The recent evolution of Public Transport in Europe

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Summary

• General features on Public Transport Systems in Europe (France and other countries)
• The new European Regulation on PT and the opening of the market
• The main stake: PT funding
General features on European PT networks
Relation between GDP/inhab and car ownership

Source: EMTA Barometer of Public Transport in European Metropolitan Areas (2006)

Bruno Faivre d’Arcier – Public Transport in Europe
Modal share

Modal split in whole metropolitan area

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Public Transport</th>
<th>Rest of motorised modes</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.4%</td>
<td>83.6%</td>
<td></td>
</tr>
<tr>
<td>37.7%</td>
<td>62.3%</td>
<td></td>
</tr>
<tr>
<td>11.7%</td>
<td>88.3%</td>
<td></td>
</tr>
<tr>
<td>12.0%</td>
<td>88.0%</td>
<td></td>
</tr>
<tr>
<td>13.4%</td>
<td>86.6%</td>
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<tr>
<td>37.8%</td>
<td>62.2%</td>
<td></td>
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<tr>
<td>47.4%</td>
<td>52.6%</td>
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<tr>
<td>49.5%</td>
<td>50.5%</td>
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<tr>
<td>12.9%</td>
<td>87.1%</td>
<td></td>
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<tr>
<td>17.4%</td>
<td>82.6%</td>
<td></td>
</tr>
<tr>
<td>29.4%</td>
<td>70.6%</td>
<td></td>
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<tr>
<td>19.8%</td>
<td>80.2%</td>
<td></td>
</tr>
<tr>
<td>21.3%</td>
<td>78.7%</td>
<td></td>
</tr>
<tr>
<td>35.4%</td>
<td>64.6%</td>
<td></td>
</tr>
<tr>
<td>18.1%</td>
<td>81.9%</td>
<td></td>
</tr>
<tr>
<td>22.8%</td>
<td>77.2%</td>
<td></td>
</tr>
<tr>
<td>23.4%</td>
<td>76.6%</td>
<td></td>
</tr>
<tr>
<td>30.1%</td>
<td>69.9%</td>
<td></td>
</tr>
<tr>
<td>44.8%</td>
<td>55.2%</td>
<td></td>
</tr>
</tbody>
</table>

Modal split in main city

<table>
<thead>
<tr>
<th>Metropolitan Area</th>
<th>Public Transport</th>
<th>Rest of motorised modes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stadsregio Amsterdam</td>
<td>47.5%</td>
<td>52.4%</td>
</tr>
<tr>
<td>Barcelona</td>
<td>64.7%</td>
<td>35.3%</td>
</tr>
<tr>
<td>Berlin-Brandenburg</td>
<td>33.3%</td>
<td>66.7%</td>
</tr>
<tr>
<td>West Midlands (Birmingham)</td>
<td>30.7%</td>
<td>69.3%</td>
</tr>
<tr>
<td>Brussels</td>
<td>64.0%</td>
<td>36.0%</td>
</tr>
<tr>
<td>Budapest</td>
<td>64.0%</td>
<td>36.0%</td>
</tr>
<tr>
<td>Greater Copenhagen</td>
<td>47.4%</td>
<td>52.6%</td>
</tr>
<tr>
<td>Frankfurt Rhein-Main</td>
<td>52.6%</td>
<td></td>
</tr>
<tr>
<td>Helsinki</td>
<td>64.0%</td>
<td>36.0%</td>
</tr>
<tr>
<td>Greater London</td>
<td>63.6%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Madrid Community</td>
<td>63.6%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Greater Manchester</td>
<td>28.4%</td>
<td>71.6%</td>
</tr>
<tr>
<td>Greater Montreal</td>
<td>63.6%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Paris Ile-de-France</td>
<td>57.0%</td>
<td>43.4%</td>
</tr>
<tr>
<td>Prague</td>
<td>57.0%</td>
<td>43.4%</td>
</tr>
<tr>
<td>Seville</td>
<td>57.0%</td>
<td>43.4%</td>
</tr>
<tr>
<td>South Yorkshire (Sheffield)</td>
<td>29.4%</td>
<td>70.6%</td>
</tr>
<tr>
<td>Stockholm</td>
<td>56.0%</td>
<td>44.0%</td>
</tr>
<tr>
<td>Greater Stuttgart (1)</td>
<td>32.8%</td>
<td>67.2%</td>
</tr>
<tr>
<td>Turin</td>
<td>31.1%</td>
<td>68.9%</td>
</tr>
<tr>
<td>Valencia (1)</td>
<td>39.0%</td>
<td>61.0%</td>
</tr>
<tr>
<td>Vienna</td>
<td>50.7%</td>
<td>49.3%</td>
</tr>
<tr>
<td>Vilnius</td>
<td>50.7%</td>
<td>49.3%</td>
</tr>
<tr>
<td>Warsaw</td>
<td>70.0%</td>
<td>30.1%</td>
</tr>
</tbody>
</table>

