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Enterprise Partnership

Lancashire Digital Strategy

September 2022

Digital

Foreword by the Chair of the Digital Sector Group

KAM KOTHIA OBE DL, LEP Board Director

As Chair of Lancashire Enterprise Partnership's Digital Sector Group, it gives me great pleasure to introduce this ambitious and inclusive strategy for the digital sector in Lancashire, which is the culmination of extensive consultation with an array of stakeholders who have provided invaluable input and to whom I am extremely grateful.

The LEP is a business-led, strategic collaboration charged with leading the economic growth strategy for Lancashire, and I believe this strategy places the digital sector at the forefront of the county's growth ambitions.

The value of the UK's technology ecosystem has exploded in recent years, and with sustained dynamic growth it has surpassed a valuation of $1tn – becoming the 3rd in the world to achieve this status after the US and China.

Lancashire has the technological capabilities to be part of this unprecedented growth opportunity. Which is why this strategy is ambitious. We need the level of ambition which has been demonstrated in other successful digital cluster areas, which have proved what is possible if there is a vision, ambition and commitment from multi-sector stakeholders.

But this ambition for Lancashire isn't about competing or following other areas; the ambition within this strategy is about Lancashire defining its differentiator; it's about dreaming big and developing an ecosystem in which start-ups, scale-ups and even unicorns can thrive; it's about bringing together large industry players and our innovative SMEs; it's about a collective confidence in the county's unique capabilities and developing strategic collaborations for the sector to fulfil its latent potential.

The decision to locate the National Cyber Force in Lancashire shows what can be achieved by working together. I believe Lancashire's digital sector is on the verge of truly transformational change and our vision and ambition will accelerate that change. We need to be bold, but fortune favours the brave and together we can take that leap of faith and take Lancashire from the fringes to the heart of the UK's technological ecosystem.

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Executive Summary

Overview of the Work

- The Lancashire Digital Strategy is the first phase of a series of documents which will inform the development of a Strategic Digital Framework, providing a high-level overview of the ambitions for the county, which is for Lancashire to harness its combined industrial, entrepreneurial and academic strengths in innovative applications of digital, data and cyber technologies, so that by 2035 Lancashire will be a globally significant economic powerhouse at the forefront of the next industrial revolution..

- The vision is ambitious, but is underpinned by a legacy of established strengths in telecoms, electronics and sensors, drawing on the technology and cyber expertise manifest in advanced manufacturing sectors. Existing sector strengths in Aerospace, Nuclear Engineering and Advanced Composite Materials are being built on and amplified by Lancashire's digital sector, supported by significant input from the county's universities in the areas of creative design, computer sciences and knowledge transfer.

- The strengths of Lancashire's digital sector, in particular its cyber and data security capabilities, have been recognised in recent investments in national centres of excellence in the County, including the National Cyber Force (NCF) and the 5G Factory of the Future at Samlesbury. These successes embody the sector's ability to translate research into products and services capable of transformational impacts in areas of major societal and technological challenge. The additional capacity and demand for leading edge applied data science these projects bring will help to further differentiate our offer from neighbouring metropolitan areas.

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- However this strategy isn't focussed solely on growing our existing digital strengths and maximising our unique capabilities to capitalise on the opportunities from emerging sectors. As recognised in the LEP's strategic framework, digital is a vital enabler to drive change in each of our other growth sectors, providing them with the means through which to increase productivity and realise their growth ambitions.

- The role of digital both now and in the future cannot be under-estimated, and will not only be instrumental in achieving economic growth, but will also contribute to addressing some of our societal challenges such a health and income inequalities and Net Zero.

- By implementing a range of strategic interventions in skills, business support, investment and a digital infrastructure which encompasses a nationally significant Innovation Enterprise Hub and a network of hubs in towns and cities across the county, Lancashire will become the fastest-growing digital economy in the UK, increasing digital employment to over 50,000 and the contribution of the digital sector to over £5 billion per annum by 2035 – growing from the current 3% contribution to over 10% of economic output

- The ambitious vision will not be achieved overnight, and will require a range of both fiscal and policy-led interventions over the short, medium and long term to achieve impact and positive outcomes for Lancashire's businesses and residents. These will be developed further through the establishment of Task and Finish Groups, which will consult widely and draw upon the collective knowledge of all stakeholders to develop a detailed Delivery Plan, thereby ensuring Lancashire achieves the transformational change it deserves and of which it is capable.

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A Once in a Lifetime Opportunity

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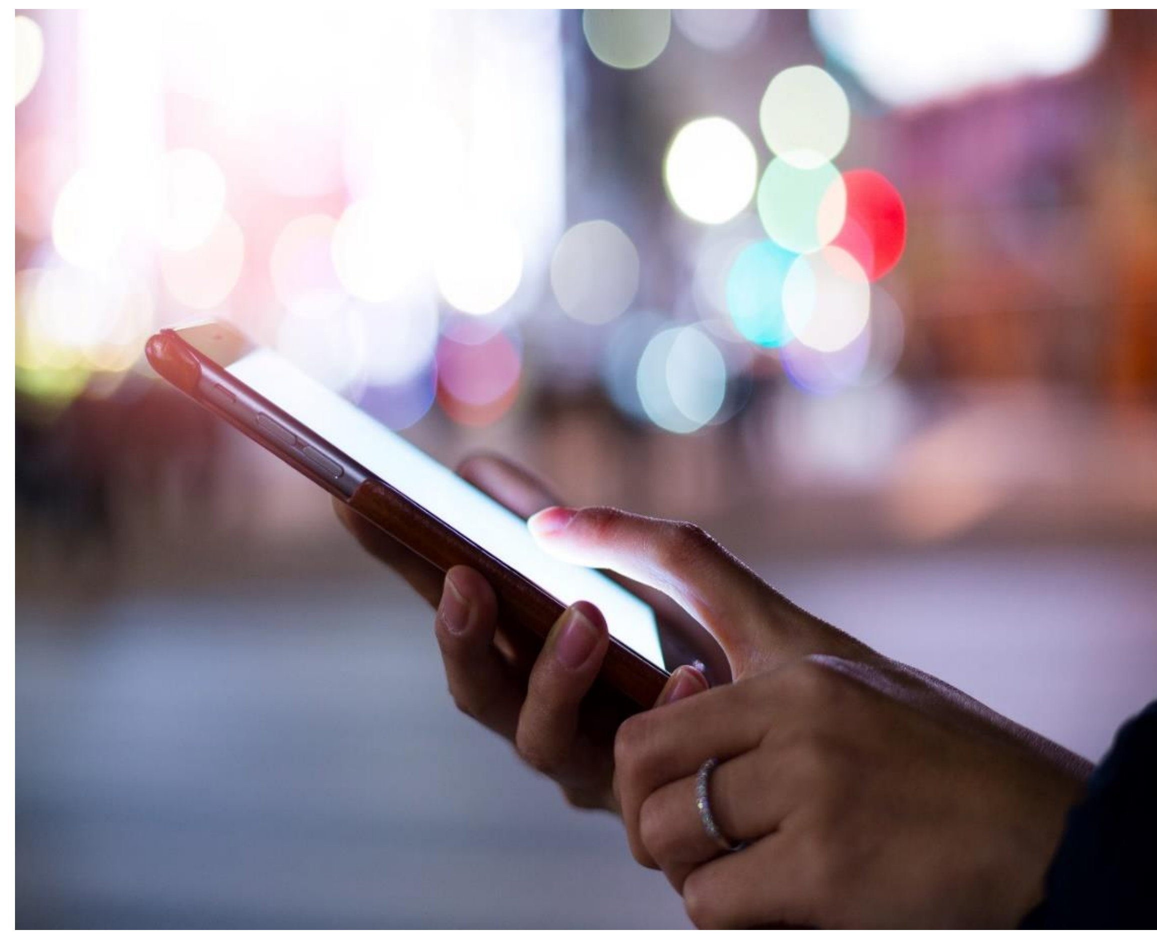
A National Perspective

- The digital economy is recognised as a key driver of growth with increasing significance in the future prosperity of the UK. DCMS estimates that the digital sector in the UK generated GVA of £137 bn in 2021 (1). Since 2010, UK Government has made sustained interventions through arms-length bodies such as Tech Nation and Digital Catapult to increase the quantity, quality and share of investment to the tech sector. Historically, that has focused on London; but whilst the capital still absorbs the lion's share of new money, other regions are harnessing more investment than ever before:

  > ***With more money than ever flowing into UK tech - £29.4 billion this year, up 2.3x from last year's figures of £11.5 billion - almost £9bn of all VC invested went into startups and scaleups outside London and the South East and the regions are home to nine of the 29 unicorns formed this year. The combined value of UK tech companies founded since 2000 is now £540 bn, after the biggest year-on-year increase since 2013/14.(2)***

- Last year, the government named the West Midlands as the UK's fastest growing region for digital tech. They are on track to create an additional 52,000 tech roles and add £2.7 Billion to their economy by 2025

- Similarly, Manchester was identified as the UK's top digital tech city. They have now have over 19,000 tech businesses including 5 home grown unicorns valued at over $1Bn each. The sector contributes £5Bn GVA to their economy, and employs 15% of Manchester's population.



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1..DCMS Economic Estimates: Monthly Gross Value Added for DCMS Sectors and Subsectors, February 2022
2. Department for Digital. Culture, Media & Sport (2021). Press release: "UK tech sector achieves best year ever as success feeds cities outside London", 21 December 2021. [UK tech sector achieves best year ever as success feeds cities outside London - GOV.UK (www.gov.uk)]

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A Lancashire Perspective

- The Lancashire Digital Economy Report 2021 sets out a picture of a digital sector which has grown by 28% over the last five years and in the period to 2028 is forecast to outstrip growth in Lancashire's economy threefold.
- It is a diversified sector which includes:
  - An information and communications sector with GVA in excess of £1bn per annum
  - An e-commerce and creative tech sector together worth £1.3bn per annum, with research from Amazon and eBay suggesting that the county has a very high proportion of e-commerce traders as well as some leading businesses in that field
  - Strengths in telecoms (particularly wireless), digital health and electronics manufacturing
- What differentiates Lancashire's digital offer regionally and internationally is its combination of:
  - Existing technology and data science capabilities within Lancashire's diversified digital sector – its "USPs"
- A set of 'frontier' sectors – four areas of emerging high growth, cross sector activities identified in Lancashire's Innovation Strategy as priorities for investment and growth:
  - Cyber, Digital & Secure Systems
  - Advanced Mobility (3) and Manufacturing
  - Clean and Sustainable Growth
  - Healthy Productive Communities
- Demand for digital intelligence and applied data in other "prime" sectors of Lancashire's economy – Aerospace, Energy & Low Carbon, Manufacturing, Health, Tourism, Culture & Place and Food & Agriculture.

