



**CiViTAS**  
Cleaner and better transport in cities



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Remodelling urban spaces: for a sustainable urban mobility

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## Nantes Metropole

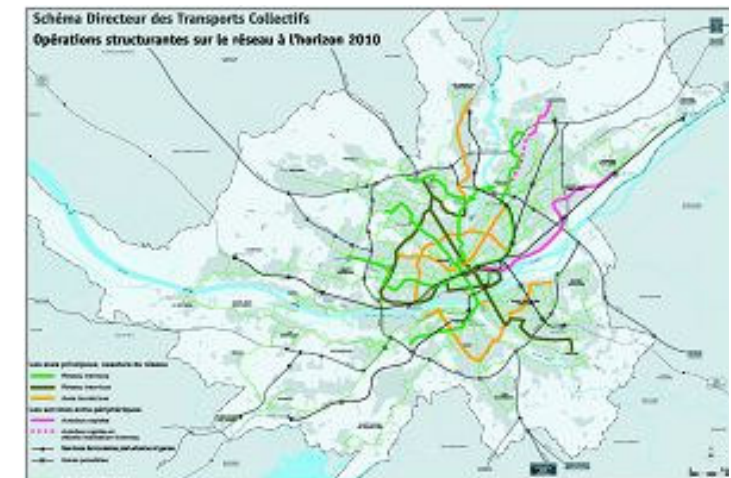
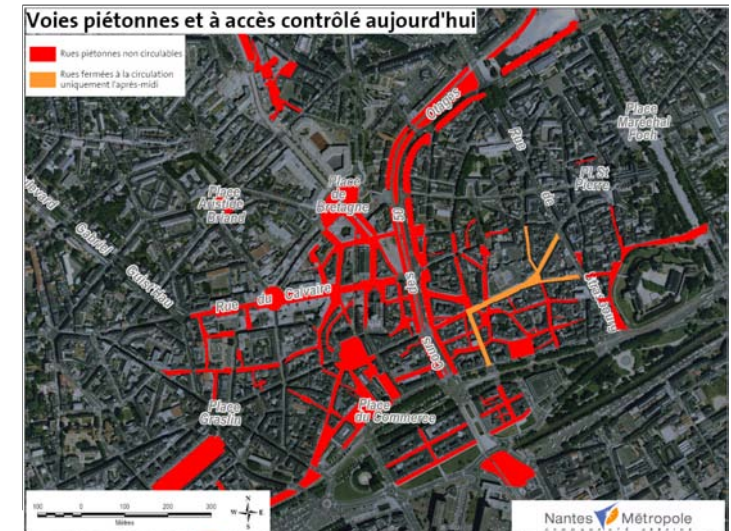
- Metropolitan area: 850 000 inhabitants
- Nantes Metropole: 24 cities, 575.000 inhabitants, 255.000 employees,
- **Competences :**
  - Water supply and sewage processing,
  - Public spaces and roads,
  - Economic development,
  - City planning, housing
  - **Mobility and public transport**



## MOBILITY : MASTER PLANS

### First mobility plan in the 90s'

- Better traffic management by:
  - Using a ring-road,
  - Reducing roads capacity and velocity,
  - Parking measures
- Development of public transport : tram network as the backbone of PT network
- Soft modes development;
- Consciousness raising :
  - travel plan,
  - walking-bus and cycling-bus,
  - European week of mobility, etc.





## CURRENT MOBILITY PLAN

### Objectives

- Guaranteed access and mobility for all
- Improved quality of life and security in transport
- Modal split change in favour of PT and soft modes
- Involvement of all stakeholders to reach the objectives



After



## BUSWAY : ELEMENTS OF CONTEXT

### One of the objectives of VIVALDI (2002-2006)

- Implementation of a large scale sustainable transport strategy for the southeast corridor (WP4)
  - The remodelling of RN801 motorway
  - The creation of a new PT route



### Our goals for the new bus system :

- A reduction in car pollution
- A better quality of life
- An improved environment



### BUSWAY : A HIGH LEVEL OF SERVICE

- 7 km long with 15 stations
- Guaranteed access to all users (PRM)
- Ring road to centre of Nantes < 20 min
- Frequency of 3mn 30s at peak times
- 4 P+R = 830 parking places  
(300 new parking places expected for 2007)
- Elements that made the tram a success applied to a bus system:
  - Dedicated lane
  - Stations
  - Priority at intersections
  - High frequency
  - Extended hours
- The use of a clean fleet (CNG)





