

Research and Innovation Strategy 2025-2030

The wonder in discovery.

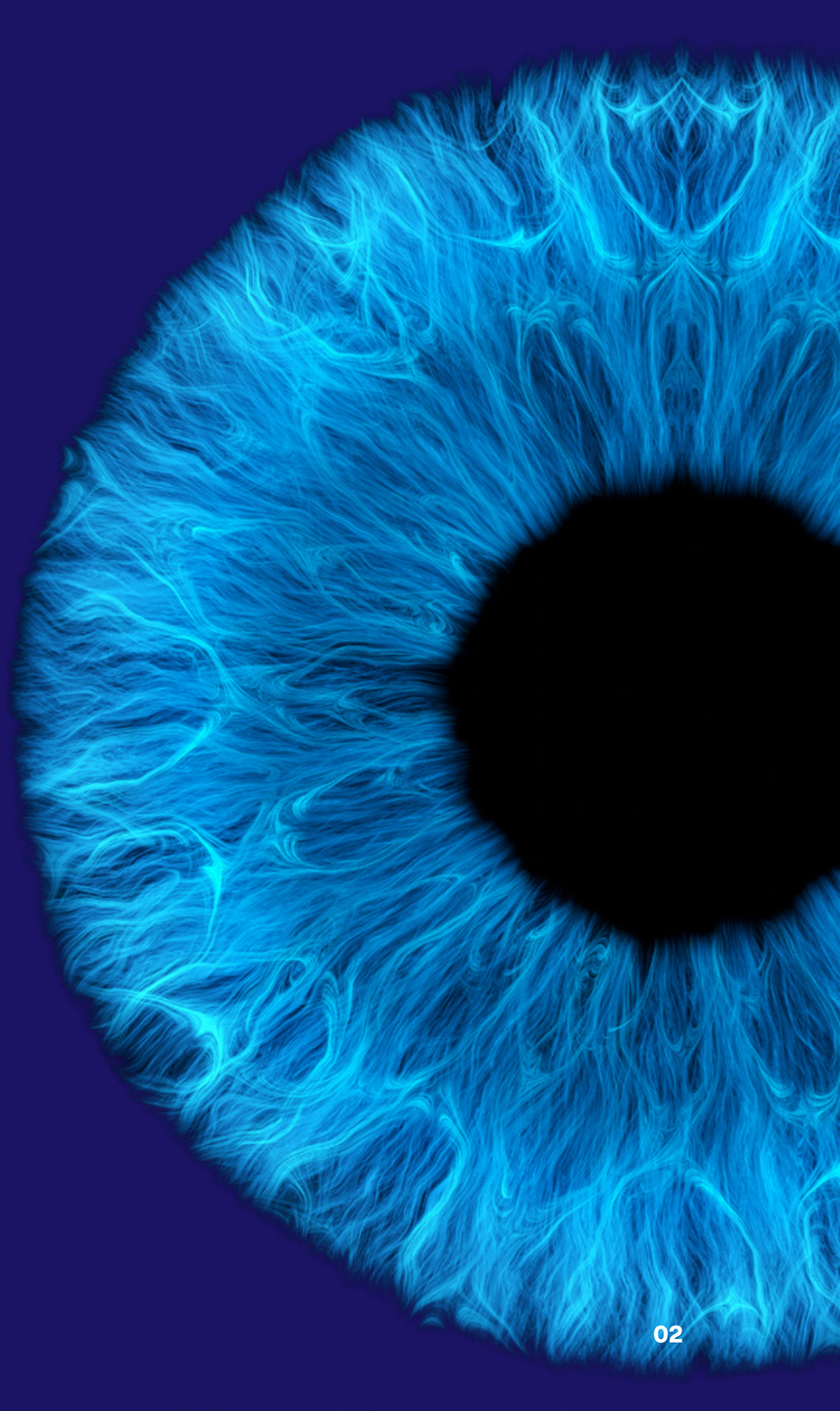
University of Huddersfield
Yorkshire roots. Global reach.

