

UKRPIF: funded projects

Round	Project title	Higher Education Provider	UKRPIF award (£)	Region	Summary
1	Imperial West Technology Campus - Molecular Sciences Research Hub (MSRH) and the Translation and Innovation Hub (I-HUB)	Imperial College, London	35,000,000	London	<p>The MSRH and the I-HUB collectively provide high specification, multidisciplinary research and incubator space for researchers, university spinouts, partner universities, small and medium-sized enterprises, and global businesses.</p> <p>The 48,000m2 development provides flexible and adaptable working spaces, including 250m2 of biotech and scientific laboratories with wet lab and office space. The I-HUB is also home to the Imperial White City Incubator, the largest concentration of affordable, flexible laboratory and office space, with specialised commercialisation services, in London.</p> <p>UKRPIF helped fund construction of the £150m project, which includes £90m of co-investment in technology ventures provided by Voreda Capital.</p>
1	National Structural Integrity Research Centre (NSIRC)	Brunel University	15,000,000	East of England	<p>The NSIRC is a dedicated interdisciplinary research facility which focuses on the long-term challenges associated with the structural integrity of products, plants and infrastructure across the energy, transport, advanced manufacturing, and infrastructure sectors.</p> <p>The UK Research Partnership Investment Fund (UKRPIF) award funded the procurement and installation of experimental, analytical and testing equipment within the facility, including:</p> <ul style="list-style-type: none"> • large chamber electron beam system • 3D X-Ray machine • high pressure autoclave

					<ul style="list-style-type: none"> • bonding furnace. <p>The NSIRC is managed by the project's core strategic partner and co-funder TWI, alongside co-investors and founders BP and the Lloyd's Register Foundation. As well as lead institution Brunel University London, over 20 universities partner and collaborate with the centre, including institutes in China, Denmark, and Malaysia.</p>
1	Centre for Children's Rare Disease Research	University College London	10,000,000	London	<p>The Zayed Centre for Research (ZCR) will be a world-leading centre of excellence that will enable scientists and clinicians to diagnose, treat and cure young people with rare diseases more accurately.</p> <p>It combines the expertise of nearly 500 academics and clinical staff from UCL and Great Ormond Street Hospital with an outpatient facility that can accommodate over 200 patients and accompanying family members at any one time.</p> <p>The strategic positioning of the new centre and its proximity to both the UCL Great Ormond Street Institute of Child Health and Great Ormond Street Hospital is vital for a truly translational and patient-focussed approach to research, building on existing strengths and bringing together teams to embody our bench-to-bedside model.</p>
1	High Temperature Research Centre	University of Birmingham	20,000,000	West Midlands	<p>The HTRC is a unique casting, design, simulation, and manufacturing facility.</p> <p>Located at Antsy Park, the centre supports underpinning casting-materials research and radical process improvements, including research into tools that will enhance product quality, performance, and production efficiency.</p> <p>The UKRPIF award funded construction of the centre, with £40m double matched co-investment provided by the institute's long-term strategic partner Rolls Royce.</p>

1	Materials Innovation Factory	University of Liverpool	11,000,000	North West	<p>The Material Innovation Factory is an £81m facility dedicated to the research and development of advanced materials.</p> <p>A collaboration between the University of Liverpool and Unilever, the MIF brings together materials chemistry expertise with the latest computational and robotic equipment to reduce the time it takes to discover new materials which have the potential to address challenges including sustainable energy, clean water, and energy storage.</p> <p>Boasting one of the highest concentrations of automated equipment for materials chemistry in the world, the facility welcomes academic or industrial users on a flexible, open-access basis creating an environment that facilitates interdisciplinary collaborations and innovation.</p> <p>The MIF has leveraged over £20m in additional funding and is a founding partner of the Sir Henry Royce Institute, a research and innovation partnership spanning the UK.</p>
1	CRUK (formerly Paterson Institute for Cancer Research)	University of Manchester	12,800,000	North West	<p>This world-leading new facility will enable research growth and, most importantly, facilitate a ground-breaking approach to how we work together by embedding the research facility within a cancer hospital. Crucially, it will drive a new model of integration of basic discovery, translational and clinical research, drawing on our recognised strengths in biomarker development, early phase clinical trials with novel agents, and real-world clinical informatics – with a strong commercialisation drive towards delivering new clinical pathways to benefit patients worldwide.</p> <p>This is enabled and driven by the wider Greater Manchester (GM) health agenda. Health inequalities and the high incidence of cancer in the GM population create unique opportunities for highly translational research.</p>

					Importantly, GM's unique devolved health and social care system provides a framework for us to address population health challenges and realise economic benefits using UoM's world-leading expertise in health informatics and new commercial partnerships to activate the transformational use of 'real world, real time' patient data.
1	Centre of Excellence in Sustainable Chemistry	University of Nottingham	10,350,000	East Midlands	<p>The Centre of Excellence for Sustainable Chemistry is developing new chemistries that are both energy and resource efficient; helping meet societal needs for high value products with as small an environmental cost as possible and training the next generation of sustainability aware scientists.</p> <p>The Centre is housed within the GlaxoSmithKline Carbon Neutral Laboratory (CNL), which is designed to be carbon neutral over its lifetime and act as an exemplar for sustainable laboratory-based research facilities of the future.</p> <p>UKRPIF funding contributed towards the cost of the CNL facility alongside contributions from industry collaborators, including a cornerstone investment of over £12M from GlaxoSmithKline.</p>
1	5G Centre	University of Surrey	11,635,000	South East	<p>The 5G Innovation Centre (5GIC) is the world's first and UK's largest academic 5G communications infrastructure research and innovation centre and home to the world's largest 5G testbed.</p> <p>5GIC supports collaborative research undertaken by academics and industry, with facilities that include the world's leading open and independent testbed covering 4km², providing indoor and outdoor environments for broadband mobile and the Internet of Things (IoT).</p> <p>The UK Research Partnership Investment Fund (UKRPIF) award, which funded construction of the Centre, was double match funded by leading international</p>

