Institution: The Glasgow School of Art
Unit of Assessment: 34 Art and Design: History, Practice and Theory
a. Overview

- **GSA research principle**

Research and Knowledge Exchange (RKE) at The Glasgow School of Art (GSA) is core to the mission and identity of the organisation. Building on RAE2008, which classified 25% of our research activity as world leading and 25% as internationally excellent, our researcher community contributes new knowledge, insight, understanding and innovation to a range of fields, by way of the economic, social, educational, political, technological and scientific aspects of our works. GSA research stems from the principle that the creative practices of architecture, design and art, informed by historical and critical thinking, provide bases for the production and circulation of new insight that can enrich human lives and understanding conceptually, materially, culturally and economically.

- **Structure for stability and sustainability of excellence**

Reflected in REF2, GSA research community is supported by a range of established and emergent groups: i) Digital Design Studio (DDS); ii) Mackintosh Environmental Architecture Research Unit (MEARU); iii) Design for Health and Care (DHC); iv) Institute for Design Innovation (InDI); v) Glasgow Urban Laboratory (GUL); vi) Praxis; vii) History of Architecture and Urban Studies (HAUS); viii) Pedagogic Research in Art Design and Architecture (PRADA); ix) International Drawing Research Institute (IDRI); and; x) Critical Inquiry (CI). As well as investing in established and emergent groups, and in response to our post-RAE strategic planning, GSA is developing sustainable critical mass up to and beyond REF2014 by way of aggregated excellence under eight RKE Strategic Themes: i) Health and Wellbeing; ii) Digital Visualisation; iii) Contemporary Art and Curating; iv) Architecture, Urbanism and the Public Sphere; v) Sustainability; vi) Innovation Design; vii) Education in Art, Design and Architecture, and; viii) Material Culture. Whereas the given RAE2008 research territories corresponded with the organisational structure of GSA, the REF2014 themes align to domains of RKE excellence and serve as bases for collaboration and contribution within and beyond discipline territories for critical mass and the diversification of routes to impact. DDS, MEARU and DHC are GSA's most mature research groups, and they yield the Impact Case Studies (ICSs) in this exercise. REF2 staff are linked both to their research Group, where relevant, and to Strategic Themes, evidencing the strength and depth of research activity across the institution, as well as developing interdisciplinarity.

b. Research Strategy

- **Achievements and developments since RAE 2008/RA5a**

Our submission to RAE2008 consolidated successes developed since 2001 and our RA5a, subsequently corroborated in the GSA 'Research and Knowledge Transfer Strategy 2009-2013', committed us to forward development of research and knowledge exchange on 12 main fronts (see http://www.gsa.ac.uk/research/). To the ultimate end of quality, collaboration and impact, we have achieved at a number of levels on each front in this census period. With elaboration in sections b and c, select achievements, correspondent with the objectives set down in RA5a, are: 1) completion of a substantive review of research in 2008-2009, leading to restructuring for new academic and professional service appointments, structures and systems to support all research-active staff in GSA to develop their portfolios, and select staff to pursue 4* and 3* levels of outputs, through competitive Research Development Funding and Sabbaticals; 2) implementation of RADAR as a public, central research repository, with the appointment of accompanying specialist staff; 3) revised Activity Planning mechanism to balance L&T commitments and research undertakings for active staff; 4) expansion of PGT portfolio linked to research specialisms, giving rise to new research-teaching linked elective courses and new research-led programmes in Fine Art Practice; Design Innovation; L&T for Creative Practices; Medical Visualisation, and; Serious Games; and a programme in Curating for validation in 2013-2014; 5) growth in overall PGT numbers from 244 in 2008-2009 to 390 in 2012-2013; 6) increase in supervisory capacity in GSA through an in-house PGCert in Supervision for Creative Practices with 13 GSA staff completing in the census period, alongside 20 GSA PGR completions; 7) increase in funding for research from £836k in 2007-2008 to £2.4m in 2012-2013; increase in KE income from just over £500k in 2008-2009 to £1.9m in 2012-2013; 8) new international research partnerships, including: CyArk, California and; Philips, Netherlands, with potential being explored through our staff, programmes

and campus in Singapore, overseen by a new GSA International Committee and Country Expert Subgroups; 9) investment in existing and emerging research centres, including, Fellows, Researchers, RAs, PGR bursaries, sabbaticals, capital equipment and estates, contextualised by strategic themes for GSA research; 10) relocation of the Digital Design Studio (DDS) to Pacific Quay, Glasgow's digital media hub; 11) establishment of the Institute of Design Innovation (InDI), with centres in Glasgow and Forres, in response to the Cox Review and business imperatives; 12) development of Scottish Funding Council-funded Living Cities project into GSA research entity, Glasgow Urban Laboratory, with Professorial appointment.

- **Current strategy for Research and Knowledge Exchange to 2025**

Within this census period, the GSA research environment has been served by institutional and School-level planning regimes, supported by business planning activity within the larger of the research groups. Two major planning cycles pertain to the period: the first, 'GSAfuture' covering 2008-2012, the second, 'GSA2025', covering 2012-2025. GSA2025 is built upon three Core Themes: 'Learning and Teaching', 'Research and Knowledge Exchange', and 'Wider Community'. Our published institutional Ambition in GSA2025 is 'to be one of a small network of internationally recognised art schools celebrated for the contribution we make to culture, society and the economy'. At the service of this ambition, our stated organisational purpose now positions research as paramount, 'Our Purpose' being 'to contribute to a better world through creative education and research': http://www.gsa.ac.uk/about-gsa/publications/strategic-plan/. Core Theme, 'Research and Knowledge Exchange', is structured around six ambitions for 2025: 1) 'Be internationally recognised as thought-leaders in our key areas of research and scholarship'; 2) 'Have an established reputation as a source of knowledge and expertise for policy-making and future thinking'; 3) 'Have academically and financially sustainable research centres of international importance'; 4) 'Be recognised for our interdisciplinary research and knowledge exchange grounded in our disciplines'; 5) 'Be an institution of choice for academic staff and research students of the highest calibre', and; 6) 'Have extended our strategic partnerships across academia, private, public and third sectors'.

