Brussels Europe Rotary Club January 9, 2013

Accessing Brussels

Pierre **LACONTE**

Honorary Secretary General, International Association of Public Transport – UITP, President, Foundation for the Urban Environment, Past-president, International Society of City and Regional Planners

Accessing Brussels The international context

Global 1. transport framework. Urban density is the key to modal balance. Rail has a brighter future in regions with dense human settlements.

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Urban Density vs. Gasoline Consumption in Cities - Concentration urbaine / consommation d'essence dans les villes - Städtische Wohndichte im Verhältnis zum Benzinverbrauch in den Städten



2. Market conditions.

The railway age in the industrial world was based on private investment in infrastructure, rolling stock and operations, rewarded by the market. Belgium was at the forefront in rail, local rail and workers passes that avoided concentrating workers in squalid peri-urban settlements.

3. New market conditions.

The market changed in the US and later in Europe when the automobile was allowed to use the road network free of charge (except for a few turnpikes) while the railroads' infrastructure did not get the same treatment.



4. Land use. Railways induced high density development around the stations. Roads and car parks could be developed anywhere. Their space consumption was much higher than that required by a rail-oriented city.

8/11/99-5/37 PM



Public Private Partnership

5.US urban sprawl: dispersed settlements which are only accessible by car became the worldwide model.



6. Starting in the US, the dispersal model gradually became dominant in Europe also. A notable exception has been the Flemish **Stevaert Decree** of 2001 on PT availability.





EUROPEAN COMMISSION DIRECTORATE GENERAL Joint Research Centre



7. Fast trains and the new railway age. A revolution in rail transport started in Japan in 1962: the Shinkansen (220 km/h), followed in 1976 by the European HS train : in France, the TGV (270 km/h), followed in 1991 by the German ICE (300 km/h) and the new ICX (250 km/h). The latest models allow a speed of up to 350 km/hour on dedicated straight track.



8. Higher capacity. **Double-deck** rolling stock allows the capacity of trains to be adapted to traffic growth on existing high-speed lines.



9. The network is nevertheless constantly expanding. It is however hampered by trans-border financing constraints. Commuter railways, a milk cow in Japan, are in Belgium underserved and underpriced, notwithstanding the rich potential.



Accessing Brussels The Metropolitan context

Cercle Gaulois 10. Brussels' Metropolitan Area

Aménagement du territoire wallon et aire métropolitaine bruxelloise

Débat avec Philippe HENRY, Ministre de l'Aménagement du territoire et de la Mobilité de la Région Wallonne et Benoît Périlleux, Cabinet du Ministre-Président de la Région de Bruxelles Capitale Charles Picqué Exposé introductif de Bruno CLERBAUX, Président de la Chambre des Urbanistes de Belgique



Proportion d'actifs travaillant en RBC = polarisation de Bruxelles:

- Gent, HV
- Brabant wallon

Turquoise : zone RER = +/- Aire Métropolitaine Bruxelloise (« AMB »)

Chambre (



Plan du RER - Horizon 2012 GEN-schema - Streefbeeld 2012 12. Brussels' Metropolitan Area

- 4 autorités organisatrices;
- 4 opérateurs de transport (SNCB, VVM, SRWT, STIB);
- Des accords de coopération bilatéraux entre les Régions;
- Un accord Fédéral RBC (Beliris) en matière d'infrastructures;
- Un accord de coopération RER organisant:
 Une conférence interministérielle
 un groupe de travail de haut niveau

DRAME LE-CONTR



ne tas orce informelle de travail

TRUNCH > FTS

Projet à l'étude pouvant encors être sujet à modification detuier det mogelijk may géwijolgil han werden.

Groupe SNCB / HM85-Groep

13. Tramway extension projects in the Metropolitan Area.



14. Metropolitan Area.

Present situation of high-way congestion in the Central Belgium Metropolitan Area.



