



45TH ASECAP STUDY & INFORMATION DAYS 2017

The Concession model in the decarbonization era: preparing the infrastructure of the future

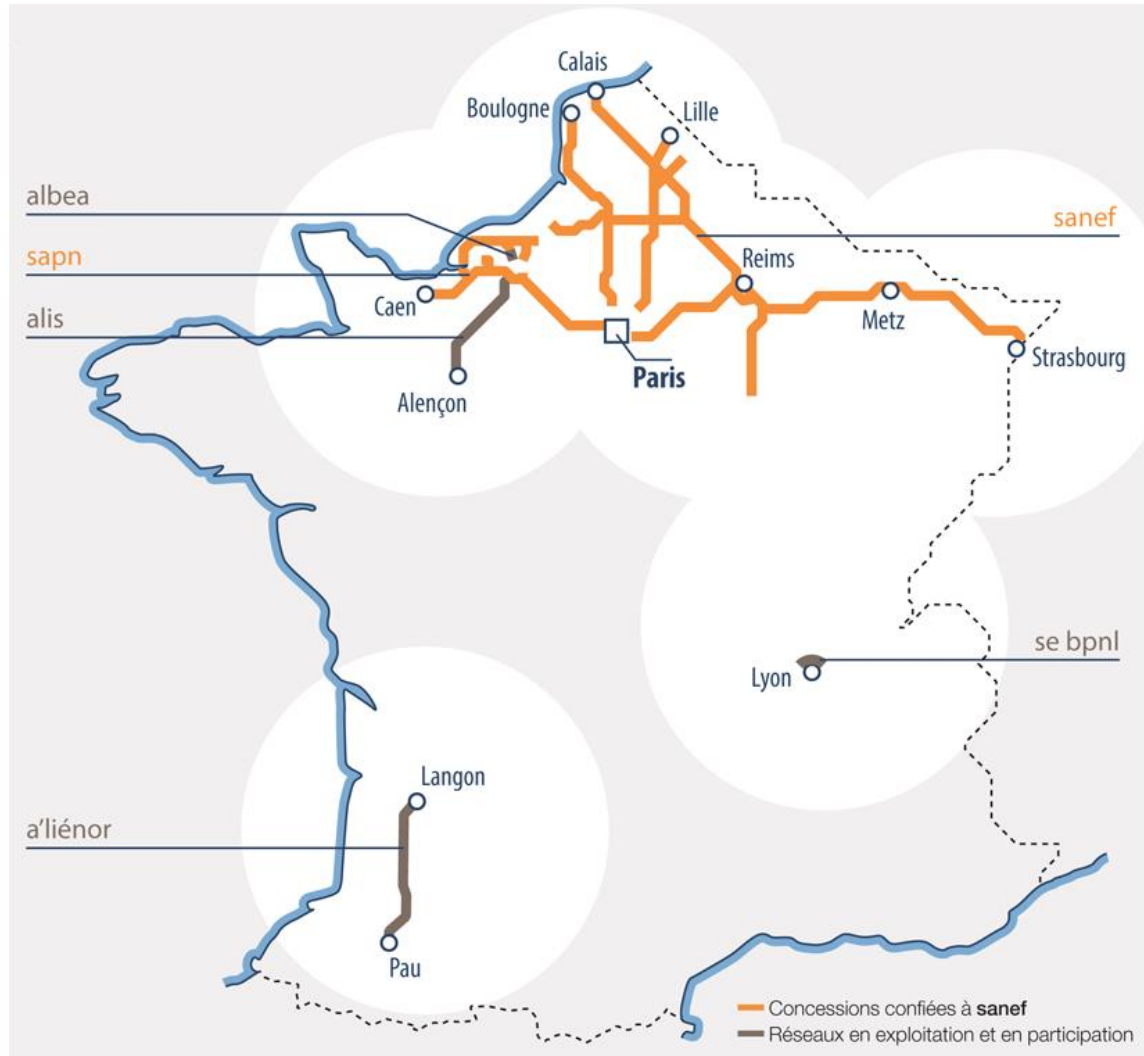
Pullman Paris Montparnasse Hotel
29-31 May 2017

www.asecapdays.com



Organized by





sanef
une société d'Abertis

2063 km of motorways

1,6 billion € turnover in 2016

2 700 employees

16 millions of traveled km per year

Yearly Investments
198 million €

- **Infrastructure is becoming more intelligent, accelerating the emergence of autonomous vehicles, enabling more proactive traffic management and transforming the way people think about mobility**
- **Smart engineering is finding ways of turning passive infrastructure into dynamic assets**
- **Within Sanef/Abertis, we call this Road Tech**
- **New innovative megatrends require collaboration and partnerships between mobility actors : car manufacturers, highway companies, service providers...**
 - **Connected vehicles**
 - **Autonomous vehicles**
 - **Use of floating car data**
 - **Crowdsourced traffic management data**
 - **Electromobility**
- **Toll highways, as premium infrastructures, are the best place for experimentation and implementation**