RESEARCH & INNOVATION

Executive summary

The University of Huddersfield's Research and Innovation Strategy 2025-2030 sets out a clear ambition: to be recognised for research that is rigorous and adopted by those who can benefit from it. Rooted in a long-standing civic commitment to useful knowledge, the strategy positions Huddersfield as a partner of choice for industry, public services, voluntary and community sector and cultural organisations seeking research-led solutions to real-world challenges.

Our decision making is informed by the evolving national and international policy and funding landscape, including the UK's Modern Industrial Strategy, Fit for the Future: 10 Year Health Plan for England, UK Research and Innovation (UKRI) Strategy 2026 to 2031, Horizon Europe and other major collaborative funding programmes. These frameworks help identify where national priorities, funder expectations and societal needs are converging, while our choices remain grounded in Huddersfield's distinctive strengths, civic role and capacity to deliver **real-world impact.**





The strategy is built around the Applied Research, Innovation and Adoption (ARIA) model, which connects discovery to application and impact. Through a network of Research Centres and Institutes, connected through Strategic Research Missions, InX – Huddersfield Innovation Exchange, stronger global partnerships, and strategic investment through the Research and Innovation Futures Fund, the University will strengthen research quality, grow income, expand commercialisation, and accelerate the adoption of research into impactful, society-enhancing practice, policy and enterprise. West Yorkshire will be central to this model: a place-based asset, test bed and beneficiary through which research is shaped with partners, adopted in real-world settings and scaled to national and global impact – embodying **"Yorkshire Roots, Global Reach."**

Investment will be focused where research excellence, external demand and future impact align most strongly. It will support curiosity-driven research while creating clearer pathways for interdisciplinary collaboration, innovation, intellectual property, spin-out activity and external engagement.

Alongside this, the strategy commits to an inclusive and sustainable research culture, stronger doctoral and staff development, and a research environment that enables talent to thrive.

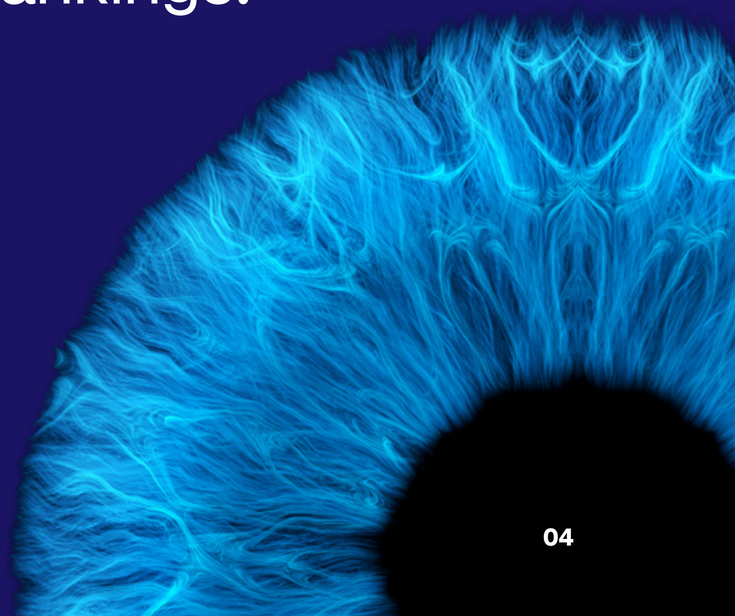
By 2030, the University aims to achieve Top 50 UK performance for research income per academic and a Top 300 for QS and Times Higher Education (THE) world university rankings. These headline ambitions will be supported first by our Strategic Research Missions, which will focus institutional capability around areas of distinctive strength and future opportunity.

A wider performance framework will also drive enhanced Research Excellence Framework (REF) performance, Knowledge Transfer Partnership (KTP) growth, focused Research Centres and Institutes, joint inter-institutional Research Centres, increased doctoral awards and spin-out development.

Taken together, this strategy sets out how Huddersfield will turn local innovation into global reach and impact.

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Our purpose

The University of Huddersfield was founded on a simple premise: knowledge should be useful. Research that sits on shelves helps no one. Research that reaches industry, public services, communities and policymakers, enhances knowledge and transforms lives.



