Transport Strategy

Contents

Foreword

[DN – introduction by Mayor Dave as Chair]

1. Introduction

Our Region

1.1. England's Economic Heartland is one of the world's leading economic regions. Its success is founded on science and technology innovation, powered by a network of world-leading universities and research centres.

1.2. Its economic success benefits not only the region's residents, but the UK more widely, with the Heartland being a net contributor to the Treasury. However, as the National Infrastructure Commission highlighted, our continued economic success cannot be taken for granted.

1.3. There is a need to invest in maintaining our existing infrastructure assets, deliver planned investment in additional capacity, and plan for the additional investment that enables sustainable growth. Investment is required to both support the existing economy and enable delivery of planned economic and housing growth while at the same time preserving our natural and historic environment.

1.4. With the rise of e-commerce and digital services, our transport system needs to be considered part of a wider system of connectivity – one that embraces both physical and digital access when identifying future infrastructure requirements.

1.5. Our ability to effect change to the transport system is dependent on the way we, collectively with local partners and central Government, consider connectivity as part of a co-ordinated approach to the development of communities, including integration with land use planning .

1.6. Whilst the region as a whole is an economic success, within it there are areas of social inequality and deprivation, where opportunities for individuals to realise their full potential are limited. Within rural communities the connectivity options available to both residents and businesses are often more limited, bringing with it implications that extend beyond the transport sector.

1.7. Improving connectivity is at the heart of ensuring that the Heartland realises its economic potential, but that cannot be at the expense of the region's environment.

1.8. The quality of the region's environment – built and natural, urban and rural – is often cited as an important contributory factor to its economic success.

1.9. Our current pattern of travel and consumption of resources is incompatible with delivering the legal requirement to achieve net-zero greenhouse emissions by 2050 and ensuring the long term sustainability of the region. Harnessing our world-leading experience in clean, green and smart growth will enable us to effect change in ways that retains our attractiveness as a place to live, work and play.

1.10. The region's political and business leadership is committed to realising its economic potential and doing so in a way that delivers environmental net gain.

1.11. This Transport Strategy is the response to this challenge. It sets out the scale of the challenge we face, the need for change and the opportunities that exist to effect that change. It provides the policy framework that will enable all those with an interest in securing the future of the Heartland to work to a shared ambition that brings benefits to its residents, its businesses, its natural environment and the UK as a whole.

England's Economic Heartland

1.12. The challenge facing the Heartland requires a response capable of delivering transformational change when it comes to strategic infrastructure and services.

1.13. The need for strong political and business leadership in order to deliver such a response was recognised in 2015 with the establishment of what became England's Economic Heartland.

1.14. Underpinning the partnership is the leaders' commitment to harness the power of collaborative working on strategic issues to deliver their shared ambition – realising the economic potential of the region. By working together on issues of strategic importance, they are better able to plan for:

- Strategic infrastructure issues and solutions that extend beyond any one single area
- Issues that are common to one or more local areas that benefit from a co-ordinated response
- The case for investment in strategic infrastructure that is strengthened by having a single voice at a scale that has influence and impact.

1.15. The strength gained through collaborative working underpins the work of England's Economic Heartland and led to the establishment of the Sub-national Transport Body for the region.

Wider Strategic infrastructure

1.16. Central to the work of EEH is the understanding that any consideration of strategic transport infrastructure and service requirements must also take into consideration the linkages with investment in digital infrastructure, both fixed and mobile, as well as utilities.

1.17. Business delivery models used by the majority of retail, commercial and professional service companies continue to undergo significant and rapid change, powered by the digital economy.

1.18. Those changes are leading to changes in the nature and scale of travel demand, a trend that will continue moving forward. As a consequence, the strategy sets out a new approach to the planning, development and implementation of strategic transport infrastructure and services at the regional level.

1.19. At the same time, the nature of travel and mobility more generally continues to evolve. With digital connectivity at the heart of many solutions, so the importance of investing in digital infrastructure increases further if their potential is to be realised.

1.20. Consideration of future transport requirements within the context of improved connectivity is central to delivering the legal requirement to achieve net-zero greenhouse gas emissions by 2050.

1.21. It also heightens the critical importance of considering future investment requirements for digital and utility infrastructure alongside that for transport, in effect creating a co-ordinated approach to the planning, development and implementation of strategic infrastructure that together delivers improved connectivity.

Oxford-Cambridge Arc

1.22. The Oxford-Cambridge Arc (as defined by Government) forms a significant part of the Heartland and EEH is an active member of the initiatives underway at national, regional and local level to improve collaboration on issues of strategic significance in order to deliver sustainable growth for the long term.

1.23. The National Infrastructure Commission's 2017 report, *Partnering for Prosperity: a new deal for the Cambridge-Milton Keynes-Oxford Arc*, found that the Oxford-Cambridge Arc is home to some of the UK's most productive and fast-growing cities and has significant potential for transformative growth. However, it said poor east-west infrastructure and a lack of suitable housing hinders the continued success of the area.

1.24. The Commission warned that the region's continued success cannot be taken for granted. Just as a business requires constant investment to maintain its competitiveness, so a regional economy requires continual investment in its infrastructure and services to remain competitive.

1.25. Responding to the Commission's report the Government identified the Arc as a national economic priority. The March 2019 'joint declaration' between Government and partners in the region set out how by bringing the strengths of individual areas together at the regional level there is the long-term potential to transform the region into a world-leading economic area, one that acts as hot bed for innovation.

1.26. The declaration recognises the need to plan for and deliver substantial additional infrastructure ahead of the arrival of planned growth, including the necessary transport infrastructure, utilities, digital connectivity, health and education.

1.27. England's Economic Heartland provides leadership on strategic infrastructure in support of the Arc initiative through the connectivity work stream, working closely with other Arc related activity.

1.28. The critical importance of infrastructure linkages beyond the Arc was highlighted by the National Infrastructure Commission.

1.29. England's Economic Heartland's wider geography, incorporating Hertfordshire and Swindon, and our strong working relationships with neighbouring Sub-national Transport Bodies, ensures these wider linkages are fully considered in the planning of strategic infrastructure and services.

At the Heart of the UK

1.30. The Heartland's location within England makes its relationships with neighbouring regions of particular strategic importance.

1.31. Historically there has always been a strong economic relationship between the Heartland and London, and with the region to the south of London. Many of the strategic transport linkages are radial in nature, centred on the capital. Even where linkages have evolved to reflect the more diverse pattern of travel – through services such as Thameslink and the Elizabeth Line – these continue to be centred on London.

1.32. All freight, from the ports on the south coast and the Port of Felixstowe traverses the Heartland, by road or rail if it is to reach the Midlands or the north of England.

1.33. The operational resilience and capacity of our transport system is therefore integral to the UK economy as a whole. Improved inter-regional connectivity will not only support the other regions and nations within the UK, it will contribute to the levelling up of the UK economy as a whole.

2. Our Vision and Key Principles

2.1. At the heart of this strategy is our commitment to harnesses the region's economic potential, and improve quality of life, health and well-being in a way that is inclusive, and which improves the environment and enables our transport system to meet the requirement to be net-zero no later than 2050.

2.2. Whilst opening up economic opportunities and housing options is fundamental to ensuring the continued success of the region, our approach must address the need to 'level up' within the region, ensuring that issues of social inequality and economic deprivation are addressed to the wider benefit of our region, its communities and businesses.

2.3. In order to achieve this, the transport strategy needs to place the user – whether it is a business or the individual – at its heart. Our approach to the development of our transport system must sit alongside and complement the interventions made in other areas of public policy to enable a more sustainable pattern of development.

2.4. This philosophy is captured in this strategy's vision and accompanying key principles:

Vision:

To realise sustainable growth opportunities, improve the quality of life and wellbeing for Heartland residents and businesses, by harnessing the Heartland's globally renowned centres of innovation to unlock a world class, de-carbonised transport system.

Key Principles:

- **Achieving net-zero carbon emissions from transport no later than 2050**
- **Improving quality of life and wellbeing through an inclusive transport system accessible to all which emphasises sustainable and active travel**
- **Supporting the regional economy by connecting people and businesses to markets and opportunities**

- **Ensuring the Heartland works for the UK by enabling the efficient movement of people and goods through the region and to/from international gateways**

3. The Heartland Today

An Economic Powerhouse

3.1. The Heartland's knowledge-intensive economy is underpinned by a network of 11 universities (and their associated research facilities) of which the universities of Oxford and Cambridge continue to be ranked in the top three universities in the world.

3.2. More than one in 10 of the UK's knowledge sector jobs are located in the region, creating an ecosystem of innovation and capability that is globally renowned. The network of cutting-edge science parks, research institutions, businesses and incubators provides the capacity and capability to harness this potential to the benefit of the region, its communities and businesses

3.3. Economic growth (as expressed by GVA) across the Heartland has consistently outstripped the UK average: with GVA growth of 25.2% recorded in the five-year period between 2011 and 2016 (compared to the UK average of 20.9%).

3.4. Oxford, Milton Keynes, Peterborough and Cambridge all having been listed in Irwin Mitchell's predicted top 10 fastest growing economies in the UK for 2020.

3.5. However, notwithstanding the headline economic success, businesses continue to face a number of challenges:

- In significant parts of the Heartland, productivity levels remain consistently below that of our global competitors, a consequence in part of increasing congestion on and reduced resilience of the transport system
- Investment in enabling and supporting infrastructure takes longer to secure funding for and deliver than planned, acting as a constraint on new economic opportunities coming forward as planned in a timely and cost effective manner
- Investment in maintaining the existing infrastructure asset fails to keep pace with identified needs (including those arising as a consequence of planned growth), increasing the vulnerability of the transport system to disruption by extreme weather events

3.6. The Local Enterprise Partnerships, through their Local Industrial Strategies, have identified the potential for the region's economy to grow by more than 70% by 2050.

3.7. Economic growth on this scale alongside the need to meet the legal target to achieve net-zero carbon by 2050 will not be realised without a step change in the way we plan for our communities, including the infrastructure that supports them.