Source: EMTA Barometer of Public Transport in European Metropolitan Areas (2006)
Public transport supply in vehicle-km (or train-km)/inhabitant/year

### Bus

- Stadsregio Amsterdam: 51
- Barcelona: 50
- Berlin-Brandenburg: 42
- West Midlands (Birmingham): 32
- Brussels: 29
- Budapest: 25
- Greater Copenhagen: 22
- Frankfurt Rhein-Main: 21
- Helsinki: 20
- Greater London: 19
- Madrid Community: 18
- Greater Manchester: 18
- Greater Montreal: 15
- Paris Ile-de-France: 13
- Prague: 12
- Seville: 11
- South Yorkshire (Sheffield): 10
- Stockholm: 9
- Greater Stuttgart: 8
- Turin: 7
- Valencia: 6
- Vienna: 5
- Vilnius: 5
- Warsaw: 5

### Railways

- Tram (train-km/inh): 34.5
- Metro (train-km/inh): 26.3
- Commuter railway (train-km/inh): 20
- Suburban railway (train-km/inh): 15

Source: EMTA Barometer of Public Transport in European Metropolitan Areas (2006)

Bruno Faivre d’Arcier – Public Transport in Europe
Public transport demand in journeys per inhabitant per year

Source: EMTA Barometer of Public Transport in European Metropolitan Areas (2006)

Bruno Faivre d’Arcier – Public Transport in Europe
Main city fares ratios

Monthly pass fare in main city / monthly GDP per capita (%)

Single ticket fare main city(€) / petrol litre price(€)

Source: EMTA Barometer of Public Transport in European Metropolitan Areas (2006)

Bruno Faivre d’Arcier – Public Transport in Europe
Coverage of operational costs

Coverage by fare revenues:

- Stadsregio Amsterdam: 38.2%
- Barcelona: 30.7%
- Berlin-Brandenburg: 36.7%
- West Midlands (Birmingham): 46.0%
- Brussels: 56.5%
- Budapest: 50.8%
- Greater Copenhagen: 44.5%
- Frankfurt Rhein-Main: 53.0%
- Helsinki: 39.5%
- Greater London: 27.3%
- Madrid Community: 45.4%
- Greater Manchester: 36.2%
- Greater Montreal: 59.5%
- Paris Ile-de-France: 44.4%
- Prague: 56.0%
- Seville: 45.5%
- South Yorkshire (Sheffield): 43.4%
- Stockholm: 38.0%
- Greater Stuttgart: 44.0%
- Turin: 24.2%
- Valencia: 22.8%
- Vienna: 55.6%
- Vilnius: 53.1%
- Warsaw: 56.6%

Coverage by public subsidies:

- Stadsregio Amsterdam: 61.8%
- Barcelona: 44.1%
- Berlin-Brandenburg: 52.6%
- West Midlands (Birmingham): 39.1%
- Brussels: 52.0%
- Budapest: 43.5%
- Greater Copenhagen: 44.5%
- Frankfurt Rhein-Main: 55.5%
- Helsinki: 56.4%
- Greater London: 39.6%
- Madrid Community: 66.6%
- Greater Manchester: 41.0%
- Greater Montreal: 55.6%
- Paris Ile-de-France: 53.1%
- Prague: 56.6%
- Seville: 66.6%
- South Yorkshire (Sheffield): 56.6%
- Stockholm: 41.0%
- Greater Stuttgart: 55.6%
- Turin: 53.1%
- Valencia: 56.6%
- Vienna: 56.6%
- Vilnius: 56.6%
- Warsaw: 56.6%

Source: EMTA Barometer of Public Transport in European Metropolitan Areas (2006)

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Main trends

• 3 trips per person per day are done in average in the metropolitan areas surveyed.
  – 40% are commuting trips as home-to-work and home to school.
• 230 journeys per inhabitant and year on public transport, this means almost one journey every labour day.
• Metro systems are extending
• new concept of tramways on dedicated platform called light rail system.
• commercial speed of 45 km/h for heavy rail, 32 km/h for metro, 23 km/h for bus (considering urban and suburban services) and 21 km/h for tram.
• the bus attracts 15% less passengers than all rail modes together
• operational costs are covered 44% by fares, 48% by public subsidies and 8% by other revenues
The new European Regulation on PT services and the opening of the market

The result of a long process of reforms

• The main objectives of the Commission’s White Paper of 12 September 2001 ‘European transport policy for 2010: time to decide’ are to guarantee safe, efficient and high quality passenger transport services through regulated competition,

• guaranteeing also transparency and performance of public passenger transport services,

• having regard to social, environmental and regional development factors, or to offer specific tariff conditions to certain categories of travelers, such as pensioners,

• and to eliminate the disparities between transport undertakings from different Member States which may give rise to substantial distortions of competition.
Definitions

- ‘public service obligation’ means a requirement defined or determined by a competent authority in order to ensure public passenger transport services in the general interest that an operator, if it were considering its own commercial interests, would not assume or would not assume to the same extent or under the same conditions without reward;
- ‘exclusive right’ means a right entitling a public service operator to operate certain public passenger transport services on a particular route or network or in a particular area, to the exclusion of any other such operator;
- ‘public service compensation’ means any benefit, particularly financial, granted directly or indirectly by a competent authority from public funds during the period of implementation of a public service obligation or in connection with that period;
- ‘public service contract’ means one or more legally binding acts confirming the agreement between a competent authority and a public service operator to entrust to that public service operator the management and operation of public passenger transport services subject to public service obligations;
The main rule: a Public Service Contract

• **Public service contracts:**
  
  (a) clearly define the public service obligations and the geographical areas concerned;

  (b) establish the compensation payment, and the nature and extent of any exclusive rights granted,

  (c) determine the arrangements for the allocation of costs connected with the provision of services (staff, energy, infrastructure charges, maintenance / repair of public transport vehicles, rolling stock and installations, fixed costs and a suitable return on capital).

  (d) determine the allocation of revenue from tickets (kept by the public service operator, repaid to the competent authority or shared between the two).
Duration of contracts

• Maximum 10 years for coach and bus services and 15 years for passenger transport services by rail or other track-based modes.
  – contracts relating to several modes of transport shall be limited to 15 years if transport by rail or other track-based modes represents more than 50 % of the value
  – may be extended by a maximum of 50 % if the public service operator provides significant assets (PPP)
  – a competitive tendering procedure
  – direct awarding possible where annual value estimated at less than EUR 1 000 000 or where annual provision of less than 300 000 kilometres (doubled if SME max 23 vehicles).

• Transition period from 3 December 2009. up to 3 December 2019
The main rule: a Public Service Contract

• Local authority may choose to provide its own public passenger transport services or to entrust them to an internal operator without competitive tendering.
  – a competent authority providing its own transport services or an internal operator should be prohibited from taking part in competitive tendering procedures outside the territory of that authority.

