

Full Speed Ahead: bringing high speed-rail to the East Midlands

Bringing HS2 to the East Midlands: The benefits

Shrinking geographies: The transformational journey times resulting from HS2 will in effect 'shift' the location of major urban areas closer to the East Midlands. Compared to today's rail journey times London will 'move' 60 miles north to Northamptonshire (relative to Derby, Chesterfield and Nottingham). Birmingham will 'move' 30 miles northeast to between Derby and Loughborough (relative to Nottingham).

Expanding labour markets: The number of people within a 90 minute end-to-end rail journey of Derby will increase by over 500,000 when HS2 is delivered, with an additional 600,000 within 90 minutes of Chesterfield.

Better jobs for local people: Our analysis shows that HS2 will nearly double the number of jobs in high value, rail-linked sectors within an hour of Nottingham by rail to over 150,000 and nearly quadruple the number within two hours to over 1,500,000.

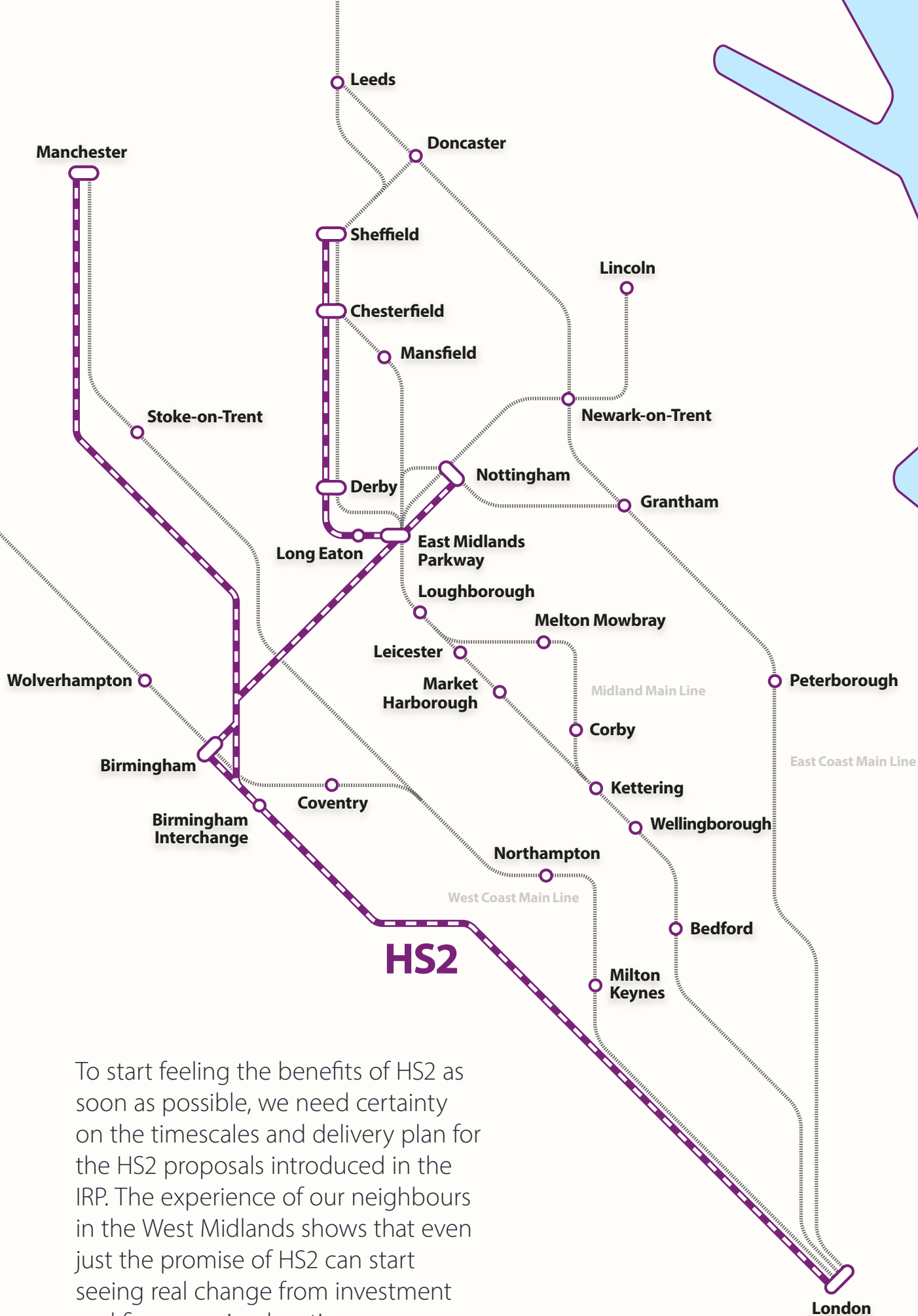
More trade for local businesses:

With HS2 in place, Nottingham, Derby and Chesterfield will be able to access an economy of around £550 million within 90 minutes by rail, £300 million greater than they can currently.

Better rail services for all: The East Midlands is currently very poorly served by rail relative to its population. In total, journeys from 74 stations across the East Midlands are set to benefit from improved journey times to and from London and Birmingham.

In this prospectus we explain the importance of HS2 reaching the East Midlands and Sheffield, as presented in the Government's Integrated Rail Plan for the North and the Midlands (IRP).

We explain how the East Midlands can seize the opportunity that HS2 presents and maximise the benefits of this once in a generation investment. Investment in rail, and HS2 specifically, will also start to address the social, economic, and environmental challenges the East Midlands faces.



To start feeling the benefits of HS2 as soon as possible, we need certainty on the timescales and delivery plan for the HS2 proposals introduced in the IRP. The experience of our neighbours in the West Midlands shows that even just the promise of HS2 can start seeing real change from investment and firms moving location, years before high speed trains start running.

