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FOREWORD – From the UCL Vice-Provost (Research)

Inspired by the utilitarian philosopher Jeremy Bentham, UCL’s founders committed our university to innovation, accessibility and relevance. Almost two centuries later, that commitment remains at the heart of our activity.

It falls to each generation of the UCL community to remind its successors of the special responsibilities gifted to us by our founders. And it falls to each successive generation to reinterpret UCL’s radical tradition in response to their contemporary circumstances and the needs of society. Introduced in 2014, our university’s institutional strategy, *UCL 2034*, restates our founding ideals as a mission: “London’s Global University: a diverse intellectual community, engaged with the wider world and committed to changing it for the better; recognised for our radical and critical thinking and its widespread influence; with an outstanding ability to integrate our education, research, innovation and enterprise for the long-term benefit of humanity”.

Never has that mission been more critical. Regrettably, the key question for our generation of researchers has become: “How will society survive to the 22nd century?”

Humanity will not secure its survival without the knowledge and wisdom generated by leading universities. Such progress will inform the innovations needed to address the enormous and critical challenges that humanity faces. Investment in the pursuit of enquiry and advancement of knowledge is critical; so too is an absolute commitment to collaboration in the generation and application of knowledge and to ensuring that knowledge benefits society. Researchers and their institutions cannot deliver the necessary insights if they operate in isolation.

UCL is well-positioned to make major contributions to help humanity survive and prosper. I judge that it can best do so over the next ten years by fulfilling the three Aims of this strategy: inspiring and empowering the UCL’s research leadership and the disruptive thinking it generates; crossing boundaries to increase engagement between disciplines, communities and activities; and delivering impact for public benefit. Complementing these Aims are three Cross-Cutting Themes, drawn from our institutional ethos and characterising this strategy’s approach: pursuing a responsible research agenda; exerting our institutional influence for the greater good; and maintaining a global perspective.

In this strategy, heeding Bentham, UCL endeavours to reach for the stars, while not forgetting the flowers at its feet\(^i\). We define aspirations for our community while also seeking to address the interests of the individual. This strategy recognises our achievements, but does not lose sight of the need for humility: we do not wish to bask in glory, but rather we must constantly challenge ourselves to do better.

– Professor David Price, UCL Vice-Provost (Research)

*What we mean by … a research strategy*

This strategy provides a vision for the nature of UCL’s research over the next ten years. We seek to build upon the radical tradition – of innovation, accessibility and relevance – established by our founders and embodied by successive generations. This strategy asserts an adaptable framework through which we can sustain and add value to our academic excellence, thereby discharging our responsibilities to the people of the world and its future generations, as well as our debt to our visionary predecessors. It defines a series of mechanisms through which UCL researchers can, individually and collectively, fulfil their potential.

This strategy is not intended to provide a detailed road map for transformation. It does not seek to predict the opportunities and challenges that will be created by future research breakthroughs. It does not define ‘priority subject areas’; such an approach would undermine our university’s agility and constrain the dynamism with which our research leaders determine the shape and future of our research activities. That would be the antithesis of the disruptive thinking which characterises UCL’s

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\(^i\) [https://www.ucl.ac.uk/2034/](https://www.ucl.ac.uk/2034/)

\(^ii\) To follow
academic community. There already exist effective and flexible mechanisms at departmental, faculty and institutional level to anticipate and respond to the rapidly and continually changing external environment. Institution-wide planning processes exist to examine and prioritise proposed major initiatives, while activities such as UCL Grand Challenges and UCL Research Domains provide support for major cross-disciplinary research themes.

This strategy does not seek to constrain research activity, but to provide a renewed context in which discovery, analysis and invention are part of a greater programme that engages with and delivers benefit to the world.

Ultimately, this strategy speaks to UCL’s enduring qualities, values and philosophy, and describes how the fundamental aspirations for research at London’s Global University can be achieved in a 21st-century context.

For the individual UCL researcher – and to those contemplating becoming a researcher at UCL – this strategy seeks to define a nurturing environment in which: your research leadership is encouraged, cherished and sustained; your expertise can be creatively linked with and enhanced by that of other disciplines; impediments to you reaching across traditional boundaries are minimised; and the consequences of your work are amplified. We encourage all researchers – and professional staff supporting the research endeavour – to view your work as part of a collective effort to help UCL to make the most of its potential as a force for public good.
EXECUTIVE SUMMARY

This Executive Summary provides a condensed version of the vision, aims, cross-cutting themes and objectives of this strategy, intended to function as a standalone two-page document.

This strategy provides a vision for the nature of UCL’s research over the next ten years. We seek to build upon the radical tradition – of innovation, accessibility and relevance – established by our founders and embodied by successive generations. This strategy asserts an adaptable framework through which we can sustain and add value to the expertise of UCL researchers, thereby discharging UCL’s responsibilities to the people of the world and its future generations, as well as our debt to our visionary predecessors. It defines a series of mechanisms through which UCL research can fulfil its potential.

What we seek to do

UCL is committed to using its position and unique set of strengths to develop and disseminate original knowledge, not only for its own sake but also to address the significant challenges facing the world today and those that will arise in the future. UCL’s capacity to do so depends on our continued and expanded ability to fulfil this strategy’s three Aims: to inspire and empower research leadership; to cross boundaries to increase engagement; and to deliver impact for public benefit.

We want to stimulate disruptive thinking across and beyond our university to transform knowledge and understanding, and to tackle complex societal problems. We wish to help to enable humanity not only to survive to the next century – an urgent challenge requiring unprecedented collective action and partnership – but also to thrive, so that the lives of future generations are worth living: prosperous, secure, engaged, empowered, fair, healthy, stimulating and fulfilling.

As a community of scholars, we must each focus our efforts, based on our founding values and driven by our intellectual curiosity, to be a force for positive social change. The role of our university is to understand and reflect society in order to transform it, in particular increasing society’s fairness and resilience.

Our Aims

The three Aims of this strategy describe our aspirations relating to research leadership, crossing boundaries and delivering public benefit.

AIM 1 – Inspire and empower research leadership: More than anything, our individual and collective research leadership underpins the contributions that we can make to humanity. We seek to identify, attract inspire and empower those who demonstrate – or show their potential to develop – research leadership, regardless of their background.

Our Objectives

1.1 Become the destination of choice for the most talented researchers
1.2 Sustain a broad research base
1.3 Foster a diverse research community
1.4 Enable leadership in diverse ways
1.5 Nurture research students
1.6 Support the development of early career researchers
1.7 Cultivate leadership through collaboration
1.8 Capture our success
1.9 Pursue responsible research leadership
1.10 Engage in and support leadership across the UK research community
1.11 Enable global research leadership

AIM 2 – Cross boundaries to increase engagement: Rarely can the most interesting questions or the most significant societal challenges be adequately addressed by one discipline, one university or one sector alone. While disciplinary excellence is at the heart of everything that we do, to amplify and inform our research we need to cross conventional, but often artificial, boundaries – between disciplines, between communities (disciplinary, academic and otherwise)
and between different kinds of activity – in order to increase engagement and develop co-design and co-production approaches to research and complex societal problems.

**Our Objectives**

2.1 Foster cross-disciplinary opportunities

2.2 Further embed cross-disciplinarity within UCL

2.3 Extend the reach of UCL Grand Challenges

2.4 Further integrate research into undergraduate and postgraduate taught education

2.5 Support engagement with different communities

2.6 Integrate research with professional practice

2.7 Forge and enhance effective partnerships beyond our university

2.8 Make our social engagement greater than the sum of its parts

2.9 Pursue responsible external engagement

2.10 Use our influence to develop connections and interaction

2.11 Cross global boundaries

**AIM 3 – Deliver impact for public benefit:** We seek to maximise the public benefit resulting from our research, including by furthering academic disciplines and scholarship, enhancing our cultural contribution and engaging in public discourse, growing national and global prosperity, providing policy advice, informing professional practice, and improving health and wellbeing. We will support activity of these kinds and the myriad other ways in which our research can deliver public value.

