INNOVATION IN TRANSPORT FOR SUSTAINABLE CITIES AND REGIONS

Parallel session 3

Towards open systems for traffic management and information services

Data exchange for real time passengers information

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To

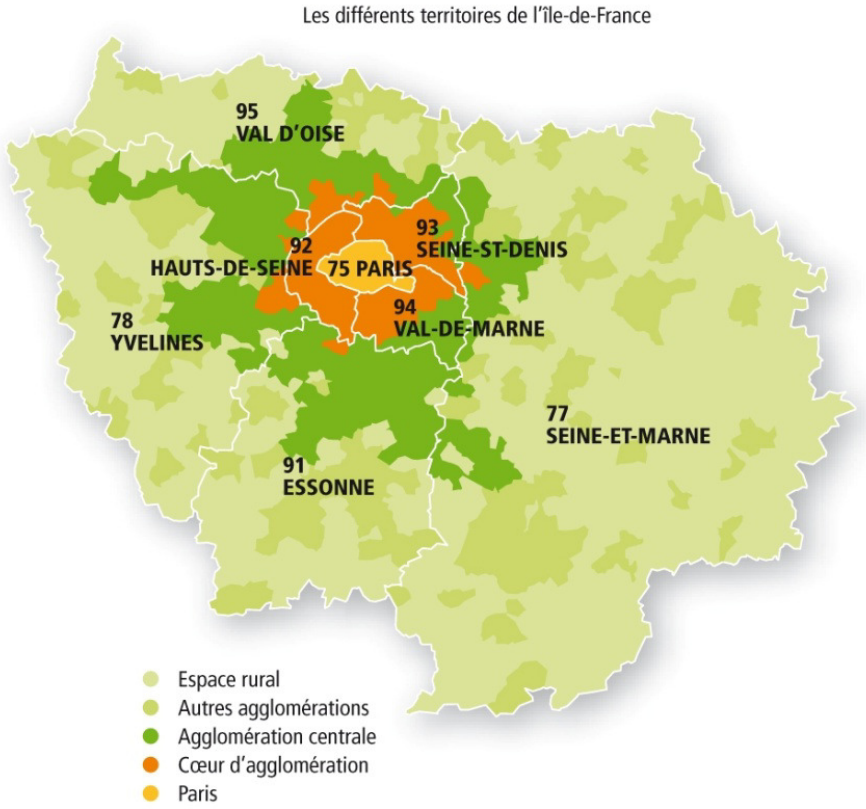
Organising authority for public transport in Ile-de-France

Towards open systems for traffic management and information services

Data exchange for real time passengers information

Ile-de-France

- 11.7 million inhabitants (almost 20% of the French population)
- 6 million jobs
- 29% of Gross National Product
- An area of 12,000 km²
- The world's most visited tourist destination (13 million foreign tourists in 2009)
- Regional administrative levels:
  - 1 Regional Council
  - 8 'Départements' (counties) of which the City of Paris
  - 115 intermunicipalities
  - 1,280 municipalities



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Transport survey

- STIF contracts with 4 operators, RATP, SNCF, OPTILE (association of private bus companies),
- and RFF (for the railway infrastructure), to operate a dense network :
  - 3.87 journeys / day / person
  - 4.4 km : Average distance for a journey
  - 41 million journeys / day
  - 70% journeys around Paris (suburbs)
  - 2001-2010 :
    - +0.6% by car
    - +21% by public transport

A few statistics for public transport in Ile-de-France

Trains and subways

- 770 stations/subway stations
- 690 subway trains
- 1,120 trains
- 143 interchanges

- 90% of stations and subway stations are equipped with real-time PIS
- 20% of subway trains/trains are equipped with real-time PIS

Tramway

- 70 tramway stations
- 97 tramway cars

- all equipped with real-time PIS

Road networks

- 27,400 bus stops
- 9,600 passenger shelters
- 8,000 buses and coaches
- 200 bus stations

