

HIGH SPEED UK

...connecting the nation

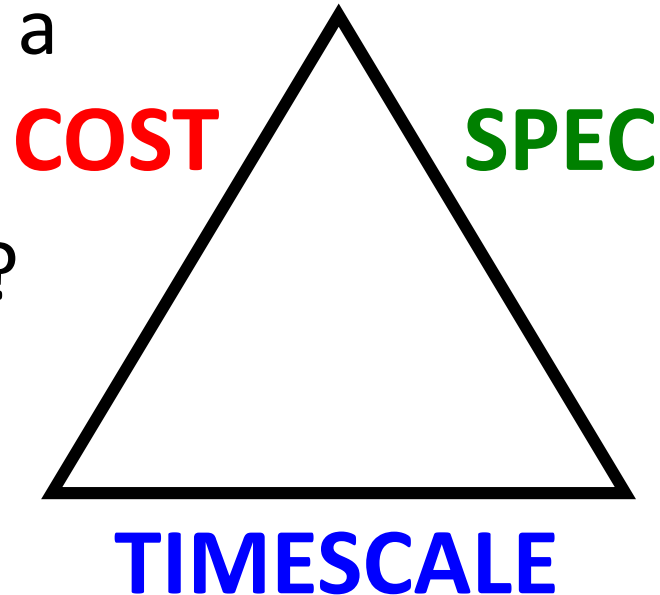
Colin Elliff BSc CEng MICE

Euston... We have a problem...

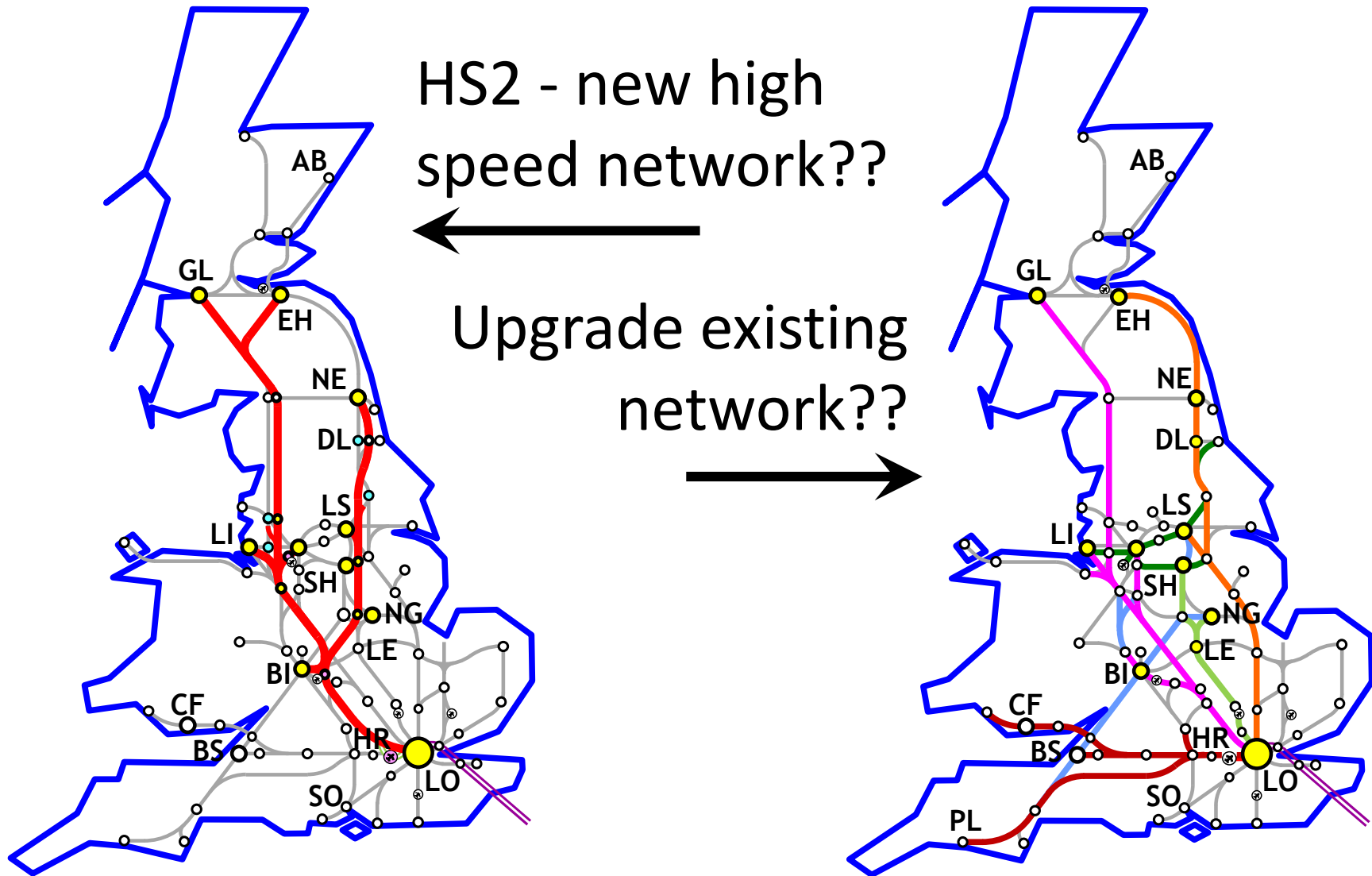
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- But is **cost** the only problem for HS2?
- Does it actually **work** as a railway project?
- And will it ever **happen**?

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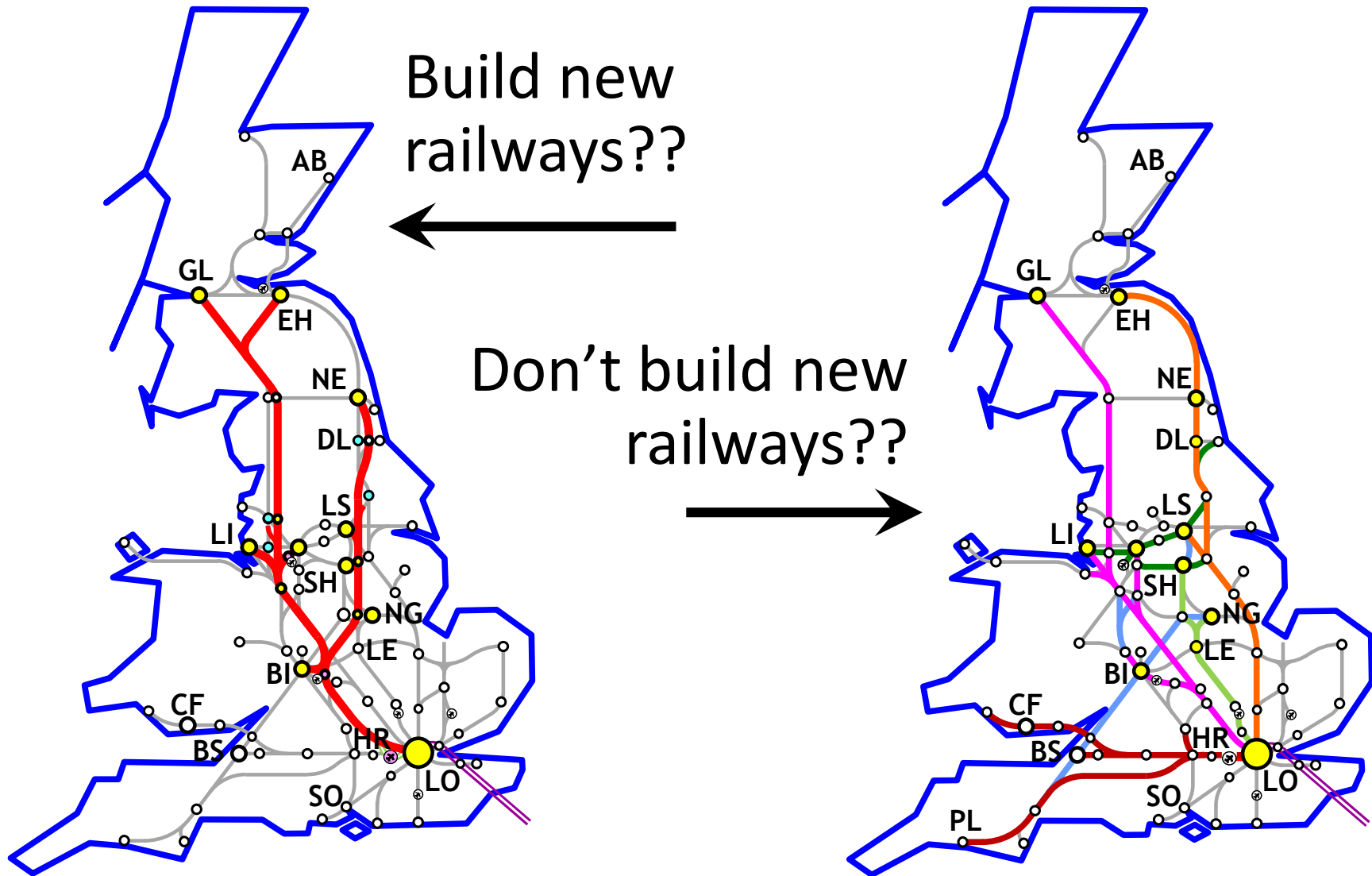
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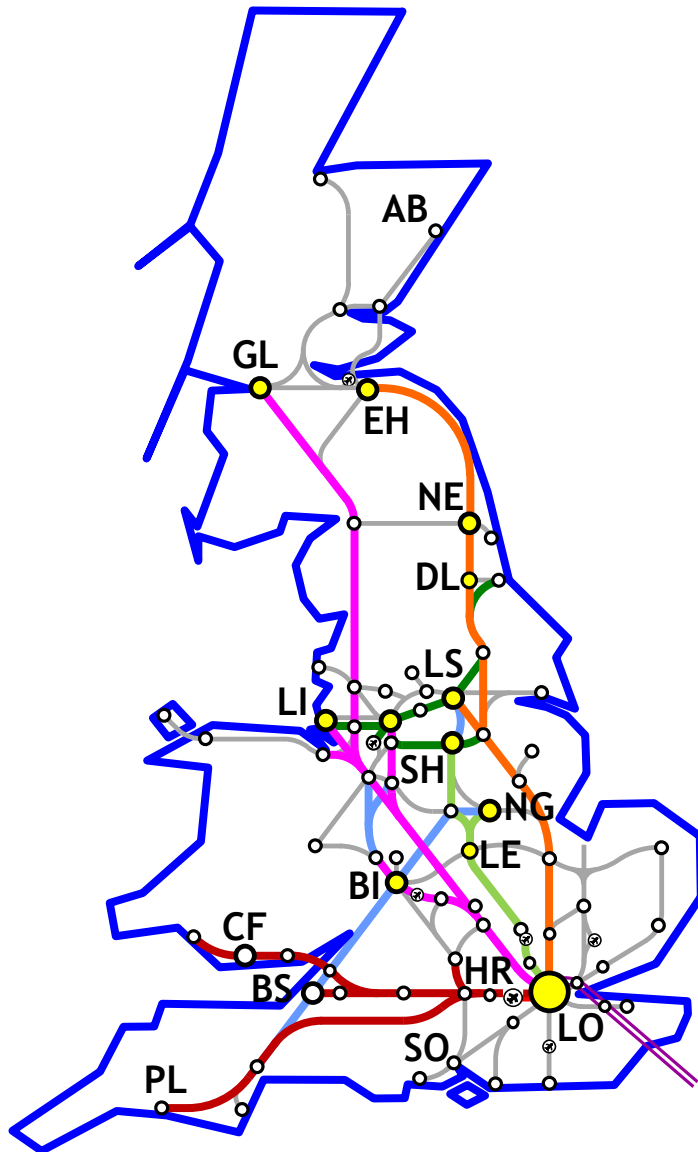
High Speed Rail – a binary choice?



