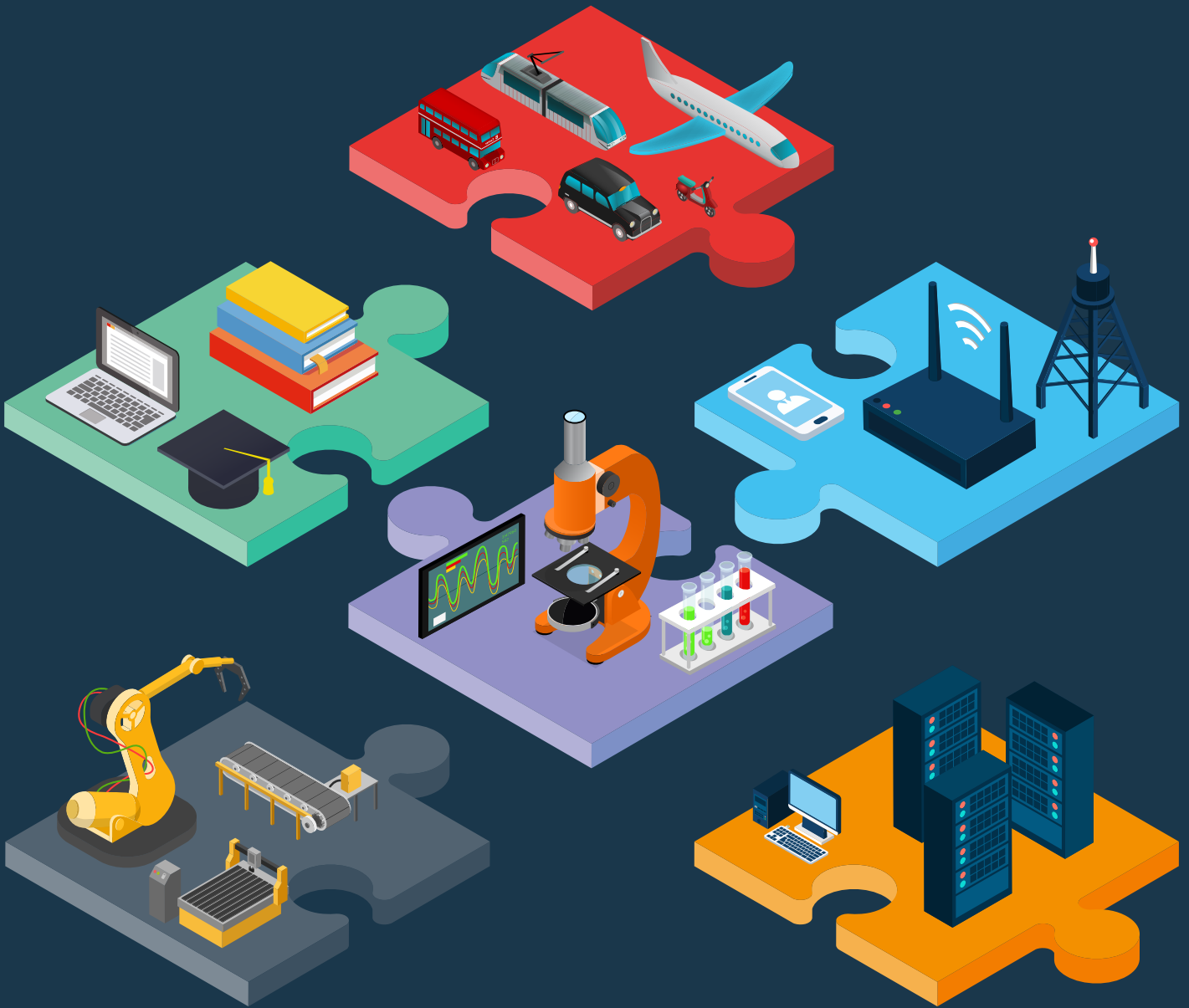


Leeds City Region Knowledge Economy



Introduction

The UK's knowledge economy is critical to our competitive position on the global stage. We have a strong record of outperformance, despite comparatively lower levels of both public and private R&D and innovation support investment than many of our competitors. The post-Brexit environment will present challenges to the UK's economic development and our knowledge economy capabilities are a crucial aspect that need to be maximised to best position the country for the future.

The emergence of Leeds City Region as a thriving knowledge economy centre and its exciting potential for further growth are integral to underpinning the UK's position as a world leader in knowledge based activity.

The Leeds City Region economy is the largest in England outside London and worth £62.5 billion, accounting for 5% of the UK's economic output. It has historically been an industrial region but today has one of the most diverse economies of the UK and has developed a particularly strong presence in various knowledge economy sectors. This growth has been fuelled by educational excellence, with the highest number of academic institutions outside of London and excellent graduate retention levels.

There are a range of initiatives underway that will see extensive investment in Leeds City Region and drive its future growth. These include wider national and regional projects like the Northern Hub and HS2 which will dramatically improve connectivity, along with more specific schemes like the Local Growth Deal, which has already seen over £1bn of investment.

This report is a continuation on our series looking at the role of the knowledge economy in the regions. It will look at the City Region's knowledge economy sectors, the key infrastructure that is aimed at supporting these sectors, the role of science parks in the knowledge economy and the key strategic commercial development opportunities.

What is the Leeds City Region?

The region is made up of 10 local authority districts, with a population of over 3 million, more than a million of whom are aged under 30, giving it one of the youngest workforces in the UK. This is an important strength going forward as the scope for enabling these young people to grasp employment opportunities in emerging sectors is a huge opportunity.

The City Region has an excellent strategic location. There are over 7 million people within a 1 hour drive, with road links via the M1, M62 and A1(M) motorways. There is a strong existing rail network that connects Leeds to London in 2 hours, and Leeds to Manchester in under an hour. This is in addition to the regional links that connect employers with local labour markets. There are major investments in the pipeline to improve road and rail capacity and these will boost productivity in the region and promote growth in the knowledge economy.

The fast growing Leeds-Bradford international airport is a major asset, providing air connectivity to global destinations along with regular flights to London that take under an hour. Leeds City Region also has excellent freight distribution networks with 23% of all England's cargo passing through the nearby Humber Ports.

The region's fundamental growth indicators all show a significant improvement over the last 5 years, although in many cases still lag the national average. Particularly notable from the perspective of the knowledge economy are that output per capita is lower than the UK average at 87.7 compared to 100 (indexed) and the percentage of the working age population with NVQ4+ or good GCSEs are both lower than the national average.

Higher skill levels are closely associated with innovation and improved productivity and therefore it is critically important that the City Region continues to improve in this area and closes the gap with the UK average if it is to maximise its knowledge economy potential.

Positively, over the last decade there has been a strong trend toward people becoming better qualified in the City Region. The percentage of people with tertiary qualifications (level 4 and above) has grown from 24% to 31% and the number of people with no formal qualifications has fallen from 16% to 10%. Skills programmes have created 2,350 new apprenticeships for young people and enabled 2,700 more young people to enter employment, education or training.

