



Innovations for sustainable multimodal transportation systems

i-Trans competitiveness cluster



- Nord-Pas-de-Calais et Picardy regions
- Centered on innovating land transportation
- 4 Priorities : the 4 I's:
 - **Intermodality**
 - **Interoperability**
 - **Intelligent**
 - **Innovation**





i-Trans competitiveness cluster
































































L'INDUSTRIE FERROVIAIRE

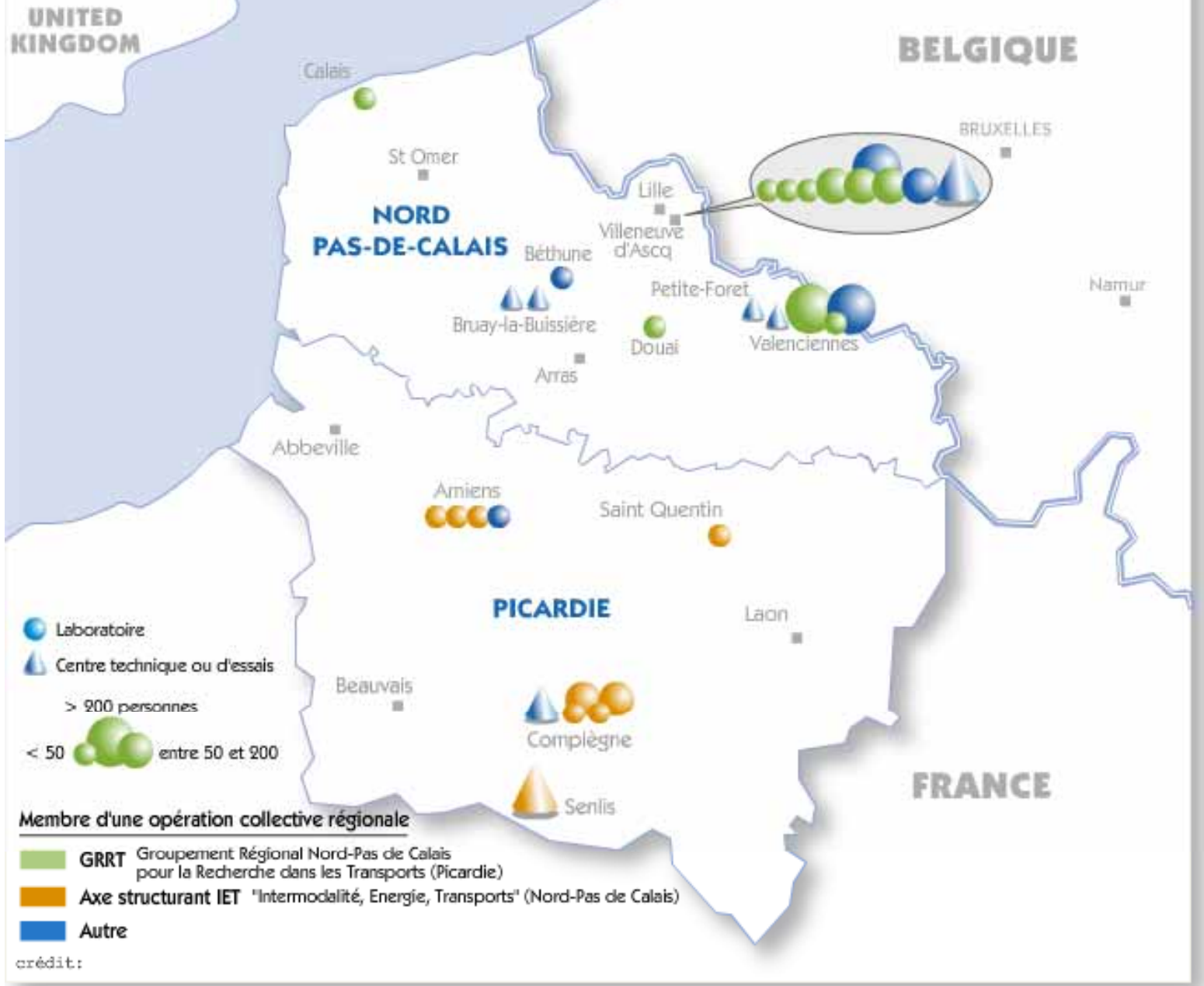
UNITED KINGDOM

BELGIQUE





LES CENTRES DE RECHERCHE



MEMBERS of PROJECTS I-Trans 2008



Main axis of innovation projects for sustainable transportation systems

I-trans is engaged in five contributions for Sustainable Transportation systems:

