

Institution: University of Portsmouth
Unit of Assessment: 32 Art & Design: History, Practice and Theory
<p>1. Unit context and structure, research and impact strategy</p> <p>Art and Design research in the Faculty of Creative and Cultural Industries (CCI) expanded significantly in breadth and depth over the census period as a result of focused strategic development and investment since 2014. As a result, this is the first submission to UoA32 from the University of Portsmouth (UoP) since 2008. It comprises 37 staff (17 female (f): 20 male (m)) equating to 34.01 FTE. Researchers in our Unit represent a broad range of history, theory and practice across Art and Design that offers an interdisciplinary understanding that reaches into allied areas of the media, communication and the built environment. Their work presents a diversity of outputs that include monographs, journal articles and conference proceedings, as well as practice research including artworks, images, exhibitions, installations, buildings and architectural designs, film and animation, software and digital applications.</p> <p>1.1 Research structure and context</p> <p>All 4 of the Schools in CCI are returning staff to the Unit:</p> <ul style="list-style-type: none"> • Portsmouth School of Architecture (PSA): architectural, urban and interior design; history and theory; heritage and conservation. • School of Art, Design and Performance (ADP): art and design history; curatorship; fashion and textile design futures; graphic and data visualisation design; illustration; photography. • School of Creative Technologies (CT): animation; creative and immersive technologies; digital humanities; human experience and interaction design; gaming. • School of Film, Media and Performance (FMC): film practice. <p>Research Leads from our 4 Schools work with the Impact Lead (SONNET), Associate Dean Research (ADR) (SUGG RYAN) and Executive Dean (KEEBLE). The cross-Faculty Practice Research Working Group (CCI-PRAG) includes staff from the Unit representing Architecture, Photography, Computer Games, Fashion and Textiles and steers the development of practice research, running workshops and mentoring colleagues within their respective schools. UoA32 has 3 Co-Coordinator (MITCHELL, SONNET, TEBA) and 1 Deputy (KWINT), each leading on different aspects of our submission. This team was formed to ensure gender balance (2f; 2m), with subject specialism and knowledge across the breadth and range of our research outputs, as well as planning for succession.</p> <p>1.1.1 Research clusters</p> <p>The establishment of three overarching research clusters in CCI has facilitated the development of our interdisciplinary research. In line with institutional ambition to bolster our</p>

existing and emerging strengths, these clusters have made a strong contribution to 4 of **UoP's 5 overarching strategic research themes** (ILES 1.2.9, p.2), while realising their own research objectives. This has significantly enabled interdisciplinary partnerships, research mentoring and bidding, and has focussed research upon major societal challenges.

- **Cluster for Sustainable Cities (CSC)**

The Cluster for Sustainable Cities (CSC) is an interdisciplinary research cluster of over 35 researchers and their students from across UoP which works at the interface of sustainable architecture, urban design, planning, social sciences, Information Communications Technology and engineering. Co-led by MELIS, it has enabled numerous successful interdisciplinary research projects, funded externally and internally. CSC's research provides real world solutions for key challenges aligned with UoP's **Sustainability and the Environment Theme**.

Researchers (DI RAIMO, ELBANHAWY, LIEBERMAN, PEDRABISSI, ROBAZZA, TEBA, TEELING) have collaborated internationally with industry, government, public agencies, charities and communities to enable urban change and effect transformations that benefit the environment, promote sustainable urban living and contribute to a carbon-neutral society. They have developed applied research on smart, resilient communities and integrated technologies, which include citizen-centric solutions to meet the changing needs of urban areas and demographic shifts by providing step-change improvements in urban living and systems. CSC has also contributed to UoP's **Health and Wellbeing theme** through the design of a specialist hospital dedicated to neuropathologies of children and adolescents (MELIS).

- **Design Innovation Cluster (DI)**

Led by FARRER, our Design Innovation Cluster developed significant interdisciplinary research aligning to UoP's **Health and Wellbeing Theme**. Our submission includes designs for healthcare materials, professionals and environments, including research into barrier solutions and diagnostic skin dressings for the treatment of chronic dermal wounds and disease (FARRER; BOWYER; GUMTAU; KWINT). A project in Nairobi raised awareness of the COVID pandemic using creative methods such as illustration to reduce transmission (BOWYER; NETTER). Design innovation projects also address social inequalities and explore cultural identities through creative practice research, advancing UoP's **Democratic Citizenship Theme**. E.g., **PONTon: Partnership Opportunity using New Technologies fostering sOcial and ecOnomic inclusioN** represents a progression from the use of digital technologies for social inclusion to uses for economic inclusion that produced a scalable and transferable methodology that can be applied to broader demographic sets and geographical regions for continuing impact (FARRER; BOWYER; NETTER).

- **Centre for Creative and Immersive Extended Reality (CCIXR)**

We have developed our physical research environment considerably by securing investment to support our strategic ambitions. Building on the existing facilities and strong track record of CT, CCI won £3.6m from Solent Local Enterprise Partnership for a new Centre for Creative and Immersive Extended Reality (CCIXR) providing state-of-the-art XR labs and multimedia facilities, due to open formally in January 2022. CCIXR builds on our track record of interdisciplinary projects combining creative and immersive extended reality with arts and humanities research,

which contribute to UoP's **Future and Emerging Technologies Theme**. In March 2021, for example, KEEBLE and GARNER worked in partnership with the Royal Shakespeare Company to create and stage *Dream*, an entirely digital presentation of live performance, bringing together traditional stage technologies and practices with new and emergent technologies of visual and spatial computing.

1.1.2 Emerging Research Groups

Our emerging **Research Groups (RGs)** provide an organisational and developmental context for research within the broad and interdisciplinary area of Art and Design across CCI. Our RGs were developed after an open call and awarded seed funding to support the realisation of our overarching strategic ambitions for research. RGs are open to Faculty staff, including Postgraduate Research students (PGRs) and technical support staff. Some groups are more advanced and outward facing, with a thematic and interdisciplinary focus on producing outputs and events such as symposia, funding bids and pathways to impact. Other RGs are more developmental, with a discrete disciplinary focus and peer-to-peer research development agenda to support ECRs and those who have entered from industry or professional practice or who would like to restart research. Their continuing work will increase the pool of submissible staff for REF2027. RGs aligned with UoA 32 include the following:

- **Advanced Games** investigates the cognitive psychological experience and impacts of computer gaming and virtual experiences (GARNER; HOWELL).
- **Computational and Analogue Theory and Practices in Architecture** interrogates the use and opportunity of technologies to create new modes of practice and production (DI RAIMO; MELIS; ROBAZZA; PEDRABISSI; TEELING).
- **Cultural Heritage** explores the preservation, display and interpretation of collections and sites, with a particular focus on audience engagement, through archival research, digital interventions and creative practice (BAILEY-ROSS; KWINT; METALKOVA-MARKOVA; MITCHELL; SUGG RYAN; TEBA; WHITMARSH). Members contribute to **UoP's Heritage Hub**, an informal cross-UoP grouping of researchers, particularly working on interdisciplinary external funding bids.
- **Digital Interactions** focuses on human interaction with and through technology, including research on data visualisation and materialisation (BAILEY-ROSS; GUMTAU).
- **Fashion, Textiles and Material Futures** considers post-digital practice in textile and material design to understand contemporary practice methods and outcomes in support of a theoretical context for designing sustainable textiles (IGOE; TORRES). Much of their research was conducted under the umbrella of the **Environment and Sustainability Theme** in collaboration with colleagues across the University; to facilitate this, IGOE is a member of both UoP's Revolution Plastics Steering Committee and Circular Textiles Group. The group also collaborated with UoP **Democratic Citizenship Theme** Director Professor Leila Choukroune on a project on human rights in the fashion and textiles supply chain.

