

MANCHESTER
1824

The University of Manchester



Research and discovery

Our future

Knowledge | Wisdom | Humanity

2021-25 plan

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Our University is a powerhouse of research, with a history of world-changing achievements, and is ranked among the leading research universities globally. To build further the quality of our research, we will attract and develop the best people, engage with global challenges, encourage and enable collaborations, and provide an environment where great ideas are born and abound.

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Foreword

Our University is a research powerhouse, ranked globally among the leading research universities for the quality and impact of our research. Our research and discovery strategy builds on our research strengths and international standing.

Our research and discovery strategy is designed to equip our researchers with the tools to remain at the forefront of their fields, advancing knowledge, understanding and solutions. Our aim is to continue to produce world-class research with impact which yields economic, environmental, health, social and cultural benefits across the world.

How we research is changing. Our researchers are creating and using new digital skills and datasets and are working with rapid innovations in equipment and other research infrastructure. Their ambitious research agendas often require interdisciplinary teams, international academic collaborations or partnerships with industry, charities, cultural organisations or government ministries and agencies. Such collaborations benefit from sharing complementary expertise and facilities, learning from each other, and pooling research costs and risks.

Successful teams integrate early career researchers, technical specialists such as data analysts and software engineers, and offer development opportunities at all career stages. They expect everyone to update their skills regularly and to build their leadership ability. Many are pioneering open research practices – where research is more easily

shared, scrutinised and built upon to accelerate progress through collaboration – the value of which was underscored by the rapid international development of vaccines and other interventions during the global COVID-19 pandemic.

Research and innovation are global endeavours of opportunities and operational challenges. Governments, businesses, charities, philanthropists and other research funders want universities to help find solutions to complex challenges and we will continue to do so. Many governments, including the UK, are increasing their investment in research and innovation to gain a national competitive economic advantage, while also investing in major supra-national research collaborations.

Research teams benefit from increased funding and opportunities for international collaborations – which at Manchester include major international research infrastructure facilities such as CERN and the Square Kilometre Array (SKA) and a successful track record of EU research funding – but must also navigate complexity to operate in this environment. This includes regulations concerning potential risks to national security, termed ‘Trusted Research’



Foreword

in the UK setting, and the moral and practical considerations in collaboration with partners in low-income countries or in conflict zones. The UK's exit from the European Union has made European collaborations more difficult due to protracted discussions about association for Horizon funding.

Our strategy fosters research excellence through the combined strength of disciplinary specialisms and interdisciplinary collaborations for both fundamental (discovery) and applied research. Our success requires a research environment and culture which is intellectually ambitious, bold, creative – with high expectations of each other but also collegial, fair and collaborative. It must maintain exemplary standards of research leadership, ethics and integrity, professional conduct and compliance with national security requirements.

To deliver our strategic vision we are committed to accelerating interdisciplinary research, strengthening research leadership and creativity, embedding an open and responsible research environment, and using our research to inspire student learning. By 2022, two years into the plan, we have made good progress, despite the impact of the COVID-19 pandemic, Brexit and wider geopolitical disruptions.