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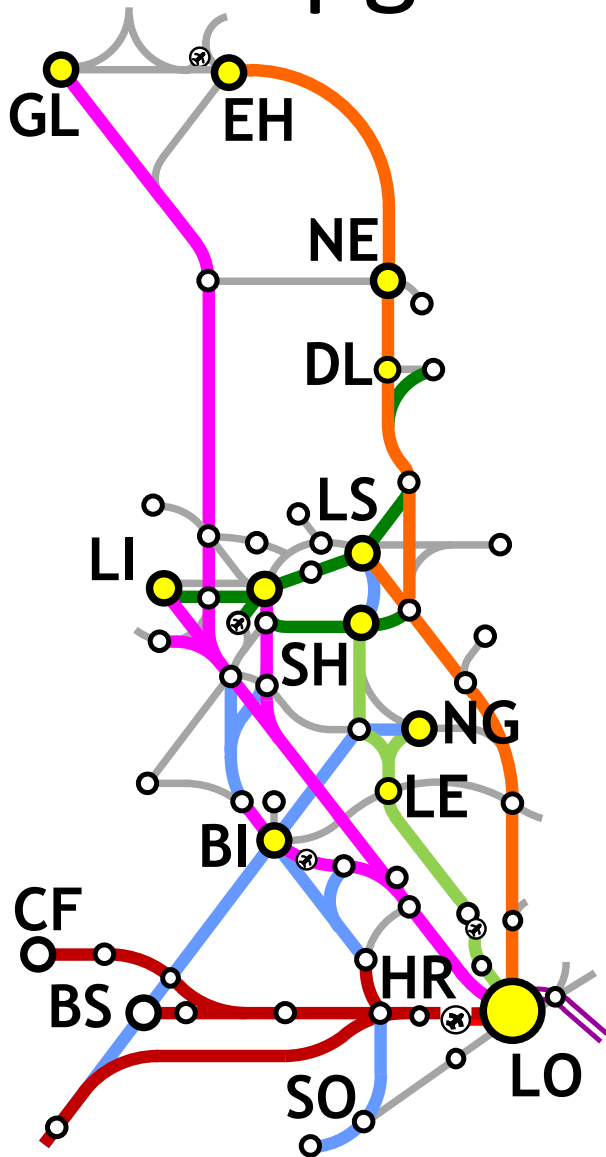
Upgrade Existing Network??



6 Main Lines

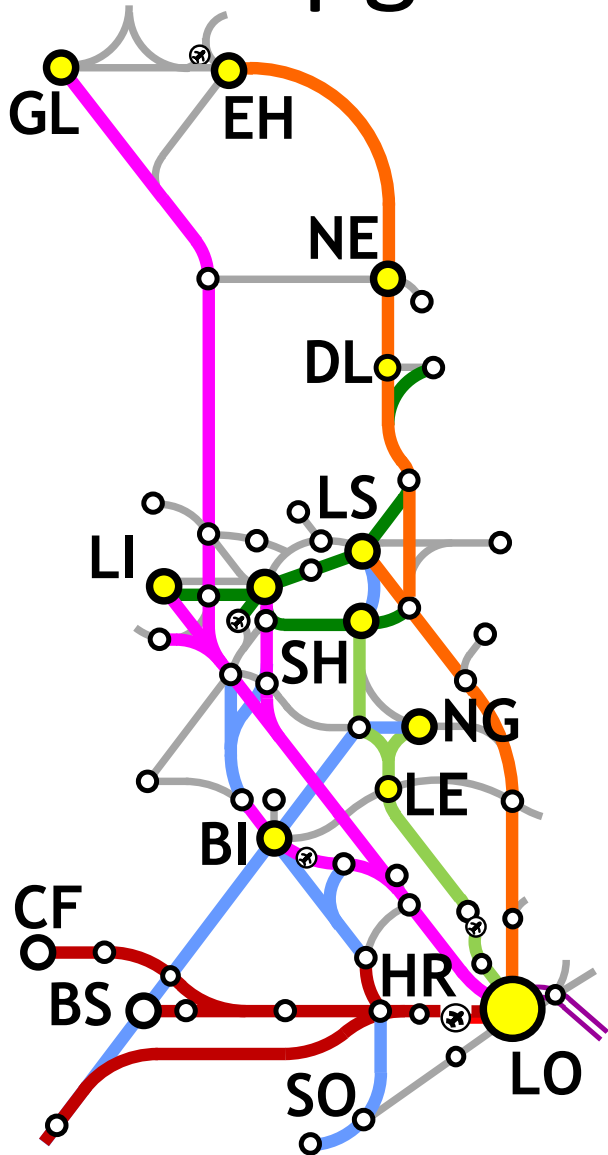
- **East Coast**
- **Midland**
- **West Coast**
- **Great Western**
- **Cross Country**
- **Transpennine**

Upgrade Existing Network??



- Insufficient capacity
- Journeys too slow
- Built to C19 priorities
- Too London-centric – interregional links poor
- And it's been tried already

Upgrade Existing Network??

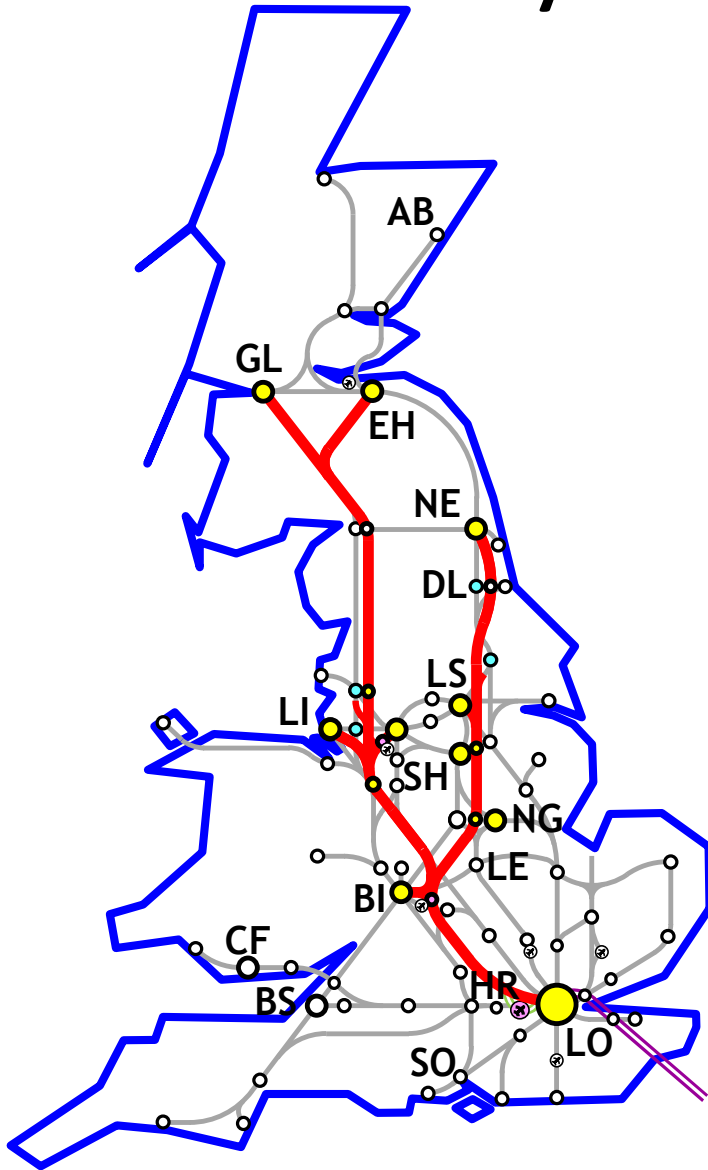


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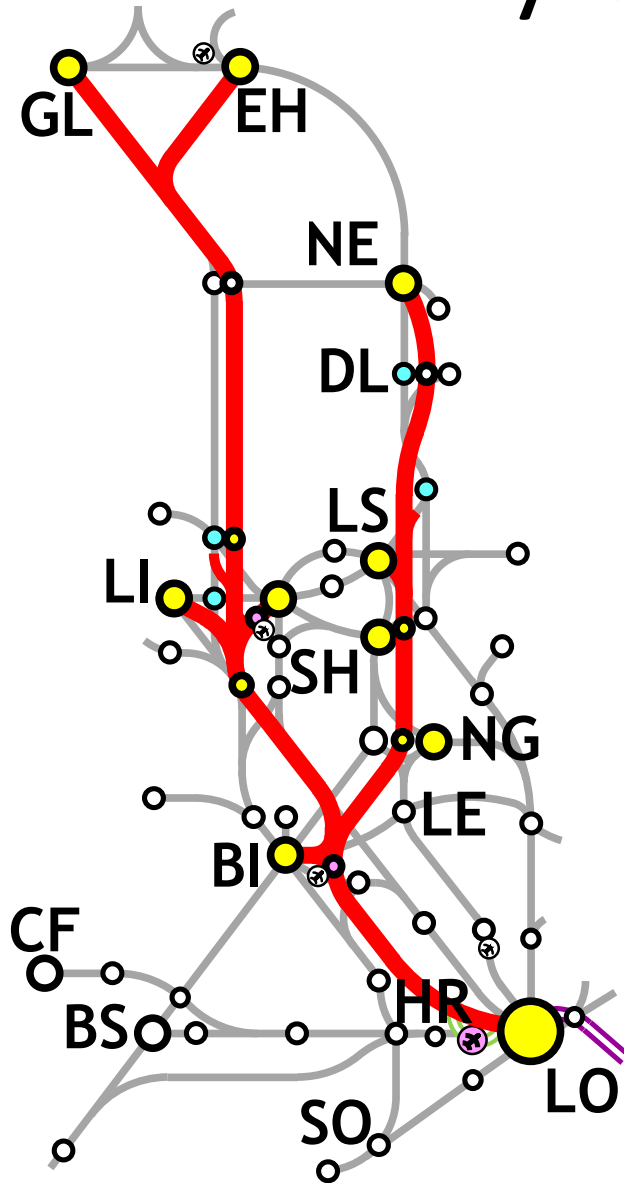
New Lines Are Essential!!

Why Build the HS2 'Y'??



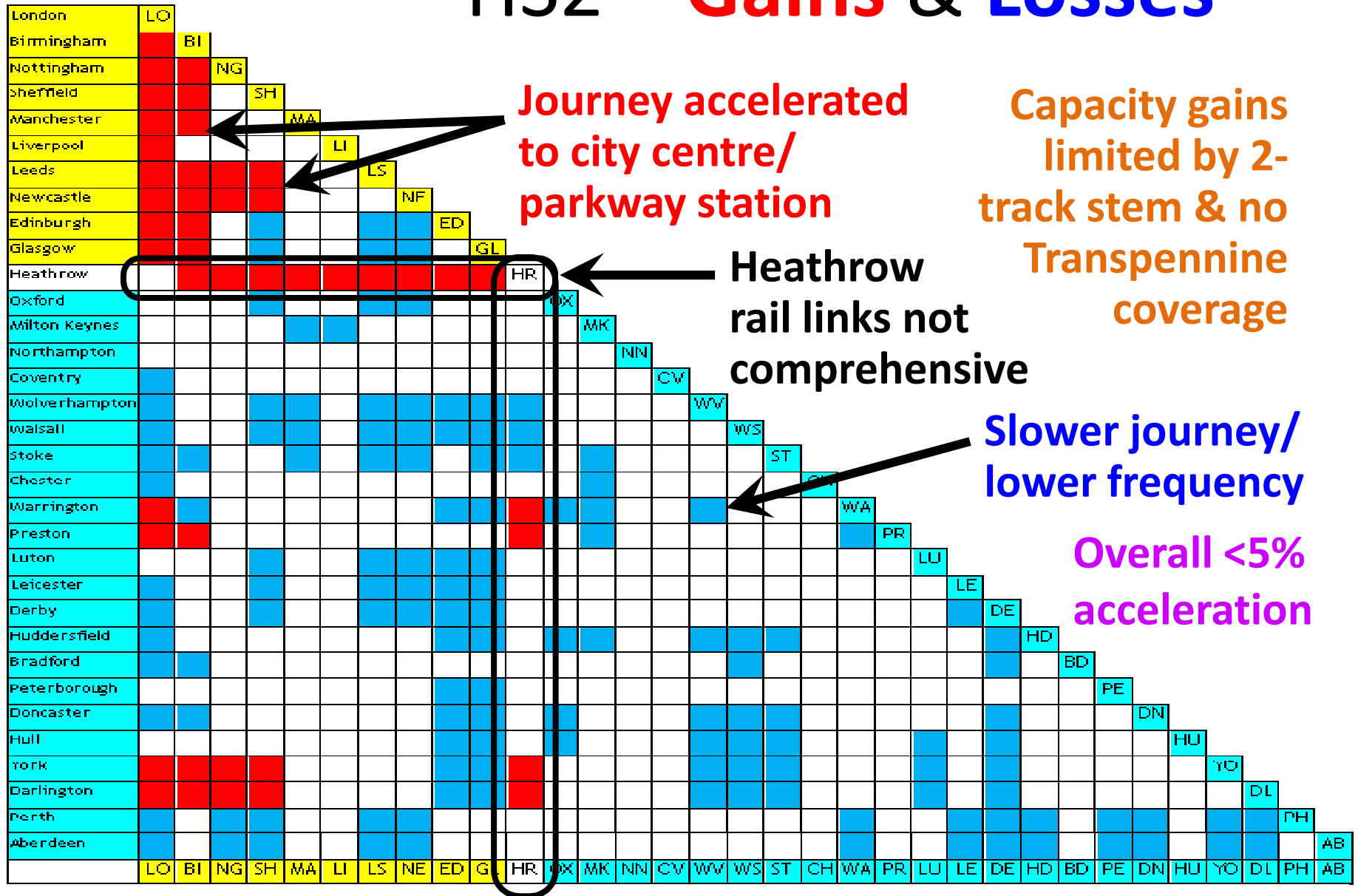
- Y-configuration
- No Transpennine link
- No CrossCountry
- London-centric
- Heathrow-centric

Why build the HS2 'Y'??



