



THE UNIVERSITY  
*of* EDINBURGH

# Research and Innovation Strategy 2030

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Professor Shannon Vallor, Baillie Gifford Chair in the Ethics of Data and Artificial Intelligence, is driving the conversation on responsible technology



# Introduction

Research at the University of Edinburgh has been transforming the world since 1583. From founding the discipline of English literature, to the first use of anaesthetics. From philosophical empiricism, to the first mammal cloned from an adult cell, Dolly the sheep. From developing the first studies of natural history, to proposing the Higgs Boson. We established the first UK medical school in 1726, and the first department of artificial intelligence (AI) in 1963.

Today, we host the UK's national supercomputer, and through the Edinburgh and South East Scotland City Region Deal we are harnessing data to drive transformations in health and care, climate and the environment, finance and business, and the arts. We are working with government, business and the creative sector to make Edinburgh the data capital of Europe.

Alongside our contribution to our region, we are profoundly international. We work with universities, governments, businesses and non-governmental organisations (NGOs) across the world to pioneer solutions to global problems. We are a cosmopolitan University, with almost half of our early career researchers hailing from 140 countries outside the UK. Every summer we co-host the world's greatest international festival, celebrating our innovation and creativity with a global audience.

We enjoy a strong ethos of research without boundaries. Across our five campuses our researchers are co-located with entrepreneurs, patients and professionals. In our diversity, we share a strong sense of identity and common purpose. Our staff and students come together across a wide

range of disciplines and perspectives to address pressing problems across our three missions: shaping the future of health and care; tackling the climate and environmental crisis; and harnessing data, digital and AI for public good.

The Research and Innovation Strategy 2030 drives forward this proud legacy, ensuring we position ourselves to respond to challenges and exploit new opportunities. The strategy is informed by three main developments. First is the increasingly central role of universities in driving innovation and growth in our local regions, and in unlocking solutions to global challenges. Second is the growing awareness across the sector of the need for more inclusive research environments that allow all of our research community to realise their potential. Third is the evolving funding environment, which requires us to continually adapt our focus to ensure we have the resources to enable outstanding research.

Our strategy will equip us to tackle these challenges and opportunities over the next seven years, across three main areas.



The world-class facilities at the University continue to advance discoveries in science



## Research

We will continue to support excellent discovery and challenge-oriented research, including through a series of initiatives to pump-prime radically interdisciplinary collaborations. We will empower our researchers to benefit from digital technologies, data and AI. Through adopting a series of focused missions and challenge areas, we will galvanise activity across the whole University to tackle urgent global challenges. We will expand our community of environmental researchers and ensure sustainability is built into our research practices and projects.

## Engagement

We will enhance industry engagement and commercialisation from our research through recognising and promoting innovation as a career pathway, and through driving forward our strategic industry and investment partnerships. We will strengthen public and policy engagement at local, Scottish and UK levels, including through our role in the City Region Deal. We will deepen our international collaborations through consolidating platform partnerships with strategic partners, focused on our University missions.

## Environment

We will ensure a collegial and inclusive environment for our whole research community. We will enhance career development and stability, with targeted support to address inequalities in research support and advancement and a bespoke plan for postgraduate research culture. We will deliver an ambitious Technicians Commitment and a programme to improve career opportunities for research enabling colleagues. We will foster responsible research through our sustainability commitment, our new University research ethics policy, and our Principles of Global Engagement.

Our approach will be shaped by the values set out in the University's Strategy 2030 – excellence in all that we do; fostering an inclusive and supportive research community; and seeking to achieve benefit for individuals, communities, societies and our world.

