

Institution: City, University of London

1. Context and mission

Research is fundamental to City, University of London (City, UoL). It sustains our identity as a university and the identity of staff as academics and researchers, and it is integrated with our mission to educate. The University's research mission is to sustain an environment where academics can conduct excellent, original and rigorous research, across all disciplines represented in our five schools. Throughout the REF 2021 period, we have aimed to substantially increase the quality and intensity of research, and this period has had several notable milestones.

City has been on a path of increasing research intensity for more than a decade. Joining the federal University of London in 2016 was an important signal both internally to colleagues and to the wider academic community of our commitment to pursue academic excellence.

City was founded in 1894 as the Northampton Institute and became a university when 'The City University' was created by Royal Charter in 1966 and has maintained connection with its roots; combining outstanding strength in professional and practice-based scholarship with excellent research.

The trajectory of increasing research intensity evidenced by the significant growth in Category A staff. In REF2021 City will submit 496 FTE Category A staff compared to 378 FTE in REF2014, a 31% increase. Over the same periods 981 PhDs were awarded compared to 561 to REF2014. City has also seen a near doubling of research grant income from £43m in REF2014 to £81m for this REF.

City's research strategy seeks to break down walls created by academic discipline-based departments. We have invested £3.3m of internal funding to create interdisciplinary research centres. This liberates academics to work across disciplinary boundaries to address complex societal challenges. Research at City provides the springboard for our engagement with the wider community. Our location in the heart of London between the legal, financial and governmental centres shapes engagement with professions, business and public authority.

Strategic leadership and governance of research fall to the Deputy Vice-President (Research & Enterprise), a Research Committee and a strategic Research, Enterprise and Impact Strategy Board. Their role is to further the institutional approach to research partnerships and plan research investments. This group oversaw the development of City's 2016 Research and Enterprise Strategy and is developing its next strategy from 2022.

2. Strategy

Research Strategy

Our research strategy is built around a clear set of objectives to create and support an environment where academics and researchers can pursue research that makes a substantial contribution in its field whether in the natural or technical sciences, the arts, humanities or social sciences. The research expectations for faculty are clear: academic staff are expected to be active in research, to publish their intellectual efforts in the top academic journals or with notable university presses, and in most cases to have an impact on the relevant practitioner community.

City’s research strategy is to create an environment that facilitates and accelerates the influence of our research.

To achieve these aims, City has (i) retained its best researchers and added to their numbers by recruiting world leading scholars to act as research leaders and mentors; (ii) paid particular attention to investing in the support and development of early career researchers whether from within the institution or hired from leading graduate schools; (iii) worked hard to ensure that academic pay and other HR policies offer an attractive environment (e.g. regarding teaching work-loads and sabbaticals); and (iv) offered financial support through effective use of quality-related (QR) funding, philanthropic donations and internal research funding schemes.

Essential Science Indicators (ESI), which helps to identify top-performing research from the Web of Science, provides strong evidence that City’s research strategy is working. Taking 2010-14 as a baseline of 100% [See table below] City’s total papers, total citations and citations per paper in ESI increased by 30%, 59% and 100% respectively between 2010–14 and 2016–20, and top papers, those in the top 1% based on the number of citations received, more than doubled over the same period.

Normalized	2010-2014	2011-2015	2012-2016	2013-2017	2014-2018	2015-2019	2016-2020
Total Papers	100%	112%	124%	134%	139%	143%	130%
Total Citations	100%	121%	152%	187%	194%	228%	207%
Total Citations per Paper	100%	108%	123%	140%	140%	159%	159%
Top Papers	100%	121%	171%	207%	214%	221%	214%
Citations to Top	100%	105%	126%	130%	90%	79%	64%
Citations per Top	100%	87%	73%	63%	42%	36%	30%

In the next five years we plan to (i) increase the proportion of staff producing what would be considered internationally excellent [REF 3* quality or higher] research outputs to at least 60%; (ii) develop research capacity in new and existing disciplines; (iii) develop capacity for interdisciplinary research across the four main REF panels; (iv) increase research income to £15m pa; (v) cultivate vibrant research communities, sustained by a range of policies that support academic staff at all career stages, paying particular attention to equality, diversity and inclusion (EDI); and (vi) become part of successful doctoral training partnerships (DTPs).