- Designed for 400km/h – can't follow existing corridors
- Segregated from existing network – many major cities left isolated
- Only 4 connections to existing network
- Improved links to Heathrow??

HS2 – Gains & Losses



Journey accelerated to city centre/parkway station

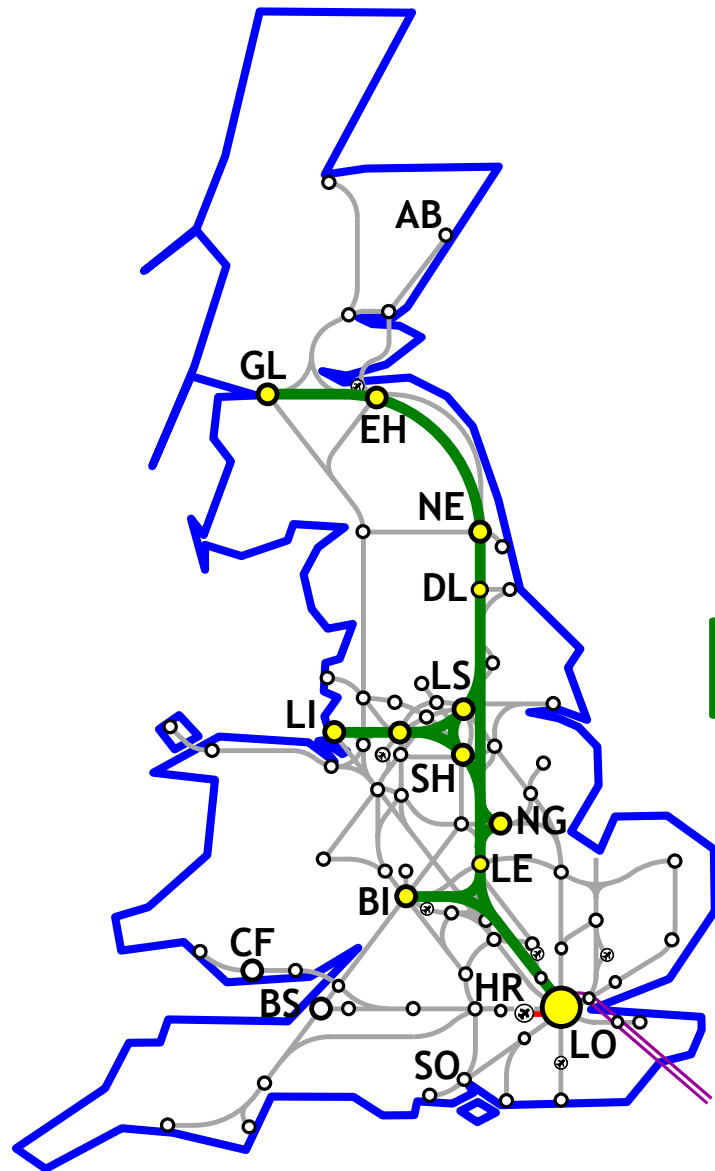
Capacity gains limited by 2-track stem & no Transpennine coverage

Heathrow rail links not comprehensive

Slower journey/lower frequency

Overall <5% acceleration

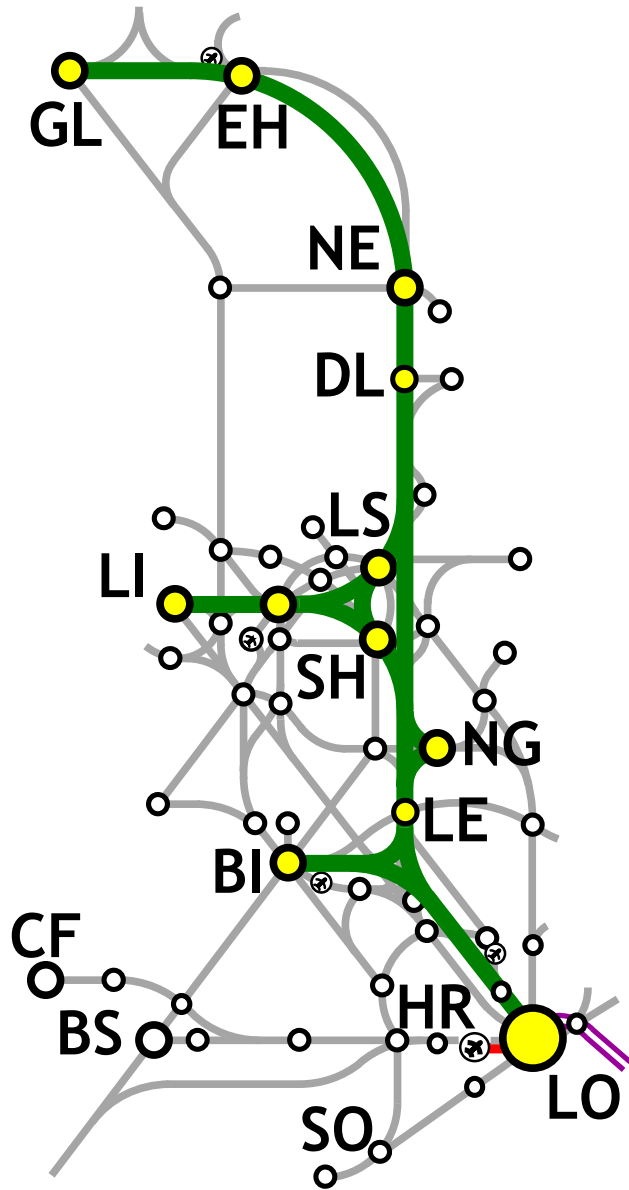
There is an alternative...



Connect the nation
with

HIGH SPEED UK

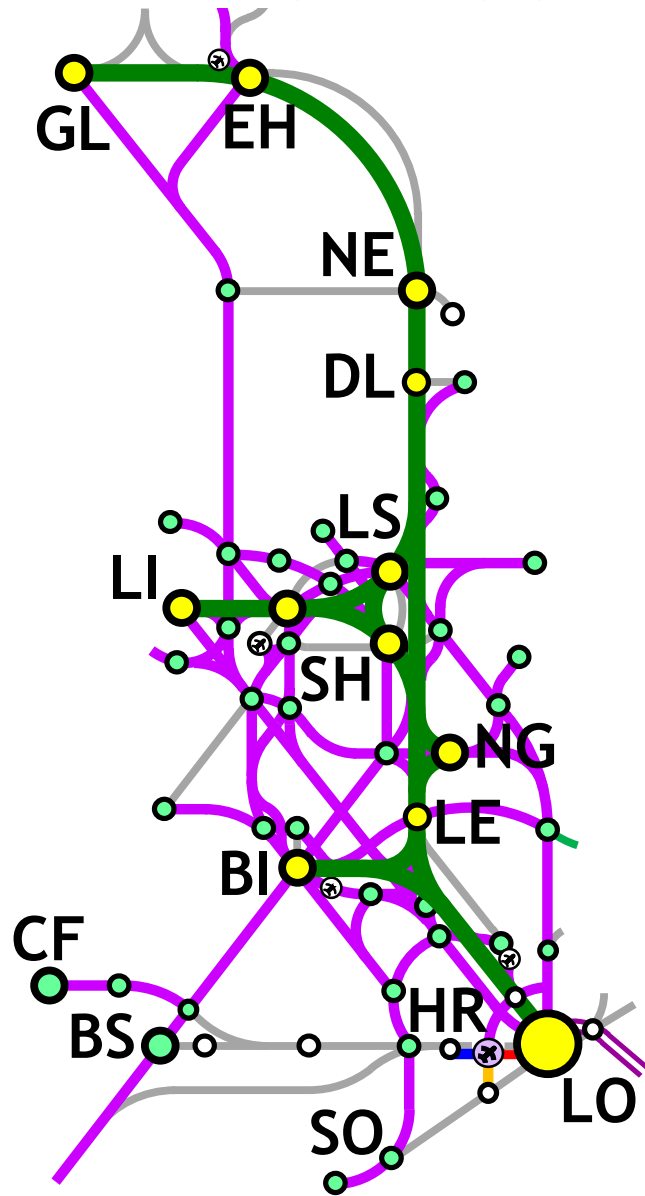
Connect the nation with HSUK



It's all about the network...

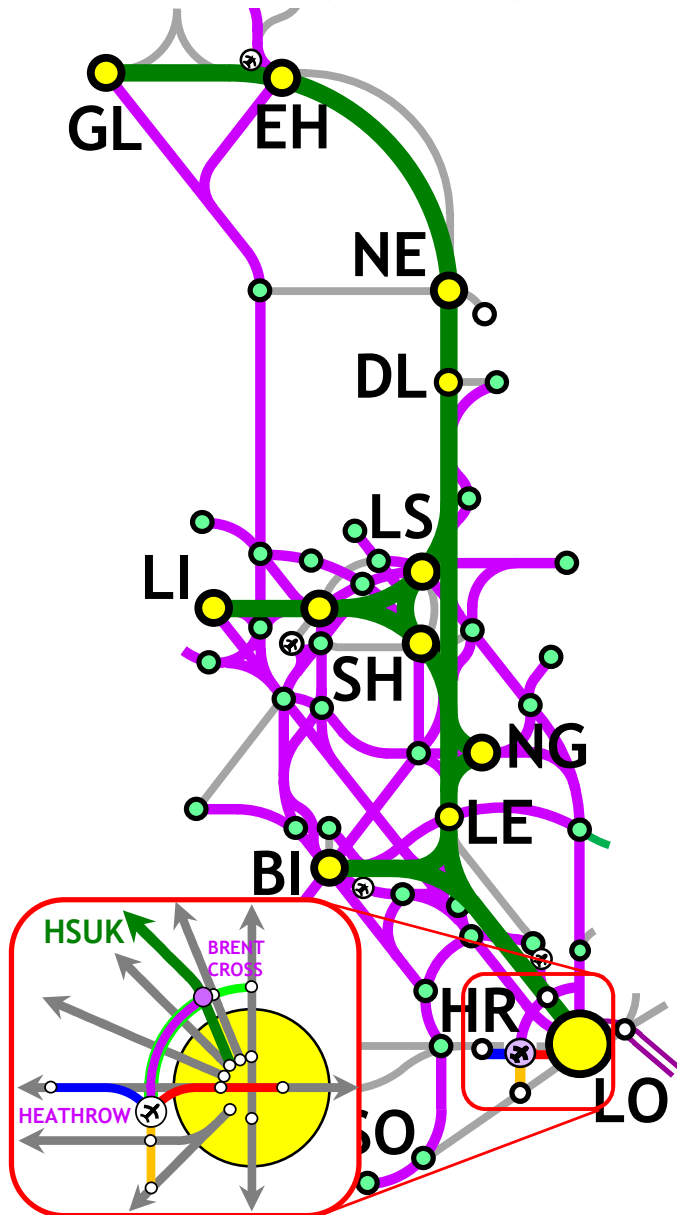
- Spine & Spur configuration
- Integral Transpennine link
- Designed for 360km/h
- Fully integrated with existing network

