

COST Exploratory workshop

**The Futures of the City:**

**Towards a sustainable built environment and mobility**

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# **Urban form, mobility and segregation: keys for the future**

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# Urban form, mobility and segregation: keys for the future

1 – Global trends and challenges

- Environment
- Socio-spatial segregation

2 – Urban form, mobility and segregation : the case of French cities

3 – A sustainable urban form model ? Keys for the future

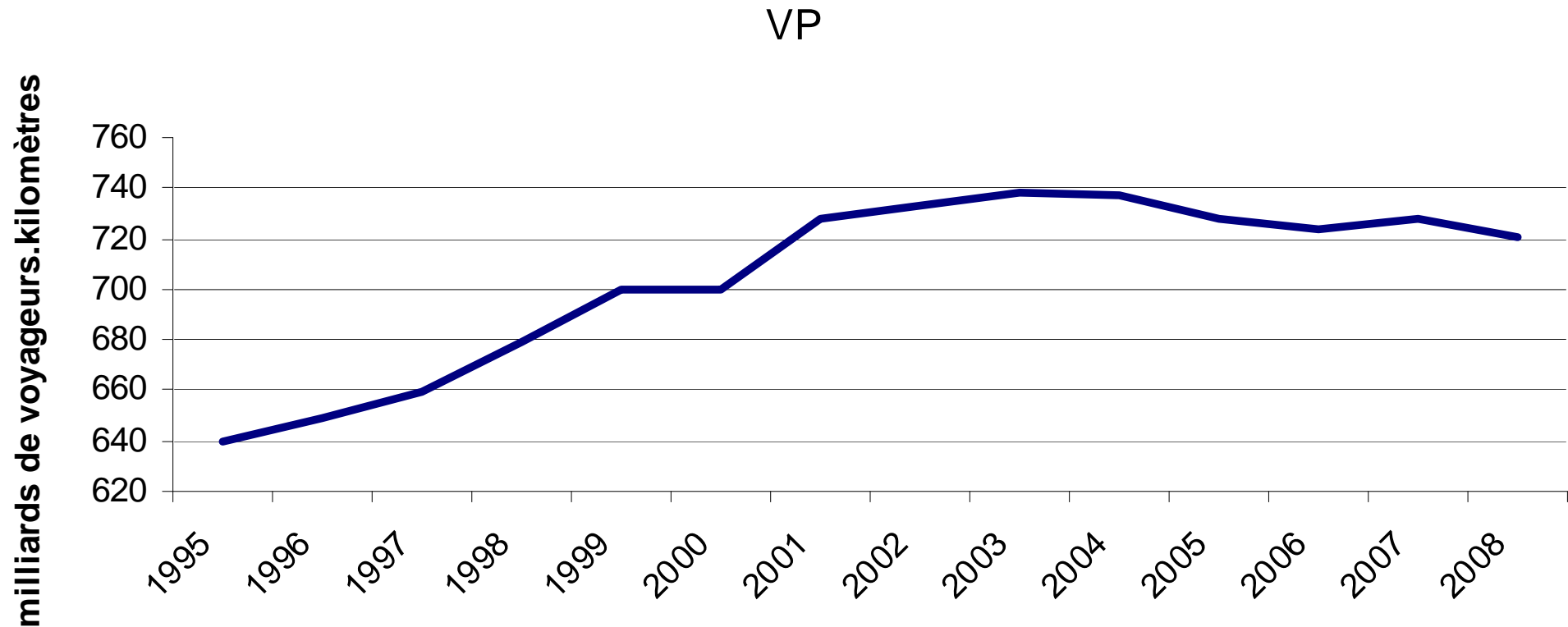
## *1. Global trends and challenges*

### **JPI Urban Europe key objectives**

- Understanding the dynamics inherent with urban systems and the implication of new grand challenges for urban systems and their development process
- Developing tools and instruments for the implementation of new urban policies on mid to long term urban development
- Assessing the contributions and impacts of emerging technologies and new governance solutions for the development of urban areas

