

DRAFT**Norfolk and Suffolk Local Industrial Strategy**

This version of the Norfolk and Suffolk Local Industrial Strategy is a local draft and has not been agreed with government, we are working with them to develop a final agreed version.

Executive summary

Norfolk and Suffolk - the UK's clean growth region.

Striving to be a globally recognised, high-tech and inclusive economy which is leading the transition to a post-carbon economy through sustainable food production and renewable energy generation.

With an economy worth £36 billion¹ Norfolk and Suffolk makes a significant contribution to UK plc. It is a diverse economy with globally competitive clusters and growing specialisms from agri-food and clean energy to information and communications technology and digital creative.

Norfolk and Suffolk has expertise in all forms of energy generation. A £36bn economy at the heart of the world's largest market for offshore wind energy. Planned investment in renewable and nuclear power generation will make it the leading supplier of renewable energy to the UK, providing power for 58% of the UK's homes.

Norfolk and Suffolk is also a major user of energy and water, with the largest Agri-food sector in the UK and world leading research into plant and soil technology and agricultural systems. Firms and communities are already facing the climate change impacts including rising sea levels, soil degradation and reducing rainfall.

The area has some of the highest concentrations of knowledge-intensive jobs in the UK, with 8000 people working specialisms from user experience design, artificial intelligence and advanced engineering to clean energy, marine and world leading microbiome research.

Record numbers of people are engaged in the economy, with 81 per cent of the working age population in Norfolk and Suffolk active, and employment levels exceed the national average. Skills levels and wages levels however are lower, but that gap is closing.

Norfolk and Suffolk is strongly connected with the rest of the world. Felixstowe is the UK's largest container port and handles around 42 per cent of its container trade. Norwich airport, via Schiphol, connects people to over 400 global destinations whilst other major airports like Stansted are within close reach. The region benefits from fast links to London and Cambridge, boasting the UK's most modern fleet of rolling stock.

This strategy is based on robust evidence and has been developed by a strong local partnership of businesses, local authorities, social enterprises, universities and colleges. It builds on the priorities and targets set by local partners in the Norfolk and Suffolk Economic Strategy, the local blueprint for

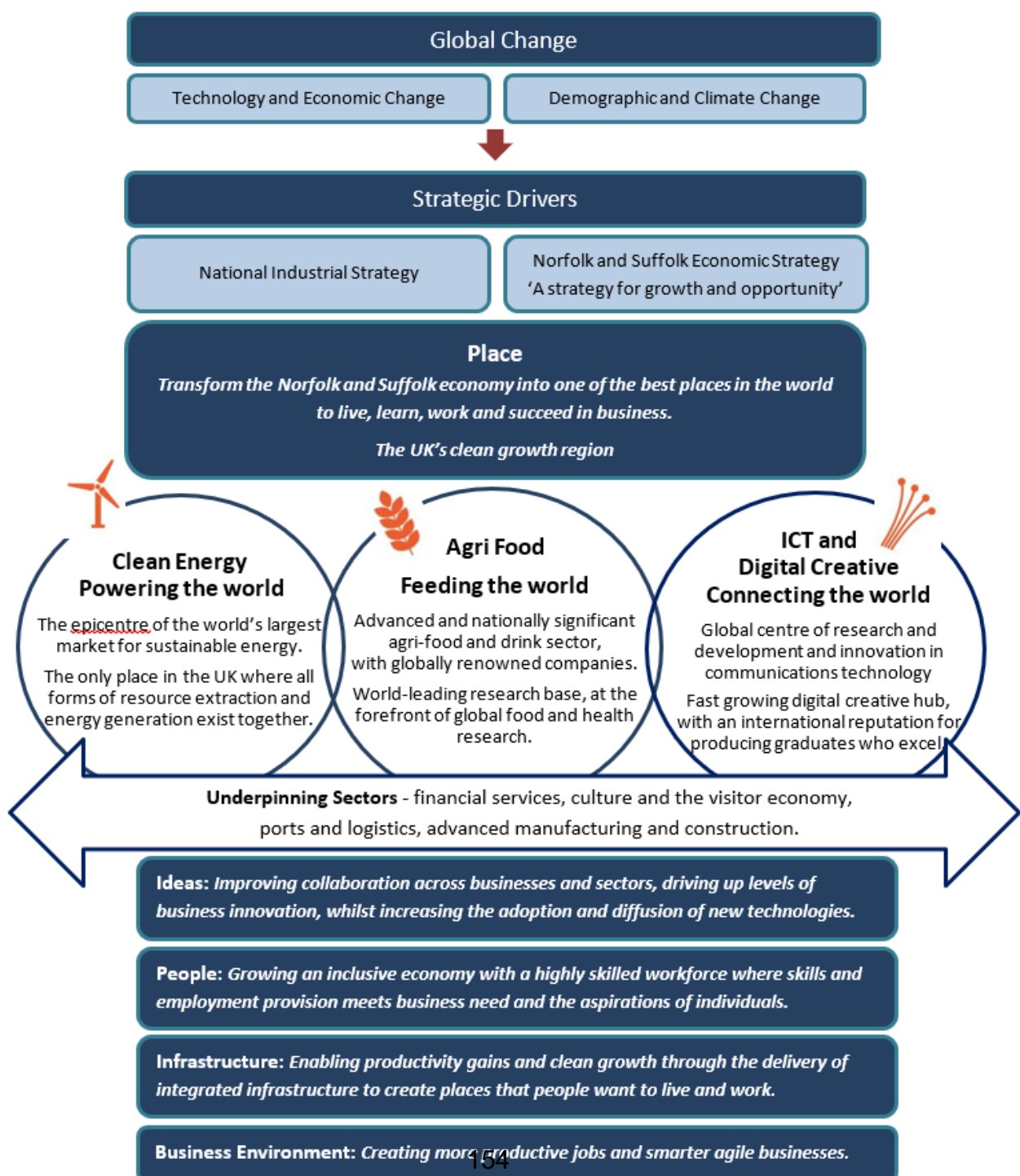
¹ Norfolk and Suffolk Local Industrial Strategy evidence base – contains all data in this document unless otherwise stated.

inclusive growth and productivity gains, with an overall goal to transform the economy into one of the best places in the world to live, learn, work and succeed in business

The Norfolk and Suffolk economy has clear and well-defined potential for growth. This Local industrial Strategy sets out a series of coherent and specific actions that brings this expertise together to drive productivity and growth across the economy as a whole, so that all businesses and communities' benefit. The scale of the productivity prize is significant. If Norfolk and Suffolk was operating at the same productivity rate as the UK average, it would contribute an additional £4bn gross value added per annum.

As global, national and local economies adapt to climate change and the transition to a zero-carbon economy, Norfolk and Suffolk is taking action to bring together expertise and emerging technology, across different disciplines and sector boundaries to provide new solutions and clean growth opportunities.

Norfolk and Suffolk Local Industrial Strategy on a page



Norfolk and Suffolk Economic Profile at A Glance

The following will be developed into infographics.

A large diverse economy, but with productivity challenges

- £35.8bn to UK plc
- The growth rate of high-growth business in Norfolk and Suffolk 2012-17 shows New Anglia was at a 43% growth rate, East of England was 23.6%, and the UK was 12.8%
- Figures for 2017 show New Anglia per hr worked real Productivity grew by 0.7%, versus the UK which grew by 0.6%
- There are 62,750 VAT registered businesses in Norfolk and Suffolk.
- There are 55,450 micro businesses (0 to 9 employees), which account for 88.4% of total businesses. This is slightly lower than the UK average of 89.3% and the regional average of 89.8%.
- There are 6,085 small businesses (10 to 49 employees) in Norfolk and Suffolk, which is 9.7% of the total. This is higher than both the UK average of 8.7% and the regional average of 8.4%.
- There are 220 large businesses in Norfolk and Suffolk, which accounts for 0.4% of the total. This is the same as the shares found for the national and regional averages.
- Business survival figures show Norfolk and Suffolk are above both the UK and eastern regional average at 46.8%, versus 43.2%, and 45.4% respectively.

Opportunity for businesses to innovate and export

- Export value per annum, holding steady at £2.9bn of goods export, and £2.4bn services
- Around 8000 people work across science, innovation and research centres Covering specialisms from user experience (UX) design, artificial intelligence and advanced engineering to clean energy, marine and microbiome research,

An ageing population but attracting people

- A positive net migration trend of just over 9,000 residents per annum
- Almost 1,655,400 residents – 3.6% growth (3.7% nationally) and an older age profile with 23.5% of residents aged 65 and over compared to 18.2% in the UK.

Inclusive growth challenges

- Norfolk and Suffolk have been behind the UK in terms of residents with NVQ3+ (the equivalent of AS and A Level) qualifications. Strong progress has been made in closing the gap, with a growth in NVQ3+ levels of 2.8per cent, a faster rate in recent years than the national average and all the comparator areas.
- Average full-time weekly wages are £487.50 compared to £537.30 nationally and 26.8per cent of jobs are below the Real Living Wage compared 22.8per cent nationally.
- Norfolk and Suffolk lag behind both the East of England and UK in terms of the share of pupils achieving a 9-5 pass in English and Maths – 40% in 2017/18 compared to 43.9% in the East of England and 43.5% in the UK
- Housing affordability is diverse across Norfolk and Suffolk. Median house prices of £225,000 are similar to the UK, £228,500. However, this is about 8.7 times higher than earnings making them less affordable than the UK, 7.8.

Connectivity and Commuting

- 92per cent of Norfolk, and 94per cent of Suffolk properties have access to superfast broadband

- Norwich, Stansted and Schiphol Airports are all within close reach and connect people to over 400 global destinations.
- The region benefits from fast links to London and Cambridge, with recent investments in both the road and rail networks, making journey times quicker and more reliable - e.g. Norwich in 90, Ipswich in 60.

