

Knowledge Exchange Framework Narrative 2023

Local Growth and Regeneration

Lancaster University's vision of being a globally significant university is consistent with our civic responsibility as a local anchor institution focussed on facilitating regional economic, cultural and societal change.

Partnership is core to Lancaster University's ethos and our industrial hinterland has driven our focus on collaboration with regional Small and Medium Sized Enterprises (SMEs).

We engage with partners to support innovation through Knowledge Exchange collaborations that are mutually beneficial. Our Strategic Plan reinforces our commitment to being "a key catalyst in positioning the North West as a beacon for positive economic, health, social and educational change" and we demonstrate this through strategic partnerships on regionally transformational projects including Eden Project Morecambe and the National Cyber Force.

Strategy

Lancaster University's approach to local growth is tailored to support Small and Medium Sized Enterprises (SMEs) in the region. Unusually for a top 15-ranked, research-intensive university, this approach was a deliberate decision to focus on connecting our academic strengths in alignment with the structure of our region and the needs of our local economies, supporting the development of innovative supply chains for key sectors including aerospace, cyber security and energy. This SME-centred strategy has delivered benefits beyond the region, with positive and measurable impacts across the UK, Europe, Africa and Asia – for example utilising our innovation collaboration programme models to develop partnerships through our overseas campus in Leipzig.

By becoming 'business as usual', this approach has allowed us to harness our undergraduate and graduate talent to provide the necessary absorptive capacity to facilitate these collaborations, whilst enhancing **graduate employability and retention** in our region. This is key to our strategic approach and essential to the locality, given productivity in both Lancashire and Cumbria is approximately 15-20% below the UK average (<https://tinyurl.com/mrmnm6rt>), caused by, and in turn compounding, a legacy of skills gaps in key sectors and relatively low levels of innovation. SMEs account for 99.7% of all businesses in those two counties. In Cumbria, SMEs that employ fewer than 50 people constitute >98% of all businesses (<https://tinyurl.com/2p86yenc>) and over 75% of all businesses in Lancashire employ fewer than 4 people (<https://tinyurl.com/uwyhk8fe>). This means that SME growth and sustainability have a major impact on regional employment and prosperity.

Lancaster University began deep and broad engagement with its local SME community in 1998, following an initial £200,000 European Regional Development Fund (ERDF) grant to support 40 Lancashire-based businesses. Lancaster is now recognised as a national exemplar in driving SME innovation-led growth. We have supported almost **15,000 SMEs**, creating/safeguarding more than almost **18,000 jobs**, thereby achieving significant economic and social impact regionally and nationally.

Our [2021-2026 Strategic Plan](#) is clear that we will work with existing and new partners for the benefit of the wider Lancashire region and the UK building strong communities and exploring the potential to develop this model for engagement internationally. In doing so, we will realise the full potential of flagship opportunities to enable researchers, businesses, local authorities and policy-makers to advance local and national thinking, planning and implementation of transformative opportunities.

We contribute to **regional economic growth** within Lancashire and broader Local Enterprise Partnerships (LEPs) across the North, working with regional HEI partners through a series of business innovation collaboration programmes now worth >£100M supported largely through European Structural and Investment Funds (ESIF). These are focussed on key local, regional and national priority areas and challenges including productivity (particularly in SMEs), **healthcare challenges** (focused on rural populations in Lancashire-Cumbria and our coastal regions), **leadership and management, the move towards net zero** and an increasing focus on a **secure digital/data driven economy**.

These innovation collaboration programmes directly contribute to levelling-up priorities Since 2016, they **have supported over 2,500 SMEs and created over 450 jobs** with the potential to increase to **over 3,000 SMEs and in excess of 600 jobs** when these projects finish later in 2023.



