The Growth Corridor as an accelerator for the UK’s economy in a post-Brexit landscape makes sense. Nowhere in Britain is there such a concentration of new thinking, entrepreneurs and great places to live with immediate access to an outstanding natural environment. Investment here will have a strong and easy ripple effect across the UK. It must be central to our plans to grow the national economy.

Already, The Growth Corridor is ahead of the curve, connecting prestigious research and academic institutions, including more than 10 universities, with a dynamic business base. It’s renowned globally for its science-based industries.

Home to world-leading research, from the Cambridge Stem Cell Institute through to the development of autonomous vehicles and prototype quantum computers, The Growth Corridor is an incubator and test bed for innovations and technological advances that are changing the way we live, work and relate to one another. Its renowned Life Sciences cluster is where discoveries and inventions are transformed into treatments and cures for disease. Its record in pioneering research and development is second to none, with rocket and satellite testing in the space cluster around Harwell Science Innovation Campus, to the Open University in Milton Keynes which has taught over two million students worldwide.

What it now needs is a strong vision to ensure further growth is managed in a way that maximises opportunities over the next 30 years, capitalising on regional diversity and expanding its innovation ecosystem to new centres to benefit more people. Adopting a bold, ambitious economic vision will ensure that by 2050 The Growth Corridor will not only rival the strongest global competition, it will be an accelerator for the UK economy.

Why is The Growth Corridor special?

- It’s a great place to live: It already has four out of the UK’s top 10 best cities and towns to live and work and residents and workers have access to a superb natural environment.
- It’s smart: In Oxford and Cambridge it has the two top ranked universities globally. Its scientific assets and highly skilled workforce are the envy of the world. The highest proportion of residents in the UK with a degree or above live here.
- It’s entrepreneurial: Two of its cities rank in the UK’s top five for business start-ups and every year hundreds of knowledge intensive businesses are born out of university research and expertise.
- It’s innovative: The tech industry shake-up starts here. It has the most patent applications per 100,000 residents in the UK and is home to the top three ranked Local Enterprise Partnerships (LEP) in England for innovation.
- It’s fast growing: The Growth Corridor contributes £90.5 billion to the UK economy and has three of the top five fastest growing towns and cities for GVA growth. The number of people here is growing too - with four of its cities amongst the UK’s top 10 fastest growing.

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2, GLASGOW: IS WHERE DISCOVERY AND CITIES TO WORK IN
3, HTTP://WWW.BBC.CO.UK/NEWS/EDUCATION-41160914
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VISION FOR THE GROWTH CORRIDOR IN 2050

In 2050, The Growth Corridor is performing as powerfully as Silicon Valley, putting scientific research at the heart of the national economy. It is a magnet for global investment and talent, galvanising technological advances that will change the way we live, work and communicate. It has generated an additional 700,000 jobs and a £163 billion increase in annual GVA.10

The Growth Corridor is the most desirable place to work in the UK. New communities have spread rapidly across the region in response to improved connectivity, from the network of east-west rail and road links to Corridor-wide provision of the best available broadband and telecommunication technologies. Each contributes to The Growth Corridor’s distinct entrepreneurial character, with its own identity, and the network of new incubator spaces, science parks and Enterprise Zones provide inspiring workplaces that reflect their specialisms.

Good spatial planning has ensured a highly skilled labour market available for all key sectors. The Corridor is pursuing sustainable and inclusive growth, focused on developing the skill sets of its residents and the inward migrating workforce, and there is good provision of high quality affordable homes built to meet demand.

As a result, The Growth Corridor enjoys diverse ethnicity and a youthful profile, which supports the variety and resilience of its existing knowledge-intensive sectors, including Digital Creative and Life Sciences, as well as new world leading specialisms in the development and production of autonomous vehicles, satellites and quantum computers.

Within The Growth Corridor, development is planning and community led. This means at the macro level, investment is directed towards sustainable patterns of growth to avoid dormitory settlements, and at a micro level, built and natural assets are protected and enhanced and economic activity encouraged at all scales.