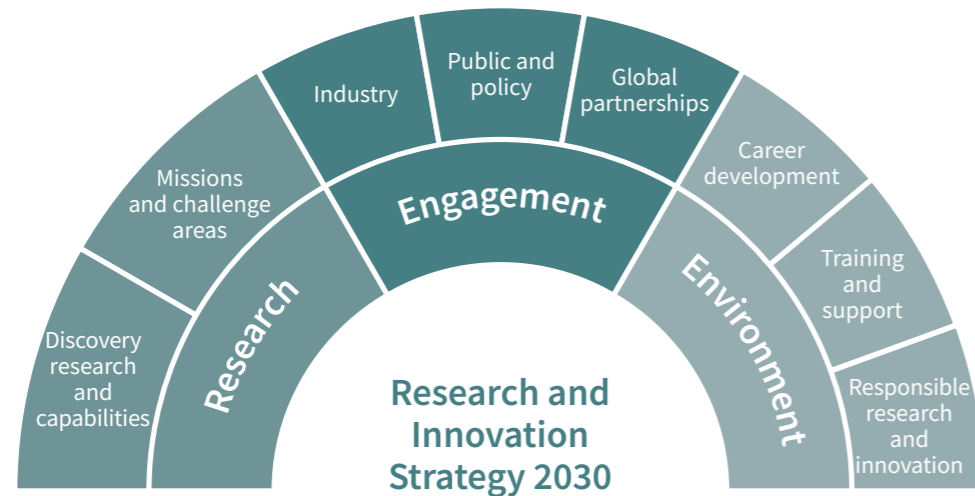
As the **Strategy 2030** states:

“We sustain a deep allegiance and commitment to the interests of the city and region in which we are based, alongside our national and international efforts, ensuring relevance to all.”

The Research and Innovation Strategy will also align closely with other key University strategies, notably our strategies on Climate Change; Equalities, Diversity and Inclusion; our Global Plan; and our ongoing work on Curriculum Transformation.

The strategy complements and amplifies the ambitious plans being realised across our Colleges, Schools and Institutes. Our approach is to support, facilitate, convene, broker and inspire – encouraging bold new ideas and connections in an enabling and inclusive environment.

The Research and Innovation Strategy speaks to all members of our research community: postgraduate students and early career researchers, academic staff, technicians and research enabling staff, at every stage in their career. The strategy also has crucial linkages to the wider educational mission of the University. Our research and innovation are informed by, and shape how we deliver, our teaching and learning. They ensure our students benefit from a vibrant environment and are equipped to become the innovators of tomorrow, working alongside partners in government, industry and the public to tackle our most pressing challenges.



# Part one: Research

## Discovery research

We conduct an extraordinary breadth of cutting-edge research, covering diverse aspects of the brain and body, communication and behaviour, human experience, technology, our environment and the natural world. Our discovery research is the bedrock of our excellence and reputation as a world-leading centre of insight, invention and learning.

We are committed to nurturing excellence and innovation in each and every one of our disciplines. We recognise that rigorous disciplinary methods and knowledge are the foundation of all cutting-edge research; and that a strong base in disciplinary research is essential for effective interdisciplinary collaboration.

We foster exciting new collaborations across what are usually disparate disciplines. For example, we bring together life scientists, engineers and data scientists to transform engineering biology. Our computer scientists, mathematicians, philosophers and lawyers collaborate to drive forward AI and quantum technologies. Our arts and humanities scholars work closely with informatics and the advanced computing facility to revolutionise research methods in digital humanities.

Key to our approach is encouraging our researchers across science, technology, engineering, maths and medicine (STEMM) and social sciences, humanities and arts for people and environment (SHAPE) to work together to innovate new approaches.

We sustain and grow our vibrant discovery research through investing in our early career researchers. Our postgraduate researchers play an integral role in our research community. Many of them are integrated in our flourishing centres for doctoral training hosted across our three Colleges and their thriving Schools, Institutes and Centres. We ensure the sustainability of our flourishing discovery research through our Chancellor's Fellows scheme, which over the past decade has supported the recruitment of more than 500 early career researchers straddling every discipline in the University.

Our research benefits from outstanding infrastructure. We operate the UK's leading research data centre and high-performance computing facility, which hosts a uniquely rich range of data sets, and enables world-leading research in areas such as AI and quantum computing, space and satellites, population health and peace tech. We have created specialised facilities across multiple campuses – including the Arrol Gibb Innovation Campus where we are creating new off-shore energy technologies; Easter Bush where we are at the cutting edge of disease control and sustainable agriculture; Edinburgh BioQuarter, where we are building one of the Europe's major hubs for life science research and innovation; and the National Robotarium where we are working with Heriot-Watt University to pioneer robotics and autonomous systems. Our extensive archives, museums and exhibition spaces provide a rich resource for researchers and publics across the world, in the festival capital of Europe.



