

CONNECTING THE UK'S ECONOMY: HOW BETTER ACCESS TO AIRPORTS CAN BOOST GROWTH





CONTENTS

Foreword	3
Introduction	4
1. How surface access boosts connectivity, productivity and the economy	6
2. Current surface access policy?	13
3. New Insights - The catalytic effect on the UK economy	15
4. The case for investment and key policy asks	19
Summary	24
Annex I & II	25

LIST OF TABLES

- TABLE 1** Examples, showing importance of improving surface access to airports
- TABLE 2** Case Study - Bristol Airport, congested access
- TABLE 3** Case Study - London Stansted, access opportunities
- TABLE 4** Case Study - Newcastle International Airport, Tyne and Wear Metro
- TABLE 5** Case Study - Edinburgh Airport, tramway and modal share
- TABLE 6** Economic impact of airports and associated aviation activities
- TABLE 7** Airport expansion, regional economy and GDP
- TABLE 8** Airport catchment areas and improved surface access / Journey speed and effect on connectivity
- TABLE 9** Journey times and employment
- TABLE 10** Benefits of improved surface access
- TABLE 11** Birmingham Airport - HS2 contribution to local economy
- TABLE 12** Benefit-cost-ratios for government expenditure on transport infrastructure
- TABLE 13** Priorities for business location
- ANNEX I** Stylised modelling methodology
- ANNEX II** Airline connectivity and economic impact



FOREWORD

The government wants to demonstrate that **the UK is open for business**. In late 2016 the government proved it was prepared to take big decisions and build for a future where the UK is open to the world. A new runway at Heathrow will be built, the first in the South East since the Second World War; and other airport developments have also been greenlighted. While the outcome of the 2016 European Union Referendum has created some economic uncertainty, government ministers have been quick to reassure industry, recognising the importance of aviation to UK Plc.

While these developments are welcomed, the country is at a critical juncture and it is vital that government continues to take action and demonstrate its commitment to maintaining and improving the UK's competitive position globally, while placing the country's economy on a secure footing in the longer term.

Investment to improve the UK's transport network is already recognised by business and politicians alike as crucial to delivering these goals. Indeed, in the summer of 2016, following the UK's decision to leave the EU, the then-Transport Secretary Patrick McLoughlin gave a speech in which he stressed that the UK must be seen to be open for business and must build the necessary infrastructure, recognising that the "investment in the long-term infrastructure we need, has become more important, not less".¹

Aviation is crucial to the UK: the sector creates £52 billion for the UK economy and supports around one million jobs.² In 2015, over 251 million passengers³ flew from airports in the UK, an increase of 5.6% on the previous year and the highest number ever recorded.

The sheer scale of this passenger growth, however, does have consequences, as on current projections it is likely that a number of airports across the UK will reach capacity quicker than was anticipated even a few years ago.⁴

The UK requires excellent aviation connectivity right across the country, both vibrant point-to-point airports and world-class hub capacity. In order to ensure the UK is connected to international economies and all the opportunities they have to offer, airports need to have the ability to grow and at the same time we need to make best use of existing capacity at all airports across the country. For this to happen, people also need to be better connected to airports.

As this report sets out, the benefit of having better access to airports does not only manifest itself in making better use of existing capacity, facilitating increased passenger

numbers and improved connectivity, but aviation also provides greater inward growth and investment. It creates economic benefits for the local, regional and national economy.

Airport development and surface access to airports should not be considered independently from each other; they should instead form part of an integrated transport strategy. Where surface access to airports is suitably well developed, airports can be accessed in fast and convenient ways, making a contribution to the economy in their own right, and creating catalytic effects as well.

These effects generate economic activity that would otherwise not occur, for example through tourism, international trade, productivity improvements and attracting foreign investment. Better surface access is therefore crucial in facilitating these catalytic impacts of airports. This timely report demonstrates that **a 5% improvement in average journey times to and from airports could deliver a 2.7% increase in passenger numbers, generating an additional £1.9 billion for the UK economy and supporting an additional 32,000 jobs.**

There is no better time for government to demonstrate its commitment to investing in infrastructure, ensuring our transport network is both more efficient and better connected. The economic rewards, both locally and for the wider economy are clearly set out in this report and are summarised in a number of key recommendations. We urge policy makers to implement them.



Ed Anderson
AOA Chairman



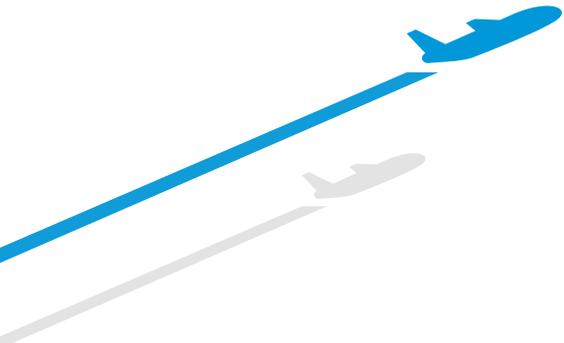
Darren Caplan
AOA Chief Executive

1 <https://www.gov.uk/government/speeches/investment-in-infrastructure-is-now-even-more-important>

2 Economic Benefits from Air Transport in the UK, Oxford Economics, 2014

3 https://www.caa.co.uk/uploadedFiles/CAA/Content/Standard_Content/Data_and_analysis/Datasets/Airport_stats/Airport_data_2015/Table_01_Size_of_UK_Airports_2015_Comp_2010.pdf

4 In 2013 the Department for Transport's highest scenario forecasts estimated there would be 235 million people travelling through UK airports - in the event, the figure is 17 million passengers higher.



INTRODUCTION

This report sets out the economic case for how improved and more efficient access to airports facilitates and delivers crucial inward investment from airports into the local and wider economy.

The report, conducted in conjunction with *Capital Economics*, demonstrates how by improving surface access to the UK's airports for passengers, airport workers and freight, we can deliver material benefits to the economy. To deliver these new and additional economic benefits to the UK economy, we are calling for the government to work towards a more integrated transport policy.

INTEGRATED TRANSPORT

Airport development and surface access should not be viewed in isolation, just as different transport modes should be viewed together rather than in isolation from one another. When taken together, each element can form part of a more efficient and more integrated transport strategy.

With growing demand for air travel, improved transport options to airports is important so that passengers continue to benefit from aviation, and the economy continues to benefit from increased passenger numbers and improved connectivity. Improvements to transport links boost catchment areas, make new journeys viable, and ensure an airport can attract a greater number of airlines offering more destinations and at higher frequencies. The increased competition means more choice lower fares for consumers.

THE CATALYTIC EFFECT ON THE UK ECONOMY

Airports make a valuable contribution to the UK economy, supporting around 1 million jobs, £52 billion GDP, and £9 billion tax revenues to the Treasury. At their most basic level, airports are big employers in their regions, providing direct benefit to the economy through those employed by the airports and airlines operating there. Airports also support a whole series of economic activity further down the supply chain, from the food manufacturers producing airline food to the oil refining activities for jet fuel. The employment these activities generates creates further economic activity as those wages are spent in the wider economy.

The greatest impact on the economy however, comes from catalytic effects caused by airport activity. These effects generate economic activity that would otherwise not occur - through tourism, international trade, productivity improvements and attracting foreign investment. By investing in surface access, widening catchment areas, and making the passenger journey more efficient, we can facilitate and deliver this vital economic activity.

The modelling⁵ in this report shows that a 5% improvement in average journey times to and from airports could deliver a 2.7% increase in passenger numbers, generating an additional £1.9 billion for the UK economy per annum and supporting an additional 32,000 jobs. Around one third of these benefits are likely to accrue to the local economy surrounding the airport.

5 See Annex I



CONTENTS

This report sets out the economic arguments for improved surface access and makes a number of policy recommendations to help deliver economic benefits, and is broken down into four chapters:

- How surface access boosts connectivity, productivity, and the economy
- Current surface access policy
- New Insights – The catalytic effect on the UK economy
- The case for investment and key policy recommendations

POLICY ASKS

The report makes a number of 'asks', which should be taken up by government, if it is serious about delivering an integrated transport system.

The report calls for the government to:

- Assess the level of public transport infrastructure connecting UK airports, and identify where there are gaps in present and future demand;
- Ensure rail capacity assessments and Highways Agency route studies include airport access; and compare passenger growth assessments and their impact on transport infrastructure.
- Set out, with Network Rail and the Highways Agency, how it will make decisions as to which surface access projects at airports will be prioritised in the government's infrastructure plans.

Lastly, the report also makes the case for new thinking on transport appraisal guidance, demonstrating how existing methodology often understates the benefits from improvements to surface access by failing to take account of the gains from trade, tourism, foreign investment and migration.

1. HOW SURFACE ACCESS BOOSTS CONNECTIVITY, PRODUCTIVITY AND THE ECONOMY

Limited or poor surface access to airports inhibits economic growth. Added to this, by forcing passengers, employees and freight operators to choose sub-optimal modes of travel to and from airports, the travel experience is adversely affected and environmental problems and congestion are exacerbated.

WHY SURFACE ACCESS INVESTMENT CAN ENHANCE AIRPORTS AND BOOST PROSPERITY IN THE UK

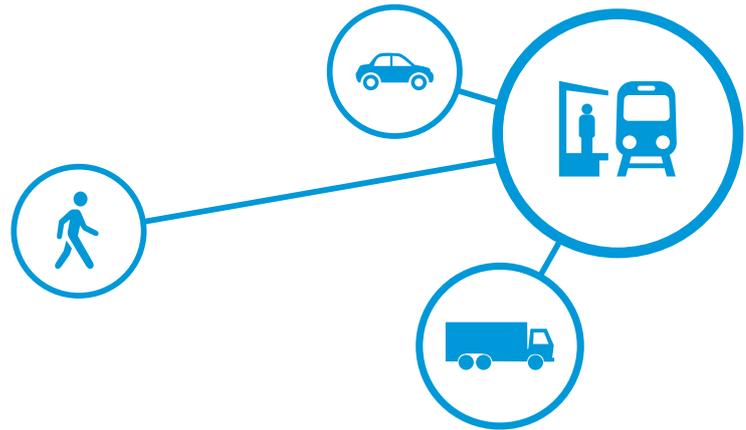
Through a multitude of channels, better surface access plays a central role in boosting an airport's contribution to the economy. Firstly, there are direct benefits, as reduced costs and time savings make passengers, businesses and airport workers more productive. Secondly, there are knock-on effects through supply chains; these benefits spill over and support further employment. Finally, there are wider benefits throughout the economy, from improving access to hubs of international connectivity.