Duration: 5 years (2 + 3) = 2014 - 2018

Co-Funded by the EC for Part 1

3000 vehicles equipped

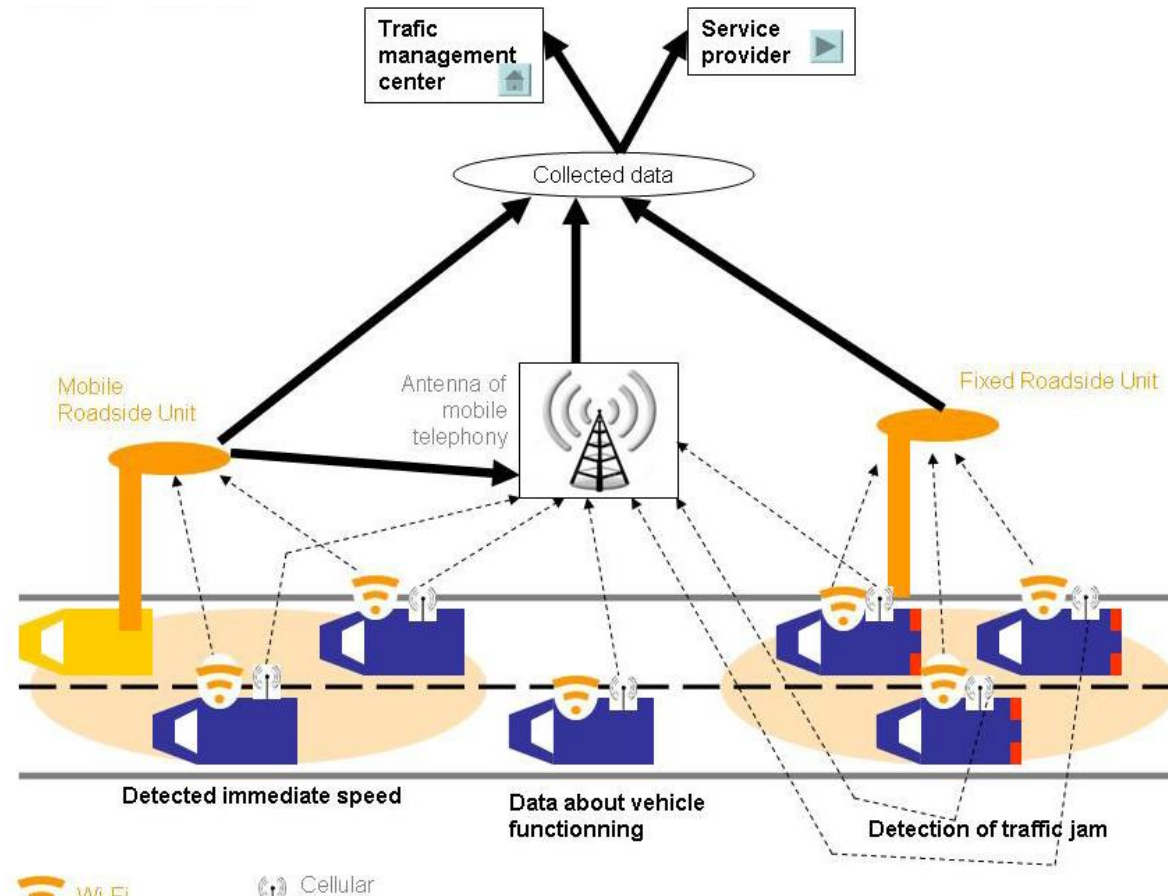
Road operators' vehicles : Renault and PSA passenger vehicles

2000 km of roads equipped with Road Side Units



5 groups of services :

