

York and North Yorkshire

Local Growth Plan

Driving transformative growth
for the UK in the north

-  Feeding
-  Healing
-  Powering
-  Connecting
-  Inspiring
-  Protecting
-  & Growing the UK

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Mayor's Foreword

"Ours is a region full of pride and potential. My ambition is simple: to help create places where people can thrive - where good health, good jobs, and a good quality of life are part of everyday experience, not just ambition.

Regions such as ours hold untapped potential for driving the nation's economic future. That's why we are positioning York and North Yorkshire to be a trailblazing City Region Rural Powerhouse, which will drive transformative growth for the UK in the North.

Our region is home to nearly one million people and spans more than 3,000 square miles of stunning landscape - historic cities, vibrant market towns, rich countryside, and a spectacular coastline. But it's not just our geography that sets us apart. We are the most productive combined authority in the North. We also boast the highest skills levels - a powerful foundation for the future.

This Local Growth Plan sets out the areas where our region has a clear competitive advantage.

We are home to world-class strengths in engineering biology and life sciences, rail innovation, clean energy, the creative industries, and food and farming innovation. Over the past year, I've seen first-hand the remarkable work happening across these fields. This plan makes clear our belief: unlocking our potential will deliver transformative growth.

We have a proud history of feeding the UK, powering the UK, connecting the UK, healing the UK, promoting the UK and protecting the UK - and by continuing to harness all those strengths, we are growing the UK.

I am proud to launch this plan and excited about what lies ahead. By focusing on what we do best, we will fix broken foundations, raise living standards, and help lift people out of poverty - building a modern, connected, and ambitious city region and rural powerhouse at the heart of the North."

David Skaith
Mayor of York and North Yorkshire
Combined Authority



Endorsement from the Business Board

“York and North Yorkshire is home to 40,000 businesses, including major national and global institutions, such as Aviva, Nestle, Siemens and McCains. But our huge strength also lies in the power of our smaller sized businesses. Our businesses are resilient – with newly formed businesses having very high survival rates.

We are also an area that's very proud of its history, which sets the foundations for future growth opportunities.

York and North Yorkshire was the natural home for my businesses, O&3, with both built on strong heritage. Based in Ripon, O&3 is a trusted provider of high-quality natural oils for a wide range of applications, from skin care to culinary use. With over four decades of family heritage and knowledge in the wholesale natural oils sector, our roots run deep.

But, like many other businesses in York and North Yorkshire, our strengths don't just lie in the past. We want to continue to evolve, ensuring our products are kind to both the people that use them and to the planet; whilst reaching wide and far, we also export to 62 countries.

I've based my business here as York and North Yorkshire is the perfect location for growth ambitions. The subregion has access to two freeports in neighbouring Teesside and Hull, making importing and exporting hassle-free. Four airports are within easy access for freight and passenger travel, including Leeds, Tees Valley, Newcastle and Manchester, and just two hours, by train from Heathrow. The A1, M1 and M62 keep our businesses connected to the UK's main road network.

Our towns are attractive places to live, learn and work, often underpinned by culture and creative opportunities. And we have some of the highest skills levels in the North, creating a strong workforce for the future. But, like many other areas, we are also facing challenging times, from rising costs to geopolitical implications.

I welcome this Growth Plan for the subregion, ensuring we maximise York and North Yorkshire's full potential and deliver growth in the North and across the UK.”

Jennifer Wood
Chair of the Business Board



Summary

Summary

York and North Yorkshire will be a trailblazing City Region Rural Powerhouse, driving growth for the UK in the North. We will build on our high-performing economy to raise productivity further and deliver transformative economic growth.

This will create opportunities at a local level, including higher quality and more secure jobs, increased investment and ensure that York and North Yorkshire is home to healthy and thriving communities.

York and North Yorkshire is starting from a strong baseline, often outperforming other northern counterparts. But there is an opportunity to raise that performance.

This will be addressed through targeting growth within our competitive advantage sectors. From Food and Farming Innovation, built on our rich agricultural and manufacturing heritage and strong innovation assets, to Engineering Biology and Life Sciences, which well-position the region to become a science superpower through a strong academic base such as the Russell Group University of York.

From Clean Energy and our unique geological advantages, such as geothermal energy, and being at the forefront of accelerating decarbonisation, to Rail Innovation, backed by a

160-year history of providing rail solutions and emerging technology opportunities linked to AI and quantum communications, and the Creative Industries which have earned York a UNESCO designation of Media Arts, and are led by strong entrepreneurialism that needs to be celebrated.

Alongside sectoral interventions, we will achieve growth through addressing our priority drivers of growth – innovation; housing and commercial development; utilities and digital connectivity; work, skills and health; transport; and trade and investment.

There is a strong presence of innovation assets, but a lack of commercialisation and translation into industry. There are opportunities to accelerate and increase housing and commercial development, such as York Central (one of the largest brownfield regeneration schemes in the UK) but viability is a challenge and many sites have stalled. There are opportunities for growth, such as technology adoption, but this is constrained by limited digital connectivity and constrained utilities.

There is excellent North-South transport connectivity by both road and rail, but there are rural barriers and an over-reliance on car travel. There is low unemployment levels, but a constrained labour market with more people needing to return to work, skills gaps and health

divides across our communities. There is a significant Yorkshire brand to build on for export and inward investment opportunities, but businesses struggle with red tape and new processes.

These opportunities are underpinned by our strong science base, world-renowned heritage, natural capital, high-performing small businesses and diverse geography – urban, rural and coastal.

Growth ambitions will also require resilience within our key employment sectors, including the Visitor Economy, Retail, Health and Social Care, Manufacturing and Education.

Achieving our bold ambitions will require strong partnership working across the public sector, including agreed Shared Priorities with His Majesty's Government, the private sector, academia and our communities. It will also be underpinned by inclusive growth principles, recognising that growth should be good for our businesses, communities and environment.

Driving Transformative Growth for the UK in the North

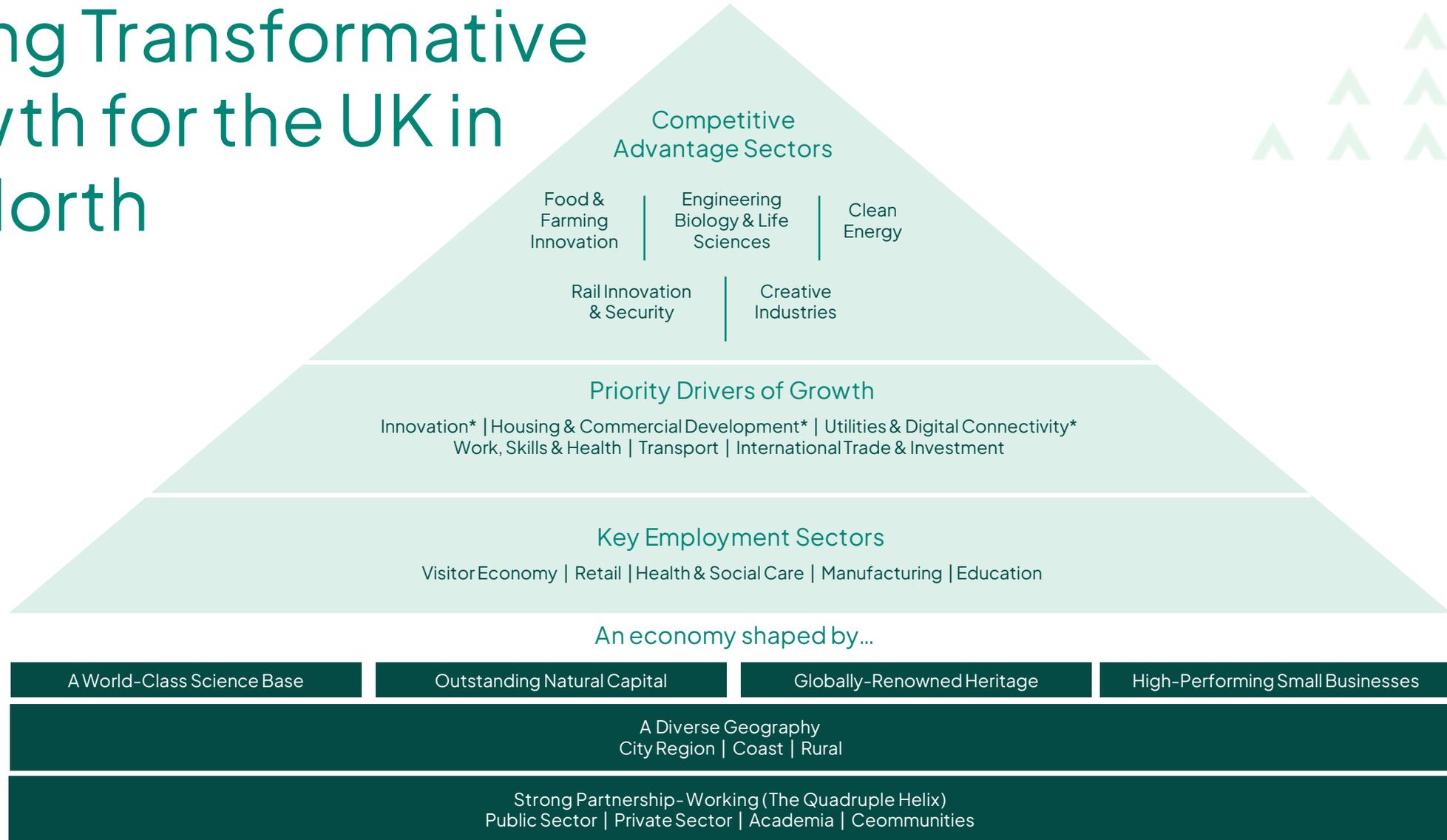
Trailblazing city region | Rural powerhouse

We will build on our high-performing economy to raise productivity further and deliver transformative economic growth.

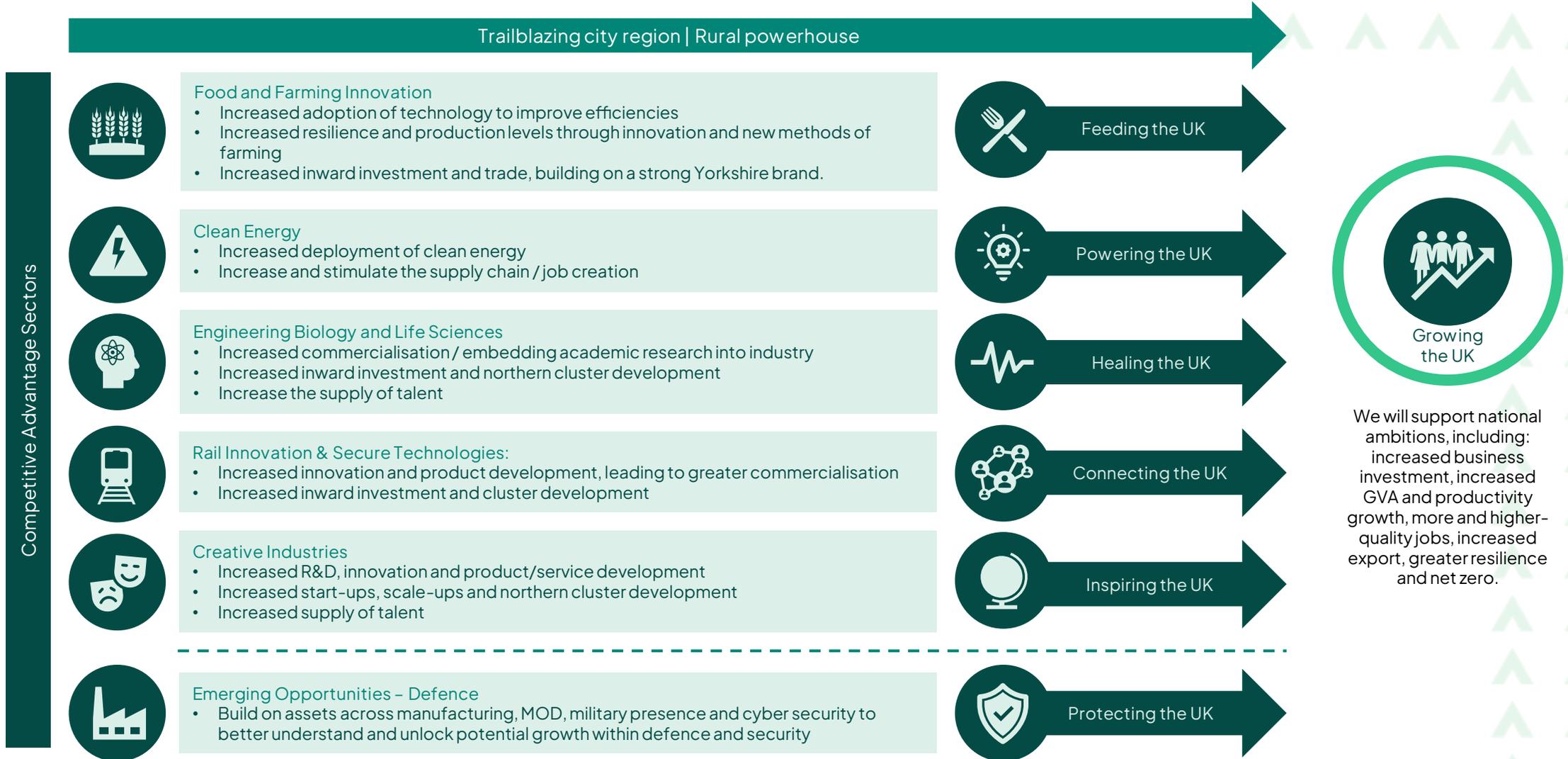
This will create opportunities at a local level, including higher quality and more secure jobs, increased investment and ensure that York and North Yorkshire is home to healthy and thriving communities.



Driving Transformative Growth for the UK in the North



How will growth in York and North Yorkshire support national ambitions?



York & North Yorkshire within the national picture

Sitting at the heart of the UK, York and North Yorkshire is well-connected to key city regions and plays a role in neighbouring economies.

York itself is directly connected by rail to 150 cities, towns and villages across the UK.

Key



Easy access airports

- Newcastle
- Tees Valley
- Leeds
- Manchester
- East Midlands
- Heathrow



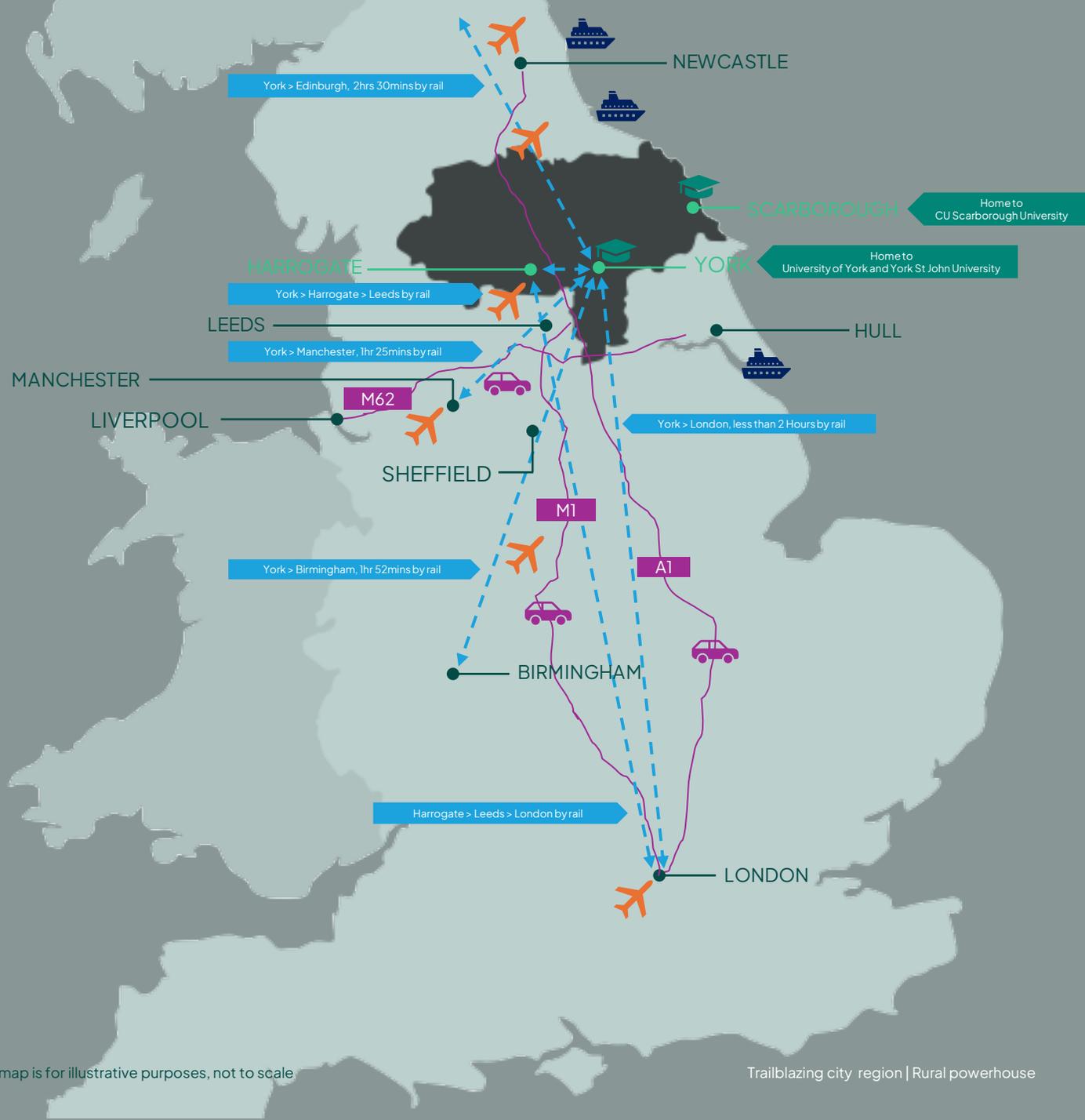
Easy Access Ports

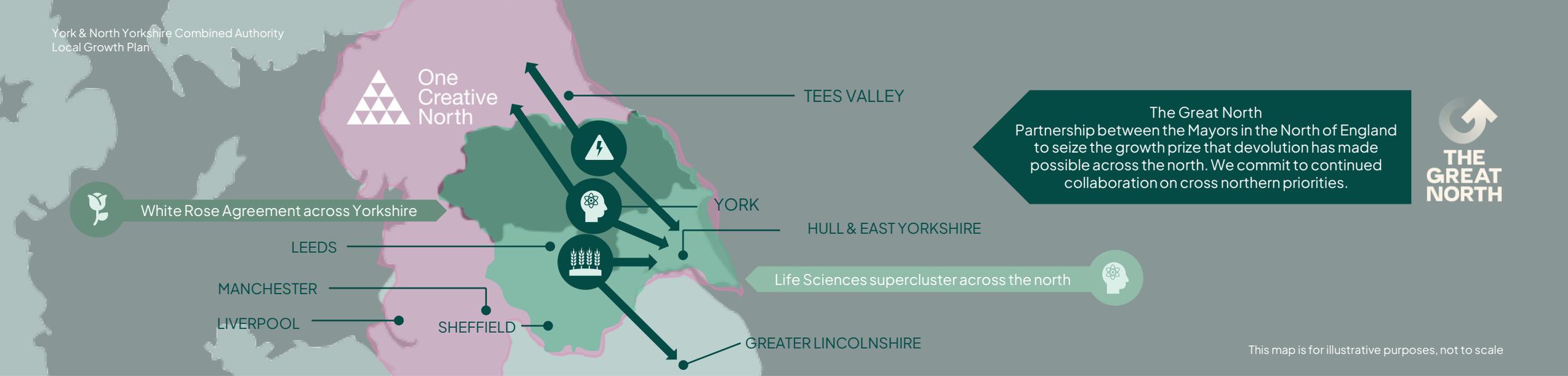
- Port of Tyne
- Teesside Freeport
- Humber Freeport



Key Road Links

- A1
- M1
- M62





The Great North
Partnership between the Mayors in the North of England to seize the growth prize that devolution has made possible across the north. We commit to continued collaboration on cross northern priorities.



This map is for illustrative purposes, not to scale

Growth in the North

Growth is not constrained by administrative boundaries...

Collaboration is a key element to the Local Growth Plan and ensuring growth ambitions are realised. We commit to working beyond administrative boundaries, and utilising York and North Yorkshire's assets to stimulate growth for the UK in the North. Activity is already underway to pioneer this approach:

- White Rose Agreement – alongside South Yorkshire and West Yorkshire, we have signed a new White Rose Agreement to champion Yorkshire and work on cross-cutting priorities, such as rail connectivity.
- Food and Farming Innovation – opportunity for close collaboration and sharing lessons learnt with other rural geographies that have a reliance on agriculture and food manufacturing, such as Lincolnshire.

- Engineering Biology – utilising York and North Yorkshire's academic and innovation assets within this sector, alongside the industrial clusters in the Tees Valley and Hull and East Yorkshire to drive growth.
- Creative Industries – York and North Yorkshire is part of One Creative North, which is a Northern creative corridor targeting support for start-ups, scale-ups and greater success in the sector.
- Life Sciences – previous research proposed a Life Sciences supercluster across the North of England could have major growth benefits, alongside building more resilience to future health challenges. We will continue to explore opportunities to grow and develop York and

- North Yorkshire's assets through close partnership working within the North and beyond.
 - Clean Energy – opportunity to share lessons learnt around emerging geothermal with areas such as the North-East, alongside engagement with the Humber on its industrial assets.
 - Defence – collaborating with neighbouring regions to identify the growth opportunity and scale across Yorkshire.
- And this is just the beginning of greater collaboration.

The York & North Yorkshire Economy

A high-performing economy in the North

Growth for York and North Yorkshire will be built on a strong track record, but more needs to be done to compete with Southern counterparts and bridge the gap with England's performance. The Growth Plan identifies the mechanisms to accelerate growth, through our competitive advantage sectors, drivers of growth and key employment sectors.

York and North Yorkshire has a highly productive economy, with GVA per hour worked in 2023 £38.2, making it one of the most productive areas in the North (as demonstrated in Figure 1), only superseded by Greater Manchester Combined Authority at £39.8. But York and North Yorkshire lags behind Southern counterparts, with Greater London (£54), West of England (£42) and Cambridgeshire and Peterborough (£40.3) combined authorities all outperforming York and North Yorkshire. Equally England's productivity performance (£42.4) was higher in 2023, meaning York and North Yorkshire is only 90.1% of the England average.

This position is consistent for York and North Yorkshire, as shown on Figure 2, with the average GVA per hour across 2013 to 2023 putting the subregion as the 5th highest performing combined authority area. Despite a strong baseline overall for the subregion, productivity does differ between York and North Yorkshire.

From 2004, York had productivity rates above the English average up until 2010. Since then, York's productivity has fluctuated. It remained consistently below the English average from 2018 until 2022, where York then reached £41.6, just above England (£41.5). In 2023, York continued to grow, reaching £43.5, fully surpassing England (£42.4).

York's GVA per hour worked also positioned it as one of the most productive cities in Yorkshire and the Humber, ahead of Leeds (£41.5) and Sheffield (£36.1).

On average, between 2013 and 2023, York had a GVA per hour worked of £36.2, very closely aligned to England's average levels over that same period (£36.5).

In contrast, productivity in North Yorkshire has consistently remained below the English average. In 2023, it's GVA per hour was £36.4, whilst it's

average performance from 2013 to 2023 was £30.6, both lower than England. North Yorkshire does, however, potentially demonstrate rural productivity strengths, surpassing other rural geographies as demonstrated on Figure 3.

While much attention on uneven regional economic growth has focused on the north-south divide, there is also a need to consider the urban-rural divide. The Growth Plan seeks to build on both York and North Yorkshire's urban and rural strengths. Addressing the north-south and urban-rural divide could bring significant benefits.

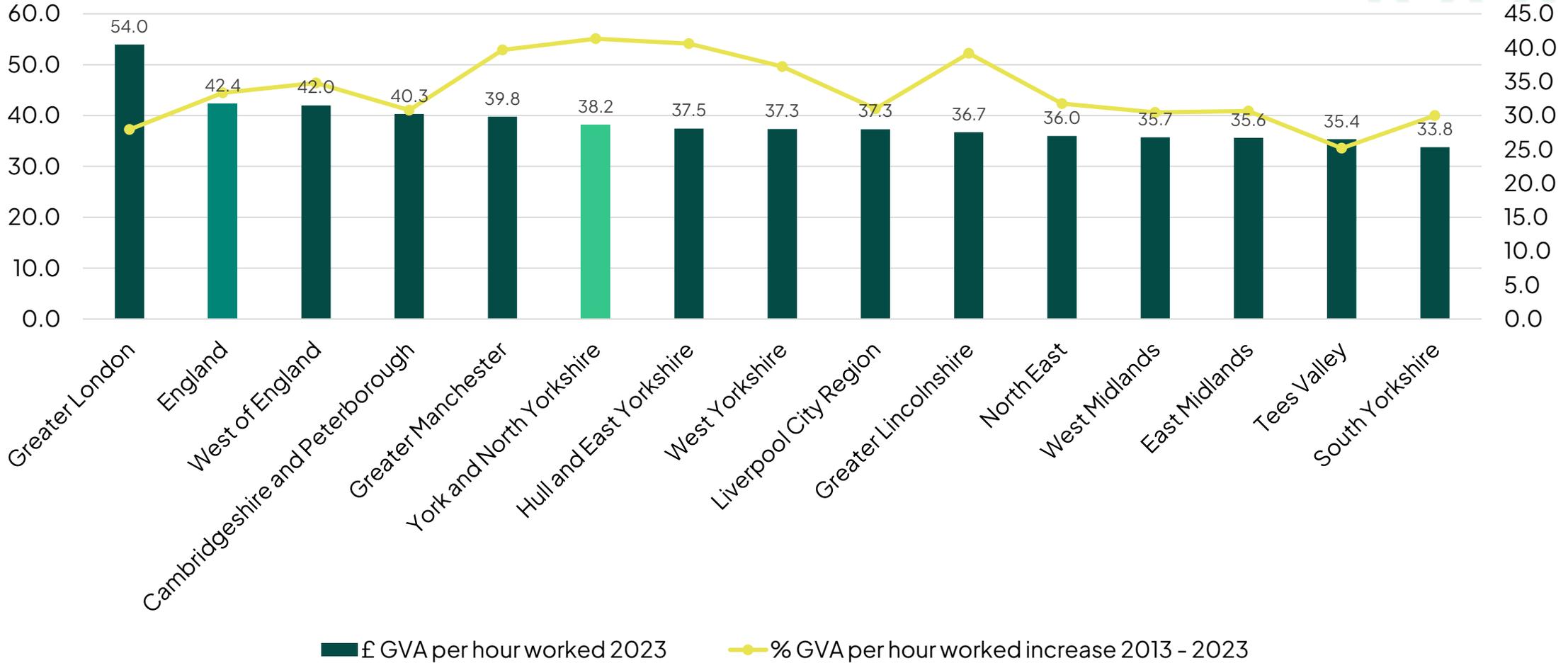
Analysis by The Rural Coalition reveals that bridging the rural-urban productivity gap in the UK, bringing it in line with Scandinavian countries, could contribute an additional £87 billion in GVA to the national economy². This would generate an estimated £19 billion in tax revenue, sufficient to fund 514,000 NHS nurses or 472,000 teachers³. Now, these are significant figures and a stretch,

but bold ambition is required, and they help to illustrate the opportunity if productivity growth can be addressed more widely.

