

Institution: University of Plymouth
Unit of Assessment: 32
<p>1. Unit context and structure, research, and impact strategy</p> <p>UoA 32 (14.3fte) at the University of Plymouth is distributed across two Schools: The School of Art, Design and Architecture (ADA) which comprises UoAs 13 and 32; and the School of Humanities and Performing Arts (HPA), in which the art historians are located, accounting for c.15% of the unit. Both research environments share the same structures and administrative and financial support for research. The unit occupies two purpose-designed sites in the city: Fine Art staff occupy refurbished studios in the Royal William Yard; The high-end digital technologies, along with photographic, film and media studios are housed on the main campus in the Roland Levinsky Building, a signature building designed by BDP with its own gallery, theatre, and cinema. It provides the public-facing aspect of the city centre campus which includes HPA and is adjacent to Plymouth City Museum and Gallery, the Devon County Records Office, and The South West Film and Television Archive (SWFTA). These are now accommodated in a prestigious History Centre (<i>The Box</i>) a £42m development as part of the city's drive toward social inclusion in the arts and culture. The city centre campus is a catalyst for interdisciplinary collaboration especially with computer science, marine engineering, and neurosciences. The University's strong partnership with University Hospital Plymouth, along with collaboration with Torbay and South Devon Hospital Trust, has provided pathways and opportunities for projects, especially in medical visualization.</p> <p>Plymouth city is positioned as a regional centre and the unit is the natural collaborator in economic and cultural development projects involving civic and social enhancement. The unit's active engagement with the community ensures that it is at the forefront of economic and cultural development projects calling on creativity and innovation. In the decade since the unit moved from Exeter to the main campus it has become a cultural nexus for the visual/plastic and sonic arts in Plymouth and its catchment. Approximately 30% of the researchers have collaborative projects with external cognate educational institutions such as Plymouth School of Art, and Schumacher College, Dartington. The unit also maintains and supports the UK offices of <i>Leonardo/ISATS</i> and the international offices of <i>Leonardo Reviews</i>.</p> <p>The overriding imperative of the School is to deliver world-class innovative research along a spectrum of arts practice, including individual enquiry into aesthetic refinement to interventions and commentary on contemporary media practices (studies in the history of art and the shaping of creative partnerships intended to transform the social landscape). It does this primarily through partnerships and the application of creative innovation in cultural interventions. The sentiment of the unit is focused on collaboration and open research seeking opportunities to</p>

share insight and experience freely in public and academic arenas. Interdisciplinary and multimodal approaches to research are embraced, delivering outputs including gallery exhibitions and public art, social intervention, curatorial practice, cross-disciplinary collaboration, and academic publication. Many see these dissemination modalities as a unified heterogeneous platform of possibility on which to explore the creative opportunities that new forms of publishing and distribution afford.

This open embrace of the opportunities that new technologies and the Plymouth campus offered researchers plus their response to the contingencies of the social changes in the city has shaped the research strategy presented in 2014. Since then, the unit has consolidated its objective of research concentration, which has been achieved by developing a structure that facilitates opportunities for focused interdisciplinary collegiate collaboration.

Structure: The strategy and structure of research for the unit (along with UoA 13) is the responsibility of the Head of School of Art, Design and Architecture (**Bennewith**) supported by an Associate Head of School Research (**Goodhew**), an Associate Head of School PGR (**Grant**) and a research committee. The collaborative interaction and quality assurance across Areas and Groups is managed and nurtured by a School Research Committee comprising all Area Leads along with ECR and research student representation. This long-established reporting system is supplemented by a monthly meeting between the HoS, AHoS, Area Leads and Group Convenors to review policy and respond to developing opportunities. The structural organization of the unit is designed to afford cognate researchers access to defined communities in which the emphasis is on processes for systematic knowledge exchange. In this way, individual research excellence in the unit is strategically focused to maximize cross-generational collaboration and interdisciplinary expertise. All staff (both research and scholarship career pathways), doctoral researchers and post-doc alumni are members of one of three **Research Areas: Design, Art** (including Film and Photography), and **Art History**. Also, all research pathway staff belong to one of two mature **Research Groups** these are **i-DAT**, which focuses on digital technologies and design; and **Transtechnology Research**, which provides a locus for research at the interface of art, science, and technology. Through AHOS and research committee oversight there is a productive flow of personnel, resources and concepts between the **Research Areas** and the **Research Groups** to deliver the objective of collaboration as the dominant mode of research practice. In this context the two **Research Groups**, along with the Arts Institute (which includes the University Art Gallery), function to support research sharing their experience and opportunities for development, dissemination, and impact to the unit as a whole. This structure has been developed to bring together emerging research topics and concerns from junior researchers and staff with the more established protocols, recognizable profiles, and networks of the two **Research Groups**.

Each **Research Group** is led by a professor whose primary contractual obligation is research and research development. These **Groups** have some overlapping functions with the **Areas**; namely research and PhD support, mentoring and seminars etc. They also provide an identifiable interface between research from across the unit and specific communities of interest within and beyond the University. Also, they provide support for recent PhD graduates to develop individual and small-scale research initiatives and act as adjunct contributors to nurture a generative process of growth that contributes to the whole of the unit.