During the census period GSA has developed critical mass in a number of research themes, listed in 'Overview'. Moving forward to meet the ambitions above, GSA plans further investment in staffing, facilities and activities to consolidate these themes, and the groups within, and will: i) increase the number of internationally recognised thought leaders in GSA's areas of research strength, to be achieved through development of early career researchers and use of external funds to recruit leading researchers in GSA's cluster areas; ii) further establish reputation as a source of knowledge expertise for policymaking and future thinking, to be achieved through the formation of new research alliances with key international organisations from public and private sectors and by building a policy perspective into research projects as they are framed; iii) secure increased external funding, in particular from the EU, to ensure academically and financially secure research centres of international importance; iv) enhance GSA's standing as an institution of choice for staff and students of the highest calibre by working closely with international partners to increase the number of international staff on faculty, and by increasing the size of the PhD community.

The GSA2025 plan builds upon the 'Research and Knowledge Transfer Strategy' current from 2009-2013, and seeks to thoroughly integrate the institutional objectives for RKE within the planning cycle of Schools and groups so that institutional ambitions and objectives are 'locally' owned. The collated Strategic Plan for GSA RKE is available at http://www.gsa.ac.uk/research/.

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c. People, including:

I.   Staffing strategy and staff development

- **Overview**

The FTE submitted to RAE2008 was 76.85, the largest grouping of research active staff in that Unit of Assessment outside London. While seeking to maintain a level of research active staff above 80% of all eligible academic staff, there has been a concentration on support for quality before volume following the report of the RAE Panel, and as detailed in the RKT Strategy for 2009-2013. This strategy has led to a Code of Practice for REF2014 which places emphasis on the submission of prospective 4* and 3* level outputs. The submitted FTE for REF2014 is 52.8 comprising 16 Early Career Researchers, 8 Professors, 20 staff qualified to PhD level, 34 full-time staff, 43 part-time, and 6 fixed-term. All six fixed-term staff have been recently consolidated from periods of input to GSA as Visiting Staff on Zero Hours contracts.

- **Post-RAE2008 investment in staffing for research development and support**

In 2008-2009, GSA undertook a substantive review of research infrastructure, staffing and support. This review led to the consolidation of centrally funded Fellows in Schools and to the establishment in 2009-2010 of new posts, structures, policies and practices with GSA-wide relevance for the development of the researcher community towards higher quality outputs, collaboration and impact. To better support established and new research activity, permanent central appointments arising from this review were: Senior Research Manager (1FTE), Knowledge Exchange Manager (1FTE), Research Developer (1FTE), Research Information Manager (1FTE), and Coordinator roles for postgraduate research degrees (0.6FTE and 0.5FTE). The remit and impact of these roles have progressed within the consolidated staff team of the Research and Postgraduate Studies Department (RPG), now, Research and Graduate School (RGS), under the leadership of the Head of Research reporting directly to the Deputy Director and Director of Academic Development. This core staff team was augmented in Session 2012-2013 with two further strategic appointments to the area: 1) Head of the Graduate School, with the post holder adopting principal duties for the development of the Graduate School including PGR. Although line management is effected by the Head of Research, this appointment is designed in part to allow concentration on the part of the Head of Research on developing GSA's RKE towards excellence in depth, and; 2) to support capacity for KE, based on recent successes (significant among them, the Digital Health Institute Innovation Centre funded by the Scottish Funding Council), a new Knowledge Exchange Manager at 0.8FTE was appointed to a permanent post in 2013, and the existing KE Manager charged to assume greater strategic responsibility for advancing KE at GSA.

In addition to the above posts, to enhance GSA's capacity to support researchers in their use of the RADAR Repository and to cover emerging sectoral priority issues around Open Access and records management, a new post, Institutional Repository and Records Manager (IRRM) was established between the Research Office and Learning Resources and a full-time permanent appointment made in 2013. The post holder works directly with the Research Information Manager, and support for the researcher community with repository usage has been highly effective. The IRRM has taken responsibility for responding to sector consultations via HEFCE and SFC on Open Access, and has worked with the RIM in mentoring staff in their use of RADAR and in their accumulation of evidence in support of research outputs for the public domain. The most recent appointment, approved 2013, for recruitment beyond the census time frame is an RKE Finance Assistant who will assume a pivotal role between the Research Office and GSA Finance for the maintenance and reporting of accurate RKE financial information, using the newly implemented GSA RKE Pipeline to track bids, funding, and post-award management.

- **Investment in Fellows, Researchers, ECRs and GSA RKE Strategic Themes**

In 2012-2013, uplift in GSA's Research Excellence Grant (REG) based in large part on increase in GSA research income in 2010-2011 and 2011-2012 allowed for strategic investment Research Fellows, Researchers, Early Career Researchers (ECRs) and PGR bursaries. This project has seen permanent Research Fellow appointments made in: i) DDS/Digital Visualisation (Jeffrey); ii) Institute for Design Innovation/Design Innovation (P. Smith); iii) Material Culture (McKenzie); iv) Contemporary Art and Curating (Brown); v) GUL/Architecture, Urbanism and the Public Sphere (Glowinska); vi) MEARU/Sustainability (Morgan and Foster), and; vii) DHC/Health and Wellbeing (Loudon). In addition to central funding of high quality research staff, GSA's RKE groups have through core and diverse project funding invested in people and their training over the census period. Several appointments have been made since 2008 across all Schools and departments, enhancing GSA's research profile and activity and contributing to the critical mass in groups and Strategic Themes. These appointments number: Drew, Neame, Sclater (Education in Art, Design and Architecture); Chapman, Ma, Jeffrey, Poyade (Digital Visualisation); Urban, Gillick, Evans (Architecture, Urbanism and the Public Sphere); Payne, Brown, Philips, Greenman (Contemporary Art and Curating); Noguchi (Sustainability); Lockwood, M. Smith, Docherty (Design Innovation); McKenzie, Sweeney (Material Culture); Taylor, Loudon, Teal (Health and Wellbeing).

