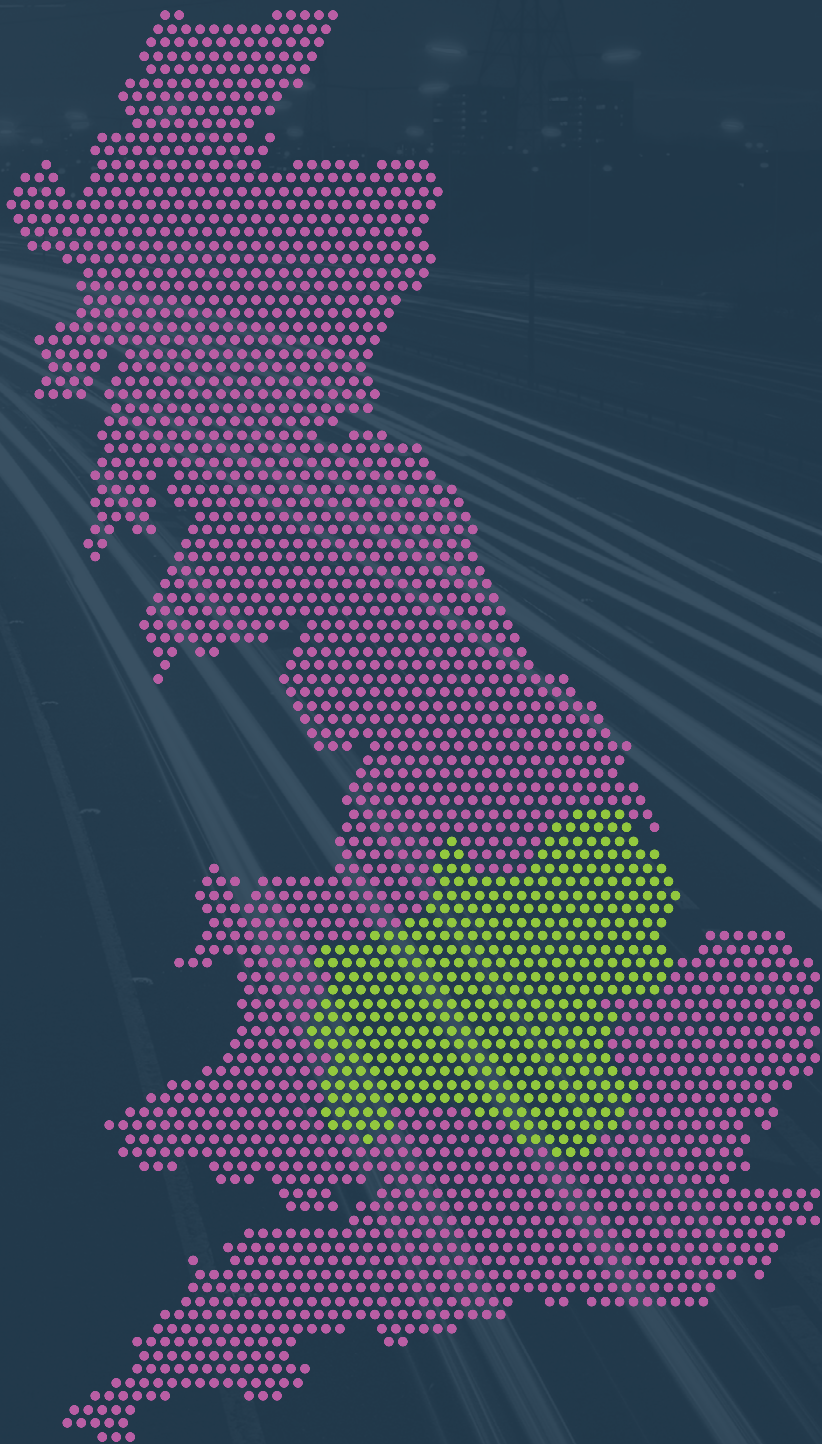
Emerging Strategy

November 2016

Midlands Connect

Powering the Midlands Engine



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Foreword

Sir John Peace

Chairman of Midlands Engine and Midlands Connect

As we get closer to the finalisation of the Midlands Connect strategy in March 2017, we pause, in order to reassess the economic and political climate in which we are now in – and how that has changed in the few short months since I was appointed chairman of Midlands Connect. This Emerging Strategy, allows us to take that breath to ensure that we are still reaching for outcomes that are as relevant now as when we started the process. Our Emerging Strategy guides the path to the final strategy and identifies where we believe the emphasis should be.

Our geographical position, infrastructure and access to supply chains, is what encourages so many companies to locate in the Midlands. We have national strengths in sectors such as manufacturing, freight and logistics and food technology; and we have attracted record levels of investment from China, India and North America since 2009. We need to continually invest in our transport infrastructure; not just for the Midlands but also for the whole of the UK to succeed outside of the EU. There are a huge amount of nationally important transport assets in our region; if these fail then the UK will fail. Our strategy is seeking extra capacity and faster journey times; but almost more importantly we're planning for a more resilient network.

HS2's arrival to both the East and West Midlands will bring significant economic benefits; from both the new line itself and the capacity it releases elsewhere. It is vital that we harness the huge opportunity open to us from this new piece of national infrastructure. Our strategy plans for its arrival and seeks to exponentially increase its value to the Midlands.

Our strategy is not all about new or upgraded infrastructure. We live in a digital economy where access to information is transforming every aspect of our daily lives. We must not just keep up, but lead the field in transport technology and ensure that innovation runs throughout our strategy.

The Midlands Engine will encourage economic growth to our region, Midlands Connect's role within the Engine is to enable ease of movement for people and goods, link to international markets to help rebalance the UK economy and above all ensure a better quality of life for Midlanders. This Emerging Strategy shows how we can accomplish this and paves the way for our future.

1 Introduction

This is our second report, in which we make the case for strategic transport investment to power the Midlands Engine for Growth.

As well as supporting the Midlands economy, our networks are at the centre of the UK's transport network and, as such, are vital links for the economies of all parts of the UK.

Unlocking connectivity in the Midlands, unlocks economic potential and for us all.

The Midlands Engine is backed by the Prime Minister who said recently

> **“there is so much untapped potential here, right across the Midlands. The government I lead will help you unleash that potential and together we will make the Midlands - from Lincolnshire to Shropshire – a powerful engine for growth ”** [1].

This report describes our work to date and presents our Emerging Strategy. In March 2017, the Midlands Connect Strategy will set out in detail the ideas we present here: the investment options we need to support the Midlands Engine, the case for investment and a programme of delivery and further research.

1.1 Midlands Connect: our Mission – to unlock our economic potential

Midlands Connect is the transport workstream of the Midlands Engine.

Midlands Connect is the transport workstream of the Midlands Engine for Growth. We are a partnership of 28 local authorities, 11 Local Enterprise Partnerships,

two airports, Chambers of Commerce, Highways England, HS2 Ltd, Network Rail and the Department for Transport.

The Midlands is built on a strong advanced manufacturing sector, the largest cluster of logistics activity in the UK, high-growth technology businesses, professional services in our major cities and the UK's dominant exporter. **These combined strengths mean the Midlands Engine is perfectly positioned to take the lead in growing our cities.**

We will consolidate our economic strengths and grow our expanding sectors; in doing so we can create opportunities for everyone living and working across the Midlands and the UK as a whole.

Our Emerging Strategy shows how transport will support the Midlands Engine to ensure we achieve our full potential. We demonstrate the importance of transport under **four themes that mirror our economic role on the global, national and regional scale.**

The Midlands as a Global Player

'Selling to the world, securing investment in the UK'
How our transport strategy will support the Midlands Engine to grow UK exports, drive new opportunities in emerging markets and attract new inward investment

The Midlands as a National Transport Hub

'Unlocking Connectivity in the Midlands unlocks economic potential for us all'We are the hub of the UK transport network and HS2 arrives from next decade cementing this role

Moving the Nation's Freight

'The UK's logistics hub'
We are the UK's Frieght hub powering supply chains, customer deliveries and exporting

Improving East-West Midlands Movements

'Building an economy that works for everyone'
Transforming how people, business and goods can travel between our cities – unlocking our economic potential across the Midlands

Cross Cutting

HS2

Smart and Digital Connectivity

Figure 1 Midlands Connect Strategy Themes

[1] Theresa May, writing in the Birmingham Mail 18th August 2016

2 The Midlands Economy

2.1 The Midlands' Economic Potential

The Midlands is worth over £220 billion to the UK economy. Raising the productivity of Midlands' workers to the national average would in itself grow our economy by £25 billion per annum, or 12% of current output. Bringing our cities closer together can help deliver this through stronger agglomeration. By removing bottlenecks on our networks we can drive business efficiency and save us all time.

The region's Strategic Economic Plans set out the ambition for over half a million new jobs in the coming years. Over 300,000 of these are in key growth sites that direct transport investment can unlock. This investment will be complemented by new housing, skills training and inward investment led by the Midlands Engine.

Our strategy will complement the HS2 Growth Strategies by maximising the strategic connectivity of the HS2 stations to make the Midlands truly "HS2 ready".

2.2 Transport and Economic Growth

There is a growing body of evidence about the relationships between the movement of people and goods and the economy, and **in particular how investment in transport can drive economic growth** both directly and indirectly. Whilst there is still much to learn about the detailed causality of transport at a local level, there is general consensus on their impacts on the economy.