21 juni 2011 - Colloquium Mobiliteitsprojecten Brussel

15. Widening projects for the Northern ring.



16. Eastern part.



17. Access to the European Area.

ACCES CENTRE VILLE : Quartier Européen Situation projetée (propositions Schéma Directeur QE + plan de circulation QE) :

> amélioration des espaces publics du QE et mise en tunnel de la circulation de transit



18. Proposal by Bruno Clerbaux.

ACCES CENTRE VILLE : Quartier Européen Situation projetée (étude mise en tunnel rue de la Loi) :

> mise en circulation locale de la rue de la Loi (Périmètre Urbain Loi)



ACP GROUP



ACCES CENTRE VILLE : Quartier Européen Situation projetée (étude mise en tunnel rue de la Loi) :

> mise en circulation locale de la rue de la Loi (Périmètre Urbain Loi)



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CLERBAUX-PINO

ACCES CENTRE VILLE : Quartier Européen Situation projetée (étude mise en tunnel rue de la Loi) :

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CLERBAUX-PINON



ACCES CENTRE VILLE : Quartier Européen



Anticongestion measures abroad The case of Singapore



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Singapore Area Licensing Scheme 1975-2000.

Through its pioneering restraint of car ownership (a monthly auction of new licensing plates, with a maximum yearly increase in car ownership of 2.5 %), its congestion pricing, its network of driverless subway trains linked with pedestrian malls and its highly convenient intermodal multi-use Easylink card, Singapore is considered a best practice in sustainable transport. Its "area licensing scheme" was launched in 1975, requiring drivers entering the city to pay a fee or accept three passengers. It confirms that oblique approaches are politically the most successful, especially in a difficult context (nobody could protest against such a scheme). Photo: P. Laconte.



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In 2000 in Singapore the fee to enter the city was replaced by Electronic Road Pricing. The new system was applied to all drivers but the fee level varied according to the type of traffic congestion (the fee increases at peak times as a way to reduce congestion). This was also a signal to the user that the fee was in effect a congestion charge, not an additional tax on automobile use. Photo: P. Laconte.

25 - Singapore has been the pioneer of driverless high-capacity metro networks (starting with the North-East Line in 2003). Absence of drivers means shorter intervals between trains, higher capacity and higher safety levels. Most of the staff interface with passengers, rather than just sitting in a tunnel. This network has set the standard for future metros around the world. Nuremberg, Brussels and other cities are retrofitting existing lines to make them driverless and increase their capacity (Source: Land Transport Authority, Singapore).



Accessing Brussels The case of Zurich

- 26. Local adaptation combining land-use and transport – Zurich.
- Excellence in public transport – the City of Zurich,
- Switzerland
- In Zurich, trams and buses enjoy absolute priority on street. When approaching a traffic light the sensor shown on the lower left ensures they have a green light at any time of the day. The City's modal split is around 80% in favour of public transport. Photo: **City of Zurich Police** Department.



27. Local adaptation – Zurich.

Zurich's - automobile traffic calming through traffic light cycle control: Traffic-calming is ensured by adapting the traffic lights system (a much shorter cycle favouring pedestrians, cyclists and public transport). Source: City of Zurich Police Department.



28. Local adaptation – Zurich. Zurich parking management: Unrestricted on-street parking is exclusively reserved for Zurich-registered residents, while automobile commuters entering the city from other municipalities are subject to limits on their parking time. Conversely, rail commuters have benefited from an increased service. The parking measure has brought a return of inhabitants to the city (who are able to park), and has been politically rewarding for the city fathers, while suburban rail travel has been made easier. Source: **City of Zurich Police** Department.



29. Mobility and Liveable Cities.

The transport network irrigating the city. Poster by Friedensreich

Hundertwasser (1928-2000) for UITP (1991).



30. Mobility and Liveable Cities.

The compact city – poster by Friedensreich Hundertwasser for UITP (1993).



31. Mobility and Liveable Cities.

- Enjoyment as a key to liveability poster by
- Friedensreich
- Hundertwasser for UITP (1995).