The Growth Corridor offers an attractive lifestyle and a lively cultural offer, providing places people can imagine a future for themselves and their families. New development is welcomed by existing communities because urban extensions and garden villages are well-connected and designed for active lifestyles. The region’s countryside is recognised as one of its strongest assets, and natural landscapes are protected and conserved, providing contact with nature and the changing seasons, to improve wellbeing.
The high levels of growth have been fuelled by the expansion of the knowledge-based economy, which has evolved over more than five decades. At the heart of this growth have been the world-class universities, as well as a network of science parks, research institutions, charities and incubators. The outstanding breadth and depth of the scientific assets and credentials attract the very best talent and the thriving entrepreneurial climate has led to the creation and growth of some of the world’s most important science and technology companies, many of which are university spin-outs.

The impact of Oxford and Cambridge Universities in this process cannot be underestimated. Benchmarking research ranks them as having helped to create and support two of the world’s top five most successful technology innovation ecosystems, along with the Massachusetts Institute of Technology (MIT), Stanford University and Imperial College London.

The innovation ecosystem continues to be a major draw for foreign direct investment. For example, the opportunity to interact with the research base has helped to attract 72 foreign direct investment projects to Oxfordshire in the past two years alone, supporting in excess of 4,400 jobs, of which over 40% were higher value.

Success has also been built on The Growth Corridor’s proximity to London. All its cities are within an hour’s commute to the capital, which provides finance and access to markets. In contrast, The Growth Corridor has access to development land and a strong advanced manufacturing base, as well as a rich seam of talent. They are closely linked yet complementary to one another.

A BOOMING ECONOMY

The Growth Corridor supports some 1.8 million jobs and contributes £90.5 billion of annual GVA to the UK economy. This success is a major draw for highly skilled workers. As a result, its population and employment base have been growing at twice the national rate for more than a decade.

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“The Growth Corridor is best understood as an alignment of highly successful, fast growing and productive towns and cities, each with a highly skilled labour force and with global strengths in knowledge-led business sectors”

Covering approximately 18,000 square kilometres (6,600 square miles), The Growth Corridor is around twice the size of San Francisco’s Silicon Valley. Its boundaries are not fixed.

To the north, The Growth Corridor comprises the limestone hills of the Cotswolds and Northamptonshire Uplands, and to the south the chalk ridge stretching from the Berkshire Downs through the Chilterns into East Anglia. These outstanding landscapes are highly productive and are integral to the Corridor’s exceptional quality of life. Between these upland areas is a broad lowland vale stretching from Oxfordshire in the south-west to Cambridgeshire in the north-east. The central part of The Growth Corridor includes Northamptonshire, Bedfordshire, Buckinghamshire and Hertfordshire.

The Growth Corridor includes the historic university cities of Cambridge and Oxford, thriving Milton Keynes, as well as Northampton, Luton, Stevenage and Swindon. London lies immediately to the south-east and its radial transport routes, including several motorways and rail lines, provide good connectivity to the capital, the Midlands and the North. Luton International Airport lies within the Corridor and London Stansted and Heathrow airports are in close proximity.

Many of the 3.3 million residents enjoy a high quality of life. The area’s network of historic cities and liveable towns have cultural and retail offerings of national significance and provide many high quality schools with ‘outstanding’ OfSTED ratings. These urban centres are set in attractive rural hinterlands, which include the Cotswolds and Chilterns Areas of Outstanding Natural Beauty. The Growth Corridor’s wealth of built and environmental assets, from historic buildings, parks and gardens, to country parks, rivers, forests and canals are integral to its success as a major visitor destination. The quality of the lifestyle on offer also acts as a strong magnetic pull for inward investors and the world’s brightest talent. Furthermore, its natural environment sustains a highly productive agricultural sector and supports innovative agri-tech and clean energy research and solutions.
The Growth Corridor’s economic success to date rests on the rapid growth of knowledge-intensive industries and their supply chains. These have clustered in the region to access the highly skilled workforce and take advantage of opportunities for research collaboration with world-leading institutions, including the unique aerospace-related capabilities of Cranfield University in Central Bedfordshire.

This concentration has created an innovation ecosystem with enormous potential. This should inform the spatial planning of housing and infrastructure to achieve sustainable patterns of development.

Looking forward, public and private stakeholders will need to work in partnership to encourage further growth by providing land and premises for businesses, as well as delivering much-needed housing that spreads the benefits from the heart of these clusters.