The Midlands Connect Strategy will maximise these effects by delivering investment which will overcome the barriers to growth through providing the efficient, reliable strategic road and rail networks with the capacity, connectivity and resilience to directly raise productivity and remove transport as a barrier to growth.

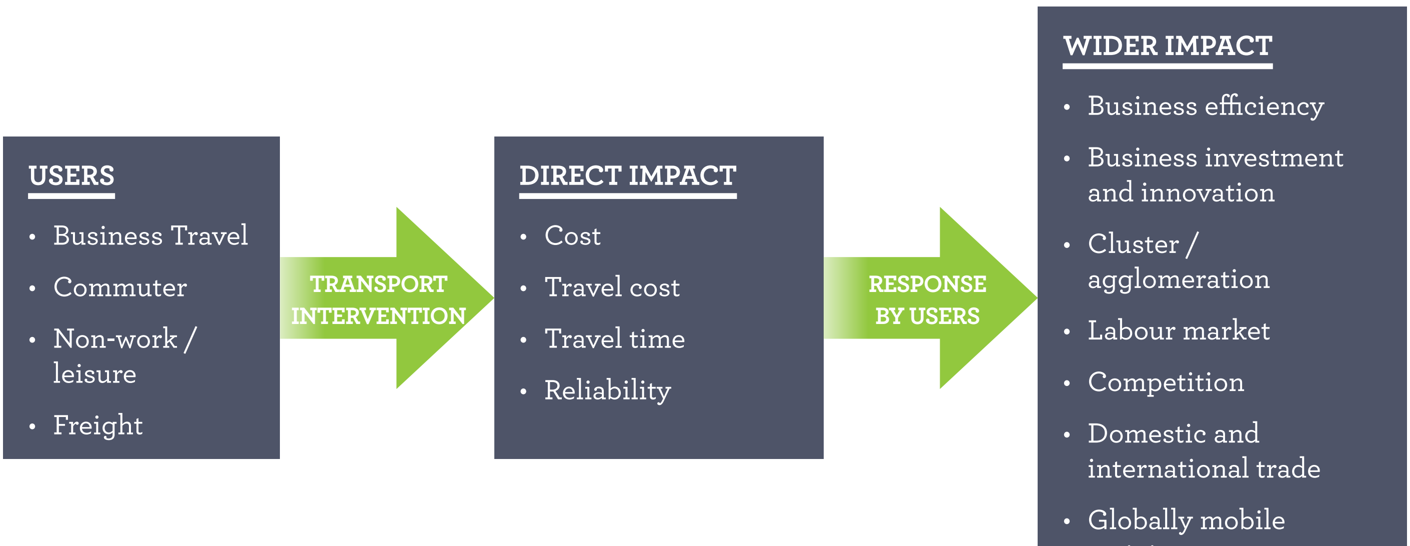


Figure 2 Links between transport and economic growth

3 Setting our Transport Ambitions

To guide the development of our strategy we have framed the technical work within four headline Conditional Outputs. **These reflect the main transport conditions needed to drive economic growth across our region.**

CO1 - Highway Journey Times

"Mile a Minute on the Strategic Road Network"

To achieve an average speed of 60mph on the SRN between our key centres, national and international destinations

CO2 - Highway Journey Time Reliability

"Journey times should be reliable for people and freight"

Based on the CO1, the Journey time (in normal conditions) should be no more than 20% higher than the average* journey time. At any time, everyday.

CO3 - Rail Journey Times and Services

"Direct and fast links between our key centres, national and international destinations"

CO3a All our key centres and national destinations to be served by direct services, with no interchanges

CO3b All journeys to have an end to end average speed of 90mph or more

CO4 - Rail Capacity

"We can carry all the freight and people that we want to"

CO4a Off peak – "everyone gets a seat" – seats occupied <=100%

CO4b Peak – no more than 20 minutes standing into our key centres

CO4c – Sufficient rail freight capacity

Figure 3 Midlands Connect Headline Conditional Outputs

*50th percentile/Median is being used

Our Conditional Outputs are intentionally aspirational to ensure our technical work is not constrained by current thinking, custom or practice.

As we draw together our strategy for March 2017 **we will refine and set corridor-specific Conditional Outputs** based on our deeper understanding of what is possible and economically viable to achieve.

We have used the Conditional Outputs to identify where the current and forecast performance of our transport networks falls below what is required to support growth. From this, we have developed a range of potential infrastructure, passenger and digital technology solutions along each of our intensive growth corridors.

3.1 Highway Journey Times

We want average journey speeds on the strategic road network (SRN) of at least 60 mph at all times of day and all days per week. This is in line with the Government's vision set out in the current Road Investment Strategy. Currently however, traffic congestion means that speeds are below this level on many parts of the SRN during peak periods but also in the inter-peak. **Many of the parts of strategic network worst affected are key freight routes for the UK as a whole.** As traffic continues to grow we expect these speeds to deteriorate, even with the currently planned levels of investment in the SRN.

3.2 Highway Journey Time Reliability

Our aspiration is simple – you should know how long it will take you travel regardless of the time or day of the week. This means that journey times at certain times of the day or day of the week should vary little from one day to another, or from week to week.

Currently this level of reliability is rare on the SRN; journey times are inconsistent meaning the 'spread' of journey times is large. Predicting journey times for individual trips is therefore very difficult, meaning that individuals or businesses build additional 'slack' into their journey plans, with consequent increases in cost and reduced quality of life.

3.3 Rail Service Provision

The speed of rail journeys is variable; journeys between key Midlands centres and London are relatively fast, but average speeds within the Midlands and to other locations are typically below 50 mph. The 52-mile journey from Birmingham to Nottingham for example takes 69 minutes whilst a comparable 50-mile journey from Southampton Central to Reading takes just 49 minutes.

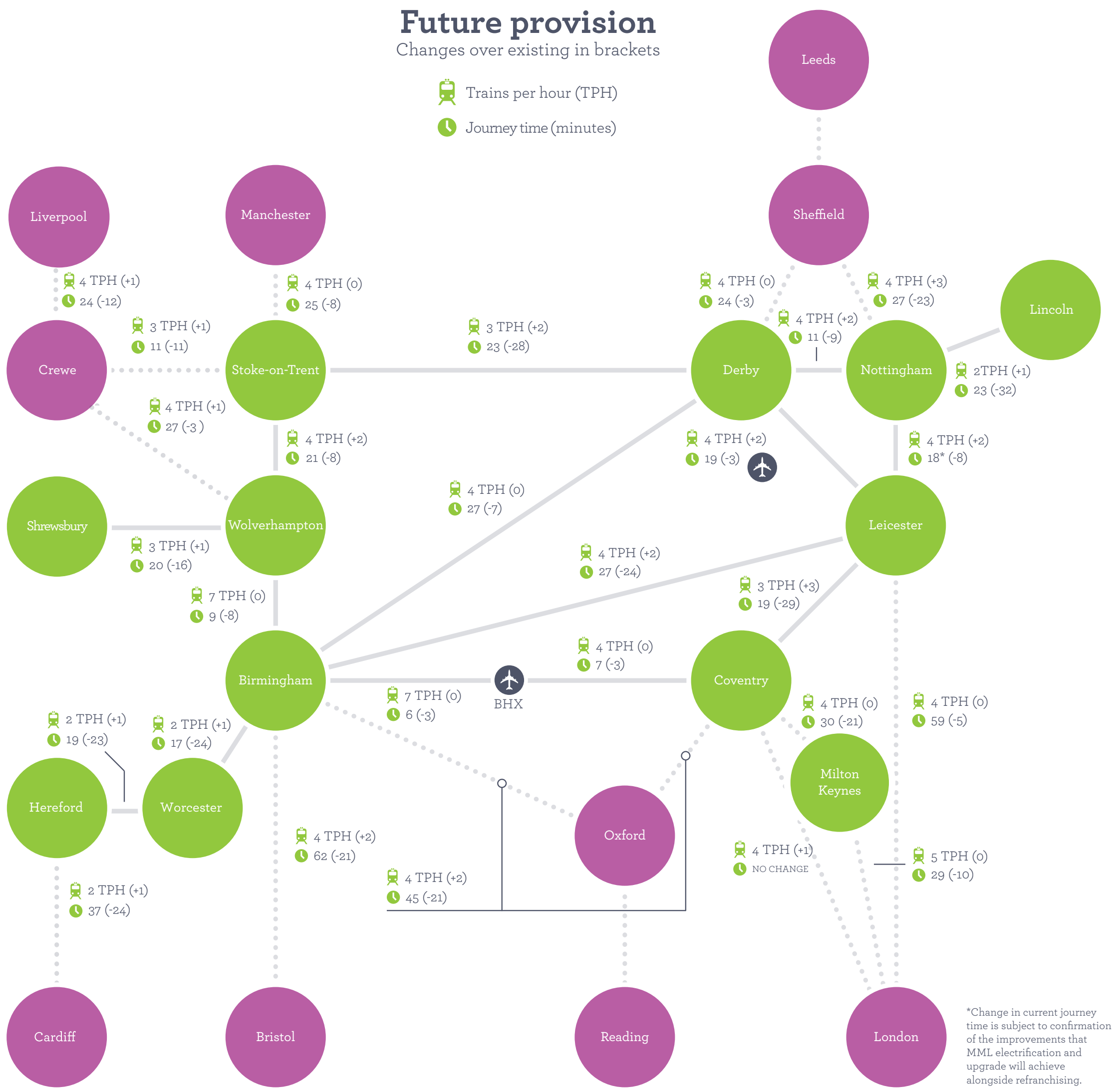
Our aspiration is for much shorter journeys between key centres within and beyond the Midlands Connect area, with journey times equivalent to 90 mph average speeds on key routes.

