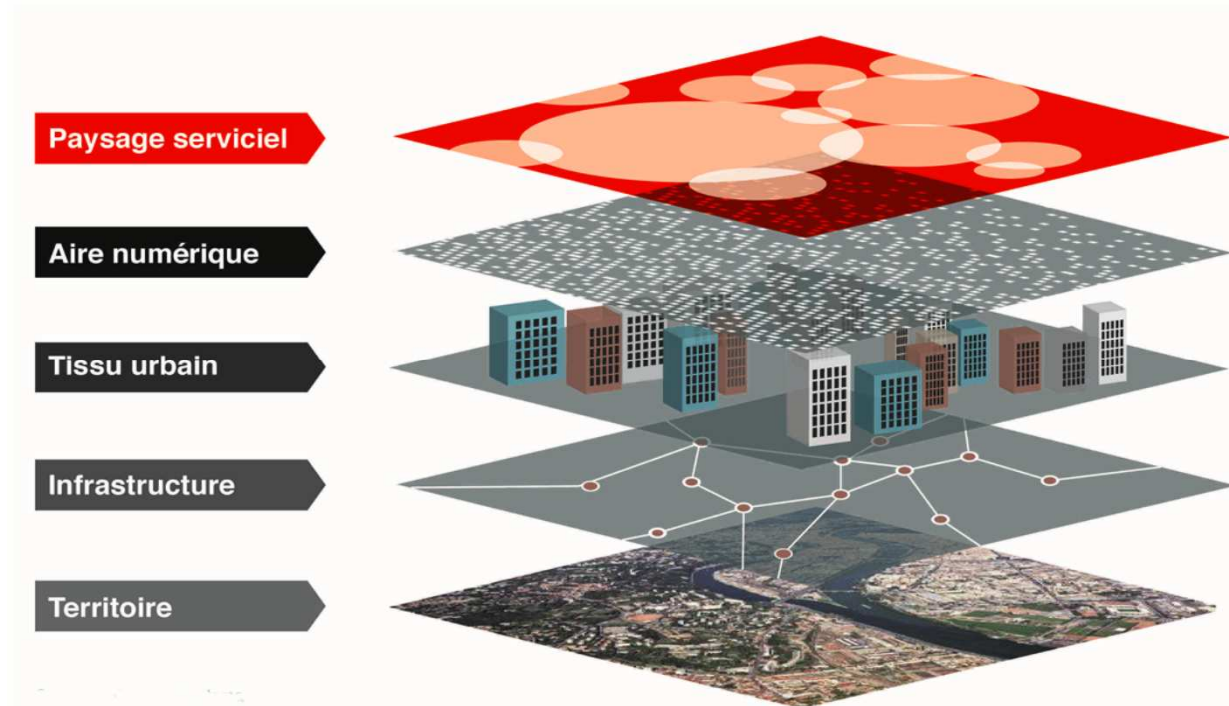


### New modes of personal mobility

- ➔ *Driving delegation (assisted, automated, autonomous)*
- ➔ *Connectivity et cooperative security*
- ➔ *Intermodality*