- ✓ Reduction of energy consumption
- ✓ Reduction of emission of pollutants
- ✓ Reduction of sound harmful effects
- ✓ Reinforcement of people safety
- ✓ Increase of infrastructures durability



Reduction of energy consumption

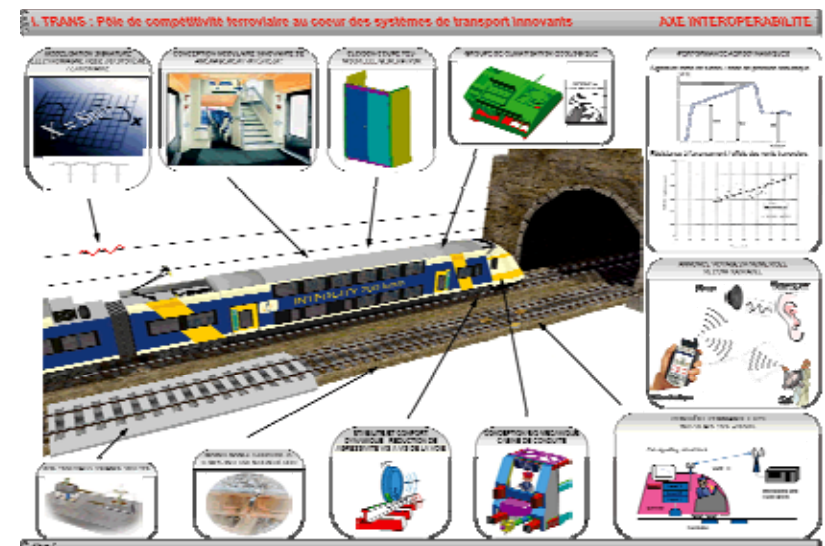


Project in progress :

-ULTIMAT

-optimal use of materials for high speed INtercity railway cars

-Aim: reduce the car mass by at least 20%





Reduction of energy consumption



Project in progress :

-C2F development of light and insulating partitions for the railway cars (leader SOFANOR)

a COMPIN Group SME



Reduction of emission of pollutants



- Multimodal Traveller Information -VIATIC.Mobilité Project



- V** comme **Voyageur**
(Résident, étudiant, Personne à mobilité réduite, touriste...)
- I** comme **Intermodal**
(Transports collectifs, parking, automobile...)
- A** comme **Accompagnement**
(Information multimodale, télébillettique, services d'information, jeux exclusifs, information temps réel...)
- TI** comme **Transports Intelligents**
(Complémentarité des modes de transports)
- comme **Technologies de l'Information**
(Wimax, Wifi, Internet, Satellite)
- C** comme **Compréhension de l'usage des services**
(Observations et recommandations)



Leader



start-up



Une expérimentation sur l'axe Lille - Valenciennes
Sur la base du démonstrateur Système d'Information Multimodale
SIM - Région Nord Pas de Calais



Reduction of emission of pollutants



Project in progress :

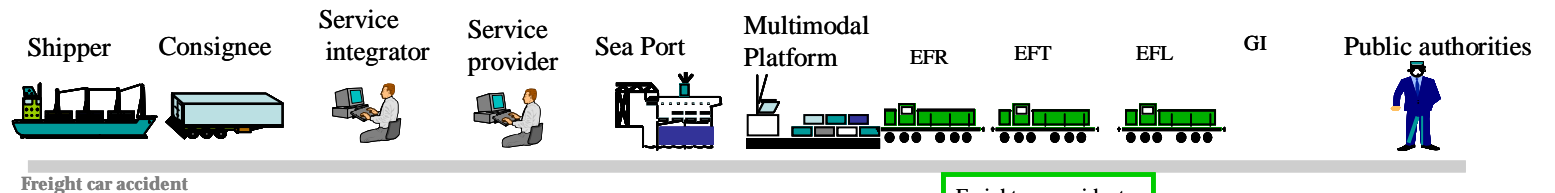
- Development of co-modality by traceability for international freight

- **DETRACE Project** : pre-project of demonstrator for European freight traceability

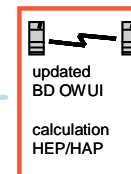
i-Trans under the aegis of



Description for complete loads of freight car process



New DEMANDHEP/HAP



Output: localisation of the train

Reduction of sound and electro-magnetic harmful effects

Projects in progress :

-**CEMRAIL** : simulation of the electromagnetic signature of the railway system (rolling stock and infrastructure)