					communications firms such as Vodafone, Telefonica, Huawei, Fujitsu, BBC, BT, EE, and Samsung. Since opening, 5GIC has attracted further national and international investors and partners from both the public and private sectors.
1	National Automotive Innovation Campus	University of Warwick	15,000,000	West Midlands	<p>The industry faces unprecedented challenges as the world moves to a low-carbon technology model. Escalating energy costs and legislation imposing strict emissions limits reinforce these challenges.</p> <p>The APRL is the UK's first complete and dedicated facility for the development of future propulsion technology. It will lead research to address these arising needs, transforming the research and innovation landscape, and positioning the UK as a leading innovator in propulsion systems.</p> <p>Research will look at reducing the cost and improving the performance of electrified powertrains compared to conventional engines. With key challenges energy storage and management, battery systems, power electronics, systems control and integration, lightweight materials and fuels. This work will be done collaboratively, with industry partners, Jaguar Land Rover, ADL, Ariel, Delta Motorsport, Potenza, Trackwise, HORIBA MIRA, and the University of Oxford, sharing the knowledge created across the transport sector.</p>
1	Institute of Health Sciences	Queen's University Belfast	10,502,000	N. Ireland	<p>The Wellcome-Wolfson Institute for Experimental Medicine has become an international hub of research excellence on biomedicine. Researchers of the Institute have already developed innovative therapeutics to tackle asthma, diabetic retinopathy, and AMR infections, improving UK patients' lives. The institute's multidisciplinary approach in investigating the mechanisms of disease has proved to be a fruitful one. As a result, the Institute, home to 330 staff,</p>

					<p>has increased its funding from research awards by 124% in the last 3 years, while tripling its industrial income.</p> <p>Additional to the UK Research Partnership Investment Fund, the institute received co-funding from Wellcome Trust, the Wolfson Foundation, Atlantic Philanthropies, the Sir Jules-Thorn Charitable Trust, the Insight Trust for the Visually Impaired and the Queen's University of Belfast Foundation.</p>
1	Energy Safety Research Institute	Swansea University	11,650,000	Wales	<p>The ESRI is a dedicated facility for energy research within Swansea University's College of Engineering, located at the institute's Bay Campus.</p> <p>Research within the 3,800m2 centre includes the conversion of excess and wasted energy; reducing the environmental impact of hydrocarbon energy; Carbon Dioxide; and next generation energy distribution.</p> <p>In addition to the ESRI's key partner and co-investor BP, the centre has gained several industry partners to further develop energy research, including Malaysian utilities company YTL and Oman Oil Company S.A.O.C.</p> <p>Swansea University is expanding its ESRI facility, with the creation of the ESRI Innovation Hub which, with multiple academic and industry partners, will focus on building high technology readiness level (TRL) demonstrators.</p> <p>The UK Research Partnership Investment Fund (UKRPIF) award was delivered in partnership with the Higher Education Funding Council for Wales.</p>
1	Centre for Translational & Interdisciplinary Research	University of Dundee	11,916,000	Scotland	<p>The Discovery Centre building is home to the University of Dundee's Wellcome Centre for Anti-Infectives Research and its Drug Discovery Unit, a discovery group working across diseases, translating biology research into novel drug targets and candidate drugs. It also houses one of the</p>

					<p>world's largest Quantitative Proteomics facilities and the Division of Computational Biology.</p> <p>The UK Research Partnership Investment Fund (UKRPIF) award, delivered in partnership with the Scottish Funding Council, funded purpose-built laboratories and state-of-the-art equipment, with strong computational, analytical high-throughput biology and chemistry capabilities, within an open-plan four-storey building.</p> <p>The centre received co-investment support from charitable sources, including over £50m of co-investment and R&D funding from Wellcome, and additional co-investment from the Bill and Melinda Gates Foundation, among other funders</p>
2	Maxwell Centre	University of Cambridge	21,031,500	East of England	<p>The Maxwell Centre is the centrepiece of the University of Cambridge's industrial engagement with the physical sciences and engineering research, developed to meet short and long-term industry objectives.</p> <p>The Centre facilitates industry involvement in the cutting-edge 'blue skies' discovery research, and is a Cambridge home to several industrial and academic partnerships, including:</p> <ul style="list-style-type: none"> • The Henry Royce Institute, a national centre for advanced materials research and innovation • The Faraday Institution, a £65m Industrial Strategy Challenge Fund initiative into battery research and technology, led by 7 universities working with industry partners • The Centre for Digital Built Britain, a partnership with the Department of Business, Energy & Industrial Strategy to deliver a smart digital economy for infrastructure and construction

					<ul style="list-style-type: none"> • Two Engineering and Physical Sciences Research Council (EPSRC) Centres for Doctoral Training (CDTs) • The Winton Programme for the Physics of Sustainability <p>The UKRPIF award supported construction of the 4,960m² building, which includes office and laboratory space dedicated to support collaborative projects with industrial partners. The Centre currently co-locates 52 individuals from 14 companies with researchers from several University departments.</p>
2	Manchester Cancer Research Centre / Oglesby Cancer Research Building'	King's College London	15,000,000	London	<p>The Research and Innovation Hub is located within the £160m Cancer Centre at Guy's Hospital, which opened in September 2016.</p> <p>The hub provides open-plan laboratory space to support collaboration between researchers and clinicians and enable translational research into cancer and its causes through analysing patient conditions, developing personalised medicine and introducing new treatments through research-led trials.</p> <p>The UK Research Partnership Investment Fund (UKRPIF) award supported construction of the new research facilities, including 6 laboratories with specialist research equipment and a cancer biobank for storing patient tissue samples. Double match funding for the project included a £25m investment from the Guy's and St Thomas' Charity.</p>
2	The Institute of Immunity and Transplantation (IIT)	University College London	11,104,400	London	<p>The IIT will be a world-class centre of excellence dedicated to the study of the human immune system. It will bring together scientists, clinicians, nurses, and patients to discover how defects of the immune system led to disease and to develop new forms of immunotherapy.</p> <p>It will combine the clinical excellence of the Royal Free London's hospitals and the research excellence of</p>