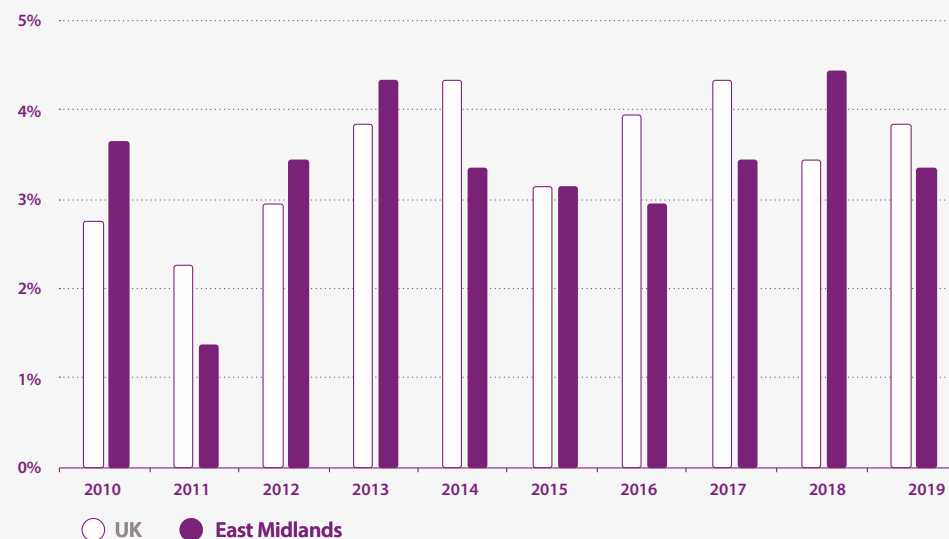
A robust and buoyant Economy

The East Midlands has a robust and buoyant economy that can massively benefit from HS2 and improved rail connectivity. GDP growth has been at or around the UK average for most of the last 20 years, and our population is forecast to grow at a higher rate than the national average over the next 20 years.

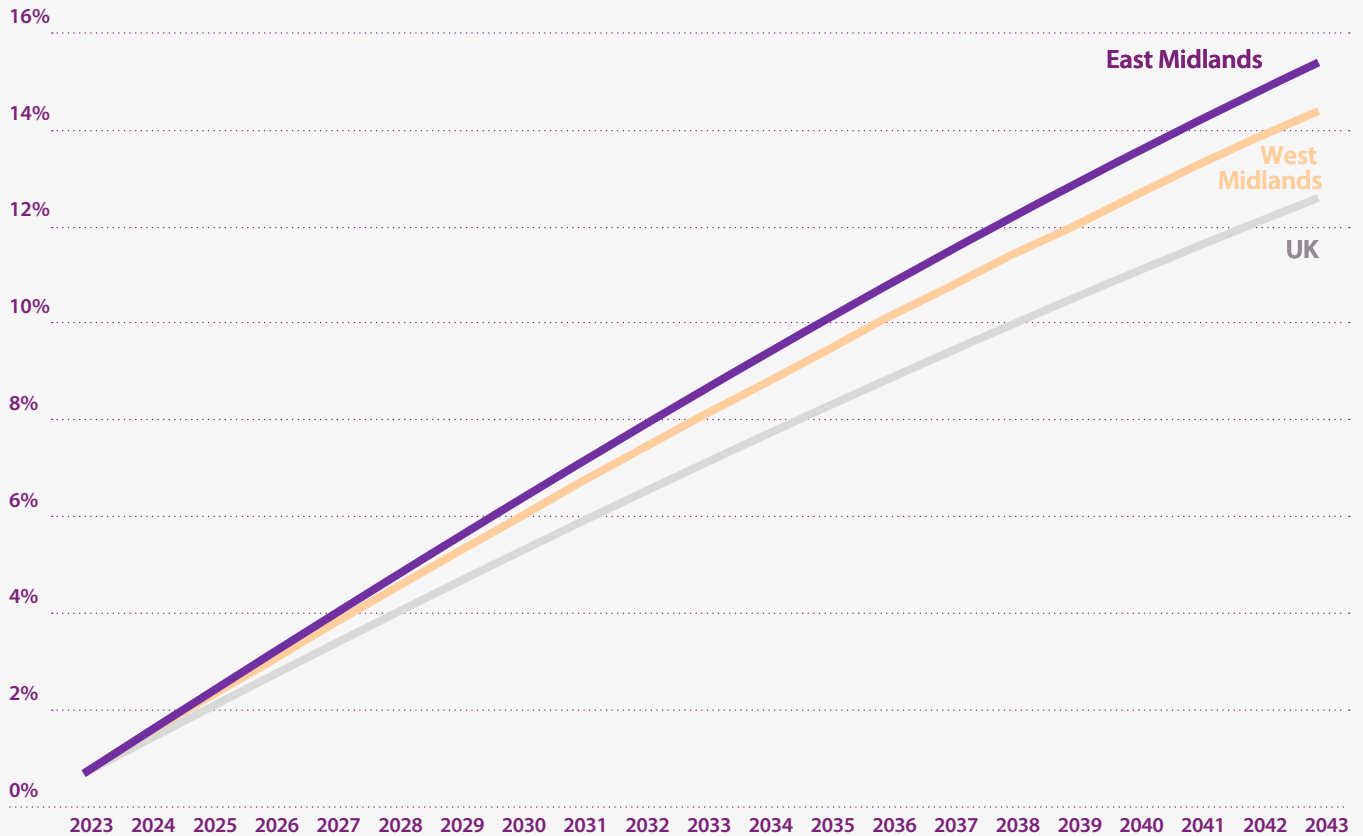
Our mix of cities, towns and villages are home to diverse local economies and industrial strengths – and a rapidly growing population.

We are proud of our network of world class universities and higher education institutions and the future of the region is one of exciting opportunities. Derby will be the home of Great British Railways, serving as anchor of a new rail campus and harnessing the power of a world class rail supply chain, and West Burton in Nottinghamshire will host the ground-breaking STEP Fusion energy plant, which is developing a commercial model of generating safe clean energy from nuclear fusion. The region is also home to the UK's only inland freeport, based around East Midlands Airport.

Historic GDP growth



Forecast population growth from 2023



We also have challenges to overcome

Despite the region's strengths we also have challenges that HS2 can help us to overcome:

- GDP per capita in the East Midlands was £26,852 in 2019 compared to the national average of £32,876¹.

- Productivity, measured as economic output per hour worked, was 15% below the UK average in 2020².
- In 2020 average disposable household income was £18,844 in the East Midlands, compared to an England average of £21,962³.

Despite the challenges faced, the East Midland's economy has continued to grow, not by becoming more productive, but by growing our population.

