

**Institution: The Glasgow School of Art**

**Unit of Assessment: 32 Art and Design: History, Practice and Theory**

### 1. Unit (and Institutional) context and structure, research and impact strategy

#### 1.1: Institutional Context and Structure

The Glasgow School of Art (GSA) is Scotland's only independent institution for education in Art, Design & Architecture. Founded in 1845, it is one of the largest specialist research communities in Scotland and was one of the first government Schools of Design, combining Glasgow's industrial and creative heritage and built on the intellectual traditions of reason and humanism rooted in the Scottish Enlightenment. Our enduring core purpose is to innovate and develop creative, critical and practical skills, new knowledge and insights in support of current and future generations of students, creative practitioners and researchers. In the 21<sup>st</sup> century, our purpose includes: the integration of new and emerging ideas, materials and digital technologies with our established creative practices to meet the United Nations 2030 Sustainable Development Goals (UN2030 SDGs).

#### 1.1a Changes since 2014: Growth and Leadership Changes

YEAR	STUDENT NUMBERS	UG	PGT	PGR	ACADEMIC STAFF TOTAL FTE	SUBMITTED ACADEMIC STAFF/SRR FTE (No)
REF2021	2777	2023	701	53	161.3	49.4 FTE (61 headcount)
REF2014	2008	1606	371	31	115	52.8 FTE (77 headcount)

Since REF2014 GSA has seen growth in student numbers and a change in student demographic, due to a targeted increase in postgraduate taught (PGT) and postgraduate research (PGR) students. There have also been significant changes to GSA's leadership. Tom Inns was Director from 2013 until 2018, Irene McAra-McWilliam was Interim Director (2018-2020) and our current Director, Penny Macbeth, joined in May 2020. McAra-McWilliam then became Deputy Director of Research and Innovation and in December 2020 Allan Atlee joined as Deputy Director (Academic).

#### 1.1b Fires and a Pandemic:

Since REF2014, GSA has experienced a sequence of unforeseeable impediments. Two major fires in 2014 and 2018 destroyed much of the iconic Charles Rennie Mackintosh Art School building including its library, gallery, teaching spaces for Fine Art and parts of our archives and collections. These events derailed strategic plans and initiatives for research that were then further stalled by the outbreak of COVID-19 in the UK in March 2020. Diverting our strategic and operational focus to crisis management at each of these three points over the current REF cycle has adversely impacted our individual researchers, research infrastructure, resources and the academic estate. Specifically, these events have delayed: development for new staff and early career researchers (ECRs); the development of civic, business and policy partnerships; and our submission to Athena SWAN. Mitigating circumstances were submitted concerning the fires and a reduction in outputs was granted.

Institutional recovery following the 2014 fire resulted in a simplified management structure and strategic plan, focused on growth, sustainability and diversification of the portfolio. Following the 2018 fire (significantly worse than the first and destroying the extensive post-2014 restoration work), our strategy was readjusted to focus on core operational goals. Although challenging, GSA's role as a vital part of Glasgow's creative and cultural infrastructure has enabled us to manage our key operations and to contribute to Scotland's creative economy and its COVID-19 recovery plan (see ICS 4 *Health and Care Services*). These three unprecedented events have strengthened our organisational resilience.

**1.1c GSA Key Developments 2014 – 2020:**

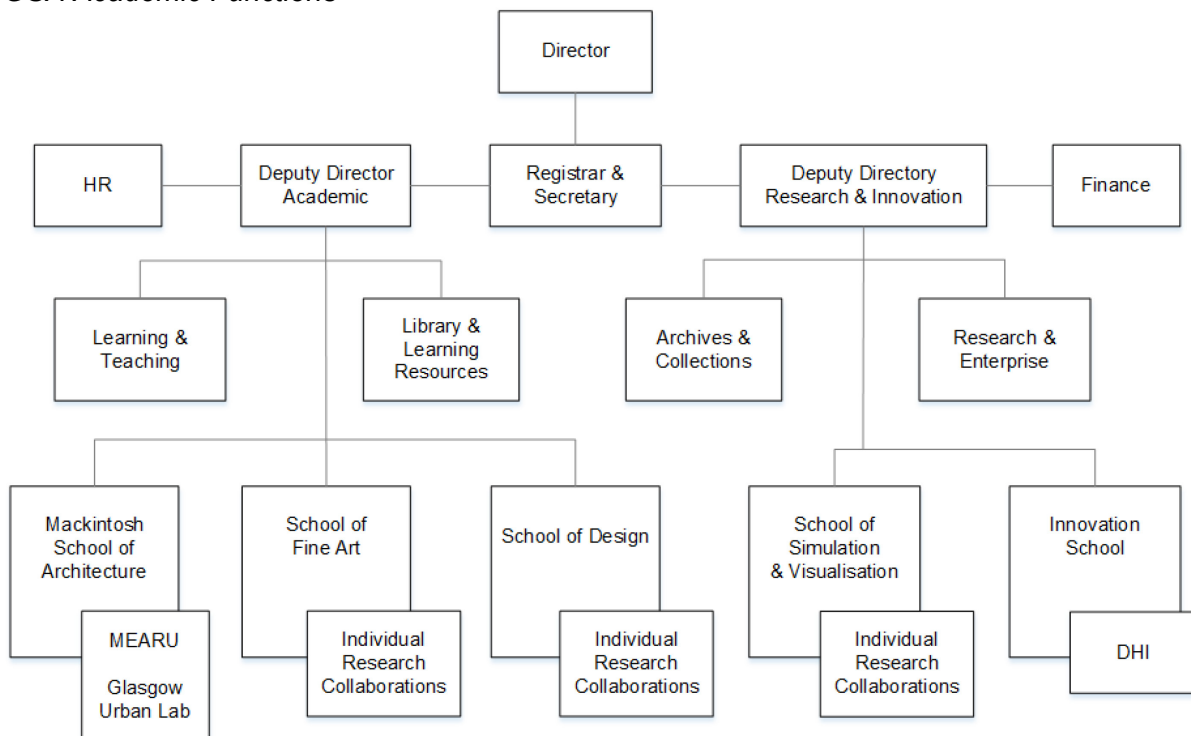
- i. Academic Restructuring (2015-16)
- ii. Strengthening Scholarly Support (2016-2018)
- iii. Building Strategic Partnerships (2014-)

**i. Academic Restructuring**

In 2016 two new schools, the **Innovation School (IS)** and the **School of Simulation and Visualisation (SimVis)**, were formed to extend our academic portfolio. In 2015, **Historical and Critical Studies** were subsumed within the relevant schools to increase the integration of history, theory and practice and to strengthen scholarship. The formation of the Innovation School was underpinned by the 2016 launch of **GSA’s Highlands and Islands** campus on the Altyre Estate near Forres, which focuses on Design Innovation PGT and PGR provision. Consolidation of doctoral studies training and funding was enabled by membership of the Scottish Graduate School for Arts & Humanities (SGSAH, 2014-present) and the appointment of a Head of Doctoral Studies (Thompson) in 2017. Our strategic plans were revised to distinguish established research strengths and their potential for impact, from strengths in innovation, knowledge exchange (KE) and enterprise and to identify emerging subject areas (e.g. AR/VR heritage visualisation) requiring targeted support. The role of the R&E Dept (formerly Research and Doctoral Studies) was also reviewed to provide effective support for academic leaders across our five schools. Its key roles are to:

- distil and disseminate sector-wide research intelligence and opportunities
- oversee research integrity, governance and ethics
- manage research and enterprise data, open research and co-ordinate submission to REF, using our bespoke Repository of Art, Design and Architecture Research (RADAR)
- support funding applications and conduct annual quality monitoring for R&E
- increase capability and capacity provision for research and career development support
- facilitate and manage EDI and coordinate data for submission to Athena SWAN and Race Equality Charter (See Section 2 People)
- oversee, manage and develop Doctoral Studies.

