Wisdom

The world’s major problems are complex, systemic, interconnected and urgent to an unprecedented degree.

Billions of humans suffer from illness and disease, despite the existence of proven preventions and cures. Life in our cities is under threat from social tension, pollution and climate change. The prospect of global peace and cooperation remains under assault from tensions between our nations, ideologies, faiths and cultures. Our quality of life appears to be diminishing despite technological and economic advances.

Wisdom – here defined as the judicious application of knowledge for the good of humanity – is the key to providing solutions to aspects of these global problems. It can arise through bringing together different expert perspectives to address issues in their full complexity.

As London’s Global University, UCL has both the opportunity and the obligation to marshal the breadth of its intellectual expertise in order to contribute to the resolution of the world’s major problems. The 2011 UCL Research Strategy sets out to achieve this not just through the generation of knowledge, but also through the delivery of a culture of wisdom.

The Wisdom Agenda

EXECUTIVE SUMMARY

- The world’s major problems are complex, systemic, interconnected and urgent to an unprecedented degree
- The development of wise solutions can arise through bringing together different expert perspectives in order to address issues in their full complexity
- UCL seeks to develop a culture of wisdom through:
  - fostering leadership within and beyond discipline-based research
  - expanding the distinctive cross-disciplinarity of our research, collaboration and partnerships
  - increasing the impact of our global university’s research, locally, regionally, nationally and internationally
- UCL’s principles, pioneering tradition, breadth and depth of expertise and flexibility, along with its home in London, position it uniquely well to adopt a culture of wisdom
- To inform the thoughts, perspectives and actions of policymakers, practitioners and the public, UCL pursues programmes of global citizenship, public engagement, enterprise, strategic partnerships and public policy

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Delivering a culture of wisdom, therefore, means drawing on the full range of expertise. It requires a spirit of collaboration and a recognition that the contribution of which each of us is capable can be vastly greater when made in concert.

Working in partnership with government, business and society, the best universities can propose robust solutions to the problems articulated by those groups.

The delivery of a culture of wisdom at UCL over the next five years will depend on our ability to:

- continue to foster leadership within and beyond our discipline-based research
- expand the distinctive cross-disciplinarity of our research, collaboration and partnerships
- increase the impact of our global university’s research, locally, regionally, nationally and internationally.

In aspiring to deliver a culture of wisdom, the 2011 UCL Research Strategy claims a role for UCL that extends beyond the common 20th century understanding of what a university is; we hold, however, that it is essential for UCL to fulfil that role in the 21st century.
Transforming knowledge into wisdom

The research of a major university such as UCL is valuable in that it both generates applicable knowledge and expands the potential of human thought and action. Specialist knowledge tends to be generated within disciplines, whether traditional (e.g., economics or pharmacology) or emerging (e.g., nanotechnology or crime science), through problem- and curiosity-driven research by individuals and small groups. This is the foundation of the advancement of human knowledge, and the core research activity of all great universities. The value of this form of enquiry – which in its highest forms has transformed human experience and improved innumerable lives – is immense and unquestionable. The academic freedom and curiosity that it requires will always be fundamental to our university’s research-intensive culture.

The potential value of such scholarship to modern society is even greater when it is fully developed in the context of the multifaculty university. This is because solutions to complex major problems evade the grasp of any individual discipline. While individual excellence and subject expertise are essential – and are to be celebrated, nurtured and supported – even more significant outcomes can be achieved when experts from different disciplines act together. Greater understanding and novel insights arise when the breadth of specialist knowledge is considered collectively. Wise solutions emerge through synthesising and contrasting the knowledge, perspectives and methodologies of different disciplines.

Only universities with excellence across the disciplines, a critical mass of expertise and a commitment to impact in its broadest sense can cultivate and deliver wisdom on the scale and with the speed required by the world’s current crises.

Developing a culture of wisdom is not easy. Academics can be deterred from working across boundaries by, for example, conventional models of academic structures, career progression and measures of prestige based overly on specialisation. Establishing a culture of wisdom therefore requires transformative action:

• respecting specialist knowledge, while dismantling the barriers to its cross-fertilisation
• supporting the synthesis of new knowledge, both within and across fields and disciplines
• facilitating collective, collaborative working practices in order to gain fresh perspectives and, ultimately, wisdom
• formulating and advocating policy and practice based upon the insights so developed.