By way of example, it is estimated that the HS2 rail link will increase Birmingham Airport's contribution to the UK economy by £52 million and create 1,300 jobs through direct, indirect and induced impacts. There are likely to be wider benefits, too. The new link could help Birmingham Airport capture 750,000 extra passengers by widening its catchment area. This in turn would help the airport attract more major airlines and develop its long-haul flight routes, improving international connectivity further.

Surface access investment schemes typically have among the highest benefit-cost-ratios of all infrastructure investment. The building of the A6 Manchester Airport relief road, for instance, has a benefit-cost-ratio of over five and is expected to boost the local economy by up to £2.5 billion. The planned route will better link South Manchester and East Cheshire, and connect less economically developed areas such as Stockport to the Manchester Airport Enterprise Zone and the Airport City Development. Better surface access boosts the economy by helping labour move to more productive areas such as the enterprise zones that surround several major airports.

It is acknowledged that airports make a valuable contribution to the economy, in terms of direct effects, indirect effects and induced effects, but the modelling⁶ in this report demonstrates the extent to which the catalytic effects of airports can generate economic activity that would otherwise not occur, particularly through tourism, international trade, productivity improvements and attracting foreign investment. Better surface access is absolutely crucial in facilitating these catalytic impacts of airports.





THE IMPORTANCE OF CONSUMER CHOICE

Airports should be accessible in the fastest and most convenient way by those who want to use them. This should include direct public transport services from a large number of locations, which are designed to meet air travellers' needs. Where it is not feasible to provide rail transport, the goal should be to provide congestion-free road access, with a preference for more sustainable travel, such as that by coach.

Airport access also needs to accommodate a range of different consumers and the transport links available are likely to influence passenger behaviour. For example, business travellers are more likely to choose the fastest route to get to an airport, whereas cost will be a more relevant consideration for leisure travellers.



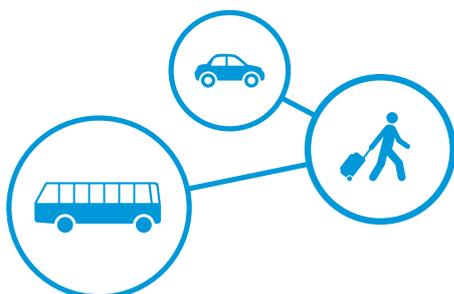
MAKING BEST USE OF CAPACITY

Businesses and consumers value a wide range and frequency of air services offered from different airports, and international business activity and tourism are strongly dependent on such services. To this end, the ability to make best use of airport capacity is imperative for the UK economy. An inability to meet air travel demand has negative economic impacts through higher costs of international travel, reduced reliability of services and potentially reduced trading opportunities.

The benefits from providing additional fixed infrastructure at airports, and therefore the capability to service a greater number of destinations at higher frequencies, depends on the extent to which there is adequate capacity on surface access links. These links are not just the "final mile" of the journey, but rather they are spread across the whole transport network.

A study by the Department for Transport (DfT)⁷ showed that four out of ten of the most congested train routes in the UK either start or terminate at an airport, demonstrating that access to and from an airport is not only essential to people wishing to use an airport, but the benefits of good transport infrastructure extend to the community living and working nearby.

Investment in surface access can take the form of making more effective use of the existing transportation system, adding capacity without the need for significant additional fixed infrastructure. For example, new bus routes and new train stations and investment in existing long-life capital assets increase the geographical scope of the transport network and make a real impact.



7 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/459330/rail-passengers-crowding-2014.pdf

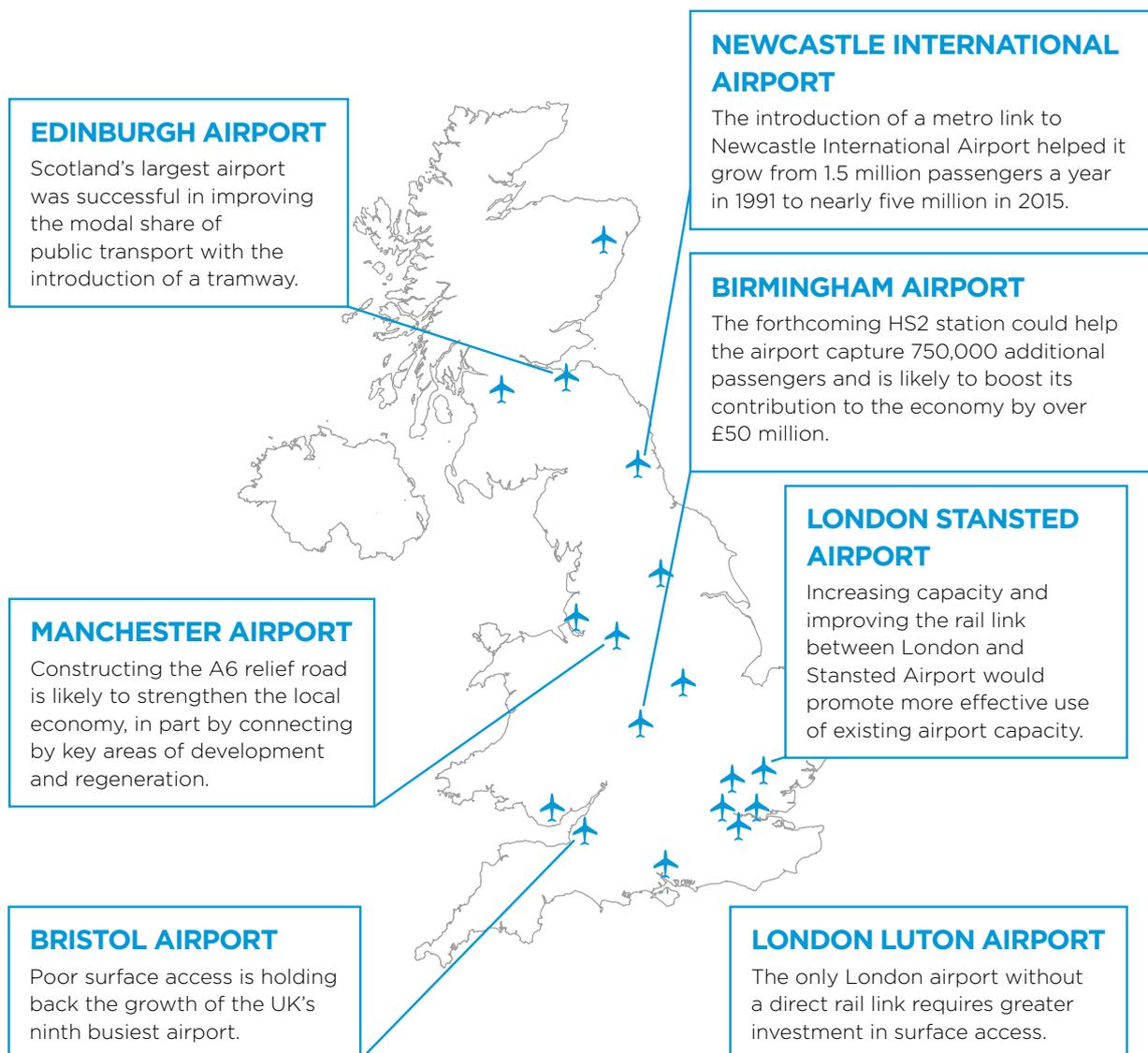
DELIVERING AN AIRPORT'S FULL ECONOMIC POTENTIAL

Growth across the UK is therefore contingent on good surface access. Improvements to transport links can improve transport efficiency, boost catchment areas, make new journeys viable and can prove instrumental in ensuring an airport's ability to service a greater number of destinations at higher frequencies. It is this kind of investment that will enable airports to deliver their full economic potential.

Below are a number of examples from airports, which demonstrate the importance of improving surface access to airports. These examples show that:

- Surface access constraints can prevent an airport from delivering its full economic potential
- Surface access investment can promote a shift towards greater use of public transport
- Good surface access can improve an airport's contribution to the economy

TABLE 1



SURFACE ACCESS CONSTRAINTS CAN PREVENT AN AIRPORT DELIVERING ITS FULL ECONOMIC POTENTIAL

Surface access can stop an airport reaching its potential if the transport infrastructure is unable to accommodate growth in support services and airport-related activities.

As airports experience surface access constraints, passengers will choose instead to travel from their less preferred airports or may be discouraged from travelling altogether. Beyond this, there are a number of spillover costs to the wider economy as congestion caused by airport traffic clogs up local road networks, making businesses less productive as people and goods spend more time in traffic.

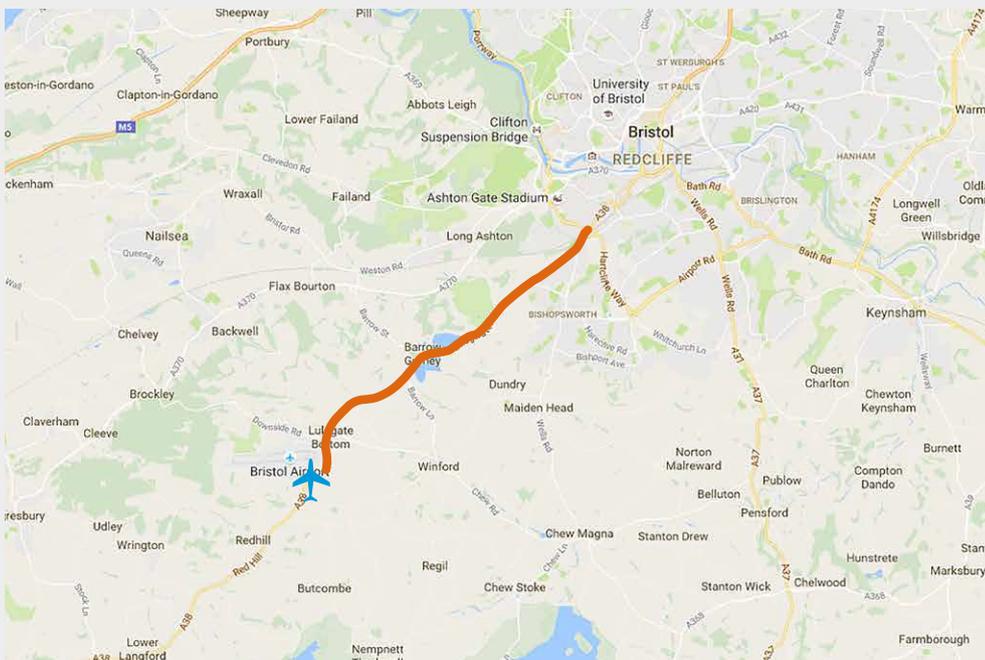
In evidence given to the recent House of Commons Transport Select Committee, The Chartered Institute of Logistics and Transport commented that “poor surface access inhibits an airport’s ability to compete”⁸, citing Bristol and Leeds Bradford Airports as examples, while Manchester Airport explained that, despite its comprehensive surface transport infrastructure and plans for an £800 million business park adjacent to the airport, the lack of further improvements to the surrounding road and rail network could become a major limiting factor in seeking to maximise the airport’s potential.