Average freight train speeds are very low, typically 25mph, despite trains being capable up to 75mph.

3.4 Rail Capacity

Passenger Services - Network Rail forecasts of crowding levels in 2023 suggests there will be several routes with significant passenger overcrowding both in the West and East Midlands. Looking towards 2037, HS2 will address some key strategic capacity issues and provide transformational national connectivity, there will however remain some capacity constrains to be addressed on other parts of the network reflecting the scale of population and jobs growth across the wider region. This will act as a brake on the Midlands economy which we must address.

Freight Services – Intermodal freight traffic to/from the Haven Ports and Port of Southampton are particularly important to the Midlands. Several constraints exist on both routes that will limit further service enhancement. As such, providing sufficient rail freight capacity in the future presents a clear constraint for the UK based on the networks within our region.



Numbers presented exclude stopping services and are based on semi-fast / fast services only

Figure 4 Midlands Connect Rail Frequency and Journey Time Aspirations

[5]Midlands Engine for Growth prospectus

4 Schemes for Early Development

4.1 Existing Commitments – Welcomed and Supported

- Midland Mainline upgrade and electrification must be delivered in full.
- Road Investment Strategy strategic schemes confirmed for development: A46 Newark Northern Bypass; M5/M42 Birmingham Box Phase 4 Smart Motorway;A45 Stanwick to Thrapston; and M1 Junctions 19-23A Smart Motorway.

In its Road Investment Strategy 1, Highways England pledged to commence this work during RIS period 1 (i.e. by March 2020). We welcome formal confirmation of this in Highways England's Delivery Plan 2016 and look forward to this work beginning as soon as possible; and to construction starting for these schemes during the early part of the second RIS period.

4.2 Midlands Rail Hub

The Midlands Rail Hub is a programme of interventions on the routes into and within central Birmingham. Together, they will provide resilience to passenger rail journeys and additional capacity in this area.

Whilst the infrastructure is focussed on corridors that service central Birmingham t**he benefits, in terms of the 10 additional/new services each hour, will spread out across our area.**

4.3 Midlands Motorway Hub

Lying at the centre of the Strategic Road Network (SRN), the M42, M5 and M6 'box' around the Birmingham hub plays a vital role in the success of the UK's economy. The motorway hub provides strategic connectivity east-west and north-south within and beyond the Midlands.

We have secured the commitment from Highways England to match Midlands Connect funding for this study. Both parties recognise the importance of building in outputs from this study into the next Road Investment Strategy (RIS) to start to plan and secure a long term future for movements through the Motorway Hub.

We anticipate that the study will set out ambitious options for investment and as it progresses we will incorporate its emerging findings into the Midlands Connect Strategy March 2017.

4.4 Developing East-West Rail Solutions

Our final strategy will set out **a compelling need to further develop enhanced East-West Rail connectivity.** The five main corridors we have identified for improvement are:

- Birmingham to Nottingham (via Derby);
- Birmingham to Leicester;
- Coventry to Leicester;
- Crewe to Nottingham (via HS2 Toton Station); and
- Thames Valley to the East Midlands and West Midlands via Coventry and Birmingham Airport.

Network Rail, on request from Midlands Connect, is currently **undertaking some high-level assessment of what might be possible to achieve on these corridors;** which will feed into the Midlands Connect Strategy.

[7]East Midlands: A Railway for Growth (September 2016)

4.5 Smart and Digital Connectivity Quick Wins

A number of 'quick win' schemes have been developed that **can deliver benefits within three years,** without requiring significant policy or regulatory change, whilst building towards the future vision for smart connectivity in the Midlands Connect region. These are set out in figure 5.

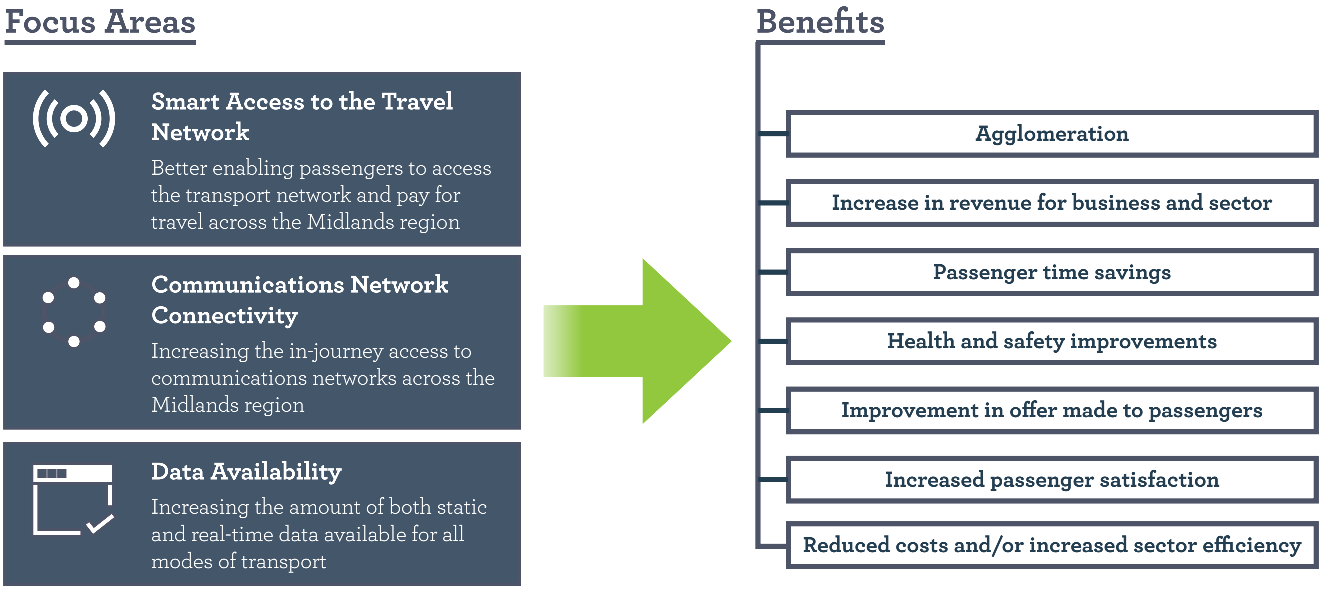


Figure 5 Smart and Digital Connectivity Quick Wins and Benefits

4.6 The M5/M6 junction and M6 junction 8 to 10A

This section of the network is one of the busiest and most congested in the country and causes significant delays to people and freight travelling both regionally and nationally. We are examining options to relieve congestion in this area.

4.7 M42 – Junction 4 to 7 (Shirley to M6) Widening

The M42 carries strategic traffic between London and the North West, and from the ports in the South West, to the north, as well as local and regional traffic. As such, it can be very congested at peak times. Whilst the upgrade to Junction 6 has been announced, we are investigating widening between junctions 4 and 7 to provide a longer-term solution.

4.8 M6 Smart Motorway Junction 15-16, Including Junction 15 Upgrade

Completing this one remaining gap in the smart motorway between Birmingham and Manchester will maximise the investment from the current Smart Motorway programme and provide greater national reliability and resilience.

5 The Midlands as a Global Player

5.1 We are a Global Player

Leading the UK on a global scale, accounting for 17% of all exports, the Midlands has a crucial role to play in supporting our export market; and in bringing in inward investment. Selling to at least 178 countries, exports from Midlands businesses have increased by 38% between 2010 and 2013.

Our global position allows us to lever in investment to the UK and our **inward investment projects grew by 130% between 2011 and 2015.** In the same period, we attracted 880 Foreign Direct Investment projects creating over 48,000 new jobs and safeguarding a further 23,000 across the Midlands.

5.2 The Midlands Airports

Air connectivity is essential for businesses to thrive in a globalised economy.

Birmingham Airport is the seventh largest airport in the UK and third largest outside London, with a catchment area of over eight million people within an hour's drive time. Current passenger numbers of around 10 million per annum could grow to 27.2 million passengers by 2030.

The airport's annual economic impact equates to £113 of GVA per passenger and 2.6 jobs in the Midlands for every 1,000 passengers passing through the airport.

East Midlands Airport is the 11th busiest passenger airport in the UK, handling over four million passengers each year. It is also the UK's leading freight-focused airport. The airport's strategic location benefits both passenger and cargo markets, with 11.6 million people living within a 90 minute drive. The airport's masterplan states that the airport could achieve a passenger throughput of 10 million passengers per annum between 2030 and 2040.

5.3 Access to Ports

Businesses in the Midlands have customers and supply chains in the Midlands, the rest of the UK and across the globe. Effective regional, national and international transport connections are therefore critical to business performance. Access to the UK's ports is clearly vital both to the Midlands economy, and with 17% of UK exports, to the UK as a whole.

Options under consideration focus on access to the four main ports that is dependent on our road network. Access to other ports including to Bristol, Liverpool, Southampton and London is being examined within the context of broader highway and rail connectivity.

5.4 Tackling the Barriers to Growth

The Midlands has a strong focus on manufacturing and logistics with sustained forecast growth in logistics employment and GVA. Manufacturing is evolving, with higher-value technology-led activity leading to strong growth in output. Logistics and manufacturing tend to be located close to the Strategic Road Network (SRN) to take advantage of good road connectivity. Given the nature of the future economy, it is important that the SRN provides the level of connectivity needed to support access to ports and international markets.