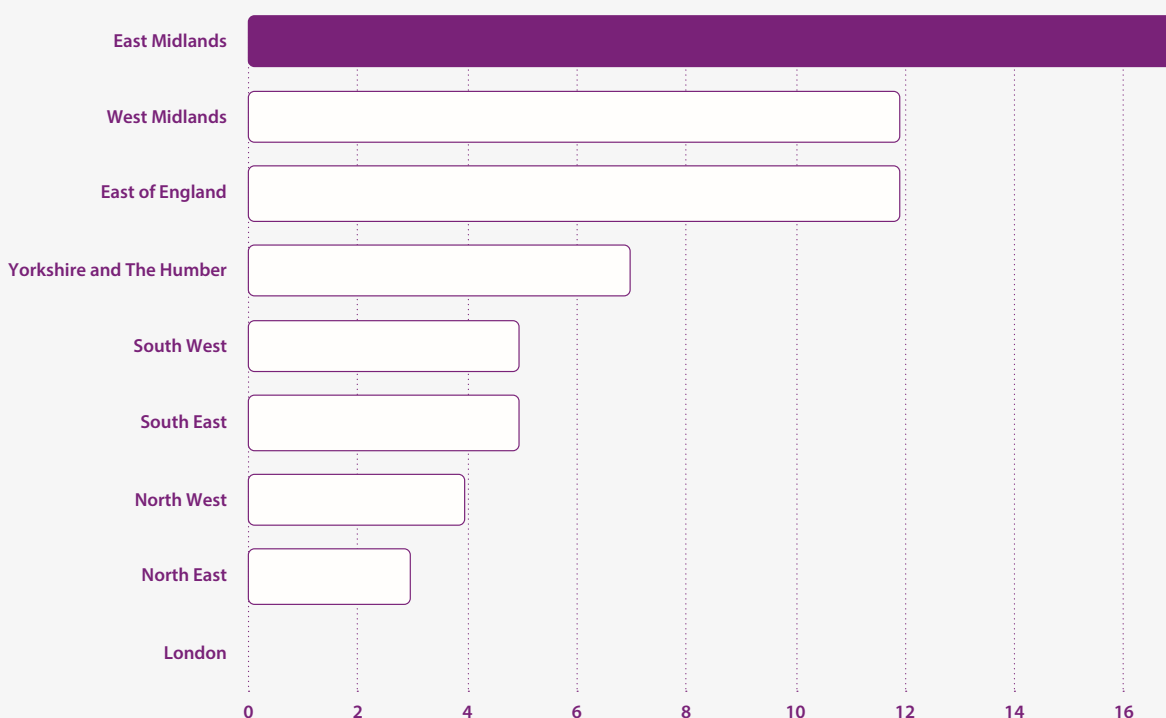
More pressing than this is that we are failing to give everyone who lives here the same life chances. Evidence from the Social Mobility Commission⁴ shows us that someone born into a disadvantaged community in the East Midlands is less likely to do well at school, find a good job and have a good standard of living, when compared to people living in the rest of the country.

The social mobility index shows that the East Midlands has the most social mobility 'coldspots' of all regions in England. These include some of our biggest urban areas including Chesterfield, Nottingham, and Derby.

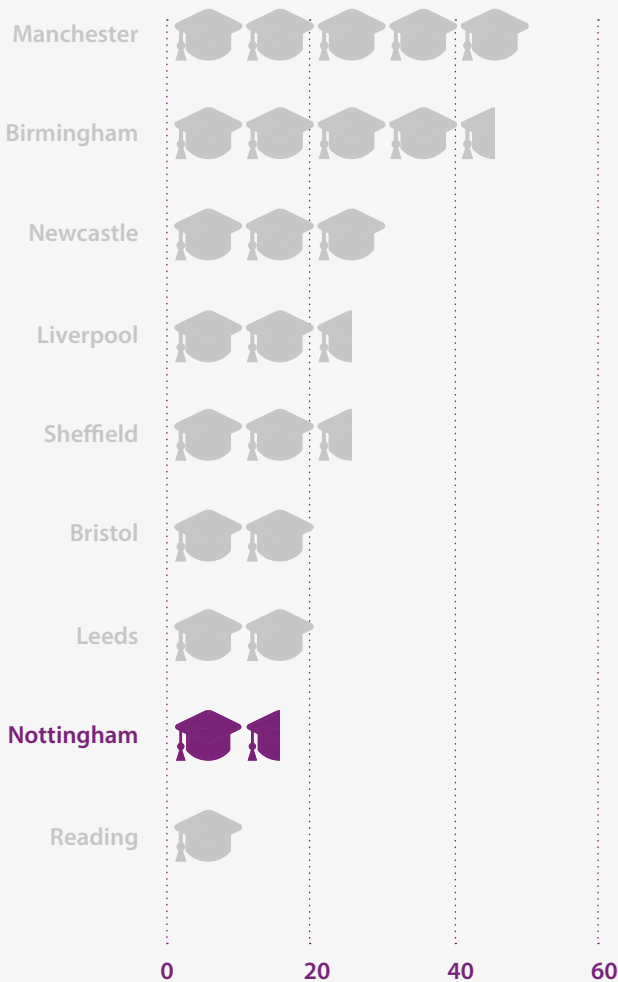
To tackle the economic challenges of the region and improve the life chances of local people we want to build an economy with a skilled workforce that attracts high-value businesses. To do that we must retain more highly qualified graduates in the East Midlands. Nottingham, despite being home to two world class universities, has the second lowest graduate retention of all UK cities home to a traditional 'red brick' university⁵.

We need to break the vicious cycle and get more of those who come to study here to take high-value jobs, stay and raise families and spend their high salaries in our economy; creating more jobs as a result.

Number of social mobility coldspots by region as defined by the Social Mobility Commission



Graduate retention rate (%)

