

**Institution:** University of Southampton

## 1. Context and mission

### 1.1 Wider context

A comprehensive, research-intensive University with a strong international focus and a founding member of the Russell Group, employing 6,000+ staff and educating 25,000+ students annually. Located in one of the world's most important port cities, it is the second largest employer in the area and contributes strongly to the region's economy and social fabric. The University provides research expertise for local businesses, widens access to higher education, especially from disadvantaged communities, and is an important arts centre. A report by *Biggar Economics* (2018) estimated that the University generates a Gross Value-Added contribution to the UK of £2,500M/year and supports 33,000 jobs.



*World-wide research collaborations from the last five years*

### 1.2 Mission and Strategy

The University updated its strategy in 2016 as a community exercise and a refresh is planned in 2021 (see COVID annex). We remain committed to our mission to “*Change the World for the Better*” with this vision:

*“Our University community is committed to the highest quality in everything we do. We have a global reputation for our passion and ability to work collaboratively in delivering world class education, research and innovation that makes a real impact on society’s biggest challenges. Our exceptional students share in these journeys of discovery and become confident thinkers who can realise their full potential”.*

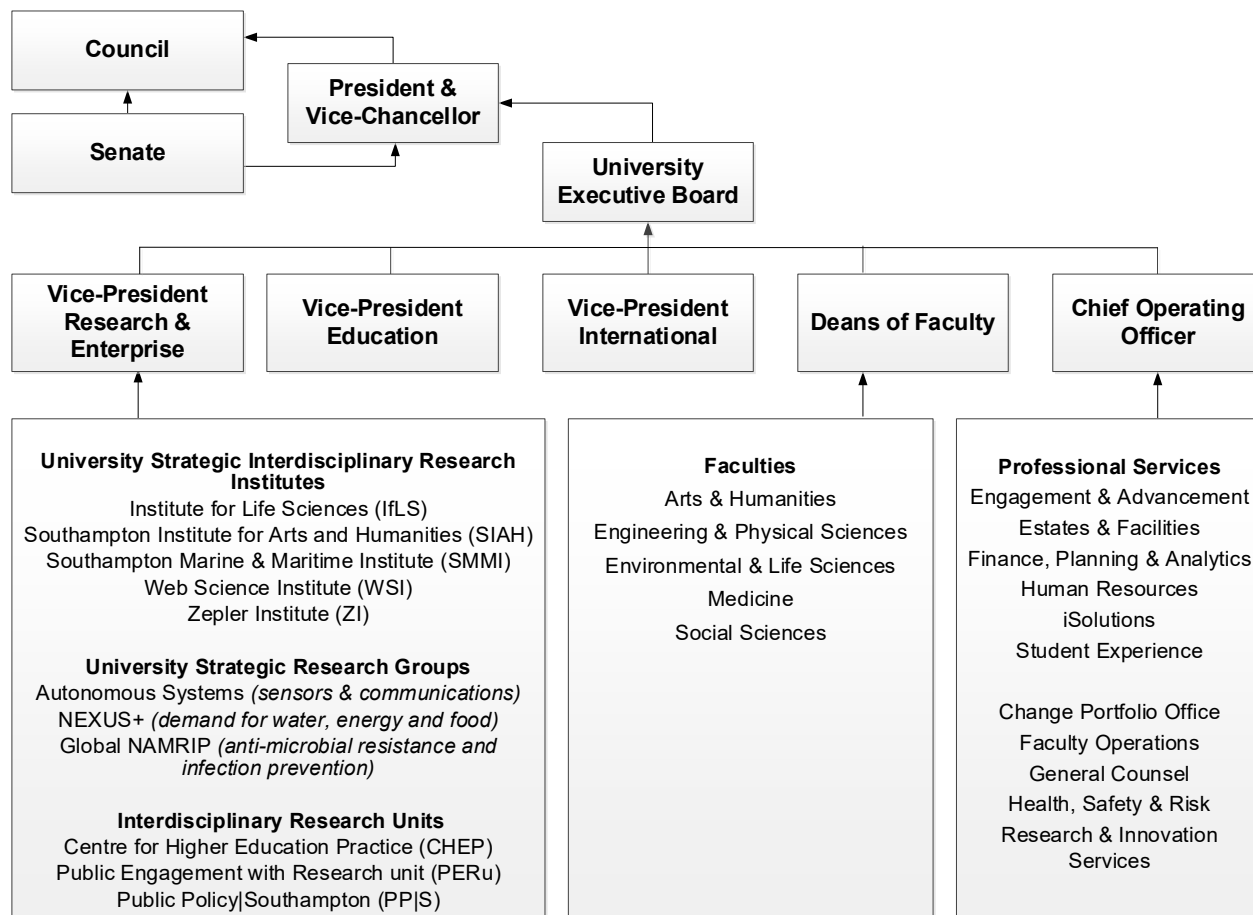
Core principles are:

- **Collegiality:** one team, working, planning and delivering together, towards our shared vision.
- **Quality:** always striving to achieve the highest quality in everything we do.

- **Internationalisation:** delivering across global markets and building strong partnerships with other leading universities.
- **Sustainability:** ensuring our actions lead to financial, social and environmental sustainability.

### 1.3 Structure and Governance

The University is led by the President & Vice-Chancellor, Professor Mark E. Smith.



