



2022 – 2027
Strategic Plan consultation

Discussion Paper Four
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Academic opportunities for targeted investment

- 02 **Introduction**
- 03 **Our comprehensive disciplinary portfolio**
- 04 **Initial factors for consideration**
- 05 **Proposed approach**
- 06 **Examples of projects that might meet the criteria**
- 07 **A common mechanism for prioritisation and delivery**
- 08 **Trade-offs, learning and updating our plans**
- 09 **Summary**

- 10 **Appendix 1:
Candidate areas for targeted investment**

- 21 **Appendix 2:
Additional candidate ideas at an earlier stage of conceptualisation**

Introduction

This paper complements *Evolving the UCL Grand Challenges* and starts the second phase of the consultation. In the first phase, the UCL community began discussing the *Vision, Mission and Values* and *UCL Now* papers. This has led to important reflections on our current strengths, weaknesses, opportunities, and threats and on the kind of institution that we would like to be.

The first phase of consultation has also revealed an appetite for investment in our academic success, and ideas about how we could do so. We therefore now consider different areas of potential investment in our academic activities.

UCL Now (discussion paper two) noted that Faculties are now very substantial entities, frequently with income exceeding £100 million. They and their constituent departments routinely make investment decisions to hire new colleagues or groups; create new academic initiatives and educational programmes; and develop research and innovation activity. This paper does not focus on that activity. Instead, it focuses on the less common situations of major investment exceeding their resources in cost or complexity. This might be because of the size of the investment (for example, in a new building or major facility), because of the need to involve professional services or other groups outside the immediate academic discipline, or because of the complexity and importance of the project to the entire UCL community.

UCL does not currently approach such investment opportunities in a structured or transparent way. When combined with our size and the academic polycentricity highlighted in *UCL Now*, this creates difficulties of communication, coordination, decision-making, and external perception that could be usefully addressed.

A second reason for addressing these targeted investment decisions is that they often interact in a critical way with the cross-disciplinary work we have discussed in paper three, *Evolving the Grand Challenges*. Our cross-disciplinary work necessarily rests on a foundation of disciplinary excellence. Therefore, reinvestment and support for that disciplinary excellence must be a key component of our strategic plan. We also need to consider the transformational potential of investment in areas of disciplinary excellence that underpin our cross-disciplinary priorities. For example, prioritising some disciplinary investment might accelerate the development of the cross-disciplinary excellence that is part of this strategic plan.

This paper and the complementary *Evolving the Grand Challenges* paper present proposals that will require investment. Some of the proposals will require new operational (ongoing) expenditure, and some will require capital investment (for example, in buildings) that must be repaid over time. It is likely that many of the proposals will generate income of various kinds to offset this investment. While financial decisions should not be the basis for establishing academic priorities, we must acknowledge that they will constrain our choices. We should also acknowledge that our ability to make any investment identified in the Strategic Plan 2022-2027 will depend on UCL's overall financial performance and any external financial pressures (or benefits). Discussion paper six, *Enablers*, will indicate where there might be the potential for cost savings, which would make available more resources for investment in the academic choices we make.

Our comprehensive disciplinary portfolio

UCL has a proud history of pioneering academic disciplines that are now regarded as core academic activities, including Architecture, Civil Engineering, English Literature, and Medicine. We have similarly championed cross-disciplinary fields such as Neuroscience, Computer Science, Area Studies and quantitative Social Sciences.

In recent years, UCL has performed strongly in emerging disciplines such as Advanced Therapeutics, first-in-human Clinical Trials, Bioengineering, Digital Humanities, and Crime Science. This pioneering tradition has become part of the character of UCL and is a quality we wish to maintain. Some disciplines such as modern Foreign Languages perform strongly in academic metrics but have weaker demand from students; nevertheless, we will maintain these disciplines. This is because feedback from the first phase of our consultation has emphasised the strong wish to continue to be a comprehensive multi-faculty university.

As identified in *UCL Now*, development of disciplines has been led organically, because of adaptive academic leadership and vision ‘on the ground’. Our disciplinary portfolio has also been augmented through mergers with other specialist institutes, including with the School of Pharmacy (in 2012) and the Institute of Education (in 2014). Such novel disciplinary development is a manifestation and beneficiary of the polycentricity and ‘bottom-up creativity’ observed in *UCL Now*, aligned with the values of ‘rigour and innovation’ advocated in the *Vision, Mission & Values* paper. These patterns of development have served UCL well to date and will continue to make it the extraordinary institution that it is. However, this is largely down to luck and happy accident.

There are also some emerging challenges for investing in areas that lie at the boundaries of academic and professional services provision. For example, research computing is driven both by academic imperatives and by hardware and software development by professional developers, in cross-professional (rather than cross-disciplinary) activity. We have created UCL Advanced Research Computing to develop such integration; similarly, emerging areas such as engagement between UCL and China may merit a coordinated professional services and academic approach. Targeted academic disciplinary development may therefore benefit from targeted professional services development and vice-versa. One example of an opportunity made possible by such alignment would be the education of the next generation of translational scientists and the acceleration of the development and adoption of novel therapies across our healthcare system.

At the same time, the opportunities afforded by our academic polycentricity are not matched by our available resources and while opportunities at the departmental level might be relatively unconstrained (such as hiring new academic staff to strengthen a discipline or build a subdiscipline), there can be significant challenges to collectively deciding between major opportunities, and then aggregating resources across departments or at a sufficient scale to invest. Decision-making on such major initiatives can appear opaque, and decisions do not always appear collective in nature. This does not align with the values expressed in the *Vision, Mission and Values* paper.

Now may be the time to engage at an institutional level in a more deliberate consideration of the those areas where the scale of investment required for transformational impact exceeds the resources available to any department or faculty. At the same time we must consider the resulting trade-offs and how such investments might be complementary to any made in *Evolving the UCL Grand Challenges*.

Initial factors for consideration

A more structured approach requires consideration of several factors.

- 1. Overcoming existing organisational barriers through academic leadership:** In many cases, academic fields of study (such as behavioural sciences, population health, or data science) span multiple UCL departmental boundaries. *UCL Now* noted the difficulties this may generate in prioritising or delivering collective investment at scale. This can be further compounded by external influences on our internal organisation, such as Research Council portfolios or REF units of assessment.
- 2. Mechanisms for coordinated investment:** Our current financial model is highly devolved to departments and faculties. When appropriate funding is available, this can benefit local development. However, different disciplinary areas may perform at an equivalent level academically but different levels financially. This devolved model can hamper the coordination of investment in academic opportunities that span multiple departments, faculties and central professional services.
- 3. How we talk about our areas of focus:** we wish UCL to be known for its ability to tackle global challenges (see *Evolving the Grand Challenges*), and there will also be disciplinary areas where we feel UCL should be instantly and externally recognised for its expertise. If one reason for making strategic investments in certain areas is to enable UCL to tell a more defined story, we will need to think about how we present ourselves and our expertise to the outside world. This will require clear, accessible, meaningful communication to targeted audiences for our disciplinary focus areas, as well as a clear narrative of how they fit within UCL.
- 4. Academic performance, peer review and reputational ranking:** Taking the QS World Rankings as one example, *UCL Now* discussed the variation in global rankings of UCL's disciplinary areas. About half of them rank in the global top ten, a further third in the global top 30 and the remainder between 50th and 100th. These rankings, educational assessments such as the National Student Survey and the Postgraduate Taught Experience Survey, and probably the forthcoming REF 2021, reveal some heterogeneity in our academic performance that we rarely consider or address. Do we wish to further strengthen leading areas to maintain our competitive edge, or to develop those areas which may have a relatively weaker performance historically? Or combine these two approaches?

