

## A **BRIGHT** FUTURE

A BRIGHT FUTURE: PLACES AND PEOPLE

Boosting the strength and wellbeing of UK communities

RUSSELL GROUP

A **BRIGHT** FUTURE

> OUR VISION IS FOR A HEALTHY, GREEN AND MORE RESILIENT UNITED KINGDOM, WITH A THRIVING INNOVATION-DRIVEN ECONOMY AND COLLABORATIVE APPROACHES BEING TAKEN TO TACKLE MAJOR CHALLENGES.





### The Government's ability to deliver this vision will be shaped and determined by the strength of cities, towns and communities across the UK and by the partnerships that can be harnessed to make the most of the opportunities and resources available.

Partnership is at the heart of the university ethos – in particular, for researchintensive universities such as those in the Russell Group. Working with schools, colleges, local authorities, the NHS, businesses and charities, our universities use their scale, research excellence and global links to provide solutions for real problems facing families, businesses and public services.

Right across the country, Russell Group universities are working for the good of their places, re-energising communities and laying the foundations for success.

Our institutions play a unique role in the UK. Their impact can be seen in everything from the young person inspired to pursue higher education as a result of a university museum visit, to local small businesses benefitting from access to new facilities and investment, to major international collaborations in cutting-edge technologies that have the potential to drive regional economic growth and shift the dial on missions like climate change.

Russell Group universities are leaders in their areas, filling regional skills gaps and attracting global talent and investment to drive health, social and economic progress across the country. They provide a bridge between public investment in education and research, and private innovation and development with the potential to transform our economy and society.

As custodians of collections and artefacts from our history, and home to hubs offering access to live music, theatre and visual arts, they are also connecting people with the past and helping expand cultural horizons.

Anchored in their communities, Russell Group universities are global institutions which have a vital role to play in cities and towns in every corner of the UK. From inclusive economic growth to Net Zero, from local health services to access to learning, we are ready to work with the Government to change lives, create wealth and make every part of the UK better off.

## **BUILDING HEALTHY COMMUNITIES**

THROUGH RESEARCH, PARTNERSHIPS WITH THE NHS AND BY TRAINING THE NEXT GENERATION OF CLINICAL STAFF, RUSSELL GROUP UNIVERSITIES ARE ENSURING R&D BREAKTHROUGHS HAVE A LOCAL AND NATIONAL IMPACT AND THAT PROBLEMS LIKE NHS WAITING LISTS CAN BE TACKLED TO BUILD HEALTHIER COMMUNITIES.

Russell Group universities work with local partners to identify health needs and provide targeted solutions in their communities – investing in research into new treatments for diseases which affect particular groups, and identifying and closing gaps in health services that have left people struggling to see doctors, dentists or other medical professionals.



#### Closing community healthcare gaps

### As key partners for the NHS, Russell Group universities work hard to help identify staff and service shortages and provide solutions for their communities.

Representing nearly half the medical schools in the UK, Russell Group universities have a record of delivery for the NHS, providing medical education informed by and drawing on cutting edge research that is delivering new treatments and technologies for health services.

Russell Group universities are using their expertise in medicine and excellence in life sciences research to bring together partners to tackle community healthcare needs: whether this is through supporting a precision medicine cluster in Scotland that will save lives and cut NHS costs, or working with other universities to extend medical education into new areas where there are significant shortages of clinical staff.

University of Nottingham

The **University of Nottingham** partnered with the University of Lincoln to open a medical school to help address NHS recruitment challenges in Lincolnshire.

As the second largest county in England with a rural and ageing population, Lincolnshire has traditionally struggled to recruit and retain doctors and other healthcare professionals. The shortage of doctors at the county's hospitals and GP surgeries has been described as critical by NHS leaders, especially during winter months.

Students at the medical school study for a University of Nottingham medical degree at the University of Lincoln. Clinical placements take place at hospitals, GP surgeries and other healthcare units in the county in collaboration with United Lincolnshire Hospitals NHS Trust and the Lincolnshire Partnership NHS Foundation Trust. Since the medical school opened in 2018, Nottingham's partnership has helped Lincoln build capacity and move towards independent, high-quality provision.



Mountain Ash Primary Care Dental Unit is a modern, purpose-built clinic situated in an area of high dental need in South Wales. It is estimated that 10,000 people in the Cynon Valley do not have access to a dentist. The 'state of the art' Unit, located at Ysbyty Cwm Cynon ("Cynon Valley Hospital") was developed to be reflective of general practice and provides a wide range of free dental care for local residents unable to access regular dental care. It is part of a wider outreach programme developed by Cardiff University School of Dentistry across Wales with the aim of enabling the local populations to attain a high standard of dental health.