*GSA Academic Functions*



GSA's five schools are: **The Mackintosh School of Architecture (MSA)**; **The School of Design**; **The School of Fine Art**; **The Innovation School**; and **The School of Simulation and Visualisation**. The table below shows the relative scale of our schools and associated income:

#### Academic Schools Overview

Data	MSA	Design	Fine Art	Innovation	SimVis	Other	TOTALS
Academic Staff	22.7	47	33.6	25.6	14.8	16.6	160.3
Staff with SRR	7.3	11.4	11.9	8	5.8	5	49.4
% staff with SRR	32%	24%	35%	31%	39%	30%	31%
Students (UG) 2020	420	912	513	134	44		2023
Students (PGT) 2020	186	189	133	132	61		701
Students PGR 2020	6	7	25	6	9		53
Total Research and KE Funding	2.26m	1.06m	0.16m	12.16m	4.85m	0.07m	21.56m
KE Funding	1.27m	0.34m	0.01m	10.74m	4.04m	0.06m	16.46m

Our new school structure clarified our research strengths in the fields of architectural and design history, socially engaged arts practice, environmental architecture and design for health and care. Conversely, it identified gaps in research support including the need to: 1) facilitate dialogue across GSA and build capability, capacity and leadership in new and emerging interdisciplinary fields; and 2) identify, systematise and strengthen complementary research and KE partnerships to enable integrated response to the UN2030 SDGs and to our civic, national and global challenges.

#### ii) Strengthening Scholarly Support

The 2014 fire highlighted the distinctive role our **heritage, archives and collections** play in GSA's research and teaching and, increasingly, in developing exhibitions and stimulating public engagement and KE. Building on the success of previous history and heritage projects (e.g. *The Glasgow Miracle*, 2012-2013, AHRC £122,500, now a permanent part of the 'Third Eye Archive' at Glasgow's Centre for Contemporary Art), in 2018 we took the strategic decision to accelerate the digitisation of our archives and collections. By Dec 2020, we had digitised 1,000+ 3D objects and over 60,000 2D items.

#### iii) Building Strategic Partnerships

A milestone in our establishment of strategic long-term partnerships was the launch of the *Digital Health & Care Innovation Centre (DHI)* in partnership with the University of Strathclyde (awarded in late 2013, with University of Edinburgh as the initial partner), one of seven Scottish Funding Council (SFC) Innovation Centres. Drawing on GSA's established research expertise in Design for Health & Care and Digital Visualisation, DHI works with healthcare providers, SMEs, charities and other key stakeholders to develop new service models, delivery pathways and digital solutions for healthcare across Scotland. Its success is demonstrated through receipt of continued funding (2017-2024) from the Scot Gov Health & Care Directorate (i.e. **NHS Scotland**) alongside SFC (ICS 4 *Health and Care Services*). For 2013-2024, DHI has received £20.5m of Scot Gov funding (£7.68m to GSA).

Our longstanding research strengths in sustainable and urban design and development are evident in GSA's **Glasgow Urban Lab (GUL)**, funded in partnership with **Glasgow City Council** (£30k per annum). In 2017, GUL was established as a United Nations Centre of Excellence and subsequently conducted a comparative research study, 'Scotland's Urban Age' (2018), sponsored by the Chambers of Commerce in Aberdeen, Glasgow & Edinburgh and the Law firm Burness Paull, and focused on understanding the concentration and growth drivers of Scotland's key cities in terms of policy, economics and strategic digital and physical infrastructures, and how these may address ageing, migration, climate change and employment. In 2019, GUL's Director, Evans, was appointed the UK's first City Urbanist by Glasgow City Council.

## 1.2 Institutional Research & Impact Strategy

### 1.2a Research Development 2014 – 2021

In REF2014, GSA outlined six key objectives for 2021: 1) Develop thought leadership in key areas of research strength; 2) Develop a reputation for expertise and policy development; 3) Develop sustainable international research centres; 4) Be recognised for interdisciplinary research and KE; 5) Become an institution of choice and attract academic staff and PGR students of the highest quality; 6) Have extended strategic partnerships in all sectors.

Despite setbacks, we have achieved the majority of our 2014 objectives. Interdisciplinary subject expertise, thought leadership, strategic partnerships and policy development are notable in our leading research centres: 1) **Health & Care**, with the work of DHI and with Macdonald's research being recognised with the inaugural AHRC/Wellcome Health Humanities 'best research award (2018); 2) **Sustainable and Healthy Environments**, with MEARU's research on Indoor Air Quality (ICS 1 *Improving Indoor Air Quality*); and **Urban and Economic Policy and Development**, with Evans' research on Scotland's major cities and his role as Chief Consultant for UN's Habitat III report (Evans, 6606).

PGR growth has resulted through our active partnership in the SFC/AHRC funded **SGSAH and developments in our support infrastructure**. Since 2014, GSA has seen a 160% increase in new UKRI-funded doctoral awards, 90% growth in UKRI PGR funding, 71% increase in doctoral enrolments and 100% increase in doctoral completions.

### 1.2b Interdisciplinary Research

As a Small Specialist Institution (SSI), GSA has an imperative to build partnerships and a long track-record of developing and contributing to interdisciplinary research e.g. through design (ICS 4 *Health & Care Services*), in environmental architecture (Foster 4595) and in SimVis's digital heritage work e.g. Jeffrey's role as a Co-Director of *One Ocean Hub* (OOH) a £20M UKRI GCRF Global Research Hub in collaboration with University of Strathclyde and international partners including Rhodes University and University of South Pacific.

To enhance school-based disciplinary research, we have developed four complementary interdisciplinary research themes which build on our existing strengths, harvest learning across schools and identify opportunities for new strategic partnerships. The themes are formed from an evidence base of high-quality research, external funding and a critical mass of researchers and PGRs. Reduced from the 10 themes outlined in REF2014, instrumental in shaping GSA's interdisciplinary research, and aligned with the UN2030 SDGs, our four new themes are:

1. **Sustainable Environment and Economies**  
SDG 7 (Affordable and Clean Energy); SDG 11 (Sustainable Cities & Communities)  
SDG 13 (Climate Action); SDG 14 (Life Below Water)
2. **Cultural Landscape & Identity**  
SDG 10 (Reduced Inequalities); SDG 15 (Life on Land); SDG 16 (Peace, Justice & Strong Institutions)
3. **History, Heritage, Archives & Collections**  
SDG 5 (Gender Equalities); SDG 11 (Sustainable Cities and Communities);
4. **Health and Care**  
SDG 3 (Good Health & Wellbeing); SDG 9 (Industry, Innovation & Infrastructure)

### Sustainable Environments and Economies

ICS 1, *Indoor Air Quality*

<b>STAFF</b>	7.9 FTE	3 Professors	1 ECR	M 80% F 20%
<b>STUDENTS</b>	7 completions	7 current PhDs		M 36% F64 %
<b>REF 2 OUTPUTS</b>				<b>22</b>
<b>EXTERNAL FUNDING</b>				<b>£6,801,754</b>

This theme includes: MEARU's work on low energy design and building performance; GUL's research addressing the ecological, social and economic sustainability of Scotland's key cities; Jeffrey's leadership of OOH; research on the creative economies of the Scottish Islands (McHattie, 6972); and research that interrogates social justice issues and inequalities (Birrell, 7529; Smith, 4820). Both MEARU and GUL maintain strategic associations with Glasgow's governance and with Scottish and UK policy makers and built environment professions to ensure their research is impactful in shaping environmental and urban policies across Scotland and internationally. Of particular note is Evans' membership of the *United Nations Economic Commission for Europe* (UNECE) and his AGE report which has provided key information for the new *National Planning Framework* (NPF4) being prepared by the Scottish Government under the Planning (Scotland) Act 2019.

### Cultural Landscape and Identity

#### ICS 2, *Refugee Crisis and Arts Practice*

<b>STAFF</b>	9.2 FTE 19 REF2 outputs	3 Professors	1 ECR	M 30% F 70%
<b>STUDENTS</b>	8 completions	8 current PhD		M 31% F 69 %
<b>REF 2 OUTPUTS</b>				<b>19</b>
<b>EXTERNAL FUNDING</b>				<b>£738,126</b>

This theme includes international projects that have refined distinctive individual research methodologies and attracted significant investment (Cooper, 7135; McBride, 4870) as well as local projects working, for example, with Scottish communities in post-industrial towns (Bird, 7526). This expanded theme embraces the Reading Landscapes group (2014-) located in the School of Fine Art. Contested social and political landscapes, migration, forced human displacement and explorations of self are also explored in this theme (Birrell 7528; Brind 7536; Tripp, 7535, McAra, 7382). Another body of research is positioned at the intersection of this theme and 'Sustainable Environments' (above), exemplified by: Greated's (7534) explorations of the visual pollution of Scotland's renewable energy generators; Thomson's (7530) exploration of the Scots language in relation to Highland flora and fauna; and Robertson's (3789; 5886) design history studies of Highland power stations.