Engagement and Impact

In producing excellent research, we aim to generate solutions to pressing societal problems. The current strategy focuses on reaching out to and engaging with new communities that reflect the increasing research intensity across the institution. We also seek to develop a closer relationship between research and impact, whether that entails commercialising intellectual property, influencing government and public authority decision-making, applying policy to clinical practice or successfully implementing artistic endeavour. Engagement often has a civic and local dimension, illustrated by City taking leading and service delivery roles on a £3.2m ERDF [project](#) that supported 800 SMEs and created 955 jobs. This strategy builds on City’s strong culture of extensive knowledge exchange (KE) activities; as recognised by its relatively high levels of HEIF funding – £2.3m pa – for an institution of its size and STEM/non-STEM subject mix.

Engagement activities are incentivised through the academic workload allowance, supported by KE teams (12 FTE staff) working across the university’s 5 schools. External visibility, including the external impact of our faculty, is one of the four performance criteria against which individuals are assessed in promotion review processes. Aspiring professors should provide

strong, sustained evidence of industry/community engagement with proven benefits to the University and that community.

Many of our academics have developed prominent profiles in the UK media. This is supported by the Communications Team (6 FTE staff), comprising former journalists and trained science communicators. In 2019/20 the team worked with 382 academics to produce 447 news articles including 97 stories based on new research outputs. In addition, City is a founding member of *The Conversation*, where academics write about their research for a general audience. Staff have published over 600 articles on the site, generating 6,700 comments and 10m reads.

City's five-year impact strategy is to continue embedding an institutional culture of engagement and impact. To achieve this, (i) impact support will be increased and better integrated with the work of our business development managers so that impact is embedded in the design process earlier in the development of new research; (ii) skills training will be provided in specific areas such as academic consultancy, project evaluation and engaging with parliamentarians; (iii) research centres will work to develop and implement strategies that shift understanding of impact away from individuals and small groups towards a collective strategic goal; and (iv) impact and KE will be better embedded in HR policies, recognising the importance of capturing the contribution of impact in appraisal, promotion and sabbatical policies.

Integrity

City regards research integrity as a core value and has a longstanding commitment to ensuring that it is embedded in its research culture and activity. The University is a member of the UK Research Integrity Office, which advises on ethics and research integrity. All staff and students' research that involves human subjects is subject to review by the University research ethics committee. We comply with the Concordat to Support Research Integrity by having an integrity champion in each school, an institutional whistleblowing policy for academic misconduct, and an annual statement on how we are meeting the Concordat obligations. The University also ensures relevant training, has appointed integrity champions in schools and has researcher integrity as a standing item on School research committee agendas. Finally, City is currently developing a policy on the responsible use of research metrics based on the principles in the Leiden Manifesto.

Open Research

Since 2012 City expects its staff to deposit the 'final author version' of their journal articles in the University's open access (OA) repository, City Research Online (CRO); this requirement has since been extended to papers from 2008 onwards. CRO underpins our OA strategy. It contains over 15,000 research outputs and almost 2,000 doctoral theses. The Repository team proactively engage with our researchers via a number of channels, advocating OA principles and benefits and also ensuring copyright and any other rights of research outputs are respected. This service develops continuously in line with higher education's rapidly changing OA landscape. City has invested over £1m in OA infrastructure, support staff, training, service contracts and Article Processing Charges for selected Gold OA outputs. Our policies promoting an open science culture are supported by an annual 'OA and Research Data Week'. A recent [global study](#) ranked City 2nd of 963 HEIs with 88% outputs in OA. Moreover, 96% of submitted staff have an ORCID identifier.