3.. A set of technologies, products and services which includes development of advanced (unmanned, autonomous) vehicles and associated sensor, control systems and infrastructure development.

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The Need for a Strategy

- This combination of factors creates demand for digital products and services and drives collaborative R&D and cross sector innovation. Combined with recent investment decisions, accelerating global demand for digital capability and data security in all sectors, this creates **a once in a generation opportunity for growth.**
- The reaction of stock markets to recent world events illustrates that technology, media and telecoms (TMT) remain relatively volatile. However, historic growth and the ability of tech businesses to attract valuations reflect high multiples of turnover point to continued investor confidence.
- Lancashire's digital sector is diverse, encompassing the gamut of digital capabilities, from digital marketing to high performance computing. The evolution of the e-commerce and creative tech sector – from simple e-commerce websites to subsequent app development and sophisticated fulfilment platforms indicate how digitally-enabled commerce can drive competitiveness and employment in a mass market sector. Rapid adaptation of artificial intelligence (AI) and machine learning (ML) continues to drive Lancashire's performance.
- We consider that the combination of sector diversity and digital capability present in Lancashire creates significant opportunities at multiple levels of maturity and capability; from start-ups to established businesses, and from creative design to coding and engineering.
- Whilst the strategy is looking to facilitate the growth of those businesses already operating within the sector, we cannot just focus on the 'here and now'. We need to harness the cross-cutting power of digital to support our other sectoral pillars of growth, as well as using our digital prowess to capitalise on the opportunities in the high growth emerging sectors of Cyber Security, Health Tech, Advanced Transportation and Net Zero Technologies.
- This is an opportunity to transform economic productivity by moving the digital sector from the fringes to the heart of Lancashire's economic strategy. This strategy sets out a vision for that transformation, in which Lancashire will forge a new identity as a globally significant hub of a fourth industrial revolution – a revolution in applied industrial data.

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Differentiating Lancashire's Offer

- Our unique combination of advanced digital, manufacturing and engineering capabilities differentiates Lancashire's offer and provides 'barriers to entry' for others outside Lancashire.
- Lancashire's expertise in data security, and in the secure and ethical creation, sharing and management of data, arises from a strong research base and effective technology transfer between universities and businesses
- Lancaster University's leading edge capabilities in research and teaching of cyber and data security are reflected in its status as the only North West university to be among the first eight trailblazing Higher Education Institutions to gain recognition for their commitment to cyber security education in a new initiative from the National Cyber Security Centre (NCSC).
- All of which were critical factors in securing investment for the National Cyber Force (NCF), to be based in Lancashire.
- Applied more broadly across key industry sectors and in sectors including health, these are strengths which Lancashire can also use to differentiate its offer from neighbouring metropolitan areas.
- The deep-seated entrepreneurial character and innovative flair shown by Lancashire during the first industrial revolution, continues today and is evident in our unique ability to support the interaction between our innovative and indigenous SMEs, large industry players and academia, which are often very disparate communities. This is demonstrated by our recent efforts to ensure local SMEs are in a position to capitalise on the opportunities emerging from the location of the NCF in the county.
- National agencies consulted reflected concern that there was too much 'hot money' in the market – too many investors looking for short-term returns on consumer-focused propositions. In proposing this strategy, we look for substantial and sustainable evidence of the translation of research into products and services capable of a transformational impact on society and the economy as a whole.
- Recent investments present Lancashire with a unique opportunity to identify itself as a leader in integrating digital technologies as part of large-scale multi-sector transformation

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The Vision

'By harnessing Lancashire's combined industrial, entrepreneurial and academic strengths in innovative applications of digital, data and cyber technologies, by 2035 Lancashire will be a globally significant economic powerhouse at the forefront of the next industrial revolution. Fuelling this growth will be an enviable ecosystem comprising world class innovation, skills and enterprise at its core, empowering Lancashire to leapfrog global competitors to become the fastest growing digital economy in the UK and the location of choice for businesses and investors.'

Strategic interventions in skills, business support, investment and a digital infrastructure which encompasses a nationally significant Innovation Enterprise Hub and a network of hubs in towns and cities across the county, will make Lancashire the fastest-growing digital economy in the UK, increasing digital employment to over 50,000 and the contribution of the digital sector to over £5 billion per annum by 2035 – growing from the current 3% contribution to over 10% of economic output.

An innovative and sustained approach to inclusive growth in digital jobs and skills will stimulate productivity growth across the economy to provide an environmentally sustainable, healthy and prosperous future for all Lancashire's people. In the process, this will make Lancashire more desirable both as a destination and a domicile.

By 2035:

Lancashire has reclaimed its identity as an economic powerhouse on the global stage, at the forefront of a digital industrial revolution

Lancashire is the **fastest-growing digital economy** in the UK and increase the contribution of the digital sector to over £5 bn per annum

Lancashire is the location of choice for businesses and investors looking to develop and apply innovative digital solutions to significant global challenges in Advanced Mobility, supply and distribution of Clean Energy and Net Zero Technologies, Cyber Security and Health

The benefits of improved skills and better access to job opportunities are available to everyone in Lancashire, regardless of race, creed, colour, gender, disability, sexual orientation or socio-economic background, leading to a **better quality of life and standard of living for all**

Lancashire has leapfrogged other UK and international regions by focusing on its strengths

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Regional Growth Imperatives

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Levelling Up White Paper

- The Levelling Up White Paper (4) proposes a new policy regime for regional development. Two of the proposed 12 missions are particularly relevant to this strategy:

  - **'Mission 2' - R&D**; aiming to boost spending outside the South East by 40% by 2030. A proposed increase in public R&D investment to £20bn by 2024-25 aims to leverage at least twice as much private sector investment to stimulate innovation and productivity growth. Department for Business, Energy and Industrial Strategy (BEIS) aims to invest at least 55% of its total domestic R&D funding outside the Greater South East by 2024-25.
  - **'Mission 6' – Skills**; significantly increasing high quality skills course completion leading to 200,000 more people successfully completing courses annually with 80,000 more people completing courses in the lowest skilled areas. The White Paper describes investment of £3.8bn in skills planned by 2024-25.

- Lancashire's Digital Strategy complements that of BEIS and its implementation would look to this new policy regime to support project funding.

4. "Levelling up: What are the Government's proposals?", House of Commons Library, Research Briefing By Daniel Harari, Matthew Ward 18 February 2022

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Made Smarter & the 4th Industrial Revolution

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- The UK Government's Made Smarter review (5) highlighted opportunities for the UK to become a global leader in industrial digitalisation by 2030. The adoption of Industrial Digital Technologies ('IDTs') aims to increase sector growth in UK manufacturing by 1.5 to 3 per cent, creating a net gain of 175,000 jobs and increased GVA of as much as £455 billion whilst reducing CO_2 emissions by 4.5 percent (6)

- Lancashire's Digital Strategy builds upon extensive work with businesses in manufacturing sectors across the county to implement Made Smarter and the recommendations of the Made Smarter Commission.

5. Made Smarter Review, "Becoming a Global Leader in Industrial Digitalisation by 2030", October 2017. https://www.gov.uk/government/publications/made-smarter-review

6. *Ibid* pp 7-8

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Regional Deals as Exemplars and Success Models

Other regions provide exemplars in looking to make the case for funding for the initiatives proposed in this strategy.

Lancashire's approach reflects learning from successful models of cluster development in advanced technologies both in the UK and internationally.

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Regional Deals

- A central part of the £826m **Aberdeen City Deal** (7), was a proposed investment of £105m in hubs for Innovation in the Oil & Gas (recently rebranded as the Net Zero Technology Centre), Agri-Food & Nutrition and Life Sciences sectors – all of which have strong clusters in the region. After five years, investments total £505m with 66% secured from private sources (8).

- Closer to home, **Made in Sheffield** is part of the Sheffield City Region deal approved in July 2012. The deal placed digital at the heart of South Yorkshire's strategy through:
  - Delivering the infrastructure with a major corporate partner.
  - Collaboration and cluster development to foster innovation through cross-industry working between the private, public and research sectors,
  - Focusing on fully exploiting digital in the advanced manufacturing, healthcare, low carbon and creative & digital sectors, digitalisation of key sectors to drive efficiency in the public and private sectors.

7. https://www.gov.uk/government/publications/city-deal-aberdeen-city-region
8. https://investaberdeen.co.uk/success-stories/latest-news/city-region-deal-annual-report

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Successful Models of Cluster Development

- **South Carolina Innovation ‘Upstate SC Alliance’ (9)**: Upstate South Carolina is a 10-county region that includes the Greenville metropolitan area and the Spartanburg metropolitan area. Both its population - approximately 1.4 million people – and physical scale are similar to Lancashire.
- Its strategy has enabled an economy previously dependant on the textile industry to transition to advanced manufacturing. Nearby Atlanta is a strong competing force, with headquarters of global businesses including Coca-Cola, Delta Airlines and UPS, but the Upstate SC Alliance has succeeded in developing a distinctive offer to inward investors and corporate partners including BMW and Michelin.
- In addition to the automotive sector, the Upstate SC Alliance is also looking to grow in engineered materials, aerospace and life sciences. It places a regional emphasis on collaboration and provides evidence that focus on workforce quality and skills, attracting ‘primes’ (large companies as anchor investors) and quality of life can compete with nearby large city offers.
- The Upstate Alliance (10) has experienced the multiplier effects of automotive and aerospace combined with the development and production of engineered materials, and more recent gains in life science and food manufacturing. Its impact can be measured in more than $17.3 billion in capital investment and 49,296 jobs generated between 2011-2020, the result of a collaborative strategy to grow and diversify the region.
- **Bristol & Bath City Region** is an exemplar of the role of university collaboration in developing significant digital innovation infrastructure. The digital ecosystem takes in:
  - Bristol’s National Composite Centre and VR Lab
  - Bath’s CAMERA for VR in gaming and health applications and Automotive Propulsion Institute
  - Bristol Robotics Lab (a joint venture of the UWE and University of Bristol)
  - Bath Spa’s Centre for Cultural and Creative Industries (CCCI)
  - UWE/Bristol's Health Technology hub.
- Its cluster strategy has contributed enormously to Bristol & Bath City Region becoming a magnet for corporate partners and venture capital investors. The position of Bristol & Bath demonstrates the impact of great regional confidence and a sustained approach to regional economic development for the digital sector.

Digital

9.. https://www.upstatescalliance.com

10. August 3, 2021 https://www.upstatescalliance.com/innovation-economic-development-upstate-sc/

Successful Models of Cluster Development

- **Scottish Optoelectronics Distributed Cluster**: Scotland has a long and distinguished history in optics, punching above its weight in a globally competitive market for over a century, built on an internationally recognised academic base and a thriving industry cluster (11). Scottish Photonics is a £1bn industry supporting over 4,000 high-value jobs in a range of vertical sectors.
- This example demonstrates the power of a distributed approach to cluster development. The sector is supported by universities across Scotland, with around 250 academics and researchers in photonics, including optical communication, quantum technologies, biophotonics, and sensors and imaging. Much of this research is internationally leading, evidenced by the fact that around 25% of all UK research funding in photonics goes to Scotland (12).