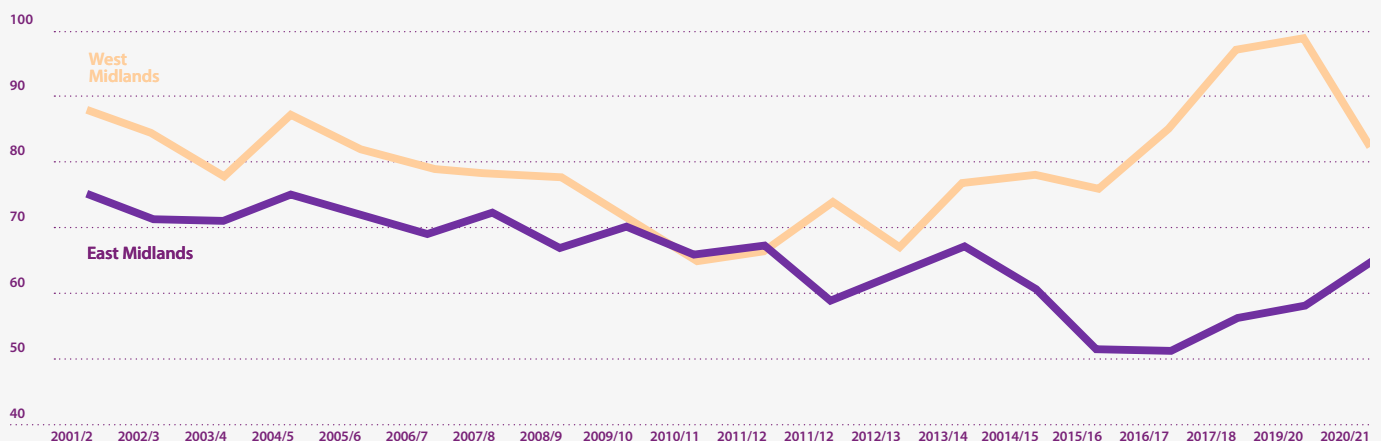


We need transport investment in the East Midlands

Our region has the lowest level of transport spend per head of any UK region or nation. If we were funded to the UK average, we would have an extra £1.26 billion to spend on transport every year⁶.

Public transport connectivity in our cities is poor compared to those of a similar size in the UK and elsewhere in Europe. In Nottingham alone, work by the Centre for Cities⁷ has shown that poor transport accessibility accounts for over £1 billion of the 'productivity gaps' that exists between Nottingham and its continental counterparts.

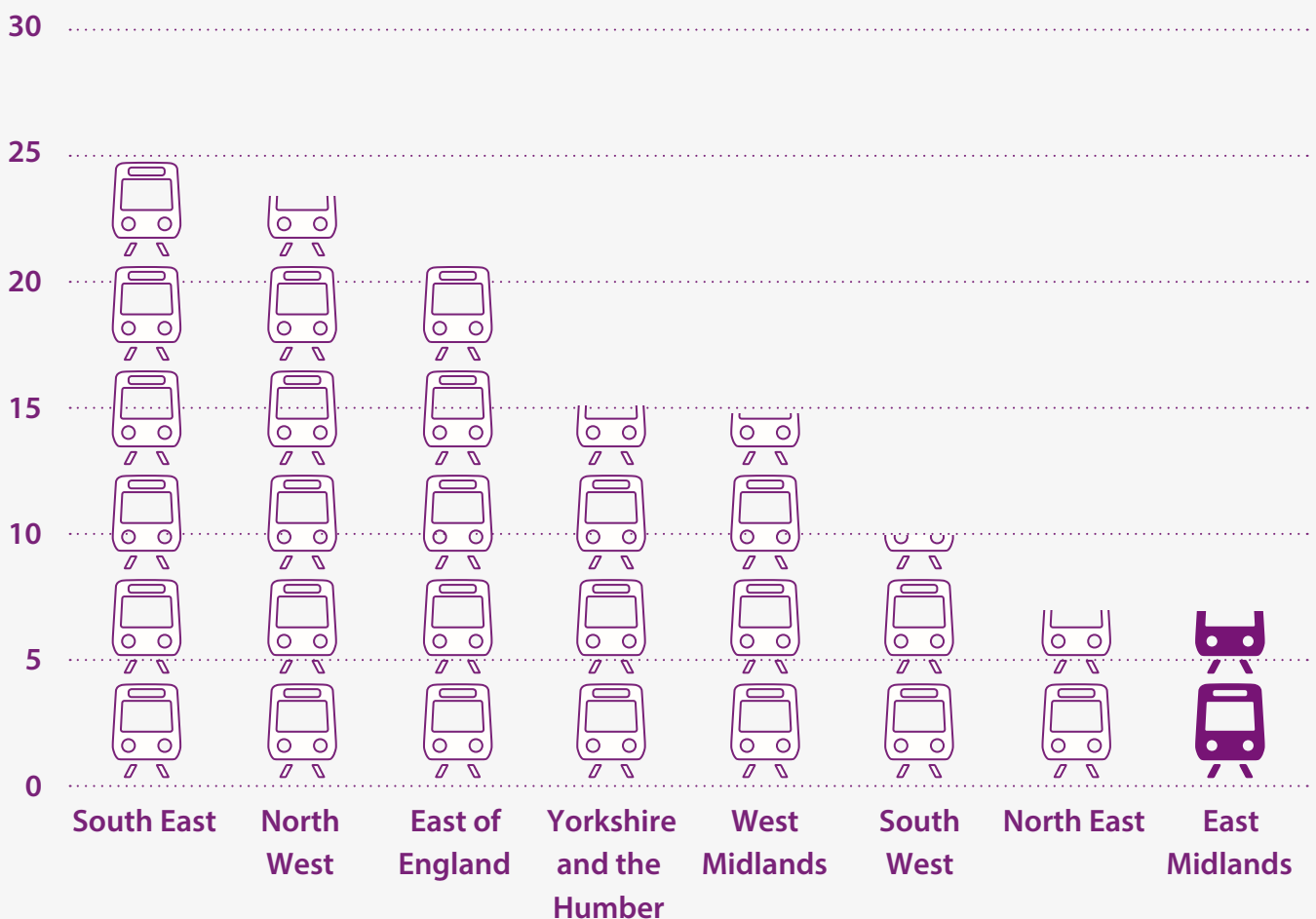
Transport spend per capita 100 = UK average



The same report found that despite its tram network, only around 50% of Nottingham's population can reach the city centre within 30 minutes using public transport – in European cities of a similar size that figure is over 70% on average.

Cities in the East Midlands are also poorly connected to the rest of the country. Work by the National Infrastructure Commission⁸, measuring how well all urban areas in England are connected to each other by public transport, found that Derby ranks 19th and Nottingham 15th of 26 urban areas over 250,000 people. A similar story is seen in Chesterfield, which was 19th of 30 urban areas of a similar size.

Station usage per capita by region (number of entries and exits/population)



Why do we need rail investment?

The East Midlands has the lowest rail usage per capita of all regions in England⁹. Our rail network is sparse and poorly served and because of this there is a very high reliance on private car usage.

We need a transport network which supports a bold, new direction for the region and importantly helps us meet the huge challenge of achieving the country's Net-Zero Carbon pledges.

