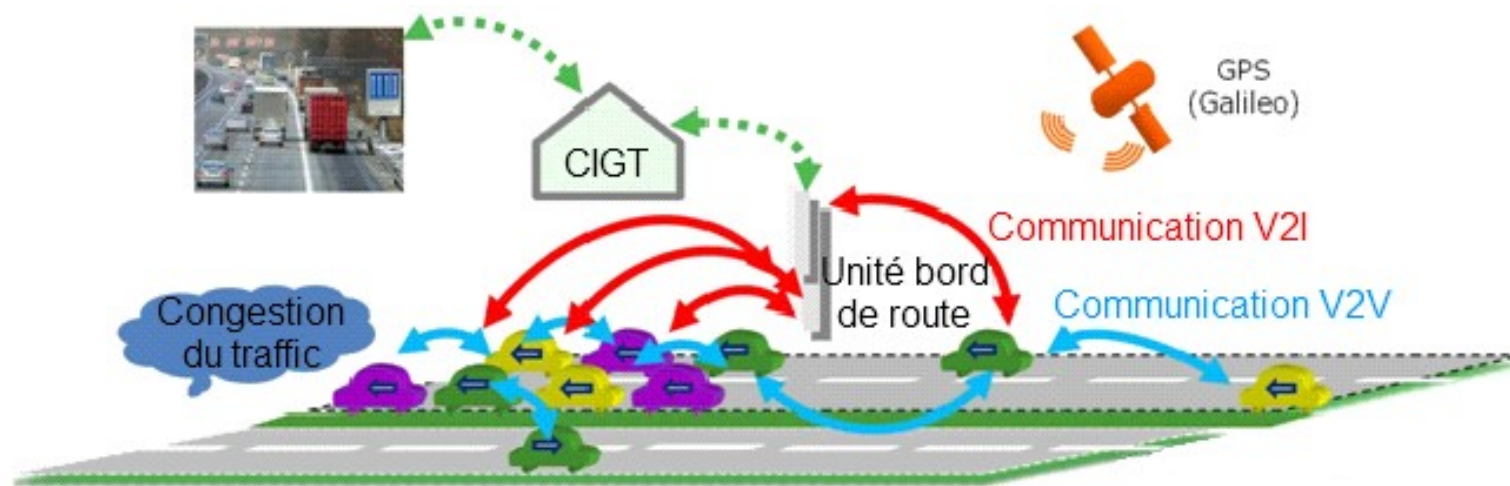




**Cerema**

Centre d'études et d'expertise sur les risques,  
l'environnement, la mobilité et l'aménagement

# Cooperative ITS Solutions



**Sylvain Belloche – Cerema Territoires et Ville**

# Content

- C-ITS objectives
- EU context overview
- French C-ITS projects
- Discussion on C-ITS benefits for dynamic traffic management