11. https://technologyscotland.scot/wp-content/uploads/2019/04/scottishphotonics-paper-final.pdf
12. Enabling Technologies in Scotland's Central Belt, Science and Innovation Audit, Glasgow Economic Leadership Consortia, 2018

- **AMRC North West** is a gateway development on the Samlesbury Enterprise Zone, part of the wider Lancashire Enterprise Zone Cluster. The flagship facility (built using a £20m grant from the LEP's Growth Deal) extends the University of Sheffield AMRC's footprint across the North. AMRC North West supports businesses to engage and adopt Industry 4.0 technologies, demystifying and de-risking the process through research, collaboration and knowledge. It provides a benchmark for the scale of project needed to deliver the benefits targeted in this strategy to Lancashire's digital sector.

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Competition, Collaboration and Partnerships

Lancashire's digital sector builds on a legacy of established advanced manufacturing strengths – including telecoms, electronics and sensors, drawing on the technology and cyber expertise manifest in advanced manufacturing sectors. Existing sector strengths in Aerospace, Nuclear Engineering and Advanced Composite Materials are being built on and amplified by Lancashire's digital sector – supported by significant input from the county's universities in the areas of data security, creative design, computer sciences and knowledge transfer.

We consider that Lancashire's "Unique Selling Points" are potential catalysts for developments in the digital sector. They provide defensible and distinctive capabilities creating high barriers to entry combining digital skills with those in Aerospace, Advanced Manufacturing and Nuclear Engineering.

Existing collaborative structures can be built on by further investments in the digital sector. As traditional industries increasingly become digital, there are opportunities to attract and partner with international corporate partners.

Case Study: Electech Innovation Cluster

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- Lancashire's digital capability is leading in the development of a new sector; 'Electech' which produces the electronics, electrical hardware and embedded software that enables the existence of technology. The Electech Innovation Cluster (13), based at the White Cross Industrial Park in Lancaster, has over 30 members and supporters across multiple traditional industry sectors.
- The Electech industrial sector covers companies who design, deploy and support hardware built using combinations of ultra-low power, highly integrated electronics chips, medium to high power electro-technical systems and embedded software (the low-level software that controls the hardware). Electech is at the heart of every automation system and every robot (14).
- Almost every aspect of the digitalisation of industry requires many different Electech technologies, from communications to power sub-systems; from embedded processing for automation and control to intelligent lighting and security systems. Advanced Electech computation powers everything from the largest datacentres to the tiniest sensors and servos, doing everything from day-to-day computing to accelerating AI-based machine learning and making every electric motor smarter and self-maintaining.

The Electech Innovation Cluster (ETIC), based in Lancaster, was founded by a consortium of technology companies to provide a strong collective voice. ETIC aims to bridge the gap between industry, research and development, government and education.

Digital

13. https://electechinnovationcluster.co.uk
14. 'Made Smarter' Review 2017

Case Study: Electech Innovation Cluster

- Industry bodies estimate that Electech contributes more than £100 billion a year to the UK economy (15). The Morecambe Bay and South Lakes area is at the very heart of the 4th Industrial Revolution, harnessing innovative Electech technologies, supporting the transition to a low carbon economy and attracting investment. The area's existing skills, infrastructure and supply chain are all vital for the UK's recovery from the impact of Covid-19 and future growth.
- This is a sector which naturally lends itself to higher value added activity, improving economic output and creating high value jobs. ETIC is establishing an inclusive local peer network, aiming to enhance local skillsets, increase accessibility to Electech careers and enable knowledge sharing and collaboration. ETIC members are active across a wide range of sectors (Figure 1)
- ETIC demonstrates the effectiveness of an industry-led initiative of companies in Lancashire committed to supporting the collaborative growth of a new sector grouping. It currently has 30 members and supporters from the public and private sectors. The "horizontal" nature of digital technology and its wide impact as digitalisation penetrates 'traditional' sector definitions underpins its approach to cross-sector working.

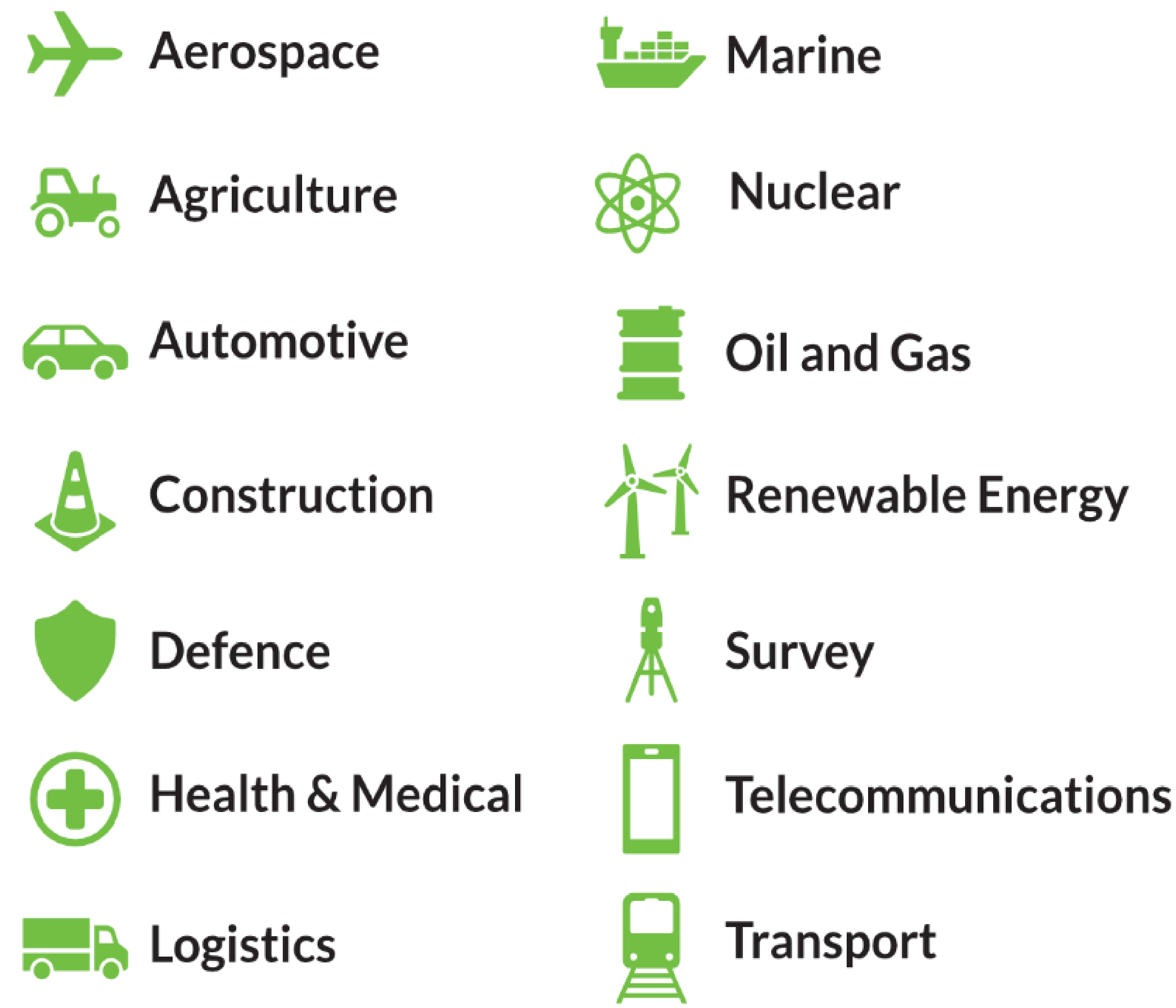

Figure 1 ETIC Sectors

15. Innovate UK, Electech roadmap report, 2019 https://www.ukri.org/publications/electech-sector-a-roadmap-for-the-uk/

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The Digital Sector Group

A collaboration between the private sector, academia and the public sector

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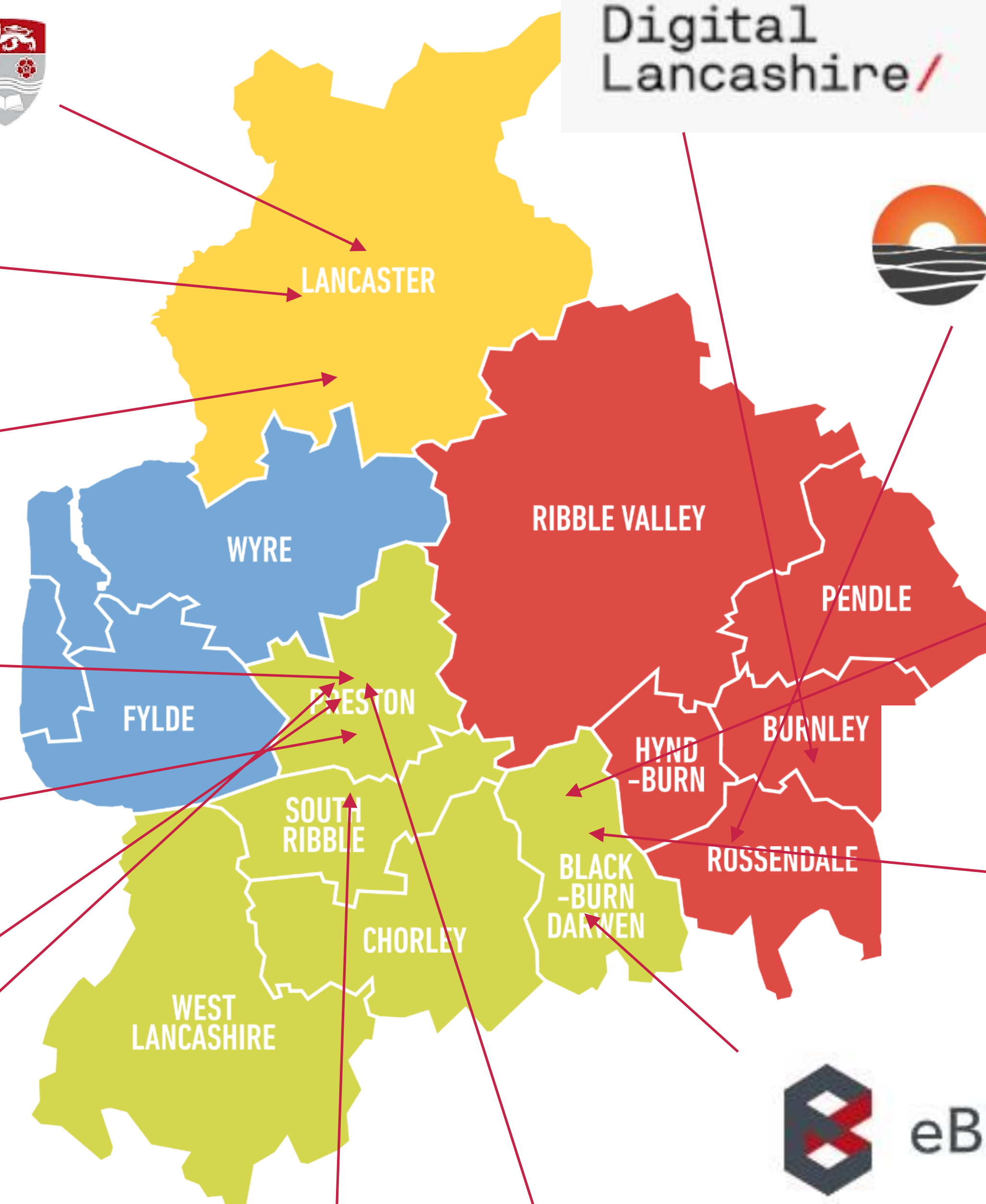
Businesses & Organisations Involved



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The Work of the Group

Working with senior leaders from the private sector, academia and the public sector with significant experience and knowledge of the digital sector and technologies, the group met on a number of occasions to develop this strategy, which is the first of a series of documents which will inform the development of a Strategic Digital Framework.