### History, Heritage Archives and Collections

#### ICS 3, *Maritime Design History and Modern Shipping*

<b>STAFF</b>	17.7 FTE	5 Professors	1 ECR	M 33% F 67%
<b>STUDENTS</b>	6 completions	15 current PhD		M 29% F 71 %
<b>REF 2 OUTPUTS</b>				<b>45</b>
<b>EXTERNAL FUNDING</b>				<b>£2,664,717</b>

Researchers in this grouping have drawn extensively on archives and collections (including GSA's) to unlock new knowledge on diverse subjects, such as: Scotland's textile design heritage (Britt 7531); art historical narratives of Afro-Caribbean artists and designers in Scotland (Boyle, 7537); and feminist perspectives on museum collections (McMullan, 7538). Research in this field also includes the collaborative conservation of archaeological heritage assets (Jeffrey, 4758; 5224); and lone scholars working independently on public heritage in the form of architectural taxonomies, monuments and post-war street furniture (Urban, 5776; Rodger, 3886; Herring 3862) and Scandinavian shipbuilding (Peter, 5608), as presented in ICS 3, *Maritime Design History*.

Strategic scholarly networks and partnerships have been vital enablers to GSA's success in this field. The Centre for Digital Documentation and Visualisation (CDDV), a joint venture established with Historic Environment Scotland (HES) and CyArk (USA) as partners (2010 - 2021), produced the Scottish Ten (ICS 1, REF2014) and has supported HES's digital visualisation leading to the 2017 launch of the National Heritage Building Conservation Centre (NHBC) as part of the Engine Shed in Stirling and concluding the transition of HES to a non-departmental government body (NDPB) with IRO status.



**Health and Care**ICS 4, *Health & Care Services*

<b>STAFF</b>	12.2 FTE	3 Professors	1 ECR	M 59% F 41%
<b>STUDENTS</b>	7 completions	6 current		M 15% F 85 %
<b>REF 2 OUTPUTS</b>				<b>18</b>
<b>EXTERNAL FUNDING</b>				<b>£7,992,101</b>

Led by Macdonald since 1995, our research in health and care is characterised by an interdisciplinary team-based approach, deploying co-design methods in clinical and community settings and focusing on the user experience (patient, carer, clinician) throughout the healthcare ecosystem (Macdonald, 7417; Macduff, 7215; Teal, 7456; French, 7451), leading to the successful launch of the **DHI**. Of particular note is GSA's contribution to the AHRC-led, cross-Council Anti-Microbial Resistance Programme (2017-20). Of the 11 funded projects, GSA led on three and provided the Co-Investigator to a fourth.

The *3D Head and Neck* (2013) developed by SimVis led to the *3D Definitive Human* (2014-2019), a new highly accurate interactive model of an entire human anatomy with extended reality interfaces. Launched in 2019 as an open-access educational tool primarily for use in medical education and training contexts, it was funded by SFC, RCSEd and NHS Education Scotland (NES) with in-kind support from the University of Glasgow and the Fulbright Commission (total funding received: £1,057,000, 2013-2020).

**1.2c GSA's Future Research Strategy**

We will continue to accelerate our recovery, encourage risk taking, support new and ambitious ideas and commit to academic and research development to enhance performance at all career stages. Following a challenging period, our strategic objectives for 2021-27 place people at the centre.

**1. PEOPLE**

*Review our academic career framework integrating appropriate principles and actions from the UKRI Researcher Development Concordat (2019) and VITAE's Researcher Development Framework (RDF). We will:*

- 1.a Review the role of research, impact, KE and enterprise to enhance academic careers, improve workload planning and work/life balance
- 1.b Develop GSA's research leadership through training and peer-to-peer mentoring
- 1.c. Enhance Research Integrity by reviewing the governance, management and monitoring of research and KE and ensure that ethics and EDI are integral all GSA's policies and practices.

**2.INFRASTRUCTURE**

*Strengthen our digital infrastructure and information management for capturing research, impact and KE to improve resilience, sustainability, transparency and reporting. We will:*

- 2a. Continue to development RADAR and Open Research to showcase all modes of arts and humanities research in discoverable digital form and support the profiling of GSA's researchers and PGR students
- 2.b. Review the learning from COVID-19 and establish leadership and processes to accelerate GSA's EDI actions and achieve Athena SWAN and Race Equality Charter recognition (aligning to UN2030 equalities SDGs).

**3. RESEARCH BASE, IMPACT & KNOWLEDGE EXCHANGE**

*Continue to consolidate of our academic infrastructure and support for research, impact and KE, including growing GSA's portfolio of interdisciplinary research skills, systematic peer support and develop opportunities for research dissemination and pathways to impact. We will:*

- 3.a. Continue to diversify sources of funding and increase grant applications, research and KE income
- 3.b. Develop skills, knowledge and methods to capture impact within GSA and with our strategic partners

3.c. Contribute to thought leadership, to internationalising our research and to sector innovation professionally and academically.

#### 4. PARTNERSHIPS

*Continue to strengthen GSA's strategic partnerships, identify pathways to increasing impact through KE, Knowledge Transfer, Enterprise and cultural engagement. We will:*

4.a. Increase policy alliances to extend GSA's research and strengthen impact in the public, private and community sectors

4.b. Develop GSA's strategic use of its civic presence, physical and digital resources to stimulate and increase outreach and public engagement.

### 1.2d Impact Strategy

#### Approach to Impact

Since 2014, we have developed an integrated approach to supporting, monitoring and managing impact through our R&E Dept. As recipients of SFC 's Universities Innovation Fund (UIF), we are committed to delivering seven national outcomes for Scotland, aligned to economic and social impact, including stimulating business demand, innovation and commercialisation, increasing social impact, social justice, diversity and inclusivity. Relationships with our users, beneficiaries and audiences are increasingly aligned to our interdisciplinary groupings enabling us to support diverse types of impact that respond effectively to our subject portfolio. These include the successful development of strategic relationships with NHS Scotland, Historic Environment Scotland and the Royal Incorporation of Architects in Scotland (RIAS) and cultural partners, including the Edinburgh Art Festival, the Sainsbury Centre for Visual Art and and Eureka!: The National Children's Museum. Our collective impact has changed policies and practices in health and care (ICS 4) and the built environment (ICS 1), created employment and increased economic benefit for health, public, private and cultural sectors (ICS 4, 2 and 3) and stimulated public imagination in relation to the political and social issues of global importance (ICS 2).

#### Support for Impact

Since 2014 we have established a clearer distinction between, research, impact and KE, enabling us to more effectively target our investment and identify future developments. This included: a 0.5 FTE investment in a new dedicated professional support role for impact as part of a full-time post (Research Development and Impact Officer, 2020-present). Staff can apply for targeted financial support for impact via our REG-funded **Research Development Impact Fund**. Since 2014 we have made 36 RDF Impact awards for diverse projects (totalling £76,831) e.g. support for participation in RCPCH/Royal College of Physicians' 'Effects of Indoor Air on Children's Health Across the Lifecourse' awareness-raising initiative (ICS 1); and prototyping a digital printing process for cashmere textiles.

Impact investment also includes five KTPs, involvement in 12 Innovate-UK projects and 5 AHRC Follow-On funding projects, focusing on health and care, energy efficient buildings, digital visualisation and rural economic, creative and community development in the Highlands and Islands. The latter were enabled by the *Creative Futures Partnership*, a significant programme of impact, KE and innovation support in partnership with Highlands and Islands Enterprise (2014-19), linked to the creation of our rural campus at Altyre. This wide-ranging initiative supported a series of impact activities for regional development, including support for creative SMEs and makers, community-led development, innovative approaches to health and wellbeing in remote locations and projects focused on sustainability and the circular economy.

GSA has also, where possible, negotiated secondment opportunities for researchers in health, creative or business settings to develop and realise the KE and impact potential of their research e.g. Poyade has collaborated on two R&D projects with autism charity Friendly Access and design agency Crag3D to develop therapeutic VR applications for people with hidden disabilities (2017-20); and French, was given leave of absence to work with Scottish Care and to apply the outcomes of her research in practice (2019-21).