Professor Colette Fagan, FAcSS
Vice-President for Research



Purpose, vision and strategic plan

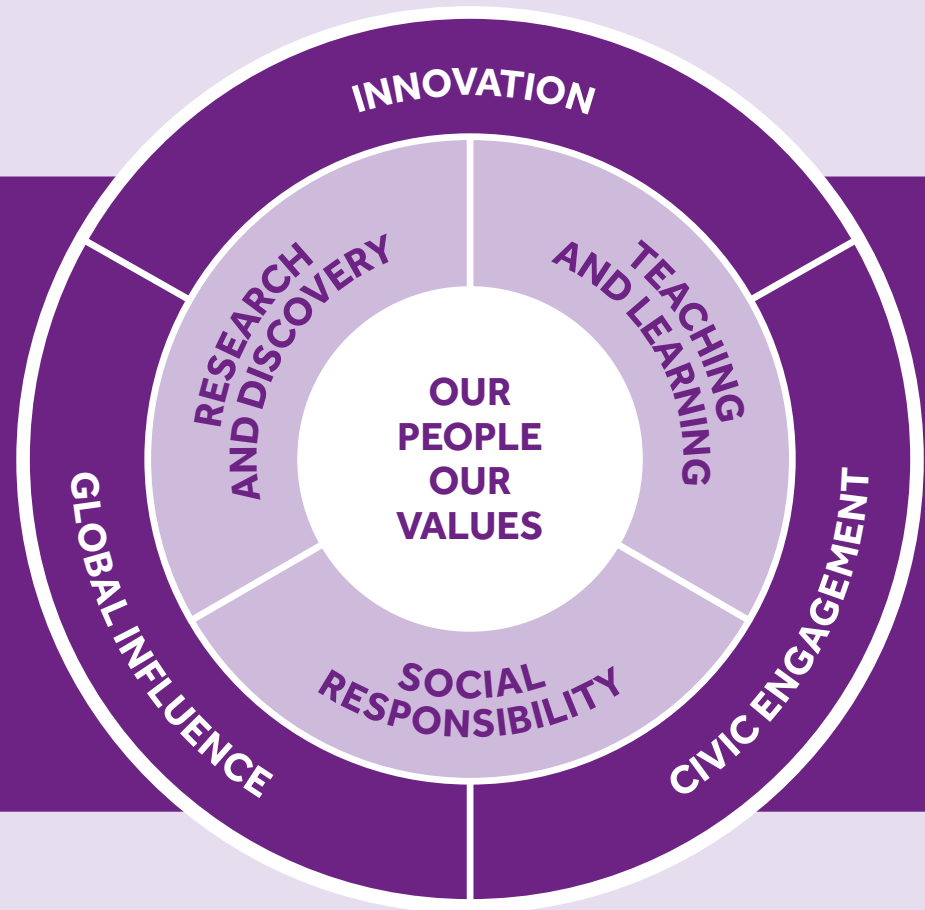
Our purpose

To advance education, knowledge and wisdom for the good of society.

Our vision

We will be recognised globally for the excellence of our people, research, learning and innovation, and for the benefits we bring to society and the environment.

Our strategic plan



Read our vision and strategic plan at www.manchester.ac.uk/strategic-plan

Research and discovery

Our ambition is to continue to advance our standing as one of the leading research universities globally. We will be a world-leading source of new knowledge, excelling in discovery and application. We will build on our record of path-breaking interdisciplinary research and bring the world's best people together, combining expertise from across disciplines to understand and find new solutions to society's biggest questions. We will provide a creative, ambitious and supportive environment in which researchers at every career stage can develop into and thrive as leaders in their chosen field.





Our strategic ambitions are to:

- be a world-leading source of new knowledge, excelling in discovery and application;
- build on our record of path-breaking interdisciplinary research;
- bring the world's best people together, combining expertise from across disciplines to understand and find new solutions to society's biggest questions;
- provide a creative, ambitious and supportive environment in which researchers at every career stage can develop into and thrive as leaders in their chosen field.

Our priorities are:

1. **Accelerating interdisciplinary research.** We will build on our strengths to address major global challenges.
2. **Developing research leadership and creativity.** We will attract and train researchers for the future through a portfolio of the highest quality training and support at all career stages.
3. **An open and responsible research environment.** We will foster an environment which enables researchers to thrive and produce work of the highest quality in its ambition, creativity, rigour and integrity.
4. **Inspiring student learning with our research-intensive environment.** We will optimise the benefits of the synergies between research and teaching for students and staff.

The successful delivery of our five-year plan relies on support from, and synergies with, priorities presented in the other *Our future* themes. These include:

- the contribution that our people, our values will make to strengthening our research infrastructure, services and culture;
- synergies with teaching identified in our teaching and learning plan;
- the international, national and regional research ecosystems, partnerships and impact that we will continue to build through our social responsibility, innovation, global influence and civic engagement strategic themes.

