SCOOP@F project

Marie-Christine ESPOSITO
French Ministry of Transport

11th ITS EUROPEAN CONGRESS
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Glasgow, Scotland | 6-9 June 2016

Projet **SCOOP**
véhicules et routes connectés
connected vehicles and roads

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Project SCOOP@F

- Launched February 2014

- Funded by the EC through the CEF

- 1st wave : 2014-2017
  - Priority services
  - ITS-G5 communications

- 2nd wave : 2016-2018
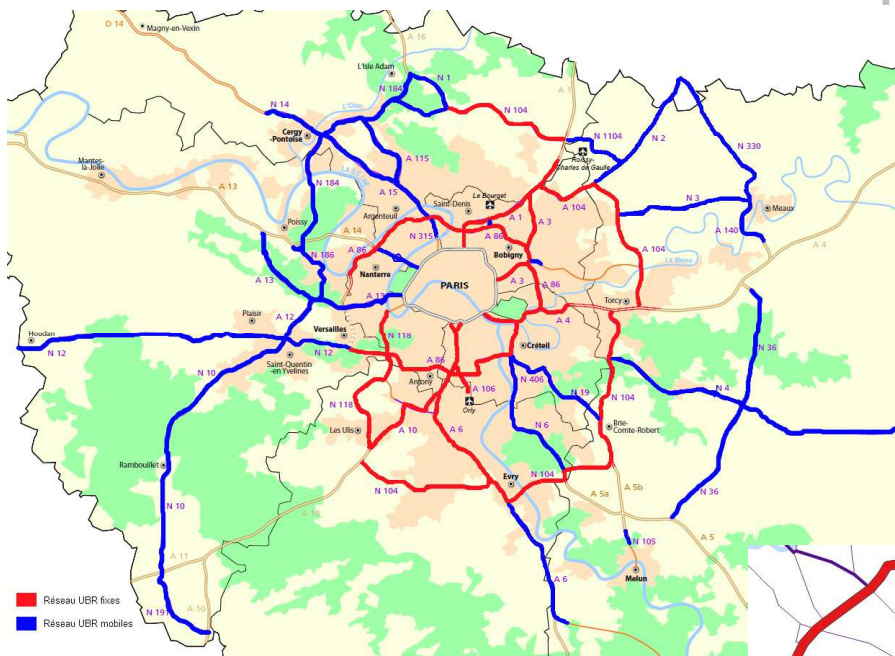 - New services
  - Hybrid cellular/ITS G5 communications