TABLE 2

CASE STUDY:

Bristol Airport needs improved surface access if it is to have the ability to grow beyond ten million passengers per annum in the future. Currently, it lacks a direct rail link and has one of the lowest modal shares of public transport among major airports (14%). Road links are currently underdeveloped and there is no a direct route to the airport from the north, west or east, meaning travellers have to drive through Bristol and then onwards via the congested A38.

Congested A38 access to Bristol Airport



8 <http://data.parliament.uk/WrittenEvidence/CommitteeEvidence.svc/EvidenceDocument/Transport/Surface%20transport%20to%20airports/written/22681.html>

ROAD AND RAIL ACCESS – A KEY BARRIER TO DELIVERING THE ECONOMIC POTENTIAL OF LONDON AIRPORTS

While some of London’s airports are approaching capacity, road and rail access is a key barrier to other airports delivering their full economic potential. The House of Commons Transport Select Committee, in its 2015 report into Surface Access to airports, identified rail links in particular as a major limiting factor⁹. London Luton Airport, for example, lacks a direct rail link. This is one of the reasons why it has the lowest public transport modal share of airports in London.

While large scale investment has taken place – notably Thameslink and Crossrail, which will substantially improve connectivity to Gatwick and Heathrow and London City respectively – further investment is needed. Airports will be working with the Greater London Authority in 2017 to develop its future transport strategy.

The opening of Crossrail in 2018 will be a positive development and stands to dramatically improve the integration of rail and air services in the east and west of London. In some cases, such as between London City Airport and Heathrow, it will be transformational, giving passengers the ability to transfer between the London airports in under two hours.

However, further investment is needed between other airports and the capital. Improvements to the West Anglia Main Line connecting London to Stansted and Cambridge have long been identified as a strategic need to enable the airport to attract a wider mix of airlines and services – but with little progress. Similarly, a lack of action on improving surface access is frustrating the potential of London Biggin Hill airport. At present, passengers coming from the South East come within four miles of the airport and yet have to drive a further 17 miles before reaching the airport.

TABLE 3

CASE STUDY:

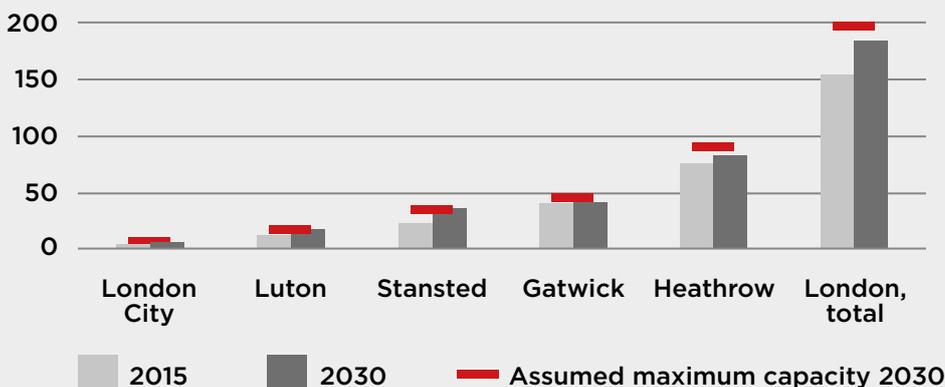
London Stansted served almost 25 million passengers in 2015. It has achieved growth of nearly 40% since 2013 and it has spare capacity for almost 20 million more passengers.

The airport sits on the West Anglia Main Line linking London to Cambridge and the economic opportunity within the region – and into the North and East of London regeneration areas – are huge. As a region, the London-Stansted-Cambridge corridor has an economic output of around £121 billion and it has grown by 65% more than the national average since 2007, yet journeys by rail – representing more than one in five passenger journeys to the airport – compare poorly to other London airports. This affects Stansted’s ability to attract a wider range of airlines, passengers and staff.

Reduction in journey times of up to ten minutes are achievable within the next five years – with the right capital investment from the Government, rail franchisee and airport.

Recognising the need for, and the value of, such a step change in connectivity to Stansted, the Airports Commission Interim Report in 2013 (repeated in its final report in July 2015) explicitly recommended to Government that urgent action be taken.

Forecast demand and capacity for London airports (million passengers per annum)



Sources: Capital Economic and Department for Transport

9 House of Commons Report <http://www.publications.parliament.uk/pa/cm201516/cmselect/cmtrans/516/516.pdf>

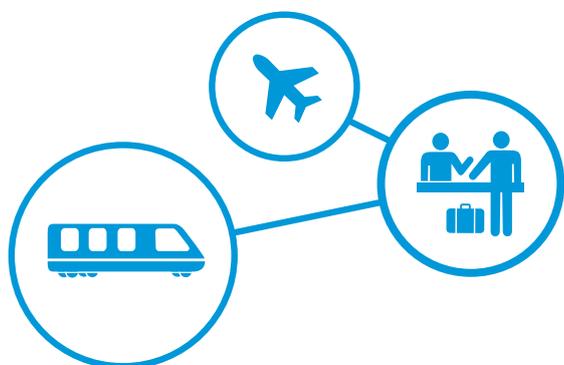
SURFACE ACCESS INVESTMENT CAN PROMOTE A SHIFT TOWARDS USE OF PUBLIC TRANSPORT & SHRINK THE ENVIRONMENTAL IMPACT

Investing in surface access can promote a shift towards public transport, benefiting passengers, airport workers and local businesses.

It increases the range of journey possibilities and in some cases, such as a new or improved rail link, can deliver a substantial boost to an airport's catchment area and make new flight routes viable.

In addition, greater use of public transport also takes cars off the road, which eases congestion in the surrounding area and can contribute to shrinking the environmental impact of the airport. Sustainable Aviation¹⁰ points out that improved surface access to UK airports would have substantial benefits, not only for airports and airlines, but also for the economy and the environment.

Some progress has already been made. Since 2006 the percentage of passengers using public transport (bus, coach, train or tube) to access eight major UK airports (Birmingham, Gatwick, Heathrow, Luton, Stansted, London City, East Midlands and Manchester) has increased by 5.9%. On average about 40% of passengers in 2014 used public transport to access the five major London airports, representing a 3% improvement since 2006. For example, 71% of passengers to London City airport¹¹ use surface access options, 50% of passengers travel by public transport to Stansted, and 29% of passengers use public transport to reach Luton. Outside of the London airports, however, the figures drop significantly to less than 25%, where the proportions of passengers using public transport range from Birmingham at 23% to East Midlands at 7.4%¹².



REGULAR SERVICES ENCOURAGE MODAL SHIFT

However, a lack of availability of round-the-clock connections, particularly by rail, can be a barrier to a shift towards the use of public transport. Jacobs Engineering Group¹³ recently reported that the network serving Copenhagen Kastrup Airport provides direct connections to two city centres (Copenhagen and Malmö) with a journey time of 20 minutes or less, and provides a 24-hour service to both with frequencies of at least 10 minutes during the day. This contributes to a rail mode-share among airport passengers of nearly 60%, while services at Oslo Gardermoen and Hong Kong International, both of which have high rail passenger mode-shares, enjoy a similarly comprehensive public transport modal share.

Some airports have dealt with a lack of adequate rail access by encouraging coach services as a means of increasing public transport usage. However it is likely in this case that any substantial increase in passenger numbers would need to be matched by upgrades in infrastructure to deal with additional vehicle congestion. The Aviation Policy Framework (APF) states that greater use of low-carbon modes to access airports also has the potential to reduce CO₂ emissions, as well as leading to less congestion and improved air quality, and while most airports have good links when it comes to coaches and buses, there is a need to also work towards some modal shift as, ultimately, the cleaner the aviation sector can become, the more it will have permission to grow.

Transport links at airports influence passenger behaviour when choosing where to travel to or from. Market research undertaken by the Civil Aviation Authority (CAA), as part of its consultation on Information Powers, found that the cost and convenience of getting to the airport was selected as a key reason for choosing an airport over other local options by 55% of respondents.¹⁴ This makes surface access a crucial part of the consumer journey, ranked second in the CAA poll (with a difference of only 1%) to the availability of flight routes which was chosen by 56% of respondents. People need to be connected to infrastructure in order to use it and for the economic benefits of that use to be realised. The Network Rail Passenger Demand Forecasting Handbook (PDFH) also highlights the importance of reduced journey times and interchanges for passengers using rail to or from an airport, but rarely adequately factors the value or importance of airport passengers into its strategic business case analysis.

¹⁰ <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/transport-committee/surface-transport-to-airports/written/23387.pdf>

¹¹ including 61% of passengers who use the Docklands Light Railway (DLR)

¹² Figures are from the Civil Aviation Authority's passenger survey, published on 19 October 2015.

¹³ <http://data.parliament.uk/WrittenEvidence/CommitteeEvidence.svc/EvidenceDocument/Transport/Surface%20transport%20to%20airports/written/26704.html>

¹⁴ CAP 1037 <https://publicapps.caa.co.uk/docs/33/CAP%201037%20Better%20information%20about%20UK%20aviation%20Consultation%20on%20the%20CAAs%20new%20pub%20duties%20-%20publication.pdf> para 3.39

TABLE 4

CASE STUDY:

The 1991 extension of the Tyne and Wear Metro to Newcastle International Airport has successfully led a shift towards greater use of public transport. The airport estimates that public transport's modal share grew from around 2% before the scheme, to around 12% shortly afterwards, and has increased to around 16% more recently.

