



The use of ITS in public transportation, how urban mobility can benefit from the development of new technologies?

CiViTAS
Cleaner and better transport in cities

CATALIST

CIVITAS CATALIST Workshop : “The activities for the sustainable mobility - good practices’ transfer between CIVITAS cities”

Krakow, the 21st of September 2010

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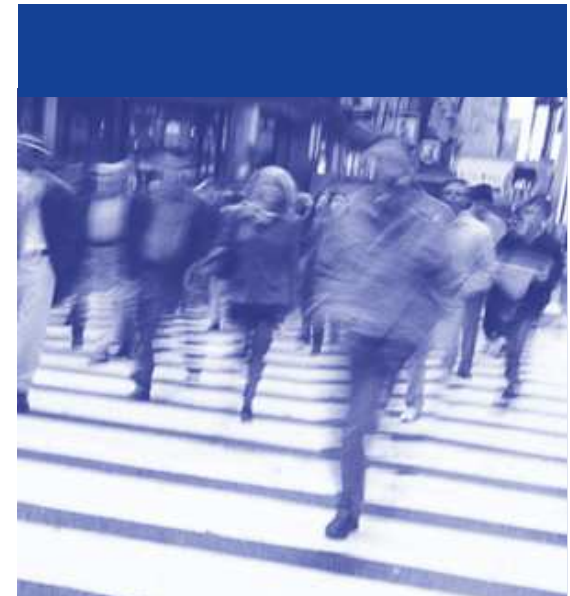


THE CIVITAS INITIATIVE
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Toulouse and urban mobility issues at a glance



- Over 800.000 inhabitants (420.000 in the municipality of Toulouse itself)
- 15 000 new inhabitants every year
- 110 000 students
- Local economy mainly based on spatial and aircraft industries (Airbus, EADS, ATR, Alcatel, Thales...)



Toulouse and urban mobility issues at a glance



Public Transport Perimeter = 82 municipalities

About 800 km²...

Several (too much?) mobility stakeholders...



Toulouse and urban mobility issues at a glance

The public transport network of the greater Toulouse area :

