

Lancashire Digital Economy Report 2021

Produced by:



In partnership with:



Lancashire
Enterprise Partnership



Blackpool Council

Invest in
Lancashire



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Welcome to

Located in the heart of England's North West, and bordering the city-regions of Liverpool, Manchester and Leeds, Lancashire has one of the largest regional economies in the UK.

Just over two hours from London by train, the county is also well connected via six major motorways. The rest of the world can also be reached easily via international airports at Manchester and Liverpool.

Lancashire is a diverse and dynamic region geographically, culturally and socially.

It offers a fantastic blend of bustling urban centres (including Preston, Lancaster, Burnley and Blackburn), picturesque rural villages, and lively seaside resorts (such as Blackpool and Morecambe).

It's also home to swathes of unspoilt countryside including The Forest of Bowland - a designated *Area of Outstanding Natural Beauty* - and miles of rugged coastline.

And if that's not enough, the Yorkshire Dales and the Lake District are right next door.

Such diversity is also reflected in its rich cultural and leisure offer. We've award winning English pubs and Michelin starred restaurants through to street food, artisan producers and farmers' markets.

There's also arts centres, live music venues, theatre, galleries and museums located across the county.

Major events, from outdoor theatre to folk music festivals, and from hit musicals to international air shows, are hosted throughout the year.

Lancashire also has a great sporting tradition, an extensive range of exciting outdoor activities, great shopping - and much, much more - all on your doorstep.

Find out more at www.visitlancashire.com



Lancashire

A Northern powerhouse in its own right

People, Productivity & Potential

With a £34 billion economy, Lancashire is home to 1.5 million people (with a further 6 million living within an hour's drive). The region is also home to over 52,000 businesses employing over 600,000 people.

The county has a large, diverse skills base across professional and skilled trades, and offers a highly cost-effective location for businesses.

Wages are, on average, lower than the UK's average, while house prices are around half that of the national average. As a result, Lancastrians see their money go much further.

Employers can also benefit, saving significantly on their salary bill without having to compromise on talent.

Over a third of Lancashire's working age population is educated to degree level or above, while its student population - spread over four universities - is over 55,000. Lancashire also has 13 FE colleges, many of which specialise in vocational skills and apprenticeships directly aligned to the technology sector.

Vocational courses (ranging from NVQ Level 2-7) include software development, IT, web design, data analytics, data science and cyber security.

Commercial Connectivity

Lancashire enjoys superb road

House prices are around half that of the national average. As a result, Lancastrians see their money go much further.

and rail connectivity, with excellent north-south and east-west access.

By train from Preston, Manchester Piccadilly is just 36 minutes away, while Manchester Airport can be reached in less than an hour. Liverpool John Lennon Airport is also only 45 miles from Preston and can be reached by car within 60 minutes.

In addition, Preston station has three trains an hour direct to London, with a journey time of under 2.2 hours.

A Proud Technological Tradition

Lancashire has a long, proud history of industrial innovation which stretches back to the birth of modern manufacturing. Richard Arkwright's revolutionary cotton spinning technology - developed in Lancashire in 1767 - is widely credited with kick-starting the world's first industrial revolution.

Today, this dynamic entrepreneurial tradition is reflected in Lancashire's global reputation for excellence in advanced manufacturing,

energy, automotive, food production, and many other key sectors.

Our strength and expertise in such tech-hungry sectors is also evidenced by the calibre of the businesses already here, including Rolls Royce, BAE Systems, TRW, Sanko-Gosei, Safran, PACCAR, Toshiba Westinghouse, Victrex and Flavourfresh.

Aerospace in particular is a core economic strength. With around 500 aerospace businesses, Lancashire is not only the UK's largest aerospace-related employer, it is also home to one of the largest aerospace clusters in the world.

In addition to these companies investing heavily in their own technological capabilities, many of them are working closely with their supply chains and our universities to drive new digitally based R&D opportunities.

Lancashire is also pursuing rapid growth in other emerging technology sectors such as MedTech, 5G, Future Mobility, UAVs, renewables, CleanTech, AgriTech and MarineTech.

Investment & Support For Business

Lancashire has a powerful ecosystem based on a strong private and public sector partnership which underpins its economic prosperity.

The *Lancashire Enterprise Partnership* has, for example, established a technology sector group, led by local tech entrepreneurs and digital business leaders, which advises on the county's technology investment strategy.