# 1. Global trends and challenges : environment

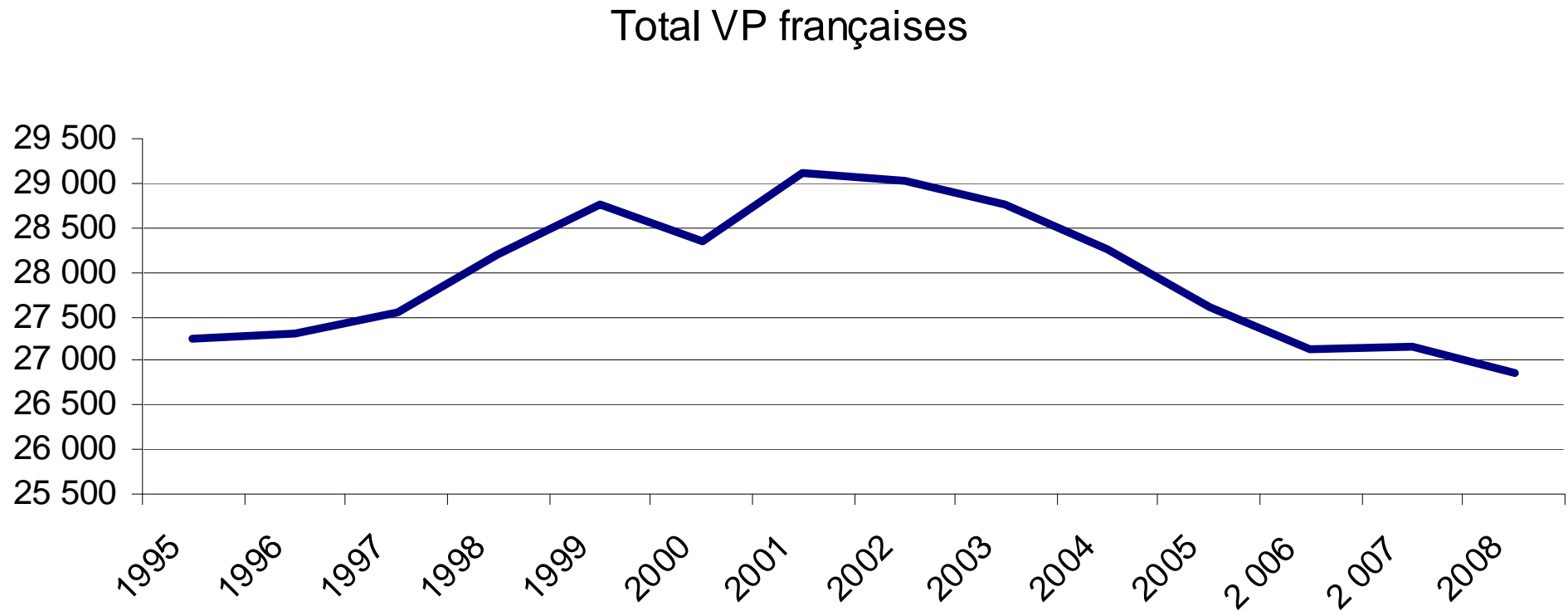
## Car traffic in France since 1995



Source : Les Comptes des Transports en 2008 (MEEDDM-SOES) - 2009

## 1. Global trends and challenges : environment

### Fuel consumption (en milliards de m<sup>3</sup>)



Source : Les Comptes des Transports en 2008 (MEEDDM-SOES) - 2009

## 1. Global trends and challenges : environment

### Other trends

- Growth of the number of cars
- Decrease in urban and suburban car traffic
- Growth of public transport offer
- Growth of public transport use : urban and suburban