Connect the nation with HSUK



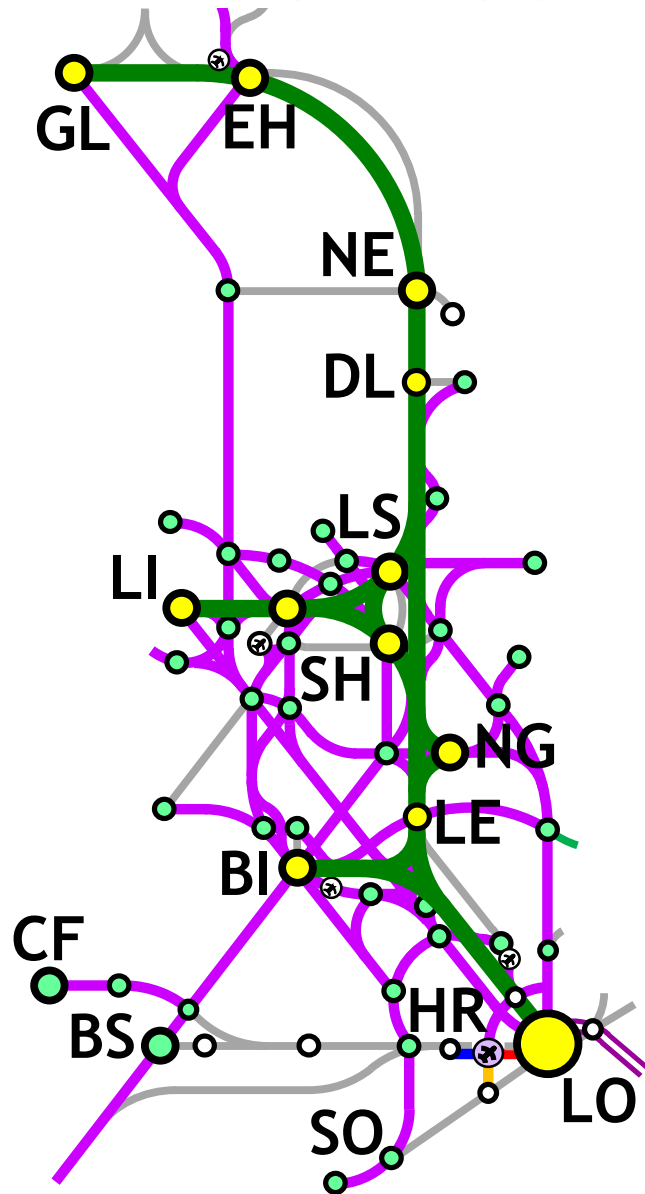
- More than 50 connections to existing network
- Accesses all major cities
- Independent 'Compass Point' rail access to Heathrow
- Overall 40% journey time reductions

Connect the nation with HSUK



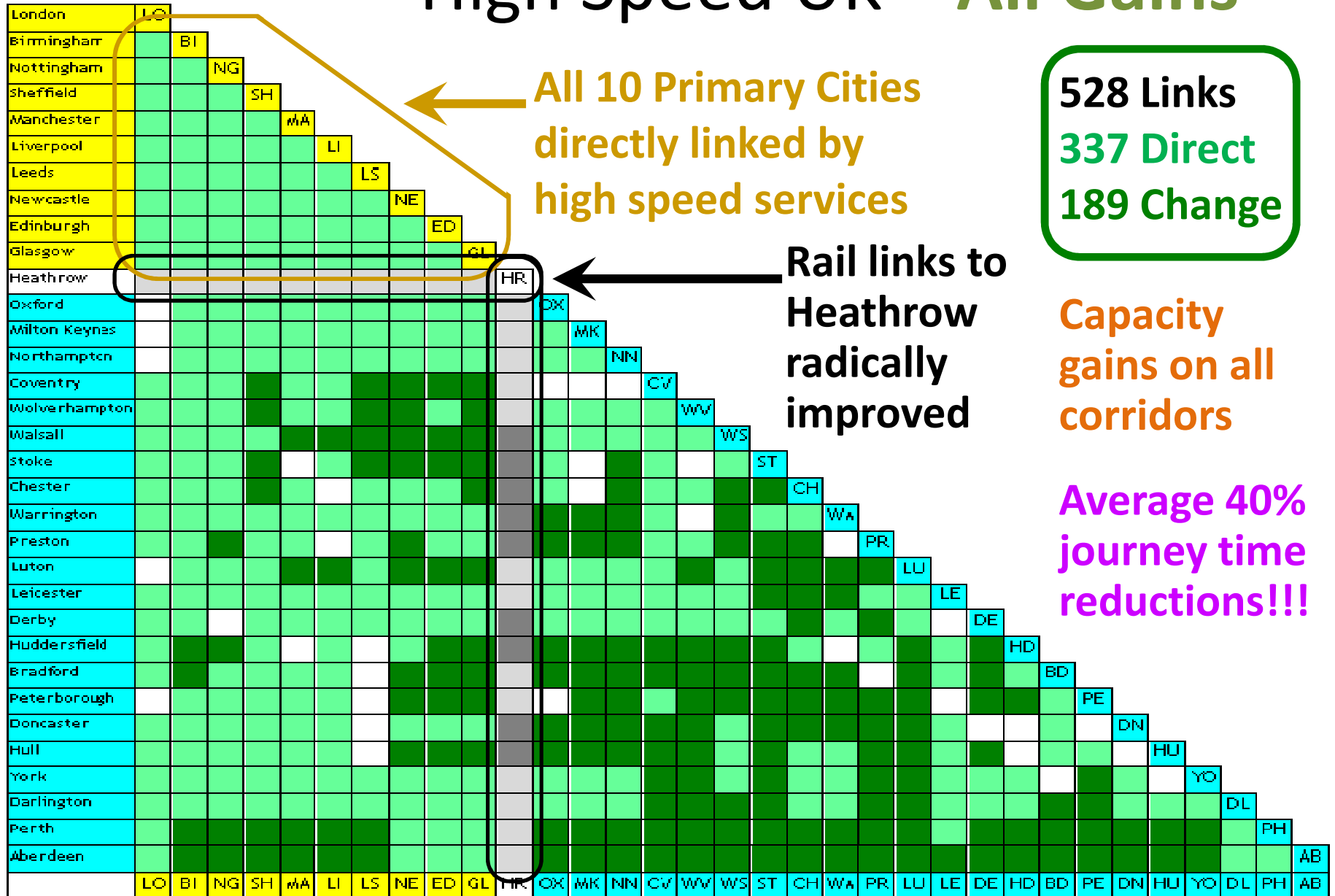
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High Speed UK – All Gains

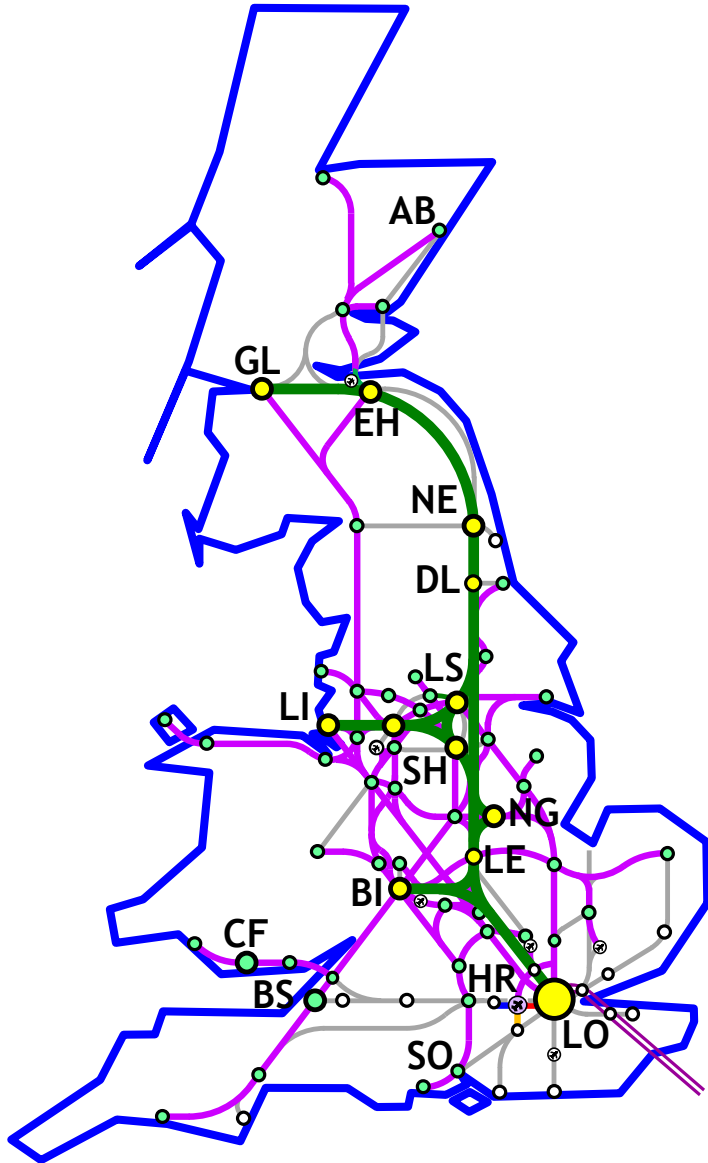


528 Links
337 Direct
189 Change

Capacity gains on all corridors

Average 40% journey time reductions!!!