Their sector specific insight and real-time evidence as to what the sector needs means we are confident the interventions are relevant and will have impact at scale to unlock Lancashire’s digital growth potential.

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Pathway to Interventions

- The Lancashire Digital Strategy Group met a number of times to discuss the vision and strategy for Lancashire's digital sector, and its wider digital economy.
- Mapping was undertaken to gain additional insight into the scale, sector and geographic distribution and significance of the digital workforce and supply chains in Lancashire.
- Stakeholder interviews were completed with senior business leaders, academics and representatives of national organisations, to obtain evidence of cross-sector portfolios, critical technologies, key economic and social challenges for Lancashire, potential growth markets, and skills and training for the digital workforce and employees in other industry sectors.
- Members of the Strategy Group contributed their time and ideas to the development of an evidence base that supports a range of potential interventions which will help Lancashire digital businesses to become more competitive, and enable the growth of employment and opportunity across other priority industry sectors.
- A number of interventions have been identified and prioritised by consultation and by the Digital Strategy Group.
- Together, the evidence gathered and the solutions proposed, form the Lancashire Digital Strategy.

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Digital Sector Action Plan

Strategic Imperatives, Enablers and Potential Interventions

Digital

Strategic Imperatives

Significantly increase the number of digital **pre-start and start-up businesses** (including university spin outs)

Provide the conditions to allow more existing and new start businesses to **scale up** (demonstrate 20% + growth in jobs and revenues year on year)

Attract **inward investment** from major digital employers

Increase the number of Lancashire businesses in all sectors using data and digital tools and services to **increase employment and productivity**

Greater **collaboration and partnership** between digital businesses and other priority sectors of Lancashire's economy, including Advanced Mobility, Clean Growth, Cyber Security and Health

Essential Enablers

Digital skills and talent development, providing inspiration for children and young people in education, upskilling and reskilling the existing workforce to address skills gaps and shortages and attracting and retaining more skilled people

A best-of-breed **entrepreneurship and innovation ecosystem**, inspiring leadership and a culture of co-creation and collaboration

Digital and physical infrastructure to support clustering and knowledge exchange, linking existing digital workplaces to county-wide provision offered through an Innovation Enterprise Hub

An escalator of strategic interventions in grant, debt and equity funding and network building to **stimulate private sector investment**

Investment in **marketing and communications** to project a positive, rich, dynamic, and forward-thinking image of Lancashire

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The role of the digital sector in the Lancashire Innovation Plan

The success of Lancashire's Innovation Plan depends on the successful outcomes of Lancashire's digital strategy.

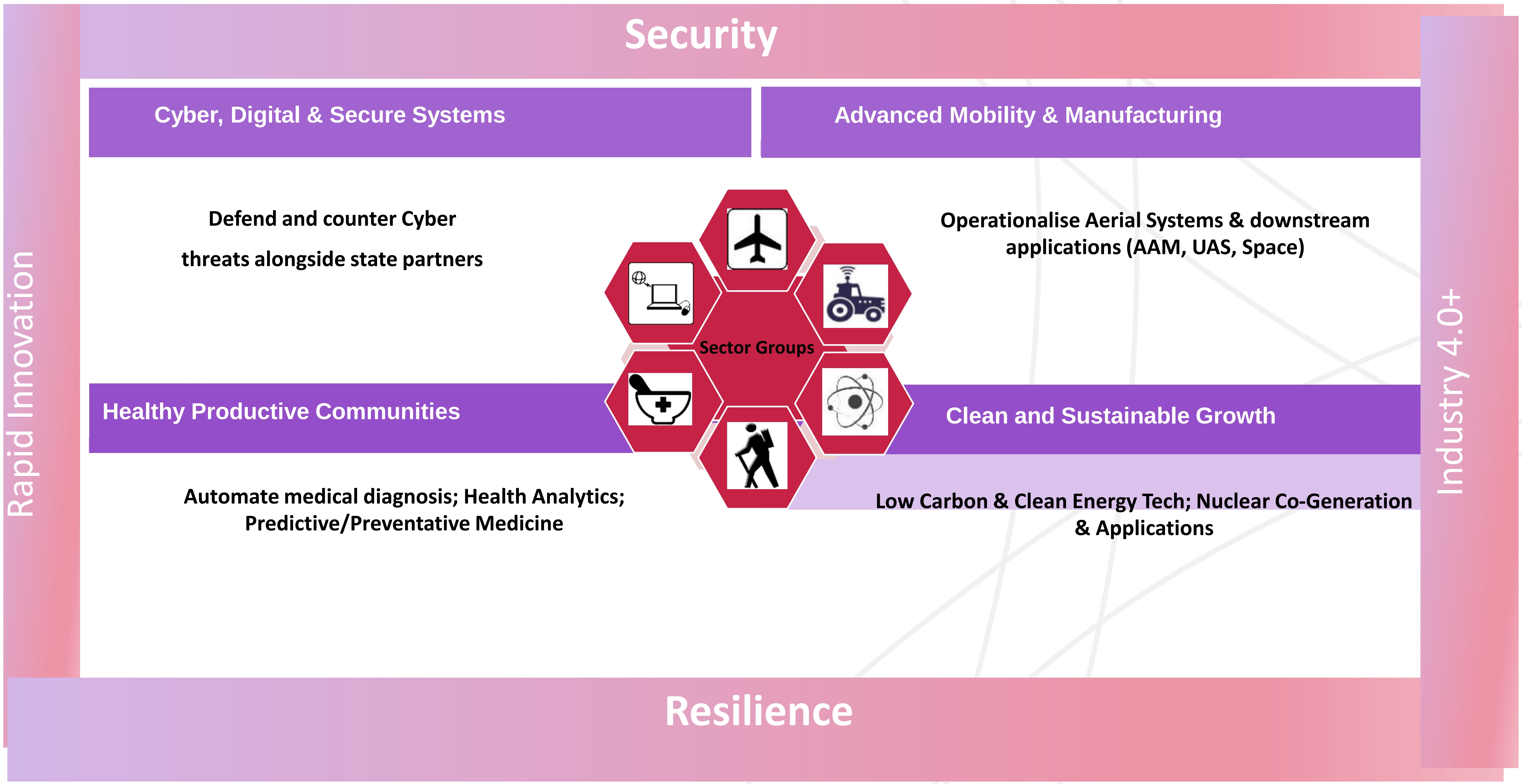
Lancashire Enterprise Partnership's Innovation Plan already identifies digital as a key sector in its own right, with key strengths in Cyber, innovation in electronics technology and manufacturing and applications in Advanced Mobility and Space.

But digital - the generation, interpretation and transmission of data from sensors and other inputs and the application of artificial intelligence in creating an output to control devices and processes – is itself a 'frontier sector', critical to the success of approaches to Rapid Innovation, Resilience, Security and Industry 4.0.

Consultation with industry representatives of Advanced Mobility, Cyber, Healthy Communities and Clean Growth has confirmed that digital is an integral part of those strategies.

Digital

Figure 2 Lancashire Economic Partnership Frontier and Cross Sectors Tiers



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1. Lancashire's Digital Ecosystem

- Lancashire boasts a growing number of digital 'hubs' in towns and cities across the county (detailed in the Lancashire Digital Economy Report 2021). The digital sector businesses within those hubs are also demonstrating increasing success in attracting private equity, with nine deals ranging from hundreds of thousands of pounds to multi-million-pound investments in the first months of 2022.

The Lancashire model

- National and international studies consistently stress the benefits, in terms of market entry, skills, knowledge exchange and productivity, arising from sector collocation. The digital sector's dispersal across Lancashire - about half the workforce is distributed between Preston, Lancaster, Blackpool, Blackburn and Burnley - argues against a strategy based on agglomeration around a single market vertical. The lack of scale in any one place compared to national and international competitors would be unlikely to harness the benefits of agglomeration observed in Manchester's media-led sector or around software development in Leeds city regions.
- Rather, Lancashire has a distinctive set of assets and capabilities that suggest it should pursue opportunities in applied industrial technologies for other 'primes' of the county's economy in both the private and public sector, with the potential to become a critical part of the supply chain in applied industrial technologies and data security for regional and national customers and partners.
- Lancashire's digital strategy does not, therefore, direct the creation of vertically integrated place-based clusters (along the lines of MediaCityUK), but will instead look to strengthen the connectivity and knowledge exchange between hubs as a way to build productivity, investment and growth in digital capability and capacity in the sector and the wider economy – including the ways in which applications of technologies such as Cyber and AI will profoundly shape our future economic and social environment.