### BUSWAY : A SUCCESS

#### Modal split in favour of PT

- 22 000 trips/day, with an increasing activity
- A high increase in intermodality:
  - + 55% trips with respect to previous bus lines
  - 28,5% of BusWay users were previously using their car;
  - Great success of the P+R; (filling rate: 100%)
- An increased mobility among the inhabitants of the Southeast area



### THE REMODELLING OF URBAN DESIGN

- Opening up of the Southeast urban area
- Reconnected districts: the expressway was a break line
- Road narrowing for the benefit of soft modes and public transports
  - Reclaimed on-road parking spaces
  - Dedicated bus and cycle lanes
- Changed urban landscape





### A BETTER SHARE OF PUBLIC SPACES

- Cars :
  - Former expressway converted into an urban boulevard, providing access to adjacent roads;
  - More than 800 parking places in 4 P+R
  - Breaking cars speed thanks to roundabouts, road narrowing and limited speed zones
- Public transport:
  - Dedicated lane;
  - Priority at intersections;
  - The use of specific traffic lights



Figure 9 – R17 Light



Figure 10 – SAC – Driving Assistance Signal



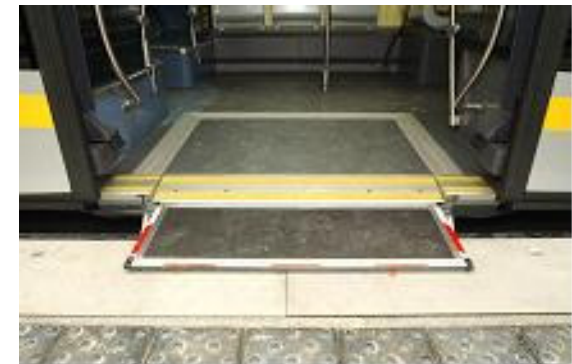
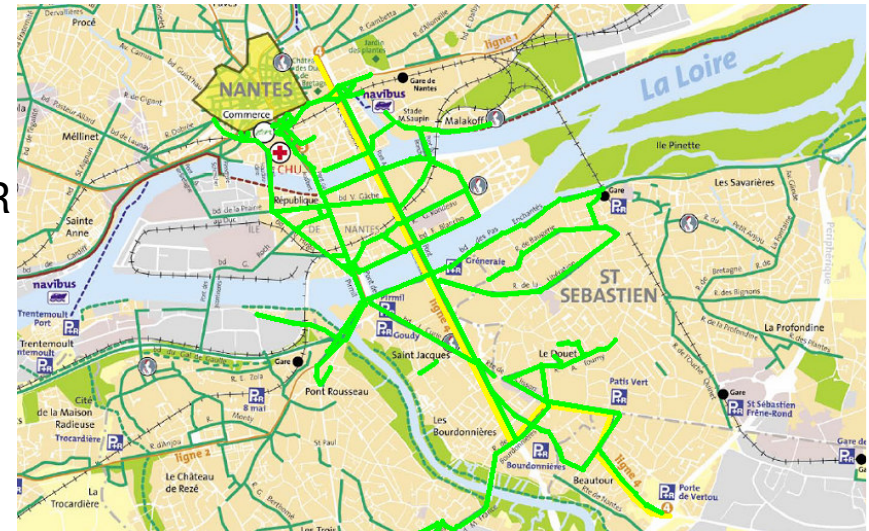
Figure 11 – R24 Light