					<p>scientists at UCL bringing together teams of more than 200 experts and more than 10,000 patients.</p> <p>The IIT has established a world leading Bone Marrow Transplant program for patients with inherited immunodeficiency.</p> <p>It has created Quell, a £35m spinout company with investment from Syncona.</p>
2	Multidisciplinary Characterisation Facility (MCF)	University of Manchester	18,017,381	North West	<p>The Multidisciplinary Characterisation Facility (MCF) represents one of the most extensive and innovative characterisation and imaging facilities in the UK, pushing the boundaries of our ability to follow materials behaviour.</p> <p>There are broadly three streams of capability within the MCF: The Electron Microscopy Centre, the Henry Moseley X-ray Imaging Facility, and the surface characterisation suite. The emphasis of the MCF is applications led, addressing industrial needs by providing the means to study materials under demanding environments as close as possible to those experienced in service.</p> <p>In 2017, the MCF became part of the University of Manchester's commitment to the Henry Royce Institute, the UK's national institute for advanced materials research, which brings together world-leading academics from across the UK to work closely with industry to ensure commercialisation of fundamental research.</p>
2	The Big Data Institute	University of Oxford	10,000,000	South East	<p>The Big Data Institute is located in the Li Ka Shing Centre for Health Informatics and Discovery at the University of Oxford. It is an interdisciplinary research centre that focuses on the analysis of large, complex data sets for research into the causes, consequences, prevention, and treatment of disease. Research is conducted in areas such as genomics, population health, infectious disease surveillance and the development of new analytic methods.</p>

					The Big Data Institute is supported by funding from the Medical Research Council, the UK Research Partnership Investment Fund, the National Institute for Health Research Oxford Biomedical Research Centre, and philanthropic donations from the Li Ka Shing and Robertson Foundations.
2	The Oxford Target Discovery Institute	University of Oxford	10,000,000	South East	<p>The Target Discovery Institute was the first stage in an initiative (comprising the Target Discovery Institute, the Big Data Institute, and the BioEscalator Innovation Building) that aims to better link discovery research in Oxford's Medical Sciences Division to translational programs in the biotechnology and pharmaceutical sectors.</p> <p>Support from the UK Research Partnership Investment Fund was critical in initiating this program (first with co-investment from pharmaceutical partners in the Structural Genomics Consortium, the Ludwig Institute for Cancer Research and the Nuffield Department of Medicine, and subsequently from the Li Ka Shing Foundation).</p> <p>The initial investment has leveraged £multi-million support, including major initiatives such as Alzheimer's Research UK's £10M award for Dementia Drug Discovery.</p> <p>The Target Discovery Institute contains state-of-the-art facilities for a range of technologies (including mass spectrometry, robotic high-content cell screening and molecular affinity assays, and synthetic chemistry), adjacent to high-quality cell biology laboratories.</p>
2	The AMRC Factory 2050	University of Sheffield	10,000,000	Yorkshire and the Humber	<p>Factory 2050 is the UK's first fully reconfigurable SMART assembly facility, designed to accelerate innovative manufacturing research into industry. The 7,023m² facility is the centrepiece of the University of Sheffield's Advanced Manufacturing Research Centre, and is home to the Integrated Manufacturing Group who specialise in the following research themes:</p>

					<ul style="list-style-type: none"> • Robotics, automation, and autonomous systems • Advanced visualisation • In-process inspection and measurement • SMART connected factory technology • Artificial Intelligence and Analytics <p>The UK Research Partnership Investment Fund award was double match-funded through the AMRC membership group, which includes leading companies working across manufacturing and engineering, including BAE Systems, Rolls Royce, and Airbus.</p> <p>The construction of Factory 2050 has catalysed inward investment within the Advanced Manufacturing Innovation District through strengthened partnerships with new production facilities, including the McLaren Composites Technology Centre and the Boeing Sheffield Factory.</p>
2	Experimentation Facilities in Engineering Science	University of Southampton	10,000,000	South East	<p>The UK Research Partnership Investment Fund (UKRPIF) supported the University of Southampton to deliver three capital projects, as part of the institute's Boldrewood Innovation Campus:</p> <ul style="list-style-type: none"> • Construction of a large experimentation building focussed on fluid mechanics (both hydro and aerodynamics) • Refurbishment of the institute's RJ Mitchell Wind Tunnel, to support industrially applied research • Development of Iridis 4, the institute's next generation of high performance computational and data handling facility <p>Through world-leading research and teaching, work undertaken within the Boldrewood Campus targets UK competitiveness in sectors that include: maritime and marine, aerospace, rail, offshore, environmental, and structural engineering.</p>

					As well as the UKRPIF award, co-investment was provided by the University of Southampton's long term strategic partner Lloyd's Register.
2	Clinical Research Facilities for Stratified Medicine	University of Glasgow	10,000,000	Scotland	<p>With investment from UKRPIF, UofG has driven the development of over £80M of academic infrastructure at the Queen Elizabeth University Hospital. The developments provide state of the art facilities for academics, NHS, and industry to drive implementation of precision medicine through a 'triple helix' model of partnership, translating research to provide patient benefits, NHS savings and economic development.</p> <p>The Imaging Centre of Excellence (ICE) incorporates a CE-marked 7T MRI scanner, an ultra-high resolution scanner, the first of its kind fully integrated within a UK clinical site. ICE also includes 3T MRI and multi-slice CT scanners, and is located adjacent to adult and paediatric Clinical Research Facilities, transforming capacity to deliver leadership internationally in imaging and precision medicine, attract international talent and enable groundbreaking medical research in chronic diseases and multimorbidity.</p> <p>An award-winning Clinical Innovation Zone provides space for industry and other organisations to co-locate with academic researchers and NHS staff.</p>
2	Continuous Manufacturing + Crystallisation Research for Pharmaceutical Products	University of Strathclyde	11,400,000	Scotland	<p>UKRPIF enabled the University of Strathclyde to establish and develop the CMAC facilities within the Technology and Innovation Centre, funding the procurement and installation of a comprehensive suite of continuous processing, process analysis, and materials characterisation equipment.</p> <p>The facilities support pharmaceutical manufacturing research conducted as part of the EPSRC funded CMAC Future Manufacturing Research Hub. It is utilised by more</p>