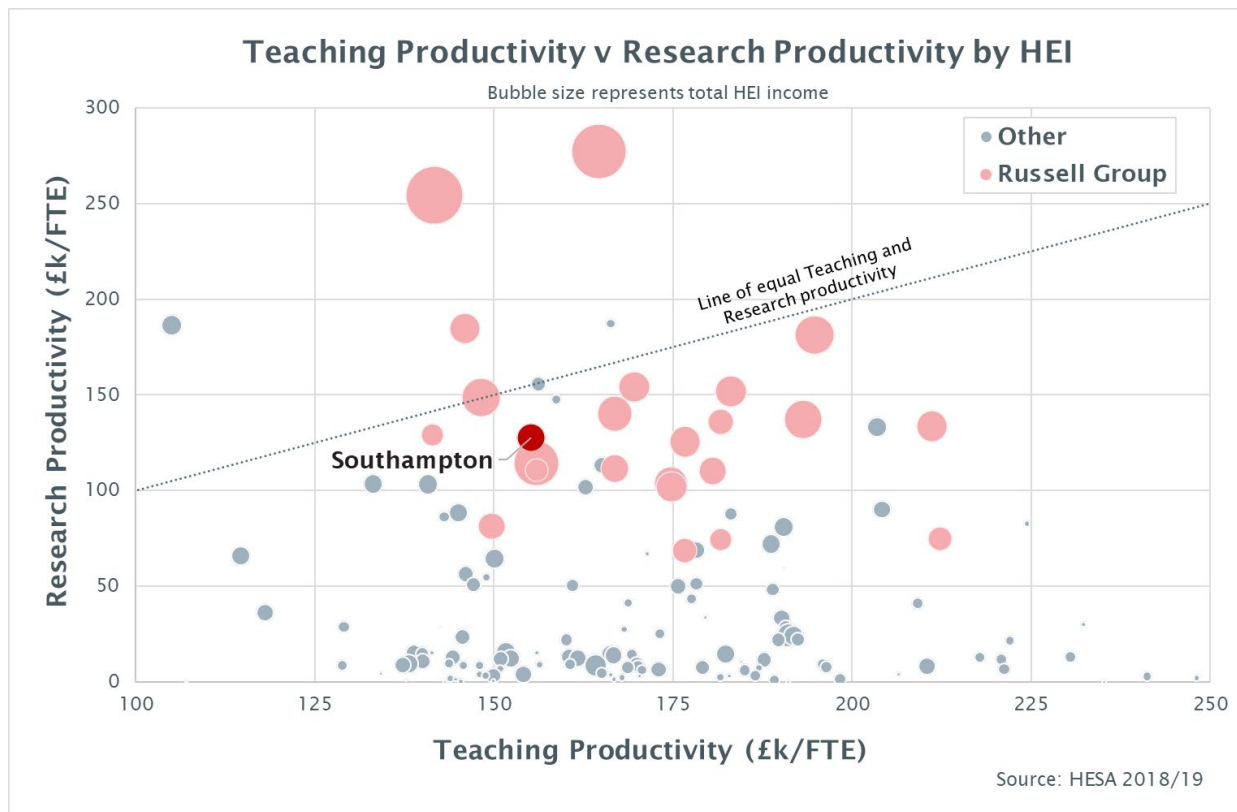
Senate, chaired by the President, oversees academic strategy and performance. The Council, consisting of twelve lay members, five members of staff elected by Senate, the Students' Union President, the President and one of the Vice-Presidents, provides overall governance, including responsibility for financial performance and reporting.

Academic staff and more than 300 degree programmes are organised into five Faculties, reduced from eight following a restructuring in August 2018. Three cross-cutting academic portfolios, *Research & Enterprise*, *Education* and *International*, are held by Vice-Presidents. Faculties, led by executive Deans, consist of one or more Schools with subsidiary departments. Associate Deans lead portfolios mirroring those of the Vice-Presidents. Additional leadership is provided by five Associate Vice-Presidents (AVPs) with focused portfolios.

The academic mission is supported by Professional Services led by the Chief Operating Officer (COO), organised into six executive directorates and five stand-alone services. The President, Vice-Presidents, Deans, COO and Executive Directors of *Finance* and *Human Resources* constitute the *University Executive Board (UEB)* which provides the executive leadership of the University.

### 1.4 Balance between research and teaching activities

We are one of the most evenly balanced universities in the UK between education, research (and enterprise) with, in financial terms, a combined research and enterprise economy of £232M (2019/20) amounting to 40% of turnover and £284M (49%) for educational activities. Over the REF period, turnover has grown by 30% from £447M to £583M (2019/20).



### 1.5 Institutional history and research focus

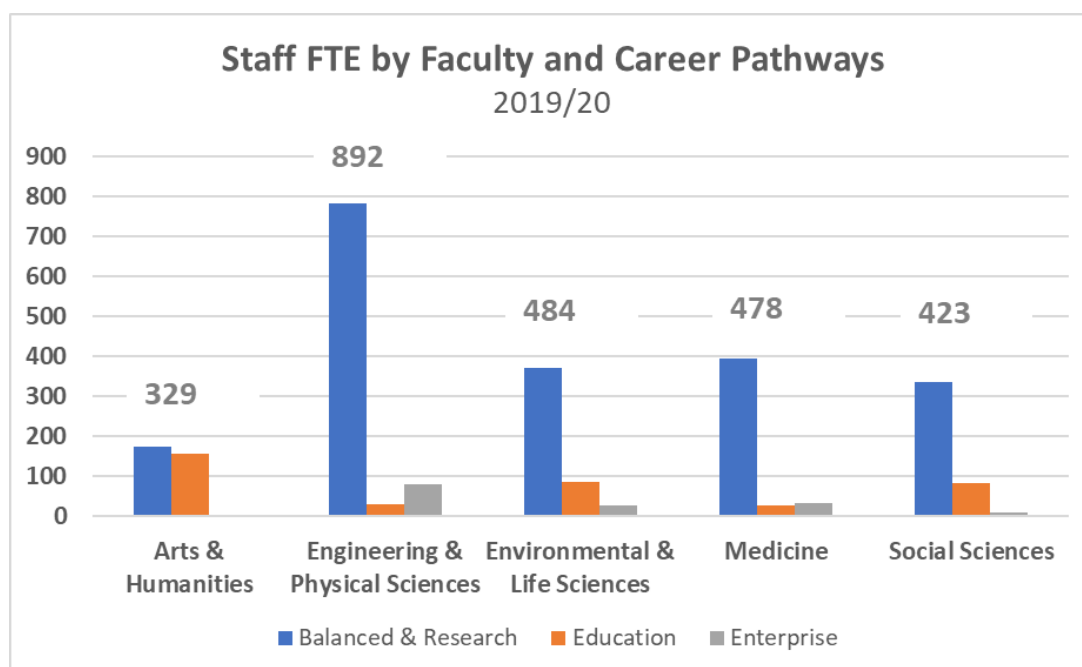
Founded as the Hartley Institution in 1862, the University gained its Royal Charter in 1952. Consistent with our strategy, we strive for quality throughout our research that is comparable with the highest international standards.

Throughout our history we have sought to innovate in research and education, including world-class landmarks that have inspired other institutions across the globe:

- First electronics department in the world (1947);
- *Institute of Sound and Vibration Research* (1965);
- Pioneering work in Cancer Immunology and Developmental Origins of Health and Disease (1970s);
- First UK medical programme with students interacting with patients throughout (1972);
- *Optoelectronics Research Centre* (1989);
- *Centre for Operational Research, Management Sciences and Information Systems* founded (1997) after more than 30 years of research in this field;
- *Southampton Statistical Sciences Research Institute* (2003).

We were early innovators in Geographical Information Systems and continue to lead in the field of Web Science. We combine strengths in computing, marine geophysics, history, environmental science, ship science and archaeology to be world-leading in maritime archaeology. Social Statistics and Demography includes the *ESRC Centre for Population Change* - the largest demography group in the UK - and the *National Centre for Research Methods*, a focal point for national research and training. Music, leveraged by our sound and vibration research, is an internationally-recognised centre of excellence for research. This combination of a proud history and ongoing innovation leads to vibrant research activity across all disciplines.