Priority one

Accelerating interdisciplinary research

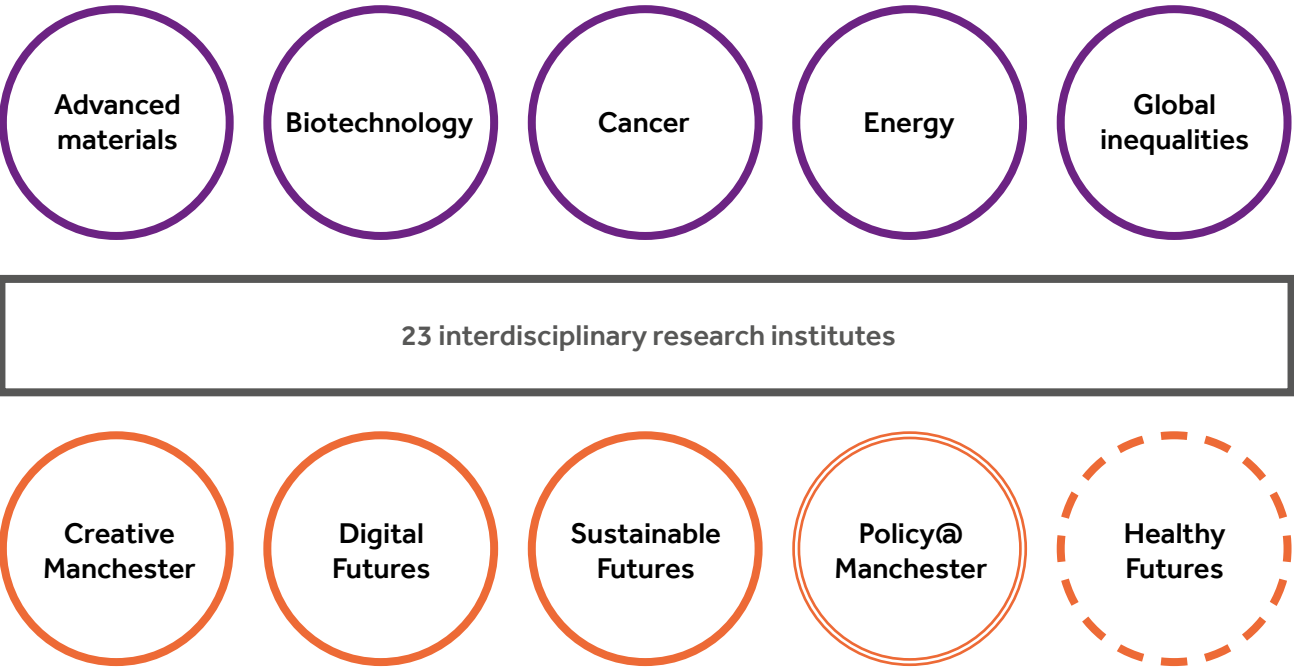
We will build on our interdisciplinary strengths to address major challenges, investing in areas of strength and scale. We will mobilise our leaders, raise our ambition and amplify our profile, positioning us to produce the next big ideas. Research will increasingly address challenges that demand large-scale multidisciplinary, cross-faculty responses and more external collaboration with researchers and co-production with end-users to improve impact.



Accelerating interdisciplinary research

More than 60% of our researchers are engaged in interdisciplinary research at any one point in time through our research [beacons](#), [institutes and platforms](#). We will drive the investment and focus of this portfolio to mobilise and deepen collaborations across the University, to spark new ideas and deliver new path-breaking research agendas, solutions and applications.

Accelerating interdisciplinary research



Beacons:
Showcase our pioneering discoveries, interdisciplinary collaboration and cross-sector partnerships that are tackling some of the biggest questions facing the planet.

Institutes:
Where we have achieved, or aspire to, world-leading status in interdisciplinary research.