Connect the nation with HSUK



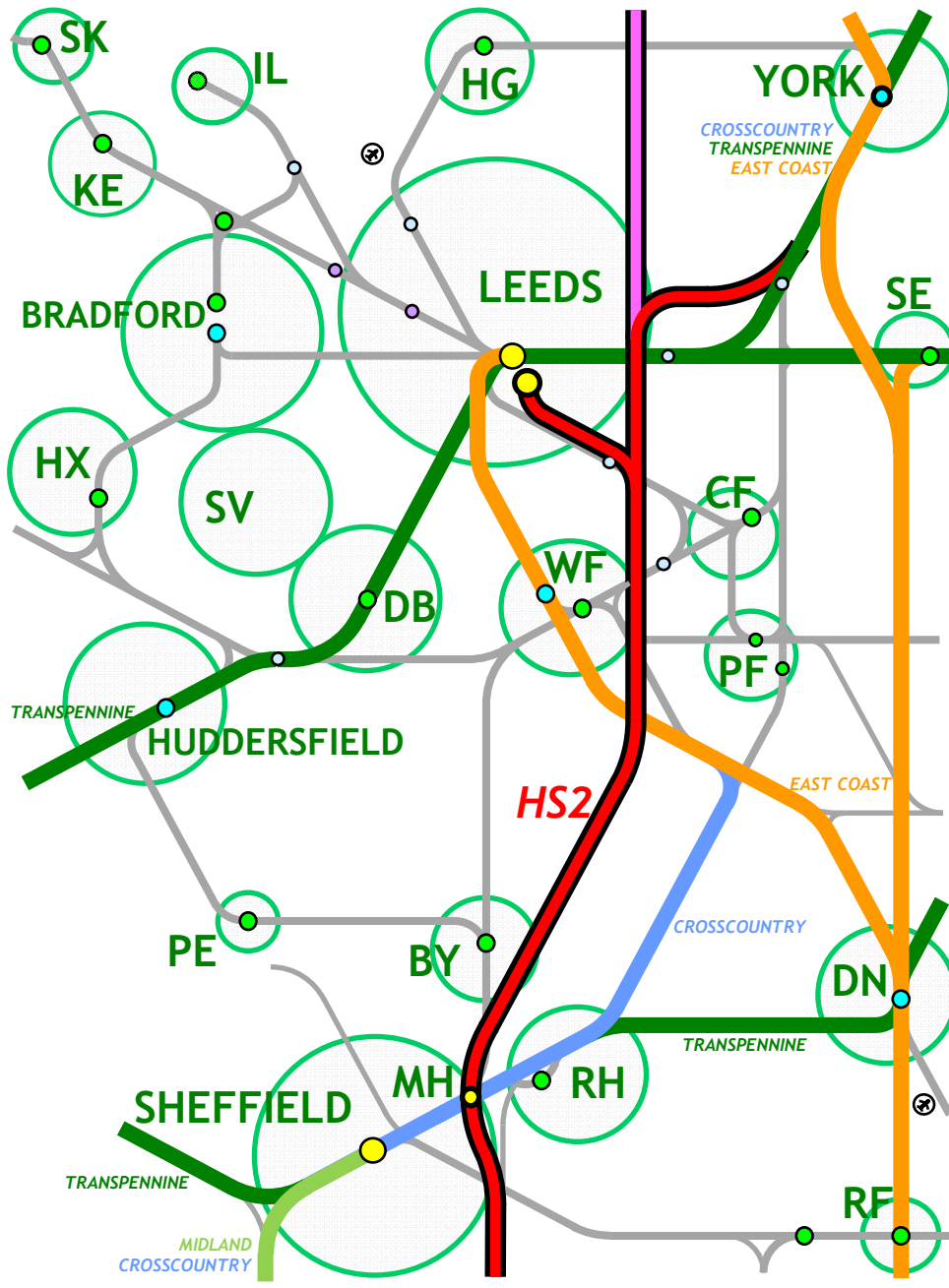
- Designed full length @ 1:25k
- Shorter route, 50% less tunnel
- 25% cheaper than HS2
- Outline timetable developed
- 40% journey time reduction
- Direct HS interregional links
- Direct regional access to H'row
- Regional economic benefit
- CO₂ cuts through modal shift
- Environmental impact minimised

What's Best for Yorkshire?

- **Segregation and London-centricity as per HS2?**

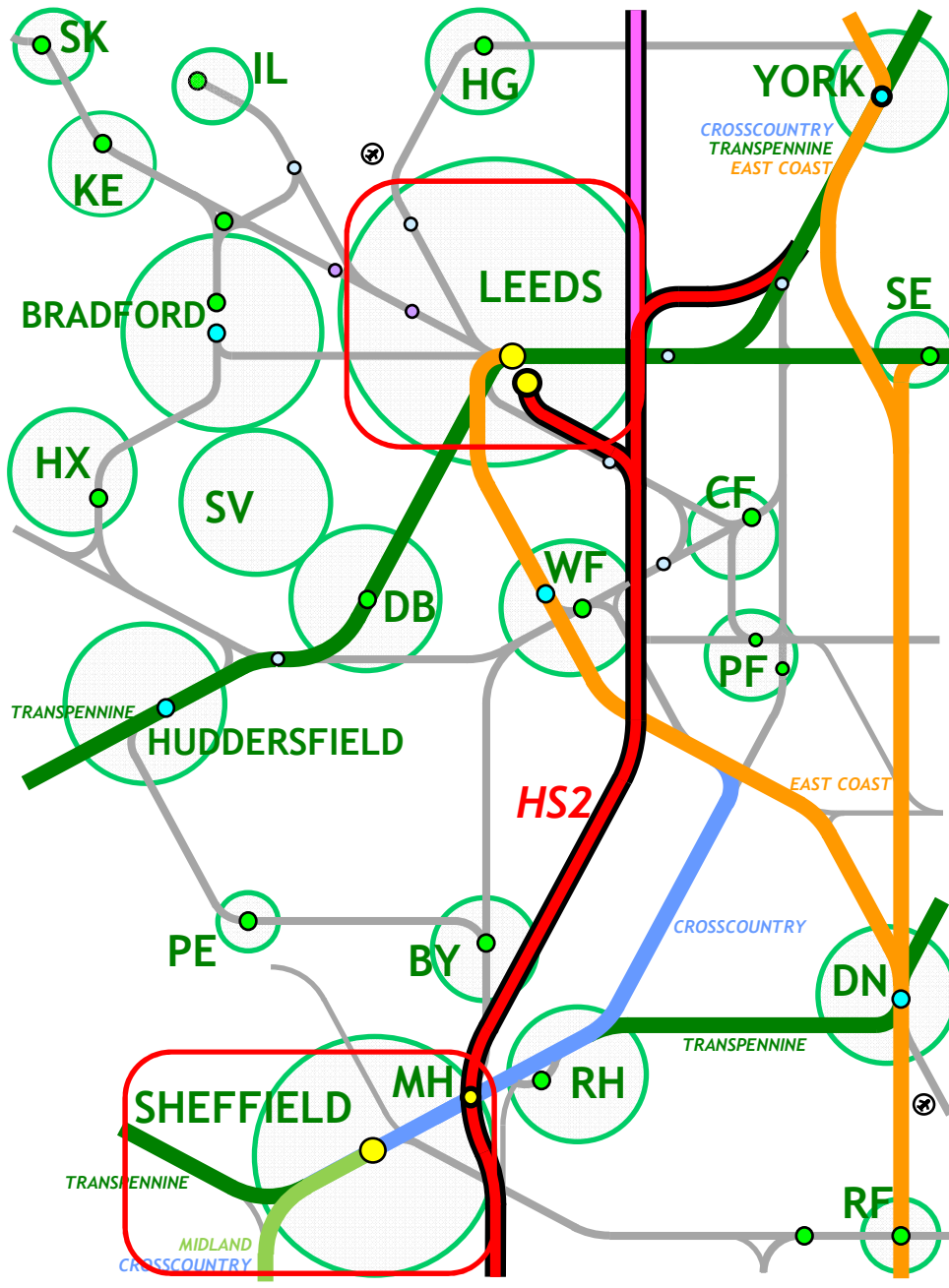
or

- **Integration and Interregional Connectivity as per High Speed UK?**



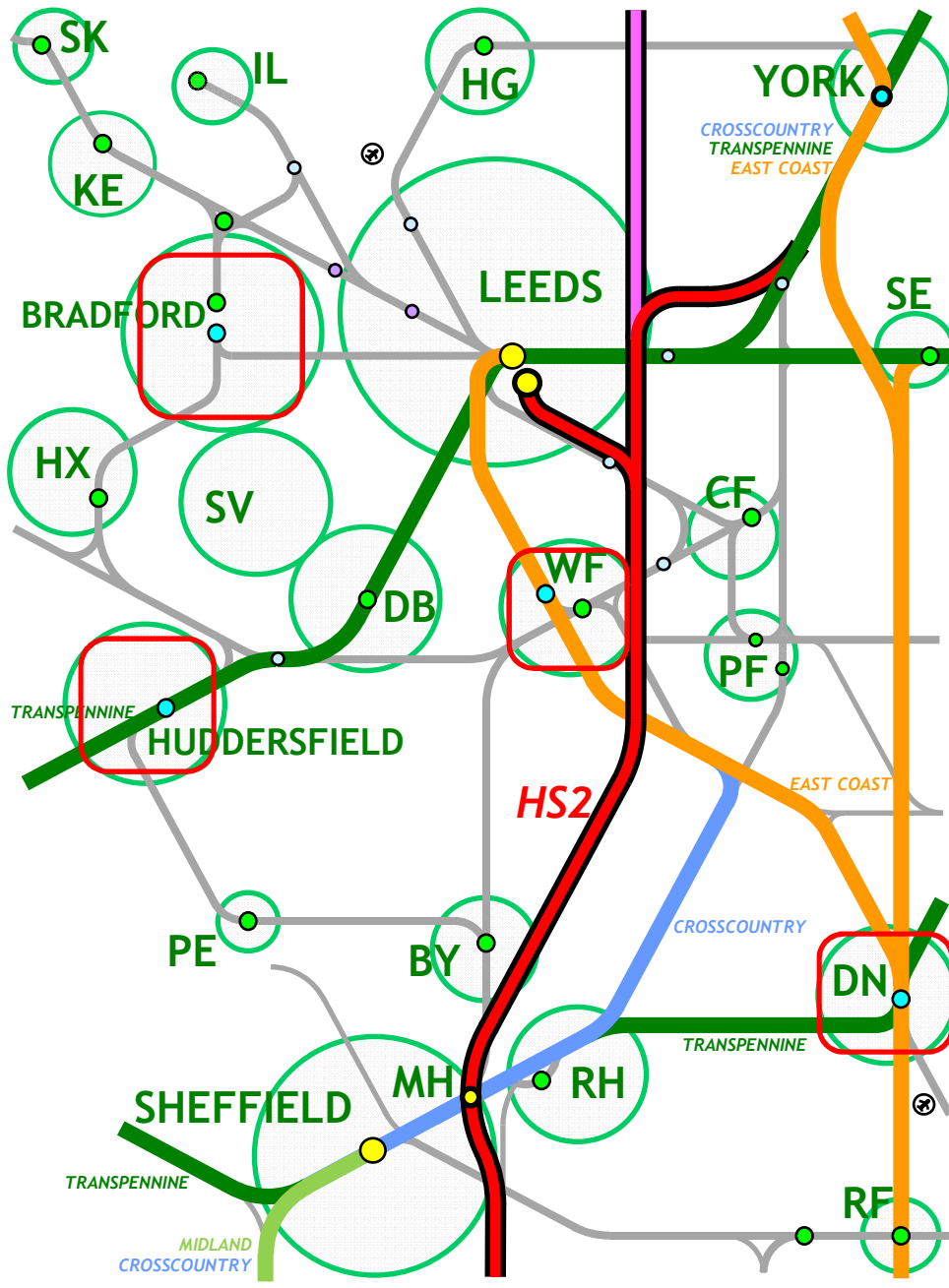
HS2 in Yorkshire

- Separate stations at Leeds & Sheffield
- Bradford, Wakefield, Doncaster & Huddersfield etc all isolated
- Main line services reduced
- Overall loss in connectivity
- No Transpennine link



