

HS2: IRRIGATING THE REGIONS

Professor Sir Peter Hall

**Symposium *Transport Choices and West Midlands
Regeneration: HS2 or what?***

University of Birmingham

8 November 2013



synaptic
synergy of advanced
transport solutions



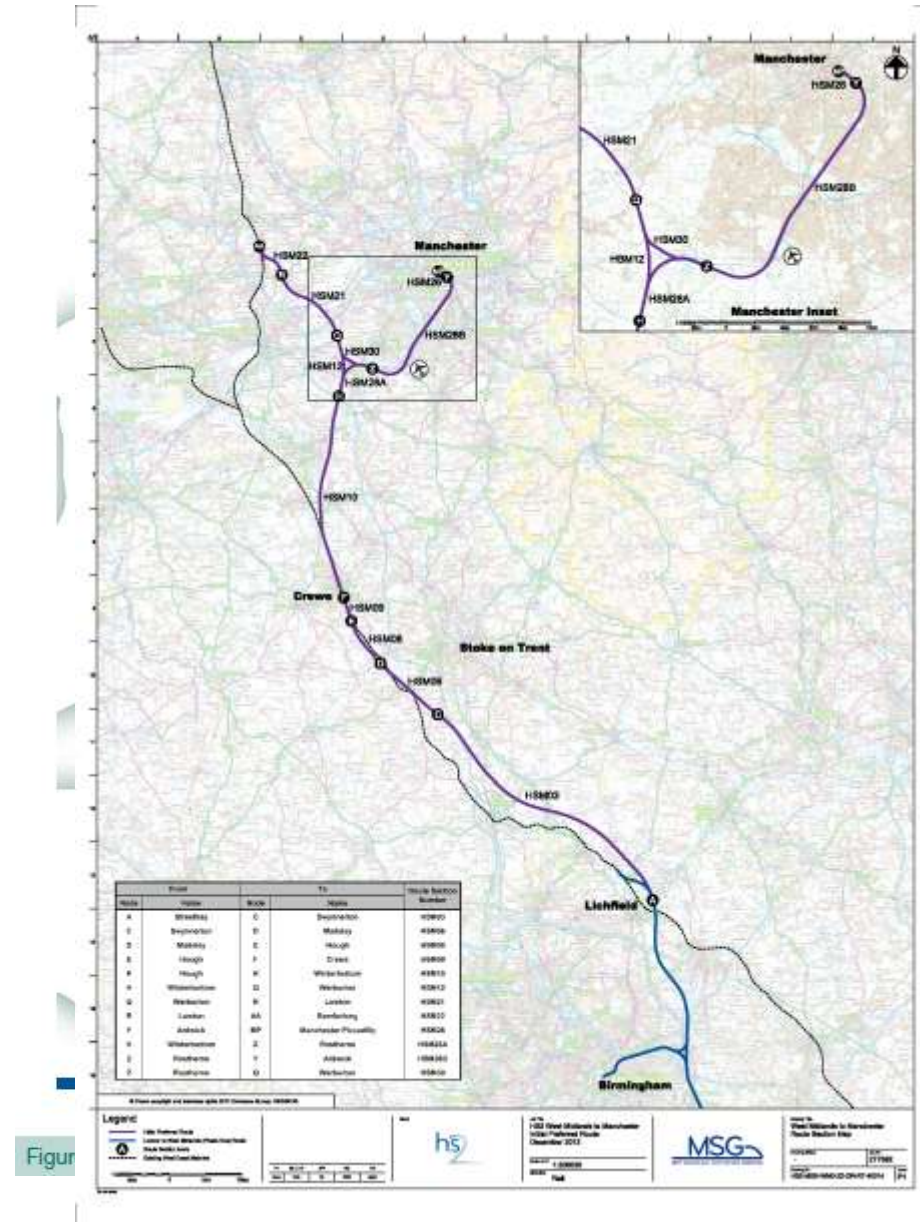
UK: Low-Speed High Speed, High-Speed High Speed - and all the rest...