There is a significant body of evidence which demonstrates that high-performing regions, nationally and internationally, are underpinned by a comprehensive, fast and reliable rail network. Excellent rail links are often cited by multi-national, high value companies choosing to locate an office in a particular city or region¹⁰. They do so not just because of how rail can support their business, but also because they know that the highly skilled people they want to recruit have lots of choice and they want to live in places with great access to opportunities.

The East Midlands is falling behind the rest of the UK in terms of the productivity of our economy, the life chances of our citizens, retaining the brightest graduates who come to study here and the investment we see in our transport infrastructure.

We need our rail network to be part of what we can offer as a fantastic place to locate a business and raise a family.

We know from research undertaken by Midlands Connect¹¹ that transport carbon emissions predominantly come from longer distance journeys. In the East Midlands for example, over half of all carbon emissions from cars come from the journeys we make which are over 25 miles in length. It's clear therefore that rail needs to play a really important role to help us leave our cars at home occasionally and use a more sustainable form of transport when travelling long distances.

"HS2 is a massive opportunity for the East Midlands and something we want to see delivered in full. Aside from the direct transport benefits, through EMDevCo we are developing major plans for growth and development around all four of the HS2 served stations in our region."

Clr Ben Bradley MP – Chair of the East Midlands HS2 Executive Board

HS2 journey time improvements

Station	Existing journey time	HS2 journey time	Saving
London - Derby	01:23	00:51	32 minutes
London - Nottingham	01:38	00:57	41 minutes
London - Chesterfield	01:45	01:20	25 minutes
London - East Midlands Parkway	01:20	00:51	29 minutes
Nottingham - Birmingham	01:14	00:26	48 minutes

Why is HS2 so important to the East Midlands?

The current proposals for HS2, as presented in the IRP, will transform inter-urban rail connectivity for the East Midlands. Under the IRP plans, HS2 services would serve Nottingham, Derby and Chesterfield stations directly on the existing rail network, with a new high-speed route between Birmingham and East Midlands Parkway.

Nottingham will be served by HS2 services to and from the new station at Birmingham Curzon Street, as well as London. Derby and Chesterfield will be served by HS2 trains from London, via Birmingham Interchange, which then carry on to Sheffield.

The new high-speed route, combined with upgrades to the existing Midland Main Line (MML), will significantly improve journey times across the East Midlands.



Artists impression of a HS2 train. Source: HS2 Company

The number of people within a 90 minute end-to-end rail journey of Derby will increase by over 500,000 when HS2 is delivered, with an additional 600,000 within 90 minutes of Chesterfield.