## ➡ 3- To expand mobility and energy infrastructure and services

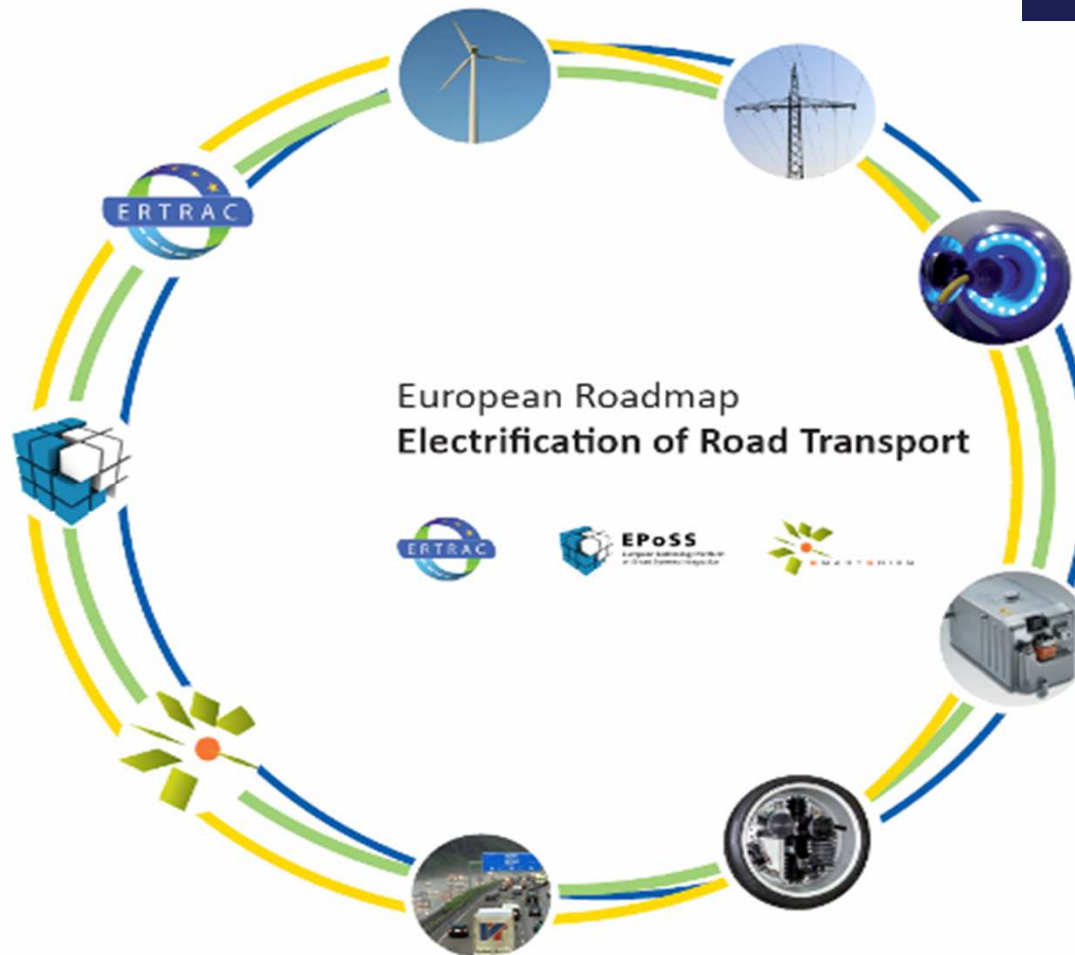


Partnership of municipalities, transportation and planning authorities, automotive industry and higher education will lead to breakthroughs in how new mobility systems are deployed in smart cities