Figure 1 - Locations of SMEs supported through Lancaster University's regional business innovation collaboration programmes 2016-2022 across the North West (LU = geographical position of the university)

Activity

Lancaster University collaborates with all five North West LEPs to ensure activities align to their economic, skills and innovation related plans. We have held a seat on key Lancashire LEP Boards and the North West Business Leadership Team ([NWBLT](#)) and are an active member of the [N8](#) partnership, a collaboration of the eight most research intensive Universities in the North of England. We have developed strategic alliances with local authority, HEI, FE college and industrial partners, and we have confirmed our commitment to our local communities through the [Civic University Network](#).

Specific examples of our activities include:

Lancashire Universities Innovation Manager (LUIM)

The LUIM role was created in partnership with the universities of Central Lancashire and Edge Hill to enable a more strategic approach to our collaboration with the Lancashire LEP. Initiatives include:

- Creation of an Innovation Framework to help guide the universities to align their regional activities with the emerging LEP strategy;
- Research and policy guidance for economic development strategies, alongside Lancashire LEP, Lancashire County Council (LCC) and the Department for Business, Energy and Industrial Strategy (BEIS). This included the creation of an Innovation Board in 2020 on which Lancaster represents the Lancashire universities and a new Innovation Strategy launched in 2022;
- Influencing wider innovation policy through input to the NP11 Innovation Group (representing all of the Northern LEPs) to develop a Northern Challenge Fund to level R&D spend towards the North with priorities for Clean Growth and Health Innovation;
- Leading the collaboration between Lancashire, Cheshire and Cumbria LEPs to develop joint strategies on Clean Growth and on leading the national 'green recovery' from the North West through the Massachusetts Institute of Technology Regional Entrepreneurial Acceleration Programme (MIT-REAP). We were one of only six regions invited to participate in the new national pilot sponsored by BEIS and focused on the stimulation of place-based innovation ecosystems. Building from the evidence base of our Science and Innovation Audit focused on Clean and Sustainable Growth, our team have focused on the development of proposals that nurture a North West 'green recovery', including SME innovation support programmes, a clean-tech accelerator network and aligned net-zero focused investment funding.

Flagship Opportunities – Net Zero

The **Centre for Global Eco-innovation (CGE)** led by the Lancaster Environment Centre (LEC) is represents a nationally leading initiative in SME partnership-working for sustainable innovation and clean growth. It is now established as a designated multi-disciplinary university research centre. Eco-I North West is a £14M programme delivered by CGE that is working with more than 360 businesses across Lancashire, Liverpool City Region, Cumbria, Cheshire and Greater Manchester to support R&D-led innovation in clean growth technologies, products and services to drive a green economic recovery. Collaboration with five North West (NW) based universities ensures businesses across the NW are capitalising on the region's knowledge base and research talent through supporting 70 PhD and MRes studentships. The original three year CGE programme saved 27,000 tonnes CO2 equivalent, 78,000 tonnes of water use and 60,000 of materials use.

Lancaster University supported a successful £50M Levelling Up Fund bid for Eden Project Morecambe – EPM (the largest investment possible) led by Lancaster City Council in partnership with the Lancashire LEP, LCC and the Eden Project. [EPM](#) will significantly regenerate the area, create over 2000 new jobs (directly and indirectly), bring an estimated 740,000 visitors to the area annually and enable multiple opportunities for KE and research. The partnership with the Eden Project already established the Morecambe Bay Curriculum in 2020, a unique pre-natal to 25 years curriculum that promotes green, practical pathways to learning in the natural environment of the Bay. There are more than 50 partners involved including nurseries, primary schools, secondary schools, colleges, universities and representation from the public, private, health and third sectors.