The next decade will be defined by artificial intelligence (AI), industrial transition, health inequality, demographic change, climate adaptation and intensifying global competition for research talent and funding. Universities will be judged not only by the quality of their research, but by their ability to mobilise expertise, work with users, translate discovery and demonstrate visible impact that benefits society.

This is both a challenge and an opportunity. Public funding is increasingly mission-led and collaborative. Industry seeks access to research, talent and facilities. Public services need evidence-led innovation. Communities expect universities to contribute visibly to place, opportunity and wellbeing.

By 2030, the University of Huddersfield will be the university that industry, public services, civic partners and creative organisations turn to first when they need research-led solutions, innovation capability and future-facing talent. This ambition will run through our Strategic Research Missions, InX – Huddersfield Innovation Exchange, the Doctoral College, our international partnerships and our work with regional and global partners. It will strengthen the relevance of our research, accelerate innovation, expand impact, diversify income and position the University as a driving force in economic, social, cultural and environmental transformation.

Our strategy will concentrate where research excellence, external demand, funder opportunity, partner commitment and future impact come together. Our commitment is to empower our researcher community to develop and innovate. Our defining outcome will be to create transformational interdisciplinary research with global impact within a supportive integrated innovation ecosystem.



What we stand for

Applied excellence

We produce world-class research that is shared, applied and adopted – creating scientific, social and cultural impact in the real-world.

Partnership by design

We create research with partners who are best placed to translate it into impact – across business, public services, cultural institutions and international networks.

Translation at pace

We move ideas from discovery to proof of concept, then into products, policy and cultural impact. We measure success by adoption and engagement, not just publication.

Sustainable impact

Our research spans disciplines – from sustainable engineering and alternative energy to architecture, technical textiles and fashion – delivering practical solutions for environmental resilience, social equity and sustainable growth.

Why Huddersfield?



Agile at scale

We combine the reach to deliver major programmes with the agility to respond quickly to emerging opportunities.



One route in

InX – Huddersfield Innovation Exchange is the University's gateway for external engagement, providing a clear and coordinated route to our expertise, facilities and innovation support.



Talent with purpose

We invest in doctoral researchers as a strategic talent pipeline, equipping them to disseminate their work widely, engage confidently beyond academia, and explore enterprise opportunities.



Research that delivers

Landmark initiatives such as the Institute of Railway Research and the National Health Innovation Campus demonstrate our ability to turn research strength into real-world solutions, national capability and lasting transformative impact.

The ARIA model

Our strategy is built around Applied Research, Innovation and Adoption: the ARIA model. It provides a framework for translating excellent research into economic, social, cultural, civic, and environmental value. Our model is rooted in local innovation and designed for global reach – translating place-based strengths into partnerships, research excellence and measurable impact at national and international scale.

Discovery generates new knowledge through curiosity-driven and challenge-led research. Research Centres and Institutes provide the disciplinary and interdisciplinary foundations of research excellence. Strategic Research Missions bring these capabilities together across Schools around major strategic challenges and opportunities, creating the critical mass required for larger interdisciplinary programmes, partnerships and investment.

They are framed as active institutional missions, not additional structures: each mission assembles capability around a major challenge where Huddersfield can combine existing critical mass, external demand and routes to adoption.

InX – Huddersfield Innovation Exchange provides the translational pathway from idea to proof, prototype, policy, practice or venture. Its purpose is to help research move into use by industry, public services, communities, policymakers and creative organisations, with impact measured by the value created for users and society.

Our growing KTP portfolio will be a key route for translating research into industrial innovation, alongside collaborative Research and Development (R&D), consultancy, commercialisation and wider partner-led activity.

ARIA is not intended to funnel all research toward commercialisation or immediate application. Curiosity-driven and discipline-led research remain fundamental to the University's research culture and to the generation of new knowledge.

Rather, ARIA provides an enabling framework for areas where earlier consideration of end users, partners and routes to adoption can open new possibilities, and where quality, ambition, partnership potential, funding opportunity and credible pathways to impact align.

This gives the model a clear basis for prioritisation: it protects the breadth of curiosity-driven research while directing strategic support toward activity where it can most effectively accelerate institutional performance, strengthen partnerships and create public value.