Housing and commercial property

- Latest figures show the combined (Norfolk and Suffolk) median house price is £225,000, compared to £228,500 for the UK
- Commercial property - Norfolk and Suffolk are significantly better value in terms of average per sq meter prices, at: £ 80, versus, £105, and £98 respectively

Norfolk and Suffolk's Potential

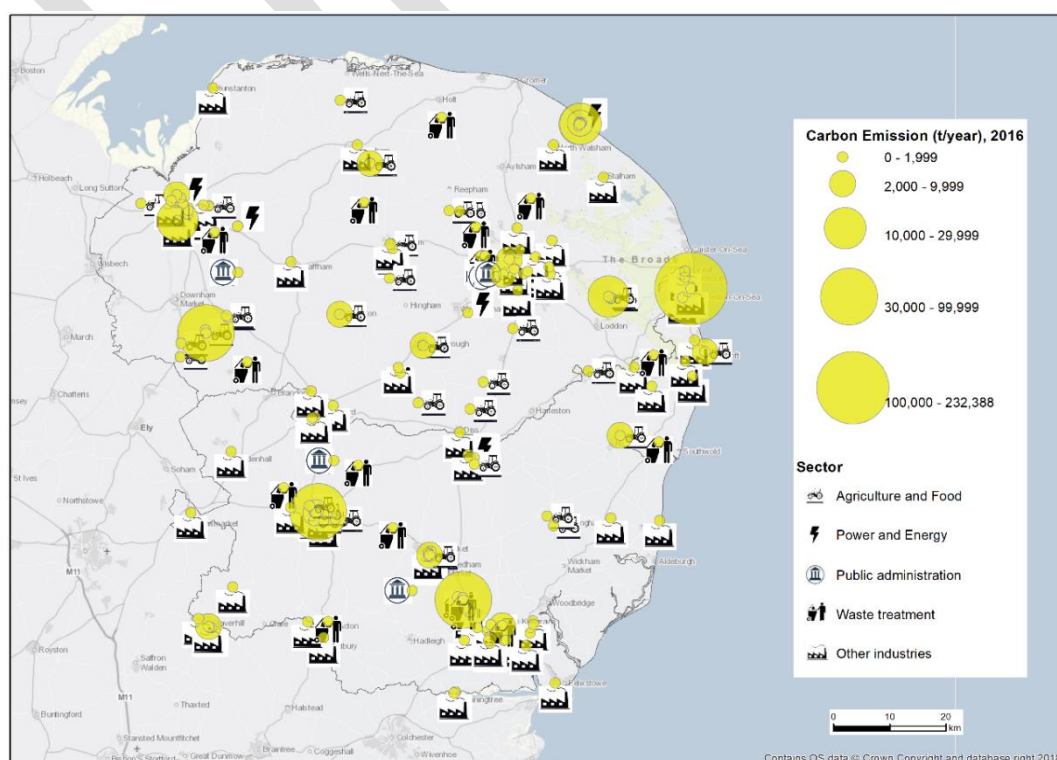
Clean Growth

Norfolk and Suffolk - the UK's clean growth region.

Striving to be a globally recognised, technology-driven and inclusive economy which is leading the transition to a post-carbon economy through sustainable food production and renewable energy generation.

Norfolk and Suffolk has an established dynamic and growing low carbon economy which is at the cutting edge of the clean growth Grand Challenge. New research commissioned from the world renown climate science team at the University of East Anglia highlights the local impacts and mitigation opportunities of climate change in the region, including agri-food, energy, construction, and transport. Coastal flooding, water resourcing and infrastructure resilience are also key considerations.

Norfolk and Suffolk have relatively low CO₂ emissions compared to the region around London. The map below major point source emitters such as power stations and food processing plants.



Norfolk and Suffolk's key strengths and assets make it well placed to be at the forefront of the clean growth revolution.

- As the UK's leading producer of renewable and low carbon energy and a significant producer of low carbon goods and services.
- As a testbed for innovation in industries which need to reduce their carbon footprint and adapt to the changes brought by climate changes such as farming and food production, transportation and construction.
- As an area with an outstanding natural environment and natural resources which are particularly vulnerable to climate change but where innovative new mitigation measures and technologies are being pioneered.
- As an area with a wealth of world class innovation and thinking, and exportable skills. Along with many award-winning businesses, that are on the leading edge of a low-carbon future.

This local industrial strategy sets out targeted actions against each of the five foundations of productivity that provide a suite of interventions which will boost productivity and support inclusive growth in ways that will optimise the contribution of our clean energy, agri-food and information and communication technology and digital opportunities, to further strengthen Norfolk and Suffolk as the UK's clean growth region.

Case Studies:

1. **THURN Group**: received industrial strategy challenge funding for the robotics in an extreme environment competition. The project will use autonomous vessels to survey ice retreat and better understand the threats of ice, making it easier to plot when its safe for people to use shipping routes or install or make changes to offshore infrastructure.
2. **Strutt and Parker Farms** have a significant commitment to renewable energy. Alongside a number of solar power initiatives, they run two major anaerobic digesters – the plant at Euston, near Thetford, exports 50,000MWh to the National Grid a year. In a recent project, they take horse muck and straw from Newmarket races, process this through a bio-digester to extract biogas and CO₂. Using advanced membranes, they separate out food grade CO₂, which is sold to a local brewery for use in beer and lemonade.
3. **The Low Carbon Innovation Fund (LCIF)** provides equity finance for small and medium sized enterprises (SME's) in the East of England that are contributing to the low carbon economy. It is operated by the University of East Anglia. LCIF 1 opened in 2010 as a £70m co-investment programme - £20.5m of EU funding matched with nearly £50m of private co-investment from UK and international investors. This fund is managed by energy and environment investment specialists Turquoise who are currently working on the exit phase, the proceeds of which will be fed into new investments. LCIF 2 is now open for investments between £25k and £1m targeting suitable companies from any sector who are seeking investment to grow and develop and which match LCIF's criteria. Additional support is also available supporting companies to develop their plans, reduce their carbon footprint and maximise carbon savings through technologies, products and services.
4. **Muntons** based in Stowmarket is a global player in the supply of malts, malt extracts, flour and flakes to many well-known names in the food and drinks industry, exports about half of its production. It produces an impressive range of beer, wine and cider-making kits which are also sold globally. The progressive company has invested heavily in product development and innovation and the results have been incredible. Such as 'malti-choc', an eco-friendly way to replace

20% cocoa in a chocolate muffin, while making it even tastier. Liquid malt, when added, can also make spaghetti bolognese meatier and cheese biscuits cheesier, Muntons discovered. Practical sustainability is at the heart of everything Muntons does. Liquid waste from its ingredients business at its headquarters is treated at a £5.4 million anaerobic digestion plant producing a fertiliser substitute for spreading on local farms, cutting out the 3,000 tanker movements a year currently required to take sludge from the site – saving 40 tonnes in CO2 emissions from the lorries. In addition, treating waste streams from malt extract production at the plant produces up to 25% of the firm’s base load electricity.

Clean Energy

Norfolk and Suffolk is well placed to be a global exemplar for clean, low carbon energy production, exporting services and skills globally, expanding the distribution of affordable sustainable energy to local communities and businesses.

Norfolk and Suffolk is the only place in the UK where all forms of resource extraction and energy generation exist together, including expertise on microgeneration, growing local energy networks and novel energy storage technologies. It has a clear distinctive and compelling offer around its all energy sector.

Infographics will include:

- Over 600 businesses, mainly specialising in offshore wind, gas and nuclear
- contributes £1.4bn to the economy
- 12,000 jobs, with thousands more employed in the wider supply chain.
- GVA per job £119,200
- Bacton Gas Terminal and the network of offshore gas platforms supplies over a third of the UK’s low carbon transition fuel
- The planned investment in offshore wind and nuclear power alone will produce enough energy to power more than 58per cent of the UK’s homes.
- Offshore windfarms in operation and development will meet half of the Offshore Wind Sector Deal’s 30GW target by 2030, with further capacity in the pipeline.
- the UK’s highest concentration of offshore windfarms, 52% of the UK’s operating fleet.
- Size of the opportunity £59.4bn capital investment in offshore energy and engineering by 2040
- Exporting £193m

Offshore Energy Production

Norfolk and Suffolk is at the epicentre of the world’s largest market for offshore wind energy, worth almost £1bn a year. The two counties have the potential to benefit more than any other area in England from growth in offshore wind jobs, with an additional 6,150 full time well-paid skilled jobs by 2032 (+600per cent growth)².

Norfolk and Suffolk has world-class operations and maintenance facilities, the ports of Great Yarmouth and Lowestoft are already strategic centres for the offshore wind sector, with potential for further growth in operations and maintenance, manufacturing and assembly.

² <https://aurawindenergy.com/uploads/publications/Aura-EU-Skills-UK-Offshore-Wind-Skills-Study-Full-Report-October-2018.pdf>

£11bn capital has been invested to date, with operational turbines generating annual operational and maintenance of £253m. Projects under construction and in development will require an additional £22bn in private sector capital expenditure bringing the total operational expenditure to £550m³.

Offshore, the region hosts over 100 gas fields and over 150 gas-related platforms. Over the next 30 years, there is a potential market of £330bn in decommissioning.⁴ Bacton Gas Terminal is the UK's only link with continental Europe's natural gas network via two separate gas interconnectors.

New and innovative energy technology concepts are being investigated in Norfolk and Suffolk, including offshore desalination, leading to hydrogen fuel production; carbon capture and storage; and gas to wire developments linked to the rejuvenation of the Southern North Sea. There is a real opportunity for Norfolk and Suffolk to become a 'test and demonstration zone', highlighting its national and global value.

Onshore Energy Production

Suffolk is home to three nuclear power stations at the different stages - Sizewell A is in decommissioning; EDF's Sizewell B is the UK's only pressurised water reactor in operation; and the Sizewell C nuclear new build project is expected to be submitted for development consent in 2020.

It is predicted that the Sizewell C power station would inject up to £200m a year into the regional economy during peak construction and £40m per year during its 60 years of operation. Furthermore, it is expected that Sizewell C would create 25,000 roles during its sixty years of operation.

