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Decision-making and evaluation: time for a change

David Bull,
Director of Planning and Transportation, Thurrock Council

Arup

27 November 2013

Introduction

David began with a number of anecdotes from his experiences over 35-40 years as a professional and a politician including:

- At Southampton City Council
- A Transport MSc at the University of Westminster
- Director of Transportation at Birmingham
- Director of Planning and Transportation, Thurrock Council, involved in the proposed Lower Thames Crossing

He noted that decision-making and politics are cultural and that politicians like to make decisions. As a counter-example, he noted that, when the Czech Republic emerged from the influence of the USSR, officials had to adjust to the freedom to make decisions rather than being given detailed instructions from above.

David began with Jackson Pollock’s “Blue Poles”, Figure 1.

Figure 1: Harmony
He hoped that the audience would accept that it was a harmonious composition. Pollock had said “It is only when I lose contact with the painting that the result is a mess. Otherwise there is pure harmony, an easy give and take, and the painting comes out well.

**Current decision-making and evaluation**

David contended that the link between decision-making and evaluation is in a mess. As we try to be more and more objective and put things in numbers, the assumptions, errors, uncertainty and external benefits and factors that can be and are ignored, or paid lip-service to, mean that there is a risk that the data or information becomes:

- More and more unreliable
- Not understood
- To the outside observer, spurious, unreliable and with no creditability for decision-making and therefore open to challenge

He concluded that we need a discussion and a debate to bring harmony back into decision-making and assessment.

**LEPs and LTBs**

Local Enterprise Partnerships (LEPs) determine priorities, and local authorities carry out actual spending. David spoke of his experience at the South East LEP, the biggest in England including:

- Three counties: East Sussex, Essex and Kent
- Three towns: Medway, Southend and Thurrock

There is £2 billion per annum national funding for the LEPs, equivalent to £12 billion over the period 2015-2021, of which 70% is likely be spent on transport.

However, in 2012 the Local Transport Boards (LTBs) were established, with funding based on head of population, although their relationship to LEPs varies across the country.
The South East LTB received £66 annual million funding on this basis, with potential for another £160 million a year or £1 billion over six years. However, the SE LTB now has 131 schemes requiring £1.28 billion of funding, so the list of schemes will need to be cut by half, before the deadline for submission to Government of 19 December 2013.

The process

The old process of regional allocations is now dead – the coalition has abolished the 8 regions – but lessons can be learned.

The first phase of LTBs has been difficult but just workable. The methodology and weightings for priorities were agreed in the South East, but David felt that they had not been understood by many. They were, however, a mix of quantitative and qualitative for flexibility, providing some “wriggle room” as to exactly how decisions were justified. Agreement had been reached on a balance of spend:

- 17% LEP strategy
- 33% economic impact or value for money (VfM)
- 25% “management/commercial”, effective availability of external funding
- 25% “financial/affordable”

The politicians and representatives decided what to include and the officers then had to justify this, attempting to show some semblance of objectivity in evaluation.

David contrasted the change of approach shown in Table 1.

The old approach has no localism, as all funding decisions were made by DfT. The new has localism, but evaluation comes later relative to DfT objectives, and is likely to produce a flood of schemes liked locally but not rated by DfT. There are also practical issues, such as that maintenance funding is in the common pot, so there is a need to sell maintenance to politicians: otherwise it won’t be funded.
Table 1: Change in approach

<table>
<thead>
<tr>
<th>Then (LEP)</th>
<th>Now (LTB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify problems (across a region)</td>
<td>Mainly road schemes identified by highway engineers for growth: jobs and housing as required by BIS</td>
</tr>
<tr>
<td>Develop ideas/schemes</td>
<td>Develop ideas: sustainability and public transport relegated</td>
</tr>
<tr>
<td>Outline evaluation</td>
<td>LEP decision, led by Highway Authority officers: no going back</td>
</tr>
<tr>
<td>Cost-benefit/value for money (VfM) for schemes you wish to take forward</td>
<td>Evaluation/cost-benefit/VfM secondary – after decisions</td>
</tr>
<tr>
<td>Sell to politicians</td>
<td></td>
</tr>
<tr>
<td>Fund: DfT decisions</td>
<td></td>
</tr>
<tr>
<td>Implement</td>
<td></td>
</tr>
</tbody>
</table>

Additionally:

- In urban areas, houses tend to get built, but then there is no will to provide supporting infrastructure
- In rural areas, infrastructure gets built to attract houses or jobs, but there may be no will, or need, or market, to provide them

Emerging issues

David suggested that under LEPs there were “winners” and “losers” in the minds of Council Leaders, business representatives and even Council officers, despite attempts at an independent process. We need a simplified transportation decision-making and evaluation process - there is a danger of the two being separate - which must:

- Be understood by local authority staff, including transport strategy and regeneration staff
- Be justifiable to the public, where it will come under scrutiny
• Be transparent to business representatives
• Meet local needs
This is what democracy is supposed to be about.

**High Speed 2**

David turned to High Speed 2 (HS2) as an illustration, and asked for a show of hands:

• 50% (8 of 16) had a view on the project
• 50% each (4 and 4) were for and against

If this was the view of the professionals, it was hardly surprising that politicians needed to turn to other bases for decision-making.

In practice, HS2 is one of the biggest projects in Britain, but the standard of debate about whether or not to proceed is poor. The professionals are confusing the public, many of whom may not even care. How can we help the democratic progress? How can we bring about clarity and order to a complicated decision-making process?

The HS2 debate now ranges across economic development, dealing with the north-south divide, having faster trains, or freeing capacity on the existing network, plus avoiding environmental impact in the home counties. All are issues, so is a public discussion of value for money and cost-benefit likely to prove helpful?

HS2 illustrated a number of paradoxes:

• Boris Johnson had been against HS2 but now plans to establish a regeneration superhub for Old Oak Common.
• All the main parties, the CBI and the trade unions are for HS2, but there is still a massive campaign against it.