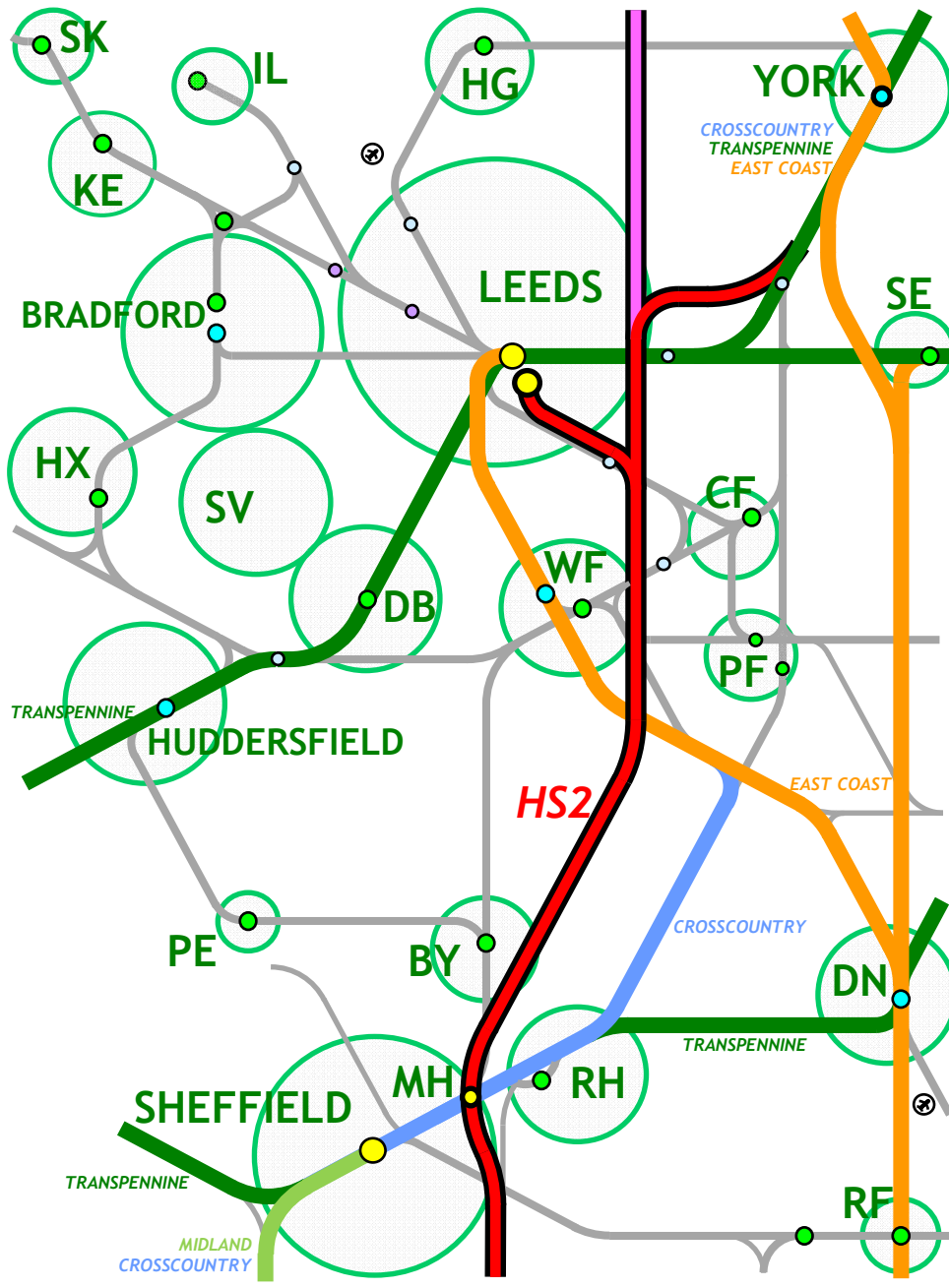
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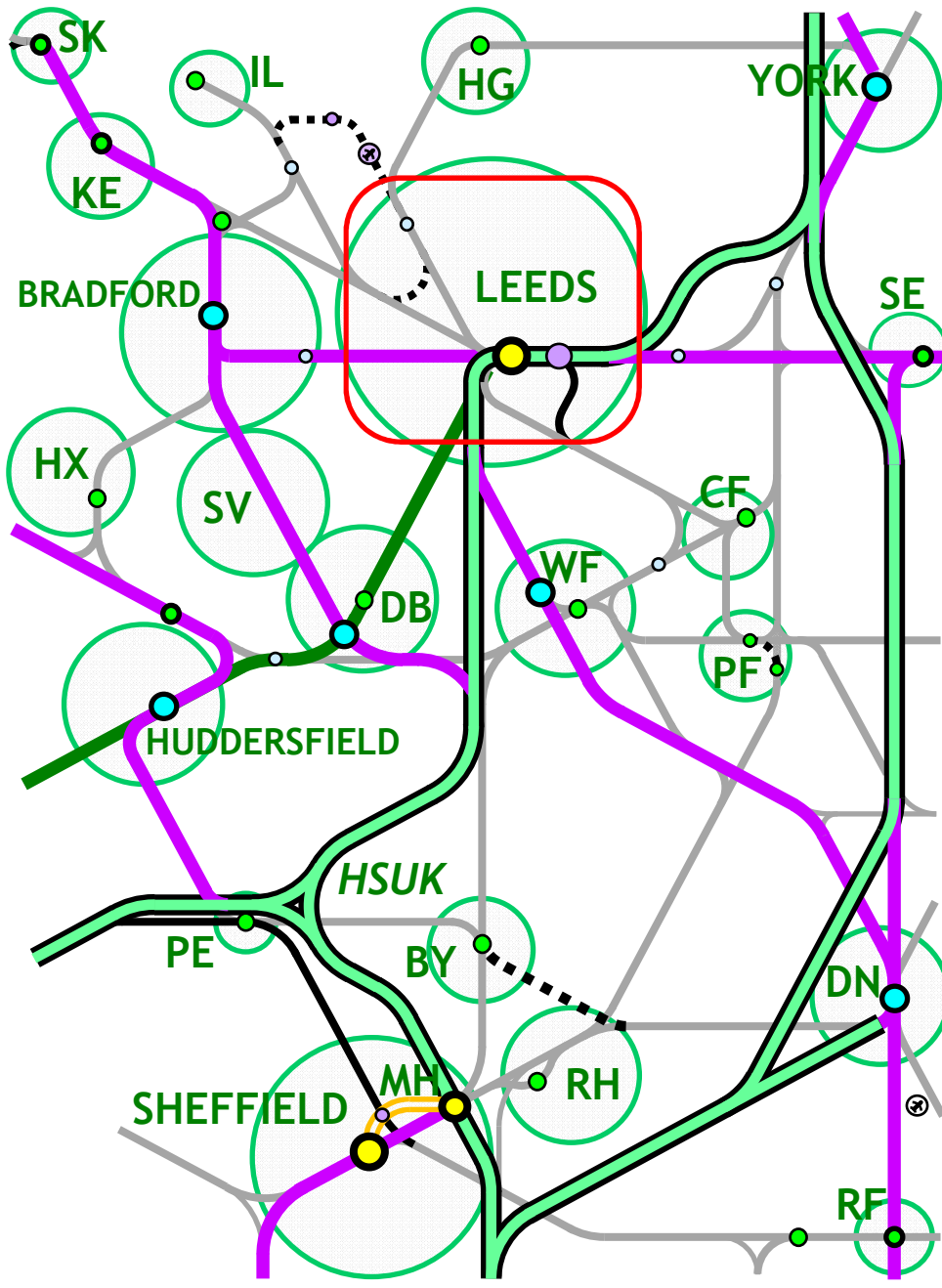
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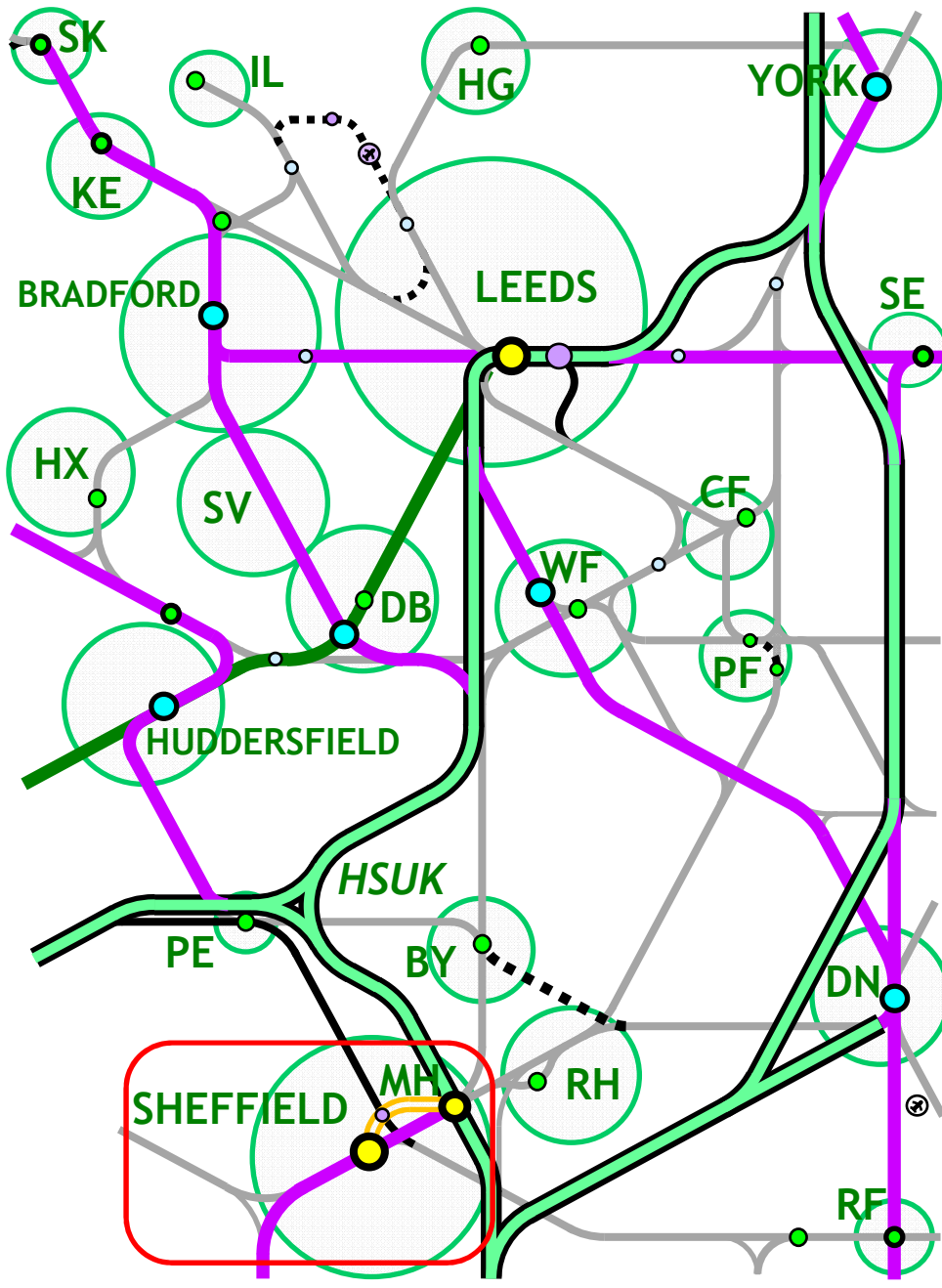
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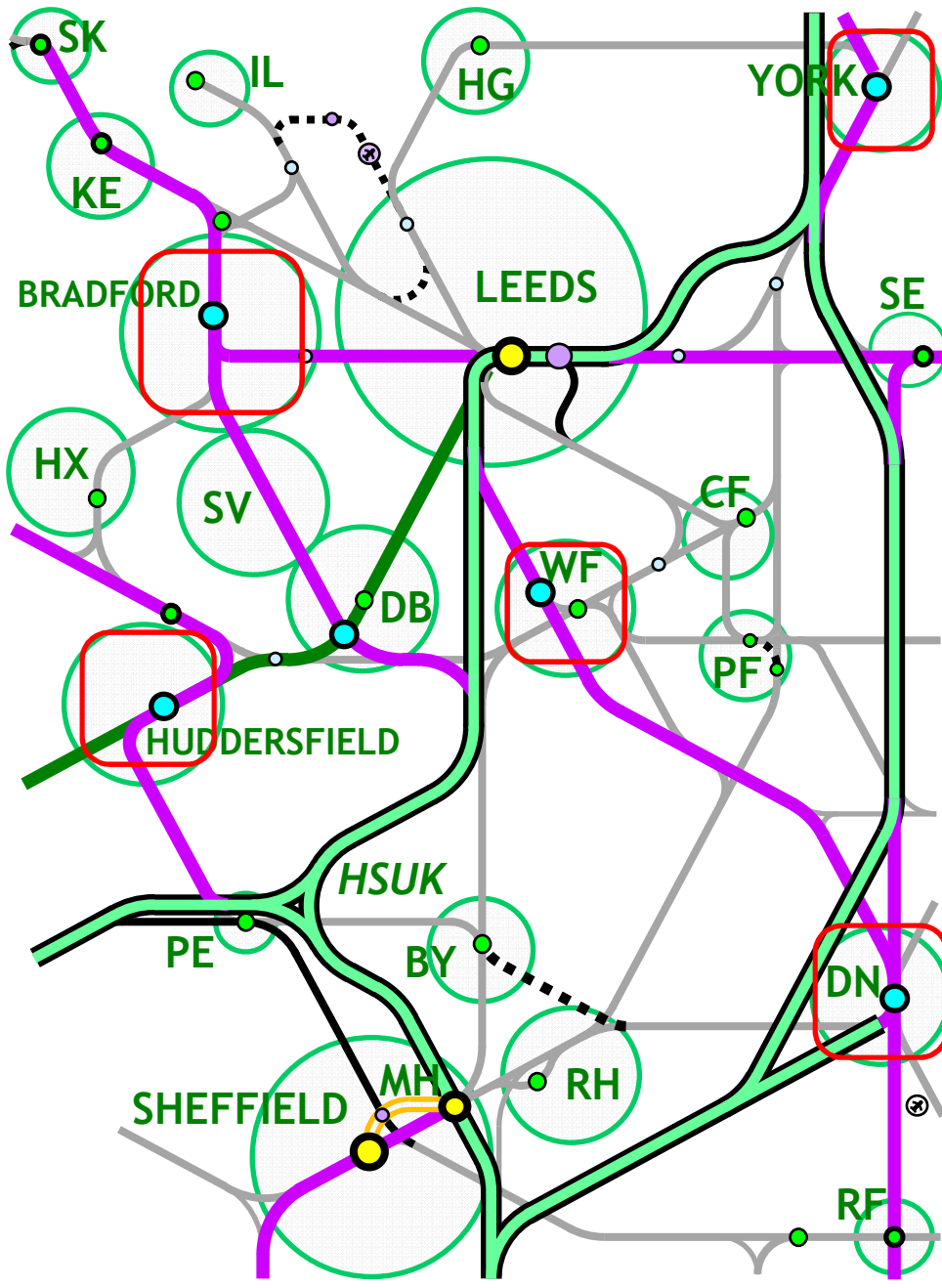
High Speed UK in Yorkshire