- **Research Assistants**

In 2013, strategic funding (c£85k) was committed by GSA through the Research Office for the recruitment of 6 Research Assistants. The initiative will develop capacity and activity in established and emerging groups and will add to the critical mass and profile of our Strategic Themes. Appointments will follow early in 2014.

- **Staff development**

Staff Development for RKE at GSA is designed to address both the development of the professional skills required of high quality researchers and the generation of solo and collaborative specialist and interdisciplinary research content. Development opportunities are designed with reference to the Concordat to Support the Career Development of Researchers. In respect of professional skills, the aforementioned support for researchers in their use of the institutional repository is an important development and a means by which issues and guidance around open access and copyright, for example, can be owned by the researcher communities. Written guidance is available to all researchers via the Virtual Learning Environment (VLE) and Open Workshops were held on RADAR for staff. The census period also played host to the approval of a revised Ethics Policy for GSA and the continued work of an Ethics Subcommittee. Ethics process now encompasses a wider range of research undertakings, from archival research, to oral histories and participant observation. All GSA researchers are required to complete an Ethics Form prior to commencement of research projects and again on receipt of funding if required.

- **Research Development Funding (RDF)**

RDF comprises two levels of funding, 'Research Development' (up to £3k) and 'Leadership Development' (£2k - £7.5k). Since the implementation of the RDF in Session 2008-2009, 80 RKE projects have been supported. Of these successful bids 41 were submitted by full-time staff, 28 by part-time and 4 by fixed-term staff, totalling investment of just over £206k. Taken together, both streams are designed to cover projects likely to return 4* and 3* quality research for GSA, as well as speculative, generative and early career research activity. National and international conference attendance is supported through RDF, as is, for example, time out for bid writing, network building, colloquia hosting, visits to archives, exhibition planning and expenses, costs for the production of new research works, and costs of article process charging.

- **Knowledge Exchange Development Fund (KEDF)**

The Knowledge Exchange Development Fund has been established since 2011 and has supported a wide range of projects across all Strategic Themes. The most recent round of funding has allowed KE projects to be pursued by full-time and part-time staff on: i) dissemination through filmic record of impact on small businesses of design innovation processes; ii) application of Fine Art studio-based learning in non-academic contexts – prison learners; iii) application of creative practice methods drawn from photography to rural community understanding of place-making; iv) product design specification to take to market a hospital food trolley to combat malnutrition in older patients; v) deployment of digital technology to facilitate access to heritage significance of industrial cranes to post-industrial communities; vi) application of 'Smartest Place' urban planning tool to European city sites; vii) generation of debate and new writing on culture and nationalism across cultural and political sectors. KE activity has greatly increased in GSA since the aforementioned appointment of the dedicated (now Senior) Knowledge Exchange Manager in 2010, and this has resulted in improved dissemination and commercialisation of research content.

- **Research Leave Scheme**

A Research Leave scheme has operated since 2011-2012, open to full-time and part-time research active staff, and to researchers on fixed-term contracts. Since launch, the scheme has received approximately £40k of funding through the GSA Research Office, allowing 9 staff to pursue research activities released from all teaching and administration (excepting PhD supervision). Final sign off lies with the Head of Research, after applications are reviewed by the GSA Peer Review College (comprising GSA researchers who are members of RCUK Peer Review Colleges). Staff are put forward with support from Line Managers and with approval of the Convenor of the relevant RKE Subcommittee which ensures necessary time release is permitted. The scheme is used to allow high performing researchers time to progress 3* research to 4* and to allow Early Career Researchers or staff on a rising research trajectory to concentrate on advancing the quality of projects with potential, for Strategic Themes or independently of them.

- **Research Office development events and briefings**

The Research Office implemented a 'Research Bootcamp' in 2010. Bootcamp is a two-day intensive training and development session for any research active staff (f/t, p/t, fixed term). The programme coaches participants to: identify and select research questions relevant to progressing research through practice; write concise and legible funding bids; determine detailed costings for research projects; identify relevant funding schemes, and; address issues of ethics. Two Research Bootcamps have been staged with GSA staff attendees numbering 26. To develop professional awareness of Impact as a prominent factor in research audit, but also to encourage staff to

consider the relevance of their practice to Knowledge Exchange and to other disciplines, Research Office staff have staged open workshops on Impact, with reference made to the range of pathways to Impact relevant to Panel D. The Senior Research Manager presented GSA Research Bootcamp as a model of good practice to the sector at the Vitae Annual Conference, 2011.

- **Development of Research Office staff**

Development and training of Research Office staff is ongoing. Attendance and participation at sector events and conferences is encouraged and supported, with staff learning and sharing information from colloquia such as, most recently, the Repositories Support Project, 'Implementing Open Access Funders' Policies'; ASLIB 'Copyright Masterclass'; M25 CPD course 'Support for Researchers'; UKSG, 'Open Access'; Scotland Europa, 'Horizon2020 Support Framework Event', and; Open Repositories Conference 2013, Canada. The OR2013 event received a paper from the GSA Research Information Manager on the work being done by the Visual Arts Data Service and partners, including GSA, with the KAPTUR project. KAPTUR concerns the nature of research data in the visual arts and the use of technology to support the gathering of research data, its discoverability, usage and preservation. KAPTUR has now developed into VADS4R in 2013, an AHRC-funded second phase of work involving GSA which will connect research data management to PGR training and professional development. KAPTUR work has steered the compilation of GSA's approved Research Data Management Policy, and has strengthened links internally between the Research Office and the Library, overseen by the Institutional Repository and Records Manager. Engagement in national, sectoral meetings informs sharable expertise, with the Head of Research and the Senior Knowledge Exchange Manager sitting, respectively, on Universities Scotland Research and Knowledge Exchange Committee and the Research and Commercial Directors Group.