Norfolk and Suffolk is the leading area nationally for animal waste biomass installations with a third of the national capacity in two large plants at Thetford and Eye power stations. One of the UK's newest straw fed biomass plants has opened at Snetterton, whilst brewer Adnams operates an anaerobic digester which was the first to export biogas to the grid produced from brewery and food waste.

The bioenergy industry is worth nearly £2bn and is based on the scale of agriculture locally with 13.7 per cent of England's crop output and 9 per cent of the livestock output. Norfolk and Suffolk is the largest straw producing area in the UK, with 313,000 hectares of cereals and 60,000 hectares of oilseed crops, with an estimated straw yield of 1.06m tonnes per year.⁵

Clean Energy Powerhouse

Planned investment in new generation projects will result in Norfolk and Suffolk being the largest contributor of clean energy to the UK and central to the UK's successful national transition to a zero-carbon economy.

Despite the area's strengths in clean energy, access to power is limited, holding back housing and industrial development in many parts of the area. Therefore, transforming the local energy system

³ 4C Offshore – East of England: Enabling Offshore Wind - 2018

⁴ 4C Offshore – East of England: Enabling Offshore Wind - 2018

⁵ https://newanglia.co.uk/wp-content/uploads/2019/06/New-Anglia-Clean-Energy-Skills-Plan_FINAL-March-2019.pdf

and new innovations in energy wider resource use is also a priority for local partners to deliver productivity gains across all businesses.

Significant investment by National Grid and other partners will be needed alongside local reinforcement, to support the offshore energy sector and the proposed new nuclear power station, Sizewell C. But it is critical that this new energy infrastructure does not impact on the natural environment, which is such a key asset for the area.

There is a clear opportunity for Norfolk and Suffolk to be a global exemplar for clean, low carbon energy production, exporting services and skills globally, and expanding the distribution of affordable sustainable energy to local communities and businesses.

Ambitious Future Plans

Local Partners will work together to:

- Expand Orbis Energy into an All Energy Centre of Excellence which focuses on supply and demand, innovation around new technology, supports the supply chain development and collaboration across industry to develop a shared all energy workforce.
- Enhance the capacity and capability of our ports to serve the offshore energy market.

The actions identified under the five foundations of productivity will also help deliver the clean energy ambition.

Case Studies:

1. **3Sun Group** led the way in diversifying from a wholly oil and gas business to more than 90 per cent renewables. It has been integral in the installation, servicing and maintenance of offshore wind turbines in the UK and European waters through the supply of skilled technicians and statutory inspection teams. 3Sun has gained a global reputation for expert operational support services specialising in the UK, German and Danish markets.
2. **Energy sector skills** - Strong co-ordination of energy skills initiatives is key to ensuring the skills needs are met. Local partners are delivering an energy sector skills plan which focuses on a higher technical engineering offer; mobilises industry leadership; builds workforce transferability; addresses overall energy skills fragility; and delivers inclusive growth. Local investments will have a major impact on developing the future energy workforce, including the £11.3m energy skills centre at East Coast College in Lowestoft.
3. **Aviva Solar Carport** One of the largest solar carports in the UK was completed for Aviva by Norfolk-based Re-Energy. And the stats are impressive. More than 542,000 kWh of power, enough to power 138 homes, will be generated following the installation of 250 car parking spaces at its Horizon building in Norwich. During peak hours, the office – which accommodates 1,000 employees – will effectively be off-grid and powered 100% by the sun. Across the course of a year, this system will provide more than 32% of the sites total energy demand, representing a carbon offset saving of 166.5 tonnes per year, and a major contribution towards Aviva's ambitious efforts to tackle climate change. Designed with the Electric Vehicle (EV) revolution in mind, the carport has futureproofed the Horizon office to allow for the addition of EV charging infrastructure to meet user demand as it arises.

Agri-Food

Norfolk and Suffolk have the innovation and expertise to develop, pioneer and apply new approaches to sustainable agriculture, utilising clean energy and innovative water management, and increase value added processing and exports through the applications of new technologies and systems.

Infographics

- largest agri-food output of any LEP area at £3.5bn.
- 91,300 jobs
- 8,885 businesses
- Output per job is high at £38,500 making it a productive sector.
- Despite accounting for only 2% of UK's population Norfolk and Suffolk represents 11per cent of its agricultural output, which is more than any other LEP area
- 12per cent of the UK's cereals, 16.6per cent of UK fruit and vegetables, 22.7per cent of the UK's pigs and 17.6per cent of UK poultry production
- Exporting £569m
- Highly specialised sub-sectors within agri-food
 - 43.4per cent of sugar production in the UK takes place in Norfolk and Suffolk.
 - Manufacture of malt, beers and ciders is five times more concentrated in the area than the rest of the UK.
 - Other highly specialised sub-sectors include tractors and farm machinery; fertilisers, pesticides and other agrochemicals; and condiments and seasonings.

A regional focus for agrifood innovation

The world-leading [Norwich Research Park](#) is at the forefront of global agri-food research and innovation. A UK asset equipped to make a leading contribution to the major challenges of food and energy security, healthy ageing and living with environmental change. It is Europe's largest single site hub of research, training, education, and enterprise in food and health. It brings together several research organisations with global reputations:

- the John Innes Centre
- the Earlham Institute
- the Quadram Institute
- The Sainsbury Laboratory
- University of East Anglia,
- Norfolk and Norwich University Hospital.

Productivity in processing

Norfolk and Suffolk is home to an advanced and nationally significant food and drink sector, with globally renowned companies including - Kettle Chips, Pasta Foods, Muntons, British Sugar, Aspalls, Mars Food, Bernard Matthews and Birds Eye. There are many more quality processing businesses with potential to grow in domestic and international markets. The area only processes 50per cent of the food it grows. The opportunity to add value to the economy with an increase in processing and high-tech production methods is substantial. A 50per cent increase in processing locally grown food could add over £2bn to the economy.

Automation, enhanced use of information technology and other innovations also presents opportunity to increase the productivity of these businesses. Local partners ambition is to help businesses develop the skills and technology needed to take this opportunity.

The climate challenge

Norfolk and Suffolk have some of the most productive farmland in the UK, yet the impact of climate change is bringing drier summers and increasing risk of extreme rainfall causing flooding⁶. Anglian Water estimates the area will have, by 2045 without intervention⁷, a third less rainfall than anywhere else in the UK - after plants and evaporation have taken their share - is barely a quarter of what fell out of the sky.

Local farmers recognised the need to up their game in response to the climate emergency and believe the sector can deliver on a demanding sustainable agenda – as long as the industry gets the right support.⁸

Sustainability and innovation in agriculture

Across the agri-food sector, innovation is concentrated in a small number of high performing businesses. Machine learning, automation, material science and satellite technology has the potential to increase innovation across the wider business base. Adoption of technology could also address challenges created by a lack of labour supply, raising productivity and creating higher skilled, higher paid jobs.

Biodiversity and healthy soils are key to a sustainable environment and effective carbon capture, acknowledged UK leaders in these areas working here – such as the team at the Holkham Estate. But farming more widely faces a major challenge in its capacity and ability to adapt and adopt new techniques and technologies.

Increasing consumer passion for food traceability and sustainability, present an opportunity for growers and processors alike. This could range from switching more primary production to spelt and other cereals used in gluten-free flours, to developing new plant-based foods informed by the food innovation programme at the Quadram Institute. Supporting businesses to adapt their products to meet the changing demands of the modern consumer will be important.

The region will explore, working with others, the scope for capacity support and new skills development to encourage farmers to adopt new approaches and to better understand the opportunities for innovation. There is significant potential for effective mentoring and sector leadership.

Ambitious Future Plans

Local Partners will work together to:

⁶ Scoping Report for the New Anglia LEP Climate Change Adaptation and Carbon Reduction Strategy, UEA Consulting, 2019 (page ref tbc when report finalised currently p14 re rain)

⁷ Hannah Stanley-Jones, AW Head of Water Resources at WRE Launch – ET has requested published source

⁸ <https://www.eadt.co.uk/business/farming/suffolk-and-norfolk-nfu-chairs-reaction-to-rsa-sustainability-report-1-6170278>

- Invest in a Food Hub based at the Food Enterprise Zone site at Honingham Thorpe in Norwich, to deliver business growth through innovation, productivity, processing, exports and support new start-ups.
- Collaborate with Lincolnshire, Cambridgeshire and Peterborough leveraging the existing strengths of Agritech East to realise the collective power as the UK centre for hi-tech, precision agriculture and food production.

The actions identified under the five foundations of productivity will also help deliver the agri-food ambitions.

Case Studies

1. **CauliRice** In 2015, Fountain Foods from Upwell in West Norfolk, successfully applied for two Agri-Tech grants worth £171,000 to set up a new company to develop and manufacture CauliRice - a new, long-life rice substitute made from cauliflower, and to install new equipment in their existing premises to make production more efficient. The new product took off immediately, benefitting from changing customer habits and the desire for more healthy choices. Cauli Rice is now on sale in all major supermarkets in the UK and across the US, with renamed company Fullgreen launching its first US production line in 2019.
1. **Aponic Ltd** have developed and manufacture a vertical soil-less farming system that uses 90% less water than traditional agriculture, runs on rain water and solar power, does not emit harmful run-off into the environment and massively reduces the need for fossil fuels in food production. Originally supported by a £28,000 grant from the Eastern Agri-tech Growth Initiative, Aponic, based in Sudbury, Suffolk, the company continues to seek new collaborations to develop the potential of its systems. In June 2019, they developed a vertical strawberry farm for Camden Town Brewery in London, to help them produce sustainable crops for their range of lagers.
2. **Crop Systems** based at Happisburgh in North Norfolk, are industry-leading innovators in modern crop storage. Their Warmstor product is a revolutionary low energy system for the automatic conditioning of potatoes for the pre-packing industry. It uses waste heat from adjacent refrigeration units to bring stored potatoes up to the required temperature for packing. They also produce Smartstor, a remote monitoring system for stored produce, and Taperstor and PosiStor, which are innovative storage facilities which maximise airflow for drying and managing moisture. Recently awarded £57,000 by the LEADER EU rural funding programme, Crop Systems have been able to build new office facilities for their business, enabling them to take on 3 new staff and grow their business.