**The challenge**

David suggested that we must work on the basis that more transportation infrastructure funding is coming to support economic growth, meaning jobs and housing. There is no ring-fenced transport funding. This is moving in the right direction,
but there is a need to argue the case for transport with those for housing and jobs.

There is also the possibility of big schemes being funded, but there will be a need to move quickly as implementation starts in 2015.

There is up to £12 billion to spend, most of it on transport schemes, but this means agreeing new priorities. It is probably too late to get the decision-making process right for the next 5-year period.

**A wish list**

David set out an effective wish list:

- Clear decision-making, backed up with value for money (VfM) projects
- A simplified evaluation process, which is cheaper and quicker but intelligible, accurate and robust

Now is the chance to review and radically alter the status quo, and this should be the catalyst for change.

This will require a new market, with competition and collaboration between professionals such as transport economists. The process must be accepted and understood by local authority Chief Executives, Leaders, cabinet members, business and public.

There was a need to reduce the risk on spending, with better cost accuracy, and with no DfT to bail out overspend, a need to get things right first time.

There was a creative and constructive debate being led by professionals, but the test of what was right would be what worked. A consensus was needed, and soon.
Conclusions

David summarised his conclusions:

• We need a new process but must act quickly and with focus. The approach will need to be harmonious, so that the debate is about the decision, not the evaluation.

• Transportation must get out of its silo, accepting competition for funds but in the context of a holistic approach to decisions.

• This will require communicating, collaborating and competition between consultants, using expertise including academics, for a fast development of ideas.

This is a challenge we can’t ignore … so what next?

Discussion

David Metz (University College London) opened that David had made a powerful case for rethinking the approach, but we appear to be trapped. WebTAG has a rigid focus on time saving, not land use changes, and contains hardly any reference to land use modelling. Things might be better if we could predict land use change. HS2 can calculate time savings but not land use effects, which transport economists can’t predict.

David Bull asked how we would capture the increase in land values on schemes such as the Jubilee Line Extension, and how do locals benefit from increased land values? David Metz said that there was a mismatch in the business economics.

Dick Dunmore (Steer Davies Gleave) said that published station counts showed that new Stratford International handled only 5% as many passengers as existing Stratford Regional: if it closed, Westfield would hardly notice. Massive land use change had taken place, but it was difficult to attribute this objectively to new travel patterns facilitated by HS1, or to argue that HS1 had “caused” the Olympics. Another attendee noted that Stratford also gained platforms to allow long-distance trains to stop, the Jubilee Line Extension, two DLR routes and the London Overground. Dick agreed that these had done more for local accessibility than Stratford International.
David said that Stratford International had created potential, such as for an HS1-HS2 link.

Robert Barrass found the arguments very interesting and was interested in a simplified process. How would we deal with issues such as HS2 or additional runways in the south east? The opportunity cost of capital and resources can also be important, a point which will be made by the opponents of HS2. There is also a lack of trust of politicians, but will the public understand complex issues. Could we have an independent body like OBR validating the evaluation processes and advising/interpreting the appraisal and its pros and cons?

David stressed that judgement was an important word. Business does it all the time. He had, for example, been involved in the London Gateway port, which had opened two weeks earlier with six berths for ships of up to 18,000 TEU. There was also an adjacent logistics park capable of handling 3.5 million TEU annually, a third of which will enter or leave by rail. The private sector has decided to change how ports work, with one of the first sheds being built by Marks & Spencer, creating 700 jobs, radically changing and simplifying its supply chain, and taking traffic off the roads. But there had been no debate on the decisions made by the private sector within this boundary, and no joined-up decision, but many in the private sector were linking infrastructure to development.

David Metz suggested that this sort of issue should be covered by transport economics.

Margherita Rendel (Torbay Line Rail Users Group) was interested in rail services in the Torbay area, which had a “lousy” service, all dependent on the Dawlish-Teignmouth section of track by the sea wall. The local politicians are mainly Conservative or Liberal Democrats. Cornwall and parts of north Devon had received EU aid, but how could improvement be won in the Torbay area?

David sympathised, but said that he had no idea. It would be necessary to jump through hoops, but the place to start would be the LEP. He also mused that there had been no proposals for a green field station on HS2 to start a new town.
Pedro Abrantes (Passenger Transport Executive Group, PTEG) found the presentation very interesting and an excellent summary of the status quo. Some people are addressing the problem of transport economists not taking the language of decision-makers, with the aim of converting our talk to things that people understand. But it is not easy: there is a clash of cultures, languages and epistemologies. BIS lives in the world of input/output analysis and has a way of looking at things which is very different from DfT. Local government, in contrast, is much more like DfT. He recalled that SACTRA had a remit to link transport to GDP, but rejected this approach in favour of welfare economics.

Pedro also noted the distinction between efficient and inefficient markets. There is an argument that the state should interfere in the latter, but in practice politicians use money to distort the former. For example, the market could be expected to pay to provide access to greenfield sites.

David said that people had been thinking about his paper at Modelling World. Peter Jones at UCL, Tom van Vuren at Birmingham and others have been getting together, but it needs a bigger group.

Scott Clyne (PwC) felt that all that politicians understand is votes, but local areas spend money which has been provided centrally and they have not had to raise.

David countered that Thurrock used to receive around £170 million per annum, but in the last three years this had fallen to £120 million, and will drop to £90 million. There is no longer an issue of surplus money and the safety net is getting lower. If we cut too far, all spending will be on Children’s and Adults services, with none left for Housing and Transportation.

Margherita Rendel was concerned that some people still earn millions.