As a region characterized by a unique urban-rural mix, we are determined to tackle these challenges by building on the strengths of our urban centres and enhancing the economic potential of our rural and coastal areas, thereby positioning the region as a major contributor to the UK's journey achieving transformative growth.

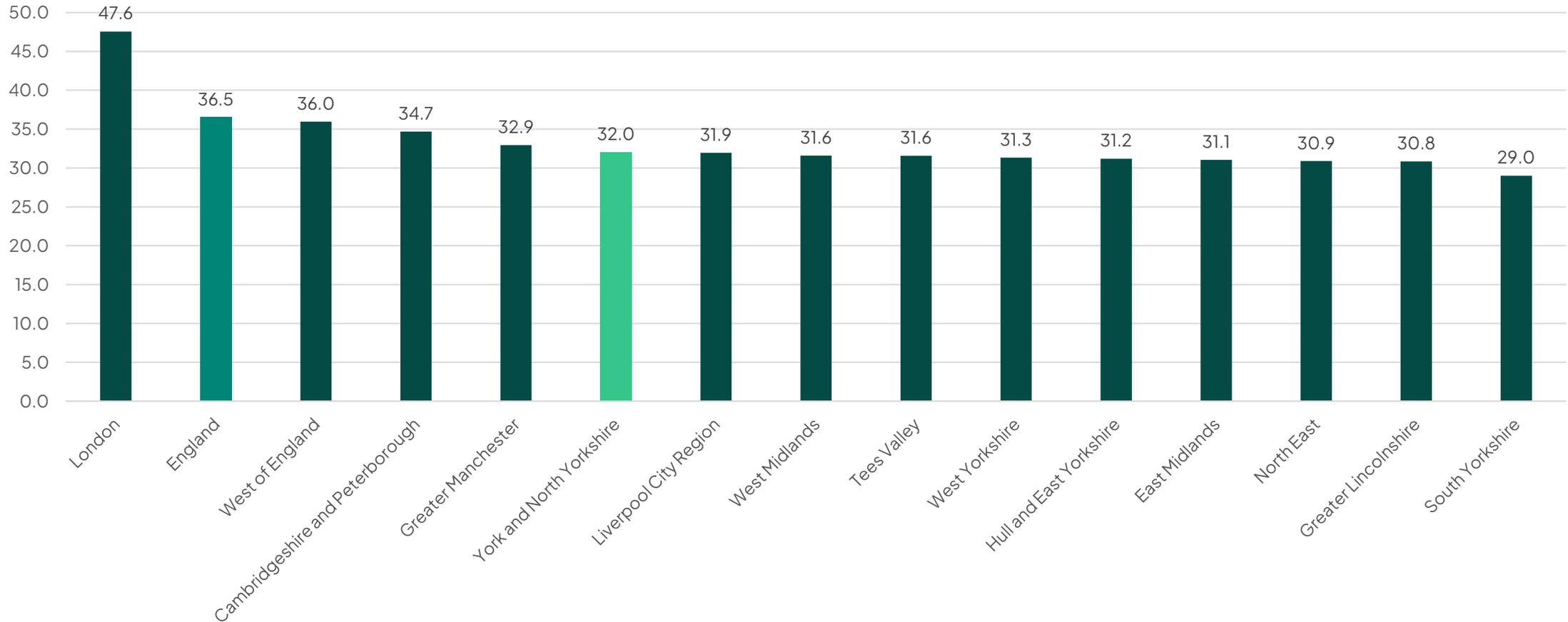
¹All of the productivity data referenced on this page is from the Subregional productivity: labour productivity indices by UK ITL2 and ITL3 subregions – Office for National Statistics and Subregional productivity: labour productivity indices by combined authorities and economic enterprise regions – Office for National Statistics

Figure 1: Gross Value Added (GVA) per hour worked (£) - Combined Authority and England comparison (2023) (Current Prices, Smoothed)



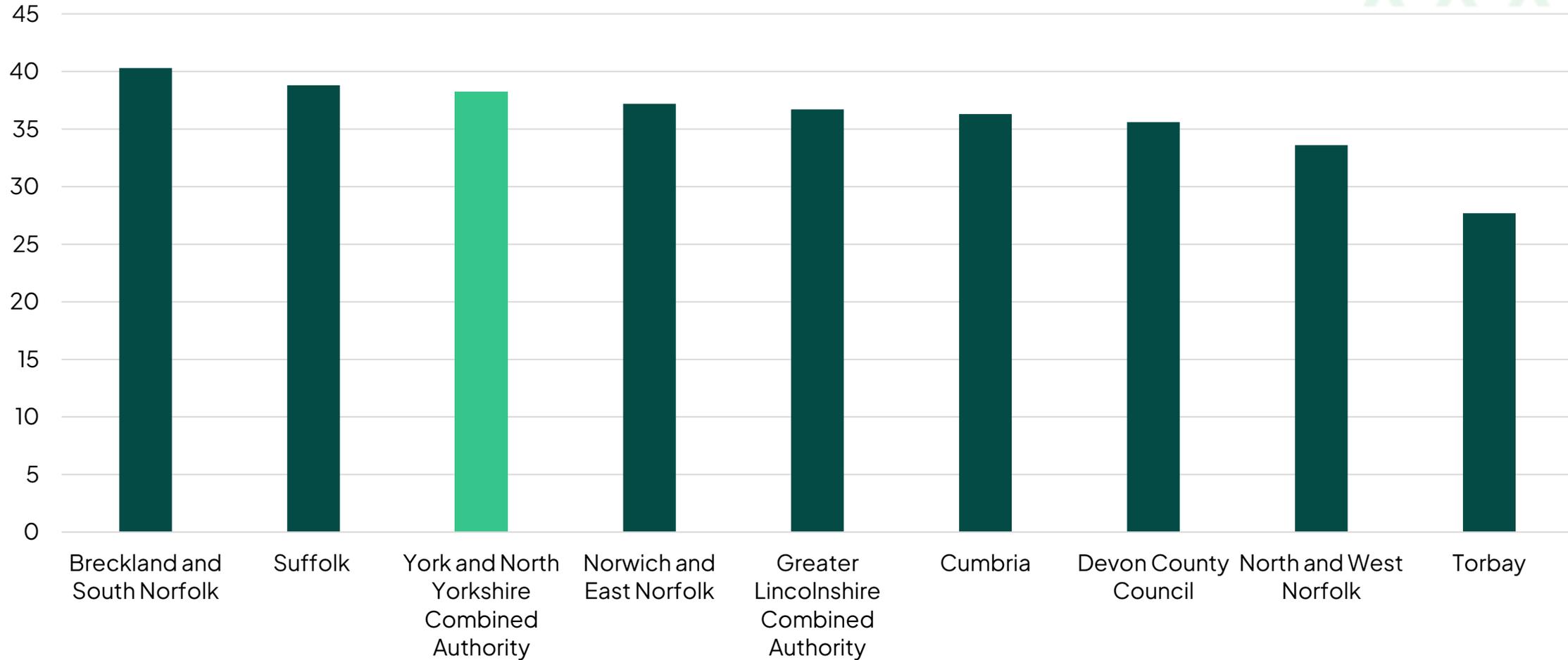
Source: [Subregional productivity: labour productivity indices by UK ITL2 and ITL3 subregions](#) - Office for National Statistics and [Subregional productivity: labour productivity indices by combined authorities and economic enterprise regions](#) - Office for National Statistics

Figure 2: Average Gross Value Added (GVA) per hour worked (£) from 2013 to 2023 - Combined Authority and England comparison (2023) (Current Prices, Smoothed)



Source: [Subregional productivity: labour productivity indices by UK ITL2 and ITL3 subregions - Office for National Statistics](#) and [Subregional productivity: labour productivity indices by combined authorities and economic enterprise regions - Office for National Statistics](#)

Figure 3: Gross Value Added (GVA) per hour worked (£) – Rural Comparison



Source: *Subregional productivity: labour productivity indices by UK ITL2 and ITL3 subregions* - Office for National Statistics
Note: Not all areas have combined authorities, but this seeks to demonstrate comparison against other rural geographies.

Our inclusive growth ambition

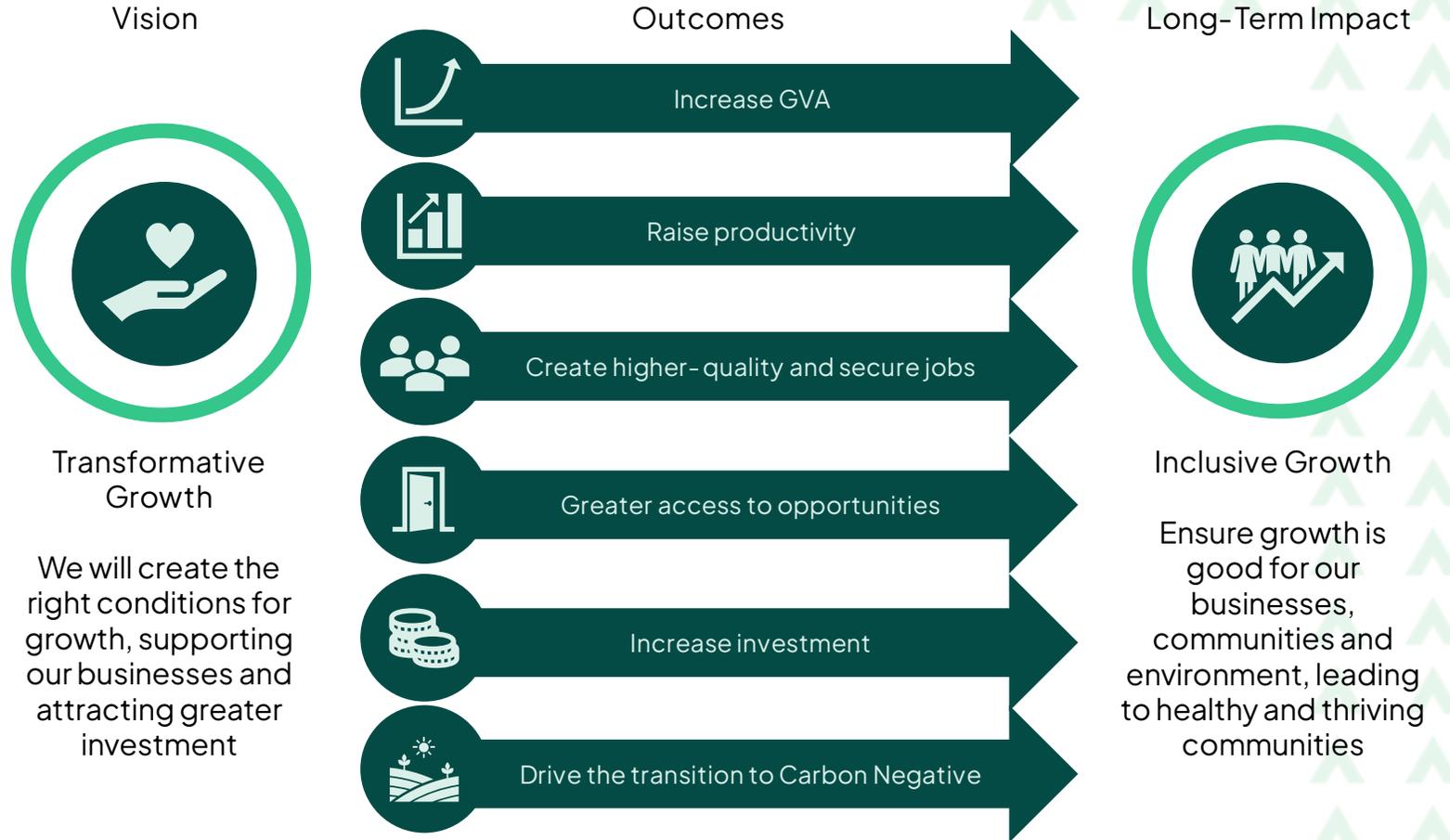
Our Growth Ambition sets out our bold targets for transformative growth for the UK in the North, ensuring our businesses, communities and environment benefit.

Our Inclusive Growth Ambition

York and North Yorkshire will be a trailblazing City Region Rural Powerhouse, driving growth for the UK in the North.

We will build on our high-performing economy to raise productivity further and deliver transformative economic growth.

This will create opportunities at a local level, including higher quality and more secure jobs, increased investment and ensure that York and North Yorkshire is home to healthy and thriving communities.



Our Local Growth Plan will be underpinned by inclusive growth principles

Inclusive growth is not a new concept, but it risks becoming another intangible buzzword if clear intentions and actions do not sit behind it. The challenge is that inclusive growth, sometimes also referred to as good growth, can be interpreted differently and there is not one agreed definition.

For York and North Yorkshire, it's about growth benefitting businesses, communities and the environment. Within this approach, economic growth is not the end point, but a means to achieving greater wellbeing for people, particularly through increased quality of life. By focussing on inclusive growth, there are massive health outcomes that could be achieved, as high-quality and secure jobs, alongside access to services (e.g. housing, transport), are key determinants of people's health and wellbeing.

Communities

Previous research from the Joseph Rowntree Foundation⁴ (in 2017) embeds inclusive growth around the poverty crisis, recognising that the economy does not work for everyone and being in a job does not guarantee a route out of poverty. It puts emphasis on inclusive growth being growth that is targeted towards better paid, higher-quality jobs that benefit more people beyond London and the South-East.

But the research from Joseph Rowntree Foundation also recognises that inclusive growth is not just about more and better jobs, although

these are core components. Access to housing and services such as transport will also determine the extent to which growth can be considered inclusive. By addressing social issues through these mechanisms, there are also fiscal benefits through reduced welfare spending and increasing tax receipts.

Our voluntary, community and social enterprise (VCSE) sector are key to supporting inclusive growth practices, often helping to embed opportunities in local places and drive change. They are fundamental to our rural communities, delivering key services around health and social care and advancing local growth in a number of ways:

- Buying Local - examples of this include operating local 'trusted trader' schemes or local 'handyman' services for social care clients, providing low-cost food options, such as community pantries, cafes and social supermarkets - which can both benefit local food providers/growers but also reduces food waste.

- Supporting Local Enterprise and Employment - providing local jobs, training and volunteering opportunities alongside the range of services they deliver. Some are active partners in local employability programmes supporting economically inactive adults back in to work.
- Leveraging and Retaining Local Wealth - By commissioning services locally and supporting community-owned assets (e.g., charity/re-use stores, arts and leisure and social activities).
- Inclusive Economic Development - their reach into the local community helps to ensure that local investment plans are inclusive, addressing inequalities and involving marginalised voices in local place shaping and decision-making.
- Attracting and Managing Investment - as not for profit organisations, they are well-placed to secure funding and investment (e.g., UK Shared Prosperity Fund, Big Lottery etc.) and deliver projects that align with local

community priorities. Their governance structures often allow them to act quickly and flexibly, making them ideal delivery partners.

- Building Community Capacity and Resilience - Through volunteering, training, and social action, CAOs help to build local capacity and resilience, enabling communities to respond to challenges and opportunities.

Businesses

Traditional economic indicators, such as productivity, are also closely linked to achieving inclusive growth. Research shows that stagnating productivity correlates with stagnating earnings.

Key anchor institutions (e.g. NHS trusts, universities, councils, large businesses) can support inclusive growth through procurement, employment, and land use.

Community Wealth Building

One model of inclusive growth is Community Wealth Building, which is about retaining more wealth in the local economy. According to the Centre for Local Economic Strategies⁵, there are five key principles that underpin Community Wealth Building:

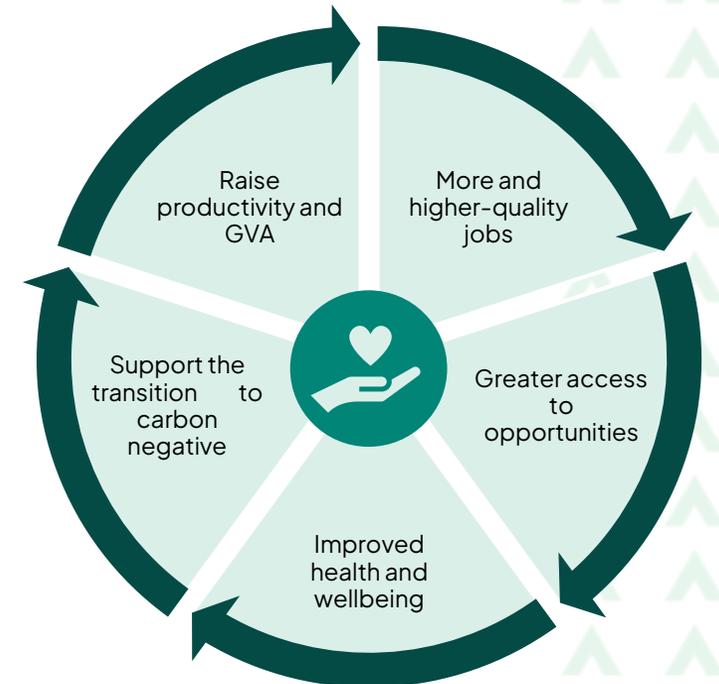
- Plural ownership of the economy – wealth generated through growth tends to benefit the minority, not the majority, and that needs to be distributed more evenly.
- Making financial power work for local places – access to finance is a challenge for many businesses, but particularly small and micros (which make up the majority of York and North Yorkshire’s economy).
- Fair employment and just labour markets – recognising that many people now have unstable jobs, often with low wages and zero-hour contracts.
- Progressive procurement of goods and services – local procurement should be prioritised, where possible, with a particular emphasis being on social value, alongside value for money.
- Socially productive use of land and property – ownership of land is a signifier of wealth and power, but few are in this position.

Community Wealth Building is not the only model that could be utilised. Integrating inclusive growth can take many forms, from alternative business models such as a cooperative structure, integrating good employment, and community development finance initiatives.

Environment

Definitions around inclusive growth typically place people at the heart. Core to supporting our people is also considering the impact on our environment, which is integral to the health and wellbeing of our communities. Our ambitions to transition to carbon negative will support economic growth, including supply chain opportunities through growing the clean energy sector and supporting businesses to decarbonise, leading to efficiencies and reduced costs.

Inclusive Growth for York and North Yorkshire will benefit our businesses, communities and environment



Transition to Carbon Negative

York and North Yorkshire is in a prime position to support national and global efforts to combat climate change, even going beyond net zero and becoming England's first carbon negative region. York and North Yorkshire can take advantage of the sustainability opportunities from both urban and rural settings.

For example:

Natural carbon capture and sequestration supported by the two National Parks, three National Landscapes, and marine assets;

- Innovative pilot opportunities through our urban assets (including Retrofit One Stop Shop for York and Heat Network Zoning Pilots in York);
- Key sectors that support the agenda, including Clean Energy.

To date, significant progress has been made to reduce carbon emissions. However, there is still a long journey to achieve this ambition and tackle climate change. Without intervention or acceleration, there are massive economic risks, resulting from changes to our climate such as increased frequency and severity of flooding, increased temperatures, water shortages, and rising sea levels. Businesses could face disruptions on food production, damages to physical assets, and destruction of ecosystems that underpin our key sectors.

What is the economic opportunity?

The transition to carbon negative is not just good for the environment, but can also support our businesses, people and communities:

- New jobs (e.g. growth within the clean energy sector)
- Increased public and private sector investment
- New skills (e.g. retrofitting requirements for the construction sector)
- Resilience for key sectors (e.g. agriculture, food and drink manufacturing, and tourism – all of which are extremely vulnerable to impacts of climate change)
- Healthier people and communities (e.g. cleaner air, improved energy efficiency of homes)
- Cheaper, cleaner and more secure energy, a benefit for both businesses and residents

The Growth Plan is primarily focussed on how the transition to carbon negative can support economic growth. To achieve this ambition, changes across infrastructure, alongside industry, will also be required. For example, decarbonisation of transport and buildings. Alongside the Growth Plan, we are also refreshing our Routemap to Carbon Negative, setting out the scale of ambition and the opportunities, actions, and investment required.

What does inclusive growth within the Local Growth Plan mean for our residents?

The priorities of the Local Growth Plan have clear benefits to our residents and align well to inclusive growth ambitions:

- Food and Farming Innovation will support our people through strengthening the UK's food security. We will increase the level of food produced in the UK, creating less reliance on imports and improve crop resilience, so that people continue to have available and accessible food all year-round. We will look at alternative methods of farming and manufacturing, particularly through technology, to reduce carbon emissions, improve profitability and offer new high-quality jobs for residents.
- Through growth in Engineering Biology, we will create less reliance on fossil-fuel based products (e.g. plastics), which will support reductions in carbon emissions and improve the health of our planet, for our people. Whilst growth in our Life Sciences sector will encourage further innovation and product development around healthcare, where York and North Yorkshire is particularly exposed due to its ageing population and greater reliance on health and social care. To unlock this, both sectors will require greater commercialisation and translation from academia into industry to ensure our great ideas benefit our people.
- Supporting Clean Energy will encourage greater energy independence and security for the UK, whilst reducing the carbon emissions and detrimental impact of energy production on the environment. For residents, this is critical as energy costs were (and still are) a contributing factor in the cost-of-living crisis.
- Rail Innovation will drive technology transformations within rail transport, improving the quality and security of train journeys for passengers, supporting people to be better connected.
- The Creative Industries have multiple benefits – they play a role in cross-industry collaboration with every sector needing creative skills in areas such as branding, digital transformation, customer engagement and product development. The sector also provides exciting job opportunities for residents, often with flexible and freelance roles which could even be delivered in our most rural communities, if the right digital infrastructure is in place.
- We will also support key employment sectors (such as the Visitor Economy, Manufacturing and Health and Social Care), building greater resilience in these businesses to ensure our residents have stable and secure jobs.
- We will ensure opportunities for all by addressing our priority drivers of growth. This includes increased access to housing; skills and training development so people are equipped for technical, high-wage job roles; increased transport connectivity, providing access to employment and education and reducing social isolation; and increased digital connectivity, ensuring our most rural communities aren't left behind.

How will we embed inclusive growth in our ambitions?

Strategic Role

- Develop metrics to sit alongside the Growth Plan which incorporate inclusive growth priorities, not just traditional economic growth metrics such as GVA and productivity.

Delivery Role

- Support businesses to implement inclusive growth practices and healthy workplaces, e.g. good business charter, living wage commitments, inclusive recruitment, retention and workforce development.

Our national role

What does growth in York and North Yorkshire mean for national ambitions?

York and North Yorkshire will be a trailblazing City Region Rural Powerhouse, driving growth for the UK in the North. Growth in the subregion could contribute to a number of national priorities, linked to traditional economic growth, resilience and net zero.

National Industrial Strategy

Central Government has now published a National Industrial Strategy, which sets out a 10-year plan to increase business investment and grow the industries of the future in the UK. The primary role of the strategy is to make it quicker and easier for businesses to invest and will provide the certainty and stability needed for long-term investment decisions.

There are synergies between the Local Growth Plan and the National Industrial Strategy, particularly in terms of growth ambitions, building resilience and targeting net zero. However, as the name suggests, the role of the National Industrial Strategy is to focus on sectors and priorities of national significance, whilst the Local Growth Plan is about recognising York and North Yorkshire's strengths and opportunities for growth. Consequently, some of the sectors identified in our Local Growth Plan may not be reflected within the National Industrial Strategy and vice versa.



York & North Yorkshire's contribution to the sectors in the National Industrial Strategy



Advanced Manufacturing

- Aerospace, advanced materials, agritech, automotive, batteries and space are identified within the National Industrial Strategy as priorities.
- Although York and North Yorkshire has a number of manufacturing strengths and it's a key employment sector, Agritech is our main specialism and plays a role within our Local Growth Plan through Food and Farming Innovation.
- We will support innovation within the farming sector and commercialisation of new technology, particularly through precision agriculture.
- We will accelerate the update of robotics and 'lean processes' within this sector, alongside skills development through encouraging businesses to utilise the extended Made Smarter programme and developing programmes for our Food and Farming Innovation sector.
- We will support the development of clusters, including opportunities linked to Next Generation Horticulture.



Clean Energy

- Wind, fusion energy, nuclear fission, hydrogen, CCUS including greenhouse gas removals and heat pumps are identified within the National Industrial Strategy as priorities.
- Clean Energy is a growth opportunity within York and North Yorkshire.
- We will support the acceleration and deployment of clean energy, including exploration of geothermal.
- We will support innovation in the sector and job creation. Research shows there's a massive demand for new jobs within the retrofit.
- We will unlock this growth opportunity through skills development and support, with consideration of the upcoming Clean Energy Workforce Strategy by central Government.
- We will work Great British Energy to increase deployment.



Digital & Technologies

- AI, engineering biology, advanced connectivity technologies, quantum technology, semiconductors and cyber security.
- Engineering Biology is a key sector for York and North Yorkshire, particularly to support our food and farming sector. We are also pursuing an AI Growth Zone and have academic capabilities linked to quantum, which is supporting innovations in our rail sector.
- We will support innovation and R&D across these sectors, whilst ensuring commercialisation and translation into industry.



Life Sciences

- Pharmaceuticals and medical technologies are identified within the National Industrial Strategy as priorities.
- Although more dispersed, York and North Yorkshire has clusters linked to Life Sciences and opportunities through our academic assets.
- We will support innovation and increase commercialisation within this sector.

York & North Yorkshire's contribution to the sectors in the National Industrial Strategy



Creative Industries

- Advertising and marketing, film and TV, video games, music, performing and visual arts are identified within the National Industrial Strategy as priorities.
- Creative Industries is core to our Local Growth Plan.
- We will boost innovation and commercialisation, building on existing clusters and programmes such as the CoSTAR Lab in York and XR Stories Network led by the University of York.
- We will support the sector through skills development and career pathway support. We also recognise the need for greater diversity in the sector.
- We will encourage innovation and development of more products and services, with opportunity for further growth through boosting exports.
- We will support One Creative North.



Defence & Security

- Drones and autonomous systems, combat air, directed energy weapons, complex weapons and maritime capabilities are identified within the National Industrial Strategy as priorities.
- Although this sector has not been identified as a growth opportunity within York and North Yorkshire, we recognise there is potential within the subregion which could be expanded upon. We have MOD assets based here, manufacturers contributing to the sector, cyber security strengths including GCHQ in Scarborough and the Institute of Safe Autonomy. We will explore this opportunity further.