The University will continue to nurture cutting-edge discovery research, which underpins the solutions of tomorrow

## Our priorities for discovery research:

- We will continue to enable **discovery research**, recognising that the transformative blue skies research of today will underpin the solutions of tomorrow. We will provide an environment in which our researchers are inspired to be ambitious and disruptive in their enquiries. Working with our Schools and Institutes, we will support our researchers in accessing the external funding most suited to their research goals, including through a new seed-funding scheme, the Big Ideas Accelerator Fund.
- We will invest in discovery research through **supporting early career researchers**. This will include launching the Edinburgh Career Development Scheme, which focuses on supporting postdoctoral researchers from under-represented groups. We will invest further in our Chancellor's Fellows scheme, initially through the appointment of an additional 60 fellows across the three Colleges.
- We will facilitate **radically interdisciplinary innovation** through our new Major Initiatives Fund, emboldening our staff to take risks in novel areas of research. We will enable staff to forge new collaborations, including through our new tool for matching STEMM and SHAPE researchers working on different aspects of innovation.
- We will empower our research community to benefit from **digital technologies, data and AI**. We will lead in the creation of innovative AI and data-driven research infrastructure, methodologies and techniques to

capture, process, analyse and share data. We will provide advice and support to ensure all of our researchers can identify, access and confidently use the AI, data and digital technologies most suitable for their research, working to the highest ethical and security standards.

- We will support our researchers in **updating methods skills** throughout their careers. Working with Schools and Institutes, we will ensure researchers at all stages and in all disciplines can access training and support to learn a new method, deploy new software, or branch into a new area of research – including through extending opportunities to embrace a new disciplinary perspective through seed funding and discipline hopping.
- We will continue to improve our **research services**, ensuring that every researcher and project benefits from comprehensive support. Recognising the crucial role of research technical professionals and research enabling staff, we will ensure these colleagues are recognised and supported through their careers, through our Technicians Commitment and as part of ongoing service improvement (see also Part three on Environment).
- We will continue to invest substantially in our **research estate**. We will develop our campuses to be ideal for purpose, with the highest standards of researcher accommodation, equipment, data handling and storage facilities. Enabled by the City Region Deal, our data-driven innovation hubs – including the Bayes Centre, Edinburgh Future Institute, and the Usher Institute – will develop open, interactive research spaces where disciplinary

and interdisciplinary researchers can work alongside industry and public organisations in 10 industry sectors (see also Part two on Engagement).

## Missions

Our discovery research underpins solutions to the major problems facing our world. Building on our strong research foundations, we will strengthen capacity in challenge-oriented research, with a particular focus on the University's three core missions: shaping the future of health and care; tackling the climate and environmental crisis; and harnessing data, digital and AI for public good.

These missions tackle chronic and pressing societal challenges, in areas where we have a critical mass of outstanding research across multiple disciplines that can be marshalled to find solutions. They require radically interdisciplinary approaches, with scientific and technological breakthroughs informed by an understanding of the societal context and ramifications of innovation: whether we are pioneering robotics for social care, addressing clean energy needs for urban populations, or ensuring the accountability of autonomous systems.

The missions will galvanise student and staff engagement, with all parts of the University coming together to identify key problems and find solutions – at local, national and global levels. Crucially, they will equip our students and early career researchers to become leaders in tackling complex societal and global challenges, whether they go on to work in research, industry, government or the third sector.

Within and across each of the missions we have identified more specific challenge areas, depicted in the wheel below. These challenge areas reflect critical dimensions of the missions, and they map onto areas of interdisciplinary strength across the University. We will refresh the choice of challenge areas as new challenges and opportunities emerge.





### Mission one

#### Shaping the future of health and care

We will empower people to enjoy healthier, longer and more fulfilling lives, through innovation in physical and mental health and care. We bring together biomedical and life sciences, physical sciences, and humanities, arts and social sciences, to address challenges of health, disease, ageing, health inequalities and health systems locally and globally. Our research applies cutting edge methods, techniques and data, informed by an ethical and people-centred approach.

*Challenge areas include:* promoting **healthy lives**, innovating **care for the future**, tackling the **mental health crisis**, promoting **One Health** in human/animal interactions (cross-cutting with mission two), and mobilising **data for health innovation** (cross-cutting with mission three).