Built on the success of the first Primary Care Clinical Teaching Unit at St. David's Hospital, Cardiff, the 18-chair clinic at Mountain Ash was opened in 2012 through a **partnership between Cwm Taf Local Health Board, Cardiff and Vale University Health Board, Cardiff University and the Welsh Government.** 

Students commence their clinical training at the Unit in their final year and attend the Unit approximately once a week during this twelve-month period. The Unit provides training for dentists, therapists and hygienists. Dental students are provided with one-to-one nursing support. **Emphasis is placed on developing their ability to work effectively with all members of the team, including their dental clinical practice colleagues and the onsite dental laboratory.** 

#### Community-led health research

#### More than 90% of Russell Group research is rated as world-leading or internationally excellent.

In health and life sciences, cutting-edge research that is having a global impact is often driven and informed by healthcare challenges facing our universities' local communities.

Links with community organisations, charities and others have helped teams within Russell Group universities build clear pictures of areas where research is needed to boost wellbeing and address health inequalities.

Partnerships with local authorities, NHS trusts and community leaders are supporting research programmes that are working with local people to deliver effective solutions.



South Asian communities have some of the highest rates of heart disease, diabetes, and poor health in the UK. Genes & Health is a **Queen Mary** University of London research study set up to help fight against these and other major diseases.

By involving large numbers of local Bangladeshi and Pakistani people, the study hopes to find new ways of improving health for communities in the UK and worldwide. Previously, few large research studies included people from South Asian populations meaning public health insights and risk estimates have been inaccurate for British people of Bangladeshi or Pakistani heritage.

Delivered in partnership with Barts Health NHS Trust, primary healthcare groups and East London community groups, Genes & Health will bring equality and the benefits of genomics in modern medicine to local communities which are currently under-represented in clinical research.



Researchers at **King's College London** are helping Lambeth Council lead a five-year community health project that is **boosting understanding of** community health inequalities in South London.

Launched in 2022 with funding from the NIHR, Lambeth HEART is a Health Determinants Research Collaboration programme that is **working with** community groups to shape research priorities and develop evidencebased policy interventions to improve health and wellbeing outcomes for local residents.

Early work with the community included visits from the Lambeth HEART team to health and wellbeing hubs, schools and community spaces, alongside workshops to encourage the engagement of local voluntary sector organisations, faith groups and social enterprises.

**Russell Group** universities employ more than 4,200 (FTE) clinical academics

#### Supporting healthy lives

Through access to sporting facilities, outreach work with local schools and other groups, and making broader wellbeing support available for people who need it, Russell Group universities provide essential community health resources and are easing pressure on the NHS by helping people live healthy lives.

Programmes delivered by Russell Group universities in many areas of the country help promote a holistic approach to wellbeing which can help reduce demand for stretched healthcare services, particularly amongst vulnerable or hard to reach populations with complex needs.



# delivery of the School Games Programme.

200 Durham students are actively involved in delivering sports activities in the community, with 4,000 children participating regularly. Team Durham hosts junior sports clubs across a range of sports, with the University's Sport and Wellbeing Park welcoming more than 2,700 visitors from the community each week. **10,000 members of the wider** community access Durham's sports facilities each year and 17 community clubs or regular activities are based at the university sports facilities.

Wewcastle University

Newcastle University, in partnership with Genr8 Kajima Regeneration Ltd, will transform the former 29-acre General Hospital site in Newcastle's West End into a Health Innovation Neighbourhood (HIN).

The new site will give the North East of England a world-class centre for research and innovation, focused on ageing and living well as it **promotes** new ways of living that lengthen people's 'health span' as well as life span.

The project aims to combine health, research, and community amenities, and support local economic and infrastructure development.

As HIN develops, leveraging Newcastle University's leadership in ageing research, the site will provide new academic hubs, NHS and other healthrelated facilities, residential, business, community, and leisure spaces.

The mixed tenure residential space will comprise inter-generational living, later living and supported living homes. It will also include specialist housing for those living with dementia, drawing on best practice across the globe.



Newcastle's Health Innovatio Neighbourhood development Credit: Newcastle University



**Durham University's** Community Sports Development programme provides members of the local community with access to a range of wellbeing opportunities, which include working with Durham City and Chester-le-Street School Sports Partnership to host festivals and events. The University also works with County Durham Sport to support the



## A CULTURAL AND HERITAGE RESOURCE FOR THE UK

THE UK IS A CULTURAL AND HERITAGE POWERHOUSE. THROUGH RESEARCH, INNOVATION, TEACHING AND BY INVESTING IN FACILITIES, RUSSELL GROUP UNIVERSITIES ARE SUPPORTING SECTORS WHICH BENEFIT THE HEALTH AND WELLBEING OF PEOPLE IN COMMUNITIES IN EVERY CORNER OF THE UK.