**Future Support for Impact**

The consolidation of our academic and support structures and the development of our interdisciplinary themes enabled us to identify the four submitted ICS and to target potential areas for growth and investment (2021-27) including: art, design and architecture history; heritage; socially engaged art practice; and visual simulation.

**Case Study Approaches**

Our four submitted ICS have received support and funding to facilitate impact development since 2014. **ICS 1 (*Indoor Air Quality*)** is drawn from the extensive body of environmental design research systematically developed by MEARU since its founding in 1986. Supported by UIF, 5 KTPs, Innovate UK funding and professional and international networks it has shaped Scottish environmental and housing construction policy. **ICS 4 (*Health & Care Services*)** has emerged from recognised design research strengths leading to the DHI, which demonstrates the importance of sustained strategic dialogue with external partners in producing and applying research in health and care environments. **ICS 3 (*Maritime Design History and Modern Shipping*)** focuses on ways that Peter's research on the design history and material culture of cruise ships and Ro-Ro ferries has been deployed directly by the shipping industry in the promotion and development of business and by international cultural organisations to enhance public understandings of this history. **ICS 2 (*Refugee Crisis and Arts Practice*)** demonstrates the ability of collaborative curatorial and arts practice to engage international public audiences with the global refugee crisis. Collectively these studies reflect our interdisciplinary themes and reveal the diversity of our research and its impacts; from influencing areas of policy and public services to enhancing and changing business and industry practices.

**Research Integrity**

GSA fully supports and is compliant with the principles of the Concordat to Support Research Integrity. Although not a formal signatory, our research governance, codes of practice, procedures and research ethics policies were revised in 2016 to align with the Concordat. Our rigorous [Research Ethics Policy](#), [Research Ethics Code of Practice](#) and [Research Data Management Policy](#) and [Records Management Policy](#) ensure high standards throughout our research portfolio. All research undertaken at GSA must apply for formal ethical approval, a process managed by our R&E Dept. As a member of Vitae, GSA actively promotes its Researcher Development Framework (RDF) to encourage best practice for the knowledge, behaviour and attributes of successful researchers. In addition, an online module on research integrity is offered through our VLE, provided by University of Dundee. Our annual research monitoring also reviews and reports on research integrity through the GSA committee structure (see Section 3.2a).

**Open Research Environment**

GSA has prioritised investment and continued to develop its Open Research environment (RADAR) since REF2014, with emphasis on the presentation of practice-based research and the discovery and dissemination of datasets as well as outputs. We are working towards full compliance with the Concordat on Open Research Data, underpinned by a series of policies, processes and communication strategies: [Open Access](#); [Research Data Management](#); and the [Research and Enterprise Privacy Notice](#). RADAR is monitored regularly for compliance. The dedicated RADAR team (2 FTE) provide regular OA and data-related advice to researchers, new staff and PhD students through a range of support materials and platforms.

**2. People**

Our collective focus on accelerated recovery in this period has placed people at the centre of our R&E planning, which has included the embedding of annual research planning to protect staff time for research, building our research communities, stimulating interdisciplinary dialogues, sustaining research production, expanding opportunities to develop impact and supporting our doctoral students.



**2.1 Staff Profile**

Since 2014 we have appointed 38 (27.7FTE) new researchers - including 4 ECRs - aligned to our research ambitions e.g. Love, who has led on research developments as SimVis grew from the Digital Design Studio to an academic school; and Johnson (ECR), our Innovation Leadership Fellow in the Creative Economy (AHRC-funded), whose research investigates the place of micro-enterprises within the creative sector. Since 2014, we have also awarded 13 professorships (e.g. McHattie, Sinclair, Smith and Urban) in recognition of research, creative contributions and leadership.

Our REF2021 submission includes **31%** of our academic community with Significant Responsibility for Research (SRR), **22%** of the SSR cohort were appointed in the period since 2014 and **68%** of the submitted staff hold a PhD representing a significant increase from 20% in REF2014. The table below provides a summary that reflects changes in our staffing profile since 2014:

*Staff Profile*

	Total Staff	SRR	M	F	BAME	Prof M	Prof F	Prof BAME	ECR M	ECR F	ECR BAME
2021 FTE	159.5	49.4	22.5	26.9	2.8	9.5	4	0	1	1.8	0
2021 Headcount	247	61	27	34	3	11	4	0	1	3	0
% of submission		100%	44%	56%	5.7%	19%	8%	0%	2%	4%	0%
2014 FTE	115	52.8	31.5	21.3	3.6	5.7	2	1	4	6.3	1
2014 Headcount	160	77	47	30	4	7	2	1	7	9	1
% of submission		100%	60%	40%	6.8	11%	4%	2%	8%	12%	2%

GSA's key research priority (2021-2027) is to strengthen and enhance the support and development of our research community. Our number of Cat A submitted staff has declined, due partly to the strategic identification of a new category of 'emergent researcher' as part of our Annual Research Planning (ARP) process. In terms of staff movement, 5 researchers have been promoted to senior roles in other HEIs (e.g. in 2016 Anderson took up the role of Dean of the School of Design, RCA; and Sharpe moved to Strathclyde in 2020 as their new Head of Architecture). The 'emergent' category identifies staff who wish to develop a research career trajectory but who do not yet have the requisite experience to do so independently. These staff are provided with research time and a tailored support programme including priority access to our new mentoring scheme (2020-). Currently, GSA has 58 (41 FTE) staff with research time who do not yet have SRR, 33 (21 FTE) of whom are emergent researchers and 6 of whom are ECRs. The others are mainly mid-career staff whose research has been curtailed, as an aspect of role, over this period due to the operational demands of the recent past. 6 ECRs from REF2014 are included in this submission (e.g. Taylor; MacKenzie) and although our percentage of ECRs (as defined by our CoP) in REF2021 has declined, we have considerable developing strength in our emergent group.

Following REF2021, we will invest R&E resources to: 1) increase the percentage of our academics with SRR, including those who are currently emergent and those who wish to re-engage with research; and 2) enhance post-doctoral opportunities for our PGR community, building on our experience with Graduate Teaching Assistants (GTAs). As with REF2014, this submission includes less part-time than full-time staff which is consistent with GSA's academic staff profile.

*Part-time staff*

	f/t SRR FTE	p/t SRR FTE	f/t all academic staff FTE	p/t all academic staff FTE
REF2021	71%	29%	59%	41%
REF2014	64%	36%	57%	43%

**2.3 Research Support and Oversight**

Professional Services in the R&E Dept (6 FTE) and the digital infrastructure for research and impact are overseen by the Deputy Director R&I (McAra-McWilliam) and led by the Head of R&E (Kirkpatrick) with the Director of REF Development (Smith). Following REF2014, GSA's EIA identified a series of key actions required to enhance the research environment, including a systematic and consistent allocation of research time and a more structured and effective approach to mentoring.

**2.3 a) Annual Research Planning and Research Leave**

A key milestone in our strategy since 2014 has been the introduction of individual **Annual Research Plans (ARPs)** in 2016. The ARP process provides a comprehensive overview of individual plans, contributions and achievements, including research outputs, grant applications, PhD supervision and research-related academic citizenship. They are critical in developing and maintaining institutional oversight and understanding of GSA's research profile, supporting schools with their strategic planning, targeting financial support, understanding individual and collective needs and aspirations and identifying gaps in our research support.

Key to creating equitable workload and encouraging work-life balance, the ARP process is introduced to new staff during their induction and probation period and is open to all academic staff with a contract over 0.2FTE. The process is led and coordinated by the R&E Dept and ARPs are peer-reviewed by a team of senior researchers, independent of management structures to ensure the assessment is equitable. As part of our accelerated recovery, we are planning a focused ECR ARP pathway to support an identified cohort of 10 Emergent and Early Career Researchers annually, creating peer-to-peer action learning groups who will receive targeted investment, training and mentoring up to the submission of their first grant application. There are three potential outcomes from the ARP process: enhanced (40%), normative (c.20%), and emergent research time (20%). The research allocations at the point of REF submission are as follows:

*Research planning*

ARPs 20/21 on REF 2021 census date	FTE	Headcount	%
Enhanced (40%)	16.2	20	19%
Normative (20%)	52.2	67	60%
Emergent (20%) with priority access to support	18.7	30	21%

In concert with the development and introduction of the ARP process, GSA also achieved the European Commission HR Excellence in Research Award (2016), confirming our strategic commitment to supporting our research communities to pursue quality research and develop and integrate their impact and KE skills.