Information and Communications Technology and Digital Creative

Grow and secure the information and communications technology and digital creative clusters at Adastral park and Norwich as national assets. Establish the UK's first unique advance highspeed optical wireless network which connects Internet of Things testbeds to support large-scale experiments.

Infographics

- 1.4 bn contribution to UK plc
- workforce of 23,400
- GVA per job £59,100
- a further 35,000 digital technicians and engineers active in companies other local sectors.
- 10,000 tech roles /vacancies to be filled by 2024

Norfolk and Suffolk's information and communications technology and digital creative opportunity is both fast-growing and high value. It is at the cutting edge of digital innovation, with distinctive strengths in telecoms, cyber security, quantum technology, artificial intelligence, Internet of Things and user experience design. It is also imperative in supporting productivity growth and technical innovation across all local sectors. Driven by recognised tech clusters centred on Norwich's fast growing digital creative hub, and at Adastral Park, near Ipswich.

Norwich – Digital Creative Cluster

The cluster is characterised by several high performing home-grown businesses (many of which are global players including Proxama, Foolproof, Content Consultants, LSI Architects and Further Search Marketing) as well as micro start-ups and freelancers. The sector overlaps and interlinks with the financial and insurance services and business services sector. There is real growth potential, but is also a driver for innovation, creativity and productivity across the broader business base.

University of East Anglia (UEA) and Norwich University of the Arts (NUA) are key to the output of talent for the Norwich area. UEA ranked 15 UK universities, has global pull with students drawn to specialisms that include computing science; computer systems engineering; business information systems; computer graphics, imaging and multimedia; data mining; engineering and environmental science. NUA the UK number 1 and world Top 10 for Games and has secured an international reputation for producing graduates who excel in a constantly evolving industry and the emerging cluster. It is also gaining national recognition for its user experience - digital design courses.

There is major demand for user experience standard skills across both digital creative primary industries, such as web and software design, and in customer experience in the broader digital economy. UEA and NUA have also developed partnerships with AVIVA and Virgin Money to respond to the digital demands of the FinTech finance sector and support SMEs within the local tech networking groups.

SyncNorwich, with over 1,300 members provides a vibrant networking programme that supports business start-up, business development and ongoing good practice sharing for the local technology community. Other networking groups include Norfolk Developers, SyncDevelopHer, Hotsource, Norfolk Data Science, Norfolk Games Developers and Digital East Anglia.

Adastral Park

[Adastral Park](#), near Ipswich, is home to BT's Global Research and Development headquarters, and a growing cluster of over 100 high-tech companies at Innovation Martlesham, employing almost 4,000 people, generating £515m gross value added with a comparatively high productivity rate of £140,000 per job. Home to the largest test and integration facility in Europe and the world's first 'real-world' demonstration of quantum encryption. The 3rd largest patent filer in the UK and number one for Artificial Intelligence technologies. This is why it has been identified as one of the UK's high potential opportunities.

Adastral Park is a BT strategic site, and has set out an ambition, to take the site to a new level as a major national strategic asset and growth engine for the UK information and communications technology the Adastral Park 2025 vision. This initiative will include facilities to underpin the UK's aim to lead in the global information and communications technology sector, accelerate the growth

of the UK's emerging telecoms software manufacturing sector, and grow the Innovation Martlesham cluster to over 200 information and communications technology companies and academic partners.

The main aspects of the Adastral 2025 Vision:

- The Tommy Flowers Institute for post-graduate information and communications technology industrial research creating future research leaders through an academic and industry network;
- The world's largest converged networks research facility;
- Maximising the opportunities for the world's first commercial-grade quantum test network link between the BT Labs and the Cambridge node of the UK's new Quantum Network.
- Exploiting the opportunities of the UK's Centre for Internet of Things operations development.
- Working with Department for International Trade to promote a High Potential Opportunity offer to promote to foreign investors.
- Aiming to work specifically with the energy and agri-food industries as they adapt to new demands and technology availability.

Case Studies:

1. **Quantum Network Link** A key component in Adastral's array of assets is the commercial-grade quantum network link between BT at Adastral Park and Cambridge University. Launched in 2018, supported by £2m of government funding, the link is the UK's first ultra-secure quantum network link, marks a significant milestone in the UK's ability to develop and test quantum computing technologies. The link uses BT exchanges along the route to act as trusted nodes, and forms part of the UKQN, which is a result of a collaboration between research and industry run by the Quantum Communications Hub.
2. **Thyngs** Bridging the gap between the digital and physical world, Thyngs transforms any product packaging or advertisement into an instant point of transaction. Using any smartphone, consumers can receive personalised content and promotions without having to download an app. Thyngs was conceived to tackle the growing challenges for the charity sector due to the decline of cash and the need to better engage with donors digitally. Initially working with local charities, Thyngs is now supporting many national and international charities. In 2018, the business was selected to be part of Tech Nation's first FinTech growth programme. The programme is a key part of the UK Government's FinTech Strategy.
3. **Inawisdon** The world is moving rapidly forward in its consumption of data from internal and external sources including mobile and web streaming data, IoT, geospatial, and social media data sources. Tech business Inawisdon is enabling businesses globally to exploit the value of that data through the latest artificial intelligence and machine learning techniques. Founded in 2016 with just two members of staff, the company has been consistent and strong in recruiting the best talent and now employs over 70 staff members based at their HQ in Ipswich and London office. Scaling the business, Inawisdon is now working with a range of national and international clients including the Post Office, Balfour Beatty and the biggest single site renewable energy generator Drax.

Ambitious Future Plans

Local Partners will work together to:

- Deliver the Adastral Park 2025 vision.

- Create a new digital accelerator centre in Norwich for scale up businesses in the digital and creative cluster.
- Develop the economic case for a Smart Emerging Technology Institute and testbed (SETI) – a unique advanced high-speed optical and wireless network (including 5G) which interlinks Internet of Things testbeds to support large-scale experiments.

The actions identified under the five foundations of productivity will also help to deliver the information and communications technology and digital creative ambition.

Underpinning sectors

This Local Industrial Strategy also recognises the strengths and the importance of a number of underpinning sectors in the Norfolk and Suffolk economy - financial services, culture and the visitor economy, ports and logistics, advanced manufacturing and construction.

Tackling the productivity challenges in these sectors and maximizing their growth opportunities are a key part of this Local Industrial Strategy.

The Five Foundations of productivity

Ideas

Improving collaboration across businesses and sectors, driving up levels of business innovation across the whole business base, whilst increasing the adoption and diffusion of new technologies in clean growth, energy and food production.

The ability to innovate – to develop new ideas and deploy them – is one of Britain’s great historic strengths⁹. Norfolk and Suffolk have played a significant role with technological break throughs from the hovercraft to the metal framed aircraft, pioneering the coding for the internet to the realisation of the single-mode optical fibre, with scientists leading the global search to develop new antibiotics discoveries that put the region at the forefront of science and innovation.

Strong science, research and innovation assets

Norfolk and Suffolk today has strong innovation assets, but innovation is concentrated, clustered around and driven by a small number of (predominantly large) companies and research assets.

Norfolk and Suffolk has one of the highest concentrations of knowledge-intensive activity in the country. Around 8000 people work across science, innovation and research centres covering specialisms from use experience design, artificial intelligence and advanced engineering to clean energy, marine and microbiome research including:

- Norwich Research Park,
- Centre for Fisheries and Aquaculture Science,
- Adastral Park,
- University of East Anglia,

⁹ <https://www.gov.uk/government/publications/industrial-strategy-the-foundations/industrial-strategy-the-5-foundations#ideas>

- Norwich University of the Arts
- University of Suffolk

The network of specialist innovation and enterprise centres also extends to Kings Lynn Innovation Centre, Hethel Engineering Centre and OrbisEnergy.

Innovation Challenge

Despite this concentration of science, research and innovation assets, it appears the all-important diffusion of knowledge and innovation collaboration is subdued; only 16per cent of firms in Norfolk and Suffolk reported collaborating for innovation purposes, ranking the area amongst the lowest performing in England.

But Norfolk and Suffolk business are ranked amongst the top performing areas is adoption of new organisational processes including innovation in supply chain management, business re-engineering, knowledge management, lean production and quality management.

There is a clear opportunity to improve links between researchers and businesses to test and try new ideas. With greater levels of collaboration between businesses and researchers, Norfolk and Suffolk's businesses can take exciting ideas into commercial products and services and capture their maximum value.

Investing in Innovation

Businesses spend on research and development is higher than most other parts of the UK, however this is concentrated in a small number of firms.¹⁰ Though only 12per cent of firms reported undertaking research and development, their spend amounted to an impressive £641m, or 1.9per cent of gross value added, compared with 1.2per cent nationally.

Public investment in research and development simulates private spending¹¹. Norfolk and Suffolk is in the lower percentile of LEP areas in accessing Innovate UK funding however the evidence indicates that this is mostly due to the lack of businesses applying for the funds. By increasing the amount of businesses investing in research and development the area can support the government's commitment to reach 2.4per cent gross value added.¹²

Innovation Ecosystem

Well-connected networks where people can easily access the right expertise, informally and collaborate and share knowledge are essential for innovation. Norfolk and Suffolk have many of the components of a strong innovation ecosystem such as a robust research base, vibrant business networks and innovation infrastructure. These are dispersed across a wide geographic area with specialisms clustered at different locations. Feedback from businesses reflects the desire to joining up Norfolk and Suffolk's innovation assets recognising that this will stimulate greater levels of cross-sector innovation.

¹¹ Industrial Strategy White Paper p.61 In the UK every £1 of public investment on R&D attracts around £1.40 of private investment

¹² Evidence base p.48

By stimulating more investment in innovation and improving the connection between businesses and the research base, Norfolk and Suffolk businesses will help to ensure the UK continues to be at the forefront of shaping the businesses and markets of the future.