Currently, congestion on the SRN often results in slow journey times and poor journey reliability. Many of the delays are caused by capacity pinch points, often at junctions, single carriageway routes, and poor network resilience due to lack of alternative routes and sub-standard design.

5.5 Options under Consideration

Surface Access to Birmingham and East Midlands Airport

We are considering targeted transport measures that could improve surface access to the airports for passengers. These include:

- improve public transport connections between East and West Midlands cities and Birmingham/East Midlands airports
- improve junction access and/or direct highways links to East Midlands Airport from A50/A453/M1; and
- maximise the opportunity of HS2 to reduce travel times by rail to the airports.

Through joined-up collaboration between airports and airlines, marketing & promotion of air services and raising awareness of the Midlands as a destination this will help secure improvements of air connectivity to US main business centres.

Access to Felixstowe and Haven Ports

The A14 provides a strategically important route for freight traffic between the Midlands and Felixstowe / Have Ports. It is heavily-trafficked, prone to congestion around key centres and has poor resilience to incidents due to its largely sub-standard design. Varying standard of route leads to congestion hot spots creating long and unreliable journey times adding to the direct and indirect costs to freight movements.

The A43/A45 corridor offers the potential to improve connectivity between the South East Midlands and Felixstowe / Haven Ports via the A14. To make this an attractive route, improvements are required to resolve congestion at a series of at grade junctions and in the Northampton area on the A45.

Options being considered include:

- A14 upgrade to expressway standard – Junctions 3 (Rothwell) -10 (Rushden);
- A43 upgrade to expressway standard from M40 Junction 10 (Bicester) to M1 Junction 15A (Northampton) and further dualling (Northampton – Kettering); and
- A45 Expressway - A14 Junction 13 (Thrapston) to M1 Junction 15 (Northampton).

Access to Holyhead Port

Beyond the M54 at Telford, there are several single carriageway sections on the A5 / A483 corridor towards the A55 and Chester, are thought to contribute to North Wales / Holyhead bound traffic using the Midlands Motorway Hub, M6 and M56 corridor.

Options being considered include:

- A5 upgrade to expressway standard M54 Junction 7 to Gledrid English/Welsh border;
- Improved link to Holyhead from Telford – including extension of M54.

Access to Immingham Port

Routes from the A46 corridor to Immingham are indirect and of lower standard than the A46 itself. Both the A46 and A15 corridors north / east of Lincoln are single carriageway which means freight to and from Immingham is heavily reliant on the M180 and M18.

Options being considered include:

- A15 dualling Lincoln to M180; and
- A46 upgrade to expressway Winthorpe (A1/A46) to Lincoln (A46/A57)

6 The Midlands as a National Transport Hub

6.1 HS2 Released Capacity and Classic Compatible Services

The Midlands punches above its weight in manufacturing, accounting for a quarter of the UK's jobs and GVA, centred on our manufacturing heartland in the central Midlands area.

The Midlands has a strong advanced manufacturing and engineering base which employs over 600,000 people and accounts for 22.5% of the UK's manufacturing output. Advanced manufacturing is particularly prevalent from Jaguar Land Rover in Wolverhampton and Solihull, to Toyota, Rolls Royce and Bombardier in Derby. Reliable transport connections are important to complex supply chains to ensure delivery to time slots and productivity is maintained.

We also have a strong food and drink production sector in cities such as Leicester, closely allied to clusters of food-related farming in Worcestershire, Herefordshire, Shropshire and Lincolnshire.

The Midlands Engine is home to the largest number of medical technology and device companies in the country. We have a strong life science pedigree that stretches from Nottingham, with its centre piece BioCity, to Birmingham, with the newly opened Institute for Translational Medicine.

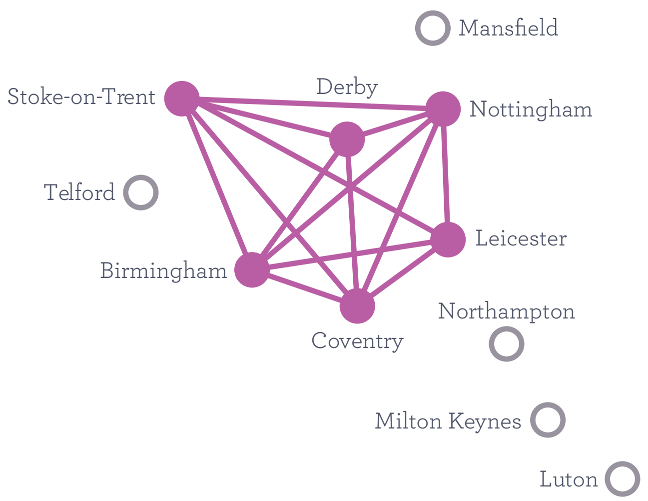


Figure 6 Largest Manufacturing Locations and Indicative Links

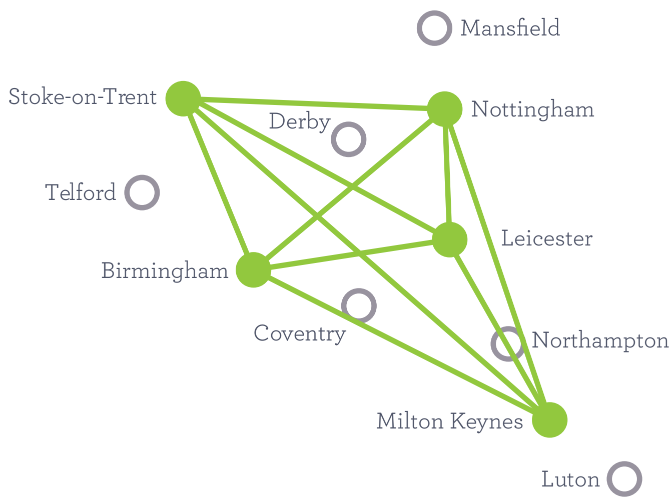


Figure 7 Largest Wholesale and Retail Locations and Indicative Links

6.2 Tackling the Barriers to Growth

The manufacturing and logistics sectors are highly dependent on good access to the SRN to operate competitively. This is heavily trafficked and unreliable for much of the day. Given the Midlands' nationally important clusters in manufacturing (including automotive and transport equipment) and logistics (including the 'golden triangle' and the UK's leading freight-oriented airport), a more effective, reliable and resilient SRN in the Midlands will support a better connected and economically stronger UK.

The rail network supports the needs of business and professional services in cities across the country. By making improvements to the classic network; and by building on the opportunities of HS2 (including utilising released capacity on the classic network), we can enable more direct services, faster journey times, more frequent services and address overcrowding (particularly during peak times). Access to city centres is particularly critical.

These improvements will improve access to markets, facilitate economic interaction between key locations, improve productivity and enhance the competitiveness of cities in the Midlands and across the country.

6.3 Options under Consideration

Midlands Motorway Hub

As set out in chapter 4, we are about to commence a joint study with Highways England to examine long-term strategic solutions to congestion on the Midlands Motorway Hub. In parallel, Midlands Connect will look at the case for shorter term solutions to immediate issues between the M5/M6 junction and M6 junction 8 to 10A and on the M42 looking at widening between junctions 4 to 7. This work will be reported in March 2017 and the schemes developed in conjunction with the Motorway Hub study.

HS2 Released Capacity and Classic Compatible Services

HS2 will transform rail travel by providing new high speed services to the Midlands. An additional benefit of HS2 is the potential it brings to use released capacity on the classic rail network, and spare capacity on the high speed network, to run new regional and long-distance rail services. This work is still underway, and our preferred options will be set out in detail next March.

A5 Cannock to Rugby

The A5 between M6 Junction 12 (west of Cannock) and the M6/M1 (near Rugby) offers the potential to provide a strategic alternative to the Midlands Motorway Hub for people and freight travelling between London & the South East and the North West. However, it is of a relatively poor standard given its strategic importance with resultant congestion and safety issues. We will examine the potential for a new offline alignment (including a new M1 Junction 20A) alongside the potential for an online upgrade between A426 junction and M6 Junction 12.

M6 Corridor to the North – Stoke Hub

The strategic road network in Stoke experiences poor journey reliability which is exacerbated during incidents on the M6, particularly on the A34 and A500 which run parallel. Long and unreliable journey times on the A50 west of Uttoxeter into Stoke-on-Trent result in long planned journey times.

We are examining options including completion of the remaining gap in the M6 Smart Motorway (Junctions 15 to 16), improvements to M6 Junction 15 (A500/A519), upgrading the A500 to expressway, a new A50 to M6 link, and upgrading the A50 to expressway from Stoke to Uttoxeter.

M1 and A1 (M) Corridors

The M1 corridor suffers from poor journey reliability caused by high traffic volumes and, in some cases, closely spaced, particularly in the East Midlands. The variable standard of route on the parallel A5 corridor in the Milton Keynes area also limits its ability to cope at times of disruption on the M1. The persistence of long and unreliable journey times results long planned journey times for road users.

We are examining the following options;

- M1 Junction 19 (Catthorpe) to J23a (East Midlands Airport) and J23a to J24 smart motorway;
- M1 further widening post smart motorway;
- A5 improvements M1 Junction 9 (Weedon Bec) to A426 (Lutterworth); and
- upgrading of the A1 to motorway standard Blyth to Peterborough.