- **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).
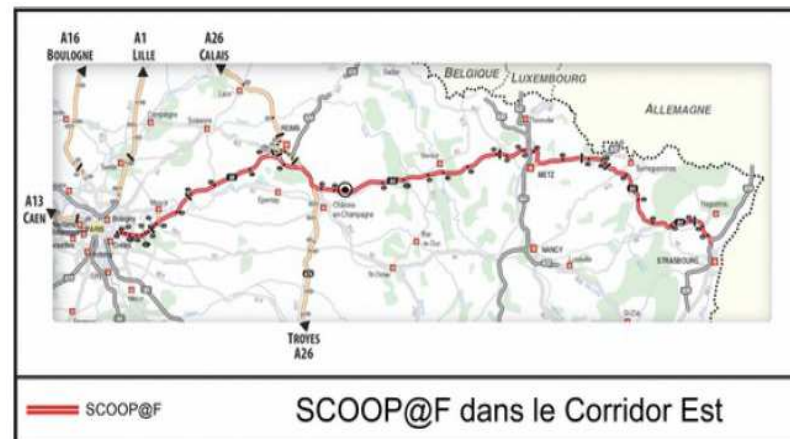
And since January 2016 :
- A telecommunication operator : Orange
- A provider of trust services : IDNomic
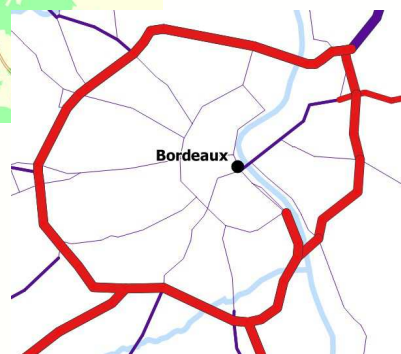- Austrian, Spanish and Portuguese partners
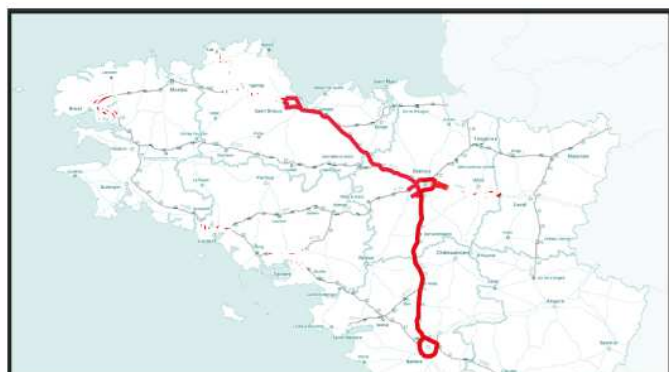
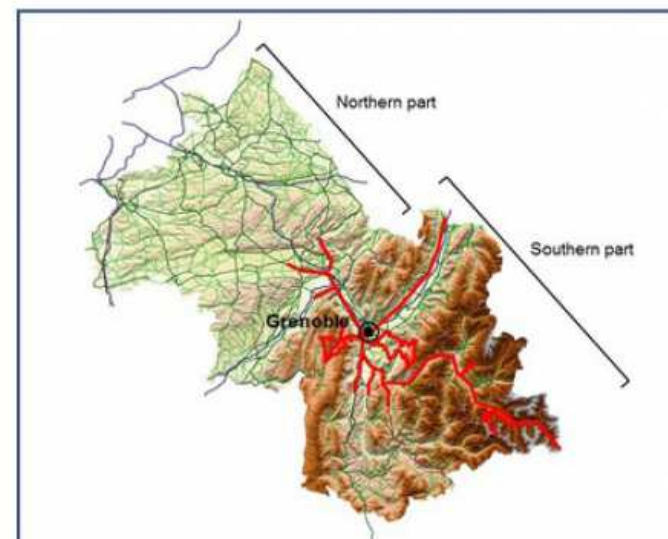# Five pilot sites