- Since late 1970s: UK has had a *low-speed high-speed* rail service (200km/hr) on a 180-year-old rail infrastructure
- Completed by West Coast Main Line upgrade (2008)
- High Speed One (2007): first *high-speed high-speed* line (300km/hr)
- Now: High Speed Two (2 stages, 2026 and 2032: a *high-speed high-speed network*
- *What about all the rest?*



HS2: Key Features

- Very high speed: 400k/hr
- Self-contained “new line”
- Plus long-distance links classical track
- Serves (major) city centres – which are performing well anyway!
- Fails to connect with regional networks to (problematic) towns
- So: *need to integrate* to “irrigate the regions”



Birmingham: Curzon Street/ Moor Street/New Street

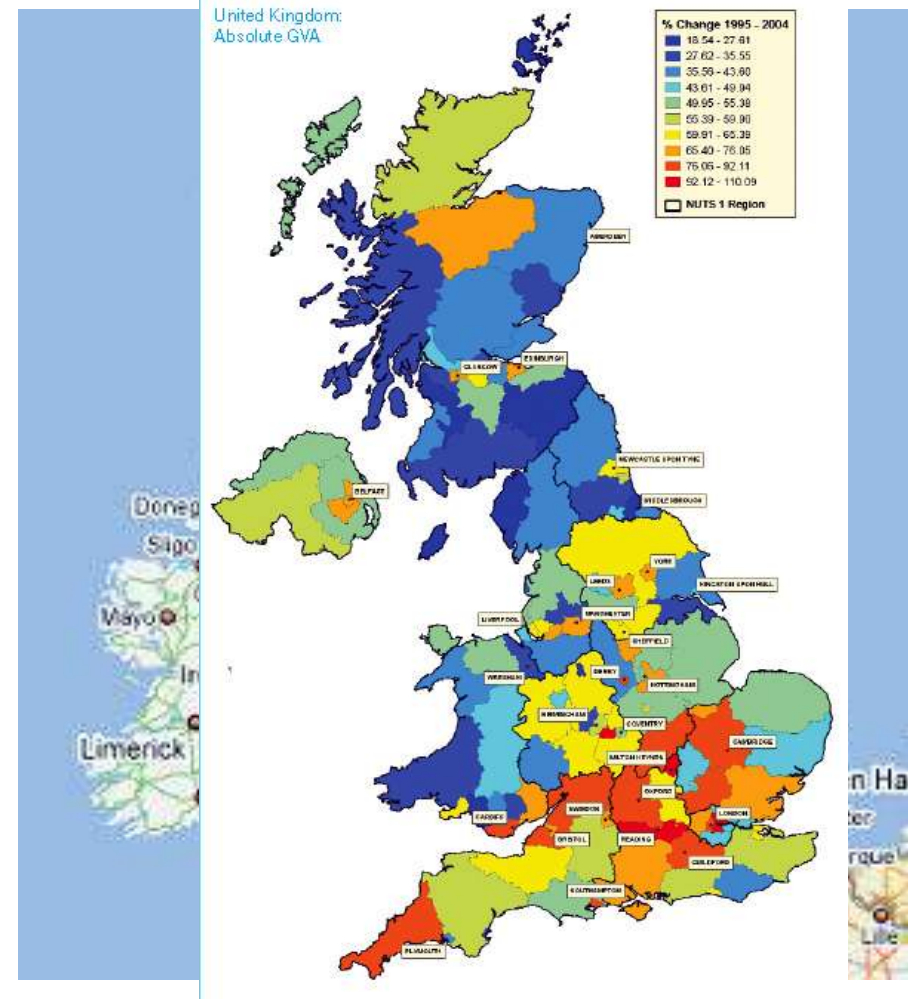


Distance, Curzon Street-New Street: 950 metres

Behind the North-South Divide: Sub-Regional Change

- N-S Divide dominates the picture
- But – within the North/Midlands – a more subtle picture
- Core cities (Manchester, Leeds, Newcastle) OK
- Outside, much weaker
- And: *very poorly-performing pockets*

Figure 8: % change in GVA in UK NUTS 3 areas, 1995-2004



Where the (Manchester) Tramway ends: Cities unlinked

Figure D:

and isolation: the importance of links for city-regional growth

South East GVA per capita (£), 1995-2005

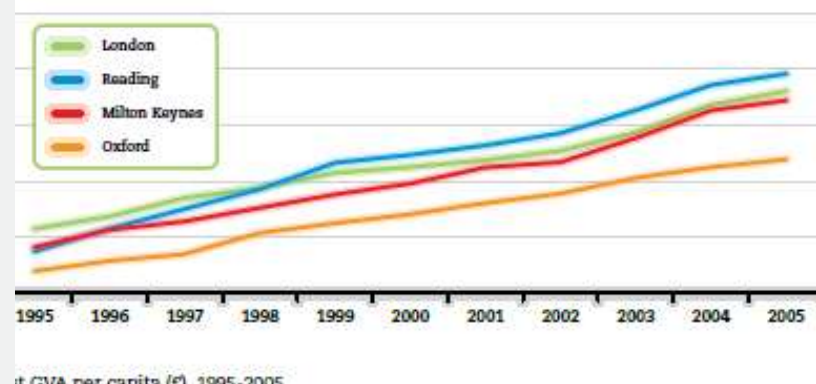


Chart 8: Greater South East – Commuting between London and Selected Cities

Cities	Proportion of resident employees commuting to London (2004)	Proportion of area's jobs taken by London in-commuters (2004)	Air journey time to London
Hastings	2.1%	0.6%	01:55
Brighton	4.4%	0.8%	01:15
Cambridge	2.8%	1.8%	01:15
Oxford	2.9%	2.6%	01:05
Milton Keynes	6.0%	2.6%	00:50
Luton	12.6%	6.9%	00:20
Reading	10.1%	5.1%	00:20

Source: ONS, Annual Population Survey and National Rail. See Appendix D for more details.

Chart 9: North West – Commuting between Manchester and Selected Cities (2004)

Cities	Proportion of resident employees commuting to Manchester (2004)	Proportion of area's jobs taken by Manchester in-commuters (2004)	Air journey time to Manchester
Blackpool	1.0%	0.4%	01:20
Burnley	2.6%	0.8%	01:20
Blackburn	3.6%	3.2%	00:50
Preston	2.2%	1.5%	00:45
Warrington	12.5%	8.2%	00:35
Rochdale	30.3%	20.2%	00:30
Bolton	20.3%	11.7%	00:20

Source: ONS, Annual Population Survey and National Rail. See Appendix D for more details.

Sources: Lucci and Hildreth 2008;
Centre for Cities, *Cities Outlook 2009*

The HST Saga: Appraisal Criteria

- Originally: case based on speed
- Cost escalation: now £42.6 billion: project threatened
- Now: case based on capacity
- But also on *indirect impacts*: development, regeneration
- Relevant for local transport too!

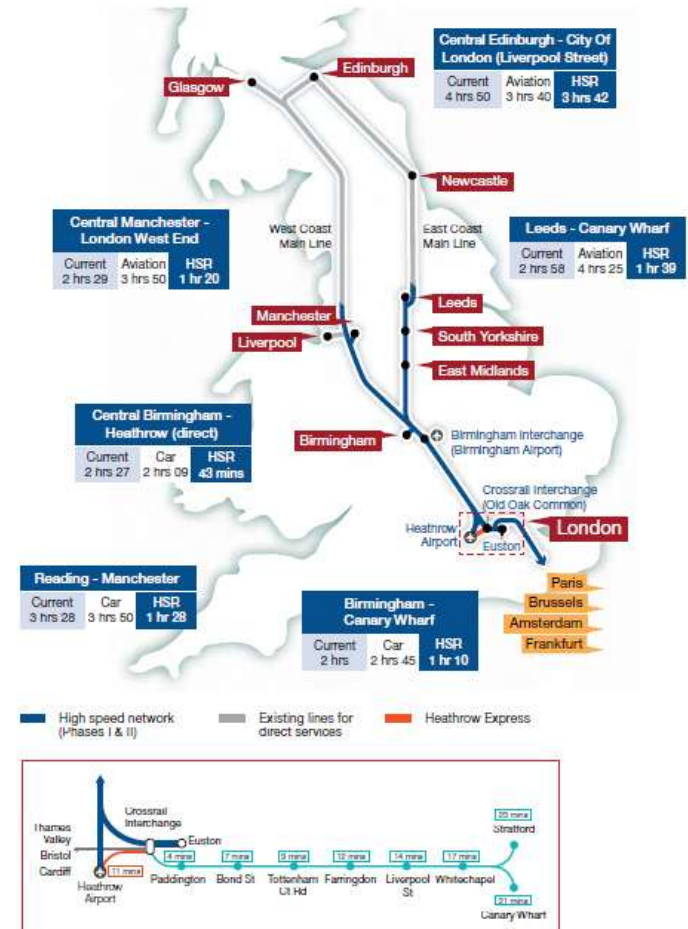


Figure 1.1 – Journey time savings via Crossrail Interchange

Reappraising HS2: The Value of Time

- 56% of HS2 benefits (£24.6 billion/ £44.1 billion) are time savings to passengers
- Many are business travellers whose value of time is derived from their salary
- But opponents argue that business time on modern trains is spent productively – in reading, telephoning and preparing for meetings – so should not be counted
- But could free time for business at destination