David noted that presentation of the case for HS2 had focused first on journey time, then capacity, and now the north–south divide, which was never part of the original remit. The latest document from DfT (“The strategic case for HS2”) said that it was about everything. Recently BIS has been calling the shots, with DfT, DCLG and other departments having to follow its line.
David Metz pointed out that it was not self-evident that transport should be prioritised, just because we are practitioners. The approach should be holistic. Pedro Abrantes noted the tensions in devolution: DfT must second-guess what locals will propose in order to make a case to the Treasury for future funding. But there is no general methodology for comparison across sectors. David Metz said that other departments do cost-effectiveness analysis (cost per unit of desired outcome) rather than cost-benefit analysis.

Stephen Bennett (BR/SRA retired) said that his career had been the opposite of the speakers, with a professional career in transport followed by becoming an elected politician. If it is hard at David Bull’s level, it is really hard at the town and parish level, which perceives no clear direction from the levels above and is at the mercy of top-down targets. Will the system ever work? Stephen was also concerned by the need to avoid dominance by the influential, but many had accepted the argument associated with Rod Eddington that all mega-projects are bad.

At this point the Chair, Scott Clyne, closed the meeting and thanked the speaker.

Report by Dick Dunmore
Introduction
Ian Yeowart began by defining open access (OA) operations, of which he has 16 years of experience. They are a true commercial operation: it is a ‘normal’ business, but within a competitive market. While expensive to establish an OA service, it is still cheaper to develop than a franchise bid. There is no second guessing opposition “bids”, and the operator is unfettered by Department for Transport (DfT) interference: after approval has been received you are free to make your own business decisions. OA operators are more responsive to market trends.

The speaker said that the DfT does not like OA services and would kill them off if they could. Most OA services, such as Hull Trains and Grand Central have been very successful, whilst the Wrexham and Shropshire Railway failed owing to the inability to obtain suitable train paths.

The Office of Rail Regulation (ORR) uses a generative/abstractive ratio test: how much revenue was a new operator taking from the existing franchise operator, and how much was it generating.

Policies
“Our objective is to improve the quality of railway services by creating many new opportunities for private sector involvement. This will mean more competition, greater efficiency and a wider choice of services more closely tailored to what customers want”. (MacGregor 1992)

This would be done by encouraging on-track competition which also applied to franchises.
The Conservative Rail Review of 2009 said that “We would promote open access. We will ensure that the people who run passenger train services, including open access operators, have a stronger say in how our railways are run.”

Conservative policy - mainly Labour beneficiaries!

The Strategic Rail Authority (SRA, since replaced by the DfT) decided that head-to-head competition was not good. Interestingly, while the Conservative Party was responsible for privatisation, no new OA access service has been introduced under the Conservatives. The speaker argued that the Civil Service saw it as competition to “their railway”. There were three new OA services, all on the East Coast Main Line (ECML), Kings Cross to Hull, Sunderland and Bradford. The SRA said that the introduction of 3 Grand Central services in 2005 would cost “the industry” £1.5 billion over ten years, whereas work undertaken by the SRA’s own consultants showed the cost to be £300,000. Interestingly, Virgin have had very little to say on the subject during consultation.

Practicalities

Is competition a good thing? Everywhere else it seems, except rail! There is opposition from Government, the DfT and competitors. Most of the benefits are from direct services to London. Passengers support it, along with local MPs, local authorities – if you stop at their stations - and businesses. OA operators regularly top the Passenger Focus satisfaction ratings, particularly on value for money. As there is opposition from vested interests it must be a good thing!

Almost 17% of ECML services are now has provided by open access operators, yet East Coast Trains seeks to operate more services and continues to make higher payments to Government year-on-year, and is rightly proud of the fact. Competition evidently works!

The speaker said that setting up an OA service is a costly and time-consuming process, with hysteria from vested interests seeking to “spook” many, including the Government of the day and the ORR. The ORR is disappointingly poor at meeting its own timescales, and has lately lost focus and significant
expertise. That said, if approval is granted, the rewards are a truly commercial business.

The speaker said that everyone other than OA operators seems to think that OA will always be “at the margin”, but no such directions or expectations can be found in the Criteria & Procedures or Moderation of Competition documents produced by ORR. Services take time to build up, with Grand Central increasing from three trains in 2007 to nine round trips per day now. Further development needs significant investment, and the development of OA services is no longer practical for small entrepreneurs. All of Alliance’s schemes would use new rolling stock, such as Pendolino trains for West Coast Main Line services. Significant funding is required to underpin an application, and significant work to forecast the revenues accurately. Further work is required to address generation and abstraction issues. But foremost, an aspiring operator must ensure the business case is sound.

Network Rail has never supported open access by way of an agreed application, and invariable say there is no capacity - and have been always been proved wrong! Once all the information is provided to ORR a decision should be made within twenty weeks. The number of trains operated on the ECML has increased from around 130 to 187 since 2005, when Network Rail (then Railtrack) said the line was full, but performance has improved on what it was then. There is definitely spare capacity on the WCML – three train paths per hour have been identified – but there will be at least some effect on performance, which Network Rail is unwilling to accept if all three paths were used. There is little performance impact with the introduction of one extra path.

The speaker said that it was technically possible to operate trains at ninety second headways, but that the commercial headway was three minutes, so there is further scope to generate capacity. If there was no spare capacity, then Network Rail must declare the route congested.
Prospects

Arriva is investing heavily in development and have submitted two applications.

GNWR West Coast Euston - Leeds/Bradford/Blackpool/Cumbria, which will be operated with Pendolinos and possibly Class 221 for non-electrified lines. This would create 300+ jobs and would offer significant economic benefits. However the decision is delayed, due to HS2 and the impact it may have on capacity at Euston.

GNER East Coast Kings Cross – Edinburgh, which will be operated by hourly nine-car Pendolinos, unlike the franchised operator which is being directed to use the IEP. The GNER service will only take five minutes longer than the times proposed by HS2 when it is opened. It will divert modal share from air and will not be abstractive, with little or no effect on the DfT budget. This is out to consultation and Transport Scotland is supportive. It would bring the benefits of HS2 twenty years early.