Unit-level environment template (REF5b)

- **Illustration Practice** research focuses particularly on aspects of health and wellbeing (BATEY; KNIGHT; NETTER) through the use of authorial illustration and the sharing of personal stories through self-publishing to offer a narrative of care and understanding.
- **Photography** members explore historical and contemporary communities, political, cultural and sexual identities in their practice research (ARIEL; HAKIM-DOWEK; KOLKER).

1.2 Achievement of strategic aims for research and impact

Our strategic aims for research and impact were to:

1.2.1 Identify, support and develop existing and new research active staff

We have returned **37 (headcount) staff**, achieved through a combination of mentoring to develop the research profile of **16 existing staff** (7f: 9m), and the recruitment of **21 new staff** (10f: 11m) with strategically relevant research expertise. This has enabled us to develop a focussed critical mass across our subjects: **Architecture has 11 new staff; Art and Design has 6 new staff; Creative Technologies has 4 new staff**. The growth and support of research active staff within the Unit has increased our expertise, techniques and methodologies, and has positively impacted on overall research activity, as evidenced by significant growth in the number of successful research bids and funding income, peer reviewed-outputs, monographs and practice research during the REF period. We have developed new areas of strength such as Architecture and Creative Technologies by ensuring that research is a priority in staff recruitment and workload planning, and by supporting developmental activities such as mentoring, project funding and enhanced Workload Allocations (WLA). In support of our ambition to deepen and expand our research, 14 staff members have been sponsored to undertake PhDs (see 2.2).

1.2.2 Support the development of practice research

CCI-PRAG (see 1.1) was formed to lead the development of practice research. It also supported the development of contextual information for 21 of our outputs (2 of which are double-weighted), which comprise nearly 29% of our total.

1.2.3 Increase the volume and diversity of external research and knowledge transfer income

Research funding increased nearly 30-fold from £21,010 in 2013-14 to £646,788 in 2019-20. 50% of submitted staff have secured externally funded research income as Principal Investigator (PI) or Co-Investigator (CI) in the census period, resulting in this year-on-year growth. Increased diversity of funding is evidenced by the numbers of different funders of our research, including UKRI Research Councils, British Council, European Commission, NHS, international and national governments and businesses (see section 3).

1.2.4 Develop the research culture and environment

Research Clusters and Groups have enabled staff to become research active and provided a crucial pipeline to increase research intensity. The critical mass developed around common

Unit-level environment template (REF5b)

themes within our clusters and RGs fostered a sense of shared research identity and reputation, engendering a facilitative culture that supports integrity and openness, and enabling a focussed and coordinated approach to training, developmental activities and bidding.

1.2.5 Enable and facilitate impact

We raise awareness of the importance of impact through workshops and activities, as well as each staff member's annual Performance and Development Review (PDR). We appointed a Faculty Impact Lead to support the development of impact in partnership with the central University impact team. We provided support for the development of impact for projects and funding bids through our Faculty Research, Innovation and Impact Acceleration Fund (RIAIF, see 2.2) and WLA. We strengthened collaborations which underpin the **production, preservation and display and public engagement with contemporary and heritage collections**. We scoped and supported the development of 6 projects, from which we selected 3 Impact Case Studies:

- **Contemporary creative practice research:** Securing the future for 'art-zines' and artists' books (BATEY)
- **Brains to Biennale:** Bridging Art and Science to Build Audiences and Develop Artists (KWINT)
- **A House Through Time:** Shaping a flagship TV series to achieve critical and financial success and inspiring the public to engage with house history (SUGG RYAN)

We have built up working relationships with key stakeholders and are involving them in the co-design and delivery of our research to **develop resilient and sustainable communities to enhance health and wellbeing and democratic citizenship**. This resulted in a number of impactful ongoing projects, such as:

- **PONToon** (FARRER) (see 1.1.1 and 4.2).
- **CRUNCH: Climate Resilient Urban Nexus Choices** (MELIS) (see 4.2), an international interdisciplinary project led by UoP, funded by the Sustainable Urbanization Global Initiative (established by the Belmont Forum and Joint Programming Initiative Urban Europe), to bring together fragmented global research and expertise to find innovative solutions to the challenges of the Food-Energy-Water nexus (FEW). The project comprises a multidisciplinary group of academics from the UK, the Netherlands, Poland, Sweden, Taiwan and USA.

1.3 Our Unit's progress towards an open research environment, research integrity and ethics

Our Unit follows the University's Open Access policy (ILES 3.2, point 24, p.4), achieving an overall OA-compliance rate of 100% for all in-scope articles during the REF period. Furthermore, 100% of our Unit's staff have an ORCID. BAILEY-ROSS contributed to the National Coordinating Centre for Public Engagement's [Museum-University Partnership Programme](#)

Unit-level environment template (REF5b)

[Toolkit](#), working with colleagues at the National History Museum and V&A to create open access resources for anyone working on projects that involve museums.

UoA32 follows UoP's commitments under the Concordat to Support Research Integrity (ILES 3.2, 22, p.4). All our research projects, including externally/internally funded and unfunded, staff, masters and PGRs, follow [UoP's ethics guidance](#) and are reviewed by CCI's Ethics Committee (ILES 3.2.23, p.4), which contains representatives from our schools and includes our Departmental Research Degrees Coordinators (DRDCs). The Ethics Committee Chair also sits on our Faculty Research and Innovation Committee (FRIC). We have held Ethics workshops in CCI and staff complete Ethics training.

1.4 Future strategic aims for research and impact

The following strategic objectives will build on our achievements in REF 2021:

1.4.1 Consolidate our research base through development of overarching interdisciplinary research themes and groups

The new **CCIXR** interdisciplinary research and development facility will drive new research that combines the critical and practical investigation of human interaction design and aligns closely with the interests and strategic ambitions of our researchers in Architecture, Art and Design, and Creative Technologies. It will support our ambition to strengthen our practice research, as well as give us the opportunity to recruit new senior research leaders.

We will review our Research Groups and consolidate them into fewer, more overarching interdisciplinary thematic groups that drive our research strategy, align CCI and UoP priorities, and build on our demonstrable expertise in **Sustainability and the Environment** and applied design and creative approaches to **Health and Wellbeing** and **Cultural Heritage**.

1.4.2 Support the development of practice research

We aim to increase the number of research active staff by supporting people to develop their professional/creative practice into practice research. This also supports our ambition to increase the proportion of practice research in our REF2027 submission by at least 30%. **CCI-PRAG** will continue to facilitate developmental work and will hold an annual conference with external speakers. As a steering group, it will provide leadership opportunities for early and mid-career academics within their schools and subject groups. CCI-PRAG will be given a devolved budget to award funds to facilitate practice research and its documentation.

1.4.3 Increase the volume and diversity of external research and knowledge transfer income

We will seize opportunities to develop bids with non-academic partners and funders offered by **CCIXR**. We anticipate further growth through targeted development and cohort training approaches aimed at specific schemes by UKRI Research Councils and other funders, and by continuing to work closely on interdisciplinary projects with our colleagues in the Faculty of Humanities and Social Sciences and exploring co-development opportunities with other Faculties and UoP Themes. For example, we will build upon work with the Theme Director for

Unit-level environment template (REF5b)

Health and Wellbeing to further develop projects aligned with Portsmouth Hospitals University NHS Trust (ILES 2.2.16, p.3), such as HARKINS' Bedview Graphic Interface Development hospital bed management project.