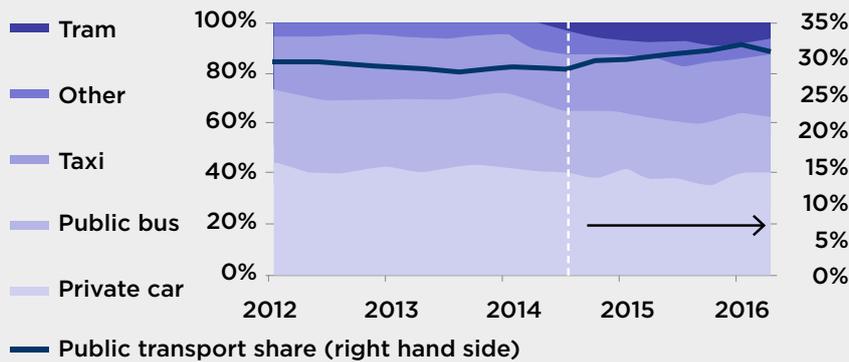


TABLE 5

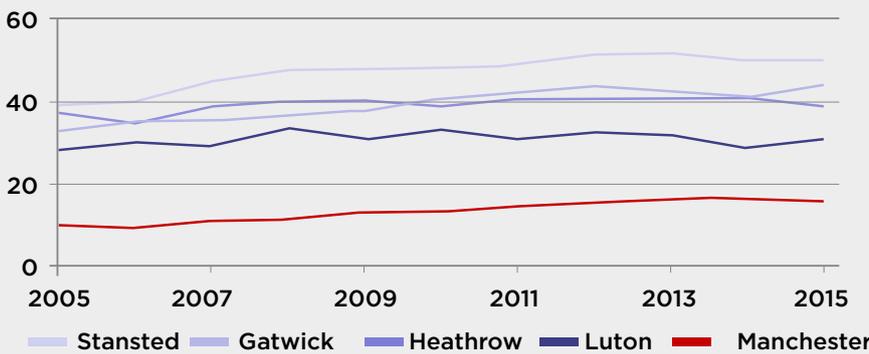
CASE STUDY:

The introduction of the tramway to Edinburgh Airport in May 2014 reversed the trend of declining public transport use for travel to or from the airport. The use of public transport has since risen from around 28% to 31% of journeys. This has helped local roads to accommodate an increase in passengers of one million per annum over the same period.

Modal share of travel to/from Edinburgh airport



Public transport modal share (per cent), selected airports



Sources: Capital Economics, Edinburgh Airport and Department for Transport

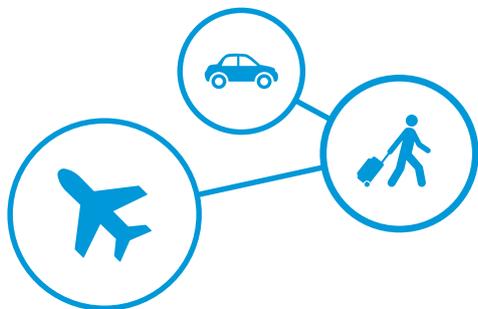


2. CURRENT SURFACE ACCESS POLICY?

AVIATION POLICY FRAMEWORK 2013, AND AVIATION STRATEGY 2017+

The UK government does not currently have an overarching strategy for planning airports and their connectivity to their wider catchment areas. Although a new Aviation Strategy is expected in 2017, the Aviation Policy Framework (APF), published in March 2013, is currently the most recent UK policy statement on aviation by central government. Although it was welcomed for its generally supportive stance towards the aviation sector and touched on the need for good surface access, it gives mixed messages. On the one hand, the APF lists road and rail schemes under way and signals support, yet on the other it sets no clear strategy, timetable or priority for integrating transport policies in the future.

In terms of future direction, the APF states that new planning applications by airports “must be accompanied by clear surface access proposals which demonstrate how the airport will ensure easy and reliable access for passengers, increase the use of public transport by passengers to access the airport, and minimise congestion and other local impacts.” It goes on to say that developers (usually the airport in this case) must pay the costs of upgrading or enhancing road, rail or other transport networks; the government will only become involved to consider the need for public funding where there are a range of beneficiaries. The government states its commitment to aligning high-speed rail plans with aviation and for the DfT to work with airport operators, the rail industry, local authorities and other key stakeholders to improve rail access to airports. While this is welcomed, details as to how they can work together are not elaborated¹⁵.



MOVING TOWARDS A MORE INTEGRATED TRANSPORT STRATEGY

In 2012 the AOA suggested that the government should extend its review of rail access to airports, covering information, ticketing, and rail franchises, to help ensure the right types of transport access to enable better use of airport capacity.¹⁶ Following the publication of the APF, the AOA reviewed the government policy against the AOA's recommendations and found that surface access was only partly addressed. It was demonstrated that current road and rail services to airports are not sufficiently considered in the APF¹⁷ and it was recommended that the DfT should assess the level of public transport infrastructure connecting UK airports and identify where there are gaps in present and future demand.¹⁸ It was also suggested that government should move towards a more integrated transport policy and network, in order to ensure surface access projects successfully align airport rail and road access with aviation.

Of course, not all airports can be served by rail, and in such cases surface access solutions are going to be predominantly road based. Improved public transport connectivity (by bus and coach, for example), enhanced or improved road capacity, greater availability and accessibility of on-site car parking, are all relevant and useful in serving airports.

INTEGRATED TICKETING

While there have been some positive developments, such as the introduction of Oyster card for pay as you go travel between Gatwick Airport and London on Southern, Thameslink and Gatwick Express services, more integration of ticketing needs to happen at a consumer level, as well as in policy. In continental Europe, rail service provision is increasingly being incorporated alongside integrated air-rail passenger facilities and ticketing arrangements. For example, Frankfurt Airport now provides check-in and baggage drop facilities within the airport's long-distance railway station, while air tickets for Lufthansa and over 70 partners that are valid for a connecting rail journey across the Deutsche Bahn rail network airlines can be purchased.

¹⁵ Aviation Policy Framework, Department for Transport, March 2013: in order, paragraphs 5.11, 5.12,

¹⁶ Recommendation 18 in An Integrated Framework for UK Aviation, AOA, November 2012, pp.24-25. <http://www.aoa.org.uk/media/7284/aoa-an-integrated-framework-for-uk-aviation-report.pdf>

¹⁷ See Review of the Government's Aviation Policy Framework, AOA, October 2013, p.21.

The APF does list current rail and road schemes and investments (Paragraphs 1.92-1.108) but does not assess current gaps beyond these schemes, nor advise how future demand will be assessed and met.

¹⁸ Review of the Government's Aviation Policy Framework, AOA, October 2013, p.7.

NATIONAL POLICY STATEMENTS, WHITE PAPERS, AND THE NATIONAL INFRASTRUCTURE COMMISSION

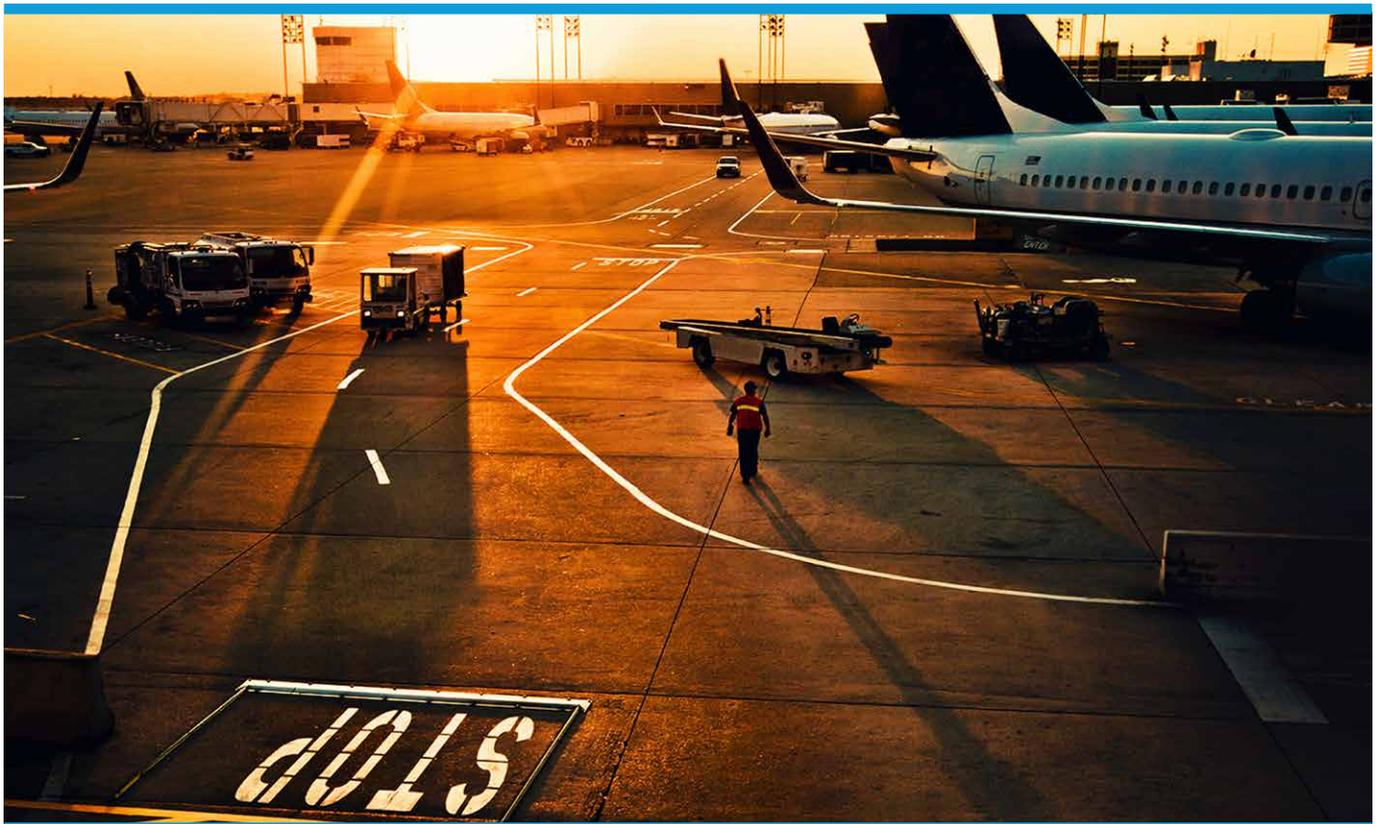
In addition to the APF, government will also set national policy through National Policy Statements (NPS) and White Papers. The National Networks NPS was designated on 14 January 2015 and sets the policy for nationally significant infrastructure projects (NSIPs) on the road and rail networks. The Planning Act 2008, as amended by the Localism Act 2011, empowers the Secretary of State to publish an NPS on airports, setting out an assessment of the need for NSIPs. In the context of airports, "nationally significant" is defined in legislation as any development that would increase the capacity of an airport by more than ten million passengers per annum or 10,000 traffic movements. At the time of writing, no NPS on airports exists, although it has been indicated by the Secretary of State for Transport that the mechanism for delivering planning consents for airport expansion will be an airports National Policy statement (NPS), following which a scheme promoter would need to apply for a development consent order.