A third application being worked on is GNER East Coast Kings Cross to West Yorkshire and Lincolnshire, which would run to a new parkway station to the East of Leeds and on to Bradford, with a daily train to Ilkley and a second route to Cleethorpes.

All applications pass the ORR’s “economic” tests, capacity is or will be available to deliver the services, and rolling stock can be sourced. The EU Fourth Railway package encourages more liberalisation, but Britain, from leading the way, could now fall behind as it gets harder to introduce new OA services.

The speaker closed by saying that Ministers know it’s a good thing but hesitate in the face of DfT misinformation. ORR also knows that it’s a good thing but also hesitates in the face of DfT misinformation – even though it is independent! DfT knows it’s a good thing but can’t bring itself to say it!

The speaker ended with a cartoon, available on YouTube at http://www.youtube.com/watch?v=d0_IORzvFwA.
**Discussion**

**Emily Bulman** (Office of Rail Regulation) said that she was concerned about cream-skimming and that it could threaten cross subsidisation. OA could mess this up so it was all a balancing act. She also disputed that there was a lack of skills at the ORR. **The speaker** replied that there was now a regulatory board and a lot of new senior staff, who didn’t necessarily have a deep understanding of railway economics and the way the system was structured. The loss of senior experienced staff like Michael Lee and John Thomas was an example. He didn’t see any issues with cross-subsidy, as these were independent intercity operations. Even so, the Northern Franchise gained from feed from open access operators, but always complained when new services were proposed. In almost every case the value of franchises has increased when there has been open access competition.

**Robert Cochrane** (Independent Consultant) said that the real problem with the reliability of InterCity services when he was at BR in pre-privatisation days was kit: trains and infrastructure were unreliable, and this was not picked up by the computer models used. Do we now have better models that accurately incorporate reliability? **Ian** replied that Network Rail still does not understand what capacity it has available. Reliability is increasing: it is still not good on the ECML, but ERTMS is being installed which will allow 225km/h running. £9 billion had just been spent on the WCML. There was indeed a trade-off between capacity and performance. Stupid things were often done when there is an upgrade, and obvious easy increases in capacity are neglected. The best people tend to leave Network Rail for Train Operating Companies. Performance tends to drop on the WCML after the PM peak, as people tend to take their eye of the ball.

**Michael Schabas** (Independent Consultant who has worked for Hull Trains) said that cross-subsidy was not an evil, and he had never heard ORR support it. He also wondered why Hull Trains has stopped trying to grow. **Ian** replied that Hull Trains had grown, and was now running a two-hourly service, which is what ORR sees as a limit for open access operators. Hull Trains had also sought to serve Harrogate, but he acknowledged that
that appeared to be the limit of their proposals. For its forecasting, Alliance used AECOM, who delivered forecasts in a standard format to ORR. These had proved to be very accurate – Grand Central’s forecasts were within 2% overall – although there were larger variations in certain categories of traffic.

**John Cartledge** (London TravelWatch) said that there were various factors affecting satisfaction, such as comfort and not having to change trains. Comfort has been declining over time. **Ian** replied that the important factors were reliability, affordability, and comfort, with simple things such as been able to look out of the window and there being room for luggage. With Grand Central there were only 64 Standard seats in a Mark 3 vehicle, all aligned with windows. As far as he was concerned, speed was the main thing, while comfort was critical and was not declining. He had also talked to businessmen and to them the quality of service matters, particularly the little things. The First class product has to be different to the Standard one. Alliance has talked to Jaguar about seat design and internal layout. With the DfT it seems it is all about cramming in as many seats in as possible.

**Martin Higginson** (Independent Consultant) wondered how important it was to be able to buy a ticket on the train. **OA** applied for routes but not for full stopping patterns: was Ian happy with them? **Ian** replied that it was important to be able to stop at the right intermediate stations, both to provide a service between key flows and to meet the ORR’s criteria. As far as paying on trains was concerned, he took the view that most passengers were not crooks, so that there was very little loss, while accepting the fact there is some inevitable loss. Grand Central did not pay on-train staff commission, taking the view that it was part of their job. He accepted that passengers cannot always buy tickets in advance, and that just about everyone had missed a train with an advance purchase ticket: allowance had to be made for this.

**Martin** also asked if there was any chance at stopping at Peterborough. **Ian** replied that the abstraction ratio from the franchised operator would be very high, and it was likely that Grand Central would be unable to cope with all of the additional demand.
Stephen Bennett (Retired) noted that privatisation is dominated by state-owned railways such as Deutsche Bahn, SNCF and NS, who were doing fine in this country, but that DB’s domestic performance in Germany was going downhill. What is happening? Ian replied that there was probably not enough competition in Germany, but that Grand Central is managed by Arriva in Great Britain. It is expensive to get into the franchising business and required deep pockets. Michael Schabas commented that the open access service between Hamburg and Cologne was failing in Germany, but that it was probably not the fault of DB. The German safety regulations were particularly onerous.

Scott Clyne (PwC) wondered if OA was only applicable to InterCity services, or whether it might be possible for other services? Ian replied that it had been requested by other groups, such as Basingstoke users. There were, however, real issues with abstraction and capacity. Scott also noted that the main demand is to and from London: have other flows been examined? Ian replied that a number of “non-London” flows had been looked at, but it was impossible to make a business case, and that there are not many places where it is possible to achieve significant modal shift.

Tim Griffiths (ex ORR) said that there was an issue around marginal costing, and that with an OA operator paying marginal cost there was no incentive for Network Rail. What if OA operators paid much higher access charges? Ian replied that Justice Sullivan had said it was right that OA operators only pay marginal costs (and it would not be legal if it was otherwise). However ORR had recently made significant changes to the capacity charge, and GNER would have to pay much higher charges for their open access service between London and Edinburgh. “Is this legal?” he asked, creating as it does a new hurdle to overcome. Ian pointed out that Alliance had always stated it would be prepared to pay the fixed charge, but if you pay the same track access charges then you must not be artificially restricted from accessing the same markets. His own view was that franchising did not make sense for InterCity services, and that paths should be bundled up like airline slots.
Margherita Rendel (Torbay Line Rail Users Group) said that more services generally resulted in more passengers on trains. What institutional measures could be used to get more services? Ian said that passengers could vote with their feet, but it was very difficult to get new services provided within the franchised system.

