



VEOLIA TRANSPORT **RATP** ASIA

INSTITUT VEOLIA ENVIRONNEMENT CONFERENCE



SUMMARY

1. Ongoing Transportation processes
2. Fast and adjusted solutions to pace this mobility need
3. Avoiding waste and overinvestment
4. Developing the relevant public organization
5. Clear relations with private companies



1. Ongoing transportation processes

- Ongoing transformation processes of society increase the urgent need for mobility
- Car boom



1. Ongoing transformation processes of society increase the urgent need for mobility (1)

- **An emergency : mobility for everybody everywhere**
 - **Urban sprawl** increases distances between key functions (and a city like Beijing is a little concentrated city in comparison with other capitals).
 - **Evolution of the work scheme** → Increase the need of mobility
 - **Individualization and changing roles of the family** → Greater diversity of destinations across the territory.



→ Mobility: a **global social fact** required to become well integrated in the society.



1. Ongoing transformation processes of society increase the urgent need for mobility (2)

- Modal shares of daily trips in Beijing from 1986 to 2005 in % (excluding walk)

	1986	2000	2005
Car	5	23.2	29.8
Public Transit	28.2	26.5	29.8
Two wheels	62.7	38.5	30.3
Taxi	0.3	8.8	7.6
Others	3.8	3.0	2.5
Total	100	100	100



- Daily average number of trips in Beijing
 - 1986: : 8,931 millions
 - 2005 : 26,04 millions
 - 2010 : 35-40 millions
- Daily average travel distance in Beijing
 - 1986 : 6 km
 - 2005 :9,3 km



1. car boom



*Traffic jams on Beijing avenues**

Increase of car use:

- 2009: 3,6 millions of cars in Beijing
- 2020: 5 millions of cars in Beijing



2. Fast and adjusted solutions to face this need of mobility

- Fast and adjusted solutions to face this need of mobility
- Mixing different modes of transportation for an efficient network
- TRAM
- BRT



2. Fast and adjusted solutions to face this need of mobility

- People generally easily abandon walk for urban transportation but they have great difficulty to give up their car for public transportation.
- To promote public transportation: find **the right mode** for the right use and **mix** different modes.
 - Feet
 - Bicycles
 - Bus and BRT
 - Trams
 - Metro
 - *Commuter Trains*
 - *Rapid urban Trains*
 - *Taxis*
 - *Cars*



2. Mixing different modes of transportation for an efficient network

- There is **no single mean** of transport that can answer to the need of big cities:
 - Necessity to use **all the means**.
 - Necessity to **think the interchange** between the different modes.



2. TRAM

- **Hong Kong Tramway**

- 240 000 passengers/day
- On the street not underground
- Quick to build, cheaper than metro



- **Paris Tramway**

- **Completes** Paris public transportation (bus and subway)
- Serves **outlying areas**



2. BRT

- **The successful Transmilenio (Bogota)**
 - 1,4 millions of people use the TransMilenio everyday.
 - Operational speed: 27,8 km/h
 - About 1000 articulated buses
 - Average transportation time: from 1 hour to 35 minutes.
 - 40% decrease of the air pollution
 - 80% of 7 millions inhabitants use public transportation.



3. Avoiding waste and overinvestment

- Waste of means with inappropriate public transits
- Improving public transportation with basic means
- Organizing public transportation into a clear hierarchy
- Developing a clear network



3. Waste of means with inappropriate public transits

- Possible waste of means:

- Bus traffic jam



1. Expensive subway investment with few passengers

- Dubai



3. Improving public transportation with basic means

- Improving transportation efficiency with same means:
 - To be efficient, a transportation network does not need huge means but **organized into a hierarchy means.**
 - Thinking the transportation network **according to urban evolutions.**



3. Organizing public transportation into a clear hierarchy

- Hierarchy of routes:

- **Structuring routes** for lines with a **high** level of frequency and a huge number of passengers.

- **Main routes** for a **medium-high** frequency and a moderate number of passengers.

- **Local routes** if the frequency and the number of passengers are quite low.

- Example: Seoul



3. Developing a clear network

- **Achieving a clear network :**
 - **Clarity of routes:** no loops, no backtracking, limited branches and dead ends
 - Readability, **comprehension** of schedules for passengers: frequency of services, clock headways at each stop, single schedule.
 - **Accessibility and visibility:** access from generator to bus stop, facilitating transfers between the different ways of transportation.
 - Intermodality and transfers : decrease the number of bus lines.
 - Fare organization



4. Finding the relevant public mobility organization

- A relevant and efficient mobility policy needs an organized body
- The Urban Travel Plan : a French strategic tool for a global mobility policy



4. A relevant and efficient mobility policy needs an organized body

- **A relevant mobility organization :**
 - Takes into account **various modes of transport and innovating services** (involving walking, two wheels, public transportation, cars, parks, intermodality).
 - Is Fitted to **local stakes and to transverse urban themes** (security, health, urbanism, social cohesion etc.).
 - Is an **organized body with a global policy** and working with many mobility partners.



4. The Urban Travel Plan : a French strategic tool for a global mobility policy

- **The French model : the Urban Travel Plan (Plan de Déplacement Urbain)**
 - A **strategic programming tool** defining a global mobility policy and dealing with mobility, environment, planning and development.
 - A main actor : **the urban transport authority** and **cooperation** between the central government, the local urban transport authority, representatives of different activities and passengers.
 - **3 stages**: diagnosis → options → strategy and long term program (including operating costs, definition of the measures planned and the relevant schedule).
 - **Wide scope**: organization of passenger and goods transport, traffic management, parking, two wheels, walking.
 - The Urban Travel Plan is **not immutable** : it is **reviewed every 5 years** by the responsible persons.



5. Clear relations with private companies

- Companies advantages
- Attracting private companies with clear and detailed contracts



5. Advantages of private companies

- **Expertise of international companies is useful:**
 - To reduce investment
 - To prepare a system easy to operate
 - To save operating costs
 - To have a more reliable operation and maintenance
 - Ex: line 9 – Seoul subway



5. Attracting private companies with clear and detailed contracts

- **Contracts allow transparency:**
 - For public authorities:
 - know the amount of the service
 - No need to bargain every year
 - Focus on policies and investments
 - For operators:
 - Can forecast their revenues
 - Can commit and improve services, organization and productivity
- **Allocating risks between the public authority and the operator**