**Our Objectives**

3.1 Recognise and nurture the diversity of research impact

3.2 Share our knowledge effectively

3.3 Amplify our impact through communications

3.4 Focus UCL Grand Challenges on impact

3.5 Foster public collaboration in research to benefit communities

3.6 Inform public policy

3.7 Contribute to improving human health

3.8 Support commercial and social enterprise

3.9 Benefit London and our local community

3.10 Pursue responsible impact

3.11 Enhance the broader UK research community

3.12 Deliver global impact of mutual benefit

**Our Cross-Cutting Themes**

Our three Aims describe what we are seeking to do. Complementing these Aims are three Cross-Cutting Themes, drawn from our institutional ethos and characterising this strategy’s approach to responsible research, our institutional influence and a global perspective.

**CROSS-CUTTING THEME A – Pursue a responsible research agenda:** UCL 2034 states that we will ensure that our “research and education are rooted in our ethical principles”. The key elements of this are: understanding the distinctive role (and limitations) of the university in advancing knowledge and enquiry; nurturing cultures of integrity in all our research activities, and supporting rising standards across all fields; leading in ethical consideration of research and its applications; engaging with those who will be affected by our research activity; and enhancing the public benefit derived from research.

**CROSS-CUTTING THEME B – Exert our institutional influence for the greater good:** The growth in UCL’s size, breadth, impact and reputation in recent decades presents us with both opportunities and – drawn from our founding values – obligations. We have considerable potential to help shape the environment in which academic endeavor takes place, to influence others’ thinking and to advocate rational, evidence-based and inclusive decision-making.

**CROSS-CUTTING THEME C – Maintain a global perspective:** As London’s Global University, we will marshal our collective expertise to deliver impact to address global problems; extend our local and global knowledge in order to increase our cultural sensitivity, make us better partners and increase the ‘grassroots’ relevance of our research; support the growth of independent research capability globally, and facilitate partnership working at all levels; and help our students to bring their research-based education to bear on their global careers and lives.
INTRODUCTION – The 2018 UCL Research Strategy in context

[This Introduction describes the significant changes within and beyond UCL that inform this strategy, and asserts the need to grow our aspirations for research at UCL.]

Previous versions of the UCL Research Strategy (in 2008 and 2011) expressed our commitment to use our collective knowledge and expertise to benefit society. This refreshed iteration, the 2018 UCL Research Strategy, develops that vision in the context of our university’s current scale and excellence, as well as more recent changes to the wider world, and seeks to provide a strategic framework for the next ten years.

Changes to UCL

Over the last decade UCL has experienced an unprecedented degree of growth. Our research income grew from £202m in 2007 to £486.5 million in 2017, an increase of more 140%. In the last ten years student numbers have grown by 104% to more than 39,000, including a doubling of postgraduate research students to nearly 6,000. We now have a community of more than 12,000 academics and researchers, compared to fewer than 6,500 in 2007.

Everything our university does should be based upon celebrating, encouraging and enabling curiosity-driven research across all fields of knowledge, which is essential to all that UCL endeavours to achieve. Equally fundamental is how our institution can become more than the sum of its parts. The concept of cross-disciplinary research grounded in disciplinary expertise has become central to how UCL understands and projects itself. Several thousand of our researchers have engaged with cross-disciplinarity, whether informally or through central initiatives such as UCL Grand Challenges and UCL Research Domains. The number of opportunities for engagement has grown significantly: an increasing number of our academic units and groupings established in recent years focus on the application of cross-disciplinary expertise to problems facing humanity.

Our achievements have been reflected in our standing in global ‘league tables’ of universities, with UCL (by rank mean) currently 7th in the world. Although no individual league table can or should be taken as definitive, and all are somewhat flawed, it is nevertheless noteworthy that we are so highly assessed by a diverse set of quantitative and qualitative approaches. This has significantly boosted our international recognition.

More objective peer assessment – in the form of the UK’s Research Excellence Framework (REF) 2014 – indicates that our growth has not come at the cost of quality. We were the top UK university for ‘research power’: the quality of our submission (the ‘grade point average’) multiplied by the full-time equivalent number of researchers submitted. Our ‘research power’ was rated top in each of the three assessed elements of REF2014: publications and other outputs, research environment and research impact.

Another key development has been the commitment to design and open a new campus at the Queen Elizabeth Olympic Park. As part of a wider education, innovation and cultural quarter for London, UCL East will create a world-leading university environment for experiment, learning and scholarship for students, staff, collaborators and the wider public, across the four themes of Experiment, Art, Society and Technology (EAST). This is complemented by focused developments in neuroscience and vision, and the development of the new ambitious academic initiatives such as the UCL School of Economics & Public Policy, the UCL Institute of Mathematical & Statistical Science and the UCL School of Future Media & Communications.

We have continued to develop a range of external partnerships and collaborations to strengthen our research activity and our engagement beyond UCL. This includes leading collaborative initiatives such as the Dementia Research Institute and the Africa Health Research Institute.
founding participation in national research bodies including the Francis Crick and Alan Turing institutes, leading the £138m UK Collaboration for Research in Infrastructure & Cities. Regarding health, UCL is a founding partner in one of the first academic health science partnerships, UCL Partners, while our major health-industry partnerships include three Biomedical Research Centres (UCL receives more NIHR funding than any other university) and the establishment of the Centre for the Advancement of Sustainable Medical Innovation with Oxford.

Our global partnerships have been strengthened by the implementation of the UCL Global Engagement Strategy, notably with Peking University as our first ‘anchor’ partner, and cross-institutional partnerships with the University of Toronto and Yale University, and those under development with higher education institutions globally, including in North America, India, Japan, South Africa and Europe.

The rapid growth in our research activity over the past five years is testament to the dedication and capability of our talented researchers. It is not, however, without its own internal challenges, including pressures around overhead recovery and funding sustainability, and increasing pressures on UCL’s estate. We will need to develop improved institutional capacity to respond to a rapidly changing and increasingly unpredictable research funding environment. To deliver continued success (including maintaining our position within the top two recipients of research funding in the UK), we will need to embed greater agility in our estate and research support planning and delivery – including both sustaining a broad research base (to position us to be able to respond to funding opportunities across the spectrum), and growing research capacity at short notice.

This strategy also reflects the other varied institutional strategies that have been adopted or adapted to support UCL 2034, such as those for: education, which commits us to research-based learning; global engagement, which aims to co-create solutions to global problems and increase research capability globally; innovation and enterprise, which emphasises engagement with business and innovation partners, promotion of innovation and knowledge exchange, and bringing benefit to London, the UK and the wider world; public policy, which seeks to foster a two-way flow of knowledge between our researchers and policymakers, and to bring cross-disciplinary expertise to bear on public policy challenges; culture and public engagement, which advocates openness and creative connections drawing on our research; and policies and developments in open access (most notably, the establishment of UCL Press, the UK’s first fully open access university press) and open science. The forthcoming UCL London Strategy aims to use our research and innovation to enhance the capital’s education system, legal services, urban design and businesses, and to improve the lives of its workers, residents and students.

The 2018 UCL Research Strategy should therefore be read in the context of UCL 2034 and as complementary to and integrated with our other institutional strategies. It seeks to enable research to enhance our education, innovation and enterprise, global collaboration, and public and civic engagement, and to contribute to making our institutional strategies more than the sum of their parts. Additionally, this strategy seeks to provide a long-term framework to interact with and respond to individual faculty strategies and ambitions, and ensure that collectively these will advance UCL’s research endeavour.

This strategy has also been developed in the context of the launch of It’s All Academic, UCL’s philanthropy and engagement campaign, one priority of which is ‘Disruptive Thinking’, focused on encouraging radical, critical thought and action by our staff and students.