Financial

- FinTech, insurance and reinsurance markets, sustainable finance, capital markets, asset management and whole service have been identified as National Industrial Strategy priorities.
- Although it has not been identified as a growth sector within our plan, we recognise that there are strengths in the subregion, with clusters in York and Skipton.



Professional & Business Services

- Accountancy, audit and tax, management consultancy and legal services are identified within the National Industrial Strategy as priorities.
- although this has not been identified as a growth opportunity, like financial services, there are strengths and clusters in York and North Yorkshire that can contribute to the national agenda.

Competitive Advantage Sectors

The Competitive Advantage Sectors are the sectors where York and North Yorkshire is best positioned to accelerate economic growth and productivity at a local and national level. In each of these sectors, York and North Yorkshire has a USP, particularly linked to our innovation, academic and R&D assets. These sectors aren't always the largest employers within the region, but they present an opportunity to unlock growth. These sectors have been identified and refined via quantitative, desk-based research and engagement with a range of stakeholders, both public and private sector. See our bibliography for further details on the research that underpins the Growth Plan.

Feeding

Food & Farming Innovation

- Significant agricultural land where innovation on soil quality and crop resilience is taking place
- Major food and drink manufacturers, including Nestle, the world's largest food and beverage company
- Our strong science base is future proofing the food industry, from genetics and alternative fertilisers to tech adoption

✂ Feeding ⚡ Healing 💡 Powering
🌐 Connecting 🎧 Inspiring 🛡 Protecting and

Growing the UK



Food & Farming Innovation

York and North Yorkshire has significant and unique assets across the whole food ecosystem, making it a perfect trailblazer to lead on national food security*.

Growth Outcomes

Adoption of technology to improve efficiency and increase productivity:

- Precision agriculture, robotics, automation
- Increased digital skills capabilities
- Improved production and resilience through new processes to increase productivity and inward investment, create high-quality jobs and reduce carbon emissions:
 - Increase regenerative agriculture
 - Increase next generation horticulture
 - Greater translation of R&D/innovation into industry (e.g. crop resilience)

Increased inward investment through investment in commercial development and incentives to attract new businesses, develop clusters and create jobs

Increased trade and export, supporting business to navigate complicated processes and maximise the Yorkshire brand

National agenda

- Focus on food security, including increasing productivity, reducing waste and increasing resilience. We commit to supporting the development of the National Food Strategy.
- Agritech is a subsector of Advanced Manufacturing within the Industrial Strategy.

York and North Yorkshire's Specialisms

Precision Agriculture

Although the number of manufacturers delivering technology-based solutions for farming is low in York and North Yorkshire, the scale of farming based here (with approximately ~70%⁶ of land dedicated to agriculture) makes the region a perfect testbed area. Our farming assets are also diverse, covering all types of arable, livestock and aquaculture.

We are also home to key academic, innovation and R&D assets linked to agritech. Agricultural and horticulture college Askham Bryan, the only land-based college in the UK, offering degree-level study, awarded by the Royal Agricultural Society of England (RASE). Fera is a national and international centre of excellence for interdisciplinary investigation and problem solving across plant and bee health, crop protection, sustainable agriculture, food and feed quality, and chemical safety in the environment. The UK Agritech Centre HQ (based at the University of York) offers a complete lifecycle of support, driving agritech innovation and adoption through world-class research facilities, expert knowledge and business support, saving time and accelerating progress.

We have strong partnership-working with the sector through the establishment of Grow Yorkshire, which brings together key sector representatives (e.g. NFU, CLA, Fera, Yorkshire Agriculture Society, Deliciously Yorkshire).

Grow Yorkshire is already supporting the adoption of technology through the creation of a Precision Agriculture Special Interest Group to inform and apply the latest technology at farm level. To achieve this, Grow Yorkshire is working with researchers and technology developers to create a forum through which collaborative innovation can occur. The Precision Agriculture Special Interest Group's key objectives are to provide a forum for collaboration, innovation and enterprise for the benefit of precision agriculture and regenerative farming in our region

Regenerative Agriculture

Regenerative agriculture could provide the change that is needed to drive growth, resilience and sustainability within farming.

*Food security is about ensuring people have fair access and choice around food, all year round.

As noted in a joint report between McCains and DEMOS⁷, “while there is no one definition of regenerative farming, it most commonly refers to methods that minimise soil disruption, reduce reliance on synthetic inputs, and expand use of non-synthetic inputs (like plants, livestock and non-synthetic fertilisers) to rehabilitate natural ecosystems.”

Often regenerative agriculture methods are associated with environmental benefits, including soil health, reduced emissions, higher biodiversity etc, but it can also support economic resilience. Some of the research is mixed around outcomes, but there is evidence that suggests possible increases in long-term yields and increases in long-term profitability (partly linked to a decrease in inputs).

Without action, climate change, soil degradation and biodiversity loss will only exacerbate the issue. Focusing on regenerative agriculture and more sustainable and technology driven practices is a step in the right direction to strengthen the UK’s food security. Given the diversity of York and North Yorkshire’s agriculture, a different emphasis in different parts of the region may be required, aligning with Government’s National Land Use Framework.

Food & Drink Manufacturing

Locally and nationally, food and drink is the largest manufacturing subsector in terms of economic value. However, historically, the sector has not been recognised by Government as a strategic advanced manufacturing sector, which has meant limited funding and support has been geared towards food and drink. For example, a Food Security report from the Policy Exchange⁸ highlighted: “Government contributed 0.3 per cent (£3m) to [food and drink] R&D Spending, whilst the automotive and aerospace sectors received respectively 1.0 per cent (£38m) and 15.8 per cent (£322m).”

To drive forward growth in this sector and support food security, digital and technological transformation will be needed, alongside increased trade opportunities and skills support.

Controlled Environment Agriculture

Controlled Environment Agriculture is not about replacing our high-quality arable land and losing sight of our rich agricultural heritage, but it’s about adapting to future needs and building resilience in our food supply. Good quality agricultural land does not need to be converted for Controlled Environment Agriculture – urban areas, particularly close to carbon-intensive

businesses (as CEA can take waste heat energy and waste carbon), are preferred. The ability to sequester the carbon from other sectors will be in massive demand, especially as the level of Data Centres (which are carbon-intensive) will need to increase to cope with advancements in AI and technology.

Regulatory changes requiring businesses to report on scope 3 emissions will put greater emphasis on local supply chains, but the UK has a gap around fruit and vegetable production. In 2023, the UK imported around £7.1bn of fruit and vegetables per year, many of which could and used to be grown in the UK⁹.

Equally, the increased demand for food combined with the dietary demands of a growing global middle class are contributing to a global agricultural productivity gap. Total food production needs to increase massively to meet the world’s requirements, and part of the challenge is that we need to do more with less (particularly balancing land tensions with housing and energy needs).

Controlled Environment Agriculture provides an opportunity to improve UK food security, reduce carbon emissions from transportation, processing and refrigeration, increases shelf life/in-home life of products and reduce waste, reduce and recycle water used in crop growth, with little to no use of chemicals or pesticides applied to the crops produced, and reduce packaging due to a much shorter supply chain.

Coastline Opportunities

North Yorkshire’s strong coastline provide opportunities across a number of sectors, including aquaculture and engineering biology (e.g. seaweed as an alternative material).

Case Study Heat to Harvest

Data centres could be seamlessly integrated with next-generation glasshouses, creating a harmonious blend of technology and sustainable food production. This approach not only optimises land use and energy efficiency, it will also enhance the nation's food security and resilience. By embracing this forward-thinking initiative, the UK can pave the way to becoming a global leader in AI infrastructure, provide highly skilled data centre roles that co-exist with Agritech job opportunities and nurture a sustainable and prosperous future.

P3P Partners is a UK-based company that develops, finances, builds and operates projects in the energy and controlled environment agriculture sectors. P3P Partners have developed 'Heat to Harvest', an innovative co-location approach to data centres, where data centres and 'next generation' glasshouses work symbiotically to deliver efficient energy and resource use. The P3P solution helps the data centre reduce power demand and expand sustainable supply of UK fresh produce.

To develop the model, a next-generation glasshouse is sited near to, but outside of the security boundary of a data centre. The P3P 'Heat To Harvest' model takes the waste heat from the Data Centre and uses it to heat the glasshouse for crop growth. The glasshouse system returns chilled water to the data centre, reducing the data centre's energy consumption. Thus, lowering the carbon intensity and climate footprint of the data centre and contributing to increased UK food security.

This is a perfect example of delivering circular economy principles.

Key Assets

Academic, Innovation, R&D

- Askham Bryan is the only land-based college in the UK, offering degree-level study, awarded by the Royal Agricultural Society of England (RASE) and is based here.
- The University of York is home to the National Agritech Centre's HQ and "Fix Our Food", which is a multi-disciplinary research programme that aims to transform the Yorkshire food system to one that is regenerative – benefitting both human and planetary health.
- Fera Science is a major driver of agritech innovation from its extensive R&D facility in the heart of our region, at the York Bio-tech Campus.
- Grow Yorkshire is a partnership led by the York and North Yorkshire Combined Authority. Together with our partners, we are investing in the growth and development of food and farming, with a strategic remit across environment, innovation, skills and resilience.
- The UK Agritech Centre HQ is based at the University of York, driving agritech innovation and adoption through world-class research facilities, expert knowledge and business support, saving time and accelerating progress.

Case Study Be a global leader in sustainable fertiliser Innovation

Anglo American are exploring opportunities for polyhalite fertiliser, with a focus on setting new standards for sustainable mining while helping to boost food production and sustainable farming practices.

Anglo American's Woodsmith Project, focused on the world's largest polyhalite resource here in North Yorkshire, will help to make the UK a global leader in low carbon fertilisers and make a significant contribution to sustainable agriculture and food security. In doing so it will create over 1,000 high value jobs, drive growth and generate large-scale exports.

Industry

- A significant amount of land within York and North Yorkshire is dedicated to agriculture, covering all types of arable and livestock farming. There are 4 times the portion of agriculture businesses based here than in England. There are also strong aquaculture opportunities through our coastline.
- York and North Yorkshire is a nationally important location for Controlled Environment Agriculture (CEA) and has been identified by the Department for Business and Trade as the region best placed to welcome controlled environment agriculture and horticulture businesses looking to invest and extend operations within the UK and Europe. This recognition is due to the region's extensive research and development capabilities, access to over 30 distribution centres servicing the UK retail market, and upstream and downstream supply chain connectivity. Some of our current private sector assets are clustered within Selby, which is home to Perfectly Fresh, APS Salad and Phytotonics.
- Food and drink manufacturing has a rich history within York and North Yorkshire, tracing back to the Victorian era, including Rowntrees (founded in York) which is now one of the world's largest confectionery factories under the ownership and investment of Nestle. We're home to the largest concentration of food and drink manufacturers in the UK.
- The manufacturing sector continues to be well-established with many global brands making their home here, including: McCains, Heineken and Taylors of Harrogate. There are food manufacturing clusters at Leeming Bar Industrial Estate and in Malton.
- Tadcaster has three major breweries, Molson Coors, Samuel Smiths and Heineken-owned John Smiths. Masham is also home to two nationally renowned breweries, Theakston's and Black Sheep.
- Alongside these larger businesses, the smaller food and drink producers also play a significant role within York and North Yorkshire with 61% of businesses classified as micro (0 to 9 employees) and 20% considered small (10 to 49 employees).

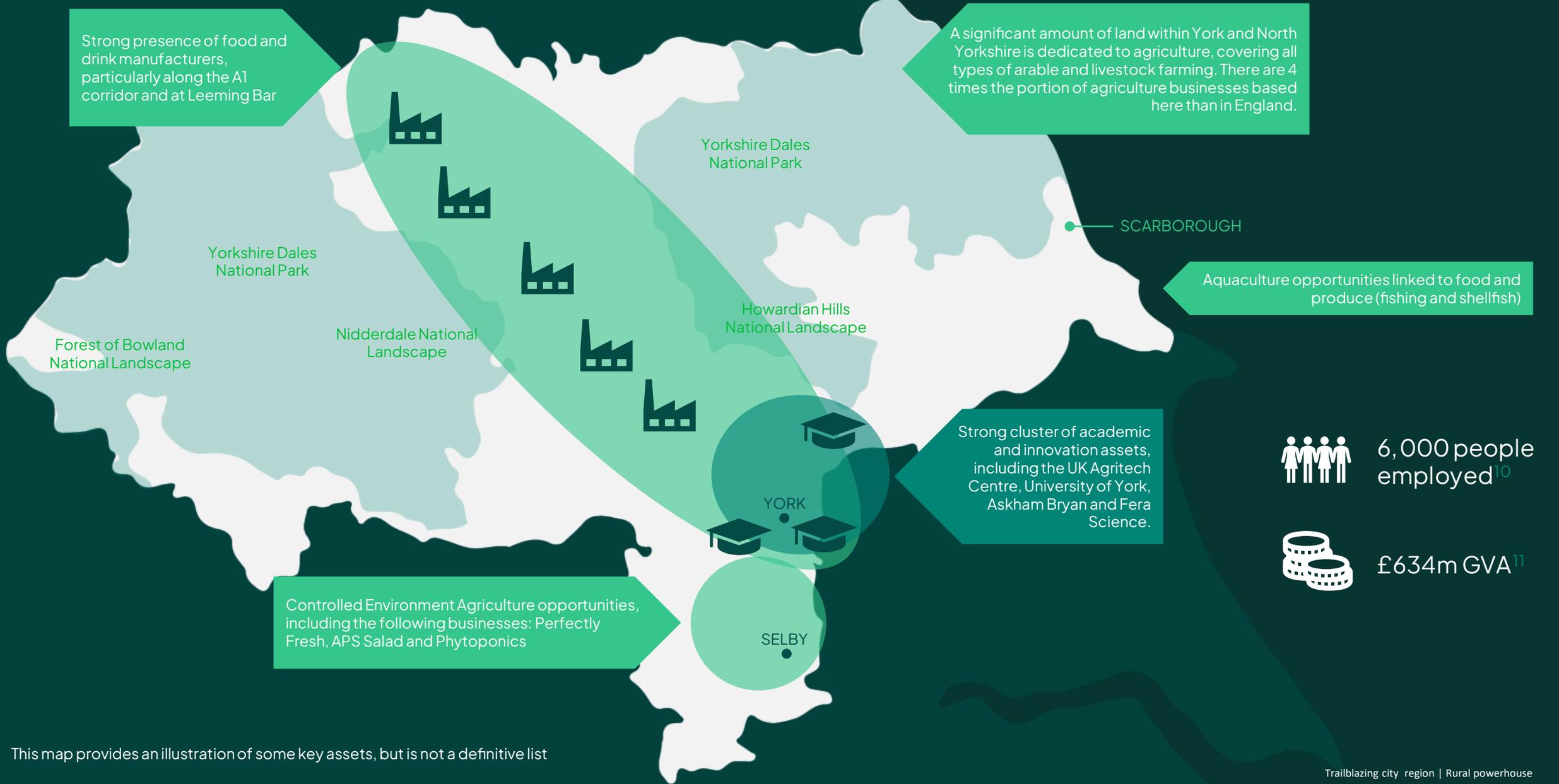
How will we unlock growth in Food & Farming Innovation?

Strategic Role

- Dialogue with HMG to explore barriers linked to regulation and increased costs – businesses have raised a number of issues linked to red tape, which are stifling growth.
- Collaborate with DEFRA on the creation of a National Food Strategy – alongside close working with DSIT and DBT.

Delivery Role

- Precision Agriculture Trailblazer for the North – supporting farmers to adopt technology to streamline processes and improve efficiency.
- Food and Farming Innovation Growth Zone – creating an attractive environment for Controlled Environment Agriculture by unlocking commercial development, accelerating innovation and supporting skills development and career pathways.
- England's First Regenerative Agriculture Region – support for farmers to transition to more sustainable practices through regenerative agriculture and ensure the skills system can support this.
- Internationalisation Support – building on the strong Yorkshire brand, provide greater promotion and support for trade missions, including working with partners.
- Technology Adoption Programme for Manufacturers – building on the strengths of programmes such as Made Smarter with a focus on food and drink manufacturing and greater flexibility around capital investment costs.
-



Strong presence of food and drink manufacturers, particularly along the A1 corridor and at Leeming Bar

A significant amount of land within York and North Yorkshire is dedicated to agriculture, covering all types of arable and livestock farming. There are 4 times the portion of agriculture businesses based here than in England.

Aquaculture opportunities linked to food and produce (fishing and shellfish)

Strong cluster of academic and innovation assets, including the UK Agritech Centre, University of York, Askham Bryan and Fera Science.

Controlled Environment Agriculture opportunities, including the following businesses: Perfectly Fresh, APS Salad and Phytoponics

 6,000 people employed¹⁰

 £634m GVA¹¹

This map provides an illustration of some key assets, but is not a definitive list

Healing

Engineering Biology & Life Sciences

- Leading edge research is taking place at the University of York, addressing global challenges to heal our people and our planet.
- Critical healthcare needs are being addressed here, from global brands, such as LabCorp and small but significant businesses.

✂ Feeding 📶 Healing 💡 Powering
🔗 Connecting 🌐 Inspiring 🛡 Protecting and

Growing the UK



Engineering Biology and Life Sciences

York and North Yorkshire is well-positioned to become the Science Superpower of the North, utilising our Engineering Biology expertise and Life Sciences research. Although these two sectors are uniquely different, they share similar USPs and challenges within York and North Yorkshire.

Growth Outcomes

Increased commercialisation leading to start-ups, spin-outs and scale-ups and job creation.

Development of a northern cluster and inward investment for both sectors, encouraging greater recognition for assets outside of the south and increasing inward investment.

Increased supply of talent through career development support and creating a future pipeline of talent, including graduate retention.

National agenda

- As the UK Government has set a goal that 80% of fossil-based products or plastics will be replaced by bio-based or waste derived alternatives by 2035, there is a massive opportunity for engineering biology to grow.
- Engineering Biology and has been identified as a subsector of Digital and Technologies within the Industrial Strategy.
- Life Sciences has also been identified within the Industrial Strategy.

York and North Yorkshire's Specialisms

Engineering Biology

York and North Yorkshire are national leaders in the bioeconomy, hosting a significant workforce and businesses across agritech, bio-based materials, and sustainable food production, with specialisms in agricultural innovation, food and beverage manufacturing, and biotechnology.

Engineering Biology is the science behind delivering a bioeconomy. Simply put, engineering biology is about creating alternative materials to fossil-fuel based products or plastics. This could include bio-based or waste derived alternatives. Given national ambitions for 80% of fossil fuel-based products or plastics to be replaced by a bio-based or waste-derived alternatives by 2035, there is a massive market opportunity for this sector.

Engineering Biology encompasses the entire research and innovation process, from discovery through to translation, commercialisation and application.

York and North Yorkshire's strengths are linked to innovation and R&D within waste, water and plants for alternative materials. Waste to products is primarily through extracting value from unavoidable food waste and agricultural side stream (particularly driven by our significant agricultural base). Valorising waste water provides opportunities for anaerobic digestion and clean energy, whilst materials from the ocean water (e.g. seaweed) could be used for food, feed, high value chemicals, bio-stimulants and fertiliser.

Plant innovation can provide alternative materials for pesticides and herbicides, flavour, fragrance, skincare and alternative proteins for pet and animal diets.

Most of the innovation and research for Engineering Biology is done in the UK and this is where York and North Yorkshire excels. The UK is the 2nd largest funded in the world in terms of research funding in the biologic sciences. But there are challenges around investment through the "valley of death" and commercialisation due to a lack of seed funding. There is a capital deficit outside the Golden Triangle of London, Oxford and Cambridge, which needs to be addressed.

It can be difficult for businesses to secure the first investment for commercialisation, as often it's linked to complicated technology which may be well-developed from an R&D perspective, but investors will often see this as high risk.

York & North Yorkshire and Tees Valley Bioeconomy Cluster

This is an established and scalable cluster of research, development and innovation infrastructure and capabilities that spans medicines, agrifood, fuel, and chemicals. It leverages the triple helix of industry, academia and public partnerships with national and international reach and a track record in delivering impact. Two established and active industrial groupings, the North East Process Industry Cluster (NEPIC) and BioYorkshire are committed to developing new business opportunities through expansive partnerships, as well as two vibrant BBSRC funded academic-industry networks: Biomass Biorefinery Network and High Value Biorenewables Network are built on the inherent R&D skills in the cluster.

The cluster is home to a concentration of science technology and innovation institutes influencing national adoption and demonstration of engineering biology and net zero technologies, already delivering new products to the market.

Case Study BioYorkshire, Public & Private Sector Partnership – Greensphere

BioYorkshire a partnership between the University of York, providing the research capability and at the global forefront of biotechnology research, especially plant science, for at least two decades; FERA, the UK's most important lab complex for connecting agritech and environmental science advances to industry and government; and Askham Bryan College, one of the leading land-based colleges in the UK at the very forefront of training the rural workforce, especially in our farms, with the technological skills that will transform the rural economy.

The network has drawn to it a powerful industry advisory group including some of the most important companies in the region, including a new Venture Fund launched by Greensphere Capital to support start-ups, a keen interest by the York Central developers in anchoring biotechnology innovation in a large-scale facility on that site, and a strong inward investment pipeline. Nowhere else in the UK can offer all this - it adds up to a unique comparative advantage for the region.



Life Sciences

In York and North Yorkshire, the demographic of our population, along with our excellent research facilities and sector expertise, is behind our ambition to be the global lead within Life Sciences. There is an opportunity to grow our existing assets and promote them externally, whilst also positioning ourselves as part of the whole Northern Life Science and Health cluster.

That ambition is driven by necessity. The number of people aged 60 and over is forecasted to increase, putting a greater strain on our health services. People are living longer, and it's essential our longevity is underpinned by good health.

Society needs new, high-quality research which expands the knowledge base of life science and their potential real-world applications. There are deep health inequalities and significant pressure on NHS budgets and a national imperative to address the UK's productivity problem through the creation of high value jobs and innovation-led growth.

There is significant potential for growth in this sector by building on the extensive research and development assets, innovation health networks and partners, alongside the highly skilled graduates exiting in our regions universities. Sub Sectors are Health Tech, Med Tech, Care Industry, Research & Innovation and BioPharma.

Case Study Skipton Cluster for Life Sciences

York and North Yorkshire's rural geography often means businesses are dispersed and there are lower concentrations compared to urban geographies. However, there are still some noticeable sectoral clusters, including Life Sciences around Skipton, where 30 businesses have been identified which represent 4.9% of employment in the area.

Bio-pharma is the predominant form of Life Sciences activity identified in the Skipton area – this relates to the design, development and manufacturing of various human (and animal) health products, including vitamin and mineral supplements, personal care and cosmetics. Aligning to this is a smaller, but distinctive segment of activity in drug production for veterinary purposes. A smaller but still significant amount of activity is in med-tech, with a group of businesses, both at the sector's core and wider, involved in the manufacturing and supply of various specialist products used primarily in medical settings (e.g. wound care, equipment for diagnostics, sedation and other personal care uses). This is matched by a similar share of activity relating to specialist testing and analytics – often incorporating an R&D element. The smallest segment locally (in terms of business size and employment) is a broad grouping of activity related to sector specific professional services: these are largely microbusinesses offering expertise in clinical testing, market research, and other relevant fields.

¹²Source: *Sector Growth Opportunities - Health, Pharmaceuticals and Life Sciences in the Skipton area, April 2025, SQW*



Key Assets

Academic, Innovation, R&D

- The University of York is a UK leader in Industrial Biotechnology, ranked No.4 in England for its Bioscience Research, with leading research capabilities in developing bio-renewables, biomass, bio-refining, and waste valorisation.
- BioYorkshire - a regional partnership that aims to accelerate the translation and application of research discoveries into full scale biotechnology applications. The ambitious programme - an innovative public-private partnership - includes the University of York, Fera Science, Askham Bryan College and a range of private sector partners.
- Opportunity for York and North Yorkshire to be part of a “Golden Triangle of The North” connected to Tees Valley and the Humber industrial clusters where Y&NY will work alongside Tees Valley’s Centre for Process Innovation (CPI) to provide the biorefining research and development for delivering the transition from fossil fuels to a bio-based, greener economy.
- World-class scale up and commercialisation at the Biorenewables Development Centre at York. It offers open-access facilities and expertise covering the whole bio-based value chain, from resource assessment, through process development, to market evaluation and commercialisation.
- York and North Yorkshire's Life Science sector is primarily centred around strong academic resources. The research strengths within our region are renowned, such as the Skin Research Centre located at the University of York and the Bioscience Technology Facility, providing access to state-of-the-art bioscience technologies for academic and commercial purposes.
- This research also includes interdisciplinary capabilities – for example, The Centre for Assuring Autonomy at the University of York is exploring the safe introduction of autonomous technologies into health and social care, including demonstrators on assistive robots and ambulance response. Similarly, York St John University’s The Institute for Health and Care Improvement and The Centre for Applied Innovation (CAI) is also exploring innovation and technology to address critical societal needs.
- Our varied geography means we’re prioritising solutions to urban and rural health challenges, making us a perfect base for developing and testing products and, in-turn, commercialising innovative health solutions.
- York Biomedical Research Institute (YBRI) lead research into Health, through collaboration and scientific excellence. Areas of research include blood, skin, infection, vision, cancer and sleep. York – Centre for Blood Research (CBR) aims to translate research into the clinic and further understanding of disease development and to identify new disease biomarkers and therapeutic strategies to improve diagnostic, prognostic and therapeutic benefit to patients. The Skin Research Centre brings together experts in skin ageing and cancer, immunity, wound healing, infection, and skin microbiome. From scientific discovery to applied research, clinical research, and pilot production and manufacturing, they are dedicated to making a lasting impact on skin health.
- The York Health Economics Consortium comprises more than 60 experts specialising in health economics and outcomes research (HEOR) for the pharmaceutical, health tech, NHS and associated health industries.
- The Institute for Health and Care Improvement launched in 2023 and comprises academics from across the university, who provide evidence and research by working closely with patients, clinicians and industry partners. The Institute’s work is used to inform key decision makers across a range of health and care sectors such as disease detection and prevention, to physical activity, rehabilitation and health promotion.

Industry

- Our growing BioYorkshire ecosystem has already attracted Greensphere Capital to base their hub and new start-ups in York, with a £150 million fund designed to invest in and scale world-leading businesses that commercialise solutions that mitigate against the dual crises of climate change and biodiversity loss. “Green Sphere” investment vehicle around the environment and sustainable land use. Main offices are now based at the university. Forming their first spinout in York, “Kew Reach”.
- The industry is developing and concentrated in a few core areas of Biopharmaceuticals, Omics and MedTech and HealthTech. The cluster is more complex than others in the North, but it presents an important growth opportunity in the region. The business base ranges from global brands, such as LabCorp and Scapa Healthcare to smaller scale such as Labskin and Abington Health at York Biotech campus to spin-outs in the region such as Mesenbio.
- Home to a cluster of over 500 care businesses – all dependent on innovation to meet the care needs of an older population.