3.8. Our current pattern of travel is not sustainable in either the short or long term, with journey lengths longer than the national average. And yet economic growth will require continued access to labour, as well as access to markets.

3.9. A co-ordinated approach across a number of policy areas – including but not limited to transport and land-use planning – is essential to achieving the step change that will deliver sustainable economic growth.

3.10. Adopting this approach needs to benefit the region's existing communities as well as enabling delivery of planned growth. It needs to be delivered in a way that creates opportunities to enable individuals realise their potential, and in particular provide the support for the more vulnerable within our communities.

Freight and Logistics

3.11. All too often the freight and logistics sector is the poor relation in transport strategies. And yet planning for and meeting the freight and logistics needs of the business community are pre-requisites for economic and environmental success.

3.12. Notwithstanding the rise of the digital economy, catering for and managing the flow of freight associated with the deep-sea container traffic transiting through the UK's global gateway ports at Felixstowe, London Gateway and Southampton remains a key strategic priority for the Heartland.

3.13. The clusters of national distribution centres located within the region are a key part of our economy and a strategic asset for the UK as a whole. Addressing the environmental footprint of these premises and their associated movements is a priority for the region.

3.14. The digital economy has changed the scale and nature of logistics, both in terms of business to business activities and business to end user.

3.15. With the use of conventional road vehicles in urban areas increasingly under scrutiny because of their environmental and social impact, there is a need to work with the freight and logistics sector to develop and apply innovative solutions that enable the servicing and support needs of the business community to be met in ways that local communities can support.

The Importance of Connectivity

3.16. Our traditional approach to identifying our future transport requirements is no longer fit for purpose. The rise in e-commerce, enabled by investment in digital infrastructure, is changing the way people access services and facilities.

3.17. And as the experience during the COVID-19 pandemic showed, there is considerable scope for the business community to increase its use of flexible and remote working while continuing to function, with consequential implications for the transport system.

3.18. Increasingly the focus is less about the ability to physically move between two points, and more about our ability to 'connect' with a service or facility. The future of our transport system is as much a consideration of digital infrastructure requirements as it is physical infrastructure.

3.19. A focus on connectivity serves to emphasise the importance of a co-ordinated approach to shaping the future of our places, one that aligns decision making across policy areas to achieve a common vision. By working with partners to adopt a vision-

led approach to place-making at the local level, we will be able to embed the philosophy of 'decide and provide' as a cornerstone of this Strategy.

3.20. As a centre for science and technology-based innovation, we will harness this region's capacity to use 'living laboratories' as the means of developing and trialling new transport solutions, ones that provide the user with choice and which secure modal shift.

A Quality Environment

3.21. The Heartland is blessed with a highly attractive environment – built and natural, urban and rural. The full extent and quality of the Heartland's environment is captured in the baseline underpinning the Integrated Sustainability Appraisal.

3.22. Over 10% of the region is designated as being part of Areas of Outstanding Natural Beauty. The Chilterns on its own comprises 6% of the region's total area and typifies the challenge facing our rural areas. A healthy and well-managed natural environment contributes to people's physical and mental health, and wellbeing. It is also a significant factor in making the region an attractive location in which to do business.

3.23. Over 35% of the region's population live in small market towns and rural hinterlands, significantly above the national average. Connectivity in rural areas is therefore a strategic issue for the Heartland.

3.24. The decline in the viability of traditional public transport solutions, combined with continued challenges in accessing reliable digital connectivity, emphasises the need to encourage new models of connectivity for rural communities and the businesses that operate in them.

3.25. More generally, the degree to which the current approach to the transport system is unacceptable and unsustainable is demonstrated by the number of Air Quality Management Areas declared within the region.

3.26. At the regional level transport emissions are responsible for 46.8% of the Heartland's total carbon dioxide emissions (compared with 36.6% nationally). More worryingly emissions have fallen at a slower rate than the national average: 17.4% compared to 21.7% between 2012 and 2017.

3.27. With people in the Heartland more likely to travel longer distances to work than the national average, and with over 62% of the workplace population travelling to work by car (compared to 55% nationally), the need for intervention is already clear.

3.28. The scale of the existing environmental challenge serves to emphasise the need for this strategy to be the catalyst of change, and to do so at pace.

Addressing Social Inequalities

3.29. Whilst the region as a whole is an economic success, within it there are areas of social inequality and deprivation — areas where the opportunities for individuals to realise their full potential are limited.

3.30. Over 812,000 people in the region live in the top third most deprived local authority areas of England – accounting for 15% of the region's population.

3.31. The implications of failing to address inequality are only too evident: within Oxford, life expectancy amongst young adult males varies by 15 years across the city. More worryingly, evidence shows that social inequality continues to grow.

3.32. Improving access to opportunities for individuals is fundamental to helping address issues of inequality. Access to services and opportunities enables individuals to realise their full potential, bringing with it consequential improvements in health and well-being, as well as making a significant contribution to the economic success of the region.

3.33. We will continue to work closely with local enterprise partnerships and local authorities to ensure that measures to create opportunities for individuals are taken forward in such a way as to support the requirements of this strategy.

3.34. We will also use our understanding of the diversity of the region's population to develop and implement solutions that respect the societal norms of our diverse communities.

Key Issues for Residents and Businesses

3.35. In July 2019 our Outline Transport Strategy started a conversation with the region's communities and businesses. The output of this forms an important part of our evidence base, providing an insight on the key issues that our residents and businesses consider the Transport Strategy needs to address. These are:

a) **The imperative to respond to the climate emergency –** the most significant message to come out of the engagement, with the requirement to achieve net zero carbon by 2050 identified by many as being one to be accelerated

b) **The importance of harnessing technology and innovation –** the knowledge-intensive economy was seen by many as unique selling point for the Heartland, one that enables the region to be bold and ambitious in its approach

c) **The need to work closely with local planning authorities –** ensuring that the Strategy complements and supports the delivery of planned growth, as well strengthening the linkage between transport, land use planning and other areas of public sector policy in order to align decision making to realise sustainable patterns of activity

d) **Putting the environment at the forefront -** reinforcing the need to achieve environmental net gain in collaboration with partners, as well as improving the resilience of the transport system to the consequences of climate change

e) **The need to be bold: not business as usual –** a recognition of the inevitability that the shift from 'business as usual' will require the adoption of ambitious proposals, some of which will be radical and transformational

f) **The need to reduce travel –** responses were clear as to the importance of reducing the need to travel and the opportunity that the growth in digital connectivity provides to achieve this

g) **The need to increase the emphasis on sustainable modes –** whilst recognising the role of the car, the engagement emphasised the importance of basing this Strategy on making the case for greater use of sustainable transport modes (including active travel)

h) **To support health outcomes –** responses emphasised the need for the Transport Strategy to ensure that policy priorities reflect the need to develop an inclusive and accessible transport system that supports better health outcomes.

i) **The importance of placing greater emphasis on wider strategic linkages –** responses highlighted the need for the Strategy to set out the important of linkages with adjoining regions, including London and working collaboratively on developing solutions

j) **Encourage use of 'nudges' and demand management -** there was overwhelming support for the use of 'nudges' which seek to change user behaviour, but there was also recognition that demand management policies may also be required.

k) **The importance of smaller schemes and maintenance -** responses highlighted the importance of smaller, local schemes and maintenance of existing assets in meeting future connectivity requirements.

l) **The importance of implementation –** a recognition by respondents as to the importance of the Strategy setting out how it will be implemented, and how this will complement the activities of local transport authorities

3.36. Constant throughout the engagement, and expressed consistently in the responses received, was the need for change in the way we plan for, and use our transport system of the future, and the need to do so at pace.

The Regional Evidence Base

3.37. Complementing the output from engagement, our Regional Evidence Base provides the evidential basis for the development of this strategy. It comprises:

- GIS-based Databank – containing up to date information on known plans for growth (economic and housing): the databank is updated annually using information supplied by local planning authorities and local enterprise partnerships
- Policy Scenario Model – a regional model that is used to assess the relative implications of alternative scenarios. The model has the ability to consider both alternative development scenarios (scale and distribution of future growth) and alternative policy scenarios. Its back-casting ability enables the interventions required to achieve a particular outcome to be explored
- Population Segmentation – part of the output from a technical study linked with First Mile/Last Mile project, this provides insight into the behaviours of the region's residents in a way that complements this Strategy's user-centred focus

- Pathway to Decarbonisation – making use of the National Infrastructure Systems Model (NISMOD) to inform this Strategy's approach to de-carbonising our transport system
- Outline Transport Strategy – the responses submitted provide insight on the key issues this strategy needs to address for our residents and businesses
- Technical Studies – the output of technical work commissioned to explore specific aspects of our transport system

3.38. Our approach ensures that this strategy is founded on a detailed understanding of the here and now. The databank provides a consistent baseline for our region built from the bottom up, thereby ensuring this strategy complements and supports the work underway at the local level, and within the sub-regional Growth Boards.

3.39. The output from our modelling tools has established the need for change in our approach to planning, developing and implementing investment in our transport system: a change that this strategy is designed to achieve.

3.40. All elements of the Regional Evidence Base are freely available to all EEH partners, including Government, its agencies and associated companies. Where new tools have been developed these have been designed to ensure ease-of-use by non-technical staff. The scope and capability of the Regional Evidence Base continues to evolve in response to the needs of EEH and our partners, and in light of continuing changes in the national policy context.