- Almost 7,100 bus stops equipped with real-time PIS
- 100% of RATP vehicles are equipped with audio systems and 75% with VI systems
- 20% of private company cars are equipped with real-time PIS

Passenger Information

Role and responsibilities of the parties involved

- The STIF draws up passenger information policies for Ile-de-France

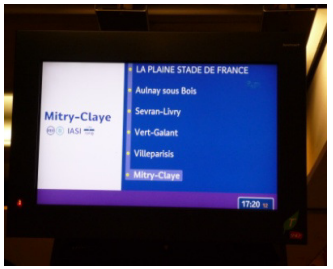
- These policies are set out in operating agreements and in two general specifications charters:
  - The platform and content charter
  - The areas of responsibility charter (draft project)

- The 80 transport operators make sure that the policies are implemented across the networks thanks to funding from the STIF

Passenger Information

Role and responsibilities of the parties involved

- The nature of passenger information is defined by the STIF
- The way it is displayed varies from an operator to another both in terms of the information on interactive equipments...



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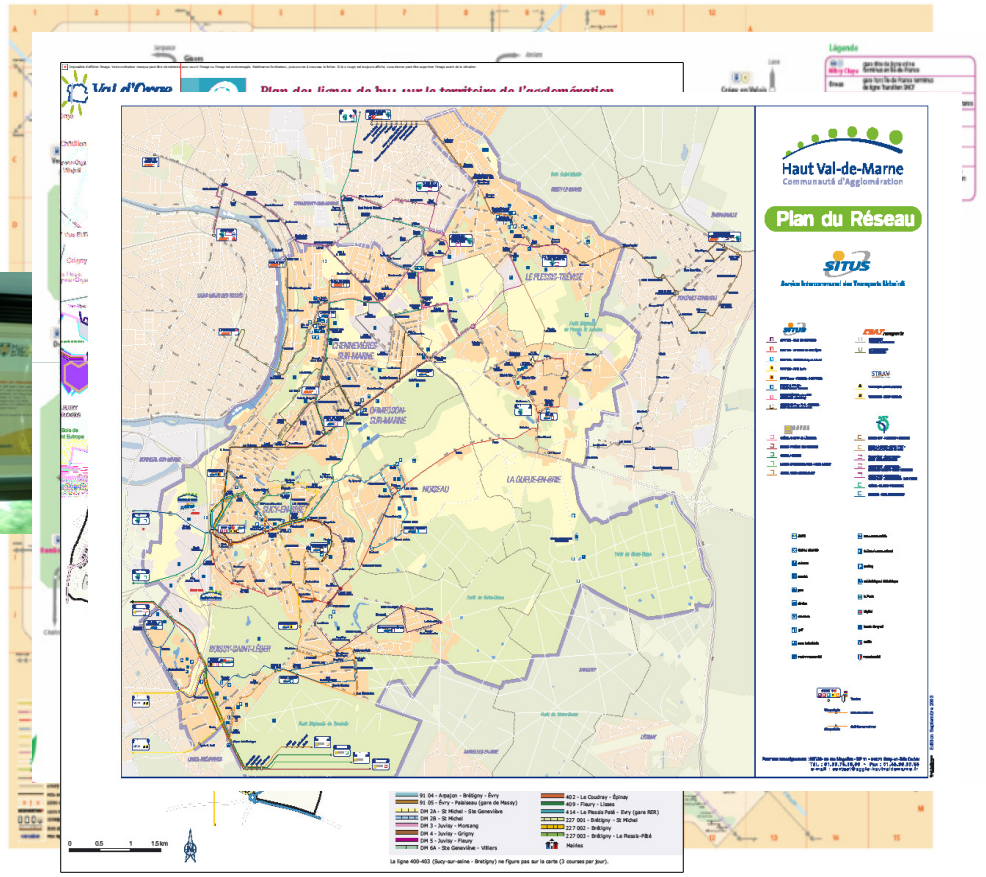
Passenger Information

Role and responsibilities of the parties involved

- ... and in terms of static information



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Real-time passenger information