Together local partners will:

Widen the cross section of businesses innovating and investing by providing the right support and access to finance needed to increase productivity through innovation, particularly focusing on clean growth.

And

Create opportunities to strengthen collaboration, learning and partnership between science, research and business, across different sectors and disciplines, to tackle key challenges.

By:

- Introducing a new joined-up offer and programme of activity that will stimulate collaboration and innovation which will include:
 - **Connecting up innovation centres** and assets opening up access which encourages cross sector collaborations.
 - **Innovation Ambassadors** linking entrepreneurs and innovators with businesses seeking to collaborate on projects.
 - a **voucher scheme** for access to credible and high-quality mentoring advice.
 - an **Innovation Research and Development fund** with grants of 1k to 25K.
 - **Innovative Projects** revenue fund, seeking projects that cover ideas and innovation, skills, innovation and the business environment.
 - Joining up **innovation portals** to direct entrepreneurs and businesses to the wide range of support services
 - **innovation hackathons** proving opportunity for large businesses to work with SMEs to answer commercial challenges.
- Developing the next generation innovation infrastructure including:
 - a **world-leading hub for plant and microbial research** linked to the John Innes Centre.
 - an **exemplar ageing society assisted living community** (testbed), linking up researchers and clinicians to trial and test new technologies.
 - exploring the **Port of Felixstowe** becoming an **exemplar for blue tech** working with Connected Places Catapult.
- Create partnerships with other parts of the UK to scope out shared and complementary capabilities to drive forward new innovations and access to new markets including:
 - Jointly appointing, with the **Offshore Renewable Energy Catapult**, a **regional manager** to support local companies to innovate and develop new technologies for offshore wind.
 - Identify mechanisms to leverage greater value and productivity from enhanced commercialisation opportunities between Norwich Research Park and the existing business base to attract inward investment.
 - Working with leading UK universities who specialise in complementary areas of strength in sectors such as agri-food, clean energy and ICT Digital.

Government is working in partnership with Norfolk and Suffolk to support the delivery of this foundation through:

- Innovate UK investing **XXX** of competitive funding in the local area. Innovate UK is also helping businesses better understand funding opportunities, further building on the New Anglia Growth Hub workshops.
- Investing £290m of Local Growth Fund, including the new Ipswich Waterfront Innovation Centre and the new headquarters for the Centre for Environment, Fisheries and Aquaculture Science in Lowestoft.

Case Studies

1. **Quadram Institute: an innovation asset** A multi-million-pound food and health research and endoscopy centre, the Quadram Institute is at the forefront of a new interface between food science, gut biology and health, developing solutions to world-wide challenges in food-related disease and human health. The new institute adds to the already global impact of research and development at Norwich Research Park. It hosts fundamental and translational research into food, human health, gut biology and disease, and feature a clinical research facility for human trials and a new gastrointestinal endoscopy unit for the Norfolk and Norwich University Hospital. The co-location of these elements in the same building will drive new collaborations between fundamental and clinical researchers and is one of the features that make the Quadram Institute a ground-breaking partnership.
2. **Digital Skills & Innovation Accelerator** - The project aims to boost innovation skills and productivity across Norfolk and Suffolk by leveraging the capabilities of the University of Suffolk, BT and Adastral Park's tech cluster Innovation Martlesham. It's hoped the centre will welcome 520 new students, 145 new apprentices and create 36 new jobs in the local area.

People

Growing an inclusive economy with a highly skilled workforce where skills and employment provision meets business need and the aspirations of individuals.

The United Kingdom has one of the most successful labour markets in the world with employment rate is at a near historic high¹³. Norfolk and Suffolk perform strongly with an employment rate above the UK average. Skill levels and wages however are lower, with more jobs than the national average in lower paying industries.

An ageing population but attracting people

Norfolk and Suffolk has a diverse and growing population. It is a desirable place to live consistently attracting a higher proportion of people of all ages than leave the area, including young people, families and skilled professionals.

But the population is older than the UK average, with pockets of deprivation and low skills close to major growth opportunities. The two counties have an ageing population, 23.5per cent of its

¹³ <https://www.gov.uk/government/publications/industrial-strategy-the-foundations/industrial-strategy-the-5-foundations#people>

population being over 65 compared to 18.2% in the UK. This is an engaged, if older, population with a huge contribution to make.

Skills and aspirations

Historically, Norfolk and Suffolk have been behind the UK in terms of residents with NVQ3+ (the equivalent of AS and A Level) qualifications. Strong progress has been made in closing the gap, with a growth in NVQ3+ levels of 2.8per cent, a faster rate in recent years than the national average and all the comparator areas. Overall skills are improving, but still lag behind where they need to be.

Apprenticeships take up is higher than both the national and wider East of England average. Apprenticeship starts for all ages in Norfolk and Suffolk have more than double over the last decade. Most of these apprenticeships are either intermediate or advanced level. 7per cent of all school leavers, entered into an apprenticeship compared with 6% nationally highlighting their slightly higher appeal and density locally

Key Stage 5 students in Norfolk and Suffolk sustaining an education or employment destination has increased from 63.7per cent in 2009/10 to 89per cent in 2016/17. Much of this is driven by an increase in students moving into sustained employment, up from 7.9per cent in 2009/10 to 29per cent in 2016/17.

There are persistent pockets of low attainment and aspiration that is dispersed throughout the area.

Workforce

Residents typically work close to where they live with relatively low levels of commuting outside of the area. Deprivation is relatively isolated in some urban and coastal areas. Average full-time weekly wages are £487.50 compared to £537.30 nationally and 26.8per cent of jobs are below the Real Living Wage compared 22.8per cent nationally.

Rapidly emerging technologies and methods under the Industrial Revolution 4.0 will change the nature of many jobs at all levels. But ultimately will create new jobs which the workforce need to be prepared for through increased awareness and training, particularly in relation to digital skills digital skills where there is already existing gaps.

The large majority of the 'future workforce' is within the existing workforce. This gives real opportunities to be reskilled to align with a changing landscape. Individuals and employers need to maximise their potential through digital literacy and strategic business application of digital technology.

18.6% of all vacancies are unfilled due to the lack of suitably skilled residents. The three universities in the area present an opportunity with the numbers of talented and ambitious people they attract each year. Ensuring high quality employment opportunities to retain graduates will inject energy, investment and new thinking directly into our local workforce and business community.

Significant evidence exists supporting the link between wellbeing at work and productivity – with wellbeing including physical health and mental wellbeing. Quality of life is constantly ahead of the national trend, affirming that Norfolk and Suffolk is a desirable place to live. There is opportunity for business to utilise this to enhance productivity and for the area to attract and secure additional business investment.

Connecting business and education

Inspiring and preparing young people for the fast-changing world of work is critical to driving the supply of the future workforce. For young people, the New Anglia Enterprise Adviser Network is meeting the eight Gatsby benchmarks at a consistently significant rate above the national average. It is facilitating collaboration between schools and businesses across Suffolk and Norfolk to deliver inspiring careers strategies that will prepare the next generation of workers.

21per cent of employers locally have entered a local school and offered some kind of work inspiration, which is in the top performing areas in the UK. Such initiatives highlight a proactive and engaged employer base in the skills system in Norfolk and Suffolk and one that is keen to see a step change in skills levels locally.

Norfolk and Suffolk will continue to promote collaboration between business, Higher Education, Further Education, schools and the public sector to provide the training opportunities and industry placements that enable businesses and people to fulfil their full potential.

Together local partners will:

Close the skills and labour gaps, especially in digital and technical skills, and continue to build skills across the strategic opportunity areas by:

Working in partnership with government to deliver the £290m investment of Local Growth Fund, including:

- **Digital Skills & Innovation Accelerator** - a new, nationally significant information and communications technology research and training centre delivered by University of Suffolk, BT and the Adastral Park tech cluster.
- **Digi-Tech Factory at City College Norwich** - enabling several interconnected Digital Technology, Engineering and Design Courses to come together in a purpose-designed building.
- **Digital & Technology Skills Hub at Suffolk New College** - offering a range of courses and provide the building blocks for individuals to progress into Higher Education and Higher-Level Apprenticeships.
- The **STEM innovation campus at West Suffolk College** will provide first class science, engineering and digital education and training for the young people of this region.
- A £7.4m **Institute of Productivity** at the University of East Anglia, helping to educate the next generation of digitally aware engineers and business leaders within modern engineering facilities. It will deliver a new regional hub for engineering, technology and management.
- Deliver the Department for Education funded **National Centre for Computing Excellence** based at West Suffolk College supporting the growth of digital skills in teachers.
- **Support Opportunity Areas in Norwich and Ipswich.** Local ambition is to maintain the partnerships to continue support social mobility.

- Delivering an ‘**Eastern Institute of Technology**’ to address many of the local and national skills shortages in energy, construction, information and communications technology and digital, advanced manufacturing, agri-tech and engineering.
- Fifteen sector skills plans are being delivered, including clean energy, agri-food and digital tech, which identify skills needs and set out the actions to ensure these needs are met.

Providing a range of opportunities that enable all residents to upskill throughout their lives, including:

- Working with DCMS to develop a **Digital Skills Partnership** building on the work of the New Anglia Digital Skills Taskforce and sector skills plan.
- Supporting the delivery of disability confident scheme for employers.
- Working with industry to support and scale up existing initiatives that provide, career support and wider awareness of the opportunities for working with an older labour force; and educational programme that supports the development of digital skills right from primary school to Post Graduate research and workforce to the hard to reach.