City uses *Figshare* to share research data under a Creative Commons licence, addressing the widely recognised problem of researchers withholding negative results. City has partnered with

Springer-Nature to help researchers structure their data in an open and accessible way, maximising potential for reuse.

Interdisciplinarity

City has significantly enhanced its interdisciplinary and thematic research capacity. Since 2014, it has invested £3.3m in seven new or existing interdisciplinary clusters: cyber security, data science, food policy, gender and sexuality, healthcare and innovation, space research, and violence and society. The investment has supported the recruitment of eight new full-time academic staff and four research fellows. Given the interdisciplinarity inherent in addressing 'grand challenges', City uses its QR-GCRF allocation for small (up to £15k) awards to enable researchers to prepare the groundwork for competitive funding calls and to encourage new cross-university collaborative projects. Staff have won interdisciplinary grants in major 'Challenge' calls including £3.5m for a National Centre for Creativity Enabled Artificial Intelligence through the Research England Development Fund.

Addressing Regional and National Priorities

City, in common with its main competitors, does not seek to impose a research agenda on its faculty. However, the University does influence the overall research activity through the organisation of research clusters, the allocation of internal research funding, and an institutional strategy that aims to closely align the University with national funding priorities and the 'demand pull' market for the knowledge that we produce. New research centres must fit with ISCF and GCRF goals while our HEIF investments take account of the government's R&D Roadmap objectives. Examples include, The Centre for Food Policy's participation in the UK Sustainable Food Future Programme; the Institute for Cyber Security participates in the National Cyber Security Programme; and the faculty-led business start-up unit located in our local Borough of Islington. Together these activities illustrate how important we consider place-based outcomes of our KE activities.

Support for Research Collaborations

Our enhanced research quality, stronger ambition and brand-strengthening through UoL membership have resulted in increased partnership opportunities. The University Research and Enterprise Office supports partnerships through advice, bid support, contract management, post-award administration and audits. Additionally, staff may use their individual research accounts, a generous annual conference budget and a proportion of grant overheads for visits to facilitate building research collaborations. City collaborates with other HEIs through regional networks including (i) the London Higher Education Research Network; (ii) London's Knowledge Quarter of academic, cultural and media organisations; (iii) the Culture Capital Exchange, an AHRC-funded network of arts, cultural and creative sectors in the capital; and (iv) the London International Development Centre. City was ranked 46th in the UK for collaborations (26th within social science) in the 2020 Leiden global rankings.

3. People

Academics and researchers are at the heart of City's research strategy and each School and department is encouraged to take a strategic view of the recruitment and retention of academic staff; whether senior research leaders or younger colleagues seeking to establish their own

careers as academic researchers. The overall aim being to grow in a way that maintains or increases the quality of our research.

The main focus is the recruitment of junior staff – from top graduate schools or looking for their first significant promotion – with clear potential to undertake leading-edge research in areas relevant to our mission. This is supplemented by the hiring of senior staff with leadership experience, often to head departments, schools or research centres. We are submitting 496 FTE Category A staff compared to 378 for the previous REF. While the increase reflects changes to the REF ‘rules’, it is also a positive illustration of City’s increased research strength.

Recognising the distinctive nature of some of City’s schools and departments with backgrounds in professional training, we introduced two clear career pathways in 2014: ‘Education’ and ‘Education & Research’. These offer opportunities for academic development and promotion and are supported by an agreed set of performance metrics, set out broad expectations for academic staff across research, education, service and enterprise activities. An annual appraisal identifies performance indicators for promotion: the production of 3* and 4* outputs (as determined by peer review), internal service, external visibility and (for those on the Education & Research path) the attraction of external funding. We monitor the number of female academics producing 3* or 4* research outputs and make adjustments for staff with disabilities, care responsibilities or maternity leave.

The University has a generous sabbatical policy in which a member of academic staff may apply for leave equivalent to one-seventh of their service at this University. Since 2014, 180 faculty have taken sabbatical leave. In addition, City will soon allow research-excellent staff with internationally excellent and world-leading research outputs to take an additional period of research leave of one term.