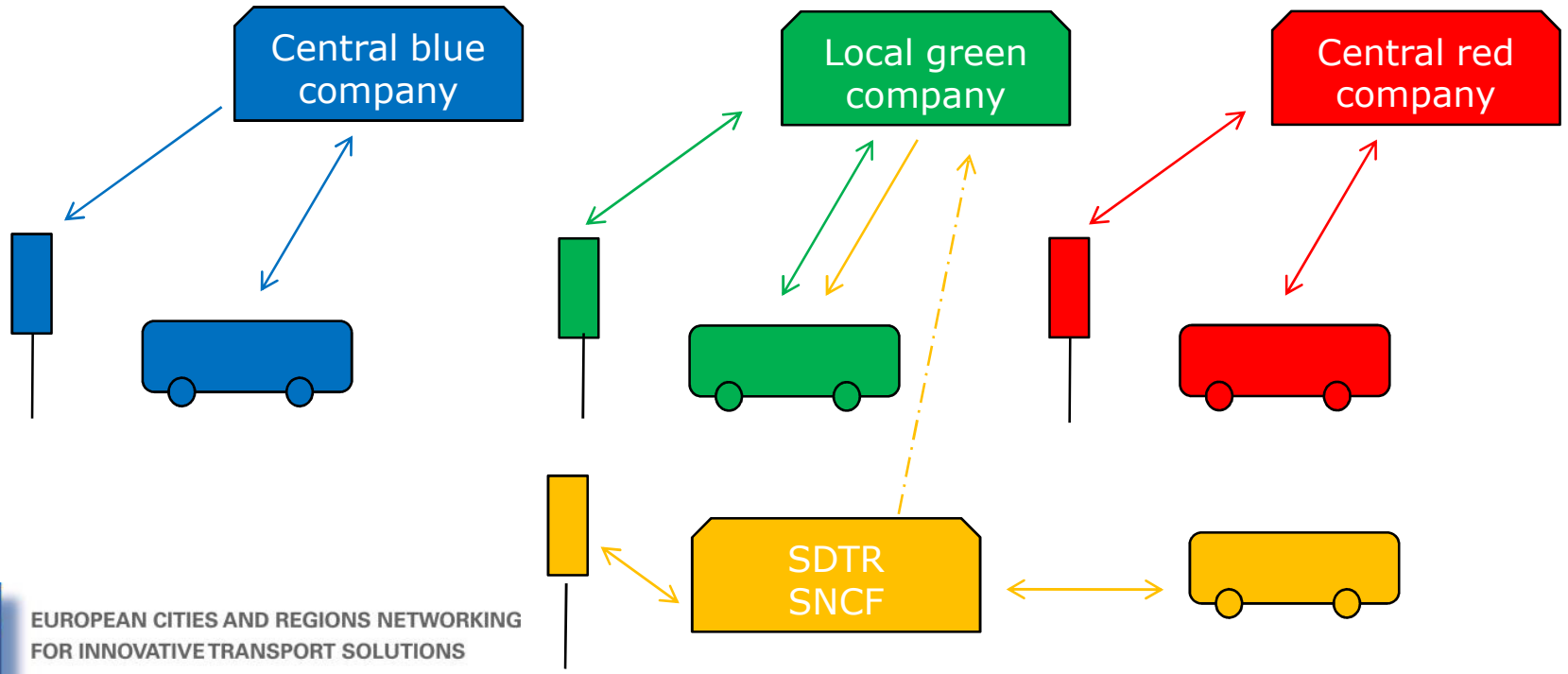
Overview

- Exchange of data between transport operators
  - Bilateral exchange is made easier by the SIRI technical specification
  - Difficulties linked to multiple exchanges in key multimodality and multi-operator areas
- Deployment of information on the ground
  - Ownership of the display platforms on the ground
  - Sharing of responsibilities
- Difficulties:
  - Peer-to-peer exchanges are making progress. In contrast, plans for information in interchanges and for sharing displays have stalled.
  - Developing interfaces between company AVLM (Automatic Vehicles Location and Management) and the SIRI data exchange model is a complex process.
  - The absence of any reference data for lines and stops is a stumbling block (a project is underway)

Real-time passenger information

Current situation

- Passenger information, and real time information in particular, become an information, not only owned by each operator, but shared in order to be coherent from the point of view of the passenger, regardless of the mode or the company, and according to the local authorities policies.