How will we unlock growth in Engineering Biology & Life Sciences?

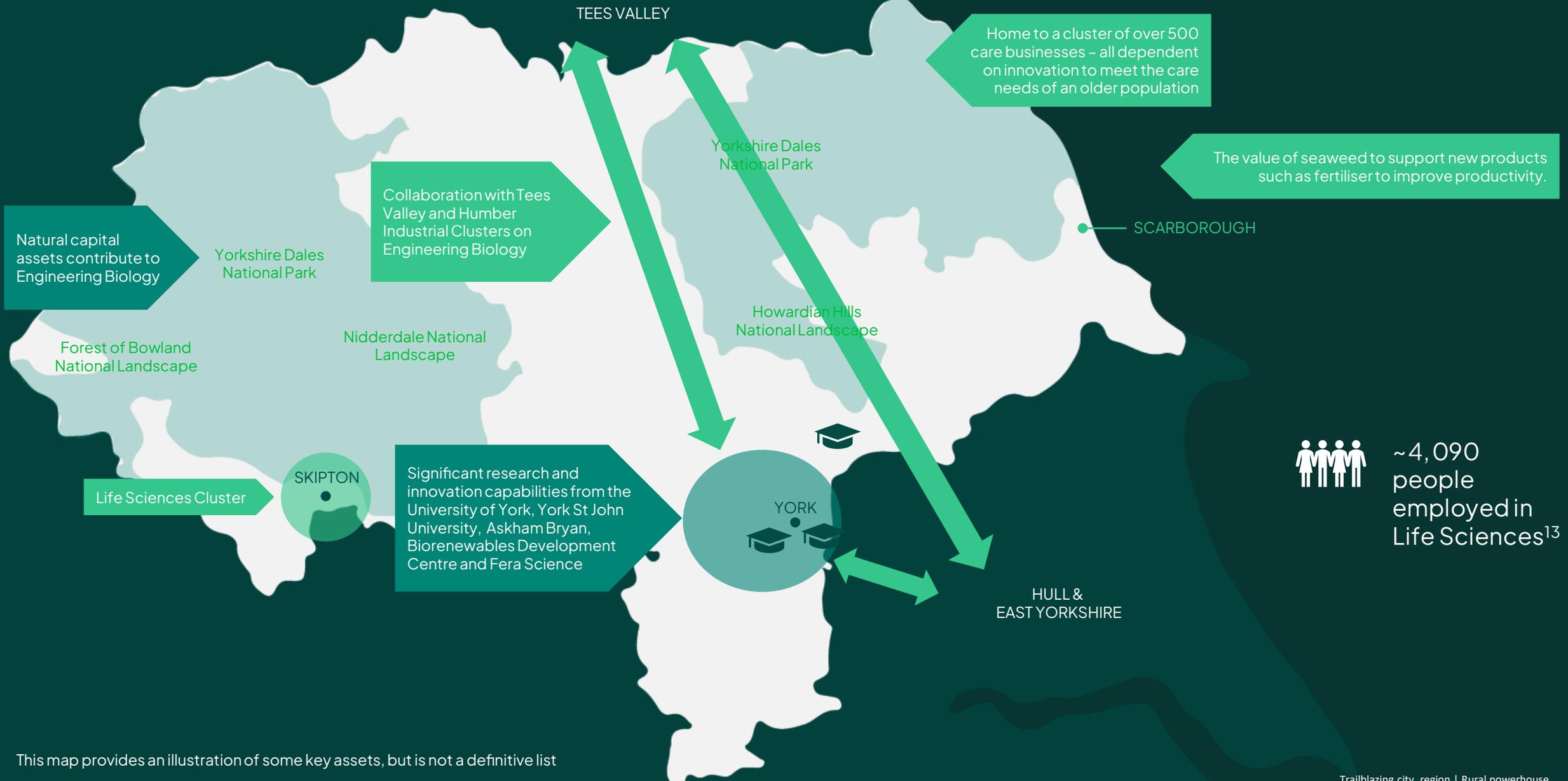
Strategic Role

- Work with partners to deliver a vision for a wider bio-ecosystem
- Collaboration with DEFRA, DSIT, DESNZ and DBT to develop these sectors.



Delivery Role

- Explore models for low-cost, flexible lab space – business growth is constrained by the lack of accessible lab space within the region, but greater insights are needed on the current offer, potentially followed by investment to unlock commercial development.
- Cluster mobilisation – in a rural geography, businesses can often feel scattered and isolated with limited collaboration. As part of existing CA investment, hub and spoke models will be tested, including skills support such as entrepreneurialism and commercialisation.
- Food and Farming Innovation Growth Zone – phase 1 will focus on Controlled Environment Agriculture as part of the Food and Farming Innovation sector. Further opportunities need to be explored to connect our food innovation with engineering biology and alternative materials to increase resilience within agriculture.
- Identify and trial a funding model to support innovation commercialisation – research into the best model will be supported via existing Mayoral Investment funding, looking at proof-of-concept funding and regional investment vehicles and skills support.
- Skills assessment for Engineering Biology and creating the skills infrastructure – complex sector as it covers a number of subsectors, from farming to alternative fuels. Further mapping is required to understand skills needs, gaps and future requirements and how existing provision can be adapted to support these needs.



This map provides an illustration of some key assets, but is not a definitive list

Powering

Clean Energy

- At the forefront of energy decarbonisation, including the location of the country's first demonstrator project converting a redundant gas well into a geothermal well.

✂ Feeding ⚡ Healing 💡 Powering
🔗 Connecting 🎧 Inspiring 🛡 Protecting and

Growing the UK



Clean Energy

Decarbonising York and North Yorkshire's energy system will create new economic opportunities, benefit local communities and support national ambitions to boost energy security. It will be achieved through industry innovation, skills training and education for growing supply chains, increasing inward investment and becoming an exemplar for green finance.

Growth Outcomes

Increase the deployment of clean energy, supporting energy independence, reducing carbon emissions and creating new job opportunities

Growth in the construction supply chain by investing in retrofit requirements and building confidence in the market, creating demand for new jobs

National agenda

- Supports national ambitions to make Britain a Clean Energy Superpower and transition to net zero.
- Aligns with Clean Energy as a key growth sector in the Industrial Strategy.

Accelerating Energy Security

York and North Yorkshire has the potential for energy independence, generating all the energy to power the region within its geographic boundaries, as identified in the Local Area Energy Plans (LAEPs)¹⁴ for York and North Yorkshire. Within the LAEPs, several mechanisms for zero carbon electricity generation locally are referenced, including domestic rooftop solar, in-home battery storage and large-scale solar farms. Decarbonisation of the energy system is possible, but it will require a bold transformation through targeted investment, skilled trades and building supply chain capacity.

The Combined Authority is utilising numerous investment streams to accelerate this transition. For example, an Energy Generation Accelerator Programme has been developed, which will identify viable sites for renewable energy generation and the best mechanisms, from battery storage to solar power. This approach will also identify the social appropriateness (particularly recognising land use constraints) and the viability of projects.

Investment has been allocated from the Department for Energy Security and Net Zero to deliver a Strategic Energy Partnership, through enabling the development of a City Leap replicator project, which could support this transition. This project is based on the Bristol City Leap, an innovative public-private partnership between Bristol City Council and Ameresco, which aims to accelerate green energy investment and help towards decarbonising the whole city. Work is underway to assess whether this approach, or an alternative model, would fit best the needs and regional opportunities of York and North Yorkshire.



The Combined Authority is also supporting a number of projects to decarbonise public assets. From electrifying council vehicles to generating power on waste land, from retrofitting existing buildings to implementing solar panels onto schools. The work being done aims to harness innovative technologies and build more resilient energy pathways.

Alongside public sector intervention, the private sector also plays a pivotal role in transitioning to clean energy.

For example, Drax Power Station, based within Selby in North Yorkshire, is the UK's largest biomass power station, playing a central role in producing the UK's electricity and exploring bioenergy with carbon capture and storage. Outside of Selby, the renewable capacity in York and North Yorkshire is modest. This must expand very rapidly to support the transition to clean energy.

Geothermal

York and North Yorkshire is a geothermal hotspot due to a salt layer at 1,700m, meaning the region has a higher-than-average geothermal potential. Due to this geology, heat presents the biggest opportunity. However, a £35m investment into pilot studies is being led by the University of York, exploring feasibility of electricity generation via deep geothermal in the region.

Alongside environmental benefits, case studies of geothermal energy generation elsewhere show the potential economic impact, particularly through job creation. A report from Arup (2021) estimates that building the sector to reach 360 projects by 2050 could create over 10,000 direct jobs and a further 25,000 indirect jobs¹⁵. It could also support with redeployment of people currently working in the oil and gas sector, with many skill requirements transferable. There is an opportunity in heat network zoning, aligning geothermal projects with new housing developments and industrial clusters.

Mine water heating is being explored in Selby but presents technical challenges linked to energy-intensive pumping and high costs.

The Combined Authority is currently seeking funding for research to create a blueprint that can be applied across the region and enable

trials in York and North Yorkshire to demonstrate the viability of geothermal systems in decarbonising schools, public sector and historical buildings and communities, amongst various building configurations, matching heat sources with end-users. This will support the development of a pipeline of geothermal projects in the region that will be complementary to the regional efforts in the transition to clean energy, while enabling opportunities for commercial investment.

Case Study Geothermal Demonstrator in North Yorkshire

In early 2024, Pickering Town Community Interest Company received funding from the UK Shared Prosperity Fund, through North Yorkshire Council, to explore the potential for geothermal heat networks in Pickering. The study assessed both the reuse of existing gas wells and the feasibility of drilling new geothermal wells to supply low carbon heat to key sites across the town. In addition to allowing for emissions reduction, this project aimed at lowering energy bills and improve the reliability of the local heat supply.

Two energy hubs were proposed:

- South Hub: This concept involves converting a redundant gas well near the A169 to supply heat to the Ryedale Swim and Fitness Centre and nearby businesses. The system could deliver £65,000 in annual energy savings and reduce carbon emissions by 209 tonnes each year. With an estimated capital cost of £1.7 million, the project has a 20-year payback period, which could be shortened if more users connect to the network
- North Hub: This proposal would drill a new 1,800 metre geothermal well to serve three local schools. The system could save £68,000 per year and cut emissions by 165 tonnes of carbon dioxide. With a £1 million investment, the project is expected to pay back within 14 years and offers further potential to expand into nearby residential areas

This study demonstrated the potential of underused assets, such as redundant gas wells. If replicated across the region, this technology would allow lower energy costs for schools, leisure centres, and local businesses; therefore, making the area more attractive for future investment. For the development of geothermal energy in the region, new jobs in construction and maintenance would be required; hence, improving local supply chains, and promoting the region as an innovation hub in clean energy and heat decarbonisation.

The study also produced a generic geothermal well design that could be replicated in other areas of the town. Additional wells could supply between 100 and 150 homes or a range of public and commercial buildings, making this a scalable and adaptable model for local energy infrastructure.

Decarbonisation of Buildings

Emissions from buildings account for 27% of total emissions in York and North Yorkshire, with nearly two thirds coming from domestic buildings¹⁶. The region has a higher-than-average proportion of homes off the gas network, a large proportion of detached homes and a higher proportion of pre-1930 homes. Consequently, energy efficiency is low within the region (63% of homes and 57% of non-domestic properties have an EPC rating below C)¹⁷ and as of 2022 approximately 15.3% of households are in fuel poverty¹⁸. A substantial amount of our building stock needs to be retrofitted to reduce energy poverty, improve health and reach decarbonisation ambitions.

This is a massive task, but presents an opportunity for our environment, businesses and communities.

However, the supply chain is not currently able to respond to the pace and scale of retrofit needed. There are approximately 300 retrofit businesses in York and North Yorkshire, with a labour force of approximately 500 people, mostly centred around Harrogate and York¹⁹.

According to the Retrofit Skills Assessment, a peak retrofit workforce of approximately 12,900 people is required by 2031 to deliver net zero by 2034²⁰. However, there are approximately 25,000 jobs across the region with skills profiles that match retrofit jobs and could be utilised to fill the skills gap²¹. This includes industries which are expected to decline due to shifts to renewables, such as roles in oil and gas. Additionally, the local supply chain can benefit from the finance needed for retrofit. Although every building is different, the average cost of retrofitting an existing home to EPC C or above is £35,000²². Applying this average to York and North Yorkshire's need to get ~250,000 homes to EPC C by 2038 results in £8.7 billion to get homes to EPC C, in addition to what is required for non-domestic businesses which is more challenging to estimate.



Key Assets

Academic, Innovation, R&D

- A number of science assets that also link strongly to Food and Farming Innovation and Engineering Biology, including Biorenewables Development Centre, York Structural Biology Laboratory and Green Chemistry Centre of Excellence at the University of York, Fera Science Ltd.
- Local Area Energy Plans which identify the changes needed to the local energy system and built environment. This information will help us to ensure a coordinated approach to the transition of energy systems across our region.
- The University of York Deep Geothermal research will inform the region of the potential of replication for deep geothermal projects.
- Close collaboration with neighbouring universities – Durham and Newcastle universities are researching production potential, geophysical data, and system integration.

Industry

- CeraPhi Geothermal Energy: 8 sites, 11 wells under feasibility and development, focusing on closed-loop systems.
- Drax's Power Station, based in Selby, is the UK's largest renewable power station playing a central role in producing the UK's electricity. It is one of Europe's largest decarbonisation projects and potential site for innovative bioenergy with carbon capture and storage which has the potential for future jobs and investment.
- Several large solar farms have been constructed across the sub-region.

How will we unlock growth in Clean Energy?

Strategic Role

Develop a Regional Geothermal Strategy to create a coordinated approach to geothermal energy development in YNY and integrating geothermal projects into regional planning.

Geothermal Database and Mapping System
Establish a comprehensive regional database and mapping system to track geothermal potential, current projects, and available resources to facilitate informed decision-making and investment.

Develop a Retrofit Strategy for the region
Co-design a strategy outlining how the pace and scale of retrofit can increase by supporting our supply chains and maximising comfort, climate and cost benefits.

Collaboration with DESNZ, DSIT and DBT.

Delivery Role

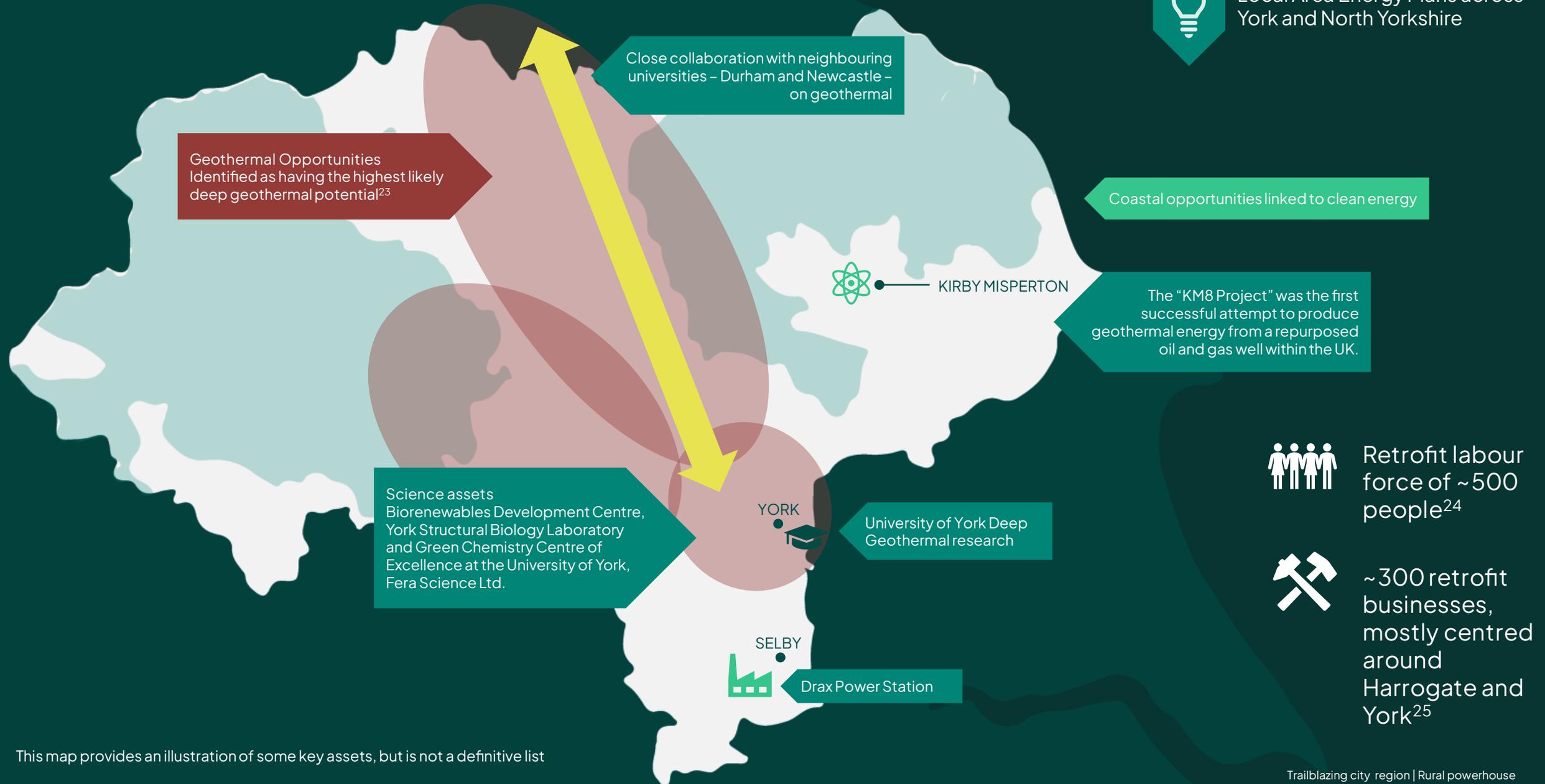
Northern Geothermal Centre of Excellence
This centre would focus on training, system testing, and development of geothermal technologies. It would also serve as a hub for knowledge-sharing, building on existing research from universities and private sector players.

Investment Aggregation
Develop regional investment portfolios that aggregate multiple geothermal projects to make them more attractive to investors, reducing perceived risks, potentially through City Leap.

Devolution (or bridge funding) to expand regional retrofit – enabling greater local control over investment into retrofit.



Local Area Energy Plans across York and North Yorkshire



This map provides an illustration of some key assets, but is not a definitive list

Connecting

Rail Innovation & Secure Technologies

- Home to the UK's biggest and best train operating companies, rail technology as well as civil engineering consultancies.
- From Network Rail's Eastern Region HQ in York to SYSTRA, specialising in world-leading engineering and consultation, and the Institute for Safe Autonomy.

✂ Feeding 📶 Healing 💡 Powering
🔗 Connecting 🎧 Inspiring 🛡 Protecting and

Growing the UK



Trailblazing city region | Rural powerhouse

Rail Innovation & Security

York and North Yorkshire has a long history linked to rail and is pioneering the future of rail through technological specialisms, including AI and quantum communications. By accelerating the translation of this innovation into industry, this will stimulate further confidence in the sector and drive greater inward investment and cluster growth.

Growth Outcomes

Increased commercialisation and product development by building confidence in the sector and encouraging greater collaboration and close-working with train operators.
Increased inward investment by creating a strong innovation ecosystem.

National agenda

- AI and quantum communications are part of Digital and Technologies sector in the Industrial Strategy.
- Opportunity to work collaboratively and support Great British Rail.

York and North Yorkshire's Specialisms

Rail Innovation

From the earliest days of steam to the sustainable solutions of tomorrow, York and North Yorkshire remains the driving force behind UK rail innovation, with York at the heart of the UK rail network. York and North Yorkshire's railway heritage is unrivalled, with over 160-year history. York is the most important location outside of London running of railways, it was the place that not only built the trains and carriages, but also the rail networks, business models, management expertise, and innovation.

Pioneering specialisms include digital, signalling, railway operations, and automation. Our rail tech companies have achieved notable successes in AI advancements, seamlessly weaving together disparate data sets and harnessing train positioning data with unparalleled precision. This heralds a new era of real-time insight extraction from aggregate data, powered by AI algorithms and tailored for dissemination to pertinent user groups.

The global digital railway market is poised for significant expansion, projected to reach £64.2 billion by 2028, with an anticipated annual growth rate of 9.2 per cent²⁶. Our ambition is to be at the heart of that growth by providing the solutions to achieve it.

Network Rail's budget of £44billion for infrastructure improvements between now and 2029 means that we, as a region, will play a big part in delivering the work²⁷. In the previous period of funding, 12 of the 20 biggest recipients of Network Rail's spend had offices and representatives in York²⁸.

Case Study

Innovations in Safety and Incident Management

RAPPORT is an innovative rail product solution that exemplifies the kind of creativity that exists in the local innovation ecosystem. Developed by Incremental Solutions, a business that create data-driven smart transport solutions, this product is an advanced incident management tool for the rail industry. It provides real-time tracking, communication, and coordination during rail incidents. By integrating with existing systems, RAPPORT delivers precise incident locations (within 3 meters), automated emergency brake detection, and mobile reporting capabilities for emergency responders. Features include resource tracking, incident replay, and visualization of rail assets, ensuring effective response and minimal disruption. Designed for desktop and mobile platforms, it improves safety, accelerates recovery, and enhances rail service reliability.

But this opportunity is constrained by a number of barriers. Due to government cuts and limited spend over the past 2 years within the rail industry, businesses wanting to bring a product to the rail market are faced with an industry that is shrinking and has limited appetite to invest. This is impacting on new products, solutions and new companies coming into the rail sector. The willingness for innovation and growth may now be constrained, when it should be a time for technology to be promoted, and the digital sector for rail to grow.

Innovation is also constrained by long and complex procurement processes, which may disadvantage small and micro businesses that have more limited capacity. To get a software product accepted for use by Network Rail or by a Train Operating Company, acceptance is required from Network Rail's IT team. Again, this is a long process and can take over 2 years and will discourage many businesses.

Security

With the increasing focus on technology transformation, such as AI, ensuring these systems are safe and secure, and our businesses are protected, is critical now more than ever. There are a number of opportunities within York and North Yorkshire that could be unlocked around Cyber Security to drive economic growth.

The presence of GCHQ and the National Cyber Security Centre in Scarborough present an opportunity in the growing Cyber sector.

Our region's wealth of expertise and R&D capabilities received a major boost in 2023 with the establishment of the Institute for Safe Autonomy (ISA). Housed in a £15 million purpose-built facility at the University of York, the ISA offers unrivalled opportunities for collaborative R&D, through sponsored collaborations and offering expertise on funding proposals.

The ISA facility enables testing to move in phases from a highly-controlled laboratory setting, to shared indoor office environments, and eventually to semi-controlled and open outdoor spaces. Home to over 100 independent experts across multiple sectors, the ISA will ensure a safety critical design, development and deployment of autonomous systems.

Our Assets

Innovation, Academic and R&D

- Supporting the rail innovation opportunities, the region also boasts 13 prominent rail education providers, contributing to a location quotient of 6, indicating a notably higher concentration of rail skills compared to the national average.
- The ecosystem continues to grow stronger with the emergence of digital rail businesses, supported by a tech accelerator through Barclays Eagle Labs and the Institute for Safe Autonomy.
- Institute for Safe Autonomy and University of York Computer Science Department.
- Railway Industry Association North.
- National Skills Academy for Rail.



Photograph provided by LNER

Case Study

Innovations in System Preventative Maintenance

The RAVE (Rail Automated Vehicle Equipment) system created by Omnicom Balfour Beatty is changing the way that railway tracks are inspected. RAVE is an A.I enabled mobile monitoring solution designed for efficient railway track inspection and maintenance. Installed on in-service trains, RAVE uses advanced sensors and cameras to collect high-quality data on track geometry, condition, and structural integrity. This continuous monitoring enables rail operators to identify defects early, optimize maintenance schedules, and reduce service disruptions. The system supports proactive asset management, ensuring enhanced safety and reliability in rail infrastructure.

Industry

- The National Railway Museum (NRM), 100 rail companies and 5,500 rail jobs focussed on the operation and development of the network, a significant private sector cluster.
- Serving as a pivotal hub, York hosts a dense concentration of railway organisations, spanning from independent consultants to the esteemed Network Rail Eastern Region's Operations Centre, cementing its position as a key node in the intricate network of the national rail system.
- Network Rail's Eastern Region headquarters in York employ over 2,400 staff.
- York rail cluster includes regular sector roundtables where companies such as Siemens Mobility, Alstom, Trans Pennine Express, Grand Central, Omnicom Balfour Beatty, Jacobs
- Rail, Aecom, Amey, Arup, Atkins Rail and Mott
- MacDonald come together as a rail industry group.
- Rail operating centre eastern region (ROC).
- National Railway Centre.

How will we unlock growth in Rail Innovation & Security?

Strategic Role

Dialogue with HMG to explore procurement flexibilities to accelerate innovation – currently contract and procurement regulations from train operators delay the process and discourage innovation.

Work with GBR in developing innovation and skills

Delivery Role

Rail Innovation Hub at York Central – exploring how to increase innovation, R&D and implementation, drawing on close partnerships with train operators.

Identify and develop career pathways to support talent pipelines and reskilling/upskilling of existing workforce, in partnership with sectoral training providers (e.g. National Skills Academy for Rail).