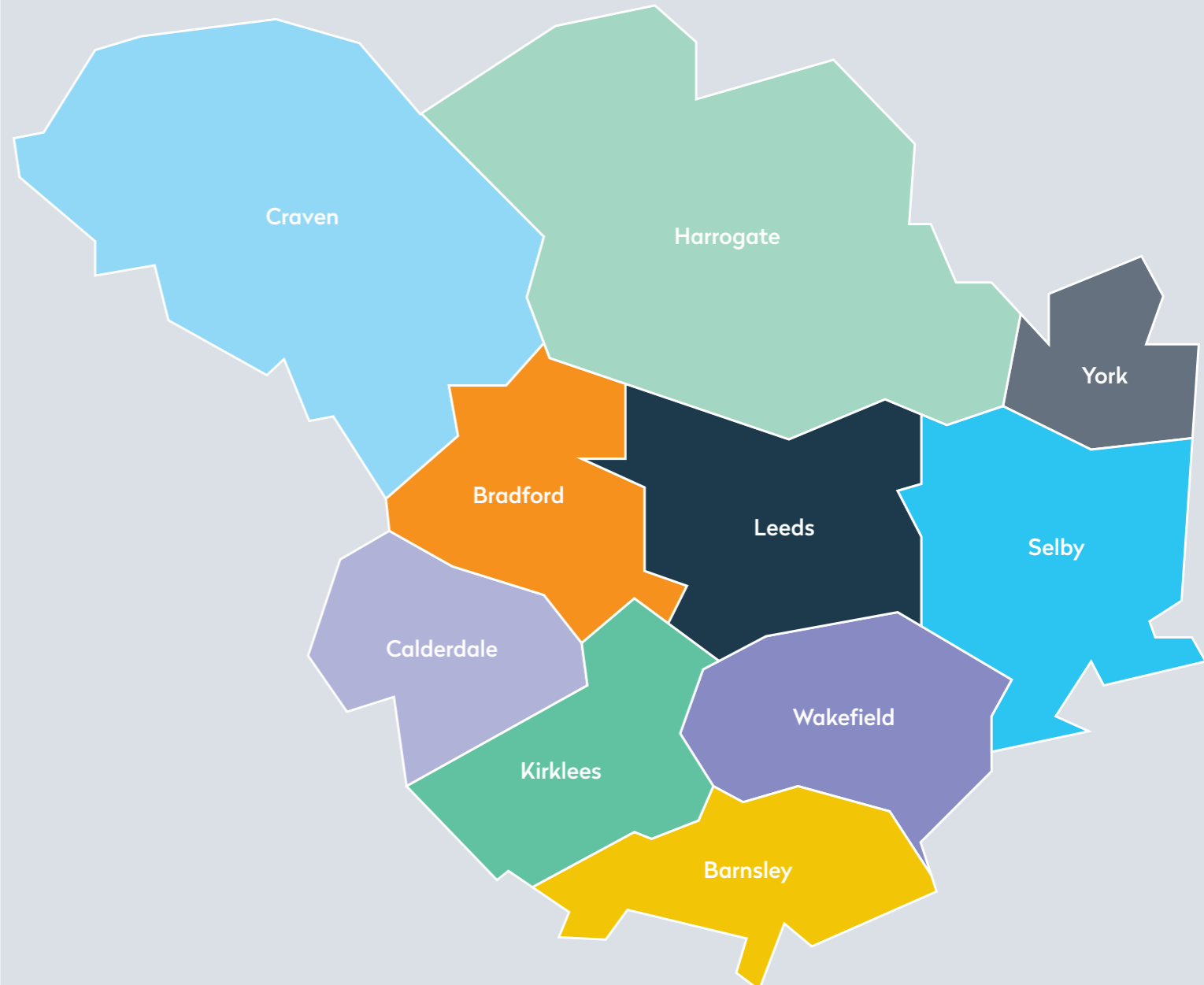
The City Region has a strong digital infrastructure, with Bradford, Leeds and York considered Super Connected cities and Leeds having the only internet exchange outside of London.

The Leeds City Region Enterprise Zone covers 142 acres and offers a range of incentives to stimulate investment and attract businesses. It is expected that this will create 9,500 new jobs by 2025 and is a huge incentive for business expansion and relocation. Another key strength is its cluster of the major cities of Bradford, Leeds, Wakefield and York, plus additional important employment centres such as Barnsley and Huddersfield.

Importantly from the perspective of a future knowledge economy workforce, the City Region has experienced a fast rate of population growth and this trend is projected to continue, with an increase of roughly 75,000 people expected over the next 5 years.

There is currently a shortfall of housing, as building was hit hard by the recession and is still only delivering around half the required volume per year. Increasing the rate of delivery is an important challenge, as it is across the UK. There is a risk that a further deterioration in affordability could inhibit growth prospects as people are deterred from moving to or within the region.

“ 10 local authority districts, with a population of over **3 million.** ”



Knowledge economy drivers

A strong backbone of enabling assets drives Leeds City Region's knowledge economy. Its prime capabilities in digital technology, media, advanced manufacturing and healthcare/life sciences all require a mix of policy, market dynamics, people, infrastructure and property to flourish. Any shortcomings in these areas will constrain growth and inhibit potential, whereas well applied stimulus and investment can be a great catalyst for growth.

This section of the report looks at the assets that underpin the region's knowledge economy and the initiatives that exist to improve them and drive future growth.

Educational Assets

A thriving knowledge economy depends on a pool of talent and Leeds City Region's educational assets incubate this at a globally competitive level, through education, upskilling, R&D and partnerships with the private sector.

The City Region has the highest concentration of higher education institutions in the UK outside London and one of the highest in Europe. There are 14 further education colleges and 9 universities which link to R&D assets and it is a renowned education centre offering direct access to an annual pipeline of 38,900 graduates, 39% (15,100) of which are in STEM (Science, Technology, Engineering and Maths) subjects.

Leeds City Region institutions can demonstrate excellence across research areas as diverse as regenerative medicines, bio-science, medical technologies, robotics, polymers, advanced textiles, metrology, data analytics and advanced turbo technologies (Source: LEP).

The region's universities contribute approximately £3.5bn to the economy and play a critical role in generating jobs, creating innovation and driving enterprise (Yorkshire Universities). A notable highlight is Leeds University ranking 9th nationally for its research impact, assessed on effects on the economy, public policy, civil society, culture as well as academia.

The region's further education institutions include a number of highly regarded computer science departments which have particular relevance to the digital skill sets that are highly sought after across the city region. Businesses considering locating in

Leeds City Region cite access to people with these skills as one of the main factors that will influence their decision.

Beyond the further and higher education institutions, the region is home to nationally acclaimed programmes such as Make the Grade, created by The Ahead Partnership, that integrates the world of work with education, building long term, local partnerships between employers and schools. There is a further concerted effort to make links between businesses and schools at a strategic level through the LEP's Enterprise Adviser programme, with the ambition of engagement with all schools during 2017.