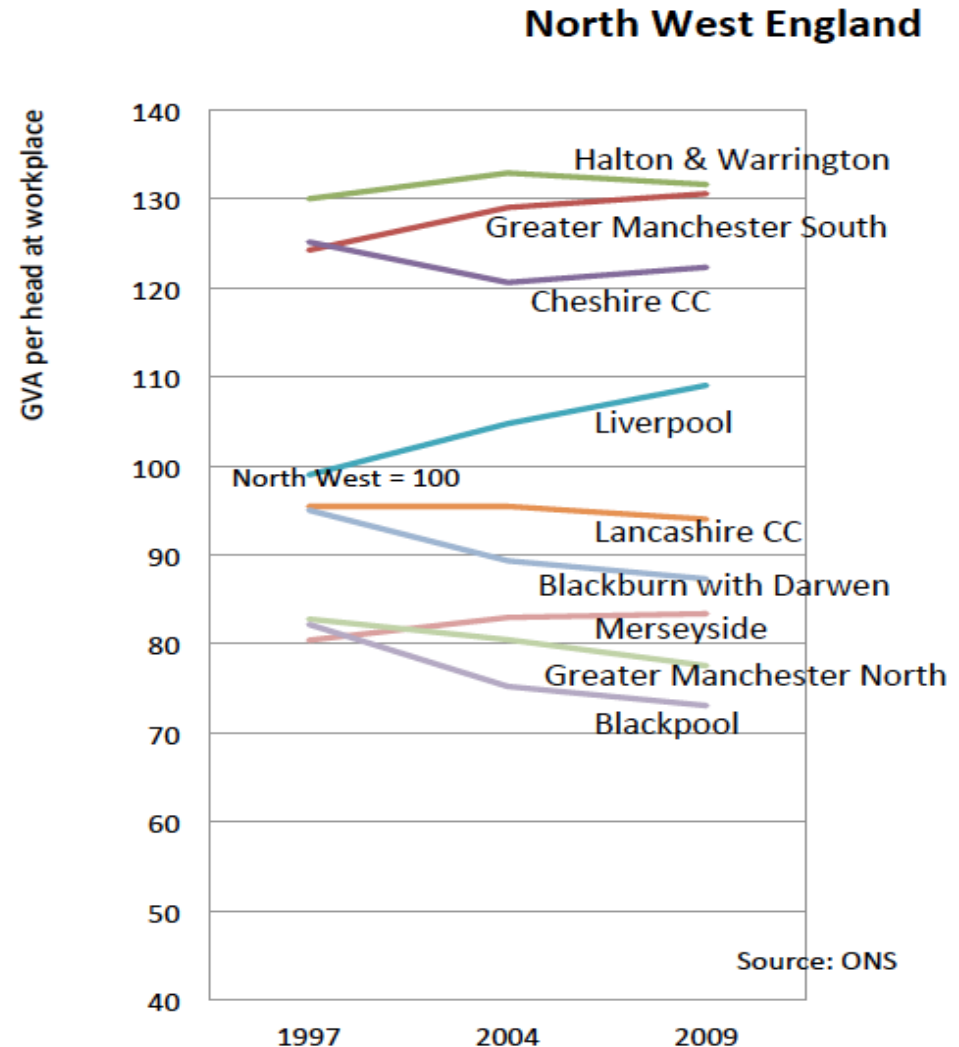
Reappraising HS2: Indirect Benefits

- UK DfT: 'HS2 is about far more than just a new railway, it provides a once in a generation opportunity to drive growth, generate jobs, and secure our country's future prosperity'
- Different studies have reached contrary conclusions:
- John Tomaney: HSL may damage the economies of provincial cities by exposing them to competition
- Chia-Lin Chen: provincial cities in UK and France benefitted economically from HSL connection
- *But: what about the rest of their regions?*
- **Introducing SINTROPHER and SYNAPTIC**

NW England: “Low-Speed High Speed”: Spatial Impacts

- Places served by HSR have stronger economies...
- And perform more resiliently through 2007 crisis
- More remote places (West Coast Lancashire, Pennine Lancashire) do notably worse