### Mission two

#### Tackling the climate and environmental crisis

We will help tackle the climate emergency, marshalling our research to understand the causes and effects of climate change, and to help communities adapt and mitigate its effects. We integrate pioneering research in areas as diverse as earth systems, biodiversity, farming and food, energy and manufacturing, space and satellites, health and inequalities, the circular economy, climate finance and corporate responsibility, public attitudes and environmental politics.

*Challenge areas include:* creating **sustainable cities**, innovating **clean energy systems**, building the **circular economy**, securing **future food systems**, promoting **One Health** in human/animal Interactions (cross-cutting with Mission 1), and harnessing **data for sustainability** (cross-cutting with mission three).

### Mission three

#### Harnessing data, digital and AI for public good

We will marshal cutting-edge data, digital and AI technologies to unlock solutions to a range of environmental, social and economic challenges. As part of our ambitious Data-Driven Innovation programme (within the Edinburgh and South East Scotland City Region Deal), we have committed to making Edinburgh the data capital of Europe. Our advanced computing capacity and world-leading informatics enable us to harness data and computational methods across all of our disciplines to address key challenges in a responsible and ethical way.

*Challenge areas include:* designing **responsible AI**, innovating **inclusive fintech**, driving **creative economies**, mobilising **data for health innovation** (cross-cutting with mission one), and harnessing **data for sustainability** (cross-cutting with mission three).

## Our priorities for missions

- We will build and strengthen **communities of students and researchers** within and across these missions and challenge areas, priming our research networks, centres and institutes for major funding and partnership opportunities. We will achieve this through the Major Initiatives Fund, College-led development activities, expanded professional support to coordinate interdisciplinary groupings, and new opportunities to develop interdisciplinary leadership skills.
- We will mobilise our partnerships and collaborations to actively **shape and identify funding opportunities**. This will help position our research groupings for funding, partnerships and impact across our missions and challenge areas, supported by the new Major Initiatives Group, and the University's new Big Bids Team.
- We will work with our research community, partners and students to articulate **shared priorities and impact goals** across the missions – setting out the positive change we want to achieve through our collaborative research. These shared goals will help galvanise action across all parts of the University: inspiring challenge-led and experiential learning opportunities for our students; creating new collaborations across our postgraduate and early career researchers; and rallying our wider research community behind our collective endeavour (see also Part two on Engagement).
- As part of the University **Climate Strategy**, we will ensure our researchers build sustainability into their research projects and research practices, and we will grow the number of researchers working on climate, biodiversity and wider environmental issues. Through the Edinburgh Earth Initiative, we will work with partners to meet and go beyond Net Zero goals in Scotland, the UK and globally.
- With our **Data-Driven Innovation** programme, we will establish the Edinburgh city region as a global location for organisations that power services through responsible use of data, attract international talent and investment, unlock opportunities through data assets, and deliver transformative changes across 10 industry sectors.



## Part two: Engagement

We are committed to maximising innovation and impact from our research: applying our ideas, insights and findings to benefit society through identifying new solutions to problems. We drive innovation and economic development locally, playing an anchor role in the Edinburgh and South East Scotland City Region Deal and Regional Prosperity Framework. Our research, innovation and outreach has catalysed entrepreneurship; built skills and created jobs; and created new tools and technologies that support greener, healthier and happier lives in our local communities and across Scotland and the UK.

Our innovation is most powerful when developed through co-creation with partners, including working side by side on our campuses with industry, government and public service providers, charities and social enterprises, patients and publics. As a global University, we also collaborate with a range of international university, government, industry and third sector partners to co-produce solutions to pressing challenges.

### Commercialisation and industry engagement

Commercialisation and engagement with industry bring multiple benefits. Such activity helps us identify the needs of stakeholders, test and co-create new solutions and take our innovations to market, scaling up and diffusing new ideas, products and services to benefit more people. It is also unlocks investment to enable further research and innovation.

The University has taken a major leap forward in commercialisation and industry engagement over the past five years, creating a vibrant environment for innovation across our community of staff, students and partners. Our industrial and translational income has increased threefold; we are supporting record numbers of student startups and staff spinouts; and our innovation has attracted significant income from licensing and venture capital. We are expanding our strategic partners in Scotland, the UK, the US and Asia, focused on a set of Innovation Engines where we have a strong value proposition and potential for partnership development and investment. Through our success in licensing new products and technologies, we have built up our own University investment fund, Old College Capital, to pump-prime and mobilise match funding for promising new spinouts. We have been supported on this journey by our highly successful commercialisation arm, Edinburgh Innovations.