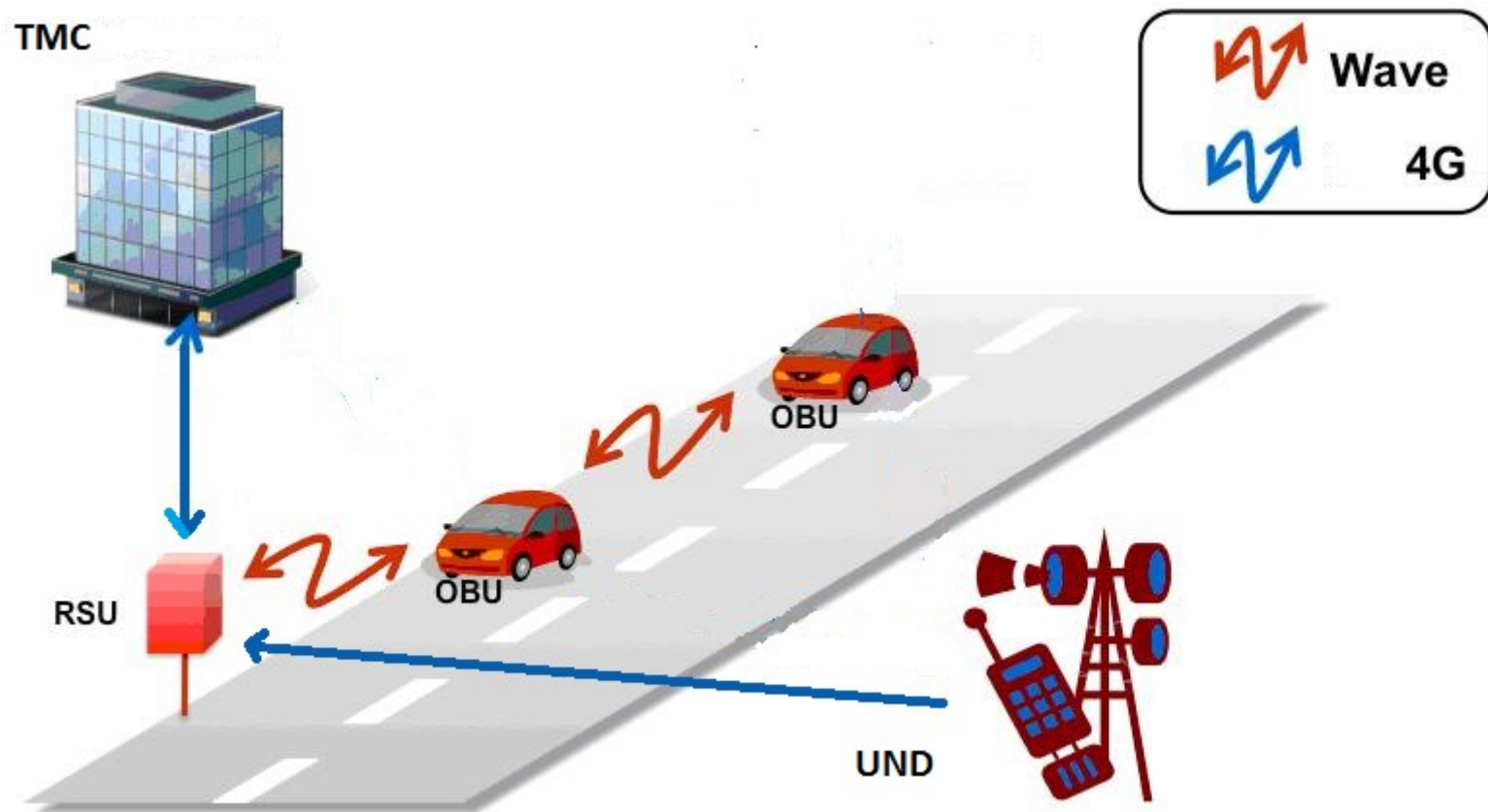


# C-ITS Objectives

- Improve road safety
- Improve road operating staff safety
- Optimize road traffic
- Improve and optimize road information
- Develop new services, such as dynamic lane / traffic management services
- Prepare future vehicles (towards automated driving)

=> *Does it seem consistent to you?*

# C-ITS Architecture



# Overview of EU C-ITS projects (1)

- Previous european research projects dealt with feasibility (CVIS, COOPERS, SAFESPOT)
- Some FOTs, such as SCORE@F in France
- A C-ITS platform at the EU level
- Now, a few pilots:
  - Netherlands-Germany-Austria Corridor
  - Nordic Way Project

# Overview of EU C-ITS projects (2)

- France is active in a few EU projects:
  - C-ITS Platform
  - C-Roads
    - 2016-2020 / 14.5 M€ (C-Roads France, tbc)
    - France: 4 experimentation sites
    - Urban environment and urban/interurban interface services
    - Traffic information services
    - C-ITS smartphone application to be developed to support early I2V services
    - Hybrid technology with seamless switch between ITS-G5 and cellular
  - InterCor
    - 2016-2019 / 30 M€ (France: 10 beneficiaries - 8.2 M€)
    - New services in freight and logistics
    - Large-scale interoperable C-ITS deployment (4 countries)
    - Fostering a hybrid communication approach based on the FR + NL experience



# InterCor map



# Scoop@F

- C-ITS Pilot Project
- Start 2014

1st phase - 2014-2017:

Priority services

ITS-G5 communication

2<sup>nd</sup> phase - 2016-2018:

New services

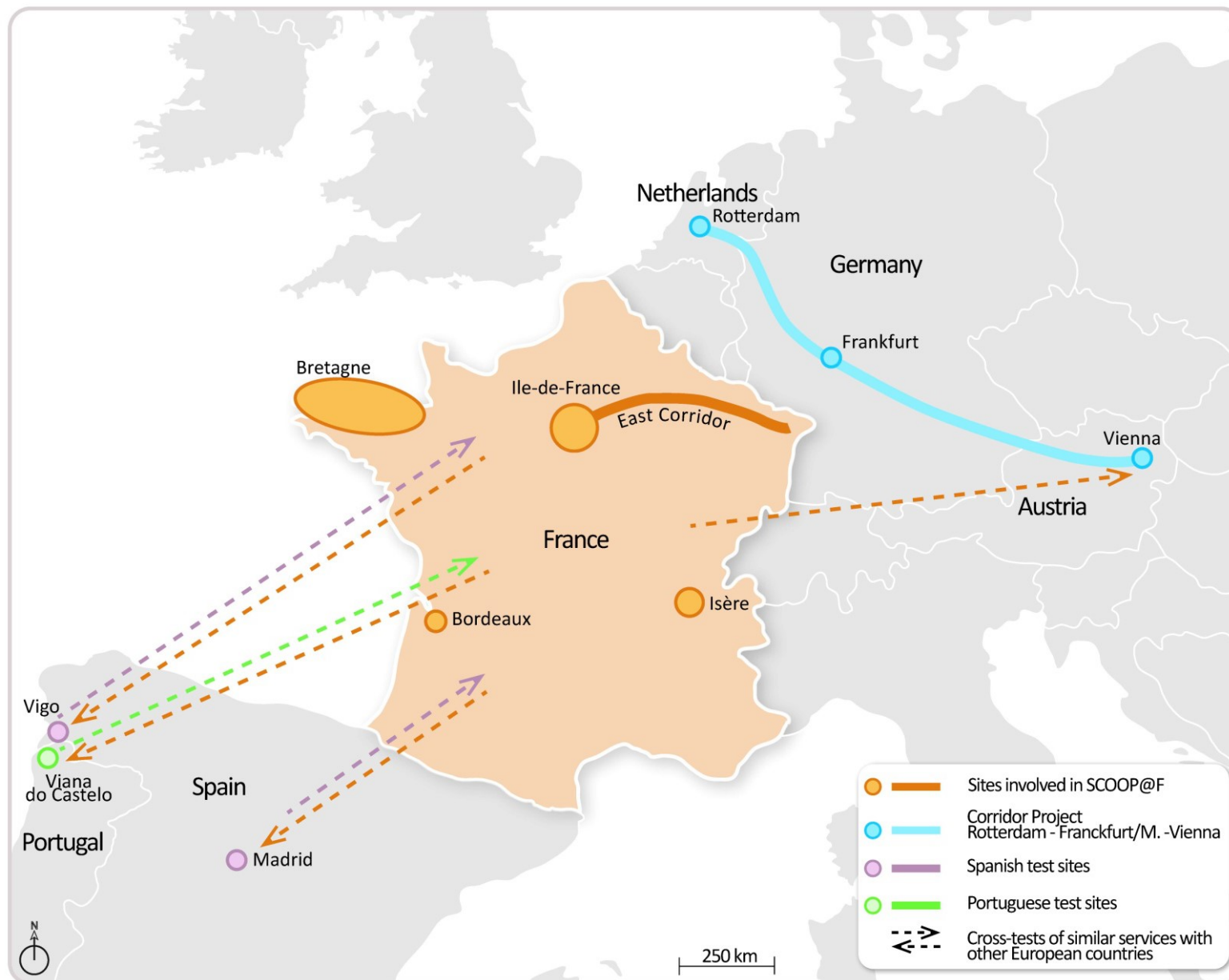
Hybrid cellular / wifi ITS-G5 communication

- Objective of a deployment of 3000 vehicles
- 2000-km equipped roads (5 sites)





# Scoop@F in the EU context



# Scoop@F phase 1: « priority services »

- Data collection

Speeds, incidents, event data sent by drivers

- Roadworks alert

Foreseen roadworks, road operations / interventions, winter maintenance

- Hazardous unforeseen event alerts (V2V / I2V)

End-of-queue, stopped vehicle, errand animal, obstacle, poor meteo conditions...