- **Equal Opportunities and Diversity and Equality**

GSA completed a substantial 'Mainstreaming Equality' project in 2012-2013, and published a set of 'Equality Outcomes' http://www.gsa.ac.uk/about-gsa/key-information/equality/ on the GSA website. The outcomes seek to foster the conditions for creativity and make clear that cultural, social and economic diversity is essential to a creative environment where difference and dialogue contribute to creative and transformative potential. As an art school, GSA understands that fostering diversity is central to our purpose and equality and diversity is at the heart of our organisational ethos. Our REF submission and Code of Practice is based upon the central principles of GSA Equalities: that the School promotes a learning, teaching and research culture in which risk taking and innovation are supported and where meaningful dialogue and critical reflection are highly valued. The principles of involvement, engagement, quality, partnership and accountability are fundamental to all aspects of the design, delivery, management, monitoring and evaluation of our learning, teaching, research and working environments. The GSA REF process, encompassing the Code of Practice, was one of the key case studies employed in the Mainstreaming Equality project.

c. II.   Research students

- **Supervisory capacity in GSA**

GSA has a well-established Postgraduate Certificate qualification in Research Degrees Supervision (validated in 2006). The PGCert is one of three routes to formal supervisor status. The other: holding a PhD and having supervised a PhD to completion prior to the validation of the PGCert. Active researchers and new starts (and PhD holders for reasons of professional development) are encouraged to complete the PGCert in Supervision through GSA's Activity Planning, and in response to RKEC's description of strategic need and capacity building priorities. To date, 13 GSA staff have completed the PGCert Supervision (and two external candidates). As of November 2013, GSA has 52 members of staff qualified to supervise PhDs by at least one of the three described routes. Of that 52, 37 staff have undertaken either the PGCert or certificated staff development for research degrees supervision and 33 hold PhDs. The 52 qualified supervisors cover all areas of the School, and support the development of research and research-teaching linkage within GSA's Strategic Themes. Qualified Lead Supervisors Education in Art Design and Architecture (Drew, Neame, Sclater, Hannah, Britt, Neil, Stewart); Sustainability (Porteous, Sharpe, Noguchi, Carter); Health and Wellbeing (Anderson, Macdonald, Chapman, Ma); Digital Visualisation (Jeffrey, Ma, Chapman, Hanna); Contemporary Art and Curating (Payne, Sinclair, Wilson, McKee, Brind, Neil, Lowndes, Birrell, Bird, Gonzalez, Smith & Stewart, Ursitti); Architecture, Urbanism and the Public Sphere (Rodger, Urban, Proctor, Sharpe); Design Innovation (McAra-McWilliam, P. Smith, Sayers-McHattie); Material Culture (Britt, Stephen-Cran).

- **PGR passes in census period**

GSA PGR completions total 20, with the distribution across the census years as follows: 08-09: Fung, Patera, Taylor; 09-10: Britt, Loudon, Matus, McLeod; 10-11: Gorst, Robertson, Rodda, Ulug; 11-12: Bacos, Griffin, McHattie, Niblock, Spaulding; 12-13: Christophini, Harron, Muller-Eie, Onyango. Operationally, PGR numbers are included in GSA KPIs/PIs distributed to each of the RKE Subcommittees. The Research Degrees Subcommittee (RDSC), reporting to parent Research and Knowledge Exchange Committee, has oversight of all PGR practices and policies, and is served by a membership representing the five GSA's RKE Subcommittees. Senate-level representation from the University of Glasgow is also present *ex officio* at RDSC. The doctoral community is supported by key Graduate School and discipline school-based staff: an Academic Coordinator PGR (0.6FTE) who has responsibility for fees matters, training and GSA-wide strategy for PGR; a PGR Coordinator for SoFA, SoD and FoCI (0.5FTE), and; in-school PGR Coordinators designated through Activity Planning for DDS, MSA and the Graduate School. The PGR Coordinator Group meets to discuss application procedures, to assess PhD applications, to interview select candidates, and to prepare for meetings of the RDSC. Interviews for PGR are carried out by the PGR Coordinator Group with input from GSA members of RCUK Peer Review Colleges, and members of the local RKE Subcommittees.

- **PGR Funding**

Of the successful PGR passes in the census period, 4 were AHRC-funded, and 1 EPSRC-funded. In 2011-2012, GSA match-funded the one remaining AHRC Capacity Building bursary and through open advert brought in an additional four students, with fees and maintenance covered for each year of their study as per the terms and conditions of the AHRC award. Strategic investment in the research student tier continued in 2012-2013 with four fees-only GSA awards offered through an open call, linked to our Strategic Themes for RKE. There is currently one enrolled AHRC Collaborative Doctoral Award candidate (fitzPatrick commenced 2010 p/t). Collaboration is with the Forestry Commission for research into the archive of the Grizedale Artist in Residence programme. In 2013 GSA won a second Collaborative Doctoral Award around Health and Wellbeing collaborating with Queen Elizabeth National Spinal Injuries Unit, Glasgow Southern General Hospital, £53k over three years. The collaborative project Knowledge Exchange Hub: Design in Action (KHEDiA) of which GSA is a core partner gave rise to 2 PGR places, each supervised by GSA staff as Director of Studies with projects supervised in GSA across 3 years until 2015.

- **Graduate School community building and support**

The PGR cohort participates in an annual PhD Forum organised by the Graduate School that brings students and supervisors together across GSA. Progression Presentations (at which select students will complete part of their programme of work for transition to the PhD track) are held twice yearly and afford the opportunity for 1st and 2nd year PGR candidates to present their research to peers. Progression Presentations are Chaired by the Academic Coordinator PGR, and are prefaced with a keynote presentation by an experienced GSA researcher. PhD students have access to a budget line held by the Head of the Graduate School for organising common events, visiting speakers, and social events. These events facilitate interaction between f/t and p/t PGR students and PGT student cohorts. The research student community is supported by central services in GSA Learning Resources (LR). LR have augmented Library Twilight Classes to include sessions on research skills open to all PGRs and have produced a suite of Discovery Guides accessible via the GSA website to help researchers explore the potential of our archive resources. New personalised support measures for all PhD students (f/t and p/t), from 2012, see each researcher being assigned a named Library contact to support them throughout their research journey. Research students have a designated Staff Student Consultative Committee which is Convened by the Head of the Graduate School and which reports to RDSC.