					<p>than 130 staff and researchers, including academics and over 45 PhD students.</p> <p>CMAC is a multi-institution research hub, alongside the University of Strathclyde, other partners include the Universities of Bath, Cambridge, Leeds and Sheffield, Imperial College London, and Loughborough University.</p> <p>The UKRPIF award leveraged co-investment from a number of large multinational pharmaceutical companies who are strategic industry partners in CMAC including; AstraZeneca, GSK, Novartis, Bayer, Lilly, Roche, Takeda and Pfizer. Alongside SME's.</p>
3	Institute of Immunology and Infectious Disease	Cambridge University	25,000,000	East of England	<p>CITIID was established to support both fundamental and translational research on human disease, and bring together scientists and clinicians to achieve three related ambitions:</p> <ul style="list-style-type: none"> • drive therapeutic breakthroughs in immune-related diseases • increase the likelihood of discovering new medicines by enhancing interactions between academia and the pharmaceutical sector • explore new strategies to control globally important pathogens <p>The institute's key strength is that immune-mediated disease is studied alongside infectious disease. The human immune system has evolved to defend us against the dangerous microorganisms that cause disease; autoimmunity and inflammatory diseases are caused when this defence mechanism malfunctions. Crucially, a dysfunctional immune system uses the same molecular pathways and mechanisms as a healthy immune system uses to fight infection, which means vital insights emerge from tackling infectious disease and autoimmunity together.</p>

3	Aerospace Integration Research Centre	Cranfield University	10,000,000	East Midlands	<p>At the AIRC, the aim is to conduct academically ambitious and industrially relevant research that will contribute directly to the growth of the aerospace industry and the wider UK economy. Industry and academia innovate together under one roof performing research to meet ambitious performance, emission control and efficiency targets for future aircraft.</p> <p>Research covers all aspects of integration in aerospace, such as integrating systems with platform, and platforms into airspace, as well as enablers such as autonomy, artificial intelligence, and intelligent automation. Laboratories connect the University's 'land-side' ground-based research with its 'air-side' flight research, providing the capability to take aerospace concepts from theory to flight demonstration and allowing validation of research to technology readiness levels normally addressed by industry.</p>
3	Advanced Propulsion Research Laboratory	Warwick University	14,500,000	West Midlands	<p>The industry faces unprecedented challenges as the world moves to a low-carbon technology model. Escalating energy costs and legislation imposing strict emissions limits reinforce these challenges.</p> <p>The APRL is the UK's first complete and dedicated facility for the development of future propulsion technology. It will lead research to address these arising needs, transforming the research and innovation landscape, and positioning the UK as a leading innovator in propulsion systems.</p> <p>Research will look at reducing the cost and improving the performance of electrified powertrains compared to conventional engines. With key challenges energy storage and management, battery systems, power electronics, systems control and integration, lightweight materials, and fuels. This work will be done collaboratively, with industry partners, Jaguar Land Rover, ADL, Ariel, Delta Motorsport,</p>

					Potenza, Trackwise, HORIBA MIRA, and the University of Oxford, sharing the knowledge created across the transport sector.
3	Graphene Engineering Innovation Centre	Manchester University	15,000,000	North West	<p>The GEIC is a purpose-built facility focused on the commercialisation of graphene encompassing pilot production and characterisation facilities, together with application development in structures and composites, energy, membranes, formulations and coatings, and printed electronics</p> <p>The centre is the latest development in the University of Manchester's facilities, which together with the National Graphene Institute (NGI) supports the research and commercialisation of graphene, a material which was discovered at the University by physicists Andre Geim and Kostya Novoselov in 2004, earning the pair the 2010 Nobel Prize in physics.</p> <p>The £60m centre, which opened in December 2018, received a £15m UK Research Partnership Investment Fund (UKRPIF), the centre received £30m co-investment from global renewables company Masdar. In addition to this, Innovate UK, the Greater Manchester Combined Authority and ERDF contributed £15m funding to the centre.</p>
4	Advanced Metal Casting Centre	Brunel University (2)	15,000,000	London	<p>Metallic materials are the backbone of manufacturing and the fuel for economic growth. However, there is a compelling need to reinvigorate the UK metals industry, to rebuild the UK's international leadership in metallurgical science, and to train more skilled metallurgists. To address these challenges, Brunel University London has been setting up the Advanced Light Metals Research Park (ALMRP) on its campus. The £16M UKRPIF funding will be used to purchase the state-of-the-art analytical instruments for characterisation of advanced metallic materials (£9.5M)</p>

					and to create the FMC (Future Metallurgy Centre) building (£6.5M), which will complete the cycle of major planned capital developments for the ALMRP. This project will deliver the infrastructure to support fundamental research in light metals, enhance Brunel's research capacity, leverage £40M co-investment from the private sector and deliver significant benefits to the UK economy.
4	Chemistry of Health	Cambridge University (1)	17,645,000	East of England	<p>The Chemistry of Health building is a state-of-the-art facility designed to support research into neurodegenerative disorders such as Parkinson's and Alzheimer's diseases.</p> <p>The 2,600m² building includes:</p> <ul style="list-style-type: none"> • Business incubation space, including laboratory and desk space, for industrial partners and start-ups to work alongside academic researchers. • The Centre for Protein Misfolding Disease, dedicated to the study of misfolding proteins in human cells, which are implicated in a range of disorders. • The Molecular Production and Characterisation Centre, which will provide support and access to state-of-the-art instrumentation for in-house, UK-wide academic and industrial users in chemistry. <p>The UK Research Partnership Investment Fund (UKRPIF) award supported construction of the centre, which secured co-investment from leading pharma companies including Elan Pharmaceuticals, AstraZeneca, and Pfizer, as well as philanthropic donations.</p>
4	Research Foundation in Compound Semiconductor Technology	Cardiff University	17,300,000	Wales	<p>Funding from UKRPIF will underpin the Institute for Compound Semiconductors - the first of its kind in the UK. At the heart of an emerging South Wales compound semiconductor cluster, the ICS has been established to provide a cleanroom facility where CS-interested companies and academics can work together to</p>