Looking forward, the LEP has bid for an additional £30m of funding for its Skills Capital programme to build on the £79m received through Growth Deals 1 and 2. The first rounds of funding were very successful and have assisted the development of world class learning environments that have helped to provide the region's young people with the skills necessary to contribute to its knowledge economy. The additional funding will focus on more ambitious schemes that will have a transformational impact on the region's educational offering.

The LEP estimate that the additional Skills Capital funding would help to deliver approximately 10,000 sq m of new or refurbished space, improve the percentage of good and better accommodation and also lever new private investment.

The projects that have benefited from this funding are expected to make a £600m impact on the regional economy through an 18% increase in the number of college students by 2021 and the creation of 3,000 apprenticeships.

The projects that have benefitted from Skills Capital funding to date are:

- **Kirklees College:** Process Manufacturing Centre in Huddersfield.
- **Calderdale College:** new state-of-the-art learning facilities to allow the College to deliver new courses and meet local skills and employment needs.
- **Leeds City College:** Printworks in South Bank; £25m restoration of Grade II listed factory into state of the art new campus building.

- **Shipley College:** Mill Building refurbishment and IT upgrade.
- **Wakefield College:** Advanced Skills & Innovation Centre; £7m new centre for advanced skills with a focus on enterprise and innovation to promote economic growth.
- **Selby College:** The Aspiration Building; additional construction and engineering facilities providing greater numbers of plumbing, electrical installation, carpentry and joinery.
- **Shipley College:** Salt Building refurbishment & IT; providing additional places with a focus on essential skills.
- **Bradford College:** Advanced Technology Centre – a £10m centre offering students opportunities to develop skills in advanced technologies such as Robotics and 3D Printing. It also provides an incubator and subsidised accommodation for small businesses and start-ups.
- **Leeds College of Building:** Flexible Construction Innovation Centre; new £17m BREEAM Excellent building at the UK's only specialist construction higher/further education centre.
- **Kirklees College:** Pioneer House & Educational Village; redeveloped into a centre for higher level skills, apprenticeships and post-19 studies, specialising in creative and digital media and art, healthcare, business and finance (Source: LEP).

In addition to these programmes, there is extensive further investment in the key regional education assets:

- **University of Leeds:** £520 million will be invested in the university over the next five years with a masterplan outlining a total of 19 development sites within the campus, potentially providing 860,000 sq ft of additional accommodation. This will further strengthen the university's ability to attract major research funding, a key driver for the economy. It is one of the region's major knowledge economy assets and an example of working effectively with the private sector, with partnerships across a range of international blue-chip companies. It is consistently ranked in the top 10 UK universities for research power and was recently announced as The Times No 1 UK University.
- **University of Huddersfield:** a £250 million improvement programme including ongoing work on a 81,000 sq ft campus expansion which will deliver a landmark new state of the art teaching facility.



- **Leeds City College:** its Quarry Hill project has received a £33m grant approval to build an ambitious new healthcare and life science training centre that will equip young people in the region to enter this growing sector.
- **The University of York** is undergoing a £750m campus expansion, the first two phases of which are now complete. It has seen the opening of seven new buildings, increasing the capacity for student numbers and providing world-class facilities.

HESA students in higher education 2014/15

Leeds City Region



15,100

Greater Manchester



14,300

Greater Birmingham and Solihull



10,200

Sheffield City Region



10,000

Location and transport infrastructure

The City Region's strategically excellent location at the centre of the country and the Northern Powerhouse will be very valuable in supporting the growth of the knowledge economy. Historically, Leeds City Region (as with most of the North) has suffered from under investment in its transport infrastructure. This has constrained economic growth and acted as a disincentive to businesses and people considering locating in the region. The infrastructure has improved significantly in recent years and a comprehensive pipeline of major projects to be delivered over the next 20 years will transform connectivity.

This section provides an overview of the major transport infrastructure investments that will be delivered across the region.

HS2

The government's planned new high-speed rail network, from London to Birmingham and to Manchester and Leeds. This route forms a 'Y' shape from the West Midlands up towards Manchester and the North West; and up towards Leeds and the North East with proposed stations in Leeds, the East Midlands and Sheffield Meadowhall.

Since the announcement of Phase Two of HS2, £500 million of investment has been attracted to Leeds, including Sky's technology hub. Leeds Station will be remodelled into an integrated 'Yorkshire Hub' to accommodate HS2 alongside regional and local services.

Journey times will reduce significantly, with 50 minutes off the time to London, and the journey time to Birmingham more than cut in half. Integrating the region into Europe's high speed rail network will be very advantageous and add to its offer.

The redevelopment of the station itself is driving one of Europe's largest regeneration projects at Leeds Southbank, effectively doubling the size of Leeds city centre.

The Northern Hub

To be completed in 2019, the Northern rail hub is a program that will transform rail travel in Northern England. The program will improve connectivity across a wide area that incorporates Leeds, Manchester, Liverpool, Chester and Newcastle. Specific examples include an increase in express services between Leeds

and Manchester and reduced journey times to Sheffield, Bradford, Halifax, Hull and the North East. A further 700 trains each day across the North of England will allow for an additional 44 million passengers a year and will in turn help to stimulate wider economic growth across the region.

New Northern Franchise Contracts

The Government recently announced its intention to drastically improve rail services in the region through new rail franchise deals. Along with other infrastructure improvements such as The Northern Hub, the new contracts will be key in underpinning the successful delivery of the Northern Powerhouse.

There will be a £400m investment by 2019, delivering new carriages and 46% more capacity into Leeds and Sheffield during the morning rush hour (as well as serving the other five major Northern commuter cities). There will be a new high-quality 'Northern Connect' service, meaning new or refurbished trains on longer-distance services. This network will service destinations in the region including Bradford and Halifax and improve their connections to other major Northern locations.

Over the total duration of the new contracts for the Northern franchise and the TransPennine Express franchise there will be a £1.2 billion boost to rail services, with 500 brand-new modern carriages, room for 40,000 more passengers, thousands more services and a host of improvements.

Smart Motorways and Bus Services

The roll out of a smart motorways programme is to be completed by 2020. This will address congestion problems through smart management and increased information, increasing capacity and decreasing journey times.

There will also be additional and improved bus services across the region by 2020, with options currently being assessed for new routes and the introduction of smart card ticketing. This will unlock new labour catchments, reduce congestion and support sustainable commuting. These initiatives will support business activity, reducing costs, improving reliability and productivity and providing enhanced access to labour pools.

York Central Station

An improved rail station will form the centrepiece of a wider £650 million regeneration scheme in central York dubbed 'the King's Cross of the North'. This will include a new entrance and the transformation of the existing city-facing eastern entrance, to create a more welcoming arrival. Capacity will be significantly increased with new and improved platforms and services.

Strategic New Train Stations

Further funding from the West Yorkshire Combined Authority (WYCA) and private sector stakeholders will go toward financing three strategically important new stations for the city region, directly connecting strategic employment and development sites with the city centre. The stations to be delivered are:

White Rose Office Park is the city's second largest employment site and one of Leeds' leading office and retail locations. The new station will provide a direct connection to the city centres of Leeds and Manchester, supporting developer Munroe K's plans for further investment in the office park, increasing its appeal to occupiers.