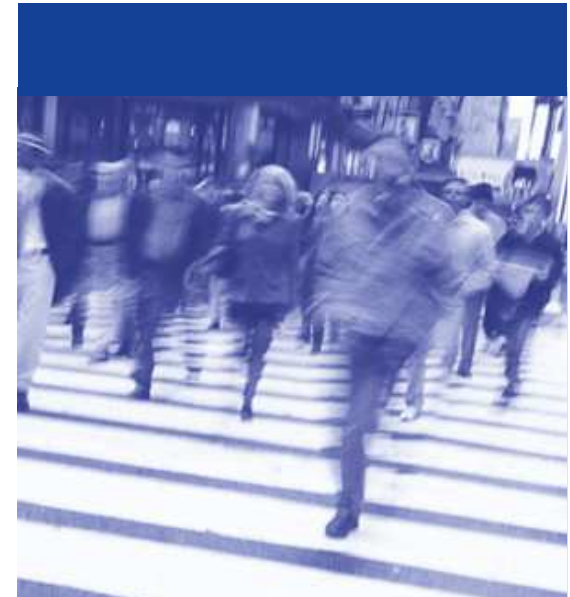
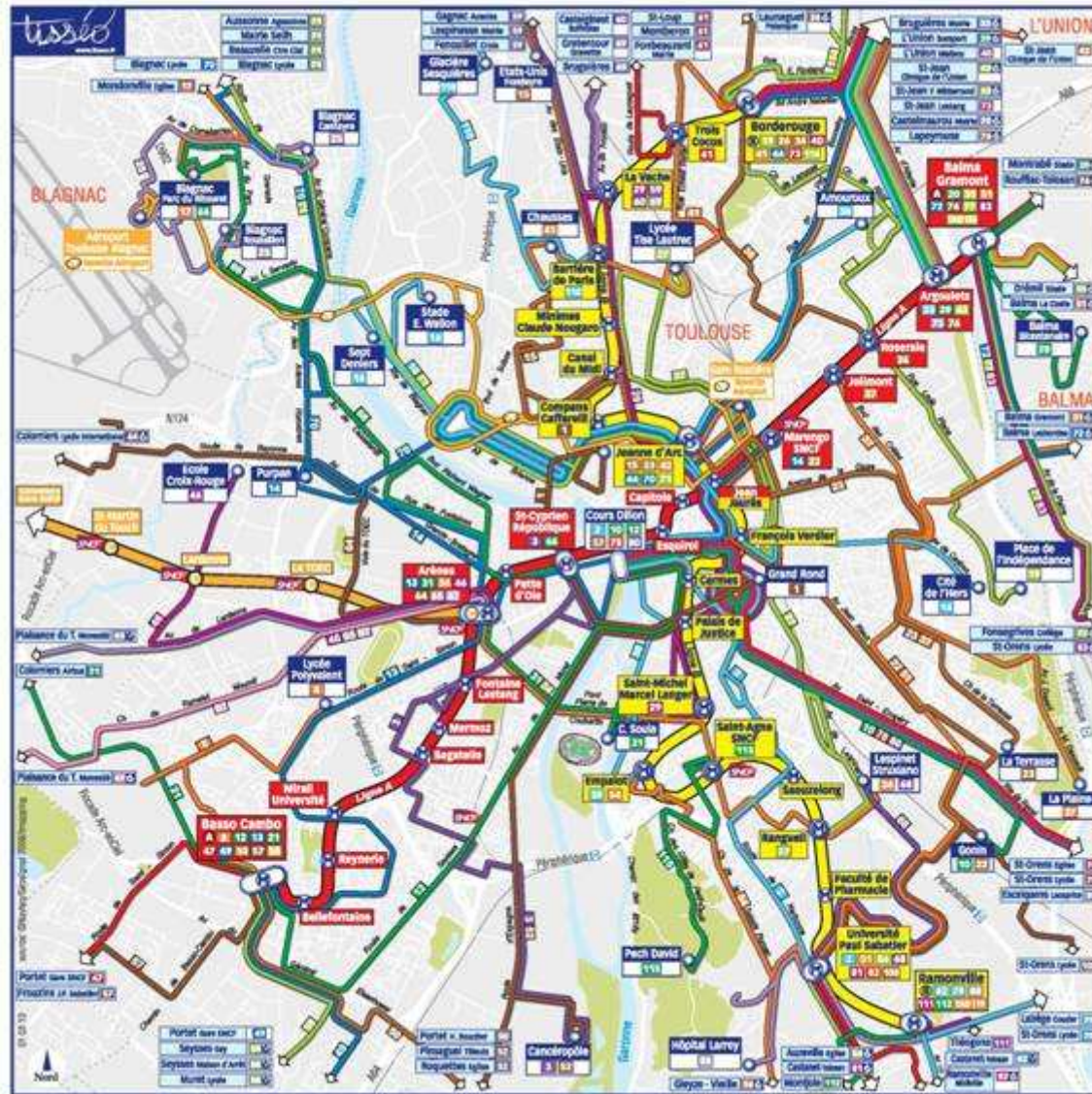
- 2 metro lines,
- 1 urban railway line,
- 2 high quality bus corridors,
- More than 20km of bus corridors
- 71 regular bus lines,
- 1 shuttle airport service,
- 1 service for disabled people,
- 550 buses of which 400 are accessible to disabled people and of which 168 run on CNG; shared between 2 bus depots and;

soon... a tramway line (28/11/10)...