➔ Re-imagine services, infrastructure and mobility



**European Green Cars Initiative**





## Automotive & aeronautic industry at all levels of the supply chain



## Green mobility players



## Excellence in education and research

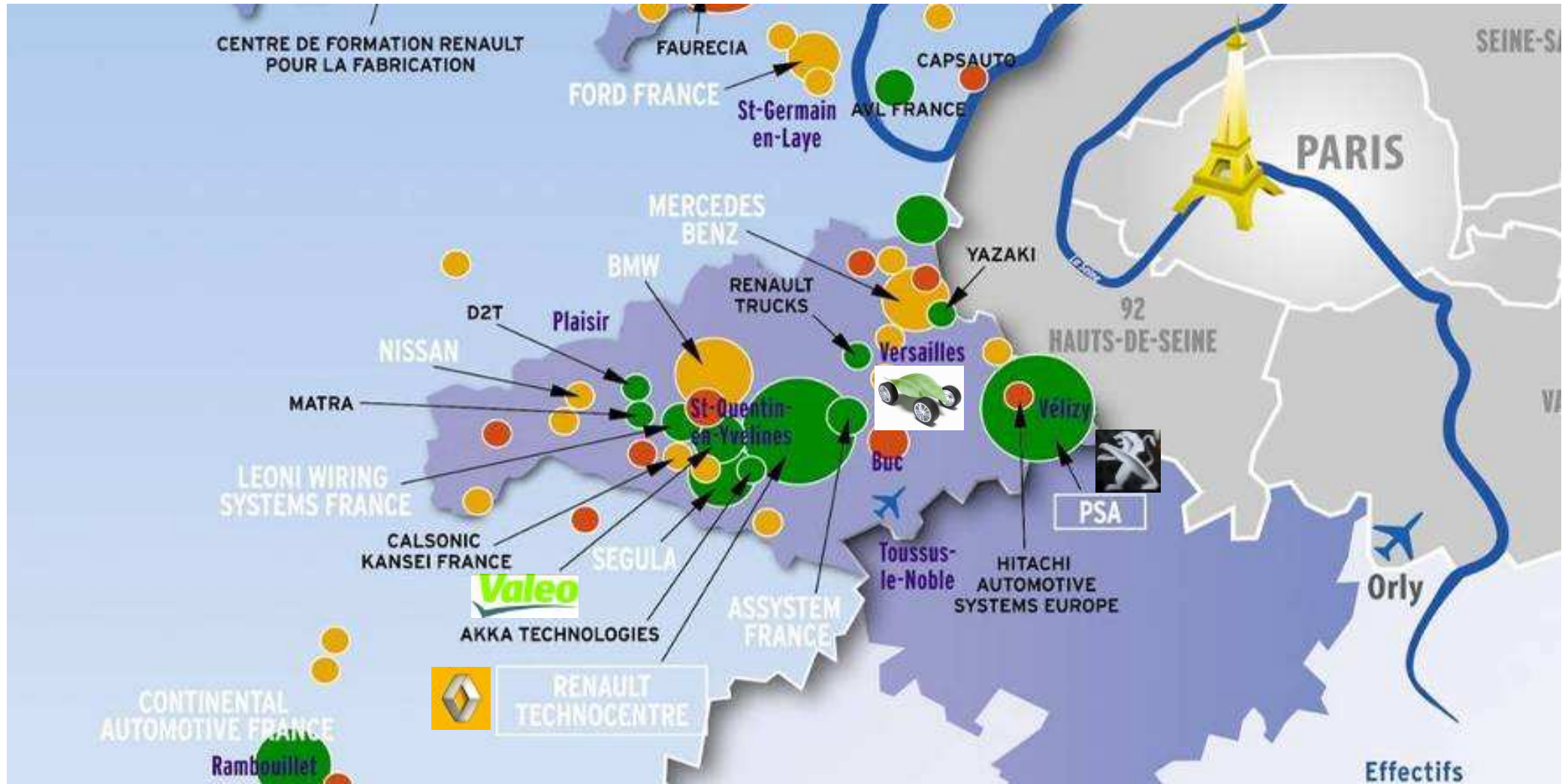


## Public and local