The Research Groups:

i-DAT is convened by **Phillips** and functions as a public research interface. Research development and mentoring in the **Design Area** is nurtured through close integration with **i-DAT** which takes its research strategy of social transformation forward with digital/software art and data-harvesting as a public arena for co-design explorations. It has developed strong international partnerships and during the assessment period, it has progressively subsumed the work of the **Planetary Collegium**. Since 2014 it has delivered prestigious Knowledge Exchange projects and captured major collaborative research funding, for example, in its current contribution to the South West Creative Technology Network. This draws on **Phillip's** research into Fulldome visualization which opens up opportunities for social intervention and public impact. **i-DAT** manages high-end research resources such as the Immersion Vision Theatre and the Immersive Media Lab that are open for public and commercial access. Through these conduits, public design imperatives and attitudes are integrated into the research environment.

Transtechnology Research is convened by **Punt**. Its core research is concerned with the cultural interpretation of technology and how research in the arts and humanities can be applied in other disciplinary contexts (**Drayson**). Through this work, the **Group** has forged significant research collaborations with film archives in the Netherlands, with neuroscientists in Europe and the USA through the Marie Curie *CogNovo* project (**Punt, Blassnigg**), and with clinical staff at the Torbay Hospital Trust on Virtual Reality training. It supports a large collaborative cohort of doctoral researchers (c.16 p.a. over the census period) in dedicated research space, in which supervisors, PGRs, and Post-docs work alongside each other, offering open seminars, supporting funding applications and publishing outputs. It carries responsibility for mentoring across the unit with researchers working at the interface of art and media technologies and provides an environment for post-doctoral researchers and visiting scholars. **Transtechnology Research** hosts the UK offices of *Leonardo* and the international offices of *Leonardo Reviews*. These provide opportunities for internships for PGRs and reviewing commissions for researchers as well as access for members of the unit to pre-publication material and academic and artistic trends in the areas of art/science/technology.

The **Research Areas** (Art, Design, and Art History) comprise research-active staff, those on scholarship pathways, PGRs, and visiting researchers. The chief concern of the Areas is for the health of cognate disciplines which they achieve by providing seminars, visiting speaker programmes, conference and symposia initiatives, and a collegiate community of interest around specific modes of research practice. They support doctoral researchers aligned with them and have formal mentoring responsibilities. They are managed by an Area Lead (appointed by competition) who has significant autonomy in managing the delivery of research in the Area with a budget of £6k p.a. Area Leads report to the School Research and PGR Committee concerning the overall strategy. ***(N.B. Only those staff submitted in this return are listed against the Research Area. Some who have retired or left are referenced in the body of the description).**

Arts Research Area (Baker, Cook, Grant, Lewin, Morstang, Parker, Partridge, Wells) * comprises painters, installation artists, sonic artists, software artists, filmmakers, writers, editors, and photographers. Its coherence derives from research being individually led and collectively shared and supported in process within the specific methodological preoccupations with practice and research. These methodological concerns are explored through formal relationships with those national and international colleagues who are concerned with research and arts practice in a variety of modes. For example, **Chandler's** and **Wells'** curatorial work and publications sit alongside **Southam's** personal vision of the landscape expressed through photography, books, and exhibitions. Similarly, **Cook's** paintings are exhibited in commercial galleries as well as a didactic exhibition curated by historians. Film and moving image research are both artisanal and conducted with industrial collaboration. **Lewin's** film formed part of a complex exhibition in the John Hansard Gallery that elaborated its research process, while **Morstang's** presence in international festivals sits alongside her exhibitions of still photography. **Parker's** more artisanal approach to film making uses screening and mixed modal collaborations to both shape and exhibit her research. These intimate interactions between form and platform provide the discursive coherence that sustains a heterogeneous area of practice.

Design Research Area (Bennewith, Black, Davis, Drayson, Corino, Emmett) * was not represented in REF 2014. During the assessment period, it has become strategically consolidated as research into problem-solving behaviour that is manifest in visual solutions at a public interface. It is both proactive and reflective in its response to real-world design issues. The appointment of a HoS as Professor of Design has given impetus and direction to the research energy in this Area. As with the other Areas, Design comprises a broad church of practice, including **Davis'** examination of 3D printing as a communication medium, **Black's** work with illustration as a performative practice and **Bennewith's** large scale use of lighting design that fuses information, technological innovation, and spectacle. **Emmett's** research into the

performative dimensions of spatial design through soundscapes, film, coding, and interactive technologies is exemplary of the unifying discourse in this Area; taking design thinking in innovative and engaging ways to transform the economic as well as social landscape. The Area is closely aligned with the **i-DAT** Research Group.

The **Art History Area (Bokody, Graham)** is administered by the School of Humanities and Performing Arts but is represented on all ADA committees. Since 2018, it has undergone some significant restructuring and is now in the process of increasing its establishment. In 2014 5 fte were engaged with contextual study of core art historical periods. These have been explored during the assessment period through pioneering research methods (reception studies, social history of art, gender studies and semiotics) and externalized in publications, exhibition curation, catalogues, and social activism through public engagement, for example, **Patterson's** social interventions using contemporary murals and **Blackshaw's** publications and exhibition concerning medical discourse and art in fin de siècle Vienna. Since 2018, the imperative of research intensity has shaped the unit's focus on its long-standing and underpinning strength in the historical contexts of Renaissance art and its later reception in the 19th century. For instance, **Bokody's** exhibitions and publications on Italian metapainting and **Graham's** studies of Vasari.

Strategy 2014-2020:

The 2014 submission proposed that the unit's future ambition was:

to further develop the international reach, reputation and cultural benefit of research in our disciplines through: (1) focusing research in concentrated areas of strength; (2) developing collaborative, inter-, multi- and trans-disciplinary practices both within the University and within regional, national and international settings; (3) supporting all staff in realizing their individual research and career ambitions, from early career researchers to professors; (4) developing the numbers, range and quality of PGR students; extending external income generation and developing business partnerships.