The growth sectors are at different stages of maturity but all have the potential to propel the UK to becoming a global leader, thereby delivering against the aspirations of the Government’s Industrial Strategy and providing responses to the ‘Grand Challenges’.

The opportunities are many and The Growth Corridor is uniquely well equipped to exploit them, facilitated by accelerating processes of convergence within and across its innovation ecosystem.

Some of the Corridor’s key growth sectors are discussed in the following sections.

**Industrial Strategy Grand Challenges**

- **Artificial Intelligence & Data Economy**
- **Clean Growth**
- **Ageing Society**
- **Future of Mobility**

**The Growth Corridor’s key growth sectors are discussed in the following sections.**

**THE INNOVATION ECOSYSTEM**
Growth Sectors

LIFE SCIENCES

Leading the healthcare revolution

Two of the largest Life Sciences clusters in the world have developed around Oxford and Cambridge. These clusters have emerged out of pioneering research, stretching back to Crick and Watson’s discovery of the double helix model of DNA in the 1950s.

Today, the clusters span the whole range of Life Sciences, from new drug discoveries to digital health, precision medicine and regenerative medicine. All of which have the potential to revolutionise healthcare provision, helping the UK meet the demands of a growing, ageing population.

The Cambridge Life Sciences cluster comprises some 350 companies. Of these, 98% are SMEs, and a third have been established in the last five years. The cluster is mature, yet is growing at a fast rate. Between 2014 and 2015 alone, the combined turnover of these companies rose by 7% to £2.6 billion, whilst total employment is forecast to increase by 5% to 12,512 by 2021.

The prospect of working alongside world-renowned hospitals and university researchers - highlights the potential for expanding the cluster to a wider geographic region.

Improved east-west links present an opportunity to open up a new wave of medical research by improving collaboration between different technologies and capabilities.

Spreading the agglomeration effects: The success of the Stevenage Bioscience Catalyst (SBC) - the first open innovation campus in the country and host to over 40 companies and university researchers - highlights the potential for expanding the cluster to a wider geographic region.

Improved east-west links present an opportunity to open up a new wave of medical research by improving collaboration between different technologies and capabilities.

Case study: AstraZeneca

Anglo-Swedish pharmaceutical giant AstraZeneca is due to open a new £500m strategic research and development centre and global corporate HQ in 2018. Situated at the heart of the Cambridge Biomedical Campus, it will become the company’s largest centre for oncology research, as well as housing scientists focused on respiratory, cardiovascular and metabolic diseases. Its decision to invest in the area has been attributed to the presence of the University of Cambridge, one of the world’s leading Life Sciences research centres, and Addenbrooke’s Hospital, an important centre for clinical trials for the NHS.

Key businesses:


What’s the potential for further growth?

‘The strength of the Cambridge bioscience cluster confirms the view held by many that it is rapidly becoming the most prominent cluster of its kind in Europe and is making a significant contribution to the growth of the United Kingdom economy as a whole’


The potential for further growth rests on extending the benefits of clustering to other parts of The Growth Corridor and tapping into new areas of medical research by improving collaboration between different technologies and capabilities.

New science to create new patient pathways: The digital health sector is the UK’s fastest growing Life Sciences sector, with a 28% annual growth rate. Through the convergence of digital and genomic technologies, enhancements to the efficiency of healthcare delivery, as well as the development of more personalised and precise medicines, are forecast to generate £50 billion turnover by 2030.

The pre-existing strengths of digital health across The Growth Corridor provide the opportunity to create an innovation ecosystem that brings investment to benefit the whole patient pathway, from prevention, diagnosis and treatment to post-intervention support and follow up.

In order to exploit these opportunities, open innovation models are increasingly being favoured in which big pharmaceutical companies work within collaborative networks of researchers and small companies. This shift in focus is increasing the imperative for clustering, and the Arc’s Life Sciences sector is well placed to take a lead in emerging segments, presenting further supply chain opportunities across the UK.