authorities

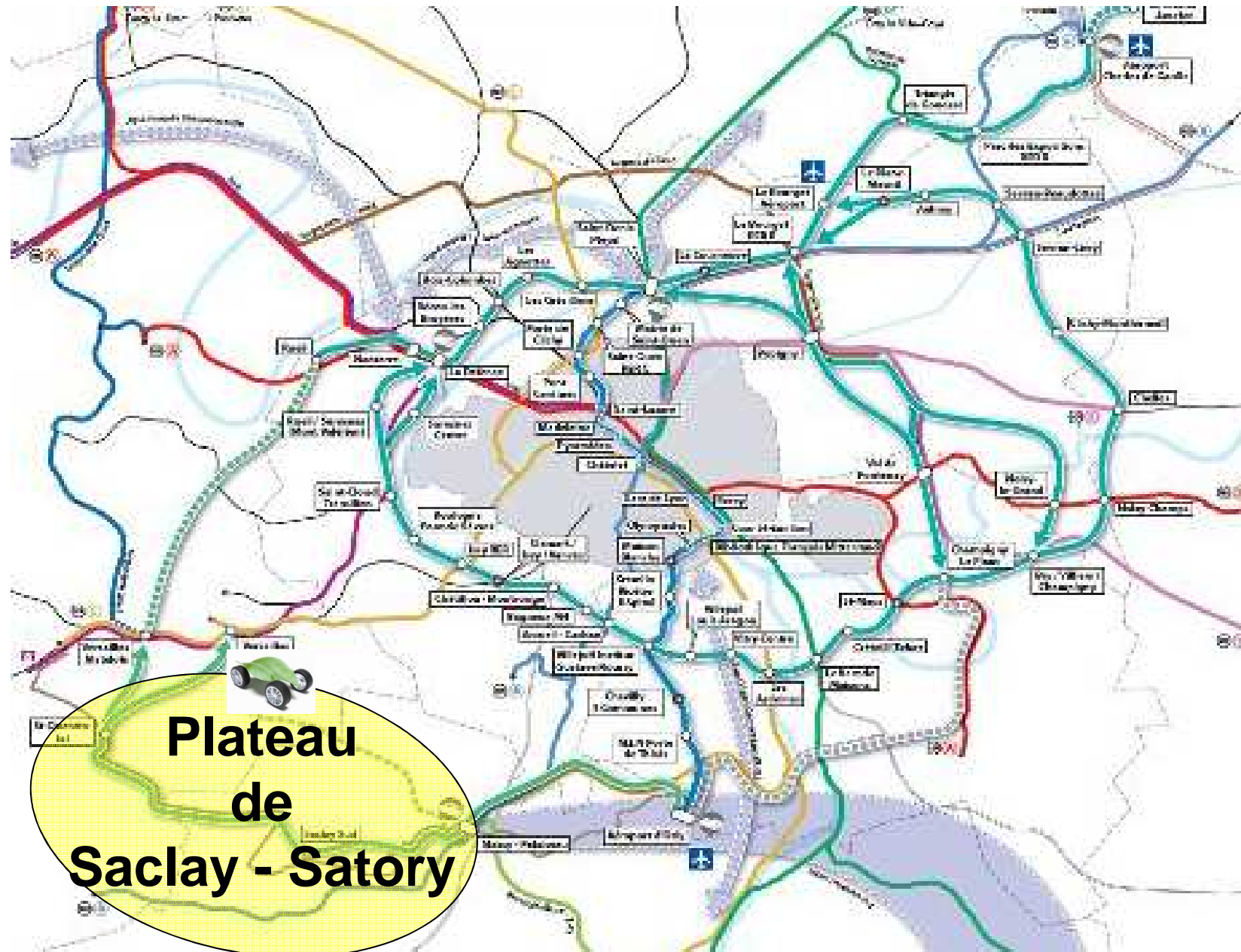




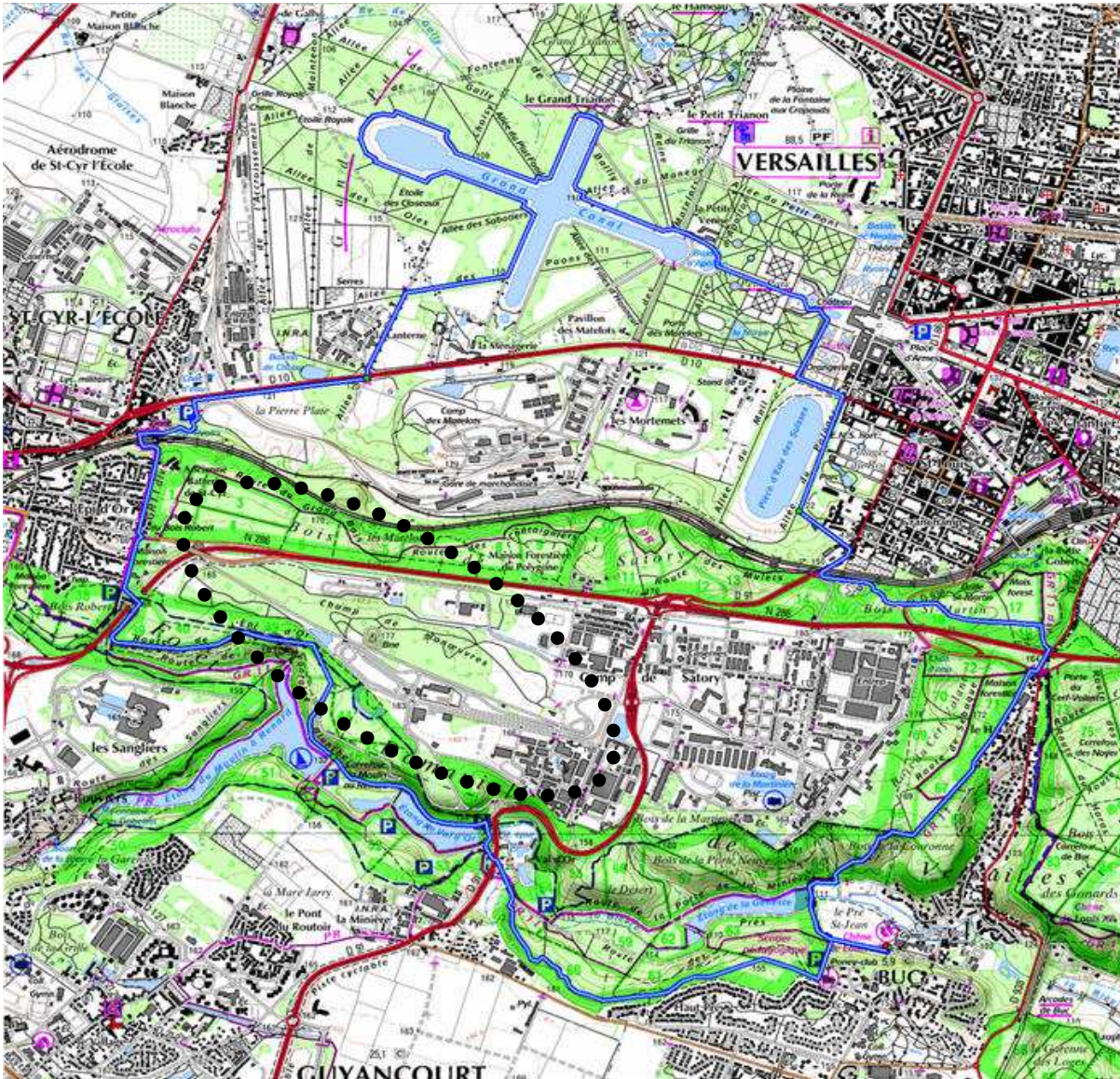
# ... at the heart of the French « automotive valley »



