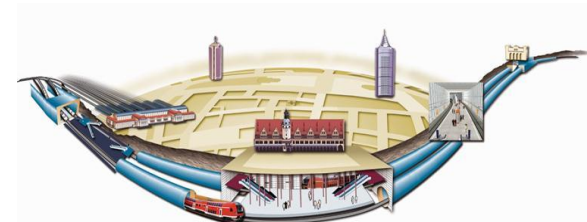
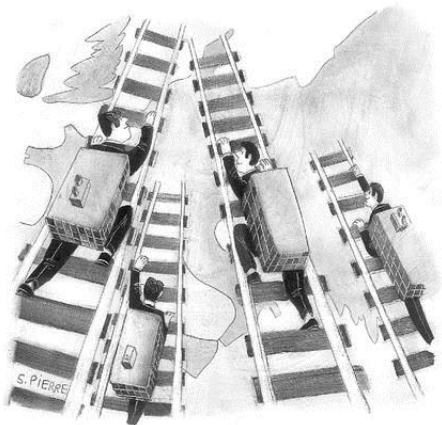




# Innovation in Sub-Urban and Regional Railway Passenger Transport : the Opening to Competition and new City Tunnel in Leipzig Region

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## Outlines

- 1) Introduction : from Lyon to Leipzig : why looking to Leipzig ?
- 2) Leipzig : city of innovations, especially for transport
- 3) Regional Passenger Rail transports : Opening to competition (evaluation of cost impacts and gain for public authorities and feedback from you !)
- 4) Perspectives - new City Tunnel (2013) - and further researches...





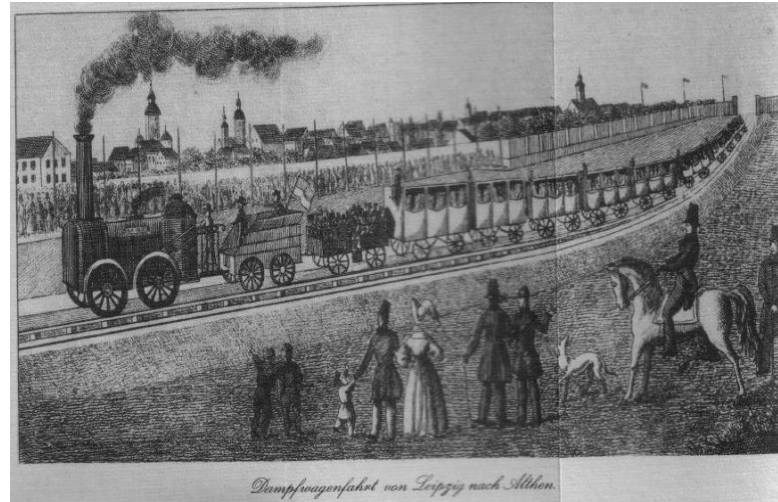
## **1) Following European Regulation in Railway Regional Passenger Transport : Germany in advance or « on time » !**

France delayed ... but « process launched » ; Regions ready ; Public Finance under constraints ; France - Germany : lack of reciprocity ;-( !

- ✓ Interesting to investigate “German case studies” like Leipzig : learning effects
- ✓ Innovating city...

- Leipzig : first long distance network 1835-1837 : LDEC
- Start of “freedom revolution” in for GDR
- Leading innovation during industry revolution
- « Culture-City » today of East Germany (Plagwitz area)
- 2009-2012 : competition in passenger regional railway transport
- New 4 km City Tunnel for passenger regional trains to be launched in 2013

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Urban Mobility Systems : Regulation Across Modes  
Florence, Italy – 7.12.2012



« Das deutsche Eisenbahnsystem ist in Leipzig auf die Welt gekommen »  
(Haase, p. 212)





FEDERAL LEVEL : German experiences in regional railway transport :

Train.km : +26 % in comparison with 1994 (630 millions train.km)

Pass.km : +55 % in comparison with 1994 (47 millions pass.km)

Federal Subsidies 1996-2009 : - 6 % (in real values)

⇒ For 1 € (in real values), + 37% of transport operations by the Länder

⇒ Costs : 7 billions €/year (Cover around 60 % of the spendings)

⇒ Newcomers : Veolia Transdev ; Netinera ; BeNEX ; AVG ; Keolis,...

And Leipzig Region ?