## Partnerships with councils, arts and cultural organisations helped universities protect community resources through the pandemic and, today, find new ways to benefit local people.

With a period of high inflation meaning many organisations are still facing significant funding pressures, university museums provide children, families and community groups with education and entertainment through local outreach activities, alongside their vital work to protect the UK's cultural heritage.

Our universities provide community cultural and heritage resources which play a crucial role in helping people access performances, learn more about our shared history and boost their wellbeing through engagement with the arts.



University of Southampton

In 2022/23, the **University of Southampton's** music venue, Turner Sims Southampton (TS), presented 114 live concerts attracting 18,309 attendees, including 1,560 students and under 18s.

Over the year, TS offered 19 free events to widen access to the joy of live music. **This included four School Concerts, enabling 655 pupils from local schools to experience a diverse international line-up of artists.** In addition to school partnerships, TS is working with local Early Years settings and regional Music Education Hubs to develop early opportunities for engagement in the arts.

In July 2023, TS hosted a free Family Day, filling the venue and the grounds of Highfield Campus with music, performances and workshops. 19 artists took part and 1,200 people attended, many for the first time. **A high proportion of families came from Southampton SO16 and SO17 postcodes, achieving the university's ambition of reaching hyperlocal communities all contributing to the National Plan for Music Education.** 



University of Southampton Turner Sims Summer Family Day 2023. Credit: Nosa Malcolm



**The University of York** leads an annual Festival of Ideas which provides the local community and visitors with access to a series of predominantly free events to educate, entertain and inspire audiences of all generations and backgrounds.

In 2023, the university worked with **131 local, national and international partners and 14 sponsors to provide 241 events to an audience of 38,500.** Participants in 2024 included violinist and composer Anna Phoebe, actor Sir Simon Russell Beale, and award-winning children's author Sir Michael Morpurgo.

A large number of partners are local or regional to York, and include long-standing organisations such as the National Centre for Early Music, the Joseph Rowntree Foundation and the Yorkshire Philosophical Society.

The university has also collaborated for many years with local societies, such as The Fishergate, Fulford and Heslington Local History Society (FFH), and continues to form new local partnerships: in 2023, for instance, with Navigators Art & Performance, a diverse collective of York-based artists, writers, musicians and performers.

#### Using research to support UK creative industries

#### Between 2010 and 2019, the creative industries grew more than one and a half times faster than the wider UK economy.

Russell Group universities are finding new ways to use research and innovation expertise to support the sector in their regions.

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**University College London (UCL)** is bringing different creative organisations together to collaborate on projects, including innovative choreography and monitoring dancers' health.

Supported by UCL Innovation & Enterprise, the UCL Dance Network works with partners including the English National Ballet (ENB), Sadler's Wells, Studio Wayne McGregor and The Place to build new links between UCL research teams and the arts, inspiring innovation such as a project to develop a remote sensor solution to monitor dancers' performance and rehabilitation.

Planned areas of work for the network include an exploration of the potential benefits of dance for people with Parkinson's disease and workshops combining dance and coding to inspire young people into the arts or computer science.

UCL is also a partner in the QuestLab project, funded by the Arts Council, which is connecting choreographers from across the country with academics with expertise in human-computer interaction, neuroscience, computer science, architecture, art and psychology. The project brings partners together to develop new performance opportunities and provide people with the chance to engage with performing arts.



#### Understanding our history and tackling new challenges

Russell Group institutions are home to facilities, projects and cultural collections which help people in communities around the UK understand our shared culture and history.

In university museums and through work like Cardiff University's Caerau and Ely Rediscovering (CAER) Heritage Project which supports community archaeology, our universities are helping pass knowledge and understanding from one generation to the next.

Russell Group universities are providing opportunities for active public participation, sharing knowledge, inspiring debate and using learning about the past to provide people with new skills to help them tackle challenges today.



During the pandemic, the **Oxford University** Museum of Natural History adapted diverse public engagement work to new digital formats. Virtual events included Mystery at the Museum, a large-scale, interactive adventure that allowed the audience to explore the Museum and collections from the comfort of their sofa. The idea for the event was developed in collaboration with BAFTA-winning wildlife presenter and explorer Steve Backshall.

#### The live event had 121,000 views with over 16,000 people in 7,689 households actively taking part, and more than 59,000 audience comments directing Steve through a series of puzzles across the Museum's collections.

The challenges featured the Museum building and objects from the handling collection, offering engagement with objects and scientific ideas such as comparative anatomy and evolution, as well as having a clear environmental message.