Nonetheless, the public transport modal share remains quite low (12%); objective : 15% in 2020 (Urban Mobility Plan)

	Public transport trips in 2009
Line A	48 940 000
Line B	40 860 000
Bus network	39 809 000
Total (trips/year)	130 460 000

Toulouse and urban mobility issues at a glance





Toulouse and its CIVITAS experience : MOBILIS, CATALIST and CIVINET

The CIVITAS MOBILIS project

- Toulouse (Tisséo-SMTC) : coordinator of the CIVITAS II MOBILIS project (33 partners (9 in Toulouse), 9,3 M€ funding, 51 measure of which 21 in Toulouse)
- Toulouse has been working on the 8 CIVITAS categories of measure (clean vehicles, Access management, pricing strategies, improving public transport, new car ownership concepts, clean freight delivery strategies, soft modes and ITS)

The CIVITAS CATALIST project

- Toulouse is the coordinator of the ITS & Transport Management Systems working group

The CIVINET network

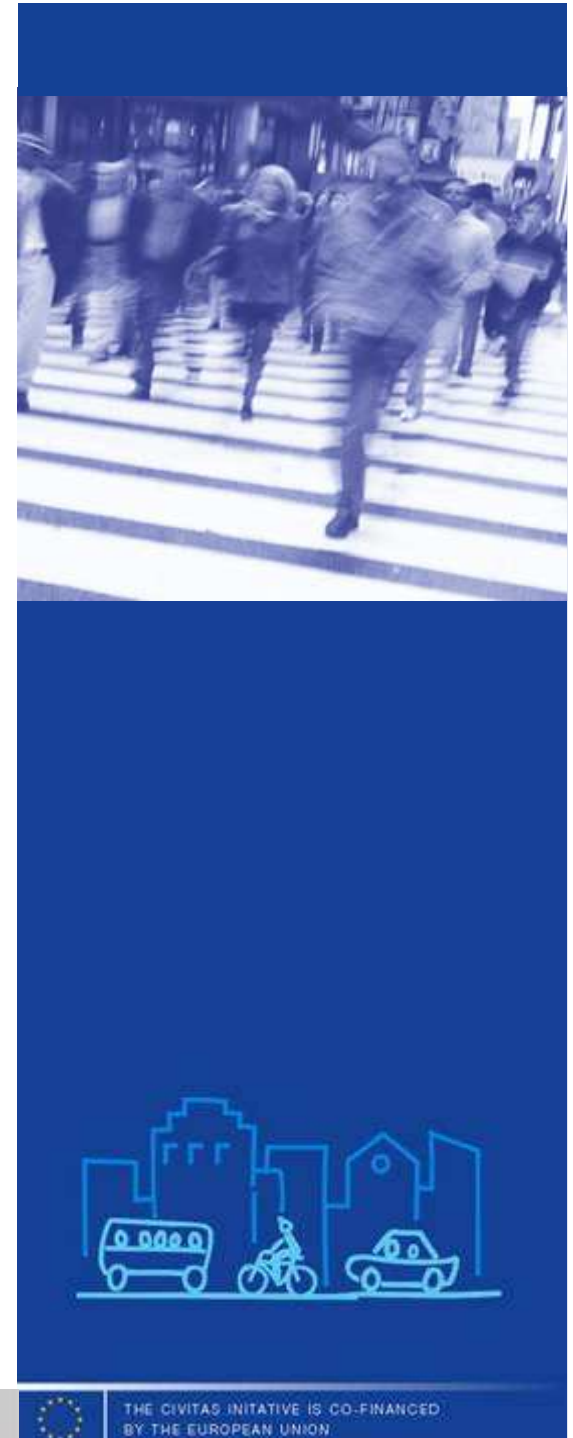
- Promotion of the CIVITAS activities and of the CIVITAS initiative at the national level



ITS in public transport

Different levels of results : Public Transport is not the mode where ITS most impressive results have been achieved...

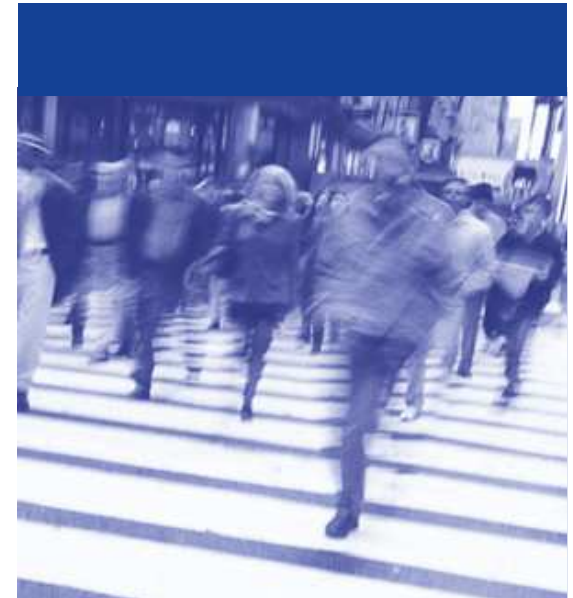
Some huge technological progress these last 20 years ; how to get the best from this in the field of public transport?