- HSUK accesses W. & S. Yorks primary hubs
- Leeds City Station
- Sheffield Midland/
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- HSUK extends to all
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- Doncaster, Wakefield,
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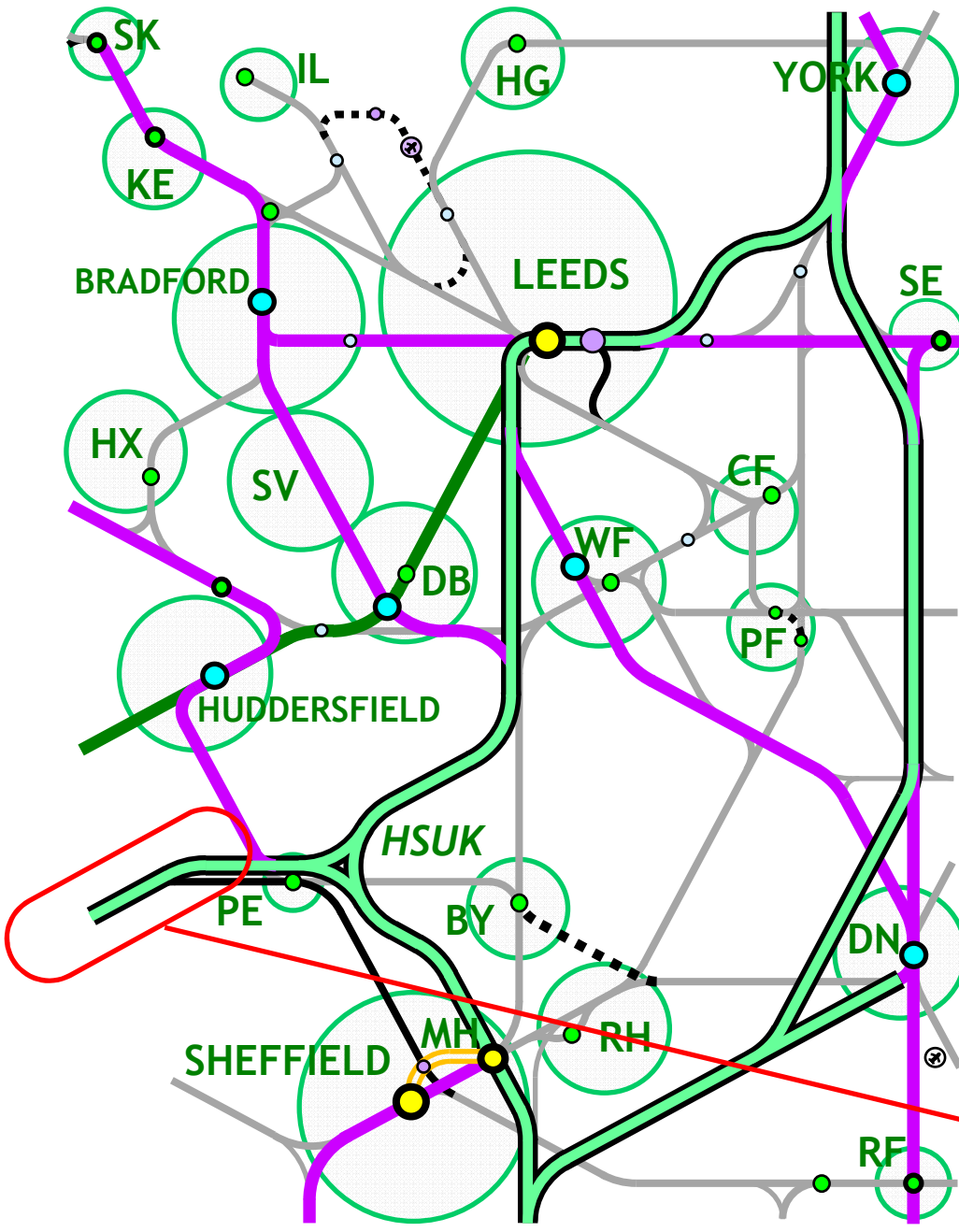
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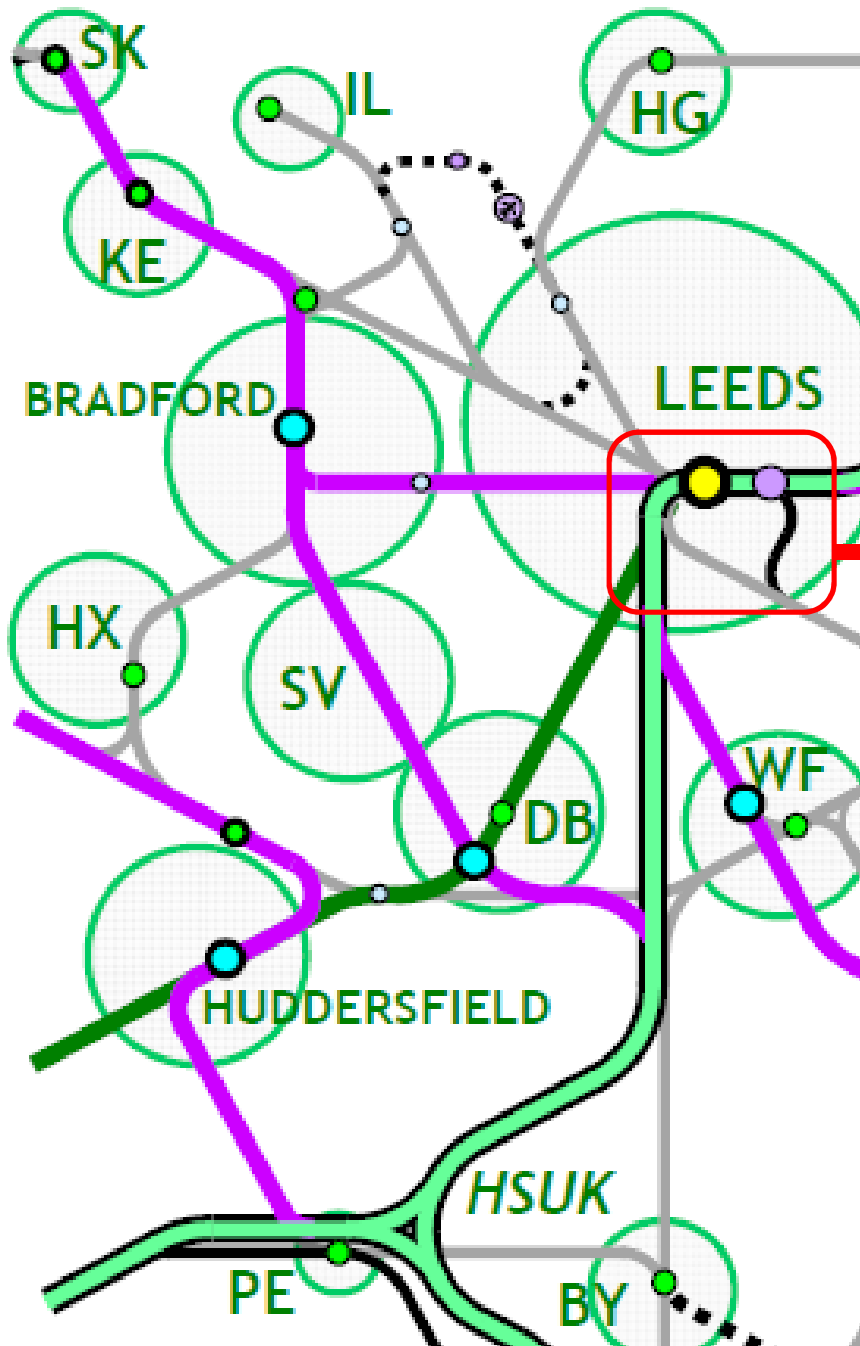
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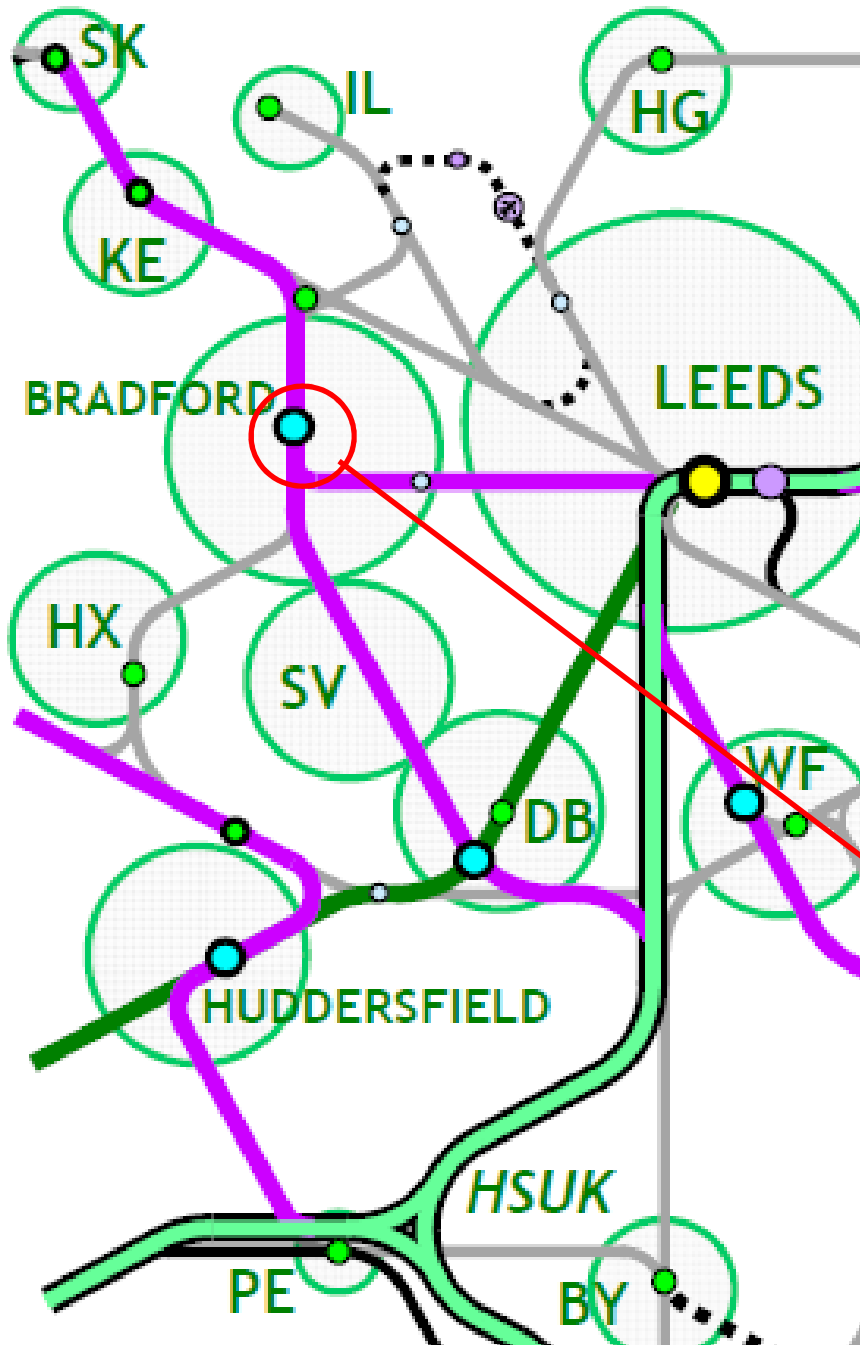
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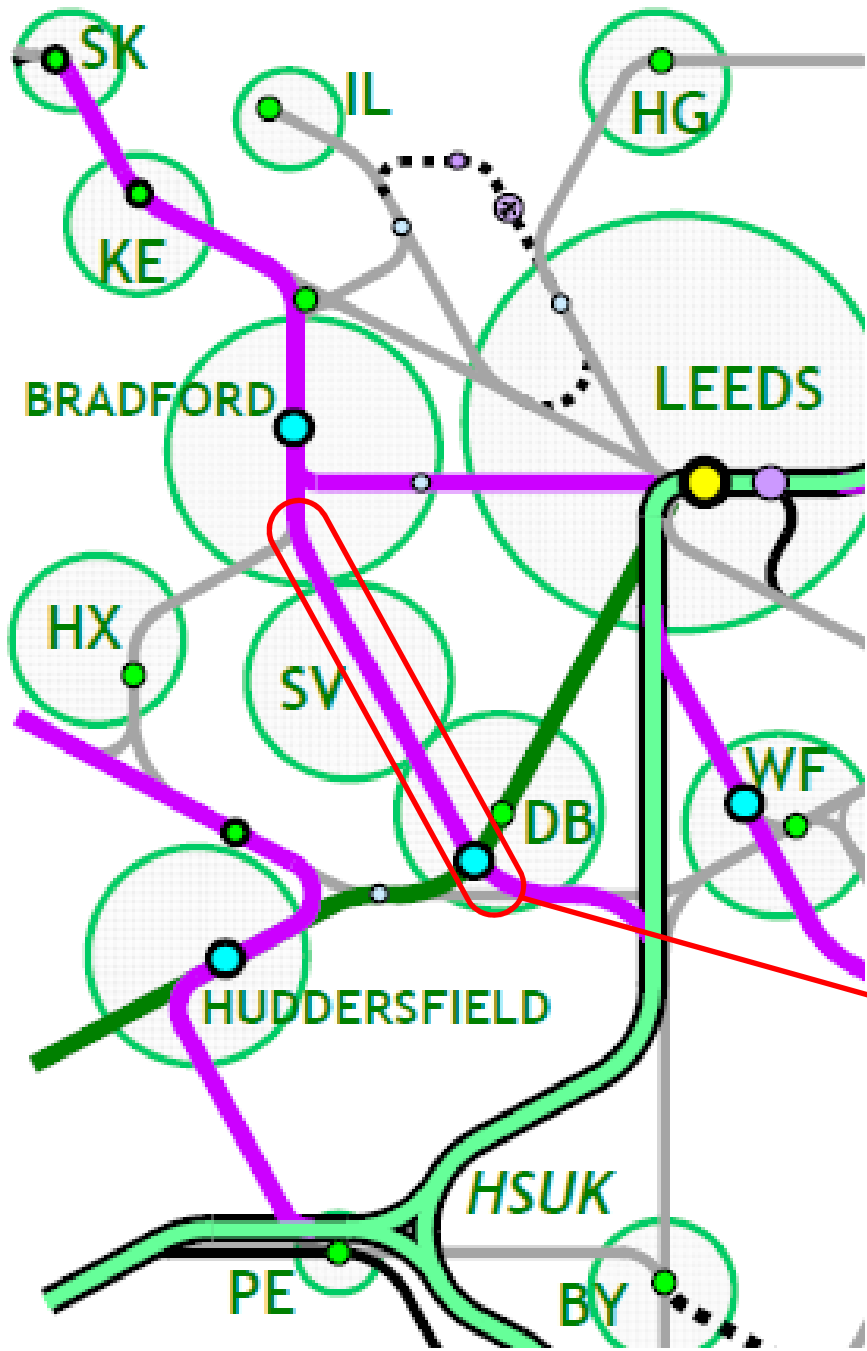