MANCHESTER e University of Man

The Age Friendly Whitworth programme at the University of Manchester's Whitworth Gallery has been developed in partnership with Manchester City Council's Age Friendly Manchester. The programme creates a dedicated space for arts and cultural activities for people aged 50+.

The programme offers participants opportunities **to learn and socialise** through free craft workshops facilitated by artists and inspired by the exhibitions and collections at the Whitworth Gallery. Targeted workshops include "Creative Menopause" and support for older people living with HIV.

The Age Friendly Whitworth programme contributes towards the NHS Greater Manchester Creative Health Strategy, which works to help people engage with creativity, culture and heritage to lead longer, healthier, happier lives.

#### Backing the arts to boost community wellbeing

Support for the arts and cultural sector across the Russell Group is also helping boost wellbeing in communities around the UK, with research showing engagement with the arts can have a positive impact on both physical and mental health, reducing demand for NHS services.



**The University of Warwick's** Arts Centre has been shortlisted for Community Engagement Project of the Year at the national Museums and Heritage Awards for its 'Playing Out in Canley' programme.

Building on a decade of partnership working in Canley, **Playing Out was a** three-year collaborative project of creative activity between residents of Canley, in Coventry, and the University of Warwick. The programme included setting up a thriving local samba band, hosting creative workshops, outdoor film screenings and an annual parade each summer.

Over the duration of the project, Warwick Arts Centre worked collectively with community leaders, residents, and artists to deliver 263 community sessions across visual arts, poetry, movement and music for over 7,000 people.

It also supported 27 local community events such as Pop-Up Cafes, fetes and celebrations, delivered 600 art packs for people to get creative at home, and developed 11 partnerships across community venues, schools and care homes.

The steering group of residents, businesses, community groups and University staff have continued meeting after the Spirit of 2012 project funding ended to sustain these activities, building on the new skills and partnership they developed.





The Playing Out in Canley Parade, 2023. Credit: University of Warwick



## SUPPORTING LEARNING, CHANGING LIVES

ACROSS THE UK, SCHOOL PUPILS, ADULT LEARNERS AND GROUPS SUCH AS CARE-EXPERIENCED YOUNG PEOPLE WHO FACE PARTICULAR BARRIERS TO ACCESSING EDUCATION ARE BENEFITTING FROM THE WORK RUSSELL GROUP UNIVERSITIES DO IN THEIR LOCAL COMMUNITIES TO PROVIDE OPPORTUNITIES FOR LIFELONG LEARNING.

Russell Group universities have a proven record of offering high-quality education across a range of technical, vocational, and academic disciplines, with teaching and learning activities extending far beyond lecture theatres and labs on campus.



#### **Tackling inequalities**

Educational inequality comes with a cost for individuals and communities. Gaps in attainment at school emerge early, impacting the life chances of students from disadvantaged backgrounds. Russell Group universities work in their communities to deliver the early interventions needed to help tackle inequalities, raise attainment and give children the best start in life.

Our universities work in partnerships with schools to engage tens of thousands of students each year. Activities include familiarising students with university campuses, developing lesson plans and teaching materials, and providing training for teachers who help pupils as they think about their post-16 options.

Russell Group universities also sponsor schools directly, many of which specialise in STEM subjects like maths, working to address local skills gaps and helping pupils prepare for and succeed in higher education.

UNIVERSITY OF LIVERPOOL

The **University of Liverpool** Maths School (ULMaS) is the first school in the North West of England to specialise in delivering an academic curriculum focused around A-Levels in Maths, Further Maths, Computer Science and Physics.

Founded by and drawing upon the expertise of the University of Liverpool, the school offers A-Level students masterclasses from leading lecturers, exciting research projects, a curriculum that goes well beyond A-Levels and STEM focused careers guidance.

The first cohort of students, recruited from across the Liverpool City Region, joined in 2020. Last year, the ULMaS was the highest performing state school or college in the North of England: more than half (56%) of students achieved 3 A\* or A grades at A level and the school was graded Outstanding in all areas by Ofsted in March 2024.



#### Access to new technologies and facilities

#### Technologies and facilities at Russell Group universities help underpin the high-quality education they offer students and cutting-edge R&D that is driving growth and creating jobs in every corner of the UK.

Researchers and students are not the only groups benefitting from access to digital resources, lab spaces, lecture halls and other facilities on campus. Through partnerships with schools, groups of parents, sports teams, charities and community groups, our universities are opening their doors to local people, ensuring research breakthroughs and investment in new facilities has the widest possible positive impact.