Fastblade is the world's first rapid testing facility for tidal turbine blades



## Our priorities for commercialisation and industry engagement:

- To take our activity to the next level, we aim to double the pool of academic staff who are engaged with industry. To this end, we will **target recruitment** of high-potential academic innovators, as well as recognising and promoting an **Innovation Career Path** for academics who want to focus on commercialisation and engagement with industry. This will involve articulating a recognised pathway for career progression from postdoc through to senior innovation leader, with clear goals, criteria and support at each stage.
- We will grow our **strategic partnerships**, with a focus on driving forward the Innovation Engines across our three missions. This will involve further building our institutional presence in the US, as well as further developing our engagement with Scottish and UK Governments to support delivery of national innovation strategies.
- We will continue to build our own University **investment fund**, Old College Capital, to pump-prime promising ventures at pre-seed, seed and growth stages. This opportunity complements our participation in other initiatives such as beLAB1407, a partnership to accelerate drug discovery. We will continue to explore other potential funds, for example in partnership with Scottish universities and Scottish Government.

- We will create new **incubation spaces** for startups, spinouts and spin-ins, informed by an integrated mapping of our space offering, and a real-time understanding of types of space required. We will develop tailored support packages for companies at different stages of development, linked to key strategic areas of research and distinct space and resourcing needs.

## Public and policy engagement

We are dedicated to ensuring our research and innovation fully engages with and improves the lives of individuals and communities – whether in Edinburgh and our region, across Scotland the UK, or through our many international projects and partnerships.

Through our **public engagement**, we engage with people to gauge new perspectives, understand lived experience, build trust in new technologies, and collaborate and co-create research. We do this through consultation and co-design with patient and community groups, exhibitions and events, engaging with schools, and building trusted relationships with a range of professional and broker organisations. We have experience of a wide range of methods of community engagement and co-production across the University, and are committed to harnessing this to inspire and inform our research and engagement.



Rachel O'Neill, Senior Lecturer in Deaf Education,  
and Alison Hendry, British Sign Language  
Development Officer

Our location in Edinburgh is central to our engagement with the creative arts. We have forged key partnerships with the city's festivals, museums, exhibition spaces and performing arts institutions. The Edinburgh Futures Institute will act as a crucial convenor and hub for these flourishing relationships, ensuring continual innovation in the design of public engagement activities.

We are committed to ensuring our engagement with communities is never extractive, but always brings clear benefit to our partners, beyond their immediate engagement. We are especially focused on extending our engagement to social and economic groups currently under-represented in engagement with the University.

Through our **policy engagement** we marshal our expertise and research to shape policy-making at local, national and international level – for example: raising the age of criminal responsibility in Scotland; informing national guidance on a range of diagnoses and therapies; and providing crucial evidence for the Intergovernmental Panel on Climate Change. We have impacted policy through a number of routes: building strong relationships with local, Scottish and UK Governments as well as a range of international governments and organisations; serving as experts and advisors to public commissions and enquiries; engaging with NGOs, advocacy organisations and other intermediaries; and disseminating policy-relevant research through public events and media outlets.

We recognise that policy impact is maximised where researchers collaborate across projects, groups and institutions, rather than working in silos that focus on individual research findings. This is why many of our hubs and centres for supporting policy engagement and impact are cross-institutional collaborations, such as the Scottish Council on Global Affairs, the ClimateXchange, and the Centre on Constitutional Change.

### Our priorities for public and policy engagement:

- Our new Research Engagement and Impact Team will strengthen and forge local, regional and national **strategic partnerships** with key organisations and community groups. In line with the University's Community Plan and our department for Social Responsibility and Sustainability, we will ensure that our partnerships are cohesive across multiple areas of activity – straddling research, skills development, and through student engagement.
- Within the **Edinburgh region** we will build on the successful relationships nurtured through the City Deal to support delivery of the Regional Prosperity Framework, the region's first integrated regional economic development strategy since the 1990s. The framework provides a blueprint for economic and social development in collaboration with local, Scottish and UK Governments.