In this regard, the Growth Corridor can pioneer entirely new industries in healthcare, leading on the types of high-risk Life Sciences ‘moon shot’ projects being advocated by the government through its proposed Health Advanced Research Programme.
Growth Sectors

DIGITAL CREATIVE

Taking a quantum leap

The Growth Corridor is a major hub for the UK’s fast growing Digital Creative sector. Its specialisms include computer games design, software development, cybersecurity, big data, high performance computing and capabilities in television and film, broadcast and production and sound. Fuelled by the area’s strong scientific base, and drawing on talent from the Corridor’s network of universities, this sector continues to boost the UK economy.

Tech City UK identifies that 56,588 people are employed in the Oxford and Cambridge Digital Creative clusters, generating an annual GVA of approximately £2 billion. These clusters are growing quickly, with 17% and 20% increases in business numbers respectively between 2011 and 2015. Similarly, Milton Keynes experienced a 16% increase in Digital Creative sector employment between 2015 and 2016 alone.

Sector growth is driven by an enviable track record in successful start-ups, dating back to the establishment of Acorn Computers in 1978 to more recently established companies like Sophos, which achieved the largest ever IPO for a UK software company in 2015, and gaming giants Rebellion and NaturalMotion.

Case Study: Pinewood Studios

Pinewood and Leavesden Studios lie at the heart of the cluster with the skills base supported by the world’s best film school, the National Film and TV School in Beaconsfield. Pinewood Studios is one of the most recognised and respected brands in production. The clustering of facilities, services and skills, together with a strong track record of supporting productions to deliver to time and budget which is critical in today’s economic climate, makes Pinewood the global leader for major productions. It is also at the forefront of the development of new platforms that are enabling the application of film and creative content across the industrial spectrum. As such, it is an essential component of the core UK film industry, which generates an estimated 43,900 full time equivalent jobs (FTEs) and contributes £1.6 billion to national GDP.

What’s the potential for further growth?

Smart technology is set to continue to transform the way we work, how we live and how we choose to communicate with each other.

The Growth Corridor’s research and development capabilities place it at the forefront of advances in the Internet of Things; Augmented/Virtual Reality; Autonomous Agents; and Cognitive Computing. Advances in each of these technologies would provide significant benefits for all sectors, and have the potential to disrupt business models and markets on a global scale. However, quantum computers perhaps present the most exciting opportunity, as they could solve problems it takes a conventional computer longer than the lifetime of the universe to solve.

The University of Oxford is leading the UK’s most significant work in the development of a scalable networked quantum computer through the Networked Quantum Information Technologies Hub (NQIT). The realisation of a practical quantum computer would be one of the biggest scientific and engineering achievements of this century and has the potential to generate a £1 billion future industry for the UK, with new industries and supply chains emerging to service it.

Key businesses:


‘Oxfordshire has a great opportunity to lead on a new economy for the UK: the National Quantum Information Technologies Hub is working on spinning out companies and devising an engineering company which would help to provide some of the advanced solutions required for quantum computing for which there is currently no supply chain’

Oxford Transformative Technologies Alliance (2017) Science and Innovation Audit

The High Performance Technology and Motorsport (HPTM) cluster is a unique concentration of industries that specialise in the design and manufacture of innovative technologies, engines and products, incorporating low carbon engineering and the application of lightweight materials and composites. Its origins can be traced back to before and immediately after World War II and reflect a combination of Government support for aircraft research and manufacture during the interwar period, as well as a shift to aerodynamics and weight reduction in early professional motorsport and racing on designated circuits.

Today, the culture of innovation and entrepreneurship, combined with high skills levels, has helped to establish a mature HPTM cluster of some 4,000 companies that employ an estimated 36,000 people in the heart of The Growth Corridor. The cluster adds £10 billion to the UK economy and is home to eight of the 11 Formula One teams, as well as iconic businesses like Cosworth, Prodrive and Millbrook Proving Ground.

The world’s best training, research and testing facilities
The culture of innovation and entrepreneurship in the sector has been nurtured with the support of a range of key institutions. The world famous Silverstone Circuit site at the heart of the cluster, whilst Cranfield University, the National College of Motorsport, and Silverstone University Technical College provide world-class training, research and testing capabilities. In addition, Millbrook Proving Ground, in Central Bedfordshire, provides an extensive array of tracks and laboratories that are used by international automotive manufacturers for testing purposes.