Strategic Research Missions

Strategic Research Missions are the priority challenge areas where Huddersfield has distinctive research strengths and the potential to build national and international leadership. Strategic Research Missions are cross-institutional themes that bring together academics from across the University, drawing on cross-School Research Institutes and the School-based Research Centres that underpin them.

Strategic Research Missions frame our areas of critical mass as active, challenge-led missions, enabling the University to assemble institutional capability around shared goals. They provide the focus for investment through the Research Innovation Futures Fund, interdisciplinary collaboration, partnership development and external engagement, enabling the University to concentrate effort where it can most effectively drive excellence, grow reputation and achieve visible impact.

Our three Strategic Research Missions focus on:

— Advanced Manufacturing and Materials

— Future Mobility and Sustainability

— Health, Wellbeing and Care

Together, these Strategic Research Missions focus institutional capability on transforming how we make and manufacture; creating more sustainable mobility pathways, infrastructure and places; and improving health, wellbeing and care at every stage of life.

The Strategic Research Missions are dynamic rather than fixed organisational structures and reviewed periodically, every four years to ensure they fit internal and external priorities.

Each Strategic Research Mission is overseen by a University Research Lead who coordinates the strategic research activity and grant portfolio, interdisciplinary development, external engagement and investment. University Research Leads work with School Research Directors, Unit of Assessment (UOA) Leads and the institutional Research and Innovation Directorate to strengthen research quality, impact, income and environment.

Strategic Research Missions bring together complementary Centres and Institutes from across the University to:

- **Develop major interdisciplinary research programmes**
- **Create critical mass for large-scale and collaborative funding**
- **Connect research excellence to emerging national and international priorities**
- **Develop strategic partnerships with industry, public services, government and civic organisations**
- **Create opportunities for doctoral and post-doctoral researchers to work across disciplinary boundaries**
- **Identify opportunities for commercialisation, knowledge exchange and impact**
- **Strengthen the University's distinctive institutional research propositions**

AI is fundamental to our research ecosystem and is embedded through the work of the Institute for Applied AI across all research areas and mobilised through Strategic Research Missions to support discovery, data analysis, design, simulation, automation, creative production, health innovation and partner engagement.

Our membership of the Defence Universities Alliance further strengthens this Strategic Research Mission ecosystem, recognising the importance of responsible dual-use research, trusted partnerships and innovation that can contribute to both civilian benefit and national capability.



Advanced Manufacturing and Materials

Our Centre for Precision Technologies (CPT) is an Engineering and Physical Sciences Research Council (EPSRC) funded national centre of excellence in advanced metrology and cutting-edge precision engineering research. Specialising in the development of next-generation technologies that improve accuracy, speed and cost-efficiency across engineering, design and manufacturing.

Our advanced materials research is focused on nanomaterials and metamaterials for applications in electromagnetic systems, 5G antenna design, surface coatings, nuclear cladding, advanced materials for defence, and materials for medical applications such as bio-polymers.

Our Technical Textiles Research Centre aims to re-establish the town and region as a world leader in textiles by harnessing the newest technology and manufacturing techniques. We also have a significant academic presence in the areas of digital transformation and supply chain management studies.

Future Mobility and Sustainability

Our Institute of Railway Research (IRR) is a world-class centre for railway engineering research and innovation. The IRR specialises in the modelling, simulation and full-scale testing of critical railway systems and works closely with industry to deliver impactful research for a safer, more reliable and cost-efficient low carbon transport system.

We have expertise in thermofluids, renewable energy, computational fluid dynamics, digital twins, smart infrastructure and sustainable engineering to address major challenges facing society, industry and the built environment.

The Future Mobility Centre and its award-winning personnel advance the study of sustainable and socially inclusive mobility and automated, connected, alternatively fuelled, and shared transport and is set to understand and inspire travel behaviour change. The Centre for Sustainability, Responsibility, Governance and Ethics (SURGE) works on initiatives that foster resilience, equity, and sustainability across business, society, and policy.

Health, Wellbeing and Care

Our research improves health where people live, work and receive care. The Centre for Equity in Mental Health is an National Institute for Health and Care Research (NIHR) Mental Health Research Group, funded to reduce mental health inequalities in our local communities through prevention, better access to care and co-production with communities. Our Healthy Housing Initiative works with housing associations, local authorities and the NHS on the health consequences of housing. We also lead research on the health and wellbeing of police and other emergency services staff.