Figure 2 - Proposed Eden Project Morecambe Site

Flagship Opportunities – Security and Protection Science

Lancaster University is the lead academic partner in the new Manchester **Digital Innovation and Security Hub (DiSH)**. Led by Barclays Eagle Labs, and partnered with Plexal and Manchester University, DiSH is a place for collaboration between Manchester's business and entrepreneurial community, leading academics, public sector organisations and the voluntary sector to identify digital security threats and provide innovative responses to them. The hub offers co-working space as well as access to state-of-the-art equipment and facilities, allowing business residents to develop and test their products and services rapidly. The DiSH is located in an 11,000ft² state-of-the-art space in Manchester city centre, together with GCHQ and the National Cyber Security Centre (NCSC). The facility builds on our NCSC recognition as an Academic Centre of Excellence in both Cyber Security Education and Research, successful delivery of two SME innovation support programmes in Lancashire and Manchester that use cyber security practices to enable business growth, and our Secure Digitalisation Enterprise Zone.

Lancaster was also part of a Lancashire-wide partnership of key anchor organisations, namely the LEP, BAE Systems, LCC and the University of Central Lancashire (UCLan), working with the Ministry of Defence and GCHQ to ultimately secure the location for the new **National Cyber Force (NCF)** in Samlesbury. This inward investment of £5Bn by Government to create a capability of up to 3,000 cyber specialists represents a transformational levelling-up opportunity for Lancashire. Lancaster's cross-institutional strengths across cyber and security were described as 'pivotal' to the decision to locate the NCF in Lancashire.

The [Lancashire Cyber Alliance](#) was recently launched, supported by the LEP and Digital Skills Partnership. It is a spoke of the North West Cyber Security Cluster ([NWCSC](#)), which provides a voice for the region and is affiliated with the UK Cyber Cluster Collaboration (UKC3). It is the ambition of Lancaster and partners to create a North West "cyber corridor" from Manchester to Lancaster and beyond.



Figure 3 - Collaborative Working Space at the DiSH

Deepening Relationships and Creating Clusters

Lancaster has recently focused on deepening relationships with Local Authorities across Lancashire and Cumbria; building on established partnerships with regional HEIs (such as UCLan, Edge Hill University – EHU and University of Cumbria – UoC) and using our Community Renewal Fund (CRF) projects as a pilot for activities funded through future UK Shared Prosperity Funding (UKSPF), the successor to ESIF. Our CRF projects focussed on creating place-based clusters of key stakeholder organisations (from across private and public sector, HE and Further Education), to develop localised innovation ecosystem collaborations leading to an increase in the proportion of Innovation Driven Enterprises (IDEs) across our region. This is our [Innovation Catalyst](#) approach developed by academic expertise from our Management School (LUMS).

Working with a range of organisations in Blackpool, we explored opportunities to create an innovative digital sector, built around a cluster of ethically powered data centres, which operate on renewable energy and redistribute excess energy into social heat networks using ground-breaking green technologies. Working with broader organisations across wider Lancashire, we set out to build resilient, sustainable innovation ecosystems in the manufacturing and engineering sectors; particularly focussing on challenges posed by the net carbon zero agenda and cyber security threats. We engaged with almost 180 organisations through these Innovation Catalysts, creating a platform for sustained collaborations and follow on activity has already started to emerge, in particular from Blackpool, where collaborative Innovate UK proposals are being developed.

Through these activities, we have supported the emergence of a business-led [Electech Innovation Cluster](#) across the Morecambe Bay region which comprises a range of SMEs led by highly motivated, entrepreneurial individuals with a strong connection and commitment to their place and the role of University as an innovation anchor and talent pipeline. The Cluster, which we have joined, is already attracting interest from InnovateUK and the NWBLT as a key emergent regional innovation cluster.

Results

In 2019, Lancaster University commissioned an independent economic evaluation of our business innovation collaboration programmes funded through European Structural and Investment Funds (ESIF). Almost 200 SMEs were surveyed to assess the impact of the support they had received from the University. The evaluation provided us with an independent assessment of our work, whether our offer was fit for purpose and represented perceived and measurable value for both beneficiaries and funders. The forecasted impacts to December 2023, cumulative across all programmes and individual SME level are shown in Table 1.