1.4.4 Increase our PGR numbers

We aim to increase PGR student numbers significantly, in line with University ambitions and targets, through our Faculty QR-funded **bursaries** scheme and attracting self-funded students. Key to this will be the **expansion and development of diverse modes of PhD programmes** that recognise more fully practice-based research, and research by publication / portfolio. We will capitalise on SUGG RYAN's 2020 **AHRC Collaborative Doctoral Partnership (CDP)** award by making more applications to the scheme and will work towards an application to join an **AHRC Doctoral Training Programme** in the next round.

2. People

Our submission includes 5 Professors (including Dean; Head of School; ADR) (2f; 3 m); 1 Associate Dean Global Engagement (f); 3 Readers (m); 3 Principal Lecturers (1f; 2m); 1 Senior Research Fellow (f); 20 Senior Lecturers (10f; 10m) and 4 Lecturers (2f; 2m).

2.1 Staffing strategy

We undertook sustained and strategic recruitment of ambitious, research-active staff to grow our research culture. Our **24 new appointments represent 65% of our headcount**. We have been ambitious in recruiting **5 Professors in research and leadership roles since 2014**: KEEBLE, Dean and Professor of Design; LIEBERMAN, Head of PSA and Professor of Architecture; FARRER, Associate Dean Enterprise and Innovation (until 2019) and Professor of Design and Innovation; SUGG RYAN, Associate Dean Research and Professor of Design History and Theory; MELIS (internally recruited replacing Lehmann), Professor of Architecture and Innovation. We have sought to maintain a balance of staff at different career levels, recruiting senior staff with managerial experience, mid-career and early-career researchers to combine experience with opportunity. Other appointments represent strategic investments into priority growth areas within school research across practice, theory and history. ADP made appointments supporting practice research in Fashion and Textile Design (1 Senior Lecturer), Photography, Illustration, and Visual Culture (3: 1 Lecturer in each). CT appointed a Senior Research Fellow in Enterprise and Innovation to support their projects and other appointments specialising in research in Human Experience and Interaction Design and Immersive Technologies (2 Senior Lecturers) and in Animation practice (1 Lecturer). PSA made a considerable investment in staff working across research in Architectural and Urban Design theory, practice and history (1 Reader; 1 Principal Lecturer; 4 Senior Lecturers; 3 Lecturers), and in Heritage and Conservation (2 Senior Lecturers).

Part-time hourly-paid staff and PGRs, such as HOWELL and HOBBS, have been nurtured to gain permanent staff contracts to consolidate our staff research profile and sustain future research strength. There is only one member of staff in the submission on an (externally funded)

Unit-level environment template (REF5b)

fixed-term contract. We have 9 staff on permanent fractional contracts (0.4-0.8), enabling them to fulfil professional practice and other external commitments.

CCI is committed to recognising and rewarding excellence in research leadership, outputs and impact. **27% of staff submitted to the Unit have been promoted** in the census period. These **10 staff promotions** comprise: 5 from Lecturer to Senior Lecturer; 1 from Senior Lecturer to Principal Lecturer; 2 from Senior Lecturer to Reader; 1 from Senior Lecturer to Associate Dean; 1 internally recruited from Senior Lecturer into a vacancy for Professor. In addition to the advice and guidance given on applying for promotion in UoP procedures (ILES 3.4, 54. p. 8), we invite successful applicants to give briefing sessions to our staff, and plans are discussed and reviewed through the PDR.

We intend to increase the number of senior research leaders, with particular attention to diversity and inclusion. We will address this at Faculty level through targeted work on the career progression and promotion pipeline to compliment the new UoP ECR to Research Leader strategy (ILES 2.2.2, 41, p.7). We will include sessions aimed at women, who are currently underrepresented at Reader level, and we will encourage and support more to undertake Advance HE's Aurora leadership training for women. We will support our Readers to make applications for promotion to Professor within UoP's recommended 4-year timeframe. We will ensure opportunities to gain experience of leadership to support applications for promotion are recruited in a fair and transparent way by advertising and interviewing roles and having time-limited terms of office. We will create new opportunities in anticipated growth in membership and activities of CCI-PRAG. We will encourage staff from underrepresented groups to apply for leadership roles through mentoring, PDR and briefings. We will continue to consider the gender balance of research leadership roles when we recruit and/or renew terms of office and will offer roles to those with protected characteristics who are underrepresented where there is a tie.

2.2 Staff development and support

Our staff development strategy aims to grow the capabilities, profile and collaborative networks of our researchers using a combination of in-Faculty training and support systems, wider University-level initiatives (ILES 3. People pp. 5-8), and relevant external initiatives such as those offered by the CHEAD Research Alliance and RIBA. Our Unit adheres to the Concordat to Support the Career Development of Researchers (ILES, 2.2.2, 41, p.7).

The research WLA is the principal mechanism to foster sustained research activity and development, and all Unit members have a workload allocation of at least 20% and up to 50%. All Unit members undergo an annual PDR jointly organised and conducted by senior researchers and School Heads, to monitor progress and development which is factored into the workload allowance for the following academic year. Our PDR process places research at the heart of career development, enabling us to factor resource requirements into our research plans at the individual, School and Unit level. Our Research and Innovation Coaching Scheme partners experienced researchers with developing ones, providing extra support for personal research strategies, plans, career progression, funding bids and research-project management.

CCI supports researchers at each stage of their career, with training activities led by our ECR working group, and follows UoP's targeted support mechanisms for ECRs (ILES 2.2.2, pp. 6-7).

Unit-level environment template (REF5b)

9 staff in the Unit are ECRs, representing 24% of the overall staff Unit FTE, which demonstrates success in the sustained strategic investment in ECR staff over the census period. All ECRs join research groups. In addition, we aim to cultivate and build supervisory experience and capacity by deploying ECRs on PhD supervisory teams, helping them learn to be effective PhD supervisors alongside more experienced staff. Currently 46% of our staff are first supervisors. All but one of our current ECRs are on supervisory teams.

73% (13f; 14m) of staff submitted to the Unit have PhDs, which reflects disciplinary norms with staff from industry, professional and practice backgrounds. In line with UoP objectives to increase the number of staff with PhDs and in support of our ambition to deepen and expand our research, existing and new staff members have been encouraged and supported to undertake PhDs. **6 staff have completed PhDs within the census period.** Of the 10 staff without PhDs (4f; 6m); **3 (1f; 2m) are currently registered.** In addition, 5 more staff (3f; 2m) not returned in this submission are registered for PhDs and we anticipate they will be part of our 2028 return.

In order to increase our research intensity, outputs and income targets, we intend to **increase the number of staff with PhDs.** We will continue to recruit staff with PhDs, mindful of disciplinary norms for those from professional, industry and practice backgrounds. We will support staff currently registered for PhDs to completion, with targeted timetabling arrangements and study leave. Both existing and new staff will be offered opportunities for research training through a more diverse range of PhDs (see 1.4.4), supported by fee waivers.

RG leads, school research leads, and Unit leads contribute to planning regular developmental events at the Faculty level to complement UoP-wide research development activities (ILES 2.2.1, p. 6). At the Unit level, activities have included workshops on producing high-quality written outputs and presenting practice research work. 4 staff in the Unit are part of the Faculty-wide CCI-PRAG, mentoring other staff to articulate and present their practice research outputs. Faculty training events on research funding are outlined in section 3 below.