Opportunities Mapping

3.41. A key output of the Regional Evidence Base has been mapping the scale and geographical extent of planned growth (economic and housing) against the backdrop of today's current situation. This has led to the identification of the following areas as being of strategic importance for our region:

- Regionally Significant Hubs – our largest urban areas, centres of economic activity in their own right and where additional growth is planned
- Areas of Economic Opportunity – areas that form the focus of economic opportunities moving forward, a combination of existing centres of activity and new opportunities (including Enterprise Zones)
- Areas of Significant Change – existing urban areas where the scale of planned growth is significant relative to their size
- Areas of Potential – areas where intervention is required to improve social equality and access to opportunities

Regionally significant established economic and population hubs	**Areas of Economic Opportunity**	**Areas of Significant Change**	**Areas of Potential**
Milton Keynes	Alconbury	Waterbeach	Peterborough
Northampton	Ely	Northstowe	Corby
Luton	Cambourne	Cambourne	Swindon

Swindon	Northstowe	Eynsham	Northampton
Peterborough	Waterbeach	Didcot	Wisbech
Oxford	Hertfordshire Enviro-Tech/ IQ – Hemel Hempstead	Princes Risborough	Kettering
Cambridge	Silverstone	Bicester	Wellingborough
Bedford/ Kempston	Westcott	Daventry	Milton Keynes
High Wycombe	Cambridge South	Huntingdon/ Godmanchester/ Alconbury	Bedford
Hatfield/ Welwyn Garden City	Luton Airport	St Neots	Luton
Watford	Science Vale		Daventry
Stevenage	Aylesbury Woodlands		Borehamwood
Hemel Hempstead	Northampton Waterside		Oxford
Hitchin/ Letchworth Garden City	Pinewood Studios		
Aylesbury	Elstree Studios		
St Albans	Stansted Airport/ Bishop's Stortford		
Corby	Bicester		
Kettering	Watford Health Campus		
Dunstable/ Houghton Regis	Millbrook/ Cranfield		
Wellingborough			

3.42. In order to maintain the success of our region whilst addressing its challenges we are adopting a whole system approach, one that ensures investment in individual transport networks is aligned to form a single transport system that supports of our strategic ambition.

3.43. It requires the development of detailed proposals to be integrated with decisions taken in other areas of policy that affect the planning, development and delivery of services for residents and businesses. This means ensuring:

- Our regionally significant hubs are connected – both digitally and physically. Investment made in inter-urban and intra-regional connectivity should be a foundation on which to build when identifying future economic and housing growth proposals, with opportunities to improve local connectivity prioritised
- Our areas of economic opportunity have the right level of connectivity – both digitally and physically – that enables businesses to access both local labour markets and the markets for their products and/or services
- Our areas of significant change are supported by investment in local connectivity and inter-urban and intra-regional connectivity

- Our areas of potential are supported by investment in local connectivity that enables residents to gain access to opportunities and services

3.44. At the same time there is a need to ensure that we actively ensure our approach to the transport system supports the role of our market towns and their rural hinterland.

4. A Step-change in Approach

Harnessing our Potential

4.1. As one of the few regions that is a net contributor to the Exchequer, continuing to invest in our region will contribute significantly to the Government's wider ambition for the UK. Investing in strategic infrastructure not only supports the delivery of planned growth within our region, it benefits other regions who are dependent upon that infrastructure for access to markets and international gateways, Investing in improved inter-regional connectivity therefore benefits the UK economy as a whole.

4.2. Achieving our strategic ambition for the region will not be achieved using a 'business as usual' approach. It requires difficult choices to be made about the future of our economy and our businesses, as well as for the way we design communities and our approach to land use planning. It will require the co-ordination of public sector policy to shape the nature and scale of future travel.

4.3. The delivery of planned economic and housing growth represents an opportunity to deliver sustainable growth that benefits existing communities and businesses. However, this will continue to be dependent upon investment in strategic infrastructure and services and a shared commitment for better co-ordination at all levels of decision making.

4.4. Improved connectivity within and beyond the region will help realise a significant uplift in economic performance – indeed, the opportunity presented by the region is greater than the sum of its parts.

4.5. Improved connectivity plays a key role in widening labour markets, providing access to housing markets and housing supply options and, supporting new opportunities for economic growth. The result will be increased economic capacity of employment hubs, increased levels of interaction and integration across the region, the ability to retain and attract high value-added business and improved affordability of business and residential space.

4.6. We will harness the potential of our knowledge-intensive economy and use the focus provided by the four Grand Challenges in the Government's Industrial Strategy to maximise the opportunity for innovation-led solutions and businesses to support sustainable growth and provide the UK economy with a competitive edge in global markets.

4.7. However technological solutions will not on their own deliver the wider ambition encapsulated by the place-making agenda. De-carbonising vehicles will not address

concerns in relation to congestion on the network, nor the impact of that congestion on our communities and businesses.

4.8. We start from a position where our transport system is under strain – a consequence of our economic success. Congestion is increasing, reliability is decreasing and together these both act as a barrier to the delivery of planned growth. They also exacerbate the environmental impact of our transport system.

4.9. But we also start from a position of opportunity:

- Responses to our Outline Transport Strategy highlighted increased acceptance within our community of the need for change and the need to do so at pace
- The digital economy creates opportunities for new ways of accessing services and facilities that will change the scale and nature of travel demand
- The region's unique knowledge economy generates innovation that provides opportunities in their own right to put the user at the heart of our transport system and effect further change to the nature of travel demand
- Investment in transformational infrastructure – such as East West Rail – will fundamentally change socio-economic geography of the region: what was previously a series of individual economic and housing market areas will become one

4.10. The opportunity to effect change is amplified by on-going wider changes in societal expectations and attitudes. Our future investment choices must reflect the needs of our existing communities and businesses, the needs of future generations and the needs of an aging population.

4.11. Changes to the way in which businesses provide access to services and opportunities are having their own influence. The traditional town centre has declined as a consequence of changes in retail business models – driven by consumer choice. The choices made by us as consumers can, and do have significant implications for our travel choices and behaviours.

4.12. Continued change in travel behaviour creates its own opportunities to repurpose our existing infrastructure in favour of active travel modes, but this must be done in a way that enables a sustainable future for our urban areas and their communities.

4.13. In setting the long-term policy framework for our transport system this strategy both supports local authorities with the delivery of current Local Plan proposals, and provides the framework within which to plan for the sustainable development of our communities in the longer-term.

The Climate Change Imperative

4.14. As a region our current pattern of travel and consumption of resources gives rise to a number of environmental challenges:

- Carbon Emissions – our emissions from transport represents a higher percentage than the national average, more worryingly the rate at which emissions are falling is behind the national average

- Air Quality – the environmental implications at a local level of our current transport choices is reflected in the number of Air Quality Management Areas and the extent to which poor air quality is an issue. There is a need for urgent action to address poor air quality and reduce the number of avoidable deaths
- System Resilience – extreme weather events are the new normal: there is a need to invest in adapting our existing infrastructure assets to improve the resilience of our transport system to reduce the impact on individuals, communities and businesses

4.15. In Oxford the average temperature is already 1.6°C higher than the average recorded in the previous century: already above the 1.5°C target agreed at the 2015 Paris Climate Change talks.

4.16. In this context, we welcome government's commitment to bring forward the end to the sale of new petrol, diesel and hybrid cars and vans from 2040 to 2035, or earlier if a faster transition appears feasible. We also support government's commitment to remove diesel traction on the rail network by 2040.

4.17. However, the evidence is clear: these changes will not be sufficient to enable our region to meet the requirement to be net zero-target by 2050. Further action is required to change the scale and nature of existing travel demand. The need for action is heightened further by the scale of the region's ambition.

Environmental Net Gain

4.18. Whilst the requirement to achieve net-zero target by 2050 serves as a key driver for change this forms part of a wider commitment, shared by the region and Government, to ensure that planned growth is delivered in a way that demonstrates environmental net gain.

4.19. The Government's 25-year Environment Plan provides the context within which this Strategy must demonstrate its ability to achieve this ambition. The linkages with decisions taken in other policy areas become all the more relevant in this context. Proposals that support the re-imagining of our urban areas will create opportunities to effect change in travel demand and behaviour. Realising those opportunities will in turn be fundamental to delivering on the ambition to achieve environmental net gain.

4.20. In line with emerging regulatory and policy requirements, new transport developments will be required to achieve biodiversity net gain and natural capital net gain. Beyond then, and in line with emerging regulatory requirements, all new transport-related development is will be expected to achieve environmental net-gain in due course.'

4.21. Caution will need to be exercised in applying this ambition to individual investment proposals. Increasingly we will need to assess the merits of individual proposals as part of a wider package of measures, the cumulative effect of which is to achieve environmental net gain.

The Scale of our Ambition

4.22. The purpose of this strategy is to support the delivery of the region's shared ambition with Government of:

- Enabling the region to realise its economic potential – with an ambition of a 70% increase in GVA by 2050
- Delivering that growth in a way that is sustainable for the long term and achieves environmental net gain – with our transport system net zero-carbon no later than 2050
- Designing a transport system tailored to meet the needs of its users, targeting behavioural preferences and responding to the needs of their individual lifestyles, now and in the future.

4.23. Achieving this will require a whole-system approach, one that brings together the need to invest in:

- Digital infrastructure (both fixed and mobile) – to enable business growth, improve access for residents to services and opportunities, in ways that also reduce the need to travel (where appropriate)
- Our existing infrastructure asset - to improve its resilience and connectivity, thereby improving business productivity and supporting our communities
- Repurposing existing infrastructure and services, particularly within larger urban areas – to actively encourage active travel modes and user-centred services, and reduce reliance on the private car.
- Greening travel routes will encourage walking or cycling and therefore improve both, physical and mental health whilst at the same time acting as green corridors for wildlife.
- New infrastructure capacity and capability – to enable delivery of planned economic and housing growth
- Improved connectivity for rural communities – to enable small market towns to support their rural hinterlands

4.24. The policy framework in this strategy enables such an approach to be pursued with vigour and at the pace required.

4.25. In this way it responds to the requirements of national policy, harnesses the inherent strengths of our region, and does so in a way that embeds a new approach to the development of our transport system as a whole.

5. A Transport System for the Future

5.1. Our current pattern of travel and consumption of resources is not compatible with the need to deliver the legal requirement to achieve net zero greenhouse emissions by 2050 and the long-term sustainability of the region. It is therefore necessary to effect both a change in travel patterns (in particular reducing the need to travel) and travel behaviours (increasing use of active travel and public transport, reducing reliance on the private car).