• The compensation granted by competent authorities to cover the costs incurred in discharging public service obligations should be calculated in a way that prevents overcompensation.
Germany:
Tendering of Mostly DB Stadtverkehr Services Led to a Big Loss in the Number of Batches

Share of Bus Services Before and After Tender Process

<table>
<thead>
<tr>
<th>Number of batches</th>
<th>before tender</th>
<th>Winner is*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>abs.</td>
<td>rel.</td>
</tr>
<tr>
<td>after tender</td>
<td>abs.</td>
<td>rel.</td>
</tr>
<tr>
<td>Incumbent is subsidiary of DB</td>
<td>Σ 196</td>
<td>100%</td>
</tr>
<tr>
<td>Municipal incumbent</td>
<td>92</td>
<td>46.9%</td>
</tr>
<tr>
<td>Private incumbent</td>
<td>82</td>
<td>41.8%</td>
</tr>
</tbody>
</table>

Looking at Volume instead of Batches, the Situation for DB Is even Worse

Share of Bus Services Before and After Tender Process

<table>
<thead>
<tr>
<th>Volume [m vehicle-km]</th>
<th>before tender</th>
<th>Winner is*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>abs.</td>
<td>rel.</td>
</tr>
<tr>
<td>before tender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>abs.</td>
<td>55.1</td>
<td>49.3%</td>
</tr>
<tr>
<td>rel.</td>
<td>22.4</td>
<td>20.1%</td>
</tr>
<tr>
<td>Private incumbent</td>
<td>31.1</td>
<td>30.6%</td>
</tr>
<tr>
<td>after tender</td>
<td>111.6</td>
<td></td>
</tr>
<tr>
<td>abs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>rel.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

International Experience, here France, Shows a Decreasing Number of Bidders per Tender since 1995

Competition Intensity over Time in France


In Germany, the Number of Bidders and the Percentage of Operator Changes Have Simultaneously Been Decreasing

**Competition Intensity over Time in Germany**

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Bidders</th>
<th>Percentage of Operator Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997-2004</td>
<td>7.6</td>
<td>91%</td>
</tr>
<tr>
<td>2005</td>
<td>6.4</td>
<td>74%</td>
</tr>
<tr>
<td>2006</td>
<td>4.5</td>
<td>57%</td>
</tr>
<tr>
<td>2007</td>
<td>5.1</td>
<td>45%</td>
</tr>
<tr>
<td>2008</td>
<td>3.5</td>
<td>38%</td>
</tr>
<tr>
<td>[2009]</td>
<td>2.0</td>
<td>22%</td>
</tr>
</tbody>
</table>

**Source:** Augustin K., Walter, M., 2009,

*Bruno Faivre d’Arcier – Public Transport in Europe*
Germany: Bus Services

• PTA able to realize significant efficiency gains, reducing subsidy payments by -15% to -31% on average.
• Inflation adjusted prices remained stable over almost a decade, while recent results indicate unit costs are increasing.
• Expenses related to the tendering process (allocation, contract management) are relatively low at only ~5% of the efficiency gains or ~2% of the costs of a contract for the full contract period.
• Overall level of competition is high (5-7 bidders). But number of bidders is declining recently
• Quality level of the public transport services has improved considerably: average age of vehicles downed, higher environmental standards.

Source: BECK A., 2009, What are the effects of Competitive Tendering on Bus Services in Germany?, Thredbo 11 Conference, Delft, 22nd September 2009
Sweden: Funding of public transport

Standard organisation in Sweden as a result of the Public Transport Act 1978
1989 Act – introduction of competitive tendering

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Vehicles</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>National infrastructure by the government</td>
<td>Buses included in contracted services</td>
<td>Regional and Local Public Transport organised by the PTA financed by Municipalities and County/Region</td>
</tr>
<tr>
<td>Regional and local infrastructure by the PTA with government grant 0-50 %</td>
<td>Trams/Trains financed by the PTA</td>
<td>Contracted services</td>
</tr>
</tbody>
</table>