- **Review of PGR Regulations and Modes of Submission**

Session 2011-2012 saw a detailed review of PGR regulations, including procedures for application, interview, modes of submission, and supervision. The review was conducted by the PGR Coordinators Group, with input from University of Glasgow. Salient developments implemented are: a scoring method, based on AHRC criteria, which filters candidates for interview; a guaranteed interview for candidates moving past the first stage; streamlining of modes of submission to PhD by thesis and PhD by portfolio and thesis; clarification of roles for Primary Supervisor and Second Supervisor. GSA continues to support PhDs by creative practice, with more than half of the 20

graduating students named above, completing PhDs with a major component of research through practice.

- **PGR capacity building and national and international sectoral engagement**

GSA is a founding member of a consortium in receipt of an award from the AHRC Block Grant Partnership (2) PhD capacity building scheme. The consortium comprises 8 founding Scottish HEIs, and covers Arts and Humanities subjects, including visual arts, cultural studies and art history. The consortium will yield additional PGR numbers for GSA and is structured around the Scottish Graduate School for Arts and Humanities (SGSAH). The SGSAH will deliver national infrastructure for the advancement of PGR training, work-based opportunities, and joint supervision. With the AHRC's doctoral provision at its core, the SGSAH aims to establish the standards for and expectations of the postgraduate researcher experience across Scotland driving up quality across all HEIs. Stemming from AHRCBGP2 work, GSA is a collaborating partner in a bid to the AHRC Collaborative Skills Development scheme based around practice-led research in the arts. GSA continues to participate in the European Framework for Research in Art and Design (EUFRAD), a subset of the European League of Institutes of the Arts (ELIA). GSA hosted the EUFRAD conference in 2008, and is a named collaborator for Work Package 3 of the ELIA SHARE network on creative practice research degrees. Researchers in the Mackintosh School of Architecture are participants in a European FP7 project entitled ADAPT-r, running to 2017, which sees cross-Europe mobility for PGRs within a network of symposia and research training events.

d. Income, infrastructure and facilities

Income

Research Income has increased steadily since 2008. The positive trend reflects GSA's success with RAE2008, subsequent REG, and, importantly, the development of greater strength in depth across a research portfolio broadened since RAE2008 to include new research activity in diverse sectors through, for example, Design Innovation and Digital Visualisation. The trajectory for income detailed in REF4 is summarised here:

Research Income £k	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
	836	955	1836	2451	2620	2362

Major Research Council grants have been secured in each of these years from the AHRC, Economic and Social Research Council, and the Engineering and Physical Sciences Research Council, demonstrating the reach of GSA research expertise beyond traditional arts and humanities territories, chiefly through achievements in the strategic domains of Digital Visualisation, Health and Wellbeing and Sustainability. In 2007-2008 income from EPSRC was, for example, more than double the level of income from AHRC (£111k versus £54k) and income from ESRC more than 50% higher than AHRC at £95k. In 2010-2011 EPSRC income was up to £123k, ESRC down to 84K, but income from the Medical Research Council secured to the amount of £184k. One example of this improving bandwidth is the Scottish Ten project which brought £676k to GSA from new funding partners including Historic Scotland. Diversification of funding for research remains a visible priority in GSA2025, with an increase in income won from UK industry, commerce and public corporations, rising from £371k in 2007-2008 to £1,177,000 in 2011-2012 and settling at £893k in 2012-2013. Impact is also indicated as being strengthened with a peak of over £1m income in 2012-2013 from government bodies, health and hospital authorities.

Over and above main streams of research income, GSA researchers continue to be successful in securing awards, grants and commissions from a range of arts organisations and agencies. Select examples here include: i) Creative Scotland Visual Artist Grant, Phillips, 2011; ii) £5k Lord Provost Bursary, Glasgow City Council, Birrell, 2010; iii) £500 Arts Trust of Scotland Award, Thomson, 2009; iv) £15k Scottish Arts Council Artist Award, Ursitti, 2008.

Infrastructure

- **Research Committee structure in support of Research Environment**

The research environment at GSA is overseen formally by the Research and Knowledge Exchange Committee (RKEC), Convened by the Deputy Director and Director of Academic Development. RKEC reports to Academic Council. RKE Subcommittees have been established since 2001 in the schools of Architecture (MSA), Design (SoD) and Fine Art (SoFA), and the Digital Design Studio (DDS). These subcommittees function as support mechanisms for school-based research activity and as reporting vehicles to RKEC. The Forum for Critical inquiry (FoCI), a research-active unit for critical, historical and cultural studies, was granted an RKE Subcommittee in 2007-2008. As some research-active areas and individuals were not supported directly by this infrastructure (Graduate

School, Directorate, Research Office, Digital Culture and other central staff) from 2012, an Inter-School RKE Subcommittee, encompassing FoCI, supports and reports the activity of all research active staff not employed within Schools and DDS. This means, firstly, that all research active staff now have equal access to the institutional support delivered by RKEC through RKE Subcommittees and, secondly, that all research active staff have an obligation to report into an RKE Subcommittee and onwards to the GSA RKEC to secure effective audit. RKEC is the nexus for all research and knowledge exchange activity within GSA, and the point at which the operational and the strategic meet for prioritisation and planning. RKEC agrees all policies related to the research environment for onward transmission and approval by Council.

- **RKE Pipeline, Annual Reporting and Business Planning**

The Research Office designed and implemented in 2013 a new Pipeline system for tracking RKE activity across all areas of the GSA research environment. The system charts all income relevant to our HESA, SFC and HE-BCI returns, as well as non-HESA income, linked to our integrated RKE Strategic Planning and to distributed PIs and KPIs. Training events have been hosted for a group of key users. Tracking of PGR students and funding is incorporated. In 2012-2013 the Research Office worked with GSA Finance and Internal Auditors to hone the Pipeline specification and to review and progress arrangements for the management of financial data underpinning the RKE environment. This review led to further investment in the human resource for GSA research (0.8FTE RKE Finance Assistant) and better links with Finance for the GSA RKEC via *ex officio* attendance from the Deputy Director of Finance and Resources.