Forecast Impacts to Dec 2023 (cumulative)	Forecast Average Impact per SME by 2023
Over 3,200 net FTE jobs created/safeguarded	2.6 net jobs created/safeguarded
A net turnover impact of £440m	£353,015 net uplift in turnover
A net profit increase of £86m	Increased net profit of £68,854
Every £1 of ESIF returns £28.55 of additional economic benefit	

Table 1 - Economic Benefits Resulting from Lancaster's Current ESIF Programmes

The evaluation also examined the beneficiary experiences as well as the economic impacts and 99% agreed delivery approaches were fit for purpose. Beneficiaries were asked what the biggest impact of participation had been on their business, in their own words. Common responses focused on benefits arising from 'networking', 'peer support', 'increased confidence' as well as via securing 'support and advice' and 'new knowledge'.



Figure 4 - Impacts Reported by Regional SMEs participating in Lancaster Business Innovation Collaboration Programmes

The evaluation also asked SMEs to consider emerging themes how delivery could be improved for future programmes. This is important not only to inform Lancaster’s own activity, but also ESIF-successor funding schemes such as UK Shared Prosperity Fund. This helps to ensure Lancaster University further evolves our role as a regional anchor institution to impact positively on local growth and regeneration across Lancashire, the wider North West and beyond.

Direct quotes from participants in these programmes appear below and show the wide range of positive effects experienced as a result of collaborating with Lancaster University.

Project Focus & Geography	Quote from SME Beneficiary
Net Zero Lancashire	“The project has made us realise that however small the enterprise, through a number of small changes, we can reduce our carbon footprint at very little cost.”
Innovation Leadership Lancashire	“As a result of the knowledge and support gained I have restructured our board of directors and begun writing a new strategy to underpin our plans to scale our work across the UK. We have gained new funding from Arts Council England and I'm much clearer about the direction we're taking as a whole organisational approach.”
Health Innovation Lancashire	“Being able to develop technology prototype to take to market which I could never have done alone. This will set me apart from my competitors and allow the business to grow.”
Student & Graduate Placements Lancashire	“Since the project, I have won a grant, my products have been improved and I have employed 2 graduates from the University; in short the experience has been life changing.”
Net Zero Cumbria	“Is a very well organised centre who are very good at finding the right person for my company and project. Have made strong contacts with the university and feel that the collaboration was natural fit.”
Innovation Leadership Cumbria	“The experience was very positive, particularly the peer to peer support group that has continued since the completion of the course.”

Table 2 - Quotes from Regional SMEs Highlighting Impacts Achieved by Participating in Lancaster Business Innovation Collaboration Programmes

We have continued to use independent external evaluation for Community Renewal Fund (CRF) projects delivered more recently during 2022. The Blackpool Innovation Catalyst focused on the concept of green data centres that also help level up the area by making a substantial contribution to the net zero agenda and employment growth. Blackpool was seen as having an advantage in this area due to the international fibre network connecting the United States to mainland Europe, which enters the UK in Blackpool, and the high levels of power generation in the North West, which makes Blackpool an ideal location for data centres and green power generation. A survey of participants found the Innovation Catalyst:

- has addressed the needs and opportunities facing Blackpool;
- has been successful in bringing appropriate partners together to support the regeneration of Blackpool;
- has the potential to lead to public and private sector investment in Blackpool;
- has the potential to lead to the growth of a digital cluster in and around Blackpool;
- has the potential to lead to Blackpool becoming a demonstrator location for re-using heat from data centres;
- has the potential to lead to Blackpool becoming a strong location with regard to the growth of renewable energy technologies;
- has the potential to lead to an improved image of Blackpool.

Figure 5 shows a Graphic Recording undertaken by an external illustrator at the final collaborative event, where delegates review and reflect on the activity to date. It creates focus for next steps and actions required to take things forward, identifying additional stakeholders who would be instrumental in enacting the new actions. A larger version of the image is available [here](#).