# ... as a seed in the « Grand Paris » future network of public transportation















## 2 programs, 3 domains, 15 internal projects

Ladimir Prince

Jean-Laurent Franchineau

**Vehicles** ..... **Eco-Mobility**

 Vehicle Electrification	Driving Delegation & Connectivity 	Shared Mobility & Energy 
New electric machines / motors ★	Autonomous vehicle ★ ★ ★ ★ ★	Design of new physical urban infrastructures for eco-mobility ★ ★
Power electronics  ★ ★ ★ ★		
Reliability of electric motors and power electronics ★	New communications, cooperative systems and safety 	Numerical services and multimodal urban platform 
Global thermal management and components	Architecture & system robustness ★	Laboratory of new usages ★ ★ ★ ★
Battery pack reliability test	Acceptability of new vehicles and new usages ★ ★	Shared energy  
Shared virtual platform		
Electromagnetic compatibility ★		

★ PhD or Post-doc

 collaborative funded project with external partners



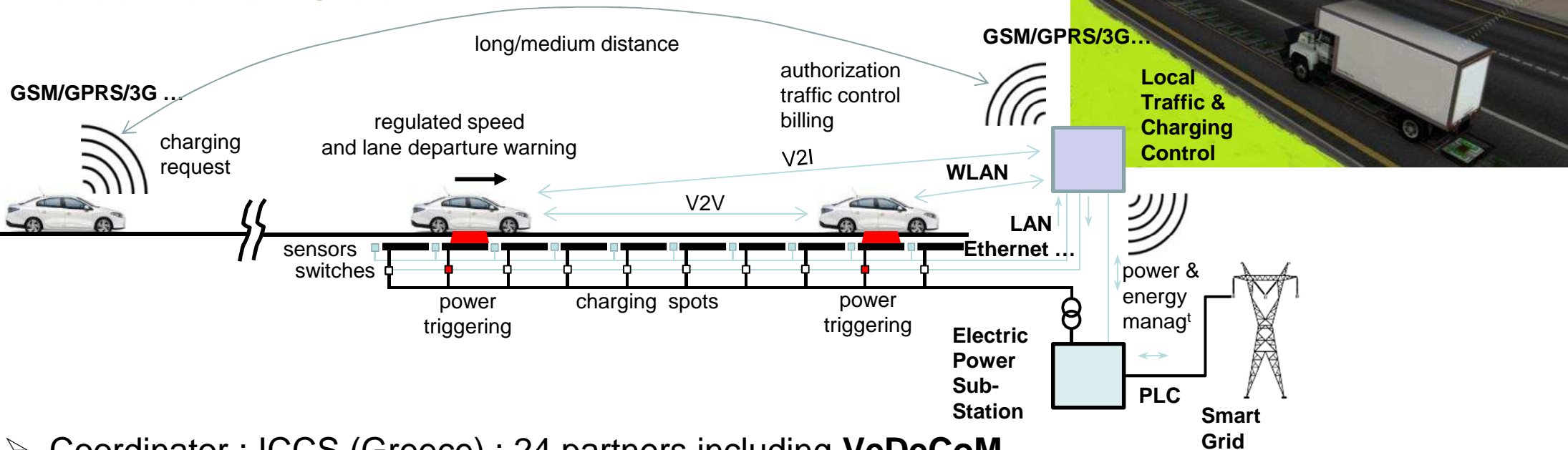
# Participation in European and National collaborative projects