We also have the Lancashire Innovation Board, a private and public sector group which oversees the delivery of the county's strategic *Innovation Plan* for its technology sector.

Further, there are regional investment programmes to support scale-ups such as the *Northern Powerhouse Investment Fund* and *Access To Finance*.


In addition, Lancashire enjoys significant investment and support from national government. As a result, Lancashire is the only UK region to have been granted four Enterprise Zone sites (special investment areas specifically designed to help businesses grow).

One of these, at Samlesbury, is primarily focused on industrial technological innovation and digitalisation, while the Warton EZ is a prime site for CAV and other Future Mobility R&D.




Lancashire's Digital Economy Dashboard

A Dynamic Digital Economy




£1bn+

£1bn+ Information and Communications sector




28%

28% GVA sector growth in the last five years




30%

30% growth in wireless communications sector over last five years



20%


20% increase in computer sector in last five years



3X


Tech sector set to outstrip local economy 3x by 2028

Key Tech Sector – Telecoms




2nd

largest tech employment sector



200+


Lancashire telecoms businesses



5,300


telecoms staff

Key Tech Sector – Energy




37,000

working in the power generation sector



3,500


nuclear specialists



30%


region produces 30%+ of UK's low carbon electricity

Technology and Digital Employment




30,000+

digital & tech professionals




4,000+

digital & technology businesses



2,000


firms in Lancashire's computing sector



1,000+


computing, technology and engineering graduates each year

Computing & Software Skills




15,000

software professionals




7,000

computing professionals



4,000

students studying Computing & Mathematical Sciences



+100%

software publishing sector has doubled over last 5 years

Key Tech Sector – Advanced Manufacturing



84,000

manufacturing professionals



2nd


highest concentration of manufacturing activity in UK



One


of the world's largest aerospace clusters

Key Tech Sector – E-commerce




£1.3bn

e-commerce market



£3m+

average company turnover £3m+



5,000

employed in digital retail sector



At the heart of Applied Industrial Technology

As digitalisation accelerates, many of Lancashire's major industrial sectors are developing and deploying advanced technologies which need to be smart, scalable and secure.

One of the core foundations of Lancashire's thriving economy and high-value skills base is its globally recognised aerospace, energy and advanced manufacturing sectors. By their very nature, these industries are entirely reliant on technological innovations, bespoke digital solutions, and highly secure (yet scalable) systems, to remain competitive.

This – coupled with the rapid migration to cloud-based platforms, edge computing, IIoT, predictive maintenance, and other digitalised and Industry 4.0 processes – means having robust and reliable cyber security at every level of the business is crucial.

Lancashire's world-leading cyber security expertise, in both industrial and critical infrastructure settings, is therefore playing a vital role within these and other tech-hungry industrial sectors.

In addition, our universities are driving technology-based R&D programmes in partnership with industry, and are devising and delivering courses and vocational training which is directly aligned to the digital demands of employers.

There is also enterprise-level connectivity embedded throughout the county, including a gateway to a subsea fibre network across the North Atlantic.

A digitalised supply chain

Lancashire's deep supply chains – which already serve

established tech-dependent industries such as aerospace and energy, and related sectors – have embraced new digital technologies and advanced production methods.

Growth areas here include advanced materials, CNC, robotics, additive manufacturing, precision engineering, VR and digital twins, low carbon solutions, and intralogistics.

Public health and social care are other areas where the county's technology suppliers are pivoting to meet changing market needs. Telemedicine, 3D-printing, and personalised

digital health apps, are just some of the MedTech areas which are growing.

Lancashire also has an agile IT support sector, with expertise in managed IT, cloud and network services.

A fast-growing electech industry

The Morecambe Bay and Lancaster areas are, in particular, home to a growing cluster of companies specialising in electech; industrial control systems, navigation technology, battery storage, hi-tech electronics assembly and other disciplines.

This has led to the formation of both the *Electech Innovation Cluster* (ETIC) and *Tech Lancaster* – two industry-led consortia of tech businesses whose aim is to bridge the gaps between electech research, R&D, government policy, and education.

Founded by eight major electech firms – Forsberg, Like Technologies, LiNa Energy, Marl, Milliampt Technologies, OTAQ, NHT Electronics and Rinicom – the ETIC and Tech Lancaster are backed by Lancaster University, RTC North, the UK Electronics Skills Foundation, and Innovate UK.