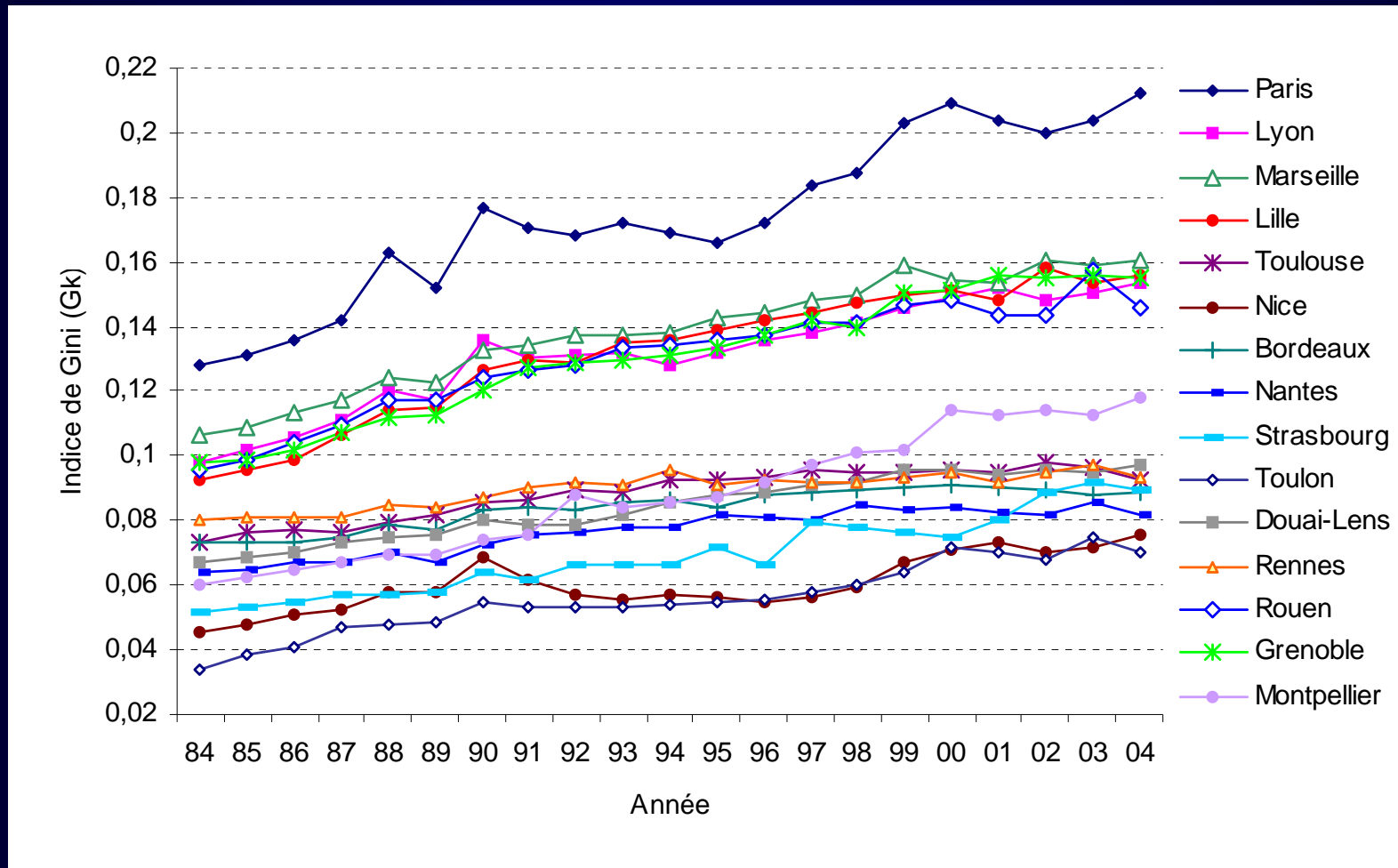
### Reasons of the traffic decrease ?

- Economic situation and price of fuel
- Local public transport investments

**Optimism for urban areas ?**

## 1. Global trends and challenges : socio-spatial segregation

- Evolution of the dispersion of the average income of tax paying households per municipality between 1985 and 2004 for the fifteen largest French urban areas



## 1. Global trends and challenges : socio-spatial segregation

### Accessibility inequalities to the city of Lyon

	Access time to a services basket			Motorized people %	
	En VP	En TC	Ratio TC / VP	0 VP	1 VP ou +
Rich areas	<b>10,5</b> minutes	35,6 minutes	3,4	5%	<b>95%</b>
Poor areas	10,3 minutes	<b>32,2</b> minutes	3,1	<b>31%</b>	69%

Source : David Caubel, Thèse, 2006, LET

- Unequal access to car
- Access time with car : factor 3 with public transport

## 1. Global trends and challenges

# How to improve urban sustainability ?



## 2. Urban form, mobility and segregation : the case of French cities

### A sustainable urban model ? Polycentrism ?



Empirical contradictory results about urban form and mobility

The question of sustainable urban area can not be reduced only to the environmental dimension...

Is there a urban form more sustainable than another ?  
What about polycentrism ?

## 2. Urban form, mobility and segregation : the case of French cities

### Polycentrism and mobility

#### ➡ Greater use of the car in subcenters

Example : polycentric urban areas in the Netherlands (Schwanen et al., 2001)

Counter-example : subcenters located near subway stations in Toronto (Pivo, 1993)

#### ➡ Greater use of the car in subcenters

Examples : Atlanta (Sultana, 2000), San Francisco (Cervero et Wu, 1997)

#### ➡ More contradictory results concerning commuting distances

Answer depending on the type of polycentrism (Schwanen et al., 2001) and the size of the city (Stead and Marshall, 2001)

Job-house imbalance increasing (environmental reasons, growing precariousness and unemployment...)