All disciplines, departments and schools have high levels of research activity. Of our 2606 FTE academic staff, 80% have balanced (education and research) or research-led contracts (hereafter collectively referred to as “researchers”) with the expectation they will be research-active; 15% follow education-led and 5% enterprise-led pathways (see §3.1). As described in our Code of Practice (CoP), all balanced and *independent* research-led staff with significant responsibility for research (1313 FTE) are included in our REF 2021 submission.



A 70-strong team, *Research & Innovation Services (RIS)*, facilitates academic collaborations, industrial interactions, knowledge-exchange and the commercialisation of intellectual property (IP). *RIS* also supports the academic community through dedicated teams for research funding development, research contracts, research governance & integrity and enabling impact.

## 2. Strategy

### 2.1 Strategic goals and achievements to 2020

The 2010 strategy described our future ambitions and priorities with excellence in research at the core of our ambition. Our strategic goals for delivering research excellence and achievements during this assessment period included:

- **Developing existing world-class research** with all disciplines contributing to our ambition to achieve a top-10 performance in the REF. We placed 18<sup>th</sup> for GPA (Grade Point Average), 8<sup>th</sup> for research intensity and 11<sup>th</sup> for research power in REF 2014 with top-5 power rankings in five UOAs and top-5 GPA rankings in five.

- **Attracting, developing and retaining high-achieving staff**

Global searches for potential leaders in all areas of activity. University Fellowships attract leading international researchers including Nobel Laureate, Professor Brian Schmidt from 2014-2017.

- **Supporting innovative research across disciplines to address global challenges**

Achievements include, amongst others, Professor Emma Tompkins, lead-author of Chapter 29, Small Islands, *Intergovernmental Panel on Climate Change (IPCC)* (2018); and *WorldPop* providing spatial demographic datasets for researchers and policymakers in Latin America, Africa and Asia to support development, disaster-response and health.

- **Increasing income from research grants**

3,890 research grants awarded during the REF period totalling £890M.

- **Supporting and increasing our early career researchers and postgraduate research students** through institution-wide “career-track” fellowship schemes and scholarships.

## 2.2 Strategy to 2026

Our 2016 strategy, underpinned by a 10-Year Plan, has a research and enterprise vision to:

*“Consolidate our position as a world-leading research-intensive university, increasing our profile for generating knowledge and technologies that have real economic and social benefits for the world. We will produce high quality research and, through our distinctive interdisciplinary approach, focus on addressing society’s greatest challenges.”*

The strategy ensures our research underpins our education activities and that we win funding that maximises the research we can sustainably undertake. It comprises six focus areas:

- **People:** Developing and recruiting world-leading academic staff and doctoral students and supporting them through their career journey to secure funding and undertake world-changing research.
- **Sustainability:** Recovering a greater portion of direct- and indirect-costs by rebalancing our funder-mix, producing accurate full-economic costing and charging for commercial research based on market-price, not cost.
- **Enterprise and Impact:** Enhancing the distinctiveness of our strong enterprise ecosystem within a strategic framework to deliver impactful research, diversify income streams and provide valuable opportunities for staff and students.
- **Professional Services support:** Strengthening interfaces between directorates and internal and external stakeholders, including two dedicated units, *PERu* and *PP|S* (§2.9) to support public engagement and impact.
- **Interdisciplinary research:** Growing our interdisciplinary research, developing our institutes and providing an environment that stimulates such activities.
- **International:** Ensuring our research is positioned to enhance our international profile with academic, government and corporate partners and to influence opinion-formers and policymakers.



### 2.3 Enabling Impact

We have a strong track-record of generating high levels of impact through translational research across almost all disciplines. Consistent with the principles of the *Knowledge Exchange Concordat*, our Enterprise & Impact (E&I) strategy recognises the diversity of activities within the University ecosystem, including:

- Business acceleration and incubation
- Consultancy
- Continuing professional development
- Corporate partnerships
- Enterprise units
- IP protection and licensing
- Public engagement
- Public policy impact
- Spinout companies
- Student enterprise

The E&I strategy is overseen by the *Southampton Enterprise Board (SEB)* chaired by the VP Research & Enterprise (VPRE). Each Faculty has an E&I board reporting to *SEB* and convenes IP panels to pursue patenting and licensing. The strategy recognises the distinction between:

- (i) Commercial enterprise activities - expected to return a financial surplus to the University in addition to delivering impact;
- (ii) Other activities associated with developing an enterprise ecosystem and delivering impact, including business incubation, student enterprise, public policy and public engagement.

Commercial enterprise income (consultancy, facilities, regeneration, CPD and IP) grew by £17M (39%) between 2013/14 and 2018/19 to £61M/year, the second highest in the sector, and at 10.4% of turnover, the highest proportion in the Russell Group (source: HEBCIS).

Investment in ecosystem development and impact is largely provided through the *Higher Education Innovation Fund (HEIF)* (£4.4M in 2019/20) and *Impact Acceleration Accounts* (EPSRC £3.9M, 2017-2021; ESRC £1M, 2019-2023; STFC £120k, 2019-2020).

Since 2013/14 the University has ranked first or second in the UK for the financial value of its *consultancy and engagement with small and medium-sized companies* (HEBCIS). Much of our E&I activity is regionally-focused:

- Founding member of *SETsquared* (with Bath, Bristol, Exeter and Surrey universities), ranked by UBI Global as the *World Top Business Incubator* managed by a university since 2015;
- University Science Park hosts ~100 companies, employing over 1500 people;
- Student Union-affiliated *Enactus Southampton* crowned UK national champion five times since 2012 and world champion in 2015;

- *Future Worlds*, a unique on-campus startup accelerator, nurtures aspiring entrepreneurs to move technologies to commercialisation. It has supported 150+ projects, launching 50+ student/staff startups. These have raised £7M+ equity investment at a valuation £40M+ and employ 100+ people;
- Four Royal Society-funded entrepreneurs-in-residence provide guidance and advice on commercialisation and business engagement;
- *ICURe (Innovation to Commercialisation of University Research)* provides nationwide support for potential university startups. Aims include improving the entrepreneurial skills of ECRs and strengthening links between academic and industrial communities. Initiated from Southampton in 2014 within *SETsquared*, £38M has been invested in supporting 342 teams, leading to the creation of 111 new companies and 500+ jobs in the UK.

Our interdisciplinary research units also support impact (§2.6).

#### 2.4 Open Research

The University is a leader in open research, open access (OA) publishing and archiving. Our “EPrints” platform is used by 675+ institutional and subject repositories worldwide. The *Open Research Group (ORG)*, comprising the Library’s Associate Director, VPRE, Associate Deans Research and academic, post-graduate and professional representatives, oversees institutional OA and research data management policies. Institutional policy and guidance on responsible research metrics were established ahead of signing DORA in 2019. *ORG* leads the University’s contribution to national and international OA policy and infrastructure, allocates funds for OA publishing, monitors compliance with policies and ensures wide engagement with best practice. Original research outputs are increasingly published and available via open access, growing from 83% (2016/17) to 87% (2019/20).