UCL’s distinctive position

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 in the future.

Taken together, the following qualities position UCL, London’s Global University, uniquely well to adopt a culture of wisdom and to ensure that the resulting insights are applied to the world’s major problems. Principles

Inspired by the utilitarian 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.

Pioneering tradition

UCL introduced to England several important disciplines now viewed as core academic activities, such as architecture, civil engineering and medicine. It established the UK’s first professorial chairs in many subjects, including those in geography, French, medical physics, media law and Egyptology. Our university founded academic departments that were the UK’s first, among them statistics, chemical engineering, and the history and philosophy of science.

Our groundbreaking research that has helped to shape the modern world. Over nearly two centuries, our staff and student achievements include:

• advances in communications such as the telephone and wireless telegraphy, and the first transatlantic computer network connection, which was the precursor of the internet
• understanding of the physiology of nerve cells and their synaptic connections
• biomedical breakthroughs such as the identification of hormones and vitamins, and the first antiseptic treatment of wounds
• understanding of the immune system’s rejection of tissue and organ grafts, and of autoimmune diseases such as rheumatoid arthritis
• discovery of the inert gases, including neon, which resulted in the first of 21 Nobel Prizes so far earned by our staff and students.

Breadth and depth of expertise

For 43 of our 49 submissions to the 2008 Research Assessment Exercise, at least 50% of UCL’s quality profile was either 4* (“of world-leading quality”) or 3* (“internationally excellent”). Excellent results were achieved across a wide spectrum of disciplines, including: architecture and the built environment; cancer studies; chemical engineering; computer science and informatics; earth systems and environmental sciences; economics and econometrics; history; history of art, architecture and design; hospital-based clinical subjects; infection and immunology; law; philosophy; and psychology. This breadth of expertise provides the bedrock upon which effective cross-disciplinary interaction is achieved.

UCL is the 15th most-cited university in the world and the 2nd most-cited in Europe (Thomson Reuters ISI Web of Knowledge Essential Science Indicators) and ranked 20th in the world and 3rd in the UK (Academic Ranking of World Universities).

Flexibility

Our intellectual agility, in the context of strategic planning, enables UCL researchers to respond rapidly and imaginatively to emerging priorities and initiatives.

London

Our home in the heart of a global capital, with a remarkably diverse population, offers close interaction with Bloomsbury’s cultural, economic, political and intellectual vibrancy, as well as Westminster and Whitehall, the City, the media, courts, galleries, museums, libraries and our world-class hospital partners.

Perspective

Our commitment to enhancing the circumstances of the people of the capital and the UK is complemented by a global perspective that recognises the interconnectedness and interdependence of people around the world.

Leadership founded in excellence

UCL’s research excellence is determined foremost by the quality of its academic staff. Enduring excellence, derived from talented individuals’ curiosity about and commitment to their chosen subject areas, is the prerequisite of research leadership, which will underpin the delivery of a culture of wisdom.

The 2011 UCL Research Strategy requires its established researchers to demonstrate sustained leadership:

• in their subject, for example by developing novel lines of enquiry
• by contributing to the intellectual life of their discipline
• through cultivating collegiality in their department, faculty and university
• by supporting and nurturing early career researchers and research students.

A central quality of the research leaders that UCL seeks to attract, retain and cultivate is the ability to determine their own research direction, based on their own curiosity about and commitment to their chosen subject area.

These leaders have the imagination and insight to address questions whose significance is not yet clear to any other human being, or to provide new answers to questions that have frustrated all others. The ability to cultivate and support these precious individuals is a critical test of a global university, and is one of our most fundamental goals.

In order to attract, retain and cultivate intellectual leaders, UCL seeks to provide a positive and creative research environment, and offer appropriate incentives and support, such as: competitive salaries, space and cutting-edge equipment; access to gifted and ambitious graduate students; freedom from excessive and burdensome administrative duties; appropriate teaching opportunities and responsibilities; and a culture in which discovery, application and leadership are cherished and rewarded.

Cross-disciplinarity grounded in expertise

UCL considers outstanding problem- and curiosity-driven research conducted by individuals and small groups to be the bedrock upon which a culture of wisdom is built.