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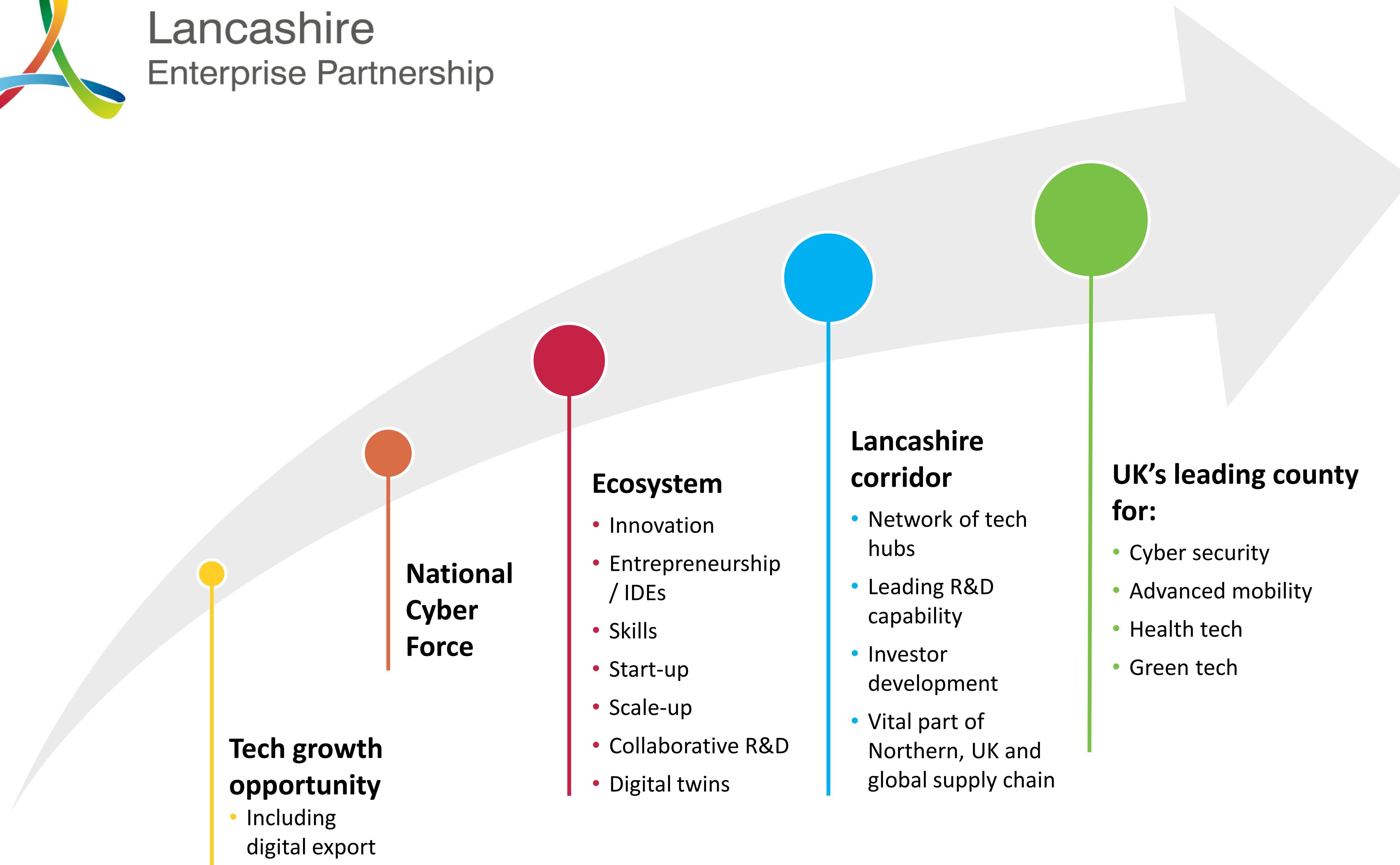

Figure 3 Lancashire - a vision of digital growth

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Digital Ecosystem

- This strategy sees digital as an enabler of growth and change, targeting innovation and solutions for identified large-sale global opportunities, reflecting sustainable growth and social benefit for producers, end users and consumers.
- The distributed model also allows for much closer interaction between the hubs, research institutions and FE colleges and employers in the digital sector and other industrial sectors looking to make increased use of applied industrial technologies. It will allow each location to remain agile and responsive to market signals from across a series of digital value chains, from fundamental research to collaboration R&D to industry-led innovation, from e-commerce to cyber security. And, just as importantly, it will allow the hubs to build strong connections to the communities and schools amongst which they sit to provide a visible spur to ambition and aspiration.

A. Increase engagement of digital supply chain with national investments in NCF and Innovation Enterprise Hub

B. Increase specialisation and focus on Innovation Driven Enterprises, at all scales from pre-start to exist within digital 'spokes' in towns and cities across Lancashire

C. Broker engagement of digital companies with customers and collaborative R&D opportunities in adjacent sectors through demonstrators and 'MVPs'

D. Develop cross-sector, peer to peer learning networks to connect all points of the digital supply chain in Lancashire with existing innovation ecosystem and major industrial actors

Figure 4 Building Lancashire's digital ecosystem

Demonstrators and 'MVPs'

The Electech case study above highlights the value of collaboration across industry sectors and with the academic research base in addressing innovation in applied data technologies.

The strategy builds upon this approach to help increase the specialisations in cyber and data security and focusses on growing the pipeline of Innovation Driven Enterprises across Lancashire's digital ecosystem, pursuing the development of demonstrators and 'minimum viable products' (MVPs) which address opportunities and challenges faced by Lancashire's key industry sectors and emerging high growth areas. Working collaboratively with Higher Education to co-design and scope projects and agree outputs, the market-focused application of collaborative R&D will catalyse adoption of digital industrial and data security technologies to increase productivity and drive growth across Lancashire's economy. The creation of the new ICS also offers a platform to develop a similar testbed for healthy living applications.

Using a distributed ecosystem of hubs to co-locate researchers and industry partners closer to end users is an opportunity to build capacity, specialisation and industry awareness of Lancashire's diverse and geographically dispersed digital capability, providing focus for investment and recruitment into those digital hubs.

Lancashire
Enterprise Partnership

Digital Ecosystem

The North West Cyber Corridor

Lancashire's positioning emphasises collaboration with and market opportunities in neighbouring metropolitan areas. Initiatives such as National Cyber Force demonstrate the complementarity and interdependency of Lancashire and Manchester in growing cyber capability and capacity across the North West to deliver on a strategy that will make the region the UK hub for cyber security.

Lancashire's offer to investors and future workforce is long-term and strategic. Rather than chasing 'hot money' for close-to-market consumer applications of digital technology, it builds upon its base in advanced technology and applied industrial data across digital and manufacturing – both in research and industry capability – to address **major strategic challenges** for the UK. Lancashire's greater experience of working collaboratively with government agencies in highly regulated sectors, including defence and nuclear, raises barriers to entry for competitors and helps align the interests of collaborative regions to its own.

In this way, Lancashire crystallises a different offer, with an improved quality of life offer at its heart, to that of neighbouring cities looking to develop 'vertically integrated' digital communications and IT sectors.

Digital

Lancashire
Enterprise Partnership

Digital Ecosystem: Aims

- Harness and tailor **existing, proven business support mechanisms** to develop focused programmes of support, networking and knowledge exchange activities around the LEP's defined sectors of growth and emerging markets.
- Identify opportunities across the hub network for **applied data science demonstrators** and prototyping zones for each of the LEP's defined sectors of growth and emerging markets, including health.
- Use these demonstrators and the hubs' networking events as platforms for a County-wide programme to **promote the benefits of digital and applied data technologies** to businesses in Lancashire.
- Support the development of existing and new hubs to deliver **affordable incubation space** for pre-start businesses and workspace for micro and small digital enterprises.
- Work with local authorities, universities and private sector landlords to ensure a pipeline of suitable **space for 'grow on' businesses** moving toward investment.
- **Complement and connect** to investments in world-class higher education, research and vocational skills provision and facilities made through Lancashire's £320m Growth Deal, including UCLan's flagship Engineering and Innovation Centre, the national Energy HQ in Blackpool, Lancaster's Health Innovation Campus and the Advanced Manufacturing Research Centre.

Innovation Enterprise Hub

The model of a distributed cluster has at its heart the creation of a new 'Innovation Enterprise Hub' for the digital sector and applied industrial data technologies at Samlesbury.

Samlesbury is already one of four Enterprise Zone sites across Lancashire, and home to the new Advanced Manufacturing & Research Centre (AMRC) North West facility, BAE Systems and the 5G Factory of The Future. The addition of National Cyber Force in Samlesbury will bring a further 2,000 jobs and transform the image of the Hub as a world class centre for digital innovation, skills and entrepreneurship. It will be at the heart of the UK's largest cyber cluster, the North West Cyber Corridor, and will be a catalyst to realise the latent potential for the digital sector across Lancashire and will be at the heart of an ecosystem of physical locations and knowledge exchange driving the growth of the digital sector in Lancashire.

To avoid duplicating services and 'reinventing the wheel', the Hub will draw upon and amplify the county-wide skills and business support systems and practices already in place, including Lancashire Digital Skills Partnership and Boost.

Digital

Lancashire
Enterprise Partnership

2. Business Growth and Investment

- The growth of digital industries globally and nationally, and demand for applied data technologies within growth sectors across Lancashire's economy, mean that prospects for business growth are healthy. However, despite some recent successes, Lancashire's digital businesses lag far behind their competitors in London and their metropolitan neighbours in cities such as Manchester and Leeds in the amount of equity investment they are able to attract.
- This is critical for Lancashire because it is smaller and scale-up organisations which will create the volume of jobs the county needs to fulfil its digital ambitions and meet demand from other sectors.
- Scottish Enterprise's Logan report (2021) highlights that in order to build a sustainable investment pipeline, there needs to be a consistent flow of new entrants and new money, from pre-start through start-up and scale-up businesses to those achieving an 'exit' at the end of the funnel.
- This strategy champions the systemic approach set out in Figure 5, including dedicated support for pre-start, start-up and scale-up businesses across all sectors, to build a vibrant and growing pipeline of new businesses and to complement Lancashire's universities efforts to support the spin out and growth of more Innovation Driven Enterprises.

E. Lancashire Innovation Plan will identify funding for both short-term business support for competitiveness and productivity and long term R&D

F. Develop regional angel networks to address need for "patient capital" to support development of small and larger scale-up businesses

G. Build the pipeline of pre-start, start-up, smaller and larger scale –up businesses to create resilience in the digital innovation ecosystem

Figure 5 Business Growth and investment

Digital

Lancashire Enterprise Partnership

Business Growth & Investment: Aims

- Harness and tailor **existing, proven business support mechanisms** in the County (Boost and Made Smarter).
- Put in place incentives and support for **patient money and smart capital** to close the gap and opportunity in investment for Lancashire businesses
- Identify and scale more of the micro- and small eCommerce businesses, which are a 'hidden strength' of the sector, as an **entry level opportunity** for new entrepreneurs; and to support existing providers to increase levels of innovation to diversify their services through developing AI, SaaS and data security expertise
- Complement work already underway in Lancashire's universities to build the pipeline of **Innovation Driven Enterprises**, from pre-start to exit
- Work with business leaders across all sectors to **highlight productivity gains** from digital
- Support digital businesses to **invest in new technologies and innovation** to target identified high growth opportunities
- Support businesses in priority and frontier sectors to **adopt and apply data, digital tools and services** (including AI) to deliver quick wins and realise the economic and social potential of longer-term growth opportunities.