Proposed approach

We propose that any targeted investment should nurture those areas which can act as a beacon for UCL, ensuring our visibility and impact nationally and globally.

The areas selected for investment should not only champion the health and excellence of a discipline or area of focus as it currently stands, but also spearhead innovation to advance it, continuing UCL's tradition of pioneering academic inquiry. Areas of investment should stimulate and harness activity beyond their main 'home' department or faculty, and better integrate scholars and activities in the field across UCL. We propose seven criteria against which to assess opportunities for investment:

- 1. Demonstrable potential for transformation:** are the necessary capabilities in place for this to be achieved? What output is envisaged from any investment? How can this be evidenced?
- 2. Internal capability and leadership commanding broad support:** including, but not limited, to that of people, commitment, and critical mass. Investments above the level of resource available locally to Faculties or Departments should command broad support across many areas of UCL.
- 3. Available time-sensitive external opportunity:** this could be the availability of research, philanthropic or other funding; the potential for collaboration or partnership; Government priorities; the appeal to students. The potential opportunity should be the present time, due either to our own capability or external opportunity.
- 4. Links to our cross-disciplinary priorities:** where strengthening disciplinary depth will help to intensify our cross-disciplinary activity proposed in *Grand Challenges*.
- 5. Responding to our London location:** for example, through business investment, start-ups, creative and cultural industries, Government and Parliament, or as a travel hub.
- 6. Improving external perceptions of UCL:** helping to make UCL 'known for' expertise in the relevant area, with reputational benefits across the university.

- 7. Affordability and value for money:** resources, financial and non-financial, must be available to support the investment and be affordable, demonstrating value for money.

Proposals for major investment should be significant for UCL rather than for their own department (or faculty). Meeting these seven criteria would mean that the proposed investment has the potential for much broader impact, across our community and with external stakeholders.

First, we need to decide whether these are the right criteria, or whether a smaller (or larger) set of criteria would be more helpful. They must express the values discussed in *Vision, Mission & Values* (integrity & mutual accountability, openness and inclusion, care and respect and rigour and innovation), so that we can be sure that investment decisions reflect these values. The agreed criteria will form part of a strategic decision framework to aid decision making in the UMC Investment Committee described below.

This will formalize a process that UCL has already successfully followed in an informal fashion. For example, the decade-long development of UCL Neuroscience has seen developments that fulfill these criteria and that will be delivered over the next five years. The Sainsbury-Wellcome Centre for Neural Circuits and Behaviour, funded by a very large (more than £100 million) external grant for construction and ongoing costs, has provided exceptional fundamental discovery science. This has allowed UCL to commit its own funds (again, significantly more than £100 million) to redevelop the UCL Institute of Neurology on the Grays Inn Road site, a project that will allow the Institute to refocus on its translational mission. And in turn this has allowed UCL to successfully compete for and secure the funding and support for a large central hub for the national Dementia Research Institute, currently housed in the Cruciform Building but ultimately to be part of the Institute of Neurology's new facilities.

These major investments – both external and internal – show how aligning to our seven criteria can transform our research, teaching and innovation. Now that UCL is much larger and more complex, (as described in *UCL Now*), formally agreeing criteria that are widely understood at the outset will facilitate new ideas coming forward and prevent misunderstanding.

Examples of projects that might meet the criteria

Appendices A & B set out the potential projects emerging from our consultation with the academic community that could meet these criteria. The available resource for investment, even if relatively large, is unlikely to fund more than a small number of major projects. The potential candidates are therefore set out for discussion and academic debate.

Academic projects do not represent the only investment priorities. Our Estates portfolio has a significant backlog of required repairs, and some of our enabling activities, including both digital and physical infrastructure – for example our Biological Services infrastructure provision – will require investment over the next few years. The interdependence of our maintenance backlog and any new projects is not just financial. For example, it is not infrequent that calls for a new departmental building or spaces arise in those areas where there are greatest maintenance and repair backlogs. We therefore also expect that prioritizing maintenance and repair may to some extent reduce demand for entirely new spaces and buildings, allowing us to focus on those transformational projects that reflect our seven criteria. In addition, by prioritising maintenance and repair we can better address sustainability in our operations, contributing to the climate crisis thematic area identified in *Evolving the UCL Grand Challenges* paper.

These investment needs will be set out in future papers.

A common mechanism for prioritisation and delivery

The Vision, Mission & Values paper, and feedback received in the first phase of the consultation, suggest that it is not always clear where decisions are made, particularly on major projects like those proposed here.

Investment decisions for projects and plans can be made in silos and can appear to be prioritised based on the entrepreneurial approach of a disciplinary area or its internal influence, rather than through collective decision. In addition, our approach to delivering major projects can focus on outputs such as buildings or systems, rather than optimising benefits and maximising value from investment. This does not align with the values we proposed and discussed – particularly those of mutual accountability and openness.

A process that demonstrated mutual accountability and openness would be integrated with our revised management structures, especially the University Management Committee (UMC); and take advice on academic investment from our Academic Board.

We propose that UMC meets regularly as an *Investment UMC*, drawing together professional services, education, research and knowledge transfer. Mutual accountability would be improved by creating a clear and transparent process for major investment decisions like those outlined in the appendices of this paper. This process would not affect, or have any oversight over, local faculty and departmental decision making. However, using the agreed criteria, it would enable effective assessment (and follow-up measurement) of the potential of major investment proposals, and would navigate and support UCL's polycentric complexity through evidence and information-based decision-making processes for these investments.

This approach would not be sufficient to ensure success of these targeted investments. Each represents a complex project with many different components across all staff groups and many domains of professional expertise at UCL. To realise effective evidence-based decision making through such a group, and to support management of our major projects portfolio, project management expertise would also be required.

UCL already employs colleagues with the technical and professional skills to undertake project management. Indeed, this expertise is a key component of the strategic plan consultation process and of many ongoing projects investing in the academic mission of UCL. But the expertise is dispersed across professional services and faculties and therefore we lack critical mass in the management of major projects.

To address this, we propose to create a central project management office, aligned to the VP (Strategy) and VP (Operations portfolios). Drawing together existing resource would not add to the professional services costs of the organisation but it would potentially transform our ability to deliver major projects on-time, on-budget and in alignment with the academic objectives of the projects.

Trade-offs, learning and updating our plans

Unlike our ambitions, our resources are finite, and this process will inevitably lead to trade-offs. A transparent process, such as the one proposed here, will help us as a community to agree on the best way to proceed.