Reinforcement of people safety

Projects in progress :

-**PROCAB** : crash protection of the driver



BOMBARDIER



Increase of railway infrastructure durability

Projects in progress :

-**ACMC** New Overhead Line Systems



-**NBT** Non Ballasted Track



-**TTSA** Track Train Sustainability and Availability



Innovation Platforms



C3T Technological Center
vibrations, crash, fatigue



CREPIM a major role in Europe
in guaranteeing and approving
fire-retardant properties of
materials



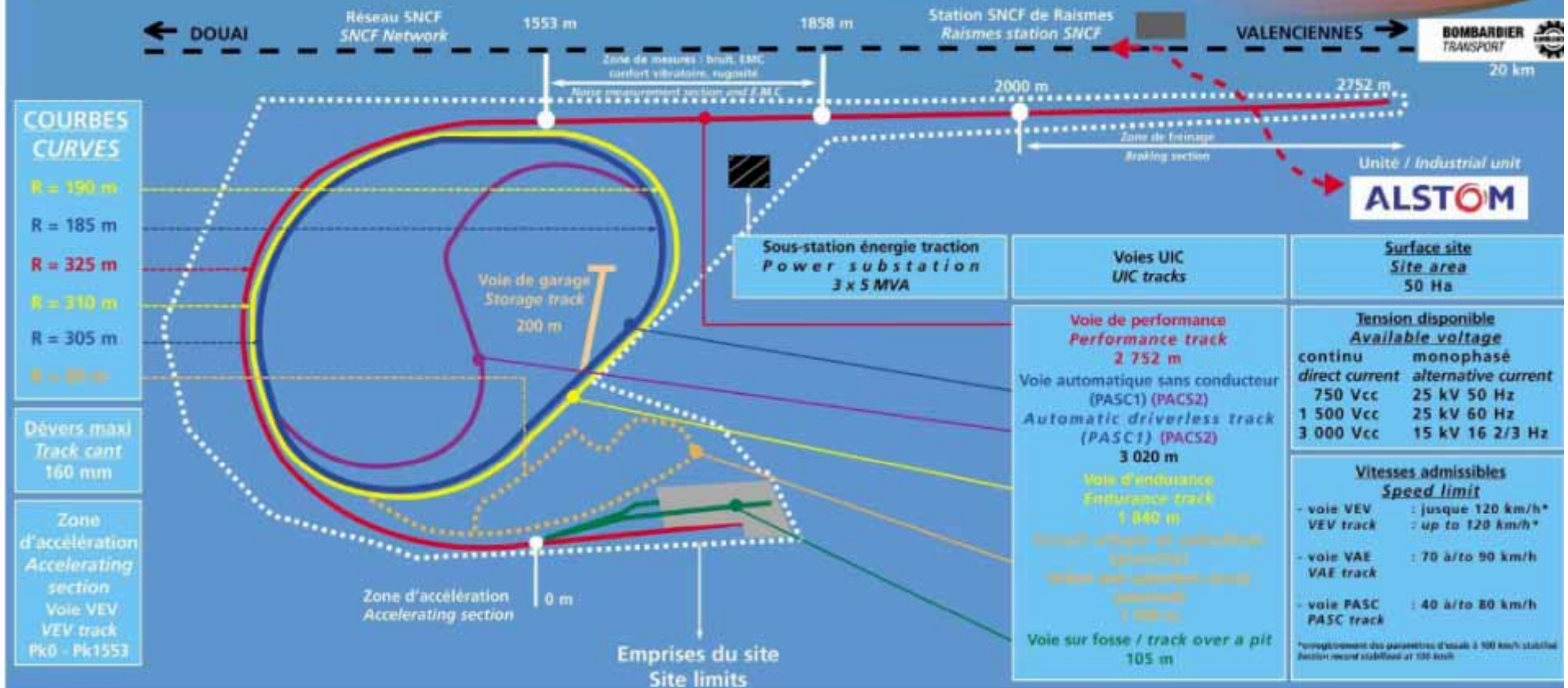
**CEF Railway Test Tracks
Center**





Centre d'Essais Ferroviaire en Région Nord-Pas de Calais, France

Test Tracks Center in Region Nord-Pas de Calais, France



Innovation Platforms : new projects

CADEMCE Test Center for catenary and pantograph

STEEVE Test Center for batteries and super-capas

ERIC European Railway Infrastructure center





**i-Trans : a cluster
engaged to develop
sustainable transportation
systems is looking for
international partnership**