Since REF2014, GSA has awarded **32** periods of research leave to **29** researchers, which resulted in the completion of **41** outputs, including **7** monographs, **6** articles and **9** exhibited bodies of work. Our annual **Research Leave Scheme** is open to all staff on a minimum of a .2 contract who have secured research time through the ARP process. In 2013-14 we awarded targeted research leave to 5 staff from the Schools of Design, Fine Art and Architecture who were not submitted to REF2014 to fast-track their research development. Of those, 3 are included in REF2021 and one left GSA in 2019.

**2.3 b) Early Career Researchers**

As an SSI, emergent researchers and ECRs are an integral part of GSA's academic community and are key to: growing quality research; succession planning; developing new generations of

researchers; and sustaining robust teaching and research linkages, that are fundamental to GSA's academic ethos. Our plan to develop a bespoke pathway to support 10 ECRs and emergent researchers per year is key to improving our resilience and sustainability.

### 2.3 c) Research Leadership

To strengthen cross-institutional and interdisciplinary dialogue and shared learning, in 2019 the Director of REF Development (Smith) convened and chaired a group of professors and senior researchers to: oversee and review the quality of research outputs; consider REF and research-related strategy to advise the Senior Leadership Group (SLG); and mentor practice-based researchers and those working on Impact Case Studies in preparation for our submission to REF2021. As an effective cross-GSA 'action learning set' this research leadership group has enabled GSA's SLG to gain an evidence-based overview of our institutional and interdisciplinary strengths, our strategic opportunities and our future challenges. To support staff development and to foster future leadership, the group also includes a number of mid (McCormack) and early career (Broadley) researchers. Supported by Dept of R&E, this group will continue beyond REF2021 as means to develop a distributed and collaborative model of research leadership and take a more schematic approach to achieving our strategic research objectives and deploying central resources.

### 2.3 d) Staff Development:

GSA's staff development strategy aims to provide an extensive programme of development opportunities to support all staff (academic and professional) and enhance the performance of GSA. For our researchers, this includes:

- Active membership of relevant creative and professional research networks (ARMA, VITAE, UK Council of Research Repositories (UKCoRR), PRAGUK, JISC Research Network) and subject associations (e.g., CHEAD UK; CAA USA; ELIA EU) contributing to debates, gaining sector intelligence and sharing good practice. Prior to Brexit, GSA was a member of UKRO (UK Research Office) and Scotland Europa.
- A portfolio of GSA-specific strategic briefings, workshops, training sessions and events aimed at bringing staff together to share insights and stimulate dialogue.
- Externally provided training through Scottish and UK-wide agencies to maximise development opportunities including leadership development, mentoring and unconscious bias training e.g. Advance HE 'Strategic Leadership Programme' (Smith, 2019-20); Scottish Crucible, The Royal Society of Edinburgh (Poyade) and GSA's participation in the **Teaching, Research and Academic Mentoring Scheme (TRAMS)** partnership led by Universities of St Andrews and Dundee

The R&E Dept ensures that our strategic development needs for research are identified and met through a tailored staff development programme. To enhance our programme, in 2015 we launched our cross-school 'Sharing Knowledge and Insights' (SKI) series to stimulate discussion, interdisciplinary debate and to support the socialisation of our researcher community. SKI events are presented by GSA staff and invited external experts (e.g. from AHRC, Vitae and BA/Leverhulme representatives) and cover practical topics such as 'how to get published,' and 'writing for impact,' as well as providing a cross-GSA platform for sharing our latest research and facilitating discussion on sectoral issues for Art & Design such as 'open access for practice-based research.'

In addition to REF2021 preparation, including equalities training from Advance HE, online provision of Research Integrity Training - including ethics and safeguarding (University of Dundee) - and participation in TRAMS (32 GSA mentors e.g. Guidicini and Peter; and 13 GSA mentees e.g. McAra and Boyle), since REF2014, **48** GSA-specific development sessions have been provided for staff. These included the development and launch of a bespoke **GSA research mentoring scheme** (in concert with TRAMS) to address our specialist needs and facilitated writing retreats - and training of GSA staff as retreat facilitators (Thompson) - to provide support for researchers and PGR students. To complement this, the R&E Dept staff have been active in contributing to national debates (e.g. Open Research for Creative and

Practice Research) and developing their skills (AHEA, IP/Copyright training, digital curation) to enhance support for academic staff.

## 2.4 Research Students

### *PhD Degrees Awarded in Successive Research Assessment Exercises*

	RAE 2008	REF2014	REF2021	% change since REF2014
PhD degrees awarded	15	20	40	100%

### *PhD Completions by Academic Year*

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Total Completions	6	5	5	7	2	9	6
+ PhDs by Publication	1		1	3			

#### 2.4 a) PGR Investment

Since REF2014, we have made a strategic investment in our PGR programme, resulting in a PGR enrolment increase of 71% (from 31 to 53) and a doubling of PhD completions (from 20 to 40). We also awarded 5 PhDs by publication (validated in 2013-14 by our degree awarding body, University of Glasgow) including to 4 staff members (Cooper, Evans, Rodger and Sinclair). In addition, we have moved from a central Graduate School model to one that aligns with our school structure. As an SSI with an imperative to strengthen interdisciplinary capability and collaborative research supervision, in 2014 we took the strategic decision to become a founding member of the SGSAH, funded as part of the AHRC Doctoral Training Partnerships programme (£5,521,362 in 2014-19 and £16,962,182 in 2019-24). Our Head of Doctoral Studies (Thompson), working with a team of 5 school-based PGR coordinators, has overseen an ongoing programme of growth and improvement. Governance oversight and quality assurance is provided by the PGR Research Degrees Sub-Committee (RDSC), reporting to REC and Academic Council. A successful internal periodic review of PGR provision (2018) commended our enhancements to researcher training and community building.

For GSA, membership of the SGSAH represents a major investment over a decade but has provided a significant enhancement of resources and opportunities for our PGR students and increased levels of cross-institutional supervision as well as external quality and policy benchmarks. It provides cross-institutional training and development to arts and humanities PGR candidates in 16 Scottish HEIs, with just **8** of those in DTP1 (2014-2019) and **10** in DTP2 (2019-24) able to bid for co-funded studentships, including GSA. Between 2014-2020 we invested over £300K in membership fees and co-funding of studentships as well as contributing to SGSAH governance and management, peer-review panels, training activities, coordination of discipline-specific programmes and cross-institutional supervision. In addition to accessing scholarships, membership of SGSAH provides our students with an annual Doctoral Summer School (40+ events) including methods workshops, discipline-specific training and KE and careers programmes plus funding for development activities proposed and organised by groups of PhDs. Since joining, **6** GSA students undertook paid SGSAH residencies or internships with, for example, RSPB, Dundee Contemporary Arts and Scotland's Future Forum. To support student applications for funding in 2018 we introduced rigorous internal review processes which has improved our SGSAH awards to an average of 3 per year.

**2.4 b) Externally Funded Studentships since REF2014 (total: 21)****Studentships**

Funder	Scottish Graduate School for Arts & Humanities	Scottish Cultural Heritage Consortium CDP	AHRC Scottish Cultural Heritage Consortium CDP	Historic Environment Scotland	Highlands & Islands Enterprise Creative Futures Partnership	AHRC Design in Action KE Hub	AHRC BGP2	AHRC CDA with NHS GGC	GCRF-related projects	GSA-funded projects
No. of new externally funded studentships commenced	9	1	1	3	1	1	1	2	2	

**2.4 c) GSA Research Training**

All incoming PGR students undertake a mandatory Research Degrees Training Programme (updated 2017-18). Drawing on sector benchmarks including the Vitae RDF and aligned to our disciplinary needs, students are trained in key aspects of PGR study, including methods, literature reviews, developing research questions and defining and understanding the nature of practice research in a creative arts context. It culminates in an annual symposium, showcasing first-year students' research projects to peers, GSA staff and invited guests. All students complete an annual training needs analysis and receive a training account to fund their specific development activities. Students participate in SGSAH training as well as GSA's own programme, which includes staff development activities, SKI Tuesdays, writing retreats and 'pop-up' sessions responding to cohort needs. In addition to regular inductions, workshops and training, our library staff provide one-to-one sessions for our PGRs, invite them to curate collections - e.g. a collection of LGBTQ books for History Month - and work closely with them and our student association to broaden and diversify the library collection.