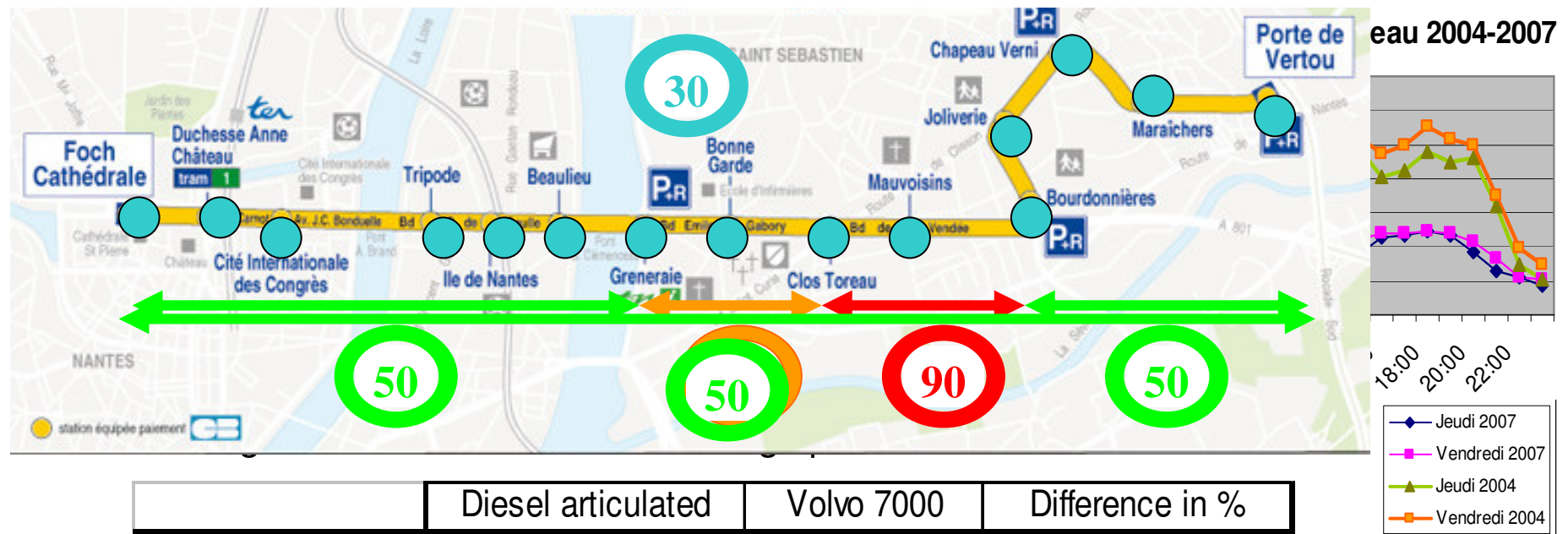
### A BETTER SHARE OF PUBLIC SPACES

- Busway route
- Main cycle lanes around the busway route

- **Bikes**
  - Continuous cycle lanes,
  - Bicycle racks around stations and at P+R
- **Pedestrians**
  - Better access for disabled people
  - Safe bus stations:
    - Car speed limited to 30km/h;
    - Traffic flow slowed with horizontal and vertical speed bumps;
    - Level crosswalks at station entrances and exits;
  - Easier access across and along the boulevard



## A REDUCTION IN CAR POLLUTION



	Diesel articulated	Volvo 7000	Difference in %
CO (g/kWh)	0,63	0,07	-88,89
HCS (g/kWh)	0,193	0,63	226,42
Nox (g/kWh)	4,85	1,6	-67,01
Particles (g/kWh)	0,0675	0,003	-95,56
GHG (g/kWh)	257	201	-21,79

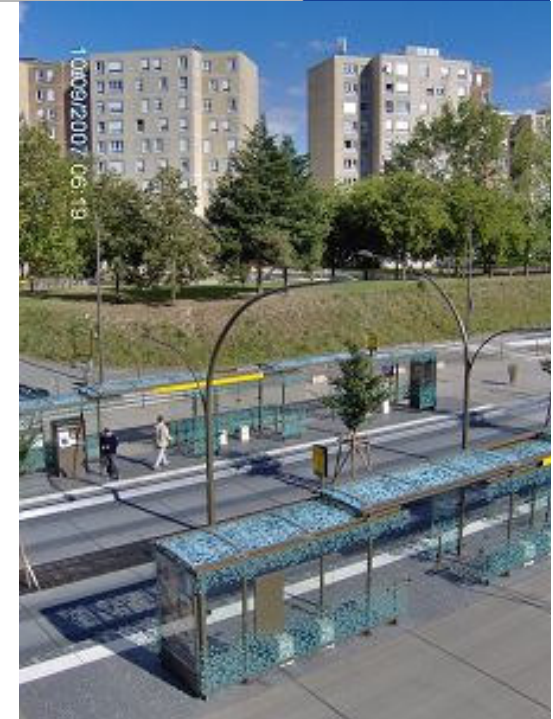
- Thanks to the switch from diesel buses to CNG buses





### AN IMPROVED ENVIRONMENT

- Less pollution:
  - Less car pollution: objectives of the impact study
  - Monitoring and assessment: launch of a research project
- A pacified environment:
  - More user friendly spaces
  - Greater sense of safety
- An integrated approach for a sustainable development...



## Thank you for your attention

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