Tom Worsley (University of Leeds) noted that OA operators tended to operate shorter trains than the franchised operator on the ECML. Would a capacity charge change behaviour, for example in encouraging operators to couple units? Ian agreed that it could be useful, but that OA operator services were always the last on the timetable graph at present as they sought to use what capacity was available.

Report by Peter Gordon
The Airports Commission: issues and evidence

Dick Dunmore, Steer Davies Gleave
Arup
26 February 2014

Introduction

Dick began by noting the context to the Airports Commission’s work of examining the need for additional airport capacity in the UK. Measured by Air Traffic Movements (ATMs), London hosts both the busiest 1-runway airport in the world (Gatwick) and the busiest 2-runway airport in the world (Heathrow). As an extreme comparison, Dallas Fort Worth airport handles around the same number of flights per year as Heathrow, but with 7 runways. However, Dick noted that Heathrow’s runways are so full that a snow plough sweep during snowy weather results in cancelled flights.

Dick noted that the Commission’s objective is to “identify and recommend to Government options for maintaining the UK’s status as an international hub for aviation”, but this simple statement contains hidden assumptions. Do we know what an “international hub for aviation” is? Whatever the answer, the remit assumes we already have one, and that we should maintain it whatever the costs and benefits. His interest had been piqued by many one-line arguments that have featured in the debate around airport capacity:

- If you do nothing you limit CO₂ emissions
- HS2 will remove all the domestic passengers
- Demand can be diverted to regional airports
- Urban airports have been replaced by out-of-town ones
- A relocated airport can remove the problem from London
- Redeveloped airport sites rapidly create new employment
- We must keep up with Paris, Amsterdam and Frankfurt
- Our future depends on direct flights to the BRICS
- Heathrow should be reserved for “connecting flights”
**Is a runway cap a CO₂ cap?**

Simply limiting runway slots does not cap CO₂. There is no direct link between an airport’s runway capacity and its CO₂ emissions. For example, Heathrow’s 480,000 annual slots could be used by Embraer 145 planes carrying up to 6,000 litres of fuel flying to and from Aberdeen. Alternatively, the slots could be used by Airbus A380 aircraft carrying up to 320,000 litres of fuel flying between London and Singapore. The CO₂ impact would evidently be vastly different.

A map also showed that NO₂ levels around Heathrow are no worse than many other significant sources of such pollution, such as diesel trains on the Great Western Main Line.

**Can HS2 and regional airports help?**

Latest CAA data show that no more than 6% of Heathrow passengers fly to or from other airports on the UK mainland. None are flying to Birmingham and the majority are flying to Scotland.

*Figure 1: Heathrow passengers to airports in Great Britain*
Significantly, the past decade has seen a steady decline in domestic passenger numbers at Heathrow: arguably this is a shrinking market. Even if HS2 were to be successful in attracting all domestic passengers away from Heathrow, the capacity released would be limited. If Heathrow’s domestic market continues to decline, by the time HS2 opens in 2026 the number of potential switchers will be even less significant.

Regarding the potential of regional airports to attract flights and passengers away from London and the South East, there is little evidence that this is possible. For foreign visitors to the UK, London is the most popular final destination, so they want to fly to an airport in or near London. To claim that there is huge untapped demand for flights to regional airports is also unfair on the great efforts that regional airports put into attracting new airlines and new routes.

**Could linking Heathrow and Gatwick help?**

It has been suggested that Heathrow and Gatwick airports could be connected by high speed rail to operate as a single airport, making optimal use of capacity across both airports’ three runways. Passengers could arrive at one and travel by train to depart at the other. However, it is highly unlikely that such a scheme would be successful. Heathrow’s current target minimum connection time is 60 minutes, already longer than competing airports elsewhere in Europe. At best, a minimum Heathrow-Gatwick connection time would be around 100 minutes, much longer than its competitors. The likelihood of airlines promoting such a connection is low. The result would be “a very elegant white elephant through Leatherhead”.

**Can we close Heathrow?**

Closing Heathrow Airport would affect many groups of people. Over 200,000 jobs in the UK depend directly or indirectly on Heathrow. How could they be moved from one location to another, perhaps overnight? Would the existing workforce be laid off and new employees hired at a new site? Where would new workers be housed? A new town? Apart from employees, how would other stakeholders respond? Passengers? Employers? Airlines?
Would the subsidy required to compensate all the different affected groups amount to illegal state aid?

There is no easy answer to the simple question: “How do you actually do it?”

The only precedent for such a movement of people so rapidly is the D-Day landings.

Even if Heathrow was successfully closed and relocated, experience from other airport relocation projects, such as Hong Kong and Oslo, shows that the regeneration of the former airport site is unlikely to happen quickly. How do you explain to a current Heathrow employee that her job is moving to Kent, but that she can expect new jobs at Heathrow to start appearing in the 2050s?

**Can we move Heathrow’s operations?**

Moving Heathrow’s operations to a new site, such as the Thames Estuary, would be unprecedented in terms of scale and distance.

*Figure 2: The relative scale of airport relocations*
When Hong Kong’s airport was moved to a new site 35 kilometres away, 30 million passengers used the airport every year. In 2013 Heathrow handled just under 70 million passengers; the proposed Thames Estuary site is almost 100 kilometres from Heathrow. By the time a relocation would take place, perhaps in 2030, Heathrow will be even busier.

The economic case for relocating Heathrow appears weak. Commissioned by the Transport Select Committee, the economic consultants Oxera calculated a Net Present Value for moving Heathrow of -£28 billion (in 2012 money). However, this figure appears to exclude the additional costs of housing airport workers, increased road and rail operating costs, and the net journey time disbenefits of travel to a more remote site.