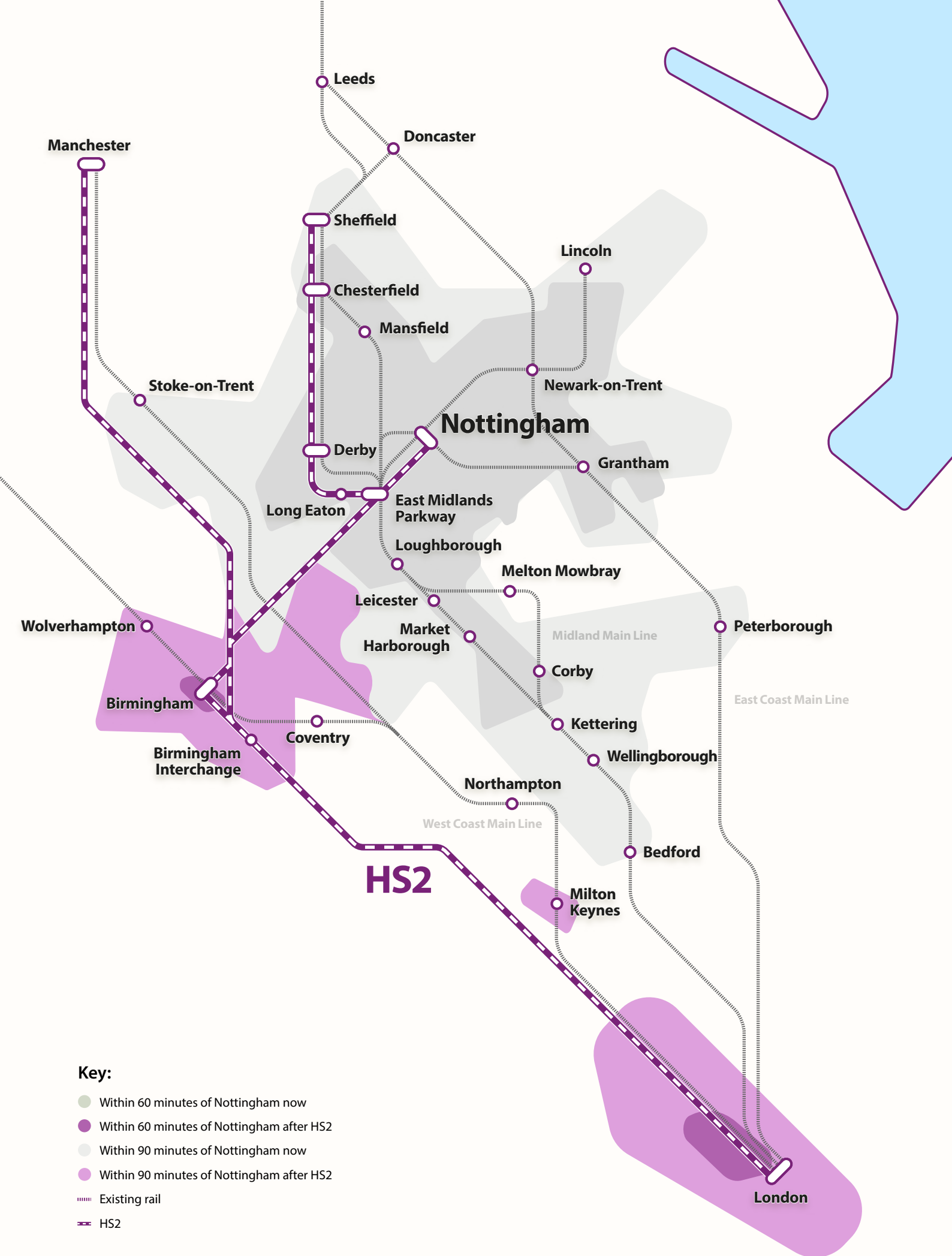


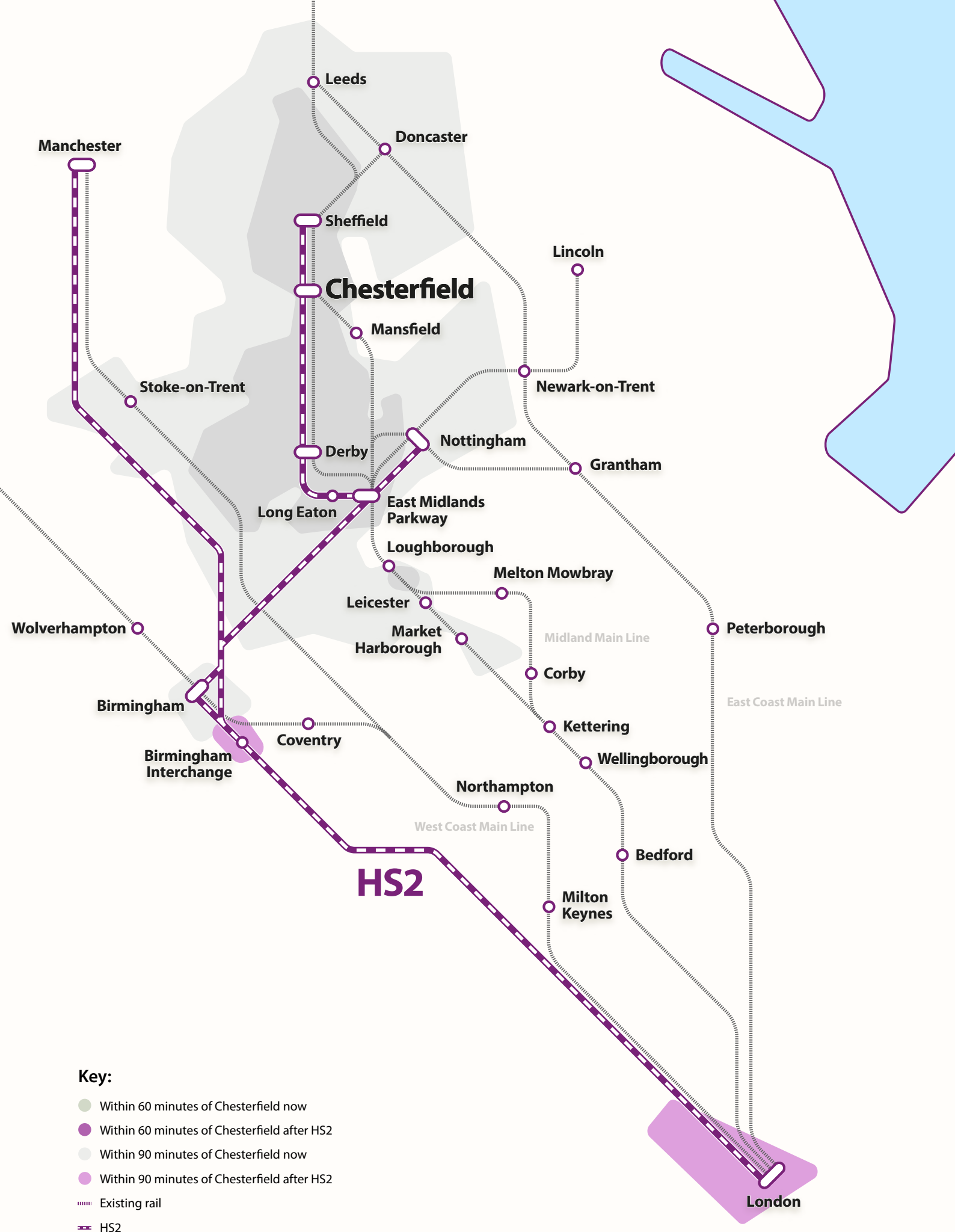
Manufacturing of HS2 trains. Source: HS2 Company

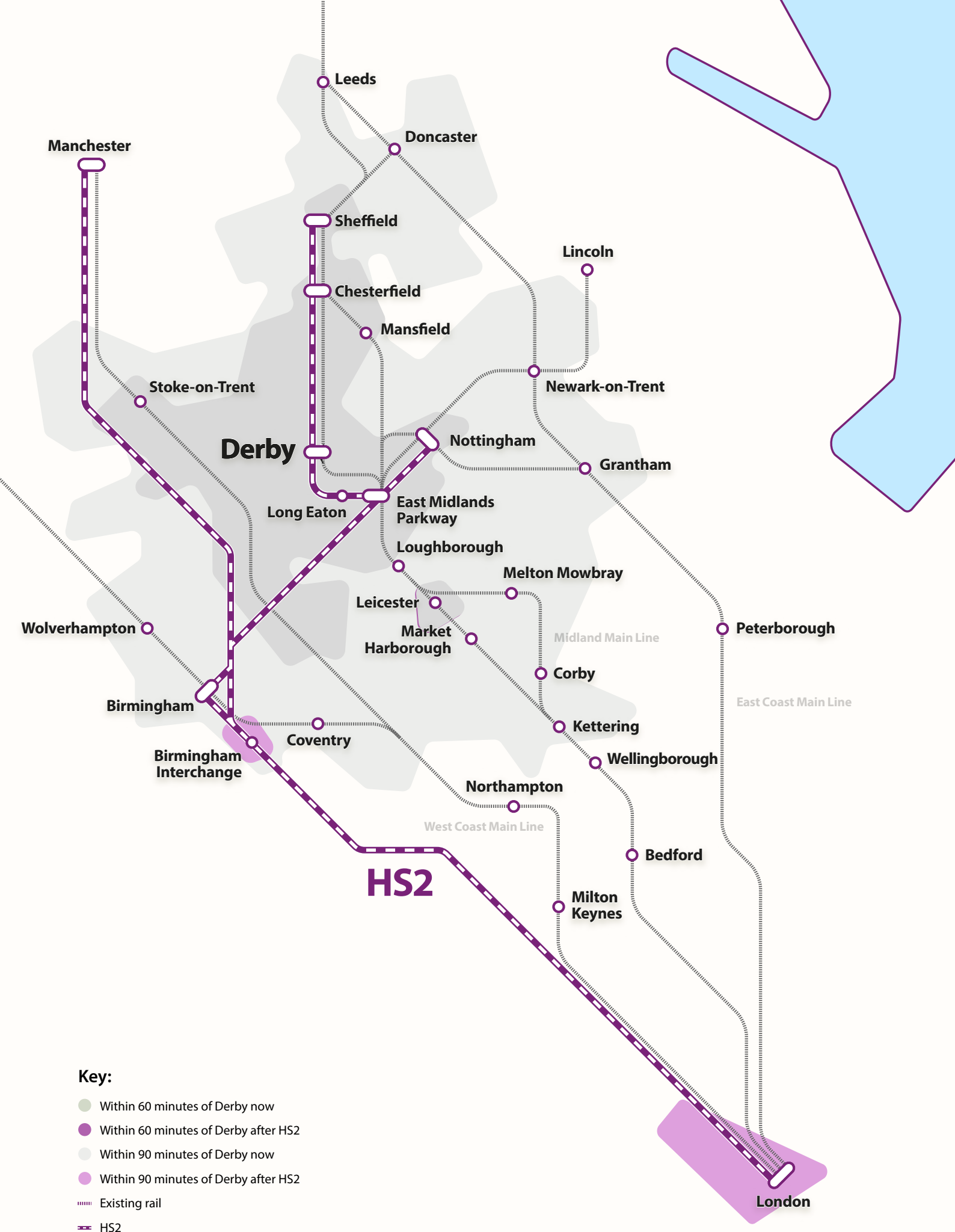
The following maps show how the HS2 journey time improvements change the catchment areas of stations in the East Midlands. Central Birmingham will be between a 30 and 60 minute end- to-end journey time away from Nottingham, with large parts of the wider West Midlands now accessible within 90 minutes. Central and North West London will also be accessible in around an hour, and with other parts of London now within 90 minutes of our region's busiest station.