Today, UCL – London’s Global University – is better equipped than ever to help to deliver the UCL 2034 mission. The quality, characteristics and aspirations of our research, as described in this strategy, also underpin our ability to achieve our other institutional objectives.

http://www.ucl.ac.uk/campaign
UCL’s distinctive position

Taken together, the following qualities position UCL, London’s Global University, uniquely well to deliver judicious insights and solutions, and to ensure that they are applied to the world’s major problems:

- **values** – inspired by the utilitarian philosopher Jeremy Bentham, our radical founders committed our university to innovation, accessibility and relevance. Almost two centuries later, that commitment remains at the heart of our activity and purpose. We continue to discuss and revisit them in new contexts, and to embody them in our work and values.
- **pioneering tradition** – UCL pioneered disciplines now viewed as core academic activities – including architecture, civil engineering and medicine – and engaged in groundbreaking research that has helped to shape the modern world.
- **research leadership** – across a wide spectrum of disciplines, as the bedrock upon which effective cross-disciplinary interaction is achieved.
- **integrity** – a deep commitment to ensuring our research generates reliable, repeatable and applicable outcomes, disseminated and promoted responsibly and as openly as possible, avoiding risks to participants or misleading peers or users.
- **openness** – committed to the values behind open access and open science, sharing our research outputs with the world of scholarship and new communities.
- **intellectual and cultural resources** – we benefit from world-leading library services, information resources and collection management.
- **breadth of excellence** – UCL has world-leading activities and individuals across the full range of subject areas. We have tremendous power in key professional disciplines such as law, education, medicine and the built environment. We are world-leaders in cross-disciplinary fields such as neuroscience, computer science, area studies and quantitative social sciences, as well as in innumerable disciplines in the arts, humanities, sciences and engineering.
- **scale of excellence** – UCL has grown to be truly one of the powerhouses of global research, as demonstrated by our research spend and our performance in the Research Excellence Framework 2014.
- **flexibility** – we strive to remain agile, both intellectually and institutionally, in the context of strategic planning that enables our researchers and support teams to respond rapidly and imaginatively to emerging priorities and initiatives.
- **student participation** – we are committed to being a global leader in the integration of education and research. We want students at all stages to participate in the creation of knowledge, so that they will understand working at the ‘edge of knowledge. Their lives and careers will spread the influence of our research around the world.
- **in, of and for London** – we value our home in the heart of a global capital, with a remarkably diverse population. We are proud to contribute to Bloomsbury’s cultural, economic and intellectual energy. We benefit from our proximity to Westminster and Whitehall, the City, the media, courts, galleries, museums, libraries and our world-class hospital partners, and have unlocked further the opportunities presented by the development of UCL East.
- **global perspective** – beyond our ambition to benefit the people of London and the UK, our global perspective recognises and reflects the interconnectedness and interdependence of people around the world.
- **dedication** – we have an ongoing purpose to enhance prosperity and wellbeing, and to develop just and fair solutions to the economic and social challenges facing the world.

Changes beyond UCL

As this strategy is being written, the UK’s changing relationship with the European Union creates unprecedented uncertainty (and, ironically, coincides with our ascent as one of the most successful European universities in winning Horizon 2020 funding and early career researcher support). While this presents challenges, it does not affect UCL’s global outlook and, indeed, we will seek to intensify our global engagement over the coming years.

Currently, UK universities face increased turbulence, with changes to higher education regulation and reform of research allocations, and ever-increasing pressures to demonstrate our economic and societal worth. In the short-term, the creation of UK Research & Innovation and the introduction of major, cross-cutting, thematic funding streams such as the Global Challenges Research Fund (GCRF) and the Industrial Strategy Challenge Fund (ISCF) are reshaping the...
nature of research funding and the ways in which universities must respond. In particular, the GCRF and ISCF will require more concerted actions to develop external partnerships and collaborative research activities that build on our major research strengths. UCL must further develop our strategic relationships with business in order to fully embrace the opportunities afforded by the ISCF. The recent growth of national research institutes – UCL is playing a leading role in the Francis Crick, Alan Turing, and Rosalind Franklin institutes – also represents a reshaping of national research capability; it will be important to ensure close engagement with and play a leadership role in these changes.

Many of the full consequences of these sector developments are yet to be seen. Regardless of the specific changes we will face at any given time, we expect that future circumstances will require us to remain agile, both intellectually and institutionally, and provide strategic planning that enables our researchers and support teams to respond rapidly and imaginatively to emerging priorities and initiatives. At the same time, we will need to be cognisant of the growing challenges to the sustainability of research funding and continuing pressures on research overhead recovery.

While universities have made significant efforts in recent years to demonstrate the relevance of their research, engage with local communities and respond to societal concerns, a distrust of academic experts (viewed as part of a detached establishment) has emerged on many fronts. In a ‘post-truth’ climate, we need to be unashamed about offering expertise, evidence and facts, but we must also ensure that we are able to speak to people’s everyday concerns. We must champion the pursuit of knowledge and curiosity, while recognising that genuine and reciprocal public engagement is more important than ever before.

Over the last decade our competitors have not stood still. Many have embraced the idea that a university should apply its collective research capacity to address global problems. Some have echoed the UCL Grand Challenges approach, establishing thematic problem-focused activity to address societal challenges. We regard this as a welcome development: our competitors are also our collaborators, and establishing productive research partnerships is one of the ways in which we can tackle global challenges. We also believe that UCL remains distinctive in the scale and breadth of its research, in its capacity for innovation, creativity and flexibility, and in its appetite for collaborating across disciplines and engaging beyond the university.

Growing our aspirations

Our university’s research and Professional Services staff have much reason to be proud of their contributions over the last decade. However, UCL must continue to stretch itself if it is to continue to fulfil its potential. We must become even more ambitious, strengthening our resilience to external events while upholding our core values. Hence this strategy and its accompanying draft Framework for Delivery seek to build on our past accomplishments (and address past constraints) while setting out our ambitions for the future.

Research leadership remains key to this strategy, now expressed as a more holistic concept of traditional research excellence in combination with the pursuit of a sustainable, responsible and ethical research agenda.

In 2011, we emphasised the need to overcome barriers between academic disciplines – as well as value disciplinary excellence – and stimulate what we termed ‘cross-disciplinarity grounded in disciplinary expertise’. We now understand the boundaries between disciplines to be a subset of the many types of barriers that can inhibit the fulfilment of our vision. We will redouble our efforts to identify, understand and overcome those more varied obstacles.

In this strategy, we are even more explicit about using our wealth of knowledge and intellectual capacity for public benefit, while continuing to cherish the expansion of knowledge for its own sake. This means intensifying our ambitions to generate new insights, to deliver impactful research across the sphere of our expertise, to build partnerships with those outside our university, and to inform how policy and practice can tackle societal problems. We also restate
and expand our commitment to using all means to maximise the public benefit which can arise from our research, as well as to explore the productive synergies between those means.

This vision asks much of the UCL researcher community and those who support it. We are more explicit about the opportunities for UCL researchers to stretch themselves; in turn, we emphasise the support that the institution should provide to its researchers. Both are summarised in the section of this strategy entitled ‘Implementation’, and detailed in the accompanying 2018 UCL Research Strategy: Draft Framework for Delivery.
WHAT WE SEEK TO DO

*UCL is committed to using its position and unique set of strengths to develop and disseminate original knowledge, not only for its own sake but also to address the significant challenges facing the world today and those that will arise in the future. UCL’s capacity to do so depends on our continued and expanded ability to fulfil this strategy’s three Aims: to inspire and empower research leadership; to cross boundaries to increase engagement; and to deliver impact for public benefit.*

Universities remain unique institutions in their ability to foster enquiry, to push the boundaries of knowledge and to advance our understanding of humanity.

Only a handful of universities – those with enduring excellence across the disciplines, a critical mass of expertise, the ability to enable cross-disciplinary collaboration, effective mechanisms for wider engagement, a commitment to impact for public good in its broadest sense and the financial sustainability to allow for long-term investment – can cultivate and deliver judicious solutions on the scale and with the speed required by the world’s current crises. UCL is among that number.

Such universities are capable of developing and sharing the paradigm-shifting insights that can secure the long-term survival, and prosperity, of humanity. We believe, however, that they cannot do so in isolation but only in open collaboration with the public. They must play an increasingly important role in connecting public and private actors, brokering knowledge between different sections of society and in engaging with external partners to tackle the global challenges facing humanity.

We want to stimulate disruptive thinking across and beyond our university to greatly expand knowledge and understanding, and to tackle complex societal problems. We wish to help to enable humanity not only to survive to the next century – an urgent challenge requiring unprecedented collective action and partnership – but also to thrive, so that the lives of future generations are worth living: prosperous, secure, engaged, empowered, fair, healthy, stimulating and fulfilling.

As a community of scholars, we must each focus our efforts, based on our founding values and driven by our intellectual curiosity, to be a force for positive social change. The role of our university is to understand and reflect society in order to transform it, in particular increasing society’s fairness and resilience.

**Our Aims and Cross-Cutting Themes**

Subsequent sections of this strategy describe in more detail our three Aims:
1. Inspire and empower research leadership
2. Cross boundaries to increase engagement
3. Deliver impact for public benefit.