- High Speed hub at Leeds City Station
- 4-track Leeds East Viad't
- Stourton - N. Hill link
- New Leeds Minster St'n
- Bradford CrossRail
- Spennithorne - Penistone redoubling
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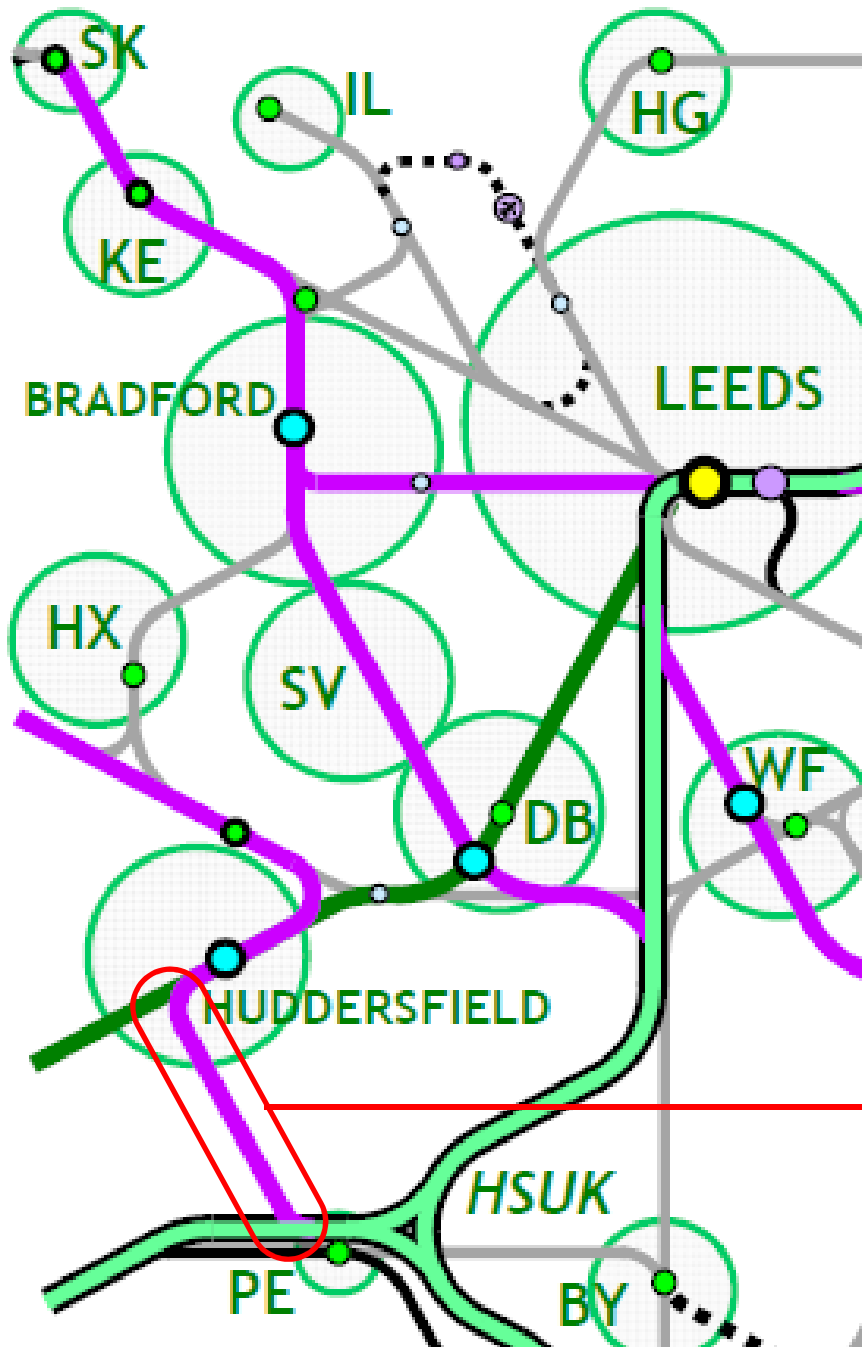


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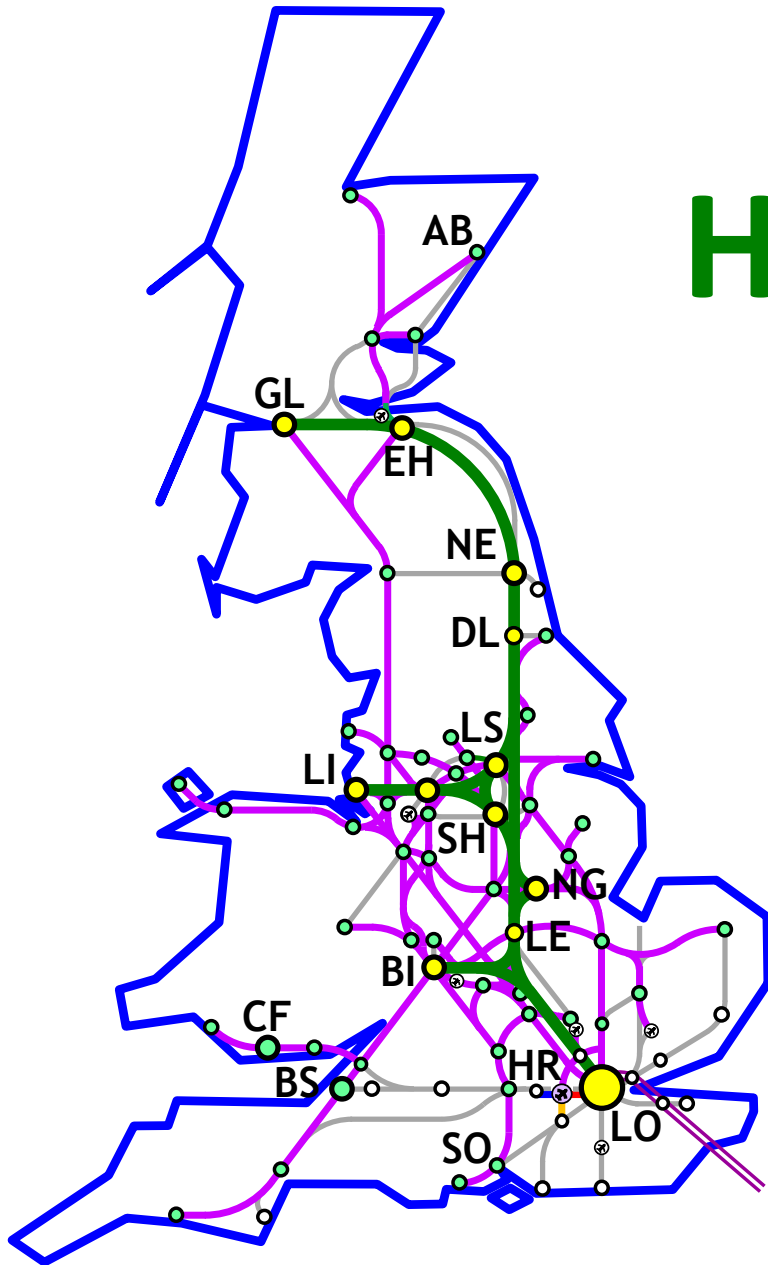
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- High Speed UK delivers **twice** the connectivity
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- High Speed UK maintains **network integrity**
- This looks like the right way to spend £50 billion...

Take the **HIGH SPEED UK CHALLENGE**



- Connectivity
- Value for Money
- Public Policy
- High Speed
- Design Principles
- Due Process

HIGH SPEED UK

...there is an alternative

Colin Elliff BSc CEng MICE