It also proposed the further extension of the two **Research Groups** (i-DAT and Transtechnology Research) as resources for the whole unit. There has been rapid achievement in these ambitions, and in response, the success of the strategy was modified in the following ways:

1. In 2018 the three **Research Areas** were formed from the previous six to enhance the critical mass in each Area to strengthen the ECR and PGR environment.
2. The unit extended its base by investing in its art/science collaboration strategy that featured in 2014. It has engaged in interdisciplinary research, particularly with Earth Sciences,

Neuroscience and Psychology with PhD bursaries for collaborative projects. Resources have also been invested in research collaborations with external agencies, e.g., the Met Office, Torbay Hospital, EYE Film Archive, Netherlands Institute for Sound and Vision, and South West Film and Television Archive (SWFTA). The unit has also extended its research and public engagement potential by funding international arts research at a geographically local level through the University Gallery and involving local arts organizations in international projects such as the Atlantic Project. This support reinforces the strategic priority of funding exhibition opportunities and initiatives that stimulate research opportunities, particularly for ECRs.

3. The unit enhanced its work-load support for the in-house editorial functions for academic journals to increase academic publishing opportunities and experience.

4. The unit allocated specific funds (c.10% of the global) for ECR support with additional work-load recognition for ECRs. It also has an 'Established Researcher' support group for post-ECR researchers who aspire to Readerships and Professorships.

5. To deliver this transformation the Area Leads have work-load compensation to administer their budget, coordinate and focus research activities including hosting externally sponsored international conferences, internal symposia, and annual conferences series. Participation and organization responsibilities for these have been distributed across the unit and the full range of academic career paths from PGR, ECR to Professor.

6. The two established **Research Groups (i-DAT and Transtechnology Research)** with track records in grant capture and PGR have become the locus for formal mentoring and support across the unit. They have also been charged with developing international collaboration and a succession strategy to support sustainable research across the unit.

7. In Art History, there has been modification to the research focus on medicine and modernism expressed in 2014. A new direction of research in Renaissance art and its subsequent reception has strengthened over the period. Public interventions include **Bokody's** exhibitions on visual media before 1500 and **Graham's** public engagement activities with the National Gallery.

As a result of these modifications to the 2014 strategy the significant intellectual shifts toward art/science/technology collaboration identified in the 2008 and 2014 strategy have been further realized and consolidated across the unit (as in the three-year Marie Curie ITN *CogNovo project* begun late 2013); **Morstang's** work with the Mathematical Society, and **i-DAT's** increasing recognition as a public portal for digital intervention.

The 2014 strategy has been particularly successful in its objective of research concentration in bringing the quality and profile of design research up to international standards. This has meant

that recent new appointments have a strong base on which to build their research relationships. Consequently, there has been a marked growth in Digital Design and the research network established in the previous assessment period focusing on the South West has yielded substantial research funding and opportunity in immersive media. This period has seen the establishment of local, national, and international collaborations with the unit becoming a leader in the international Fulldome community.

In common with much arts practice, the research activity in the unit has a significant public-facing dimension whether through on-line distribution or curated public exhibition. As with research so both public engagement and impact have been served by the strategy of resource concentration. While the unit primarily supports emergent and individual research, the **Research Groups'** strategic responsibility to foster collaboration has enabled large scale projects to be nurtured. The two impact case studies in this assessment are the products of ongoing research that has its origins in the previous assessment period. The first and most broadly public-facing has emerged from a spectrum of research activity that has shaped **i-DAT's** ambitions since its inception. It was chosen for its strength and for the involvement of a large number of agencies and researchers including Tate and 25 local arts organisations. The second is built on research in **Transtechnology Research**, originally funded by HERA, which had an inherent impact component that was extended by two further Follow-on Funding (FoF) impact grants. The findings were also embedded in the Marie Curie ITN project, *CogNovo*, which had an integral impact component. The beneficial involvement of international archives and the health sector in this case study also reflects the interdisciplinary reach of the unit's strategic approach to research impact. *CogNovo* is exemplary of the unit's emphasis on interdisciplinary and intergenerational collaboration. The grant-funded a training programme and 12 research fellows for three years, which was complemented by a further 14 University studentships. They each examined creativity and cognition from scientific and/or artistic perspectives. Each fellow had a team of c.5 supervisors (to include ECRs) drawn from disciplines across the Science, Arts and Humanities. The unit directed 5 of the PhD studentships and contributed to the training of all 26 fellows. The project had an impact work package in the form of public participation events (based on the successful HERA format of an informal knowledge exchange market). The stimulus of such events is also evident in some new research concerns as in **Drayson's** work on the use of gossip as a discursive mode in academic medical research.

