

New light rails In Paris Transportation system



RATP Direction Générale Développement Groupe - Mission Marchés & Coopération
Octobre 2009

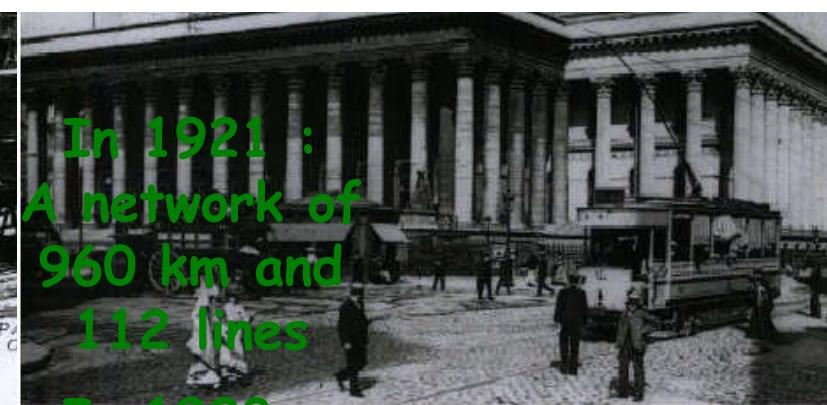
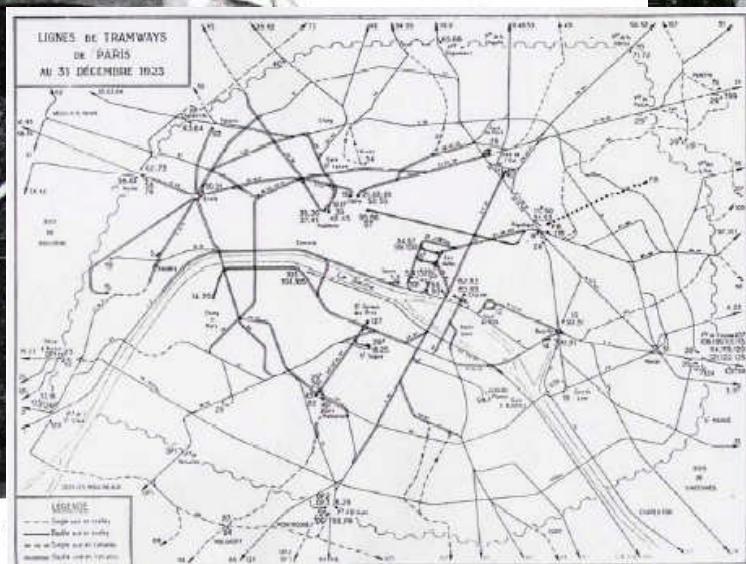
history of tramways in Paris : since 1873

from 1873 to 1938

- ◆ First parisian tram in 1873
- ◆ Network extended and modernised until 1929



- ◆ Progressively dismantled between 1929 and 1938



In 1928 :
727 millions
passengers
(1907)

Cliché RATP

New projects of tramways in the parisian area



75 kms of new lines to be built within next 5 years



The tram of « les maréchaux »

- ◆ Built along the avenues dedicated to Napoleon field marshals: first section opened in december 2006
- ◆ **8 kms long with 17 stations.**
- ◆ Desserves areas of 167 000 inhabitants and 89 000 jobs.
- ◆ **100 000 passengers** per day, from the beginning.
- ◆ Commercial speed : 18 km/h
- ◆ One tram every **4 minutes** at peak hours.
- ◆ Works from **5:00am to 12:30 pm**



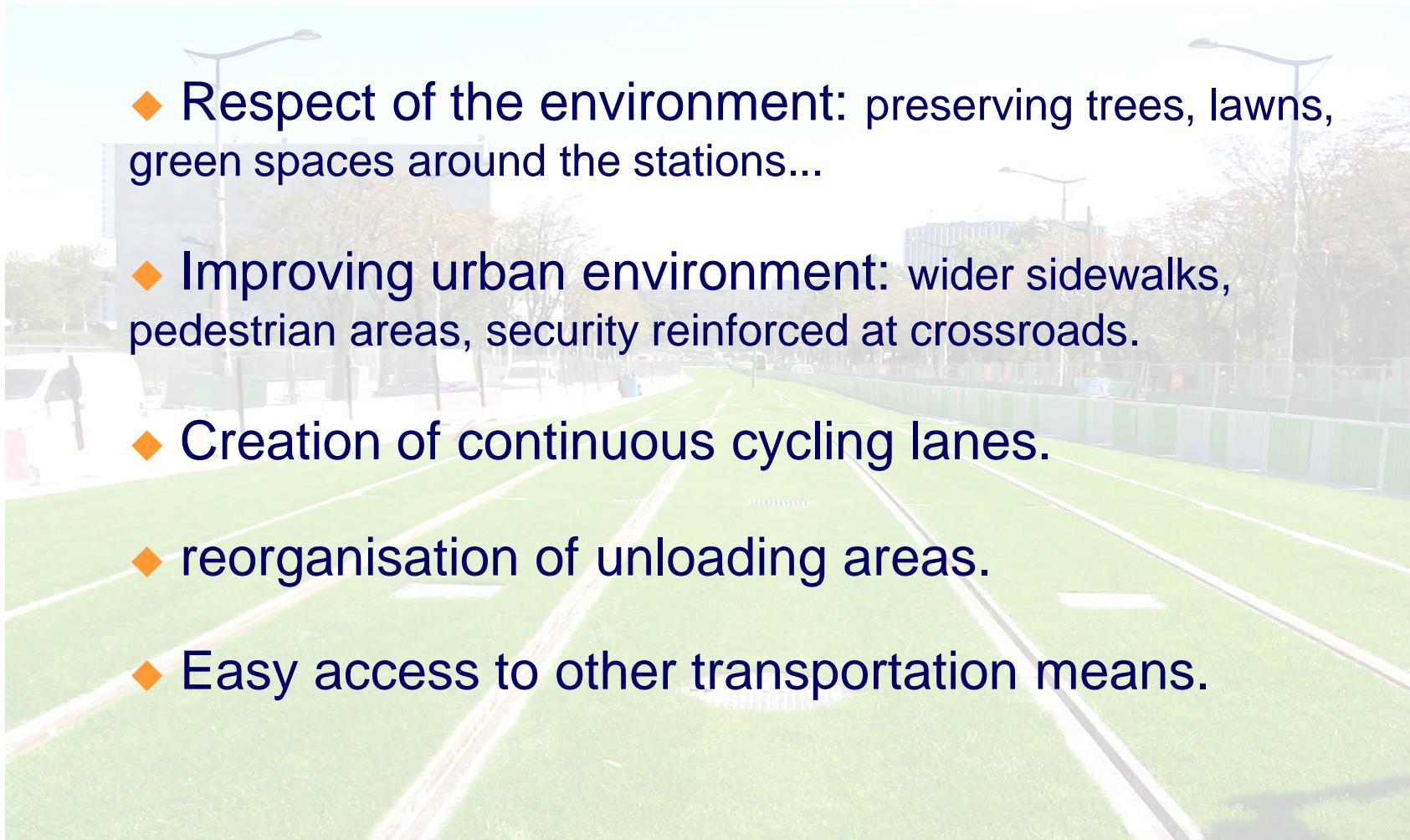
Improving the whole system of public transportation