Attracting global players

Global IT consultancy firms already provide a significant proportion of the digital employment opportunities in Lancashire – but mostly in the role of service provider to large public sector clients.

Lancashire's digital strategy seeks to transform the sector landscape in the county from top to bottom, leveraging public sector investment in significant 'centres of excellence' such as National Cyber Force, AMRC North West and the National Energy HQ in Blackpool to identify opportunities for new R&D collaboration with other global digital 'primes' as part of a targeted inward investment campaign.

Inward investment can be used to accelerate acquisition of skills and capabilities critical to the development of Lancashire as part of a national cyber hub; without it, there is a risk that development of that capacity will take too long, undermining the opportunity and exposing Lancashire to greater competition.

It can also open up access to global markets for applied industrial data across all industry sectors to Lancashire's innovative SMEs.

Digital

Lancashire
Enterprise Partnership

3. Transforming Digital Skills and Talent

- Lancashire needs **more people with more advanced digital skills** if it is to achieve its objectives**.** The scale of the opportunity to transform the digital skills and employment landscape is matched by the gravity of the challenge.
- Lancashire needs to invest further in digital skills, including re-skilling and up-skilling the existing workforce, to address structural issues which beset the county's economy:
  - Shortage of available jobs – there are not enough employment opportunities in Lancashire for its working age population
  - Skills gaps and shortages
  - Proportion of Level 4+ qualifications in the workforce below UK and regional average
  - Aging workforce
- These four issues combine to depress both wages and productivity levels in digital and across the economy – and need to be addressed if Lancashire is to take advantage of the opportunity which presents itself through NCF and other investments.

Digital

Lancashire Enterprise Partnership

3. Transforming Digital Skills and Talent

- Lancashire was the first area to launch a Digital Skills Partnership together with DCMS, who provided funds to develop the model. The Lancashire DSP (LDSP) is now one of eight partnerships nationally collaborating with DCMS and with local private, public and third sector partners to drive up digital skills, digital inclusion and the future pipeline of talent.
- The LDSP has made good headway in Lancashire to enable a joined-up approach to digital skills development, but we are still relatively early in the journey. Lancashire employers in both the tech and other sectors still report skills gaps and shortages, and the inability to attract people with the level of skills needed, as the most serious issue affecting not just growth but the sustainability of their businesses.
- Alongside this sit some structural challenges which affect digital sectors in all parts of the UK:
    - Underrepresentation of women in the workforce – women make up fewer than one in six employees in some digital sub-sectors (although the picture improves slightly in digital content and marketing subsectors)
    - Underrepresentation of people with other protected characteristics, including disability, race, creed, sexuality and socio-economic background
    - Undersupply of new entrants at all levels – from take up of computer science-related courses of study in schools through apprenticeships into graduates and more experienced mid-career professionals
- If it is to succeed, the digital strategy needs to be complemented by a manifold increase in the number of new entrants and a significant upskilling of the existing workforce. The LDSP will need to accelerate the growth of the talent pipeline, working with the Lancashire Careers Hub to inspire and engage young people in schools and colleges, and through partnerships with providers of skills and employment programmes, including Skills Bootcamps, to enable adults to pivot to these new opportunities and upskill in the workplace.
- There is also a job to be done in other sectors which will have an increasing need of digital skills to ensure that both employers and employees have a better understanding of the need and opportunities to develop digital skills amongst the existing workforce; and the opportunities for recruitment and retention that presents in those areas of industry currently struggling to adopt the benefits of applied industrial tech in pursuit of increased sustainability and competitiveness in a time when global markets have been severely disrupted.

Digital

Lancashire's Digital Workforce

- Office of National Statistics data obtained through the Business Register and Employment Survey (BRES) represents an estimate of employment drawn from a survey of a small percentage of companies across the UK. This has some recognised limitations:
  - It underestimates freelance and contract employment, an important part of the digital workforce, where the flexibility to introduce new skills either on a project basis or to catalyse R&D is an important factor in growth and the absorptive capacity for innovation of smaller firms
  - It relies on Sector Industrial Classifications (SIC codes) which in many cases do not keep pace with this fast-moving industry.
- BRES (2020) (16) estimates that total digital sector employment in Lancashire was 19,975. Analysis of LinkedIn carried out as part of the research for this strategy in May 2021 suggests that Lancashire's digital workforce is nearly two-thirds as large again – more than 33,000 individuals.
- Some of these people are based in Lancashire and commuting out of area for employment; but this still represents a significant opportunity for Lancashire to do more to retain and 're-shore' resident talent to harness the opportunities for growth in the digital and other priority sectors over the next decade.

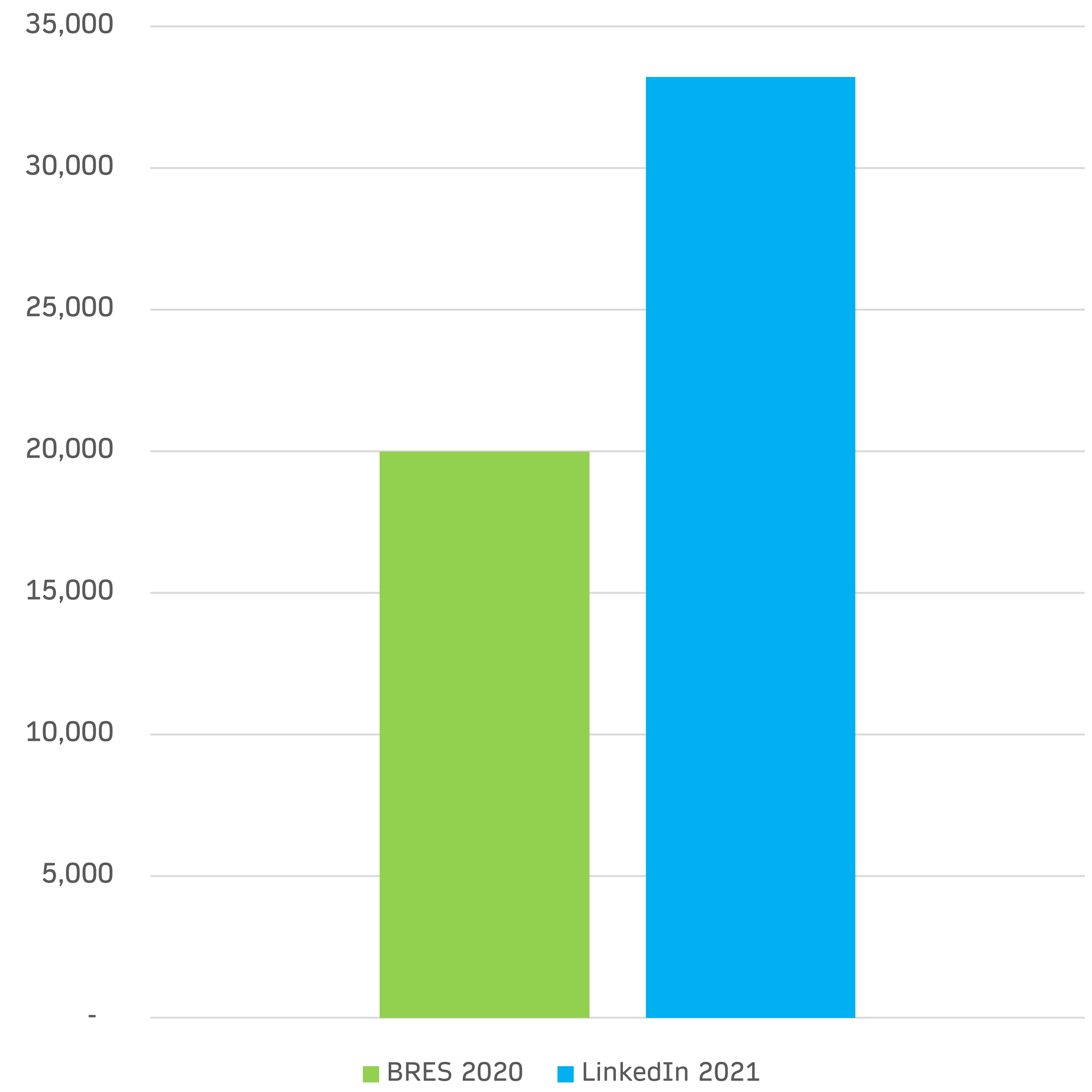


Figure 6 Lancashire digital employment (Source: The Fifth Sector/Curator Technologies 2021)

Scenarios for Digital Sector Jobs Growth in Lancashire

- Current employment in digital industries in Lancashire stands at just below 20,000 (14)
- Cambridge Econometrics' estimate of digital jobs growth to 2035 (shown at (1) in Figure 7) reflects current trends. It emphasises how low levels of investment and skills gaps and shortages are holding back growth in Lancashire's digital sector.
- However, there are several factors which cause us to be more optimistic about jobs growth.

Inflection points in jobs growth

- We already know that National Cyber Force (NCF) will create 2,000 new jobs at Samlesbury by 2030 (2), of which it is estimated two-thirds will need to be recruited outside the county to reflect the levels of skills required.
- Private sector companies likely to be directly involved in supply chains to NCF suggest that this investment alone will create three new jobs in the Lancashire economy for each job created at NCF (3).
- Consultation with employers in digital and other priority sectors, universities, national tech organisations and other stakeholders indicates that implementation of the recommendations in this strategy could create an additional 15,000 jobs – bringing total employment in Lancashire's digital sector to over 50,000 by 2035 (4).

- It is important to note, that Lancashire is currently collaborating with Greater Manchester to develop an agreed model to more accurately forecast digital jobs growth to support the development of the NW Cyber Corridor.