Thorpe Park is Leeds' biggest business park with over 60 occupiers including IBM, National Grid, Atkins and United Utilities. The new railway station will support the £162 million investment from L&G and Scarborough Group in a large expansion of the Park. It will provide integral infrastructure, connecting the Park to the city centre and wider region. The second phase of development at Thorpe Park has begun and will deliver a 300,000 sq ft retail and leisure scheme, 940,000 sq ft of offices and 300 new homes.

A new station at **Leeds Bradford Airport Parkway** will be built on the existing Leeds to Harrogate line, serving and supporting the development of Leeds Bradford Airport. Owned by Bridgepoint Capital, this is one of the UK's fastest growing regional airports.



Digital infrastructure

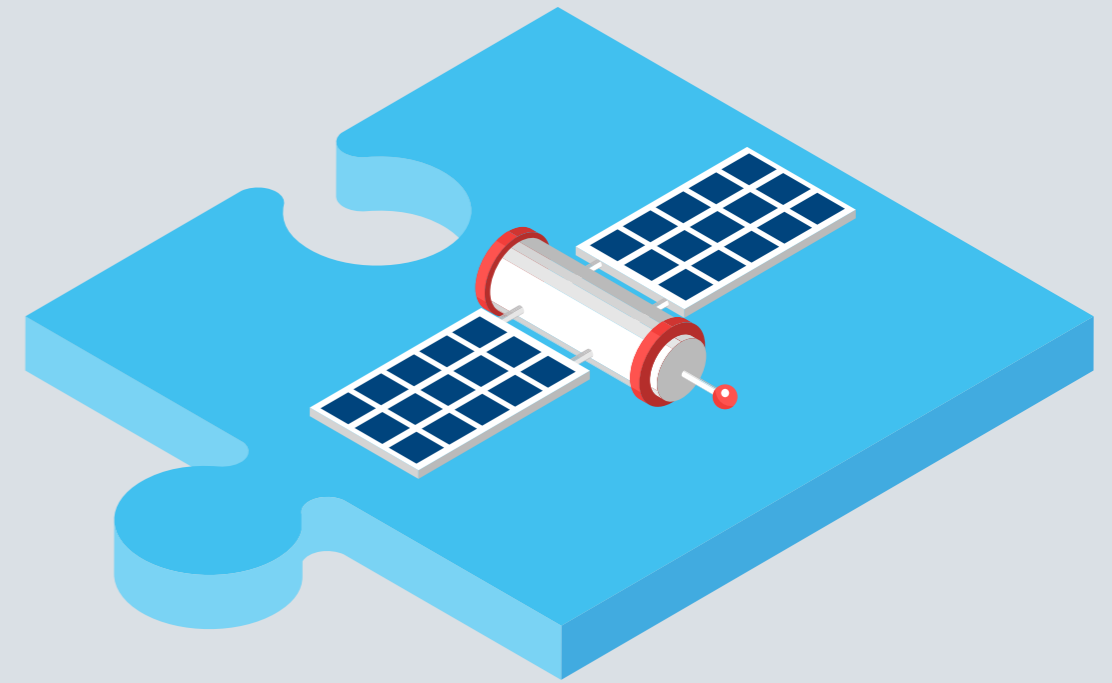
World class digital connectivity is essential for the region's knowledge economy to grow and compete in a global environment. This component of connectivity mainly refers to fixed line, broadband, mobile, wireless and satellite connections but in most cases the key factor is fast connectivity of some sort. For example, the manufacturers organisation EEF recently stated that 91% of its members now rely on high speed internet access and a recent CBI survey showed that 81% of firms see more reliable mobile connectivity as essential.

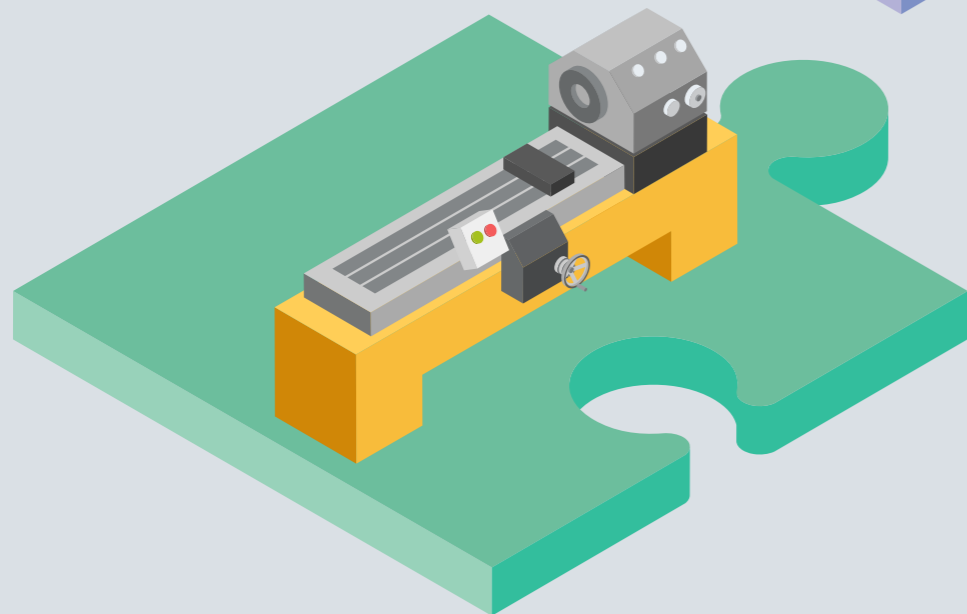
At a national level, the UK performs relatively unfavourably in terms of average and peak broadband speeds and also in the rate of improvement compared to other OECD countries. According to the latest Akamai connectivity report the UK does not rank in the top 15 globally across any of these measures.

Leeds City Region, however, is well positioned to outperform nationally and internationally in terms of connectivity. It has the only internet exchange outside of London and is currently in Phase 2 of the Superfast West Yorkshire project which will see 98% of the region covered by superfast broadband by the end of 2018. This is a £37m scheme, bringing much faster broadband speeds than average to the region, supporting business growth and creating new opportunities for local people.

The region also hosts one of the highest concentrations of Internet Service Providers in the UK and across metropolitan Leeds has extremely high-capacity and low cost data services.

“ The Superfast West Yorkshire project will see **98%** of the region covered by superfast broadband by the end of 2018. ”





Knowledge economy sectors

Advanced Manufacturing

Leeds City Region has a long historic connection with manufacturing. Today it has the largest manufacturing workforce of all LEPs and is central to the UK's advanced manufacturing industry, and delivering the Northern Powerhouse's prime capability in this field. Of its 140,000 people employed in manufacturing, approximately a third of them are in advanced manufacturing jobs.

