



UNIVERSITIES IN THE NORTH POWERING REGIONAL ECONOMIC GROWTH





“Sustained economic growth is the only route to the improved prosperity of our country...Growth is now our national mission.” Rt. Hon Rachel Reeves MP, Chancellor of the Exchequer, July 2024

Research and innovation are vital for generating long term economic growth.

In the North of England, the N8 Research Partnership, made up of eight world-class universities forms a ‘Golden Octagon’ across the region. Powered by collaboration with business and local and combined authorities we are engines of economic growth and creators of highly skilled jobs where these are most urgently needed.

Underpinned by world class research, innovation, impact and education provision, we are uniquely placed to help the Government deliver its missions of

- *Kickstarting economic growth*
- *Making Britain a clean energy superpower*
- *Taking back our streets*
- *Breaking down barriers to opportunity*
- *Building an NHS fit for the future*

Working with the Golden Octagon to reinforce the strength of the innovation economy in the North of England offers the potential to dramatically improve the productivity of this part of the UK. These case studies show how N8 universities are leading the way in delivering this Government’s missions. Our strong partnerships with the public and private sectors accelerate the uptake of new innovations and provide access to the vocational and academic skills businesses need, giving opportunities for all.

The 'Golden Triangle' has successfully demonstrated that research and innovation can drive economic growth, unlock investment and create jobs across the Greater South East. The N8 Research Partnership forms a Golden Octagon across the North of England that can power productivity growth and improve health and standards of living for its population and the wider UK.

Find out more about the N8 and how we can deliver the missions together via the QR code.



Solving the cyber problems of today and the future

The establishment of the National Cyber Force in Lancashire represents a unique opportunity for the region to revolutionise how we stay safe online. The North West will need 30,000 highly skilled core cyber jobs with the sector’s economic output quadrupling to £2.8bn. Accredited by the National Cyber Security Centre, Lancaster University has invested £19m in cutting-edge research and teaching facilities including state-of-the-art labs supporting large scale data sets and The Lens – a co-working space to facilitate government, business and academic interactions that creates a unique collaborative environment.

Our approach to cyber security is helping to rethink the cyber skills and talent pipeline.



Small modular reactors - accelerating the UK’s clean energy ambitions

The University of Sheffield’s Advanced Manufacturing Research Centre will house Rolls-Royce SMR’s new multi-million pound facility to manufacture and test prototypes for small modular reactors (SMRs). This first phase of £2.7m is part of a £15m+ project underpinning the Rolls-Royce SMR programme, which aims to deploy ‘factory-built’ nuclear power plants, each providing enough low-carbon electricity to power a million homes for more than 60 years. The University, the Mayoral authority and industrial partners are working together to support clean energy and manufacturing R&D, creating jobs and driving economic growth in South Yorkshire and across the UK.



Harnessing biotechnology for sustainable industrial futures

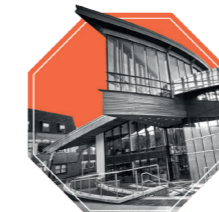
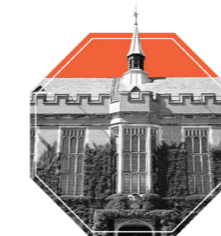
The Industrial Biotechnology Innovation Catalyst (IBIC) is a £5m initiative to promote industrial biotechnology in the North West. Led by University of Manchester in partnership with University of Liverpool, IBIC will accelerate knowledge exchange, skills development, and innovation in industrial biotechnology. With a market potential exceeding £34bn in the UK, industrial biotechnology could transform industry by using nature’s own mechanisms to find alternative and more sustainable biological routes to manufacturing. IBIC is expected to stimulate £2.5m cash and £4m in-kind co-investment, establish 150 collaborative projects, train 200+ students, create up to 100 green jobs, and attract further investments, delivering a 3:1 economic return.



Industrial collaboration for health and wellbeing

University of Liverpool and Unilever, through their long-term strategic partnership, established the Materials Innovation Factory (MIF) – a world-class centre for materials chemistry and microbiome research. It is home to one of the highest concentrations, globally, of materials science robotics.