## 2) Leipzig Railway Region

- 4000 km<sup>2</sup> ; 1,7 millions inhabitant 40 km around
- Network : 500 km and 110 stations ; 50 000 passengers/day
- 10 millions trains.km, 345 millions pass.km ; Spending for regional transport for around 100 millions Euros (less than 1% of total SPNV supply in FRG)
- January 2010 – December 2012 : DB Regio and MRB (Veolia)
- Result of introduction of competition : 20 % decrease of public spending : it means + 2 millions train.km/year
- 1<sup>er</sup> January 2011 : Decision Government of Saxony : saving 10 millions € on regional passenger transport (ar. - 500 000 trains.km for Veolia (MRB) and - 400 000 trains.km for DB )
  
- January 2013 : new City Tunnel to be opened in city center (Who is building the tunnel ? : DB indirectly ; new contracts : DB)

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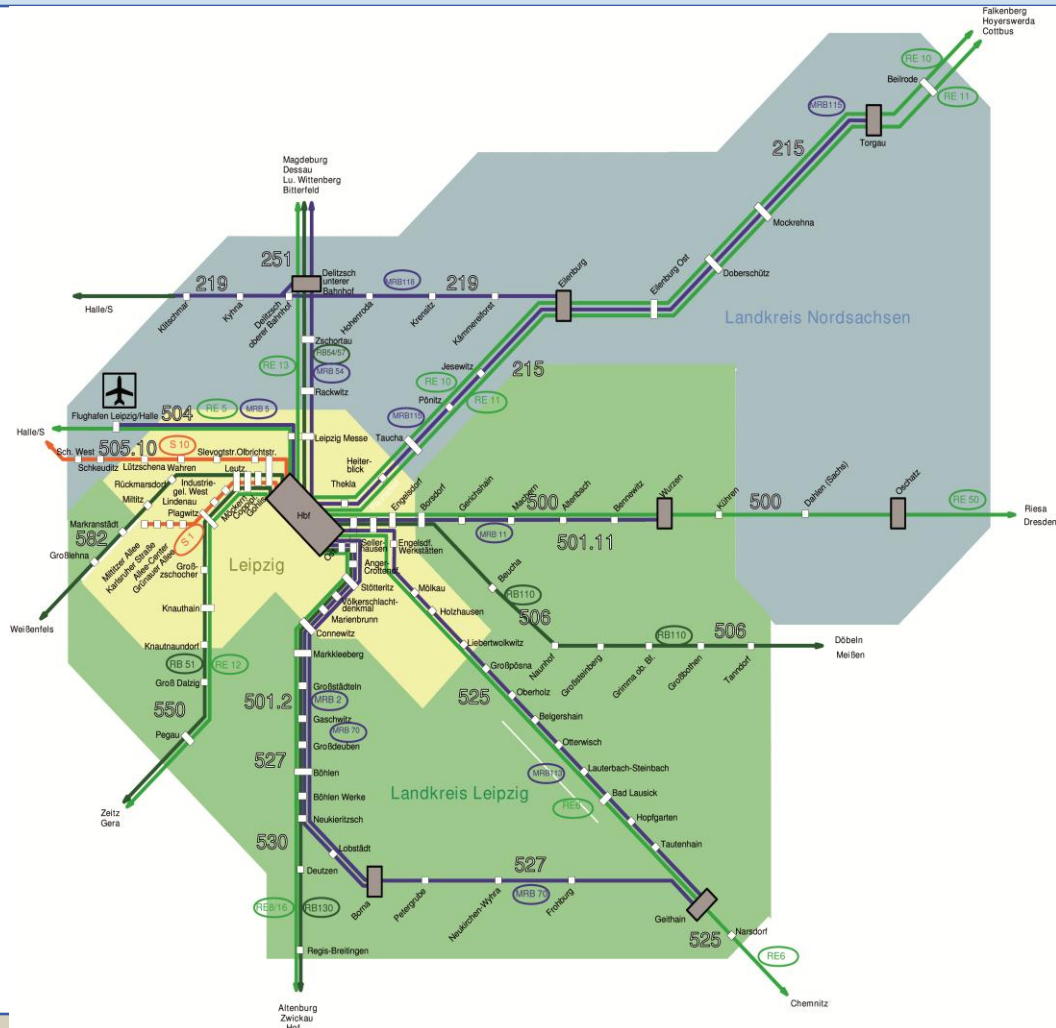
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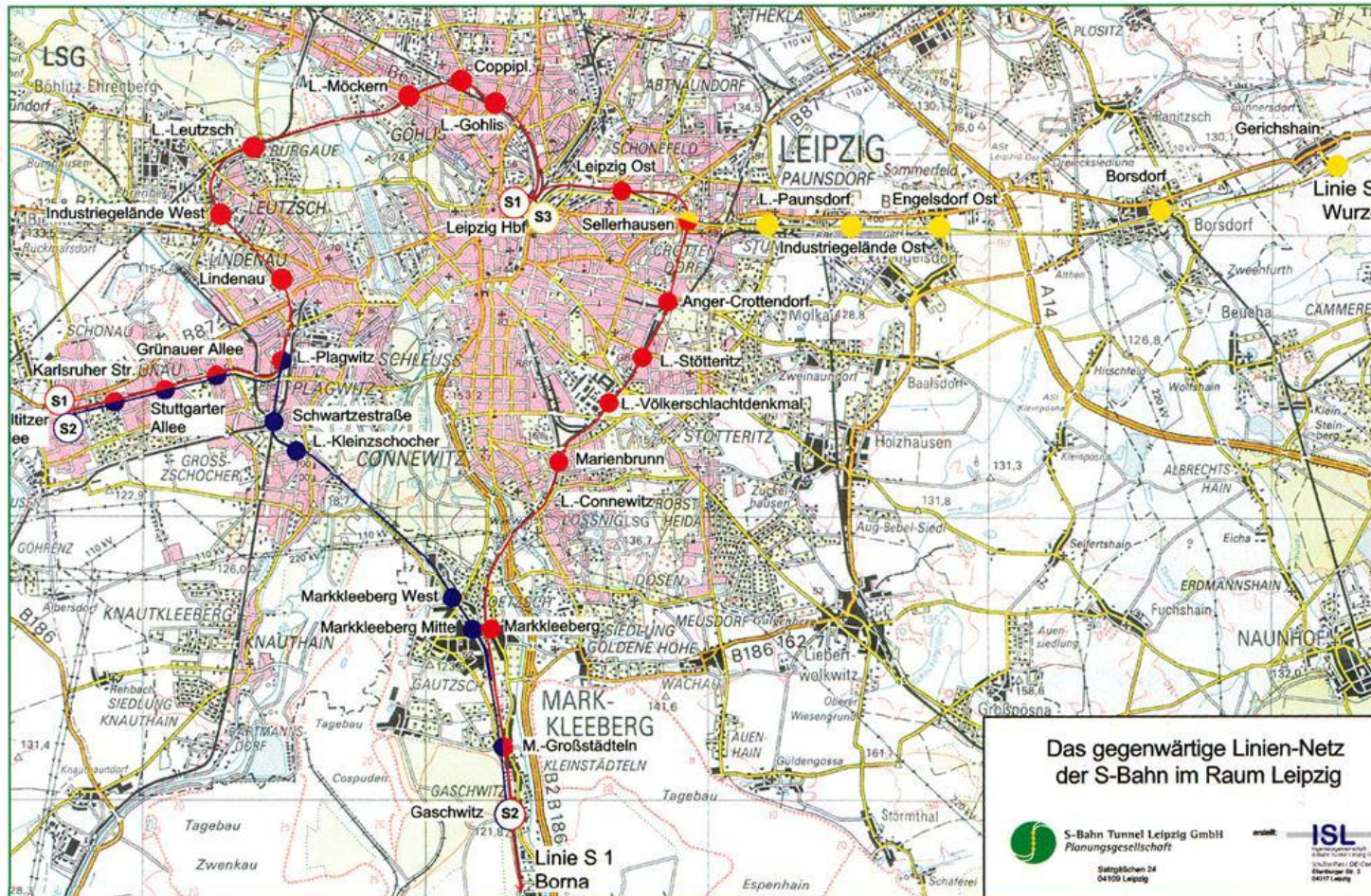


### Methodology :

- Direct contact with transport authority ZVNL : ver'y great welcome
- Discussion with DB Regio / MRB
- Newsgroups discussion « Rail »
- Podium discussion