SCOOP@F en Ile-de-France

SCOOP@F dans le Corridor Est
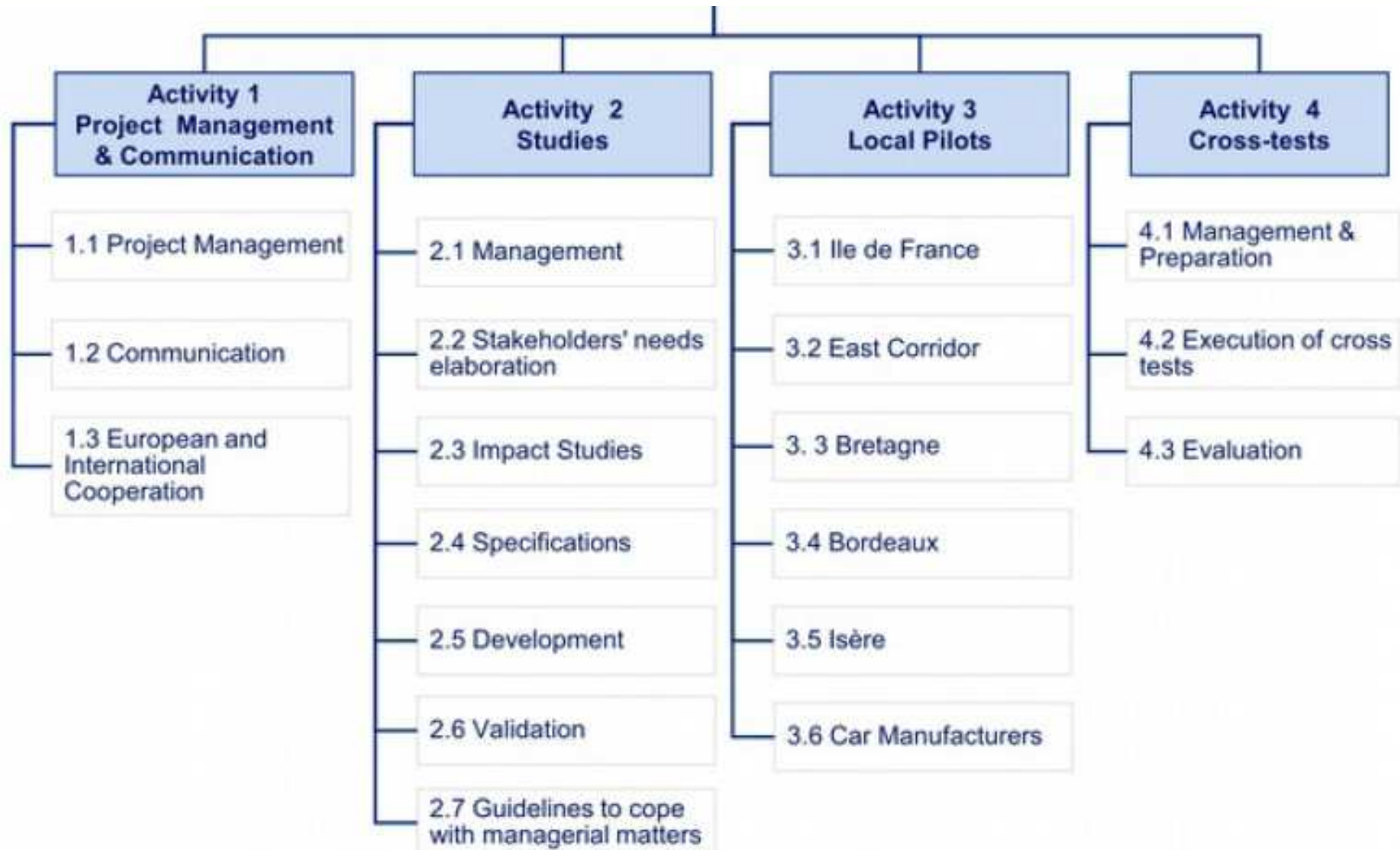

SCOOP@F à Bordeaux

SCOOP@F en Bretagne

SCOOP@F in Isère

Project structure

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

New services
specified in the 2nd wave

- On-board VMS
- Temporary lane closures (including dynamic lane management)
- Wrong-way driving alert (I2V only)
- Information on parking areas
- Information on next train departures
- Dynamic speed information
- Smart POI
- Information on winter road conditions
- Rerouting