Lancashire's world-leading cyber security expertise, in both industrial and critical infrastructure settings, is playing a vital role within tech dependent sectors



UK #1

Biggest provider of aerospace-related jobs in the UK



3,500

Lancashire is home to 3,500 nuclear specialists

Industry partnerships & pilots

Lancashire is renowned for its participation in government and industry-led technology pilot schemes.

An example is the government-backed *Made Smarter* Industry 4.0 support programme which offers funding and advice to SMEs regarding the adoption of more advanced manufacturing technologies. Lancashire was one of the first areas to pilot the scheme, which is now being rolled-out in other regions.

The county has also recently been working in partnership with the government on two pioneering skills projects, the DCMS-funded *Fast Track Digital Workforce* programme and the DfE's *Digital Skills Bootcamp* pilot (which is now rolling-out nationally). Both schemes have enabled employers to fast-track people into digital employment in skills shortage areas such as electronics technology, software programming, cyber security, digital marketing, and DevOps.

Another example is the *ACaDEmE* programme, a partnership between BAE Systems, Lancaster University, and local SMEs, which enables training for students, apprentices and young people in technical disciplines such as additive manufacturing and Virtual Reality.

Our fast-growing electech offer reflects how Lancashire's deep supply chain has adapted to meet new commercial needs



Delivering Digital Data

Lancashire has been at the frontline of the UK’s advanced telecommunications industry for a generation, and telecoms is the county’s second largest technology employer.

With vast expertise across fixed-line connectivity, industrial cabling and ethernet networking, data transfer and storage, VoIP technologies and wireless, the county is now embracing the exciting opportunities offered by 5G/6G, private networks, IIoT and Industry 4.0 connectivity.

The county’s wireless industry alone has seen over 30% growth between 2014-19, while the region’s concentration of communications equipment manufacturing is over four times the national average.

In March 2021, Rossendale-based Mission Labs (who developed the CircleLoop VoIP telephony product for micro-businesses), was acquired by the Gamma software group in a £46m deal.

Outstanding telecoms talent
Lancashire’s mature telecoms sector means it has an established, highly-skilled telecoms workforce of over 5,300 (spanning wired, wireless and satellite specialisms) working for over 200 firms.

These include major operators, such as enterprise telco Daisy Communications, together with niche providers such as TNP (a large-scale private network developer), and B4RN (supplier of full-fibre broadband to remote locations).

5G & the future
Lancashire’s telecoms pedigree was a key driver in bringing the ground-breaking 5G Factory

The region’s concentration of communications equipment manufacturing is over four times the national average

of the Future testbed to the county.

Backed by government, and based at the Salmsbury Enterprise Zone (adjacent to the AMRC NW), the facility brings major players from the private and public sectors together to drive the development, deployment and adoption of 5G-enabled technologies in multiple settings.

Partners in the project, in addition to AMRC NW, include BAE Systems, IBM and private network specialist aql.

Also contributing to the project is Miralis, a Lancashire-based global logistics and data optimisation business whose customers include Europcar, the Department for Transport, Disney, Diageo, Shell, and the Co-Op.

Further 5G innovation is being driven by Lancaster University’s Communication Systems Research Group, which is currently focusing

on 5G within advanced manufacturing, and Edge Hill University, which has dedicated research programmes linked to wired, wireless and 5G networking.

Commercial communications connectivity
Lancashire is rapidly building capacity to enable faster, higher volume – and more secure – transfer and storage of digital data. With excellent fibre connectivity already installed in many conurbations, next generation digital infrastructure is being rapidly rolled-out.

This includes a new county-wide gigabit network being developed by IX Wireless.

Unlike traditional ‘dig and cover’ operators, IX Wireless deploys a fibre ring, carried above ground on its own telegraph pole infrastructure (as well as fixed wireless technologies) to deliver gigabit capability.

Lancashire’s telecoms pedigree was a key driver in bringing the ground-breaking 5G Factory of the Future testbed to the county

Already having achieved 80% domestic and commercial coverage in Blackburn, the company has plans to extend its reach to four million premises by 2025.

Lancashire has also invested in high-speed, high-volume global connectivity. This is exemplified by its coastal gateway to the North Atlantic Loop; a high-capacity, ultra-low latency subsea network which connects the county directly to North America and Europe.

This connection means that Lancashire companies can enjoy faster transatlantic switching speeds via New York rather than being routed through a London exchange.

Having access to this network – which has the capability to carry more than 30% of the world’s internet traffic – also creates significant opportunities within the hyperscale Data Centre market.