Outreach work is also helping Russell Group universities take new technologies directly into their local communities

#### IMPERIAL

Imperial's community engagement programme, based in the Invention Rooms at the White City Deep Tech Campus, offers local people opportunities to learn new skills in science and technology, develop digital skills and join mentorship programmes to develop leadership skills in their communities.

For example, the Maker Challenge programme gives local young people the chance to develop an idea and see it through to creation from making wearable technology to household gadgets - making critical contributions to building STEM knowledge and capacity within the community.

What the Tech?! is a digital literacy programme founded by Imperial students that brings together students and elderly local residents who bring along their electronic devices such as smartphones and laptops to get help and support with digital skills. Agents of Change is a pioneering community leadership network that supports female leaders of all ages and backgrounds to tackle local challenges and drive positive social change in their communities through networking events, workshops, and seminars.

These are delivered in the Dangoor Reach Out Makerspace, a workshop and design studio which inspires local young people to gain handson experience of making and prototyping, including through cutting edge technologies such as 3D printers, scanners, laser cutters and woodworking equipment.



The Maker Challenge, Dangoor Reach Out Makerspace **Credit: Imperial** 

#### **Opportunities to gain new skills**

#### Russell Group universities recognise people take different paths to learning.

Our institutions work with local partners, including business and community groups, to develop lifelong learning opportunities targeting skills gaps, providing options for adults who have traditionally faced barriers accessing education or skills training, and for individuals with work or caring responsibilities. Interventions are designed to meet specific local needs and help people get on in life.



area of Belfast.

Digital inclusion was identified by local residents in the Market area of South Belfast as a key challenge facing families, informed by the community's experiences during the Covid-19 pandemic and the need to better understand how to support families as they recovered from lockdowns.

A high number of parents reported to researchers that they lack digital awareness, hindering their ability to fully support their children with homework and creating some apprehension around online communication with schools.

QUB and partner organisation the Market Development Association responded to this skills gap by developing an Open College Network (OCN) level 2 ICT qualification, intended to directly meet the needs of the community. Local groups were also actively involved in curriculum development.

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

The entrepreneurship team at the London School of Economics (LSE) worked with OakNorth, an alumni-founded business, to develop LSE Generate: a schools partnerships initiative designed to help participants develop skills such as adaptability that are crucial to their future success.

LSE Generate has created a series of programmes focused on mentordriven entrepreneurship which range from standalone events to six-month schemes culminating in a demo day where pupils have an opportunity to pitch ideas to investors and founders.

Bootcamps and workshops are held in LSE's innovation hub, the GenDen, and delivered in school settings. Since the schools programme was launched in 2021 LSE Generate has supported thousands of young people across London and the South East, providing opportunities for children as young as 10 to benefit from university expertise.

Our universities work with more than 500 local and national employers to offer a mixture of advanced, higher and degree apprenticeships to provide people with opportunities to learn and develop in the way that works best for them.

These courses provide high quality technical and academic education ensuring students leave with the skills and experience valued by employers. Partners include major regional and national employers such as Jaguar Land Rover, PwC and Rolls Royce as well as small and medium enterprises.

At present, 17 Russell Group universities offer apprenticeships in subjects such as digital technology, health, law, construction, manufacturing, and social sciences. They offer a range of apprenticeships with more than 2,100 students studying toward Level 6 and 7 qualifications, of which more than 60% are in STEM disciplines.

**Queen's University Belfast** (QUB) has worked with local skills providers to create a new digital ICT qualification designed to address needs identified through "Growing Up in the Market" a longitudinal study of a working-class

## **DRIVING ECONOMIC GROWTH ACROSS THE UK**

DECADES OF WORK TO ESTABLISH NETWORKS AND BUILD PARTNERSHIPS ALLOWS RUSSELL GROUP INSTITUTIONS TO IDENTIFY AND BRING TOGETHER LOCAL, NATIONAL AND INTERNATIONAL TEAMS TO DRIVE ECONOMIC PROGRESS.

From semiconductors in South Wales, to cybersecurity in Northern Ireland, precision medicine in Scotland and advanced materials in North West England, our universities are setting an agenda for inclusive and sustainable growth.