Our three Aims describe what we are seeking to do. Each is reinforced by our three Cross-Cutting Themes, which draw on our founding principles and current capability, and characterise how we will advance those Aims.

**CROSS-CUTTING THEME A: Pursue a responsible research agenda**

*UCL 2034 states that we will ensure that our “research and education are rooted in our ethical principles”. The key elements of this are: understanding the distinctive role (and limitations) of the university in advancing knowledge and enquiry; nurturing cultures of integrity in all our research activities, and supporting rising standards across all fields; leading in ethical consideration of research and its applications; engaging with those who will be affected by our research activity; and enhancing the public benefit derived from research.*
What we mean by ... responsible research

Responsible research and innovation can be broadly defined as ensuring that research and innovation practices are inclusive of all those affected by research and that they strive towards sustainable, ethically acceptable and socially desirable outcomes. We advocate the following principles:

- valuing a diversity of knowledge, experience, research, outputs and outcomes
- addressing societal challenges and seeking to deliver public value
- fostering an inclusive research agenda that supports participatory research, co-production, citizen science and public engagement
- enabling creativity and collaboration across the whole UCL community
- being honest, open and generous in partnerships at all levels
- pursuing open science, including ensuring open access to research findings and data
- promoting diversity and gender equality in our research community
- embedding a robust ethical framework
- committing to the responsible use of research metrics
- nurturing our researchers at all stages of their career, and recruiting from the broadest talent pool.

CROSS-CUTTING THEME B: Exert our institutional influence for the greater good

The growth in UCL’s size, breadth, impact and reputation in recent decades presents us with both opportunities and – drawn from our founding values – obligations. We have considerable potential to help shape the environment in which academic endeavor takes place, to influence others’ thinking and to advocate rational, evidence-based and inclusive decision-making.

CROSS-CUTTING THEME C: Maintain a global perspective

As London’s Global University, we will marshall our collective expertise to deliver impact to address global problems; extend our local and global knowledge in order to increase our cultural sensitivity, make us better partners and increase the ‘grassroots’ relevance of our research; support the growth of independent research capability globally, and facilitate partnership working at all levels; and help our students to bring their research-based education to bear on their global careers and lives.

AIM 1 – Inspire and empower research leadership

More than anything, our individual and collective research leadership underpins the contributions that we can make to humanity. We seek to identify, attract inspire and empower those who demonstrate – or show their potential to develop – research leadership, regardless of their background.

UCL should strive to be the university of choice for the very best researchers, those with the ability to determine their own research direction, based on their own curiosity about and commitment to their chosen subject area, including their ability to critically interrogate it and their desire to inspire others. We will provide the environment, facilitation and support to attract, retain and nurture them. We will listen to and learn from them.

UCL will support its researchers in addressing long-term questions of high significance, influencing the thinking of their peers, students and successors, developing the connections of their work to other fields and practices, and maximising the public benefit of their insights. We seek to inspire them to lead through collegiality and collaboration, within and beyond the university.

What we mean by ... research leadership

Enduring individual intellectual excellence is the prerequisite, but not the limit, of research leadership. Our conception of leadership is not the traditional one based on privilege, power and authority. Rather, UCL expects its researchers to exemplify leadership through:

- contributing to the advancement of their discipline and the development of novel lines of enquiry
- supporting the intellectual life and collegiality of their department and faculty
- nurturing the development of early career researchers
- disseminating the results of their research as openly and responsibly as possible through scholarly outputs and, as appropriate, education, civic and public engagement, translational research, commercial and social enterprise activity, and influence on public policy and professional practice – and, where possible, making accessible the data underpinning their research
- being open to engagement with cross-disciplinary collaboration
- ensuring that their public research profile (currently through the UCL Institutional Research Information Service) is comprehensive, accessible and up-to-date
- engaging outside the university to enable greater research impact to further public benefit, for example through productive collaboration or engagement beyond UCL, significant impact beyond UCL, influence on research and related policy, and provision of expert advice to government and other groups
- applying the principles of responsible research to their thinking and conduct
- supporting UCL's efforts to exert its institutional influence for the greater good
- maintaining a global perspective.

Research leadership underpins and is a pre-requisite of this strategy's two other Aims: crossing boundaries to increase engagement and delivering impact for public benefit.

Our Objectives

1.1 – Become the destination of choice for the most talented researchers: UCL should become the destination of choice for the best and most promising research leaders – from early career to established – by providing a research environment which: supports them in career development and the attraction of funding; offers first-rate facilities and resources, including digital; supports their engagement with other disciplines and with external partners; and demonstrably recognises their achievements. Ultimately, our university’s culture should be one in which researchers feel valued for pursuing their intellectual curiosity, fulfilling their potential and maximising the impact of their research. We will listen to and value the opinions of our all of our researchers, not simply those of the loudest or most dominant voices.

1.2 – Sustain a broad research base: UCL’s breadth of disciplines is one of its distinguishing strengths, and we will ensure that thriving and engaged communities provide leadership across
the research spectrum: from arts, humanities and social sciences to the basic and applied sciences and medicine. We will create and maintain international leadership in selected areas where we have demonstrably outstanding strengths and critical mass, while sustaining a broad base of academic disciplines through which future priority areas can be developed and nurtured. We will sustain the diverse environments needed to support such leaders in different fields, and value a variety of knowledge, research activities and research outputs. Our research policies will be sensitive to disciplinary variation, and resist unnecessarily uniform approaches.

1.3 – Foster a diverse research community: Highly talented and promising researchers come from all backgrounds. We will recruit from the widest possible talent pool to ensure an increasingly diverse and open research community, as the model that can best address the challenges of a global society. We will implement innovative mechanisms for identifying outstanding individuals and research groups from different parts of the world and diverse backgrounds – including those from outside academia. We will also work with and empower people from under-represented groups to develop systems and change cultures (including recognising intersectionality\(^\text{ix}\)), to ensure that research leaders reflect the diverse communities that they serve.

1.4 – Enable leadership in diverse ways: We will encourage and support our researchers as they exemplify leadership. We will be vigilant against threats to the fundamental academic freedoms that such leadership requires. We will continue to emphasise the quality of outputs over their quantity. We will promote the physical, emotional and mental wellbeing of our researchers, so that a research career at UCL is personally fulfilling and part of a rich and balanced life.

1.5 – Nurture research students: The recruitment and development of high-quality research students are critical to our university’s long-term success. UCL will provide the very highest-quality learning environment for the most able research students, and develop additional ways to offer a demonstrably better research student experience than its peer institutions. This will include the continued development of strategic and innovative programmes to which many of its finest research leaders across many disciplines contribute. We will not only support our most talented research students to progress in academic careers but also prepare them to apply their skills elsewhere should they choose to pursue other professions.

1.6 – Support the development of early career researchers: We will aim to increase the number and range of postdoctoral awards to allow the very ablest students to continue their research after graduation, in order to support them in producing those highest-quality research outputs that will accelerate their progress into academic or non-academic research careers, or to apply their skills in other professions. We will provide the finest subject-specific and generic skills development, such as that provided by the UCL Doctoral School and UCL Library Services. We will create opportunities for early career researchers to maximise the impact of their research on policy and practice, and take leadership roles around new initiatives. We will provide outstanding early career research staff with stable career paths that break the cycle of short-term and precarious contracts.

1.7 – Cultivate leadership through collaboration: We will seek to enhance our research leadership through partnerships with other universities and organisations, both at a strategic level and through supporting individual research collaborations. We will also respond proactively to government initiatives in partnership with other institutions and, where appropriate, build on initiatives where individual research leaders and groups have already identified complementary strengths in and engaged with their counterparts at other institutions.

1.8 – Capture our success: We will support our academic research staff to disseminate the results of their research through appropriate channels, including scholarly outputs, education, civic and public engagement, translational research, commercial and social enterprise activity, and influence on public policy and professional practice (as reflected in the new Academic

\(^\text{ix}\) Definition, link to follow
Careers Framework⁹). We will improve the systems through which we: track opportunities, applications and awards; record, manage and promote research activity and expertise; and monitor and support external engagement and research impact. We will also ensure that the exceptional achievements of our researchers are suitably recognised and celebrated.