It further gives the region a competitive edge in global mass data markets such as smart cities and IoT, Esports and online gaming, Ultra-HD content, and OTT entertainment services.

In addition, the growing low carbon energy offer along the Fylde coast, combined with world leading research on energy-optimised cloud computing at Lancaster university, are creating emerging opportunities for a net zero-focused datacentre cluster in the county.




4m
Starting in East Lancashire, Wireless IX has a target of four million gigabit connections by 2025




30%
2014-19 saw 30% growth in Lancashire’s wireless industry



Cyber Security, Coding & Computing

Lancashire's world-class expertise in cyber security spans from defending critical infrastructure and protecting national government networks to preventing industrial espionage, blocking consumer malware, and safeguarding children.

As home to many highly sensitive industrial sectors – including defence, energy, aerospace, advanced manufacturing and national food production – so Lancashire has developed world-leading expertise in cyber security.

And while much of this is focused on corporate online protection – especially as more industrial sectors adopt cloud-based processes, IIoT and private wireless networks – the county is also developing robust cyber security provision which supports SMEs and consumers.

From campus to containment
The county's universities have driven much of this work, with Lancaster University at the forefront.

They have established the *Lancaster Cyber Security*

Centre of Excellence, a multi-disciplinary hub and testbed which is renowned internationally for its research into every dimension of cyber security.

This includes monitoring and anticipating emerging threats, identifying new hacking tactics, developing faster threat detection methods, and exploring cyber-attack motivations and psychology.

Lancaster's expertise is further reflected in its cyber security master's degree, only one of five programmes in the UK certified by the National Cyber Security Centre (NCSC).

The government's new National Cyber Force (NCF) – due to be located in the North West as part of a new 'cyber corridor' – will further consolidate Lancashire's

strength within the cyber security space and links with GCHQ.

Private sector protection
Such world-class, R&D-led cyber security provision is reinforced by private sector specialists such as Mitigate Cyber, whose sector expertise includes energy, telecoms, fintech and professional services.

Mitigate, which is a member of the *Cyber Resilience Centres Trusted Partners* network (which works closely with GCHQ) also undertakes ethical hacking and penetration testing across a wide range of industries. It further offers training and cyber assessments which are certified by the NCSC.

BAE also has deep industrial and military cyber security expertise through its Applied Intelligence Division.

Lancashire is home to numerous other cyber security providers and consultancies which work across industrial, commercial and consumer markets.

SMEs can also explore and develop new cyber security technologies via the *Lancashire Cyber Foundry*, a government-backed initiative delivered in partnership with four North West universities, including Lancaster.

Coding, Computing & Creating

Coding and software development capabilities are key technology drivers and Lancashire has a significant propriety IP offer – together with scalable 'white label' skills and capacity – across the county.

Lancashire has over 2,100 businesses working within computer programming, consultancy, and related services, which employ over 7,000 people. Between 2014–19, this market grew by over 20%, making it the county's largest digital technology sector.

More recent research has identified the county has 15,000 professionals working specifically within software and software development (a majority of which are high-skilled, high-value roles).



15,000
Lancashire is home to 15,000 software professionals



10,000+
Graduates every year with computing, technology and engineering skills

Between 2014–19 Lancashire's computing sector grew by over 20%, making it the county's largest digital technology market

Another indicator of the county's growing software market is its rapidly expanding software publishing offer. Between 2014–19, this sector more than doubled in size.

A programming pipeline

Lancashire's long-established technology tradition, developed by helping sectors such as advanced manufacturing, telecoms, energy and aerospace adopt new digital protocols, means the county has extensive expertise in upgrading, integrating and securing legacy systems.

Engineers with experience of first and second generation programming languages have been key to this, especially when required to develop cost-effective retrofit solutions for companies looking to digitalise their processes.

Lancashire's pipeline of next generation coders and programmers is also healthy, underpinned by its world-class higher education provision.

For example, Lancaster University is home to the *School of Computing and Communications* (ranked #6 in the country in the latest *Guardian University League Table* for computer science and information systems).

Edge Hill University and UCLan also have well established specialisms in software development, software engineering, and related technology disciplines such as AI, Machine Learning and Data Analytics.

As a result, the county produces over 1,000 graduates a year with high quality, industry-relevant computing, technology and engineering expertise.



Lancaster University's cyber security master's degree is only one of five in the UK certified by the National Cyber Security Centre



Industry-led Innovation

Lancashire has a dynamic, technology-led R&D ecosystem which is set to drive growth and create significant commercial opportunities across a range of sectors.