ITS in Toulouse, what was in CIVITAS?

ITS and telematics

- Realization of an EGNOS / Galileo experimentation for public transport management;
- Bus priority experimentation;
- Development of an integrated multimodal traveller information (development of a new traveller information scheme, experimentation of P+R occupancy for the highway users; development of an integrated multimodal information centre)
- The launch of an entirely new smart card ticketing system



ITS in public transportation – benefits for urban mobility









Lignes 15, 16, 71 - Horaires Théoriques 11:57

Direction	15	16	71
» États-Unis France	12:05	12:05	12:05
» Blagnac Lyon Saint-Esprit	12:16	12:20	12:34
» Aéroport Agde/Albi/Évran 71	12:30	12:34	12:52
» États-Unis France	12:40	12:52	13:05

Horaires non officiels sur notre site - Ligne 15

Lignes 22, 43, 44 - Horaires Théoriques 11:57

Direction	22	43	44
» St-Jean Cléopâtre	12:10	12:13	12:25
» La Terrasse Corcaze	12:29	12:40	12:46
» Bordenouge	13:07	13:15	13:19
» La Terrasse Corcaze	13:30		

11:57

Bon voyage sur le réseau TGV !

11:57

Plus d'infos sur le réseau TGV ?
Appelez TGV 05 61 41 70 70
www.tgv.fr

SORTIE

SORTIE côté Rue Alsace Lorraine



E-ticketing as a manner to simplify the experience of passengers, to reduce fraud and to ensure security of public transport transactions:

The implementation of a contact less system provides benefits to all mobility stakeholders.

Benefits for public transport operators:

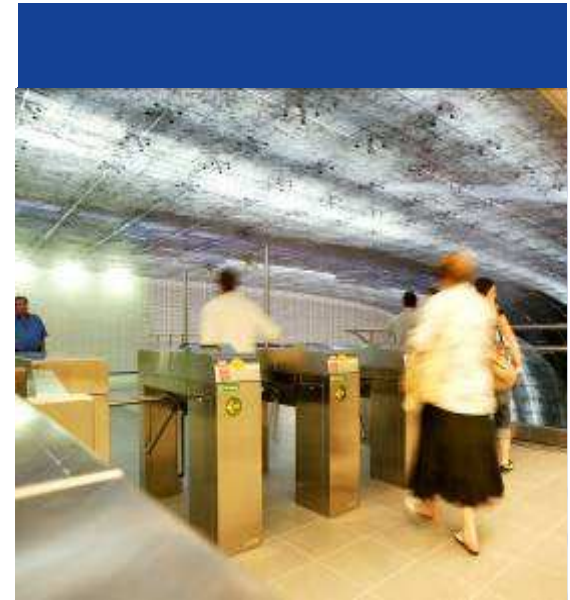
- reduce passenger fraud levels,
- reduce delays at entry gates,
- flexibility in fare policies,
- improve cash handling procedures,
- raising levels of knowledge of traffic patterns and customer preferences.

Benefits for local authorities:

- cross functionality with the rest of e-government activities,
- control tool for services contracts,
- identification and entitlement.

Benefits for users:

- improvement of the overall quality of the journey experience as well as hypothetical reduced costs.