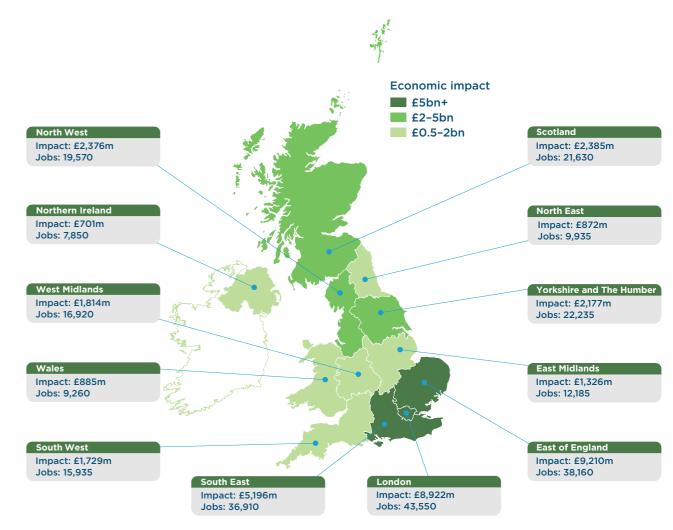
Our institutions use their scale, leverage and reach to bring partnerships together that deliver real economic impact through research and innovation. Russell Group investment in facilities is regenerating and reimagining UK cities, and is creating new ways for people to benefit from access to their local universities.

### Supporting jobs across the UK

Russell Group universities are often amongst the largest employers in their city, but not just because of their campus-based activities: university research is creating thousands of jobs outside of higher education in new and growing businesses.

Innovation clusters in strategically important sectors such as materials science, AI and semiconductors based around Russell Group universities are home to businesses that are helping transform our economy and boosting employment.

In 2021/22, R&D and innovation activities at Russell Group universities supported more than 250,000 jobs across the UK. 80,000 of these jobs were in startups and spinouts created to commercialise university research breakthroughs.



These figures indicate the destination of impact and not the impact of a particular Russell Group university on the region in which they are based

Every £1 of public funds invested in research at Russell Group universities adds more than £8.50 o the UK economy

entice learning at the Advanced facturing Research Centre Credit: University of Sheffield

#### **Building for success**

### Partnerships with local authorities, businesses and others have helped Russell Group universities deliver capital projects that benefit students, researchers and members of their local communities.

Major works programmes around university innovation districts or new campuses are building the knowledge infrastructure the UK needs to develop new clusters of cutting-edge businesses, with these programmes often at the heart of regeneration projects driving regional renewal.

Large developments Russell Group universities are helping deliver frequently include homes for families, hospitality venues, community resources and new public spaces. These projects have a record of creating jobs and wealth by bringing new companies into an area.

### University of Sheffield

University of BRISTOL

The **University of Sheffield** transformed the former Orgreave coking plant - the site of violent clashes between pickets and police during the miners' strike in 1984 - into a global hub for advanced manufacturing through the development of the University's Advanced Manufacturing Research Centre (AMRC) and its sister centres the Nuclear AMRC and the AMRC Training Centre.

Since the AMRC opened in 2001, the clustering of High Value Manufacturing companies around these facilities has led to **global companies such as Rolls-Royce, Boeing, and McLaren choosing to co-locate to be close to world leading research and innovation capability.** 

A recent economic impact report found that some of the biggest private sector investments into UK advanced manufacturing over the last 15 years would not have happened without the AMRC, and it has **brought more than £260 million** of private investment and more than 600 jobs to South Yorkshire.

## The **University of Bristol's** new Temple Quarter Enterprise Campus (TQEC) is a catalyst for innovation, civic engagement and economic productivity that involves industry and civic organisations to drive meaningful change in digital, business and social innovation.

The new campus is spearheading a programme of inclusion initiatives that signal the University's commitment to make a positive contribution to its locality as part of its renewed civic mission. **Designed to ensure that a wide range of communities are part of the University, it will foster collaboration on shared challenges for the city-region.** 

Key spaces for civic engagement in the largest campus building will include the Bristol Rooms, a co-working space for civic and community partners. The campus connects directly to the region's largest transport hub and enhanced cycling and walking routes will improve city connectivity.

A variety of initiatives ahead of full opening include the **opening of the nearby Barton Hill micro-campus, which provides a vital link between the University and the diverse local community and co-produced research with new communities in the city, including community responses to Covid-19.** 

The Campus sits in the heart of Bristol Temple Quarter, one of the UK's largest regeneration projects.

#### **Boosting regional investment**

#### Russell Group universities have a proud record of backing innovation-led local businesses.

By closing gaps that have seen some types of business or those located in certain parts of the country struggle to access funding for growth, universities are giving more founders and creators opportunities to thrive.

In tackling challenges such as regional imbalances in access to venture capital investment, our universities are helping create the conditions for economic growth in every corner of the UK, with their research excellence and scale also driving significant Foreign Direct Investment (FDI) around university-led innovation clusters, creating jobs across the country in high-value sectors such as biosciences.

In 2022/23, Russell Group universities secured more than £1 billion of FDI through research grants and contracts.



WARWICK

Russell Group universities **B** are co-founders of a new in commercialisation of univer the midlands.