In a large and complex organisation like ours, decisions to transform or invest in one discipline or area can have unintended consequences: rather than address these by making no change at all, we need to be alert and responsive, and show care and respect if they do occur.

There may also be trade-offs that we will need to explore in *UCL Size & Shape*. We need to create the financial and non-financial headroom necessary to realise the academic ambitions agreed in the discussions that will follow the publication of this paper. The financial constraints of the sector outlined in *UCL Now* mean that government capital for major developments is now largely unavailable in the UK. Therefore, we must consider whether we need to generate additional revenue, reduce our costs, or do both, if we are to make the investment we need for these new developments. In addition, we must weigh our academic investments against the need for investment in enablers that support our academic mission, including physical infrastructure. With our commitment to continuing as a comprehensive multi-faculty institution, reaffirmed in the comments received in the first phase of our consultation, we will need to carefully examine our growth plans and our future size and shape.

The external environment and our local circumstances will continue to evolve and will change in the period 2022-2027 and we must be prepared to adjust our priorities, reflecting the dynamic nature of the UCL Strategic Plan. This paper has therefore set out principles and candidate areas for consideration and discussion, rather than suggesting a final settled list of investments. Learning and updating our plans as we progress will be critical to our future disciplinary success.

Summary

The approach that has been proposed here focuses particularly on those areas where the investment required might exceed the resources of a single operational unit (for example, department or faculty) at UCL. We have set out principles for consideration, a single delivery process for prioritisation and delivery of complex major project portfolio, and several potential candidate disciplinary areas for discussion.

Appendix 1:

Candidate areas for targeted investment

This appendix presents ideas for projects, disciplines, and areas where UCL could significantly strengthen our academic work through investments at a greater scale than could be resourced by a single faculty or department. This is neither a final list nor a definitive account of each area. Rather, these are initiatives that have come from our academic community, presented to stimulate discussion and generate more ideas.

Any of these proposals will require investment that has not yet been characterised, and so cannot proceed without a process such as the one suggested in the main paper. Some of the proposals will require new operational (ongoing) expenditure, and some capital investment (for example, in buildings) that must be repaid over time. It is likely that many of the proposals will generate income of various kinds to offset this investment, and that some will generate philanthropic interest.

These proposals are presented in preliminary form and not in any particular order so that we focus on the academic elements and potential. Our ability to make the collective investment identified in the Strategic Plan 2022-2027 will depend on UCL's overall financial performance and any external financial benefits or pressures. We will also indicate (in the *Enablers* paper) where there might be potential cost savings, which would increase the amount available for investment in any academic choices we make.

Finally, these proposals are presented independently from each other. However, it is apparent from many of the proposals that there are potential synergies and opportunities to combine and align complementary aspects of different proposals. These combinations, synergies and opportunities are some of the benefits of adopting a transparent process.

A: Mainly capital expenditure

1: Translational and applied research at UCL East Phase 2

Transformative opportunity: start (and complete) initial planning on the enabling of academic opportunities afforded by future development of UCL East Phase 2.

Phase 1 of UCL East will deliver 50,000 m² in two buildings (Pool Street West and Marshgate), housing around 4,000 students and 260 academic staff from nine faculties. It will continue our tradition of academic polycentricity while adding some complexity in the form of ten new undergraduate and 40 research and postgraduate degree programmes. UCL East Phase 1 will not reach 'steady state' in terms of staff and students until 2029/30, which is outside the scope of this strategic plan.

UCL East Phase 2 offers the potential for further development up to a total of 180,000 m² (equivalent to approximately 40 percent of the Bloomsbury campus). In the time frame of this strategic plan, UCL will need to make some decisions and begin planning should the intention be to develop UCL East Phase 2 in the 2030s. We might start with consideration of the scope of existing activities in UCL East Phase 1 and how these differ from those represented on the Bloomsbury campus.

For example, we might establish a guiding principle of using UCL East to amplify our capacity for, and the impact of, applied / translational research. If that were the case, Phase 2 could be the development of an environment for applied / translational research across the discipline spectrum, but particularly in the Social Sciences, Arts and Humanities, Engineering and the Physical Sciences. In this scenario, Bloomsbury, where our major hospital partners are physically located, would be a hub for concentration of life sciences and medical translation, while UCL East would be a hub for concentration of applied research in other disciplines including the creative arts, social

sciences, and humanities. East Phase 2 might deliver new facilities for translational, acceleration and incubation, and might also involve 'lift and shift' of some activities from Bloomsbury to East.

One possible exemplar project is the development of infrastructure associated with the Electrochemical Innovation Lab within Chemical Engineering and the Advanced Propulsion Lab. This would enable continuing development of the world leading UCL activity in electrochemical technology and power systems (including hydrogen research) that is of high relevance to global needs, including the proposed grand challenge of climate change discussed in *Evolving the Grand Challenges*.

In UCL East Phase 1, the School for the Creative and Cultural Industries draws together research, learning, public engagement, and enterprise focused on art and technology, media history, heritage and cultural production. As *UCL Now* highlighted, London accounts for more than 40 percent of all UK employment in this sector, mostly in small and medium size enterprises; and East Bank will incorporate not just UCL East but also UAL's London College of Fashion, the BBC, Sadler's Wells and the V&A. Thus, there is the potential to build upon this excellence to create a transformative presence for UCL in the arts, humanities and social sciences.

UCL Sport East gives us the opportunity to be a global leader in the delivery of sport and exercise research and education, building on an established suite of programmes and research activity around elite sport and performance, musculoskeletal and exercise science, and physical therapies. UCL East Phase 2 might allow us to expand this activity into the role of sporting and physical activity in improving population health, quality of life, disability sport and adolescent sport. The location of UCL East within the Olympic Park would provide valuable access to field-based teaching, data collection, access to sports populations and to a diverse community that can draw benefit from our expertise. It would also provide the opportunity to develop a state-of-the-art sport and exercise laboratory to drive equally prominent research.

Finally, one other possible exemplar might be the development of neuromorphic computing. This is a disruptive technology that can radically transform the way we do computing, offering efficiency gains of a factor up to a million, vastly reducing the unsustainable carbon footprint of AI. It is closer to realisation than quantum computing, is a field that UCL has the potential to lead in and is being

highlighted by government as a priority. This is an opportunity ripe for UCL to grasp, and brings together researchers from Engineering, Brain Sciences, Maths and Physical Sciences, amongst others. As with other projects highlighted here, this disciplinary excellence would align well with our cross-disciplinary candidate areas including Climate Crisis and Data-Enabled Societies.

Other specific translational candidates for development – or indeed deciding not to develop UCL East Phase 2 at all, or to develop it for entirely different purposes – are possible. But at this early stage, a modest financial commitment to now scope and develop these and other options could be an important component of the Strategic Plan 2022-2027.

2: UCL Mathematics and Statistics

Transformative opportunity: create world-leading research and teaching excellence in mathematics and statistics, contributing to our global strategic challenges.