Fig



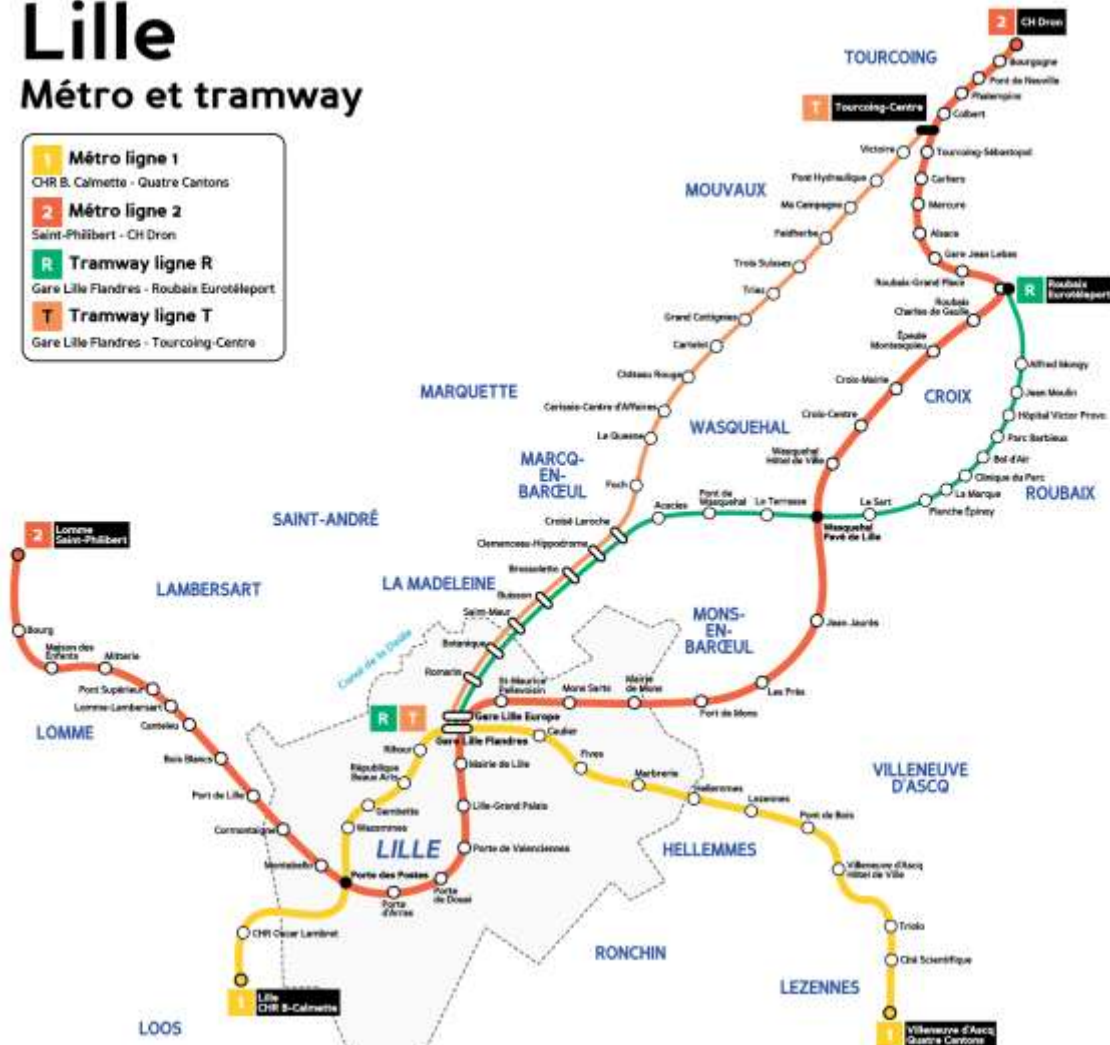
Source: Chen, C., Hall, P. (2012)

Lille: Exploiting the TGV Advantage

Lille

Métro et tramway

- 1** **Métro ligne 1**
CHR B. Calmette - Quatre Cantons
 - 2** **Métro ligne 2**
Saint-Philibert - CH Dron
 - R** **Tramway ligne R**
Gare Lille Flandres - Roubaix Eurotéléport
 - T** **Tramway ligne T**
Gare Lille Flandres - Tourcoing-Centre