However, even within this domain, there can be a critical role for cross-disciplinarity, where adoption of methods or analogies from other disciplines is often part of the most creative and innovative research. A researcher working in an environment where a wide range of advances are being made, and which can act as a source of inspiration, has greater potential to be a better researcher than one within a narrow, deeply siloed institute. Often, the most significant new opportunities for intellectual activity arise when such interactions between disciplines prove especially fruitful, and it is not coincidence that the vast majority of our new research centres and similar investments are at cross-disciplinary interfaces.

Major societal challenges can rarely be addressed using the findings of a single research advance. The appropriate approach is for leading researchers to work together to build a cross-disciplinary synthesis responding to these challenges, linking into a bigger picture both their own advances and those made by other leaders in their discipline.

Researchers who fully understand the context, justification and nature of such research findings are better positioned to make this synthesis than non-researchers simply drawing on the outcomes of disciplinary research without such familiarity.

Through interaction between disciplinary experts – rather than interdisciplinary generalists – our collective subject-specific knowledge can be made greater than the sum of its parts. Our work will thus become best-placed to yield solutions that can address effectively aspects of the major global issues of the 21st century.

Much cross-disciplinary interaction occurs spontaneously, but fostering it at scale requires a more directed and proactive approach. UCL is, therefore, strengthening its cross-disciplinary research, enabling our existing excellent specialisms to come together and optimise their joint impact, through:
• sustaining a broad and excellent research spectrum
• fostering an environment where openness to cross-disciplinary interaction is considered a significant aspect of leadership
• supporting leaders through the difficult process of finding funding for cross-disciplinary research activities through the expertise of research facilitators
• supporting those academic departments that already adopt a cross-disciplinary approach
• establishing new academic departments to address problems demanding diverse expertise
• providing thematic contexts for cross-disciplinary interaction
• forming thematically focused centres that draw on expertise from across our academic departments
• facilitating and promoting research through UCL Grand Challenges.

UCL Grand Challenges

Overarching our cross-disciplinary collaboration are the UCL Grand Challenges – of Global Health, Sustainable Cities, Intercultural Interaction and Human Wellbeing – the mechanism through which concentrations of specialist expertise across and beyond UCL can be brought together to address aspects of the world’s key problems.

The UCL Grand Challenges draw on our collective talent in order to generate wise solutions – increasingly, in partnership with external agencies – and disseminate these in a compelling manner through scholarly outputs, education, public engagement, translational research, commercial and social enterprise activity, and influence on public policy and professional practice.

They provide an environment in which researchers are encouraged to think about how their work can intersect with and impact upon global issues. They also complement UCL Research Frontiers’ support of our exploratory and curiosity-driven cross-disciplinary research.

The UCL Grand Challenges both nourish ideas naturally arising from academics’ concerns and curiosities, and coordinate institution-wide responses to external agenda. They aim to:
• create networking opportunities – to connect academics across UCL’s disciplines and foster networks of experts (eg through roundtables, town meetings and centrally seed-funded cross-disciplinary institutes)
• provide spaces for debate – to bring together different expertise, perspectives and methodologies in order to provoke new understanding (eg through symposia, workshops and public events)
• facilitate novel research – to stimulate cross-disciplinary activity to generate wisdom and societal debate
• improve policy and practice – to enhance economic performance, public service and policy, quality of life, and social justice and equity.

UCL is bringing wisdom to policy and practice

UCL is deploying the following mechanisms to inform the thoughts, perspectives and actions of policymakers, practitioners and the public.

Global citizenship

UCL is inculcating in its community of students a culture of creative and critical scholarship, of ambitious, idealistic and ethical behaviour, and of obligation to society. Our learning environment is underpinned by the preparation of our students for their future roles as global citizens.

Our aim is to ensure that we develop graduates who are: critical and creative thinkers; ambitious, but also idealistic and committed to ethical behaviour; aware of the intellectual and social value of culture difference; entrepreneurs with the ability to innovate; willing to assume leadership roles in the family, the community and the workplace; and highly employable and ready to embrace professional mobility. These future leaders will both recognise and help to produce wise counsel.
Public engagement

UCL is committed to public engagement, by understanding the public’s varied concerns, beliefs and behaviour, responding with proposals that are relevant, effective and efficient, and addressing the barriers to adapting individual, organisational and mass behaviour.