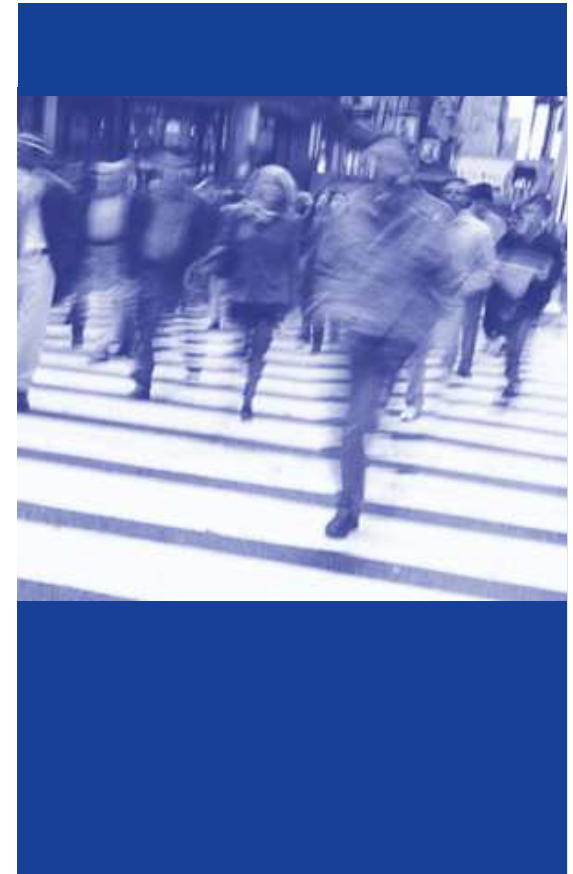
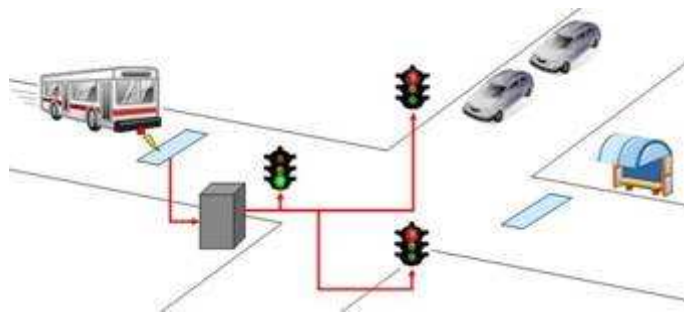
A bus priority system: a smart way to increase the bus network commercial speed

Help public transport authorities and operators to increase the attractiveness of their bus network:

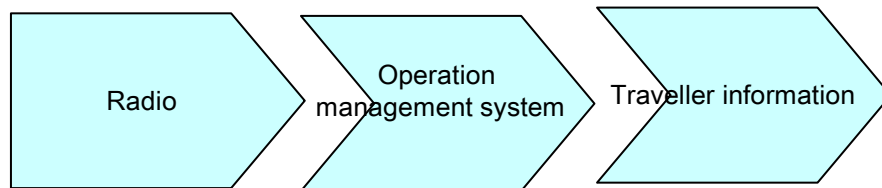
- Increase the commercial speed of the bus network;
- Increase the regularity of the bus services
→ More attractiveness = more users!

Different technologies that should suit everyone's needs:

- Passive or active magnetic loop systems;
- Microwave detection systems;
- Short range radio detection system



An AVL project – providing quality information and facilitating the surface network management