**Surface access needs**

Relocating Heathrow to the Thames Estuary would also have major implications for surface access. For the new airport to achieve a rail mode share of 25%, similar to that at Heathrow and Stansted now, rail connections would need to handle 22.5 million annual passengers in 2030 and, given current forecasts, 37.5 million passengers in 2050. This would be a railway operation 4 times and 8 times the size of that at Stansted.

Proposals by the architects Fosters and Partners foresee a 20 trains-per-hour service for the new Estuary airport, requiring new links to HS1 and Crossrail and significant investment in capacity on existing lines through South London. The cost of these new transport links could not be borne by a private airport operator; significant taxpayer subsidy would be needed.

**Would a new hub cut noise?**

If the rationale for relocating Heathrow is to reduce noise, it might be cheaper for the government to pay to rehouse everyone currently living in Heathrow’s noise footprint. The uninhabited space left behind, if turned into pleasant parkland, would be an added bonus. The point made was that the noise issue is perhaps less important when balanced against the many benefits gained by affected residents from living in pleasant, affluent and well-connected West London.
Anyway, according to the air traffic controllers NATS, planes serving a new hub airport in the Thames Estuary may generate more noise over London than is currently the case for Heathrow. NATS advice to the London Assembly was that a Thames Hub airport would result in more planes flying over central London at a low level. In addition, increased competition for airspace to the east of London would definitely require the closure of London City Airport and might also require the closure of London Southend Airport, reducing the net gain in runway capacity for London as a whole.

Is London the right place for a European hub?
Several reports claim that the world’s “economic centre of gravity” is moving eastwards. If so, is London in the best location in Europe to serve future patterns of long-haul travel?  

*Figure 3: Major long-haul destinations from Europe*

Note: directions are based on great circle routes from Brussels
Frankfurt seems to be best-placed to serve high-growth South and East Asia, while Madrid is well located to host flights to booming economies in South and Central America. In comparison, London’s strength has always been its proximity to the long-established North American and European destinations. And what if the UK leaves the EU? Could Heathrow’s hub status be at risk if London loses its position as a major centre for European business and tourism?

**Does London need transfer passengers?**

When the transatlantic air travel market was liberalised in 2008 under the EU-US Open Skies agreement, US airlines that had previously served Gatwick due to their exclusion from Heathrow immediately moved their operations to Heathrow. When airlines had the choice, they chose to fly from the UK’s hub airport.

*Figure 4: Transfer passengers at Heathrow*

If airlines don’t mind (!) losing 10% of their passengers, you might remove 5% of demand

It has been argued that Heathrow could maintain its hub status (and the benefits this brings to London) without a third runway, by eliminating flights with few or no transfer passengers. However, all but 5 million of Heathrow’s 70 million passengers travel on routes with at least 18% transfer passengers.
Airlines benefit from operating from a hub airport because transfer passengers contribute to the viability of routes, and Heathrow serves many transfer passengers.

That said, it is not axiomatic that Heathrow needs to provide a wide range of onward connections to benefit from hub-and-spoke economies of scale. A foreign airline serving Heathrow may not need to attract many transfer passengers in London if it can make the route viable by feeding sufficient transfer passengers onto the flights at its home hub.

**Does London lack connectivity?**

When compared to other cities in Europe, London has the largest number of direct air links.

*Figure 5: Destinations served by major European airports*

![Graph showing destinations served by major European airports](image)

While it loses out to Paris for African destinations, Frankfurt for Asian destinations and Madrid for South American destinations (and, surprisingly, Amsterdam for UK destinations), London is very well connected overall.
**Airlines decide the outcome**

Ultimately, because of the liberalised and competitive nature of the aviation industry, it will be the airlines that decide the outcome of the UK’s airport strategy:

- Airlines will not serve an airport that they do not want to serve, so new capacity added where it is not wanted will not be used.
- Conversely, extra capacity at an airport that airlines want to fly from will fill up quickly.
- Providing extra capacity by building a new airport may result in airport charges that are too high for airlines to bear, but subsidy may be illegal.

**An economic framework?**

Dick ended by asking what economic framework should be used to assess proposals, and speculated that the key question was: “Does London have comparative advantage in providing outsiders with long haul air travel?”

**Discussion**

**Gregory Marchant** (retired, formerly SRA) suggested that Heathrow is technically a 3-runway airport as a diagonal runway still exists within the airport footprint, albeit unused. He also asked if the significant decline in passengers between Heathrow and Glasgow over recent years could have been caused by Virgin Trains’ improvements to services on the WCML? **Dick** agreed that there was probably some rail effect.

**David Quarmby** (independent transport consultant) suggested that even if HS2 is not able to attract many regional transfer passengers away from Heathrow, it may succeed in encouraging back to Heathrow regional passengers who currently use continental hubs to transfer onto long-haul flights. On the possibility of closing Heathrow, the risk for the UK economy is that large multinational firms that have located in West London and the Thames Valley for good access to the airport would leave the UK. Concerning the comparison of airport connectivity, London’s airports do not look so good when examined individually. Also, London has been losing...
connectivity over recent years. Dick responded that surface access times for hubs in continental Europe are often very long, and this justifies considering London’s airports as a group.

Peter Forbes (Alan Stratford and Associates) challenged Dick’s proposed Economic Framework, because not all business benefits are captured by journey time benefits. What about the value of increased inward investment and access to high-growth economies such as the ‘BRICS’ (Brazil, Russia, India, China, South Africa)? Dick responded that his proposal was provisional, but noted that most of the UK’s economic links are still with Europe.

Peter also wondered why Stansted had been rejected as an option by the Airports Commission, as it is better than the Thames Estuary site in many ways: Dick answered that the remit of the Commission had not been to assume that Heathrow would close and then identify the best way forward.