*It s not possible to conclude,  
it depends on polycentric characteristics (Charron, 2007)*

## 2. Urban form, mobility and segregation : the case of French cities

- ☞ Comparison of French urban areas (Lille, Lyon, Marseille-Aix)
- ☞ Analysis of the mobility (House locations, work locations, commuting distances) and socio-spatial segregation

### Distances of commuting

	Lille	Lyon	Marseille
Total Kms « all workers »	2898811	6415821,9	6748277,8
Total Kms « commuters »	2543743	5226223,0	3522605,2
% Kms commuters	87,8%	81,5%	52,2%
Average Distance (km)	7,6	10,1	13,6
Average Dist. « commuters »	9,9	13,0	21,0
Change 1990-1999	15 %	11 %	8 %
% by car	69 %	66 %	68%

## *2. Urban form, mobility and segregation : the case of French cities*

### The geography of commuting, distances and modes of transport

- Longer trips in Marseille area because of distant sub-centre
- Shorter trips in Lille because of proximity between centre and sub-centres
- Lack of public transport offer between sub-centres

## *2. Urban form, mobility and segregation : the case of French cities*

### Which links with urban forms ?

- A real equilibrium at the sub-centre scale
- A relative proximity to sub-centres, also for people living out of sub-centres
- But, an increase of distances, due to the increasing number of longer trips (urban sprawl)

## *2. Urban form, mobility and segregation : the case of French cities*

### Urban forms, segregation and mobility : three types ?

- Lyon : « an extended mono-centrism, with inequalities both apparent and diffuse »
- Marseille : « an “energy hungry” duo-centrism and doubly socially unequal »
- Lille : « an economical polycentrism, but socially unequal »

## *2. Urban form, mobility and segregation : the case of French cities*

➤ Lyon : « an extended mono-centrism, with inequalities both apparent and diffuse »

- Here, subsidiary centres can be identified, but they do not in any way rival the principal centre, and in fact they simply extend its influence.
- Dualism between rich districts in the centre and poor districts in suburbs is apparent, but territorial inequalities are also diffuses.
- The development of secondary poles contributes to the growth of spatial and politic influence of the centre.
- But also to create islets attractive for richest households, and could be able to stop social specialization of urban areas.

## *2. Urban form, mobility and segregation : the case of French cities*

### ➤ **Marseille : « an “energy hungry” duo-centrism and doubly socially unequal »**

- In the Marseille urban area there is a secondary centre which is of considerable importance, and which exercises a high degree of influence in the structuring of commuting with the centre. This model could be described as "energy-hungry", given that the large distance between the city centre and the secondary centre means that the average commuting distance is greater than in the other 2 urban areas, and that the car is the dominant means of transport
- These two poles are also socially opposites. The town of Marseilles is divided in two parts, South and East rich districts, and poor districts only in the north of the town. In the second pole, Aix-en-Provence, households have high incomes in quite all districts.

## *2. Urban form, mobility and segregation : the case of French cities*

### ➤ Lille : « an economical polycentrism, but socially unequal »

- Here, several employment poles can be identified as, to some extent, rivals of the centre. They include the new town of Villeneuve d'Ascq, and their closeness to one another means that average commuting distances are shorter in Lille than in the other 2 urban areas.
- Great socio-spatial segregation : a “dual” territory, with rich districts and very poor districts, spatially located.

### 3. A sustainable urban form model ? Keys for the future

#### ➤ Organised polycentrism is potentially "economical" in terms of car traffic... if it means :

- That employment poles structure their surrounding **districts**,
- That commuting between different parts of an urban area is accompanied by a reduction in pollution through an increase in the use of public transport.

❖ *This obviously requires the implementation of appropriate planning policies*

#### ➤ Does polycentric model develop or reduce segregation ?

- There is no obvious answer,
- But, attractiveness for richer households could be able to stop social specialization of urban areas **and reduce socio-spatial segregation**

### *3. A sustainable urban form model ? Keys for the future*

## Which challenges and which degree of liberty at local level ?

- Better to reduce non wished mobility than urban sprawl
- Is it possible to decouple urban sprawl and mobility ?
- Towards an organized polycentrism ?
- Be careful to socio-spatial consequences...
- Accept to lose time ?

### 3. A sustainable urban form model ? Keys for the future

➤ *Be careful to socio-spatial consequences...*

Mexico :  
an example  
of a  
« closed  
district »



### 3. A sustainable urban form model ? Keys for the future

➤ *Be careful to socio-spatial consequences...*



Mexico :  
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### *3. A sustainable urban form model ? Keys for the future*

## Are we ready to lose time ?

- Lose useless time : driving time
- Enhance the value of time spent in public transport
- Role of ICT (JPI Urban Europe)
- Role of transport policies : investments for public transport offer (quantity and quality) AND regulation for car traffic

### *3. A sustainable urban form model ? Keys for the future*



*Thank you...*