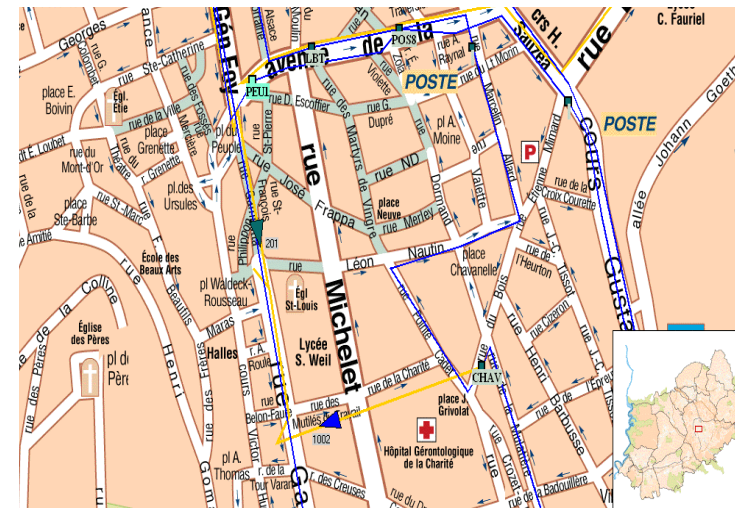
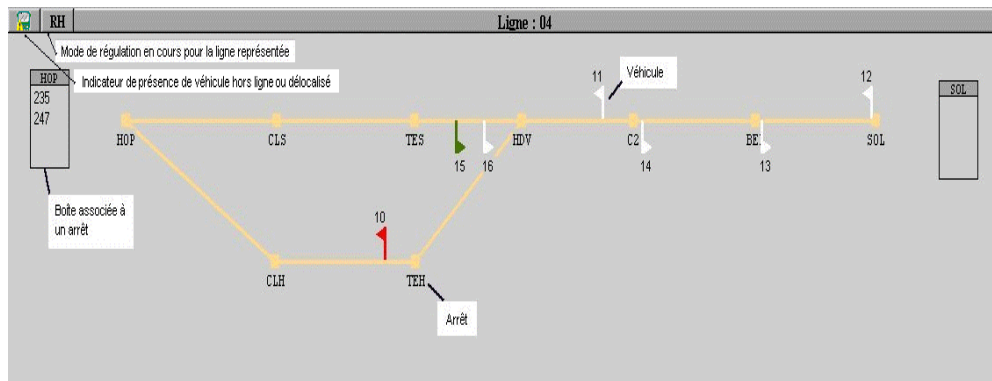
Bus, tramway and ground staff localization enables to :

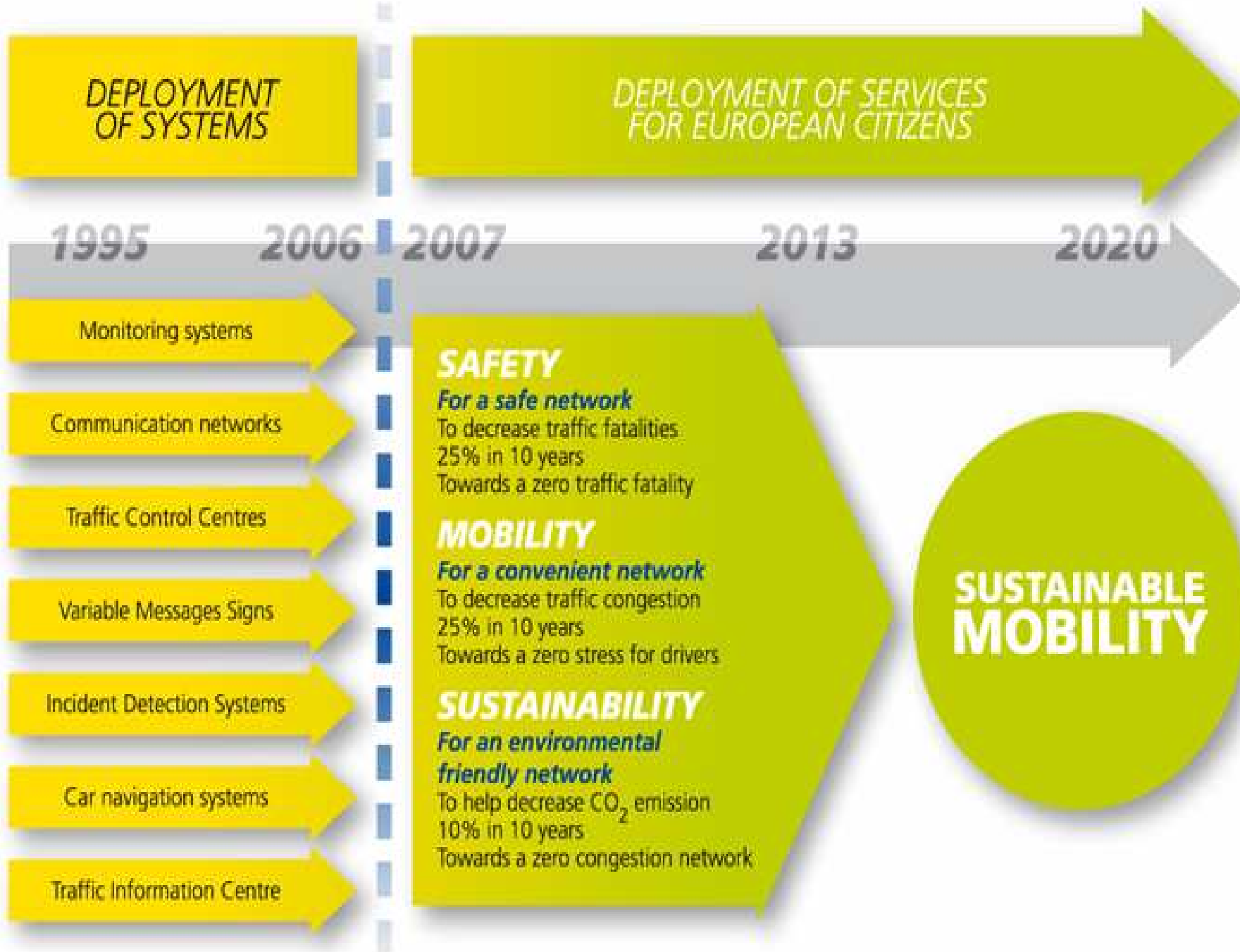
- Inform the ground staff being in the area of any trouble / incident;
- Inform drivers and regulators of any delay / ahead of schedule situation;
- Update waiting times on a regular basis