Since 2015-16 we have run and developed our GTA Scheme (funded by the Research Excellence Grant) giving PGR students the opportunity to gain teaching experience, supported by an academic mentor, which develops graduate skills and confidence and integrates research and teaching. During the pandemic, where required, GSA provided co-funded studentship and fee-waiver extensions and access to hardship funds and additional equipment.

**2.4. d) Supervision**

There are currently **54** active supervisors at GSA, **30** as primary supervisors. Our PGR provision is supported by a core group of **43** senior staff, whose reputations as educators, artists, architects and designers provide a draw for prospective PhD candidates. To qualify as a primary supervisor at GSA, staff must have supervised a PhD to completion, hold a PhD or complete GSA's PG Cert in Supervision. Since 2013/14, **17** staff have completed the PG Cert. Regulatory standards are maintained through regular mandatory supervisor training following the expectations of SGSAH. To strategically grow supervisory capacity we are actively placing emergent researchers and ECRs in supervisory teams under the mentorship of experienced colleagues in the role of primary supervisor.

**2.5 Supporting Equality and Diversity in Research Careers**

GSA is committed to ensuring EDI is integral to all activities and functions in line with our duties as a public sector body in Scotland. Our equalities outcomes goals include:

- an organisational culture in which respect for self and others is understood and practised; where identity-based ignorance or prejudice is challenged and confidence promoted
- an increased number of people from diverse ethnic and cultural backgrounds contributing to learning, teaching and research at GSA and engaging with diverse local communities



- development of a fair pay and career progression framework that underpins equality of opportunity for all, actively works towards reducing the gender pay gap and addresses occupational segregation
- an objective to increase the proportion of female staff submitting research for audit and inclusion in REF2021
- achieving Equality Impact Assessment Actions (EIA) with respect to REF2021
- working to ensure equality of opportunity for all staff in respect of participation in Research and Enterprise activities as relevant to role profiles

GSA supports the principles of Athena SWAN and has an outstanding commitment to SFC to work towards an application, through the 'small specialist institution' route (delayed by recent events). Our successful application in 2016 to the HR Excellence in Research award established a framework and baseline data for our future application, specifically supporting equality and diversity in the recruitment and retention of researchers (see section 2.1).

We have seen an improvement in the Cat A percentage of women staff submitted to REF2021 – 56% compared with 40% in 2014. In addition, the gender pay gap within the Cat A grouping is smaller at -9.4% than GSA's as a whole which is -15.4% (GSA Equal Pay Review, April 2019). The BAME data for this group is, at 5.7%, broadly equivalent to the GSA workforce (5.8%), 3% of the cohort declared a disability and 6 staff took a period of maternity leave, which is 60% of the total academic staff maternity leave cohort since REF2014, strongly suggesting no impediment to research. There was 1 period of paternity leave.

### 3. Income, infrastructure and facilities

#### 3.1 External Income for Research, Knowledge Exchange and Impact

Since REF2014 we have increased our average annual external research, KE, impact and other research-related income by 61% to £3.3m (£66.5k per [SRR] head).

<b>Research Income by Academic Year (see REF 4b) [GBP]</b>						
<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>	<b>2016/17</b>	<b>2017/18</b>	<b>2018/19</b>	<b>2019/20</b>
2,325,000	3,959,000	4,069,000	3,916,000	2,793,000	3,217,000	2,742,000

This represents a diverse range of funding and activity (more than 300 projects), underpinned by a core of high-quality research. We have succeeded in our aim to grow our portfolio of UKRI grants, as lead applicants (15 AHRC awards, including 5 Follow-On Funding) and through strategic, interdisciplinary collaboration (21 awards, including ESRC, EPSRC, MRC and NERC, some GCRF-based). Together with grants from bodies such as RSE and Leverhulme, this work accounts for around 15% of research income.

<b>UKRI Grant Income (excluding Innovate UK) [GBP]</b>						
<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>	<b>2016/17</b>	<b>2017/18</b>	<b>2018/19</b>	<b>2019/20</b>
150,982	416,286	402,554	318,488	402,505	570,253	532,103

The majority of our research income facilitates applied research, experimental development and KE, particularly in the strategic domain of Health and Care. We have secured significant investment from health and hospital authorities, local authorities and government bodies, and our role as core partner in the DHI (ICS 4) accounts for 25% of income since REF2014. Further investment from NHS Education Scotland, Scottish Health Boards and individual trusts, NIHR, CSO and charitable bodies enables work in medical visualisation and design-led service improvement.

Our research contribution to sustainable economic development in Scotland is also driven by investment from public bodies, including through GCC's ongoing strategic partnership in GUL (2014-2020: £151k), and Highlands and Islands Enterprise's support for our work with creative economy SMEs in the region through the *Creative Futures Partnership* (2014-19) at GSA's

Highlands & Islands campus, on the Altyre Estate near Forres. In addition, we have targeted impact-orientated competitive grants to facilitate built environment research and KE, and received £1.3m from Innovate UK, Construction Scotland Innovation Centre and Interface (ICS 1), including 5 KTPs in partnership with architects and housing associations. Collaboration with Historic Environment Scotland, Scottish Government and National Trust for Scotland (£1.5m) early in this REF period focused on the completion of large-scale heritage visualisation projects. This capability, developed through an earlier phase of research, is now provided as consultancy and commercial services, with proceeds reinvested in the research environment.

### Other Income

As is characteristic of our sector, Cat A submitted staff also secured investment in their research from sources not reflected in annual HESA returns, for example Birrell (Creative Scotland, £99k), Boyle (Hauser & Wirth, £35k), Bird (Heritage Lottery, £16,700; Atlas Arts, £5k), McBride (Creative Scotland, £15k), Ursitti (Creative Scotland, £11,300), Carter (Arts Council England, £5k), Nielsen (Stiftung Arp e.V., €2k).

## 3.2 Infrastructure to Support Research and Impact

### 3.2 a) Committee and Reporting Structures

Policy development, planning, governance and oversight are formally provided by our Research and Enterprise Committee (REC), convened by the Deputy Director R&I (McAra-McWilliam), and reporting each semester to our senior committee, Academic Council. School-based Research and Enterprise Sub-committees report to REC, as does the Research Degrees Subcommittee. R&E, with the Finance Dept, is also responsible for the full economic costing/transparent approach to costing working group, fEC/TRAC.

Research infrastructure is underpinned by the core QR grants from the SFC, consisting of the Research Excellence Grant (REG), Universities Innovation Fund (UIF) and Research Postgraduate Grants (RPG). Organisational support for research and impact is provided by the central R&E Dept, reporting to the Deputy Director R&I, and responsible for research policy, governance, funding and grant support (including post-award), researcher development, open research, quality assurance, REF preparation, alignment with research concordats and postgraduate research. Managed by the Head of R&E and the Director of REF Development, the team comprises the Head of Doctoral Studies, Research and Impact Development Officer, Knowledge Exchange Manager (vacancy), Repository Manager, Research Information Coordinator, Research Finance Officer and two administrators. Among the team's responsibilities are the maintenance of the RADAR research repository (see section 3.2b) and institution-wide Pipeline database system for planning, tracking and reporting project and grant development and delivery. Since 2015, we have invested 27% of QR income in maintaining this core capacity.

Five senior academics, one per school, are also part-funded (total: 10% of QR) to ensure integration and coordination of central and local needs and priorities. These act as local research leads and their role includes: convening the School's research subcommittee; overseeing school-level internal funding bids; providing mentoring and guidance to researchers; membership of the central research leadership group convened by Smith; and representing their School on REC and in all aspects of REF planning. Since 2014, a proportion of QR has been invested to sustain specific research-intensive posts in key areas of activity. These have included Macdonald, Sharpe, Cooper, Jeffrey, Sinclair, MacKenzie, Poyade, Abbott and Calvert.

Research support services are provided to all researchers, including ECRs and emergent researchers, irrespective of FTE, SRR status or level of experience. Institutional **Research Development Funding (RDF)** is available to all research active staff via a peer-reviewed application process. The scheme supports research leadership, small and developmental projects, co-funding for external grants and research dissemination. Since 2014, we have made 399 awards (£417k). The **Research Leave Scheme** releases staff from teaching and administration in order to make significant progress towards research objectives. Awards are

made as appropriate to career stage, on the basis of quality and potential, through peer review and with the support of line managers. Since 2014, **32** periods of leave were awarded (£135k), with average duration of 9 weeks, which have led to the completion of REF2 outputs for Urban (7447), McMullan (7538), McCormack (4405), Ursitti (7541), Birrell (7528; 7529), Guidicini (7252), Carter (7532), Rodger (5638) and Smith (4820). Staff can also apply for **RDF Impact Awards** to facilitate the impact of their research (see 1.2.4b).