Source: S. Ringqvist, RTM Konsult, 2009
Sweden: Responsibilities PTA↔ Operators

- PTA responsible for operations design, fare system and information
- Operators contracted after competitive tendering
- Contract models used today
  - Gross contract models
  - Gross contract models with incentives
  - Quality incentives
  - Revenue incentives
- ……Limited usage of net-contract
– 3 –

Funding Local Public Transport
Alternative source of funding

• Capturing real estate increased value
  – the London Docklands (Light Rail), the new Orestadt district in Copenhagen (funding the subway: 45% from land sale and 15% from land tax), the Parla Township in the Madrid suburbs (Tramway)
  – a risk linked to the real estate market…
  – preference for local tax based on property value (long term)

• Resources from the car sector
  – Germany: special tax on fuel (3.5 bn € a year to the federal State)
  – Paris region: receipts from the parking rules offences
  – London: the congestion charging scheme (not designed for!)

• Fare increase
  – preventing social exclusion?
The French UPT Financing Scheme

• Since the 70’s, a dedicated Transport Tax
  – Based on the total wages of public and private companies of more than 9 employees, located within the UPT area
  – From 0.55% to 1.80%, and more in the Paris region
  – A new obligation for companies to reimburse 50% of the PT monthly ticket of employees using the PT network to go to work
  – Companies are the main financial contributor for UPT

• A breath of fresh air for municipalities …
  – A strong capacity of investment for PTAs
  – But an easy money which does not encourage for efficiency
  – Fares remain low…
  – PT operators’ productivity does not increase
the drift of public contribution

103 PT networks - Euros 2005

+3.6 % per year

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A decrease of the farebox revenue per trip

Farebox revenue per trip

Euros 2005

- 0.9 %
- 0.6 %
+ 0.8 %
- 0.1 %

Data: UTP - chiffres clés 2006

> 250,000 inhab. [22]
100-250,000 inhab. [34]
< 100,000 inhab. [47]
Total [103 PT networks]
An increase of operating cost per vehicle km

Operating cost per vehicle kilometre

Euros 2005

Average annual change

Data: UTP - chiffres clés 2006

> 250,000 inhab. [22]  100-250,000 inhab. [34]  < 100,000 inhab. [47]  Total [103 PT networks]
The 1995-2005 evolution (average annual increase rates)

<table>
<thead>
<tr>
<th></th>
<th>1995/2000 average annual increase rate</th>
<th>2000/2005 average annual increase rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 250,000 inhabitants [22]</td>
<td>1,40% 1,80%</td>
<td>1,27</td>
</tr>
<tr>
<td>100 to 250,000 inhabitants [34]</td>
<td>1,80% 0,40%</td>
<td>0,21</td>
</tr>
<tr>
<td>&lt; 100,000 inhabitants [47]</td>
<td>1,50% 0,00%</td>
<td>0,02</td>
</tr>
<tr>
<td>Total [103 PT networks]</td>
<td>1,60% 1,30%</td>
<td>0,86</td>
</tr>
</tbody>
</table>
The 1995-2005 evolution (average annual increase rates)

