NextStation

SMART STATIONS IN SMART CITIES

6th International Conference on Railway Stations

Madrid, 19-21 OCTOBER 2017

Passenger stations in their geographic context

Airy MAGNIEN
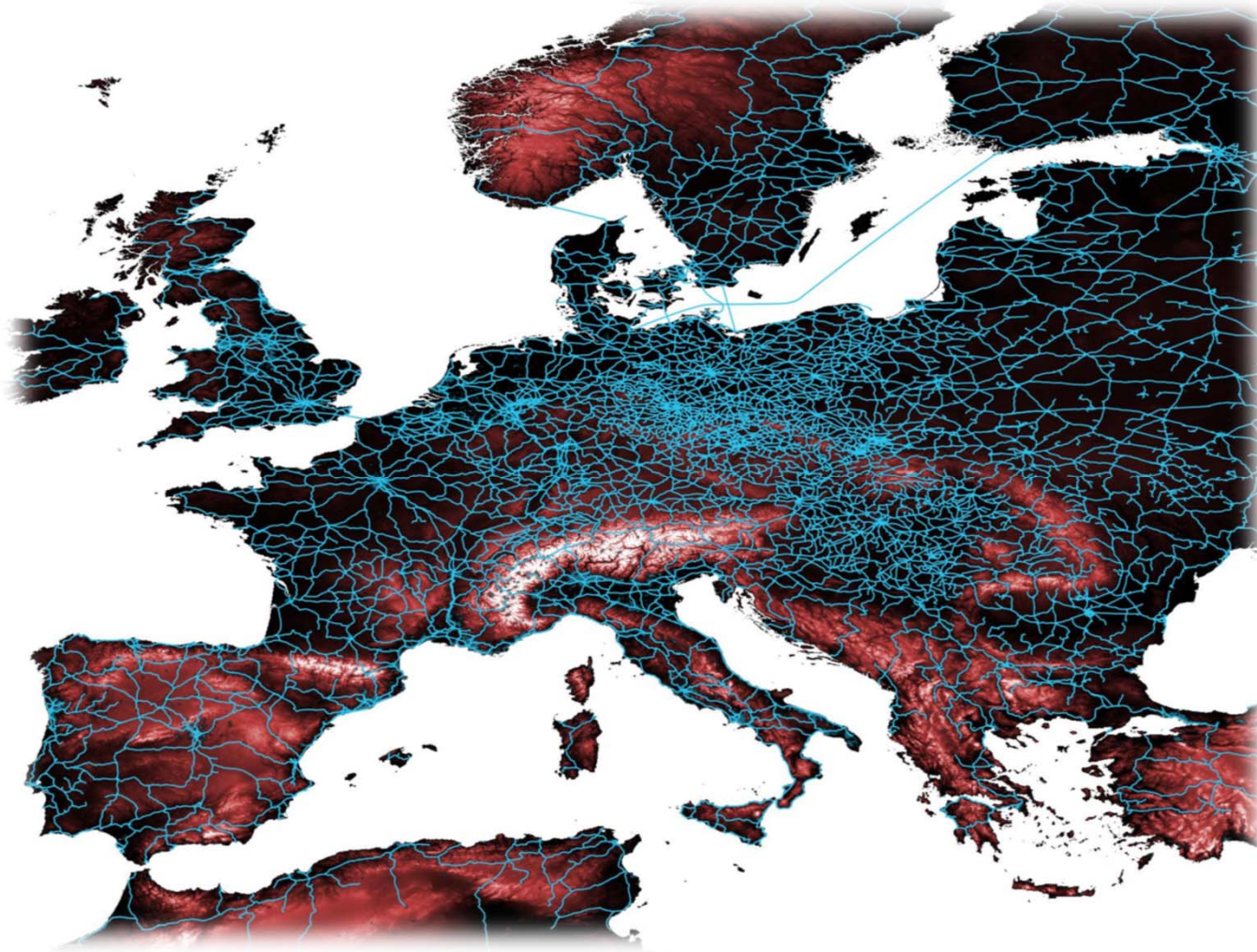Head of Data, Statistics & Economics Unit, UIC, France
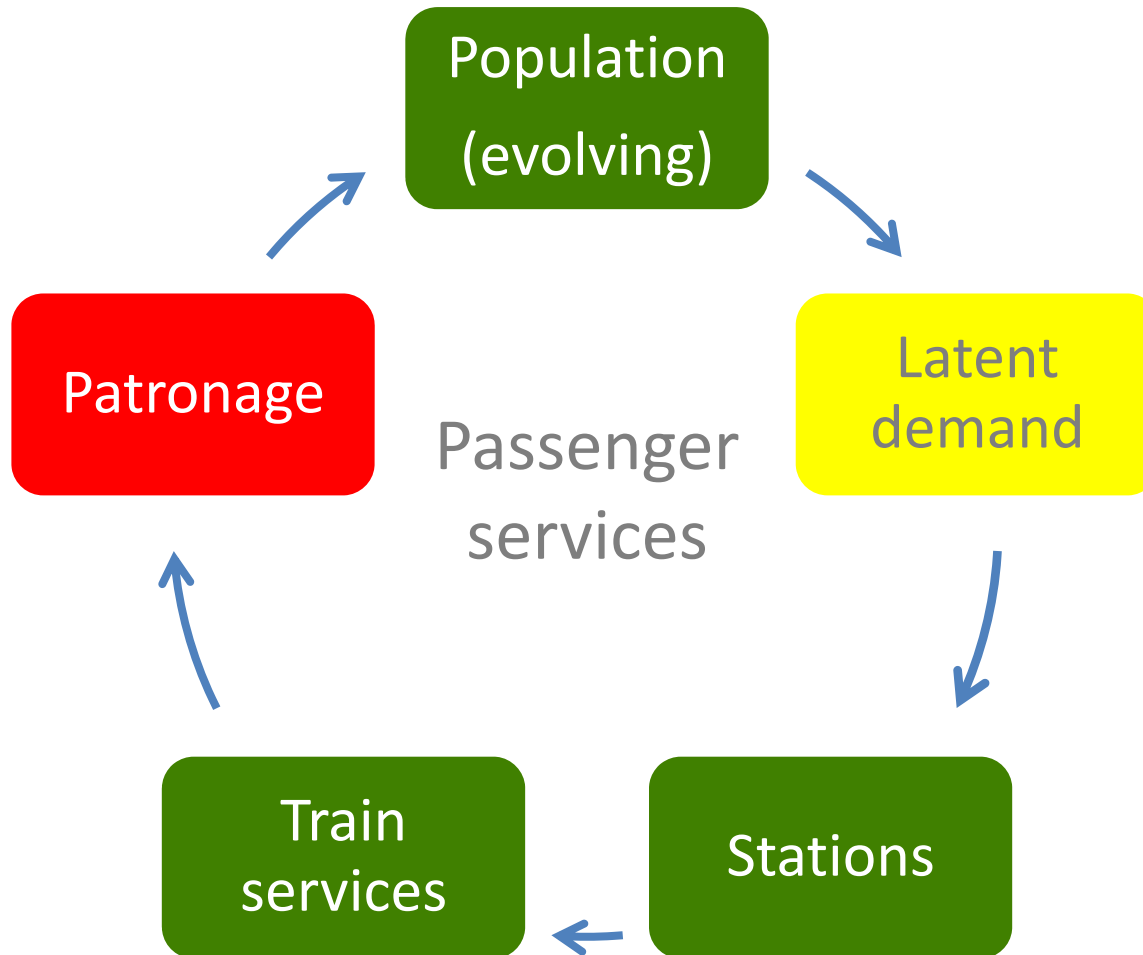SESSION 1a. SOLUTIONS FOR AN INTEGRATED MOBILITY