Mathematical and statistical methods underpin key aspects of many areas of academic enquiry and many sectors in our economy. There is unprecedented demand for expertise and collaboration in mathematical science across UCL and beyond: Data Science, Machine Learning and Artificial Intelligence are the drivers for much of this demand at present, although there exist numerous opportunities for other branches of the mathematical sciences, including in operational research and evidence-based policy/decision making. There is currently a huge amount of activity across UCL at all levels, using techniques that are fundamentally mathematical in nature. This includes education, where modules involving 'mathematics' in the title have proliferated (see Figure 7 in *UCL Now*) and are arguably fragmented.

The Departments of Mathematics and Statistical Science are closely involved with this activity and are frequently approached with requests for further collaboration in research and teaching. This includes cross-disciplinary activity of the type highlighted in the paper *Evolving the Grand Challenges*, such as the challenges of Data-Enabled Societies and Climate Crisis. At present, these departments have limited capacity to respond effectively to such requests, and to thus provide the leadership and focal point for the large community of disciplinary

and increasingly cross-disciplinary UCL researchers working in this area. One possibility that has emerged is the potential to transform our academic capability in this area, including by rehousing these academic disciplines in a new building. This would provide leadership across UCL in these areas and enable sound mathematical and statistical underpinning for activities across the institution, from the humanities to science and healthcare.

One example of the cross-disciplinary opportunities that would be unlocked by enhancing our institutional capacity in the mathematical and statistical sciences comes from working with our three National Institute of Health Research (NIHR) Biomedical Research Centres. Through our partnership in the London Academic Health Science Centres, bringing together UCL Partners, Imperial AHSC and King's Health Partners, UCL now has an opportunity to enable access to real-time real-world patient data for research by committing to a pan-London programme to join-up our extensive resources. We have co-developed a programme with OneLondon and Health Data Research UK (HDR UK) to pull together multiple different data sets. The approach would enable a critical mass of data for London that has not been achieved before and would make the capital a target for Life Sciences innovation and research and development. It is expected to take at least three years for this programme to deliver tangible benefits, and collective investment in a business case for London (£75k per partner) will be necessary, followed by further programme costs (tbc) and the preparation of 'demonstrator projects' to showcase the possibilities. All this activity would align with our cross-disciplinary candidate areas highlighted in *Evolving the Grand Challenges*, but also with our London Framework championed by the Pro-Provost (London) and the Vice Provost (Health).

To capitalise on this opportunity, UCL would need to ensure it is proactively co-developing and contributing to the OneLondon strategy and preparing our communities for the ways data may be used and accessed in the future. This would include considering the value of data, commercial implications, ethics around ownership, and the additional value to London as a Biosciences economy going forwards. Again, this would require UCL to align its approach, with investment in a strategic programme team to support academic leads in this area.

These examples illustrate how the establishment of an Institute might help coordinate, align, improve, and scale up activities at the level of the whole

institution. In health, this would align with key UCL and national priorities, addressing important methodological challenges in risk prediction and modelling of health outcomes using large routine data. There are also potential synergies and alignment with other proposals described here, notably the UCL Computer Science and Kings Cross Knowledge Quarter and UCL Economics proposals.

3: Slade 2030

Transformative opportunity: to build on the Slade's current position as a key contributor to an academic ecosystem focused on the role of art, design and creative practice in addressing societal challenges and enabling individuals to explore and express their way of being in the world.

The Slade is recognised globally as a leading school of Fine Art, with a distinctive fine art teaching practice and art research methodology. The Slade's academic strategy is also linked to the current challenges and opportunities around physical space, which include the imminent relocation of Slade staff and students to Judd Street for 18 months due to urgent health, safety and accessibility issues with the North Wing Building/Woburn Square. In parallel, there are emerging opportunities at UCL East to contribute to new interdisciplinary approaches to art, design and creative practice as foundations for innovation. Alongside a BA in Art and Technology (to be taught at UCL East), the Slade is also developing an MA in Curation and there is appetite across Arts and Humanities, Engineering and the Bartlett to start a School of Design if possible.

The Slade has an opportunity to develop new models for working with and across disciplines, taking a leadership role within the university around art, design and creative practice, and increasing and diversifying the staff and student communities who experience the vitality of the Slade's research and teaching environment. The Slade School of Art, Design and Creative Practice could be a future state in which the Slade's unique research and teaching methodologies are at the heart of a vibrant interdisciplinary research and teaching offer at UCL.

An integrated academic and estates strategy could bring together two components that are central to the longer-term sustainability and evolution of the Slade: an academic strategy for sustainability and growth; and an estate that is fit for purpose for art education and research in the 21st Century. This could expand and diversify the teaching portfolio;

strengthen research capacity and impact; and create a more publicly engaged School that can lead community debates around the value of art practice and education to address pressing social and economic challenges.

Such an approach would be strongly cross-disciplinary, linking to many of the candidate areas explored in *Evolving the UCL Grand Challenges*, at the same time enabling the Slade to remain a global leader in art education and research activity. If the necessary additional spaces were also forthcoming, the Slade would be able to increase its student numbers and diversify its student body.

4: Gower Place teaching facility

Transformative opportunity: to deliver a shared, flexible, and modern teaching and learning space in Bloomsbury to meet medium-term needs for centrally bookable non-specialist teaching space.

There has been particular pressure on the Bloomsbury teaching estate in recent years. Changing patterns of teaching space usage, the changes in the awarding of A levels during the pandemic, and the need to start some UCL East programmes at Bloomsbury in advance of the campus opening have all created demand that significantly exceeds supply. At the same time, some of the short-term modular teaching pop-up space in the main quad and south junction are subject to planning timing limitations which means there is a medium term need for high quality central teaching space.

An opportunity exists to repurpose existing space and create a mixed-use non-specialist teaching block in Gower Place, generating an additional 2400 square meters of centrally bookable teaching space in a mixture of small- and medium-sized spaces with capacities between 10 and 60 persons. Different design configurations are available but around 1,200 teaching spaces and 130 study spaces could be created, or if desired proportionately more study spaces and fewer teaching spaces.

Such a teaching facility would significantly increase capacity for teaching and learning on the Bloomsbury campus, complementing the increased capacity at UCL East that will become available in the next few years. This would improve the student and staff experience through the provision of high-quality teaching and learning space and

accommodate planned growth in student numbers. It would also better align our teaching space with evolving teaching methods and methodologies following the COVID-19 pandemic.

Key advantages include a significant increase in net useable area, flexibility of teaching space configuration, sustainability improvements to our core estate, and improved access to the Physics Building, Lecture Theatre and Gower Place entrance with simplified ramped approaches and improved accessibility for all users.

This would also be part of a broader opportunity to integrate medium-term timetabling, estates provision, teaching and learning space provision and student number planning to ensure that teaching and learning continues to deliver a high-quality student and staff experience.

5: UCL Computer Science & Kings Cross Knowledge Quarter

Transformative opportunity: to deliver world-leading research, innovation & education in computer science, integrating with UCL Advanced Research Computing (ARC) and IDEALondon (IDEAL), with opportunities for other disciplines.