Our health workforce research reaches from the NHS to Nepal and beyond. Based on our National Health Innovation Campus and working with NHS trusts, Integrated Care Systems, local government, charities and industry, we bring together applied health, maternal and child health, biomarkers and diagnostics, wound care, neuroscience, health technologies, creative health and wellbeing economics. We work collaboratively with our engineers and scientists to solve real-world challenges through the application of AI, data science, smart sensing, bio-metrology and additive manufacturing.

InX – Huddersfield Innovation Exchange

InX is the University's gateway for external engagement. It gives industry, public services and external organisations a single route into our research, innovation support, facilities and commercialisation expertise.

Through **InX**, organisations can access translational support, Intellectual Property (IP) and commercialisation pathways, specialist facilities, and real-world testbeds. It brings together the 3M Buckley Innovation Centre, the Health Business Innovation Centre, the Huddersfield Health Innovation Incubator, and the University's wider innovation infrastructure. **InX** will use West Yorkshire's industrial, health, civic, cultural and community partnerships as a distinctive place-based platform for adoption, demonstrating regional benefit while generating models capable of wider replication.

InX also manages the University's IP pipeline, from identification and protection through to licensing, commercialisation and spin-out formation and venture development. Its purpose is simple: to move research into use, through commercial application, policy influence, public-service innovation and wider social and cultural impact, with Knowledge Transfer Partnerships continuing to form part of a broad portfolio of engagement with industry.





National and global partnerships

We build national and international partnerships to strengthen our research quality, visibility and reputation, while staying grounded in our civic mission and commitment to place.

By 2030, the University will establish inter-institutional multi-partner Hubs. These will be mission-aligned partnerships that extend Huddersfield's research reach, develop significant consortia capacity, sharing infrastructure resources, and facilitating academic exchange to enhance global collaboration.

These Hubs will support:

- Jointly funded research with complementary institutions
- Cotutelle and dual doctoral routes
- International challenge programmes addressing shared global issues
- Visiting scholar activity and researcher exchange
- National and international network-building for early career researchers
- Regional and global Research and Development (R&D) relationships with industry

Our regional and global profile will be built through distinctive partnerships, high-quality co-authorship, strategic networks and targeted dissemination, with a clear focus on collaborations that deliver academic excellence and long-term mutual benefit.

Civic commitment and partnerships for place

Through a distinctive place-based approach to research and innovation, the University of Huddersfield will become a nationally recognised civic university: mobilising interdisciplinary expertise, co-created innovation, policy engagement and cultural practice to build more equitable, healthy, prosperous and resilient places.

We will deliver this commitment through sustained collaboration with local, regional, national and international partners. Building on our Civic University Agreement and established relationships across local government, the West Yorkshire Combined Authority, the NHS, business, education, culture, communities and the third sector, we will address complex regional challenges and translate research into policy, practice and innovation. West Yorkshire will serve both as beneficiary and living testbed: a place where solutions are co-developed and evaluated locally, then scaled for national and international impact.

Civic partnership will underpin all Strategic Research Missions. Within this wider commitment, the University will place particular emphasis on culture, creativity and creative technologies as drivers of place development. Programmes spanning cultural regeneration, creative health, heritage, learning, community empowerment and public-service innovation will strengthen identity, wellbeing, skills, participation and resilience.

Our capabilities in immersive and multisensory technologies, spatial sound, games and interactive media, digital creativity, and augmented and virtual reality will enable new forms of cultural production and participation. They will also support innovation in health and wellbeing, education, heritage, public services and regional economic development, creating new pathways for creative talent, technical skills and enterprise across West Yorkshire.

Through distributed leadership, we will convene universities, communities, public services, cultural organisations and businesses around shared priorities. This approach will build the critical mass required to secure major collaborative funding, expand doctoral training and knowledge exchange, attract investment and support innovation-led growth. It will strengthen evidence-informed policymaking, civic leadership and community capability while positioning Huddersfield as a leading national model for sustainable place-based innovation.