connected with :

**5 metro lines, 2 RER(express regional train) lines,
37 bus lines**



Integration within urban environment





Financing the project

total: 214.11 M€

◆ City of Paris	49.30 M€
◆ Regional council	81.32 M€
◆ State	50.76 M€
◆ RATP	32.73 M€

RATP also financed **53 M€** for the rolling stock.

The City of Paris financed street developpment : **44 M€**.

Contracting firms financed works on their own networks
(estimated cost: 80 M€).

Tramway line disposal

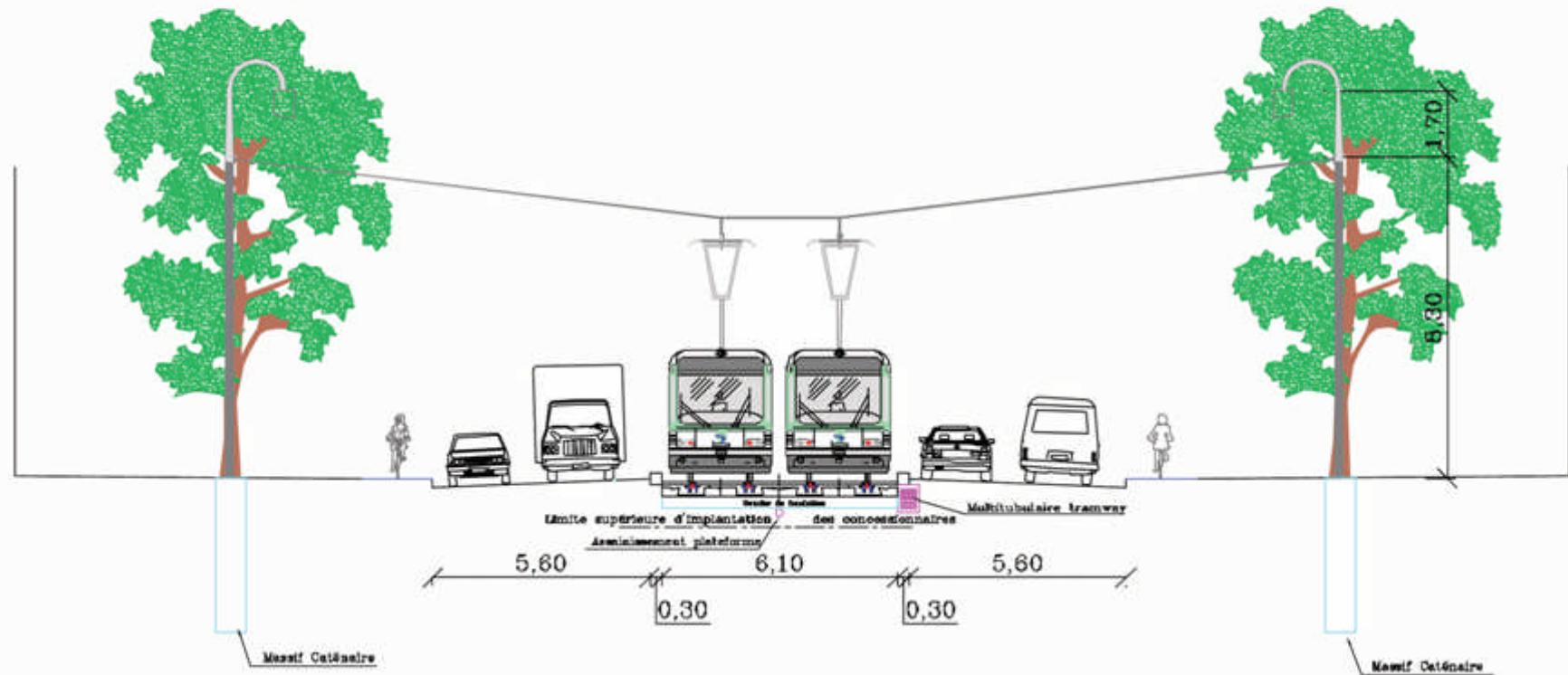
Central lanes



Side lanes

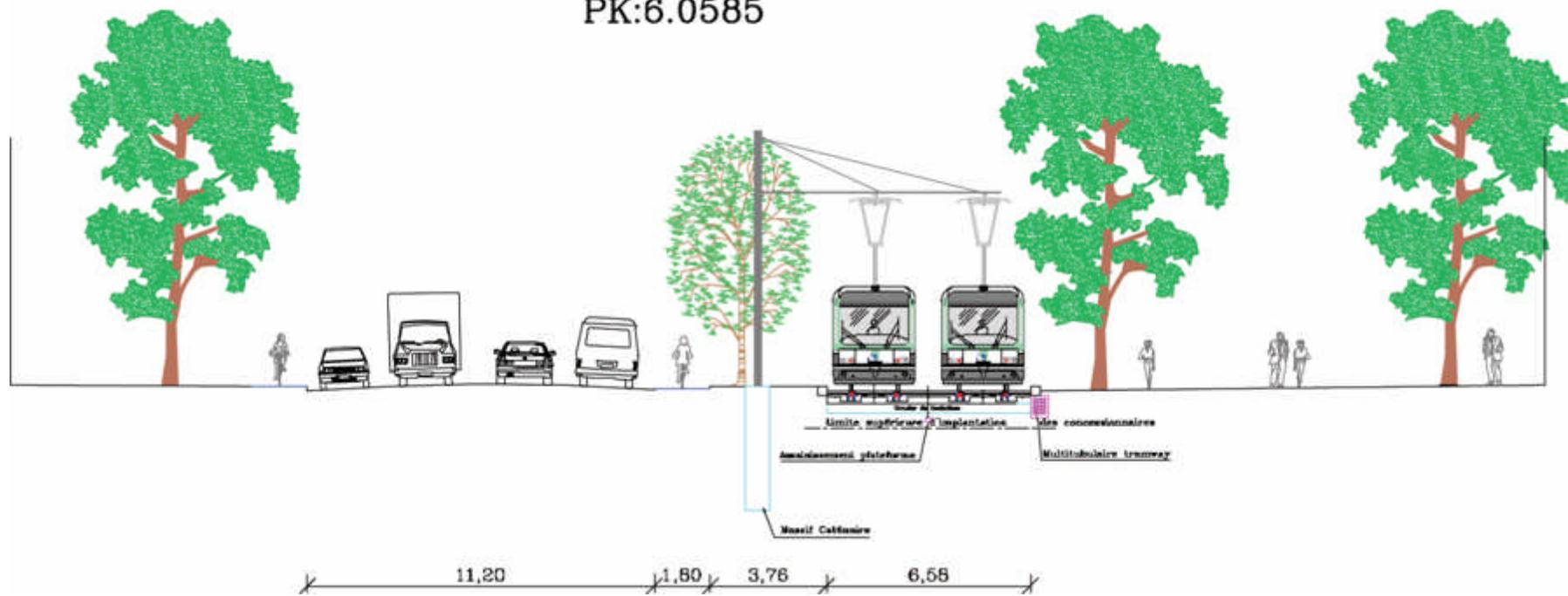
section of the street

COUPE SITE AXIAL
PK:3.6232



Section of the street

COUPE SITE LATERAL
PK:6.0585





Urban project

Using specific materials

PAVEMENT

CYCLING LANE

IRON GRATE



DARK ASPHALT

CLEAR ASPHALT

GRANIT KERB

GRANIT KERB

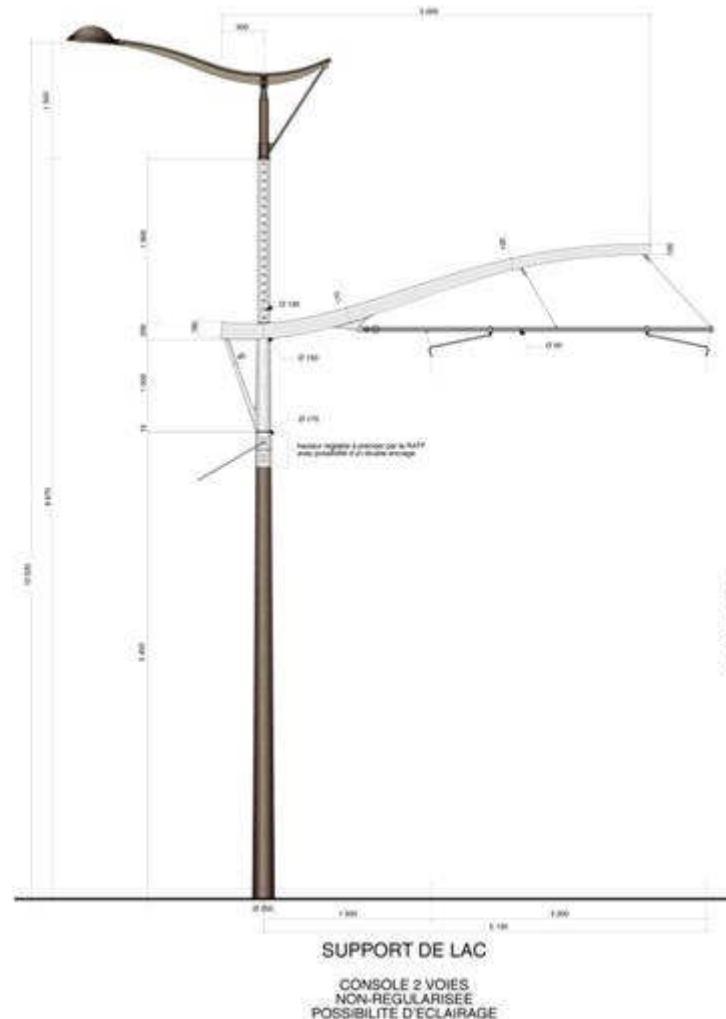
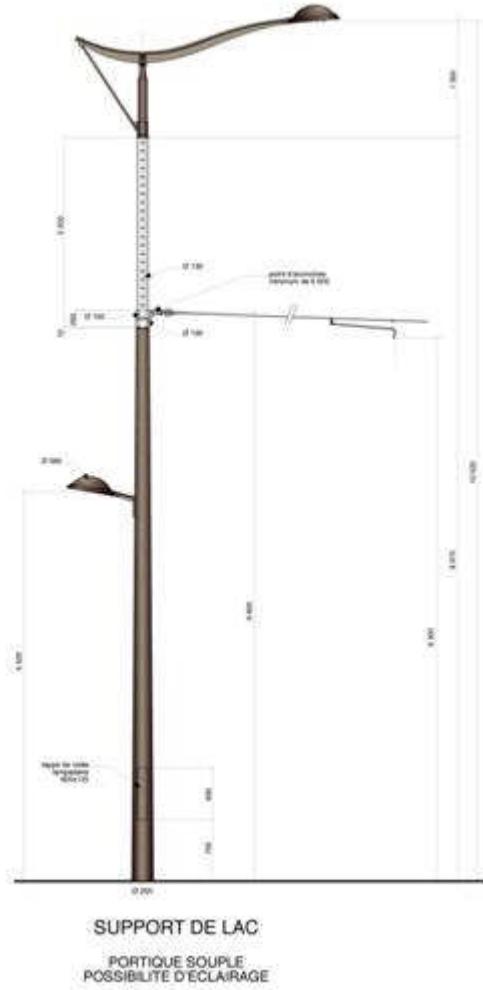
DARK COATING