#### 2.5 Regional and national priorities

We are strongly engaged with regional and national research agendas including research councils, national academies and government departments (e.g. appointments of Chief Scientific Advisors to the *Food Standards Agency* and for *National Security*). Regionally we have close relationships with the *EM3* and *Solent Local Enterprise Partnerships*, and with *SETsquared* and the *Science and Engineering South (SES) Consortium*; our two previous Presidents served a combined five-year term on the *Solent LEP* board and VPRE is board member for *SETsquared* and *SES*.

We lead, or strongly engage with many major national research priorities, including the *Faraday Institution*, *Future Flight (Aerospace Technology Institute)*, *Alan Turing Institute*, *Rosalind Franklin Institute*, the *UK Collaboratorium for Research into Infrastructure and Cities* and have close relationships with national capabilities such as the *National Oceanography Centre*, *Diamond Light Source* and the *Francis Crick Institute*. Engagement is commonly through our interdisciplinary units.

#### 2.6 Interdisciplinary research and collaboration

With a longstanding commitment to interdisciplinary research, we maintain low barriers between Faculties, Schools and Departments, with much cross-disciplinary activity evolving organically and becoming distinctive parts of the University (§1.5). Since 2013 we have considered specific needs and opportunities requiring an interdisciplinary approach. Building on existing strengths,

this resulted in the creation of five new *University Strategic Interdisciplinary Research Institutes (USIRIs)*:

- *Institute for Life Sciences (IfLS)*
- *Southampton Institute for Arts and Humanities (SIAH)*
- *Southampton Marine and Maritime Institute (SMMI)*
- *Web Science Institute (WSI)*
- *Zepler Institute (ZI)*

Each *USIRI* is led by a Director and advised by a strategic advisory board chaired by the VPRE and including the Deans. Each institute represents a research community of 200+ members, focusing their research and embedding them in a network spanning the University and beyond, and playing an important role in generating impact and reputational benefit. We have invested ~£2M/year in the *USIRIs* and received an estimated 200% ROI. Conceived during the REF period and launched in November 2020, *SIAH* will raise the visibility and identity of arts and humanities research to our local, national and international audiences.

We actively encourage self-forming *University Strategic Research Groups (USRGs)*, interdisciplinary research communities originating from community-led proposals. Focused on particular opportunities, *USRGs* have lifetimes of 3-5 years, each receiving funding of ~£20k/year. Currently, there are three such groups, but beyond the interdisciplinary infrastructure shown (§1.3), there are 25+ academic and industrial research centres and institutes. The interdisciplinary research strategy and its implementation is led by an AVP.

Additionally, two overarching interdisciplinary strategies have been adopted by *UEB*: on *Life Sciences* and *Environmental Sustainability*. These extend beyond interdisciplinary research and guide key decisions such as hiring staff, development of educational programmes and investment in facilities.

## 2.7 International partnerships

We have prioritised international research engagement, jointly-led by the VPRE and VP International. An AVP leads strategic international projects, including research collaborations. These are supported by an International Relations team working with *RIS* (§1.5). Each Faculty has an Associate Dean International.

The University is a member of several strategic international partnerships, including:

- *Worldwide Universities Network (WUN)*, a global network of 22 research-intensive universities spanning 13 countries.
- *RENKEI* partnership with 12 leading Japanese universities.
- *Epigen* consortium with Singapore and New Zealand.
- *Confucius Institute* in collaboration with Xiamen University.
- *The Photonics Institute* with Nanyang Technological University.
- The *India Centre for Inclusive Growth and Sustainable Development* with business partners and policy makers.
- University of Southampton Malaysia, delivering research and education in Iskandar.



International research funding (outside UK and EU) increased from 4.1% to 8.5% of total research income during the REF period (£4.5M (2013/14), £10.2M (2019/20)). EU funding (£17.7M (2019/20)) averaged 16.0% in the same period.

The proportion of our papers published with international co-authors has grown from 52% during the last REF to 58% between 2014 and 2019, indicating an increasingly internationally-connected University (Source: SciVal, August 2020).

	Co-authors (%)			
	International	National	Institutional	None
<b>Southampton</b>	<b>58.0</b>	20.3	13.4	8.4
<b>Russell Group average</b>	54.1	18.8	13.0	14.2

### 2.8 Research Integrity

The University is a signatory to the *Concordat to Support Research Integrity* and has robust policies to ensure we maintain the highest standards in research. VPRE chairs the Research Integrity & Governance (RIG) Committee comprising Associate Deans Research, and the University Research Ethics Committee comprising the chairs of the Faculty Ethics Committees and a lay member. Each Faculty has a research ethics committee (chaired by an experienced academic and including at least one lay member) and in some cases one or more sub-committees covering specialist areas. The committees are supported by a RIG team of seven staff and an on-line ethics approval system, *ERGO II* which processed 5000+ applications from staff and students in 2019/20.

### 2.9 Community Engagement

Two *Interdisciplinary Research Units* support impact delivery:

1) *Public Engagement with Research* unit (*PERu*) is a founding signatory to the UK’s *Manifesto for Public Engagement* and has played a significant role in the sector via the RCUK/UKRI-funded *Schools University Partnership Initiative* (SUPI) (£200k), *Catalyst Seed Fund* packages (£125k), and *Strategic Support to Expedite Embedding PER* (£98k) programme. The RCUK *Funding Assurance report 2017-18* noted the University provides “a comprehensive and holistic *PER support package*” for researchers in all disciplines including a seed-fund that has enabled impact from 80+ projects.

*PERu* delivers diverse public engagement events including the annual *Southampton Science and Engineering Festival* (founded 2004), attracting 8000+ people to engage with researchers and projects (155 exhibiting teams in 2019); and the “*Human Worlds Festival*”, aligned to the AHRC-supported, national *Being Human* programme, which similarly engages the public in arts, humanities and social science research. Other initiatives include:

- Partnership with the Winchester Science Centre since 2017 to co-create exhibits for 190,000+ annual visitors.
- *Activity Mapper* (visualises outreach with schools/other publics) has recorded 800+ events since 2018, maximising the quality, sustainability and impact of public engagement.
- Building collaborative capacity to support sustainable interactions between the University and deprived communities.
- Supporting Southampton’s bid for City of Culture 2025.