Lancashire's mix of high-value industries, a highly skilled workforce, geographical connectivity, and a strong regional economy, means it is already enjoying rapid, technology-led growth.

This, when coupled with its industry-led R&D provision; the county's pipeline of industry-relevant graduate and young talent; and major investments in new technology facilities; adds up to an even greater opportunity.

The home of high-tech hubs & testbeds

Lancashire has invested significantly in a series of strategic, industry-focused, and collaborative technology hubs, digital testbeds, innovation sandpits, and centres of R&D excellence, to unlock commercial potential:

The Advanced Manufacturing Research Centre North West

Based at the Samlesbury Enterprise Zone, the AMRC North West has been created to accelerate the development and adoption of Industry 4.0 technologies and processes across all manufacturing disciplines.

Part of the national AMRC network, which is HQ'd at the University of Sheffield, the Lancashire facility is a world-leading research centre for advanced manufacturing R&D. It's also home to Lancashire's 5G Factory of the Future.

The BAE Academy for Skills & Knowledge (ASK)

BAE System's ASK centre – also based at Samlesbury – is an integrated skills hub which trains technology apprentices for both BAE and other Lancashire employers.

ASK's leading-edge equipment and systems exactly mirror the latest technologies used on BAE's own production line such as robot cells, a VR cave, and industrial additive manufacturing equipment.

UCLan's Engineering Innovation Centre

UCLan's Engineering Innovation Centre (EIC) in Preston provides Lancashire's next generation of technologists, engineers, and tech-led SMEs, with real-world experience on live industrial challenges involving robotics, mechatronics, AI and advanced materials.

Recently the EIC secured over £3m of investment to develop new drone technologies and is the home of the Lancashire Drone Command and Control

Centre. This is a centre of excellence for applied drone research, with a particular focus on commercial and enterprise applications.

Lancaster University's Health Innovation Campus

The Lancaster Health Innovation Campus (LHIC) is focused on the development of health-related products and services including digital health and MedTech innovation.

A collaborative space – which brings both businesses and health providers together – its mission is to take a solution, place-based approach to addressing global health issues.

The LHIC is creating new, high-value jobs, and is helping Lancashire firms develop innovative products and services which can be quickly commercialised. Larger organisations, including national and international healthcare providers, can access LHIC's extensive network of digital health experts – and R&D facilities –

to develop scalable MedTech opportunities.

Edge Hill University's Centre for Data and Complex Systems

Edge Hill's CDCS supports international excellence in computer and data science with a particular emphasis on data analytics, data representation and visualisation. Other specialisations include interoperable and interconnected technologies; future internet and cloud computing; IoT; disruptive technologies; and cyber security.

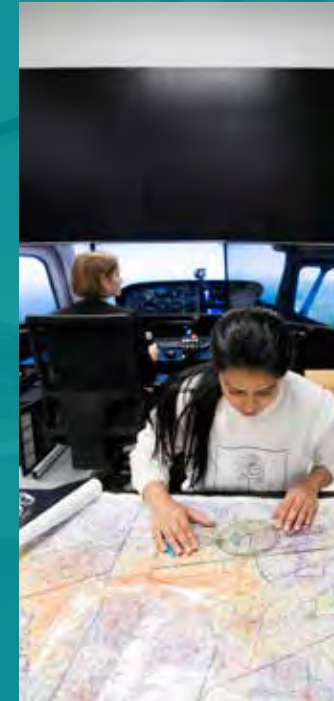
Edge Hill is also home to the Productivity & Innovation Centre (PIC), a business-focused hub which helps SMEs increase efficiency through smarter, data-led product development and digital innovation.

Sector-Specific Colleges

In addition to higher education provision and facilities aligned to industry, Lancashire also has an outstanding further education offer which can help meet the needs of specialist technology sectors.

For example, Myerscough College, based near Preston, is a leader in AgriTech research, while the Energy HQ at Blackpool & Fylde College specialises in vocational engineering training for the commercial energy sector.

Industry-led R&D provision, a pipeline of industry-relevant talent, and major investments in new technology facilities, adds up to a great opportunity



£100m+

invested in new high-tech collab hubs across Lancashire

Lancashire's next generation of technologists, engineers, and tech-led SMEs, get real-world experience on live industrial challenges involving robotics, mechatronics, AI and advanced materials



£3m

of funding recently secured to develop commercial drone technologies



Digital Health & MedTech



As exemplified by the Lancashire Health Innovation Campus, there is a rapidly growing digital health and MedTech opportunity in Lancashire which is geared up to meet the demands of a more personalised – and more preventative – approach health and social care.