In order to ensure that senior researchers are supported to be effective research leaders, UoP invested in two ongoing schemes in which Unit staff have participated (ILES 2.1.34, p.6): the Research Leadership Programme (DI RAIMO), and the Reader to Research Lead Programme (ZAMBELLI) for which KEEBLE and SUGG RYAN are mentors. These schemes include coaching sessions, a mentor from across UoP, and extensive workshops on how best to support early and mid-career colleagues. To ensure staff at all levels will benefit from such schemes, UoP will be launching a new early to mid-career programme in October 2021, which staff in CCI will be offered the opportunity to participate in through their ongoing development as part of the PDR.

All Unit members have access to a Conference Support Fund, which provides funding for conference fees, travel, accommodation and costs of caring responsibilities. All staff can apply for one term of sabbatical leave to undertake a predefined project. Three of our four sabbatical awards supported staff undertaking and/or progressing doctoral research: NETTER (2017) advanced his practice-led PhD research and developed outputs in illustration and historiography; IGOE (2017) advanced her previous doctoral research towards a monograph, *Textile Design Theory in the Making*; MITCHELL (2019) progressed a PhD by Publication in 'Performing Interiors'. Our fourth sabbatical supported the development of impact by KWINT (2018) arising

Unit-level environment template (REF5b)

from his previous curatorial research on neuroscience and visual culture, and the development of a related successful bid for a Paul Mellon Centre Fellowship. We supported the development of research and impact activities leading to outputs and external funding bids through our Research, Innovation and Impact Accelerator Fund (RIAAF), which covers the cost of expenses including travel, materials and research assistance. Projects from the 10 awardees from the Unit include research assistance to conduct perception questionnaires for ROBAZZA's practice research on the impact of temporary urban structures; travel expenses for PEDRABISSI and DI RAIMO for projects for the Venice Architecture Biennale (postponed to 2021); and expenses for KNIGHT's project on alternative book formats to aid cartographic literacy in the digital age. GARNER had an award from the University Themes Research and Innovation Fund for his interdisciplinary project Sonic Augmented Reality and the Virtual Doctor (£9,380).

2.3 Postgraduate research students

2.3.1 Integration into research culture

We recognise and value PGRs as an essential part of our Unit's research culture. In line with our wider Faculty strategy, we have allocated substantial QR funds to bursaries that support PGRs' full and part-time registration. We currently have **34 PGRs** registered in our Unit, comprising **14 in Architecture, 12 in Art and Design, and 8 in Creative Technologies**.

We nurture and develop PGRs' skills and confidence through integrated training and seminar programmes in which they participate alongside established staff researchers, supported by supervisory tutorials. PGRs also present to their supervisors prior to their seminar. These developmental opportunities led to our Unit PGRs' participation in annual Faculty-wide postgraduate research conferences. Our PGRs also attend regular research meetings to discuss and share research and to network with other students and researchers. Our Faculty Research Degrees Coordinator leads fortnightly catch-up sessions and, prior to COVID restrictions, a monthly research lunch to which all PhD students and supervisory teams are invited. DRDCs also set up regular peer-to-peer meetings between students. Furthermore, we strategically assigned PhD students office space next to academic staff to facilitate easy access and engagement with them and to help integrate PhD students into our research culture.

2.3.2 Recruitment and funding of PGRs

Alongside developing our student-staff research culture, we aimed to increase the numbers of PhD students in our Unit over this REF period. While 10 PGRs graduated in the census period, the exponential growth in our research output and income has been matched by a sharp increase in new registrations, totalling 34.

Table 1: New PGR registrations

2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
0	2	2	3	4	8	5	10

As well as the interest generated by our staff's research outputs, our primary mechanism for attracting students has been advertisements for fully-funded Faculty bursaries and UoP strategic and global bursaries. CCI offers up to four bursaries per annum to promote research in strategic areas, complementing the University-wide global bursaries for which our students are eligible, as well as attracting self-funding candidates. We will build on SUGG RYAN's AHRC CDP with the Science Museum Group for future applications and we will also adopt this collaborative model for some of our own bursary-funded projects, drawing on existing work we do with our local heritage and cultural organisations such as Worthing Museum (BAILEY-ROSS), Fishbourne Roman Palace (TEBA), Aspex (ACE NPO) and Portsmouth Guildhall Trust (KEEBLE), and forging new partnerships, e.g., Portsmouth City Museums. This will help us build track record and capacity to submit an application to join an AHRC Doctoral Training Programme in the next round.

Supporting the wider University's admissions policy (ILES 3.30, p.5), we carefully word our bursary advertisements to emphasise the value of candidates with protected characteristics and encourage uptake from communities experiencing barriers to PhD study. We also encourage dialogue from candidates with non-traditional backgrounds and qualifications. In this way, we have sought to develop a diverse and international postgraduate student body, with 30% of our PGRs during this REF period coming from overseas.

2.3.3 Monitoring and support mechanisms

We provide each PGR with a supervisory team of at least two (usually three) supervisors with expertise relevant to the student's topic and/or methodology. All supervisors complete supervisory training provided by the Graduate School. All PGRs take part in an annual review, requiring them to submit a thesis outline, a summary of their progress and training over the year, and draft sections of their thesis. We ensure this process is as supportive as possible, carefully choosing assessors with a complementary research background and promoting constructive feedback. We offer any PGR who has not made sufficient progress the opportunity to re-submit their work within an agreed deadline for a second (and final) review meeting. To monitor progress and resolve any emerging issues, each student's primary supervisor also meets with them for regular one-to-one check-ins alongside additional meetings with their supervisory team, providing reports on their progress to the DRDC.

The Unit's students have also benefited from UoP's measures to overcome the effects of COVID on PGR research and progression, which include no-cost fee extensions, access to the student hardship fund, and other targeted support (see ILES COVID Annex, p.10). We also offered increased online support to our PGRs, including an enhanced online Graduate School Development Programme (GSDP), moving Faculty informal fortnightly PGR catch-up online, and offering an online writing retreat.

2.3.4 Skills development and career preparation

Our supervisors encourage PGRs to identify their training needs and arrange internal and external Continuing Professional Development (CPD) to meet them, assessing their progress and development in the Annual Reviews and adjusting training goals accordingly. We

Unit-level environment template (REF5b)

complement the GDSP with bespoke developmental sessions at the Faculty and School/Department level. E.g., our 'Ethics for Creatives' event provided a panel of experts to demystify the ethics process and offer research tips and insights ranging from interviews to collaborative practice-focused research. We offer dedicated funds for PGRs to attend national and international conferences so they can improve their presentational skills and utilise networking opportunities. We also encourage PGRs to submit their work for publication, facilitated by peer-review feedback from their supervisory team. PGRs have co-authored peer-reviewed journal articles with their supervisors and have also contributed chapters to edited books in our REF submission.

Personal, professional and career development are integral to the content of the GDSP, which aligns with the Vitae Researcher Development Framework (RDF) (ILES 2.2.1., 38, p.6). Our Graduate School provides 76 training sessions across the RDF domains, 11 of which specifically address job searching, preparing CVs and application forms, transferable skills, personality-type analysis, interviews, entrepreneurialism, and sourcing and applying for research funding. Our Careers and Employability Service also provides a comprehensive range of resources and training.