1.9 – Pursue responsible research leadership: Leadership is possible only if our research is trustworthy, reliable and reproducible. We will encourage researchers to lead by example – at local levels and across our university, as well as in their interaction beyond UCL – in nurturing cultures of integrity in all their research activities and supporting rising standards across all disciplines. We aspire to lead, and to support our researchers’ leadership, in open science and responsible research, as we have in open access. We will provide relevant training and skills development for our researchers so that they can embody and exemplify responsible approaches to research.

1.10 – Engage in and support leadership across the UK research community: Researchers from a university of UCL’s size, breadth, impact and reputation have a responsibility – for example, through service within their discipline and membership of funding agencies or other public and private bodies – to help shape the environment in which academic endeavour takes place, to influence others’ thinking and to advocate rationale, evidence-based and inclusive decision-making. We will encourage researchers to engage in these ways, and support their activities. We will fully exploit the opportunities offered by membership of and engagement with public bodies, and seek to increase our contribution where it currently has less influence.

1.11 – Enable global research leadership: Research leadership necessarily adopts a global perspective, since research is both informed by and affects an interconnected and interdependent world. We will continue to enhance research facilitation support for UCL researchers to engage with global funding and partnership opportunities, including with EU institutions. Inspired by the UCL Global Engagement Strategy, our commitment to a global perspective will produce a virtuous circle, in which connections around the world inform and improve the quality and consequences of our research, our community can act as our global advocates and ambassadors, our students are prepared to bring their research-based education to bear on their global careers and lives, and our global reputation supports the fulfilment of our vision for research.

⁹ http://www.ucl.ac.uk/hr/docs/proms/UCL-Academic-Careers-Framework171017.pdf
AIM 2 – Cross boundaries to increase engagement

Rarely can the most interesting questions or the most significant societal challenges be adequately addressed by one discipline, one university or one sector alone. While disciplinary excellence is at the heart of everything that we do, to amplify and inform our research we need to cross conventional, but often artificial, boundaries – between disciplines, between communities (disciplinary, academic and otherwise) and between different kinds of activity – in order to increase engagement and develop co-design and co-production approaches to research and complex societal problems.

Cross-disciplinary collaboration between experts can produce a much more nuanced and holistic understanding of any given problem. Although fostering cross-disciplinary activity is not unproblematic, over the past decade it has been embraced by many researchers across the breadth of UCL, and has become engrained as an approach that distinguishes our university.

Crossing the boundaries between disciplines is fundamental to our aims, but is not the extent of our ambitions.

If we are to maximise the positive effects we can have on the world, we need to overcome the conventional barriers between the research endeavour and the societal needs that can inform it, and between the mechanisms through which research can engage with, for example, policymakers, businesses, community stakeholders and practitioners.

We believe that such connections and partnerships for the co-creation of knowledge must grow more widespread if research is to fulfil its potential to address significant issues. There is not one mode, but many emerging models, of how these boundaries are crossed. UCL’s flexibility and collegiality will allow it to explore these many approaches simultaneously, learning and sharing lessons openly.

What we mean by … cross-disciplinarity

We use ‘cross-disciplinarity’ to mean collaboration between experts in different disciplines that transcends subject boundaries.

We recognise that there are numerous related concepts of definitions – of cross-, multi-, inter- and trans-disciplinarity – which often mean different things in different fields and to different peoplexi.

Rather than attempting to provide a single definition, cross-disciplinarity at UCL provides a flexible framework for individuals and groups to adapt their own preferred mode of working – from integrating disciplines and forging new fields, synthesising knowledge and developing challenge-based research, to undertaking research across and between several disciplines, and pursuing careers that move across and between disciplines.

Our Objectives

2.1 – Foster cross-disciplinary opportunities: We will continue to support the outstanding problem- and curiosity-driven research conducted by individuals and small groups that is the bedrock upon which all our achievements are built, and to value disciplinary excellence. We will support further interaction between disciplinary experts to make our collective subject-specific knowledge greater than the sum of its parts. We will further develop the rich, multi- and cross-disciplinary environment that ensures that our academics have greater potential to be better researchers than those working in a deeply siloed institute.

2.2 – Further embed cross-disciplinarity within UCL: Much cross-disciplinary interaction occurs spontaneously, but in order to foster it at scale we will further develop a more directed and proactive approach. This includes, for example: supporting those academic departments that adopt a cross-disciplinary approach; establishing new academic units to address problems

xi Link / Reference to follow
demanding diverse expertise; continuing to provide the coordination of research and funding opportunities, supporting engagement beyond UCL, through our research facilitation functions and our problem-focused UCL Research Domains; continuing to revise and develop the UCL Research Themes that encourage and facilitate cross-disciplinary interaction; and supporting those researchers who can make a distinctive contribution to research through undertaking trans-disciplinary career journeys. We will also explore further ways of sharing facilities for research support across disciplinary boundaries.

2.3 – Extend the reach of UCL Grand Challenges: In the second phase of UCL Grand Challenges – our flagship programme to stimulate cross-disciplinary approaches to addressing global problems – we have augmented our focus on building UCL’s capacity to cross boundaries between disciplines with an emphasis on partnership with others. We are committed to embracing external engagement in all of our activity, including with relevant policymakers, businesses, community stakeholders and practitioners. This will better enable the co-identification of problems and co-development of activities to address them.

2.4 – Further integrate research into undergraduate and postgraduate taught education: We celebrate the fact that our community both creates new knowledge through research and disseminates it through education, and increasingly view these not as parallel activities but deeply connected. We will further integrate research into the education process, building on the Connected Curriculum to ensure that students benefit from a high-quality and well-resourced research environment which offers access to world-class academics, equipment and facilities. We will ensure that our learning and teaching is informed by our research activities, delivered by experts in the field, and provides opportunities for students to undertake their own research. Where appropriate, we will also contribute to more cross-disciplinary undergraduate and postgraduate taught curricula, including through increasing UCL Grand Challenges’ engagement with students – beyond the successful Global Citizenship programme – embedding awareness of the potential impact of societally focused cross-disciplinary research and analysis.

2.5 – Support engagement with different communities: Our research will be enhanced through work with communities and other partners to define and tackle societal problems. UCL researchers have pioneered methods for civic and public engagement with research, including through citizen science, patient involvement, and co-design and co-production of research. We will support our researchers in exploring and refining approaches to overcoming barriers between academia and the rest of society. We will further develop an active, reciprocal culture of engagement as a means to enrich our research.

2.6 – Integrate research with professional practice: We will continue to support those research fields in which integration with professional practice is so extensive as to be part of the basic character of the discipline – such as in law, medicine, education, engineering and cultural professions. We will enable researchers to engage in other areas of practice that, for example, support ecosystems, deliver public services or produce creative outputs. We will seek to remove cultural and other barriers that would impede such partnerships (for instance approaches to funding, publication and intellectual property that fail to respect the contributions made by the non-academic partners). We will also seek to support further participative research with and by practitioners.

2.7 – Forge and enhance effective partnerships beyond our university: Collaborations and partnerships can bring together complementary strengths and deepen the impact of research, and are a crucial way of sharing and being open with our knowledge. UCL will continue to form strategic partnerships – for example with other universities and research organisations, commerce and industry, third sector organisations and healthcare providers – that can enhance our research and enable its impact to be widened and deepened. In particular, we will ensure that we position our research capability to engage with industrial partners and pursue shared endeavours in the context of the Government’s Industrial Strategy. We also recognise the value

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xii [http://www.ucl.ac.uk/research/domains](http://www.ucl.ac.uk/research/domains)

xii [http://iris.ucl.ac.uk/iris/browse/researchTheme/list](http://iris.ucl.ac.uk/iris/browse/researchTheme/list)
of a spectrum of partnerships, which includes those driven by only a few individuals, that can deliver innovation and significant societal impact.

2.8 – Make our social engagement greater than the sum of its parts: We are justly proud of the wealth of specialist skills and expertise developed across the many fields of social engagement, such as those focused on business, culture, health, professional practice, public policy, media, civic society and the public. We will explore how to cross the boundaries between these varied practices, with professionals and the researchers they support gaining new insights and mutual benefit from sharing the diversity of specialist knowledge, perspectives and methodologies. We will explore cross-fertilisation of such activities as a means making our collective social engagement greater than the sum of its parts.