The R&E Dept coordinates the research mentoring schemes and SKI Tuesday programme (Section 2.3.d). Information, advice and guidance - including research handbook - is provided to all staff via GSA's intranet and through regular electronic bulletins. R&E also maintains subscriptions for staff to relevant creative and professional research networks (see section 2.3d).

### 3.2 b) Space and Facilities

The £50m, purpose-built Reid Building, opened in 2014, houses the School of Design and is the main reception building of the GSA campus. It accommodates both Design-specific and cross-GSA facilities, available to our researchers and PGRs, including wood, metal-working and plastics workshops, digital fabrication facilities, Media Studio, the Case Room (traditional letterpress printmaking), the Centre for Advanced Textiles (CAT), a 300-seat lecture theatre, interdisciplinary project and seminar rooms, space for public engagement, specialist silversmithing equipment, textile equipment, the Mackintosh Furniture Gallery (relocated following the 2014 fire) and the international standard, publicly accessible Reid Gallery. The School of Fine Art Stow building, acquired in 2016 and occupied in 2018, includes further specialist wood, metal and making workshops as well as dedicated photography labs and a recording studio, also available to our researchers and PGRs. In addition, Stow includes shared studio and office space for PGR students. SimVis's dedicated premises are equipped with specialist technical facilities, also available to our researcher community, including one of the largest 3D (4k) interactive projection spaces in Europe, an industry standard dubbing studio, suites of high-capacity graphics and animation computers, motion capture equipment, laser scanning and photogrammetry equipment, haptic interface testing facilities and a usability testing studio. Our Highlands and Islands campus near Forres provides a base for research and KE programmes, including aspects of the DHI provision and creative economy research.

Central to our facilities and resources infrastructure are our Galleries, Archives & Collection. Due to our specialist status, resources and assets, GSA receives an annual Museums, Galleries and Collections Grant (£264k in 2019/20) from SFC to support our exhibitions programme, archives and collections, enhancing curatorial and archival access and opportunities for the research community. 33% of our exhibitions programme since 2014 has been research-related. The Reid Gallery and Ground Floor Corridor Gallery represent **310m<sup>2</sup>** of exhibition space; and the Reid building also includes an interpretation and visitor centre, 'Windows on the Mack' (**150m<sup>2</sup>**), which displays items from the collection.

GSA's Mackintosh Collection has Museum and Galleries Scotland 'Nationally Significant Collection' recognition. Although the collection incurred significant loss and damage in the 2014 Mack fire (and some further loss in the 2018 fire), much of it has been subsequently conserved and digitised. Our Archive & Collections (A&C) - relocated in 2015 to The Whiskey Bond in Glasgow's West End after the 2014 fire - consist of a continually developing set of records and artefacts relating to the school's activities since its foundation in 1845, comprising one of the UK's most comprehensive archives of art, design and architecture education. It contains items pertaining to C.R. Mackintosh, his peers and former GSA staff and students, including around 200 plaster casts, 400+ textiles items and commercial design collections including the Stoddart Templeton Archive. A&C includes viewing and research spaces to support GSA's and external researchers and the public.

This digital collection is key to enhancing our scholarly and public access and to expanding our civic role in the context of the 2013-14 opening of Reid Building (which marked the significant expansion of our public galleries by 66%), and Glasgow City Council's ongoing Avenues Project (£115M) which embraces GSA's campus within the wider urban regeneration of Glasgow City

Centre. Since REF2014, 9 GSA researchers working with heritage, archives and collections have attracted over £1.16M of funding from SFC, the Art Fund and Royal Society of Edinburgh, developed **28** exhibitions, **68** community workshops and produced over **20** publications linked to Scottish collections, including GSA's own collections and archives. Despite the loss of the Mackintosh Museum and the temporary closures of the Reid Gallery (following both fires) over this period, GSA held **69** exhibitions and **88** events.

GSA's library service, located in our Bourdon Building (also home to MSA), provides staff and students with access to an extensive collection of subject-specific print and online resources. Many of our rare and special books, stored in the Mackintosh Library and destroyed in the 2014 fire, are being replaced through an acquisitions and donations campaign. Membership of the Scottish Higher Education Digital Library, broadens the scope of our small and specialist library, giving our researchers digital access to extensive humanities resources. The library holds more than 15 special collections of rare or historical volumes, including sources of visual material, artist's books, decorative papers, theses and dissertations, exhibition catalogues and design libraries. As associate members of staff of the University of Glasgow, GSA researchers also have access to the vast and comprehensive collections of the University of Glasgow library, encompassing a wide range of subjects that are not included within our own collections.

RADAR is central to our digital infrastructure and the dissemination of all GSA's research outputs. Since its launch it has been systematically and regularly enhanced through the addition of a research blog, its connection to the British Library EThOS initiative, the electronic archiving of PhD theses and the development of opportunities to capture and disseminate multi-modal practice research outputs.

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

##### **a. Collaborations, Networks and Partnerships**

GSA has developed strategic partnerships with the following national and international organisations: CCA Glasgow; NHS Scotland, United Nations and Glasgow City Council. Our international strategic relationships are focused predominantly in China and include a formal teaching and research partnership with Luxun Academy of Fine Arts, Shenyang, China. We are one of 13 members of the Scottish university sector Energy Technology Partnership (ETP) and a member of the Scottish Universities Insight Institute (SUII), a HE-led network focused on KE between humanities and social sciences and civic, community and charitable organisations.

GSA has worked with more than **225** partners across **125** collaborative, funded research and KE projects, including at least: **45** UK HEIs (e.g. University of Ulster; RCA; University of Edinburgh), **33** international HEIs (e.g. Ghent University; University of Toronto; Washington State University; University of the West Indies), **24** cultural organisations (e.g. *Documenta*, the V&A Dundee and London; Cairngorms National Park Authority; National Trust for Scotland; Pier Arts Centre), **12** NHS organisations, **13** other Government and public bodies (e.g. Creative Scotland, Public Health England; Highlands & Islands Enterprise), **43** UK companies (e.g. Scottish Power, Velux, Four Walls Consultancy, Moorbrook Textiles), **8** international companies (e.g. Siemens, Perceptive Engineering; RAND Europe), **9** housing associations (e.g. Charing Cross Housing Association, Eildon Housing Association), **8** community organisations (e.g. Arisaig Community Trust; Kilmartin House Trust; Moray Wellbeing Hub) and **12** other charities.

##### **b. Contributions to the Research Base, Economy and Society**

GSA's researchers make a significant contribution to the sector and perform a range of citizenship roles for: research councils; grant awarding bodies; disciplinary societies; advisory and editorial boards; peer review panels; juries and selection panels; and conference organising committees. Their contribution is also evidenced in various residencies, visiting professorships, conference and symposia keynote addresses.



**I) Research Councils and Funding Organisations**

	AHRC PRC	AHRC other	EPSRC	ESRC	UKRI Cross Council	Other UK funders	Internatio nal Peer Review
Researchers	10	14	5	1	2	10	10

GSA's researchers have contributed to national and international research assessment, grant and funding reviews. These include for example: **Smith's** appointment to the REF2021 Sub Panel for UoA32; **10** researchers are members of AHRC Peer Review College and others have made contributions to ESRC (**Macdonald**) EPSRC (**Abbott, Musau, Chapman, Louchart, Poyade**) and to UKRI cross-council Initiatives including Anti-Microbial Resistance and COVID-19 calls. Researchers have also made contributions to other UK funders including: The Wolfson Foundation (**Sinclair**); Pasold Research Fund (**MacKenzie**); Leverhulme Trust (**Britt**); as well as internationally including the Austrian Science and Art Funds (**Birrell, Carter, Sinclair**); Netherlands Organisation for Scientific Research (**Robertson**); Fundação para a Ciência e a Tecnologia (**Smith, Platt**); Swiss National Science Foundation (**Urban**); Social Sciences & Humanities Research Council of Canada (**Carter**).