For example, UCLan's pioneering *Neuro-Rehabilitation Online* project involves academics working with the NHS to pilot an online tele-rehabilitation initiative to help support survivors of stroke and brain injuries.

Digital Health and MedTech also underpin the latest approaches being used by the Integrated NHS and Care system across East Lancashire.

Blackburn with Darwen Council are running a pioneering Public Health programme of smart sensors in homes, monitoring movement and environmental signs.

East Lancashire Hospitals are discharging patients into the community earlier, using wearable technology and remote monitoring techniques, keeping patients safe in their own homes.

The Lancashire & South Cumbria Integrated Care System has an ambitious digital strategy and a strong track record of collaboration, including delivering one of the UK's first cloud-based integrated record and data platforms, opening the door for innovative partnership working.

The private sector is also ramping up its digital health offer by working closely with the NHS.

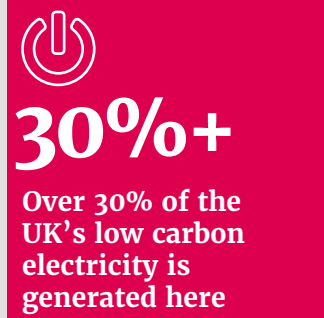
Lancashire firms are working with the NHS on a range of digital health solutions including telemedicine, AI-enabled cancer screening, and predictive hospital bed management

Sundown Solutions is working with the NHS on a web-based dashboard that accurately tracks bed availability in hospitals, while Redmoor Health (which has grown from just two to twenty employees in the last two years) is supporting the NHS with AI-enabled cancer treatment screening applications.

Lancashire is also the UK home of Alcidion, an Australian health informatics company which is working with the NHS to develop mobile solutions to help detect deteriorating patients on hospital wards. Alcidion already works with 300 hospitals across Australasia and the UK.



Tech Hungry Sectors



Lancashire is home to several major industrial sectors which are rapidly adopting new digital processes to stay competitive. With many involved in defence and critical infrastructure, they constantly require the most robust technologies, the most skilled technicians, and the highest levels of cyber security, available.

Aerospace

Anchored by BAE Systems (which produces the *Typhoon Eurofighter* and sections of the *F-35 Lightning II*), and employing over 13,000 people, Lancashire is one of the largest aerospace clusters in the world.

BAE is a global leader in applied aerospace technologies. Next generation BAE aircraft (including the autonomous *Taranis* and the *Tempest* fighter) are being developed using AI, robotics, VR, digital twinning, IIoT, and a host of cloud and edge-based processes.

Lancashire is also home to aerospace giants such as Rolls Royce, Aircelle, Kaman and Magellan, who themselves are rapidly digitalising their production lines. These in turn support a local supply chain of over 500 specialist firms – many of which have adopted new technologies to meet evolving client demands.

Energy

Lancashire has a significant concentration of energy assets including oil, gas, nuclear and renewables. Its energy supply chain also has extensive utilities, transmission and distribution expertise.

Within nuclear – which alone employs over 3,500 people – Lancashire is the only UK region to have a whole fuel-

cycle capability. It also has a fast-growing small modular nuclear reactor sub-sector.

In addition, Westinghouse's Springfields site – a designated *Strategic National Asset* – produces over 30% of the UK's low carbon electricity.

The Springfields site – which is home to a new *Clean Energy Technology Park* – also facilitates the *Oxide Fuels Complex*, one of the world's most advanced nuclear manufacturing facilities.

Manufacturing & Food Production

Employing over 84,000, Lancashire has the UK's second largest manufacturing sector, accounting for 13% of its workforce.

A key sub-sector which is rapidly adopting more Industry 4.0 technologies is automotive, and the county is home to over 100 automotive businesses employing around 3,500 people.



Lancashire's key industrial sectors require the most robust technologies, the most skilled technicians, and the highest levels of cyber security, available

Another of Lancashire's largest sectors, farming, represents another major tech opportunity.

Myerscough College, a world-class centre of AgriTech R&D, already works closely with industry to develop new tech-led solutions via its *Food & Farming Innovation Centre* in Preston.