2.9 – Pursue responsible external engagement: Research as an endeavour is of and for society: UCL’s research should be – to the greatest extent possible – accessible to, engaged with and inclusive of those it affects. The development of knowledge should be guided by the interests of the full range of stakeholders, including community and civil society groups. We will foster an inclusive research agenda that supports participatory research, co-design and co-production, and civic and public engagement in many forms. We will stimulate an ongoing dialogue with the UCL community and those outside the university, challenging existing assumptions and ensuring that we are a responsive and responsible research institution.

2.10 – Use our influence to develop connections and interaction: In order to help us and others to cross boundaries, we will further exploit our convening power, bringing together parties with common (or divergent) interests, and being a ‘honest broker’ of candid conversations. As we explore ways in which our social engagement can be made greater than the sum of its parts, we will draw on the experiences of other knowledge-based institutions and invite them to draw on ours, while recognising that each will wish to adapt lessons to their own circumstances and agendas.

2.11 – Cross global boundaries: The impact of research, whether positive or not, inevitably crosses boundaries in an interconnected and interdependent world. Addressing global challenges requires sustainable and mutually beneficial global partnerships. As a global research powerhouse, we will extend our local and global knowledge in order to increase our cultural sensitivity, make us better partners and increase the ‘grassroots’ relevance of our research.

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**UCL East**

We have made the crossing of boundaries fundamental to our vision for the first phase of our new campus at the Queen Elizabeth Olympic Park. As part of a wider education, innovation and cultural quarter for London, UCL East will create a world-leading university environment for experimentation, learning and scholarship for students, staff, collaborators and the wider public.

In our single largest development since the founding of UCL in 1826, we are designing the facilities to have a fluid, open character, ideal for participative development and learning across the themes of Experiment, Art, Society and Technology (EAST).

Embodying UCL’s commitment to creating and sharing knowledge for the benefit of all, the new campus will build on and reinforce activity in our Bloomsbury home.

Pool Street West will house the Future Living Institute, a new multi-disciplinary home for discovery, bringing together researchers from at least five faculties, comprising:

- a centre for Robotics & Autonomous Systems, part of a wider set of Experimental Engineering Labs covering a wide range of unique and innovative fields of study
- the Global Disability Innovation Hub, London’s new global research centre to bring together the top minds in disability, design and innovation
- the Culture Lab (Poole Street West), offering teaching, research and engagement spaces, underpinned by new programmes in making, media, conservation and heritage, and public history – including a new foundation studio for the UCL Slade School, and a London Memory Archive supporting the study of UCL’s East London collections as well as oral histories of the area
• Nature-Smart Cities Labs, a research and teaching centre using the Park as a ‘living lab’ to focus on three key themes: enhancing biodiversity of cities; understanding urban ecosystem services and wellbeing benefits; and engaging urban populations with their natural environment
• the Urban Room, as part of the Global Future Cities Co-Labs, a major public and community space for debating the past, present and future of London. The Co-Labs will provide opportunities for the application of knowledge towards the improvement of human settlements worldwide.

The academic vision for Marshgate is still in development, but activities to be accommodated include:
• the Culture Lab (Marshgate), which will offer teaching, research and engagement spaces, underpinned by new educational programmes in making, media, conservation and heritage, and public history – including a media lab, an object-based learning laboratory and a suite of conservation facilities
• the Experimental Engineering Labs, with new academic activities in unique, innovative and multidisciplinary fields of study, including advanced propulsion, future manufacturing and applied imaging
• the Institute of Making Big, a multidisciplinary research club for those interested in the made world: from molecules to buildings, synthetic skin to spacecraft, soup to diamonds, and socks to cities
• the Global Future Cities Co-Labs, organised around a series of shared spaces, specialising in providing opportunities for in-person and virtual collaboration and application of knowledge towards the improvement of human settlements worldwide, and the strategic use of ICT in sustainable and prosperous urban futures
• the Academy of Innovative Applied Finance, providing leadership and training for future financial and business leaders, enabling close collaboration between research, financial innovation, industry and government.
AIM 3 – Deliver impact for public benefit

We seek to maximise the public benefit resulting from our research, including by furthering academic disciplines and scholarship, enhancing our cultural contribution and engaging in public discourse, growing national and global prosperity, providing policy advice, informing professional practice, and improving health and wellbeing. We will support activity of these kinds and the myriad other ways in which our research can deliver public value.

UCL cherishes curiosity and imagination, and believes that the expansion of knowledge and scholarship is in itself of public value: it is a fundamental element in the development and improvement of society. However, building on the concept of ‘chrestomathia’ (or ‘useful knowledge’) defined by our spiritual founder Jeremy Bentham, we hold that every opportunity should be taken to consider how our research can deliver positive social change.

UCL doesn’t pursue research impact simply in response to policy and funding trends but because we believe that the research endeavour is rooted in delivering societal benefit. We believe that a desire to undertake research that can improve lives inspires each one of our researchers and academics. We have a clear responsibility to work for the public good within our local, national and global communities. We will promote diverse forms of research design and dissemination – and the delivery of impact not only upon, but with, external communities.

We recognise that all researchers will consider the impact of their research in the way that makes most sense for them. We fully support this approach and encourage researchers to be continually ambitious in how they can further expand the impact of their research and deliver greater public benefit. We want UCL’s research capability to continue to push the boundaries of how we engage externally, of the ways in which our research impacts on the wider world, and of how we generate public value.

Our Objectives

3.1 – Recognise and nurture the diversity of research impact: We will value the full breadth of research impact for public good, be it on academic disciplines and scholarship, through cultural contribution and engaging in public discourse, or by generating income and supporting business, providing policy advice, or improving health and wellbeing, or the myriad other ways in which our research can deliver public value, including physical and digital interactions. We recognise that timescales for societal impact vary from hours – for example, as experts offer wise commentary on contemporary events – to centuries, as fundamental discoveries play out their full benefits to civilisation.

3.2 – Share our knowledge effectively: The maximisation of benefit cannot happen if only those within academic institutions have access to our research outputs. UCL will continue to fully endorse open access to – and introduce open science approaches for – outputs as a vital way of allowing the widest possible sharing of knowledge. We will build on the success of UCL Press – the UK’s first fully open access university press – as well as promote open access findings wherever they are published. We will further develop the UCL Institutional Research Information Service (or its successor) as a window on our research activity and a resource for internal and external stakeholders who want to learn more about the extent of our activity in a particular area. We will also work to develop accessible and comprehensible abstracts to be published on UCL Discovery alongside research outputs. We will appropriately contextualise and frame research findings, with uncertainties and scope clearly indicated. As a natural extension to open access we will support, where possible, full access to research data.

3.3 – Amplify our impact through communications: UCL communications channels will continue to ensure that our reputation reflects the quality and purpose of its research; a major element in this will be the responsible public promotion of specific research outcomes as exemplars of institutional quality and purpose. Institutional communications, however, must do more than support an excellent reputation: they must support and reinforce UCL’s research leadership and influence, and amplify our impact through compelling delivery mechanisms for
our insights to those positioned to implement and benefit from them. We will also proudly champion the role of expertise and knowledge – and how they are relevant to and can enhance people’s lives – in public discourse.

3.4 – Focus UCL Grand Challenges on impact: The second phase of UCL Grand Challenges is characterised by an emphasis on societal impact as the ultimate aim of the programme. While UCL Grand Challenges will continue both to nourish ideas naturally arising from academics’ concerns and curiosities, and to coordinate institution-wide responses to external agendas where our expertise can contribute, we will focus on those activities with the potential to contribute to the resolution of aspects of social problems.

3.5 – Foster public collaboration in research to benefit communities: Since we should not presume that we necessarily have a clear sense of the concerns of the wider public, we must do a better job at listening to their concerns and interests, and engage in responsible and responsive dialogue to inform our research agendas. We will support our researchers to understand and respond to the public’s varied concerns, beliefs and behaviour, engage with and inform public opinion, to develop further innovations in citizen science and to address the barriers to adapting individual, organisational and mass behaviour change. We will also support the UCL Culture Manifesto’s vision to open UCL to different public groups, foster creativity and mobilise researchers to engage with the wider world.

3.6 – Inform public policy: We seek ultimately to embed a culture of public policy engagement across UCL so that external agencies can identify sources of relevant knowledge, and so that UCL can better anticipate and respond swiftly to emerging policy issues. At the level of individual researcher or department, and through to the flagship institution-wide UCL Public Policy programme, we will continue to stimulate policy-focused outputs, foster greater academic-policy interaction and support the development of evidence-informed policy formation through innovative mechanisms and activities. We will also develop more faculty- and department-led activities and explore new ways of informing public policy from cross-disciplinary perspectives.