David Quarmby commented that he had been surprised by the exclusion of Stansted, but that Stansted is an illustration of what happens when capacity is provided where it is not wanted: the airport is currently only 45% full. The same would apply to a Thames Estuary airport.

John Cartledge (London TravelWatch) asked why, if “predict and provide” has been abandoned for roads, it should not be abandoned for aviation? Dick responded that in reality no new runway capacity would now be built until 2025 at the earliest: “we’re not predicting and providing, we’re predicting and procrastinating”. John also commented that, given that proposals for new runway capacity in London are always fraught, perhaps we should just let Amsterdam airport serve as the UK’s hub?

Robert Barrass noted that in previous discussions in the past about new airport capacity for London (such as Maplin Sands), hub status was not an issue. The focus was more on airport congestion and environmental impacts. Dick replied that patterns of aviation are fast-changing: “we don’t really know how things will pan out”.

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David Metz (University College London) suggested that Heathrow could focus on serving business rather than leisure travel. Letting the market operate under capacity constraints would push out lower-value leisure travel while maintaining high connectivity and good economic performance. Dick responded that slot availability limits the number of routes served, not the number of passengers carried. The most valuable routes are chosen, but there is no point in turning down leisure passengers who can profitably be carried on a larger aircraft.

Derek Moore commented that where wealth-generators choose to locate themselves is important for an airport’s success. A well-connected airport will attract international headquarters and resulting high-value business passengers, who prefer not to change planes to get where they need to go. It is also important to have access to growth markets in the South and East of the globe. Dick replied that he has not studied forecasts of relative growth in demand for travel to Europe and the rest of the world.

Peter White (University of Westminster) noted that the decline in domestic demand at Heathrow is mirrored across the UK. He asked if there was any evidence on the percentage of transfer passengers that connect within airline alliances? This could permit the dispersion of alliances across multiple airports.

Dick said that most transfers take place within alliances, but questioned whether any alliance would be willing to leave Heathrow and hand valuable slots to competitor alliances. However, if Heathrow were to close, smaller alliances could conceivably relocate to another existing airport, such as Gatwick.

Report by Scott Clyne
Reviews

The views expressed are those of the reviewers and should not be attributed to the Transport Economists’ Group

David Metz - Peak Car: The Future of Travel

Landor LINKS, 2014, published price £6.95


I should start this review by saying that I was tempted to start every other sentence with “in your opinion of your reviewer”. Reviews always reflect a personal review, this one certainly does. Peak Car is a short book at around 35,000 words and is clearly aimed at the general reader rather than the specialist.

Notwithstanding the title, much of the book is not specifically about the phenomenon of peak car, which has been reported in detail elsewhere. While it covers the topic, it goes on to examine the whole area of the future of transport. The danger of covering such a wide area in a short text is that it is limits how deep you can go. The book contains some very interesting facts. For example the share of London journeys by car has dropped from 50% in 1990 to 38% now and the author predicts a fall to 30% in the future - we shall see if this comes about. People are learning to drive later in life and the older one learns to drive the shorter the distance driven per year. It might have been useful to contain some more statistical tables to back up some of the contentions. There are, however, plenty of suggestions for further reading.

I wonder if enough distinction is made between travelling less (or at least not travelling more) and changes in modal share. Are the reductions in travel noted due to recession or a permanent structural change? The author states that there is a natural limit of travelling of about an hour per day, which makes sense, but rail commuters may well exceed this. Commuting in a comfortable train where it is easy to work is a very different experience from standing in very cramped conditions on a hot tube train.
The author has suggested that priority might be given to people travelling by air on business, but you could argue that travelling for leisure is a worthwhile activity. There is a difference between the carrot of improved public transport and the stick of congestion and higher taxes and charges. I would also like to know if advancing of technology (have a look on the web of the possibility of using algae for fuel if you want an example) will help solve issues like global warming and the problems of the future will be in the area of road congestion and accessibility.

It might have been useful to include a couple of case studies going into greater detail. The author, rightly in my view, is critical of appraisal methods used by the Department for Transport and dubious about the benefits of HS2 – although many would disagree with either or both of these contentions. It would have been interesting for him to have gone into more detail. HS2’s Andrew McNaughton has stressed the importance of park and ride stations but the future generation which will be using it may be less car orientated than the existing one. Should we be developing local links to railheads by public transport before we start building our 400 km/h showcases?

Are there differences between regions, ages and social groups? We hear a lot about the imbalance of investment between the north and south. Would northerners (if it makes any sense at all to refer to such a group) benefit if the cities of the north effectively became a second London, with multiple town centres (similar to the Randstad in the Netherlands), or are northerners looking for a different lifestyle and don’t want to become more urbanised like London?

Could it be argued that much of the cultural infrastructure should be duplicated up north (branches of all the major museums, London theatre plays have weeks up north, the British Library builds reading rooms in Manchester, and so on) and that links between northern cities be improved? Would this eliminate the need for HS2? Are there youngsters who would like to live in London but cannot afford to?

The book is aimed at the general market and will provide an interesting and stimulating read for anyone interested and is thoroughly recommended as a thoughtful and insightful introductory text. The book is not aimed at the specialist
transport economist but that doesn’t mean that members of the group wouldn’t benefit from reading it – particularly those with entrenched views - and it is recommended for this group as well.

Review by Peter Gordon

Hans Jeekel – The Car-dependent Society
A European Perspective
Farnham, Ashgate, 2013, £60
ISBN 978-1-4094-3827-4

The author’s aim is “to paint a broad and comprehensive picture” of frequent car use and car dependence in Western Europe, focusing on “the social and cultural aspects of car mobility”. He considers car dependence to evolve through a spectrum from (i) car use, (ii) frequent car use, (iii) strong reliance on the car and eventually (iv) being unable to do without it. This last phase is defined as being in the situation when a journey is either impossible without a car, or very difficult to make by another means of transport. Car dependence may be caused by one or more of a range of factors, including the location of either or both ends of the trip, the time at which it needs to be made, the type of trip (chained trips are notoriously inconvenient by public transport), and who or what is to be transported (the young, the old; heavy and/or bulky items).