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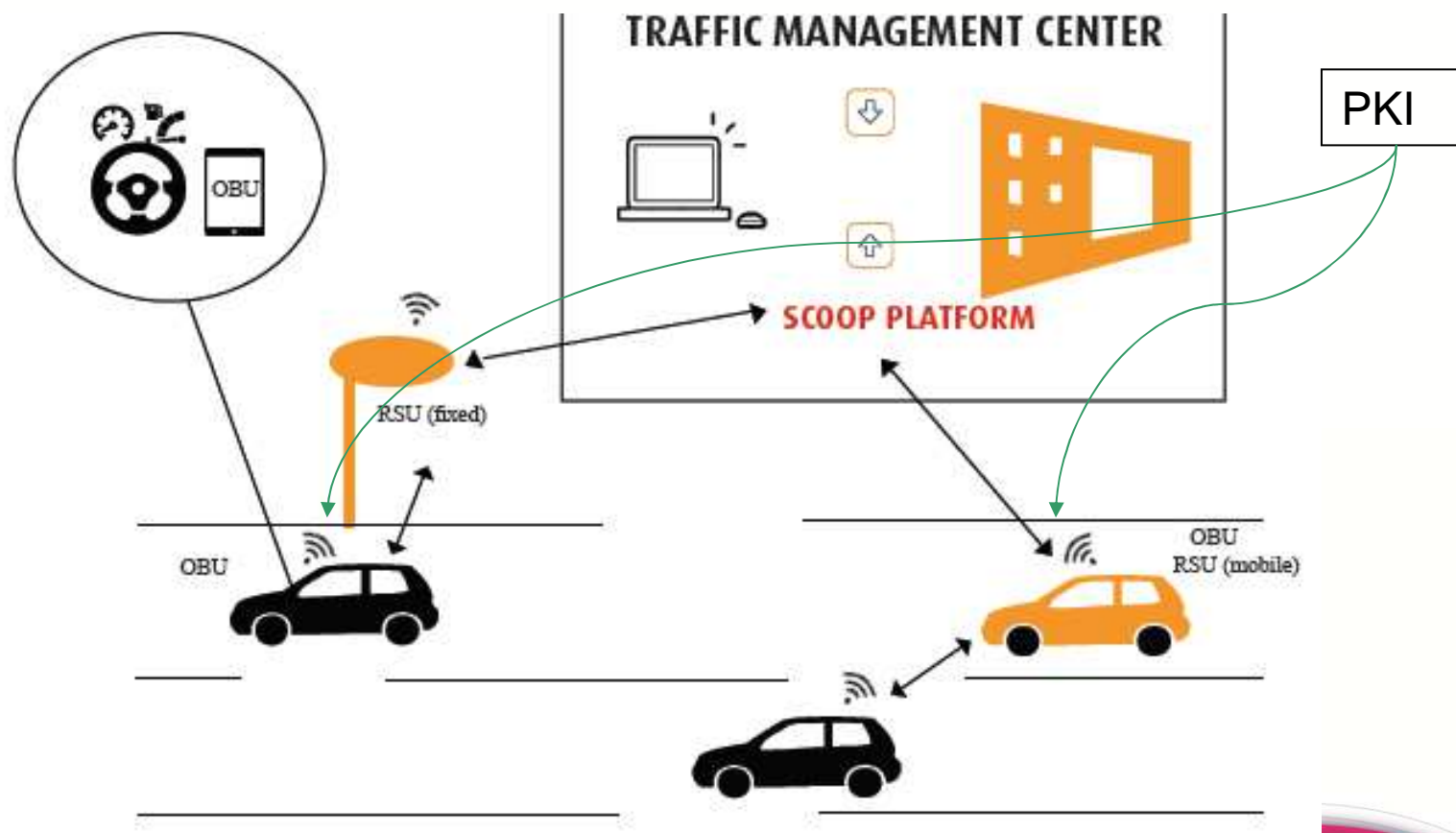
- Specifications ready and now available in English
- Procurement process achieved for all public partners
- First prototypes available and currently tested in laboratory and on tracks
- Preparation of deployment
- Preparation of evaluation

+ specifications of wave 2 started

The SCOOP@F specifications

2.4.1	Common set of functional and technical specifications for SCOOP
2.4.1_Bis	List of standards applicable for specifications and development
2.4.1_Annexe	Renewal of pseudonym certificates and upload of Logs (T-Logs and U-Logs)
2.4.1.2	Specifications of DENM fields
2.4.1.3	Catalogue of Tlog data to collect
2.4.1.3_Bis	Technical specifications of data to collect
2.4.1.4	Specifications of Datex II v2.3 messages in conjunction with CAMs and DENMs
2.4.2.1	Functional and technical specifications of RSU
2.4.2.2	Functional and technical specifications of OBU for road operators
2.4.2.2_Bis	Specifications of Software for Road operators OBU
2.4.3.1	General functional specifications of SCOOP platform
2.4.3.2	Detailed functional specifications of SCOOP platform
2.4.4.1	Analysis of safety objectives
2.4.4.2	Scoop@f risk analysis for safety
2.4.4.3	Comparison between the risk analysis performed by Solucom (2.4.4.2) and the risk analysis proposed in ETSI standard TR 102 893 (TVRA)
2.4.4.4	State of the art of public key infrastructures for cooperative ITS
2.4.4.5	PKI System Requirement Specifications
2.4.4.6	PKI architecture and technical specifications
2.4.4.6_Bis	Use case scenarios with security data
2.4.4.7	Strategies for changing pseudonyms and sizing the PKI traffic

First release now available in English !