The National Infrastructure Commission was established on 5 October 2015 as the non-ministerial government department responsible for providing expert advice to the government on the main infrastructure challenges

facing the UK. Its remit is to provide unbiased analysis of the UK's long-term infrastructure needs and to hold the government to account for non-delivery of the major infrastructure required to place the UK economy on sounder footing. Political independence from government should allow it to assess dispassionately and free from political influence, the future long-term infrastructure needs of the country. Over the coming years, its work will hopefully highlight how infrastructure development is absolutely integral to the UK's future success, and the continued creation of jobs and growth.

Aviation is a major component of the UK's economic infrastructure and airports should be considered as crucial national infrastructure. The National Infrastructure Commission must include aviation and its integration with other modes of transport as a central plank of its deliberations.

While there is a broad framework by which surface access needs are recognised and dealt with at a national policy level, much of the true trickle-down effect of infrastructure investment is currently missed out. In the next section we look at how economic factors are under-represented in policy and make the case for prioritising investment in surface access.



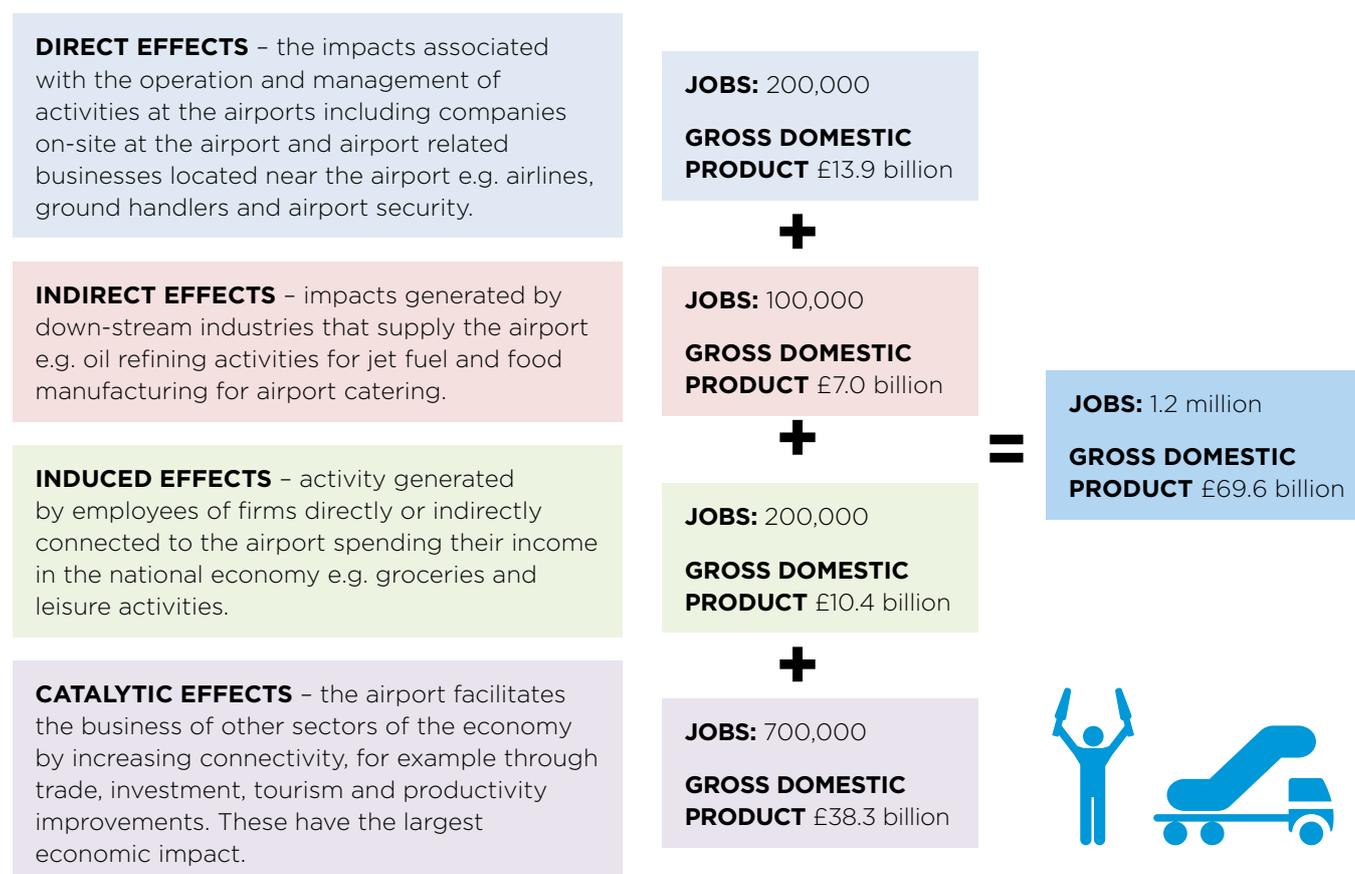
3. NEW INSIGHTS – THE CATALYTIC EFFECT ON THE UK ECONOMY

Modelling commissioned by the AOA shows that a **5% improvement in average journey times to and from airports could deliver a 2.7% increase in passenger numbers, generating an additional £1.9 billion per annum for the UK economy and supporting an additional 32,000 jobs.** Around one third of these benefits are likely to accrue to local economy surrounding the airport.

As the graphic below illustrates, increased airline connectivity facilitates economic activity that would not otherwise occur. Firstly, airports will have a very direct effect on the economy, largely through the direct activities of the airport's operations. A substantial level of activity is then generated by incomes generated by these activities being spent in the general economy, but because of catalytic effects which generate activity in trade, investment, tourism and extra productivity, 700,000 jobs are created and £38.3 billion is added to the UK's GDP.

TABLE 6

Airports make a valuable contribution to the UK economy



Economic impact of airports and associated aviation activities in the UK 2013

Sources: Capital Economics, InterVISTAS, Economic impact of European Airports (InterVISTAS, Bath), 2015

TRADE

A greater ability to travel and trade overseas helps business enter into new markets, especially in the service sectors where face-to-face contact is an important part of doing business. And when transporting physical goods, improvements in air freight can open up new markets such as in the advanced manufacturing sector, where time can critically affect profitability.

INVESTMENT

Businesses place high importance on how well connected an area is when deciding where to locate their offices, plants, warehouses or outlets. Good infrastructure that connects the UK to the rest of the world is therefore crucial in helping to attract foreign direct investment.

IMPROVED PRODUCTIVITY

Improvements in the time, reliability and cost associated with business travel feed through into improvements in business productivity as existing travel becomes more efficient and new opportunities to travel open up. Firms also have access to a wider pool of skilled labour. And they can benefit from knowledge spill overs when better connected to each other.

TOURISM

Lastly, the effect of tourism is substantial. Tourists spend over £22 billion a year on visits to the UK and generate thousands of associated jobs. Better airline

connectivity enables and attracts a greater number of tourists to a region or country.

Indeed, a wide body of literature¹⁹ (such as the sources listed in Annex II) suggests that airline connectivity has a material economic impact on the economy.

THE LOCAL ECONOMY BENEFITS FROM IMPROVED SURFACE ACCESS AND INCREASED AIRPORT ACTIVITY

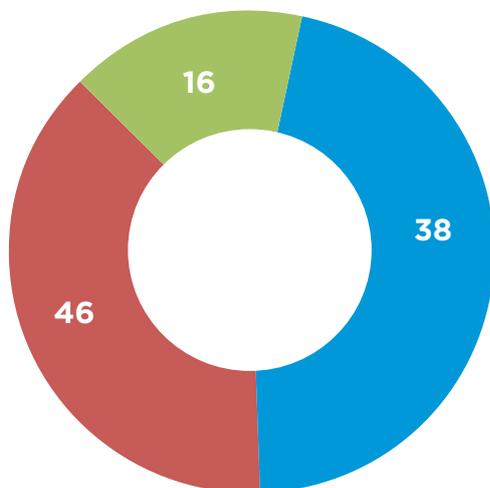
Surface access improvements support the local economy through their influence on airport activity²⁰.

Such improvements can help airport activity grow closer to its potential. A wide range of studies have found positive direct impacts to the local economy of higher levels of airport activity. These range from around £20 to £170 of Gross Value Added (GVA) for each extra passenger. And estimates vary from around £20,000 up to £100,000 for the GVA per additional employee.

Although it can be difficult to accurately quantify direct impacts, it is clear that higher levels of airport activity can be a boon to the local economy and there are further knock-on benefits to consider as activity is supported through supply chains. The associated wages and spending from these extra jobs in itself helps to create more employment.

Overall, a considerable portion of the benefits from transport infrastructure investment accrue to the local economy. For example, analysis suggests that around 35% to 40% of the benefits from airport expansion at Heathrow or Gatwick would accrue to the local region.

TABLE 7



Share of present value of real GDP impacts (excluding construction) that accrue to the surrounding regional economy under airport expansion in the 'assessment of need' scenario (per cent)



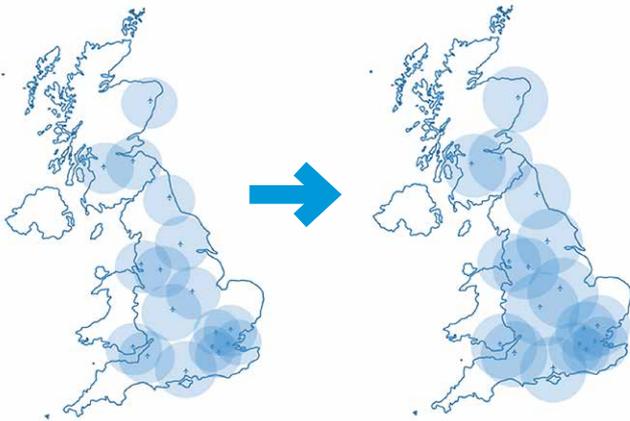
Sources: Capital Economics, PricewaterhouseCoopers, Strategic Fit: GDP/GVA Impacts (PricewaterhouseCoopers, London), 2015

¹⁹ See Annex II

²⁰ This is usually measured by the number of passengers handled.

We have created a stylised model of airport to illustrate how improvements to surface access influence airline connectivity.