HST Impact: Nord-Pas-de-Calais

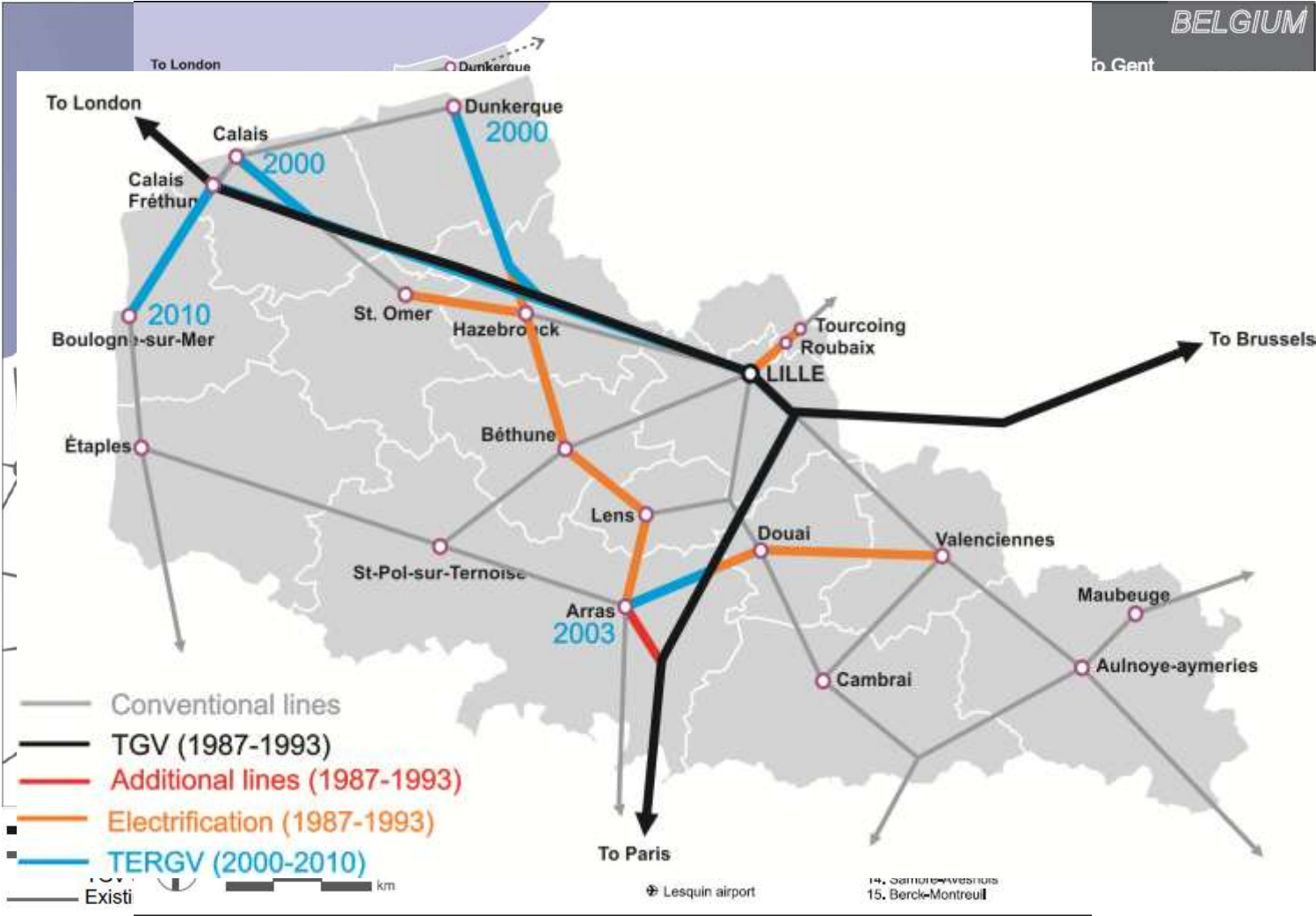
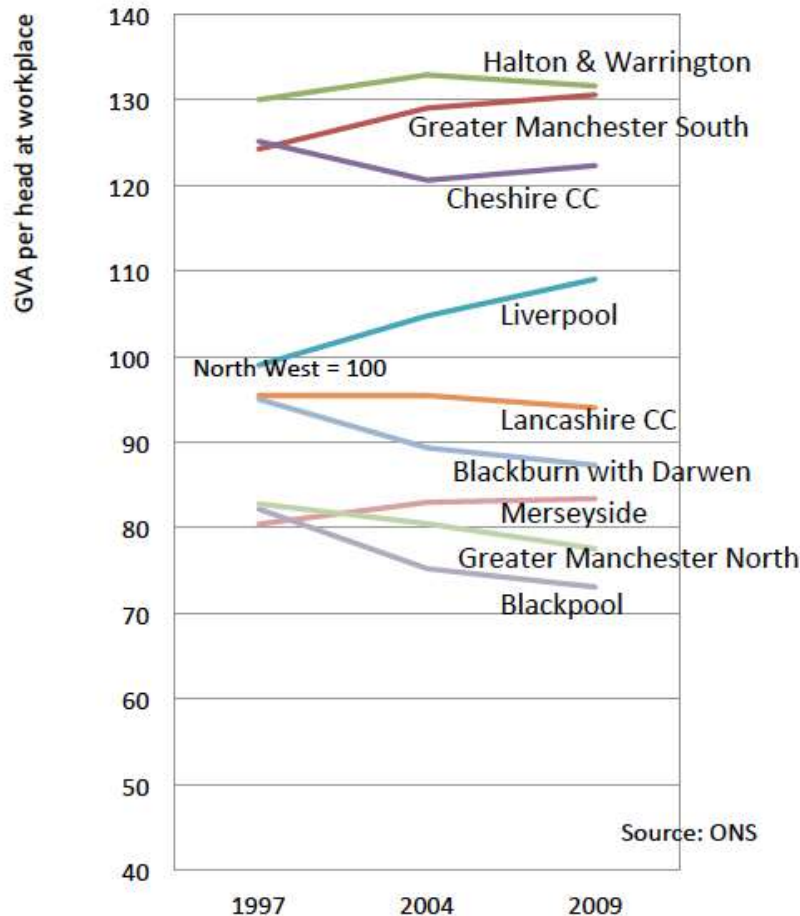