UNDER THE HIGH PATRONAGE OF

GOBIERNO DE ESPAÑA | MINISTERIO DE FOMENTO

ORGANISERS

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Railways: not created equal; grew up differently

Data : © Natural Earth

How do railways serve the population?

Population (evolving) → Latent demand → Stations → Train services → Patronage → Population (evolving)
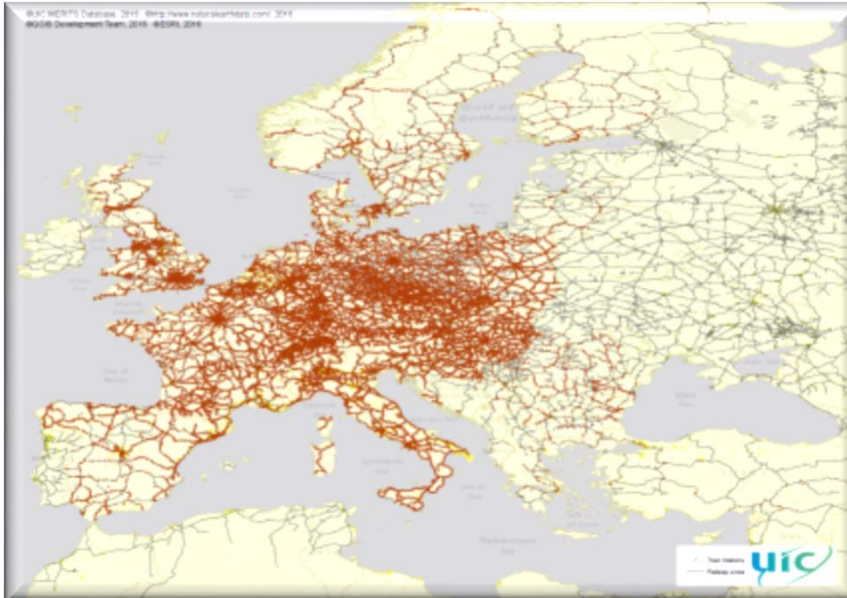
Passenger services

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

Criterion	Sources (**bold** = used here)
Patronage	**Public (UK);** **open data (FR/SNCF Réseau,…)** … or commercial secret [1]
Train stops	**MERITS** (not yet open); open data…
# of platform edges	Not RINF; "Inventory of Assets" [2] ?
Station size	?
Intermodality	Google maps, OpenStreetMap

[1] especially where railway operators compete "on the tracks", rather than "for the tracks"
[2] see http://www.era.europa.eu/Document-Register/Pages/Consultation-preliminary-draft-limited-revision-TSI-PRM.aspx