					<p>demonstrate the findings of their research and scale it up ready for exploitation by industry.</p> <p>First established in 2015, the ICS will soon move to a new 1250m2 cleanroom, part-funded by the UKRPIF. Six times larger than its existing facility, the new cleanroom and equipment will enable the ICS to process wafers up 8" in diameter.</p>
4	Building a New Biology	Edinburgh University	14,966,500	Scotland	<p>As part of an estates plan to create a world-leading research cluster for biological sciences, the University of Edinburgh is designing an iconic building to bring together researchers and technologies within an integrated research complex.</p> <p>'Building a New Biology' is an ambitious plan to grow research capacity, quality, and outputs of the School of Biological Sciences. It will support intellectual discovery and generate health, social and economic benefits.</p> <p>The first step in this plan is the re-engineering of 1967 Darwin Building to provide 6,000m2 of new research laboratories and workspace for 350 researchers and a 3,000m2 Technology Hub to house state-of-the art facilities. The new Darwin Building will be the gateway to biology in Edinburgh, a focal point for outreach activities, and a magnet for attracting partners to enable our translational work.</p> <p>Breakthroughs in science often occur at the interface between disciplines: the laboratories will be entirely flexible to allow easy re-purposing. Social learning spaces will engage the next generation of biologists, preparing them for 21st century careers.</p>
4	IRR Institute for Regeneration and Repair (previously the Centre for Tissue Repair)	Edinburgh University	10,700,000	Scotland	<p>The Centre for Tissue Repair will discover and deliver new therapies to repair tissue damage caused by disease and injury, building on the University of Edinburgh's world-</p>

					<p>leading expertise in regenerative medicine to progress vital advances in biological and physical sciences.</p> <p>It will also develop advanced imaging and sensor technologies that will enable scientists to view and measure tissue regeneration in real-time, giving vital new understanding and early read-outs of the success of these exciting new treatments.</p>
4	Neurological and Psychiatric Imaging Research and Therapeutics Hub	King's College London	10,000,000	London	<p>The Hub brings together 250 clinicians and scientists from disciplines including neuroimaging, neurology, psychiatry, genetics, molecular, cellular biology, and drug discovery, in efforts to fast-track new treatments to patients affected by disorders such as Alzheimer's disease, Parkinson's disease, motor neurone disease, depression, schizophrenia, epilepsy and stroke.</p> <p>The UK Research Partnership Investment Fund (UKRPIF) award enabled the institute to procure and install a range of imaging equipment to support ground-breaking molecular, cellular, animal, and human research to advance knowledge of disease mechanisms, reveal new avenues for therapy and test innovative therapeutics.</p> <p>Since establishment, the Hub now hosts a UK Dementia Research Institute Centre, alongside other research</p>
5	Biomedical Engineering Research Hub	Imperial College London	20,000,000	London	<p>The hub will house a clinical facility side-by-side with multidisciplinary laboratories and offices.</p> <p>Based in the Michael Uren Biomedical Engineering Research Hub on Imperial's new White City Campus, the facility will house a clinical facility side-by-side with multidisciplinary laboratories and offices for translational research initiatives. It is designed to facilitate the seamless translation of cutting-edge research into real-world clinical solutions.</p>

5	The Inequalities Institute	London school of economics	32,176,500	London	<p>The International Inequalities Institute aims to become the world's premier centre for interdisciplinary research on inequalities. It will pool and facilitate research, creating a generation of scholars with the complex social science tools necessary to understand current and future inequalities.</p> <p>Purpose-built research facilities will:</p> <ul style="list-style-type: none"> • spark new ideas and innovative solutions • involve research users in conception, design and delivery • implement research ideas.
5	Digital Aviation Research and Technology Centre	Cranfield University	15,000,000	East Midlands	<p>The Digital Aviation Research and Technology Centre (DARTeC) will be built at Cranfield University and will spearhead the UK's research into digital aviation technology.</p> <p>The Centre will address research challenges facing the aviation industry such as:</p> <ul style="list-style-type: none"> • the integration of drones into civilian airspace; • increasing the efficiency of airports through technological advances; • creating safe, secure, shared airspace through secure data communication infrastructures; • increasing the reliability and availability of aircraft through self-sensing, self-aware technologies. <p>Game-changing technologies such as a digital air traffic control tower and next-generation radar technologies on the University's licensed airport will provide an opportunity to create new integrated digital aviation systems that can inform future regulation promising increased efficiency, flexibility and capacity.</p> <p>Funding for DARTeC will be provided from a consortium of leading aerospace and aviation companies including; Thales, SAAB, Aveillant, Boxarr, and the Boeing IVHM</p>

					Consortium - as well as the UKRPIF and Cranfield University.
5	Creating a new Centre for Cancer Drug Discovery	Institute of Cancer Research	30,000,000	London	<p>The Institute of Cancer Research (ICR) is passionately committed to improving the lives of cancer patients through excellent research. The ICR is the world's most successful academic organisation at discovering new cancer medicines - identifying 20 drug candidates since 2005 alone and is consistently ranked by international league tables as one of the world's most successful higher education institutions for industry collaboration.</p> <p>Its new Centre for Centre Drug Discovery - thanks to a £30m UKRPIF award - will enable the world's leading academics in cancer drug discovery to further transform the lives of patients across the world. Housing 280 scientists across four floors of multidisciplinary research space, the Centre will also form a centrepiece of The London Cancer Hub, a globally significant life-science innovation cluster now being developed by the ICR and the London Borough of Sutton.</p> <p>The building will house research in cancer evolution and drug resistance, and feed advances in knowledge into the ICR's drug discovery programmes. It will facilitate collaboration, stimulate innovation, and drive partnership with industry and the translation of discoveries into the clinic.</p>
5	Advanced Therapies Centre	King's College London	10,164,789	London	<p>King's College London will establish an Advanced Therapies Centre, bringing together expertise, manufacturing capability and experimental medicine research facilities for cell and gene therapy.</p> <p>These therapies offer enormous promise for severe, intractable diseases, but their development is limited by access to clinical-grade manufacturing infrastructure and early-phase trials capabilities.</p>