fig. 3. The railway network, main stations, and sub-regions in Nord-Pas-de-Calais. Note: The motorway network is supplementary in this diagram.

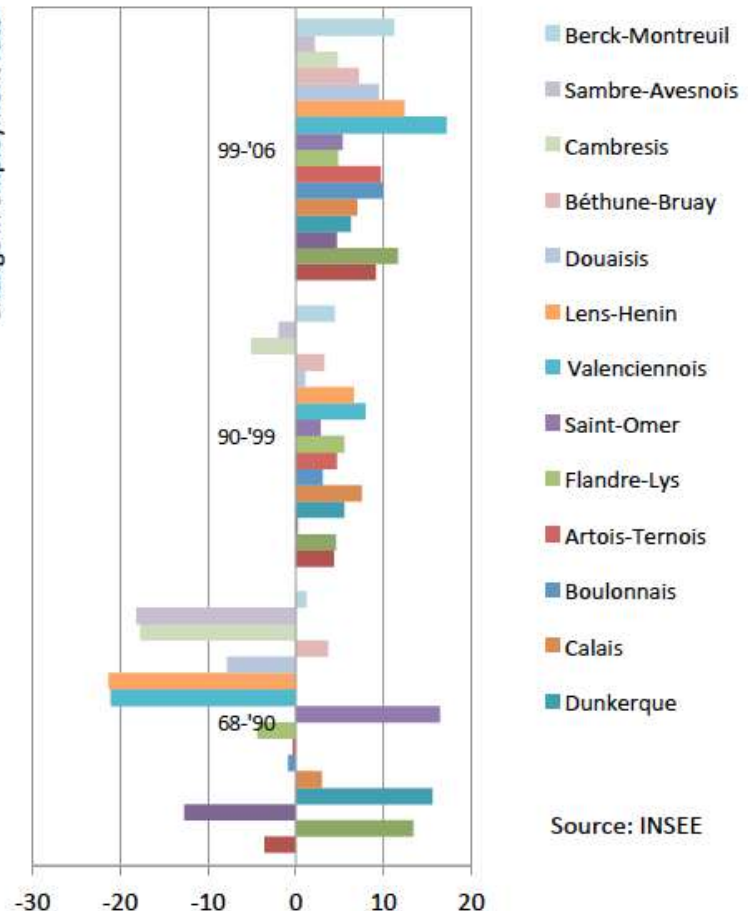
Impacts of High-Speed Rail: UK (NW England) and France (NPDC)

North West England

Nord-Pas-de-Calais



Change in employment rate



North West England electrification: A partial revolution

- Rail network:
Electrification 2016
- Key Network:
Manchester-Liverpool-
Preston
- Linking to West Coast
Main Line
- *But other parts not
reached: “Third Circle”*
- And these are deprived
areas