**ii) Juries and international panels**

GSA researchers sat on **8** international juries and panels, including: College Art Association's (CAA) Professional Development Fellowships Programme, 2016-17 (**Smith**); RIBA President's Research International Award Panel, 2016 (**Platt**); Scottish Design Awards, 2020 (**Evans**); The Landscape Institute Awards, 2020 (**Evans**).

**iii) Editorial and Advisory Board Roles**

Since 2014, researchers at GSA have been engaged as editors or associate editors of academic journals including: *International Journal of Technology-Human Interaction* (**Love**), *Journal of the Scottish Society for Art History* (**Greenman**); *International Journal of Art and Design Education (IJADE)* (**Sclater**), **15** researchers hold editorial board positions on **15** international journals, demonstrating our engagement with and beyond the creative sector, including: *Visual Culture in Britain* (**Smith, Calvert, Thompson**); *Journal of Open Archaeology Data* (**Jeffrey**); *Journal Frontiers in Robotics and AI* (**Poyade**); *Arts and Humanities in Higher Education* (**Gunn**); *Virtual Reality* (**Chapman**); *Co-Design* (**McHattie**); and *Journal of Textile Design Research & Practice /JTDRP* (**Britt**). In addition, researchers have edited **12** special issues of journals, including: *Cultural Trends* (**McHattie**); *International Journal of Art and Design Education* (**Sclater**); *Studies in Material Thinking* (**Robertson**); and *Research in Comparative and International Education* (**Sclater**),

**Journal Peer Review**

Journal Subject	Art	Design	Architecture & Built Environment	Computing & SimVis	History & Heritage	Critical & Cultural Studies	Education & Pedagogy
<b>Number</b>	<b>7</b>	<b>8</b>	<b>7</b>	<b>10</b>	<b>5</b>	<b>15</b>	<b>8</b>

Over **26** researchers have conducted peer review for **60** international academic journals including: *Design Journal* (**Macdonald**); *Journal of Architecture* (**Urban**); *Journal of Visual Art Practice* (**Sinclair**); *Higher Education Pedagogies* (**Abbott**); *Feminist Media Studies* (**Smith**); *Studies in Material Thinking* (**Thompson**); *International Journal of Human Computer Interaction* (**Love**); *International Journal of Rapid Manufacturing* (**P Smith**) *Journal of Biomedical Engineering and Computational Biology* (**Poyade**); *Journal of Bodies, Sexualities and Masculinities* (**Boyle**); and *Journal of Communication Inquiry* (**Robertson**).

**Peer Review for Book Publishers**

**7** Researchers have contributed to peer review for at least **8** academic publishers including



Bloomsbury (**Macdonald, Calvert, Smith, MacKenzie**); Intellect (**Thomson**); University of Oxford Bodleian Library Press (**Peter**); Yale University Press (**Smith**); and Routledge (**Thompson, Gunn**).

#### External PhD Examination

**19** researchers have been invited to examine **35** PhDs including at Universities of Glasgow, Edinburgh, Newcastle, Southampton, University of the Arts and Royal College of Art and **5** internationally, including Aarhus (Denmark), Central European University (Budapest), Universidad Rey Juan Carlos (Madrid.)

#### iv) Advisory and Trustee Roles

**7** GSA researchers have held **11** advisory roles including: Member of Board of Trustees of RIAS, 2017 (**Menon**); Founding Trustee of Bernat Klein Foundation, 2017- (**Jardine**); Trustee and Council Member for The Royal Glasgow Institute, 2017- 2019 (**Greated**); Board Member, Pier Arts Centre, 2018- (**Brownrigg**); Expert Assessor for The Landscape Institute's High Streets Task Force, 2020 (**Evans**).

#### v) Visiting professorships, Fellowships, Residencies

**2** staff have undertaken visiting professorships: **McCormack**, Visiting Scholar Award, Yale Centre for British Art, 2014; and **Rodger**, Paris 8 University, 2019-20; **6** staff have been awarded with fellowships, including a Japan Foundation Research Fellowship, 2014 (**Macdonald**), a German Historical Institute Fellowship, 2018 (**Urban**) and a Leverhulme Fellowship, 2019-21 (**Britt**); **8** staff have undertaken **13** residencies, including at Fermynwoods (Forestry Commission/ACE), 2018 (**Carter**), Stills Gallery, Edinburgh, 2014 (**Bird**), Frenchwoods Festival of Performing Arts, Upstate New York, 2019 (**Figgis**) and Soulisquoy Printmakers, Orkney, 2017 (**Pickstone**)

#### vi) Prizes, awards and nominations

Our researchers' contributions have been recognised by: 1) **8** awards, including **Macdonald's** 'Best Research' award for the inaugural AHRC/Wellcome Health Humanities Medal (2018) and his 'Key Change Maker and Thought Leader' for the British Council's Design for Disability and an Ageing Society (2017), **Chapman's** BAE Chairman's Silver Award for Virtual Reality (2014) and ; and **Boyle's** Art Fund, New Collecting Award to acquire works by black artists to address gaps in Glasgow Museums collections; and 2) **5** nominations, including for the Jerwood Prize 2017 (**Tripp**) and the Alice Davis Hitchcock Medallion for Architecture History by the Society of Architectural Historians of Great Britain 2020 (**Peter**).

#### vii) Keynotes, Conferences and Events

Since 2014 our researchers have been part of **12** international conference organising committees: *EAEA13*, 2017 (**Platt, Chapman, Maver, Poyade**); *International Conference on Advanced Virtual Interfaces*, 2014, 2016 and 2018 (**Love**); *Eurosun* 2016 (**Porteous**); *EUROVR* 2018 (**Poyade**), *Futurescan 3*, 2015 (**Britt**); *British International Conference in HCI*, 2014 and 2015 (**Love**); *Material Culture in Action*, 2015 (**Robertson**); *Authenticity in Transition: Changing Practices in Art Making and Conservation*, 2014 (**Robertson**); and *Mackintosh: Materials & Materiality*, 2017 (**Calvert**). In addition, **8** researchers have undertaken peer review for conferences, including: *Design Research Society* and *Design 4 Health* (**Macdonald**); *Passive and Low Energy Architecture/PLEA* (**Musau, Menon**); *CHI* (**Love**); *ICIDS, AISB, ASME, AAAI, IVA* (**Louchart**); *International Cultural Heritage Conservation and Digitisation Conference*, 2018 (**Jeffrey**).

**13** staff have been invited to present **43** keynote presentations including, for example, *Digital Preservation Coalition*, *Wellcome Trust '3d4Ever'* conference, Wellcome Institute, 2016, (**Jeffrey**); *Delivering a Sustainable Housing Recovery*, *Biennial Conference of Department of Housing, Planning, Communities and Local Government*, Government of Ireland/Royal Institute of the Architects of Ireland, 2017, (**Evans**); *D-Health. Design Research in Healthcare* symposium, Lucerne University of Applied Sciences, 2016 (**Macdonald**), *Art Libraries Society*

*UK & Ireland, 2019 (Calvert); 34 staff have made over 120 research presentations at academic conferences; and over 40 staff have made over 170 public presentations of their research in national and international cultural, community and civic settings.*

**viii) Expert submissions to policy, governmental or parliamentary groups**

**5** of our researchers have made significant contributions to policy development and parliamentary debate and discussion including: **Menon's** participation in the Scottish Parliament's Food Poverty Network (2017); **Sharpe's** membership of the Scottish Government Energy Efficiency Standard for Social Housing (ESSH) Review Group, 2017; **Evans'** principal authorship of the UN's UNECE Habitat III Regional Report on Housing and Urban Development (2016); and **Sinclair's** contribution to a Parliamentary Cross-Party Group on Culture addressing the future of arts funding in Scotland (2016).

**ix) Engagement and Contributions to Learned Societies**

31 GSA Researchers have played an active role in 69 disciplinary communities of practice, learned societies and national bodies including: Royal Society of Edinburgh (**Cooper**); International Association of Art Critics (**Thompson**, 2016-); Design Research Society (**Love**); Society of Antiquaries of Scotland (**Jeffrey**, Fellow, 2002-present); and leadership roles as part of the CHEAD Executive Committee (**Gunn**, 2017-); Association of Degree Courses in Fashion & Textiles (FTC) (**Britt**, 2014-2016); College Art Association International Committee (**Smith**, 2014-17), Scottish Ecological Design Association (**Foster**, Director, 2019-present).