Case Study: Silverstone
Silverstone Park is home to 40 HPTM companies, each of which has been drawn by the profile raising address and the cluster of specialist skills and capabilities in the area. In addition to opening up potential business collaboration opportunities, tenants are able to benefit from having access to testing and R&D facilities at Silverstone circuit, the workforce training capabilities of the National College of Motorsport, Britain’s only dedicated sub-contract inspection metrology centre and a rapidly growing Enterprise Zone.

What’s the potential for further growth?

Zero emission vehicles
Looking forward, the cluster continues to adapt and to demonstrate global competitive advantage as motorsport evolves spatially to new markets like China and South America, as well as in response to regulatory change relating to climate change in particular. This has real growth potential in relation to the development of cleaner, low carbon and energy efficient products and solutions. One such example of this is the research being undertaken by the Faraday Institution that will help to ensure the UK sits at the forefront of the design, development and manufacture of batteries for the electrification of vehicles.

Autonomous vehicles
The Growth Corridor is also at the forefront of research and development of autonomous vehicle innovations, a sector that has been identified by the Government as having the potential be worth £28 billion to the UK economy. Technology being developed by Oxbotica, a recent artificial intelligence spin-out from the University of Oxford’s Mobile Robotics Group, is being used in a trial to deploy 40 self-driving pods in the UK Government’s ‘Driverless Car Challenge’. In addition, the opening of the new Multi-user Environment for Autonomous Vehicle Innovation Research Facility at Cranfield University and the development of a range of different test areas by Millbrook Proving Ground and Remote Applications in Challenging Environments (RACE) are further enhancing The Growth Corridor’s autonomous vehicle research and development capabilities.

In combination, the technological advances in motorsport and autonomous vehicles in The Growth Corridor have the potential to make a significant contribution towards the Government’s Industrial Strategy Grand Challenges of artificial intelligence, clean growth and mobility.

‘The intensely competitive nature of motorsport - driven by its link to “the spectacle” and “the business of winning”, and the constant imperative to innovate, improve and solve complex technological problems - has helped to mould an industrial ecosystem which is full of paradoxes’.

Growth Sectors

AEROSPACE

The Growth Corridor’s Aerospace sector has the potential to be a major contributor to UK economic growth. Aircraft manufacturing and maintenance is already a major employment generator, and space technologies is growing at a fast pace, driven by advances in artificial intelligence and big data.

Aviation:
The aircraft manufacturing and maintenance sector is clustered around Luton International Airport. It is one of the top three hubs in Europe for business aviation services, being an access point for international investors. It is estimated that the airport itself supports 9,400 direct jobs. Approximately 15% of these jobs are in manufacturing companies like GKN Aerospace Transparency Systems and Monarch Aircraft Engineering. Its strategic importance as a focus for aviation service economic activity is being further emphasised by the recent award of Enterprise Zone status.

Case study: Cranfield University
Cranfield University, in Central Bedfordshire, drives the sector’s growth and is one of the only universities in the world to own and run an airport. On site facilities include the National Flying Laboratory Centre, the National Wind Tunnel Facility and the recently opened Aerospace Integration Research Centre. In addition, the sector will soon benefit from the opening of the Digital Research and Technology Centre. This centre will lead research and development into game-changing artificial intelligence technologies aimed at integrating drones into civilian airspace, increasing the efficiency of airports, creating safe shared airspace, and increasing the reliability of aircraft.

Space:
Harwell Campus in Oxfordshire is the UK’s gateway to space. The world-renowned science, innovation, technology and business campus is home to nearly 60 space companies, including Lockheed Martin, Thales Alenia Space and Elecnor Deimos. This makes it the largest space cluster in Europe.

The companies within the cluster benefit from being co-located with:
• The European Space Agency’s (ESA) Business Incubation Centre - supporting selected space application start-ups;
• The European Centre for Space Applications and Telecommunications - the ESA’s first technical centre in the UK supports activities related to telecommunications, integrated applications, earth observation, exploration, climate change, technology and science;
• The Satellite Applications Catapult - a not for profit research, innovation and technology company with the vision to accelerate growth in the UK space industry through the exploitation of space applications; and
• Rutherford Appleton Laboratory (RAL) - RAL carries out world-class research and technology development with involvement in over 210 space missions.