A46 Corridor (South West – North East) - Leicester & Coventry Hub

The A46 corridor provides a key link from the South West and Wales to the port of Immingham. We are considering options to provide a key trans-national route, potentially from M5 Junction 9 at Tewkesbury to the M6/M69/A46 interchange at Coventry, to Leicester, Newark, Lincoln and the port of Immingham. The route could act as a viable strategic alternative to both the M1 and the Midland Motorway Hub.

Options being considered include:

- A46 upgrade to expressway standard M5 Junction 9 (Tewksbury) to M40 Junction 15 (Leamington Spa);
- A46 upgrade to expressway standard M6 Junction 2 (Ansty) to M40 Junction 15;
- A46 to A45 link road (A46 Stoneleigh Junction to UK Central)
- M6/M69/A46 Junction improvements;
- New road from M69 to M1 J20A to A6 to A46 (south/east of Leicester); and
- A46 upgrade to expressway from Newark (A46/A1) to M1 J21A.

Rail Improvements between East Midlands to the North of England

Currently, rail services between the East Midlands (particularly Leicester and Nottingham) and Sheffield / Leeds are poor. The same is true of connections to some other core cities. We also want to maximise the benefits of HS2 by providing direct services from East Midlands city centres via Toton to the North without the need to interchange at Toton.

Options being considered include:

- Trent Junction capacity issues;
- classic compatible services from Nottingham/ Derby/Leicester to Leeds, Manchester, York and Scotland (via Toton); and
- rail shuttle connections from main centres in East Midlands to Toton.

East & West Midlands Rail access to Thames Valley and the South East

Currently there is poor rail connectivity between the Thames Valley and East Midlands (to some extent improved once East-West Rail opens) and to Heathrow Airport from both the East and West Midlands (partially addressed through proposed HS2 station at Old Oak Common, with fast connections to Heathrow Airport). Rail connections are also very poor between the cities of Leicester and Coventry. However, our research suggests that better connectivity to the Thames Valley and South East would support the Business & Professional Services Sector in the Midlands.

Options which we are examining include:

- new rail services between the Thames Valley and East Midlands / North-East England, via Leamington Spa Midlands to Heathrow Airport;
- direct rail services between Coventry to Leicester, and improved capacity between Coventry and Leamington Spa;
- stops at Solihull for Cross Country services on the route towards Oxford and Thames Valley;
- direct rail services from the East Midlands to Swindon / Bristol via East-West Rail route;
- connectivity from the Chiltern Main Line to Birmingham Interchange;
- four-tracking the line between Solihull and Birmingham Moor Street; and
- making best use of released capacity from HS2 on the Coventry – Birmingham corridor.

Links to the South West and Wales – Road and Rail

Road travel conditions to the South West are impacted by high seasonal flows on the M5 corridor in particular and poor access towards Hereford from the M5, including delays due to several junctions on the south side of Worcester. There is also a strong economic case to improve the connections between Cardiff, Bristol, Birmingham and the East Midlands given the strength of the business and professional services sectors in these locations.

Options we are considering include:

- dualling and junction upgrades on the Worcester Southern Ring Road;
- a Hereford Transport package, including a Hereford Bypass;
- M5 Junction 6 upgrade;
- Hereford to Worcester to Birmingham rail frequency and journey time improvements; and
- double-tracking of the single track section between Stoke Works and Droitwich Spa.

7 Moving the Nation's Freight

The Midlands is the centre of the UK logistics sector, accounting for approximately 20% of UK jobs and GVA. In addition, the Midlands transport networks are critical to the success of the sector as a whole: a third of all UK road freight travels to, from, within or through the Midlands.

Many UK companies have their National Distribution Centres in the Midlands and there are more planned.

Logistics activity is strongest adjacent to the strategic transport networks from Stoke in the north west to Milton Keynes in the south east but is most heavily concentrated in the 'golden triangle' in Northamptonshire and Leicestershire: the A50 corridor and the UK's leading freight-focused airport at East Midlands Airport make for a compelling reason to ensure their continued competitiveness.

Reliable journey times on the strategic road network are needed if the Midlands is to remain the national logistics hub. Businesses need to ensure efficient use of fleet and to ensure 'just in time' delivery slots are met. Minimising the unpredictability of journey times will allow businesses across the UK to operate more efficiently and reduce costs.

The Midlands rail network is also critical for freight: nearly half of all UK rail freight travels to, from, within or through the Midlands with key routes connecting to ports at Felixstowe and Southampton.

East Midlands Airport is the UK's leading freight-focused airport. The location of the airport is also key to the future growth of the air cargo market. It is the major mail airport in the UK, with express freight operators providing international next-day delivery, made possible through overnight aircraft operations and surface connectivity. Cargo handling is forecast to increase from 300,000 tonnes in 2013 to up to 700,000 tonnes in 2040 and air cargo movements are expected to grow from 23,800.

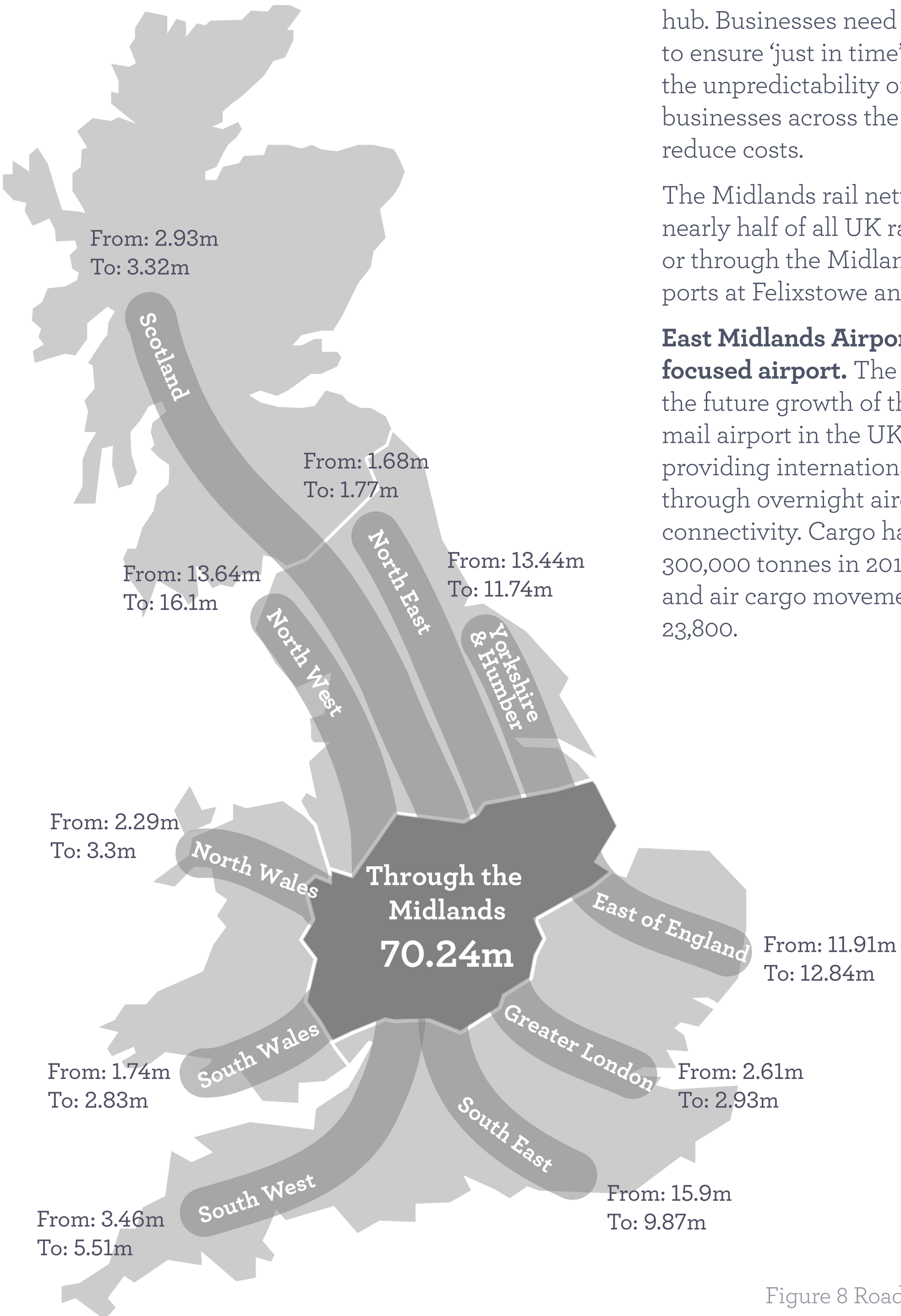


Figure 8 Road freight flows through the Midlands

Many of the options being considered as part of the strategy, as described above, will benefit the freight sector. We are flagging these issues up in the relevant sections and the summary table in Appendix A of this report.

In addition, we are still working on identifying options which specifically address freight challenges and enable growth in relevant sectors. However, there are two emerging areas that we focussing on (described in Section 7.1).

7.1 Options under Consideration

Peak and off-peak motorway reliability particularly affects freight. Unreliable journey times lead to extra 'planned' journey times to ensure agreed time slots are met. The net impact is a less efficient and productive distribution sector than if we could provide 'guaranteed' journey times.