Established with the support of other university partners from Midlands Innovation and public investment through the Higher Education Innovation Fund (HEIF), Midlands Mindforge Limited is a patient capital investment company with **plans to raise up to £250 million from strategic corporate partners, institutional investors and others.** It aims to transform groundbreaking science and technology into successful businesses with real-world impact through equity investment and acting as a partner to entrepreneurs.

UNIVERSITY OF LEEDS



The University of Manchester



The company provides not of and business services that h

The company provides not only the capital, but also access to the people and business services that help academic spinouts to thrive. It does this by being part of a collaborative ecosystem that works with academics, specialists and service providers.

In October 2023, Northern Gritstone achieved its final close fundraising target of £312 million. It has so far made 15 investments in some of the most exciting future science and technology-enabled sectors such as advanced materials, energy, health technology and cognitive computation.

#### Russell Group universities Birmingham, Nottingham and Warwick

are co-founders of a new investment company that will accelerate the commercialisation of university spinouts and early-stage IP rich businesses in

Launched in July 2021 by the universities of **Leeds**, **Manchester** and **Sheffield**, Northern Gritstone is an independent investment company that supports science and innovation-based businesses located in the North of England, including spinouts emerging from the three founding

#### Backing community enterprise

### Russell Group universities are innovation hubs spinning out dozens of new companies every year and creating clusters of high value jobs and economic activity in their regions.

Targeted packages of support for spinouts and community-based small and medium enterprises are helping turn globally important R&D breakthroughs into regional economic impact and skilled jobs.

The kind of assistance our universities provide includes office and lab space to help businesses grow, access to specialised equipment and expertise to develop new products and services, and hands on support for management teams.



The **University of Exeter** has opened a city centre Innovation Hub to provide local businesses and entrepreneurs with easily accessible support as they work to develop new products and services.

**Exeter Innovation work with more than 2000 partners annually**, providing bespoke assistance in recruiting and developing talent, accessing R&D facilities, developing research proposals and more.

The new community innovation hub, **developed in partnership with Exeter City Council to drive regional economic growth and supported through funding from the Shared Prosperity Fund, will allow people who want to benefit from university expertise to make an appointment or drop in to meet advisors.** 

In addition to tailored development advice, the innovation hub hosts regular events with partner organisations and offers networking opportunities for founders and representatives of the local business community.



### 80,000 UK jobs supported

by Russell Group spinouts in 2021/22.



## **CREATING NET ZERO COMMUNITIES**

WORKING WITH LOCAL AUTHORITIES AND OTHER COMMUNITY PARTNERS, RUSSELL GROUP UNIVERSITIES ARE USING RESEARCH TO PROVIDE LOCAL SOLUTIONS TO NET ZERO CHALLENGES SUCH AS IDENTIFYING AND IMPROVING "HARD TO DECARBONISE" HOUSING STOCK.

Tackling the climate crisis and building a green future is an enormous challenge for communities across the UK. Meeting our emissions reductions targets responsibly means changing everything from the way we heat our homes to the way we produce food - but there are huge economic opportunities for the UK too.



#### Supporting green growth

Russell Group universities are playing a crucial role in ensuring their local areas see the environmental and economic benefits of Net Zero research which is helping drive clean growth in towns and cities in every corner of the country.

**UNIVERSITY**OF BIRMINGHAM

Since 2017 the University of Birmingham (UoB) Energy Institute has helped support the development of policy thinking around Net Zero, unlocking innovation and investment for translational research to support the transition to a low carbon future, and creating a testbed for new technologies in the East Birmingham - North Solihull Corridor.

The Tyseley Energy Park, backed by the Energy Institute, is a strategically important asset that is enabling the University, industry, national organisations and investors to test and validate new green technologies

at scale in areas such as Hydrogen production, clean transport, carbon capture and high value material recycling.

Tyseley sits in an area which is one of the 20% most deprived in the UK. The **UoB has committed to working alongside public and private partners** to regenerate the site with plans for investment to support new skills provision, transport, and housing alongside innovation facilities.

### Protecting communities from climate risks

#### Russell Group researchers working to mitigate environmental risks associated with rising global temperatures and changing weather patterns are often informed and guided by local needs.

As leaders in climate research, our universities are creating regional blueprints through green partnerships that Government can use to set the UK on a faster journey to Net Zero.

On topics like flood management and biodiversity loss, solutions developed to help address problems facing cities around the UK are also being used to protect property, lives and the environment in other parts of the world.

University of Glasgow

**University of Glasgow** researchers are working on a £10.5 million research programme that is helping Scotland's largest city move towards climate resilience whilst tackling health, social and economic inequalities.