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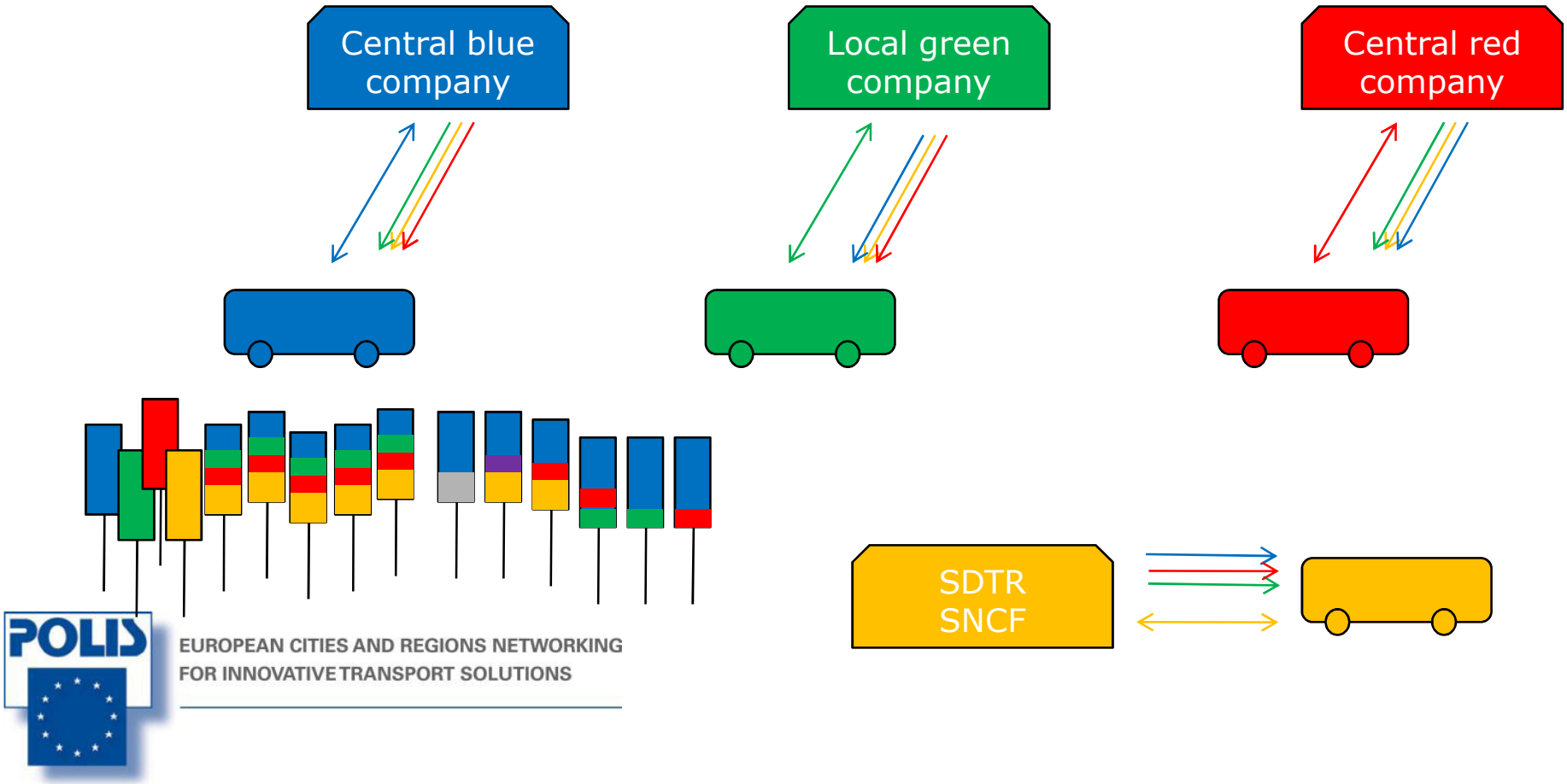
Real-time passenger information