We encourage and facilitate PGRs to acquire lecturing experience, providing our students with paid supervisor-supported teaching experiences. To begin teaching, PGRs must enrol on the Graduate Students Professional Development teacher-training programme, provided by the Department for Curriculum and Quality Enhancement. In the last Postgraduate Research Experience Survey (2019), our Faculty scored in the top quartile of universities for PGRs' professional development (82%) and teaching opportunities (82%), with 49% of our PGRs employed in lecturing and 92% receiving formal teaching training.

2.4 Equality and diversity

Our Unit follows UoP's commitment to Equality and Diversity (ILES 3. p.7). The recruitment and promotion processes for staff consider and encourage applications from those with protected characteristics. All Unit members involved in the selection of outputs have completed UoP's three core modules on Equality and Diversity training (Unconscious Bias, Bullying and Harassment, and Equality in Higher Education). As described in the ILES, UoP holds an Institutional Athena Swan (AS) Bronze Award (ILES 3, 44, p.7). PSA and CT both hold the AS Bronze award, while ADP and FMC both have an AS progression team of staff preparing to submit an application. To support our aim of increasing the proportion of women in leadership positions, two people from the Unit have undertaken Aurora leadership training.

Staff with caring responsibilities have access to flexible working plans and timetable constraints. Our FRIC's recommendation of a fund to support the costs of those with caring responsibilities to facilitate conference attendance proposed by our ADR was incorporated into the 2019 University Travel and Expenses Policy.

All staff who are 'at risk', have family members 'at risk', or who have been uncomfortable being on campus during COVID have been supported in remote working since March 2020. All

Unit-level environment template (REF5b)

research activities and meetings have also taken place online and we will pursue a mixed online and in-person approach for research events in future.

Overall, **46% of submissible staff are female**, which is in proportion with our eligible staff. While we have a gender balance in our Lecturers, Senior Lecturers and Professors, all three of our Readers are male. 35% of the staff that we have appointed in the census period are female and promotions also show an imbalance, with 22% going to women, which we will address in our new staffing strategy (see 2.1). Despite this, the **mean gender pay gap for UoA 32 eligible staff is just 1%**. 36% of our outputs are attributed to female staff and we will work to close this gap for our submission in REF 2028.

Examples of initiatives supporting equality and diversity include CCI hosting the 2015 UoP AS Annual Conference with Jane Duncan, then President Elect of RIBA as keynote speaker. Professor Catherine Harper, our former Dean, was UoP's Institutional AS Champion and SUGG RYAN served on the Career Progression and Promotion Working Group of the University's AS Self-Assessment Team. The work of implementing equality and diversity has been extended at departmental level through an Equality and Diversity group in all Schools. Other examples include an all-staff workshop in PSA on issues relating to gender, pedagogical practice and the promotion of women to leadership roles. In response to this, and to facilitate an increased diversity of research outputs, in 2017 PSA organised a practice research conference, open to all Faculty staff. The conference had a range of external and internal speakers engaged in different forms of practice to enable a discussion about the making of research through a diversity of voices. The UoP AS Champion Fund then supported PSA to facilitate a follow-on conference on equality and diversity.

UoP is signatory to the Race Equality Charter. The 9% representation of BAME staff submitted in UoA32 is 2% higher than those eligible and our submission of 50% of eligible BAME staff represents a higher proportion than the 39% of eligible white staff submitted. To increase representation, we are taking action to increase the number of BAME staff we recruit. E.g., UoA32 staff took part in a series of anti-racism development sessions with the organisation 'Shades of Noir' in 2020. Sessions addressed curriculum design, research agendas, learning and work-environment cultures, and staff recruitment. We have a significant international presence within staff in this submission, with 29% EU and 12% non-EU international. Together, this reflects the inclusive, multi-cultural environment within the Faculty, as well as the international reputation that it enjoys.

UoA32 fully supports people with disabilities to engage in research and to have a significant responsibility for research as part of their roles: of the 13% of staff with declared disabilities, 51% are being submitted, compared to 41% of those without disabilities.

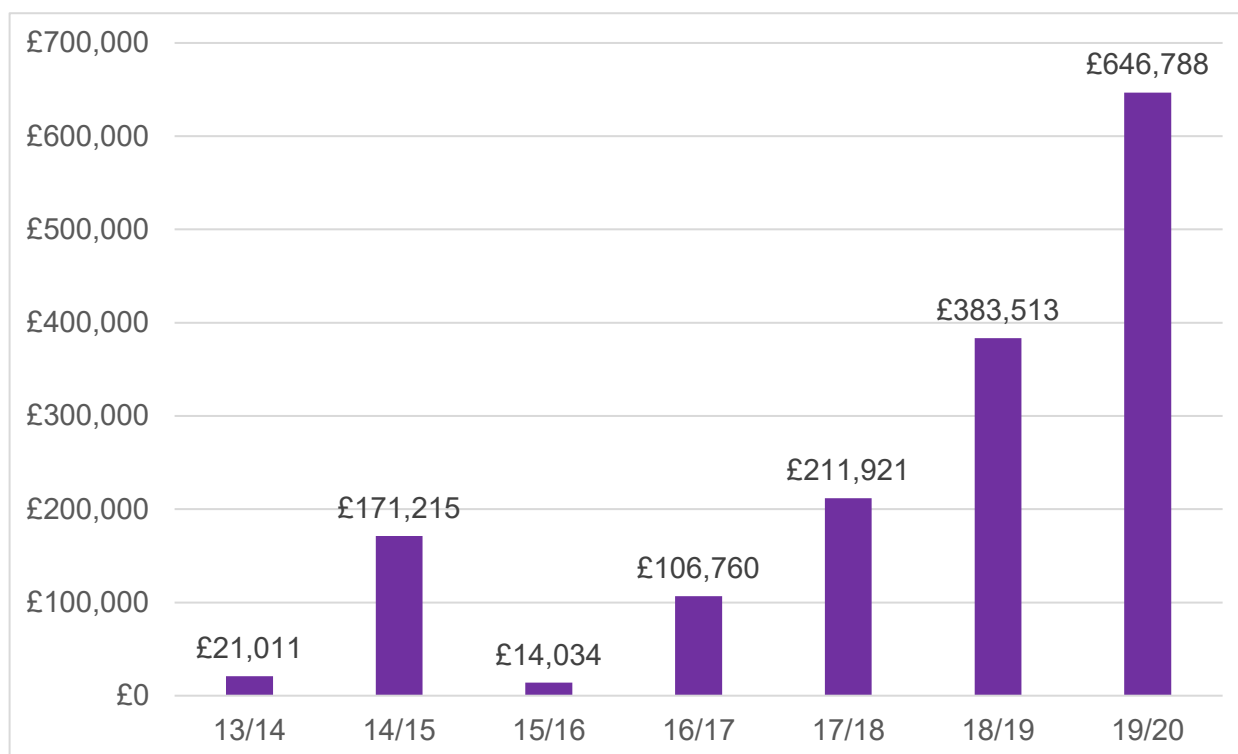
Equality Impact Assessments showed no significant difference according to age between staff in our submission and eligible staff. 100% of eligible ECRs (5f; 4m) have been submitted. Within our submission, ECRs (24% of our submitted staff) are slightly under-represented with 20% of outputs, whilst senior researchers are overrepresented, with 29% of outputs from Readers and Professors (19% of our submitted staff).

3. Income, infrastructure and facilities

3.1 Income

There was a substantial growth in the volume and diversity of income to our Unit from external sources over this REF period. **Our annual research income has increased by nearly 3,000% percent from £21,010 in 2014 to £646,788 in 2020.**

Chart 1: UoA32 Research Income, 2013/14 – 2019/20



Grand total: £1,555,242; Average: £222,177.