We engage with local and global communities and recognise our role in ensuring effective two-way dialogue between university and society. Without diminishing the profundity of our research, we will make it accessible and comprehensible to the public, and engage in responsible and mutually beneficial debate.

As one of six national Beacons of Public Engagement, we know that it is through social dialogue that our insights can be applied judiciously. Our UCL Beacon partners are Arts Catalyst, Birkbeck College, the British Museum, Cheltenham Festivals, City & Islington College and Southbank Centre.

Enterprise

Economic growth is supported by the rapid flow of ideas between research institutions and enterprise. As part of the 2011 UCL Enterprise Strategy, our university seeks to expand dramatically the engagement of its research leaders with enterprise, and in particular, to link together numerous piecemeal interactions into more valuable and more rapidly responsive sustained relationships.

In recognition that corporate policies and practices have a significant impact on global issues, UCL will proactively share its research findings with business leaders through its thematic communities and institutes. This will, in turn, lead those businesses benefiting from UCL expertise to view the university as an exceptionally strong source of wise solutions.

We recognise the importance of continuing to develop our enterprise agenda by:

- maximizing the economic impact of UCL research
- translating research findings into practice
- fostering an entrepreneurial environment
- enhancing our consultancy activity
- providing focused continuing professional development.

Strategic partnerships

UCL is committed to forming strategic partnerships, for example with other research organisations, with commerce and industry, and with healthcare providers. We engage in partnerships, such as the following, to enable the impact of our research to be widened and deepened:

- the Francis Crick Institute – formerly known as the UKCMRI – a partnership between UCL, Cancer Research UK, the Medical Research Council and the Wellcome Trust, to find new ways to treat diseases such as cancer, tuberculosis, influenza and malaria
- UCL Partners, one of just five Department of Health-designated Academic Health Science Centres, established by UCL and the Great Ormond Street Hospital for Children NHS Trust, the Moorfields Eye Hospital NHS Foundation Trust, the Royal Free Hampstead NHS Trust and the University College London Hospitals NHS Foundation Trust, which treat more than 1.5 million patients every year
- the Sainsbury–Wellcome Centre for Neural Circuits & Behaviour, host by UCL with capital funding contributed by the Sainsbury family’s Gatsby Trust and the Wellcome Trust
- the Yale UCL Collaborative – also involving UCL Partners and Yale/New Haven Hospital – established to improve global health through scientific research, clinical and educational collaboration
- the London Centre for Nanotechnology, a joint venture with Imperial College London, a multidisciplinary enterprise to solve global problems in information processing, healthcare, energy and the environment through the application of nanoscience and nanotechnology
- the UCL School of Energy & Resources, Australia (SERAus), created as the outcome of a partnership agreement between UCL, Santos Limited and the Government of South Australia
- Higher Education London Outreach, a £1.3-million project led by UCL in partnership with MegaNexus Ltd and supported by London Business School, providing London businesses with free consultancy and technical expertise
- UCL-Q, the first British university campus in Doha, Qatar, founded by UCL, the Qatar Foundation for Education, Science & Community Development and the Qatar Museums Authority to provide research programmes and masters degrees in archaeology, conservation and museum studies
- a Framework Agreement on Scientific Cooperation between UCL and the Max Planck Society, with more than 80 funded research projects involving 48 of the 82 Max Planck Institutes
- strategic partnerships with companies such as Arup, EDF and Lotus Engineering, which allow UCL to develop long-term relationships, with particular benefits for research. The EDF partnership, for example, has fostered a strong relationship between EDF Energy in the UK, EDF R&D across Europe and the UCL Energy Institute

Engagement with public policy

We are committed to working with governments at all levels, as well as with non-governmental organisations, to identify and respond to public policy needs.

Many of our individuals and research groups already have excellent and mutually beneficial connections with policymakers. Building on this, we are developing an institution-wide programme of policy engagement through which external agencies can identify sources of relevant wisdom and our institution can better anticipate and respond swiftly to emerging policy issues.

Through the UCL Public Policy Strategy, we pursue individual and institutional excellence in policy engagement, establishing dialogue between academics and policymakers. By developing a deeper understanding of the policy landscape, we will identify and respond to urgent cross-cutting policy issues and bring cross-disciplinary expertise to bear on public policy challenges. In addition, we are committed to better communicating relevant research to policymakers and to translating research outcomes into policy recommendations wherever possible.