"Midland Main Line electrification remains TfEM's top rail investment priority and will deliver faster, cleaner and greener travel for people and businesses across the region. It is also a prerequisite for bringing HS2 to the East Midlands in line with Government's Integrated Rail Plan."

Sir Peter Soulsby - Chair of TfEM







For Chesterfield and Derby, the benefits are focussed on improved connectivity with London. Journeys which would take well over two hours today, will take less than 90 minutes from both stations.

In effect the journey time improvements will bring Birmingham and London significantly 'closer' to the East Midlands. In comparison to travelling by rail today, London would 'move' 60 miles north, a similar distance away from Derby and Nottingham as Northampton. Birmingham would 'move' closer to Nottingham to the equivalent of travelling to somewhere approximately between Derby and Loughborough.

By effectively moving these major destinations closer to our main cities creates the opportunity for our economy to trade and interact with a much larger part of the UK economy. It raises the opportunity for the East Midlands to take advantage of the release valve of an over-heating London economy which has seen many high-profile, multi-national firms already move to Birmingham.

What are the costs of delay?

Our previous HS2 Growth Strategy estimated that 74,000 additional jobs and an additional £4 billion of GVA would have been generated by HS2 ten years after opening. Given this, each year that HS2 is delayed has the potential to delay transformative benefits to the region of an order of magnitude of tens of thousands of jobs and billions of pounds per year.

Every year HS2 is delayed will prevent the East Midlands from generating tens of thousands of jobs and billions of pounds in GVA.



Chesterfield

Nottingham

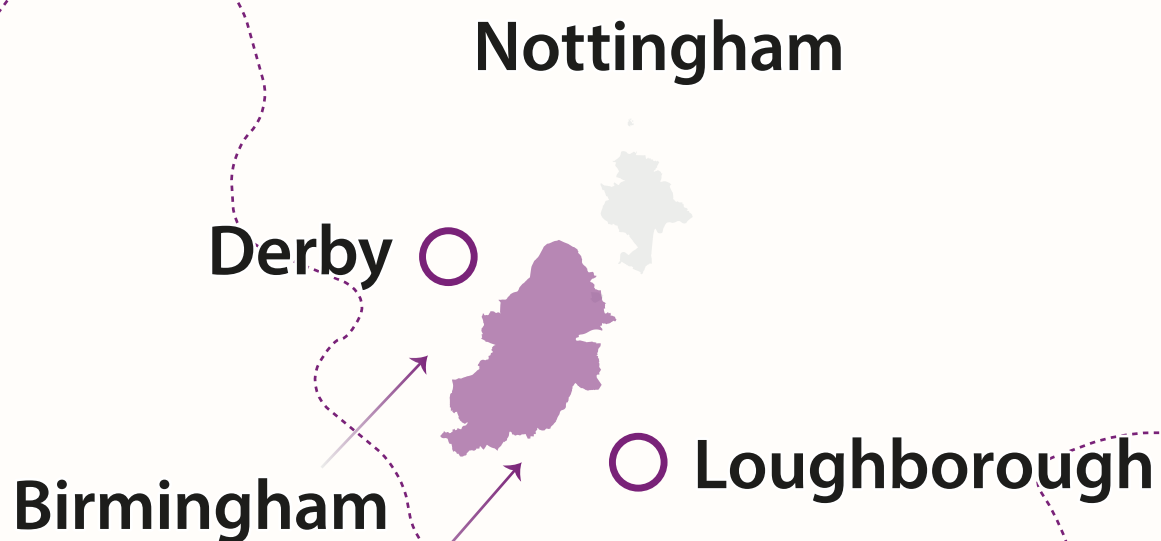
Derby

**East Midlands
Parkway**

Northampton

London

In effect HS2 journey time improvements will bring London significantly 'closer' to the East Midlands, to the equivalent of near Northampton.



In effect HS2 journey time improvements will bring Birmingham much closer to Nottingham, with it 'moving' to between Derby and Loughborough.

HS2 will not just benefit four stations in the East Midlands. In total journeys from 74 stations across our region are set to benefit from improved journey times to and from London and Birmingham.

The additional capacity for rail passengers is also a much-needed impact of HS2. The investment will deliver approximately 8,000 extra seats per day in each direction between both Nottingham and Derby and London, with an additional 1,750 seats per day between Chesterfield and London.



Nottingham city centre, which is home to an economy ready to benefit from HS2. Photo by Eamonn Wang on Unsplash

Nottingham, Chesterfield, and Derby can currently access an economy of around £250 million within 90 mins by rail. With HS2 in place this figure will increase to over £550 million.