Our vibrant, supportive research environment, together with our staffing and recruitment strategy, has brought on experienced PIs who have been able to support their colleagues in developing collaborative bids - with training and administrative support from Faculty Research & Innovation (CCI-RI) - to secure more funding from diverse sources. Income has ranged from smaller-scale individual projects such as KWINT's Paul Mellon Centre Fellowship (£10,135) to joint funding bids to multi-partner projects such as ZAMBELLI's (CI) AHRC Large Grant 'Wastes and Strays', with Newcastle University (UoP £36,840 of £207,944. The DI cluster's participation in complex, consortium-based international research programmes has been key to our income growth; such as FARRER's European Regional Development Fund (ERDF) Interreg France (Channel) England programme funded PONToon (see 1.2.v) (CI: HAKIM-DOWEK; NETTER) with 11 partners across the UK and France (£569,727 of €5.8 million).

Interdisciplinary projects conducted under the umbrella of the Cluster for Sustainable Cities have been key to increasing external income for the Unit and have facilitated a range of outputs such as journal articles and edited books. CSC members worked together under the

Unit-level environment template (REF5b)

leadership of senior academics to obtain a range of funding, with CIs learning from PIs, and made 3 successful bids to the British Council (PIs: LEMES, TEBA; CI: MELIS) totalling £60,936 with universities in Brazil, China and Jordan. They also obtained funding from ESRC (CI: MELIS); ERDF Interreg 2 Seas (CIs: ROBAZZA, KALLITIS); MIBACT– Italian Ministry of Cultural Heritage and Activities (MELIS); and Portsmouth City Council (ROBAZZA). CSC also received 4 competitive internal awards from the UoP Global Challenges Research Fund totalling £286,825.

We will help our other RGs grow income in the same way through their development into larger thematic groupings. We will build on our projects on **sustainability**, e.g., FARRER's ERDF Interreg 2 Seas funded Sustainable Up-cycling of Agro-, Agrofood, and Fisheries Residues in Horticulture and Agriculture as Bioenergy, Biochar and Chitin-rich Products (Horti-blueC, CIs: BOWYER; NETTER). Significant funding was obtained for projects to improve the delivery of **healthcare**: BOWYER's Tupumue, funded by the Medical Research Council (CI NETTER); BOWYER'S Action Against COVID Transmission (ACT) (CI: NETTER) was supported by the Research England QR Global Challenges Research Fund; HARKINS' Portsmouth Hospitals NHS Trust funded Bedview Graphic Interface, and FARRER's ERDF Interreg 2 Seas DERMA (CIs: BOWYER, NETTER, GUMTAU, KWINT).

We have also drawn on our strengths in research in **collections, curation and audiences** to develop funded projects with museums and cultural institutions: SUGG RYAN's AHRC CDP with the Science Museum Group; and BAILEY-ROSS's (CI) Innovate UK funded 'Disgust: Why Do We Feel the Need to Judge' for Worthing Museum. In addition to Paul Mellon Centre funding, KWINT's curatorial projects with multiple partners have been supported by the Henry Moore Foundation and form the basis of an Impact Case Study (ICS). Collaborative partnerships and strong stakeholder involvement have underpinned Creative-XR projects funded by Innovate UK: GARNER's XR for Training and Education with DSTL via QinetiQ; and KEEBLE's impactful Innovate UK/UKRI Audiences of the Future Demonstrator Project with the Royal Shakespeare Company Consortium, including the Philharmonia Orchestra, Manchester International Festival, and Punchdrunk. The latter's multidisciplinary engagement of design, creative technologies and performance received significant in-kind support from industrial partners including EPIC and Vicon. This work builds on the 2018 UoP/Limbik Theatre production *Fatherland*, which was supported by over £100k of funding as part of Creative XR (ACE/Digital Catapult). KOCHBERG's (CI) practice research 'Ritual Reconstructed: Challenges to Disconnection, Division and Exclusion in the Jewish LGBTQI Communities' was funded by AHRC and formed the basis of his practice research submission.

3.2 Infrastructure

CCI made considerable investments in research management and administration over the census period, externally recruiting the ADR (SUGG RYAN) and appointing a Faculty Innovation Director and Faculty Impact Lead, complemented by appointment of a Research and Innovation Officer, Research and Innovation Administrator, Senior Finance Officer, and Centre Business Director for CCIXR. The Executive Dean (KEEBLE) and ADR co-chair the FRIC, which determines the research strategy and support schemes for the Faculty. Each School is represented on the FRIC by Heads of School (including LIEBERMAN: PSA) and School Research Leads (including DI RAIMO and ZAMBELLI: PSA, KWINT: ADP and BAILEY-ROSS:

Unit-level environment template (REF5b)

CT) who have a WLA to support this. REF leadership is drawn from this committee and the wider academic community.

CCI-RI developed a Research & Innovation Hub that features funding opportunities across the broad range of Art and Design covered by our Unit and a library of previous bids and funder feedback to support colleagues, embracing mentoring and peer-led culture. Researchers are also supported by central UoP Research and Innovation Services (RIS) whose seven Grants and Development Officers support Unit members with Research Council grant applications and deliver targeted training on UKRI schemes working with CCI-RI, the ADR and School research leads. UoP has a Peer Review College (PRC) run by RIS, with reviewers from across UoP including Unit members FARRER, GUMTAU, KEEBLE, and SUGG RYAN. Along with successful award holders, they also undertake reviews of bids within CCI not covered by the UoP PRC. The library has a Research Data Officer who advises staff on data management plans (ILES 3.3.24 p.4). Investment in our library resources in liaison with our specialist Faculty Librarian also supports our research.

3.3 Facilities

The Unit is housed in the refurbished Eldon Building and supported with investment in facilities over the census period to ensure the ongoing vitality and impact of our work. This includes state-of-the-art television and motion capture (MoCap) studios, and a cinema used for teaching, research and public engagement events. Practice research in UoA32 is supported with provision of annually-updated workshops in timber, digital and wet photography studios, metal, laser cutting, 3D printing, glass/plastic, textiles construction, and fashion studios. These provide staff and PGRs with opportunities to experiment with research questions. ROBAZZA was supported to build the sculptural structures that resulted from his research projects. MITCHELL used laser scanning engineering workshops as part of her exploration of interior space in Wymering Manor. KWINT'S Henry Moore Foundation project used the MoCap Studio. Other staff members explored ideas of mapping and textile printing as ways of exploring city edges in Portsmouth. CCI also includes state-of-the-art creative technologies and virtual reality (VR) labs that TEBA, HOWELL, BAILEY-ROSS, GARNER, BOWYER and FARRER use to advance research and practice in digital innovation studies, including preservation strategies for tangible and intangible heritage.

Building on our demonstrable academic expertise, CCI prioritised the securing of sizable external funding to create **CCIXR**, our world-leading facilities in creative and immersive technologies to enable our future research and impact activities (see 1.2.4). The facility, located within the Eldon Building, will feature cutting-edge technologies including photogrammetry, volumetric capture, and virtual production technology. Alongside GARNER and BAILEY ROSS's funded partnerships with Worthing Museum and QinetiQ (DSTL), our funded R&D applications of creative technologies and human interaction design in relation to immersive theatre have been key to the development and successful funding of CCIXR. We will also be creating new updated Motion Capture facilities, a VR lab, recording studios, and a digital coding space. Our three new music studios will incorporate world-class equipment including a Neve Genesis mixing desk and a Dolby Atmos system. These world-leading facilities will have an invaluable impact on UoA32's research in human interaction design and medical applications, as well as artistic, design, curatorial, heritage, spatial, and architectural practice. They will also drive future income

with interdisciplinary projects that combine our strengths and facilities in creative, immersive and extended reality with our wider research in art, design, architecture and media.