<table>
<thead>
<tr>
<th></th>
<th>&gt; 250,000 inhabitants [22]</th>
<th>100 to 250,000 inhabitants [34]</th>
<th>&lt; 100,000 inhabitants [47]</th>
<th>Total [103 networks]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Served population</td>
<td>0.76%</td>
<td>1.28%</td>
<td>1.35%</td>
<td>1.00%</td>
</tr>
<tr>
<td>PT supply (veh.km per inhab.)</td>
<td>0.83%</td>
<td>0.48%</td>
<td>0.52%</td>
<td>0.67%</td>
</tr>
<tr>
<td>Patronage (Trips/inhab.)</td>
<td>1.34%</td>
<td>-0.83%</td>
<td>-1.31%</td>
<td>0.56%</td>
</tr>
<tr>
<td>Load factor (Trips per veh.km)</td>
<td>0.50%</td>
<td>-1.31%</td>
<td>-1.83%</td>
<td>-0.11%</td>
</tr>
<tr>
<td>Covering ratio</td>
<td>-2.35%</td>
<td>-3.30%</td>
<td>-2.77%</td>
<td>-2.59%</td>
</tr>
<tr>
<td>Farebox revenue per trip</td>
<td>-0.92%</td>
<td>-0.11%</td>
<td>0.78%</td>
<td>-0.60%</td>
</tr>
<tr>
<td>Farebox revenue per veh.km</td>
<td>-0.43%</td>
<td>-1.42%</td>
<td>-1.06%</td>
<td>-0.70%</td>
</tr>
<tr>
<td>Operating expenses per trip</td>
<td>1.46%</td>
<td>3.30%</td>
<td>3.64%</td>
<td>2.05%</td>
</tr>
<tr>
<td>Operating expenses per Veh.km</td>
<td>1.97%</td>
<td>1.95%</td>
<td>1.75%</td>
<td>1.94%</td>
</tr>
<tr>
<td>Operating deficit per trip</td>
<td>3.55%</td>
<td>5.42%</td>
<td>5.25%</td>
<td>4.11%</td>
</tr>
<tr>
<td>Operating deficit per veh.km</td>
<td>4.07%</td>
<td>4.04%</td>
<td>3.33%</td>
<td>4.00%</td>
</tr>
</tbody>
</table>
The 2015 reference scenario: average increase rates

<table>
<thead>
<tr>
<th>2015/2005 variation</th>
<th>Operating Expenses</th>
<th>Other PTA Expenses</th>
<th>Network Total Cost</th>
<th>Fare Box Revenue</th>
<th>Operating Deficit</th>
<th>Net Transport Tax</th>
<th>Public Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 250,000 inhabitants</td>
<td>39%</td>
<td>48%</td>
<td>43%</td>
<td>14%</td>
<td>61%</td>
<td>37%</td>
<td>76%</td>
</tr>
<tr>
<td>100-250,000 inhabitants</td>
<td>36%</td>
<td>47%</td>
<td>40%</td>
<td>-5%</td>
<td>51%</td>
<td>40%</td>
<td>63%</td>
</tr>
<tr>
<td>&lt; 100,000 inhabitants</td>
<td>37%</td>
<td>42%</td>
<td>39%</td>
<td>-2%</td>
<td>52%</td>
<td>39%</td>
<td>61%</td>
</tr>
<tr>
<td>Total [103 networks]</td>
<td>38%</td>
<td>47%</td>
<td>42%</td>
<td>10%</td>
<td>57%</td>
<td>38%</td>
<td>72%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Public Contribution per inhabitant</th>
<th>2005</th>
<th>2015 Reference scenario</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 250,000 inhabitants</td>
<td>97.53 €</td>
<td>159.74 €</td>
<td>64%</td>
</tr>
<tr>
<td>100 to 250,000 inhabitants</td>
<td>51.24 €</td>
<td>74.55 €</td>
<td>45%</td>
</tr>
<tr>
<td>&lt; 100,000 inhabitants</td>
<td>28.98 €</td>
<td>41.84 €</td>
<td>44%</td>
</tr>
</tbody>
</table>
First scenario: *Reducing the 2015 Public Contribution to its 2005 level*

Needs together (compared with the reference trends):

- A 10% reduction of the operating expenses per PT employee (OPTE)
- A 10% reduction of the number of employees per million vehicle kilometre (EVKM)
- A 20% increase of the Fare Box Revenue per Trip (FBRT)
- A 20% increase of the Number of Trips per Vehicle Kilometre (NTVK)

PTAs consider such an objective non realistic…
Scenario 2: to stabilise the ‘Fare Box Revenue / Operating Expenses’ ratio at the 2005 level