1. Collection of data
2. Road works alerts
3. On board Signalling
4. Traffic information
5. Park and ride



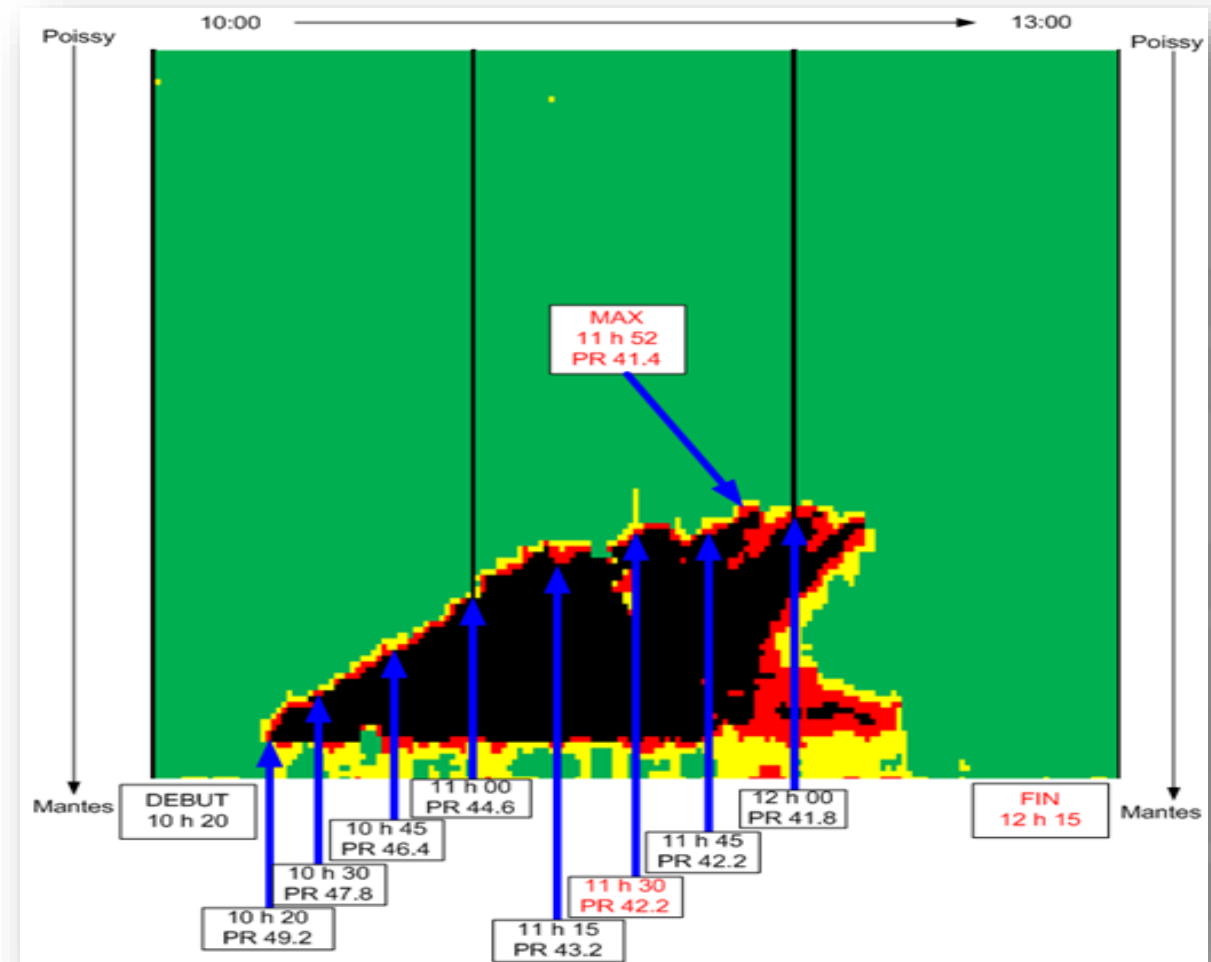
Full automation will take many years, and still need a lot of challenges to be addressed, but in the mean-time :

- **First stages of automation - single-lane and multiple-lane management - will occur only on highways : intersection management challenges won't be solved before the 2020s.**
- **Automated vehicle will need a strong V2V and V2I communication infrastructure. Tolloed motorway in concession could be a suitable framework for the fast implementation of this infrastructure.**

There will still be complex scenarios where AI powered car alone won't find their way through and will need the help of human operators => Fully supervised motorways with traffic management centers could be the foundation of autonomous car management systems.

Data coming from our clients are integrated in our traffic management system :

Bluetooth technology allows to follow customers trip on our motorways, providing information on average speed, congestion...



CONNECTED CITIZENS by Waze



- **For Sanef**
 - Use Waze information as another 'sensor' to understand real-time traffic on its motorways
 - Use Waze as another communication channel to inform its clients of current traffic situation
 - Show Sanef innovation by being the first road authorities to make a partnership with Waze in France
- **For Waze**
 - Obtain high quality traffic information from sanef
 - Communicate on these information in the Waze app or Waze web site
 - Promote Waze through Sanef communication channels



- **R&D: Sanef partner of FABRIC (EU funded project)**
 - Feasibility analysis and development on on-road charging solutions for future electric vehicles (2014-2017)
 - www.fabric-project.eu
- **E-WAY Corridor :**
 - Promoting electromobility on our networks**
 - 33 charging stations deployed by SODETREL on our service areas within Corridor project (200 stations in France)
 - 2 x 6 TESLA super-chargers
 - and for internal use by our operations teams**
 - EV and charging stations for our toll collection teams



Borne de recharge (A4 Tardenois)

- **Toll highways, as premium infrastructures, are the best place for experimentation and implementation**
- **Co-operation between vehicle and infrastructure is necessary or even essential**
- **New trends that we have to take into consideration to address our customers expectations :
Mobility as a service.**
 - **Facilitate mobility**
 - **Facilitate toll payment**
 - **By providing integrated service offers**