The MIF ensures the Liverpool City Region boasts the best academic labs in the world, enabling world-leading human microbiome research – exploring how the skin microbiome contributes to wellbeing, resulting in the development of first-to-market toothpaste and skincare products. To date, the MIF has generated nearly £100m in investment and actively contributes to economic growth across the city region and beyond.



Developing place-based health innovations at scale

In response to the universal challenge of older, poorer, sicker, and less productive populations, Newcastle University and development partners Genr8 Kajima Regeneration Ltd are developing a Health Innovation Neighbourhood (HIN) in the city’s West End.

Drawing on Newcastle’s world-leading research and innovation, HIN aims to reshape approaches to preventative healthcare, reduce inequalities, and provide a model for holistic community wellbeing, future global health practice, and neighbourhood place-making. By providing a real-world test bed for new educational approaches, research and innovation, and engagement, HIN presents a unique opportunity to do this at a scale not yet achieved elsewhere in the world.



Economic growth through the creative industries

York is at the centre of a burgeoning digital and creative sector. XR Stories, a partnership with the British Film Institute and Screen Yorkshire, has brought new jobs and training to the region and provided funding and support for hundreds of young film makers and digital developers, by leveraging co-investment of nearly 4 times its original budget. CoSTAR Live Lab brings together the University and key industry players through a new state-of-the-art R&D facility at Production Park near Wakefield, which is at the forefront of innovation for live events and performances. It will also significantly contribute to economic growth and job creation by incubating startups and delivering training.



Supporting future generations from day one

Through Child Health Outcomes Research at Leeds (CHORAL), the university is working with the Leeds Teaching Hospitals NHS Trust and Leeds Hospitals Charity to ensure that children’s social and educational mobility is not held back by childhood disease. In collaboration with the City Council, the My First 1000 Days project will reduce the impact of inequality, increasing life chances and reducing costs on the State.

Collaboration with local and national partners – including the Royal Foundation (HRH Princess of Wales visited last year), Careers Teachers, and Red Kite Teacher Training – has been vital in enabling students to gain practical experience and deliver real-world impact in childcare settings.



Delivering net zero in the UK maritime sector

Durham University is leading a £21.3m UK National Clean Maritime Research Hub (UK-MaRes Hub), jointly funded by UK SHORE and EPSRC. The Hub undertakes innovative research in marine fuels, propulsion systems, port operations and infrastructure, maritime operations and vessel efficiency in order to realise the social and economic benefits of transitioning to a clean maritime future.

The UK-MaRes Hub is a consortium of 13 universities, plus over 70 partners from across the maritime and shipping sector. To date 16 new roles have been created, and the first research conference was attended by 120 delegates from academia, industry and government.

Rebuilding the partnership between government and universities

The 'Golden Octagon' of the N8 universities in the North of England can help this mission-led government to drive economic growth fuelled by R&D, investment, and high-skilled job creation, in the way the Golden Triangle does in the Greater South East.

The government can help the Golden Octagon deliver this ambition, by:

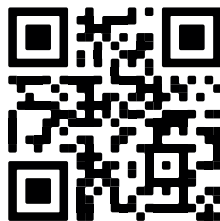
- › *Setting long-term budgets and investment priorities that support place-based development*
- › *Investing a globally-competitive % of GDP in R&D and addressing regional imbalances in funding*
- › *Strengthening transport connectivity across the North to support the innovation ecosystem, job mobility, and turbo charge economic growth*
- › *Championing collaboration between local leaders, universities, businesses and investors*



The N8 Research Partnership is the leading university alliance, based in the North of England. We stand together, renowned for our shared ambitions and collective action, powered by our networks and relationships, and underpinned by our world class research, innovation, impact and education provision.

We seek to create an environment where universities, businesses, policymakers and citizens build meaningful collaborations delivering impact for our region and beyond, with the N8 universities as essential foundations in a dynamic pan-regional innovation network.

Durham University
Lancaster University
University of Leeds
University of Liverpool
University of Manchester
Newcastle University
University of Sheffield
University of York



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