Like Mathematics and Statistical Sciences, Computer Science is becoming an increasingly important discipline both in its own right and as an underpinning discipline for many areas of activity at UCL. The UK science and technology strategy has identified frontier technologies such as artificial intelligence as key to the future competitiveness and impact of the UK science base. For example, the National AI strategy launched in September 2021 aims to position the country as a global leader in the governance of AI technologies, supporting development of the next generation of AI talent as well as proposed investment in the availability and capacity of computing power for UK researchers and organisations.

UCL's academic staff in Computer Science are currently scattered across eight separate buildings within and beyond UCL's Bloomsbury site. This can create a lack of cohesion in what is a highly collaborative discipline. Nevertheless, Computer Science is establishing pioneering cross-faculty interdisciplinary centres and developing many strong teaching and research relationships with major organisations globally, including the world's leading universities and technology companies

plus intergovernmental agencies such as the World Health Organisation and the UN. Opportunities now exist to further contribute to the development of many disciplinary areas across UCL, linking to the ambitions in health and many other areas to develop significant capabilities in AI.

At the same time opportunities also exist for targeted investment in the hardware and software that underpin and support our academic capability. UCL Advanced Research Computing is our recently established collaborative enabler for leading edge research in UCL disciplines that require raw computer power, supported by tools for using it as effectively and efficiently as possible. Reducing the current fragmentation in high performance computing expertise will directly improve institutional effectiveness. Currently housed in St Martin's Le Grand, embedding ARC with academic disciplines could enhance and strengthen opportunities to collaborate and influence.

There are also unrealised commercial opportunities to strengthen our impact in computer science and related disciplines, as it is currently not as strong or fully realised as that in (for example) advanced medical therapies. IDEALondon is an established entrepreneurial powerhouse, partnered with the start-up experts Capital Enterprise. It provides accommodation (commercially) to start-ups and a powerful network of mentors, investors, and experts to accelerate growth and success. The Faculty of Engineering Sciences has hosted IDEAL since 2016. To date it has helped more than 70 start-ups, created over 3,000 jobs, and raised around £340M funding. However, its potential is constrained by current leased accommodation near Shoreditch and its dislocation geographically from UCL. There is thus a significant opportunity to expand income streams from this activity.

Together these considerations suggest that disciplinary and cross-disciplinary opportunities in Computer Science could be significantly enhanced by bringing this activity together in a new facility. One possibility is afforded by redevelopment of the Kings Cross Knowledge Quarter (KCKQ) site at Camley Street. This links UCL's Bloomsbury and Stratford campuses, being close to St Pancras and the seven minute high-speed train journey to the Queen Elizabeth Olympic Park. KCKQ is considered an 'innovation district' (BEIS Science and Innovation Audits – Wave 3) which sets the scene for the UCL activities and collaborative ethos.

The site at Camley Street is large enough to deliver four buildings (two of which would provide 16,264 m² academic space) in total. This would be sufficient not only to accommodate the investment suggested in this section but might also accommodate other projects in this list. The whole site is sufficient to accommodate academic activities including providing lecture theatres and flexible teaching rooms; specialist and non-specialist labs; adequate study spaces and common rooms; enterprise and innovation space; co-working space with spinouts, and room to bring in partners to work alongside students and staff in an enterprise and innovation hub that builds on Base KX and IDEAL. There is also the opportunity to provide a bespoke conference centre KCKQ. It might also provide temporary swing-space to facilitate a radical reconfiguration of Bloomsbury teaching spaces. When the need for swing-space declines, vacated areas will accommodate expansion of existing activity. The space would also support enhanced outreach and public engagement activities of direct benefit to Camden residents. UCL@KCKQ would enhance UCL's overall estate provision and take the pressure off both Bloomsbury and Stratford sites, releasing several leases across London.

Therefore, there is an opportunity to bring together a critical mass of operational and academic activities in this space. This would be further enhanced by co-habitation, and by co-location with KCKQ entities such as Central St Martins, Google, Facebook, Huawei, ATI, the Francis Crick Institute, Merck etc. The proposal offers UCL the opportunity to enhance its relationship with Camden Council by supporting its strategy of providing employment to its citizens and seeking to build on the excellent work undertaken at UCL East to attract a local workforce.

6: UCL Economics

Transformative opportunity: to further develop world-leading research and teaching excellence in economics, contributing to our global strategic challenges.

UCL has world leading excellence in the social sciences, but our institutional reputation (but not performance) in the social sciences undeservedly lags behind our specialist neighbour, the London School of Economics and Political Science. We are committed both to advancing the fundamental social science disciplines and to developing cutting-edge cross-disciplinary and applied research and education that draws on them. Our interests in social sciences and related disciplines span the globe, as we seek to understand the social, political, economic, cultural and environmental processes that have shaped the world, and to mobilize our research findings for the public good. To this end economics, econometrics, the contribution that they make to the study of inequality, globalization, sustainability, international development, the regulation of public utilities, and public and economic policy are all central to addressing contemporary global challenges.

Economics at UCL delivers world-leading research excellence and is a forerunner in innovative economics teaching. Consequently, we have the opportunity to become fully recognised as one of the most impactful economics research institutions in the world and to shape the future of blended learning in economics in post-COVID higher education. With the increasing digitalisation of teaching after COVID, it is now even more important than before to create an exciting and authentic learning community for students on campus, as a complement to their online education. UCL Economics has pioneered digital modes of delivery to its large undergraduate student body, but it is increasingly clear that to take full advantage of these opportunities will require high quality flexible teaching and community space, linked to high performance computing.

One possibility that has emerged is the potential to transform our academic capability in this area, including by rehousing these academic disciplines in a new building, potentially alongside other computational disciplines with which it has strong synergies. This would also address the impact of the redevelopment of Euston on the leasehold building that UCL Economics occupies. By creating a new hub for economics research and education at UCL we could improve the visibility and the impact of our world-class interdisciplinary research on the most pressing global policy challenges. These world class facilities would include suitable teaching space for a rapidly expanding cohort of economics students and excellent office space for economics doctoral students and staff.

Developing our institutional capacity in economics would unlock new opportunities for collaboration.

This could build on the recent major donation of £5 million (\$7 million) donation to UCL to establish the James M. and Cathleen D. Stone Centre on Wealth Concentration, Inequality and the Economy. The mission of the Stone Centre is to advance research and teaching to provide clear understanding of the causes of wealth inequality, and its economic and political consequences. It will bring together leading economic researchers on these issues from around the world. This is the first Stone Centre in the UK; the others are based in world-class research institutions (UC Berkeley, Harvard, Brown, CUNY, and INSEAD) that often boast much better facilities and resources than UCL. The mission of the centre closely aligns with the proposed thematic area of inequality highlighted in the *Evolving the UCL Grand Challenges* paper. But opportunities for collaboration exist more broadly across our entire economics portfolio that would align and contribute to many of the opportunities highlighted both in this paper and in *Evolving the UCL Grand Challenges*.