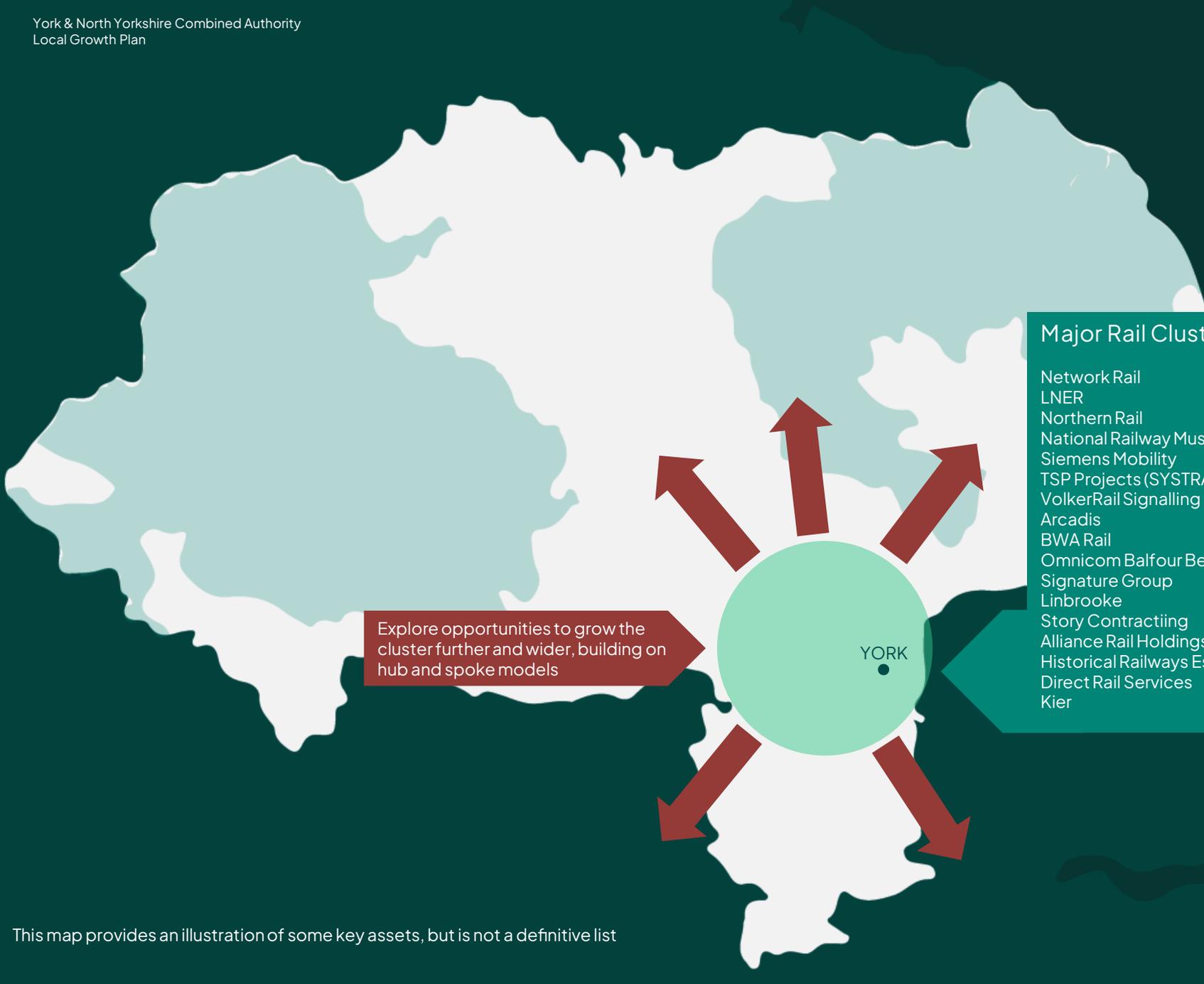




Over 180 years
of pioneering
rail innovation



13 leading rail
education
providers



Explore opportunities to grow the cluster further and wider, building on hub and spoke models

Major Rail Cluster

Network Rail	GDJ Transport
LNER	Arup
Northern Rail	AECOM
National Railway Museum	First Transpennine Group
Siemens Mobility	Grand Central
TSP Projects (SYSTRA)	First Class Partnership
VolkerRail Signalling	URS Scott Wilson
Arcadis	Mott MacDonald
BWA Rail	York EMC Services
Omnicom Balfour Beatty	Amey Rail
Signature Group	Atkins Rail
Linbrooke	Babcock Rail
Story Contracting	JSD Rail
Alliance Rail Holdings	York College
Historical Railways Estate	Yorkshire Rail Academy
Direct Rail Services	University of York
Kier	

This map provides an illustration of some key assets, but is not a definitive list

Inspiring

Creative Industries

- From Viridian FX creating the visual effects on House of the Dragon for HBO to digital storytellers AY-PE producing immersive experiences for national institutions like Edinburgh Castle and Madame Tussauds which are seen by millions of visitors every year.

✂ Feeding ⚡ Healing 💡 Powering
🔗 Connecting 🎧 Inspiring 🛡 Protecting and

Growing the UK



Creative Industries

Build on York and North Yorkshire's strengths in Media Arts, including UNESCO-recognition, and entrepreneurialism to drive growth through job creation, start-ups and scale-ups.

Growth Outcomes

Increase the no. of start-ups and scale-ups and inward investment in the sector by building confidence in the sector of the opportunities within York and North Yorkshire and a northern cluster (One Creative North).

Retain talent locally through skills development and career pathways support

York and North Yorkshire's Specialisms

Creative Industries

The Creative Sector in York and North Yorkshire is well-established, diverse and world-class. York and North Yorkshire is at the forefront of digital and creative innovation, evidenced by the quality of the businesses and organisations based here.

With companies creating high-end visual effects for Netflix and HBO; digital storytellers entrancing audiences at some of the World's most visited museums and attractions; animators and film-makers moving and inspiring audiences; games designers; theatre companies; contemporary art and culture publications; experimental architecture for live global events - this is a region brimming with innovators, communicators and creators.

York is one of only 25 cities in the World - and the only UK city - to have been designated as a UNESCO City of Media Arts (which includes communication through photography, film, video, audio, computer or digital arts and interactive media - e.g. gaming). Alongside this, there are companies across the region delivering world-class content from VFX to BAFTA-qualifying film festivals and installations seen at global event, creating impacts locally, nationally and globally.

York and North Yorkshire's combination of urban, rural and coastal places sets it apart from other areas. Each place has its own creative network and strengths.

By connecting these networks together, we can forge a regional narrative to drive growth, raise the profile of the sectors and increase opportunities.

The region is committed to keeping its world-class creative industries ahead of the growing international competition, encouraging the application and adoption of new and emerging immersive technologies like AR, VR, XR in various creative industries, including gaming, virtual production, TV & film, visual communication, and media.

Case Study

Peel X

Peel X is an award-winning XR studio based in Skipton, North Yorkshire. They bring the real and the virtual worlds together to seamlessly deliver unforgettable immersive user experiences across tourism, retail, education, culture and the arts.

Over the past decade, Peel X has grown into a visionary team at the forefront of digital storytelling. Their diverse portfolio of work has achieved such accolades as Visit England's 'Best Told Story' Award and includes groundbreaking projects that bring destinations throughout the UK and overseas to life through app-based and Augmented Reality experiences. Their recent award-winning app 'Vist Unearthed' - the first AR trail app to deliver archaeological storytelling - was recently featured in the British Museum.

More locally, they also developed an app in Pickering for a 'Pixie Trail'.

National agenda

- Creative Industries is a key sector within the National Industrial Strategy.

Case Study Aesthetica

York is proud to be the home of internationally renowned media arts organisation Aesthetica, which has championed global, contemporary visual culture for the past two decades across publishing and exhibition.

The company is an outstanding example of our region's standing in international curation, exhibition and large-scale events through its magazine, annual Art Prize exhibition and the BAFTA-Qualifying Aesthetica Film Festival. The magazine is distributed across 1,200 UK locations and exported to 20 countries.

The film festival, one of the largest in the UK, showcases the best in moving-image and screen culture, as well as innovations in XR, Gaming and New Technologies. It has a masterclass programme, workshops and unparalleled industry attendance. The festival welcomes some of the world's best directors, producers, animators, and VFX specialists whilst also playing a key role in the UK Screen Industries.

Aesthetica has also been fundamental in developing creative networks across North Yorkshire.

Case Study Artist Exhibition at Selby Abbey

Helen Brook and Mandy Keating's work is currently being exhibited at Selby Abbey for the Emergence exhibition which focuses on environment, sustainability and nature. Their approach and use of sustainable materials is highly innovative. This is part of a Shared Prosperity Fund programme.

Key Assets

Academic, Innovation, R&D

- Excellent facilities and R&D capabilities in immersive, mixed reality, both at the University of York (home to XR Stories and XR Network+) and York St John University as well as within the college sector – most notably Askham Bryan's award-winning Centre of Excellence for mixed reality.
- The University of York is leading on R&D at CoSTAR Live Lab, a state-of-the-art facility for the UK's creative industries, developing cutting-edge technology solutions to revolutionise live performance experiences. Live Lab is one of three regional labs, backed by the AHRC to the tune of £75.6m, which incubate start-ups and trains future technologists, empowering diverse voices and new talent across the sector to secure the future of creative innovation in the UK. The state-of-the-art research and development facilities available at CoSTAR Live Lab will offer the creative industries in York and North Yorkshire a long-term infrastructure to build new capability for our region in Creative Innovation and Research.

- XR Stories and XR Network+ are two related projects at the University of York; connecting companies and creatives with academic research, to provide expertise, space and infrastructure to help drive growth and innovation in the creative sector.
- York St John University has a growing specialism in XR, AR, VR and immersive technology. The Creative Centre at York St John University is a striking, purpose-built facility that opened in 2022 to serve as a hub for creativity, performance, and technology, and is designed to support interdisciplinary collaboration across the arts and sciences.
- Screen Yorkshire Connected Campus initiative forges closer links between TV and Film professionals, production companies, broadcasters and the students trying to break into this competitive industry. Partners in York & North Yorkshire include Craven College in Skipton and York College, alongside our universities

Industry

- 1500+ businesses in York and North Yorkshire are operating in the creative & digital sector²⁹.
- Viridian FX create high-end visual effects for global distribution, such as HBO's House of the Dragon and KAOS for Netflix.
- Orillo, an award-winning York based studio produces commercials, content, features and shorts for a nation and international client base.
- Digital storytellers AY-PE produce immersive multimedia experiences for national institutions like Silverstone Museum, Edinburgh Castle, the Science Museum Group, the Imperial War Museum and Madame Tussauds that are seen by millions of visitors every year.

- Stage One design and build high-end projects for the creative industries which include experimental architecture such as the Serpentine Pavilion; and touring stage sets for Ed Sheeran's 'Mathematics' tour.
- Tell Media, a technical production company, provides broadcast and remote production, live streaming and distribution, sports presentation and graphics on a global scale using cutting-edge technology.
- Based on the edge of the Dales in North Yorkshire, Factual Fiction is the UK's first off-grid production company. Recent productions include their three-part Amazon Original, 'The Greatest Show Never Made', 'The Puzzle Lady', for Channel 5 and C4 show 'Our Yorkshire Shop'. They are developing scripted and unscripted projects with ZDF, Fremantle, PBS Masterpiece, Amazon, Warner Bros, BBC, Channel 4 & Channel 5.
- The creative and culture offer across our region is fuelled by a thriving and diverse festival programme. From the Theakston Crime Writing Festival in Harrogate to the critically acclaimed North York Moors Early Music Festival; from Scarborough Fair and Big Ideas by the Sea at Scarborough, the North's leading environmental and arts festival; to the Malton Sculpture Trail and Selby's Now Then! Project. This year-round activity supports a large creative workforce and contributes significantly to the region's draw as a visitor destination.

How will we unlock growth in the Creative Industries?



Strategic Role

Work with key partners such as DCMS.

Develop a Creative Strategy in partnership with NYC/CYC and other partners.

Partner of One Creative North

Delivery Role

Connecting the creative ecosystem
Establishing, developing and growing existing networks at a local and regional level; strengthening the connections across the sector and the geography both within York & North Yorkshire as well as across the wider region through One Creative North and Creative Corridors.

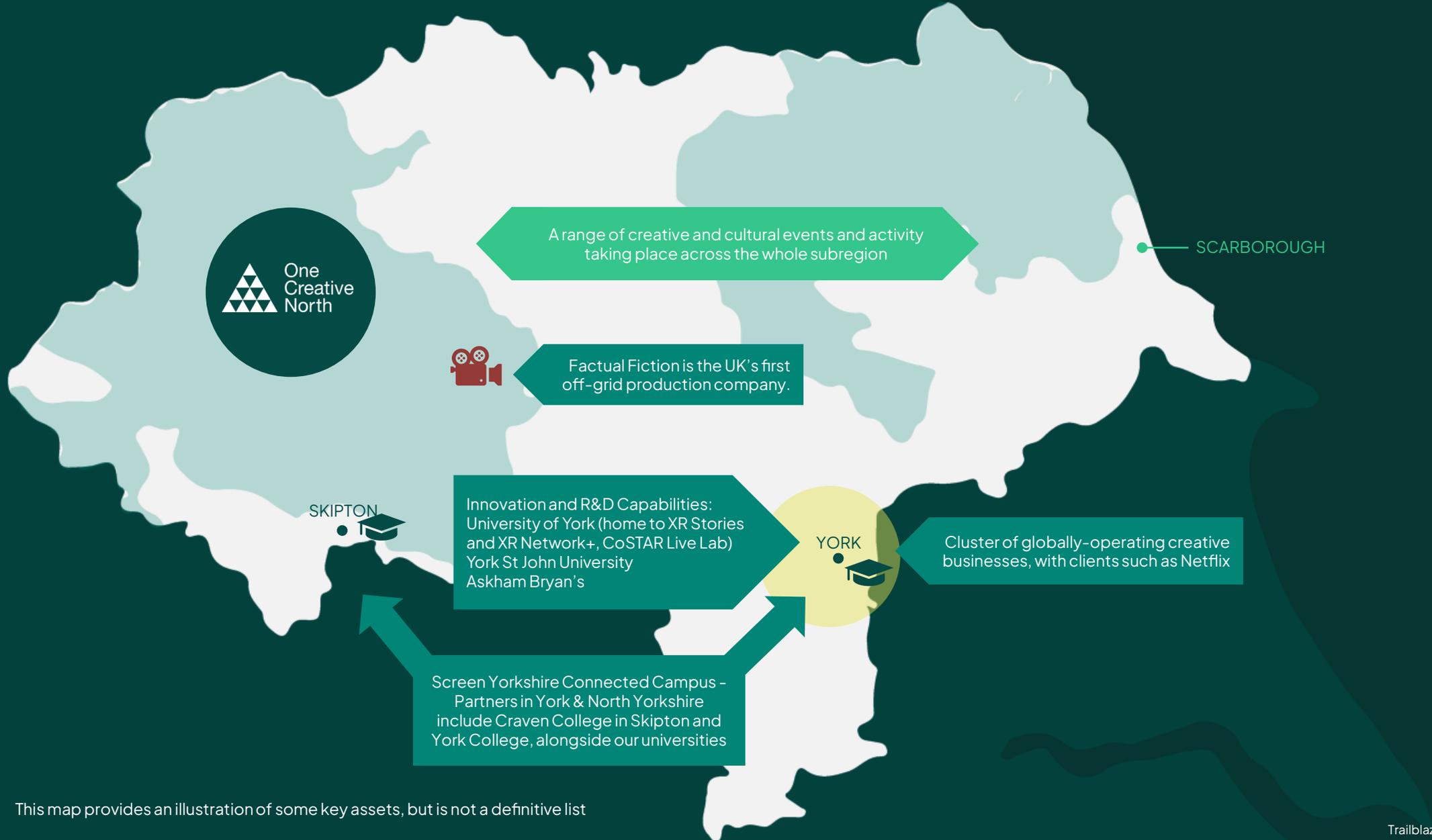
Skills
Provide skills support through inclusive interventions that enable more people from all ages and backgrounds to pursue creative careers here, utilising devolved skills funding.

Build a pipeline of regional creatives able to access the R&D capabilities and facilities of both CoStar Live LAB project and the

CoStar Network
Alongside our universities and XR Stories.

Deliver a programme of entrepreneurship; with an emphasis on the large freelance workforce that historically doesn't access 'traditional' business and skills support.

Establish a YNY content creation fund



This map provides an illustration of some key assets, but is not a definitive list

Priority Drivers of Growth

York and North Yorkshire Combined Authority will work with a number of partners, both local, regional and national, to ensure the right mechanisms are in place so our businesses, communities and environment can thrive. This includes addressing the following, alongside our sectoral priorities: housing and commercial development, innovation, utilities and digital connectivity, skills and employment, transport and trade and investment.

Priority Drivers of Growth

Alongside sectoral interventions, there are a number of cross-cutting policies that need to be addressed, which will create a pro-business environment and remove barriers to growth.

- We need to unlock housing to ensure access to labour and that people can work and live in York and North Yorkshire; alongside accelerating commercial development to support growth and inward investment needs.
- We need to strengthen the innovation ecosystem to improve productivity, bring new products to market and increase the value of our growth sectors.
- We need to remove utility constraints, such as digital connectivity to enable greater technology adoption and improved efficiencies.
- We need to ensure the right skills and employment support is in place to develop the future pipeline of talent, and ensure businesses aren't constrained by skills or labour gaps.
- We need to improve transport connectivity to ensure businesses have access to a diverse labour market.
- We need to increase trade and investment by supporting businesses to navigate this complex, regulatory landscape.

To address these requirements, we will utilise both local levers, including the Combined Authority's appropriate devolved funding and tools such as the Spatial Development Strategy, and national policies that emerge from the National Industrial Strategy.

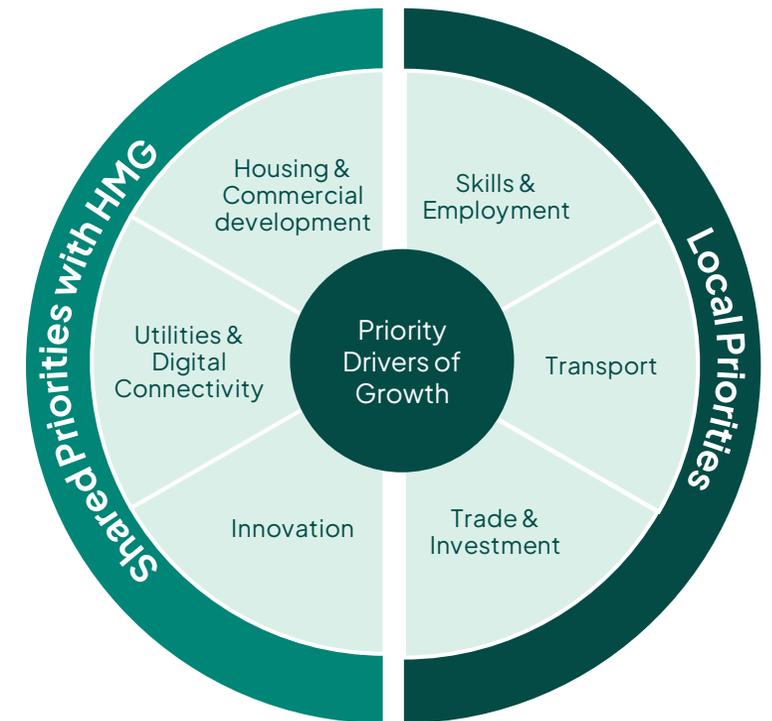
As such, we have agreed some shared priorities with central government, as highlighted on the next page. These primarily apply to areas that are evolving and still in development within the Combined Authority. Priorities that have not received a new commitment of joint-working through the Local Growth Plan, such as

skills, are more mature and the CA already has a close-working relationship with the relevant government department. These will continue to be addressed through those existing relationships and mechanisms.

If appropriate, these shared priorities may evolve and be changed in the future, depending on what is needed within York and North Yorkshire. Any amendments would be jointly agreed with central government.

If these opportunities are not addressed, then they will become a constraint for growth – major investment is needed, both from the public and private sector.

York and North Yorkshire is expecting a major increase of residents, based on increased housing targets. In an area with a constrained labour market, increased access to people could unlock our growth ambitions. However, this increase in people will also put a strain on infrastructure needs, from transport and utilities to key public services, such as schools and healthcare. Infrastructure can't be a bottleneck for our growth opportunities.



Shared Priorities between HMG and the Combined Authority

Housing and Commercial Development

Increase sustainable and high-quality commercial and housing development to enable greater business investment and increase affordable housing. Addressing this will require HMG and YNY to work together to explore actions including how to:

- Deliver innovative partnerships and models that could unlock sites for both housing and commercial development
- Work together to deliver increased sustainable housing, including potentially addressing planning capacity constraints, local site viability issues and related infrastructure

This would support business growth and expand the region's talent pool beyond the urban centres and into rural areas where key sectors are based.

Innovation

Improve commercialisation of research to increase knowledge transfer and innovation across the region's growth sectors. Addressing this will require HMG and YNY to work together to explore actions including how to:

- Strengthen connections between academic institutions and industry
- Tackle some of the regulatory challenges that limit innovation
- Work with HMG on innovation in food, farming and waste to support food security, health, and the environment as part of the National Food Strategy 2025
- Explore investment models to unlock further private sector investment

This would support businesses to capitalise on the region's academic and science specialisms and assets, boosting productivity in key growth sectors.

Utilities

Boost digital connectivity and skills to enable greater digital innovation. Addressing this will require HMG and YNY to work together to explore actions including how to:

- Improve the region's broadband infrastructure, particularly in rural areas

This would support businesses to invest in and roll-out technological and digital advancements in growth sectors located beyond larger urban centres, boosting productivity in these sectors.



Strengthen the Innovation Ecosystem to increase productivity

York and North Yorkshire has strong innovation assets, but limited commercialisation and translation of academia into industry is constrained.

Innovation is doing something different to create value. It might be transforming creative ideas into new product solutions. It can also be about changing processes or approaches to improve efficiency, productivity and profitability. An increased focus on delivering innovation can be a catalyst for growth and an opportunity to gain a competitive advantage. At a time when technological advancements are rapid and the economic landscape constantly shifts, innovation is critical for survival and success.

York and North Yorkshire has a dynamic innovation ecosystem, including world-class education (including three universities), science and Research and Development assets (e.g. National STEM Learning Centre, the National Agritech Centre, Institute for Safe Autonomy) and sectoral clusters (Food & Drink corridors, BioYorkshire).

Circular Economy

Moving towards a circular economy is a perfect example of innovation. Our current economy is reliant on a 'take-make-dispose' model. This wasteful use of resources results in economic loss, environmental damage, substantial carbon emissions and widening social inequalities. A circular economy model is a way of working that promotes using only what we need, stopping waste and making the most of all our resources, including people, products, services, systems and our planet. This means reducing waste throughout supply chains, designing products to last longer and switching to using more sustainable materials.

With much circular economy technical expertise already based in our region, we can leverage this at pace, offer solutions to our region's businesses and communities and establish our region as the leaders in delivery of circular economy.

Benefits of the circular economy include:

- Increased resource productivity
- Reduced costs and increased competitiveness for resource intensive businesses
- Additional opportunities to generate commercial revenue streams
- Reduced finite resource consumption
- Reduced CO2 emissions
- Increased export opportunities of circular knowledge and technologies
- Increased inward investment

Our Innovation History

With decades of experience feeding the country, we will transform our food systems and support future resilience

From being at the forefront of milling technology in Britain to pioneering new methods of farming, including regenerative agriculture and precision agriculture.

From the growing prominence of chocolate and confectionaries in the Victoria era to housing the largest confectionery factory in the world from Nestle, and the first global confectionery brand to move to sustainably sourced and recyclable paper packaging.

From pioneering in frozen foods with McCains opening a production facility in Scarborough in 1968 to attracting strong academic and innovation assets, including the National Agritech Centre's HQ within the University of York.

As the heart of UK rail, we will pioneer digital transformation and innovation to protect and secure transport connectivity into the future

From the 1840s and playing a key role in connecting London to Edinburgh by rail to York being a major centre of railway operations and administrations, only matched by London.

From constructing some of the world's earliest electric trains to the emergence of digital specialisms in the rail ecosystem - including the University of York's Institute for Safe Autonomy and the National Railway Museum's WonderLab, which was established to foster key STEM skills..

Powering the past and future with bold ambitions to reach carbon negative, led by revolutionising our energy supply

From a leader in mining technology in the 1980s at Selby's "super mine" to supporting energy independence and new mechanisms for power, such as the potential of geothermal near Pickering.

From Kellingley Colliery, the last deep mine in the UK, supplying Drax power station to Drax powering most of London and leading the production of electricity from sustainable biomass, alongside the Biorenewable Development Centre, based in York, being the first in the UK to successfully produce hydrogen at scale.

Home to distinctive heritage, a backdrop to numerous TV and film productions, and building momentum in our creative industries

From rich cultural heritage, ranging from Viking and Roman and castles, to York establishing itself as a global player in the creative industries and digital media, underpinned by the city's UNESCO City of Media Arts status - the only one in the UK, recognized for excellence in film, TV, gaming and immersive technology.

Innovating for the greater good with leading health and wellbeing research and international life science businesses based here

From the Retreat, based in York, revolutionising approaches to mental health, building on Quaker principles of compassion and respect, to critical health research led by the University of York, ranked in the top 12 nationally for Biological Sciences and Chemistry.

From Seebohm Rowntree conducting research in York, between 1899-1901, which contributed to public perceptions on poverty completely altering to Labcorps Early Development Laboratories in Harrogate supporting the development of all 50 current top selling prescription drugs in the world.

Although we have a strong history of innovation to build on and a number of assets, we need to increase the translation of innovation into industry and encourage greater collaboration between the innovation ecosystem and businesses. While the region supports a strong level of innovation through its asset base, with broadly comparable research funding and a higher level of ‘innovation active’ businesses compared to the national average, this regional strength does not translate into business growth. The number of businesses which are conducting internal R&D and levels of entrepreneurship are low, particularly within York.

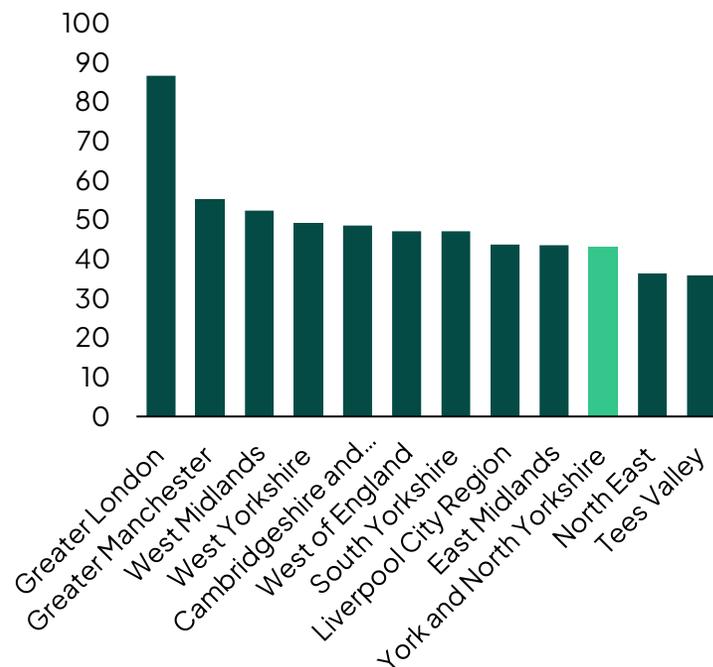
While the University of York has relatively high revenue from Intellectual Property (particularly given the university’s size), its numbers of start-ups are relatively low compared to other universities. This suggests that despite the university’s success in monetising its research, it may need to improve its support for entrepreneurial activities to better translate innovation into new businesses. There may be lessons learnt from other universities and regions where commercialisation is strong.

We need to build on the strengths of our innovation assets and encourage further commercialisation. But there are a number of constraints to unlocking this, including:

- Lack of investment for proof-of-concept, early stage and scale-up, with funding often more favourable to the South, particularly Cambridge and London
- Regulatory constraints
- Lack of commercialisation and entrepreneurial skills
- Lack of flexible and low-cost laboratory space

How will we unlock growth through innovation?

