

Uncertainty and Inter-jurisdictional High-speed Rail Planning

Insights from Portugal and the United Kingdom

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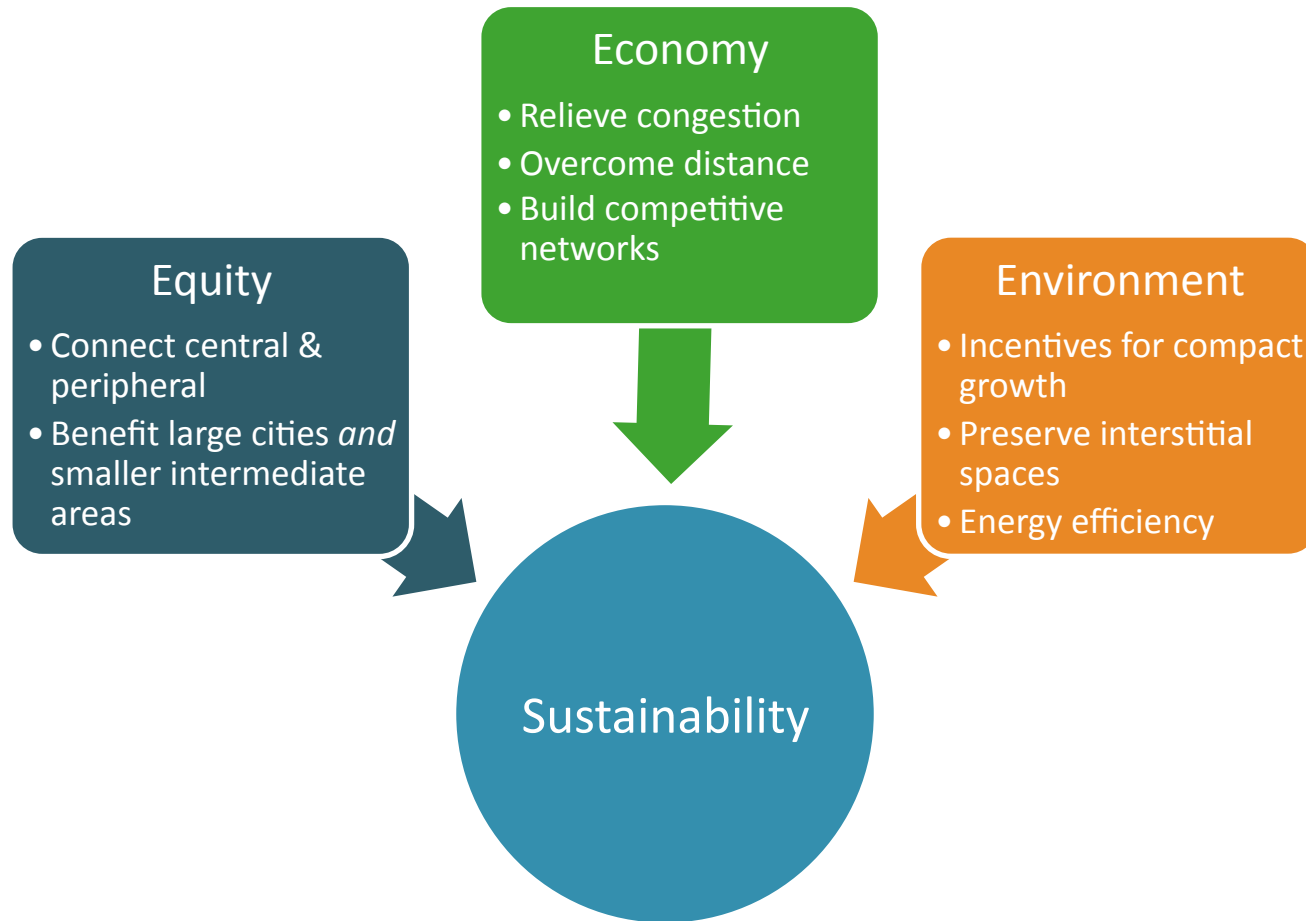
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Motivation: HSR as a Sustainable Initiative



It's complex!