Education and research are equal partners in economics at UCL. For example, the Stone Centre links the existing CORE project, which is transforming economics education around the world, with the research strengths of the UCL Economics Department. CORE's (Curriculum Open-access Resources in Economics) vision is that a radically transformed economics education can contribute to a more just, sustainable, and democratic world in which future citizens are empowered by a new economics to understand and debate how best to address pressing societal problems. UCL has an opportunity to connect this to the broader landscape of innovative post-COVID education that will be addressed in the forthcoming *Education: Programmes and Priorities* paper, developing transformative blended-by-design education and aligning to our broader pedagogical proposals to develop the UCL Grand Challenges.

Another example of the cross-disciplinary opportunity that would be unlocked by enhancing our institutional capacity in economics would be an increased focus on the role of economics in developing policy solutions. For example, the Policy Lab will launch in May 2022, bringing together the Departments of Economics and Political Science under the leadership of Professor Marc Stears, its inaugural Director. This ambitious new initiative will bring UCL's world-leading economists and political scientists into dialogue with policymakers, business leaders, philanthropists, community groups and NGOs to shape public debate, as well as to design and test ambitious new policy solutions to some of the most pressing issues of our time.

These examples illustrate how investment in economics might help coordinate, align, improve and scale up activities at the level of the whole institution. This would align with key UCL and national priorities, including our Business Schools and our initiatives in public policy.

7: UCL Student Union

Transformative opportunity: to develop a new student space that co-locates learning, networking and cocurricular facilities that maximises the potential of our thriving Students' Union, and creates a stronger sense of community and belonging, transforming the experience of our students.

UCL defines itself not only as a centre of world-leading academic excellence, but also as a place of deep human networks, creativity and innovation, and dynamic entrepreneurialism. Much of this takes place between lectures and meetings - in shared sites of socialising, spaces of serendipity, places where the opportunity for connection is created at the human scale.

UCL has an opportunity to provide not just tutorial rooms and lecture halls, but also to create cutting edge, hybridised places where learning, networking and co-curricular activity can evolve. In this new student space students could form free flowing friendships, interdisciplinary and intercultural connections, develop their skills, pursue their extra-curricular passions, study together, and give voice to their political opinions. Such a development would be an attractive proposition for future generations of students. It would transform our student experience, increasing student satisfaction scores and enabling the development of a stronger sense of community and belonging.

A particular challenge at UCL is that our Students' Union and sports facilities are below the standard and size of other institutions when compared nationally and against immediate London peers. The Union moved in to 25 Gordon Street in 1959 with the promise that they would soon have their own union building. Sixty years later our students' union still operates from the same building, with two main satellite locations around campus with additional cafe and bar sites. Currently there is little cohesion between these locations with no clear heart to the student community and union services. There is also a severe shortage of informal study space, seated cafe spaces, and appropriate space for religious observance for our diverse student community. These issues could also be resolved via investment in improved students' union facilities.

Despite its limited current facilities, our Union has the largest student activities programme in the country; the largest student volunteering programmes in the UK; has made UCL one of the best universities in London in terms of sporting achievement; and also supports the best student opera in the country as well as a wide range of outstanding music and arts societies. This proactive role in sport and societies is a special part of our Union's history, which differentiates it from many

other students' unions and could give us a clear competitive edge compared to other universities. Enhancing its facilities would support the development of a stronger and extracurricular offer that could develop students' skills and confidence, enhance their employability and support them to have the breadth of university experience that will equip them for future success as leaders and decision makers.

There is therefore an opportunity to develop and potentially co-locate these learning, networking and cocurricular facilities, rationalising the estate and creating a new social student-led space at the heart of the Bloomsbury campus. Co-location of facilities supports the promotion of the Students' Union as the heart of the non-academic student experience. Facilitating access to such a wide range of facilities through one portal would strengthen both the utilisation of the Students' Union UCL and its brand. The spaces could be easily navigable, preventing the need for convoluted directions to access key services. Flexibility would also be vital to any new provision, achieving the most efficient use of space for enjoyment by the maximum number of users.

There are additional opportunities to develop the co-curricular experience in sport and music for our students. UCL Students' Union runs the university sports teams but sports facilities within UCL are inadequate for a university of our size and the limited indoor facilities are poorly located above the Bloomsbury Theatre. Indeed, this location does cause some tension between the user groups of these highly specialised areas. There are proposals to further develop sport as an academic discipline (see UCL East Phase 2 opportunity, above), creating additional opportunities to link the Students' Union with research, innovation and education. While the Union also runs the University orchestra, choir, opera and other musical groups, there are no appropriate facilities for music practice, with rehearsals taking place in inadequate facilities such as meeting rooms. Music, although not a taught subject at UCL, is an excellent social facilitator and creative outlet. The social value of music practice and rehearsal cannot be underestimated.

A sense of ownership encourages higher engagement and students should feel at home in any further development of the Students' Union. Common room and social spaces that are student-led and separate from the commercial pressures associated with informal café or restaurant space, are vital in nurturing this sense of belonging. This is particularly relevant for a London university where students may have long travel times from their residences. The opportunity is to create spaces for study, for collaboration, for informal learning, for socialising, for relaxing, for training, rehearsing, religious observance, eating, and resting.

B: A mixture of capital and operational expenditure

8: UCL Cancer

Transformative opportunity: to be recognised externally as a world leader in cancer research and treatment by creating new biological therapies.

UCL has immense strengths in cancer research and treatment, ranging from our fundamental understanding of cell biology through to the development and spinout of companies focused on ground-breaking biological therapies for haematological malignancy and childhood cancers. We hold the largest portfolio by value of Cancer Research UK grants and our Cancer Research UK/UCL Cancer Trials Centre (CTC) is one of the largest such centres in the UK.

This contributes to our excellence in translational research across a range of clinical disciplines. For example, UCL and our partner hospitals deliver 47 per cent of all UK academic and industry-sponsored cell and gene therapy trials, at numbers on par with the leading university sites in the US. Our strong track-record in translation of advanced therapies builds on years of investment in fundamental research, with dedicated support from our Translational Research Office, and from deliberate efforts to align the development pipeline from end to end. This has included lobbying for additional GMP facilities, resulting in a successful award to the Royal Free Hospital, UCL and King's College London in March 2021.

Despite this sustained excellence, we are not fully recognised as a national leader in this area. Some of this might reflect “identity” issues, where our competitors are research institutes that have ‘Cancer’ in their title. But there are also other issues, perhaps analogous to the situation in which UCL Neuroscience found itself over a decade ago. The individual academic units that contribute to our excellence in cancer are spread over several departments and faculties (although the focus is the UCL Cancer Institute); our clinical partnership is also spread over multiple hospital partners including the Royal Free Hospital, UCLH, Great Ormond Street Children's Hospital and others. And our profile in

clinical academic and postgraduate training is perhaps not as fully developed as our research activity.

Addressing these external perceptions is not an end in itself but should reflect a desire to build coherence and internal leadership that makes the whole of our cancer portfolio more than the sum of its parts. Our experience with neuroscience is that a focused project delivering research excellence and patient benefit can be transformational.