4. Collaboration and contribution to the research base, economy and society

4.1 Arrangements to support effectiveness of research collaborations, networks and partnerships

A central aim of our Unit has been to encourage research collaborations, networks and partnerships to stimulate and internationalise our research and build on collective strengths. This has proven central to the expansion and development of our research outputs, impact and bidding activities over the past six years, and the significant rise in external income during this period is testament to this. These collaborations have been developed through the PDR, along with the RIAAF, the Conference Support Fund, and seed funding for RG activities. In addition, members have access to an individual staff development allowance of £450 per year, which funds travel for networking. Readers and Professors have an annual allowance of £1000 with the specific aim of developing networking and thereby seed-funding collaborative projects. Collaborative working and partnership has been supported by CCI-RI, as well as RIS colleagues, notably a faculty-dedicated Collaboration Manager (ILES 2.2.15, p.3).

4.2 Staff engagement with key research users, beneficiaries or audiences

The **public discourse of architecture**, and in particular **cultural and social sustainability**, is a key focus for research in this Unit. Led by MELIS and CSC, **CRUNCH** (see 1.2.5) works with urban practitioners, designers and policy makers at six international case-study sites. The project offers Urban Living Labs as a testbed for the interdisciplinary practice-based application of research knowledge and post-occupancy data monitoring. Although continuing through 2021, it has already resulted in a major publication of findings to date and has informed the design of a strategic mobility plan led by MELIS for the UNESCO Heritage City Centre of Campeche, Mexico (September 2020). Based on the developing principles of community resilience, the plan has been developed in partnership with the Governmental Fundacion Pablo Garcia with the Patronage of the City Centre.

Working with colleagues across the Faculty, KEEBLE and GARNER contributed to the **UKRI Innovate UK Audience of the Future Demonstrator Project** led by the Royal Shakespeare Company. In this project, originally scheduled for 2020 (rescheduled to 2021 due to COVID), a multi-disciplinary team provided creative and technical R&D for *Dream*, a live digital performance with the RSC, Marshmallow Laser Feast, Goldsmiths, Manchester International Festival and Magic Leap.

Our interdisciplinary partnerships with researchers both within and beyond UoP in projects facilitated by the DI cluster have been key to our engagement and response to national and international priorities and challenges. Led by FARRER, **PONToon** (see 1.1.1) was centred around community development, social and economic inclusion and equality. Established as a consortium of UK and French partners, including Aspex Visual Arts Trust, Portsmouth (ACE NPO), Devon Mind, and Amiens Metropole, the project explored the design and interface of

Unit-level environment template (REF5b)

creative technologies in support of social inclusion and empowerment of socially marginalised young women.

GUMTAU collaborated with STS Defence on data visualisation, developing **IconIC** (Intelligent Condition Monitoring with Integrated Communications), an automated ‘machine to machine’ and ship-to-shore data exchange capability. Led by the Flanders Institute for Agriculture, Fisheries and Food, **Horti-Blu** is an Interreg-funded project bringing together academic and industrial partners from the Netherlands, Belgium, France and UK to investigate sustainable and circular soilless horticulture. FARRER and BOWYER led UoP’s team, which included botanists, biologists and business innovators.

Between 2014-2020 FARRER and BOWYER were part of the Interreg funded project **DERMA – Design of Enabling Regenerative Materials**. Joining bio-scientific and clinician teams on this project, UoP researchers’ contribution focused upon prototype development and material innovation. In 2017-18 FARRER, BOWYER and DI RAIMO secured funding to further develop and share aspects of this research with colleagues at the Ho Chi Minh City International University (IU), Vietnam, through participation in the Erasmus+ staff mobility scheme. This research-focused collaboration enabled sharing of practice and presentation of the work - ‘DERMA - Wound Care by Design’ - at the 7th International Conference on the Development of Biomedical Engineering in Vietnam: Healthcare Technology for Developing Countries, which took place in Ho Chi Minh City (2018).

UoP Global Challenges Research Funding also enabled the CSC to undertake a number of collaborative research projects and build new networks and partnerships. MELIS and BOWYER (£176,825) investigated catalysing sustainability transitions in cities in the global south suffering from severe plastic pollution. LIEBERMAN (£80,000) leads a project to explore building resilient coastal communities: ‘Learning from Small Island Developing States’. TEBA’s (£20,000) project led and grew a Middle Eastern Heritage Research Hub network to explore different heritage challenges in Egypt, Lebanon and Turkey in collaboration with key universities and heritage bodies in these three countries of the Middle East.

4.3 How the Unit engages with diverse communities and publics through its research

4.3.1 Exhibitions

Photographers in the Unit have made significant exhibitions of their research in projects which have directly involved participatory communities: HAKIM-DOWEK curated and exhibited *East and West: Visualising the Ottoman City* (Peltz Gallery, Birkbeck College, 2014) as part of the AHRC Conference Project ‘Ottoman Pasts, Present Cities: Cosmopolitanism and Transcultural Memories’; ARIEL’s photographic work *Blurring a Border Begins with First Light* was competitively selected and exhibited at the 2016 Print Awards, the centrepiece of the International Print Biennale. KOLKER’s exhibition of photo portraits *The Landscape of Auschwitz* was part of The Lake District Holocaust Project, working with refugee Holocaust survivors. TORRES’s extensive international exhibition of fashion-film series *Unmaking* included *TRANSFASHIONAL*, held at Lisbon Fashion Week SUMMER 2017 at Pátio da Galé, Praça do Município - a joint initiative of the Lisbon City Council and ModaLisboa Association (2016), at Ujazdowski Castle Centre for Warsaw Contemporary Art (2017), at City Museum of Rimini

Unit-level environment template (REF5b)

(2019-20), Vienna Museums Quartier (2017), and at Melkfabriek 'State of Fashion' (successor to Arnhem Fashion Biennale) (2018).

A number of **curatorial projects** have engaged with diverse communities and publics, including KWINT's *Frontiers Reimagined* (Venice Biennale, 2015). In 2019 MELIS was appointed Curator of the Italian Pavilion at the Venice Biennale 2020. Though delayed until May 2021 due to COVID, this project, entitled *Resilient Communities*, provides an unrivalled platform for a number of researchers in this Unit (DI RAIMO, LIEBERMAN, PEDRABISSI, ROBAZZA) and a culminating showcase for the CRUNCH project. METALKOVA-MARKOVA curated *An Archaeology of Memory* at the National Gallery of Bulgaria in Sofia, 2018, a major public engagement component of a much larger British-Bulgarian research and education project, 'Heritage Preservation on the Devetaki Plateau in Bulgaria', which instigated and examined methods of recording, restoring and adapting vernacular architecture. DI RAIMO's co-curation of *Albanian Universe between the Vacuum and the Energy* marked the first presentation of an Albanian Pavilion at the Milan Triennale (XXI Design after Design, 2016).

4.3.2 Media

A key ambition for UoA32 is to ensure our research reaches beyond academia and informs and enriches the communities with whom we collaborate (ILES 2, p.3). Staff from the Unit attended talks by UoP's Press Office on how best to engage with the media. CCI hosted explanatory talks by editors of *The Conversation* along with UoP's Head of Media and Communications, resulting in articles by 7 members of the Unit.