Not only is The Growth Corridor an ideal location for servicing the UK space industry, the presence of ESA at Harwell also positions it as an ideal location from which to service the European space market.

Key businesses:

What’s the potential for further growth?
Aviation:
In the UK alone, demand for national and international flights is forecast to almost double to 45 million passengers in 2050. The continued upward trend in global demand for air travel presents significant opportunities for The Growth Corridor in both the manufacturing and maintenance of aircraft, as well as in the development of innovative solutions to improving flight efficiency and safety.

Space:
The growth potential for the space sector is exciting. The UK Space industry’s target is 10% of the global space market by 2030. This should mean £40 billion per year and 100,000 jobs in the UK. The Growth Corridor will have a central role to play in achieving these targets.

Increasing numbers of small satellites with shorter lifetimes are driving rapid replacement rates and accelerated development of sensors. A UK spaceport could offer launch facilities for these satellites, anchoring the value chain in the UK. As the spaceport is likely to be at a remote location, Harwell would be a more accessible location for application and supply chain development, supported by the recently announced investment in a National Satellite Test Facility on site.

‘Harwell is a place which matters globally. It’s a place where the impact of what has been discovered could matter for the rest of the world’.
Magali Vaissiere, Head of European Space Agency’s ECSAT
Looking forward, opportunities for innovation (products and services) exist at the interfaces of technologies being developed by each of the growth sectors. For example, quantum computers will enable smart infrastructure to intelligently optimise and direct the route of autonomous vehicles, and advanced materials being developed by the Aerospace and HPTM sectors have the potential to be incorporated into the development of medical devices. The aim now is to create the right conditions to support the incubation, testing and commercialisation of innovations that will transform society and accelerate the UK economy.

Creating the right conditions for growth

The Growth Corridor has become a test bed for innovation and new thinking. Clustering within the Corridor it has created a world-class ‘living laboratory’, where different technologies can be deployed together to address common challenges, such as healthy living, efficient mobility and national productivity.

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It is vital that we consider the quality of places, infrastructure and the environment, as well as the ability of people to take advantage of opportunities by ensuring that training and education programmes are aligned with current and future employer requirements and spatial choices do not unnecessarily exclude people from key sectors.

UNLOCKING THE POTENTIAL

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Creating the right conditions for growth

The Growth Corridor currently operates principally as several independent sub-regions, extending outwards from London along radial routes. Increasing the connectivity between these existing transport corridors, through improved east-west rail and road infrastructure, has the potential to create a large cross Corridor functional economic area that will aid the spread of clusters, the flow of highly skilled workers and, ultimately, the convergence of technologies.

In achieving this, The Growth Corridor will become an extensive science-based cluster, stretching from London to Cambridge, Milton Keynes and Oxford. Once developed, this could compete with the largest clusters in the world, including the USA’s Silicon Valley and Life Sciences Corridor.

Major investment will enable The Growth Corridor to achieve transformational growth; it will become a catalyst for the UK economy in a post-Brexit era.

However, growth needs to be planned in a sustainable manner, balancing economic, social and environmental needs. Without a balanced approach there is potential to undermine the very strengths and assets the area is trying to promote. Unless we create places where people and businesses want to locate, because of the quality of the environment, of life and of the social interactions that they offer, economic growth will be stunted and investment poorly allocated.

It is vital that we consider the quality of places, infrastructure and the environment, as well as the ability of people to take advantage of opportunities by ensuring that training and education programmes are aligned with current and future employer requirements and spatial choices do not unnecessarily exclude people from key sectors.

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As outlined, the potential of The Growth Corridor is huge. However, achieving such levels of forecast growth is not a given. There are challenges to economic growth that will need to be addressed if the Corridor is to reach its potential.

The challenges

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Avoiding a skills shortage

The Growth Corridor has one of the most highly skilled workforces in the UK, yet skills are potentially the scarcest resource in delivering the growth opportunities for the area, for developing new technologies and realising their extended benefits. With some of the lowest unemployment rates nationally, and consistently high rates nationally, and consistently high investment capital for start-ups and scale-ups, the Corridor’s high tech skills pipeline is paramount. The availability of skills is also important for attracting inward investment.