- We will encourage and support all researchers involved in research that affects communities to deploy appropriate **methods for public and community engagement**. This will be supported by developing a repository of trusted tools and practices of citizen and community engagement that promote inclusivity and community benefit.
- We will amplify our **policy impact**, through ensuring specialised support for researchers working on areas with potential policy impact, across the whole University. This will include innovative approaches to policy engagement through the Edinburgh Futures Institute, and through supporting mobility and exchange via secondments and fellowships with policy organisations. Recognising the barriers to equality, diversity and inclusion (EDI), we will ensure we foster diversity in the researchers engaged in policy impact.
- We will continue to engage with the **creative sector** to help them harness data-driven technologies to deliver entrepreneurship and adoption of innovation, through the City Deal and Techscaler, and in our partnerships with the Edinburgh festivals, museums, galleries, the BBC and the gaming industry.

### Global partnerships

International engagement is crucial to the success and impact of our research. We collaborate with leading universities across the globe to produce cutting-edge insights and findings; and we partner with a range of organisations and communities to enhance our understanding of different locations, cultures and communities, and to ensure our research positively impacts people and the planet. Our global outlook is reflected in our composition, with 45 per cent of our early career researchers hailing from 140 countries, and more than 50 per cent of our outputs co-authored with collaborators based outside of the UK.

Over the past few years, we have sought to consolidate our international university partnerships, enabling us to forge deep relationships with a number of regions and institutions across research, teaching and mobility, based on three main priorities.

First, we have partnered with universities, public and civic organisations in Africa, South East Asia and Latin America to tackle global problems. Our collaborations have focused on addressing challenges in health and mental health, agriculture and food security, child protection and education, urban planning and natural disasters, climate adaptation and mitigation, and conflict, displacement and peacebuilding. We will continue to support our crucial relationships with global south universities and organisations, ensuring that our partnerships are equitable and co-produced.



Second, we have established deep partnerships with six European universities aligned to our research strengths and profiles, and to our values and priorities. We have identified strategic research themes, intensifying our collaborations through joint PhD fellowships and seed-funded projects. We are strengthening these ties through playing an active role in Una Europa, an alliance bringing together a broader set of European partners. We are committed members of the League of European Research Universities, the leading grouping of research-intensive universities which is at the vanguard of setting European standards on research and innovation. These relationships will continue to be crucial to our future research excellence and funding.

Our third set of partnerships is with North America, Australia and East Asia, where we work with universities and industry partners to support collaborative research and innovation. We now have well identified and supported partnerships with selected universities, complemented by on-the-ground representation in the East Coast of the US and in Singapore.

The strategic importance and value of international research collaboration will grow as we address complex global challenges and require new models for building and sustaining partnerships and funding. To drive this, we will co-create a transformative network of new global platform partnerships in selected regions of the world. These platforms will provide opportunities to co-create and deliver joint research and impact, alongside partnerships to deliver teaching, supervision and student and staff mobility.

### Our priorities for global partnerships:

- We will deepen our **European partnerships** through engagement with Una Europa, with a focus on facilitating early and mid-career networking to build collaborations and consortia. We will support collaborative external grant bids through targeted seed funding opportunities.
- Our new platform partnerships with **lower- and middle-income countries** will focus on addressing our core missions and challenge areas. Partnerships will be guided by clear values, including promoting equality and diversity in all aspects of our impact and engagement. We will continue to realise our Principles for Global Engagement, and will roll out the frameworks we developed on Ethical Action in Global Research, and on integrating Gender Equality into Global Research
- Alongside these platform partnerships, we will support a new **global health network** focused on developing a set of values and community of practice around University research on health and mental health.
- We will deepen our ties with **North America, Australian and Asian** partners, and set out a forward-looking strategy to strengthen engagement in East Asia. Our platform partnerships in these regions will be focused around key strategic areas of research that align to our missions and other areas of complementary and overlapping research. As with our EU partnerships, a particular focus will be on pump-priming collaboration to pursue excellent externally funded research in strategic areas.



Nasa astronaut Dr Kathleen 'Kate' Rubins speaks to a group of Edinburgh researchers as part of a collaboration on space technology with Rice University in the US.



## Part three: Environment

We want every member of our research community to be valued and enabled to realise their full potential. We recognise that advancing knowledge is a team effort, drawing on a range of contributors beyond the lead academic: from students and postgraduate researchers, postdoctoral fellows and early and mid-career researchers, through to technicians, research enabling staff and collaborators from across sectors and institutions.