Multiple: Geographic & Temporal Scales, Actors, Domains



Therefore, focus on uncertainty at the interface between technical and institutional complexity

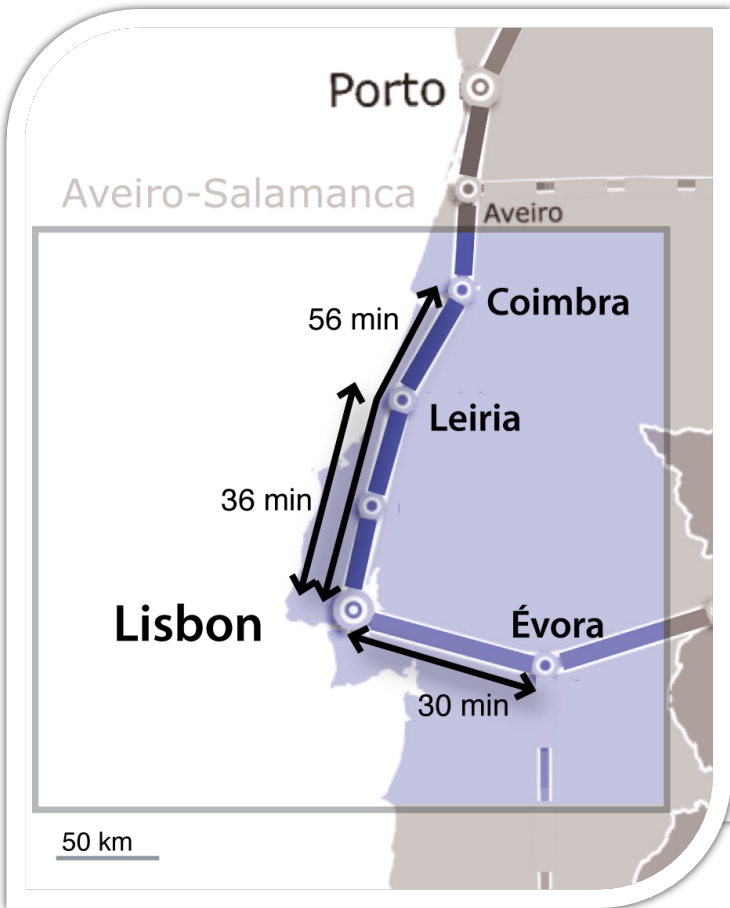
Technical complexity

- Uncertainty of outcomes

Institutional complexity

- Uncertainty of a multi-actor inter-jurisdictional system of control

Case Studies



Source: RAVE, modified by Author



Source: DfT, modified by Author

Selection criteria: < 1 hour from a major city

Cooperative multi-scalar planning and robust system design – Coimbra

- City of Coimbra & REFER (national infrastructure agency) entered into a formal cooperative protocol to manage a multimodal hub and new area of development
- Cooperation led to a more robust design that could go ahead in multiple future scenarios, including one with no current HSR implementation, but without precluding its future inclusion in the multimodal hub