The city region has 7,000 manufacturing businesses, generating a sales turnover of £25bn and contributing £7bn of economic output to the local economy. It offers the UK's most complete manufacturing supply chain with unparalleled breadth and proximity to suppliers. This promotes collaborative working and minimises transport time and costs.

The new M62 Corridor Enterprise Zone capitalises on existing concentrations of manufacturing business in the location and has the potential to deliver roughly 100 hectares of new employment land for the advanced manufacturing sector.

Its key advanced manufacturing strengths:

Energy

The City Region generated 13% of the nation's renewable energy in 2014 and has a strong track record of innovation and delivery in this sector. Becoming a leading edge centre for zero carbon energy is one of the LEP's 4 key strategic priorities and is also seen as a prime capability for the Northern Powerhouse.

Selby and York are particularly recognised as centres for the energy industry within the region. BioVale in York is a new cluster to promote innovation and entrepreneurship in bio energy. The affiliated Biorenewables Development Centre facilitates the transfer of leading research and expertise from York University to commercial applications and is at the forefront of innovation in the field.

Selby is home to Drax powerstation which represents a major ongoing and future opportunity for the region to build on its energy production capability and become the UK's leading centre for low

carbon energy. It generates 7% of the UK's total electricity and 70% of this is now biomass. It will see the creation of thousands more jobs following the European Commission awarding £240m to fund the White Rose Carbon Capture and Storage Project.

Looking forward the City Region is introducing a £150m+ Energy Accelerator Programme to support commercial operators to successfully develop low carbon projects. A £200m project by Peel Environmental was recently approved and will focus on low carbon electricity production. Another significant pipeline project from Peel will see investment of £25m to create the North Selby Anaerobic Digestion and Horticultural Glass Facility.

Precision engineering and manufacturing

This field embodies the change from the traditional manufacturing industries of the region to modern high value activities. Leeds City Region has the greatest concentration of high-value manufacturers in the UK and is renowned for innovation in processes, technology and products.

The Centre for Precision Technology, the EPSRC Centre for Innovative Manufacturing and the 3M Buckley Innovation centre enable interaction between business and the research infrastructure, to deliver cutting edge solutions particularly in the fields of metrology and surface characterisation.

Other examples of key assets include the Hybrid Powertrain & Engineering Research Centre, Automotive Research Centre and the Advanced Materials Engineering Centre.

BorgWarner, VTL and Turbo Precision are all successful examples of advanced manufacturing firms based in Leeds City Region who add value through bespoke engineering. The US engineering giant Cummins also has its global turbo technologies research and development headquarters in Huddersfield.

The new M62 Corridor Enterprise Zone capitalises on existing concentrations of manufacturing business in the location and has the potential to deliver roughly 100 hectares of new employment land for the advanced manufacturing sector.

Technology, media and telecoms

The region has received considerable attention for its strength in Technology, media and telecoms. There are roughly 70,000 people in the City Region employed in these sectors and one of the LEP's key strategic priorities is the digital agenda, with a strategic focus on developing digital technology, creativity and innovation.

This sector represents an opportunity for the City Region, as the UK is expected to need an additional 760,000 digital workers by 2020. The spread of digitisation is accelerating in pace and increasingly disrupting almost every industry. Therefore strength in digital capability will dramatically improve the region's chances of growth beyond the traditional sectors it is associated with. This will provide the opportunity for integration and collaboration with industries where the City Region is already strong.

A good example of this in Leeds, which has a traditional strength as a banking centre, being the second largest in the UK after London and has now become one of Europe's leading Fintech centres.

The digital economy is seen as a key focus for the Northern Powerhouse and Leeds City Region will drive this. Indeed, it already has the highest concentration of digital, data and technology innovators in the UK. The digital economy represents a crucial opportunity for the North to close the economic and social gap with the South.

Digital sector employment growth in the North of England between 2012 and 2015 was 28.1% compared to 3.1% in non-digital sectors. This trend is expected to continue with digital jobs in the region predicted to grow at 10 times the rate of non-digital (InvestLeeds).

Leeds in particular has a globally renowned reputation in digital technology. It has a digital economic output of £671m and has seen average salary growth in the sector rise by roughly 30% since 2012 which is 10% higher than the next best performing city (other than London).

The academic knowledge base is a huge asset to the region's digital economy and research shows that specialisms of