Using technology will play an important part of this, particularly in the short-medium term, whilst infrastructure solutions are under development. Our Smart and Digital Connectivity "quick wins" will enable the full utilisation of the travel information that we have to provide scheduling and routing solutions that will allow logistics to adapt and remain productive on the networks that we have.

In terms of infrastructure, specific areas of focus in the short term are the M5 northbound, particularly between Junction 2 and the M6 to the west of Birmingham; and the between Junctions 8-10. We are currently examining the case for these to be taken forward for early development and delivery.

Rail Freight Capacity Improvements

Demand for rail freight is forecast to grow but there is currently limited capacity to support this across the Midlands. Failure to address this will hold back growth with associated impacts on the regional and national industries depending on this.

In combination with the rail passenger options we are identifying options to address capacity:

- in the vicinity of Leicester station (Midland Main Line crossing);
- in the Trent Junctions area; and
- on the Water Orton corridor.

We are also considering options to:

- alter service patterns to use capacity in Central Birmingham more efficiently; and
- increase capacity on the route via Coventry and Nuneaton.

We want to encourage the development of Strategic Rail Freight Interchanges, recognising that they generate modal shift as opposed to serving a finite rail freight demand. We are reviewing existing and potential new proposals to identify gaps in provision and promote these opportunities in the final strategy.

Some schemes may require direct state investment in order to release sites. An example of such a site is Bescot, where there is a long standing ambition to deliver a rail terminal but investment in road access will be needed.

8 Improving East to West Midlands Connectivity

8.1 Diverse Regional Economies

The private sector accounts for three-quarters of the Midlands' 5.8 million jobs. Professional services, retail/wholesale and manufacturing are the dominant activities in the private sector accounting for two-thirds of all private sector employment. **Over 100,000 people are employed in business, professional and financial services in Birmingham,** including companies such as Deutsche Bank; **whilst in Nottingham the business services sector employs over 75,000 people** and contributes £4 billion to the local economy. Companies including Capital One, Experian and Ikano Bank all have a presence in the city. However, the Midlands is under-represented in terms of professional services and accounts for only 10% of UK professional services GVA.

We will continue to be home to exciting, cutting edge high performance technology, and world-leading research facilities.

The Midlands Engine will continue to rise to the global challenges in the energy sector. **We are home to the second largest chemical cluster in the UK,** worth £6bn per annum, and the largest UK refinery cluster, totalling 27% of UK total capacity.

The region's growing Creative, Digital and Design sector will continue to underpin much of our wider growth, supported by world-leading smart technology.

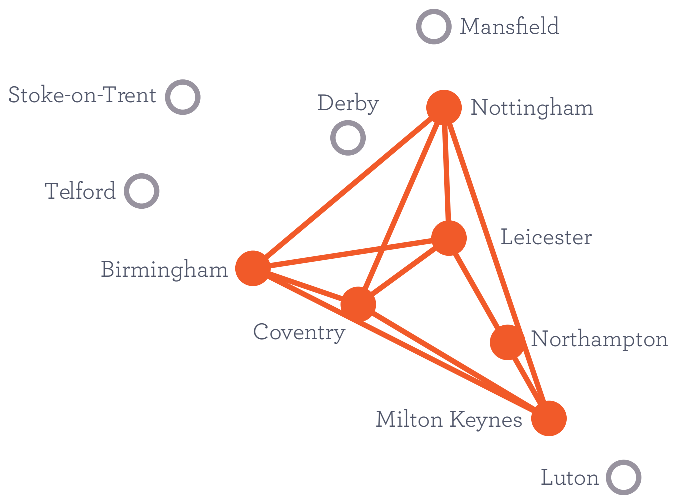


Figure 9 Largest Financial Services Locations and Indicative Links

8.2 Tackling the Barriers to Growth

The importance of east-west links, and their relatively poor performance at present, has been a recurring theme of our work to date.

Stoke, Derby, Nottingham, Birmingham, Coventry and Leicester all have strong manufacturing sectors and the linkages between these centres are therefore likely to support supply chains. Of these centres, Derby is forecast to experience the greatest growth, driven by advanced manufacturing. Given these interactions it is essential that there is effective and resilient highway connectivity, and also to support the jobs anticipated within the wider Midlands.

Longer highway travel times and poor travel time reliability will increase direct costs for business and lead to a loss of agglomeration potential. Connectivity and capacity issues therefore limit access to suppliers and customers and skilled labour markets and increase business costs.

The Nottingham, Derby, Leicester and Birmingham (including the Black Country & Solihull) PUAs are four of the areas forecast to see the largest growth in the Business & Professional Services sector over the forthcoming years. There is a strong case to overcome some of the barriers to growth between these locations. Central Birmingham suffers from constraints in capacity on several routes which limits the improvements which can be made to services across the Midlands.

Whilst HS2 improves connections on its network, better centre-to-centre classic rail network connectivity between Birmingham to Leicester and Derby/Nottingham is needed to improve the economic interaction between these centres further – HS2 does not necessarily serve all of these centres

We are considering options for east-west connections in the context of their wider role as part of the national rail and road networks.

8.3 Options under Consideration

East to West Midlands Rail Connectivity

Constraints to east-west connectivity limit the economic interactions both within and between the East and West Midlands. This constrains productivity and hinders investment in those sectors more reliant on rail (especially higher value Professional Services). As a starting point we are examining the case for the Midlands Rail Hub, and the extra services this would enable. We are also considering Nottingham to Birmingham journey time and frequency improvements; faster and more frequent services between Birmingham and Leicester; and classic-compatible services between Nottingham and Curzon Street.

However, we are also examining where additional infrastructure improvements could enable further service enhancements (such as Trent Junction, route upgrades on the Leicester and Nottingham lines, upgrades between Shrewsbury and Wolverhampton and additional train capacity between Wolverhampton and Coventry). We are also considering the need for additional track capacity (such as four tracking) required.

Options under Consideration - Nottingham/ Derby Hub (A52 / A453 / M1 J24)

We are examining options for improvements to the SRN within the Derby/Nottingham Hub to facilitate better local and strategic connectivity within and beyond the hub. This includes examination of how improvements to the road network can ensure effective access to the proposed HS2 station at Toton.

Options being considered include:

- upgrading the A52 to expressway standard between Derby city centre and M1 Junction 25;
- upgrading the A52 to expressway standard between M1 Junction 25 and Nottingham (A52);
- a new road from M1 Junction 25 to Toton HS2 Station;
- Fourth Trent Crossing (Nottingham A52 to A612);
- A52 improvements between M1 Junction 25 and the A46; and
- upgrading the A50 upgrade to expressway standard between Uttoxeter and the M1.

A42-A38

The A42/A38 corridor provides the key strategic highway links between the East and West Midlands. The A38 corridor has the potential to provide an alternative for long distance trips between the Midlands and north of England which may currently route via the M42 / A42 / M1. Likewise, the dual carriageway on the A42 provides route inconsistency with the M42 and M1 corridors either side of it.

There is potential to reduce long and unreliable journey times in this area.

Options being considered include:

- upgrading the A42 to motorway standard between Appleby Magna and M1 Junction 24; and
- upgrading the A38 to expressway standard from M1 Junction 28 to the M6 Toll at Lichfield.

Improvements on the Nottingham to Crewe to North West/Wales Rail Corridor

Improved rail connectivity between both the Stoke and Staffordshire hub and the Derby/Nottingham hub could act as catalysts for business and professional services in both economic hubs. Better connectivity to these hubs could also provide better access to the HS2 stations at Crewe and Toton, raising their potential to unlock the growth of higher-value, rail-focused sectors in North Staffordshire.

The North Staffordshire Line currently experiences chronic overcrowding which is a product of poor connectivity, frequency & limited hours of operation between the Stoke & Staffordshire and Nottingham & Derby hub. Improvements could provide better to the North West.

We are examining the case for double-tracking the line from Stoke to Crewe; capacity at Trent Junction; improved connectivity from Stoke to Crewe, and from Nottingham / Derby / Leicester to Toton; and better rail connectivity between the East Midlands and Manchester via Stoke.

Improvements on the Nottingham – Lincoln Rail Corridor

To support business productivity in rail-focused sector Lincoln needs better connections to Nottingham, Derby and Birmingham. This corridor suffers from poor connectivity between Lincoln and West Midlands with no services continuing west of Nottingham. There is also limited scope to increase passenger frequencies or freight paths on this line due to the flat crossing of the East Coast Main Line at Newark.

Options being considered include improvements to Lincoln to Birmingham journey times; and a rail flyover at Newark.

9 Sub-national Transport Body

In tandem with our strategy development work we are reviewing possible options for a Sub-national Transport Body (STB). Our work includes examination of the potential powers and responsibilities that could be devolved and shared; governance structures; and the potential benefits and disbenefits of a range of partnership models from informal to formal. This work is informing discussion across the partnership and, ultimately, will ensure the proposal that we submit to become a STB is truly the best option for both the region and the UK as a whole.

A starting point for this has been to identify how Midlands Connect, on a more formal footing, could add greater value to strategic transport planning process.