5.2. The experience of the COVID-19 pandemic has highlighted the extent to which rapid and widespread use of digital connectivity can act as an effective and efficient means of maintaining business activity. It also illustrates the extent to which change can be effected at pace when the circumstances require it, providing the imperative for change is compelling.

The Pathway to Decarbonisation

5.3. This strategy has to enable our region to deliver on the legal requirement for net-zero greenhouse emissions by 2050.

5.4. The Paris Agreement enshrines a commitment on the signatories to restrict the increase in global average temperature to 'well below' 2°C above pre-industrial levels and [to pursue] efforts to limit the temperature increase to 1.5°C above pre-industrial levels.

5.5. The UK Government is under a duty to ensure that the net UK carbon account for 2050 is at least 100% lower than the 1990 baseline ('net zero target' which was enshrined into law in June 2019).

5.6. Transport is now the largest sector for UK greenhouse gas emissions (27%), of which road transport accounts for over 90%. Transport's contribution towards carbon emissions is significantly higher in our region than the national average and the rate of decline in emissions is noticeably slower.

5.7. EEH is committed to addressing decarbonisation and as part of our work on this strategy commissioned a study on the strategies to deliver robust pathways to decarbonisation by 2050. The outcome of that work, published as part of the Regional Evidence Base, has informed our policy approach.

5.8. Most of our local authority partners have passed resolutions declaring a 'climate change emergency' and have targets to deliver organisational net zero emissions by 2030.

5.9. We are committed to working with partners to implement the required actions within this strategy as they develop proposals that are consistent with the Government's legally binding commitment to reach net zero emissions by 2050. Further, we are committed to supporting partners as they respond to any future changes in legislation pertaining to new infrastructure proposals. Together with partners we will monitor and review of policies, programmes and infrastructure proposals for compliance with the need to deliver carbon reduction.

5.10. There is an expectation in many quarters of the Heartland to achieve net-zero carbon earlier than 2050, as demonstrated by responses to our Outline Transport Strategy. Whilst we share this aspiration, delivering on it will require significant policy interventions at the national level over and above those already made.

5.11. The Government measures are welcome, but in isolation they will not be sufficient to enable our region to meet the legal requirement by 2050.

5.12. Our ability to meet that requirement earlier than 2050 will be dependent upon a number of external factors (driven by changes in the delivery models used by

businesses for their services and products), along with decisions taken in other areas of public policy that affect the planning, development and delivery of services.

5.13. The policies set out in this Strategy set a framework that will enable us, alongside our partners to work together to deliver the pathway to decarbonisation that is both ambitious and deliverable.

5.14. We will support our partners to enable the potential of the digital economy to effect fundamental change in the scale and nature of travel demand to be realised at the earliest opportunity.

5.15. We will actively promote the opportunities created by change in the scale and nature of travel demand to re-purpose our existing infrastructure assets (with their embedded carbon) so they give priority to active travel and public transport.

5.16. Whilst integration with land use planning is an important consideration, there is a need to recognise that other factors, such as demand management or improved provision of alternative travel options, maybe more significant in the short to medium term in effecting change in travel demand.

5.17. We will work with our academic partners and Local Enterprise Partnerships, to ensure that we harness the capability of our knowledge-intensive economy to develop new user-focused services that directly reduce our carbon consumption to levels consistent with the legal requirements.

5.18. Our ambition to achieve environmental net gain also has the potential to contribute to the net-zero carbon goal as part of transport-related carbon emissions will be stored in new green infrastructure.

Decarbonising our Transport System

T1 We will support and plan for the decarbonisation of the rail network with priority given to securing:

- **Completion of the Midland Mainline electrification**
- **Delivery of East West Rail as an electrified route**
- **Infill electrification schemes that enable electric haulage of rail freight services, in particular those to/from the international gateway port of Felixstowe and to/from national and regional distribution centres**
- **Delivery of a long term solution for the electrification of the Chiltern Main Line between Birmingham and London Marylebone**

T2 We will support and plan for the decarbonisation of the road fleet, working with the private sector, the energy sector, local authorities and Highways England to ensure the infrastructure required to support an electric fleet (including buses and freight) is available

T3 In identifying future investment requirements we will prioritise those which contribute to a reduction in single occupancy journeys of 20% (of total traffic flow) by 2040 (compared with 2020)

5.19. We will work with government to decarbonise our transport system in keeping with the ambition set out in 'Decarbonising Transport – Setting the Challenge'. Through our hierarchy of modes we look to make active travel and public transport the first choice for travel.

5.20. Electrification offers a significant opportunity to decarbonise our transport system. We will continue to support our partners in the deployment of renewable energy generation in our region and beyond; and the opportunity that new technology such as Vehicle to Grid and Hydrogen Electric Vehicles bring.

5.21. We will build on the leadership being provided by Milton Keynes, Oxford, Cambridge and Peterborough on electrification of the local transport network and use that knowledge to see it applied across the region at scale. We will work the infrastructure owners in the energy sector to ensure that this ambition is enabled by the necessary investment in the electricity supply and distribution networks.

5.22. Whilst electrification of the road fleet – actively encouraged by national and local policy – is supported, it will form part of a co-ordinated approach to investment in local connectivity.

5.23. Lessons learned in our region about the deployment of Ultra Low Emission Vehicle enabling infrastructure and the behaviour of users is already feeding in the national policy. We will continue to support our partners to scale this activity.

5.24. Substitution of electric vehicles for Zero Emission Vehicles will make a positive contribution towards reducing overall carbon emissions. However, it will not address wider place-based concerns that arise from overall volumes of vehicles in urban areas and poor journey time reliability for intra-urban connectivity.

5.25. Electrification of our road fleet must therefore be taken forward as part of an approach that seeks to reduce the overall number of vehicles in our urban areas. Giving greater priority to active travel modes and multi-occupancy vehicles will be supported.

5.26. We will work with partners, to redress the decline in vehicle occupancy and encourage the deployment of new mobility solutions to increase the efficiency of passenger movement.

5.27. We will work with the rail sector to build on their traction decarbonisation business case to develop a rolling programme of electrification for our rail infrastructure. The timescales associated with the planning, development and implementation of electrification projects makes the need for a rolling programme of electrification an urgent requirement.

5.28. Particular priority will be given to ensuring the early electrification of those key rail corridors that are essential for strategic rail freight movements. Enabling electric haulage of rail freight serves to reduce the carbon emissions of existing movements. It also serves to improve the business offer for long-distance freight by rail compared with road haulage, the latter being a particular concern in terms of its carbon emissions.

5.29. As the sole remaining non-electrified main line route serving London, we will continue to work with Network Rail, Midlands Connect and TfL to prepare the business case in support of a long-term solution for the Chiltern main line.

5.30. On those routes where electrification is not a practical or viable solution we will work with rail sector to identify alternatives that decarbonise the rail network.

Mobility for the Future

T4 We will work with infrastructure owners and operators to ensure that proposals brought forward for the development of the transport system reduce reliance on the private car by considering the needs of users on the basis of the following hierarchy:

- **i) Active Travel Modes (pedestrians and cyclists)**
- **ii) Public transport modes (bus, scheduled coach and rail)**
- **iii) Low emission/ zero carbon private vehicles, including two wheeler vehicles**
- **iv) Other Motorised modes**

All proposals to be prepared on the basis that they provide inclusive and accessible travel options for all users

T5 In identifying future investment requirements we will prioritise proposals on the basis of value for money, their contribution towards achieving net-zero carbon targets, and their contribution to wider sustainability and environmental net gain outcomes

T6 We will continue to work with partners, universities and the private sector to use 'living laboratories' to trial innovative solutions and apply new business models at scale

5.31. The strategic ambition of this Strategy requires additional measures over and above those taken forward to de-carbonise our transport system. Those measures need to both reduce the need to travel and reduce the reliance on the private car.

5.32. Given that travel is a derived demand, it is essential that the planning and development of our transport system is co-ordinated with wider policy considerations, including but not limited to land-use planning.

5.33. Ensuring that local communities and businesses can safely access locally to the services and facilities they need is an important contributory factor to managing future travel demand: access to services and facilities can both help reduce the length of journeys and encourage greater use of active travel modes. Integrating transport and land use planning in this way will create additional opportunities to effect long term change in travel patterns.

5.34. Walking and cycling is already prevalent in some parts of the region, particularly in Oxford and Cambridge. We support the outcome of the Gilligan Report – *'Running out of Road'* – that outlines the need for investment in our region to unlock low

carbon economic growth. Through the user hierarchy, we will be able to work with partners to ensure walking and cycling levels continue to grow across the region.

5.35. At the same time there is a need to take account of how the continued growth of e-commerce continues to impact on both the need to travel and the nature of future demand: including consideration of the increase in local delivery services.

5.36. Such considerations, when brought together as part of the commitment to deliver sustainable development, need to be reflected in the design of proposals for investment in the transport system.

5.37. Application of the best practice set out in documents such as CIHT's *Better Planning, Better Transport, Better Places* should not just be restricted to new developments but used more widely to ensure continuity of approach between existing and new infrastructure.

5.38. Where safety or perceptions of safety impair our ability to improve connectivity we will work with infrastructure owners and operators to address this.

5.39. Considering the needs of users in accordance with the hierarchy of modes when developing proposals will help ensure that future investment actively encourages a modal shift. In this way, the hierarchy will encourage an increase in investment in local measures that improve the health and well-being of individuals and help reduce the environmental footprint of our transport system. It also supports partners wishing to pursue the application of 'vision zero' principles at the local level.

5.40. The hierarchy of modes needs to be equally applied to the existing infrastructure asset. A failure to maintain the existing asset has a direct impact on the productivity of businesses in our region. Investment in maintaining the asset offers the opportunity to use the hierarchy to re-purpose the available space in favour of modes that support a more sustainable pattern of development.