Although the universities, research institutes and high tech businesses in The Growth Corridor are a major draw for UK and global talent, business surveys conducted by the LEPs highlight that the potential of the knowledge-based sectors is already being constrained by skills shortages, including in advanced IT and engineering. In the medium to long term, skills for replacement and new jobs will increasingly require higher skills attainment, particularly in science, technology, engineering and mathematics (STEM) disciplines.

Fund now to avoid ‘brain drain’

The future economic success of The Growth Corridor relies on the ideas, knowledge and talent of its people. Universities are central to building this capacity, driving new thinking and nurturing emerging growth sectors. It is vital that the institutions that have helped support the birth and growth of the Corridor’s clusters in turn have the support they need to retain their global position in leading research that drives the commercialisation of technological advances.

Funding innovation can be risky and costly, outcomes are often uncertain and it might not always be immediately obvious who will benefit. Access to finance, as well as research support, will help businesses to offset risk and innovate more.

The arguments for public support for innovation have been widely accepted by the UK’s global competitors. As a result, the UK faces stiff competition for talent and investment. Without an adequate flow of research funding from the government, the UK’s global competitors will draw for UK and global talent, undermining future business performance.

Housing affordability

With high levels of labour market participation, The Growth Corridor is nearing full employment. The relatively low increases in housing completions compared to the growing demand means that affordability is increasingly a problem.

Analysis undertaken for the NIC by Savills shows that the average ratio of house prices to earnings across the Corridor was 9.2 in 2015, substantially higher than the England average of 7.6. Furthermore, the affordability gap is widening fast, having risen from 8.5 in 2014 and 7.9 in 2013. The same pattern is true for private rental stock, particularly in larger urban areas.

Without housing delivery to meet demand, increasing numbers of workers will have to travel significant distances to access employment, affecting quality of life and placing additional strain on the transport network. These pressures not only threaten the future competitiveness of existing businesses, but if not resolved, they also risk discouraging businesses and workers from outside the area from locating and investing in The Growth Corridor.

Better connectivity

The success of The Growth Corridor’s towns and cities has put transport networks under strain, leading to significant levels of congestion. If left unchallenged this will prevent access to employment opportunities and undermine future business performance.

Outside of The Growth Corridor, better rail connections to London and its international airports, as well as the east coast ports, are a priority. Whilst commuter services are generally fast and frequent, the forecast economic growth to 2050 will increase rail demand further. There are significant bottlenecks that will constrain growth. Without addressing these, higher growth might not be easily accommodated.

Fast internet access is now considered an essential factor in the development of a digital economy and should be considered a given for world leading clusters. However, ultrafast broadband coverage is patchy across the Corridor. Whilst Luton (92.9% of properties) and Cambridge (91.8%) are ranked 2nd and 3rd nationally for the percentage of properties with ultrafast broadband, Milton Keynes is ranked 62nd out of 63 UK cities, with a penetration rate of just 12.9% and rural areas lag even further behind.

The space to grow

The availability of affordable and relatively low cost commercial floorspace, together with obtaining finance, are frequently cited in growth sector business surveys as being constraints to growth in the Corridor. The limited supply of Grade A standard laboratory and incubator space is also perceived to be a constraining influence.

Analysis of the property market by Savills has highlighted that there is growing demand for office and industrial space in the Corridor. Signals suggest that supply is not responding sufficiently to meet demand, even when rental levels per square foot are increasing. Savills estimate that, based on past trends, demand for office space will exceed total supply in the next five to 10 years. Linked to this, continuing sharp increases in asking rents is likely to impact on productivity and the competitive edge of key sectors.

Housing affordability
Much of the UK Government’s and National Infrastructure Commission’s (NIC) focus to date has been on the delivery of housing and infrastructure to support economic growth in the Corridor. Creating the right kind of infrastructure in the right places, at the right time will undoubtedly enable economic growth. However, it is only part of the solution.

The Growth Corridor has enormous potential to become an inter-connected city region that can drive UK economic performance and deliver innovations and technologies that can catalyse growth in lagging regions elsewhere in the country. With a world-leading innovation ecosystem in place, transformational economic growth forecasts can be achieved.