Gap in strategic planning	Description	Potential benefits of becoming a Sub-National Transport Body
Route-based approach to Strategic Road Network (SRN) And rail infrastructure programme development.	Route-based approach does not necessarily align with Midlands Connect east-west connectivity challenges and routes disjointed across the region.	Enable clearer prioritisation of Highways England and Network Rail investment programme aligned to Midlands Connect strategic connectivity priorities.
Multi-modal perspective in planning and prioritising connectivity improvements	Lack of alignment between road and rail prioritisation and development of integrated solutions.	Enable different and complementary multi-modal solutions to be developed.
Lack of clarity on local authority main road network Improvements to main road network would be prioritised by LEPs and delivered by LHAs.	Impacts on ability to prioritise investments in the non-SRN network. Does not necessarily align with Midlands Connect east-west connectivity challenges and routes disjointed across Midlands Connect area.	Enable clear prioritisation of main road network investment programme aligned to Midlands Connect strategic connectivity priorities and linked to SRN programme.
Rail franchise geographies and specification	Existing franchise geographies do not align with Midlands Connect ECT east-west connectivity challenges and ability to influence franchise specifications disjointed across Midlands Connect area.	Better align franchise specification process to enable services to be developed and improved to meet Midlands Connect connectivity challenges (alongside road, rail and multi-modal approaches).
Alignment of planning and funding horizons across partners	The delivery bodies all have different perspectives on and confidence in future funding.	Better align planning processes across delivery bodies and secure getting greater long-term funding certainty from government at a sub-national level.
Alignment of other non-transport strategic planning functions	SEPs and local plans not complementary across Midlands and do not maximise synergies with Midlands Connect strategy.	Co-ordinate and enforce strategic consistency of SEPs and plans and ensure transport strategy aligned.
Complex engagement processes and limited accountability for representing Midlands Connect priorities	The complex set of different processes, multiple and often overlapping stakeholders prevent effective engagement on pan-Midlands Connectivity issues and constrain Midlands Connect perspective effectively influencing delivery bodies.	Single voice for pan-Midlands transport connectivity priorities maximises opportunity for delivery bodies to respond to Midlands Connect needs.
Pan-Midlands digital connectivity to support transport networks	Wide range of different authorities and operators limits development and implementation of digital strategy for ticketing, customer information and network operations	Co-ordinate and drive digital connectivity strategy for transport across Midlands

10 Conclusions and Next Steps

This report reinforces the importance of the Midlands to the UK.

Our mission is clear: to unlock our economic potential on a global, national and regional scale.

In doing so, we can, as the Prime Minister put it, "build an economy that works for everyone" .

The challenge facing us all is to secure sustained economic growth in these economically uncertain times.

Supporting our manufacturing heartland, food production, export markets, medical science and finance and business sectors will be essential in shoring up and expanding our economic strengthens.

This Emerging Strategy sets out the benefits that we can deliver through a programme of strategic transport investment that unlocks economic growth at a national and regional scale. As part of this we are considering options for using smarter technology to maximise the capacity that we have across the region.

By getting goods and people where they need to be, when they need to be, we can unlock our potential and create new opportunities.

The Midlands acts as the transport hub for the UK's transport network, meaning the economic benefits of getting the Midlands moving will be shared across the nation.

Unlocking connectivity in the Midlands, unlocks economic potential for us all.

We are now exploring the options and case for investment in each ahead of **publishing the Midlands Connect Strategy in March 2017.**

Our work will pay specific attention paid to how we can maximise economic benefits as part of the government's emerging Industrial Strategy. The final strategy will include a programme of scheme development and delivery in 5 year phases for the next 20-30 years. This programme will need to be kept under review and updated periodically.

As part of the wider Midlands Engine for Growth, the Midlands Connect Strategy will make a real difference to the lives of those living and working both in the Midlands and the country as whole.

10.1 Next Steps

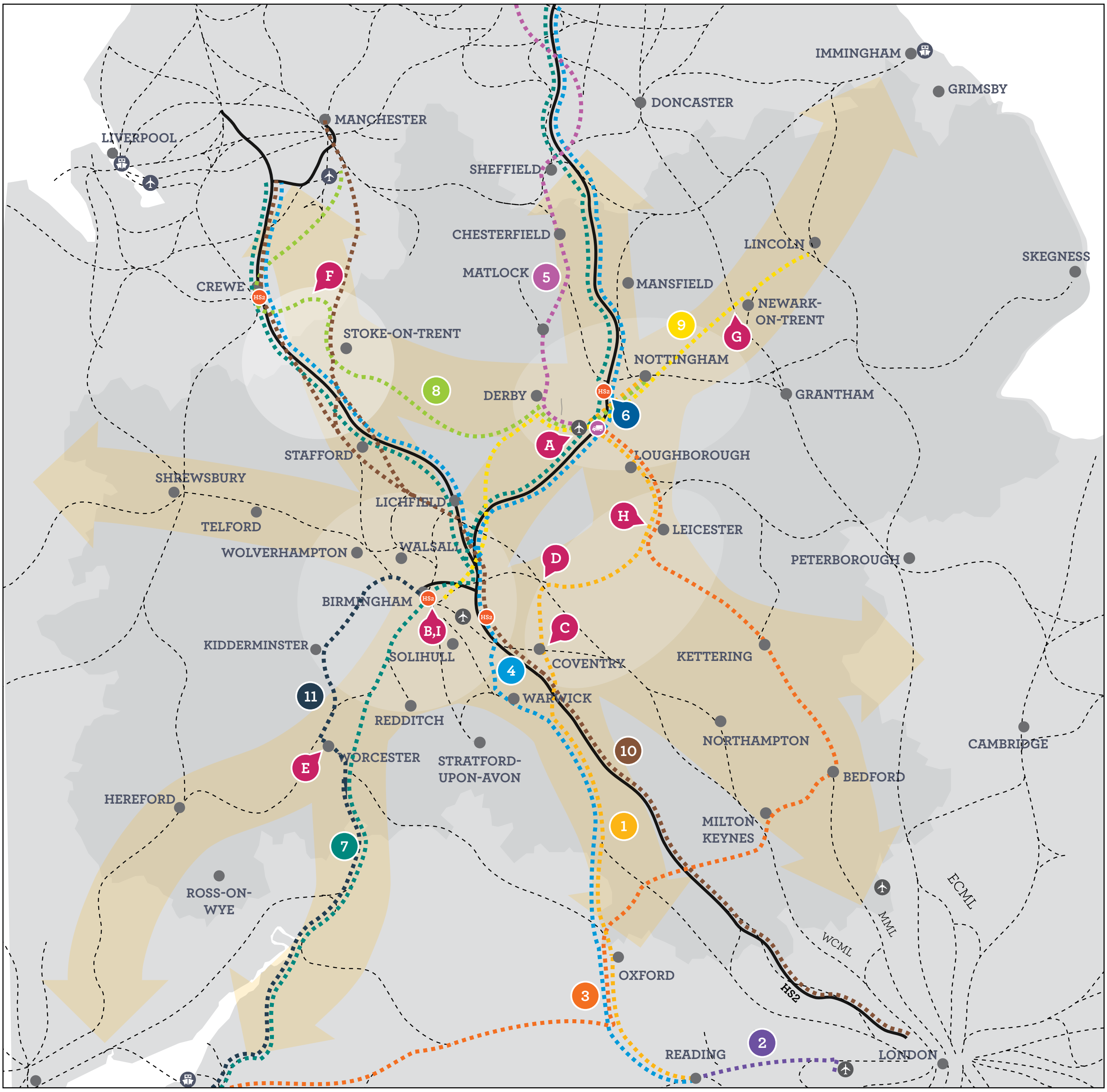
Action	By When
Submission of Strategic Outline Business Case for Smart and Digital Connectivity	Autumn 2016
Midlands Rail Hub – proposition for development funding	Autumn 2016
Development of Strategic Outline Business Cases	Spring 2017
Development of Sub-national Transport Body Proposition	Spring 2017
Full Midlands Connect Strategy	March 2017
Midlands Motorway Hub – Study to inform RIS2	Summer 2017
Midlands Rail Hub – commencement of scheme development (subject to government approval)	April 2017
Smart Connectivity Programme Initiation (subject to government approval)	Winter 2017

[11]Theresa May, writing in the Birmingham Mail 18th August 2016

Summary of options under consideration

Midlands Connect Rail Infrastructure and Services

Options under consideration



Major new service patterns

1. New services to the Thames Valley from the East Midlands
2. New services to Heathrow Airport from the Midlands
3. New services from the East Midlands to Bristol via E-W Rail
4. New classic compatible services into HS2 from the South of England
5. More frequent services on the classic network between the East Midlands and Leeds
6. New classic compatible services into HS2 at Toton (both north and south facing)
7. New classic compatible services into HS2 from the South-West
8. New services from the East Midlands to the north-west via the North Staffordshire Line
9. New services between Lincoln and Birmingham via Nottingham and Derby
10. New classic compatible services to Stafford and Stoke (and beyond) via HS2 and Handsacre Junction
11. New services into the West Midlands, through Worcestershire

Major new infrastructure

A. Trent Junction Capacity Enhancement (possibly grade separation of some movements)

B. Midlands Rail Hub (making several improvements in the Birmingham area, including works in the Bordesley area to provide new links to Birmingham Moor Street)

C. Wolverhampton to Coventry Capacity Enhancements (including work at Coventry to facilitate more south-north movements)

D. Nuneaton Capacity Enhancement (facilitating new direct services between Coventry and Leicester, and beyond)

E. Worcester Area Capacity Enhancement (facilitating improved service provision through the area, possible requiring double tracking between Droitwich Spa and Stoke Works Junction)

F. Stoke to Crewe Capacity Enhancement (may require double tracking to facilitate further service provision along the North Staffordshire Line and beyond)