The approach to interdisciplinarity inflects the unit's attitude and response to **Open Research**. The research culture in the unit is characterized by an intellectual generosity and openness inherent in the arts. A key instrument in eternalising this sentiment has been the integration of impact events in major research projects. In this vein, AHRC FoF (**Punt**) extended the impact events integral to the HERA project to deliver open (no cost) writing workshops in India as part

of the Kochi Biennale. Similarly, *Leonardo Reviews* is financially supported by the unit in its mission to make a high-quality synthesis of research in the arts and sciences freely accessible to less well-resourced research communities. The journal *Message: Graphic Communication Design Research*, (launched by the unit in 2013 by the Design Area) is free to access and **Phillips'** open-source audience metrics applications (ARTORY) allows user engagement to be understood. **Cook's** work, which exists in relation to both public and commercial contexts of art as a commodity, was also made available in York as a contribution to understanding the materiality of 17th Century Dutch still-life with the financial support of the unit. **Punt's** work with and for the Belgian journal, *Place*, attempts to offer a freely accessible undifferentiated platform for arts research that does not prioritize or hierarchize forms of presentation and externalization. Similarly, **Parker** has delivered open filmmaking and creative media workshops for artists at Plymouth Art Centre and Calstock Arts (funded by Creative Skills, Cornwall).

This concern with direct public engagement as an impact strategy through open research principles can impinge on the ethical management of data in new and unexpected ways. Members of the unit serve on the Ethics and Integrity Committee and share in the process of developing responses to the challenges to protocols that new modalities pose. All staff and research students take part in, and are responsible for, ensuring that their work complies with the University Code of Practice on Ethics and Data Integrity as well as subject specific ethical guidelines.

Future Research Strategy (2020-2025)

The School of Art, Design and Architecture revised their five-year strategy in 2019 with a new aim to '*Sustain a vibrant research culture across the School with clear frameworks and processes that raise both the confidence and ambition of the School's research-active staff and encourage a greater volume of grant capture and partnerships.*'

This aim is divided into five actionable objectives:

- (i) Generate research of the highest quality that benefits the advancement of our own fields of practice or makes valuable contributions to other disciplines through interdisciplinary research collaborations.
- (ii) Interdisciplinarity and research collaborations to increase large scale grant capture.
- (iii) Research Leadership: Increase the research intensity of School staff and optimise the way staff currently use their time to undertake research.

(iv) Equality and Diversity: Promote diversity and equal opportunity in research and enable (or create opportunities for) people from all backgrounds to contribute to the research excellence of the School; so that the research we undertake has equal benefits for all.

(v) Partnerships and Knowledge Exchange: Partnerships with industry and public sector partners for enhanced impact, income generation and knowledge exchange activities.

These objectives align with University of Plymouth strategic objectives to be a *'broad-based, research-intensive university, delivering excellent interdisciplinary research, and civic engagement.'* The Unit has adopted these objectives and is delivering them through a SMART action plan with measurable initiatives. One area in which we aim to achieve growth is in grant capture, enabling our research base to grow and building on our existing track record. We will also seek to strengthen our connections to the industry by incorporating them into innovation-related research initiatives which will capitalise on the School's investment in knowledge exchange and the infrastructure of the Digital Fabrication and Immersion lab. To enable staff to prioritise and focus on research we have established a new 'chunking' of time to allow staff to maintain short, concentrated, periods of research effort. Diversity and equality are also embedded fully within our research strategy and we aim to ensure gender and diversity balance in researcher teams on funding projects through monitoring.

2. People

The overarching frameworks that shape the **staffing strategy** in the unit are:

- (i) Presumption against short term contracts to ensure continuity and succession.
- (ii) Delivery of research against the expectations of the Concordat to Support the Career Development of Researchers, and
- (iii) to deliver a good working and learning environment in which there is due regard to the possibility of inherent bias to ensure that we meet the highest standards of equality and diversity. In 2018 the School of Art, Design and Architecture was awarded the Athena SWAN Bronze Award.

Within these parameters, the unit's response to the consequences of personnel changes as senior members of staff retired was factored into its long-term strategy. To meet this challenge, the two established **Research Groups** in the unit were tasked to:

- (i) make available opportunities for research and impact infrastructure; and

- (ii) provide support for **Research Areas** to capture the strengths of both emerging and established researchers.

This strategy was particularly significant for photographic research as two professors retired early (**Chandler, Southam**) and a third (**Wells**) reduced her time to 40%. Support was directed to this Area to maintain its profile and impact. **Morstang** was promoted to an Associate Professor and given additional financial support (c. 39k) for her project development and impact. **Parker** was supported (with £18k) for teaching relief to extend her film work into the community as an integral part of her practice. **Wells** too has, in her fractional post, been funded (c. £10k) to engage ECR researchers more fully in her curation projects and to secure impact. The Co-convenor of Transtechnology Research (**Blassnigg**), a stellar researcher, died in 2015 and in her place an ECR (**Drayson**) was appointed who has rapidly developed a strong profile having been supported with teaching relief, close mentorship and in extending her professional qualifications. In 2014 the unit returned 16 staff (13.75 fte). In this assessment, a similar return of 20 contracted staff (14.3 fte) has been achieved. As a measure of the effect of this staffing emphasis on development and succession, the current submission includes research from 8 new researchers (1 ECR) who were not submitted in 2014.

The overriding principles in all decision making and strategy, in respect of all people concerned with the unit in any way, is to ensure freedom of thought and expression and freedom from discrimination. This is monitored and ensured by standing agenda items at all committees, clear and transparent reporting pathways, harassment advisors, and individual ethical vigilance. To ensure this imperative of equal opportunity and proactive inclusion the strategic framework that is in place in the unit for developing researchers comprises:

Identification of Research Pathway:

- (i) All staff have at least one annual meeting with the HoS and AHoS Research to discuss scholarship and (for those on research track) their three-to-five-year research plans.
- (ii) Professors meet with the HoS to discuss their research plans, networking, and research student strategy for contributions to the base discipline.
- (iii) Staff who are on a scholarship track and wish to develop a research pathway submit a three-to-five-year research plan to the HoS.
- (iv) If this is viable and consistent with the research profile of the School, it is supported along with all research staff in the following ways:

Infrastructural Support:

- (i) A baseline workload research allowance of 350 hrs. per year.
- (ii) Confidential monthly mentoring by Professors or Senior Researchers.
- (iii) ECR group support and forum led by a 'senior'.
- (iv) Established Researcher Groups (post-ECR: pre-Reader) led by a Professor.
- (v) The two **Research Groups** have identifiable offices and published office hours to work with colleagues from across the unit. The three **Research Areas** have studios and offices for collegiate exchange.