Doctoral talent pipeline

Doctoral researchers are central to everything we do.

Through the Doctoral College, candidates are connected from the outset to Research Centres and Institutes, Strategic Research Missions, industry partners, international networks and tailored professional development.

We equip researchers for careers within and beyond academia, building capability in project leadership, collaboration, entrepreneurship, communication, AI and data literacy, ethics, policy engagement and innovation. Opportunities include interdisciplinary projects aligned with Strategic Research Missions, industry-linked research projects, co-supervision with external organisations, placements and secondments, and international exchange through our inter-institutional Research Centres.

We will further strengthen our alumni networks to deepen global connectivity, expand opportunities for doctoral placements, and build a strong pipeline of funded collaborative doctoral research awards.



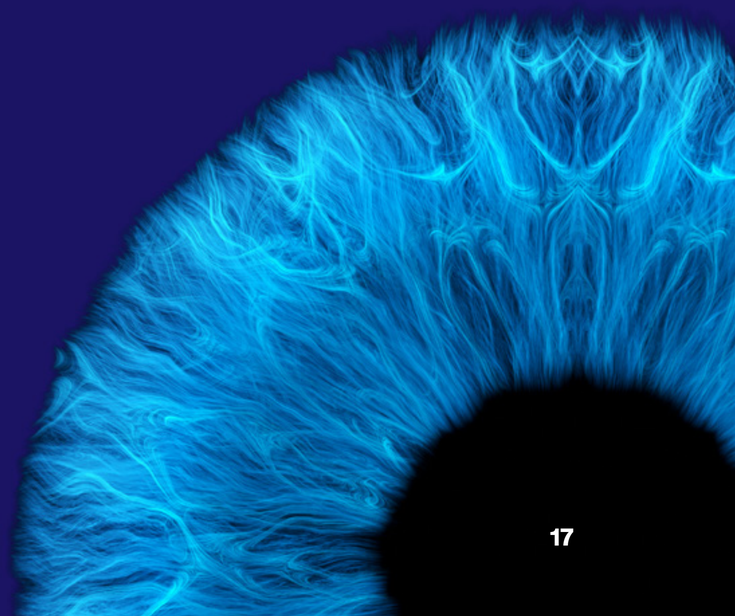
Inclusive research culture

An inclusive research culture is essential to research excellence, innovation and long-term success. The University will continue to advance academic freedom of speech, gender equality and inclusive research careers, guided by the principles of the Athena Swan framework, the Women in Research Charter, and the Race Equality Charter, alongside wider support for underrepresented groups across research and academia.

We are building a research environment in which everyone who contributes to research success is recognised – including academic staff, doctoral researchers, technical specialists, professional services colleagues, practitioners and external collaborators. That means fair access to opportunity, transparent routes into research leadership, and proper recognition of technical, professional and collaborative contributions. It also means stronger support for early career and mid-career researchers, for colleagues navigating non-linear career paths, and for the mentoring and peer networks that help talent develop and thrive.

We will embed public engagement and community involvement across the research lifecycle, with two-way engagement that actively involves communities and external organisations in research design, delivery and dissemination. Across the research environment, we will continue to strengthen equality, diversity and inclusion, research integrity, open research, responsible assessment and public engagement as core features of how research is led, supported and shared.

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Governance and responsible research

Our research and innovation activity is supported by clear institutional oversight and coordinated support for research quality, impact, doctoral provision, innovation performance, global engagement and research visibility. This includes robust arrangements for research integrity, ethics, security, compliance and risk, ensuring that partners can work with the University with confidence.

The University is a signatory to the San Francisco Declaration on Research Assessment (DORA), the Concordat to Support Research Integrity, and the Concordat on Open Research Data. We are committed to trusted research, research security, ethical practice and responsible assessment across all research activity. This commitment will underpin our global partnerships, ensuring that international collaboration is pursued with integrity, transparency, due diligence and shared responsibility for ethical and socially beneficial research.

Contact

Research, Governance and Performance
rgp@hud.ac.uk

InX – Huddersfield Innovation Exchange
inx@hud.ac.uk

research.hud.ac.uk

Research and Innovation
University of Huddersfield
Queensgate
Huddersfield
HD1 3DH

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