Facilities

- **Estate**

GSA takes possession of the £50m SFC-funded, Steven Holl Architects-designed, Reid Building in December 2013. The building houses the School of Design, as well as a state-of-the-art 300-seat lecture theatre, seminar rooms and interdisciplinary project spaces, as well as new exhibition and educational spaces open to the public. In 2009, the DDS moved to the purpose-built Hub, in Glasgow's Digital Media Quarter at Pacific Quay, home to BBS Scotland, Scottish Television, Glasgow Science Centre, Galaxy Scotland and Film City Glasgow. The DDS houses Lab1, one of Europe's largest laboratory spaces for virtual reality and immersive stereo visualization. In collaboration with NHS Education for Scotland the DDS has two networked research centres located in Inverness and Stornoway with five others under development.

- **Learning Resources for researchers**

GSA's Learning Resources supports the researcher community by: enhancing physical and virtual access to our archive materials; capacity building, and; by disseminating research to strengthen its impact. Examples of success in these areas are: i) a substantial £9m Heritage Lottery-Funded Mackintosh Conservation and Access Project (2007-2010) that resulted in significant improvements to the physical accessibility of our archives & collections and a dedicated reading room for researchers; ii) the appointment of an Archives and Collections Assistant, enabling an increase in opening hours of 400%; iii) a new exhibition space (2014) to house temporary exhibitions and research expositions based on our historical collections, with an attendant public engagement programme; iv) a substantial programme of refurbishment works (2013) undertaken in the Library to enhance the research environment resulting in an increase in the number of individual and group research spaces; v) an extension of Library opening hours by opening on Sundays; vi) facilitation of regular access to our historical Mackintosh Library for researchers; vii) continued participation in SCONUL Access Scheme which ensures our researchers have access to over 150 HE libraries across the UK; viii) continued participation in the Scottish Higher Education Digital Library, a consortium that licences electronic content from academic publishers, enabling our researchers to access a growing collection of several thousand electronic journals across many subject disciplines; ix) initiation of patron-driven acquisition of e-books via our online catalogue, seeing GSA's become one of the first academic libraries in Scotland to offer this service, and; x) launch of InfosmART, a portfolio of online interactive modules in research skills for creative practitioners. InfosmART secured the award of Information Literacy Practitioner of the Year in 2011 at the prestigious LILAC Conference. In 2012 GSA Learning resources completed a Scottish Library and Information Council-funded project to repurpose InfosmART into an open educational resource for use by the wider educational community. All InfosmART content has been specifically mapped to the Vitae Researcher Development Framework, along with a number of other research, vocational and pedagogical frameworks.

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e. Collaboration and contribution to the discipline or research base

- **GSA Themes of Excellence**

Select collaborations and contributions across the census period, grouped here by Strategic Themes, illustrate a broad spectrum of engagement and dissemination, connected to public, private and third sectors. Arranged to make clear the strength within each of our themes, as well as interdisciplinary underpinnings and potential, reference is made chiefly to REF2 staff but also to select members of the wider GSA researcher community.

- **Health and Wellbeing**

Prof. Anderson, i) On-call consultant to MoD ii) MoD Trusted List of Experts; iii) invited assessor, Wellcome Trust; iv) invited lecture, Royal Society of Medicine, London, 2013; v) invited to give the Royal College of Physicians and Surgeons of Glasgow MacEwan Lecture, International Surgical Congress of the Association of Surgeons of Great Britain and Ireland, 2010; vi) Visiting Professor, de Montfort University; vii) Member, ACM, FRGS, FRSA, Arab Society for Computer Aided Architectural Design; **Dr. Chapman**, i) elected in the inaugural cohort to the Royal Society of Edinburgh Young Academy, 2011; ii) invited speaker, NES Annual Dental Conference, 2011; iii) Fellow, British Computer Society; Chartered Engineer; Chartered IT Professional; PRINCE2 practitioner; iv) winner, 2009 UK Industry Awards IT Innovative Project of the Year; v) Director of art & music production house, Cryptic; vi) External Examiner: UWS, University of Hull; vii) Reviewer for: EPSRC; IEEE Visualization and Computer Graphics & Applications; International Journal on Human Computer Systems; Royal Society of Edinburgh; **Prof. Macdonald**, i) advisor to: the Royal College of Art (scientific review chair, 'Include' conference, 2009, 2011), The Royal Society of Arts/Design Council (Independence Matters Programme Advisory Committee 2011-12), the Singapore Building and Construction Authority (invited keynote and workshop); ii) Invited presentations: Keynote, 'Design: case studies from healthcare', Design4Health, SHU, 2013; Designing with Ageing Populations: new research in the UK and Japan, 2010, GSA; The environment and ageing. Invited keynote speaker, Community of Research Exchange, GCU, 2009; iii) grant reviewer: AgeUK, EPSRC (panel), AHRC, SPARC: article reviewer: JED; The Design Journal; UAIS (Universal Access in the Information Society); iv) Fellow: RSA, HEA; v) first individual overseas member of the International Association for Universal Design (IAUD), Japan; vi) External Examiner: PhD, Loughborough University, 2009 and 2013; vii) Visiting Professor, Ritsumeikan Asia Pacific University, Kyushu, Japan (2008-12); **Dr. Loudon**, i) selected participant, SFC/RSE Scottish Crucible, 2012; ii) Nexxus Life Sciences Innovation Award, for 'envision' (New Dynamics of Ageing), 2011; iii): originator of innovative software system that converts complex biomechanical data into easily understandable visualisations helping both therapist and patient for 'envisage' funded by MRC Lifelong Health and Wellbeing (LLHW), 2010-13.