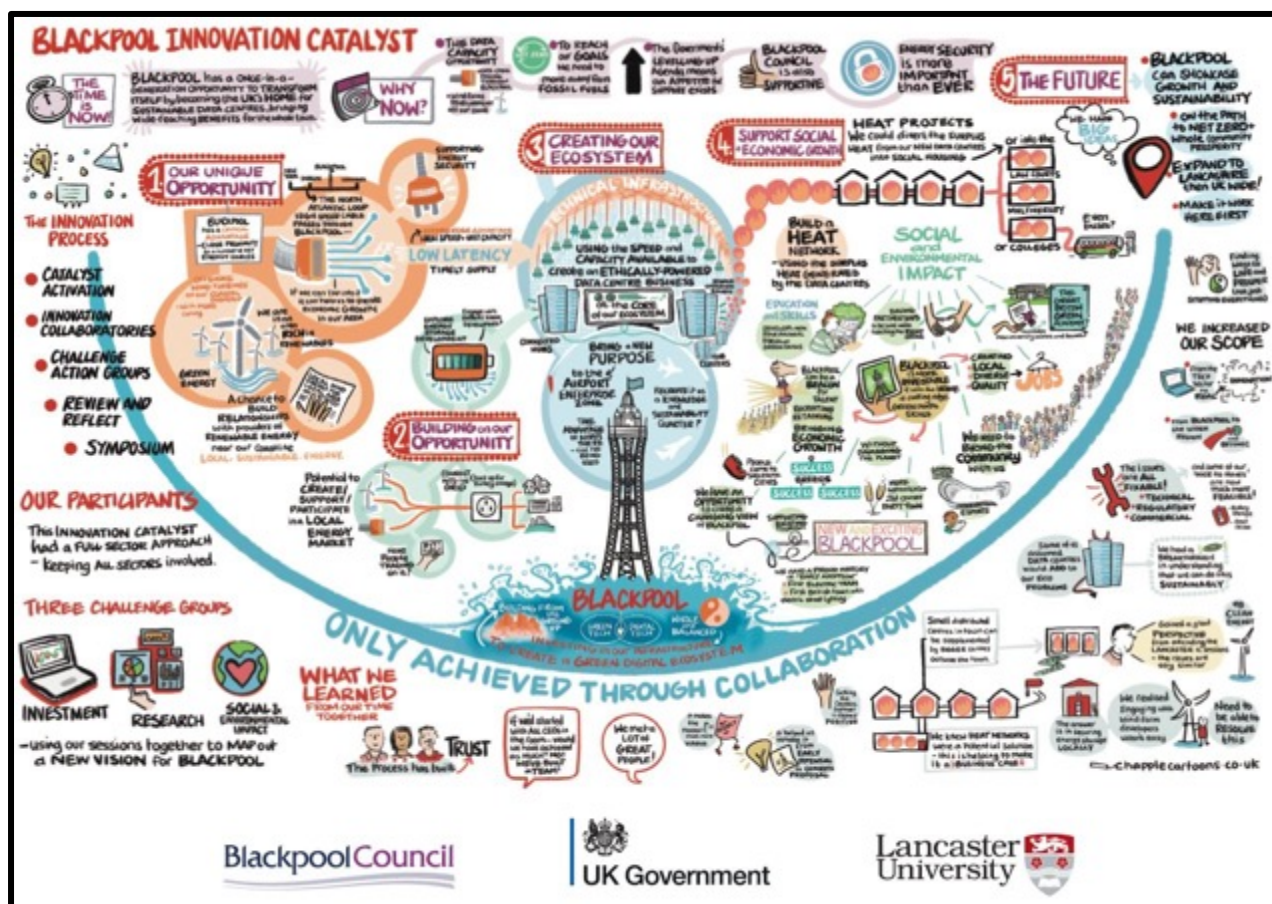


Figure 5 - Graphic Recording of the Blackpool Innovation Catalyst Project showing activities undertaken, learning and next steps agreed by participants