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Source :  
technical visit  
from the author  
at the invitation  
of the Ministry  
of Economy,  
Labor and  
Transport from  
Land Saxony, 4  
Mai 2012



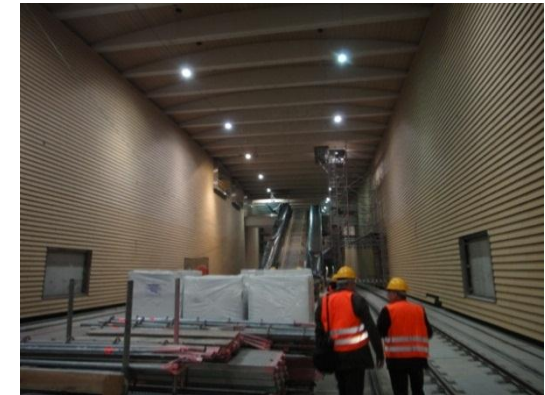
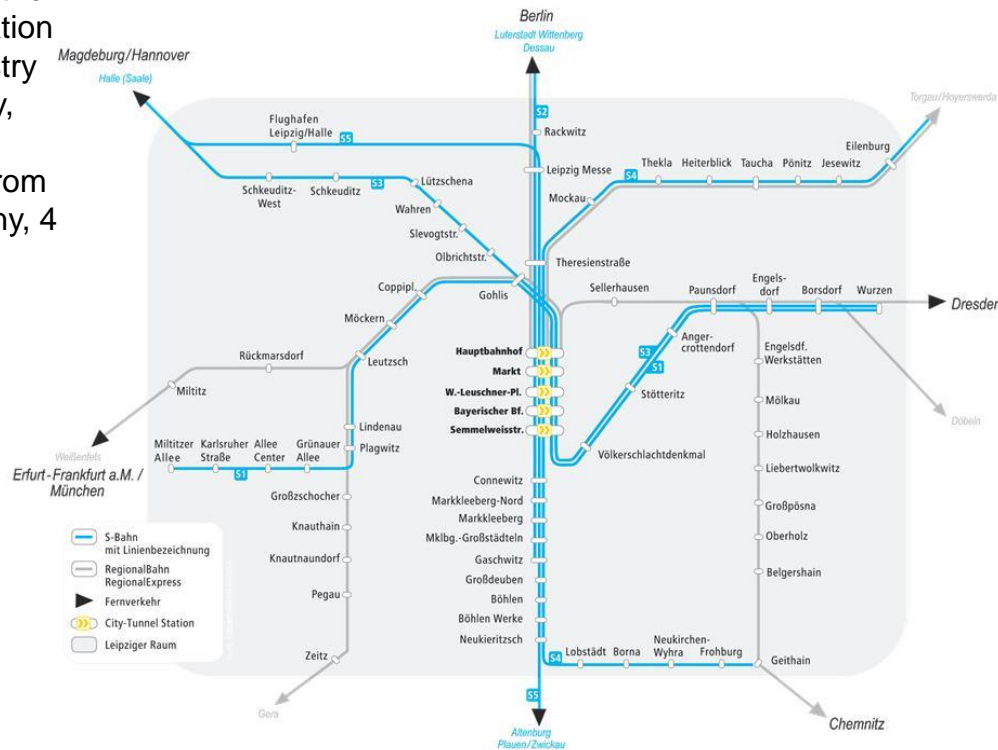
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## Time savings

 REISEZEITVERGLEICH				
von	nach	Reisezeit Fahrplan 2006	Reisezeit City-Tunnel	Zeitvorteil
Halle	Altenburg	84 min	63 min	21 min
Eilenburg	Altenburg	87 min	71 min	16 min
Wurzen	Miltitzer Allee	72 min	62 min	10 min
Eilenburg	Borna	79 min	64 min	15 min
Halle	Gaschwitz	69 min	58 min	11 min
Delitzsch	Gaschwitz	56 min	35 min	21 min
Eilenburg	Gaschwitz	55 min	45 min	10 min
Leipzig Hbf	Altenburg	58 min	46 min	12 min
Delitzsch	Altenburg	90 min	77 min	13 min



### 3) Cost assessments of transport operations in Leipzig Region

Table : Estimation of infrastructure costs in regional railway operation in Leipzig Regio (million €/year and in % of total)

Traffic	Cost of tracks	Stop in stations	Total	TOTAL
2010				
6 – 7 millions trains.km / year	25 -30	10 – 15	35-45	5 – 6 €/train.km
	30 – 35 %	10- 15 %	Around 45 %.	