Jeekel shows how society has become more unpredictable and chaotic, accepting of man-made risks and experiencing dispersed, “unbundled” activities – separately zoned homes, shopping, leisure and workplaces – as successors to previous closely-spaced, diverse communities. Such societies encourage high daily quantities of travel and “highway locations” ensure most of this is by car, which accounts for 79% of the daily 36 kilometres per head in Western Europe. The remainder is divided roughly two thirds (12.5%) by public transport and one third (7.5%); the lobby for green travel has a lot to go for, but
faces an uphill struggle. Even for children, 11% of daily travel is by car in the Netherlands (the author’s home country) and an estimated one adult trip in eight is for escort purposes. This book gives a valuable insight into children’s lifestyles; “outside-orientation” mainly belonging to the “lower classes”, who let their offspring play unsupervised on the street and in public places; then there is the freedom-lacking “back-seat” cohort, constantly being ferried by car to friends, relatives and hobbies; and perhaps saddest of all, those who seldom leave home, being primarily occupied with computers. The narrative touches briefly on links between car use and obesity, but this is not addressed in the specific context of child lifestyles.

Six types of car-mobility are presented. 60% is for personal reasons (care of children, family and friends; visiting; and relaxation) and 40% work-related (commuting by workers and students; travel in the course of business). Social analysts will enjoy the characterization of eight “mentality” groups according to their mobility patterns: the traditional and modern bourgeois, convenience-oriented, new conservatives, cosmopolitans, social climbers, post materialists and postmodern hedonists, who “value breaking with moral and social conventions” and are the highest users of public transport. Classifications of characteristics, motivations and attitudes are a strong feature of this book, providing much food for thought and countless opportunities for their application to circumstances of the reader’s choice.

Chapter 4, “From frequent car use to car dependence”, is of particular interest, setting out how the phenomena arose and evolved. The case of DIY and the rise of huge building materials outlets is well stated. Jeekel shows the development to be encouraged by a mix of personal pride in one’s own practical capabilities and exasperation at the poor standards of “professionals”. Once again, the car is an essential contributor to a changing lifestyle, needed to carry the heavy and bulky purchases; and the stores require a large footprint that necessitates peripheral, highway locations. Car dependence is discussed under headings of locations, activities, times, people and societies, within the range from “difficult” to “impossible” without a car.
Jeekel calculates that in the Netherlands around a quarter of employed persons are car dependent, some 0.75 to one million individuals; or approaching four million including all categories of car-dependent person: business-to-business, trip chainers, those living and working in “highway locations”, rural residents and the less able. For most of these people, some 80-95% of their trips rely on cars.

The second part of this book, covering “Problems and Perspectives”, digresses into an examination of energy issues – worthwhile but slightly out of place here – before returning to the main theme by addressing societal questions, community and cultural attitudes, and scenarios for the governance of car mobility. Perhaps disappointingly, no magic ‘solutions’ are offered, just re-statements of familiar fuel and technology-related outcomes, forecasts of more home-working and a call for (unspecified) new policies.

*The Car-dependent Society* ends by setting out a research agenda for the social and cultural aspects of mobility, identified under themes such as culture (convenience, knowledge, flexibility, immobility and ethics) the social domain (time, education, income, exclusion, community, safety) and governance. Research themes are classified under understanding, equity, lifestyles and anxiety, covering aspects such as habit, optimism, necessity and expected future problems.

This is a well-researched work, with a 30-page bibliography. The material consulted has been used effectively to compile a unified whole, but it is also easy to dip into and find individual themes and topics one is interested in. It will make worthwhile reading for any transport economist wanting to understand the “why?” as well as the “what?” of transport policy development; and it makes a raft of recommendations for further research that will be appreciated by academics and students developing their study programmes.

Review by Martin Higginson, York, February 2014
TEG AGM 2014
Arup
26 March 2014

The AGM, held immediately before the March meeting, was attended by ten members.
Papers, Minutes, statement of financial principles, and records of other AGMs and Accounts, are available on the TEG website at http://www.transecongroup.org/AGM_and_Accounts.htm.

Details of the TEG Committee 2014-2015 elected at the AGM appear on the next page of this Journal.
## TEG Committee 2014-2015

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The Transport Economists’ Group, formed in 1973, provides a forum for people involved in transport economics to meet regularly and discuss matters of mutual interest. Membership is open to economists working in transport and others whose work is connected with transport economics.

The aim of the Group is to improve the quality of transport management, planning and decision-making by promoting lectures, discussions and publications related to the economics of transport and of the environment within which the industry functions.

Meetings, held at Arup’s Central London HQ at 13 Fitzroy Street from September to June (except December), consist of short papers presented by speakers, drawn from both within the Group’s membership and elsewhere, followed by discussion.

The Group’s Journal, “The Transport Economist”, is published three times a year reporting on meetings and other activities of the Group. It reviews recent publications of interest and contains papers or short articles from members. The Editor welcomes contributions for inclusion in the journal, and can be contacted at petersgordon@blueyonder.co.uk.

The current membership of over 150 covers a wide range of transport modes and types of organisation. Members are drawn from transport operators, consultants, universities, local and central government and manufacturing industry. All members are provided with a full membership list, updated annually, which serves as a useful source of contacts within the profession. Applications from people in all sectors are welcome.

Applications for membership should be made on a form which can be downloaded from the Group’s website at www.transecongroup.org.
Reports of meetings

Decision-making and evaluation: time for a change  
*David Bull*  
1-10

Open access rail services, policies,  
*Ian Yeowart*  
practicalities and prospects  
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The Airports Commission: issues and  
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Details of meetings are provided on our website at  
[http://www.transecongroup.org/meetings.htm](http://www.transecongroup.org/meetings.htm)