City provides a framework, opportunities and funding to help faculty steer their own professional development by (i) Hands-on sessions with external experts to help staff fine tune papers and grant applications, (ii) The Staff Doctoral Track which has enabled 19 staff to obtain a PhD without interruption to their work, and (iii) Senior staff mentor junior staff to help them develop their publications and understand academic publishing.

Equality and Diversity

We are committed to recruiting, retaining and promoting exceptional academic staff from a variety of backgrounds. We amend policies and practices as required and work with schools to find appropriate ways to support diversity as part of our everyday working practices. For example, following adjustments to the parental leave policy, staff returning after maternity leave has increased to 95% (from 80% in 2017/18).

In 2020 the University approved its first comprehensive institutional EDI Strategy following a consultation with staff networks. EDI is embedded through staff development programmes, including ‘Dignity and Respect in the Workplace’, ‘Inclusive Leadership’, and the ‘Advance HE Aurora’ leadership programme. Since 2014, the majority of staff who line-manage have undertaken inclusive leadership training. The number of people who have taken ‘Dignity and Respect in the Workplace’ since the beginning of 2014 is 537 while 67 staff have attended the Aurora programme.

The current academic and research staff profile is as follows, with comparisons to sector average (SA):

- Total: 946 of whom 541 (headcount) have significant responsibility for research.
- Gender: 46.5% are women (46.6% SA); 26.3% of professors are women (28% SA).
- Ethnicity: 16.6% are from ethnic minority groups (16.4% SA).
- Disability: 5.3% have declared a disability (4.6% SA).
- International: staff: Category A submitted staff include 48 nationalities.
- Employment contract: 94.5% are on permanent contracts and 5.5% on fixed-term contracts (67% permanent and 33% fixed-term SA).
- Early career researchers (ECRs): 31 staff are self-declared ECRs (N/A SA).
- Age: 7.9% are over 65 years (3.7% SA).

City achieved the Athena SWAN Bronze award in 2016 and has since commenced work on an action plan led by the Athena SWAN Implementation Group, which regularly reports on progress to the University Executive Committee. Two schools now have their own Athena SWAN Bronze award and the other three aim to submit in 2020/21. Each School has an EDI Lead who reports to the Equality Committee and School Executive Committees to ensure that EDI features in decision-making processes e.g. internal research evaluation. Promotion panels must have regard to gender balance. We have set the target that at least 30% of professorial staff will be women by the end of 2021, up from 24.8% in 2019, and we strive to include members of all protected groups as well.

Following the withdrawal of a statutory retirement age, a small number of older faculty have chosen to continue to work beyond the age of 65. They continue to research, hold leadership positions and act as ambassadors for the institution. In 2020, City became a Stonewall Diversity Champion and also embarked on the Race Equality Charter self-assessment with plans to submit for the Bronze Award in 2022. Finally, we are proud to be a member of the Disability Confident scheme, which recognises employers who are committed to supporting applications from candidates with a disability or long-term health condition.

Early Career Researchers

The recruitment, training and retention of ECRs has been a key activity over the REF period due to the expansion of new lectureships. Schools have reduced junior faculty's teaching loads to help them focus on publication and adjust to the demands of teaching; only in their third year do they assume the full teaching load. These provisions – alongside extensive mentoring, priority access to research pump-priming funds, training and (in some cases) new building space – offer a competitive package for junior hires. City has held the HR Excellence in Research Award since 2012.

Permanent contracts are now the norm, with only 5.5% of academic and research staff on fixed-term contracts. Only 14 Category A submitted staff are on fixed-term contracts, and these are staff holding fellowships. Research-only staff have terms and conditions of employment equivalent to those of academic staff, with those on Grades 5B moving to 6 upon successful completion of a PhD then progressing automatically and incrementally to Grade 7 once the top of the salary scale is reached. Finally, bridging funding is available to research staff supported through research grants to maintain employment and retain the skills of such staff in between grants.