3.7 – Contribute to improving human health: We will build on our exceptional strengths in biomedical and related sciences and strong relationships with our partner hospitals to improve health systems. We will support better links between research and frontline healthcare delivery, recognising that this often requires the establishment of new processes and facilities. We will look to the major health challenges facing populations across the globe such as social determinants of health. We will apply a broader range of academic expertise than just biomedicine, develop new forms of engagement with the corporate and public stakeholders within the health system, and engage with the medical research charity sector to understand the issues it faces.

3.8 – Support commercial and social enterprise: UCL’s commitment to widespread collaboration with commercial and social enterprises in order to maximise the societal impact of our research is described in the UCL Innovation & Enterprise Strategy. We will seek to maximise the myriad opportunities for our research community to provide expertise, skills, services and products to external partners, collaborators and customers, for example through contract research, consultancy, licensing and continuing professional development. We will link together numerous piecemeal interactions into more valuable and more rapidly responsive sustained relationships. Recognising that corporate policies and practices have a significant impact on global issues, we will proactively share research findings with business leaders through our thematic communities and institutes. We will also aim to establish UCL as a leading research collaborator and provider of knowledge-based services to the commercial and voluntary sectors.

3.9 – Benefit London and our local community: UCL research will be brought to bear on the city that is its home. London itself poses a set of complex and systemic problems which can be resolved only through the deployment of cross-disciplinary expertise in collaboration with local communities, government bodies, policymakers and practitioners, local business and other London organisations. Through the forthcoming UCL London Strategy, we will set out plans for building our engagement with potential partners such as those. We intend that our work with London will develop beneficial outcomes that can be applied elsewhere and on larger scales.
3.10 – Pursue responsible impact: Consideration of how our research delivers public benefit is central to a responsible research agenda. We will strive towards sustainable, ethically acceptable and socially desirable outcomes. We will seek to understand and minimise the potentially negative consequences of our innovations, while ensuring that their benefits are shared widely. The development of knowledge should be guided by the interests of the full range of stakeholders, including community and civil society groups, and we should do our best to anticipate the needs of people whose voices may not be heard and the interests of groups that have not yet formed; in this way, innovations will come better prepared for responsible application to deliver impact for public good within the real, complex and contested world.

3.11 – Enhance the broader UK research community: Our responsibilities begin at home, in shaping the beneficial research culture advocated in this strategy. However, we will also bring our expertise and experience to bear on the external research policy, funding and regulatory environment. We will be responsive to the strategic objectives of others – for example, the major funding agencies, both public and private, and governments – and play a prominent role in helping to inform and shape those agendas, including continuing to provide leadership in major new collaborative research institutes and initiatives. We will use our collective sector experience to propose ways in which limited funding can be most effectively and efficiently invested.

3.12 – Deliver global impact of mutual benefit: UCL defines itself as a global university, and many of our research activities are international in nature, whether because of subject matter or partnership. In alignment with the UCL Global Engagement Strategy, we seek to co-create judicious solutions to enduring and emerging global problems, help to increase independent research capacity globally and establish strategic international partnerships, in order to maximise our impact on social, environmental, cultural, economic, legal and health issues globally.
IMPLEMENTATION – Developing a Framework for Delivery

[This section summarises the aspirations set out in this strategy, both institutional and at the level of the individual researcher. It describes how these have inform the strategy’s Draft Framework for Delivery, which will lead to the development, implementation and monitoring of a set of action plans.]

Much of the activity required to successfully implement this strategy will take place at an institutional level. However, this will be insufficient on its own. We also need individual researchers to reflect on and embrace the aims of this strategy, and to exemplify it in the context of their own work. Furthermore, we recognise the many and varied obstacles facing the implementation of this strategy, and are keenly aware that overcoming them will require us to draw on the experience, expertise and imagination of the whole UCL community.

The Objectives described in this strategy have informed our Draft Framework for Delivery, a programme of activity defining the indicators against which progress can be assessed. We provide here a summary of some of these proposed activities. The framework will be a ‘living document’, designed to respond to the rapidly changing environment in which we operate; progress on achieving its actions will be reported on regularly, and proposed future activities consulted upon. In discussion with those identified in the framework as ‘key delivery partners’, we will develop specific action plans with priorities, measures of success and timelines for delivery.

Institutional activity

We will continue to develop systems, policies, an environment and a culture that will stimulate and enable disruptive thinking across our university, in order to transform knowledge and tackle complex societal problems. We will consolidate good practice and introduce new methods of planning and supporting research and researchers.

In research leadership: UCL will enable the entire research community, at every career stage, to pursue leadership in diverse ways which reflect our collective and individual ambitions. We will strive to:

• provide a research environment which – in addition to offering first-rate facilities, infrastructure and resources, and support for career development and attracting funding – nurtures our research students, recognises and rewards researchers’ achievements, supports their engagement with other disciplines and with external partners, and enables work-life balance
• maintain our international leadership in those areas where we have demonstrably outstanding strengths and critical mass, while sustaining a broad base of academic disciplines
• recruit from the widest possible talent pool and strive to ensure that research leaders reflect the diverse communities that they serve
• support our most talented research students to progress in academic careers but also prepare them to apply their skills elsewhere should they choose to pursue other professions
• promote a ‘whole career’ approach and provide outstanding early career research staff with stable career paths that break the cycle of short-term and precarious contracts
• support individual and institutional research collaborations, including those in response to Government initiatives and those led by individual research leaders.

In crossing boundaries: UCL will continue to support the opportunities outstanding problem- and curiosity-driven research conducted by individuals and small groups, while also further developing the rich multi- and cross-disciplinary environment that draws on that subject-specific expertise. Furthermore, we will support effective and mutually beneficial engagement with external communities and organisations. We will aim to:

• foster interaction between disciplinary experts to make our collective subject-specific knowledge greater than the sum of its parts
• support those academic departments that adopt a cross-disciplinary approach and establish new academic units to address problems demanding diverse expertise
• continue to provide the coordination of research and funding opportunities, and support engagement beyond UCL, through our research facilitation functions and our problem-focused UCL Research Domains
• extend the reach of UCL Grand Challenges, expanding engagement within the UCL community and externally, including with relevant policymakers, businesses, community stakeholders and practitioners, in order to better enable the co-identification of problems and co-development of activities to address them
• further integrate cross-disciplinary research into undergraduate and postgraduate taught education, in particular through building on the Connected Curriculum and other curricula to embed awareness of the potential impact of societally focused cross-disciplinary research and analysis
• support civic and public engagement with different communities – including through citizen science, patient involvement, and co-design and co-production of research – as a means to enrich our research
• where appropriate, integrate research with professional practice, in both those fields already well-established and by enabling researchers to engage in other areas of practice that, for example, support ecosystems, deliver public services or produce creative outputs
• explore how to cross the boundaries between varied practices of social engagement – such as those focused on business, culture, health, professional practice, public policy, media, civic society and the public
• Intensify our global engagement, in recognition of the increasingly international nature of research and knowledge dissemination.

In delivering impact: UCL embraces the diversity and breadth of research impact, whether on academic disciplines and scholarship, through cultural contribution and engaging in public discourse, by generating income and supporting business, by providing policy advice, or improving health and wellbeing, and the myriad other ways in which our research can deliver public value, including physical and digital interactions. We will seek to:
• share our knowledge effectively, by continuing to fully endorse and promote open access, communicate our work in more accessible ways and promote responsibly specific research outcomes as exemplars of institutional quality and purpose
• ensure that institutional communications support and reinforce UCL’s research leadership and influence, and amplify our impact by providing compelling delivery mechanisms for our insights to those positioned to implement or benefit from them
• emphasise societal impact – and contributions to the resolution of aspects of social problems – as the ultimate aim of UCL Grand Challenges
• seek to embed a culture of public policy engagement and influence across UCL through the flagship UCL Public Policy initiative
• foster public engagement with research to benefit communities – include through responsible and responsive dialogue to inform our research agendas – and support the UCL Culture Manifesto’s vision to open UCL to different public groups and mobilise researchers to engage with the wider world
• contribute to improving human health, including by building on our exceptional strengths in biomedical and related sciences, and strong relationships with our partner hospitals, to improve health systems, supporting better links between research and frontline healthcare delivery, applying our breadth of academic expertise beyond biomedicine, and engaging with the medical research charity sector to understand the issues it faces
• support commercial and social enterprise activity, in alignment with the UCL Innovation & Enterprise Strategy, seeking to maximise the myriad opportunities for the UCL research community to provide expertise, skills, services and products to external partners, collaborators and customers, for example through contract research, consultancy, licensing and continuing professional development
• benefit London through supporting the forthcoming UCL London Strategy and setting out plans for building our engagement with other London institutions, businesses, communities and governmental bodies.