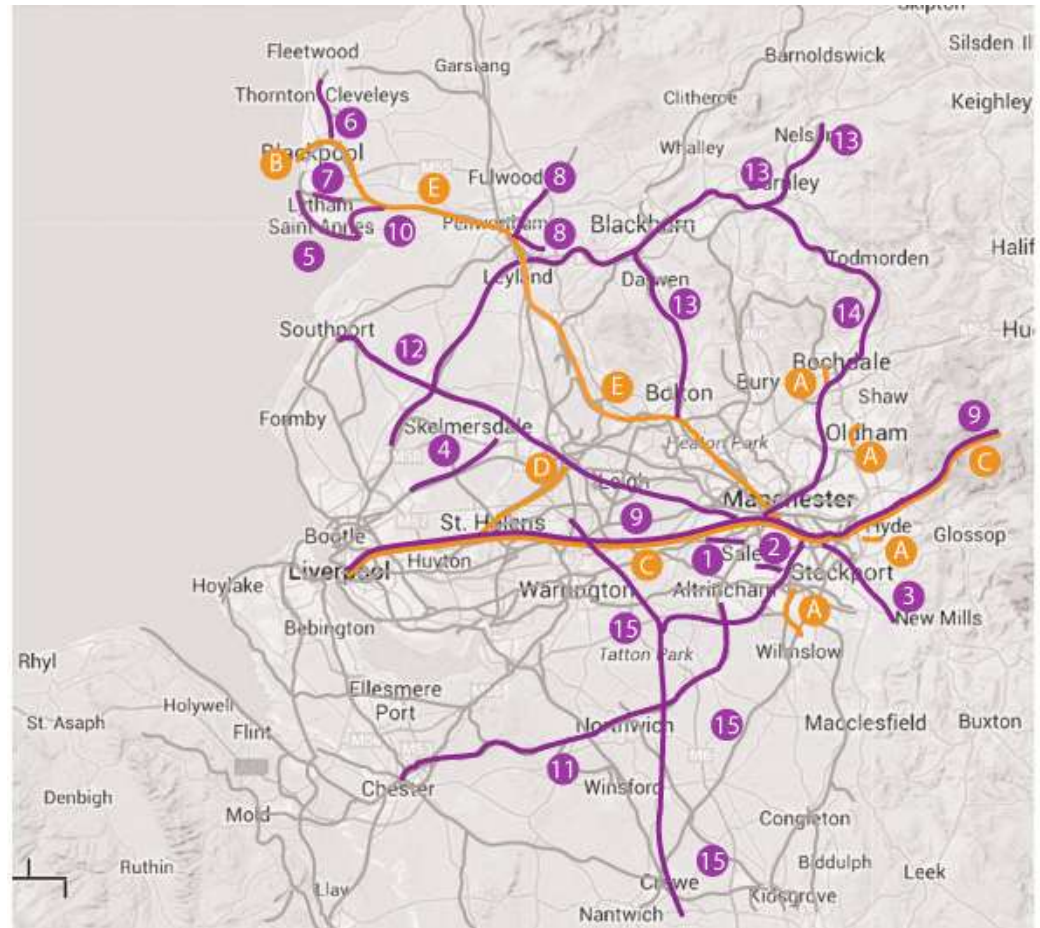
S-Map 2030 North West: 2020 and 2032

Stage One 2020

- A. Ashton, Oldham and Rochdale Centres, Wythenshawe/ Airport
- B. North Pier-Blackpool North tram extension
- C. Liverpool-Manchester-Leeds electrification and Ordsall Curve
- D. Liverpool-Wigan electrification
- E. Manchester-Preston-Blackpool North electrification

Stage Two 2032

- 1. Trafford Centre-Port Salford tram extension
- 2. East Didsbury-Stockport tram extension
- 3. Manchester-Marple tram-train
- 4. Kirkby-Skelmersdale electrification
- 5. Squires Gate-St Anne's tram extension and St Anne's-Kirkham & Wesham electrification
- 6. Poulton-Fleetwood tram
- 7. Yeadon Way BRT
- 8. Preston BRT
- 9. High Speed 1.5: Pendolino Liverpool-Manchester-Leeds
- 10. Blackpool-Preston tram-train
- 11. Altrincham-Chester electrification
- 12. Manchester-Wigan-Southport and Preston-Ormskirk electrification, with Lancashire Coast tram-train
- 13. Manchester-Blackburn-Burnley-Colne electrification
- 14. Preston-Blackburn-Burnley-Todmorden electrification
- 15. High Speed 2



Key Research Conclusions

- *In both NW England and NPDC:*
- HST strengthened economy of regional Core City
– but not necessarily all sub-regions
- *In NPDC:*
- Regional policy “irrigated the region”
- *But:* transforming regional economies needs more than a HST connection
- ***Linkages HST-regional networks are key: HST extensions, tram links***
- ***Needs: S-Map 2030 West Midlands!***