- **Digital Visualisation**

Prof. Ma, i) Editor-in-Chief for Serious Games section of Elsevier journal, Entertainment Computing; ii) Expert Judge, International Loebner Prize Contest in Artificial Intelligence to find the world's best conversational chatbot computer program; iii) Established the International Conference on Serious Games Development and Applications; iv) Elected as the IFIP Technical Committee (TC14) Entertainment Computing - National Representative of UK, 2012; v) Keynotes: CultureTech, Intelligent Digital Storytelling Workshop, Derry, 2013; Jury Symposium, Visual Evidence, Open University, 2010; vi) invited lectures: International Workshop on Waiting for Artificial Intelligence, 2013; 125th Anniversary Meeting of the Anatomical Society, interactive electronic teaching in Anatomical Sciences Education, The Royal College of Surgeons, Edinburgh, 2012; vii) Grant reviewer, NHS i4i Invention for Innovation; **Dr. Jeffrey**, i) member, Institute of Archaeologists; ii) Fellow, Society of Antiquaries of Scotland; iii) Publications Committee, Council for British Archaeology; iv) member, AHRC PRC; v) Editorial Board, Journal of Open Archaeological Data; vi) member, RDM Forum Advisory Board, 09-12; **Abbott**, i) PRINCE2 practitioner; ii) CoI, Storystorm, £15k EPSRC Culture and Communities Network, 13-14; iii) invited lectures: Association for Medical Education in Europe, Vienna, 2011; 11th Congress of European Association of Clinical Anatomy, Padua, 2011; iv) PI, Digital Repositories and Archives Inventory, £50K JISC, 08; Other collaborations and events: i) 'Scottish Ten', partnership with Historic Scotland, collaboration and commission with international agency CyArk to digitally capture international heritage sites, including Eastern Qing Tombs, China, and Mount Rushmore, USA, 2012 ongoing; ii) industry specialist teaching and tutorial input from Disney-Pixar's Mark Andrews, 2013; iii) DDS has established the International Conference on Serious Games Development and

Applications (SGDA), hosted by a different university in Europe every year. Springer has published the proceedings in the LNCS series. The conference is endorsed by Springer, the European GALA Network of Excellence in Serious Games, SINTEF, IFIP, FP7 TARGET Project, Norwegian University of Science and Technology, The Glasgow School of Art, BIBA, University of Bremen, Technical University of Lisbon, INESC-ID/IST.

- **Contemporary Art and Curating**

Prof. Cooper, i) Elected member, Royal Scottish Academy; ii) member, Royal Geographical Society; iii) works accessible in more than 40 public collections in Britain, Europe and North America, including Tate, London and MAM, Fort Worth; **Dr. Payne**, i) Fellow Higher Education Academy; ii) Invited exhibitor, Rom8, Bergen, 2013; iii) 'Neither/Nor', group exhibition, Liverpool Biennial, 2010; iv) Curator, 'Painting as Material Practice' symposium, Wolverhampton, 2009; v) International Peer Reviewer, Austrian Science Fund; **Sinclair**, i) Co-Investigator on £125k AHRC 'Glasgow Miracle' project; ii) 2011 3-month Deveron Arts Residency; iii) 'Nothing in the World But Youth', group exhibition, Turner Contemporary, Margate, 2011; iv) 'No Leftovers', group exhibition, Kunsthalle, Berne, 2008; **Greated**, i) invited speaker, Edinburgh International Science Festival, 2013; ii) member, Advisory Committee, Talbot Rice Gallery, Edinburgh; iii) visiting lecturer, Karnataka Chitrikala Parishat, Bangalore; **Dr. McKee**, i) PI on AHRC 'Glasgow Miracle' project; ii) Director of the Centre for Contemporary Arts, Glasgow; iii) Curator, Glasgow International Festival of Visual Art, 2004-2008; iv) curator, Yossi Breger at Tel Aviv Museum of Contemporary Art, 2011; **Dr. Brown**, i) Director, Common Guild Glasgow; ii) Curator, Scottish Pavilion, Venice, 2013; iii) Director, Glasgow International Festival of Visual Art, 2010 and 2012; iv) Associate Curator (Art Fund International), Gallery of Modern Art, 2007-2012; v) Co-Curator, 'Structure and Material', Arts Council Collection Touring Exhibition, 2011; vi) member, Imperial War Museum Art Commissions Committee; vii) Turner Prize Judge, 2011; **Hopkins**, i) 'Made in the UK', Museum of Modern Art, Rhode Island School of Design, USA, 2011; ii) 'Harness', solo exhibition, Mummery + Schnelle, London, 2008; **Pollard**, i) recipient of the Creative Scotland Amsterdam Residency, 2011; **Calcutt**, i) External Examiner, University of Central Lancashire, 2006-2011; ii) invited speaker, 'Altered States of Paint', Dundee Contemporary Arts, 2008; **Smith/Stewart**, i) 'Enter Love and Enter Death', solo show, Inverleith House, 2008; ii) 'Acts of Voice', group exhibition, Para/Site Art Space, Hong Kong and Total Museum of Contemporary Art, Seoul, 2013; **S. Mackenzie**, i) Elected member, Royal Scottish Academy, 2013; Other collaborations and events: i) 'Learning to Draw', exhibition collaboration with Fleming Collection London, curated by S. Mackenzie on exploratory power of drawing, 2013; ii) GSA/Glasgow one of six collaborators around the UK and Eire participating in Colm Cille's Spiral a re-imagination of the legacy of sixth-century Irish monk and patron Saint of Derry –Londonderry, Colm Cille (St Columba), 2013; iii) GSA hosted the annual Marmite Prize for Painting IV, featuring work by 32 international artists, including GSA MFA graduate Hyojun Hyun, 2013.

- **Architecture, Urbanism and the Public Sphere**

Prof. Platt, i) External Examiner, Universities of Ulster, Edinburgh, and Welsh School of Architecture, Cardiff; ii) Visiting Professor, Bauhaus University, Weimar; iii) member, Revalidation Panel, Ulster School of Architecture, 2011; **Prof. Evans**, i) Co-Founder, Glasgow Urban Laboratory, with Glasgow City Council and the Lighthouse; ii) Lead architect on redesign of St. Andrews Square, Edinburgh; iii) Project lead, Urban Expansion, Moscow, 2013; **Dr. Rodger**, i) Founding Editor, The Drouth, Scotland's Literary Quarterly; **McMullen**, i) Elected member, Royal Scottish Academy, 2013; ii) commissioned artist, permanent work in Scottish Parliament; **McKeown**, i) winner, Scottish Design Award Architecture Grand Prix, 2012; ii) winner, Scotswood Expo, 2009; Other collaborations and events: i) MSA-hosted 'Architecture, Literature and the City', International Symposium, 2012 in partnership with the Technische Universitat, Wien; ii) Fulbright Distinguished Chair, Prof. Ann Markusen, 2011; iii) collaboration with Architecture and Design Scotland, funded by AHRC, for public seminar on Modern Catholic Church Architecture, 2012.