One opportunity would be to apply our learning and success in advanced therapies to: i) build greater focus on oncology therapies, where there is significant potential to grow our portfolio from biology to breakthrough, and ii) increase alignment ‘end-to-end’ for our other pipelines (e.g. small molecules, vaccines, devices and diagnostics), by identifying and tackling bottlenecks, and aligning our internal support structure from bench-to-bedside.

To grow our cancer translational pipeline, a new UCL Cancer Biotherapeutics Centre could be created in partnership with UCLH, to drive one of the largest immune-oncology translational research programmes in Europe. By co-locating research laboratories and clinical activities, we would transform the translation of novel research to patients, and clinical trials. This would build on the strength and depth of relationship between the UCL Cancer Institute (home to over 400 scientists located over three sites, and the Cancer Research UK City of London Centre) and UCLH (a cancer workforce of ~1000 staff, and home to the UK's most advanced cancer treatment centre and one of two Proton Beam Therapy centres in the country). The project could be a major priority for UCL's next philanthropic campaign, building on historic success in health in the Its All Academic Campaign (noting that over 45 per cent of the UK's charitable donations are known to be to medical research, hospitals and end-of life care).

To improve alignment of end-to-end translation will require close working within UCL (the Translational Research Office, UCL Innovation & Enterprise, Research & Innovation Services, and UCLB) and with our NHS partners to identify and address the bottlenecks mentioned above. This would have broader benefits beyond cancer but will require increased investment in our Translational Research Office and in our NHS-UCL clinical and translation facilities. This would deliver continued expansion our portfolio of novel therapies and spinouts, make a transformative impact to patient and public outcomes. UCL would become the favoured institution for the next generation of innovators and grow our reputation as key opinion leaders in pioneering translation.

9: UCL Infection Centre

Transformative opportunity: to be recognised externally as a world leader in infection research and a major contributor to addressing these emerging risks for the benefit of humanity.

Even before the COVID-19 pandemic, communicable diseases accounted for one quarter of deaths globally, and, as a result of COVID, infectious disease has now risen to the top of the World Economic Forum's global risks horizon (<https://www.weforum.org/reports/the-global-risks-report-2021>).

Vulnerable global communities will continue to be severely affected by long-established endemic pathogens many of which are the focus of UCL research, including tuberculosis, HIV, viral hepatitis and sexually transmitted infections. Antimicrobial resistance is on an unremitting course to undermine our therapeutic options. Advanced medical therapies that compromise host defences are making us increasingly susceptible to opportunistic pathogens. The evolutionary capacity of viruses that infect animals to diversify their host range will continue to threaten new pandemics with increasing frequency, compounded by the unpredictable selection pressures arising from climate change.

We have the tools to better understand the natural history of infections as well as the complex interaction between infectious agent, host immunity and the environment. We can not only monitor and predict but intervene to reduce the risk of transmission or consequences of disease. Effective implementation of vaccines and drugs, developed through an understanding of pathogen biology and immune responses and rolled out in populations following rigorous trials, have provided some of the most impactful biomedical interventions to date. As infectious causes are increasingly identified for diseases that were previously considered 'non-communicable', so there is opportunity to broaden the benefits of our interventions. Biological, social, behavioural, economic and geographic determinants need to be addressed collectively to prevent not only the direct impacts of infection on health and emergence of new pathogens, but also their impacts on local and global economies. These represent areas for which UCL has established cutting-edge research expertise, but our internationally recognised investigators are dispersed across multiple faculties, often unaware of synergies in purpose or complementarity in expertise to address intractable problems, and to translate discoveries for real-world impact.

We could seek to establish UCL as a global powerhouse for infection research with the capacity

to attract, train, nurture and disseminate the future scientific leaders in infection, with a durable legacy that will safeguard against microbial threats to human health for generations to come. This could be achieved by creating a UCL Infection Centre to empower transformative benefits for human health locally, nationally, and internationally. The Centre would catalyse the integration of world-leading expertise spanning UCL in microbiology, life sciences, mathematics and computing, experimental medicine, clinical trials, epidemiology and population health, engineering, the built environment, behavioural science and health services research.

This aligns with the approach of UCL Health of the Public to generate knowledge to ultimately address major infection challenges and to design interventions for whole populations. Importantly, our research excellence is further empowered by uniquely powerful partnerships with the NHS, national and international public health agencies and academic institutions that afford global reach, with the potential for new partnerships in India and China.

The next generation of students, researchers, clinicians, and policymakers will need to be trained to use a multidisciplinary team-science approach to effectively integrate biological, clinical, epidemiological, and social tools to ask important questions and have the skills to address them. UCL is already leading this innovation in its MSc in Applied Infectious Disease Epidemiology which complements other postgraduate programmes, such as the MSc/MRes in Infection and Immunity. Bringing together infection research and teaching across the University will enhance this rich training environment and develop scientists and professionals who will be able to respond to the complex infectious disease challenges of the 21st Century.

Academic activity in this area might benefit from investment in a physical hub to serve as a focal point. Inwardly, this would enhance our capabilities to deliver cross-faculty impact, facilitate innovation through new and sustained interactions between investigators and improve efficiencies through shared infrastructure. Outwardly, this would consolidate and embody UCL's credentials to provide comprehensive solutions to infection control, and the ability to mobilise rapidly against emerging threats. It would enhance our attractiveness for internationally outstanding investigators and students who share our ethos for multidisciplinary collaboration. It could attract research and philanthropic funding, and commercial/industry partners to deliver maximum impact from our discoveries.

C: Mainly operational expenditure

10: UCL Business Schools

Transformative opportunity: to create a unitary UCL Global Business Schools offer, aligned with UCL's distinctive emphasis on cross-disciplinary research for impact, leading on our applied strengths in health and other disciplines.

UCL has a highly successful business school, the UCL School of Management (UCL SoM). This offers innovative undergraduate, postgraduate, and doctoral programmes to prepare students for leadership roles in the next generation of innovation-intensive organisations. On the Bloomsbury campus, UCL SoM offers a standalone Management Science degree and twenty undergraduate programmes that combine management with languages, economics, and engineering. These undergraduate programmes are highly successful and selective, giving the School a UK ranking of third in 2021. Postgraduate programmes consist of four master's programmes and a Global MBA in London plus a joint MBA programme at Peking University. These programmes attract a large cohort of mainly Chinese students, and the MSc in Management, one of the largest MSc programmes at UCL, took 393 students in 2020. The online Global MBA was launched three years ago and enrolled 22 students this academic year. The MBA and the School do not feature in business school rankings and the School is ranked 94th (QS) in its disciplinary area. SoM is housed in state-of-the-art premises in Canary Wharf. The School of Management is part of the Faculty of Engineering Sciences.