Institutional level environment template (REF5a)

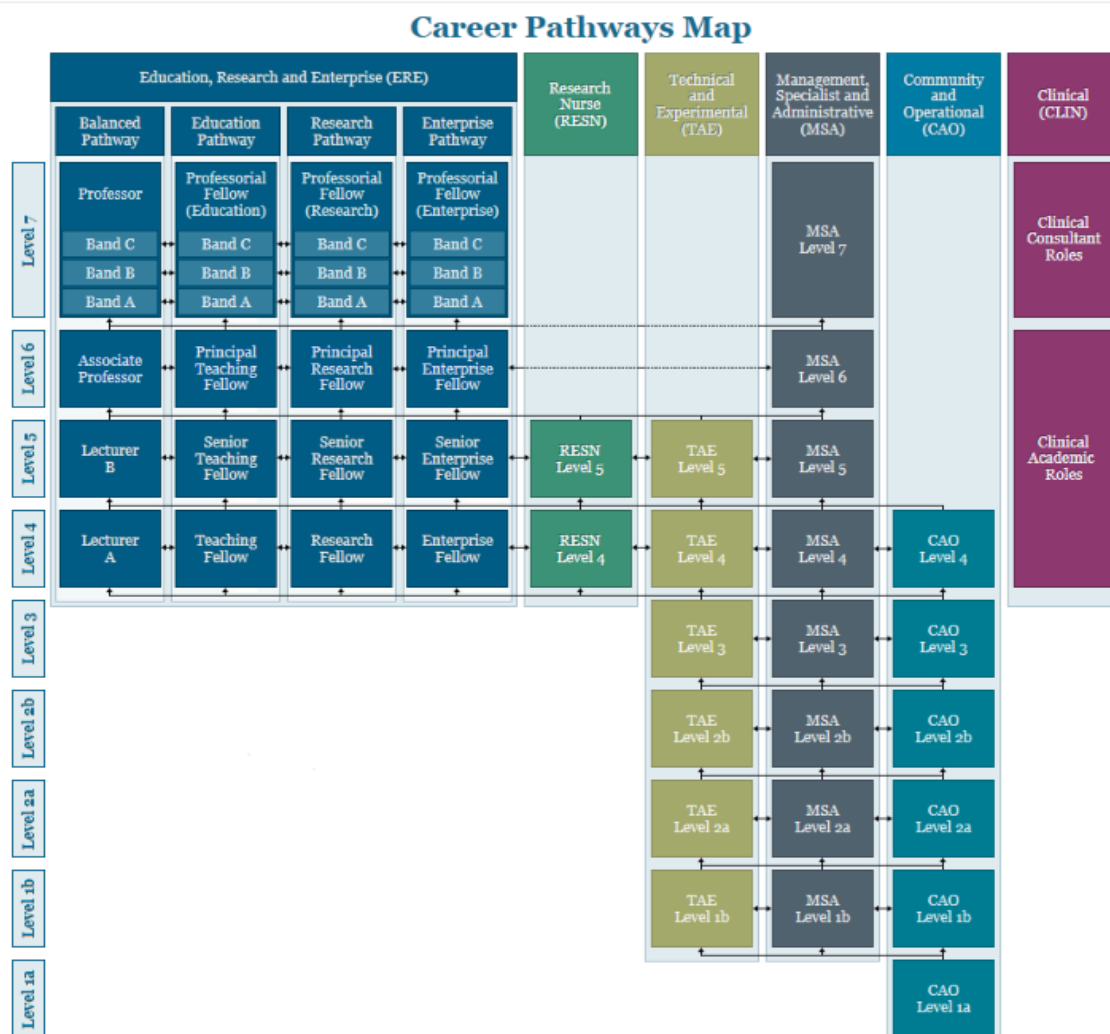
2) *Public Policy|Southampton (PP|S)* supports the local, national and international public policy impact of our research. Four policy experts (supplemented by secondees) operate three key themes: stimulating evidence demand in government; supplying evidence; and increasing policy engagement capacity amongst the research community. The team’s activities include:

- Collaborating with the *UK Parliamentary Office for Science and Technology* and UK government departments, including Chief Scientific Advisors.
- Delivering our affiliation with the *Cambridge Centre for Science and Policy (CSaP)* Fellowship scheme.
- Delivering PhD and ECR knowledge-exchange secondments to local and national government, including Cabinet Office, BEIS, Department for Education, Southampton City and Hampshire County Councils.
- Delivering *Policy|Training* sessions and supporting a *Policy|Network*.

3. People

3.1 Staffing strategy and staff development

Consistent with the University strategy, we prioritise recruiting and developing world-leading academic staff and building strong Professional Services to support them in winning research funding and undertaking world-changing research. A revised staffing strategy, “*Reward and Recognition*”, introduced in 2014 provides a framework with six job families ERE, RESN, TAE, MSA, CAO and Clinical as illustrated below.



To ensure equity across the University and between staff in different job families, the cumulative expectations for capability and performance at each level (1-7) are defined for individuals progressing through the pay scale. The ERE job family has four career pathways: *balanced, education-led, research-led and enterprise-led*. Clear descriptors for promotion, based solely on merit, exist for each pathway and level, with all ERE staff supported by mentors through the promotion process.

Movement between job families and career pathways is encouraged, reflecting individuals' changing interests and institutional requirements. ERE promotions and movements between pathways are initially considered within the Faculty and then the University-level *Academic Promotions Advisory Group*, with final approvals by Senate and Council. Promotions and in-level transfers at level 6 (Associate Professor-equivalent) and level 7 (Professor) involve an interview panel chaired by a member of *UEB*. All staff are required to have an annual appraisal with their line manager recorded via an on-line system. Appraisal outcomes are moderated by the next-level manager with *UEB* scrutiny to ensure University-wide consistency.

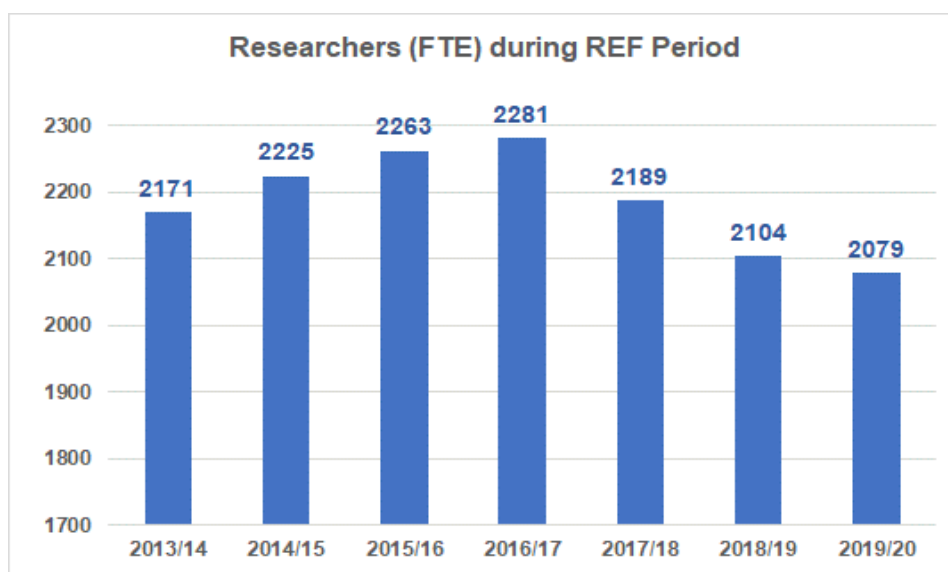
**3.2 Study leave and flexible working**

ERE staff may apply for sabbaticals/study/research leave. Provision for such leave is one semester in every four years of service. Special leave-of-absence may be granted to enable staff to accept temporary research appointments elsewhere of up to two years. Following discussion with line managers, decisions are taken at Department or School levels taking account of the objectives and wider staffing requirements in that unit. Such leave is routinely taken and plays an important role in maintaining a vibrant research culture.