					<p>The Centre will be open to academic and industry partners across London and the UK, and support the planned Cell and Gene Therapy Catapult large-scale manufacturing facility.</p> <p>The Centre will create a unique addition to the UK's biomedical research and development capability. It will trigger a substantial investment in the UK by pharmaceutical companies, creating high value jobs, scientific advances, and ground-breaking improvements in healthcare.</p>
5	Institute of Advanced Automotive Propulsion Systems	University of Bath	28,910,000	South West	<p>The University of Bath Institute for Advanced Automotive Propulsion Systems (IAAPS) will be a global centre of excellence, delivering transformational research and innovation into advanced propulsion systems. It will lead the development of future generations of ultra-low and zero emission vehicles and is scheduled to open in early 2021.</p> <p>Located at the Bristol and Bath Science Park, IAAPS will attract sector related businesses to the region and generate significant economic growth. IAAPS will stimulate over £67m in additional automotive research investment by 2025, creating an additional turnover of £800m for the UK automotive sector and supporting nearly 1,900 new highly productive jobs.</p> <p>Specialist facilities will make IAAPS a hub for training and skills development, as well as enlarging a competitive South West automotive cluster by supporting small and medium-sized businesses, and regional start-ups.</p> <p>The development of IAAPS has been led by the University of Bath, working in partnership with global companies and local businesses, the Automotive Council, and the Advanced Propulsion Centre.</p>
5	UK Rail Research Innovation Network	University of Birmingham	28,086,000	West Midlands	<p>The UK Rail Research and Innovation Network (UKRRIN) is designed to create powerful collaboration between</p>

					<p>academia and industry, aiming to provide a step-change in innovation in the sector and accelerate new technologies and products from research into market applications globally.</p> <p>A UKRPIF investment of £28m and £61m of new private industry match-funding investment was used to establish three national collaborative rail Centres of Excellence focused on:</p> <ul style="list-style-type: none"> • Digital Systems Integration at the University of Birmingham • Rolling Stock Innovation led by the University of Huddersfield • Infrastructure Innovation led by the University of Southampton. <p>The three Centres are joined by a fourth in Testing led by Network Rail.</p> <p>Supported by government and key industry bodies, including the Rail Supply Group (RSG) and Rail Delivery Group (RDG), this multimillion-pound initiative is recognised as being critical to the delivery of the rail sector's industrial strategy for growth and long-term success, enabled through world-class science and innovation.</p> <p>The UK Rail Research and Innovation Network (UKRRIN) will future proof the UK rail industry through innovation and collaboration by creating opportunities that will boost the UK economy and drive productivity.</p>
5	Centre for Crop Science	University of Cambridge	16,928,000	East of England	<p>The Cambridge Centre for Crop Science (3CS) will use modern plant science to increase the range of productive crops and sustainable cropping systems for use in the UK and in regions of the world where food security is threatened.</p>

					<p>It combines the excellence of the University of Cambridge and the National Institute for Agricultural Botany (NIAB) in multidisciplinary research with an agri-food industry user base. The partnership connects the unrivalled diversity of the university with the unique NIAB pipeline that connects research to the end-users of innovation in farming and agri-tech, the food industry, and applied research and extension services.</p> <p>UKRPIF funding will allow 3CS to be housed in a state-of-the-art research laboratory, supplemented by glass house and field station facilities and access to growth and trials land across the United Kingdom.</p> <p>3CS will be led by a newly appointed Professor of Crop Science, and will involve researchers from the University of Cambridge, NIAB, other UK and international research institutes, and industrial partners. Collaboration will be a central theme of 3CS: interdisciplinary; national and international; private and public sector.</p>
5	Translational Neuroscience	University College London	28,850,000	London	<p>This project will realise a dual interdisciplinary translational research hub to harness the world-leading power of UCL Neuroscience to find better ways to diagnose and treat devastating neurological disorders.</p> <p>The dual hub will retain facilities in Queen Square and create a new building on Grays' Inn Road that will serve as the headquarters and major research centre for the UK Dementia Research Institute (DRI), a new home for many of the UCL Queen Square Institute of Neurology laboratories and a clinical space for UCLH. In total the dual hub will accommodate over 800 people.</p> <p>The interim location for the UKDRI at UCL has been established and acts as the headquarters for a national institute that draws together over 300 established and early career researchers.</p>

					We are developing a new shared Magnetic Resonance Imaging facility that will work across UCL and UCLH.
5	Alliance MBS	University of Manchester	9,666,429	North West	<p>Alliance Manchester Business School was awarded £9.7m from the UKRPIF towards the redevelopment of a world-class business and management research centre of excellence for the North.</p> <p>The new School was officially opened by Lord David Alliance on 11 June 2019 and is already playing a leading role in harnessing pioneering business and management research to further strengthen the North West economy and boost productivity. The building promotes greater interdisciplinary working among colleagues and with business partners, helping to extend links with leading international partners, while facilitating enhanced research-led teaching for business leaders of the future.</p> <p>This landmark refurbishment of the UK's largest business school will also deliver additional state-of-the-art facilities to the University of Manchester campus, including a Data Visualisation Observatory and a Behavioural Economics and Strategic Management Laboratory - both due to open later in 2019.</p>
5	Research and Innovation Centre for Power Electronics and Machines	University of Nottingham	9,365,000	East Midlands	<p>Power Electronics and Electrical Machines are critical technologies to deliver all future scenarios of sustainable land and air transport and energy networks.</p> <p>Electrification of transport and decarbonisation of energy supplies are key to future society and involve businesses spanning from small local companies to major global engineering companies.</p> <p>To meet the demands for research and innovation capability and skills capacity, the University of Nottingham Power Electronics, Machines and Control Research Group (PEMC), a global research leader in these technologies, looks forward to the opportunities resulting from this new</p>

					<p>Research and Innovation Centre for Power Electronics and Machines.</p> <p>The new Centre will be located on the University's Jubilee Campus as part of the Faculty of Engineering's Research Cluster.</p> <p>The Centre will support the growing demand for innovation in power electronics and machines across a broad range of applications including transportation electrification and renewable energy. It will support economic growth and will maintain a technology lead in an area of existing UK competitiveness enabling commercial potential to be maximised.</p>
6	Bristol Digital Futures Institute	University of Bristol	28,872,000	South West	<p>Located within the University of Bristol's new Temple Quarter Enterprise Campus (TQEC), the Bristol Digital Futures Institute (BDFI) will accelerate the level and scale of the institutional transformation within the Digital Innovation sector. It will pioneer a co-creation and co-production approach across social, computer sciences, engineering and the arts that will bring researchers together with industrial and civic partners to define new methods for sociotechnical innovation and address cross-sector challenges. Working hand-in-hand with industry, the community, local government and other stakeholders, BDFI will break out from disciplinary silos and will create a new mould for the future of digital research and education, targeting skills and jobs creation, new frameworks, IPR, business models and policy and regulation.</p>
6	Future Metallurgy Centre	Brunel University London	16,000,000	London	<p>Metallic materials are the backbone of manufacturing and the fuel for economic growth. However, there is a compelling need to reinvigorate the UK metals industry, to rebuild the UK's international leadership in metallurgical science, and to train more skilled metallurgists. To address these challenges, Brunel University London has been</p>