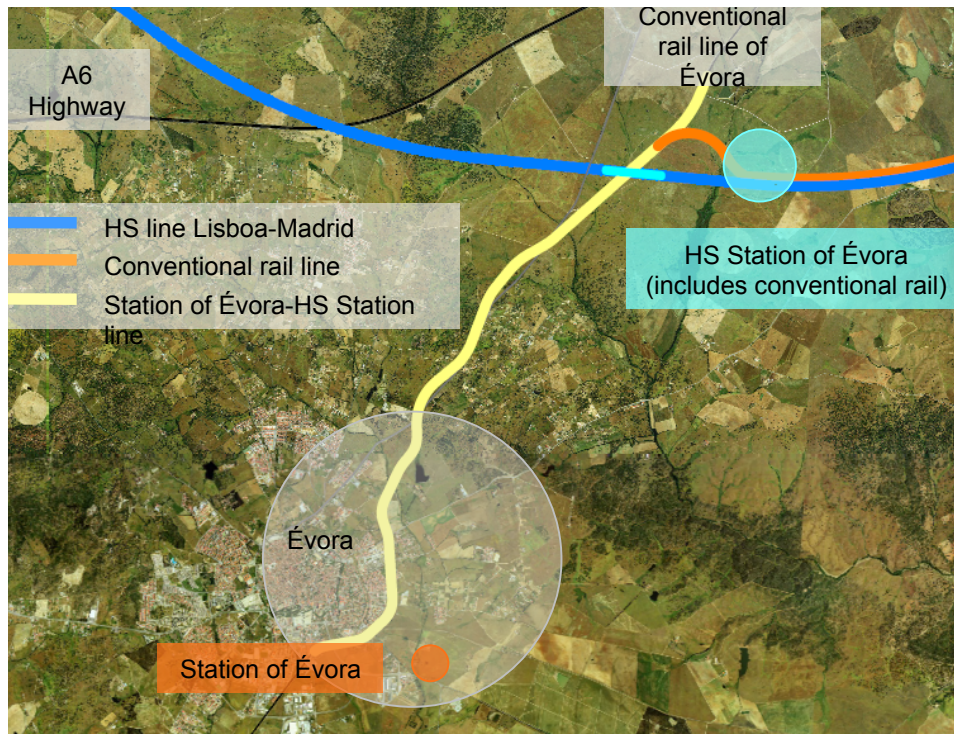


Source: REFER



Source: Author

External station locations as a constraint on future benefits – Évora & Leiria



Source: REFER

Station placement affects:

- Development prospects
- Incentives for local government involvement
- Policy tools available to influence HSR outcomes

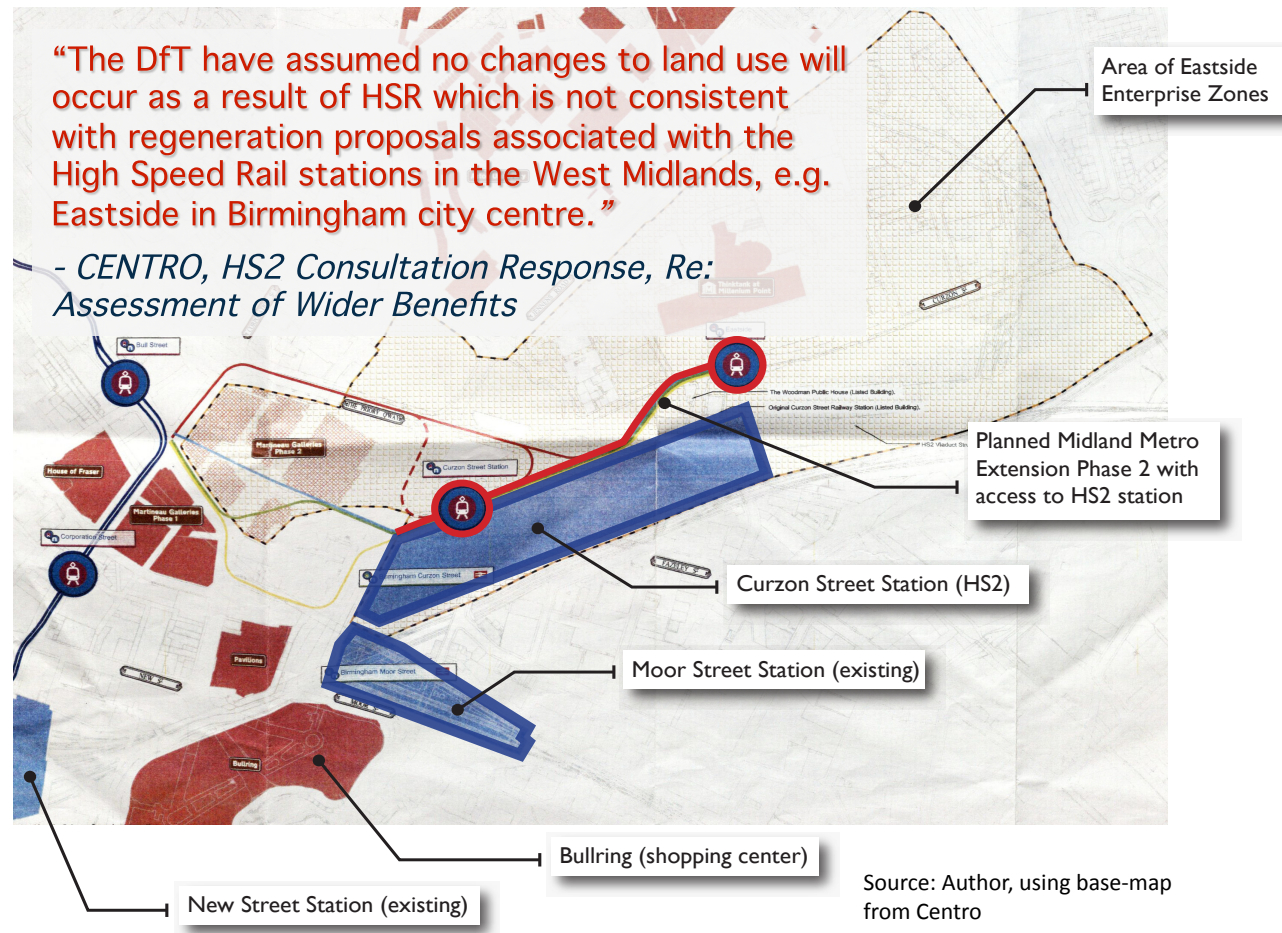
Evaluation dominated by more near-term considerations:

- Reduce travel times between dominant O-D pairs
- Provide easy regional car access
- Avoid localized cost associated with urban construction

Challenge: how can the evaluation process adequately account for potential but uncertain future development that might justify a more centralized station location?

Uncertainty and the challenge of integrating local station-area plans – Birmingham

- Pre-existing metro plans & “enterprise zone”
- Co-dependence of HSR & local initiatives
- Uncertainty of local initiatives as a barrier to their inclusion within the national evaluation process
- Failure to include “HSR supportive” strategies may constrain HSR’s success

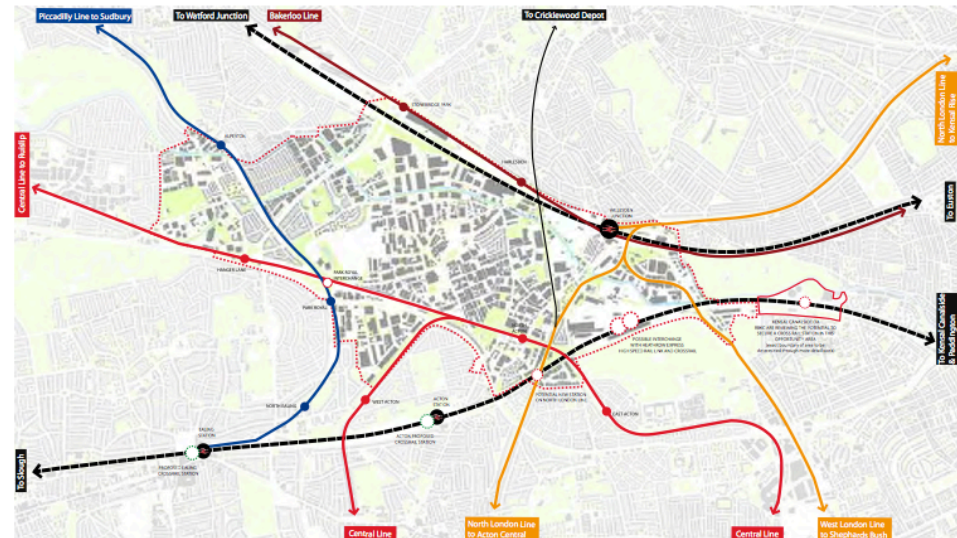


Managing uncertainty of outcomes in project evaluation – Old Oak Common, London

- Convergence of transport infrastructure and industrial land
- TfL & the Mayor's office want a strategic transport interchange
- London Overground connections could be justified if major redevelopment occurs