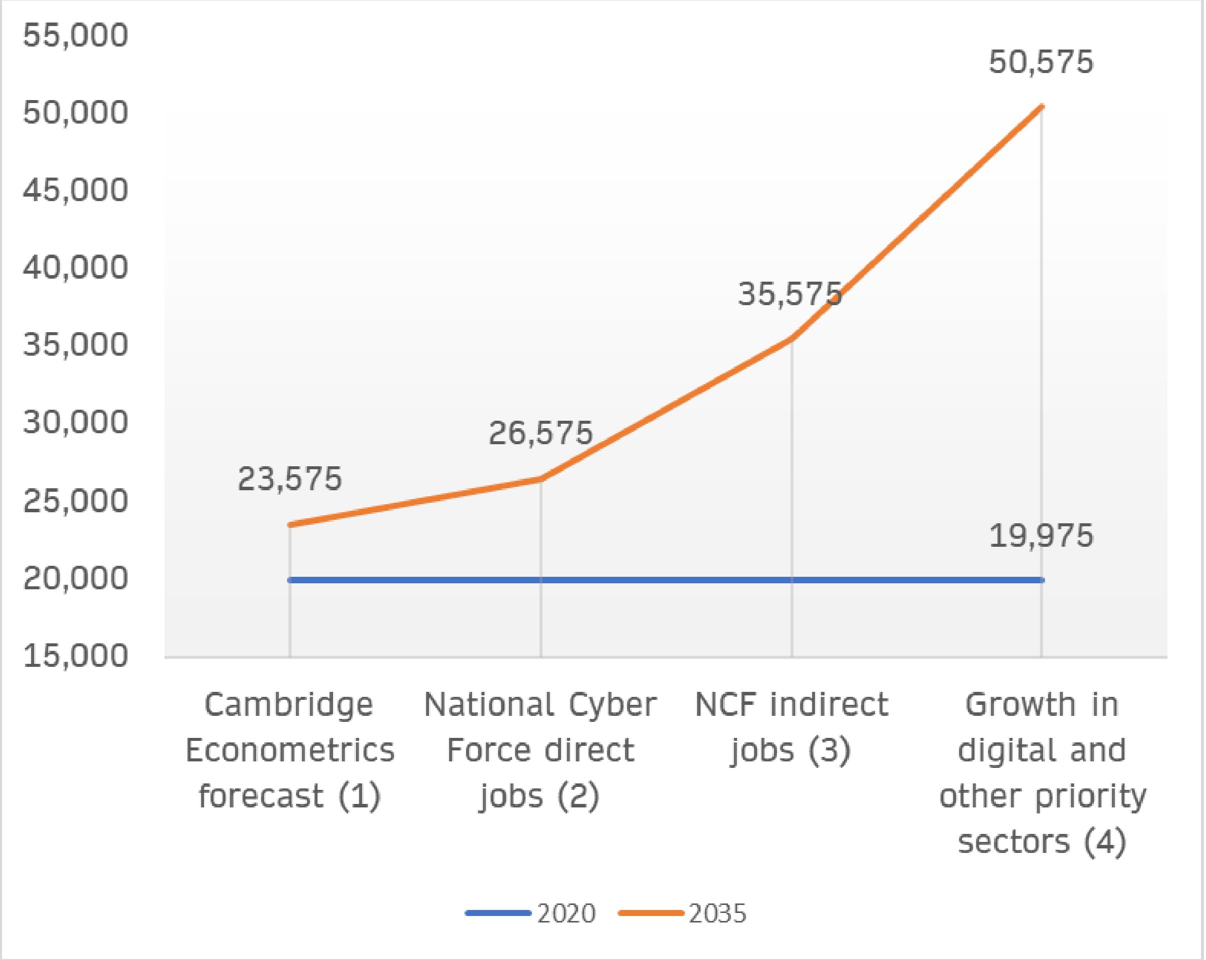


Figure 7 Scenarios for digital jobs growth to 2035

16. The Fifth Sector analysis of BRES (2020) using SIC codes included in DCMS definition of digital sector

Lancashire
Enterprise Partnership

Transforming Digital Skills and Talent

- Skills gaps and shortages of people with digital skills at all levels are, and will remain, the main constraints to growth of Lancashire's digital sector. Unless addressed, this will also limit the ability of other priority sectors within Lancashire to meet their objectives.
- Capacity needs to be increased across the education and training system, from schools to universities and including private sector providers and employers' own CPD, to provide Lancashire with a workforce with the skills needed to access any of the 2,000 employment opportunities at NCF. The county requires a systemic approach to increasing the number of people entering the digital workforce, beginning in primary school with information and inspiration about digital careers, progressing through all stages of education and continuing throughout people's working lives.
- Working with the Lancashire Digital Skills Partnership, the strategy has identified five priority actions which align with three of the four strategic priorities in the Lancashire Skills & Employment Framework:
  - Future Workforce
  - Skilled and Productive Workforce
  - Inclusive Workforce
- These combine to address the key problem faced by the digital sector and other pillars of growth in Lancashire's economy – **the need for more people with digital skills.**

H. Careers inspiration and transformation of the school curriculum for computer science

I. Develop a campaign to lobby for a change in national skills policy to embed digital in curriculum

J. Extend and expand flexible models of delivery, such as digital bootcamps

K. Integrate provision of CPD to drive recruitment and retention

L. Innovative and sustained approach to equality, diversity and inclusion

Figure 8 Transforming digital skills and talent

Digital

Transforming Digital Skills and Talent

- The LEP has already taken significant strides to address the issue: it was the first area in the country to launch a Local Digital Skills Partnership trailblazer and is one of only eight areas in the Country, supported by DCMS in this 'test and learn' phase.
- The suggested actions (shown in 8) build upon existing examples of good practice developed through the work of the LEP Skills team and its partners in education and industry.

Careers inspiration

- Since changes to the national curriculum saw ICT replaced by Computer Science in 2012, the number of students opting for that course of study has fallen. Fewer than 1 in 10 children in Lancashire pursue digital courses after Year 9.
- If Lancashire is to plug its skills gaps and shortages, it is essential that children, their parents and educators understand and can communicate the range of opportunities available to those with digital skills.
- Lancashire Digital Skills Partnership already coordinates online digital skills training and a range of digital resources and opportunities for schools and educators. It also offers initiatives for children as young as 8, designed to get children excited about the possibilities of digital long before they have to make their choice of GCSEs in Year 9, and to inform (and therefore reassure) their parents about the career prospects which arise from those skills.
- Existing Teaching School Hubs and the advent of the new National Institute of Teaching can provide a focus on training teachers for digital programmes, including computer science. This could potentially deliver a step change in the quality and take-up of digital education in schools, and with it, the supply of suitable educated and qualified young people to Level 2 and Level 3 qualifications.
- Other initiatives, including the proposed Morecambe Bay Curriculum being promoted by partners bidding for Eden North including Lancaster University and Lancaster & Morecambe College, also set digital skills in the context of citizenship, developing the net zero industries of the future and global sustainability goals.

Transforming Digital Skills and Talent

Flexible models of delivery

- Digital apprenticeships, T Levels, traineeships and higher technical qualifications need simultaneously to meet the needs both of larger employers and a digital sector predominantly made up of businesses employing fewer than ten people.
- For **new entrants**, this means supporting flexible provision through apprenticeships and group training schemes which allow smaller employers to share the burden of training whilst presenting the learner with the opportunity to experience a variety of working environments.
- For **people already in work**, returning to work or at risk of redundancy or redeployment, this means having access to up-to-date information and advice about the career opportunities available in skills and training for the skills needed to access them.
- For **unemployed** people, Escalate, Lancashire's Skills Escalator programme to help unemployed people get back into work, has instituted effective referral processes, so that people can move from project to project to enhance their employability skills, secure sustainable employment and progress within the workforce. The Lancashire Adult Skills Forum and the Employer Skills Forum bring together partners to support referral processes, share good practice and co-ordinate activity.

Digital skills bootcamps

- Skills Bootcamps have been used successfully to give adults aged 19 and over who are either in work, self-employed, recently unemployed or returning to work after a break the opportunity to build up sector specific skills. Intensive and flexible courses of up to 16 weeks, all Skills Bootcamps offer a guaranteed interview for a job at the end.

Transforming Digital Skills and Talent

Recruitment and retention

- Whilst universities across the county are taking steps to increase recruitment into computer science subjects and meet employer demand for digital skills, Lancashire cannot rely solely on graduate entry to provide the digital workforce it needs to meet its growth ambitions. Lancashire already offers Access to Employment, funded recruitment and pre-employment training support for employers. For people already established in digital careers in other areas, recruitment and retention links to the other pillars of the strategy, around business growth, building Lancashire's digital ecosystem and promoting Lancashire as both a dynamic digital economy and one which offers a more affordable and attractive quality of life than its competitors.

Digital inclusion

- Lancashire has a huge, underutilised talent resource amongst people with protected characteristics, including minority ethnic communities, women and people with disabilities. This strategy takes forward an innovative and sustained approach to inclusion. It emphasises the need for support for employers and new entrants from 'non-traditional' backgrounds to enter the sector to complement existing programmes such as InnovateHer (which aims to equip girls aged 13-16 with the self-belief and skills to pursue a career in technology) and City of Tomorrow (which invites young people aged 8-13 to design ideas for the safer, smarter, kinder City of Tomorrow, surfacing careers in the connected city). This encompasses programmes to support educators and parents in understanding the career opportunities that arise from digital skills, programmes for new entrants and those currently excluded from the workforce and measures to support people being made redundant or redeployed from role in other sectors.
- The strategy for diversity and inclusion extends to offering support for entrepreneurship – many of the leaders of Lancashire's successful e-commerce sector and an increasing proportion of those working in cyber come from South Asian backgrounds – as well as highlighting to employers the value of a diverse workforce in addressing global markets.

Transforming Digital Skills and Talent: Aims

- Lancashire needs **more people** with **more advanced** digital skills. Accelerating and improving the quantity and quality of supply of digital skills and talent is the most significant challenge in addressing existing skills gaps and shortages and building capacity for Lancashire's residents and businesses to take advantage of opportunities for growth.
- Delivered through investment in an expanded Lancashire Digital Skills Partnership, these actions will help Lancashire become a digital skills hot spot with:
    - High levels of digital inclusion
    - Successful businesses and increased productivity across all sectors
    - A pipeline of people with digital skills leaving our schools, colleges, universities and training providers
    - Support digital businesses to invest in new technologies and innovation to target identified opportunities in high growth areas

Productivity

Productivity in Lancashire's digital sectors is less than two-thirds the national average, reflecting gaps and shortage in skills and the fact that many of the micro-enterprises which make up the overwhelming majority of businesses in the sector are not taking opportunities presented either amongst the traditional 'primes' of Lancashire's manufacturing and engineering sectors, or in the larger commercial markets in neighbouring metropolitan areas.

The digital strategy aims to close this productivity gap by 2035 and then continue to exploit the conditions for growth to make Lancashire one of the most productive digital regions of the UK. Over the period to 2035, the strategy aims to achieve a £4 bn increase in GVA (at 2020 prices) attributable equally to an increase in the number of digital jobs and in output for each employee.