The plan

- The challenge is the high number of peer-to-peer exchanges required and responsibility for display on the ground



Real time passenger information

Architecture study

Technical aspects

- Defining a programming interface to regulate the implementation of the SIRI standard
  - to make the process easier and support global rationalisation

Job aspects

- Untangling the task processes
- Defining separate service quality commitments for the person producing the data and the person disseminating it
- Getting ourselves to a position where we can assess that quality

Organisational aspects

- Studying the role and responsibilities of the STIF in the target area
- Calibrating the governance model

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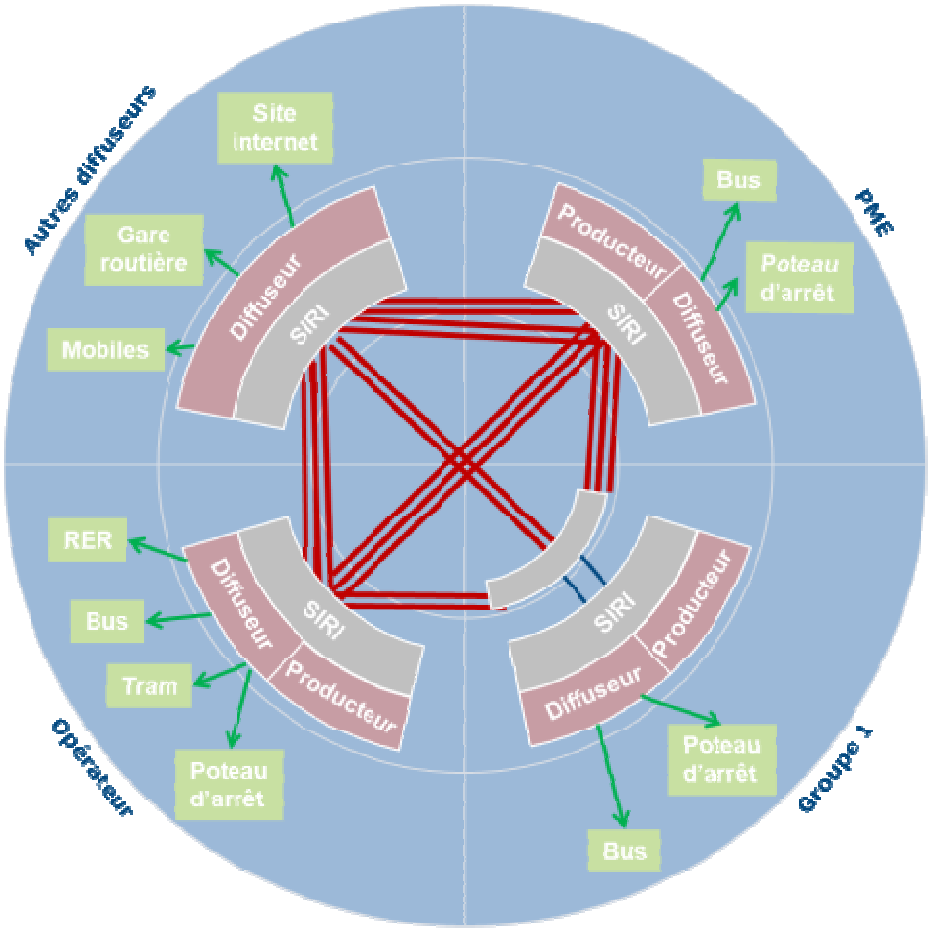
Step 1 : peer-to-peer exchange