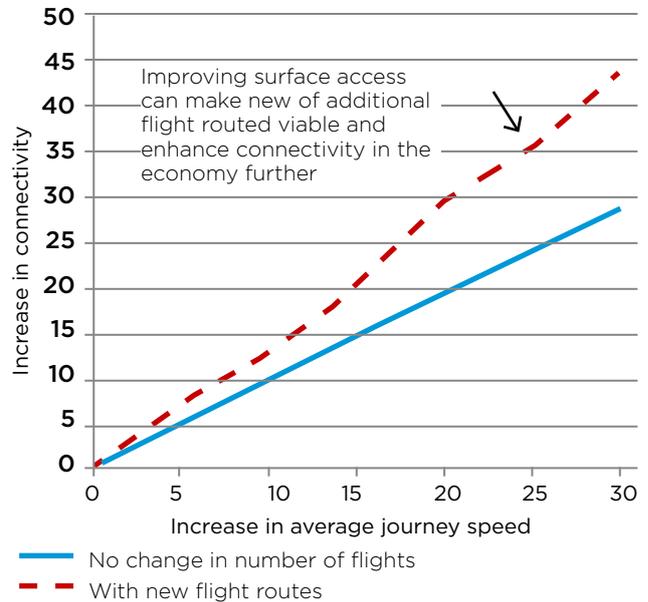
TABLE 8



Improvement to surface access can increase average journey speeds to airports, widening catchment areas and opening up new journey possibilities

Illustrative widening of catchment areas at the largest 18 airports in the UK through improved surface access

Source: Capital Economics. Note: the circles are illustrative only and don't represent the exact catchment areas.



Stylised relationship between improvement in average journey speed to or from airports in the UK (per cent) and change in overall connectivity in the economy (per cent)

Source: Capital Economics

INCREASING AIRPORT ACTIVITY STIMULATES LOCAL AND NATIONAL ECONOMIC GROWTH

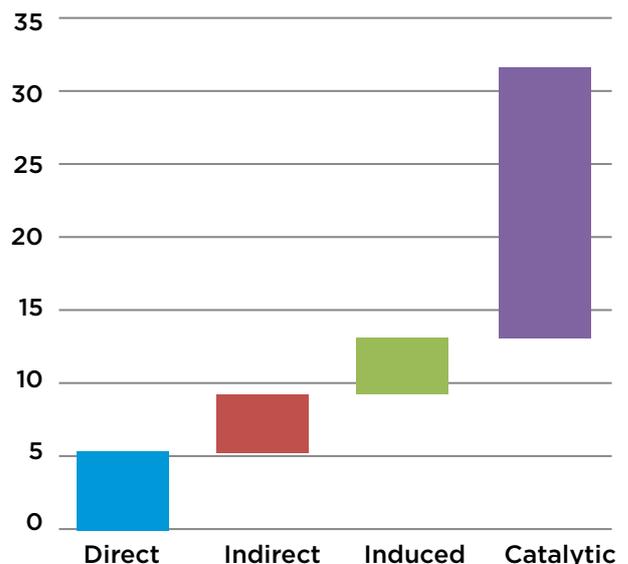
A 5% increase in average journey speeds supports a 2.7% increase in the number of passengers flown each year.

This would have substantial benefits for the UK economy through the direct, indirect, induced and catalytic effects. The positive impacts would be felt in the local or regional economy, and at a national level.

Benefits of this magnitude would boost GDP by £1.9 billion per annum (2015 prices) and help to support an additional 32,000 jobs in the economy.

By way of comparison, estimates suggest that phase one of HS2 will support 22,000 jobs in the West Midlands and provide a £1.5 billion boost to its economy. Overall, the government expects the full HS2 network to support 100,000 jobs across the UK.

TABLE 9



Increase in employment supported by improvements to journey times by type of economic impact (thousands)

Source: Capital Economics

TABLE 10

Benefits of improved surface access

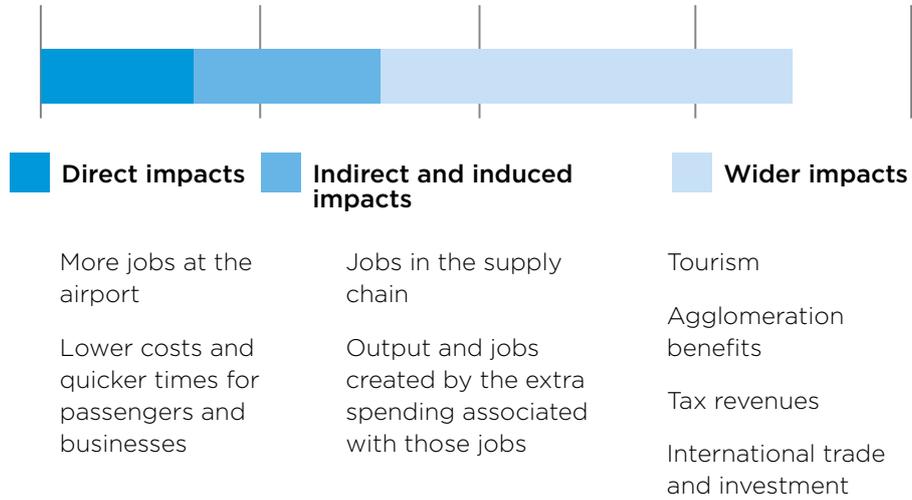
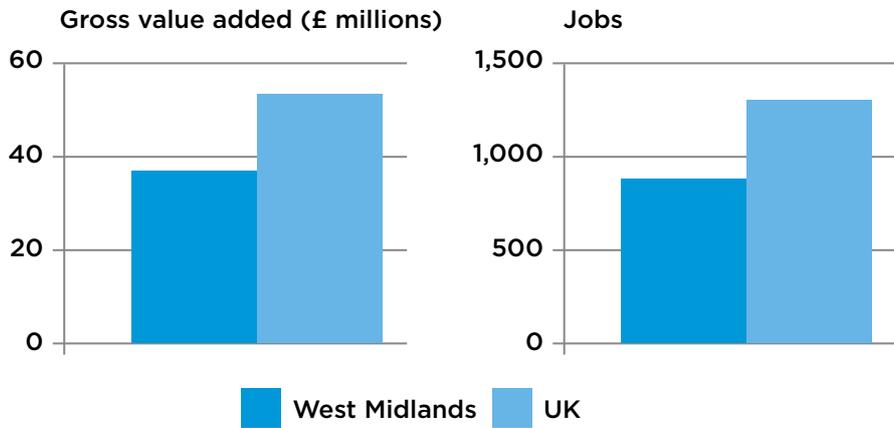
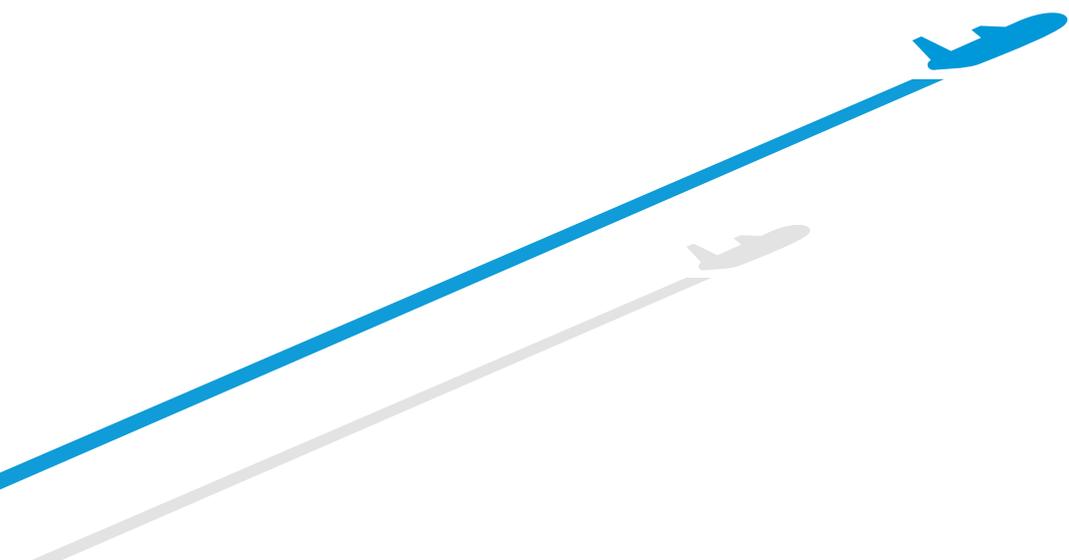


TABLE 11

Estimates of Birmingham Airport's future additional contribution to the economy as a result of HS2



Sources: Capital Economics; York Aviation, *The West Midlands Aviation Opportunity (Birmingham Airport, Birmingham)*, 2015



4. THE CASE FOR INVESTMENT AND KEY POLICY ASKS

Airport growth across the UK will be significantly enhanced by good surface access – this report sets out how the catalytic effects caused by an airport generates economic activity that would otherwise not occur. How can we ensure that the UK benefits from a stronger network of connectivity from all parts of the UK?

In policy terms, to deal with the key international connectivity needs over the next 20-30 years, the government needs to put in place policies to enable airports in all parts of the country to grow.

RECOGNISING THE FULL RANGE OF ECONOMIC BENEFITS STRENGTHENS THE CASE FOR INVESTMENT

The case for investing in surface access links to airports is strong and long understood.

The Eddington Transport Study²¹ found that targeted improvements to surface access links are able to offer the highest average welfare return on transport infrastructure investment. If UK airports are to remain competitive, there is a need for airports to work in tandem with government and local authorities to address the surface access needs of current and future airport customers, recognising the knock-on effects which will be enjoyed by the local and wider economy.

Much of the infrastructure around airports is already reaching capacity. In the South East particularly, as the Airports Commission concluded, regardless of decisions on airport expansion, “many key road and rail links in the [South East] are expected to be close to capacity by 2030.”

Earlier in the report it was noted that four out of ten of

the most congested train routes in the UK either start or terminate at an airport. In fact, Network Rail has found that airport passengers are often not the main source of pressure on transport systems around airports with growth in non-airport-related passenger journeys around airports often having a much more significant impact on surface transport infrastructure than airport-related journeys. While there is growing demand for rail travel to airports, rail passengers travelling to airports do not match rail demand at the busiest time of day on the train network.

Securing investment in surface access routes to airports therefore benefits large volumes of travellers on different sorts of journeys, and not just those who are directly using the airport. Improving access to airports boosts international connectivity and supports the UK's international competitiveness by improving travel conditions for both international business travellers and freight.