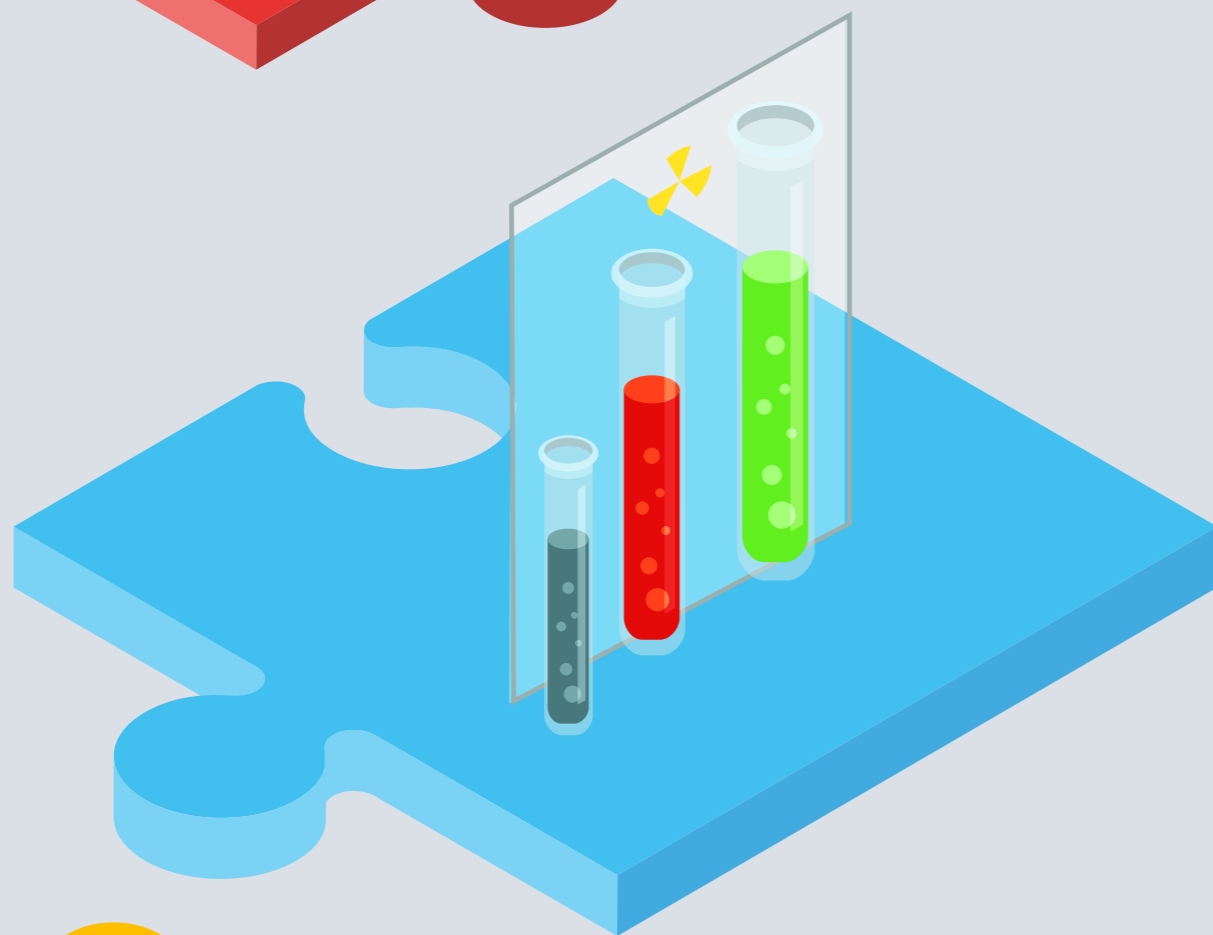
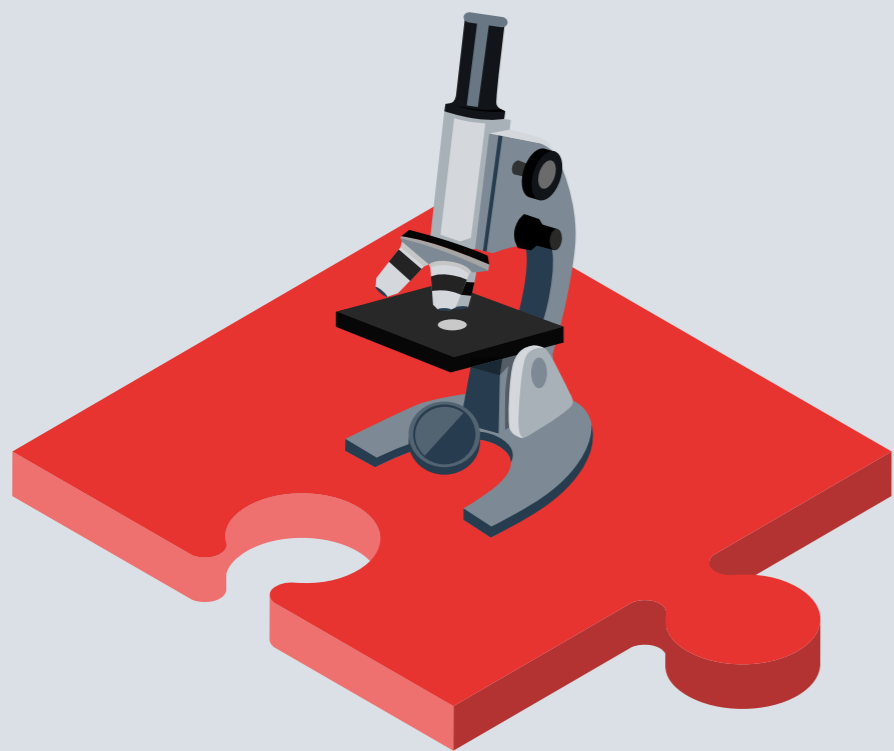
universities' shape the trajectory of nearby techclusters. Leeds is home to Yorkshire HQ, Sky TV's Technology Hub and Made TV as well as nationally significant digital entertainment clusters.

Along with the digital infrastructure (see infrastructure section), that provides businesses with the required level of resilience and low cost – high capacity functionality, the city region has a range of key digital assets that drive its digital sector. These include:

- **The Leeds Institute for Data Analytics:** state of the art physical and IT infrastructure, providing the academic community and partners in business, government and the third sector with the tools to harness the potential of Big Data.
- **Leeds Data Mill:** the leading open data site in the UK.
- **Digital Catapult:** works across a range of four key technology drivers that positively disrupt business models and create competitive advantage.
- **Bradford Digital Health Enterprise Zone:** a £13 million partnership led by the University of Bradford and backed by investment from BT, connecting people, health and care services, businesses and academia.
- **QComm Hub:** Led by the University of York, the five-year, £24m QComm Hub project is part of a major national initiative, the UK National Quantum Technologies Programme, which aims to ensure the successful transition of quantum technologies from laboratory to industries.

Commercial examples of the region's innovative approach to data analytics and data science include companies such as Asda-Walmart, Telefonica, TomTom, Marks & Spencer, Yorkshire Water and market researchers such as Acxiom, Call Credit and CACI. It is also a hub for the gaming industry with data analytics, modelling and IT platforms and has high profile partnerships with the likes of Google Digital Garage and Futurelabs.





Science

Of all the knowledge economy sectors, science remains the most specialised and scarce in terms of clusters in the UK. Leeds City Region has a significant presence in science related activities and leads the UK in the scientific offering in many fields.

The City Region's particular scientific strength lies in life sciences. 196,000 people are employed in health and life sciences jobs, it has 138 Centres of Excellence in healthcare and is the centre of the UK's healthcare economy. The City Region's other knowledge economy specialisms complement and drive its strength in the life sciences.

This is particularly evident in the field of health informatics, where the region's digital capability has helped encourage leading private sector companies, such as EMIS Group and AQL, to locate in the area. The presence of assets like Google's Digital Garage and top ranking universities in big data research have contributed to the region having the highest number of health informaticians in the UK.

Technology Enabled Care (TEC) is another life science field where the region excels and demonstrates the breadth of its knowledge economy capabilities. This area is an important source of future

opportunity for the region, as the market for TEC is expected to grow significantly over the next 10 years and Leeds City Region is one of only two regions with companies operating across the full spectrum of TEC.

The region's life science clustering has also been driven by its strength in advanced manufacturing, as well as its digital capability. It is renowned for producing cutting edge medical devices and is home to a number of leading manufacturers. The Institute of Medical and Biological Engineering at the University of Leeds has the largest orthopaedic research group in Europe and is an excellent example of how academic assets underpin the region's knowledge economy.

Pharmaceuticals is another leading sector in the region's science based knowledge economy. The University of Bradford is a pre-eminent hub of research for pharmaceutical products and the Institute of Cancer Therapeutics is particularly well regarded. A number of high profile international drug making companies are located in the region along with more niche innovative companies. The breadth of operators illustrates the region's diverse appeal.

“ **196,000** people are employed in health and life sciences jobs in the City Region. ”

Science parks

This chapter explores the role of property in supporting the knowledge economy and how it is integral to allowing these sectors to grow.

A science park is a special type of supportive business environment designed to harness technology transfer and growth in the most innovative sectors of today's knowledge economy. There are two characteristics that clearly distinguish them from a standard business park: business incubation and links with a knowledge centre. They also offer a flexible environment specifically designed to encourage the start-up and growth of innovative, knowledge based business through provision of 'incubator' space, services and support. Science parks also have an important relationship with centres of knowledge creation and technical expertise. In the UK, these are nearly always universities, though it could equally be the research laboratory of a multinational company.

Science parks have an important role to play in driving the growth of the knowledge economy. Small technology companies are first incubated in them, but then 'graduate' and cluster locally to the benefit of the regional economy. Science parks are important in stimulating economic growth and provide a solution to local employment problems, in particular the retention of the most gifted young people.