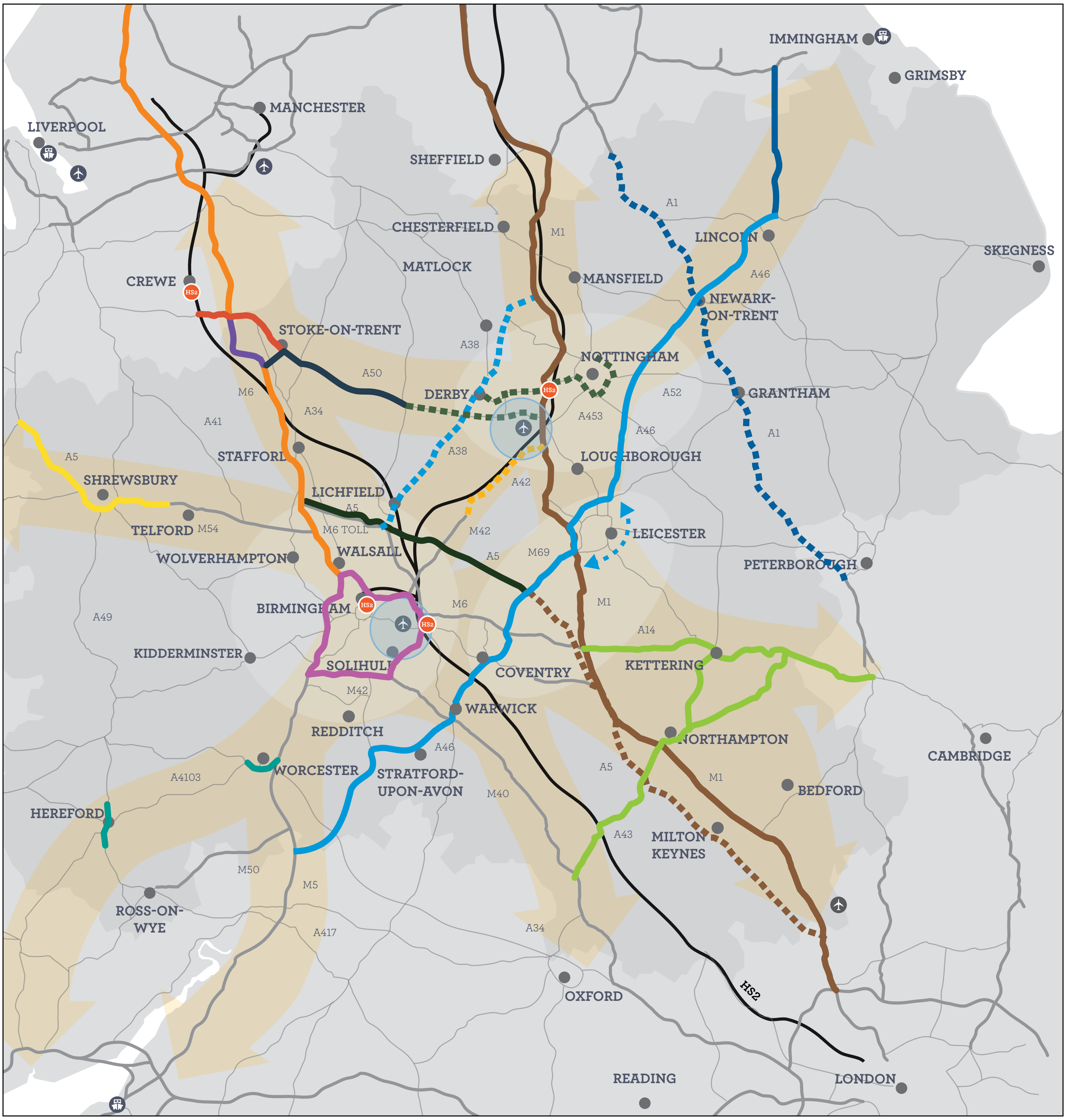
G. New flyover / similar at Newark (to grade separate the East Coast Main Line and the Newark Castle route)

H. Infrastructure improvements in the Leicester area (including potential quadrupling of the railway, new platforms at Leicester, a new diveunder at South Wigston and dynamic freight loops on the line to Nuneaton)

I. Infrastructure improvements in the St Andrews area (to maintain freight capacity in light of several passenger aspirations)

Midlands Connect Road Infrastructure

Options under consideration



Scheme for early Development and Delivery:

- Midlands Motorway Hub (broad area shown – but priority areas include the M42 between J4 and J7, the M6 between J8 and J10 and the M5 / M6 interchange)

Options under consideration by strategy theme

Midlands as a Global Player:

- Access to Birmingham and East Midlands Airports
- Access to Immingham
- Access to Felixstowe
- Access to Holyhead

National Transport Hub and Freight:

- Stoke to Crewe
- M6 Smart Motorway Junction 15-16 and Junction 15 upgrade
- M6 long term capacity enhancements (beyond Smart Motorway)
- M1 long term capacity enhancements (beyond Smart Motorway).
- May include enhancement of the parallel A5 corridor
- Upgrade of A1 to A1(M)
- A46 corridor upgrade (to at least expressway)
- May include bypass to south/east of Leicester
- A5 corridor between Cannock and Rugby

East-West Connectivity:

- A42 upgrade (to motorway standard)
- A38 upgrade (to expressway)
- Nottingham / Derby measures
- Stoke hub measures
- Worcester and Hereford measures

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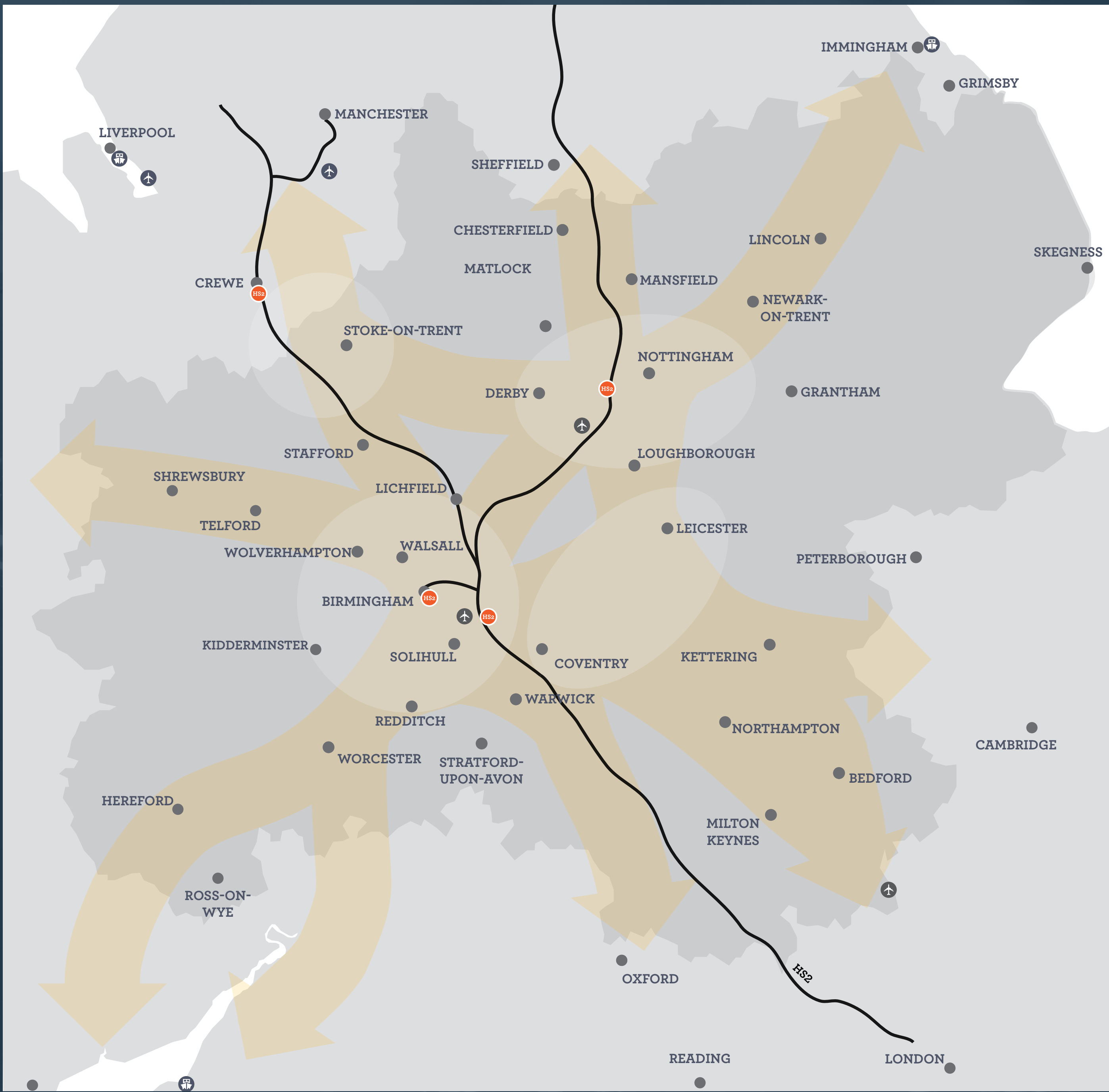

Midlands Connect
Powering the Midlands Engine

Midlands Connect
16 Summer Lane, Birmingham, B19 3SD

MCAdmin@midlandsconnect.uk www.midlandsconnect.uk @MidsConnect