# European project



European Green Cars Initiative

## *FeAsiBility analysis and development of on-Road charging solutions for future electric vehiCles*



- Coordinator : ICCS (Greece) ; 24 partners including **VeDeCoM**
- Countries : Greece, Belgium, France, Germany, Italy, Netherlands, Spain, Sweden, UK
- Duration 48 months : 01/2014 – 12/2017
- Total project : costs 9001 k€ / funding 6495 k€
- VeDeCoM : costs 1182 k€ / funding **887 k€**



including



PSA PEUGEOT CITROËN



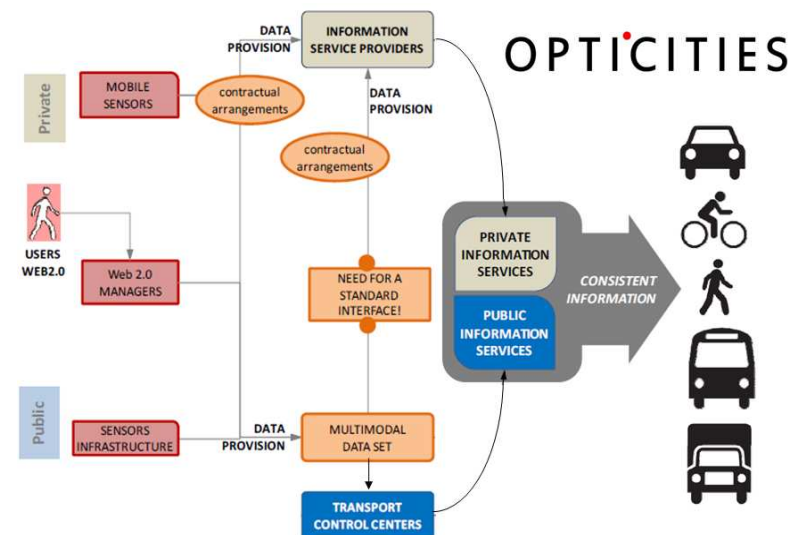
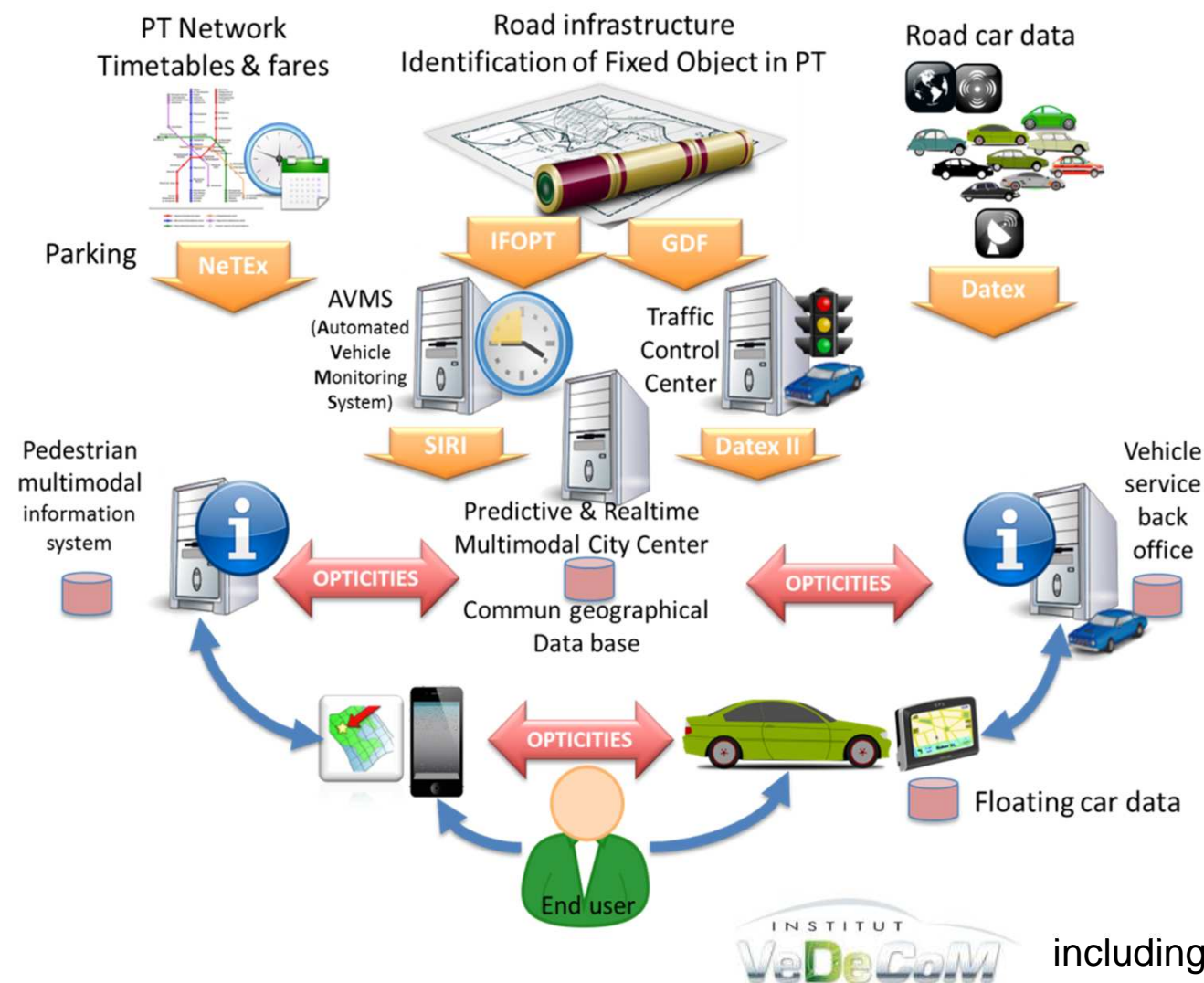
with



# European project



## Optimise Citizen Mobility and Freight Management in Urban Environments



- Coordinator : Grand Lyon
- 23 partners including **VeDeCoM**
- Countries : France, Belgium, Germany, Spain, Italy, Poland, UK, Sweden
- Duration 36 months : 11/2013-10/2016
- Total project : cost : 13 012 k€  
funding 8 998 k€
- VeDeCoM : costs 864 k€  
funding **603 k€**