Doctoral Researchers

While each UOA has its own PhD programme, the institutional mission is to offer promising master's graduates with an excellent academic track record rigorous training to become creative, productive, autonomous researchers. A thriving PhD programme is of paramount importance to our schools and a major factor for many staff that we hire. We submitted 75% more doctoral degrees awarded in REF2021 than in REF 2014 (981 vs 561) with graduates from 77 nations, and currently have 600 registered doctoral researchers – more than one per Category A staff submitted.

In 2019 City reorganised its research training and created a new Doctoral College to improve the student experience, promote interdisciplinary work, share good practice on research supervision, improve student progression and completion rates, and represent postgraduate research issues across the institution. The Doctoral College is led by an assistant vice-president, a senior member of faculty who chairs the Doctoral College Board of Studies. The Board brings together senior figures from across the institution with responsibility for PhD programmes. It maintains the academic quality of those programmes through mechanisms such as approving transfers from MPhil to PhD status, confirming thesis examiners, guiding institutional policy, and reviewing completion and attrition rates and alumni outcomes. The Doctoral College also oversees our Researcher Development Programme: an annual series of events on research methods, career development and mental health awareness. Local training is augmented via our membership of the Bloomsbury Postgraduate Skills Network, and we have also invested in licences for LinkedIn Learning for self-directed study.

While cross-UOA supervision is growing in popularity with 55 such doctoral degrees awarded since 2014, every student is registered in only one department, which is ultimately responsible for the quality of their training. Any member of staff who wishes to supervise research students must have a good research record and must attend a mandatory module on the MA in Academic Practice. There is a limit to the number of students an individual supervisor may supervise, usually six. Students may take study leave to pursue their work elsewhere but City's procedures relating to risk assessment, health and safety, and ethics must be followed.

The provision of scholarships is an important factor in attracting top-calibre students. City hosts or participates in three UKRI DTPs: the £9.1m South East Network for Social Sciences ESRC DTP, spanning ten leading UK universities; a £5m BBSRC CDT on sustainable food; and a £0.5m EPSRC DTP (host). In addition, since 2019/20, supported by the European Institute of Innovation and Technology, City has led a new Industrial DTP in AI Technology and Cybersecurity. Finally, we currently fund 127 full scholarships from internal resources. Doctoral researchers undertaking teaching are put on graduate teaching assistant employment contracts and paid in addition to any studentship or bursary amounts they receive, with hours capped in line with prevailing UKRI norms to prevent overload and ensure that adequate research time is preserved.

City uses annual reports and periodic reviews (every six years) to scrutinise the effectiveness of its doctoral studies procedures and environment. These reviews cover staff–student ratio, four-year submission rates (seven-year for part-time candidates), candidates' satisfaction rating of their supervision and research environment, application and acceptance data, formal complaints, pastoral care, learning support, student feedback and representation, and career destination information. City participates in the Postgraduate Research Experience Survey to gauge research students' feedback.

4. Income, infrastructure and facilities

Research Funding

External Funding

Institutional strategies and supporting activities for generating research income across research units include: (i) year-long sabbaticals to reinvigorate individuals’ research, subject to an approved workplan, often including a research funding application; (ii) increased provision and better-targeted training for preparing grant proposals, especially getting staff to think about the types of deliverables funding bodies require and how these can be designed into their proposals; (iii) development of grant ‘coaching’ by senior staff in some UOAs, replacing an earlier conception of mentoring; (iv) generous provisions to return overheads from research grants to PIs, enabling them to provide bridging salaries to RAs/RFs to increase career security and research continuity; (v) targeted support for low-income UOAs to increase grant capture, resulting in a doubling of income for Music and ten-fold increases for Politics and for Law; (vi) installation of the Worktribe grant system to monitor grant success rates, thereby informing strategic decision-making while enabling PIs to keep track of income and expenditure; and (vii) reorganisation of our research support infrastructure, resulting in the addition of two research grant officers and dedicated contracts and post-award finance teams.