Improving aspirations and continue to develop employability and work readiness amongst young people including:

- Developing a cost-effective model to support the **transfer of apprenticeship levy** to businesses by creating a virtual pot where unspent levy is ‘transferred’ and used to match up businesses with apprentices and providers.
- **Enhancing New Anglia Enterprise Advisor Network and Careers Hub** to support ensure all secondary schools and colleges are equipped to achieve all the 8 Gatsby benchmarks.
- Work with the Department for Education to promote the opportunities that qualifications such as **T levels** bring, encouraging businesses to provide industrial placement enabling students to gain employability skills.
- Promoting the work of Easton & Otley College to provide ‘Farm Ready Students’ in conjunction with large farming estates such as Honingham Thorpe Farm, Stody Estate and The Morley Agricultural Foundation.

Case Studies

1. The **New Anglia Enterprise Adviser Network** matches senior business leaders with secondary schools and colleges to increase student encounters with the world of work and support the development of employer engagement plans. 100 Volunteer Enterprise Advisers from local businesses across Suffolk and Norfolk are supporting schools with delivering inspiring careers strategies. The New Anglia Local Enterprise Partnership’s (LEP) aims to have an adviser in every education establishment in Norfolk and Suffolk by 2020.
2. **Norwich Inclusive Economy Project** UEA is working in collaboration with Norwich City Council to deliver the Norwich Inclusive Economy Commission project which is exploring the economic issues that the city is facing, the impact of potential future trends, and how the Council might intervene in the economy in new ways in the future. The project seeks to provide new insights into the local economy by moving beyond conventional economic indicators. It will explore the different forms of economic inclusion and exclusion that exist, as well as often ignored ‘hidden’ economies.
3. **Award winning Creative Computing Club-** Matthew Applegate, founder of Creative Computing Club, which operates in Ipswich and across Suffolk, won the 2019 BAFTA Young Game Designers Mentor Award. Matthew set up Creative Computing Club in 2012 and it now works with more than 300 young people every week across Suffolk

helping them to engage in technology-based sessions. The clubs offers short courses on everything from robotics to artificial intelligence to game design. Matthew also works with nine Suffolk schools to help young people to learn about making games.

Infrastructure

Enabling productivity gains and clean growth through the delivery of integrated infrastructure to create places that people want to live and work.

Boosting infrastructure enables success. It is the essential underpinning of our lives and work¹⁴. Places and communities are interconnected, depend on transport links and draw on many of the same labour market and supply chains. Delivering Norfolk and Suffolks' clean growth and productivity ambitions is dependent on a number of core infrastructure improvements.

Transport connectivity

Norfolk and Suffolk is strongly connected with the rest of the world and core to the UK's freight and logistics system. The area is well served by ports (Felixstowe, Ipswich, Great Yarmouth, Lowestoft and King's Lynn) and airports (Norwich and Stansted) and connectivity to each of these key hubs is critical to ensure their ongoing success to UK plc. The area benefits from fast links to London and Cambridge with recent investments in both the road and rail networks making journey times quicker with greater seating capacity as well as boasting the UK's most modern fleet of rolling stock.

Committed improvements to date through the Roads Investment Strategy will deliver significant benefits but additional investment on the A14, A47, A11 and A12 could further drive growth opportunities for Norfolk and Suffolk^{15 16}.

Opportunities for the electrification of transport, including last mile connectivity, is critical to support the government's ambition that all new cars be electric by 2040. Almost 40per cent of all carbon dioxide emissions in Norfolk and Suffolk come from transport¹⁷.

Pursuing opportunities for modal shift and active travel, broader network efficiency and flexibility as well as reducing the need to travel through initiatives such as improved digital connectivity, will be critical in delivering clean growth across Norfolk and Suffolk.

Digital connectivity

The Better Broadband for Norfolk and Suffolk programmes¹⁸ have made a significant impact on digital connectivity with 92per cent of Norfolk and 94per cent of Suffolk properties having access to superfast broadband.

Although higher than the national average, take up of superfast broadband is 67per cent with levels relatively high in rural areas, there is still work to be done to improve take up, applying readily

¹⁴ <https://www.gov.uk/government/publications/industrial-strategy-the-foundations/industrial-strategy-the-5-foundations#infrastructure>

¹⁵ Britain's Premier Trade Route, Suffolk Chamber of Commerce, 2019

¹⁶ Investing in East-West Success, A47 Alliance 2019

¹⁷ Climate Change Adaptation and Carbon Reduction Action Plan Scoping Report, UEA, 2019

¹⁸ Better Broadband for [Norfolk](#) and [Suffolk](#)

available technology and connect the rural communities and businesses still unable to access superfast broadband. We will work with Government to fulfil its pledge to bring ultrafast broadband to all homes and businesses by 2025.

Housing and Commercial Land

Housing affordability is diverse across Norfolk and Suffolk. Median house prices of £225,000 are similar to the UK, £228,500. However, this is about 8.7 times higher than earnings making them less affordable than the UK, 7.8. House prices vary throughout the two counties with higher prices in parts of Suffolk and the north Norfolk coastline. Like most places across the UK delivering against ambitious targets to build new homes has been challenging. However, Local Plan allocations and permissions data do indicate that there will be a substantial upswing in housing completions to 2021.

Norfolk and Suffolk has a dynamic commercial property market, with pockets of relatively low value properties close to the major growth opportunities. Although existing commercial development site allocation is on trend to meet projected demand, many of these sites needs further infrastructure to open up the site for development, which is difficult to forward fund.

Local partners are committed to building the right housing and commercial space where it is needed and integrate infrastructure to build communities and places people want to live and can thrive.

Energy

Norfolk and Suffolk's all-energy production is a significant asset to UK plc. but there are clear challenges ahead when it comes to the electrification of transport and heat and the move towards a digital society.

Although domestic and commercial energy consumption across the two counties is decreasing, the number of customers and meters are rising. Grid and substation constraints across the two counties are a challenge to growth in many locations.

Norfolk and Suffolk are working through the BEIS supported Greater South East Energy Hub to help provide support in thinking innovatively about local and sustainable energy solutions. The Local Energy East strategy¹⁹, developed in partnership with neighbouring LEPs, sets out collective local energy ambitions to 2030 and are underpinned by a range of activities which are being take forward.

The decarbonisation of heat offers significant opportunity for the infrastructure around Bacton gas terminal from the introduction of hydrogen and in 'off-gas' areas of high fuel poverty in Norfolk and Suffolk.

Water

Norfolk and Suffolk is amongst the driest area in the UK with low rainfall but, is also at high risk of flooding due to the combination of low lying land and its 140 mile long coastline. With increasing pressures on energy and water through growth and climate change, the area must consider how it manages energy and water demand. In particular it must consider the impact of climate change for the most vulnerable infrastructure, communities and sectors.

Improvements in infrastructure help to drive business growth and productivity, provide confidence to investors and help support the sharing of innovative thinking. Infrastructure also connects people

¹⁹ <https://newanglia.co.uk/wp-content/uploads/2019/03/LEE-Strategy-LOW-RES.pdf>

to a wider breadth of employment and skills development opportunities and offers the potential for a significant shift towards a net zero carbon future.

Together local partners will:

Deliver an integrated approach to infrastructure and inter-regional connectivity to maximise clean growth impacts locally and for UK plc by:

- Delivering integrated transport priorities, that reduce the need to travel and encourage modal shift as well as support a growing and thriving economy including:
 - Taking an active role in Transport East, the sub-national transport forum for the East of England.
 - Continue to work with Network Rail and the Cambridge and Peterborough Combined Authority to deliver the improvements at both Ely and Haughley rail junctions.
 - Develop options for integrated ticketing and pioneer the sharing economy alongside other initiative to encourage modal shift and network efficiency.
 - Develop an Electric Vehicle plan which covers take up, the necessary supporting infrastructure, electrification of freight and sets out the support needed for demand led EV roll out.
 - Work with the Connected Places Catapult to maximise future of mobility opportunities locally.
- Delivering sustainable, energy efficient, intelligent homes, commercial space and communities that are fit for the future including:
 - Enhancing digital infrastructure both fixed and mobile through delivering initiatives such as the Norfolk & Suffolk Innovation Network.
 - Working with Homes England and the construction industry to explore and implement innovative approaches to building homes.
 - Encouraging new housing entrants into the market to improve diversification, drive innovative and sustainable delivery.
 - Take an active role in Water Resource East to develop a single multi-sector regional approach to water resources.
 - Working with local communities to promote and support them to access the Defra's Rural Energy Community Fund.
 - Developing exemplar low carbon energy generation, networks and storage which benefit local businesses and communities including:
 - Increasing the number, quality and scale of local energy projects delivered working with the Greater South East Energy Hub.
- Developing exemplar low carbon energy generation, networks and storage which benefit local businesses and communities including:
 - Next generation technologies focussed on reducing demand and carbon emissions including generation of hydrogen from hydrolysis to produce clean fuel; carbon capture storage; and a new resilient, flexible transmission network.
 - Developing a local energy investment prospectus to demonstrate opportunities for innovative funding and delivery methods.

Government is working in partnership with Norfolk and Suffolk to support the delivery of this foundation through:

- Local Full Fibre Network fund with Norfolk and Suffolk receiving £8m and £5.9m respectively.
- Transforming Cities fund with Norwich already securing £6.1m of government.
- Future highstreets fund with Great Yarmouth and Kings Lynn securing £150,000 each to develop plans to revive their highstreets.
- To create a network across Norfolk and Suffolk to enable private, public and educational sector organisations and the public to explore, trial and implement Internet of Things technology.