Globalisation means that the international connectivity of the UK has become more important in recent decades, and it is likely to become increasingly more so over the next 20 years. This makes it critical that transport



21 <http://webarchive.nationalarchives.gov.uk/20090104005813/http://www.dft.gov.uk/about/strategy/transportstrategy/eddingtonstudy/>

appraisals capture the benefits from increased trade and from attracting globally mobile investment.

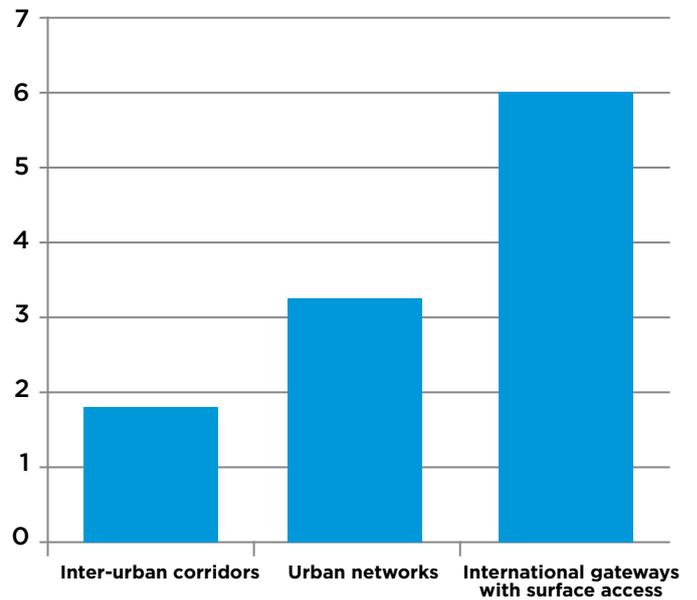
Although the benefits from improving surface access are widely known, this has not prevented underinvestment in recent decades. It is therefore imperative that greater consideration is given to the

economic effects, particularly the catalytic effects, of surface access investment to airports when surface access improvement is under consideration. This will provide the greatest opportunity to enhance prosperity in the UK.



TABLE 12

Average wider benefit-cost-ratios for different types of government expenditure on transport infrastructure



Sources: Capital Economics and Sir Rod Eddington, *The Eddington Transport Study* (The Stationery Office, Norwich), 2006

THE IMPACT OF IMPROVED INFRASTRUCTURE

The impact of improved infrastructure on trade, tourism, foreign direct investment or migration are not always captured in transport planning and strategy.

While these benefits can be difficult to quantify, the benefits will be particularly prevalent for schemes that improve international connectivity, such as enhancements to surface access to airports. More information could be incorporated to better reflect the full range of potential benefits of a scheme.

For example, improvements in surface access and connectivity can facilitate growth in tourism by increasing the accessibility of destinations within the

UK. Tourism is also an important export, with spending by visitors in the UK totalling £22 billion in 2015. This spending generates knock-on benefits through indirect and induced economic impacts and provides tens of thousands of jobs.

International business travel involves the flight, the airport experience and the journey to and from the airport. Faster, more convenient and less costly business travel allows exporters to develop a more competitive presence in existing overseas markets and opens up new market opportunities to them, while improved surface access cuts costs and enables growth in air freight routes, helping exporters of goods to become more competitive in global markets. Agglomeration can also benefit exporters, helping exporters have a larger number of, and more stable, trading relationships with countries when they are

'closer' to exporters who also sell into those markets.

Transport links and international access are among the top priorities for businesses when choosing where to locate. The availability of air services, both in terms of the number of destinations reached and the frequency of services, are important to foreign direct investment, business investment and location decisions. Better quality surface access supports greater provision of air services and reduces the cost to firms of reaching regional markets. The long-term nature of business investment means that organizations seek to ensure that air connectivity will be adequate for their own future operations.

A study by York Aviation found that air connectivity is an important factor in a city or region's ability to compete for globally mobile capital. For example, while London tops their international Business Connectivity Index, they warn that if it cannot maintain that competitive edge, the chances it's position being eroded and business going elsewhere increase.

TABLE 13

**Top priorities for business location
(percentage answering absolutely essential)**

Factor	Percentage
Easy access to markets, customers or clients	60
Availability of qualified staff	53
Quality of telecommunications	52
Transport links to other cities and internationally	42
Value for money of office space	33
Cost of staff	32
Availability of office space	25

Sources: Capital Economics and Cushman & Wakefield European Cities Survey



POLICY ASKS

Given the benefits of enhanced surface access, what are the policy 'asks' which can help deliver those benefits?

ASK 1: ASSESS THE LEVEL OF PUBLIC TRANSPORT INFRASTRUCTURE CONNECTING UK AIRPORTS AND IDENTIFY WHERE THERE ARE GAPS IN PRESENT AND FUTURE DEMAND

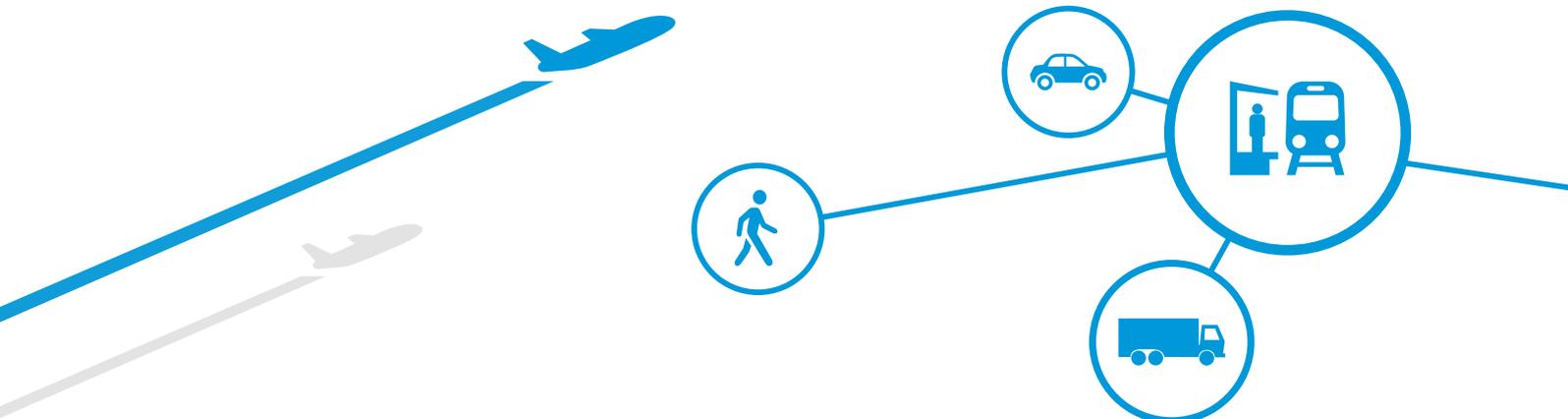
More can still be done to better assess the quality, speed and reliability of public transport infrastructure connecting UK airports and identify where there are gaps in present and future demand. Modelling future demand for surface transport around airports requires accurate predictions of future airport-related journeys such as staff, passengers and other services. It must also take into account passenger growth, airport expansion and other investment as well as consider the impact of increased local journeys due to factors such as population growth and local housing and business development.

So further assessment should be undertaken by the DfT to identify gaps and potential solutions. These appraisals must take account of the catalytic effects outlined in this report. Solutions will need to work in tandem with recommendations made by the Airports Commission in their Interim Report in December 2013 and Final Report in July 2015.

ASK 2: ENSURE RAIL CAPACITY ASSESSMENTS AND HIGHWAYS AGENCY ROUTE STUDIES INCLUDE AIRPORT ACCESS AND COMPARE PASSENGER GROWTH ASSESSMENTS AND THEIR IMPACT ON TRANSPORT INFRASTRUCTURE

The DfT needs to ensure rail capacity assessments and Highways Agency route studies include airport access and compare passenger growth assessments and their impact on transport infrastructure. While this is starting to happen, it needs to become common practice. For example, the London & South East Market Study²² recognises the importance of rail access to airports, and the importance of airports as integrated transport hubs. It sets out a number of conditional outputs for airport rail services with aspirations for improved frequencies, direct services and faster journeys to key airport catchments.

The Highways Agency and local highway authorities need to work closely to address road access to airports and the importance of reliability, particularly in light of growing demand. Route Management Strategies should integrate national infrastructure with locally deliverable solutions and must endeavour to reflect airport passenger traffic. This practice should be mandated in Government policy at a national level to continue to deliver better transport integration, while similar measures by devolved administrations can complement this ambition.





ASK 3: SET OUT, WITH NETWORK RAIL AND THE HIGHWAYS AGENCY, HOW IT WILL MAKE DECISIONS AS TO WHICH SURFACE ACCESS PROJECTS AT AIRPORTS WILL BE PRIORITISED IN THE GOVERNMENT'S INFRASTRUCTURE PLANS

The Government should set out, with Network Rail and the Highways Agency, how it will make decisions as to which surface access projects at airports will be prioritised in the government's infrastructure plans. While the APF states a commitment to improving surface access, clarity as to how this will work is needed. Many airports are keen to improve surface access and they need certainty that the evidence they develop will be considered.

Ultimately, a combination of government and the National Infrastructure Commission is needed to deliver transformative infrastructure with the latter providing policy continuity and taking a longer term horizon and assessment of need, regardless of changes in government. While it is better locally to have joint spatial plans and for the Local Enterprise Partnerships (LEPs) to work with local authorities, ultimately most decision making will come from the government and the DfT. The DfT should therefore work with its partners to set out a clear process for prioritising surface access improvements and the type of evidence they expect airports to contribute to support their case.



ASK 4: IMPROVING TRANSPORT APPRAISALS TO BETTER CAPTURE CATALYTIC IMPACTS OF INVESTMENT

At a more granular level, but working in tandem with the policy recommendations above, there is an opportunity for transport appraisals to better capture the full range of potential benefits, to help to ensure that scarce resources are allocated to projects with the greatest returns. It is important that government is able to ensure that the full economic benefits from investing in surface access are recognised in transport appraisal guidance and for this, further research into catalytic effects is required to reflect the catalytic benefits brought about by tourism, investment, trade, and productivity.

The effect of airports should be embedded into transport appraisals. For surface access improvement schemes, there can be significant knock-on benefits through the better utilisation of airport infrastructure. Widening airport catchment areas can influence the attractiveness of airports, offer some relief to congested airports and also support airport capacity growth.