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
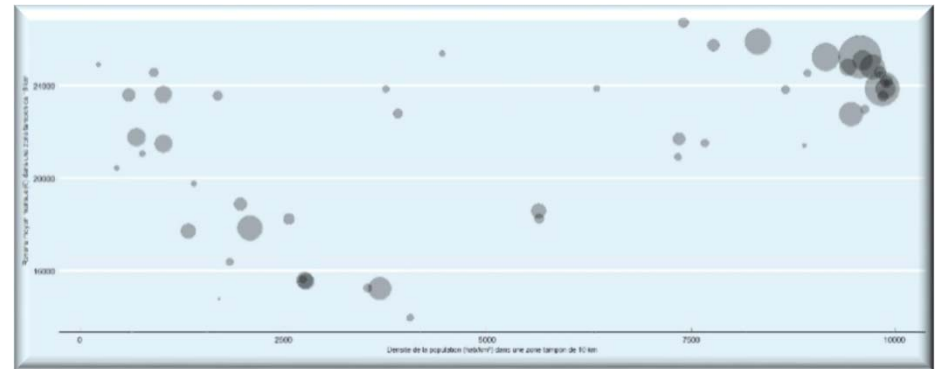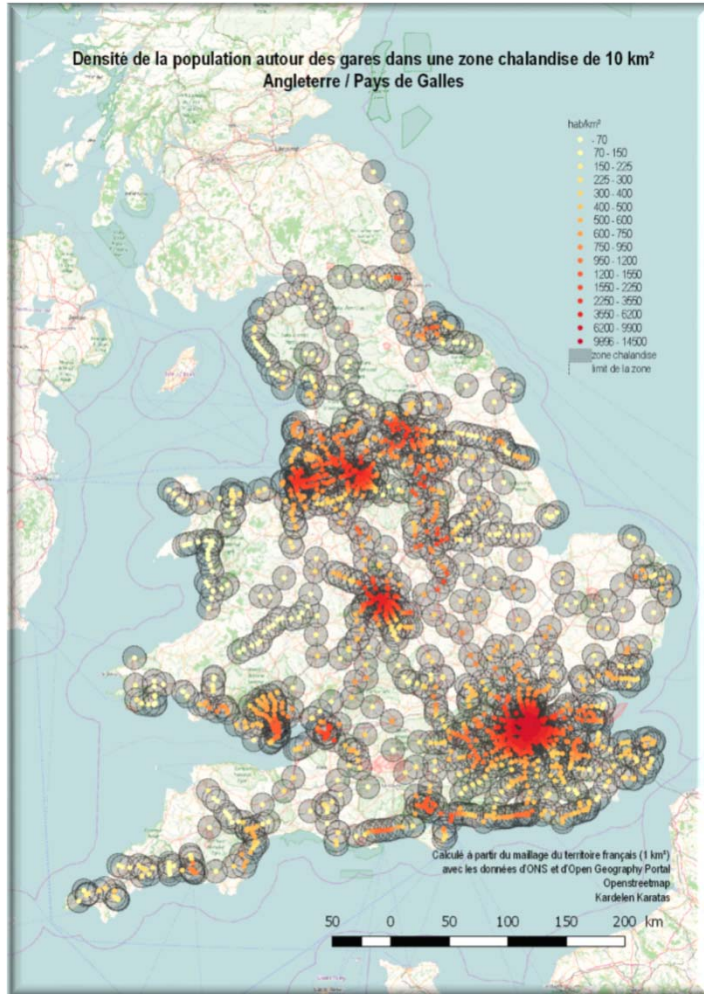
❖ … with high resolution (order of magnitude: km)

    ❖ Hardly any public, homogeneous source
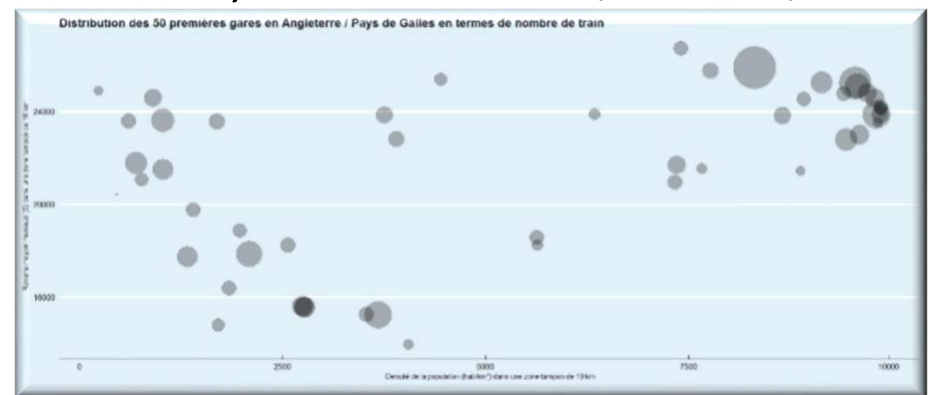
Test, England + Wales

Densité de la population autour des gares dans une zone chalandise de 10 km²
Angleterre / Pays de Galles

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

of passengers, 50 busiest stations (= disk size)