Current situation



- SIRI is the open standard used to deploy the multimodal passenger information systems with a large number of stakeholders and for all modes
- Transport stakeholders are building p2p connections but we observe that main companies are building or ready to build a unique SIRI interface for several transport networks

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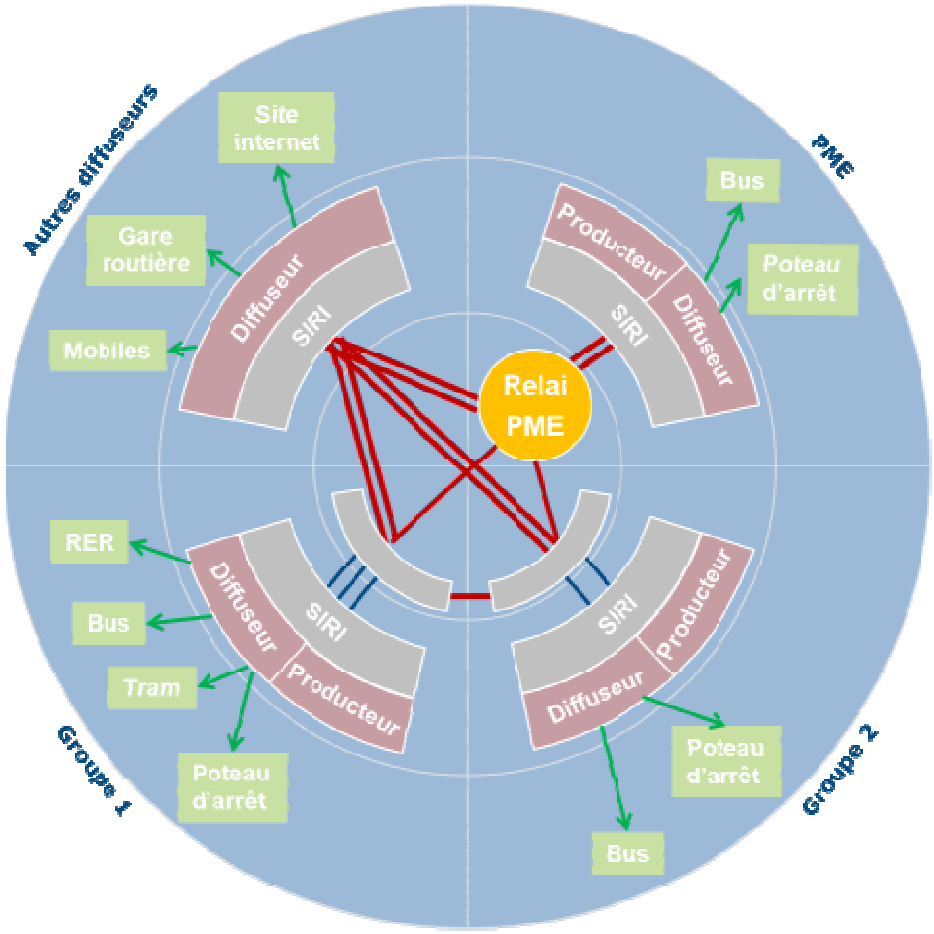
Step 2 : merging interfaces

2014



- But using a standard is not sufficient, we have to organize data exchange and build and manage an architecture in order to reduce the number of peer-to-peer connections.
- Main transport companies (SNCF, RATP, Veolia, Keolis) are building a unique SIRI interface. Data exchange will be provided only by those interfaces
- STIF will build a system for small companies that will be connected to the main companies interfaces