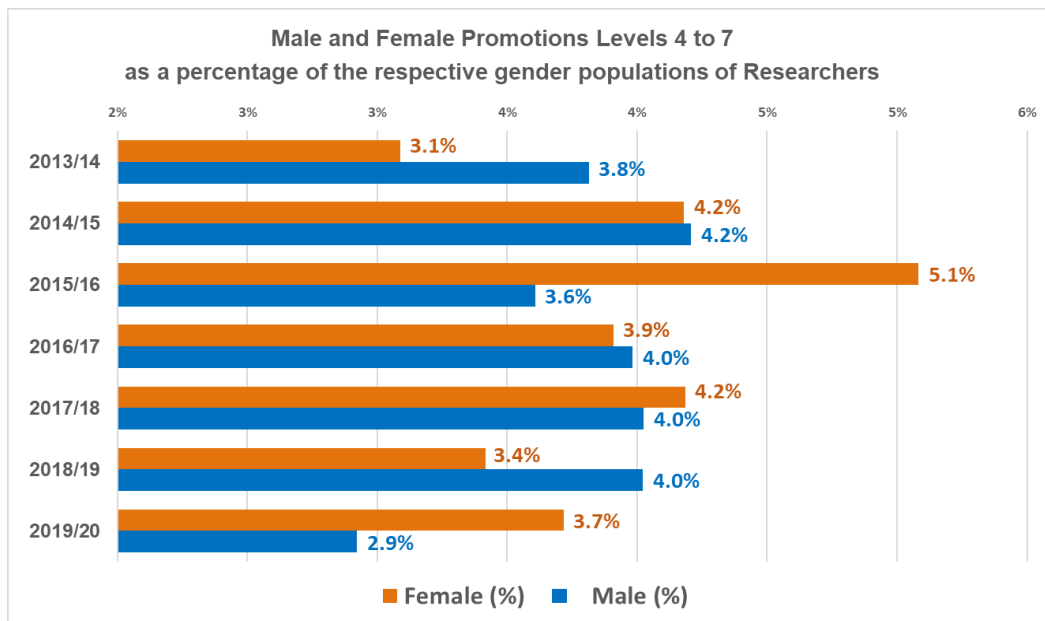
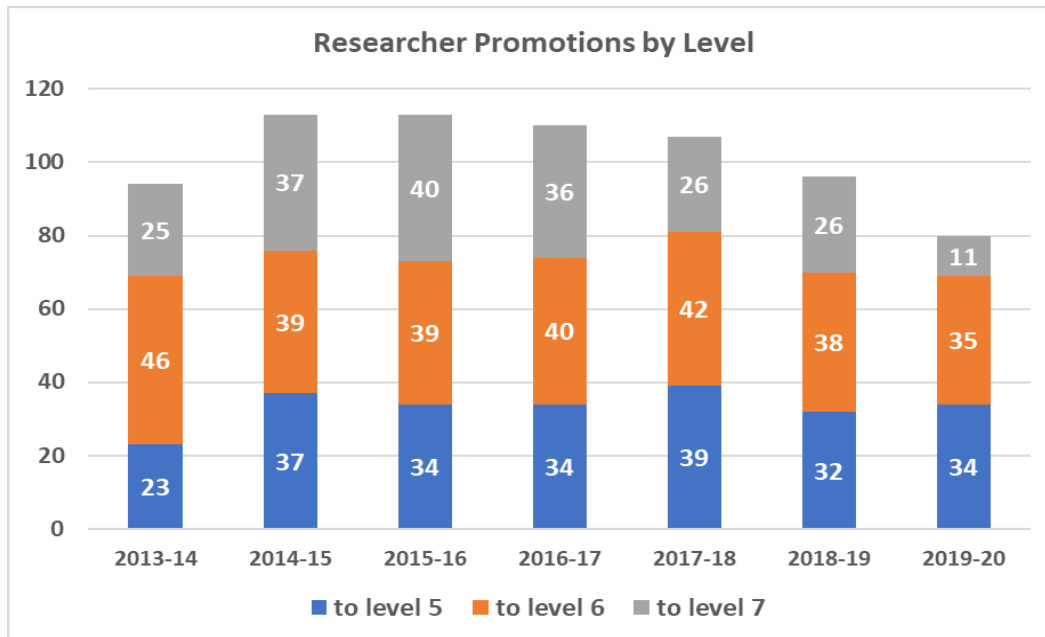
Flexible or remote working is routinely enabled where needs are identified. Line managers and Heads of School, supported by HR Business Partners, make these decisions and put in place the necessary support for staff working in these modes.

**3.3 Staff recruitment and progression**

Each Faculty and School has an overall strategy, including staffing plans, which are discussed as part of annual business planning. Overarching University strategies (e.g. life sciences and environmental sustainability) encourage hiring in particular areas. Our research community increased steadily until 2016/17 in line with the University's growth strategy, and then underwent a planned contraction in response to the uncertain economic climate.



Promotions at levels 4-7 (Postdoctoral Research Assistant (level 4); Lecturer/Senior Research Fellow (5); Senior Lecturer/Associate Professor/Principal Research Fellow (6); Professor/Professorial Fellow (7)) have remained relatively stable as has the percentage of male and female researchers promoted during the REF period.



### 3.4 Supporting our staff

We take a whole-organisation approach to the wellbeing of all staff and students, led by the *Health, Safety & Risk Directorate*. The strength of the University’s community is key, as it fosters a wide range of interactions and networks that promote wellbeing, including social, cultural and recreational events and activities.

The areas of focus are *Mental Health and Stress, Physical Health, Occupational Health and Emergency Response* with a rich range of resources available, and a diverse programme of activities to promote wellbeing and self-awareness of issues that might affect one’s own, or

colleagues' and fellow students' wellbeing. The University is a signatory to the *Mindful Employer Charter* and runs an assistance programme providing confidential advice for colleagues.

We have a supportive policy for managing ill-health, including guidance for return-to-work and contact with the University during prolonged absences. Allowances are made in terms of workload and timetabling in discussion with line managers and HR Business Partners, and a *Parents and Carers* network provides peer and professional support.