Source: Dijkhuis and Siraut



Source: Park Royal OAPF

Managing Uncertainty

Inter-jurisdictional OAPF planning process to develop future land use scenarios for EIA sensitivity tests – used to evaluate system performance under alternate futures

Summary of Findings

1. Existing processes and evaluation mechanisms affect the level to which local knowledge can be incorporated into HSR design
2. Certain initial decisions along with cooperative inter-jurisdictional planning can help manage the long-term uncertainty of HSR planning and implementation
3. Flexibility is important

Strategies for resilient multi-scalar planning & implementation

Any HSR project is subject to:
long timelines, high stakes, iterative design, and *challenge*

Formalized commitments

- Local representation in decision-making
- Contractual agreements that formally incorporate local plans
- Designating a % of HSR funds for complementary schemes
- Inclusion of local accessibility requirements in HSR authorizing documents

Informal coalition building

- HSR changes the competitive landscape
- Introduces incentives for cooperation
- Take the opportunity to reevaluate other regional LU/T strategies
- Build a broader coalition for change
- Partnerships gain durability from stakeholders interested in broader vision

Parting Thoughts –

“High-speed rail infrastructure should not be considered the end objective, but rather the initiation of a long process of developing actions and strategies to enhance its effects”

- J.M. Ureña
*Territorial Implications of
High Speed Rail: A
Spanish Perspective.*

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Image: Coimbra
Image Source: Author

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- Isabel Lopes, Eduardo Pires, and Daniel Ferreira, [REFER](#).
- Rafael António Robalo Ribeiro de Azevedo, [REFER](#).
- José Vilela; António José Cardoso; Helena Terêncio, and Fernando Rebelo, [City of Coimbra](#).
- Dra. Sandra Cadima; Maria João C.G. Neto de Vasconcelos, [City of Leiria](#).
- Luis Santos and Ricardo Grade, [SMTUC](#), [Coimbra](#).

UNITED KINGDOM (January and February 2013)

- Chris Tunstall and Richard Leonard, [Birmingham City Council](#).
- Mike Ogden, Maria Pilar-Machancoses, and Toby Rackliff, [Centro](#).
- Michael Colella, Peter Moth, and Andres Wallace, Julian Ware, and Simon Weaver. [Transport for London](#).

Findings – I.

Managing outcome and institutional uncertainty

Coimbra: National-local collaborative planning can produce station-designs that are more robust and able to perform under multiple future scenarios.

Évora & Leiria: An evaluation mechanism that values more certain current costs over potential future benefits can result in a station-placement decision that constrains the economic development and environmental sustainability benefits of HSR.

Birmingham: Insufficiently broad project assessment due to both outcome and institutional uncertainty can block potential long-term benefits from HSR.

Old Oak Common: The OAPF offers one model of inter-jurisdictional scenario planning that can help manage long-term development uncertainty within a formal evaluation framework

Findings II.

The importance of establishing flexible initial conditions

- The Coimbra collaboration between REFER and the City creates a institutional framework that can more flexibility handle changing designs needs
- HSR-supportive local planning in Évora and Leiria is at risk because of the decision earlier in the HSR planning process to locate stations external to the cities.
- In Birmingham, initial decisions about station design may constrain or enable future station-area growth.
- At Old Oak Common, the initial decision to purchase a “real option” by building decking over the rail yards would provide flexibility to enable higher-density commercial development as future market conditions allow.