Platforms:
Provide forums, focus and resources to connect, drive and amplify interdisciplinary collaborations across our institutes, research centres and individual academics. They support research, external engagement, impact and inform teaching. Healthy Futures is an emergent platform.

www.manchester.ac.uk/research/structure/institutes-platforms



Action one: take a strategic approach to identifying and coordinating our key research strengths

We will accelerate interdisciplinary research quality and impact by identifying and regularly reviewing our research strengths and research themes and prepare teams to address major societal challenges. Our global strategic partnerships will enable interdisciplinary research collaborations in areas of mutual strength and shared interest. Our research engagement, translation and application, including commercialisation, will support our innovation and civic engagement strategic plans.

Action two: mobilise and maintain engaged interdisciplinary communities around societal challenges

We will bring the world's best people together, combining expertise from across disciplines to understand and find new solutions to some of the world's most pressing problems. We have established three University-wide priority themes:

- creative (creative industries and the cultural economy);
- digital (data science, artificial intelligence, cybersecurity and digital trust);
- environmental sustainability (launched 2021);
- and will launch a fourth theme: health (including health equity and inequalities).

Our research [beacons](#), [institutes and platforms](#) will strengthen connections, build interdisciplinary research communities and catalyse research agendas and external partnerships.

Action three: communicate and promote our research strengths and impact locally and globally

We will develop communications campaigns to extend the reach of our research and communicate the benefits and impact that our research achieves. We launched the Greater Manchester policy hub in 2022 within Policy@Manchester to provide focus and resource to enhance our regional research impact and policy influence as part of our commitment to research-informed civic engagement.

Priority two

Developing research leadership and creativity

We will expect all our researchers, including our research students, to strive for excellence, including in their leadership and collegial mentoring. We will develop researchers for the future, not just the present. We will provide an environment which enables success, placing development and wellbeing of all our researchers at the heart of all we do through a portfolio of the highest quality training and support at all career stages, that foster ambition, creativity and collaboration.





Our researchers will be able to build their skills and capabilities at all career stages to enable them to fulfil their potential as leaders within their chosen field and the various career pathways available in all sectors of the economy. We will deliver this through enhancing our policies, training and development opportunities and infrastructure to provide a world-class and collegial research environment.

Action one: attract the best new talent

We will attract and support the very best early career talent by securing external awards to run doctoral training programmes and through our internally funded postgraduate studentships. We will build additional international experience and opportunities for our postgraduate researchers, including new international collaborative partnerships. We will seek to increase the number of international research students to enhance the strengths and power of the University's research base (see global influence theme).

Action two: invest in research fellowships

We are creating a University Fellowship Network to attract the best new talent and accelerate the progress of our externally and internally competitively funded independent fellows. We will grow the number of externally funded fellows against our 2020 baseline. We will invest in strategic recruitment of Presidential Research Fellows.

Action three: retain and develop mid-career talent

We will enhance the retention and development of our mid-career researchers through bespoke training and professional development opportunities. We will support them to become leaders with international standing in their field by providing world class infrastructure and other resources that will enable them to secure external research funding, build international collaborations and pursue related activities.

Action four: exemplary researcher training and professional development

We will launch a new University-wide framework for research training and professional development, including leadership, across all career stages. We will ensure the content and approach remains relevant through strategic engagement with our research funders and leading employers. We will use our institutional strengths in interdisciplinary research, including contributions from our [research platforms](#) to help equip our researchers with leading-edge skills and ways of working.

We will enhance our researchers' employability and career success by working with research funders and employers to design and implement innovative training to build capabilities and opportunities for successful academic and industrial career paths and to enhance mobility between these pathways.

We will surpass the sector's researcher development concordat by trialling innovations to enhance postdoctoral career development.