However, in order to achieve this growth, significant investment will be required in the following areas:

**Skills**
- Aligning training provision with current and future employer requirements is key to addressing skills gaps and shortages going forward. Working in partnership with employers, trade unions, colleges and training providers, employers will be required to drive the design and delivery of skills solutions. It will also be important to highlight the opportunities available by inspiring young people to pursue particular career paths. Programmes involving employers in education and boosting the take-up of apprenticeships are key to achieving this, and lifelong learning is required to upskill people once they are in the workforce.

**Connectivity**
- Investment in east-west connectivity as well as key interchanges will allow The Growth Corridor’s transport systems to work as proper networks, providing improved connectivity to other major centres of growth for all localities across the Corridor, as well as to London and further afield. Significant investment is also required to address last mile congestion around city and town centres, as well as to the locations of knowledge-based growth sectors. Improved connectivity will reduce congestion, facilitate the spread of agglomeration effects linked to individual clusters, and help to improve linkages between different sectors. A comprehensive approach to transport and ultrafast broadband connectivity will need to be implemented to ensure that all sections of The Growth Corridor and beyond are able to benefit, and to reduce overheating in particular locations.

**Enterprise**
- In order to achieve sustainable economic growth, the Corridor’s enviable record of business start-ups and scale-ups must be continued, through for example, improved provision of incubator and grow-on facilities, business advice and access to finance. Linked to this, there is scope to increase levels of knowledge transfer between universities and the business community to enable the commercialisation of ground-breaking innovations. Continuing investment in hard and soft infrastructure is required to facilitate these processes.

**Investing in science, research & innovation**
- The Growth Corridor is the main driver of innovation in the UK, and the support infrastructure for innovation must receive continuing investment if the country is to achieve economic growth and stay ahead of its competitors. Investment is needed to help reduce the risk associated with innovation. The focus for investment should be in supporting local hot-housing of ideas and their exploitation, encouraging and facilitating knowledge transfer between universities and the private sector, and creating the right networks and infrastructure so that new technology created in universities and research institutes results in new manufacturing facilities and linked supply chain opportunities across the whole Growth Corridor and beyond.

**Employment land & premises**
- Investment will be required to extend the agglomeration effects of the clusters to new locations within The Growth Corridor. The creation of Science Parks, Enterprise Zones, Local Development Orders and incubation facilities, supported by knowledge transfer from the Corridor’s universities, has proved successful in achieving this. Continued investment in such infrastructure, including linked transport networks and ultrafast broadband, and innovative approaches to placemaking are required to enable new and sustainable patterns of growth across the Corridor and avoid the creation of unbalanced dormitory settlements.
The world we live in is challenging. We need solutions to a rising global population and finite resources, climate change and emerging health crises.

The Growth Corridor is already a global leader in science-based innovation and technology. Bringing the smartest minds together and connecting different skills and expertise will help the UK to meet these challenges.

Investing in the Corridor, against the uncertainties of Brexit, is one of the surest ways of propelling the UK economy, providing growth opportunities for the country as a whole. Here we can incubate new ideas that will alter the way we live, work and relate to each other.

By 2050, it will provide a springboard for growth that will create 700,000 additional jobs and generate a £163 billion increase in annual GVA. The impact of investment here will have a far-reaching effect.

Achieving this level of transformational growth will require significant investment, to overcome infrastructure challenges and exploit opportunities presented by the convergence of technologies. This investment will be focussed on, but not limited to, landscape led placemaking; skills development; funding for science, research and innovation; the delivery of new transport links and networks; and support for the commercialisation of ground breaking technological advances.

The ambition to deliver sustainable economic growth across the Corridor is supported by collective intent. This shared intent, where partners actively recognise the need for cross-corridor alignment and shared working across boundaries, will allow the early progression of a consistent, high level approach to prioritisation and action planning.

The Growth Corridor’s LEPs, working in partnership with public and private stakeholders, will lead the development and implementation of local industrial strategies for the area. These strategies will build on the vision set out in this document, identifying the essential infrastructure and economic development investment priorities that will be required to deliver transformational growth.

The only limit to the potential of the Corridor may be our imagination.