Importantly, science parks project the image of a modern economy, helping to attract private research and raising the 'innovative profile' of the region more generally. According to UKSPA, almost a third of science park floor space is accounted for by bio-related industries, but with less than 18% of all tenants, suggesting that the majority of these occupiers are large firms, requiring a greater degree of space for labs. Computer / telecoms make up 27% of all tenants but only 19% of space, while the tenant to floor space ratios for tech consultancy and business services are even smaller.

There is no single model for a successful science park and they differ in terms of maturity, size, design, purpose and setting. A science park will normally evolve to accommodate a range of occupiers both in terms of activity and size. As the park establishes itself, it may provide space for larger occupiers with buildings designed for single occupancy (i.e. 10,000 sq ft to 120,000 sq ft). The ownership of science parks also varies; often the parks are

owned and managed by the associated university, while others are joint ventures to promote regional development, usually in conjunction with a local authority. In terms of space occupied, 69% of all science park tenants have less than 15 staff, while only 12% have more than 150.

There are also clear differences in how businesses use space. Those which are more laboratory or manufacturing intensive, such as bio-related or industrial technologies, require a greater ratio of floor space per employee than the more traditionally office based sectors such as business services, technological consultancy and computer and information systems, Universities and hospitals play an important role in the location of science parks.

This section provides an overview of key science park clusters in Leeds City Region.

Leeds City Region Science Park clusters

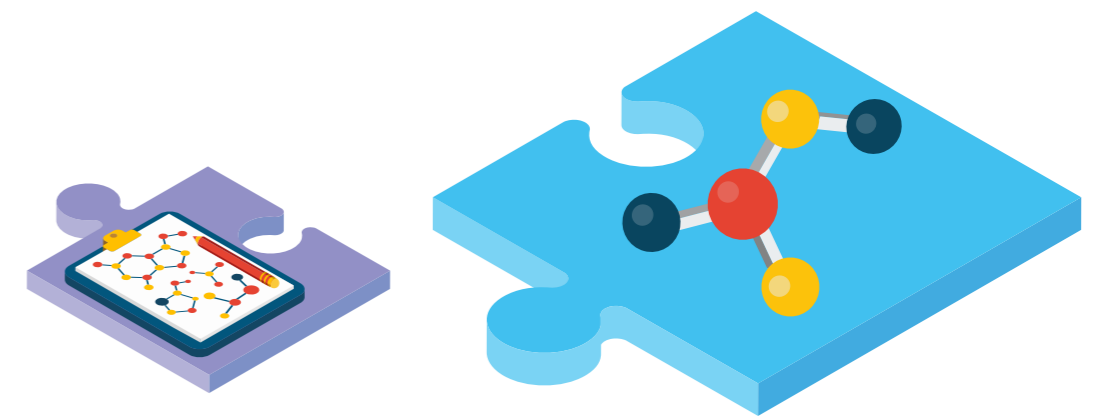
York Science Park

There are over 130 companies located on York Science Park, blending small burgeoning outfits with established international giants, like Smith & Nephew and Nestle. The university has had a key role in the success of the science park, partly due to the effectiveness of its spin out and growth policy and its collaboration with the private sector.

York Science Park is particularly renowned for its strength in biosciences, healthcare, medical research, bio renewables, environmental research, IT and digital and creative technology. The quality of accommodation delivered at York Science Park and the prestige of the location has created an established park with a premium address.

It comprises approximately 21 acres, located directly adjacent to York University and has become part of a wider comprehensive development. The physical proximity to the university and the strong working arrangements between the university and science park give companies direct access to class leading research facilities and labs.

The Innovation Centre was the first building to be developed on the park. Which was subsequently followed by the IT Centre



and the Bio Centre comprising of purpose built incubation accommodation with around 100 000 sq ft of specialist facilities, making York the first UK Science Park to offer dedicated IT, Bio and knowledge-based incubation space on a single site.

The main properties at York Science Park are:

The Innovation Centre: established in 1995, it continues to attract a wide range of companies from various sectors. Its focus is to provide the optimal platform to launch and grow businesses.

The Bio Centre: features ACDP Cat 2 laboratory facilities with the ability to convert to Cat 3 and access to the University of York's outstanding expertise, research and facilities in the fields of bioscience, biology and chemistry.

The IT Centre: facilities include a secure on-site data centre with internet hosting facilities for the entire science park and high speed broadband on demand and Cat 6 wiring throughout.

Enterprise House: the building provides the opportunity for established businesses to manage their own workspace whilst benefitting from the on-site facilities the park provides.

The Ron Cooke Hub/Springboard: the facility provides accommodation for start-up businesses wishing to establish their businesses in a flexible, low cost collaborative environment.

The Catalyst building: provides accommodation targeted towards the creative, media, IT and digital sectors. The building provides high specification accommodation including a secure on site data centre with internet hosting facilities on demand.

Leeds Innovation Centre

Leeds Innovation Centre provides 30,000 sq ft of laboratory and office accommodation with an additional 10,000 sq ft to be added in 2018 with the completion of the Nexus building. This £38m project will be a high profile gateway to research and innovation at the University and a UK-leading environment for collaboration and partnership. It will be a hub for the local innovation community as well as national and international organisations looking to innovate, be more productive and grow (University of Leeds).

The original Innovation Centre has a particular focus on providing quality accommodation and support services to the university's spin-outs. It also hosts a range of other organisations which benefit from the quality of facilities and access to the university.

It offers a range of innovation fostering services including:

The Research and Innovation Service: enables the transfer of the university's research into business so that collaborations and innovation are made possible and research is easily accessible.

Commercialisation Service: provides support for innovative business ideas and identifies, protects and manages intellectual property. It focuses on insuring the Centre, associated enterprises and the university achieve maximum impact from research.

The IP Group: generates commercial value from intellectual property created by its university partners.

The Innovation Space: provides conferencing facilities, seminars, workshops, innovation programmes and a wide variety of business events.

The Innovation Centre's aim is to be as flexible as possible with regards to the offering it provides tenants. This extends to the tenancy terms which are tailored to suit the varying needs of occupiers. This approach has been important in enabling the cluster to develop as successfully as it has.

Commercial opportunities

Our recent report **Leeds City Region: Confidence Yields Growth** looked at the property market in the region, the following section in this report isolates the points from that analysis that are most relevant to the knowledge economy. These schemes will help the region to continue to grow and the represent key opportunities for potential investors and occupiers in knowledge economy sectors.

Office:

The region has numerous opportunities to cater for the Fintech, Wholesale Technology & Media sectors as many of its traditional corporates enhance their digital activities. New developments such as Central Square, Wellington Place and Sovereign Square in Leeds are London specification office buildings with large floor plates, which have set new benchmarks for office developments in the city.

2016 saw activity fuelled by the growth of technology businesses such as Sky's enhanced footprint at Leeds Dock and the expansion of Perform Group, the digital sports content and media group owned by the US billionaire Len Blavatnik.