Providing real-time information to customers!

Examples of displayed information for regulators :





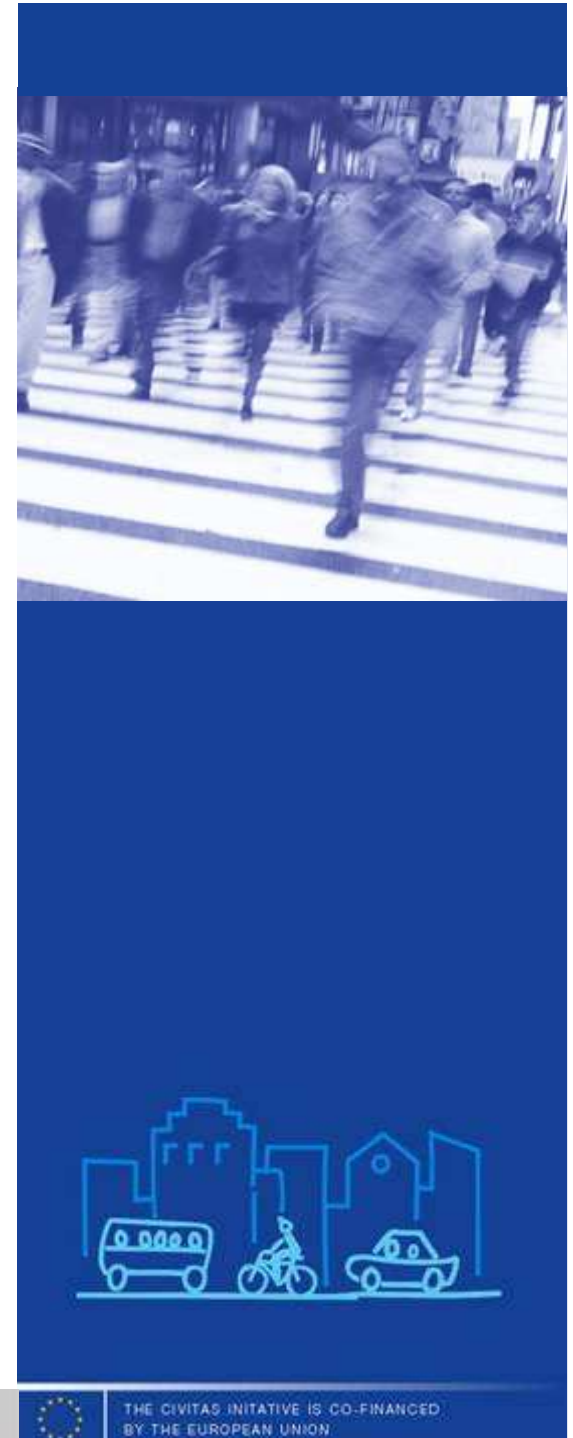
The EU ITS Action Plan and Directive

Main priorities:

- Optimal use of traffic data, routes and itineraries;
- Road safety and security;
- Data protection and liability;
- Goods and traffic management continuity;
- Integration of vehicle into transport infrastructures;
- Coordination of European ITS systems.

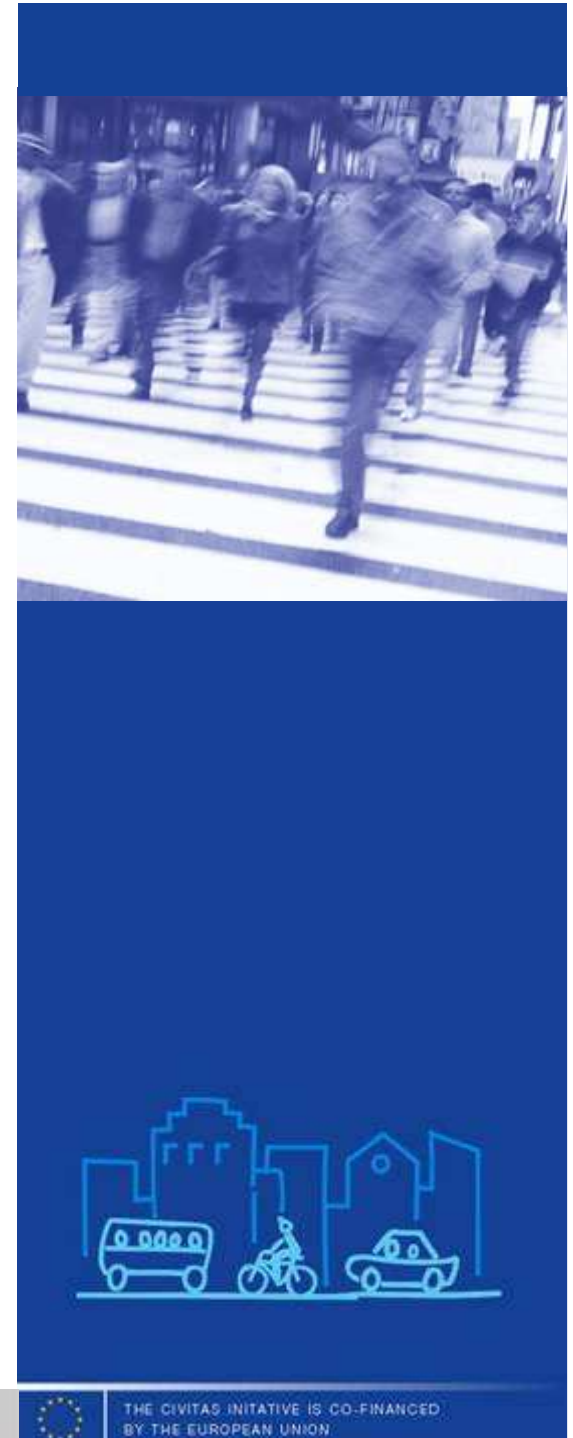
Main Drivers:

- Lack of effective cooperation;
- Lack of interoperability;
- Privacy and liability issues to be clarified.



ITS in debate

- How to ensure the interoperability of transport systems?
How to go beyond institutional and administrative burdens?
- How to ensure a smooth coordination of ITS activities together with a common definition of priorities?
- ITS to generate scale effects?
- How citizens can get used to ITS in public transport?
How to protect sensitive data?



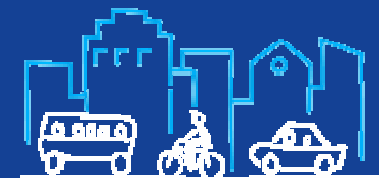
Thanks for your attention!

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