4. Identity, Marketing & Promotion

- Lancashire is currently a net exporter of digital talent to London and neighbouring metropolitan areas. Although the measures set out under skills, business support and ecosystem development will do much to address the need for more people, more jobs, more high growth businesses and increased investment, other measures need to be taken to secure the development of a resilient digital sector and to make available the digital talent needed to fuel growth across Lancashire's economy.
- These include:
  - Recruitment in the short term of people with higher level digital skills to address gaps and shortages
  - Increased recruitment into and retention of a greater proportion of computer science graduates from Lancashire's universities
  - Attracting investment from two or three global digital businesses which can 'anchor' the digital ecosystem and provide additional impetus to collaborative R&D with the county's universities and SMEs
- This requires a coordinated focus on marketing and inward investment which highlights Lancashire's distinct benefits for digital employers and employees:
  - A range of affordable housing in attractive areas close to potential employers
  - Good national and international transport links to markets
  - Quality of life – the distinctive mix of urban, rural and coastal environments accessible from anywhere in the county
  - Lancashire's role as a critical hub within an interdependent and complementary North West Cyber Corridor
  - Lancashire as a leading source of innovation in data science

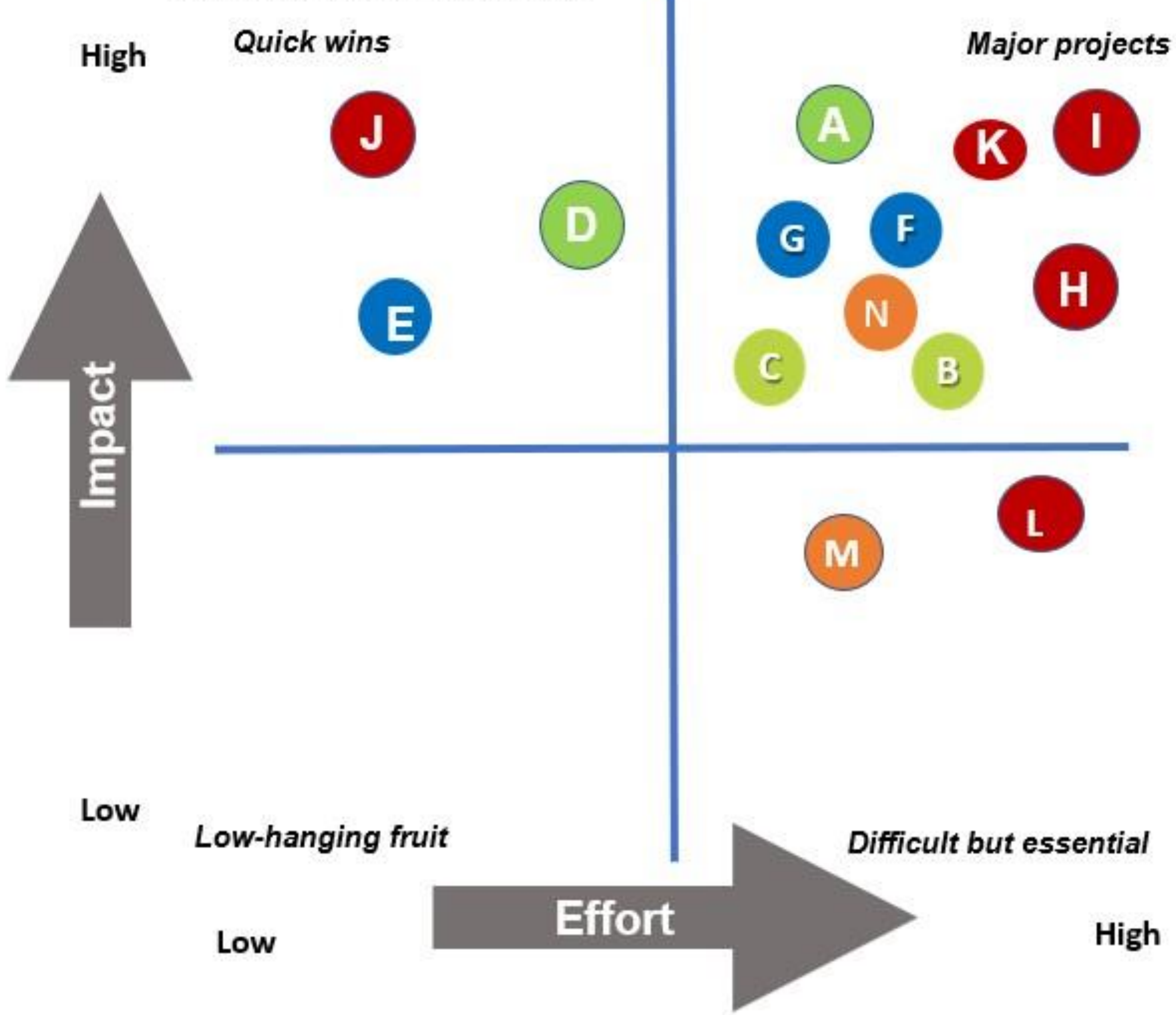
M. Identify Lancashire's critical strengths and competitive advantage as part of the North West Cyber Corridor

N. National and international marketing to attract talent and investment

Figure 9 Identity, marketing and promotion

Lancashire Digital Strategy: Prioritisation of Potential Interventions

VISION – By harnessing Lancashire's combined industrial, entrepreneurial and academic strengths in innovative applications of digital, data and cyber technologies, by 2035 Lancashire will be a globally significant economic powerhouse at the forefront of the next industrial revolution. Fuelling this growth will be an enviable ecosystem comprising world class innovation, skills and enterprise at its core, empowering Lancashire to leapfrog global competitors to become the fastest growing digital economy in the UK and the location of choice for businesses and investors.



Digital Ecosystem

- A. Increase engagement of digital supply chain with national investments in NCF and Innovation Enterprise Hub Hub
- B. Increase specialisation and focus on Innovation Driven Enterprises, at all scales from pre-start to exit, within digital 'spokes' in towns and cities across Lancashire
- C. Broker engagement of digital companies with customers and collaborative R&D opportunities in adjacent sectors through demonstrators and 'MVPs'
- D. Develop cross-sector, peer-to-peer learning networks to connect all points of the digital supply chain in Lancashire with existing innovation ecosystem and major industrial actors

Business Growth

- E. To increase engagement of the supply chain with Lancashire's existing investments in the innovation eco-system (e.g. EIC and AMRC NW).
- F. Develop regional angel networks to address need for "patient capital" to support development of small and larger scale-up businesses
- G. Build the pipeline of pre-start, start-up, smaller and large scale-up businesses to create resilience in the digital innovation ecosystem

Skills

- H. Careers inspiration and transformation of the school curriculum for computer science
- I. Develop a campaign to change national skills policy to embed digital within school curriculum
- J. Extend and expand flexible models of delivery, such as digital bootcamps
- K. Integrate provision of CPD to drive recruitment and retention
- L. Innovative and sustained approach to equality, diversity and inclusion

Marketing

- M Identify Lancashire's critical strengths and competitive advantages as part of 'North West Cyber Corridor'
- N National and international marketing to attract talent and investment

VISION

STRATEGIC IMPERATIVES

Significantly increase the number of digital **pre-start and start-up businesses** (including university spin outs)	Provide the conditions to allow more existing and new start businesses to **scale up** (demonstrate 20% + growth in jobs and revenues year on year)	Attract **inward investment** from two or three major digital employers	Increase the number of Lancashire businesses in all sectors using data and digital tools and services to **increase employment and productivity**	Greater **collaboration and partnership** between digital busineses and other priority sectors of Lancashire's economy, including advanced mobility, clean growth and health

ENABLERS

Digital skills and talent development, providing inspiration for children and young people in education, upskilling and reskilling the existing workforce to address skills gaps and shortages and attracting and retaining more skilled people	A best-of-breed **entrepreneurship and innovation ecosystem**, inspiring leadership and a culture of co-creation and collaboration	**Digital and physical infrastructure** to support clustering and knowledge exchange, linking existing digital workplaces to county-wide provision offered through Samlesbury Super Hub	An escalator of strategic interventions in grant, debt and equity funding and network building to **stimulate private sector investment**	Investment in **marketing and communications** to project a positive, rich, dynamic, and forward-thinking image of Lancashire
Digital Ecosystem	A	B	C	D
Business Growth and Investment	E	F	G	
Digital Skills and Talent	H	I	J	K L
Identity, Marketing and Promotion	M	N		

OUTCOMES

- **Lancashire has reclaimed its identity** as an economic powerhouse on the global stage, at the forefront of a digital industrial revolution
- Lancashire is the **fastest-growing digital economy** in the UK and increase the contribution of the digital sector to over £5 bn per annum
- **Lancashire is the location of choice** for businesses and investors looking to develop and apply innovative digital solutions to significant global challenges in advanced mobility, supply and distribution of clean energy and net zero technologies, cyber security and health
- The benefits of improved skills and better access to job opportunities are available to everyone in Lancashire, regardless of race, creed, colour, gender, disability, sexual orientation or socio-economic background, leading to a **better quality of life and standard of living for all**
- **Lancashire has leapfrogged** other UK and international regions by focusing on its strengths

Lancashire
Enterprise Partnership

Next Steps

Digital

Lancashire Enterprise Partnership

Next Steps

- Lancashire's unique strengths in digital as outlined in this report, along with recent investment decisions have the ability to establish the county as a major contributor to the UK's technology ecosystem.
- Our aspirations are ambitious, however by making use of a range of policy and fiscal interventions, as well as the knowledge collateral of stakeholders, the sector has the potential to achieve transformational change.
- The essential next step is to translate the Digital Strategy into an Implementation Plan, developed by stakeholder Task and Finish Groups.
- The Task and Finish Groups will be aligned to our 4 areas of intervention: developing the digital ecosystem; business growth and investment; transforming digital skills and talent; identify, marketing and promotion.
- The digital ecosystem evolves rapidly by comparison to other sectors. As a key growth sector and primary enabler of many other sectors of growth, a plethora of initiatives are emerging across the county, via interventions of local authority, the education sector, businesses directly, national government departments and other agencies and organisations.
- The Task and Finish Groups will consult widely with these stakeholders to develop an Implementation Plan which recognises and reflects these initiatives within the Digital Framework and seeks to identify any additional gaps to be commissioned within the Plan.
- The Implementation Plan will also articulate the alignment of all elements of the LEP's Strategic Economic Framework, including the Skills and Employment Framework, Innovation Strategy and Plan, Internationalisation Strategy, Finance for Business Plan and other Sector Plans.
- The business-led Digital Sector Group will provide oversight and direction to the Task and Finish Groups and the final Implementation Plan, review progress of delivery and monitor impact on the ground at appropriate intervals.
- In recognition of the very dynamic and fast changing nature of this sector, and emerging opportunities such as the successful establishment of National Cyber Force in Lancashire, a number of specific initiatives will be progressed in parallel with the Implementation Plan - major projects, quick wins and essential enablers.

Digital

Next Steps

Digital Sector Group (industry, academia, local government)

DIGITAL SECTOR PLAN

Wider Stakeholder Engagement

Formation of stakeholder 4x **Task and Finish Groups:**

Developing the digital ecosystem
Business growth and investment
Transforming digital skills
Identity, marketing and promotion

3yr IMPLEMENTATION PLAN

OUTCOMES

Evaluation,
Feedback & Review

Lancashire
Enterprise Partnership

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Digital