We are committed to overcoming the structural and often unacknowledged barriers that can hold back the ambitions of many in our research community, and especially those from minoritised groups. We also want to address the under-representation of certain groups in research and research leadership roles. We aim to marshal knowledge to identify and address these barriers – as a learning organisation that draws on data, expertise and lived experience to co-design approaches that increase the diversity and inclusivity of our research community.

### Career development

We recognise the multiple challenges facing research and research services staff across the sector. Many academics are grappling with an expansion in the tasks that they are expected to take on, creating competing pressures on their time. Early career researchers face a competitive job market and often precarious roles for many years. Research enabling staff and technicians have often been insufficiently recognised for their contribution, and have lacked clear and stable pathways for career progression. Those from

under-represented groups often face especially acute challenges, confronting multiple structural barriers to launching and advancing academic careers.

We have started to address these challenges through a range of measures that seek to improve support, reduce precarity and build transparent career pathways. Many of the measures are captured in our Research Cultures Action Plan, which sets out our plans in more detail. We have also started building diversity targets into key recruitment processes, including our Chancellor's Fellows scheme where we have been successful in supporting a higher proportion of female and ethnic minority researchers onto the programme.

### Our priorities for career development:

- We will continue to target recruitment opportunities for **early career researchers and under-represented groups**, including meeting EDI targets for our Chancellor's Fellows, and offering targeted postdoctoral opportunities through our Edinburgh Career Development Scheme.
- We will more explicitly capture **citizenship and collegiality** in criteria for academic promotion and review. This will enable us to better recognise, incentivise and reward roles linked to citizenship and collegiality, such as membership of committees, organising peer groups and networks, and providing mentoring and peer support.



Sarah Abouzied, Manuscripts of the Islamicate World and South Asia intern, with illuminated Qur'an in the University's Special Collections



- We will enhance recognition and career pathways for our **technicians and research enabling service staff**. For technicians, this will be achieved through implementation of our Technicians Commitment and the creation of a new Technician Lead role. For research service staff, we are reviewing and enhancing processes, roles and responsibility across the University to create clearer routes to progression.
- We will expand career development support for **our early career researchers and research staff**. This includes a range of measures to support our postgraduate researchers, including a new career development support role linked to the Doctoral College. We will ensure continued commitment to the Concordat to Support the Development of Research Careers, including through the dedicated 10 days pledged for research staff development and seeking to lead systemic change among the wider university sector.
- We will **reduce job insecurity** through a series of initiatives to limit the use of fixed-term contracts across research and research service roles. These include creating more stability for career scientists working on multiple and sequential projects, and ensuring open ended roles for long-serving employees.

## Training and support

Complementing support for career development, we offer a range of opportunities for more targeted training and support. This includes schemes to support students and staff at different career stages, including postgraduate researchers and early career researchers; training for research leaders and PhD supervisors; targeted support for grant applications and industry engagement; and networks providing peer support for particular communities, such as the Disabled Staff Network and Staff Pride Network.

We recently invested in our Institute for Academic Development to boost capacity for research leadership training. Our new University-wide Doctoral College, established in 2020, ensures coordination of training opportunities and support for postgraduate researchers across the University. And we will continue to improve professional support for grant applications, through our ongoing review and enhancement of University-wide services. Across these areas, we will ensure a particular focus on boosting the opportunities of researchers and research service staff from under-represented groups.

### Our priorities for training and support:

- We will scale up training and support for our **training for leaders** of research teams, with a focus on promoting a positive and inclusive culture within their teams, and rewarding collegiality and citizenship. This will be supported through boosting training capacity within the Institute for Academic Development.

- We will monitor and address **under-representation** in grant applications and awards, to inform targeted interventions. Measures will include cohort-building, support and leadership development opportunities for women and researchers with black and ethnic minority backgrounds; as well as targeted initiative to ensure those from minoritised groups are well represented in internal seed funding and fellowship and grant applications.
- We are committed to improving **gender balance** within innovation careers. Through our Innovation Career Path (see Part two), we will seek to address the leaky pipeline between student enterprise and later stage company profiles, where we see significant gender imbalance. We will roll out bespoke programmes to support under-represented groups in innovation activities, as well as diversifying our investment committee membership.
- We will address an identified gap in support for **researchers with disabilities**. We will ensure more comprehensive support for this group; and build greater recognition – both internally and externally – of their positive contribution to the University.
- We will develop a targeted plan for postgraduate research culture to enhance voice, recognition and integration of our **postgraduate Researchers** into the wider research community.