In responsible research: To ensure that our commitment to a responsible research agenda underpins the pursuit of this strategy’s Aims and Objectives, we will strive:
to pursue responsible research leadership through promoting adherence to the four principles in the UCL Statement on Research Integrity\textsuperscript{xiv}, to support our researchers’ leadership in open science and responsible research, and to provide relevant training and skills development for our researchers so that they can embody and exemplify responsible approaches to research towards sustainable, ethically acceptable and socially desirable outcomes, and seek to maximise the beneficial impact of our research while understanding and minimising its potentially negative consequences to stimulate an ongoing dialogue within the UCL community and with those outside the university, to ensure we are a responsive and responsible research institution to ensure that the development of knowledge is guided by the interests of the full range of stakeholders, including community and civil society groups, and do our best to anticipate the needs of people whose voices may not be heard and the interests of groups that have not yet formed to foster an inclusive research agenda that supports civic and public engagement in many forms, including participatory research, co-design and co-production.

In exerting our institutional influence for the greater good: UCL wants to support our researchers to engage in helping to shape the environment in which academic endeavour takes place, to influence others’ thinking and to advocate rational, evidence-based and inclusive decision-making. We will aim to:

- fully exploit the opportunities offered by membership of and engagement with public bodies
- further exert our convening power, bringing together parties with common (or divergent) interests, and being an ‘honest broker’ of candid conversations
- draw on the experiences of other knowledge-based institutions relating to social engagement, and invite them to draw on ours
- benefit the broader UK research community by bringing our expertise and experience to bear on the external research policy, funding and regulatory environment, playing a prominent role in helping to inform and shape those agendas, and using our collective sector experience to propose ways in which limited funding can be most effectively and efficiently invested.

In maintaining a global perspective: To continue to nurture our global community of researchers, our international partners and global engagement, and our commitment to benefiting global society, we will seek to:

- extend our local and global knowledge in order to increase our cultural sensitivity, make us better partners and increase the ‘grassroots’ relevance of our research
- enable global research leadership and continue to enhance research facilitation support for UCL researchers to engage with global funding and partnership opportunities
- develop global impact of mutual benefit, in alignment with the UCL Global Engagement Strategy, seeking to co-create judicious solutions to enduring and emerging global problems, and to increase independent research capacity globally.

Engagement by individual researchers

This strategy provides a broad framework for the advancement of our university’s research. It is unlikely that every researcher will be able to respond directly to every Objective at every point in their career, but we hope that it will reinforce a culture in which individual researchers are enabled to develop further their own talents, interests, engagement and impact.

In research leadership: Enduring individual intellectual excellence is the prerequisite, but not the limit, of research leadership. Researchers are encouraged to embody leadership through a variety of activities:

- contributing to the advancement of their discipline and the development of novel lines of enquiry
- supporting the intellectual life and collegiality of their department and faculty
- nurturing the development of early career researchers

\textsuperscript{xiv} http://www.ucl.ac.uk/research/integrity/integrity-at-ucl
• disseminating the results of their research as openly and responsibly as possible – for example through scholarly outputs, education, civic and public engagement, translational research, commercial and social enterprise activity, and influence on public policy and professional practice – and, where possible, making accessible the data underpinning their research
• being open to and enabling engagement with cross-disciplinary collaboration
• ensuring that their public research profile (currently through the UCL Institutional Research Information Service) is comprehensive, accessible and up-to-date
• engaging outside the university to enable greater research impact for public benefit, for example through productive collaboration or engagement beyond UCL, significant impact beyond UCL, influence on research and related policy, and provision of expert advice to government and other groups.

In crossing boundaries: Crossing boundaries requires dedication and openness on the part of our researchers, who are encouraged to enhance their research by, for example:
• pursuing appropriate opportunities for cross-disciplinary interaction and adopting a collaborative approach in working with colleagues across disciplines
• remaining open to engagement with, and valuing the perspectives of, external partners and those communities with an interest in research outcomes
• where applicable, connecting their research to professional practice and public policy
• considering how they can embed co-design or co-production in their research
• drawing on and exploring methods and practices for overcoming barriers between disciplines and between academia and the rest of society.

In delivering impact: We recognise that all researchers will consider the potential impact of their research in the way that makes most sense for them. Researchers are encouraged to be ambitious in how they can further expand the impact of their research and deliver greater public benefit, for example by:
• going beyond compliance with open access, such as by sharing the relevance and excitement of their research through mainstream, specialist and social media, and other communications channels
• considering how they can effectively engage beyond the university, including through open science
• exploring the potential for their research to maximise its benefit, such as through engagement with public policy, health systems, and commercial and social enterprise
• disseminating and applying relevant research findings to London’s people, groups and institutions.

In responsible research: Researchers are encouraged to demonstrate their commitment to a responsible research agenda, including through:
• adhering to the four principles in the UCL Statement on Research Integrity\textsuperscript{xv}: Rigour, Honesty, Open & Transparent Communication and Care & Respect
• striving towards sustainable, ethically acceptable and socially desirable outcomes, and seeking to maximise the beneficial impact of their research while understanding and minimising its potentially negative consequences
• conducting trustworthy, reliable and reproducible research that is appropriately contextualised and framed, with uncertainties and scope clearly indicated
• leading by example – at local levels and across our university, as well as in their interaction beyond UCL – in nurturing cultures of integrity in all their research activities and supporting rising standards across all disciplines
• developing an inclusive research agenda that engages, as appropriate, with civic and public engagement in many forms, including participatory research, co-design and co-production
• striving constantly to do better, by valuing a diversity of knowledge and remaining open to reflections and questions about whether and how they can improve.

\textsuperscript{xv} \texttt{http://www.ucl.ac.uk/research/integrity/integrity-at-ucl}
In exerting our institutional influence for the greater good: Researchers are encouraged to help shape the environment in which academic endeavor takes place, to influence others’ thinking and to advocate rationale, evidence-based and inclusive decision-making, including through:

- serving within their discipline and through membership of funding agencies, and other public and private bodies
- bringing their expertise and experience to bear on the research policy, funding and regulatory environment
- being responsive to the strategic objectives of other groups and helping to inform and shape those agendas.

In maintaining a global perspective: Researchers are encouraged to explore and develop a global perspective, including by:

- extending their local and global knowledge in order to increase their cultural sensitivity, make them better partners and increase the ‘grassroots’ relevance of their research
- seeking to co-create judicious solutions to enduring and emerging global problems,
- helping students to bring their research-based education to bear on their global careers and lives
- engaging with global funding and partnership opportunities
- helping to support the growth of independent research capability globally, and facilitating partnership working at all levels.
CONCLUSION

Previous versions of the UCL Research Strategy (in 2008 and 2011) expressed our commitment to use our collective knowledge and expertise to develop and disseminate original knowledge, not only for its own sake but also to address the significant challenges facing the world and those that will arise in the future. This reflected our founding principles of innovation, accessibility and relevance.

This refreshed iteration, the 2018 UCL Research Strategy, develops that vision in the context of our university’s current scale and excellence, as well as changes to the wider world.

We have expanded the scope of our three Aims, in order to reflect UCL’s capacity and commitment to inspire and empower research leadership, to cross boundaries to increase engagement and to deliver impact for public benefit. Our three Cross-Cutting Themes – relating to pursuing a responsible research agenda, exerting our institutional influence for the greater good and maintaining a global perspective – characterise how we will approach those Aims.

As a UCL researcher, or a person who aspires to be one, we invite you to find motivation and empowerment in our university’s radical tradition of innovation, accessibility and relevance. In doing so, you will inspire future generations of UCL researchers to fulfil their own potential. As a researcher or a professional supporting the research endeavour, we encourage you to view your work as part of a collective effort to help UCL to make the most of its potential as a force for public good.