Figure 4: Business births per 10,000 population in 2022 Combined Authority Comparison



Strategic Role

- Explore with HMG the opportunities for York and North Yorkshire from the newly announced R&D Missions Accelerator Programme
- Work closely with innovation-led government departments, including the Department for Science, Innovation and Technology

Delivery Role

- Prepare for a Local Innovation Partnership
- Develop an innovation ecosystem, such as a York Central Innovation Hub and development of innovation hub and spoke model
- Deliver the Business Innovation Fund and utilise outcomes to explore future funding requirements
- Pursue an AI Growth Zone
- Support businesses to embed Circular Economy principles

AI Growth Zone

According to Government: “AI Growth Zones will unlock investment in AI-enabled data centres and support infrastructure by improving access to power and providing planning support. These areas will help drive innovation, create high-skilled jobs, and strengthen the UK’s position as a leader in AI.”

Our vision is to underpin the UK as a global leader for AI whilst driving transformative regional growth. To achieve this, we seek to create a pioneering AI Growth Zone in York and North Yorkshire. Our priorities are to unlock sustainable growth, foster high value employment and position the region at the forefront of the UK’s digital economy – which helps to deliver the ambitions of our Local Growth Plan.



Source: 3D rendering, Drax

Why here, why now?

- Shovel-ready site at the centre of Yorkshire and the Humber, meeting the government’s criterion, providing 600MW of power capacity by 2030, with the ability to scale up to 1.2GW or beyond, and 200 acres of development land by 2028, with space for another 130 acres for expansion.
- World-class research powered by a university alliance with global AI and tech expertise anchored by cutting edge capabilities in AI Safety Assurance – the cornerstone of a secure and ethical technological future.
- Commitment to unite across academia, industry and government, streamlining and accelerating the delivery of transformative projects that harness artificial intelligence and data driven innovation.
- A thriving tech ecosystem powered by a fast-growing cluster of digital and deep tech businesses ready to scale.
- A proud industrial heritage that stands ready to create a beacon for industrial reinvention in the North.
- Future-proofed plans that incorporate an AI and Clean Energy Campus, a connected ecosystem powered by dark fibre networks and designed for long-term phased expansion.

What we’ll deliver?

- A globally significant AI Growth Zone that drives breakthroughs in AI assurance, data science and emerging technologies, creating a range of global investment opportunities.
- A revolution in food and circular economies, transforming food security and sustainability through AI-powered innovation.
- Net Zero leadership, advancing critical carbon removals technology and supporting industrial decarbonisation at scale due to the proximity to the UK’s largest industrial cluster.
- Skilled workforce for the future, partnering with Further Education and Regional Training Organisation to build a future ready workforce.

The ripple effect

- Thousands of new, high value, high skilled jobs across urban and rural communities.
- Transformation of the rural economy that empowers local communities with digital infrastructure and innovation.
- Regional growth with national impact, extending the benefits across Yorkshire and the Humber.

Unlock housing to increase access to labour and accelerate commercial development to support growth needs

There are opportunities for commercial and domestic developments within York and North Yorkshire, but sites have stalled and struggle with viability

Unlike many Northern counterparts, York and North Yorkshire has challenges around unaffordable housing, which pushes many young people and potential workers out of the area, all of which contributes to a constrained labour market, and limits future economic growth. The average house price in York was £299,000 in February 2025, slightly lower than February 2024 (-1.6%), but the city had the highest average house price in Yorkshire and The Humber, whilst North Yorkshire had the second highest level at £270,000³¹.

Average rents in York are also high. The average monthly private rent in York was £1,117 in March 2025³². This was an increase from £1,090 in March 2024, a 2.6% rise³³. Although lower than national average levels, this is much higher than averages for Yorkshire and the Humber.

Both York (8.3) and North Yorkshire (8) local authorities have the highest affordability ratios for Yorkshire and the Humber³⁴. Their ratios are also higher than the averages for other northern regions and for England, suggesting closer similarities with southern counterparts. The affordability ratios are calculated by dividing house prices by gross annual workplace-based earnings and are an indication of housing affordability. The higher the ratio, the worst the affordability.

Within some of our most popular tourist spots, including within the National Parks and along the coast, affordability and access to housing for local people is impacted by the number of second homes and holiday lets.

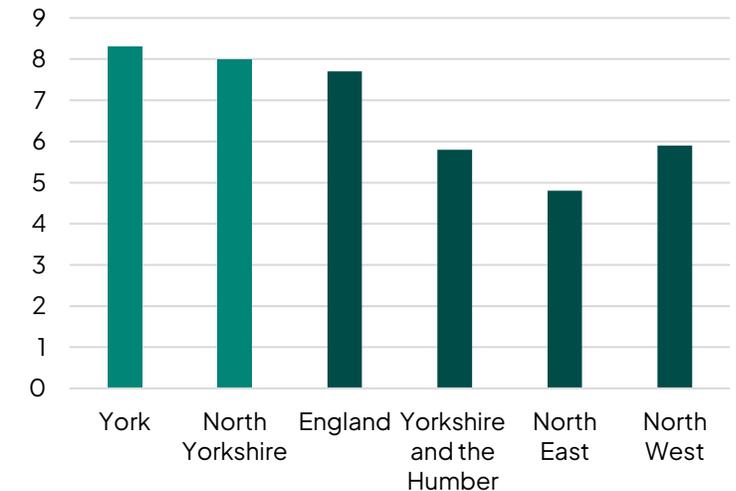
Alongside affordability challenges, there is also a broader need to increase housing supply, as emphasised by Government's recently increased housing needs figures. York and North Yorkshire sees the greatest increase in housing targets under the new method of all Combined Authorities, second only to the Tees Valley. However, for York specifically the target increase is 19.3%, whereas for North Yorkshire it is 19.5%³⁵. Delivering new affordable homes, particularly in our most rural areas, is vital to the sustainability of our rural communities.

Alongside housing, unlocking commercial development is also fundamental to growth ambitions.

North Yorkshire is in the process of developing a comprehensive Local Plan to guide development over the next 15 to 20 years. A call for sites has been run and there are significant opportunities identified along the A1 corridor running North to South, to the North-West of York and a concentration of potential sites around Selby which would increase density and be well placed for the new Selby gateway development which will support travel around the region and into West Yorkshire.

Accelerating housing and infrastructure will provide a growth opportunity for our construction sector, but we must ensure the right skills and capacity are in place to drive this forward.

Figure 5: Affordability Ratio



Source: Office for National Statistics, 2024

To unlock our housing growth and commercial development, there are a number of barriers that need addressing, including:

- Capacity and skills within planning and the construction sector;
- Viability constraints and high costs, particularly linked to critical infrastructure (e.g. bridges, roundabouts, grid capacity);
- It's also difficult to deliver economies of scale within a rural context.
- Lack of funding for affordable housing;
- How the region can build high quality homes that support energy efficiency, lower bills, and reduced health impacts;
- Slow build out rates – in order to minimise risk and maintain financial returns, private developers will not build out new faster than they can sell them at existing local prices. Cutting prices to speed up sales is never in their interests.

How will we unlock growth through housing and commercial development?

Strategic Role

- Utilise the strategic place partnership, a formal arrangement designed to support joint working on housing delivery with Homes England and key partners
- Develop a strategic pipeline for housing and commercial development delivery, including a review of public land assets and different delivery models
- Develop a Spatial Development Strategy and support the development of Local Plans across the area, including collaborative working with the two Constituent Authorities, such as developing joint evidence
- Work closely with Government to ensure York and North Yorkshire benefits from recently announced national policy in the Industrial Strategy.

Delivery Role

- Continue to deliver the Brownfield Housing Fund and explore future funding models to accelerate housing
- Utilise the strategic place partnership, a formal arrangement designed to support joint working on housing delivery with Homes England and key partners
- Further explore CA powers to convene and accelerate housing and commercial development – e.g. Mayoral Development Corporation
- Develop a strategic pipeline for housing and commercial development delivery, including a review of public land assets and different delivery models

Regeneration

Regeneration also needs to be considered as part of our interventions around housing and commercial, ensuring that we take a joint-up approach, particularly working with our Local Authority partners.

York and North Yorkshire has a number of large-scale regeneration opportunities:

- York Central – one of the UK's largest mixed-use regeneration projects. A large city centre brownfield site which already has Enterprise Zone Status and outline planning permission for 2,500 homes and 1million sq. ft. of Grade A offices. Network Rail are a key landowner in the site, which includes the £60m expansion of the National Railway Museum. The National Industrial Strategy announced the relocation of Civil Service roles, with £255m being invested to complete the development of new government hubs in a number of places. This will include a York Central hub.
- Selby – Olympia Park is a 33Ha site in Selby focusing on industrial and renewable energy development. Selby Station Gateway is also underway, led by North Yorkshire Council, which includes: improvements to the area around Selby station to improve the environment for pedestrians and cyclists; junction improvements; Bus station passenger environment improvements; amongst other interventions.

- M62 Corridor – linked closely to Selby, there are a number of opportunities along the M62. This includes a proposal that is being led by the Combined Authority, in close collaboration with private and public sector partners, for an AI Growth Zone. There is also Eggborough West will include 1,500 new homes with additional infrastructure, including assisted living facilities. Gascoigne Interchange is a major logistics hub with significant economic potential.
- Coast – both Scarborough and Whitby received “Towns Deal” from central government which included significant investment for regeneration activity. Scarborough is also set to receive further investment (just under £20 million) as part of government’s Plan for Neighbourhoods.

Any spatial requirements will be considered further within a Spatial Development Strategy for York and North Yorkshire and specific site allocations will be included in Local Plans. It is not the role of the Local Growth Plan to determine spatial priorities.



Improve utilities and digital connectivity to enable rapid technology adoption and growth from businesses

York and North Yorkshire has strong urban digital connectivity, but our rural communities are some of the worst-off areas in England for connectivity.

Against most digital connectivity indicators, York and North Yorkshire performs poorer than the national average. This is primarily due to North Yorkshire's digital limitations, which is unsurprising given the rurality of this area and challenges in deploying infrastructure to rural areas.

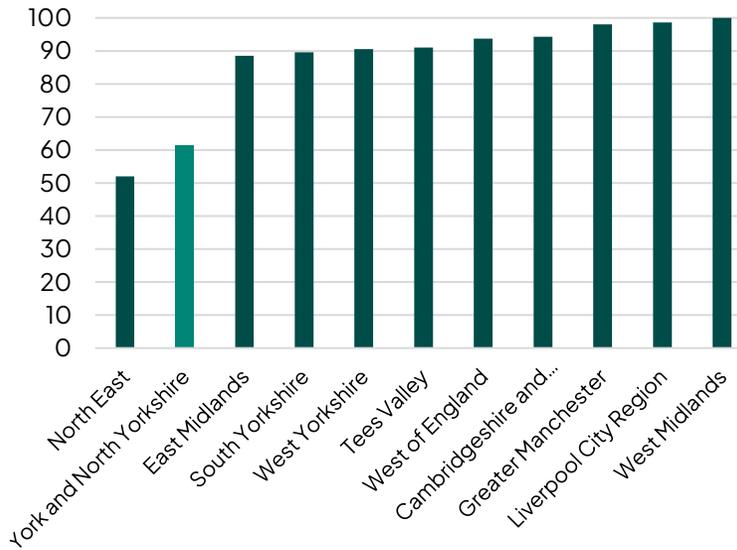
Only 73.2% of premises have coverage from a gigabit-capable service in York and North Yorkshire, compared to 81.7% of the UK³⁶. This drops even lower (69.7%) when just measuring North Yorkshire's level, whilst York outperforms national levels (84.9%)³⁷.

York also has 100% 4G coverage and 97.7% 5G coverage, ahead of the national levels, demonstrating excellent connectivity, likely driven by its compact, urban nature³⁸. North Yorkshire has 94.1% coverage for 4G, but is significantly lower for 5G coverage at 60.2%, again reflecting the challenges of rolling out digital infrastructure in a predominantly rural area³⁹.

York and North Yorkshire has some of the worst digital connectivity when comparing against other combined authorities, which could create economic barriers for the area as greater emphasis is put on technological advancements, particularly AI, to improve productivity. This will be most notable in our rural communities, where productivity performance is already lagging compared to urban performance.

Other utility challenges for businesses include energy infrastructure, particularly the costs, and grid capacity. Businesses have mounting pressures on them due to increasing costs, particularly linked to utilities.

Figure 6: % of premises with 5G coverage



Source: Ofcom

How will we unlock growth through digital connectivity?

Strategic Role

- Explore with DSIT and local partners how to accelerate digital connectivity
- Work with the Department for Energy, Security and Net Zero to address energy and grid constraints, including exploration of the recently announced Connections Accelerator Service which will provide support connecting to the grid for demand projects

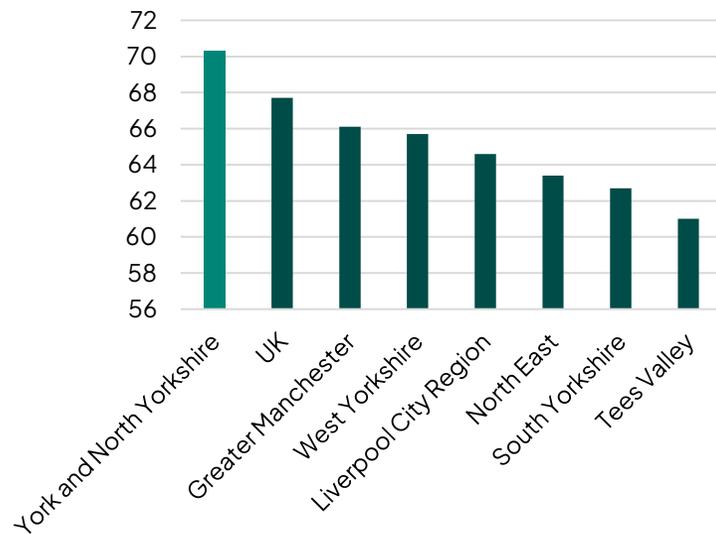
Delivery Role

- Deliver projects on the ground to remove utility constraints, working in close partnership with local and national partners

Ensure the right support is available to develop a healthy and talented labour market

York and North Yorkshire has a highly qualified labour market, but this does not always translate into the required skills of businesses, with commercialisation and entrepreneurial skills often limited.

Figure 7: % of the population aged 16 to 64 with level 3 or above qualifications



Source: Office for National Statistics

Productivity performance is closely linked to the skills and capabilities of an area's labour market. Across many measures, York and North Yorkshire demonstrates a strong skill base. It has some of the highest skills levels in the north, with 70.3% of those aged 16 to 64 with level 3 or above qualifications. Equally, of those who are economically inactive, 29% have no qualifications but 29% also have a level 4+ qualification. This group of inactives could be critical to growth ambitions, as York and North Yorkshire has a constrained labour market, partly due to an ageing demographic.

In order to ensure we maximise our growth potential, we need to untap the potential in our strong qualifications and skills base across our working population. Transferable skills will be increasingly important for those transitioning into emerging/growth sectors or for those displaced from contracting sectors. Support will need to be available to individuals and employers to ensure they can identify, utilise and enhance existing skills and qualifications to align with emerging and growth sector needs, including commercialisation and entrepreneurialism.

York and North Yorkshire has a relatively higher proportion of residents who are aged 65 and over (24%) than the national average (18%). The working age population in York and North Yorkshire is

predicted to shrink while projected population growth is amongst those aged 70–89, each projected to grow by around 4% from 2018 to 2043.

Unemployment in the region is low. Between October 2023 and September 2024, the unemployment rate was 1.8%, well below the national rate of 3.9%, alongside a low claimant rate (2%); although there is variation across the region. Greater levels of employment deprivation are experienced in Scarborough, to the North-East of York, close to the centres of Selby, Skipton and Ripon.

Early retirement is a common reason for people being economically inactive in YNY, with 21% of those inactives citing it as their main reason, which is significantly higher than the national average of 13%. Long-term sickness also contributes to economic inactivity, with 30% of inactive individuals citing it as their main reason, suggesting adaptable work environments and flexible work hours may be required to encourage people back into the workplace.

Higher Education institutions are a key asset to YNY, but graduate retention rates within the local labour market need improvement.

⁴⁰Source: all references on this page are from the Labour Market Analysis undertaken by YPERN on behalf of the Combined Authority, which utilises data from ONS.

Graduate Outcomes data shows that 42% of new graduates working in the region originally come from York and North Yorkshire or neighbouring areas, indicating difficulties in attracting graduates from further afield. Furthermore, York city's graduate labour market is much smaller than those of neighbouring cities, and its private sector requires support to create and sustain graduate entry roles.

The York and North Yorkshire labour market underutilises the skilled labour pool that it has. The exact reason for this is unclear – possibly due to a lack of movement in the labour market and career progression, or a lack of high-skilled jobs roles being in demand. Key to our growth agenda is creating higher skilled, higher paid job roles, whilst lower skilled roles become an entry point into the labour market.

Strong qualifications does not always translate into a highly skilled workforce. Continued upskilling of employees is essential to maintaining a dynamic labour market. Employers report that 42% of managers, directors, and senior officials require upskilling, making this group the most commonly identified for development.

The skills most frequently needed include specialist knowledge relevant to their specific roles, alongside the ability to adapt to new equipment and materials. Notably, in York and North Yorkshire, there is a higher demand than the national average for skills in computer literacy and basic IT. This indicates that foundational digital competencies are a particular priority for employers in the region.

Through business engagement, it has also been noted that a skills gaps exists for technical business skills, such as commercialisation and entrepreneurship. This is particularly relevant in growth sectors such as Life Sciences and Engineering Biology.

Productivity is also closely linked to pay and therefore to living standards, as more productive businesses tend to pay higher wages.

Pay is important and is linked to productivity and living standards. Overall, York and North Yorkshire have comparatively lower pay in their workplaces compared to English and British averages. Gross weekly pay for full-time workers is higher when assessed by home geography compared to work geography (£686 vs. £667). This implies that workers are able to access higher paying jobs outside of their immediate region. This could also mean that we're losing highly skilled employees to jobs elsewhere as they offer higher wages. However, this pattern does differ between York and North Yorkshire.

York consistently outperforms North Yorkshire and the broader Yorkshire and The Humber region in terms of annual wage levels, reflecting its higher-wage urban economy and stronger productivity. North Yorkshire maintains a steady upward trajectory, remaining above the Yorkshire and The Humber average but below the England median.

In York, average gross weekly pay is higher when measured by work geography (£730) than by home geography (£711), while the reverse is true in North Yorkshire, where home geography pay (£674) exceeds work geography pay (£640). This suggests that jobs located in North Yorkshire tend to be lower paid, prompting residents to commute elsewhere for better-paying opportunities. Conversely, York attracts higher-paying jobs, drawing in workers from outside the area and resulting in workplace-based pay outpacing residence-based pay.

York's workplace-based median pay (£730) is almost exactly in line with the national average, while North Yorkshire's workplace-based pay (£640) falls significantly below it. North Yorkshire consistently underperforms on pay relative to English levels, while there is some fluctuation in the York figures. North Yorkshire's median pay is approximately 87% of the English average.

While York and North Yorkshire's median weekly pay is approximately 91.5% of the UK median, the gap widens at higher earnings levels. At the 80th percentile, pay in York and North Yorkshire falls to about 91% of the UK's median weekly pay. Higher earners in York and North Yorkshire lag further behind their national counterparts. This widening gap at the upper end of the pay distribution suggests that the area faces challenges in attracting or retaining higher-paid roles, which may have implications for overall income growth and economic competitiveness in the region.

^{41, 42}Source: all references on this page are from the Labour Market Analysis undertaken by YPERN on behalf of the Combined Authority, which utilises data from ONS.

How will we unlock growth through skills and employment?

Strategic Role

- Align Local Growth Plan and Get York & North Yorkshire Working Plan to ensure we are tapping into the potential across the whole of our working age population.

Delivery Role

- Utilise devolved skills and employment funding to deliver training and support that meets our growth needs, including prioritising commercialisation and entrepreneurial skills.
- Develop all age careers approach to ensure accessible, clear and quality pathways for residents whatever stage of their career or working life and aligned to our growth sectors.
- Encourage and support employers to invest in and commit to workforce skills development
- Support individuals and employers to identify and maximise transferable skills.

Improve transport connectivity to ensure people have access to employment and training opportunities and growth can be unlocked

York and North Yorkshire has strong transport connections in urban conurbations, particularly for travel outside of the subregion, but highly isolated rural communities

York and North Yorkshire is well located to take advantage of key transport connections to other major economic centres and markets. York is directly connected by rail to 150 cities, towns and villages across the UK and is within a 2-hour journey to London. We have excellent North-South connections by both road and rail and on the TransPennine route across to Leeds and Manchester. Our region is also close to 3 international airports at Manchester, Leeds/Bradford and Tees Valley.

Our key strategic transport assets are the East Coast Main Line (particularly our national railway hub at York), the TransPennine rail route and the A1, A19, A66, A63, A64 and A59 road corridors, as well as the connection to the M62 and M1.

However, there are limitations to the connectivity within the region and many businesses have raised this as a constraint to growth.

Poor public transport links mean that most major employment areas are accessible only to nearby communities, restricting opportunities for workers from further afield.

The reliance on localised rail and bus services creates isolated commuting zones, making it difficult for people to travel efficiently between towns and cities within York and North Yorkshire.

This lack of regional integration in the public transport network limits labour market mobility and economic interaction between urban centres, contributing to fragmented development across the area.

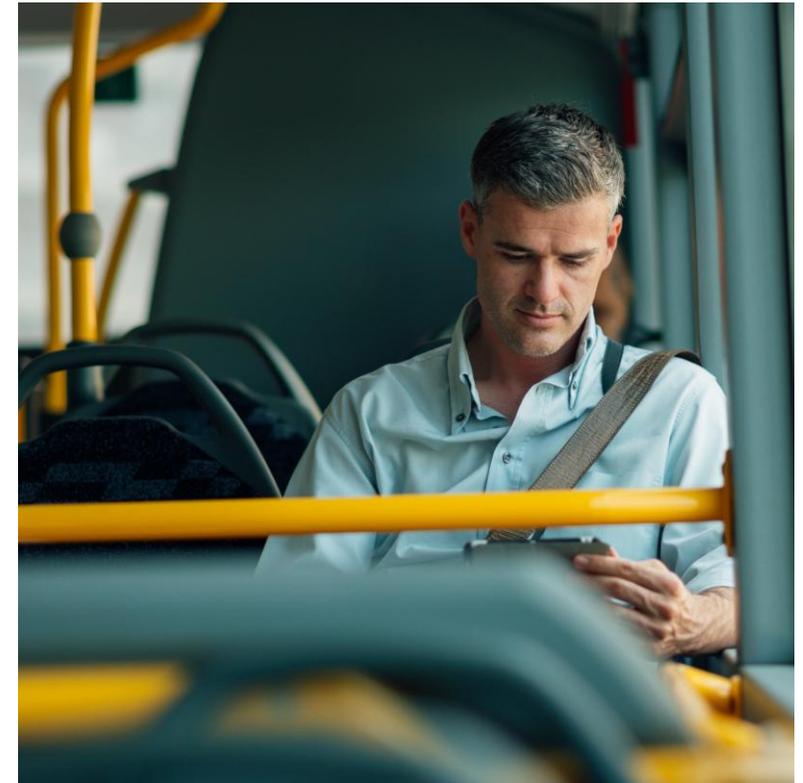
Connectivity is much stronger across the geography when driving, especially compared to public transport. Despite the wider accessibility offered by driving, there is still a lack of connectivity between the northern, coastal, and southern parts of York and North Yorkshire.

Coastal areas, in particular, are isolated, with their commuting zones not extending significantly inland or connecting with central and southern areas.

Driving a car or van is the most common mode of travel in North Yorkshire (53%) and York (41%), both exceeding the England average (37%).

The high reliance on cars in North Yorkshire reflects its rural nature and limited public transport and active travel options. York has public transport use equivalent to the national average, whilst North Yorkshire has lower levels.

The current transport system is not working for some people, in urban areas buses are trapped in congested streets and in rural areas residents are stranded by irregular services.



How will we unlock growth through transport?

Make the region feel “smaller, more connected...”

Transport opportunities to unlock growth

- Invest in rail corridors, exploring both existing and new rail infrastructure, through strategies such as Northern Powerhouse Rail and Yorkshire’s Plan for Rail (via the White Rose agreement). This could include: increased rail connectivity between York and Scarborough, with two trains per hour; addressing the East Coast Mainline bottleneck at Northallerton; Sherburn in Elmet platform extension to keep passengers in Sherburn in Elmet connected with York, as well as Hull and Sheffield, for years to come; TransPennine route updates, including Gascoigne Wood for freight rail.
- Bus transformations recognising that many of our rural areas are not serviced by rail. For example, developing bus improvement plans in Harrogate, Scarborough and York, as well as corridors between main centres, alongside smaller towns like Selby, Northallerton and Skipton. Explore cheaper bus fares for younger people and opportunities for an integrated ticketing system.
- Active travel interventions, such as station gateway improvements to provide easier and safer experiences for pedestrians, cyclists and bus users, e.g. York and Scarborough Station Gateway.

Strategic Role

- Develop a Local Transport Plan, which is closely aligned to our growth ambitions.
- Work with key government departments, e.g. Department for Transport.

Delivery Role

- Deliver our Integrated Transport Settlement across a range of transport modes.



Increase growth opportunities through trade and investment by supporting businesses to navigate the complex, regulatory landscape

There is a strong Yorkshire brand to build on, but businesses are often constrained by red tape and a lack of understanding around export opportunities.

The total number of businesses trading in international markets between 2019 and 2022 (largely before and after Brexit and Covid) fell by 7.7%. In terms of the value of trade in goods, 28% are exports (£1.6bn) and 72% (£4.2bn) are imports.

The USA is the most important trading partner for York and North Yorkshire, but mainly due to imports - £994m of trade (£193m export, £801m imports), followed by Germany with £539m of trade (£184m exports and £355m imports); and China with £536m of trade (£55m exports and £481m imports).

There are opportunities to develop York and North Yorkshire's export potential further but businesses are facing a number of challenges, including:

- Navigating trade barriers post UK EU exit
- Rising costs and economic pressures
- Supply chain disruptions
- Limited access to international markets
- Uncertainty in global markets
- Complexity of export control regulations
- Limited awareness of support that is available

Alongside export, York and North Yorkshire is primed to welcome new inward investment opportunities, both domestic and international. We've got site capabilities and a strong labour market to access.

The number of Foreign Direct Investment (FDI) projects in York and North Yorkshire was relatively modest but has increased from 11 in 2019/2020 to 16 in 2023/2024. Key sectors attracting FDI in 2023/24 included Technology and Advanced Manufacturing (7 projects), Creative, Lifestyle and Learning (5 projects) and Energy and Infrastructure (4 projects).

Investments were dominated by North American and European investment. Germany, Austria, Belgium, and the USA each has two projects. Other investors originated from Canada, the Czech Republic, France, Ireland, and Spain. All 16 investments in 2023/2024 came from existing investors, with a focus on site expansions and new facilities. Notable projects included a £70 million site expansion in Selby, and a £59 million site expansion in Scarborough.

