From intermodality to intermobility:

how research & innovation frame station's adaptation to posturban challenges
1. Starting from station’s challenges
Applying research to station management

2. How may academics and corporate collaborate?
Framing new station’s ecosystem

3. Valuing station activity
Modelling pathways of station development

4. Fertilizing flows
Digitalizing client’s behaviour

Conclusion
Necessity of structured Partnership for Sharing more!
1. Starting from station’s challenges

Intermodality to Intermobility

Disruption? 

Station as a network: More than interconnection?

Station as a urban place: More than (smart) hubs?

Beyond efficiency

Research as part of the solution?
More science for stations?  
Adding to expertise a research strategy

- Case studies
- Data mining

- Quanti/Quali Methods
- Algorithms, Visualization

- Calibration, Comparison
- Tests of robustness

- Data
- Formalization
- Generalisation
How may academics and corporate collaborate?

Overcoming limitations on both sides

1. OVERCOMING OPACITY

- Fragmentation of laboratories
- High degree of specialization

2. SELECTING HOT TOPICS

- Trip modelling
- Intermodality
- Design and Planning
- Services

3. Negotiating conditions

- Access to hot datas...
- Authorizations of exps...

4. Contracting
Framing together the ecosystem

Sharing station’s spaces

Recomposing the ecosystem

Source: CERTU Le foncier ferroviaire acteurs et stratégies d’intervention
Fiche n° 3 novembre 2012 Gilles Bentayou, avec l’accord de RFF.
Valuing station activity

Purpose

• linking investment with performance
• ranking service efficient and effective delivery
• asserting and comforting processes of costing

Multi criteria assessment

• Perimeter of costs
• Level of Quality service

Costing methods

• Toolkit Development
• Standards of cost profiling

Interest for Station Operator

• Testing various scenarios
• Optimizing and measurability for all station
Modelling pathways of station development

Comparing “pathways” of station development

Involvement of public institutions

Mapping station typologies

Comparing Types of PP Partnership

<table>
<thead>
<tr>
<th>Location</th>
<th>Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gare du Nord</td>
<td>3</td>
</tr>
<tr>
<td>Victoria St.</td>
<td>2.5</td>
</tr>
<tr>
<td>Atocha</td>
<td>2</td>
</tr>
<tr>
<td>Hauptbahnhof</td>
<td>1.5</td>
</tr>
<tr>
<td>Berlin</td>
<td>1</td>
</tr>
<tr>
<td>Milano</td>
<td>0.5</td>
</tr>
<tr>
<td>Centrale</td>
<td>0</td>
</tr>
</tbody>
</table>
High Priority
Shared interests
Contradictory expectations
Common questions!

- Fast growing volumes
- Free / limited access
- Conviviality
- Exclusivity
- Security
- Speedness
- Waiting zones
- Catchments
- Seamless movement
Digitalization and station flows « fertilization »

TRADELLER’S BEHAVIOUR
HYPOTHESES AND CHOICE MODELS:
- itineraries and tracks
- waiting patterns
- occupational modes

According to:
- traveler typology, motivation, frequency
- moving alone or group
- space cognition and perception
- information, signals

PARAMÈTRES DES INSTALLATIONS:
- traffic at doors
- traffic at stairs
- vertical circulations
- horizontal movements

STATION FREQUENTATION DATAS

TRAIN MOVEMENTS DATAS

URBAN EVOLUTIONS

ARCHITECTURAL DATAS)

FLOW MODELS

FLOW ANALYSIS

MULTICRITERIA ANALYSIS

TARGETS OF PROJECT OWNER
- Spatial calibration: desirable to acceptable possibility
- CoCost
- Feasability
- Exploitation constraints

VALIDATION OF SPATIAL CALIBRATION

SPATIAL CALIBRATION OVERCOME?

NO VALIDATION OF SPATIAL CALIBRATION

DRAFT RESULTS

THRESHOLDS OVERCOME?

STATION SPATIALIZING

WHAT CRITERIA? WHAT TYPES OF ANALYSES?
Revealing interaction potentials for more competitive stations
THANK YOU    MERCI