Financial Support:

The unit has distributed an average of £114k QR funds p.a. over the census period. This has been achieved through:

- (i) Competitive funding through application for conference attendance and major project development.
- (ii) Competitive sabbatical/research leave scheme for seed research and project delivery. (**Bokody, Blackshaw, Cox, Grant, Lewin, Morstang, Patterson**)
- (iii) Support for individual projects with the appointment of research assistants where appropriate.
- (iv) Professors and Readers have a personal fund of £1,000 and £500 p.a.
- (v) Access to 2 RAs (0.6fte) available for grant application development, RA assistance for research development and delivery, teaching relief and external consultants.
- (vi) Matched funding and seed-funding for major undertaking for example Lewin and Phillips Arts Council Funding and Morstang's initial film treatments.

Collegiate Support:

- (i) All research staff are members of a **Research Area**.
- (ii) The **Research Areas** have a budget (c. £6k p.a.) to deliver research stimulation programmes including seminars, external speakers and post-doc visitors that foster collegiate collaboration.
- (iii) Collaborative evaluation and development of the **Area/Group** objectives relative to the national and international environment are achieved through unit research review events undertaken annually by the School Research and Graduate Affairs Committee.
- (iv) **Area** and **Group** delivery of a conference programme that involves external agencies.

- (v) Postgraduate research teams, where possible, include less experienced staff who can be mentored as supervisors.

Research students: Students are integral assets that enrich the research culture of the unit. At the university level, they are supported administratively and with generic training by the Doctoral College. At the unit level, there have been more than 100 PGRs p.a. on-site in the period. Those funded during the assessment period were linked to two major grants: the AHRC 3D3 regional cluster (15), and the Marie Curie ITN (25). The unit also funded two full-time Regional Development bursaries and a new Doctoral Teaching Assistant programme covering fees and payment for 250 hrs. teaching (3). The remainder of the PGRs are self-funded and mostly register as P/T students. PGR recruitment in **Transtechnology Research** pays special attention to providing space and support for mid-career returners for whom PGR was very often regarded as a remote option.

Monitoring and support of PGR progress are managed institutionally by Gradbook which records tutorial contact and progress through the various formal stages. Additionally, the School has a PGR coordinator at AHoS level whose remit is to oversee the health of the PGR environment and the delivery of training programmes. The fully integrated status of PGRs in the unit ensures that they are undertaking their projects in an environment in which future professional pathways are openly discussed. Also, the Marie Curie ITN funded specific provision for a careers officer and career development, and where this included open lectures and seminars, they were shared with all PGRs. P/T PGRs can work as interns and RAs, e.g., as collaborating editors on journals or on public engagement and impact projects, for example, collaborating with consultants on filming clinical practices and developing a gallery in Torbay Hospital. **i-DAT's** work provides PGRs with opportunities to collaborate with SMEs (e.g., Elixel).

PGRS can remain in the unit as University Associates following completion. In this assessment period, the unit supervised 85 completions and its graduates have gained teaching and research positions in institutions including, Bristol University, Bournemouth University, Cardiff Metropolitan University, ESHADR at Rouen, Rhode Island School of Design, Central Royal College of Art, St Martins UCL, and the University of Vienna.

Equality and Diversity: Equality and Diversity have been at the forefront of the unit's profile and contribution to the University ethos even before its move to the main campus in 2006. The parameters of the UoA in some sense make this axiomatic since much of the international research agenda in art and design has been informed by the various iterations of feminist theory concerning social practices and the ideologies of representation. The intellectual and creative opportunities to make these interventions, along with LGBT+ debates and post-colonial criticisms of modernism, are central to practitioners in this unit. For example, **Parker's** concern

with feminist practice and filmmaking has a 30-year track-record of interdisciplinary collaborations. She has taken this extended research into a large-scale LGBT+ project intended to have a cultural impact on the local community. In 2020 she won the BAFTSS Practice Research Award in the Essay/Experimental film category. **Blackshaw's** international exhibitions at the Courtauld and Drawing Room galleries explore the perception and construction of sexuality around 1900 and today. Similarly, **Lewin** addresses the issue of exclusion and alienation by resituating post-colonial criticism in autobiographic film-works, texts and exhibitions that aggregate personal reflections to promote positive social action. Finally, **Morstang's** film *In Transit* poses the issue of moral relativity in wartime through an archaeological documentary. Other researchers (**Black, Blassnigg, Drayson, Punt, Wells**) have expectations that their work highlighting social and political asymmetries, will encourage thoughts about inequality. In much the same vein **Bennewith's** and **Phillips'** collaborations with Plymouth City Council and SMEs brings their research to certain constituencies in the public arena that need to be given visibility and cultural agency.

These attitudes inform its strategies and research management, and it was awarded an Athena SWAN Bronze Award and is operationalizing toward Athena SWAN Silver recognition.