including



# French project

Norm-Atis

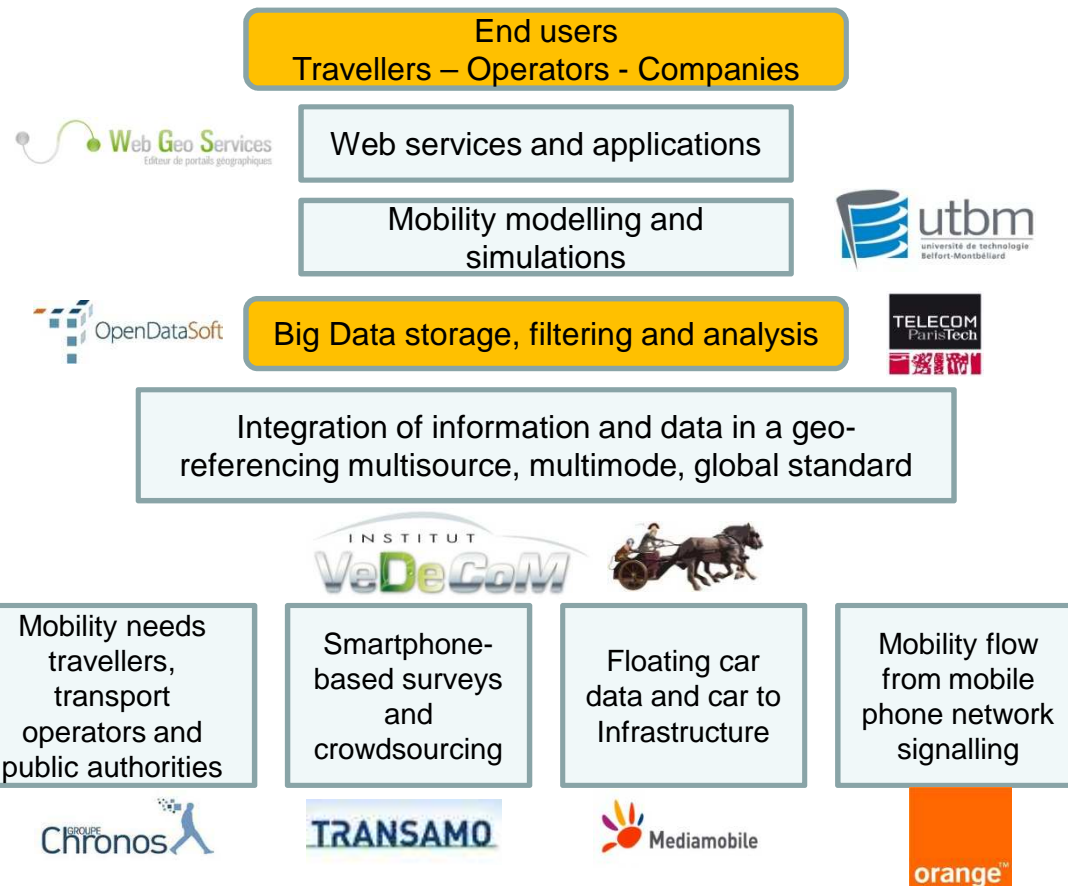
AGENCE NATIONALE DE LA RECHERCHE  
ANR



## New standard for data and geographic reference for Advanced Traveler Information Systems

### Objectives

- Comprehensive understanding of mobility behaviors from users' needs and new mobility indicators.
- Scheme for collecting mobility data in different territories
- ISO/CEN draft for this new multisource multimodal geo-referenced database
- Dissemination of predictive and real time multimodal travel information.
- Promotion of the use of these tools for individual and collective control of the transport system at a local level
- First application and demonstration on the plateau South-West of Paris extending from Palaiseau to Saclay, Versailles, and Saint Quentin en Yvelines



- Coordinator : VeDeCoM - Duration 42 months : 01/2014 – 06/2017
- Total project : costs 2 902 k€ / funding 898 k€
- VeDeCoM : costs 611 k€ / funding **189 k€**



# European project



## *SAfe and Green road vehicles in Europe*

- SAGE (2011-2014) aims to strengthen regional capacity in research and innovation in accordance to the Europe 2020 strategy for sustainable growth.
- SAGE represents a network of regional research driven clusters with strong automotive industry that aims to prepare for and facilitate an increasing pace of innovation within the major European growth market for safe and green road vehicles for passengers and goods.
- “Green” translates as a focus on knowledge and solutions for radical reduction of CO2 emissions and energy use, and “safe” as a focus on active and intelligent solutions that substantially change the safety of the road transport system.



WARSAW UNIVERSITY OF TECHNOLOGY

# European project



## Vehicle Road Automation



VRA, coordinated by ERTICO – ITS Europe, is a support action funded by the European Union to create a collaboration network of experts and stakeholders working on deployment of automated vehicles and its related infrastructure, and a cooperation interface between EC funded projects, international relations and national activities on the topic of vehicle and road automation.