5.41. The transport system plays a key role in allowing communities to access, and to reduce severance to, green spaces. Greening existing transport routes encourages walking and cycling and therefore reduces transport-related carbon emissions whilst at the same time storing additional carbon in trees, green vegetation and corresponding soils

5.42. A key component of the Regional Evidence Base is the analysis undertaken of the behaviour of the region's existing population. The insight this provides enables partners to develop bespoke solutions that reflect the characteristics of their local community

5.43. Through our First Mile/Last Mile project we continue to capture the experience gained by our partners, and combine that with our benchmarking of global best practice to ensure we, with our partners, can deliver the best possible first last mile solutions according to different place conditions across the region.

5.44. The use of data analytics is driving the growth in user-focused services, typically accessed via smart phones.

5.45. We will continue to build on the leadership being provided by Oxford, Cambridge and Milton Keynes in the development of the data infrastructure that supports the widespread availability of user-focused services. And through our Innovation Working Group we will use that knowledge to develop this capability across the region on a consistent basis.

5.46. As a focus for science and technology based innovation in the UK we are working with partners, in particular with our universities and research facilities, to maximise the use of 'living laboratories' as a means of trialling innovation in the region at scale and at pace.

5.47. The region is a leader in the development of the technology associated with the use of electric vehicles and connected autonomous vehicles, technology that has the potential to be a key part of our transport system moving forward. The work underway in both Oxfordshire and Milton Keynes provides the region with access to experience on which it can build.

5.48. A key priority for our Innovation Working Group is to work with the private sector to develop proposals that will encourage the scaling up of trials to the regional level at the earliest opportunity possible.

5.49. The availability of digital infrastructure (both fixed and mobile) is central to enabling the region exploit its leadership in innovation to the full. Not only is digital infrastructure critical to the use of data analytics underpinning user-focused services, it also offers the potential to help reduce the need for travel in the first place.

5.50. Harnessing the potential of our business community in the development of new solutions and businesses will not only benefit the region, it will also provide the UK with a competitive edge.

5.51. The COVID-19 pandemic experience highlighted the extent to which remote working has the capability to enable a significant proportion of the regional economy to function. What it also highlighted was the extent to which the need to travel can be reduced by the availability of digital infrastructure.

5.52. The short-term implications of the COVID-19 on the regional economy potentially offers the opportunity to lock in some of the consequential benefits of the reduction in travel achieved as a consequence of the widespread use of remote working.

5.53. It remains important to ensure that investment proposals continue to offer good value for money. We will use an evolution of our multi-criteria framework, originally developed to identify investment priorities for the initial five-year Major Road Network programme as the basis for ensuring that investment priorities taken forward into the investment pipeline are consistent with our vision and principles.

5.54. Individual investment proposals will continue to be considered on their own merits. However, our approach also ensures that, where appropriate, a scheme's contribution as part of a wider package of measures is also considered: it is often the cumulative benefit of a co-ordinated package of investment that needs to be captured.

5.55. As we develop our shift in the appraisal process, we will work with the Government as part of their 'Green Book' review and other funding decision makers to ensure that the appraisal of investment proposals reflect the importance of wider sustainable development principles as well as achieving the net zero target.

Connectivity Studies

5.56. Moving forward, our implementation strategy identifies a programme of connectivity studies, which will apply this policy framework in support of planned growth.

5.57. The studies will build upon known investment priorities already identified in our investment pipeline. Then, using information held in our Regional Evidence Base, we will work with our partners to identify proposals that support ambition at the local level for the development of their economy and communities.

5.58. To effect change in the scale and nature of future travel demand, we will work with partners to understand in more detail the factors that influence current travel choices, and more importantly understand what intervention is required to enable change to take place.

5.59. The future transport options considered by the connectivity studies will enable us to identify the levels of service required of our transport system in order to support partners' ambitions for their businesses and communities.

5.60. Confidence in terms of the level of service on offer help both individuals and businesses as they make their decisions about where best to make their investment: for individuals in terms of where to choose to live and have access to services and opportunities and for businesses in terms of access to labour and access to markets.

5.61. The output from the studies will in turn feed our future investment pipeline

6. Transforming Journeys

6.1. Improving east-west connectivity provides the overriding transformational opportunity for our region, also unlocking opportunities to improve north-south connectivity.

6.2. Taken together this will transform what is currently a series of discrete functional economic areas and housing markets, creating a better connected and interrelated region, delivering agglomeration benefits for businesses and levelling up opportunities for the region'.

6.3. Maximising the benefits and opportunities arising from the investment in strategic infrastructure is at the heart of realising our ambition for the region. The clarity provided on the future development of our transport system will enable partners to bring forward proposals for their communities with greater confidence. In this way it will enable our economic potential to be realised and the region's future housing needs to be met.

The East West Rail Main Line

T7 **We support the delivery of the East West Rail project (including its Eastern Section), with the expectation that Phase 2 of the Western Section is open from Oxford – Bedford by 2024, Aylesbury – Milton Keynes by 2025 and the Central Section by 2030**

T8 **We will work with Network Rail and the EWRCo to prioritise delivery of East West Rail as a digitally connected and enabled corridor**

T9 **We will work with the EWRCo and Network Rail to identify opportunities to realise the longer-term potential of the East West Main Line in support of the economic potential of the region**

T10 **We will work with partners, the EWRCo and Network Rail to ensure that where the East West Main Line intersects existing main lines the opportunity is taken to establish regionally significant transport hubs: priority will be given to developing proposals in the following locations:**

- **Oxford Stations**
- **Bicester Stations**
- **Aylesbury Station**
- **Bletchley/Milton Keynes**
- **Bedford Midland Station**
- **East West Rail/East Coast Main Line**
- **Cambridge/Cambridge South Stations**

T11 **We will work with partners to prioritise investment in improved local connectivity at East West Main Line stations with their local communities**

T12 **We will work with Transport East and Network Rail to identify opportunities to realise the longer-term potential of the East West Main Line in support of economic activity and housing growth**

6.4. The historical dominance of London within the UK economy means that the vast majority of our region's strategic transport linkages are radial in nature, centred on the capital.

6.5. Improving east-west connectivity across our region has been consistently identified as one of the most significant barriers to it realising its economic potential. East West Rail has been at the heart of the region's strategic priorities for 25 years.

6.6. The delivery of a strategic railway connecting East Anglia, with central, southern and western England has been the shared ambition of the local authorities comprising the East West Rail Consortium (EEH provides the officer and administrative support to the Consortium). The core focus for the East West Main Line is to achieve a step-change in east-west connectivity, linking Ipswich and Norwich with Cambridge, Milton Keynes, Oxford and beyond that towards Swindon and onwards to Bristol and South Wales.

6.7. The Consortium has promoted the East West Rail project in three sections:

- Western Section: linking Oxford – Bicester – Bletchley/Milton Keynes – Bedford, with services also serving Aylesbury
- Central Section: linking Bedford – Cambridge
- Eastern Section: linking to the east of Cambridge

Though each section of East West Rail brings with it benefits to the communities it serves, the full transformational benefit will only to be realised through the delivery of all three sections to create the East West Main Line

6.8. Travel patterns will be transformed. The East West Main Line will, for the first time, offer a fast, reliable, and attractive rail link across and within our region that will have a competitive advantage to the private car.

6.9. The benefit of the East West Main Line lies not just in the improved connectivity between those urban areas it directly serve, but also in the opportunity created where the route crosses the radial main line routes centred on London.

6.10. Identifying these points as regionally significant rail interchanges creates opportunities to offer users a range of new rail-based journey options. Our baseline of the existing rail network offer provides the foundation on which to work with the rail sector and identify the measures required to make those options real. Central to this will be the principle of journey options requiring no more than one-stop interchange.

6.11. Removing the need for rail users to transit through London will additionally provide some relief to rail services on the radial main lines to/from the capital.

6.12. The transformational benefit of the East West Main Line to the region, its residents and businesses, will be enhanced further by ensuring it is delivered as a digitally enabled corridor, one that provides improved digital connectivity for both passengers and communities close to the rail corridor.

6.13. The commitment by Government to deliver the current proposals for the Western and Central sections of the East West Rail project represents a first step in realising the full benefit of this transformative link for the region and beyond.

6.14. Building on the confidence generated by the work of the EWRCo, we will work with local authorities to ensure that the opportunities created by this investment are used to shape the location of future economic and housing growth proposals.

6.15. Delivery of the current East West Rail proposal will be transformational in its own right. However the longer term potential of the East West Main Line to support planned growth and encourage further shift in passenger and freight movements on to the railway will require additional investment in its capacity and capability.

6.16. As a strategic link in the wider national network, realising the longer term potential will deliver benefits more widely for the transport system. We will work with the EWRCo and Network Rail to develop the longer-term potential of the East West Main Line over and above that of the current proposal.

Other East West Arcs

T13 We will prioritise improvements to east west rail connectivity to support economic activity and in support of planned housing growth, including:

i) A northern arc connecting Northampton, Corby and Peterborough/Cambridge

ii) A southern arc connecting central Buckinghamshire, Watford and southern Hertfordshire

T14 We will work with Western Gateway and Network Rail to develop proposals that strengthen connectivity between Swindon/Oxford and the South-West and South Wales in support of economic activity

6.17. The output from the opportunities mapping illustrates the extent to which east-west connectivity acts as a constraint right across our region.

6.18. Building on that output has identified two additional east-west arcs where improved connectivity will support the delivery of planned economic and housing growth:

- A northern arc that links Northampton, Corby and Peterborough/Cambridge
- A southern arc that links central Buckinghamshire, Watford and southern Hertfordshire and which improves orbital connectivity

6.19. The opportunities mapping also highlights the strategic importance of improving connectivity between Oxford and Swindon. We will work with the rail sector to ensure that he benefit of investment in the East West Rail project extends through to Didcot Parkway and onward towards Swindon.

6.20. The National Infrastructure Commission in its report identified the need to use improved east-west connectivity in our region as the catalyst for strengthening the linkages with the South West and South Wales.

Improving North South Connectivity

T15 We will work with Government, Network Rail, Highways England and Oxfordshire County Council to develop a long term solution to challenges on the Didcot – Oxford – Bicester/Banbury corridor

T16 We will work with Network Rail, Government and adjoining Sub-national Transport Bodies to maximise the allocation of released capacity on the classic network as a result of HS2 to benefit connectivity within the region.