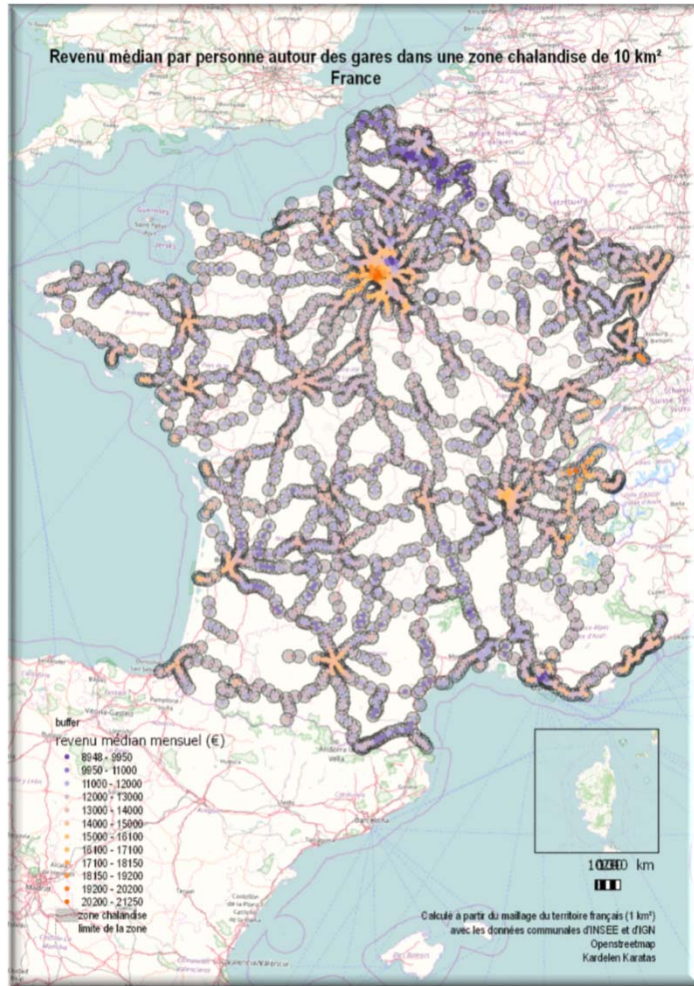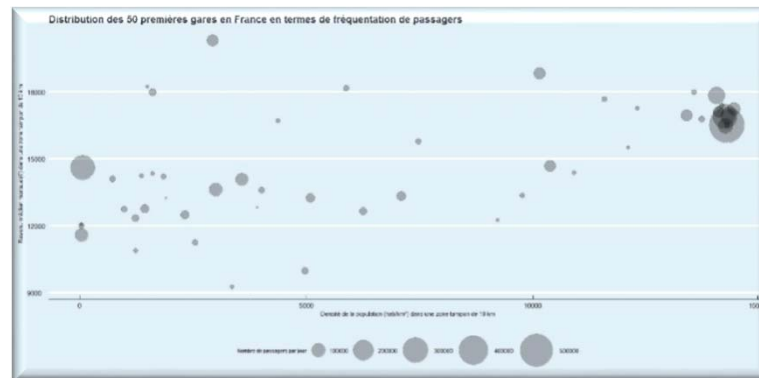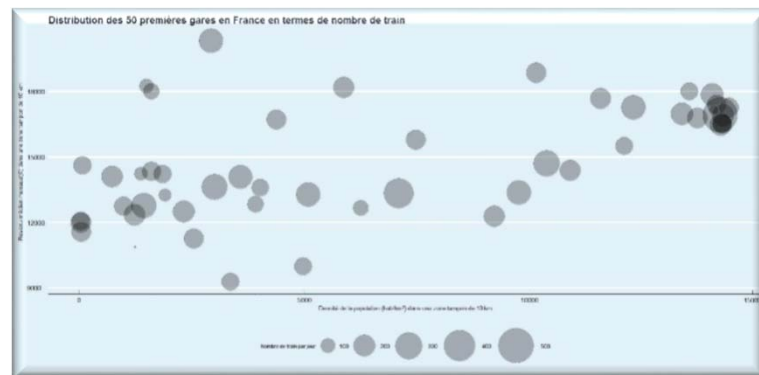### # of trains, 50 busiest stations (= disk size)

Tests, France

Revenu médian par personne autour des gares dans une zone chalandise de 10 km²
France

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

of passengers, 50 busiest stations (= disk size)

Distribution des 50 premières gares en France en termes de fréquentation de passagers

of trains, 50 busiest stations (= disk size)

Distribution des 50 premières gares en France en termes de nombre de train

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

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THANK YOU
GRACIAS

Airy Magnien, Kardelen Karataş, UIC