station design



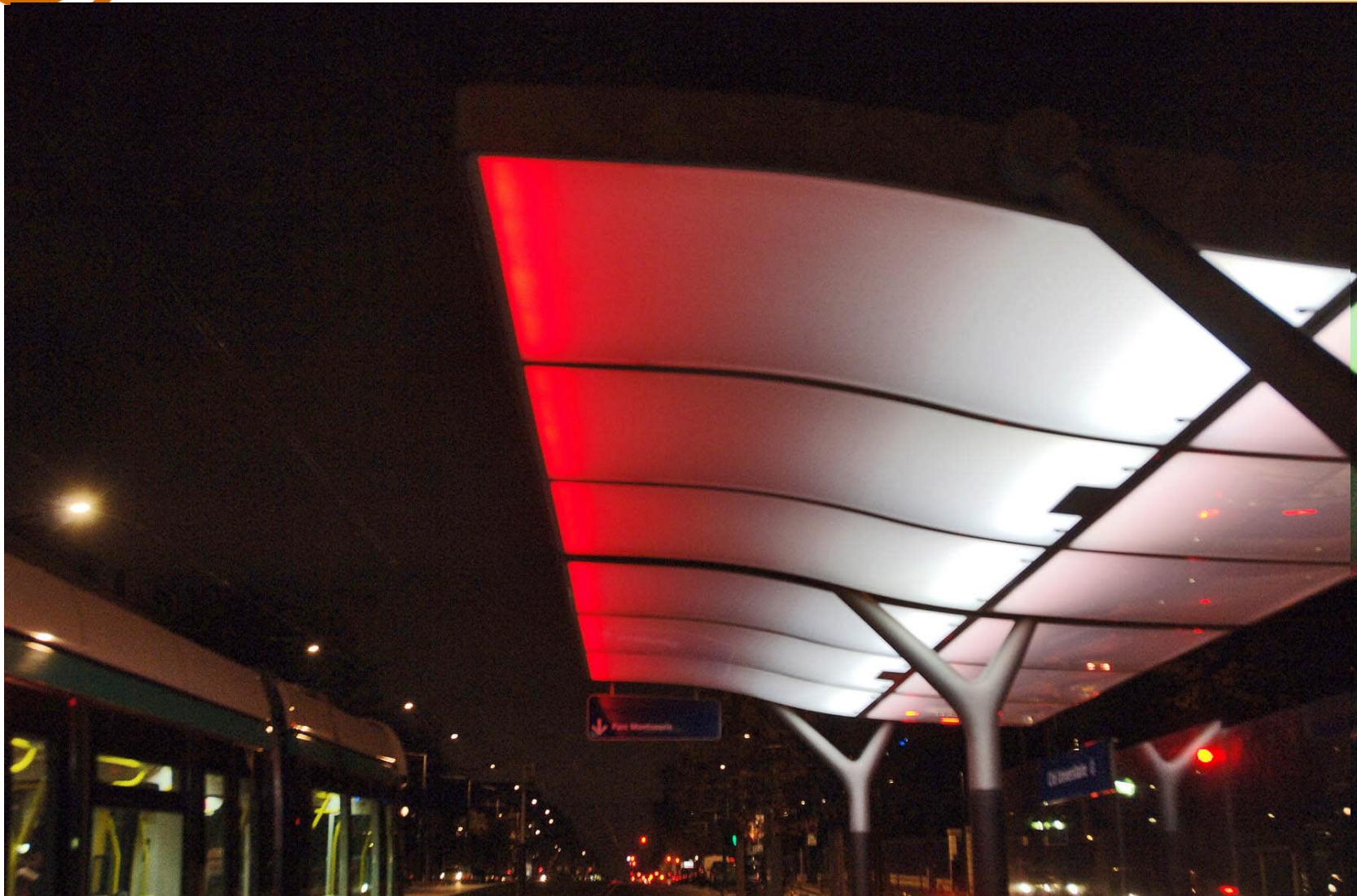
By Atelier Wilmotte

Design of rail catenaries





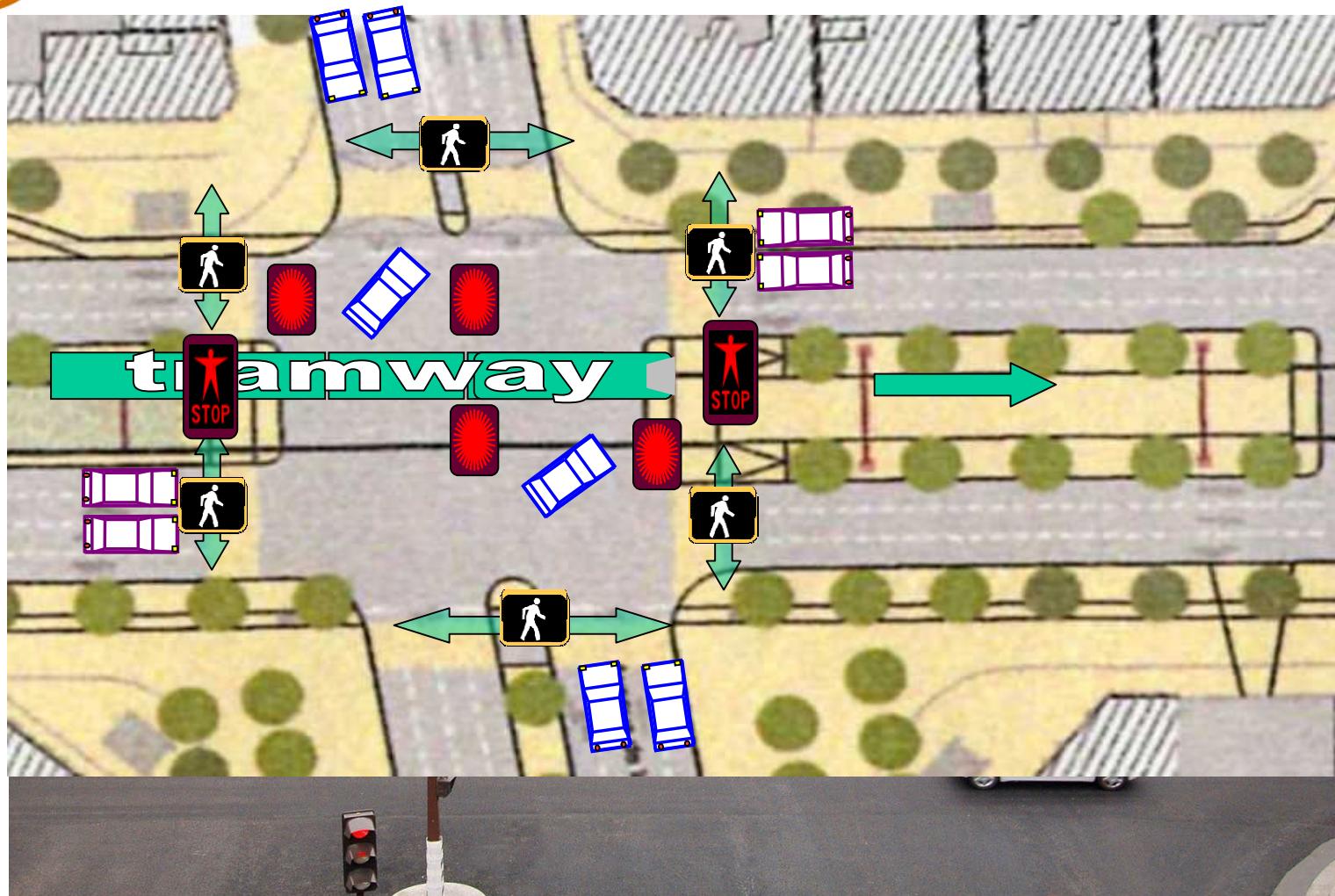
Stations at night



© RATP - Denis Sutton

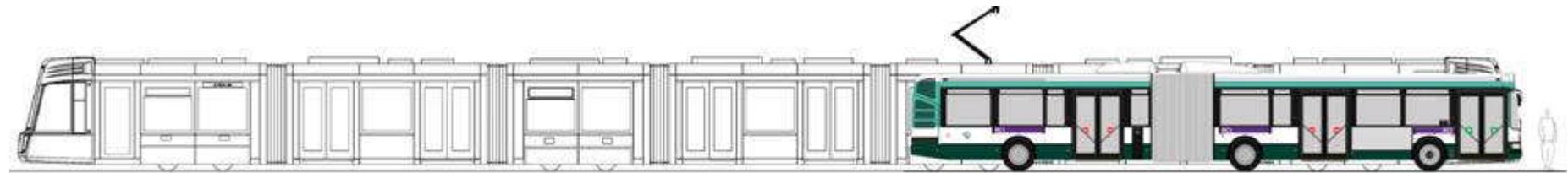
7690d18 - 28/11/2006

Priorité aux feux





the rolling stock





The rolling stock

modern, comfortable, silent and easily accessible:

Citadis 402 by Alstom

- ◆ 45 m long, 2.65 m wide. 304 passengers
- ◆ low floor
- ◆ Electric powered
- ◆ Air conditionning