T17 We will work with Government, Network Rail, and partners to develop a solution that improves connectivity on the Luton – Bedford – Wellingborough/Kettering corridor

T18 We will work with Cambridge and Peterborough Combined Authority, Cambridgeshire County Council and Peterborough City Council alongside Network Rail and Government to support the priorities identified in the Cambridgeshire Corridor Study

T19 We will work with partners, including Government and Highways England to develop a long term solution to the challenges of the A1 (East of England) corridor.

6.21. The benefit of transformed east-west connectivity creates consequential opportunities to improve north-south connectivity along a number of key corridors. These are:

- *Swindon/Didcot – Oxford – Bicester/Banbury*: forms part of the strategically important Southampton – Oxford – West Midlands corridor, the significance of which is exemplified by the pressures placed on both the rail corridor and the A34. A long term solution to the challenges of supporting the economic opportunities within Oxfordshire and enabling strategic movements is required. The outputs from the Oxfordshire Rail Corridor Study will form a key component of the solution
- *Northampton – Milton Keynes/Bletchley – Aylesbury – Old Oak Common*: the combination of delivery of East West Rail (Western Section) and HS2 creates opportunities to develop a new regional service linking these regionally significant hubs with key economic opportunities and allowing easier access to Heathrow Airport and HS2
- *Luton – Bedford – Wellingborough/Kettering:* forms part of the Midland Mainline along which improved connectivity is important in support of planned growth, as well as in order to strengthen the economic linkages with the East Midlands to mutual benefit.

6.22. In the longer term completion of HS2 will create opportunities to reallocate capacity on the existing (classic) rail network, including the West Coast Main Line, the Midland Main Line and East Coast Main Line. We will continue to work with Network Rail and adjoining Sub-national Transport Bodies to maximise the benefit of such opportunities for the region.

Transforming Intra and Inter Regional Journeys

T20 We will prioritise investment in the development of public transport based solutions when improving intra-regional connectivity between Regionally Significant Hubs, Areas of Economic Opportunity and Areas of Significant Change

T21 We will work with infrastructure owners to ensure that all new strategic infrastructure investment is designed as digitally enabled corridors

T22 We will support investment in the Strategic Road Network and Major Road Network where this meets one or more of the following criteria:

a) Protects and enhances the existing infrastructure asset

b) Delivers a solution to an identified problem on the existing infrastructure asset

c) **Enables access to new economic opportunities and/or additional housing growth**

T23 We will, working with Network Rail, Highways England and public transport operators, identify the level of service required between Regionally Significant Hubs, Areas of Economic Opportunity and Areas of Significant Change to achieve improved intra-regional connectivity: the levels of service will be reviewed on a bi-annual basis

6.23. Improved connectivity between our regionally significant hubs, areas of economic opportunity and areas of significant change will be important moving forward if we are to support our business community and levelling up opportunities for our residents.

6.24. Where there is a need to improve intra-regional connectivity we will prioritise the development of public transport based solutions, complemented by investment in improved local connectivity.

6.25. At the same time this strategy recognises that there will continue to be a need to invest in our highway network. At the regional level this means the Strategic Road Network and the Major Road Network. However, where that investment is taken forward it will be as part of a system approach to support development of our transport infrastructure and services.

6.26. Investment in our road network will be particularly important where it supports one or more of the following criteria:

- It protects and enhances our existing infrastructure asset thereby improving network resilience and productivity for businesses
- It is require to provide a solution to an identified problem on the existing infrastructure asset, particularly where this is required to the delivery of planned growth
- It is required to enable access for new economic opportunities or to enable planned housing or economic growth

6.27. Our programme of connectivity studies reflects the need to develop a package of measures to support economic and housing growth opportunities. Through them we will work with partners to ensure that the travel implications of longer term ambitions for local communities are reflected in our future infrastructure requirements.

7. Connecting People with Opportunities

7.1. Providing people with connectivity to employment opportunities and the services they require allows individuals realise their potential and achieve their personal ambitions.

7.2. A lack of connectivity denies people choice and can give rise to concerns about the implications for the health and well-being of individuals, and by extension the wider family group. It is particularly important to see areas that currently experience social

depravation, due in part to poor connectivity, as areas of opportunity: ones where investment in improved connectivity has the potential to reduce social inequalities across, and within our region.

7.3. Increasingly connectivity can be achieved digitally, as an alternative to physically. This can create new opportunities for individuals by providing them with access to jobs and services, whilst reducing the need to travel.

7.4. The growth in e-commerce is further evidence of how changes in the business models of companies are having an effect of the need for travel. It also serves to emphasise the importance of planning for and making appropriate provision for freight and logistics needs at the local level.

7.5. Notwithstanding the rise of the digital economy, residents and businesses will continue to need access to services and other supporting facilities (including social infrastructure) that requires travel.

7.6. There is much that the public sector can do to create the conditions that enable a more sustainable pattern of activity – through the framework that it sets out in Local Plans to the ways it plans for and delivers services for residents and businesses. Likewise the policy frameworks used by Government to plan for and deliver its services can, and do, have a significant effect on the need to travel.

7.7. The polycentric nature of the Heartland means that the existing pattern of movements is complex. This makes it important to ensure that the solutions put forward for investment are tailored to local needs. The information held in the Regional Evidence Base provides an invaluable insight that will support partners in the development of those solutions.

7.8. Through our First Mile/Last Mile we have analysed the existing behaviour of the region's population. This enables proposals to be developed that are bespoke to the needs of the local community and their local connectivity requirements, thereby increasing the likelihood of their success.

7.9. In developing solutions for improved local connectivity it is essential to avoid exacerbating difficulties arising from issues relating to access to, and the affordability of transport.

Transport Orientated Development

T24 We will work with local planning authorities and local enterprise partnerships to use the opportunities created by investment in strategic transport infrastructure and services to shape the location of future economic and housing growth proposals. We will work with partners to ensure integration of travel modes and local connectivity are integral components of any such proposals

T25 We will support the development and delivery of high quality, segregated mass transit systems where there is the potential market for its long term sustainability: priority will be given to supporting the delivery of such systems in the following locations:

- **Cambridge (the CAM)**
- **Milton Keynes**
- **The A414 corridor in Hertfordshire**

7.10. Investment in strategic transport infrastructure – to improve inter-regional and intra-regional journeys – creates opportunities that are of regional significance within the urban areas that it serves.

7.11. Investment in rail services has a particularly powerful impact, one that will act as a catalyst for change. Working with partners we will ensure that the opportunities created by having improved access to rail services are used to shape future economic and housing growth proposals brought through the Local Plan system.

7.12. Investment in mass transit systems can have a similar catalytic effect where it can be demonstrated that there is the potential market for its long term sustainability.

7.13. Rail stations and stops on mass transit systems have the potential to be the focus for a transport oriented development. In order to realise this potential, the investment in strategic connectivity must be complemented by investment in local connectivity as part of a co-ordinated package.

7.14. Measures to encourage active travel and co-ordination with onward local public transport services are particularly important, both to residential areas and areas of economic activity within the surrounding urban area. Where necessary this should be supported by investment that repurposes the existing infrastructure in favour of such measures

Improving Local Connectivity

T26 We will work with partners to establish 'mobility hubs' in areas of significance as locations where interchange between travel modes is actively enabled.

T27 We will work with public transport operators and the Government to develop industry-led solutions that enable frictionless travel using a combination of travel modes

7.15. Across the region there is a high prevalence of communities with low population densities – both within our urban areas and more widely amongst small market towns and their surrounding rural hinterlands.

7.16. At the same time, the growth in user-focused transport services enabled by smart phones, and facilitated by the spread of contactless payment, continues to transform the transport system.

7.17. Interchange between modes of travel can introduce 'friction' into the journey. Users seek reassurance that the interchange will be convenient, predictable, reliable and safe, as well as being supported by appropriate facilities on site.

7.18. The establishment of 'mobility hubs' that serve local communities within a larger urban area offers the opportunity to offer 'frictionless' interchange between modes. Onward connectivity from the hubs into the immediate communities creates

opportunities to encourage active travel to/from local public transport services. These should be considered as part of a comprehensive approach to improving local connectivity in areas of regional significance.

7.19. Mobility hubs are locations where demand for movement can be concentrated in a way that supports local public transport services. Park and ride facilities are an example of mobility hubs, but they could also be a viable way of improving local connectivity between district centres in larger urban areas.

Rural Connectivity

T28 We will work with partners to develop tailored solutions for our smaller market towns and rural areas that improve local connectivity, including exploring options for centres of mobility.

7.20. A particular challenge exists in improving connectivity in our small market towns and their rural hinterlands. This is an issue for both residents and the businesses operating from them.

7.21. With 34% of our population living in our small market towns and their hinterland, connectivity in rural areas is a strategic issue that needs to be addressed by this strategy.

7.22. Connectivity for our rural communities face a number of challenges, including:

- Access to digital connectivity, which is critical for businesses based in our rural communities, yet the cost of its provision can be a barrier to making the required investment
- The digital economy, which is encouraging new business models for consumer goods and new ways of accessing services and facilities, creating challenges for the future of our small market towns
- Traditional business models for providing public transport in rural areas becoming increasingly unsustainable, leading to the reduction, and in some instances removal, of services.

7.23. The connectivity requirements of our small market towns are a function of, and influenced by their function within the overall hierarchy of settlements for that part of our region.

7.24. Where a town acts as commuter settlements for a larger regionally significant hub this results in a concentrated flow of movements that are predictable and capable of sustaining local public transport services. A similarly sized town that is free-standing is more likely to perform as a sub-regional centre for its rural hinterland. The resulting pattern of movements is more varied and disparate, making the case for traditional solutions harder to sustain.

7.25. Investment in digital connectivity in rural areas will enable businesses to operate more efficiently and provide opportunities to conduct business remotely thereby reducing the need for travel. In addition, digital connectivity offers the potential for innovative solutions to be developed where there remains a need to travel.

