Appraising territorial effects of tram-based system
results of the state of art
Plan

1- Recall of last presentations : from impact to congruence

2- Different decision models in Europe : the cases of France, UK and Germany

3- Towards an exploratory analysis : cases studies and method

See summary of results of the 1st stage
Recall of last presentations

1- Kassel, sept 2009
Presentation of aims and study stages

2- Koksijde, march 2010
Definitions of "territorial effects" and "urban development"
Approach for analysis: governance, appraisal methods and main results about social, economic and territorial effects

3- Blackpool, sept. 2010
French case: context and governance
First European state of the Art

4- Nijmegen, march 2011
Analysis of territorial effects of French urban tramways
Suggest of case studies in Europe

5- Valenciennes, sept. 2011
Results of the state of art about decision models in Europe
Case study and method for the second stage
The observed effects are not part of causal relationships, but of complex interactions. These interactions depend on the economic and social conditions at a given time, the dynamism of local actors and their ability to seize the opportunities.

→ We will use the terms "territorial effect" or "opportunity" instead of "impact"

From impact to congruence

<table>
<thead>
<tr>
<th>Vocabulary</th>
<th>Link</th>
<th>Dynamics</th>
<th>Approach</th>
<th>Method</th>
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</thead>
<tbody>
<tr>
<td>Impact; structuring effects</td>
<td>Causal relations</td>
<td>Synchronic: report at a specifical moment</td>
<td>Cartesian: fragmented approach, identify the weight of the transport variable</td>
<td>Assessment comparison before/after</td>
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<tr>
<td>Territorial effects; mutations; congruence</td>
<td>Reciprocity: A phenomenon interacts with its environment</td>
<td>Diachronic: to take into account temporal evolutions and dynamics which have been noticed before the putting into service of tram system</td>
<td>Systemic: complex approach of synergies, interdependences</td>
<td>Observatory: temporal analysis of interactions</td>
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Different tram contexts

Number of urban area (more than 200,000 inhabitants) with a tram system

- France: removed old tram to open many modern tram and modernize
- Germany: preserve old tram
- UK: removed old tram to open a few tram

1880/ UK leader
1940/ UK anticipated tram closing (World War 2)
1950/ city planning for cars
1960/ German preservation
2000/ French tram renewal
Different decision models

Foreword: this is a large distinction of a three contrasted decision models

- **France, political logic**
- **UK, economical logic**
- **Germany, technical logic**

**France, political logic**

Importance of the political dynamics representatives in the choice of the transport system, and the implementation of projects.

This decision model is questionable: appraise tram-system investments is light and is generally utilized to justify the political choices.

This decision model is efficient: many modern tramway lines in French urban area. Political interest to the "image effect".

Consequence: to do a beautiful project is a « French style »!

French projects offer high landscape quality; French tramway as actor of urban renewal.
Different decision models

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- UK, economical logic

Tram projects assessment is influenced by an economic logic. Cost-Benefit Analysis (CBA) is of decisive importance in achieving the proposed tramway projects. But authors think that CBA produced many errors or lies.

Many tram projects, however providing many social benefits were rejected: only the average cities of Sheffield (in 1994) and Nottingham (in 2004) have a modern tram.

Consequence: to do a profitable project is a « UK style »!
Different decision models

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- France, polical logic
- UK, economical logic
- Germany, technical logic

Germany, technical logic

The german model rests on an efficient approach based on the coherence of the mobility's systems. In the decision-making, there is also a wide place for the technical study and for the transport's ingeniery. German logic gives more coherence between public transport and urban renewal.

German public transport are more conceived for their transport function than their « image effect ». The investment's choices minimize the tramway's part on the requalification of the urban environment: for exemple, projects of passage in underground of the tram-based system.

Consequence: to do a efficient project is a « german style »!
Towards an exploratory analysis

One question: How could we reach beautiful, profitable and efficient project?

One hypothesis: there is a differentiation of the national models (political, economical, technical). Do the local studies confirm this hypothesis?

Six cases studies: Analysis of 6 guided transport networks among which 4 are in North-West Europe.

One method: a three-dimensional graph to observe the opportunities and the territorial effects produced by the tram system.
Nottingham Express Transit (2004)
Sneltram Utrecht (1983)
Tramway de Valenciennes (2006)
Saarbahn (1997)
Tranvia Bergamo-Albino (2009)
Tranvia Velez-Malaga (2006)
Observation of tramway's effects through the three-dimensional graph.
A three-dimensional graph

Observation of tramway's effects through the three-dimensional graph.

Spatial dimension
- Metropolitan/regional scale
- Scale of urban planning
- Corridor of the line (400-500 m.)
- Perimeter of the tramway line

Temporal dimension
- Previous phase (2-3 years before)
- Open tram starting of the infrastructure
- Mutations at middle term
- Mutations at longer term
- For example: permanent effects on street planning
- For example: temporary effects at civil engineering on traffic

Functional dimension
- Tram project
- Transport policy
- Urban policies (economic, social, environmental ...)

For example: 
- permanent effects on street planning
- temporary effects at civil engineering on traffic
A three-dimensional graph

Observation of aims and assessment of tram policy in different contexts

- **Spatial dimension**
  - Metropolitan/regional scale
  - Scale of urban planning
  - Corridor of the line (400-500 m.)
  - Perimeter of the tramway line

- **Temporal dimension**

- **Functional dimension**

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<th>Country</th>
<th>Assessment Interest</th>
<th>Policy Focus</th>
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<tr>
<td>France</td>
<td>Direct effects of tram system</td>
<td>Transport policies (economic, social, environmental)</td>
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<tr>
<td>Germany</td>
<td>Transports effects of tram system</td>
<td>Economic effects of tram system</td>
</tr>
<tr>
<td>UK</td>
<td>Economic effects of tram system</td>
<td>Transports effects of tram system</td>
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Previous phase (2-3 years before)
Open tram starting of the infrastructure

In France, assessment interest for direct effects of tram system?
In Germany, assessment interest for transports effects of tram system?
In UK, assessment interest for economic effects of tram system?
Thanks for your attention

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