# Scoop@F phase 2: new services

- Temporary road closure (and dynamic lane management)
- Dynamic speed information
- Ghost driver alert (I2V only)
- Multimodal information (train departures, parking...)
- Route guidance

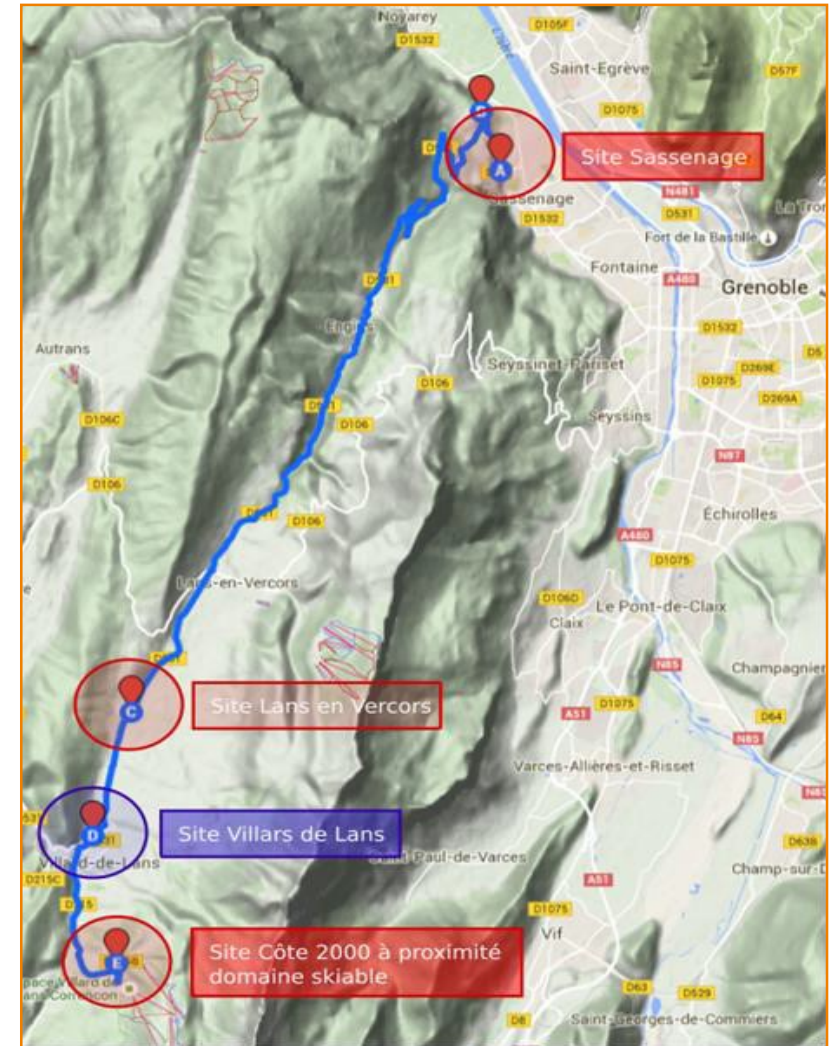


⇒ *Have you already thought to deploy / deployed such services? Other dynamic traffic management services?*

⇒ *What are the main (foreseen) outputs? Main challenges?*

# Another French C-ITS Project: SYNCRO

- Grenoble / Villard de Lans (30km)
- Mountainous region
- Access to ski stations
- Objectives:
  - Give dynamic travel time / meteo information on VMS
  - Give personalized in-vehicle info
  - Cooperative event information





# Another French C-ITS Project: SYNCRO



# Contact

***Sylvain Belloche***

*Cerema*

*Tel: +33 472 745 938*

[sylvain.belloche@cerema.fr](mailto:sylvain.belloche@cerema.fr)