Opportunities across the East Midlands

HS2 will deliver a wide range of economic, social, and environmental benefits right across the East Midlands, but some of the most direct benefits will be felt in four main locations:

Nottingham

Nottingham is the East Midlands' biggest and most productive local economy. It has several advantages which mean it is ready to realise the benefits of HS2 straightaway. Nottingham's economy has a strength in industrial sectors which are high-value¹² and are characterised by high rates of travelling by rail for commuting and business¹³. These include sectors such as head offices of multi-national companies, financial services, and computer programming. Nottingham is home to over 20,000 jobs¹⁴ in these high value sectors which will directly benefit from HS2.

Growing these sectors is not just important for the businesses and individuals that work in them, they also generate large ‘multiplier impacts’ from which the rest of the East Midlands will benefit. These impacts occur when a particular sector or business grows, boosting prosperity in the wider local and regional economy, which in turn increases demand for goods and services of local businesses.

As we’ve shown, HS2 will effectively bring both London and Birmingham ‘closer’ to Nottingham – with potential for significant agglomeration and synergy benefits between businesses in the three cities. Nottingham has the chance to be a focus for high-value growth in the region.

Our analysis shows that HS2 will nearly double the number of jobs in high value, rail linked sectors within an hour of Nottingham by rail, and nearly quadruple the number of jobs within two hours.

Jobs within X minutes of Nottingham	Base	With HS2	% increase
Within 60 minutes	90,000	160,000	78%
Within 120 minutes	420,000	1,660,000	295%
Within 180 minutes	1,980,000	2,520,000	27%

As well as these economic productivity benefits, ongoing development, and regeneration in and around Nottingham city centre will maximise the benefits of HS2 services arriving at the station. Regeneration of the city's Southern Gateway will help further integration the station with the rest of the city, with new 'Grade A' office development already delivered in the immediate vicinity of the station.



Derby station, where HS2 services will help integrate the station into the wider city centre. Source: Derby City Council

Derby

HS2 services arriving at Derby station will continue the City's strong railway heritage and close ties with the wider rail industry. The upcoming arrival of Great British Railways' Headquarters will grow these ties further and complement HS2 in Derby.

These ties to the railway are not just historic, Derby's economy is home to over 8,000 of the same high value, exporting jobs mentioned above, with many of these in businesses related to, or part of the railway industry supply chain. Many of these jobs are located close to Derby station in the Pride Park and Osmanton areas of the city, and HS2 connectivity will provide a boost to these important economic assets.

HS2 will also integrate the station in Derby with the rest of the city centre in line with the City Council's Masterplan.

Chesterfield

In Chesterfield the arrival of HS2 will align with and maximise the benefits of ongoing proposals 'to create a vibrant gateway to North Derbyshire'¹⁵. The proposals that make up the Chesterfield Station Masterplan include new development plots which could deliver over 800 jobs, and improved public transport and active travel links between the station and the town centre.

Regeneration of the Staveley corridor was a key part of our growth strategy based on previous proposals for the Eastern Leg of HS2 – and it remains a key priority for the region. The site previously identified as a location for a HS2 maintenance depot still has a huge amount of potential for the local economy and can still play a major role in rail-related development.



Chesterfield Parish Church in the town centre and close to area covered in the Chesterfield Station Masterplan.
Photo by Huw Edwards on Unsplash

East Midlands Parkway and Toton

Development around a high speed hub station in Toton was also a key part of previous proposals for HS2. Toton is still a major development opportunity for the region, and East Midlands Development Company¹⁶ (EMDevCo) is continuing to work on the site as part of their plans to create over 80,000 jobs and add billions to the Midlands' economy. EMDevCo is currently leading work to review and refresh our regional HS2 Growth Strategy, with publication due in 2024.

EMDevCo is also working on plans for the site of the existing Ratcliffe-on-Soar coal-fired power station, with the plans to transform the site into a technology, advanced manufacturing, and energy hub. The site is adjacent to East Midlands Parkway which will be directly served by HS2 services.

For both Toton and Ratcliffe, development will be delivered with or without high speed rail services coming to the East Midlands. However, HS2 will result in higher quality development and generate significant added value as well as help speed up the pace of delivery.



Artists impression of how future development might look in the East Midlands Parkway/Ratcliffe area. Source; EMDevCo

The First Step: Midland Main Line Electrification

The proposals for HS2 East published in the IRP are only achievable if full electrification of the Midland Main Line (MML) is delivered. Electrification of the MML is vitally important, with its positive impacts on journey times and greenhouse emissions as well as helping to build a positive perception of a 21st century railway in the East Midlands. It is also the key enabler of HS2 and so certainty on the timescales of its delivery is critical to wider investor confidence.

To realise the benefits and opportunities discussed in this report businesses, investors, and planners in our region require certainty over the delivery of HS2. Delaying the delivery of HS2 to the East Midlands and Sheffield will have inevitable costs and threaten investor confidence in our region.

We want to work with Government to agree:

- A clear timescale and delivery plan for the full electrification of the Midland Main Line
- A clear timescale and delivery plan for bringing HS2 to the East Midlands and Sheffield
- A clear proposition for extending HS2 to Leeds and the North East

Endnotes

- 1 Future of the East Midlands economy, House of Commons Library
- 2 Office for National Statistics
- 3 Office for National Statistics
- 4 Social Mobility Index, Social Mobility and Child Poverty Commission and Social Mobility Commission
- 5 The Great British Brain Drain, Centre for Cities
- 6 HM Treasury Public Expenditure Statistical Analysis 2022
- 7 Table 1 in Measuring up: Comparing public transport in the UK and Europe's biggest cities, Centre for Cities
- 8 Transport Connectivity Discussion Paper, National Infrastructure Commission
- 9 Calculated using the Office of Rail and Road's Estimates of station usage and ONS population estimates
- 10 Why HS2 is vital for delivering economic change, Andy Street, Mayor of the West Midlands
- 11 Midlands Connect Carbon Baseline
- 12 For the purposes of this analysis 'high-value' jobs are those in sectors identified as 'high-skilled exporters' in Appendix 2 of Opportunity knocks? Economic outcomes for low-skilled people in cities, Centre for Cities
- 13 Table 3 in Wider Factors affecting the long-term growth in Rail Travel, Independent Transport Commission identifies six sectors as having especially high levels of commuting by rail.
- 14 Business Register and Employment Survey, Office for National Statistics
- 15 Chesterfield Station Masterplan, Chesterfield Borough Council
- 16 <https://www.emdevco.co.uk/>

Full Speed Ahead: bringing high speed-rail to the East Midlands