Due to these measures, City’s research income has increased from £8.6m pa in REF 2014 to £11.6m pa in this REF, totalling £81.2m over the REF period. City ranks in the UK top 40 for Horizon2020 income, and UKRI sources are a healthy percentage of all research income at 24%.

Internal Funding

City has invested significant resources to help stimulate faculty’s research. These include the following internal funding schemes, which are in addition to School-based funding:

University Research Pump-Priming Fund	£0.56m
HEIF funding for knowledge exchange	£15m
Academic sabbatical leave	£8.9m
Investment in interdisciplinary centres	£3.3m
Surpluses and uncommitted grant income returned to PIs	£6.3m
Total internal research investment	£34.06m

Together with **external funding of £81.2m**, this represents a very significant investment to ensure the vitality and sustainability of our research culture. City is also developing enhanced processes to ensure the sustainability of our funding streams, such as the creation of separate vice-president roles for research and for enterprise to support the needs of funders with different time horizons.

EDI and Research Funding

Our Athena SWAN action plan ensures EDI is deeply embedded in our research and enterprise policies, practices and culture. The researcher training programme includes the module ‘Women and Research’, which enables experienced female researchers to share their experiences and discuss how they overcame career challenges. Among 1,569 funding applications for the period

2014/15–2018/19, the success rates were 27.75% for female PIs and 25.26% for male PIs. Finally, internal funding schemes prioritise ECRs and returning scholars.

Equipment and Estate

During our two strategic plans (2012–2016, 2016–2021), City invested approximately £200m in new academic staff, IT, libraries and estate. Investments in the REF period included (i) a new building for City Law School offering 7,200m² of floor space costing £65m. Four of our five schools have now moved into new buildings since 2002; (ii) refurbishment of the offices of the European Social Survey (European Research Infrastructure Consortium, headquartered at City); (£1m) (iii) provision of offices for the new interdisciplinary Centre on Violence and Society (£0.5m); (iv) leasing of a new executive education facility for the Business School (£1m); (v) upgrading of the Thermo-Fluids Test Cells, enabling research into reduction of emissions from combustion engines (£5m); (vi) substantial investment in City's main research library, resulting in major increases in the numbers of study spaces and data resources, and improved accessibility (£21m); and (vii) additional investment in specialist infrastructure in applied health sciences, notably a £6.03m investment in optometry and radiography.

Digital Infrastructure

Maintaining an up-to-date IT infrastructure is very important to City's research, particularly in facilitating collaboration with researchers at other institutions. To help ensure a closer alignment, Library Services, Research and IT meet regularly to discuss new ways to create a better digital research community.

City has invested heavily in high-powered computing (HPC) facilities to accommodate the demands of intense computing for researchers and teaching. In 2020 we signed a contract with Dell to implement the service, and we are investing £700k for HPC infrastructure constituting approximately 3,500 cores and 30,000 GB of RAM. The move to the new HPC service as opposed to workstations, allows more users of HPC to benefit from the investment.

Library Services

Library Services is a partner in the scholarly research lifecycle, helping to maximise the impact of research through conservation, dissemination and promotion. There are over 150 University-wide databases available to support education and research. Since 2014, the Library has invested significantly in online resources as the provision of published information has modernised. Library Services subscribes to over 100,000 online journals (an increase of 128% since REF 2014) and over 200,000 online books (up 421%). Researchers continue to have access to the print collections in our libraries and can request books for purchase through the Library's Read for Research scheme. Library access (including access to online resources) has further improved through the University's membership of the UoL. Since 2016 our researchers have had full access to Senate House Library and its outstanding arts, humanities and social science collections as well as digital resources and study spaces.

The Library has dedicated research librarians who offer one-to-one support for researchers and run workshops in key areas such as literature searching, citing and referencing, copyright and specialist database support. The Director of Library Services is a member of the University's Research Committee and the UoL's Federal Libraries Group. The Head of Academic Library Services is a member of the Doctoral College Board of Studies.