SMART STATIONS IN SMART CITIES
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Passenger stations in their geographic context

Airy MAGNIEN
Head of Data, Statistics & Economics Unit, UIC, France
SESSION 1a. SOLUTIONS FOR AN INTEGRATED MOBILITY
Railways: not created equal; grew up differently
How do railways serve the population?

Population (evolving)

Patronage

Passenger services

Train services

Stations

Latent demand

What can we observe?

Public data

Restricted data

Dubious concept
What do we know about stations?

Lacking a comprehensive, geolocalized set of stations data

MERITS data

CRD data (early 2016)
What else do we know about stations?

UIC 180 states “what matters”, but sources are hard to find

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Sources (bold = used here)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patronage</td>
<td>Public (UK); open data (FR/SNCF Réseau,…); … or commercial secret [1]</td>
</tr>
<tr>
<td>Train stops</td>
<td>MERITS (not yet open); open data…</td>
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<tr>
<td># of platform edges</td>
<td>Not RINF; “Inventory of Assets” [2] ?</td>
</tr>
<tr>
<td>Station size</td>
<td>?</td>
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<tr>
<td>Intermodality</td>
<td>Google maps, OpenStreetMap</td>
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[1] especially where railway operators compete “on the tracks”, rather than “for the tracks”

What do we need to know about the population?

- Population density
  - Delivers half of the information (lacking employment or recreational / socializing places information)
- Population income (average, per capita)
  - Are these relevant parameters?
  - According to Eurobarometer 388 (2012), top reasons for NOT taking the train are:
    1) Price (= unwillingness to pay)
    2) Too few or too distant services

- ... with high resolution (order of magnitude: km)
- Hardly any public, homogeneous source
Test, England + Wales

Population (X) and income (Y) in circle centred on station

# of passengers, 50 busiest stations ( = disk size)

# of trains, 50 busiest stations ( = disk size)
Tests, France

Population (X) and income (Y) over circle centred on station

# of passengers, 50 busiest stations (\( = \) disk size)

# of trains, 50 busiest stations (\( = \) disk size)
Provisional conclusions

- The differences between England and France show that “factors other than plain observable population characteristics” should help and explain station patronage and train services.
- Some improvement are expected from study parameters, e.g. “served area” around stations, and links with other transport means (railways are not standalone!)
- Work continues under UIC global footprint study, with the participation of Kardelen KARATAŞ and Snejana MARKOVIĆ
THANK YOU
GRACIAS

Airy Magnien, Kardelen Karataş, UIC