In addition the challenges of Brexit, climate change, and the need for greater food security, means Lancashire is set to become a key player in advanced farming methods and sustainable food production.



E-commerce & Creative Tech

Lancashire’s strength in applied industrial technologies and commercially focused digital R&D is complemented by a strong creative and e-commerce offer.

End-to-End E-commerce
Some of the most successful e-commerce businesses in the UK are based in Lancashire.

These include Preston-based EKM, whose e-commerce platform has been deployed by 80,000 online businesses and currently supports one in five UK online shops.

Online fashion retailer Boohoo Group (which 2019 had sales of £857m) also has its global distribution centre in Burnley, employing over 3,500 people, and is rapidly adopting more digitalised, automated and smart picking and packing processes.



3,500
staff employed by Boohoo in Burnley



10,000
orders a day processed by Rossendale’s webuybooks online recycling service

Other Lancashire e-commerce success stories include Rossendale’s webuybooks, an online book, CD and DVD recycler which processes 10,000 orders a day, gifts and homewares business Studio Retail Group, luxury wallpaper business Graham and Brown, UK Bathroom Store, Havwoods Flooring, and Pure Luxuries.

Specialist e-commerce software and digital support services are also a growth area in the county, with businesses like Brickweb, The Fulfilment Crowd, and Cloud Commerce Pro, all developing and delivering advanced technology solutions for the booming online shopping sector.

E-commerce technology from Preston’s EKM powers one in five UK online shops

Clicks And Bricks
We are also seeing increasing convergence between digital and physical retail operations. For example, national roadside retailers Euro-Garages (HQ’d in Lancashire) have invested

significantly in smart logistics and other digital operational processes, while Hippo Leasing (one of the UK’s biggest car hire firms) is rapidly evolving into an online ‘click and collect’ business.

Dynamic Digital Design
Lancashire is also home to hundreds of tech-savvy creative suppliers including digital design agencies, digital marketing consultancies, and freelance content creators.

Creative clusters can be found in areas such as Burnley (also the location of AMS Neve, an Oscar award-winning company specialising in digital music production), and Preston, the base of full-service digital design consultancy Motionlab whose clients include Saab, Sainsburys, easyJet and Stella Artois.

Lancaster is another creative digital hotspot and home to numerous creative studios including Two Stories, Hotfoot, Fat Media, NuBlue, Factored and SQ Digital.



Digital Sector Support

Lancashire has an extensive ecosystem of industry-focused groups, publicly funded business support programmes, and informal peer-to-peer networks, all dedicated to growing the county’s tech sector.

Larger organisations can also take advantage of county’s four Enterprise Zone sites. This includes the Samlesbury site, which is home to the AMRC North West facility, BAE and the 5G Factory of The Future.

PEER-TO-PEER INDUSTRY NETWORKS	BUSINESS SUPPORT	SUPPORT FOR SKILLS	FUNDING
Digital Lancashire a peer-to-peer membership organisation (with over 700 participant) which promotes and supports digital businesses in Lancashire. It also runs a Women in Tech sub-group.	Boost Lancashire’s Growth Hub, offering a wide range of business support programmes, signposting services, and events	Lancashire Digital Skills Partnership digital skills training in partnership with Google Digital Garage, Lloyds Bank, and Enterprise Nation	Access to Finance helps Lancashire tech businesses access angel investment & VC funding
Lancashire Innovation Festival annual event series sharing learning and best practice of technological and broader innovations from organisations across Lancashire	Digital Plus UCLan-based support programme to help SMEs maximise digital technologies	Digital Boost supports Lancashire SMEs to develop more digital skills to drive growth	Northern Powerhouse Investment Fund government-backed finance for scalable businesses
Array Festival Annual Digital Sector festival hosted by digital hub Fraser House	DigitME2 a UCLan programme which assists SMEs to grow and innovate via Industry 4.0 practices	Tech Lancaster runs tech and electech bootcamps across the county	
Blackpool Tech Hub a networking group dedicated to helping Blackpool-based digital businesses	Lancashire Cyber Foundry a programme which helps SMEs develop new cyber security solutions and other related technical innovation		
Our Health Matters a Lancashire business support network aimed specifically at the healthcare, digital health, and MedTech sectors	The Lancashire Forum Creative a UCLan-based leadership and business growth programme tailored to meet development needs of Lancashire’s creative and digital SMEs	CREATIVE, DIGITAL & TECH WORKSPACES	Society 1 Preston
Lancashire Tech Talks regular, informal gathering of local tech professionals, business leaders and policy makers to share ideas, discuss issues, and network		Fraser House Lancaster	The Town Hall Padiham
		Strawberry Fields Chorley	The Cathedral Quarter Blackburn
		The Landmark Burnley	Old Docks House Preston
		InfoLab21 Lancaster University	The Lancashire Digital Technology Centre Burnley

In good company...