3. Income, infrastructure, and facilities

Most researchers in the unit have a track record of practices that are dependent on interdisciplinary collaboration. This, combined with an imperative to use arts practice as an agent of social and economic change, has shaped the support for accessing funding through (i) grant capture (ii) civic partnerships (iii) art agencies (iv) philanthropic sources (v) consortia.

- (i) At the unit level, grant capture is supported at the concept and application stage with RA support. Also, the considerable experience of award boards within the unit is available at all stages before grant submission. Of the c. £1.3 million awarded by EU/UKRI, c. £900k was for interdisciplinary research.
- (ii) Civic partnerships are at the core of the impact strategy that drives research in **i-DAT**. Funding for this was achieved directly from Research England (Creative Clusters Fund, valued at £6.5m). It involved a consortium of 4 HEIs and 2 cultural partners to build the South West Creative Technology Network (SWCTN), a project to expand the use of creative technologies across the south-west of England led by the University of the West of England (UWE Bristol), in partnership with Watershed in Bristol, Kaleider in Exeter, Bath Spa University, the University of Plymouth and Falmouth University. The unit has benefited from 4 research fellowships under this

programme. Transtechnology Research has established a strong collaborative relationship with South Devon and Torbay NHS Hospital Trust which has invested £15k seed-funding, clinical access, and office space for RAs

Cultural Development Fund: The Cultural Development Fund is a £5m DCMS/Arts Council funded project over three years to develop the cultural and creative ecosystem of Plymouth in sustainable ways. It is a cross-city partnership involving the University, **Plymouth College of Arts**, and **Plymouth City Council**. The unit's share of c. £800K funds several research-led knowledge exchange and cultural leadership development activities. This fund is important for the development of the School (and unit) in terms of advancing research-led knowledge exchange activities concerning the Creative Economy and developing a stronger relationship between our community-engaged research and knowledge exchange activities for social and economic good.

Arts Agencies are also key funders, and the unit undertakes to match-fund grants that require this, for example, Arts Council Projects Awards to **Lewin** and **Morstang** were supported in this way and led to a successful application that enabled the realization of ambitious film and exhibition projects. **Parker** supports her film practice through a mixed funding portfolio (EU Culture Programme, Centre for Moving Image Research, Royal West of England Academy and Arts Council England) and **Bokody** was awarded residential research fellowships at Niki-Istituto Universitario Olandese (Florence) and BildEvidenz (Freie Universität, Berlin). **Morstang** has been especially successful in attracting funds from philanthropic sources. The unit also invested in the early stages of her films' development and production so that funds for their completion were attracted and, in some cases, the unit has funded late-stage completion to ensure maximum public engagement and visibility for her work on environmental topics.

- (iii) There have been major research collaborations involving cross-institutional and cross-sector partners: (a) The research into Fulldome Immersion has established relationships that brings the unit's research into partnership with Dome designers and content providers across the world. One outcome of this has been the investment by Plymouth City Council in a unique arts Fulldome as part of its regeneration policy. (b) Major PGR research funding for the unit during the period of assessment was dominated by awards made by the AHRC for 3D3 Doctoral training. (c) EU funded Marie Curie 2014. The 3D3 programme brought training collaboration from 3 South West HEIs. Marie Curie involved 21 industry and research institute partners from across the world who supported in kind and placements. The project involved new partners including Manipal University, Hungarian Academy of Science, Max Planck Institute, and companies *LogicMills* and *Kin Design*. (See full list at: www.cognovo.eu). The University continues to fund its alumni activity, including a

conference programme delivered in 2019 in the Philippines that considered creative responses to UN Sustainable Development Goals.

The emphasis on high impact research as a KPI for the two **Research Groups** provides focus and visibility for strategies and practices that engage cultural, economic, and social change. For this, they have access to RA, administrative and producer support, including resources through the Arts Council National Portfolio Organisation Grant. For example, collaboration with the Eden Project and work on *Artory* had extensive RA support.

In 2020 two new Labs specializing in Digital Fabrication and Immersive Media were created in the Roland Levinsky Building that represents over £1.5 m investment by the University. They provide a new cutting-edge resource through which the University can lead in advanced Science, Technology, Engineering, Arts, Architecture, Maths and Medicine research and KE projects, where researchers, students and industrial partners can work in collaboration. They are a catalyst for the development of new interdisciplinary PGR opportunities helping to re-define the way artist, designers and architects' work with engineers and medical practitioners in the envisioning, designing, manufacturing and construction of our future built environment. Through the connection with the Cultural Development Fund, they create new economies for the region through interdisciplinary research and knowledge exchange. These labs, part-funded by the European Regional Development Fund, similarly extend the reach of research through an integrated multimodal approach which has been a key research concern for some research projects.

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

Collaboration

The unit also has an established network of international partners, working extensively with film archives in the Netherlands sharing research to develop conservation, preservation and exhibition projects that have mutual research interest which has cascaded to academic engagement with the *South West Film and Television Archive* (SWFTA). During the assessment period, with the collaborative advocacy and support from members of the unit, this endangered and badly sited archive of television programming (the largest in the UK) has been recognized, restored, and situated in the heart of *The Box*. These partners continue to be active collaborators and shaped a F-o-F project with the *Indian Space Research Organisation* (ISRO), Bangalore, India, and Manipal Centre for Philosophy and Humanities, India at the Kochi Biennale (2019), which has led to increased dialogue between Indian and Dutch archives. Collaborative projects concerning theoretical aspects of art, science and technology included

international research institutions: Aarhus University, Bibliotheca Hertziana – *Max Planck Institute* for Art History; Cambridge Digital Humanities Learning Programme, The Computer Lab, University of Cambridge; University of Arts, Poznan, Poland; Art-Science-Technology, The Sangar Institute, and Gdansk University of Technology, Poland; School of Architecture.