The Glasgow as a Living Lab Accelerating Novel Transformation (GALLANT) project is using Glasgow as a test bed for sustainable solutions to climate challenges throughout the city.

While working to address key local environmental problems, the programme collaborates closely with communities and is considering the co-benefits and trade-offs for public health, wellbeing, and the economy.

GALLANT is focused on transforming River Clyde land use to manage floods, restoring and connecting habitats to halt biodiversity loss, regenerating polluted land with new technologies, enhancing active travel and nature connectivity, and developing sustainable communityscale energy solutions to achieve Net Zero carbon.

The GALLANT project. Credit: University of Glasgow

Russell Group universities are also working hard to decarbonise their own campuses and activities around the UK and are determined to make significant further progress as fast as possible.

This is not a straight-forward task given the historical nature of our university buildings and the size and complexity of the functions that make up large university estates.

Universities are the ideal test beds for new Net Zero initiatives as they function as small cities, contain world-leading scientific expertise and are embedded and influential in their local communities. Our universities are committed to showing leadership and sharing best practice to help the UK reach Net Zero.



The University of Edinburgh's Advanced Computing Facility (ACF) is at the centre of a trial that could see waste heat recycled to warm at least 5,000 households in Scotland's capital.

The facility, home to the ARCHER2 national supercomputer and used for research such as national climate modelling and health data modelling, currently releases up to 70 GWh of excess heat per year. This is projected to rise to 272GWh once the UK Government's recently announced next-generation Exascale supercomputer is installed at the University.

The Edinburgh Geobattery project is conducting a £2.6 million feasibility study that will examine how the water in old mine workings near the computing facility could be harnessed to heat people's homes.

The process of cooling the supercomputers would be augmented to transfer the captured heat into the mine water - up to a maximum temperature of 40°C - which would then be transported by natural ground water flow in the mine workings, and made available to warm people's homes via heat pump technology.



#### Bringing Net Zero home

Researchers are working with businesses, local authorities and others to take Net Zero technologies out of the lab and into the community, cutting carbon emissions, energy bills and creating more warm homes.

UNIVERSITY OF CAMBRIDGE

Breakthroughs in clean energy are helping change the way we power homes and innovative approaches to energy efficiency are helping councils and other partners transform local housing stock.

Researchers at the **University of Cambridge** have developed a new AI model with the potential to help local councils identify 'Hard-to-decarbonize' (HtD) houses which are responsible for over a quarter of all direct housing emissions.

A new 'deep learning' model trained by researchers from Cambridge University's Department of Architecture promises to make it far easier, faster and cheaper to identify these high priority problem properties and develop strategies to improve their green credentials. Houses can be 'hard to decarbonize' for various reasons including their age, structure, location, social-economic barriers and availability of data.

The model developed by a team at Cambridge's Sustainable Design Group, can classify HtD houses with 90% precision.

The researchers trained their AI model using open-source data from Cambridge, including Energy Performance Certificates, street view images, aerial view images and land surface. In total, their model identified 700 HtD houses in Cambridge. The researchers had previously worked with Cambridge City Council to assess council houses for heat loss and are set to discuss their latest findings with local representatives and local authority officers.



#### Boosting community access to green spaces

#### Alongside local authorities and charities, Russell Group universities are engaging in partnerships to deliver research and education on biodiversity and conservation.

Working with others, they are helping to protect the future of the UK's natural environment and to break down barriers, ensuring everyone can benefit fully from access to public green spaces.

#### UNIVERSITY OF LEEDS

The UK's 27,000 parks and green spaces are essential for exercise, socialising, relaxation, and provide active travel routes away from busy roads. However, 1 in 6 women feel unsafe in parks during daylight hours, a ratio three times higher than men, rising to 4 out of 5 women after dark.

# management to help women and girls feel secure.

This guidance has been adopted by the UK Government-owned Green Flag Award guality standard for parks; an international accreditation programme for green spaces worldwide. In West Yorkshire, it is informing the Mayor's police and crime plan, bus safety and transit strategies and park design. Over 80 park managers and volunteers are now trained to intervene safely if they witness harassment in a park.

Leeds City Council Climate, Energy and Green Spaces department is using the guidance to inform park planning, accessibility audits and testing new park designs.

University of Leeds researchers worked with the Mayor of West Yorkshire, the Make Space for Girls charity and Keep Britain Tidy on park safety research to help more women and girls access public green spaces. Interviews and focus groups led by Dr Anna Barker and Professor George Holmes supported the development of guidance on park design and

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### GROUP

www.russellgroup.ac.uk +44 (0)20 3816 1300 enquiries@russellgroup.ac.uk @russellgroup

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