					setting up the Advanced Light Metals Research Park (ALMRP) on its campus. The £16M UKRPIF funding will be used to purchase the state-of-the-art analytical instruments for characterisation of advanced metallic materials (£9.5M) and to create the FMC (Future Metallurgy Centre) building (£6.5M), which will complete the cycle of major planned capital developments for the ALMRP. This project will deliver the infrastructure to support fundamental research in light metals, enhance Brunel's research capacity, leverage £40M co-investment from the private sector and deliver significant benefits to the UK economy.
6	Heart and Lung Research Institute	University of Cambridge	30,000,000	East of England	The Cambridge Heart and Lung Research Institute (HLRI) is a timely and unique translational research enterprise, combining the world-renowned research expertise of the University of Cambridge with the clinical excellence of Royal Papworth Hospital in cardiothoracic medicine and surgery. Cardiorespiratory diseases comprise the largest disease burden in the developed world. In response, the HLRI will rapidly expand and accelerate commercially relevant and high impact basic and clinical research into treatments by enabling new collaborations with big pharma, leading medical device companies and a vibrant local biotech cluster. Within the first five years, the Institute aims to demonstrate proof-of-concept for at least ten new drugs or diagnostic approaches in cardiorespiratory disease, for accelerated NHS adoption.
6	Centre for Resilience in Environment, Water and Waste	University of Exeter	10,477,000	South West	The Centre for Resilience in Environment, Water and Waste (CREWW) will undertake research into some of the most pressing environmental challenges that impact upon the provision of safe and resilient water and waste services across the UK and overseas. These include ensuring sufficient water to cope with a growing population and climate change, and understanding how catchments

					<p>respond to flooding and drought, to improve future resilience.</p> <p>Part-funded by South West Water, CREWW will incorporate specialist laboratory facilities and space to facilitate collaboration between academics and water industry colleagues. Research will be transdisciplinary, drawing on expertise from across academic disciplines to deliver engineering, nature, economic and behaviour-based solutions that deliver multiple benefits to the environment, society, and the economy.</p>
6	Manufacturing, Engineering, Technology and Earth Observation Research Centre	University of Leicester	13,750,000	East Midlands	<p>The Manufacturing, Engineering, Technology and Earth Observation Research Centre (METEOR) is a key part of Space Park Leicester. It will be an internationally unique, world-leading research and innovation centre, co-locating academic and industrial space R&D. METEOR will revolutionise how satellites are conceived, designed, operated, and produced, while bringing world-leading approaches to data capture, mining, and interpretation. It will:</p> <ul style="list-style-type: none"> • Address the research challenges and barriers to adoption of modern industrial processes for satellite production. • Build a facility of digital systems and IT infrastructure to support the challenges of big data and its processing in space technology and Earth Observation (EO) services. <p>Develop a laboratory for novel EO research methods, technologies, and applications at high spatial and multispectral resolution.</p>
6	Project Oriel	UCL	30,000,000	London	<p>Oriel is a joint venture between UCL, Moorfields Eye Hospital and Moorfields Eye Charity.</p> <p>Major eye diseases are expected to increase over the next 15 years. It is estimated that 4 million people in the UK will</p>

					<p>be living with sight loss by 2050. The ageing population globally is adding to this challenge, resulting in a greater and more complex demand for eye services.</p> <p>Oriel will create a new and transformative, purpose-built centre for advanced eye health to deliver world-leading eye care for patients, the best education for students and research for the benefit of the whole population. It will provide the integration of clinicians, scientists, patients and public to maximise the opportunity to translate discovery science into experimental medicine and through increased access to clinical trials/studies for patients and populations, rapidly improve patient outcomes.</p> <p>Philanthropy will play a key role in supporting this ambitious project</p>
6	Centre for Integrative Semiconductor Materials	Swansea University	29,920,000	Wales	<p>CISM will be a world-first research and technology development facility dedicated to integrating historically disparate semiconductor platforms and their manufacturing philosophies.</p> <p>CISM will be developed with industrial partners across the semiconductor supply chain, embedded within a modern, translational university environment delivering research excellence, real technology outcomes, skills, jobs, and economic growth. CISM will contain manufacturing-grade clean rooms for TRL-spanning activities, state-of-the-art processing tools for R&D, product development and training, and flexible incubator space to nurture start-ups.</p>
6	London Institute for Healthcare Engineering	King's College London	16,000,000	London	<p>The London Institute for Healthcare Engineering will bring together world-class research and development from academia, industry, and the NHS in a flagship Institute at St Thomas' Hospital. It will accelerate translational research, improve patient outcomes, and drive economic growth, through partnerships with multinationals and SME MedTech companies. Building on excellent research</p>

					<p>infrastructure, including the Wellcome/EPSRC Centre for Medical Engineering and London 7T MRI Clinical Research Facility, the Institute will provide an optimised environment to translate research into health and economic impact through intensive collaboration between sectors on cutting-edge projects, ranging from novel digital health technologies to life-saving invasive medical devices. Partners and co-investors include Siemens Healthineers, Medtronic, NVIDIA, IBM, Wellcome, and SMEs.</p>
6	Globally leading cancer research centre	University of Manchester	25,000,000	North West	<p>This world-leading new facility will enable research growth and, most importantly, facilitate a groundbreaking approach to how we work together by embedding the research facility within a cancer hospital. Crucially, it will drive a new model of integration of basic discovery, translational and clinical research, drawing on our recognised strengths in biomarker development, early phase clinical trials with novel agents, and real-world clinical informatics – with a strong commercialisation drive towards delivering new clinical pathways to benefit patients worldwide.</p> <p>This is enabled and driven by the wider Greater Manchester (GM) health agenda. Health inequalities and the high incidence of cancer in the GM population create unique opportunities for highly translational research. Importantly, GM's unique devolved health and social care system provides a framework for us to address population health challenges and realise economic benefits using UoM's world-leading expertise in health informatics and new commercial partnerships to activate the transformational use of 'real world, real time' patient data.</p>
6	York Global Initiative for Safe Autonomy	University of York	10,479,456	Yorkshire and the Humber	<p>The York Global Initiative for Safe Autonomy, housed in a dedicated new research facility at the University of York, will address the challenges faced by the world-wide</p>