Case Studies

1. **Toggam Solar Farm**, near Lakenheath in West Suffolk is an example of how the public sector can invest in energy generation to create income to help fund essential council services and become a leader in carbon reduction. West Suffolk Council operates the 12.4MW site, which when purchased in 2016. The site generates around 12,000MWh of electricity annually bringing in £1.43m of income last year. After taking into account the capital outlay, this delivered a net income of £352,000 to fund local services. Along with its other assets, the council is able to offset around 4,900 tonnes of CO₂ and provide enough power to run 3,500 homes.
2. **Equipmake** Based at Hethel Engineering Centre, innovative company Equipmake is among those leading the charge in electric vehicle (EV) technology. Not only a leader in ultra-high performance electric motors, the company also specialises in complete EV drivetrains and ultra-fast power electronic systems. Experienced at collaborative R&D projects, Equipmake has developed a range of products for use in a wide variety of projects including the High-Performance Carbon Reduction (HIPERCAR) performance range-extended electric sports car co-developed with Ariel and Delta Motorsport. Equipmake developed the AMP200 drivetrain for the new, high performance, electric sports car. However, the company's aim is much larger than becoming a maker of engines for high-performance electric cars. A bus project and a second automotive customer project are already in progress and the number of serious enquiries from giant automotive players is rising rapidly as the business scales production. Equipmake is due to move to a new facility near Snetterton motor racing circuit this year and aims to begin commercial-scale production there in 2020. The company raised £3 million from private investors at the end of last year and about £5 million has been spent on the project to date.
3. **Norfolk and Suffolk Innovation Network** The project will deliver the largest free public sector Long Range Wide Area Network (LoRaWAN) in the UK to enable businesses, the public sector, educational organisations and the public to explore, trial and implement Internet of Things (IoT) technology across Norfolk and Suffolk. The infrastructure will provide the foundation for a whole ecosystem that will help transform our economy:
 - Creation of new innovation businesses in Norfolk and Suffolk
 - New entrepreneurs able to trial and demonstrate their ideas
 - Enabling agri-tech (and other) solutions where mobile phone networks are inadequate
 - Teaching school children and students about the technology, increasing interest in coding careers

This project also has the potential to open new market opportunities to develop new products across Norfolk and Suffolk.

Creating more productive jobs and smarter agile businesses.

Business base

Norfolk and Suffolk has a strong business environment and is a great place to build and grow a business, with positive levels of business support and good business survival rates.

There is a large and diverse business population of 62,750 independent enterprises growing by 13.9per cent since 2013, which is below the UK average of 23.2per cent.

SMEs account for 99.7per cent of businesses, which is in line with the UK average. Despite accounting for the overwhelming majority of businesses, micro-firms (0-9 employees 88per cent) represent only 19per cent of turnover and 30per cent of all employees. In contrast, large businesses (250+ employees) account for about half of all employment and turnover.

The area has a business birth rate of 11.1per cent, which is lower than for the UK, 13.1per cent. However, businesses that start here, stay here with good business survival rates – almost 47 per cent of firms are still in business five years after starting up, which is higher than the UK average of 43per cent.

High-growth firms form and flourish here, with 43per cent growth since 2012 significantly out-pacing both the eastern region, 23per cent, and the UK 12per cent. Norwich and Ipswich are in the top 10 fastest growing cities in the UK with vibrant, diverse economies.

There is a stable and resilient business base with low levels of churn.

Opportunity for businesses to export and secure inward investment

Norfolk and Suffolk is home to several internationally facing businesses which export £2.9bn of goods, over 55 per cent to the EU, and £2.4bn of services. With the current level of exports lower than comparator areas, there is an opportunity to encourage a wider cross-section of businesses to engage in exporting.

Supporting businesses to grow and scale up

There is an extensive network of business advice services across Norfolk and Suffolk, centred around the New Anglia Growth Hub, the single point of access for all business support. The wider business support network includes start up agencies MENTA and NWES as well as business intermediaries such as the Chamber of Commerce, the Federation of Small Businesses, the Confederation of British Industry and the Institute of Directors, National Farmers Union, Country and Land Association and strong levels of support from the financial and professional services sectors.

Together local partners will:

Increase the number of businesses growing, scaling up, and the number of new high growth potential businesses; and

Raise sustainability, productivity and wages amongst the wider business base. Support businesses to expand market access and attract inward investment.

By:

- Providing industry leadership that drives actions and takes advantage of the opportunities that exist within and across clean energy, agri-food and information and communications technology and digital creative including:
 - Building on the recent launch of the All-Energy Industry Council, establishing an Agri-Food Industry Council and Tech Industry Council.
 - Working with Department for International Trade to promote High Potential Opportunities to foreign investors.
- Sharpening the high-quality business support offer to ensure meets the changing needs of businesses adapting to new ways of working and new technology including:
 - New support mechanisms for businesses to make the transition to clean growth and greater resource efficiency.
 - Expanding business-led initiatives to boost productivity and technology adoption such as Be the Business for visitor economy.
 - Delivering an integrated inward investment and business location offer.
 - Expanding Invest East a free "investor led" programme that supports businesses to understand and prepare to raise equity and other forms of finance.
 - Expanding funding and support for spinouts, widening access building on university enterprise funds.
 - a mentoring support scheme, supported by local large business, which will further enhance the New Anglia Scale Up programme.
 - Enhanced targeted support for high potential businesses, including supply chain support programmes, with peer-to-peer and collaborative support for businesses.
 - Enhancing support for SMEs and start-ups in the digital and creative including co-working space.
 - Delivering supply chain programmes that supporting local companies to take advantage of opportunities such as increased UK content in the offshore wind supply chain and drive sectors up the value chain.

Government is working in partnership with Norfolk and Suffolk to support the delivery of this foundation by:

- Investing £290m Local Growth Fund to the area which has delivered, for example;
 - the Eastern Agri-Tech Growth Initiative which is supporting the development of new and innovate ideas within this growing sector.
 - £31.8m m of Growing Places Funding providing loan-funding to help kick-start and support development projects.
 - £2m to New Anglia Capital to support to stimulate entrepreneurship and support job creation in early-stage businesses with high-potential
 - 25m to Growing Business Fund to support local businesses which want to grow and create new jobs.
- Continuing to support the New Anglia's Growth Hub to provide high quality business support across the county.
- Supporting the development of the Enterprise Zone.

Case Studies

1. **New Anglia Business Growth Programme** - £47m worth of business support between April 2013 and March 2022, which includes:

- New Anglia Growth Hub
 - Small Grant Scheme (£1k-25k)
 - Growing Business Fund (£25k-500k)
 - Support for start-ups
2. **Business Energy Efficiency Anglia** has offered free energy efficiency advice and grants to over 800 SMEs across Norfolk and Suffolk. Since 2016, BEE Anglia has awarded over £1m to 160 organisations²⁰, supporting a wide range of projects, and helping businesses of all sectors to cut their energy costs and carbon footprint.
 3. **LOCAL PRODUCTIVITY CLUB** Free training and support is being offered to SMEs in West Norfolk through a new productivity club launched thanks to a grant of nearly £60K. A local productivity club has been set up offering free training and support to small and medium-sized West Norfolk businesses following a grant from Innovate UK, the government's innovation agency. The successful bid for funding was made through a collaboration between Anglia Business Growth Consultants Limited, the College of West Anglia and West Norfolk Council and the project aims to demonstrate that forming a group of small, low productivity companies from the same local area, together with support, can deliver significant productivity gains within four months.

Places

Transforming the Norfolk and Suffolk economy into one of the best places in the world to live, learn, work and succeed in business.

Norfolk and Suffolk is a diverse area with two main urban centres, Norwich and Ipswich, market towns, villages and significant rural areas with over 140 miles of coastline. The majority of land (85per cent) is utilised for agriculture. The main urban centres of Norwich and Ipswich are dynamic fast-growing centres with a rich cultural offer.

There is a strong quality of place offer with two Areas of Outstanding Natural Beauty - the Norfolk Coast and the Suffolk Coast and Heaths - and home to the Broads National Park. Thetford Forest is a 19,000ha forest covering the north of Suffolk and south of Norfolk. It is a designated Site of Special Scientific Interest. This makes the area an attractive place to live, work and visit.

The culture sector ensures that places are distinctive, with rich history, sense of purpose and identity, attracting new businesses and investment. 'Place' nurtures and supports thriving economies, that are creative, tolerant, enterprising and entrepreneurial. Norfolk and Suffolk museums, theatres, festivals, concert halls, dance houses and creative spaces play a key role in bringing people together, generating opportunities for community celebration, reflection and learning, whilst also supporting tourism and related small businesses. Truly successful places are always underpinned by a sense of creative vibrancy, a manifestly strong quality of life, and a clear sense of cultural identity.

The [Norfolk and Suffolk Economic Strategy](#) sets out major growth locations and growth corridors in more detail, underpinned with a robust evidence base and detailed understanding of what is needed to continue to drive and unlock each location.

²⁰ <http://www.beeanglia.org/news-and-events/small-grant-pot-launched/>

Clean Energy

There is notable clustering of the energy sector along the coast in Suffolk (particularly around the nuclear cluster servicing Sizewell), Great Yarmouth and Waveney (servicing the offshore wind and oil and gas industry) and North Norfolk (around Bacton gas terminal).

Beyond the all-energy coast, the sector also has a visible representation in Ipswich and Greater Norwich – servicing the respective clusters in nuclear and offshore – as well as King’s Lynn and West Norfolk, alongside parts of mid and west Suffolk

The New Anglia Space to Grow Enterprise Zone comprises six sites around Lowestoft and Great Yarmouth where energy businesses are clustered. The zone has the potential to create 18,500 new jobs over the next 25 years.

The ports of Great Yarmouth and Lowestoft are strategic centres for the offshore wind sector. Significant investment has been made in port infrastructure to support pre-assembly, construction, installation and operations and maintenance, with land available for further expansion.

Norfolk and Suffolk has the closest ports to the four high-growth export markets of Belgium, Denmark, Germany and the Netherlands.²¹ Beyond Europe Norfolk and Suffolk companies are already exporting their expertise to Asia, North and South America and the Middle East, with the potential to increase this further

Norfolk and Suffolk is the leading area nationally for animal waste biomass installations with a third of the national capacity in two large plants at Thetford and Eye power stations.

Suffolk is home to three nuclear power stations at the different stages - Sizewell A is in decommissioning; EDF’s Sizewell B is the UK’s only pressurised water reactor in operation; and the Sizewell C nuclear new build project will be submitted for development consent in 2020.