## Responsible research and innovation

We are committed to maintaining the highest standards of ethics and integrity, upholding values of honesty, rigour, transparency and open communication in our research and innovation. We encourage our researchers to be bold, disruptive and open in their research, while ensuring they benefit from appropriate safeguarding and support. We will strengthen this commitment through a focus on four key dimensions of responsible research: ensuring our research is ethical, open, uses responsible assessment, and is safe and trusted.

**Research ethics** means treating all those involved in and affected by our research with care and respect, at every step of the research and innovation process. We recently adopted a new University Ethics Policy, which systematises our processes and scales up our ambition in this area.

**Open research** means sharing our data, methods and the outputs from our research, to ensure they are rigorous, openly available, and – where appropriate – reproducible. We have been early adopters on Open Access, and have developed a world-class infrastructure for data processing, storage and sharing. We will continue to be forefront of open research and reproducibility, including through the Edinburgh Open Research Initiative Network.

**Responsible assessment** requires avoiding the use of narrow metrics to assess research and researchers. We were early adopters of the San Francisco Declaration on Research Assessment and the Agreement on Research

Assessment, and are delivering a robust action plan on ensuring a balanced, including and fair approach to assessment, including through use of the narrative CV.

**Trusted research** means ensuring that our research remains collaborative and that we can share our intellectual property, while protecting it from the risks posed by actors seeking to exploit the open system of international research collaboration. We are bringing together knowledge and expertise from across the University and beyond to ensure that our researchers can continue to collaborate internationally while understanding the risks, keeping their data and intellectual property safe and complying with legal and regulatory frameworks.

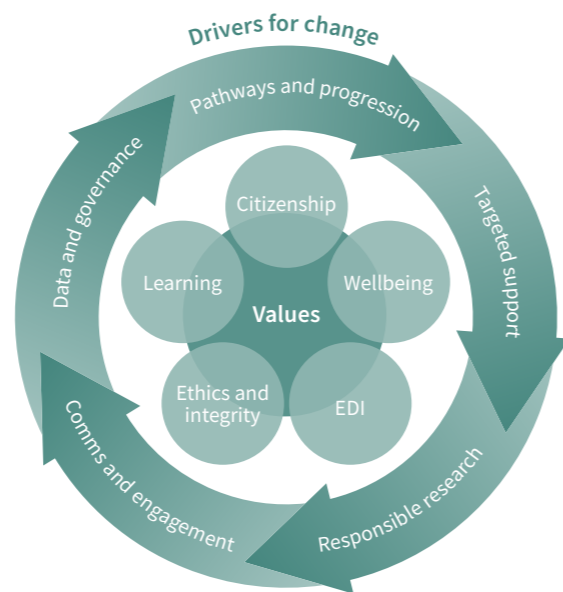
### Our priorities for responsible research and innovation:

- We will roll out a University-wide online **research ethics system**, and will continue to ensure comprehensive training and to update our research ethics to respond to new risks and challenges, for example in digital and data-driven research.
- We will introduce an ambitious **sustainability commitment**, covering both the content of our research (how we frame our research questions and design), and how we conduct it (including equipment, travel and engagement). This will include being early adopters and rigorously implementing the new UKRI Concordat.
- We will proactively address emerging **security challenges**, rolling out new Principles of Global Engagement,

and strengthening awareness and support across the University. We will seek to do so in a way that minimises additional bureaucracy and facilitates international collaboration and data sharing, while enhancing risk management and ensuring compliance with evolving national legislation and policies.

- We will incorporate relevant aspects of the **narrative CV** into our recruitment, progression and reward processes, ensuring any evaluation and assessment of researchers and their research is nuanced, equitable and celebrates the diversity that is crucial to a flourishing research environment.

How we are fostering an environment where researchers and those who support them can thrive



The Royal (Dick) School of Veterinary Studies' advanced surgical, laboratory and animal facilities support the delivery of world-leading research in veterinary medicine, animal biosciences and sustainable agriculture





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