7.26. Although the scale of their application will be different, the concept of 'mobility hubs' offers the opportunity to concentrate demand for travel in ways that support connectivity to adjoining urban areas or areas of economic opportunity.

8. Making the Heartland work for the UK

Connecting to Global Markets

T29 We will work with infrastructure owners/operators, Network Rail, Highways England and the Government to improve surface access by public transport to international airports in order to reduce the environmental footprint of their operations, with priority given to:

- **Luton Airport – with a focus on improving travel opportunities via services on the Midland Main, and ensuring the right level of service and capacity on the Direct Air Rapid Transit service (DART)**
- **Heathrow Airport – with a focus on improved interchange and connectivity via the Old Oak Common transport hub, and through delivery of Western Rail Access to Heathrow**

T30 We will work with relevant Sub-national Transport Bodies, as well as Network Rail and Highways England, to prioritise the development of proposals that enable improved connectivity along the key inter-regional corridors: priority will be given to identifying solutions to future needs on the following corridors:

- **Swindon/Southampton – Reading – Didcot/Oxford – West Midlands**
- **London – Luton – Bedford – East Midlands**

8.1. As one the world's leading economic regions our continued success is dependent upon being connected globally – both physically and digitally.

8.2. Notwithstanding the growth in digital connectivity, the physical access provided through the UK's international gateways – most of which lie outside of our region - continues to be fundamental to our global competitiveness.

8.3. However, it is important that this strategy actively encourages investment in improved surface access connectivity that reduces the environmental footprint of those gateways, in particular:

- *Luton Airport* – located within the region, a focus for European services and a key hub for private business aviation services in Europe. Delivery of the Direct Air Rapid Transit (DART) will improve connectivity between Luton Airport Parkway Station and the airport. Improving travel opportunities via national rail services stopping at Luton Airport Parkway is key to reducing the need to travel to the airport by private car.
- *Heathrow Airport* – located within London, the UK's global hub airport and a key gateway for business travellers and international visitors with interests in our region. Realisation of the potential to develop a new regional rail service linking Northampton – Milton Keynes/Bletchley – Aylesbury – Old Oak Common would

represent a step change in public transport connectivity for those requiring access to Heathrow Airport. Delivery of the Western Rail Access to Heathrow will improve connectivity for large parts of the Thames Valley, including Oxfordshire.

8.4. In addition we will work with adjoining Sub-national Transport Bodies and Network Rail to assess the need for improved surface access to the other international gateways that support our region including Stansted Airport, Birmingham Airport, East Midlands Airport (for freight) and St Pancras International.

Realising the Potential for Rail Freight

T31 We will work with Network Rail and all relevant Sub-national Transport Bodies to develop proposals that increase freight on the rail network with priority given to the following corridors:

- **Felixstowe to Nuneaton**
- **East West Main Line**
- **Southampton to West Midlands**

T32 We will work with Network Rail and all relevant Sub-national Transport Bodies to maximise the conveyance of construction materials by rail with priority given to the following corridors:

- **Midland Main Line – providing access into the region from aggregate sources in the Midlands**
- **Great Western Main Line – providing access into the region from aggregate sources in western England and Wales**

8.5. Our work to identify the pathways to decarbonisation has highlighted that freight and logistics is the largest contributor to carbon emissions, it is also potentially the most difficult to implement solutions to reduce carbon emissions.

8.6. Encouraging greater use of rail for freight and logistics will provide additional resilience for the business community, whilst also acting on the need to make progress with reducing the carbon emissions arising from the sector.

8.7. Rail is most effective when hauling loads between medium and long distances. Our study of the freight and logistics sector identified that currently a high proportion of road based freight involves trips over 200/300 km. Many of these movements are prime candidates for a shift to rail for the trunk haulage, with the final stage of the journey being delivered by vehicles powered by electricity or other low carbon fuels.

8.8. Unlocking the opportunity to grow the market for rail freight requires investment in infrastructure to provide the capacity and resilience to enable rail freight to be a more attractive offer for logistics companies. It will also require investment in facilities and the supporting network of Strategic Rail Freight Interchanges if we are to build on the current strength and growth of intermodal rail freight services.

8.9. The Heartland is uniquely placed to benefit from growth in use of rail freight given it is at the heart of the 'Golden Triangle' for logistics with many of the world leading distribution companies already operating national distribution centres here. Our

strategic infrastructure already accommodates significant freight flows linked with international gateways at Felixstowe, Southampton and London Gateway, with shippers forecasting long term growth in these flows in response to economic growth and the use of global supply chains. Forecasts for the sector consistently predict strong growth for intermodal freight and construction materials.

8.10. The 23 active rail freight terminals in our region already handle a mixture of containerised freight, construction materials, domestic waste, automotive and metals. The provision of additional floor space served by rail freight terminals acts to increase the attractiveness and competitiveness of rail versus road haulage.

8.11. Demand for rail freight is forecast to grow exponentially in the long term, driven by continued growth in deep-sea shipping markets, particularly at the Port of Felixstowe. Investment in the capacity of the Felixstowe branch line will enable 47-48 trains per day in each direction, however longer term there is a need to increase this further to at least 60 trains per day.

8.12. Bottlenecks on the Felixstowe – Nuneaton line mean that a significant proportion of containerised freight travels south along the Great Eastern Main Line, across North London and onward to multiple destinations. This leads to conflict with the need to provide additional capacity for rail passenger services, particularly along the North London line. The need to integrate rail passenger services between Shenfield and London along the Great Eastern Main Line as the full Crossrail service becomes operational will only exacerbate the need for additional rail freight capacity along the key corridors for rail freight movements.

8.13. The constraints on rail connectivity between Felixstowe and the Golden Triangle of Logistics places additional pressure on our strategic road infrastructure, with consequential implications for their operation and carbon emissions. Investment in rail freight will realise benefits on the strategic road network.

8.14. Whilst delivery of the Ely Area Capacity Enhancements currently planned will provide some additional capacity on the Felixstowe to Nuneaton corridor, further investment in that corridor will be required if rail freight is to realise its full potential.

8.15. In addition the East West Main Line has the potential to act as a catalyst for transformational change in the rail freight offer by:

- *Providing alternative routing*: trains operating between the Port of Southampton and Daventry International Rail Freight Terminal (DIRFT) could use the East West Main Line and thereby avoid the need to operate via Birmingham or London. Trains serving the Port of Felixstowe could use the East West Main Line avoiding the need to traverse the heavily-congested North London Line
- *Enabling rail delivery of construction materials:* as the transformational infrastructure investment at the heart of our region, the East West Main Line has the potential to enable delivery of aggregates by rail to freight terminals in our region. It offers the opportunity to directly support the delivery of planned growth in ways that reduces the pressure on local roads and deliver wider environmental benefits in the process

- *Growth in intermodal rail freight*: given the role East West Main Line has to play in supporting the realisation of economic opportunities there is the potential to develop new freight handling facilities along the corridor thereby providing businesses and communities with quicker access to goods, as well as providing new business and employment opportunities in their own right.

8.16. The need to meet the increased demand in construction materials required to enable delivery of planned growth within the region is another market where the scope for rail growth is significant. Making additional capacity available on the Midland Main Line as a strategic rail freight corridor is of regional significance.

8.17. In the west, containerised freight from Southampton, serving Daventry and the West Midlands is constrained by capacity issues between Didcot and Oxford, and along the West Coast Main Line. In addition, construction materials moved into the region from the Mendips and Wales make the Great Western Main Line a second strategic rail freight corridor for the region.

8.18. We will continue to work with the freight and logistics sector, along with Network Rail and the EWRCo to develop detailed proposals that will enable the potential for rail freight to be realised. Given the strategic nature of the rail freight movements we will work closely with adjoining Sub-national Transport Bodies and London to promote and prioritise investment in enabling infrastructure.

8.19. Specific opportunities that we will prioritise include:

- Identifying required enhancements along the Felixstowe to Nuneaton corridor, particularly between Bury St Edmunds and Ely, and in the Leicester area
- Exploring the potential benefit of providing a chord at Manton that would offer a route serving Felixstowe that would avoid the need to transit London
- Exploring the potential for an east-north chord at Bletchley that between the East West Main Line and the West Coast Main Line would again offer a route serving Felixstowe which would avoid the need to transit London
- Understanding the nature of existing capacity constraints between Bletchley and Milton Keynes and their possible infrastructure solutions, both pre and post HS2 to ensure freight requirements are taken fully into consideration.

Strategic Rail Freight Interchanges

T33 We will support the development of Strategic Rail Freight Interchanges where they support the ambitions of this strategy

8.20. Realising the full potential of the rail network to accommodate additional rail freight requires the availability of rail connected warehousing. These facilities range in size from Strategic Rail Freight Interchanges to smaller intermodal facilities.

8.21. The shortage and cost of land-supply for industrial storage and distribution in London may see more companies relocating their distribution centres in the Heartland.

8.22. We will work with partners and the freight and logistic sector to identify the need for additional Strategic Rail Freight Interchanges where these support the overall ambition for our region.

Supporting Road Freight

T34 We will work with Highways England, local highway authorities and the freight sector to ensure that strategic corridors for road freight and logistics are fit for purpose: priority will be given to the following corridors:

- **The M25/M1**
- **The A34 and M40 north of Oxford**
- **The A1 corridor (north of Huntingdon)**
- **The A14**
- **The A508 into Northampton**

T35 We will work with Highways England, local highway authorities and the freight sector to minimise the impact of road freight on local communities: in particular we will look to work with partners to use improved planning and the application of innovative solutions to achieve this outcome

T36 We will work with Highways England, local highway authorities and the freight sector to address the need for secure overnight lorry parking and their associated facilities

T37 We will work with local transport authorities and the freight and logistic sector to ensure the local servicing and support needs of the business community are met

8.23. This strategy acknowledges that road haulage will remain an important part of the freight and logistics sector.

8.24. We will work with Highways England, local highways authorities and the freight sector to ensure the key parts of the Strategic Road and Major Road Networks continue to support the movement of road haulage and thereby minimise the impact of road freight on local communities. A key issue in this regard will be ensuring the provision of adequate overnight parking for lorries and the associated facilities.