A framework needs to be established whereby the impact of transport infrastructure investment on tourism can also be better reflected. Tourism contributes a large amount to the economy of the UK each year and where infrastructure improvements boost tourism flows that benefit should not be overlooked.

Likewise, a framework for evaluating the impact of transport infrastructure investment on foreign direct investment should also be integrated to reflect the realities of a world of globally mobile capital. Infrastructure improvements can contribute to attracting foreign direct investment into the UK. This can be particularly relevant to schemes that improve international connectivity, such as investment in airport infrastructure or surface access.

Lastly, international trade should be integrated into modelling. Where schemes might improve international connectivity their impact on the prospects for tourism and exports of goods and services should be considered.

SUMMARY

In 2015, over 251 million passengers flew from airports in the UK, an increase of 5.6% on the previous year and the highest number ever recorded. The sheer scale of this passenger growth has consequences, as on current projections it is likely that a number of airports across the UK will reach capacity quicker than was anticipated even a few years ago.

Airport development and surface access to airports need to be considered together, forming part of an integrated transport strategy, developing a transport network that connects airports to their communities and communities to their airports.

Airport growth across the UK is contingent on good surface access and inadequate transport links can prevent airports from delivering their full economic potential. Improvements to transport links can boost catchment areas, make new journeys viable and are instrumental in ensuring an airport's ability to service a greater number of destinations at higher frequencies.

As this report has set out, the benefits of having better surface access to airports are many and not only does it allow airports to make better use of existing capacity, facilitating increased passenger numbers and improved connectivity, but better access to airports provides greater inward growth and investment. It creates economic benefits for the local, regional and national economy.

An airport can contribute to economic growth on many levels, particularly through the catalytic effects that this report has set out. These effects generate economic activity that would otherwise not occur – through tourism, international trade, productivity improvements and attracting foreign investment. By investing in surface access, boosting catchment areas and by making the passenger journey more efficient, we can facilitate and deliver this vital economic activity.

There is an opportunity for government to develop a truly integrated transport policy for the first time. To this end, the AOA is calling for government to:

- Assess the level of public transport infrastructure connecting UK airports, and identify where there are gaps in present and future demand;
- Ensure rail capacity assessments and Highways Agency route studies include airport access; and compare passenger growth assessments and their impact on transport infrastructure.
- Set out, with Network Rail and the Highways Agency, how it will make decisions as to which surface access projects at airports will be prioritised in the government's infrastructure plans.
- The report also makes the case for new thinking on transport appraisal guidance, demonstrating how existing methodology often understates the benefits from improvements to surface access by missing out the gains from trade, tourism, foreign investment and migration.



ANNEX I

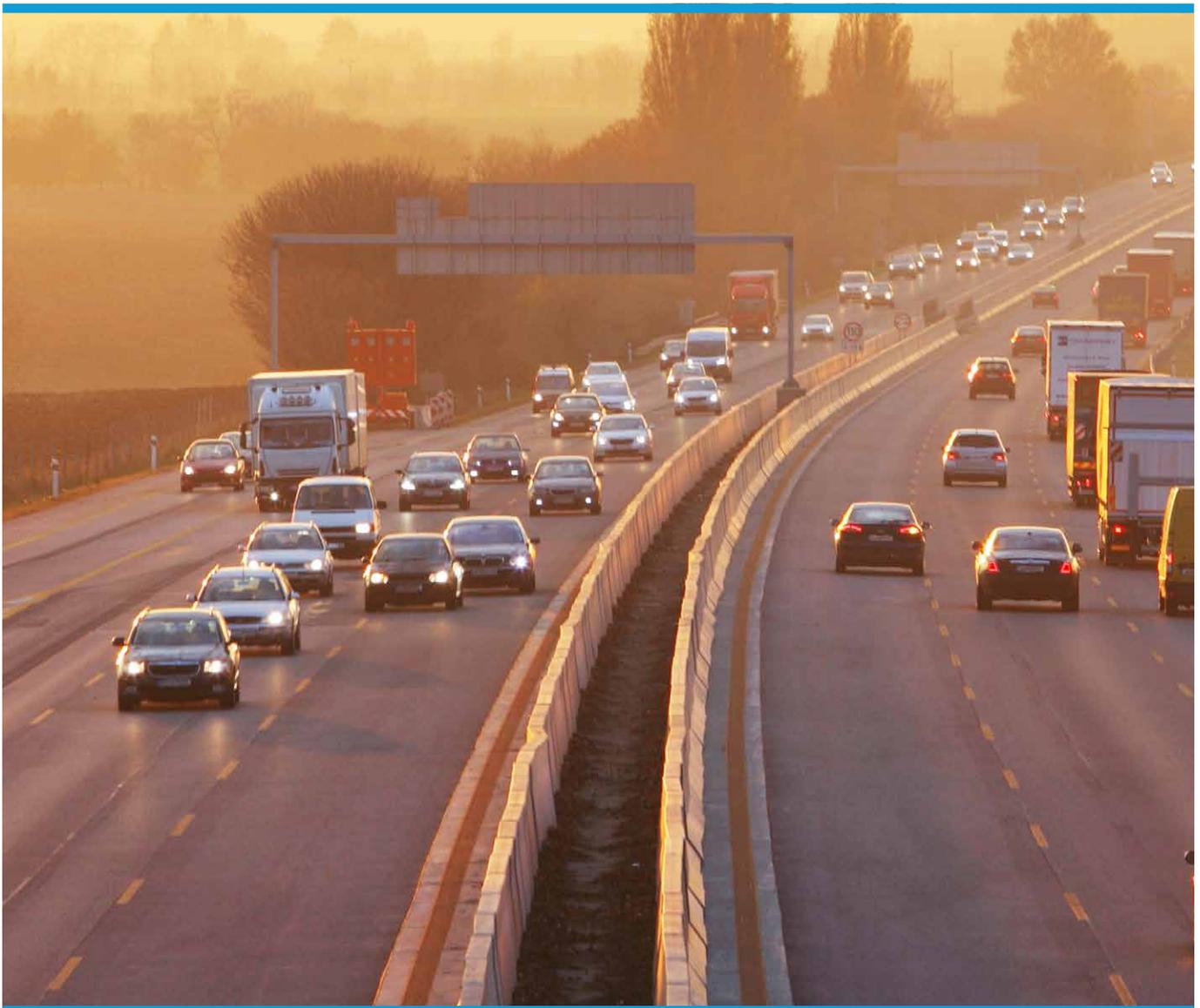
STYLISTED MODELLING METHODOLOGY

Capital Economics consider stylised catchment areas of 18 of the largest airports in the UK by annual air movements and analyse the extent to which improvements to journey times could support greater demand for air travel and associated economic activity.

First, they use data from Google maps to assess typical journey times from 20 locations surrounding each airport. Here, the fastest route was chosen, whether it by public transport or private car. They then calculate the average speed for each journey based on distance as the crow flies. From these data, they evaluate each airport's catchment area based on a maximum journey time of 60 minutes.

Data from the Office for National Statistics and official statistics for Scotland enable them to work out the population within a 60 minute journey and the additional population, and therefore increased catchment area, from an improvement to average journey speeds.

Through regression analysis, they establish the relationships between catchment areas, number of routes provided by each airport and the average daily frequency of a route. This allows them to make an indicative assessment of the increase in flights supported by an increase in catchment area at each airport and evaluate the overall increase in economic activity in the UK.



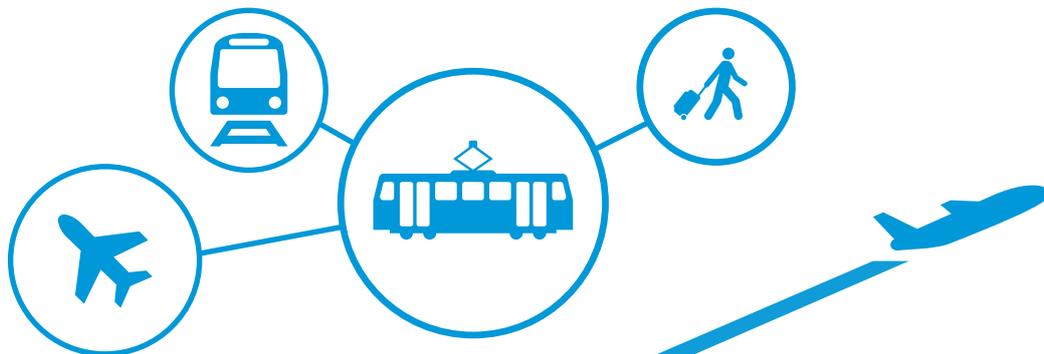
ANNEX II

A WIDE BODY OF LITERATURE SUGGESTS THAT AIRLINE CONNECTIVITY HAS A MATERIAL ECONOMIC IMPACT

Source	Findings
InterVISTAS, <i>Economic Impact of European Airports</i> (InterVISTAS, Bath), 2015	A 10% increase in connectivity is associated with a 0.5% increase in GDP per capita
International Air Transport Association, <i>Aviation Economic Benefits: Measuring the economic rate of return on investment in the aviation industry</i> (International Air Transport Association, Geneva), 2007	A 10% increase in the level of connectivity to the global air transport network (relative to GDP) can produce a long-term increase in productivity of 0.7% per annum
Oxford Economic Forecasting, <i>The Economic Contribution of the Aviation Industry in the UK</i> (Oxford Economic Forecasting, Oxford), 2006	A 10% increase in connectivity (relative to GDP) is associated with a 3.5% increase in the level of fixed investment in the long run
Oxford Economics, <i>Impacts on the UK Economy through the Provision of International Connectivity</i> (Oxford Economics, Oxford), 2013	A 10% increase in business related connectivity increases economy-wide productivity - and hence GDP - by 0.5% in the long run
Germà Bel and Xavier Fageda, 'Getting there fast: globalization, intercontinental flights and location of headquarters', <i>Journal of Economic Geography</i> , 8, 2008. pp. 471-495.	A 10% increase in the supply of intercontinental flights involves around a 4% increase in the number of headquarters of large firms located in the corresponding urban area
PricewaterhouseCoopers, <i>Econometric Analysis to Develop Evidence on the Links Between Aviation and the Economy</i> , (PricewaterhouseCoopers, London), 2013	A 10% increase in seat capacity increased the UK's goods exports by 3.3%, goods imports by 1.7%, service imports by 6.6% and service exports by 2.5%

Studies on the economic impact of improved connectivity

Source: Capital Economics







CONNECTING THE UK'S ECONOMY:
HOW BETTER ACCESS
TO AIRPORTS CAN
BOOST GROWTH

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