Action five: creativity as a theme in research practice

Creativity and innovation are at the heart of all that we do; integral to how we generate ideas, design and do research, and make discoveries. The Creative Manchester research platform will initiate an interdisciplinary programme of reflection and capacity building in creative practice in the generation of research ideas and project design and research leadership – including the launch of a [University College for Interdisciplinary Learning](#) (UCIL) module, a series of 'in conversation' events and a professional development module for all researchers tailored to career stage.

Action six: communicate and promote a positive research culture and environment

We refreshed the statement of research contribution expectations for academics in 2021 and will implement this and the parallel statement of expectations for research staff. We will provide an inclusive and well-resourced environment, enhanced by investment that commenced in 2021 to facilitate research innovation and excellence. This has a built-in emphasis on supporting a research culture that is creative, collegial, collaborative and recognises the contribution of all team members.



Priority three

An open and responsible research environment

We will complete our strategic investment in transforming our research environment to support open research and a modernised responsible research framework for how we organise, resource, conduct and share our research to meet the highest standards of conduct and integrity; environmental sustainability; equality, diversity and inclusion; and positive economic and social impact.





An environment which attends to how we do our research enables researchers to thrive and produce work of the highest quality in its ambition, rigour, integrity and creativity. We will invest to meet the highest standards of openness and responsibility. We will ensure that the University's strategies for **environmental sustainability** and for **equality, diversity and inclusion** are integrated into all elements of our research and discovery strategic actions.

Action one: open research

We will foster a vibrant and collaborative research community by accelerating progress to establish an open research environment to make it easier to access and re-use data. We launched an Office of Open Research in 2022, led by the library in partnership with research service teams to drive this activity. We will build open research capability by developing systems, tools and training, and ensure that open research is recognised and rewarded, for example in our promotions systems.

Action two: reproducible research

Through the Office for Open Research and our membership of the UK Reproducibility Network (UKRN) we will work with our research community to promote and accelerate research reproducibility, sensitive to disciplinary differences in research methods.

Action three: responsible research

Our University commitments to progress equality, diversity and inclusion; wellbeing and environmental sustainability are set out in our people, our values and social responsibility plans. Aligned with these commitments, we will maintain a dynamic, ambitious and productive research environment, with zero tolerance of bullying and harassment, by ensuring that our research culture is creative, collegial, fair and collaborative.

We outline the University's expectations of research integrity and best practice through our Code of Good Research Conduct. We will implement these standards by ensuring that all our researchers understand their rights and responsibilities, and are supported to seek advice and report any concerns they have. We will ensure we have the necessary systems and resources for our research to fulfil all professional and compliance standards, including the UK's Trusted Research framework.

We will work closely with the Social Responsibility team to promote environmentally sustainable innovations in how we research, including sustainable laboratory practices and travel policies.

Priority four

Inspiring student learning with our research-intensive environment



We will use our research knowledge, skills, equipment and related infrastructure to provide an inspiring learning environment and unique opportunities for our undergraduate, postgraduate and research students.

The synergies between research and teaching for staff and students inform our teaching and learning plan. A research-intensive environment gives students access to leading research facilities and equipment and opportunities to learn through engaging with current research throughout their programmes of study.

Action one: teaching-informed research and research-informed teaching

We will work more closely across teaching and research to optimise the benefits for students, including connections between our interdisciplinary research and the curriculum of our UCIL; and the contributions our [research platforms](#) can make to building students' skills and capabilities.

The value of teaching-informed research is less widely understood than the benefits of a research-intensive environment and to redress this we will initiate a joint teaching and research project and awareness-raising campaign through the Institute of Teaching and Learning.

Key measures of success

Board scorecard metrics

To be consistently ranked within the top 25 universities in the world, as measured by the QS World Ranking and/or the Academic Ranking of World Universities.

The quality of our research will place us among the top 5 UK universities in the Research Excellence Framework (REF), or alternative, following REF 2021.

Increased market share of external research funding opportunities.

Interdisciplinary research

Additional metrics

Other metrics and qualitative assessments will be used by the University's Research Strategy Group to monitor and evaluate progress.

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