Agri-food

Agri-food is significant in almost every part of Norfolk and Suffolk. Despite an evident and valued presence in rural and semi-rural areas, the sector also has notable concentrations in and

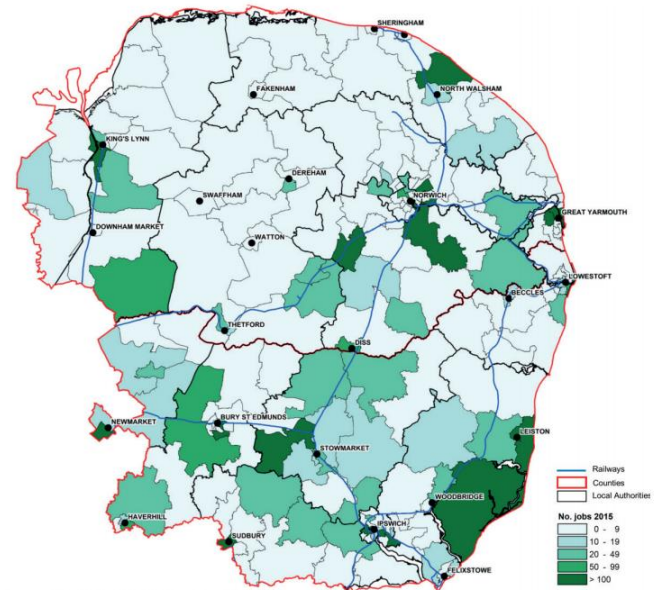
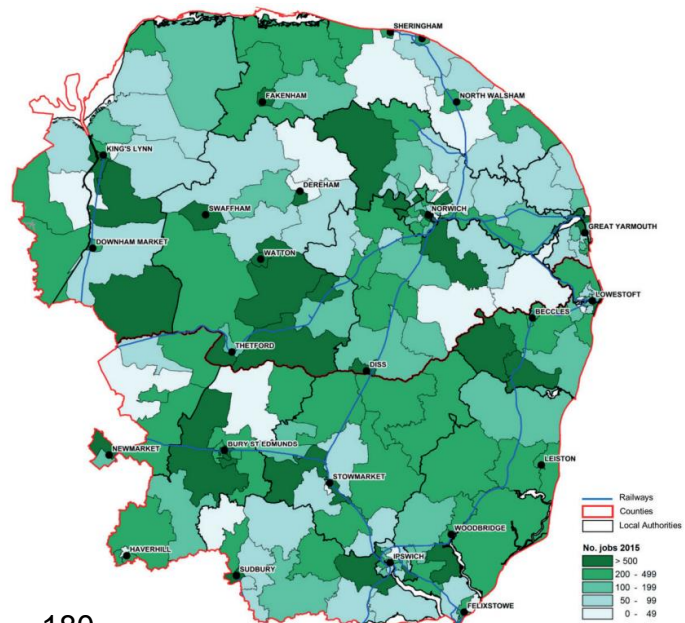


Figure 10.7 – Energy sector clusters in Norfolk and Suffolk, 2015



²¹ 4C Offshore – East of England: Enabling Offs

around urban areas, particularly market towns, such as Bury St Edmunds, Stowmarket, Thetford, Sudbury, King's Lynn and Diss.

Growth corridors are also evident, reflecting their role in food and drink production. The Stowmarket, Orwell and Greater Norwich food and drink clusters are particularly evident, which in part contributed to these areas being amongst the first three Food Enterprise Zones (FEZ) in the country.

- The renowned Suffolk Food Hall and Jimmy's Farm outside Ipswich,
- Stowmarket, part of the 17 ha Stowmarket Enterprise Park
- the Food Enterprise Park in Norwich, where an innovative mustard and mint milling facility, Condimentum, is currently being built.

The region's ports also play a key role in the import and export of agricultural products and food, whether the UK's leading grain port at Ipswich, the UK's biggest container port at Felixstowe, or King's Lynn port which specialises in handling agribulks and aggregates.

ICT Digital

Spatially, ICT and digital businesses are dispersed across Norfolk and Suffolk, though most densely concentrated in urban areas. Recognised in the Tech Nation Report as nationally significant tech clusters, Norwich and Ipswich have a growing tech community and innovative start-up scene.

Norwich has specialisms in tech and digital creative and Ipswich in ICT and tech-related research and consultancy.

In the west of the two counties, particularly in Newmarket, Bury St Edmunds and King's Lynn, there are also notable concentrations of digital tech businesses, many exploiting the advantageous proximity to the Cambridge cluster.

Stowmarket and Diss, both on the mainline to London and within an hour of the city, have a noticeable clustering of activity.

The Cambridge-Norwich Tech Corridor spans over 100km of the A11 and rail links between the two cities. It comprises the UK's most established tech cluster in Cambridge and clusters of business and research excellence across advanced manufacturing, agri-tech, life sciences and digital creative.

It contains over 12,000 knowledge intensive businesses and is well placed to develop synergies with businesses in both Cambridge and Norwich.

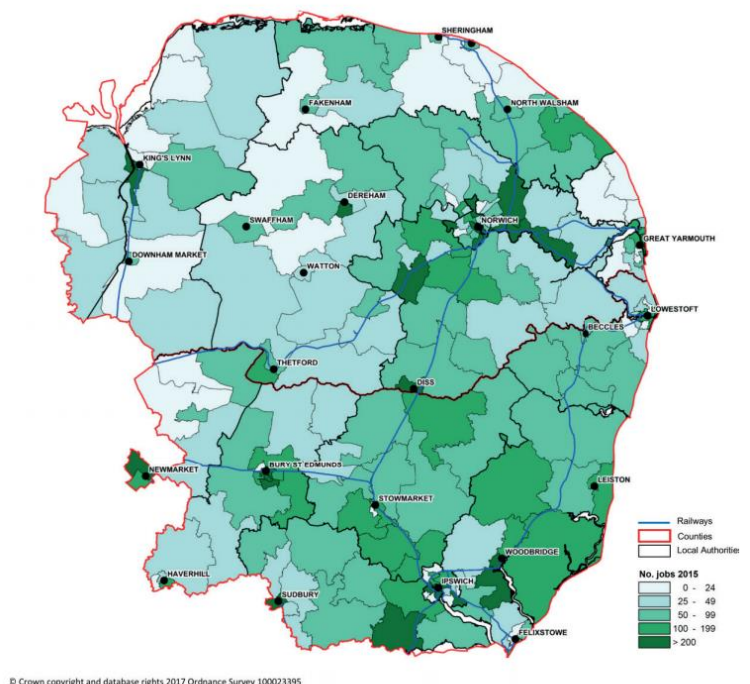


Figure 11.1 – ICT, tech and digital creative sector clusters in Norfolk and Suffolk, 2015

Norfolk and Suffolk will build on the place-focused approach to improving access to skills and employment agreed in its economic strategy, recognising the different requirements of its towns, urban, coastal and rural areas, connecting pockets of deprivation which exist alongside the largest future opportunities.

Together we will:

- Communicate a clear, ambitious offer to the world central to attracting the people, investors and businesses of the future.
- Accelerate investment on the EZs to help drive economic growth.
- Work with Anglian Water and other partners to establish Natural Capital East to protect and enhancing the natural resource base, while increasing productivity and adding value with targeted investment.
- Develop a collaborative maritime cluster with the view of having a stronger Coastal Powerhouse narrative with Government, ensuring that the opportunities of Maritime 2050 are maximised for the Norfolk and Suffolk area.
- Develop a shared investment prospectus with Arts Council and National Lottery Heritage, ensuring that cultural infrastructure is maintained and developed, including specific new development in market towns and places where there is significant new housing.

Making it Happen - Collaboration, Implementation and Evaluation

The Norfolk and Suffolk economy is most successful when we work together for the benefit of the people who live, learn and work here.

This Local Industrial Strategy will not be delivered by one partner alone or by one strand of investment or actions. It is the next stage in the evolution and implementation of the [Norfolk and Suffolk Economic Strategy](#).

The way we work together is a major strength. Businesses, the LEP, local authorities, third sector organisations, colleges and universities collaborate to deliver shared ambitions rather than focusing on organisational, sectoral or geographic boundaries. Local partners have come together to agree this strategy and are all committed to aligning relevant actions and investment to the agreed priorities.

A number of tools and systems have been put in place to support this way of working:

- **Shared evidence base** which continues to evolve and stay live, providing partners with a reliable and consistent source of economic data to inform action and investment decisions.
- **Delivery and Investment plans** which sets out how projects and priorities will be delivered and funded, their outcomes and how partners will be mobilised to achieve them.
- **A common investment prioritisation framework**, which is used to assess projects, providing transparency and ensures that all investment is focused on projects that delivers maximum impact and value for money.
- **A shared inclusive growth toolkit** which provides assurance that projects are also judged consistently by their capacity to deliver positive impacts for local residents.
- **An annual stock-take of progress**, which will review progress and identify where changes are needed to reflect new economic or policy circumstances.
- **An evaluation programme** which sets out the approach to evaluating actions and projects.

This Local Industrial Strategy does not include any new spending commitments outside of existing budgets. Instead, it will inform the strategic use of local funding streams and, where relevant,

spending and decisions at the national level. It will also help Norfolk and Suffolk decide on its approach to maximising the long-term impact of the new UK Shared Prosperity Fund once its details and priorities are announced at Spending Review.

To demonstrate progress towards the long-term vision set out by this Local Industrial Strategy, the Strategy contains a number of specific actions. Where these actions are locally-led, these will be drawn from local budgets which exist for those purposes; where actions are shared between Norfolk and Suffolk and government, they will be funded from existing local and departmental budgets, with funding allocated for those specific purposes.

This Strategy does not represent all the priorities and action being developed in Norfolk and Suffolk. As detailed in this Strategy, Norfolk and Suffolk will regularly review the latest evidence to continue designing the most effective approaches and interventions to be at the forefront of the future UK economy. This Strategy sets out long term ambitions and will continue to evolve as the economy changes.

Norfolk and Suffolk local partners are committed to working with government to build more relationships and successful collaborations to create productive growth, enterprise and jobs that benefit all communities across the two counties.

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