The SCOOP@F prototypes
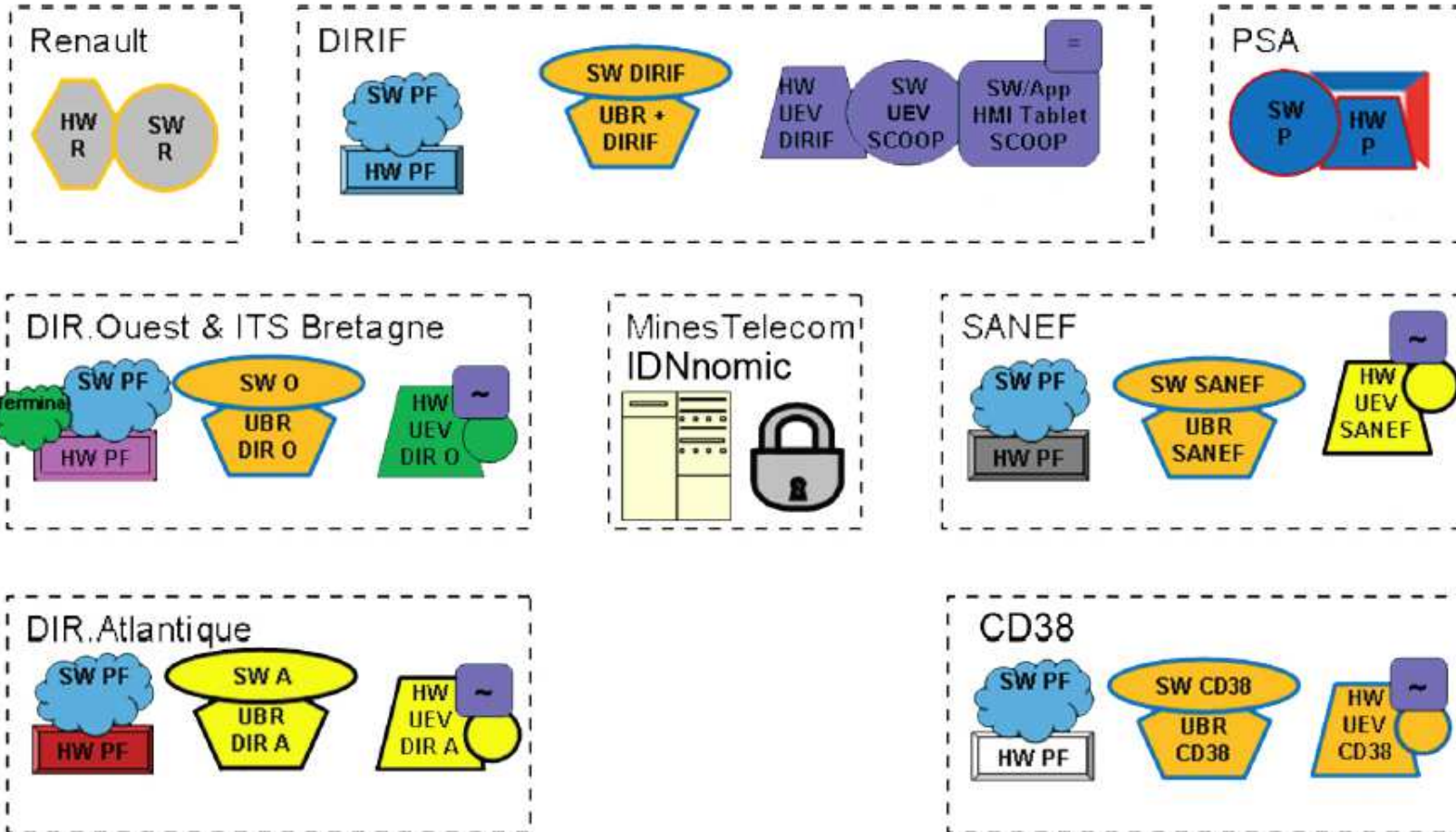
Validation process

- In laboratory tests
- Conformity with specifications
    - Interoperability

- Tests on test-tracks
    - Tests on sub-systems
    - Tests on the whole ecosystem

- Open road tests on each pilot site, with the local traffic management system
    - Tests on the whole ecosystem
    - Ergonomics assessment

▪ Security

Based on a detailed risk analysis
PKI architecture discussed with national security agency ANSSI
Certificate policy currently discussed within WG5 of the C-ITS platform

▪ Privacy

Authorization process by the national data protection agency CNIL on its way
Legal basis for data processing : consent
- Responsibility for data processing
Road operators for the CAM / DENM messages
Research labs for the evaluation logs

▪ Evaluation

Acceptability
Legal responsibilities
Sanitary impacts
Technical evaluation
Socio economical evaluation
Traffic and accidentology impacts

More information on the new website

French : *www.scoop.developpement-durable.gouv.fr*

English : *www.scoop.developpement-durable.gouv.fr/en*

Thank you for your attention

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