### **3.5 Career pathways for part-time and fixed-term staff**

The University is a signatory to the *Concordat to Support the Career Development of Researchers* and is implementing the seven key principles, including Principle 6 that “*diversity and equality must be promoted in all aspects of the recruitment and career management of researchers*”. The Concordat is implemented via the *Centre for Higher Education Practice (CHEP)* which provides opportunities for academic professional development for all staff and PGRs. Concordat Champions in each Faculty support local implementation of the principles. Training and networking events are provided across the University and overseen by a *Concordat Steering Group* led by the AVP Interdisciplinary Research.

Staff policies apply equally to both full-time and part-time staff (certain benefits may apply pro-rata to their hours). Policies which facilitate part-time working include flexible working, job sharing, career breaks and voluntary reduced hours. All staff policies conform to equality and diversity legislation and form an integral part of our wider equality and diversity agenda.

Over the assessment period, the percentage of researchers (FPE) on permanent contracts has grown from 58% to 61%, the fourth largest increase in the Russell Group (HESA 2013/14-2018/19).

### **3.6 Early Career Researcher development**

In addition to the *Concordat* (§3.5), our commitment to supporting researchers' careers was substantiated in 2020 on renewal of the European Commission's *HR Excellence in Research Award* (first achieved 2012). The University's ERE Career Pathways provides clear guidance for ECR development while an ECR network, supported by *CHEP*, provides access to networking events, discussions on career development, access to mentoring, and peer-mentoring through action-learning sets.

A University-wide approach is taken to help ECRs applying for fellowship funding, led by the Associate Deans Research and supported by *RIS*. Our strong enterprise and impact environment supports ECRs seeking to follow entrepreneurial career paths, and in public engagement and public service, while the *University Careers & Employability Service* assists ECRs exploring non-academic careers.

### **3.7 Training and supervision of PGR students**

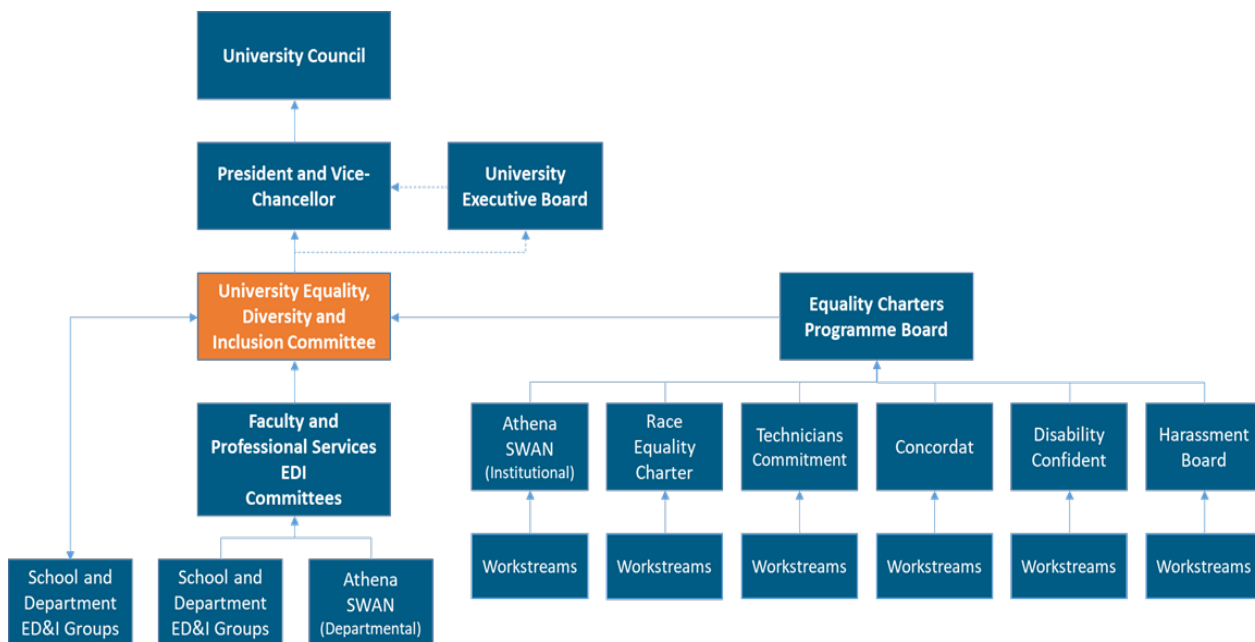
The Doctoral College, led by a senior academic director reporting to VPRE and VP Education, provides a focal point for doctoral training and researcher development. Regulations for doctoral degrees are developed in combination with the *Education Committee* and *Academic Quality and Standards Committee*. *CHEP*, in partnership with the *Library*, *RIS*, *iSolutions* and *Careers & Employability Service*, delivers a flexible and high-quality learning experience including a core development programme via face-to-face training and on-line courses, aligned to *Vitae's Researcher Development Framework*. EDI, research ethics and data management modules are mandatory.



PGRs can also participate in intensive training and development activities through summer schools. Each Faculty has a Graduate School, led by a director which ensures implementation of University policy regarding doctoral students and degrees, and maintains a local doctoral student community. During the REF period, the University participated in 26 externally funded CDT/DTPs awarded by all UKRI research councils, the NHS and UK Government. For the ~3,000 PGR students we host, 57% funding comes from external, non-UKRI sources.

**3.8 Equality, diversity and inclusion (EDI)**

In October 2019, a new governance structure was implemented to provide clearer routes through which EDI matters can be raised and decisions made. VPRES is the University’s EDI champion and chairs the EDI committee reporting to UEB.



The focus on improving EDI is ensured through a strategy and action plan. All protected characteristics are covered by the strategy, with resulting policies and initiatives supported by an EDI team in HR. An annual diversity report on our performance is reviewed by UEB, Senate and Council, and is publicly available. EDI is a key component of the University’s staffing strategy and all staff involved in hiring, appraisal and promotion processes are required to undertake EDI training.

We have signed two key pledges: *Time to Change*, a national campaign to end mental health discrimination; and the *Mindful Employer Charter* to create a supportive and open culture for employees with mental health issues. The University is a founding signatory of the *Athena Swan* charter and received a Silver award in October 2016 following ten years work at bronze-level. In addition, nine Schools and Faculties have obtained silver and bronze departmental awards, recognising their work to implement University policies and broaden awareness of gender equality in their local area.

We are a member of *Inclusive Employers*, which supports building inclusive workplaces and a partner of *AccessAble* (formerly *DisabledGo*) to promote disability-accessible buildings. In December 2017 we became the *first* UK university to achieve *Disability Confident Leader* status, the highest level accreditation for employers committed to ensuring recruitment processes are inclusive and accessible; this was reaccredited in 2020.