					<p>introduction of robotics and connected autonomous systems (RCAS).</p> <p>The Initiative builds on York's unique expertise in the assurance of autonomy, advanced communications, and design and verification of RCAS, to facilitate their safe introduction and adoption. It will address the RCAS challenges across three central research pillars: design, assurance, and communications</p> <p>UKRPIF funding will enable the construction of a new building to bring together world-leading experts and industrial partners. The building will facilitate research, education and training, innovation, ethics, and public engagement through an ecosystem of living laboratories and commercial innovation. Close partnership with regional, national, and international partners will support the National Industrial Strategy.</p>
7	The Pears Maudsley Centre for Children and Young People	King's College London	11,061,809	London	<p>The Pears Maudsley Centre for Children and Young People, led by KCL, aims to make a transformative leap forward in research in childhood mental health. Mental health disorders affect one in six children and young people and represent one of society's most pressing challenges. With three-quarters of adult mental health disorders starting in childhood, the effects of this problem reach into all aspects of society – individual wellbeing, families, communities, and economic productivity.</p> <p>UKRPIF funding will help KCL develop a major upgrade in research capabilities, by providing cutting-edge clinical research equipment alongside a dedicated research collaboration hub, facilitating collaboration with all sectors across the UK.</p>
7	CMAC Data Lab – a Digital Medicine	University of Strathclyde	11,000,000	Scotland	<p>CMAC Data Lab, a world-leading centre for medicines manufacturing research, skills, technology and translation, led by the University of Strathclyde, will revolutionise the</p>

	Manufacturing Research Accelerator				<p>way medicines are designed, developed, manufactured and regulated.</p> <p>For decades, pharmaceutical firms have manufactured their products in batches. It's a tried and tested method to produce drugs, but it can be slow and inefficient. To streamline production, manufacturers have begun to apply continuous manufacturing technologies to the pharmaceutical production process. Continuous production removes built-in production gaps and can shorten manufacturing times from months to days.</p> <p>CMAC Data Lab will enhance productivity, accelerate development and scale-up for new patient-centric products, and develop more sustainable and resilient processes, as well as create a unique environment to train the future workforce. And it'll do this by making use of AI, robotics and the internet of things.</p>
7	Centre of Excellence for Railway Testing, Validation and Customer Experience (South Wales)	University of Birmingham	15,000,000	West Midlands	<p>The Centre of Excellence for Railway Testing, Validation and Customer Experience in South Wales will support a more efficient and productive railway. The University of Birmingham will lead the creation of this centre.</p> <p>The investment will help the UK's rail industry develop the capability to create and deploy new innovations while developing clusters of industry activity. The activities will support significant reductions in whole-lifecycle costs, supporting a more efficient and productive railway.</p>
7	Cranfield's hydrogen integration incubator (CH2i)	Cranfield University	22,968,000	East of England	<p>The Cranfield Hydrogen Integration Incubator (CH2i) is a collaborative project to provide a fully integrated, world-leading research and innovation capability.</p> <p>Based at Cranfield University, with its deep specialism in aerospace, engineering and energy, the project focuses on developing hydrogen enabled aviation at scale. It will provide specialist facilities for the rapid development of technologies in a safe environment up to the highest technology readiness levels.</p>

					CH2i will comprise new research laboratories and specialist testbeds as well as enhancements to Cranfield's Global Research Airport. It will sit at the heart of a broader Hydrogen eco-system on campus, where research and industry partners work together to unlock some of the technical challenges around the future development and deployment of hydrogen within the aviation industry.
7	CTWR	Hull University	16,000,000	Yorkshire and the Humber	<p>The centre brings together world-leading academics, clinical researchers and industry to tackle some of the major health challenges of today. The project will focus on translating research discoveries into clinical settings, addressing major health challenges that cost global health care systems, including the NHS, billions of pounds per year.</p> <p>The new centre will act as a national hub for translational health research, catalysing new discoveries across diagnosis, treatment and care that will deliver direct and indirect improvements to local, national and global health and wellbeing.</p>
7	Smart Trials Development Hub	King's College London	10,000,000	London	<p>Recent advances in therapeutic development have delivered transformative benefits to patients with common life-threatening diseases, but not all treatments benefit all patients. This poses two significant challenges: we don't understand the biological reason why some patients don't respond to therapy, and clinical trials across the world under-represent the population so the biological diversity in ethnic minorities is also not considered.</p> <p>King's College London's UK Smart Trials Development Hub is the first facility in the world to meet these challenges. The Hub will study diverse patient data and samples to understand the mechanisms behind individual's response to treatments to develop targets for therapeutics with clinical, academic and pharmaceutical partners.</p> <p>The facility will house state-of-the-art experimental data</p>

					and AI-driven techniques to define characteristics of individual patients' diseases. This innovative approach enables accurate predictions of which patients will benefit from existing and new therapies – critical for designing efficient, cost-effective and inclusive clinical trials.
7	Zero Carbon Translation Centre (ZCTC)	University of Nottingham	13,970,191	East Midlands	<p>The University of Nottingham will establish new world-leading research facilities to decarbonise future transport. Building on the university's internationally leading capabilities in electrification, hydrogen and manufacturing, the investment will enable testing of novel powertrains, including cryogenic electrical machines and systems fueled by liquid hydrogen and other green fuels. It will also create advanced manufacturing capabilities to allow rapid market introduction of the latest research into decarbonised transport solutions where battery electric power is not viable.</p> <p>The facilities will offer open access and space for industry collaboration, placing UK science into a globally leading position in a significant market. At the same time, they strengthen the university's position as part of a national network of research, infrastructure, and skills development, while also enhancing regional impact.</p>