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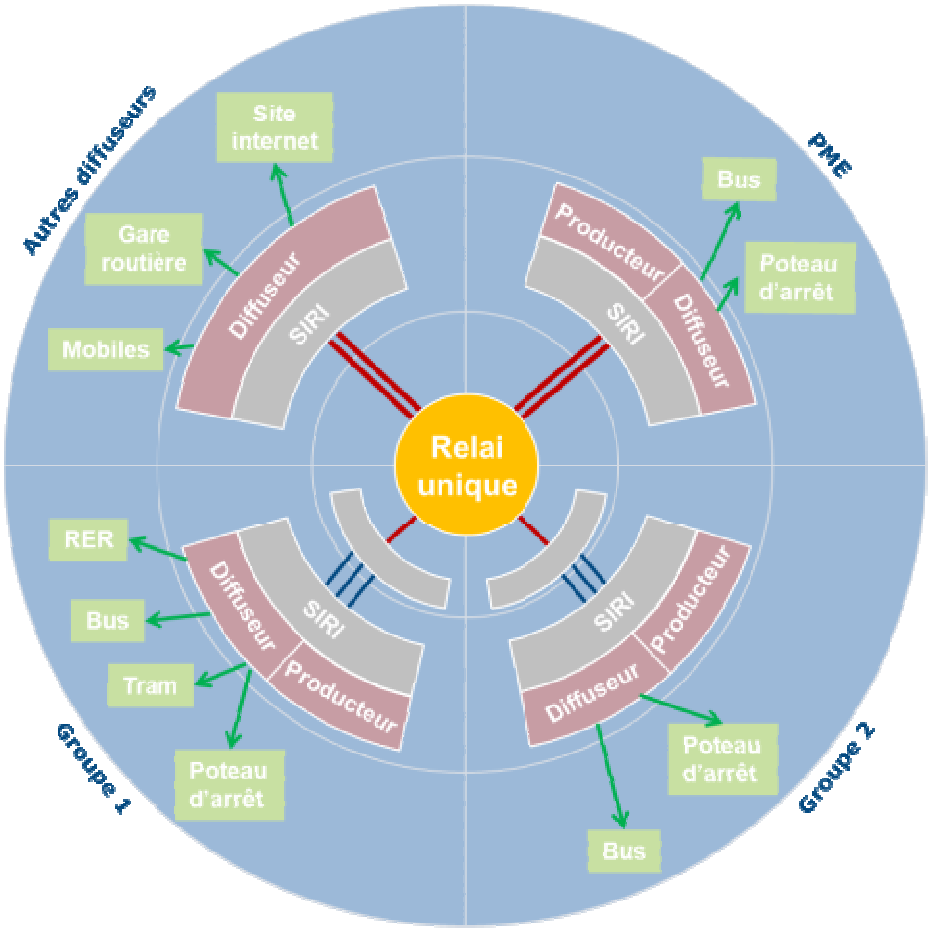
Step 3 : a central system

2016



- The system operated by STIF will be the central system
- Every company has a unique connection only with the STIF system
- The aim of this project is :
  - To provide for data exchange a central system independant of transport companies
  - To be able to provide real time information for every stop point

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Results to be achieved

- The organization to manage and coordinate the deployment of data exchange controlled by the transport public authority results in :
  - Defining of a programming interface to regulate the implementation of the SIRI standard
  - Making the process easier and support global rationalisation
  - Defining separate service quality commitments for the person producing the data and the person disseminating it
  - Getting ourselves to a position where we can assess that quality
  - Facilitating the cooperation between stakeholders, although sometimes competitors
  - Introducing the same service quality obligations in the contracts

Added values of the real time architecture

- ✓ **A « faster » and more reliable answer regardless of passengers needs**
- ✓ **A real opportunity to develop new services on the Internet and mobile**

- ❑ A better guarantee of convergence of all the solutions produced by the various actors (operators, administrators of bus stations)
- ❑ A control strengthened by the STIF
- ❑ A role of incontested arbitrator
- ❑ A plan erasing the relative imbalance between the operators
- ❑ A better visibility of the progress of the projects
- ❑ A better follow-up of the service quality
- ❑ A participation of the main operators which is wished and shared
- ❑ A steady rythm but allowing a progressive load increase and in coherence with the rythm of the deployments of the AVLM.
- ❑ An iterative approach offering more visibility and allowing intermediate decision-making

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