The largest international collaboration in the reporting period was through the Marie Curie funded ITN *Cognovo*. The project identified partners within and beyond the University with interests in Psychology, Computation, Art, History, Critical Inquiry, Neuroscience, Robotics, IP exploitation and AI. These collaborations yielded new pedagogic and disciplinary insights (**Denham, S., Punt, M**) and employment destinations in academia and industry. Nationally, the most significant research collaboration partnerships have been developed by **Cook** with York University, **Graham** with the National Gallery, **Davis** with the V&A and **Phillips** with The Tate for a major exposition of digital and software art. This led to collaborative partnerships with the Environmental Futures & Big Data Impact Lab. University of Exeter, Exeter City Futures, the Met Office, Plymouth College of Art, Plymouth Marine Laboratory, and Rothamsted Research. **Cook** has pioneered an innovative integration of his contemporary practice and art historical research in collaboration with the University of York and York Art Gallery. Drawing on his award-winning work (Suny Art, and New Light prizes) he has given masterclasses in China and Netherlands and collaborated on curatorial and artistic research to integrate contemporary arts practice into a historical exhibition. These priorities and strategies have been and will continue to be, driven by a vision that through collaboration with our communities of practice and place our research will contribute to the cultural, ecological, social, and economic betterment of our region and beyond. A key emphasis is to develop and nurture open strategies for intergenerational collaboration. This is done as part of the ethos of research as a collaborative 'gift culture' that retains, through succession, the assets of the research community.

National and international collaboration in the unit is regarded as both an opportunity to extend its reach of influence and as a mechanism to enrich the cultural base of the unit's interventions. The imperative for Open Research is also met with public exposition and collaboration with cultural agencies to maintain the health of the discipline base. Inevitably, in this context, much of the evidence for collaboration and researcher's engagement is captured elsewhere in this document. This integration is continuous with, for example, **Emmett's** major research projects in collaborations with architects and musicians that brings together situated cognition, fluid architecture and machine aesthetic as a musical form (e.g., *Space Interface*). Other major creative collaborations in this vein have also involved small groups of researchers working on projects with partners. These include The Centre for Moving Image Research (CMIR) University of the West of England, Bristol; Concordia University, Montreal, Canada; Tokyo Art Centre, and

Urbana Kultura I Edukacija, Čakovec, Croatia, who have all been part of bids for research funding.

The School's approach to **Knowledge Exchange** is distinctive and sustainable. It aims to improve the effectiveness of the models through which we deliver research and education to contribute to the financial, social, creative, and intellectual capital of society. The Unit's research is embedded in a creative and cultural-led regeneration of the city and region of Plymouth and the rural creative economy in Cornwall through its co-leadership of the South West Creative Technology Network, the Cultural Development Fund, and the Creative Cultivator (phase 1 and 2). The practice-based research and the professional nature of disciplines in the UoA, means that KE is frequently a key element of the research process when working with audiences and communities as a mode of "discovery and research" that they are more comfortable with. New and early career research staff are guided and encouraged to develop research trajectories that include the effective transfer and impact of research and knowledge generated in the UoA.

Contributions to research base

During the assessment period, **Punt's** work with European research councils included chairing and/or participation in 6 AHRC award boards as a Strategic Reviewer and contributions to the training programme for the PRC, for which the University was specially recognized by AHRC for three consecutive years. His work has also brought on new staff across the School including **Lewin** who is now serving on the AHRC PRC. Intergenerational collaboration is especially evident in the editorial work in which PGRs and ECRs gain experience to manage material and gain experience of publication from the production point of view. Publishing collaborations associated with this have been with MIT Press (University of Texas at Dallas, ATEC/EMAC; SAR (Society for Artistic Research), Universidade Federal de Goiás, Brazil; Laboratory for Research in Electronic Media, MediaLab/ UFG. Through these and activities listed below the unit sees itself as an important contributor to the health of the discipline in key areas such as practice as research, digital design, art/science/technology research and design thinking, especially in the context of civic engagement.

Journals Contributed to as Editor/ Reviewer

Bokody: *Papers of the British School at Rome*. **Black:** Reviewer, *Journal of Illustration*. **Drayson:** *Leonardo Reviews*, (Associate Editor, member of Review Panel). **Davis:** *AIGA (American Association of Design: MAKE)*, **Graham:** *OUD Holland: Journal for Art of the Low Countries*. **Morstang:** *Screenworks*, *Interdisciplinary Science Reviews Journal*. **Phillips:** *Ubiquity. Journal of Pervasive Media*. (Co-Editor). **Punt:** *Leonardo*, (International Co-Editor) *Leonardo Reviews (Editor-in-Chief)*. Editorial Boards: *Consciousness, Literature and the Arts*;

Journal of Writing and Creative Practice; Leonardo Book Series; Leonardo/ISATS; Media Lab, UFG, Goias; Refractory: a Journal of Entertainment Media; Place; Schumacher Society.

Reviewer: Bloomsbury; International Journal of Entertainment Technology and Management; Int. J. of Entrepreneurship and Innovation Management (IJEIM); Intellect; MIT Press, Rodopi. **Wells:** Co-editor, *Photographies*; Curator: *Seedscaapes: Future-Proofing Nature*.