First train delivered in october 2005

Total accessibility



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8453D097 - 17/03/2008



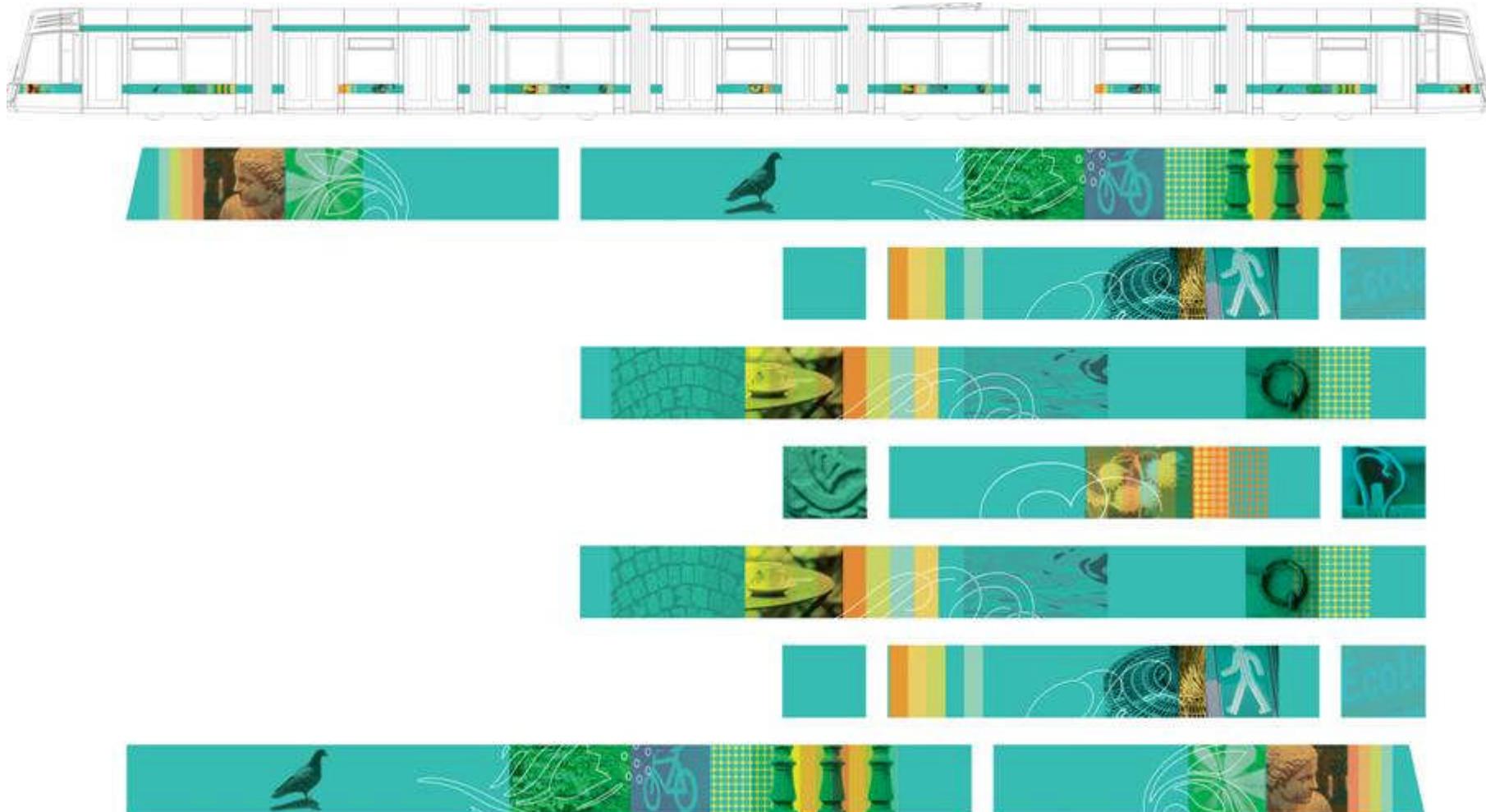
Design



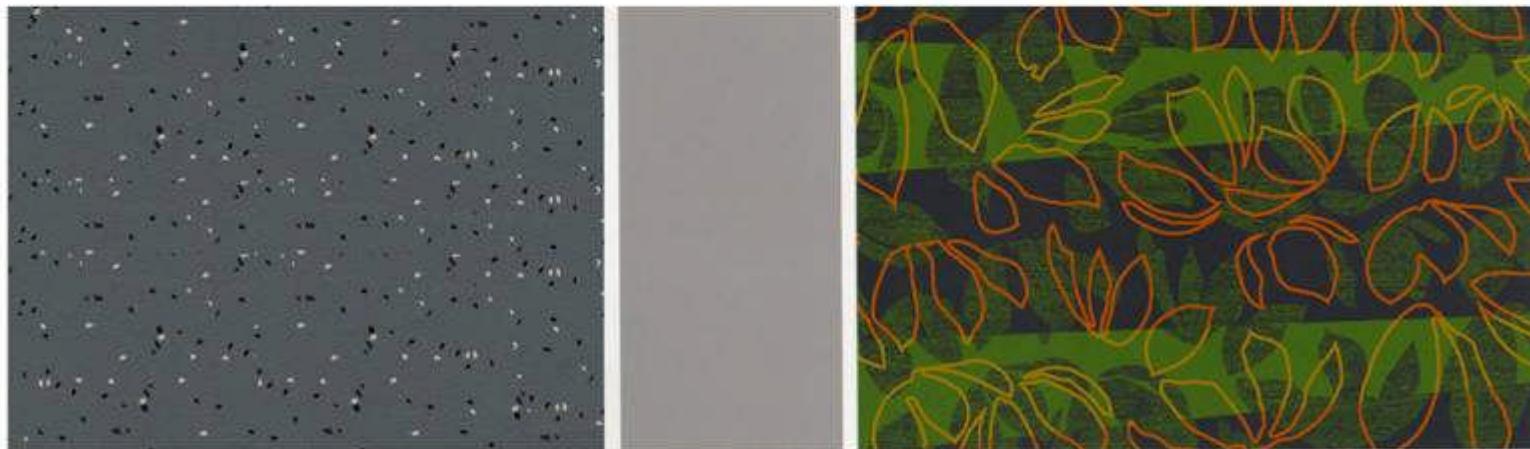
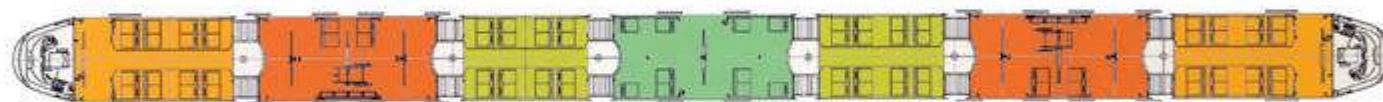
Parisian symbols