In January 2018 the University signed the *Race Equality Charter* to improve the representation, progression and success of minority ethnic groups of staff and students. In 2019 we conducted a University-wide equality survey to understand our staff's experiences in relation to their gender and race in our community. We are working towards a bronze award by 2022.

Staff and students maintain networks and societies to represent, support and engage members who share a similar background, characteristic or common cause, for example:

- Black Asian and Minority Ethnic Staff Network
- Christian, Islamic and Jewish student societies
- Disability Staff Network
- International societies
- Parents' and Carers' Network
- Pulse LGBT+ Staff Network
- Student Union Feminist Society
- Theano
- Women in Science, Engineering, Technology and Humanities (WiSET+)

These groups are autonomous with their own terms of reference and aims. They participate in an annual programme of networking events and provide advice to the University when it develops new or existing policies.

We have been a *Stonewall Diversity Champion* since 2010.

Our Equal Pay Reviews show that the University provides equal pay for work of equal value and that the mean gender pay gap has reduced to 18.9% (21.5% in 2017, 22.9% in 2015); they include recommendations and action plans to raise awareness and address issues, including continuing to remove barriers to promotion for women. The University has achieved its 2020 target to have 30% female representation on all University Committees and is aiming for 40% by 2025.

We aim for the highest EDI standards and have a zero tolerance towards discrimination, harassment and bullying.

### **3.9 REF submission**

Our Code of Practice (CoP) was widely communicated internally and published on the University website.

The *Reward and Recognition* framework (§3.1) unambiguously defines ERE staff on balanced and research-led pathways, readily identifying all researchers having *significant responsibility for research*. Rigorous monitoring of staff records (on a weekly basis by *RIS* and at least annually by Faculty REF committees) ensured that the diversity of the staff cohort returned to REF, matched the criteria specified in our CoP.

Committees at University, Faculty and UoA levels provided robust oversight of REF policies and scrutiny of processes to ensure these were inclusive, and over 130 staff involved in REF decision-making attended bespoke, unconscious-bias workshops. An initial Equality Impact Assessment (July 2019) was widely circulated and findings discussed at *UEB* and other senior management meetings. The final EIA identifies subsequent enhancements made to REF processes and recommends improvements to systems and the collection of data for protected characteristics.

#### 4. Income, infrastructure and facilities

##### 4.1 Research income

Increasing research and enterprise income, and overhead and full economic cost-recovery are strategic priorities. Overhead cost-recovery has improved from 28.1% (2013/14) to 29.2% (2019/20). Income growth during the REF period is shown in the table.

Income (£M)	2012/13	2019/20	Growth
Research	147	173	18%
Enterprise	37	59	59%
<b>Total</b>	<b>184</b>	<b>232</b>	<b>26%</b>

Source: Financial Accounts

Research applications targets are set annually as part of the business planning process and are a focus in appraisal discussions for all research-active staff; progress is monitored monthly by *Finance* and *UEB*.

The VPRE, Associate Deans Research and Enterprise, Deputy Heads of School for Research and *RIS* are actively engaged in supporting individual members of staff and research groups to apply successfully for research funding. Where applications are evaluated as being strategic at the Faculty and/or University levels, additional bid support is provided.

##### 4.2 Specialist infrastructure and facilities

The University has consistently ensured its research is supported with appropriate infrastructure and facilities, investing regularly and strategically in a wide range of leading-edge experimental facilities. Since 2014, major investments include:

- The *Boldrewood Innovation Campus*, in partnership with Lloyd's Register, with the largest university-owned towing tank in the UK. Boldrewood also houses the *National Infrastructure Laboratory (NIL)* (part of the UKCRIC) and facilities for autonomous system development and testing, and other fluid dynamics research (£100M+ including £26M from EPSRC for *NIL*).
- Upgrading the University's major research wind tunnel, the *RJ Mitchell*, as part of the National Wind Tunnel Facility (£0.7M, EPSRC).
- High Performance Computing (HPC) infrastructure with the creation of a new Data Centre and three upgrades of *Iridis*, one of the largest computational facilities in the UK. These support work across the University, including in Arts, Humanities and Social Sciences (£50M+).
- *Centre for Cancer Immunology*, including animal facilities and state-of the art research equipment (£27M).
- *µ-Vis Computed Tomography Centre*, which supports work across the University including in Archaeology, Palaeontology and Music (£10M).

We maintain one of the world's most capable cleanrooms for micro- and nano-fabrication with exceptional capabilities in optoelectronics. This underpins the *Zepler Institute* and represents an ongoing investment of £120M+ since 2007. Over the next decade capital funding will be used to leverage external funds, including philanthropy, to continue to develop our research facilities.

This is also the aim behind the allocation of £0.75M/year to the *Multi-User Scientific Equipment for Research (MULSER)* fund.

The Library's annual budget (£8.5M) includes £4M to support research including access to 8,000+ academic journals, 1.6M volumes and 6.5M historic manuscripts.

Turner Sims concert hall and John Hansard Gallery are internationally recognised Arts Council England national portfolio facilities.

#### **4.3 Shared/Collaborative facilities**

The University hosts two EPSRC National Research Facilities, *Crystallography* and *Physical Sciences Data-Science* services, and is an access point to the *National Dark Fibre Infrastructure Service*. We are a founding member of the *SES Consortium* (with Oxford, Cambridge, Imperial, UCL, King's College and QMUL), which shares computational and experimental equipment to ensure effective use across the region, and has successfully created three "Tier 2" HPC clusters.

We are a major user of the UK National Supercomputing service, *ARCHER* and the STFC Harwell Research Campus, in particular, the *Diamond Light Source* as well as international synchrotron facilities across a wide range of research areas. We regularly collaborate on international programmes using major research facilities in Oceanography, Physics and Astronomy. Our own facilities are regularly accessed by users from other institutions and industry, nationally and internationally. The development of a publicly available equipment register (<https://equipment.data.ac.uk/>) was led by the University.

#### **4.4 Major benefits-in-kind**

We regularly receive donated equipment from industry partners, or significant discounts from equipment suppliers wishing to have their equipment used at the University. During the REF period we acquired £72M capital equipment with £28M from grants and donations, while income-in-kind (REF4c) totalled £123M.

#### **4.5 EDI enhancements**

Robust approaches to equality and diversity apply to all aspects of our operations including acquisition of research funding and support for accessing infrastructure. Workload models, designed and operated by individual schools, assign teaching and administrative duties in a way that ensures staff have a substantial baseline to undertake research. Workload levels are fully transparent, allowing gender benchmarking and fairness in the allocation of work. All researchers (full- and part-time) are offered research leave with the timing of sabbaticals scheduled to accommodate staff circumstances where necessary, with financial support for seed-corning new work or conference attendance, allocated by staff grade to ensure gender parity.