UCL has also recently created the world's first business school dedicated to health, the Global Business School for Health (GBSH), launched in September 2021. This School will reimagine global healthcare management, unravelling health challenges from a business perspective and questioning the status quo to inspire public good. It will provide training and education for healthcare leaders of today and tomorrow, underpinned by a multidisciplinary health systems research programme and directly relevant to our strategic priorities in health. GBSH is currently recruiting for its first cohorts of students with three postgraduate degrees (Biotech and Pharmaceutical Management, Digital Health and Entrepreneurship, Global Healthcare Management with specialisms in Analytics, Finance, and Leadership) and an MBA

Health that is taught full-time and face to face. GBSH works closely with leading global healthcare organisations at the cutting edge of healthcare and will be housed in state-of-the-art premises at UCL East. The Global Business School for Health is part of the Faculty of Population Health Sciences.

In addition to these two successful initiatives, many other units at UCL are engaged in business and management research and education. For example, the Institute of Finance and Technology offers two postgraduate programmes – MSc Banking and Digital Finance and MSc Venture Capital and Private Equity with Finance Technology. The Disability Hub offers an MSc in Disability, Design, and Innovation, and the Bartlett's Real Estate department delivers a unique Healthcare Facilities MSc with a healthcare management approach. Several finance programmes are spread across Mathematics, Computer Science and Engineering, along with MBAs in the UCL Institute of Education and Bartlett. The Department of Medical Sciences also teaches a healthcare specialism on the University of London MBA; Psychology and Language Sciences deliver Business Psychology and organisational behaviour expertise. Finally, the Department of Space and Climate Physics delivers management and leadership-related courses. There is also significant and often unmet demand from many Faculties for business-related modules and teaching to augment their programmes.

Targeted opportunities have also been identified in the Institute of Education (IOE). One possibility would be to focus on the model adopted by the Global Business School for Health, but now aimed at the international education market. There is a clear need for research and training in managing education systems in different countries. IOE has a suspended MBA in Educational Management for the domestic market. UCL has significant expertise in education and international development and receives regular requests from global partners, especially in Asia-Pacific countries, to deliver training and research collaboration. Such an opportunity would contribute to delivering transformative global education leadership.

The creation of multiple centres of management and business expertise is a good example of UCL's academic polycentricity. However, it also creates challenges of alignment and external identity in a very applied area where it is important to work coherently with global organisations. It is striking that both the School of Management and the Global Business School for Health exemplify a research-led approach - with applied focus in specific areas - that is distinctive in the international business school sector.

We might consider the potential to coordinate these existing activities, retaining their distinctive culture and autonomy while amplifying this unique interdisciplinary research approach, perhaps aligned with the development of UCL East Phase 2. One possibility would be to align the leadership of these initiatives in a federated structure ('UCL Business Schools') to provide academic leadership. This may also catalyse a pedagogically appropriate reduction in complexity of our multiplicity of modules that focus on business, an area to be further explored in the forthcoming *Education: Priorities and Programmes* paper.

11. UCL China

Transformative opportunity: Creating a deep understanding of China and its enduring cultural and geopolitical significance, while fostering strong educational and research collaborations in a spirit and practice of 'vigilant hospitality'.

The world's most populous country is of particular importance to UCL. China is a major source of (and destination for) our students, a place where many of our research and enterprise collaborators are located, a source of enduring academic focus but also a major international power with geopolitical influence that makes it a focus of intense interest for governments and non-governmental bodies around the world, including the UK. We currently have 7,405 Chinese students enrolled in full degree programmes, multiple research initiatives and collaborations including a major institutional partnership with Peking University, a range of interactions with Chinese commercial organisations, and much more besides.

Interest in China is widely dispersed across UCL. For example, the UCL Institute of Education (IOE) hosts the IOE Confucius Institute for Schools and leads the Mandarin Excellence Programme in partnership with the British Council and on behalf of the Department for Education; the Institute of Advanced Studies hosts the China Centre for Health and Humanity; the UCL Institute of Archaeology hosts the International Centre for Chinese Heritage and Archaeology; and the Bartlett and the UCL Institute for Global Health also host significant research programmes that focus on China.

Our educational programmes are also dispersed. For example, the School of Management hosts the UCL MBA with Peking University; UCL History hosts the MA in Chinese Health and Humanity;

and UCL Laws offer a joint LLB with the University of Hong Kong. We do not currently offer Chinese Studies as an undergraduate degree, despite its potential importance for creating greater cultural understanding and scholarship in this important area. This distributed provision sits alongside considerable and more focused strengths in Area Studies other than China; for example, the UCL Institute of The Americas, the School of Slavonic and East European Studies and the UCL European Institute.

There is thus an underlying capability and critical mass, plus potential leadership that could crystallise much broader interest and focus on China. UCL has the potential to play a more prominent role in many key areas of the relationship between the UK and China, which it is also critical to manage effectively for the future of our institution. There is strong interest and expertise in intercultural communication associated with the IOE, which hosts an MA in Intercultural Communication and plans a BA in Communication. The development of cultural literacy will be crucial to any UCL geopolitical strategies.

We currently lack an integrated focus on these academic, operational, and external relationship issues. Our popularity as a destination for Chinese students can represent a challenge for diversifying our recruitment, and there are risks as well as benefits in such a concentration. Targeted investment could create a focus for a deeper understanding of China's history, values and interests that would inform these issues; cultural curiosity and cooperative intellectual exchange; development of academic partnerships and intercultural understanding; but also 'vigilant hospitality' to protect our academic freedoms as well as our intellectual property, making our values – as set out in *Vision Mission & Values* – more visible to our Chinese colleagues and to the Chinese student community at UCL through our practice.

This might require integrated leadership of new research collaborations; new pedagogical engagement (such as interdisciplinary BA and MA programmes in Chinese Studies); integrated expertise in the risk assessment of academic and commercial partnerships; and a broad programme of engagement with our Chinese community, the local Chinese diaspora and the broader alumni community.

Appendix 2:

Additional candidate ideas at an earlier stage of conceptualisation

In addition to the more developed ideas identified above, there is a larger number of potential ideas at a less developed stage, or that may not be deliverable in the current time frame of the Strategic Plan 2022-2027, that we might wish to consider for development in future. These are listed here for transparency:

1. **Rare Dementia Support Centre** to provide research, education and support for rare forms of dementia.
2. **Institute for Women's Health** to refresh, refurbish and bring together the research, education and innovation in this area.
3. **Student Centre II** to accommodate emerging needs and opportunities for additional learning spaces that enhance the student experience.
4. **UCL Obesity** to bring together our work on the biology of appetite and obesity, the interactions of biology and behaviour and the operation of the social determinants of health within at-risk populations through to the way we produce food and pay for it, the way we build and regulate our communities, and how we move and behave within these communities.
5. **Global Centre of Excellence for Brain Injury Recovery** to provide a holistic model of rehabilitation from brain injury (including not just medical provision but arts, culture, engineering and other elements).

During the lifetime of the Strategic Plan 2022-2027 we would expect this list to change and grow. The dynamic nature of our investment prioritisation process, and its responsiveness to external circumstances as well as academic priorities, suggest that we require a common mechanism for prioritisation and delivery.