Case Study: University of York Mumbai Campus

International engagement is already taking place within York and North Yorkshire, with the University of York announcing its intention to open a new campus in Mumbai after a number of events took place in India.

The University of York Mumbai is set to welcome students from the academic year 2026/27. It will initially offer undergraduate and postgraduate courses in computer science with AI and cyber security, business, economics and creative industries. There will also be a focus on research and innovation around food security, environmental change and future technologies.

Key Growth Opportunities for Export & Leading Markets



Food & Farming Innovation

Growth Opportunities:

Novel Plant Protection: The global biopesticides market, valued at US\$7.54 billion in 2023, is set to grow to US\$28.61 billion by 2032, driven by rising pest resistance and biodiversity concerns. **Precision Agriculture:** Labour shortages in agriculture are accelerating demand for AI, robotics, and automation, with the precision farming market forecasted to grow at 12.8% CAGR from 2024–2030. **Controlled Environment Agriculture (CEA):** Glasshouses and energy-efficient greenhouses present growth areas, with the global CEA market reaching US\$27 billion by 2030. **Food and Drink:** Growth in sustainable packaging, alternative proteins, and digital production technologies to meet climate and energy challenges.

Leading Markets:

Netherlands: Expertise in glasshouse construction and advanced horticulture.
Canada: Leader in sustainable controlled-environment agriculture.
Asia-Pacific: Dominates alternative protein markets, particularly seaweed and insect production.
India and Australia: Emerging opportunities in food



Engineering Biology

Growth Opportunities:

Synthetic Biology: Expected to grow from US\$16.35 billion in 2023 to US\$116.04 billion by 2032, with applications in bio-based chemicals and biofuels. **Waste Valorisation:** Increasing demand for circular economy solutions to transform agricultural and industrial waste into high-value products. **Animal biotechnology:** With a global market valued at US\$22.66 billion in 2021, opportunities exist in vaccines and precision livestock feed solutions. **Plant biotechnology:** The Plant Biotechnology Market was valued at USD 105.1 Billion in 2023 and is anticipated to grow CAGR at 11.4% and reach USD 276.9 Billion by 2032.

Leading Markets:

US: A global leader in synthetic biology R&D and RNA technologies
China: Strong in biomanufacturing and scale-up processes, despite tech limitations.
Germany and Denmark: Specialists in white (industrial) biotechnology innovations.



Life Sciences

Growth Opportunities:

Age-Tech: The Japanese aged-care market is valued at US\$954 billion by 2025, offering export opportunities in assistive technologies and robotics. **AI in Healthcare:** Applications in diagnostics, treatment optimisation, and predictive analytics are driving inward investment and technology deployment. **mRNA Technology:** Emerging demand for cancer therapies and vaccines for ageing populations, with the market reaching US\$909.14 million by 2031.

Leading Markets:

Japan: A significant market for age-tech and healthcare solutions for ageing populations.
US: The world's largest market for health tech and medical innovations.
Asia-Pacific: High growth in genomics and med-tech applications.

Key Growth Opportunities for Export & Leading Markets



Rail & Security

Growth Opportunities:

Smart Railways: Forecasted to grow to US\$51.6 billion by 2027, focusing on IoT-enabled predictive maintenance and autonomous systems.

Digital Signalling: High-growth area driven by capacity optimisation and emissions reduction targets.

Sustainable Materials: Demand for advanced composites and biodegradable materials for rolling stock and infrastructure.

Leading Markets:

Germany, Japan, and China: Innovation leaders in rail technologies and manufacturing.

Middle East: Major investments in rail infrastructure as part of economic diversification.

US: Focused on freight rail advancements and sustainability.



Creative Industries

Growth Opportunities:

Media and Entertainment: Forecasted growth to US\$3.4 trillion by 2028, driven by streaming and digital advertising.

Gaming: Cloud gaming is expected to grow from US\$3 billion in 2023 to US\$22 billion by 2030, supported by advancements in 5G and XR technologies.

Heritage Tech: Combining Y&NY's rich cultural assets with AR/VR for tourism and preservation offers export and investment potential.

Leading Markets:

US: The largest entertainment market and leader in immersive content.

India: Fast-growing gaming and entertainment industries.

Japan and South Korea: Pioneers in digital heritage and XR technology.

How will we unlock growth through trade and investment?

Strategic Role

- Work with key partners, such as the Department for Business and Trade to identify FDI and export opportunities
- Attend events, where appropriate, to promote York and North Yorkshire, e.g. UKREiff
- Develop an Investment Pitchbook to showcase opportunities within York and North Yorkshire and attract investors.

Delivery Role

- Through our Growth Hub and Business Innovation Fund, we will support businesses to begin their export journey.

Key Employment Sectors

Key Employment Sectors

The York and North Yorkshire economy does not rely on one singular industry. All our businesses play an important role, but some have more growth potential on a local and national scale than others (as identified within our competitive advantage sectors). Whilst others are integral due to the high proportions of people employed in these sectors. For example, the Visitor Economy, Wholesale and Retail, Health and Social Care, Manufacturing and Education are not sectors that are solely unique to York and North Yorkshire, but they are distinct features of our economy, and they need to be supported.

Growth Outcomes:

Increase the resilience and survival rates of our businesses through advice and guidance, skills and training support, and peer-to-peer networking. Increase productivity through innovation and use of new technologies.

York and North Yorkshire has a vibrant and successful visitor economy, worth more than £5.86bn to the region. Attracting over 40 million visitors and supporting over 54,000 jobs, the visitor economy plays a significant role in the wider economy⁴⁷.

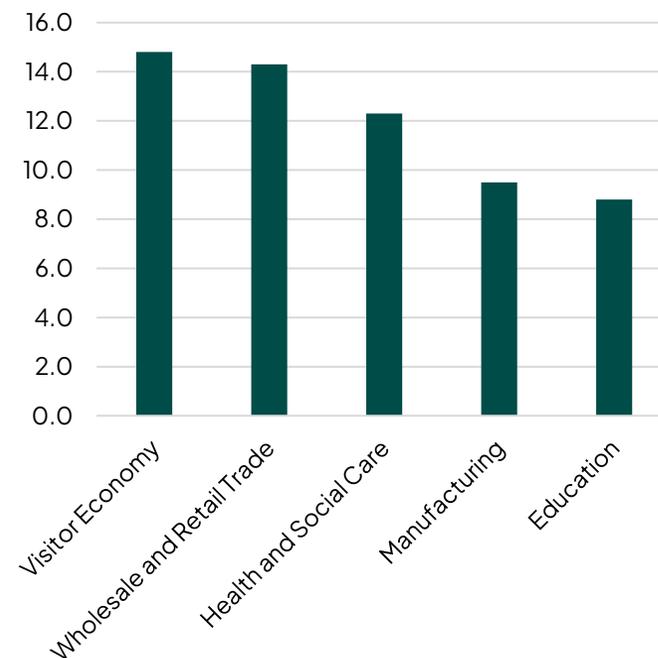


Visitor Economy

From the iconic York Minster and cobblestone streets of the Shambles in York, which has the most attractions per square mile in the UK; to the historic spa town of Harrogate and its maintained Turkish Baths; to our distinct coastline, including Scarborough and Whitby, the latter which is home to Whitby Abbey and popular Dracula and Goth festivals; alongside the vast and beautiful countryside across North Yorkshire which includes two National Parks (Yorkshire Dales and North York Moors). The tourism offer is both diverse and widespread.

The sector has strong assets to build on and opportunities for growth. But what does growth mean for this sector? It is not just about increasing the number of tourists, it's about increasing the value of tourism through new approaches, such as regenerative tourism and enhancing transport connectivity to encourage greater movement in the local area.

Figure 8: Top 5 Employment Sectors for York and North Yorkshire (%)



Source: Business Register and Employment Survey, Office for National Statistics, 2023

Regenerative tourism is about visitors having a positive impact on their holiday destination – whether that’s through supporting local economies, preserving culture and heritage, or respecting and enhancing the natural environment. It also encourages visitors to stay for longer but travelling in a sustainable way and discovering new places.

For example, if visitors came to York for the day, could they be encouraged to book a hotel for longer, explore the city centre, then utilise public transport to go explore further – like jumping on the train to Harrogate or Scarborough.

Alongside these opportunities for growth and development, the sector is exposed to many threats – overly saturated locations, staff shortages, domestic and international competition and increasing pressures for sustainable tourism, to name a few.



Retail

Retail is York and North Yorkshire’s second largest employment sector – levels closely match the national figure. Although the sector is not unique to York and North Yorkshire, it is integral to our economy and closely links to our Visitor Economy and what makes our high streets, cities and town centres an attractive place to visit and work.

But there are a number of factors that could threaten this sector, including the growth of online retail, the rise in home working since the Covid-19 pandemic, and the increased cost of living.

Health and Social Care

Health and Social Care is one of the largest sectors in York and North Yorkshire for employment – 12.3% of employment is based in this sector, equating to 49,000⁴⁸. It’s expected that number will grow further, given the rising pressures on health and social care due to an ageing population. As people are living longer, it’s essential that this is underpinned by good health. Nationally, the number of people aged 60 and over will rise by 38% by 2030⁴⁹. This is likely to significantly impact York and North Yorkshire, as the area has higher than average proportions of people aged 50 and over. 21.9% of residents are aged 50 to 64, compared to 19.4% for England⁵⁰. The only exceptions to this trend being York and Selby.

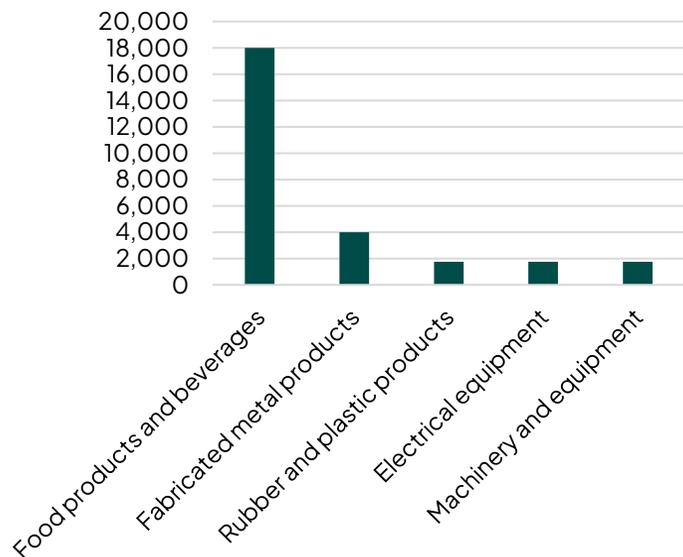
We are already home to a cluster of over 500 care businesses – all dependent on innovation to meet the care needs of an older population.

Challenges within the health and care sector include low wage and gender pay gaps impacting on affordable living and attractive and stable career choices.

The local authorities are a significant deliverer of such social care and preventative health and well-being services, alongside NHS and Integrated Care System health institutions. Not only are these some of the largest anchor organisations in the area, but they are also well placed to understand the impact of service and potential areas for innovation required to tackle the issues identified above.



Figure 9: Top 5 Employment Subsectors of Manufacturing



Source: Business Register and Employment Survey, Office for National Statistics, 2023

Manufacturing

Manufacturing is a significant asset in York and North Yorkshire, particularly as it's heavily interconnected to other sectors as part of the supply chain.

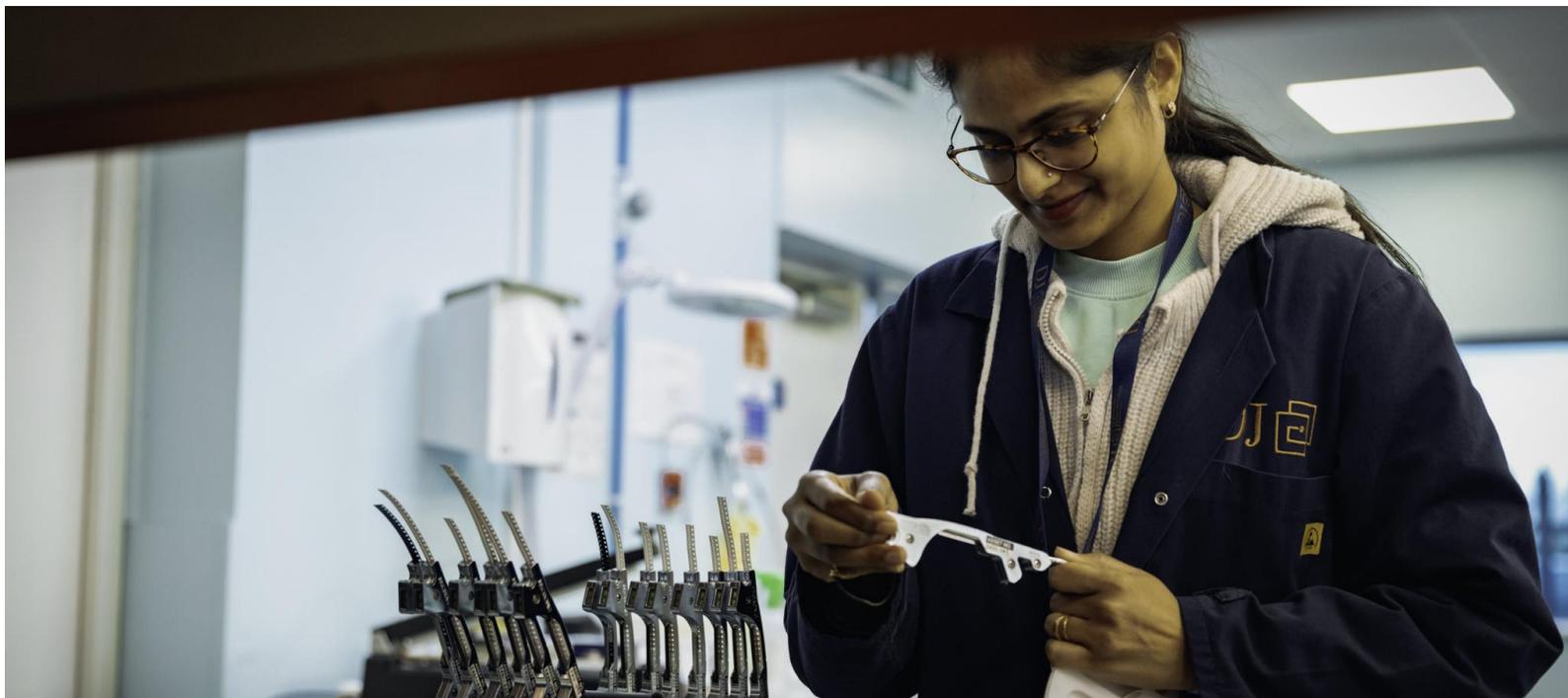
Our main subsector is food and drink production, which is addressed via our competitive advantage sectors, looking at the full food ecosystem, from farm to fork. Besides food production, our manufacturing subsectors present a mixed picture and variety, but there are some clear focal points.

York and North Yorkshire is home to a cluster of innovative businesses creating transport fit for the needs of today's commuter. We're also proud to be home to the UK's largest bus assembly company, Alexander Dennis. These and other manufacturers in our region know they can rely on a strong motor vehicle component supply chain industry in the region, comprising more than 100 manufacturers of all aspects of vehicle component parts.

Increasing manufacturing capacity in the region will help those investors who want to localise their supply chains and minimise the impact of future crises. There are also considerable opportunities emerging in new technologies, materials and low-carbon processes.

Manufacturing can use innovative technologies and methodologies to enhance productivity and competitiveness.

York and North Yorkshire has a great manufacturing story and expertise to tell the world. But there are challenges facing the sector – high costs across materials and utilities; a lack of transport connectivity affecting the movement of goods and access to labour; unaffordable housing near employment sites; and a lack of confidence in the medium to long-term, so the risk appetite of the sector is low.



Defence & Security - this sector can relate to several businesses, covering manufacturing, cyber security and the military

Defence is a growth sector referenced within the National Industrial Strategy. The UK government has also announced defence spending is to increase by £13.4bn year on year and other European government announcements and pledges to increase spending on security and ramp-up production of military equipment have multiple significant implications for the companies operating in the sector: both in terms of how they scale up their manufacturing processes; how they fast track the development of key strategic technologies, and how they reshape and build up supply chains that are resilient as possible⁵¹.

York and North Yorkshire has strengths within defence and security. We're home to a number of Ministry of Defence assets, including Catterick Garrison, Europe's largest garrison, RAF Leeming, Fylingdales, GCHQ site in Scarborough, which is believed to be the longest continuously-serving site for Signals Intelligence in the world. We also have the Institute of Safe Autonomy based at the University of York. RAF Menwith Hill near Harrogate is an extensive satellite ground station and communications intercept and missile warning site. It has been described as the largest electronic monitoring station in the world.

There are also manufacturing capabilities taking place within York and North Yorkshire linked to defence, although this can be difficult to define as many businesses wouldn't directly identify themselves as operating in this sector. Currently, there are around 20 businesses across York and North Yorkshire supplying into Defence and Security.

There could be growth opportunities within this sector for York and North Yorkshire due to its landscape. One of the most important elements for businesses operating in defence is privacy, so rurality lends itself well to this and the subregion has sites that could be appropriate for this. We're currently undertaking some research to better understand this sector and its scale within the subregion.

Education

Employment levels in education also closely match national levels. Key anchor institutions include higher education providers, such as the University of York, York St John University and Coventry University in Scarborough.



Delivery Role

- Produce and deliver a York and North Yorkshire Local Visitor Economy Partnership Framework, which sets out how we can work together to increase the value of the sector.
- Continue to deliver the Growth Hub service, which provides free and impartial business support and guidance, across all sectors.
- Support deployment of the Made Smarter programme within York and North Yorkshire, which helps manufacturers to adopt technology.
- Deliver devolved skills support, ensuring our businesses have the skills and training that they require.
- Deliver a High Street Fund to support our key businesses in our town centres.
- Work with government to explore growth opportunities within our defence sector.

How will we unlock growth through our key employment sectors?

What makes York and North Yorkshire uniquely placed to deliver growth

These assets are part of the DNA of what makes York and North Yorkshire uniquely placed to deliver growth. They are also responsible for shaping our competitive advantage sectors - Food and Farming Innovation, Engineering Biology and Life Sciences, Clean Energy, Rail Innovation and Creative Industries.

Our Diverse Geography: City Region, Coastal & Rural

City Region

As the historical, cultural and economic heart of the region, York's significance cannot be overstated, particularly as it distributes investment and benefits out into the wider area, including access to talent and home to significant, internationally operating business clusters. Its significance is evident in its heritage, often a centre of church and royal power. But the city is equally future focussed and innovation-led, including two of our universities (Russel Group University of York and York St John University), alongside key R&D assets and driving forward critical redevelopment, including York Central.

At 45ha, York Central is one of the largest mixed-use regeneration projects in the UK. This provides much needed modern office space (raising floorspace for this use from 13 to 16%), residential, a new public square, and 18 acres of public realm. The development is a transformative project set to deliver over 2,500 new homes, with at least 20% designated as affordable housing.



Not only is the city significant to the region, but it has a national role, particularly its position on key rail networks and strong connections to London (less than two hours on the train).

Integrated closely with York's economy and West Yorkshire is the historic spa town of Harrogate, the second largest population area. Harrogate is a key economic centre that attracts significant residents, visitors and businesses. Supporting both Harrogate and York's economy is the development of a new settlement in Maltkiln, which sits close to a key railway link, between the two urban centres. We would also explore the potential for further new settlements to meet longer term growth aspirations across the region.

To the South of York is Selby, which provides massive growth opportunities particularly through its available brownfield land which could be used for redevelopment, including former Eggborough Power Station and Gascoigne Wood. Selby is also part of our proposal for an AI Growth Zone, which would be part of a corridor including York and Hull.

Aside from York and the cathedral city of Ripon, the region's principal settlements are market towns. For example, Knaresborough, Selby, Skipton, Malton, Northallerton and Richmond (to name a few). These locations are often highly integrated to our urban centres and provide key access to labour.

Coastal

York and North Yorkshire has an incredible coastline with a strong maritime history, a buoyant visitor economy, manufacturing base and emerging offshore renewables sector.

Scarborough is one of our largest coastal communities and presents a number of opportunities, with investment and redevelopment taking place.

Middle Deepdale expansion is a major residential development in North Yorkshire, delivering over 1,350 new homes as a sustainable urban extension to Scarborough. Spanning 90 acres, the project includes homes for sale and rent, extra care housing, community facilities, a school, retail outlets, and public open spaces. Scarborough and Whitby have previously received investment for "Town Deals", which was an injection of investment to address skills and enterprise, cultural activities, sustainability and connectivity.



An Economy Shaped by a World-Class Science Base, Outstanding Natural Capital, Globally-Renowned Heritage and High-Performing Small Businesses.

Along the coast, we also have significant businesses operating on a global stage, including McCains, the leading producer of frozen potato products, and Anglo American, a global mining company, currently exploring sustainable fertiliser opportunities.

Rural

With two National Parks (North York Moors and Yorkshire Dales) and three National Landscapes (Howardian Hills, Forest of Bowland and Nidderdale), the majority of York and North Yorkshire is defined by rurality and smaller settlements.

Rural areas are often overlooked for their urban counterparts, wrongly perceived as an attractive backdrop or tourist hotspot, but they have a role to play in economic growth. Some of our key sectors are underpinned by rurality, including food and farming. We are the perfect location to be an innovation testbed, contributing to significant national ambitions such as food security.

We want to embed innovation at the core of our rural assets, including pioneering natural carbon sequestration and leading the way for decarbonisation.

The isolation provided by our rural areas does not need to be a hindrance, with some sectors like defence and security, preferring the privacy. We could be the perfect location for growing defence needs. We are already home to a number of MOD sites, with some locations being disposed and possibly available for redevelopment opportunities such as business growth and housing.

We should not underestimate the opportunities that rural locations could present.

World-Class Science Base

Our science base underpins our growth sectors. We have three universities: York St John University, Coventry University Scarborough campus and the University of York (part of the prestigious Russell Group). We also have a number of sectoral assets linked to innovation and Research and Development, such as the HQ for the National Agritech Centre, Fera Science Ltd, Stockbridge Technology Centre, CoSTAR Live Lab, Askham Bryan, and the National STEM Learning Centre, to name a few. The academic capabilities in our region all play a role in driving growth in our competitive advantage sectors.

Outstanding Natural Capital

York and North Yorkshire's natural capital has had a significant impact on economic development for centuries – influencing access routes through the landscape, providing natural resources for industry and determining the best locations for settlements⁵².

It was the richness of the region's lowland farmland that contributed to both the wealth of local landowners, and the funds and willingness to experiment in new techniques and technologies⁵³. Unsurprisingly, given the rural nature of York and North Yorkshire, which includes two National Parks (North York Moors and Yorkshire Dales) and three National Landscapes (Howardian Hills, Nidderdale and Forest of Bowland), farming remains a significant sector and has contributed to a strong presence of food and drink manufacturing businesses within the region.

The landscape plays a significant economic role across a number of sectors, alongside traditional agriculture. Our creative sector has an opportunity for product development and innovation that encourages more usage and enjoyment of our natural capital, benefitting our tourism businesses as well. Protection and maintenance of our landscapes provides new "nature-based" jobs, such as highly skilled contractors carrying out peatland restoration.

Our natural capital assets play a role in opportunities around Clean Energy. York and North Yorkshire's geology means it's a geothermal hotspot and provides an opportunity for clean energy generation. However, there are some tensions for land usage between agriculture, energy, and housing developments. Some of this will be addressed nationally through the Land Use Framework, whilst locally we are undertaking research linked to energy opportunities and where they are best placed, ensuring the most appropriate location is maximised rather than targeting high-quality arable land.

There are also significant decarbonisation benefits from natural capital through sequestration and carbon capture as natural carbon sinks. Restoring and protecting these assets, including tree planting, increasing hedgerows and increasing bioenergy crops, restoring peatland and better soil management, particularly through regenerative agriculture, could help us to decrease our greenhouse gas emissions. Tree planting for carbon sequestration also supports climate change resilience by providing natural flood risk management, water security and shading benefits.

York and North Yorkshire is 1 of 4 pilot places that are part of DEFRA's Local Investment in Natural Capital programme, developing and testing approaches to leverage private sector investment to enhance our natural capital, improve carbon sequestration and boost biodiversity. These projects illustrate how our net zero ambitions can yield economic benefits for landowners, farmers, and coastal communities.

We also support the development of a Local Nature Recovery Strategy, in partnership with our two constituent authorities. This will set out the priority areas for nature recovery and improving biodiversity.

York and North Yorkshire is primed to be a pioneering area for natural capital and utilise this to address the ambitions of the Growth Plan. As such, we're currently building a strategic relationship with the Department for Environment, Food and Rural Affairs, looking at how we establish a more joint-up approach to enable growth.

Case Study SeaGrown

Based on the North Yorkshire coast, SeaGrown are focussed on improving the health of our oceans and combatting climate change through sustainable seaweed cultivation. Seaweed absorbs excess nutrients, reducing pollution and improving water quality. Seaweed captures carbon from the atmosphere and the ocean, mitigating the impacts of climate change. And seaweed creates vital habitats for a diverse array of marine species, helping to restore biodiversity.

The business develops seaweed as a service, for biodiversity uplift and water quality improvements, alongside seaweed-based products, including cosmetic and food alternatives such as soap and salt.

Globally-Renowned Heritage

York and North Yorkshire has an abundance of heritage assets, ranging from Prehistoric, Roman, Viking and Medieval, each of which have contributed to an unmistakable sense of place and community identity.

It is also this heritage that has underpinned our economic opportunities. Throughout history, we have played a role in supporting the country – feeding the UK, powering the UK, healing the UK and connecting the UK.

Our heritage underpins a number of our key growth sectors. Built assets, including internationally-renown sites, such as the Studley Royal and Fountains Abbey World Heritage Site, are fundamental to our tourism sector, attracting global visitors. These sites have also made York and North Yorkshire a perfect location for Film and TV, contributing to our Creative Sectors. For example, several locations in York were used as sets in the BBC drama Gentleman Jack, such as Holy Trinity Church on Goodramgate, whilst North Yorkshire has been visited by the likes of Hollywood stars, including Tom Cruise for Mission Impossible 7.

Technology and innovation is critical to unlocking further benefits from our heritage. We have the expertise and ability to use digital and immersive technology to protect, preserve and present that heritage for current and future generations.

York Minster's Centre of Excellence for Heritage Craft Skills features a state-of-the-art Tech Hub that utilises the latest technology to enhance and safeguard the future of centuries old creative skills and is pioneering a new approach to heritage preservation.

Our heritage assets make York and North Yorkshire a highly attractive place to live, work and learn. But they're more than a nice backdrop and can contribute to economic opportunities. In 2020, research suggested that heritage contributed for approximately £2.1bn of GVA for York, North Yorkshire and East Riding⁵⁴.