- **Sustainability**

Prof. Sharpe, i) member, AHRC Peer Review College; **Dr. Noguchi**, i) designer of Alouette Home's EcoTerra House, Canada's first zero energy house; ii) member of the Institute of Engineering Designers; iii) member of the Royal Architectural Institute of Canada; **Prof. Porteous**, i) OBE for services to environmental architecture; ii) recipient, SUST Low Energy Award at World Renewable Energy Congress, 2008; **Carter**, i) Fellow Higher Education Academy; ii) 'Tate is 25', group exhibition, Tate Liverpool, 2013; iii) Invited speaker, LAND symposium, Tyntesfield, 2013; iv)

'2008 Projects', Rogaland Kunstsenter, Stavanger, 2008; **Musau**, i) member, Passive and Low Energy Architecture society; Other collaborations and events: i) MSA-led and hosted 'Zero Energy Mass Custom Housing', International Conference, 2012; ii) partnership with academics at Strathclyde and Caledonian universities that looked at laundry habits of a mix of residents in the West of Scotland analyzing air quality and energy consumption relating to domestic laundry habits.

- **Innovation Design**

Established in 2012, and launched by Finance Secretary, John Swinney, the Institute for Design Innovation (InDI) is a new RKE entity for GSA that builds on the professional academic and industry experience of Prof McAra-McWilliam. In its early phase, InDI strategic focus is on collaborations, network building and service design for industry, commercial and government clients. **Taylor**; **Teale**, i) invited speaker: Empowering communities to design positive health and care services, Design4Health, SHU, 2013; ii) project lead, community engagement through design, for DALLAS, Scotland; iii) selected participant and award winner, SFC/RSE Scottish Crucible, 2010; **Prof. McAra-McWilliam** i) invited panellist, European Telemedicine Conference, 2013; ii) voted one of fifty top design leaders by the UK's Design Week magazine, 2012; **M. Smith** i) Keynote, 'Cluster Evaluation' at Global TCI conference, Kolding, Denmark 2013; ii) Board member, The Competitiveness Institute; **Docherty**, i) in collaboration with Gray's School of Art and the University of the West of Scotland, awarded £79,000 by Creative Scotland for Collective Futures project to research business models for designer-maker collectives; ii) invited specialist on innovation in services for public libraries to Strategy Unit, Scottish Government; iii) named partner in £2m project funded by MRC and ESRC for 'Developing Methods to Evidence Social Enterprise as a Public Health Intervention' led by Professor Donaldson, Yunus Centre for Social Business and Health at Glasgow Caledonian University; **Chueng-Nainby**, i) Keynote Speaker and Curator, Creative Emergence International Symposium, School of Design, JiangNan University, Wuxi, China, 2011; 2013; ii) CoDesign with HIM digital health project funded by Highlands and Islands Enterprise with Aberdeen University and University of Highlands and Islands; **Bailey**, i) Advisory Board, Service Design Research Network, Lancaster University, 2013.

- **Education in Art, Design and Architecture**

Prof. Drew, i) Editor, *Art, Design & Communication in Higher Education*; ii) Chair of the Council for Higher Education in Art and Design (CHEAD); iii) member, AHRC Peer Review College and Strategic Reviewer for the AHRC; iv) member of Universities Scotland Learning and Teaching Committee; v) External Examiner, Kingston University and University of East London; **Dr. Neame**, i) Senior Fellow of the Higher Education Academy; ii) member of Association of Academic Developers; iii) Convenor of GSA Research Unit, PRADA; **Dr. Neil,** i) member, AHRC PRC and Fellowship Panel; ii) sector lead for QAA Scottish Enhancement Theme Research-Teaching Linkages 2010; iii) Convenor, Curriculum Review panel, Elam School of Art and design, University of Auckland, 2010; iv) member of the Editorial Board of the journal *Art and Research;* v) member of Universities Scotland Research and Knowledge Exchange Committee; vi) External Examiner, PhD, University of Leeds, 2013; **E. Reid**, i) member, Access and Inclusion Committee of the Scottish Funding Council; **S. Stewart**, i) member, Royal Incorporation of Architects Scotland, Education Committee; ii) External Examiner, Central St Martins; **iii)** visiting critic, Universitat Liechtenstein and RMIT/Sint Lucas Academy, Brussels and Ghent. Other collaborations and events: i) 1913: Rite of Spring**,** an ongoing collaboration between The BBC Scottish Symphony Orchestra, The Royal Conservatoire of Scotland (RCS) and The Glasgow School of Art (GSA) to mark the centenary of Stravinsky's *Rite of Spring* Premiere, 2013; ii) 'Education and Talent', a research project funded by Creative Scotland in partnership with the University of Glasgow addressing the meanings of talent in art and education, 2013.

- **Material Culture**

Material Culture is an emergent theme in the GSA Research Environment encompassing research through craft and the materiality of studio practice. **M. Mackenzie**, i) curator, 'Nudie Cohen', MoMu, Antwerp, 2011; **Lamb**, i) Goldsmiths' Craftsmanship and Design Awards, Gold Prize, 2012; ii) invited speaker, The Society For Jewellery Historians, Royal Academy of Arts, London, 2012; **Boyd**, i) commissioned designer, Glasgow Commonwealth Games, 2013; ii) exhibitor, 'Subversive Design', Brighton & Hove Museum and Art Gallery, 2013; **Dr. Britt**, i) Chair, Association of Fashion and Textiles Courses; Other collaborations and events: i) industry specialist input from Oscar-nominated Hollywood costume designer, Deborah Nadoolman Landis, 2013.