Source : investigation in Leipzig – 2009-2010 ; discussion and cross check

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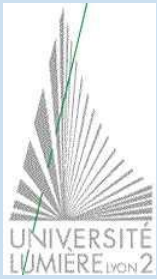


Table : evaluation of operating costs in regional passenger train in the Leipzig Regio (in million €/year and in % of total)

Traffic 2010	Capital Costs	Rolling Stock and maintenance	Energy costs	Employees costs	Overhead costs	Risks and profit	Total	TOTAL
6 – 7 millions train.km / year	20-24	5 – 6	4- 5	5,5 – 6,5	5,5 – 6,5	1,5 – 2,5	41,5 – 50,5	6 – 7 € train.km
	30 %		6-7%	7 %	7 %	1-3 %	Around 55 %	

Source : investigation in Leipzig – 2009-2010 ; discussion and cross check ; TOTAL infra + operating : 76,5 – 95,5 millions euro / year, it means around 11 – 13 €/ train.km

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Table : summary of evaluation of costs and revenues of regional passenger transport in Leipzig regio

2010	Operating costs in €/train.km	Infra costs in €/Train.km	Total cost in €/Train.km	Revenues in €/train.km	Public subsidies in €/train.km	Traffic in Train.km	Subsidies en €	Benefit from tendering compared with statu quo en €/ par an
DB before competition	? DB ? 10 – 12 €/train.km ?	[5 – 6] €/train.km	? DB ? 14-16 € train.km?	[3 et 4] €/train.km	[9 – 12 €] €/train.km	[6 - 7] million Tr.km	[65 – 70 ] million €	
Competition	[6 et 7] €/train.km	[5 – 6] €/train.km	[11 – 13] €/train.km	[3 et 4] €/train.km	[7 – 9] €/train.km  Benefit : 2-3€/train.km	[6 - 7] million Tr.km	[50 – 56] million €	Entre 12 et 16 million €/year

Source : discussion and cross check

**Differentiation variables** : employees costs (not any more), energy (under investigation – No !), rolling stock material and access to financial market, “lean management”



CONCLUSION : Learning from opening to competition in Leipzig Region :

- Not easy : rolling stock material : bottleneck (See Arriva (before DB) not tendering)
- Newcomer : no information : has to do the counting of passengers on his own ; may change now...
- Costs of train stations : St. 1 (Leipzig) : 39,19 € / stop ; Airport : 19,73 €/stop → 2,22 € / stop... complexe ; not clear
- Complexity of tendering (high expectations of transport authority) : less competition in the future ? Strategic behaviors of DB and newcomers ?
- Leipzig interesting : SERVICES + NEW INFRA. : City tunnel : risk and uncertainty in a long term perspective for the newcomer (train stations costs for instance ; who is building the tunnel ? ; Time of opening ? Long term contract required by the incumbent operator for buying new rolling stock materials compatible with tunnel ?
- AND Budget cut during operation : possible in Sachsen (1 millions Euro = 10 millions train.km on a vote by the Saxony Parliament ! RISK !
  
- Learning : FRANCE SNCF – TER costs : 16 €/train.km >>>> 11 € train.km (Germany) !
- FIRST TENDER : - 20 % subsidies ! SEE : Alexandersson G and Hulten S (2007) Competitive tendering of regional and interregional rail services in Sweden In European Conference of Ministers of Transport (2007) Competitive tendering for rail services, ECMT, Paris.

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Financement du tunnel de Leipzig, un projet européen (en millions d'euros)

Source : DB AG, 2004, p. 89 ; visite technique le 4 mai 2012

	Planning prévisionnel	Coût actuel en mai 2012
<b>UE EFRE 2001-2006</b>	168,73	224,79
<b>DB AG (DB Netz und DB Station und Services)</b>	16,36	17,95
<b>Subventions fédérales (§ 8(1) BSchwAG et § 8 (2) BSchwAG</b>	114,54	208,30
<b>Subventions fédérales (Gvfg)</b>	77,20	
<b>Gouvernement de Saxe et Leipzig</b>	194,80	508,70
<b>TOTAL</b>	571,62	959,75