High-Performing Small Businesses

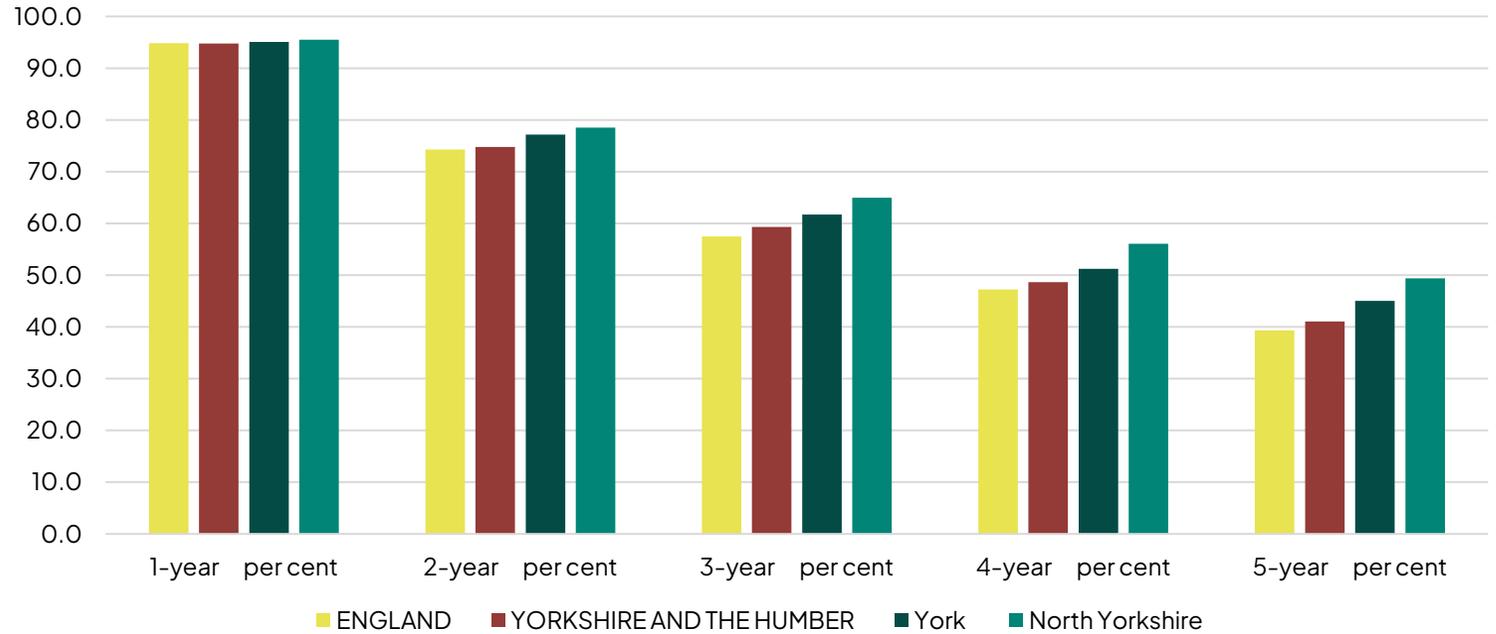
York and North Yorkshire's economy is dominated by smaller sized businesses, with 89% classified as micro (having up to 9 employees⁵⁵). Larger businesses are less than 1% of the business demographic (although this should not diminish their significance in terms of economic contribution and employment⁵⁶).

York and North Yorkshire both have below UK-average business birth rates (per 10k working-age population). However, newly formed businesses have a high survival rate, especially in North Yorkshire.

Using these assets, there is an opportunity for the region to build on its urban strengths and boost rural productivity, setting the precedent for other rural regions and bridging the gap with national performance.

Figure 10: Survival Rates of Newly Born Enterprises by Births of Units in 2018

Source: Office for National Statistics



Strong Partnership Working – ‘The Quadruple Helix’

To create growth at scale, the York and North Yorkshire Combined Authority can't do this alone. Collaboration will be key, pooling expertise, knowledge and resources. The ‘Quadruple Helix’ model is an approach to innovation, which recognises the significant partnership between the public sector, private sector, academia and communities.

Public Sector Role of the Combined Authority

A Combined Authority is where a group of councils work together across a larger area. The York and North Yorkshire Combined Authority has been created by the City of York Council and North Yorkshire Council.

The York and North Yorkshire Combined Authority is a legally recognised, single body. Our role is to use some of the money and powers, that up to now have been held by central government, and work with local leaders and communities to invest in ways that will help to make York and North Yorkshire a better place for you to live, work and do business.

To deliver on the Growth Plan, the Combined Authority commits to the following:

Coordination and leadership: with the support of our Mayor, the Combined Authority will provide leadership for growth within York and North Yorkshire, alongside convening key partners and ensuring activity is business-focused. This will include engagement with our Business Board, which includes representation from a wider range of private sector businesses, who will provide continued challenge and support.

Promote York and North Yorkshire: through the Mayor, we can

ensure the voice of York and North Yorkshire is heard and that central government recognises our unique growth opportunities, particularly from an urban, rural and coastal perspective. Our role is to help put the region on the map, both nationally and globally, encouraging inward investment and internationalisation for our businesses, alongside skills and talent retention.

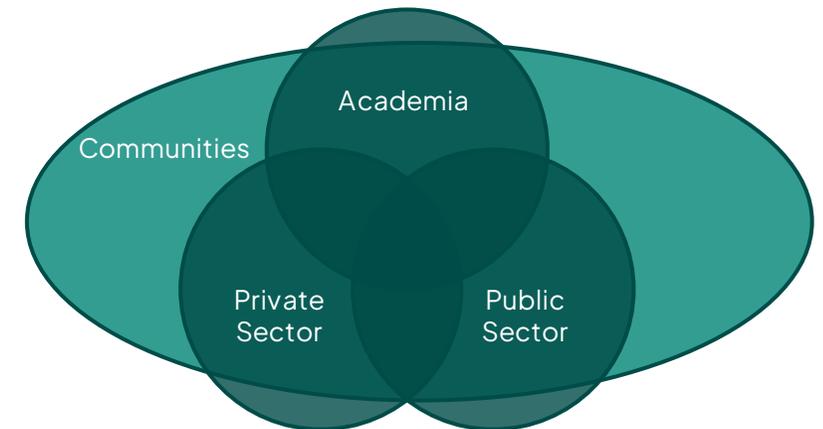
Advocate for York and North Yorkshire towards central Government: we will work closely with central Government to explore opportunities for further devolution, which means greater powers locally and single long term funding settlement.

Delivery of programmes to support growth: the Growth Plan identifies a number of actions, which the Combined Authority, in partnership with other stakeholders, will take ownership of managing, coordinating and ensuring successful delivery.

Role of the Local Authorities & National Parks

York and North Yorkshire has two unitary councils (City of York Council and North Yorkshire Council) and two National Parks (Yorkshire Dales and North York Moors), which have a strong track-record of partnership working with the Combined Authority, and they have been integral to developing the Local Growth Plan.

The ‘Quadruple Helix’



Strong Partnership Working – ‘The Quadruple Helix’

Through their established economic strategies, built on robust evidence and consultation, we were able to identify regional, cross-cutting opportunities and identify the basis of the Growth Plan. They will continue to play a key role, advocating for their local areas and acting as a delivery partner. They will also be responsible for development of Local Plans, which will help to provide spatial direction to housing and commercial development and growth opportunities.

Role of Central Government

We have been working collaboratively with central Government to develop our Local Growth Plan, ensuring it achieves growth both locally and nationally. We will build on this strong partnership approach, seeking support from central Government on the following:

- Further dialogue regarding devolution and a single settlement based on the English Devolution White Paper and Established Authority status;
- Advocate for and support York and North Yorkshire's competitive advantage sectors, particularly through the National Industrial Strategy;
- Invest in the programmes identified within the Growth Plan.

Central Government has already committed to Shared Priorities, linked to housing and commercial development, innovation and utilities, to support York and North Yorkshire to achieve our growth ambitions.

Role of the Private Sector

Growth cannot be achieved without the support of our local businesses, entrepreneurs and investors, who are responsible for creating jobs, driving innovation, new products and internationalisation and investing in our local area. We're proud to be the home of both global, influential businesses and entrepreneurial small and micros. Each have a role to play, and we will work collaboratively to ensure our decisions are business-led and that York and North Yorkshire has the right ecosystem in place for businesses to thrive and grow.

Role of Academia

The academic institutions in York and North Yorkshire each have a role to play in our growth ambitions, from our schools to Further Education and Higher Education, and ongoing training and development. They are developing the future pipeline of talent, ensuring our businesses have the right skills in place to thrive, and pioneering innovation and research in our growth sectors. We will continue to engage with our academic partners, utilising their extensive knowledge and expertise, to deliver our Growth Plan.

Role of Communities

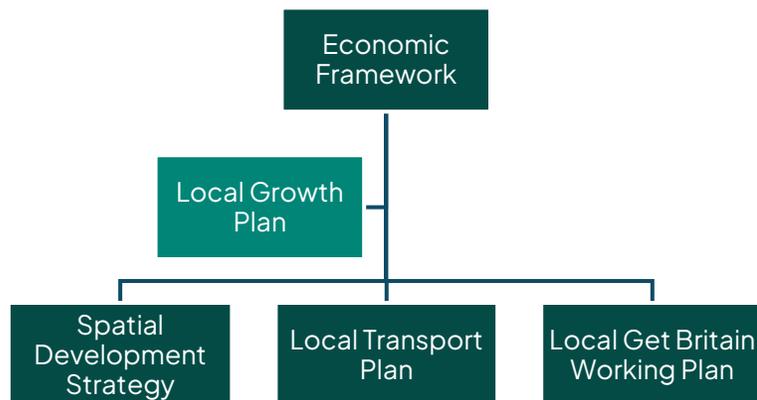
There is a risk that growth is not shared more widely and only benefits a small minority. We want our growth to affect the many, not just the few. We will put communities at the heart of this plan and explore mechanism such as Community Wealth Building to ensure people are not left behind.

Delivery plan

Delivery plan

There is always a risk that a strategy is nothing more than nice words on a page if it does not have a clear action plan that sits alongside it. **We are committed to working with partners and ensuring the Growth Plan translates into tangible delivery and has a meaningful impact.**

We will continue to work closely with central government, but we will not be solely reliant on them. We will provide local leadership and start driving change now through our existing mechanisms as a Combined Authority. This includes devolved funds such as the Mayoral Investment Fund and Adult Skills Fund; and providing strategic direction and influencing local and national policy through other strategies, as highlighted below:



Consideration will also be made to localised strategies, such as Local Plans

This current iteration of the Growth Plan begins to identify actions, but these need to be developed further into a detailed 10-Year Delivery Plan and tested with partners (both public and private sector), ensuring best use of public money and that robust assurance processes are followed. We also need to ensure our efforts are targeting the most appropriate delivery mechanisms.

Key stakeholders that will support the Delivery Plan development will include:

- **Combined Authority members:** will have final approval of any proposed activity;
- **Business Board:** will act as a critical friend, ensuring activity is representative of sectoral needs, and they will endorse the delivery plan;
- **Growth Board:** an informal advisory board with key public sector partners, including City of York and North Yorkshire Councils, Yorkshire Dales and the North York Moors National Parks, and representatives from the Ministry of Housing, Communities and Local Government;
- **Central Government:** we will continue to work closely with central government, across a range of departments, looking at synergies and complimentary activity, particularly linked to the National Industrial Strategy;
- **Investor Panel:** we will work with private sector financial institutions to explore opportunities for private sector investment;
- **Academia:** our academic institutions are pivotal to delivering growth and supporting our growth sectors, whether that's through developing the future pipeline of talent, or supporting R&D and innovation with research and collaboration with businesses. We will work closely with the skills sector to test ideas and build on their expertise and knowledge.

As this is a 10-year plan, delivery is required across the short, medium and long-term. We will work with partners to prioritise activity and identify opportunities for immediate activity.

We will also put in place robust monitoring and evaluation processes for any activity, alongside regular reviews of the Local Growth Plan, as this should not be considered a static document. Given it is a 10-year vision, we need to build flexibility into the plan, recognising that changes may occur within the economy that are beyond our control and had not previously been considered.

Investment

Part of the role of the Combined Authority in delivering the Local Growth Plan is providing leadership and influence, ensuring that York and North Yorkshire has a seat around the table with central government. Alongside that, serious investment will be required to deliver on the Local Growth Plan and achieve a significant impact. But the public sector alone can't do this. Collaboration needs to underpin every aspect of the Local Growth Plan, including investment.

Delivery plan

We have a number of mechanisms already at our disposal through devolution, including the Mayoral Investment Fund, a £18m per year allocation of funding over 30 years, and control of the Adult Skills Fund. Central Government announced further opportunities for investment within the National Industrial Strategy, including establishment of a new local growth fund from 2026–27 (although full details on this have not yet been published).

But we won't stop there. We will work across central government departments and government-owned companies, including the National Wealth Fund, British Business Bank, Office for Investment, Great British Energy and the new National Housing Bank to explore opportunities for further investment and attracting private sector funding to deliver our 10-year plan.

We will also establish an Investor Panel, which will draw together key private sector financial institutions. Their role will be to act as a critical friend and provide guidance on programme development, helping us to identify where there might be private sector appetite to invest.

We are also developing an Investment Strategy which will support prioritisation of projects and help us to test strategic fit and viability.

Local Ideas for Exploration

Note: This list includes draft actions which require further development, so these could be subject to change. There will also be strategic actions that sit alongside this, where the Combined Authority's role is to provide leadership and convene key partners and advocate for York and North Yorkshire.

Priority	Activity	Which inclusive growth outcome does this support?
<p data-bbox="96 605 259 686">Inclusive Growth</p> 	<p data-bbox="392 605 1620 665">Develop metrics to sit alongside the Growth Plan which incorporate inclusive growth priorities, not just traditional economic growth metrics such as GVA and productivity.</p> <p data-bbox="392 762 1620 853">Support businesses to implement inclusive growth practices and healthy workplaces, e.g. good business charter, living wage commitments, inclusive recruitment, retention and workforce development.</p>	 <p data-bbox="1905 668 2283 696">More and higher-quality jobs</p>

Local Ideas for Exploration

Note: This list includes draft actions which require further development, so these could be subject to change. There will also be strategic actions that sit alongside this, where the Combined Authority's role is to provide leadership and convene key partners and advocate for York and North Yorkshire.

Priority	Activity	Which inclusive growth outcome does this support?
<p>Food and Farming Innovation</p> 	Dialogue with HMG to explore barriers linked to regulation and increased costs	 <p>Raise productivity</p>
	Collaborate with DEFRA on the creation of a National Food Strategy – alongside close working with DSIT and DBT.	 <p>Support the transition to Carbon Negative</p>
	Precision Agriculture Trailblazer for the North – supporting farmers to adopt technology to streamline processes and improve efficiency.	 <p>More and higher-quality jobs</p>
	Food and Farming Innovation Growth Zone – creating an attractive environment for Controlled Environment Agriculture by unlocking commercial development, accelerating innovation and supporting skills.	 <p>Increase investment</p>
	England's First Regenerative Agriculture Region – support for farmers to transition to more sustainable practices through regenerative agriculture.	 <p>Increase GVA</p>
	Internationalisation Support – building on the strong Yorkshire brand, provide greater promotion and support for trade missions.	
	Technology Adoption Programme for Manufacturers – building on the strengths of programmes such as Made Smarter with a focus on food and drink manufacturing and greater flexibility around capital investment costs.	

Local Ideas for Exploration

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Priority	Activity	Which inclusive growth outcome does this support?
<p>Engineering Biology & Life Sciences</p> 	Work with partners to deliver a vision for a wider bio-ecosystem	 Support the transition to Carbon Negative  More and higher-quality jobs  Increase investment  Increase GVA
	Collaboration with DEFRA, DSIT, DESNZ and DBT to develop these sectors.	
	Explore models for low-cost, flexible lab space – business growth is constrained by the lack of accessible lab space within the region.	
	Cluster mobilisation – in a rural geography, businesses can often feel scattered and isolated with limited collaboration. As part of existing CA investment, hub and spoke models will be tested.	
	Food and Farming Innovation Growth Zone – phase 1 will focus on Controlled Environment Agriculture as part of the Food and Farming Innovation sector. Further opportunities need to be explored to connect our food innovation with engineering biology and alternative materials to increase resilience within agriculture.	
	Identify and trial a funding model to support innovation commercialisation – research into the best model will be supported via existing Mayoral Investment funding.	
Skills assessment for Engineering Biology and creating the skills infrastructure - complex sector as it covers a number of subsectors, from farming to alternative fuels. Further mapping is required to understand skills needs, gaps and future requirements.		

Local Ideas for Exploration

Note: This list includes draft actions which require further development, so these could be subject to change. There will also be strategic actions that sit alongside this, where the Combined Authority's role is to provide leadership and convene key partners and advocate for York and North Yorkshire.

Priority	Activity	Which inclusive growth outcome does this support?
<p>Clean Energy</p> 	<p>Develop a Regional Geothermal Strategy to create a coordinated approach to geothermal energy development in YNY and integrating geothermal projects into regional planning.</p>	 <p>Support the transition to Carbon Negative</p>
	<p>Geothermal Database and Mapping System: Establish a comprehensive regional database and mapping system to track geothermal potential, current projects, and available resources to facilitate informed decision-making and investment.</p>	 <p>More and higher-quality jobs</p>
	<p>Develop a Retrofit Strategy for the region: Co-design a strategy outlining how the pace and scale of retrofit can increase by supporting our supply chains and maximising comfort, climate and cost benefits.</p>	 <p>Increase investment</p>
	<p>Collaboration with DESNZ, DSIT and DBT.</p>	 <p>Increase GVA</p>
	<p>Northern Geothermal Centre of Excellence - This centre would focus on training, system testing, and development of geothermal technologies. It would also serve as a hub for knowledge-sharing, building on existing research from universities and private sector players.</p>	
	<p>Investment Aggregation - Develop regional investment portfolios that aggregate multiple geothermal projects to make them more attractive to investors, reducing perceived risks, potentially through City Leap.</p> <p>Devolution (or bridge funding) to expand regional retrofit - enabling greater local control over investment into retrofit.</p>	

Local Ideas for Exploration

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Priority	Activity	Which inclusive growth outcome does this support?
<p>Rail Innovation & Security</p> 	<p>Dialogue with HMG to explore procurement flexibilities to accelerate innovation – currently contract and procurement regulations from train operators delay the process and discourage innovation.</p>	 Bridge the productivity gap with England
	<p>Work with GBR in developing innovation and skills</p>	 More and higher-quality jobs
	<p>Rail Innovation Hub at York Central – exploring how to increase innovation, R&D and implementation, drawing on close partnerships with train operators.</p>	 Increase investment
	<p>Identify and develop career pathways to support talent pipelines and reskilling/upskilling of existing workforce, in partnership with sectoral training providers (e.g. National Skills Academy for Rail).</p>	 Increase GVA

Local Ideas for Exploration

Note: This list includes draft actions which require further development, so these could be subject to change. There will also be strategic actions that sit alongside this, where the Combined Authority's role is to provide leadership and convene key partners and advocate for York and North Yorkshire.

Priority	Activity	Which inclusive growth outcome does this support?
<p>Creative Industries</p> 	Work with key partners such as DCMS.	 <p>Bridge the productivity gap with England</p>
	Develop a Creative Strategy in partnership with NYC/CYC and other partners.	 <p>Support the transition to Carbon Negative</p>
	Partner of One Creative North	 <p>More and higher-quality jobs</p>
	Connecting the creative ecosystem: Establishing, developing and growing existing networks at a local and regional level; strengthening the connections across the sector and the geography both within York & North Yorkshire as well as across the wider region through One Creative North and Creative Corridors.	 <p>Increase investment</p>
	Skills: address the skills mismatch through inclusive interventions that enable more people from all ages and backgrounds to pursue creative careers here in YNY.	 <p>Increase GVA</p>
	Build a pipeline of regional creatives able to access the R&D capabilities and facilities of both CoStar Live LAB project and the CoStar Network; alongside our universities and XR Stories.	
	Deliver a programme of entrepreneurship; with an emphasis on the large freelance workforce that historically doesn't access 'traditional' business support.	
Establish a YNY content creation fund		

Local Ideas for Exploration

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Priority	Activity	Which inclusive growth outcome does this support?
<p data-bbox="96 605 290 644">Innovation</p> 	Explore with HMG the opportunities for York and North Yorkshire from the newly announced R&D Missions Accelerator Programme	 Bridge the productivity gap with England
	Work closely with innovation-led government departments, including the Department for Science, Innovation and Technology	 Support the transition to Carbon Negative
	Prepare for a Local Innovation Partnership.	 More and higher-quality jobs
	Develop an innovation ecosystem, such as a York Central Innovation Hub and development of innovation hub and spoke model.	 Increase investment
	Deliver the Business Innovation Fund and utilise outcomes to explore future funding requirements.	 Increase GVA
	Pursue an AI Growth Zone.	
	Support businesses to embed Circular Economy principles	

Local Ideas for Exploration

Note: This list includes draft actions which require further development, so these could be subject to change. There will also be strategic actions that sit alongside this, where the Combined Authority's role is to provide leadership and convene key partners and advocate for York and North Yorkshire.

Priority	Activity	Which inclusive growth outcome does this support?
<p>Housing & Commercial Development</p> 	Develop a Spatial Development Strategy and support the development of Local Plans across the area, including collaborative working with the two Constituent Authorities, such as developing joint evidence.	 <p>Greater access to opportunities</p>  <p>Support the transition to Carbon Negative</p>
	Work closely with Government to ensure York and North Yorkshire benefits from recently announced national policy in the Industrial Strategy.	
	Continue to deliver the Brownfield Housing Fund and explore future funding models to accelerate housing.	
	Utilise the strategic place partnership, a formal arrangement designed to support joint working on housing delivery with Homes England and key partners.	
	Further explore CA powers to convene and accelerate housing and commercial development – e.g. Mayoral Development Corporation.	
	Develop a strategic pipeline for housing and commercial development delivery, including a review of public land assets and different delivery models	

Local Ideas for Exploration

Note: This list includes draft actions which require further development, so these could be subject to change. There will also be strategic actions that sit alongside this, where the Combined Authority's role is to provide leadership and convene key partners and advocate for York and North Yorkshire.

Priority	Activity	Which inclusive growth outcome does this support?
<p data-bbox="96 605 333 733">Utilities & Digital Connectivity</p> 	<p data-bbox="392 605 1595 629">Explore with DSIT and local partners how to accelerate digital connectivity, including investment models.</p> <hr/> <p data-bbox="392 719 1638 801">Work with the Department for Energy, Security and Net Zero to address energy and grid constraints, including exploration of the recently announced Connections Accelerator Service which will provide support connecting to the grid for demand projects</p> <hr/> <p data-bbox="392 915 1564 968">Deliver projects on the ground to remove utility constraints, working in close partnership with local and national partners</p>	 <p data-bbox="1888 701 2303 725">Greater access to opportunities</p>

Local Ideas for Exploration

Note: This list includes draft actions which require further development, so these could be subject to change. There will also be strategic actions that sit alongside this, where the Combined Authority's role is to provide leadership and convene key partners and advocate for York and North Yorkshire.

Priority	Activity	Which inclusive growth outcome does this support?
<p data-bbox="96 604 333 686">Skills and Employment</p> 	<p data-bbox="392 604 1640 658">Utilise devolved skills and employment funding to deliver training and support that meets our growth needs, including prioritising commercialisation and entrepreneurial skills.</p>	 <p data-bbox="1829 668 2359 701">Bridge the productivity gap with England</p>
	<p data-bbox="392 755 1607 809">Develop all age careers approach to ensure accessible, clear and quality pathways for residents whatever stage of their career or working life and aligned to our growth sectors.</p>	 <p data-bbox="1905 833 2283 866">More and higher-quality jobs</p>
	<p data-bbox="392 906 1437 939">Encourage and support employers to invest in and commit to workforce skills development</p>	
	<p data-bbox="392 1015 1289 1048">Support individuals and employers to identify and maximise transferable skills.</p>	 <p data-bbox="1888 1008 2300 1041">Greater access to opportunities</p>

Local Ideas for Exploration

Note: This list includes draft actions which require further development, so these could be subject to change. There will also be strategic actions that sit alongside this, where the Combined Authority's role is to provide leadership and convene key partners and advocate for York and North Yorkshire.

Priority	Activity	Which inclusive growth outcome does this support?
<p data-bbox="96 604 300 651">Transport</p> 	<p data-bbox="392 604 1638 658">Develop a Local Transport Plan, which is closely aligned to our growth ambitions and will set the direction for delivering the Integrated Transport Settlement.</p>	 Greater access to opportunities  Support the transition to Carbon Negative
	<p data-bbox="392 761 1225 786">Work with key government departments, e.g. Department for Transport.</p>	
	<p data-bbox="392 918 1302 943">Deliver our Integrated Transport Settlement across a range of transport modes.</p>	

Local Ideas for Exploration

Note: This list includes draft actions which require further development, so these could be subject to change. There will also be strategic actions that sit alongside this, where the Combined Authority's role is to provide leadership and convene key partners and advocate for York and North Yorkshire.

Priority	Activity	Which inclusive growth outcome does this support?
<p>Trade and Investment</p> 	<p>Work with key partners, such as the Department for Business and Trade to identify FDI and export opportunities.</p>	 Bridge the productivity gap with England
	<p>Attend events, where appropriate, to promote York and North Yorkshire, e.g. UKREiIF.</p>	 More and higher-quality jobs
	<p>Develop an Investment Playbook to showcase opportunities within York and North Yorkshire and attract investors.</p>	 Greater access to opportunities
	<p>Through our Growth Hub and Business Innovation Fund, we will support businesses to begin their export journey.</p>	 Increase GVA

Local Ideas for Exploration

Note: This list includes draft actions which require further development, so these could be subject to change. There will also be strategic actions that sit alongside this, where the Combined Authority's role is to provide leadership and convene key partners and advocate for York and North Yorkshire.

Priority	Activity	Which inclusive growth outcome does this support?
<p>Key Employment Sectors</p> 	Produce and deliver a York and North Yorkshire Local Visitor Economy Partnership Framework, which sets out how we can work together to increase the value of the sector.	 <p>Bridge the productivity gap with England</p>
	Continue to deliver the Growth Hub service, which provides free and impartial business support and guidance, across all sectors.	
	Support deployment of the Made Smarter programme within York and North Yorkshire, which helps manufacturers to adopt technology.	 <p>More and higher-quality jobs</p>
	Deliver devolved skills support, ensuring our businesses have the skills and training that they require.	
	Deliver a High Street Fund to support our key businesses in our town centres.	 <p>Increase GVA</p>
	Work with government to explore growth opportunities within our defence sector.	

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Note: where evidence is not yet publicly available, this will be published shortly.

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