Soft colors



Inside design



Large escape windows

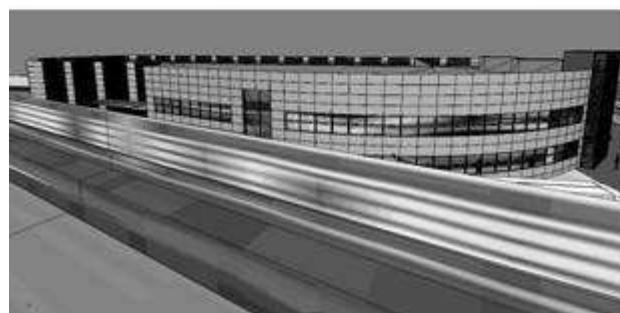


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7730d06 - 10/01/2007

The depot and maintenance site

inside of south Paris area

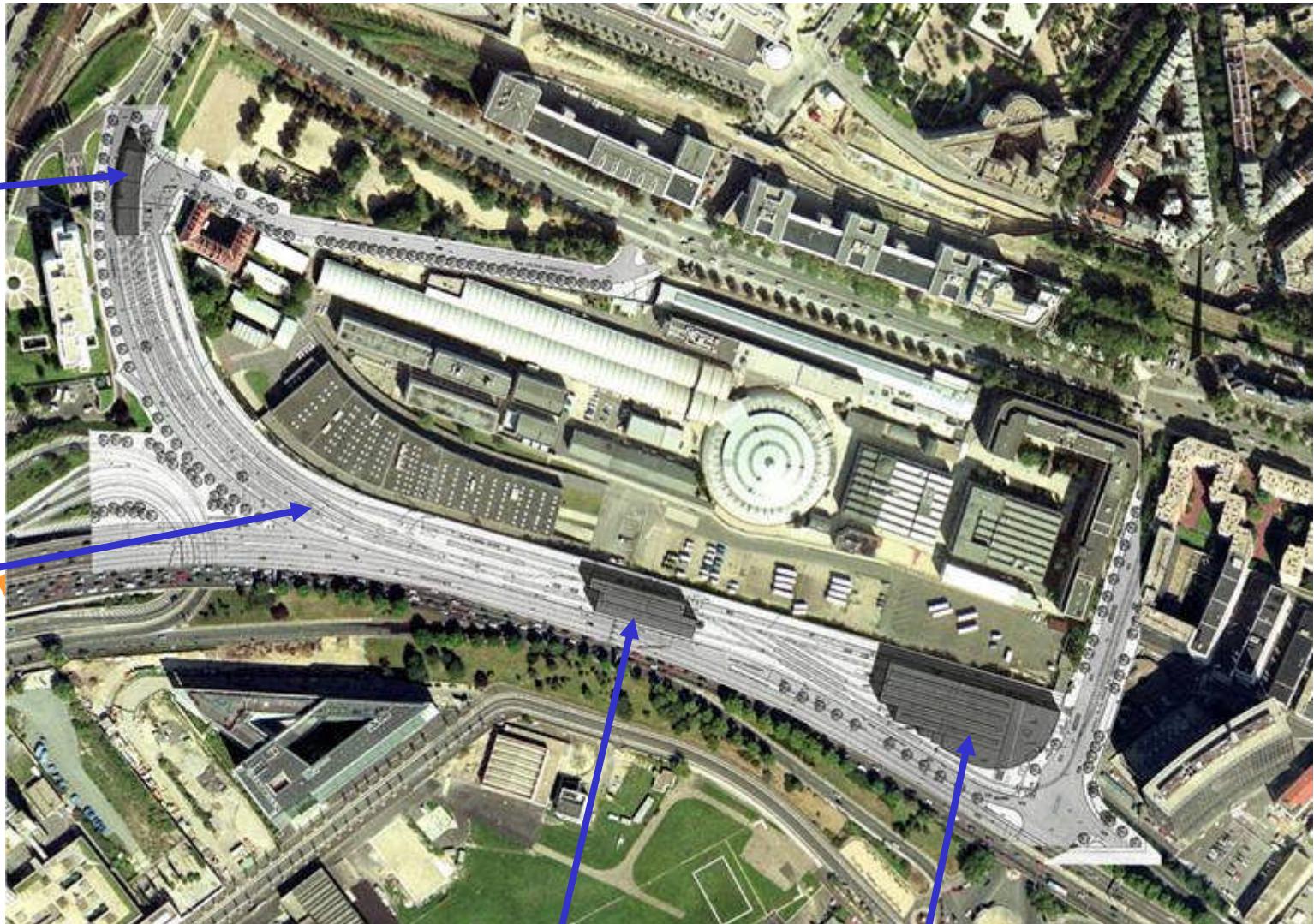


Control traffic
room
+
power
station

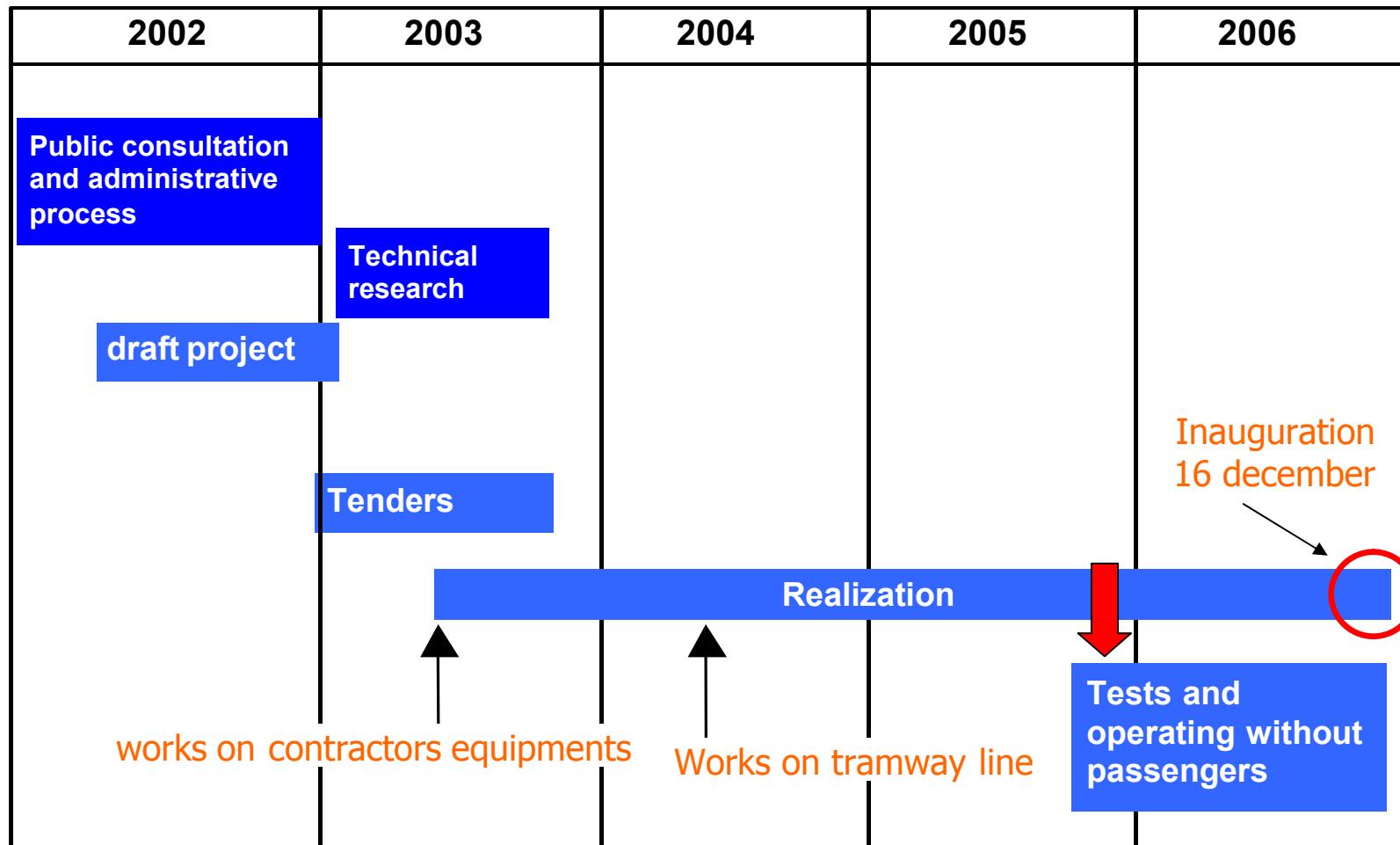
depot

Washing machine

maintenance
workshops
and staff rooms



Realization planning



Works at contractors networks

summer 2003 - summer 2004



largest
pipelines
beam =
1.20 m



Porte de Sèvres, Paris 15e - August 2004



Communication

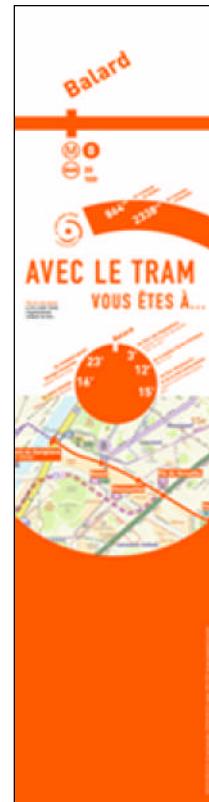
- ◆ A graphic identity and logo: A tram for everyone





Communication

Different medias



Local information panels



Communication



Leaflet for neighbour residents

Magazine

Leaflet for local companies and shops



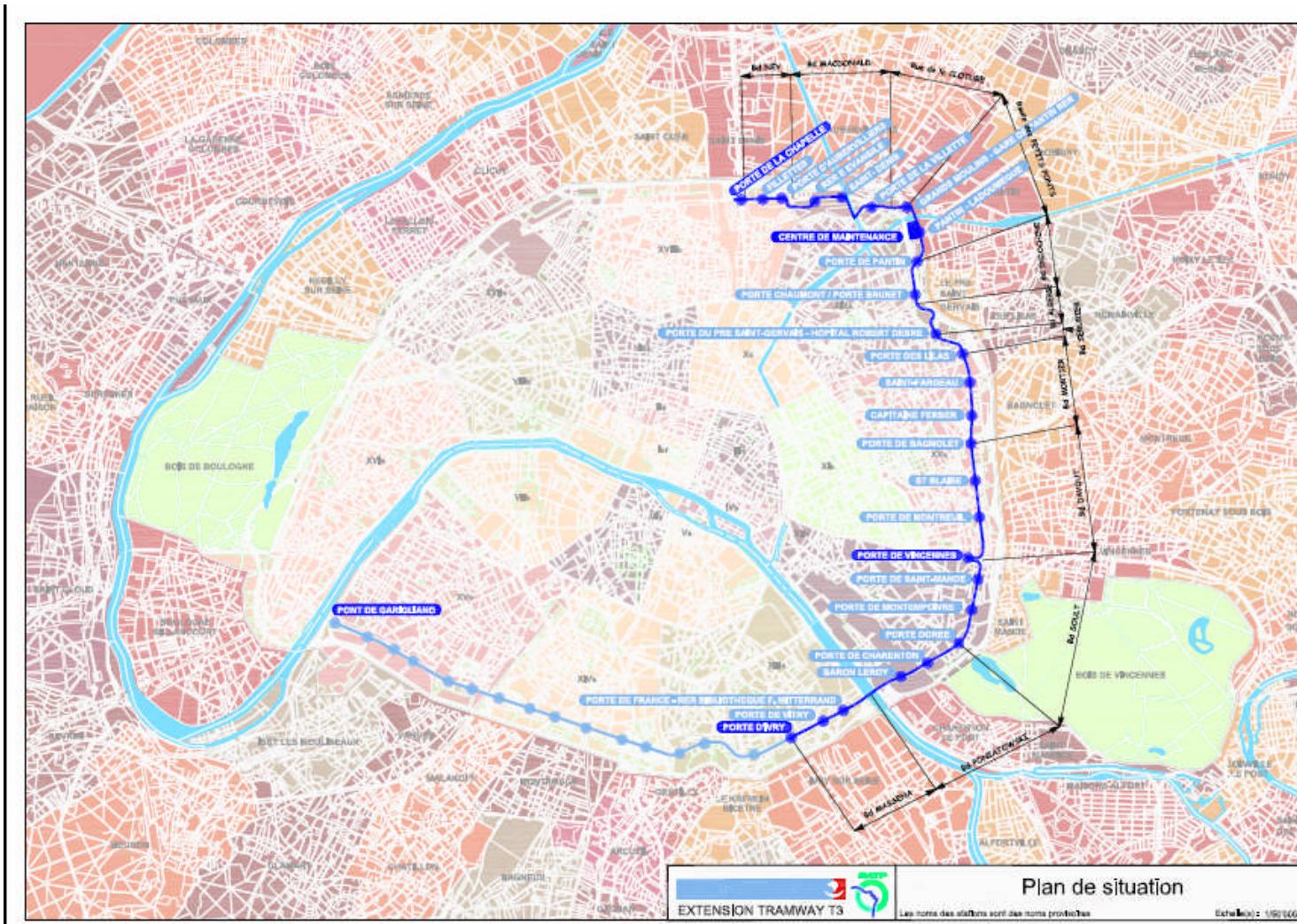
Communication

Coordinated and exhaustive information :

by the team composed with RATP and Paris cityhall employees



The east arch extension





STEEM: A research work for energy saving

(Système de Tramway à Efficacité Energétique Maximisée)

- Based on a convention between **RATP, Alstom and INRETS**.
- Financed by PREDIT and ADEME.
- This **experimentation aims to reduce energy consumption on light rail trains**, by recuperating energy from the stages of speed reducing, and directly store it locally on the train, using new technologies of super condensators.
- Between the stations, a total autonomy of the train will become possible.
- The experimentation will consist in plulling down the rail pantograph in both directions between « **Porte de Choisy** » and « **Porte d'Italie** » stations, on a specialy designed train on line T3 in 2009 and 2010.
- **We are expecting 30% energy savings from this new technology**

• STEEM project received the agreement by CERTIFER, the French agency for trains certification.

Thank you for your attention



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6997d02 - 12/10/2005