8.25. While the Strategic Road and Major Road Networks are crucial to the long distance movement of road freight, movement of goods to, and around urban centres is vital for the retail, leisure and cultural sectors. Failure to account of these requirements in the development of the local transport system will lead to increased congestion, deterioration in air quality and difficulties for businesses to operate efficiently.

8.26. As a centre of innovation in the UK we will harness the opportunity to trial new solutions that enable the servicing and support needs of the business community in our urban centres to be met. Priority will be given to the implementation of solutions that provide the required level of access whilst at the same time reducing the impact of freight and logistics on local communities and their environment.

9. Implementation

A Mechanism for Change

9.1. This strategy is the foundation on which we will plan the strategic development of the region's transport system. Ensuring its policies are implemented will be the key to its success.

9.2. The strategy sets out the need for change in order to deliver our vision for the region's transport system: change in the way we develop solutions to the issues to be addressed, change in the way we appraise the merits of individual proposals, and change in the way we plan for and deliver an investment pipeline.

9.3. This will require a whole-system approach which brings consideration of individual networks together as a single transport system: one that meets the expectations of its users – both individuals and businesses.

9.4. Ultimately delivery of specific proposals will remain the responsibility of individual infrastructure owners and service providers. Implementation at the regional level will complement and build upon their role, providing added value in three ways:

- Strategic influence – ensuring the regional voice shapes the development of national investment programmes, overseen by the Government and delivered by Network Rail, EWRCo and Highways England
- Co-ordination – providing the mechanism for developing and implementing solutions which offer most benefit at a regional scale
- Accelerating delivery – helping to ensure that schemes and initiatives which cross local authority boundaries are delivered efficiently and that the benefits for our communities and businesses are realised as soon as possible.

9.5. In identifying solutions for implementation it is important to take into account the opportunities and challenges created by decisions in other areas of public sector policy, including but by no means limited to consideration of proposals in the land use planning system. In the same way the choices made in respect of transport solutions need to support wider ambitions for place-making at the local level.

9.6. The COVID-19 pandemic demonstrated the ability to achieve fundamental shifts in travel behaviour at scale and at pace. Change, driven by necessity and if applied consistently at scale, is not only possible, but deliverable providing the imperative for change is compelling.

9.7. The pandemic also served to highlight the need to treat fixed and mobile digital infrastructure as integral components of a co-ordinated approach to providing individuals and businesses with access to services. Investing in the quality and resilience of digital networks will be crucial to sustaining long-term change in travel patterns (including a reduction in overall travel), and travel behaviours.

9.8. And in keeping with the whole-system approach, the need to de-carbonise our transport system highlights the importance of the investment made in the utility

infrastructure networks – in particular electricity supply networks and/or other low carbon fuels – being aligned with investment in our transport system.

Harnessing Innovation

9.9. We will continue to harness the opportunity created by the region being a centre for science and technology based innovation. The focus provided by the Government's Industrial Strategy – and in particular its four Grand Challenges – will encourage the development of new business models within the transport sector which both meet the need to improve connectivity and deliver environmental net gain.

9.10. We will build on the region's existing successes to continue to grow our global significance as a region of innovation, particularly in the key sectors of high performance technology, life sciences, creative and digital technologies and aerospace.

9.11. The business models operating in large parts of the retail and service sectors will undergo further change, quite likely at an accelerated pace in the aftermath of COVID-19. We will use this as the opportunity to embed fundamental change in travel demand and travel behaviour to the benefit of individuals, their communities and businesses.

Creating Confidence, Providing Flexibility

9.12. Investment in strategic infrastructure requires a long-term commitment at national and regional level. Maintaining and repurposing our existing assets requires investment – both revenue and capital. Developing and delivering proposals takes time and typically extends over a number of political cycles.

9.13. Fundamentally our approach to implementation has to generate confidence:

- For business investors - clarity that the transport system will provide access to the labour pool and to markets
- For the local authorities - certainty that the investment required to support planned growth will be available
- For local communities - reassurance that infrastructure will be delivered in a timely manner

9.14. At the same time our approach must also be flexible enough to actively encourage new solutions and business models to come forward, and to do so at pace.

9.15. This is a key challenge facing the transport system as we transition from a traditional approach to investment to the one required to achieve our strategic ambition for the region.

9.16. The timescales associated with strategic investment are such that proposals currently in the early stages of development may need re-evaluation in order to determine whether their benefits remain consistent with that strategic ambition. Where they are not, we will use our programme of connectivity studies to identify alternative proposals.

Connectivity Studies

9.17. Our programme of connectivity studies forms a key part of this strategy's implementation.

9.18. The development of the programme has been shaped by the information held in the Regional Evidence Base, together with responses to the Outline Transport Strategy. The programme identifies those parts of the region where there is a need to work with partners to identify the proposals that need to be taken into the investment pipeline for delivery.

9.19. Our approach to each study will ensure that the solutions taken forward support delivery of planned housing and economic growth, and doing so in a way that addresses challenges that already exist on the transport system. Each study will be jointly commissioned with partners. This will enable our partners to use the connectivity studies to identify the implications of future growth scenarios they are considering as part of their longer-term ambition for their communities. The studies will also enable the transport implications of choices in other areas of public sector policy to be considered. This is particularly important where new models of service delivery are being considered that would have the potential to significantly change future travel demand.

Accelerating Delivery of Commitments

9.20. Investment in the region's transport system has not kept pace with economic growth. The additional demand generated by the growth has resulted in the performance of our transport system deteriorating. Congestion has increased and reliability has decreased, as has the overall resilience of individual networks. This has a direct impact on the productivity of the economy and has implications for our residents as they travel.

9.21. Where the need for investment in our transport system has been established we will continue to work with infrastructure owners and service providers to accelerate the delivery of that investment. This includes committed schemes included in Highways England's Road Investment Strategy, EEH's Major Road Network programme and Network Rail's investment pipeline.

9.22. We will work with Network Rail, the EWRCo and Highways England to ensure that their investment programmes reflect the needs of our region. We support these infrastructure owners as they take individual proposals through their statutory processes into delivery.

10. The Investment Pipeline

A Co-ordinated Approach

10.1. A key benefit of a regional approach lies in the ability to provide a clear, prioritised view of strategic transport investments and to do so in a way that ensures investment in individual networks is co-ordinated in order to deliver on a shared strategic ambition.

10.2. The co-ordination of investment is all the more important given the crucial role that digital infrastructure, and indeed utility infrastructure, has to play in realising our strategic ambition for the region's transport system.

10.3. We will work with all infrastructure owners to ensure that their long term strategic planning activity is co-ordinated with our programme of connectivity studies. This will realise efficiencies and ensure we embed the need for a whole-system approach into our way of working across the region.

10.4. The programme of connectivity studies will ensure that regional priorities inform and shape the future development of strategic infrastructure networks that are the subject of cyclical reviews. These include:

- Network Rail's Rail Network Enhancements Pipeline
- Highways England's Road Investment Strategy
- EEH's Major Road Network Investment Pipeline
- Future Rail Franchise Specifications
- Digital Infrastructure
- Five-year Assessment Management Plans for utility infrastructure – in particular energy supply

10.5. The output from the connectivity studies –specifically the solutions identified – will establish the need for investment in infrastructure and services. Those solutions will be fed into the region's investment pipeline for subsequent development and delivery.

10.6. We will review the investment pipeline on a five-year cycle. This will enable the region to ensure that its requirements shape the investment programmes of Highways England and Network Rail. It will also provide our partners with the confidence to allocate resources to develop detailed proposals for implementation.

Capacity and Capability

10.7. A review of the infrastructure delivery process, undertaken in collaboration with our partners, has identified a number of 'pinch-points' where lack of access to specialist skills and knowledge introduces risk into the development and delivery of individual projects. Experience suggests that more efficient management of programmes and scheme development could reduce overall costs by as much as 20%. Managing this risk will represent better value for money to the public sector, as well as creating greater confidence within the community that proposals will be delivered in a timely manner.

10.8. We will therefore establish a 'centre of excellence': a regional resource which will provide our partners with access to the specialist skills and support required to address the identified 'pinch points'. Access to this resource will support our partners realise efficiencies that will help accelerate the delivery of investment and reduce costs.

10.9. The establishment of a regional 'centre of excellence' accessible to all partners will ensure the knowledge and experience accumulated through the development of

individual proposals is retained within the region. Enabling all partners to have access to that accumulated knowledge will enable the benefits to be applied more widely to their own proposals.

Delivery of the Pipeline

10.10. The region's investment pipeline (published alongside this strategy and available on our website) establishes the need for investment in order to support the delivery of planned growth. Realising that growth will in turn be dependent upon securing the funding and/or finance to enable the region's investment priorities to be developed and then delivered.

10.11. A combination of public and private sector funding will be required, as will a mixture of capital and revenue investment.

10.12. Adopting a co-ordinated approach to the development of the investment pipeline and its delivery will realise efficiencies by enabling a more effective use of the resources available to develop proposals and secure required permissions.

10.13. The specialist skills and accumulated knowledge held within the regional 'centre of excellence' will supplement existing skills available to partners. This addresses the risks previously identified by those partners that are associated with the development and delivery of investment proposals.

Regulation

10.14. As part of whole system approach to the development of the region's transport system we will keep under review the need for change in the regulatory regime governing the sector.

10.15. Where our work identifies benefit from seeking a change we will work with other Sub-national Transport Bodies and Government to make that case in a timely manner.

Investment Framework

10.16. This strategy provides clarity on where investment in strategic infrastructure and services is required, supporting the work of local authorities and growth boards as they look to plan and deliver planned growth in the longer term.

10.17. It also provides the foundation for a conversation with institutional investors with regards to securing long-term commitments to invest in the region. We will work with the investment sector to develop a long-term investment framework, one that enables institutional investors to work with the region to secure the long-term strategic ambition of the region.

- ENDS -