“We continue to benefit from having strong links to Lancaster University and we work closely with its world-class academics and high calibre students. Lancaster itself is also a great place to be, both in terms of the quality of life it offers and also the growing tech cluster it's becoming home to.

“The wider county also offers massive opportunities for collaboration and business development across all digital industries, and Lancashire is definitely an exciting place to be right now if you're an ambitious tech company like ourselves.”

“As a company working within healthcare we find that young people, both at graduate and apprentice level, bring fresh and innovative thinking to how we approach complex and challenging issues. The fact we can tap into Lancashire's vast pool of bright talent, through it's excellent universities and colleges, was therefore a major factor in our decision to come here.

“That, together with the huge amount of R&D opportunities the region offers within both the private sector and across the NHS, means we are perfectly placed to take advantage of the latest ideas and technologies within the digital health and MedTech space.”

“We're seeing many companies based around Morecambe Bay developing and deploying next generation electech technologies which increasingly underpin key growth sectors such as Future Mobility, MarineTech, CleanTech, Aerospace and advanced manufacturing.

“Such leading-edge, proprietary and deep tech solutions are also helping these and other sectors transition to a low carbon economy, creating jobs and attracting investment along the way, which is bringing benefits to Lancashire's entire tech supply chain.”

“Every successful technology business needs world-class people, world-class education and world class-facilities, and Lancashire already has all of these in place.

“The region's economy is supported by a wide range of investment programmes and collaborations between private and public sector partners, and having great universities such as UCLAN, Lancaster and Edge Hill on our doorstep makes attracting and retaining talent much easier.

“There are only a few places where you can build a really successful business, and in EKM's opinion there's nowhere better than Lancashire.”

“Lancashire offers companies like Mitigate access to world-class cyber security R&D expertise through its universities - and major commercial opportunities through its collab spaces - which significantly strengthens our offer.

“Throughout the county, there is also an extensive network of similarly ambitious businesses, together with highly supportive public sector partners, who are as committed to driving growth through technology-led innovation as we are.”

James Walkerdine
Chief Operating Office
Relative Insight



Lynette Ousby
Managing Director
Alcidion UK



Rich Grant
Managing Director
Milliamp Technologies Ltd



Alison Chesworth
Head of Talent
EKM.com



Zain Javed
Co-Founder & Chief Technology Officer
Mitigate Cyber



About this report

This report has been produced by Lancashire County Council in partnership with the Lancashire Enterprise Partnership.

It is based on economic, demographic, educational, occupational and skills research undertaken by specialist regional development consultants Mickledore between May - August 2021.

Official UK Datasets used included the Business Register and Employment Survey (BRES), UK Business Counts, The Annual Survey of Hours and Earnings, the Annual Population Survey, Companies House and the Higher Education Statistics Authority (HESA).

Other sources included company information from Dun & Bradstreet, company websites, as well as information from the Lancashire Digital Skills Partnership's *Lancashire's Digital Landscape* report (2019).

Data from the Lancashire Enterprise Partnership, Lancashire County Council, Digital Lancashire, Boost (Lancashire's Growth Hub), and other partners was also drawn upon.

In addition, bespoke LinkedIn research was undertaken across a number Lancashire's employment sectors to get a more accurate, real-time understanding of the county's technical and digital skills capacity and capability.

Mickledore also conducted over 20 interviews with a wide range of public and private sector stakeholders, including technology and digital businesses, universities, Digital Lancashire, representatives from Lancashire's unitary and district councils, the Lancashire LEP's Digital & Technology Sector Group, and Lancashire County Council.

We would like to thank all contributors for giving up their time, sharing their insights, and supporting this project.

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For more details about the research - and Lancashire's digital and technological sectors - please contact Lancashire County Council's Innovation and Digital Lead, Maya Ellis (maya.ellis@lancashire.gov.uk).

You can also get more information on Lancashire's economy and investment opportunities at www.investinlancashire.com



For more information

- Invest in Lancashire**
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(Lancashire's business support service)
www.boostbusinesslancashire.co.uk
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