

# High Speed Two

A case study in providing a green and healthy  
transport alternative

**nef** (the new economics foundation)



# High Speed Two

- £32.7bn (now £50bn) trans-national high speed rail line
- Objectives
  1. Catalyse economic growth
  2. Provide additional rail capacity
  3. Help bridge 'North-South divide'
  4. Backbone of low-carbon UK transport system



■ High speed network (Phases I & II)    
 ■ Existing lines for direct services    
 ■ Heathrow Express

# 1 - HS2 and the economy

## Catalysing economic growth and job creation



- Questions surrounding the value of time savings in the economic models
- Poor track record for accurately assessing wider economic impacts
- Little evidence on job creation claims

## 2 - HS2 and rail capacity

### Providing rail capacity



- Forecasts badly underestimated demand for HS1
- Demand models do not incorporate material factors, like effect of ticket pricing
- GDP growth and past demand drive model
  - Can we count on these continuing?

## 3 - HS2 and economic rebalancing

### Rebalancing the UK's economic geography



- International examples show more prosperous regions benefit more
- Evidence suggests that HSR connections can exacerbate economic imbalances

## 4 - HS2 and sustainability

### Contributing to Britain's low-carbon future



- HSR is more carbon intensive than conventional rail
- Impact on aviation-related emissions will likely be minimal, at best
- Emissions from construction and generated demand further degrades the carbon case for HS2

# Our alternative investment package

- Includes 88 individual schemes
- Compiled from government documents, stakeholder interviews and academic literature
- Multi-modal alternative
- Strives to meet the disparate stated objectives
- Mirrors the costs and coverage of HS2









# 1 - Investments in mainline rail

- Upgrade works to the WCML and ECML
- **Price:** £10bn (£3.3bn for WCML, £6.7bn for ECML)
- **Benefits:**
  - Cost-effectively increases services and capacity within/between regions
  - Boosting economic performance through connectivity and agglomeration
  - Lower user travel costs
  - More accessible railway jobs
  - Environmental gains
- **Objectives met:**





## 2 - Investments in regional rail

- Works to increase connectivity within & between key non-London cities in addition to station redevelopments
- **Components:**
  - New tunnels
  - New track to connect MML to WCML
  - Electrification schemes
  - Commuter rail link enhancements
  - Station redevelopments
- **Price:** £10bn
- **Benefits:**
  - Addressing regional growth imperative
  - Increasing capacity & sustainability in the North
- **Objectives met:**    



## 3 - Mass transit and buses

- Funding for light rail schemes, bus network development and smart ticketing systems
- **Components:**
  - Direct capital funding for light rail projects in Manchester, Birmingham, Liverpool and Leeds
  - £2bn for strategic bus fund for targeted investment and development
  - £150 million for smart ticketing systems in the four large conurbations
- **Price:** £6bn
- **Benefits:**
  - Transit capacity and environmental gains
  - Creating conditions for generating employment
- **Objectives met:**





## 4 - Investments in active transport

- Funding for walking and cycle paths, bike parking and rental schemes
- **Components:**
  - £750 million in cycle-related funding for Birmingham, Leeds and Manchester
  - £500 million each in cycle funding in 4 other cities
  - £700 million for walking schemes in the 7 cities
- **Price:** £2bn
- **Benefits:**
  - Foundation for low-carbon transport system
  - Increase resilience of local transport networks
  - Boost individual health
- **Objectives met:**    





## 5 - Investments in connectivity

- Funding to rollout to-the-door fibre optic broadband infrastructure and video conferencing hubs
- **Components:**
  - £4.5 bn for to-the-door fibre optic broadband works
  - £1 bn for video conferencing hubs designed for SME and NGO access
- **Price:** £5.5 bn
- **Benefits:**
  - Enable ultra-fast to-the-door digital connectivity
  - Boosting business and education
  - Releasing pressure on existing transport system and the environment
- **Objectives met:**

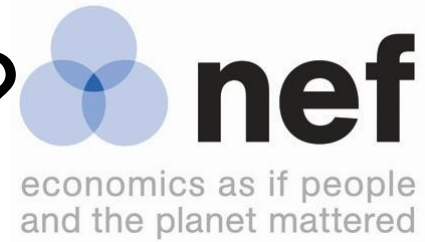




# Take home messages

- nef proposal: *alternatives* that we could spend the money on
- Big risk in HS2 proposal: 50 billion!?
- All eggs in one basket!!
- No risk analysis done!!
- What about ticket prices? Assumed ticket prices would be the same
- What about 88 different measures, spread the risk, higher benefits

# What case did nef make?



## Failures in Govt assessment:

- failure to recognize that people are productive during travel (so how do you calculate the VALUE of time savings; they overestimated this saving as they assume that nothing happens during travel)
- Env't arguments – the only way HS2 delivers CO2 reductions is by replacing flights

# nef points (II)

- HS rail is more C intensive than conventional rail, but less C intensive than air travel
- Most of the travel goes to Manchester and Leeds, but they are not connected by flights to London – so its an unreasonable comparison as one wont replace the other
- C emissions will go up , rather than down

# Conclusion

Compared to HS2, **nef** believes that implementing a holistic alternative investment package could be:

1. More inclusive
2. Faster to achieve
3. More balanced
4. Better for the economy
5. Less risky
6. Generate higher return on investment

It is possible that there could be better and cheaper ways to meet the strategic objectives underpinning HS2

There is time for the government to step back and step up

## HS2 and Jobs

- Government says HS2 will create 100,000 jobs
- Jobs estimate was not in scope of study for our alternative
- Applying UK defaults from PEP working paper, the 1.25bn in the nef alternative would generate 14,125 jobs (7685 direct and 7685 indirect & induced)

- Now Government just say “its necessary”



# New research opportunities

- Have been asked by wildlife groups in NE to conduct full CBA
- Combining active transport and green space literature
  - Well-being from green space that is often associated with active transport
- Employment impact methodology and tools
  - What local factors are the most important determinants?
- Thanks!