CEG Southbank in Leeds is a £350m regeneration scheme that will effectively double the size of Leeds city centre. The likely office provision will have large modern footplates, targeting a wide range of potential occupiers, along with flexible space capable of sub-division. It is expected the majority of the buildings will have ground floor retail or leisure uses and extremely high quality public realm. This kind of offering is key to the region's appeal to knowledge economy based operators to attracting the labour pool they require.

Inward investment enquiries are strong with a significant proportion of occupier demand coming from London based businesses reviewing their property strategies. There is a strong representation in knowledge economy based activities in this demand and there are a number of requirements in excess of 50,000 sq ft.

Beyond Leeds, there are compelling office options for occupiers in Bradford, Wakefield and York, striking an excellent balance between scope for large spaces and at the same time nurturing and maintaining smaller SMEs.

Bradford's local authority is working hard with the private sector to deliver new grade A office space at The Hub, with potentially 45,000 sq ft at Building One, and a further building to follow. Wakefield has successfully completed the regeneration process of the Merchant Gate area of the city and has modern accommodation available at competitive quoting rents.

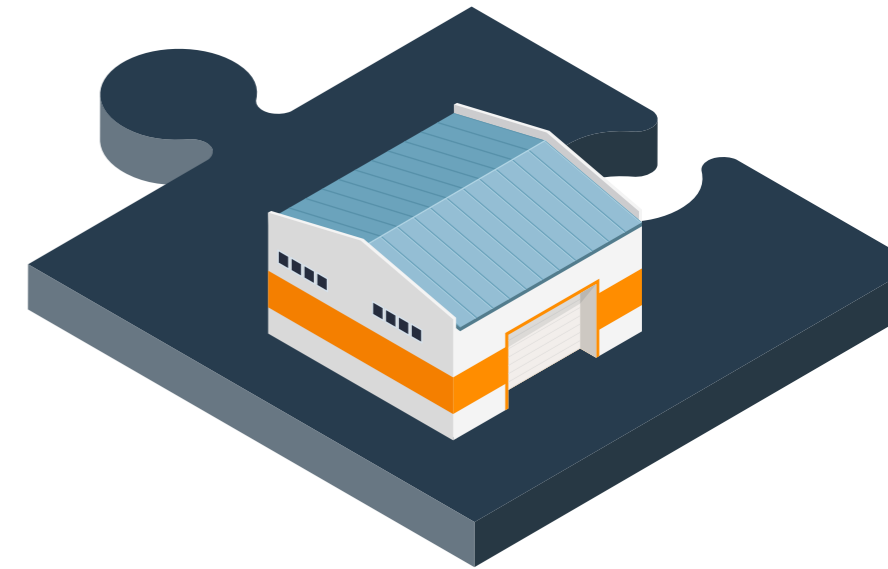
There is a willingness from the local authorities to work with private sector businesses and investors/developers to bring occupiers into the region. Perform Group and Provident Financial are good examples of this in Leeds and Bradford respectively.

Manufacturing and distribution:

There are many emerging clusters that are attracting development and occupier interest due to their access to skills and transport infrastructure. For instance Universal Components have committed to 165,000 sq ft at Ashroyd Business Park in Barnsley and L&G took 556,000 sq ft of space at Hurricane Way in Sherburn for a modular housing factory.

Looking to the future, the second phase of the Leeds City Region Enterprise Zone will deliver 9 sites with excellent national and international links. They offer opportunities, particularly for advanced manufacturing operations.

These opportunities benefit from this significant Enterprise Zone incentives which include business rate relief, capital allowances and funding and grant options. The sites are detailed opposite, a number of which already have planning permission.



- Gain Lane, Bradford – 7.06 hectares
- Parry Lane, Bradford – 4.1 hectares
- Staithgate Lane, Bradford – 8.5 hectares
- Clifton Business Park, Calderdale – 23 hectares
- Lindley Moor East, Kirklees – 6.3 hectares
- Lindley Moor West, Kirklees – 8.6 hectares
- Moor Park, Mirfield, Kirklees – 6.2 hectares
- South Kirkby Business Park, Wakefield – 12 hectares
- Langthwaite Grange Extension, Wakefield – 11.94 hectares

Baildon Business Park in Bradford is targeted at modern tech businesses and has the potential for over 170,000 sq ft of additional space. It has already attracted high profile occupiers and offers excellent connectivity to Bradford, Leeds and Leeds Bradford Airport.

Northminster Business Park in York is currently home to 45 businesses with strong representation from science based and R&D occupiers. It is the only gated business park in York and has enhanced security measures. There are currently plans for a significant proposed expansion, covering 30 acres which will deliver a range of buildings with broad occupier appeal.

“ CEG Southbank in Leeds is a **£350m** regeneration scheme that will effectively double the size of Leeds city centre. ”

Conclusions

The range and quality of Leeds City Region's assets position it to continue to grow as a leading centre for the knowledge economy. World class universities, its standing as the UK's second financial centre, digital and scientific expertise, a large and young skilled workforce and an open business environment means that Leeds City Region stands out as a centre for knowledge economy activity.

The pipeline of regeneration across the City Region is vast and this will provide the variety and capacity of real estate required for growth. The transformational nature of these schemes will create more than just a place to work; they will create new urban environments that provide the amenities, support and services required to attract and retain the best workers. The £1bn Growth Deal from Westminster – the largest settlement of devolved funding and powers of any LEP in the country, will accelerate economic growth in the region. It will be used to fund projects and programs that will create thousands of new jobs and upskill the workforce.

Leeds City Region, as with the rest of the country, will face challenges following Brexit as our trading and funding relationships with the EU change. The City Region has benefitted

significantly from EU funding to date and there are now specific funding risks to projects. So far, there is very limited evidence of projects being cancelled post-Brexit but there are some that have been put on hold or had decisions deferred (WYCA). There is also the more general long term issue of a significant funding resource being removed.

Despite all this, Brexit will present opportunities for Leeds City Region. The scope for more pro-active targeting of investment and new relationships with non-EU sources of funding is a significant prospect. The removal of certain EU regulations on trade could also prove beneficial to the region along with the devaluation of Sterling, which is currently making the UK seem more attractive to many overseas investors.

Overall, we believe Leeds City Region and its knowledge economy are excellently positioned for the future, as long as the projects and initiatives that will enable growth are delivered effectively and on time. It has a very strong existing asset base and demographic characteristics that are unusual for the UK and have the potential to be a great strength, if harnessed through appropriate education and upskilling.

For further information
please contact:

Ben Hall

Regional Senior Director
Ben.Hall@gva.co.uk
0113 280 8064

Daniel Francis

Head of Research
Daniel.Francis@gva.co.uk
020 7911 2363

Josh Rose-Nokes

Senior Researcher
Josh.Rose-Nokes@gva.co.uk
020 7911 2363

 [@GVAViews](#)

Our offices:

Birmingham
Bristol
Cardiff
Dublin
Edinburgh
Glasgow
Leeds
Liverpool
London
Manchester
Newcastle