- Stabilising the Operating Expenses per PT Employee at its 2005 level (OPTE) = a 6% reduction compared with the reference scenario
- Stabilising the number of PT Employees per million Vehicle Kilometres (EVKM) = a 11% reduction
- A 2% increase of the Number of Trips per Vehicle Kilometre (or a 2% increase of the Fare Box Revenue per Trip)
- Leads to a 36% increase of the Public Contribution compared with 2005 (or a 23% reduction compared to the reference situation).
Scenario 3: to stabilise the share of Public Contribution in the total of resources

- means finding extra 337 M€ (or 29 € per inhabitant), while the Public Contribution still grew by 450 M€ compared with 2005

- Needs together:
  - A 5% increase of the Transport Tax (compared with the reference scenario),
  - A 12% increase of the Fare Box Revenue per Trip
  - A 12% increase of the number of Trips per Vehicle Kilometre
Scenario 4 – ‘Sustainable Mobility’: means a 60% increase of the number of trips on PT networks

• Hypotheses:
  – A 25% increase of the supply (veh.km per inhabitant)
  – A 30% increase of the PT Authority‘s other expenses per Vehicle Kilometre
  – A 30% increase of the Number of Trips per Vehicle Kilometer
  – A 25% increase of the Fare Box Revenue per Trip

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Operating Expenses</td>
<td>1,725</td>
<td>2,400</td>
<td>2,772</td>
<td>16%</td>
<td>61%</td>
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<tr>
<td>Other PTA Expenses</td>
<td>1,652</td>
<td>2,439</td>
<td>2,878</td>
<td>18%</td>
<td>74%</td>
</tr>
<tr>
<td>Network Total Cost</td>
<td>3,377</td>
<td>4,839</td>
<td>5,650</td>
<td>17%</td>
<td>67%</td>
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<tr>
<td>Fare Box Revenue</td>
<td>799</td>
<td>907</td>
<td>1,740</td>
<td>92%</td>
<td>118%</td>
</tr>
<tr>
<td>Operating Deficit</td>
<td>926</td>
<td>1,492</td>
<td>1,032</td>
<td>-31%</td>
<td>11%</td>
</tr>
<tr>
<td>Net Transport Tax</td>
<td>1,534</td>
<td>2,098</td>
<td>2,098</td>
<td>0%</td>
<td>37%</td>
</tr>
<tr>
<td>Public Contribution</td>
<td>1,044</td>
<td>1,834</td>
<td>1,812</td>
<td>-1%</td>
<td>74%</td>
</tr>
</tbody>
</table>
Lessons learnt...

• Cutting the drift of Public Contribution needs structural changes in the structure of the funding of PT networks
  – The present economic crisis forces PTAs to savings

• Fares should be revised in the perspective of ‘sustainable mobility’
  – Newcomers are car drivers with a higher willingness to pay

• The economic performance of PT network has to be improved
  – Analyzing the reasons of a low productivity and a weak attractiveness
Some paths to improve PT network performance

• Reforming the Public Service Contract
  – Sharing the ‘tactical level’ with PT operators, to optimize the operation of the network
  – Developing real financial incentives: a performance-based contract

• Redesigning networks
  – To a better identification of the ‘missions’ and the consequent adaptation of the ‘level of service’ standards
  – Diagnostics to be done at the level of each route

• Redesigning the fare structure
  – A more individualized marketing approach
  – Designing new fare products in relation to the targeted customers
A performance linked to the roles of PT

Social role

Environnement stakes

Which supply for each mission?

Who pays what?

Congestion reduction

Urban renewal
Which “performance”?  

- **Productive**: output / inputs  
  - Economic efficiency … 

- **Contracts Performance**: Operator control  
  - Encouraging to productivity and quality  

- **Network Performance**: « attractiveness »  
  - Design of the network (Trip per kilometer)  

- **Service Performance**: the 4 roles  
  - Adequacy to the targets  

- **Public Policy Performance**:  
  - Contribution to Sustainable Mobility
Thank you!