Membership of Peer Review Colleges and Juries

Bokody: International Centre of Medieval Art (ICMA) Book Prize, 2019-2021, Lewin: AHRC PRC. **Drayson:** Reviewer, Austrian Research Council (FWF). **Partridge:** REF2021, Member of UoA SP32 Art & Design, History, Theory, Practice Sub from the start and the criteria setting phase, Deputy Chair, and Interdisciplinary Advisor. **Phillips:** SIGGRAPH Asia 2020; 2018-Arts Council England SW Arts Technology External Reference Group, 2018/19/20, Reviewer EVA London, 2014-2020, ISEA International Program Committee, 2017, ISEA International Board (Secretary) 2016/18/19/20, Reviewer. *Design Research Society*, 2014-2017, ISEA International Advisory Committee, 2013-14 AHRC *Internet of Things* Advisory Board, 2013-15 Arts Council England SW Digital Reference Group, 2012-15 Technology Strategy Board Internet of Things Special Interest Group. **Punt:** Expert Assessor EU Horizon 20/20 *Photolit* Project, Leuven 2019 and 2020/21. Foundation for Science and Technology, Portugal; Cultures and Cultural Production Evaluation Panel, 2020, *Fonds voor Wetenschappelijk Onderzoek*, Senior and Junior Researcher Scheme, 2020, Programma Aga Kahn, 2019, European Science Foundation, 2019. *Fonds zur Förderung der wissenschaftlichen Forschung*, Belgium, Fellowship Awards, 2018, AXA Research Fund, 2018, National Science Centre, Poland, 2018-2022, Czech Science Foundation, 2018, Foundation for Science and Technology, Portugal. Stimulus of Scientific Employment, 2018-2021, FWT Austria Board BMC Chair and Head designate, PEEK Awards, 2017-2021, AHRC Creative Clusters Strategic Reviewer, 2017, Foundation for Science and Technology, Portugal; Cultures and Cultural Production Evaluation Panel, 2016, European Science Foundation, College of Expert Reviewers, 2016, GCRF Large Grants follow-on-funding panel, 2015. AHRC Fellowships Panel 5, (Chair) 2015, AHRC Fellowships Panel 3, (Chair), 2014, AHRC Research Grants Panel, 2014, AHRC Fellowships Panel 2, 2014, AHRC Fellowships Panel 1, 2014-17. Reviewer, FWT (Austrian Science Fund). AHRC, PRC, Strategic Reviewer, (to 2016), JHEP Advisor 2018.

External Phd Examining:

Baker: University of South Wales, Manchester Metropolitan University, University of Wales.

Black: University of Northampton. **Emmett:** University of the Arts, London. **Graham:** University of Nottingham. **Partridge:** University of Westminster, University of the West of England,

Phillips: Bournemouth University, Bartlett School of Architecture, UCL, Leeds Beckett

University, University of Brighton, (2) Edinburgh University, Edinburgh Napier University, Goldsmiths, University of London, De Montfort University, University of Salford, University of New South Wales, University of Wales Trinity Saint David, University of Westminster, University of Huddersfield.

Personal Awards and Prizes:

Bokody: Fellowship, BildEvidenz (Freie Universität, Berlin, 2018). Fellowship, Niki - Istituto Universitario Olandese (Florence, 2016). **Cook:** New Light Exhibition, First Prizewinner, 2017, Sunny Art Prize 2019, First Prizewinner, Jackson's Painting Prize, Still Life category, First Prizewinner 2020. **Morstang:** 2nd Prize for *Prosperous Mountain*. Festival international du Documentaire Eau et Climat, Belgium, 2014.

Contribution to Economy and Society

The impact of social engagement extends beyond its academic base in regarding collaboration as a fluid and responsive interaction with changing modes of knowledge production, distribution, and reception of art research. **Parker's** film work, for example, is specifically intended to shape social perception and her partnerships with LGBT+ groups and their impact agenda is exemplified in *Heaven is Place*. **Black's** research, at the threshold of illustrative practice, is manifest in her publications and performances in public houses as sites of political opinion forming. **Graham's** public engagement events at the National Gallery explore the transformative role of Renaissance painting in national identities. **Drayson** is especially concerned to take her analytical practices and insights into hypnotherapy back to the community to nudge cultural shifts by selecting formats (performances and workshops) and publication in Design, Arts, and Medical Anthropology journals that are unfamiliar with her research and presentation style.

Morstang's profound commitment and contribution to ecological justice, *Prosperous Mountain*, was recognized by President Macron which gave her work further leverage as an agent of social change. **Patterson's** recent collaborative work with local community and heritage groups through her Wallflower project, based on her monograph on murals, saw her initiate and oversee the painting of several public murals in Plymouth.

The unit sees its collaboration strategy as extending its international network of research collaborations to further enrich the visual and creative culture of the region in the interests of the unit and the community. **Phillips'** research in the digital arts and design has informed policy for Plymouth City Council and has developed information applications for its services (e.g., Plymouth *Dataplay*). Researchers in the unit collaborated on the development of Fulldome resources in the Grade II Listed Devonport Market Hall that will house a digital centre for arts, community and visitor activities, and enterprise. This project represented an investment of £7m

Unit-level environment template (REF5b)

by the council that is intended to engage the public in state-of-the-art digital creativity. This has informed the provision of digital education at the secondary school level and social enterprise collaborations with Plymouth Council.