An experienced broadcaster, SUGG RYAN is represented by leading factual television and radio agency Knight Ayton Management. She is consultant and contributor to all 3 series of BBC Two's *A House Through Time*, whose individual episodes have reached audiences of over 4 million. Public engagement through social media is central to SUGG RYAN's research and she contributed articles on house history to leading genealogy website [FindMyPast](#) and was interviewed for their Facebook Live events. She founded and co-hosts Twitter's #HouseHistoryHour via [@HouseHistoryHr](#) with 7 leading professional house historians, engaging with professional and amateur historians and genealogists, and heritage professionals.

4.3.3 Co-creation with communities

KOCHBERG'S interdisciplinary ethno-documentary project 'Ritual Reconstructed: Connecting LGBTQI+ Jewish Communities through Filmmaking' closely involved members of the Jewish LGBTQI community through innovative arts practices, and resulted in public screenings of the [co-created documentaries](#). Co-creation in the community is central to ROBAZZA'S research, which explores temporary urban installations as tactical tools for environmental and socially sustainable development through the promotion of belonging, social cohesion and solidarity between members of the local community. In 2019, ROBAZZA co-designed and co-built *Chatterbox*, a public space interactive installation in partnership with 25 members of 'Chat Over Chai', a Portsmouth based BAMER (Black, Asian, Minority Ethnic and Refugee) group, with funding support from Portsmouth City Council (£9k) and ACE (£15k).

Unit-level environment template (REF5b)

The focus upon the interface of creative practice-led research and health and wellbeing innovation was further explored by BOWYER and NETTER's participation in the AHRC MRC Wellcome Trust-funded AIR network concerning global air pollution. This led to a number of distinct community-based projects in the Mukuru and Buruburu areas of Nairobi. The initial focus of the 'Tupumue' project concerned information gathering and communication about respiratory health but recent events have developed this work through the GCRF funded project ACT (Action against COVID Transmission), which co-creates and disseminates public health messages through creative media.

4.4 Evidence of the Unit's contribution to the sustainability of the discipline

Staff undertake roles that support and sustain the discipline nationally and internationally:

4.4.1 Subject associations and learned societies

Staff hold leadership roles in subject associations across our disciplines, including: BATEY, founder member UK & Ireland Zine Librarians group; TEBA, Chair of ICOMOS-UK Digital Technology National Committee. Memberships include: HARKINS, Chartered Society of Designers; IGOE, Design Research Society and Textile Society; HOWELL, Southern Independent Games Network and The Independent Game Developers Association (TIGA). Fellowship of learned societies includes: SUGG RYAN, Royal Historical Society; LIEBERMAN and FARRER, Royal Society of Arts.

4.4.2 UKRI Peer Review Colleges

Several members of the Unit have served on the AHRC Peer Review College in the census period: GUMTAU; FARRER; SUGG RYAN (strategic reviewer). FARRER is an Assessor for Innovate UK and Interreg funded projects and member of EPSRC Peer Review College. SUGG RYAN is a Peer Reviewer of UKRI Future Leaders proposals. ZAMBELLI is a member of AHRC Technē Peer Review College.

4.4.3 Editorial boards

Researchers are editorial board members of a range of journals across our disciplines - selected examples include: *Airea: Arts and Interdisciplinary Research Journal*; *Computer Games Journal*; *Journal of Architecture*; *IBBYLink Journal*; *Journal of Textile Design Research and Practice*. SUGG RYAN was a member of the Editorial Board of the Adam Matthew Digital database *Trade Catalogues and the American Home*, and the Advisory Boards for AHRC funded project 'The Redress of the Past: Historical Pageants in Britain' (2013-17) and the V&A's *Food: Bigger Than the Plate* (2019).

4.4.4 Peer reviewing

Researchers regularly review book proposals for publication, including for Edinburgh UP, Routledge, Pearson, Bloomsbury, Lawrence King, Vintage Press, McFarland, Rowman and Littlefield, and Manchester UP. They peer review articles for publication across a range of

Unit-level environment template (REF5b)

journals that reflect the diversity and interdisciplinarity of our research. Selected examples include:

- *Art, Design & Communication in Higher Education*
- *Textile: Journal of Cloth and Culture*
- *Journal of Design History*
- *Journal of Cultural Heritage Management and Sustainable Development*
- *SPACE: International Journal on Architecture, Planning and Urban Design*
- *Drawing On: Journal of Architectural Research by Design*
- *IDEA Journal*
- *IEEE Pervasive Computing*
- *Digital Scholarship in the Humanities*
- *Games and Culture Journal*

They also peer review for interdisciplinary journals including: *International Journal of the Arts in Society*; *Journal of Home Cultures*; *International Critical Geography Conference*.

4.4.5 External examining of PhDs

Staff have examined a range of PhDs in the UK, including BATEY: Anglia Ruskin; BAILEY-ROSS: Bath Spa; FARRER: Heriot-Watt; HARKINS: Arts London; KWINT: De Montfort; Southampton and overseas: FARRER: Western Sydney, Australia; MELIS: Polis, Albania; SUGG RYAN: Carleton, Canada.

4.5 Indicators of wider influence, contributions to and recognition by the research base

4.5.1 Prizes

SUGG RYAN's monograph *Ideal Homes, 1918-39* won the Historians of British Art 2020 Book Prize for Exemplary Scholarship in the Period after 1800 and was shortlisted for the Society of Architectural Historians of Great Britain 2018 Alice Davis Hitchcock Medallion. MELIS won architecture prizes for his practice research for the Library and Auditorium of Sant'Anna University and the Stella Maris Clinic for Children with Neuropathologies. BATEY won the *Journal of Publishing Studies* 2020 International Award for Excellence for Information, Medium, and Society. Our ECRs have also won awards for the quality of their research: HOWELL's *Amnesia: A Machine for Pigs* won the TIGA Games Industry Award for Best Audio; BUCKNER's *//_sleeper* was nominated for Best Animated Film at the 2019 Dublin Independent Film Festival; TEBA, Best Early Research Stage paper at the REHAB 2015 International Conference on Preservation, Maintenance and Rehabilitation of Historic Buildings and Structures, Porto, Portugal; PEDRABISSI, award for Best Presentation on Architecture and Built Environment at the International Conference on Civil Engineering and Architecture (2019).

4.5.2 Keynotes and international lectures

SUGG RYAN gave the 2019 Association for Art History annual lecture, and her six keynotes include 'Nordic Modernity and Nostalgia', University of Tampere (2018), and 'History in the Limelight: Dramatizing the past, c.1850 to the present', UCL Institute of Education, London (2016). MELIS gave numerous international lectures including TEDx, Mestre (2019), Italian Institute of Culture, London (2019), Biennale Pisa 2019, International Festival of Culture, Assisi (2019), Domus Academy Milano (2019), Buenos Aires Biennale (2019), Architecture International Festival Rome (2019). TYRRELL gave the 2019 AIA Spring Lecture Series, Baltimore USA. Other international presentations include: DI RAIMO (University of La Sapienza, Italy); KOLKER (Tsukuba University, Japan); KWINT (Circolo Italico-Britannico, Italy, 2015; Norwegian University of Science and Technology, 2018); TORRES (The Swedish School of Textiles; Manifattura Tabacchi, Italy; Austrian Center for Fashion Research in collaboration with MAK, Austria; Whataboutery 8, The Netherlands; Foment de les Arts i del Disseny, Spain).