

<p><b>Institution:</b> University of Reading</p>
<p><b>Unit of Assessment:</b> 32B Art and Design: history, theory, practice</p>
<p><b>1. Unit context and structure, research and impact strategy</b></p> <p>World-leading research in the history, theory and practice of 'design for reading' continues to thrive at Reading and includes information design, book and document design, graphic design and typeface design. In this REF period our established research centres, the Centre for Information Design Research (CIDR) and the Centre for Ephemera Studies (CES), have flourished, attracting income and opportunities for collaboration. One of the University's new competitively-awarded Interdisciplinary Research Centres '<a href="#">Book Cultures and Publishing</a>' (CBCP) has recognised our strength in printing and publishing history and practice and is co-directed by Typography &amp; Graphic Communication (T&amp;GC) together with Modern Languages and English Literature. Our work in non-Latin typeface design has flourished with an eager and committed cohort of doctoral and early-career researchers. We have prioritised global engagement through research collaboration with universities, industrial partners, professional associations and NGOs in China, India and Africa in line with our REF 2014 vision.</p> <p>T&amp;GC sits within the School of Arts and Communication Design and within the University's Heritage &amp; Creativity research theme. The School comprises three distinct, small research divisions: Art; Film, Theatre and Television; and Typography and Graphic Communication. Recent investment by the University has focused on embedding a new, fit-for-purpose, research structure with enhanced leadership and expanded support services. Four new research themes: Environment, Heritage &amp; Creativity, Prosperity &amp; Resilience and Agriculture, Food and Health, each with its own Research Dean, have activated cross-disciplinary working. This new structure has benefitted T&amp;GC immensely as demonstrated by the increased success and breadth of our research funding portfolio (as below).</p> <p>T&amp;GC's aim in this REF period has been to ensure sustainability of its distinctive, globally-recognised, discipline-shaping research portfolio. Our strategy to achieve this has been to:</p> <ul style="list-style-type: none"> <li>• <b>extend our range of funding sources</b> including for fellowships, knowledge transfer and impact as well as for research grants taking advantage of opportunities from UKRI, charities, the EU and government;</li> <li>• <b>engage in cross-disciplinary research</b> where 'design for reading' is integral to successful outcomes (e.g. an antimicrobial resistance communication project with pharmacy and architecture);</li> <li>• <b>prioritise support for doctoral and early-career research</b> to ensure growth and reach of 'design for reading';</li> <li>• <b>engage in partnership work</b> to support impact and knowledge transfer (e.g. museums and hospital trusts);</li> <li>• <b>promote our distinctive approach to collections-based research</b> and raise the profile of the research value of the Lettering, Printing and Graphic Design Collections in T&amp;GC;</li> <li>• <b>provide a stimulating, supportive and inclusive research environment</b> that promotes collaboration and inter- and cross-disciplinarity as drivers of research and innovation.</li> </ul>

T&GC's impact strategy is embedded within its strategy for research and knowledge exchange. It is underpinned by collaboration with non-academic external partners who work with us to extend the reach of our research. Supported by a University Impact Development Manager, we work with partners in the development of impact-driven funding bids and resulting projects (e.g. AHRC Follow-On funding with House of Illustration and Design Science resulted in a public exhibition in London attended by over 10,000 people, and science resources for primary school children designed with teachers and children). Funding from Reading's GCRF funding for equitable partnerships extended the impact of Walker's AHRC-funded antimicrobial resistance project ([IDAPPS](#)) through work in Rwanda. Impact evaluation is built into what we do as it is critical to our research to understand whether it has made a difference to people's lives, which in turn is an indicator of its success.

Over the next 5 years we will maintain and enhance a distinctive research identity in the history, theory and practice of typography and graphic communication. We are committed to developing a diverse and engaged community of researchers and partners in the pursuit of excellent, sustainable research that is of benefit to society. We will:

- **generate income to stimulate innovation in research.** We will integrate design thinking in the development and investigation of innovative, cross-disciplinary research questions and their exploration notably in health, and in environmental science with national and global relevance. We will develop ambitious funding bids through leadership and engagement with the new Centre for Book Cultures and Publishing to build on our strengths in book design history and practice.
- **undertake collaborative research and impact with partners** in heritage and culture, and in public services. We will exploit opportunities arising from Reading's institutional partnership with the British Museum (IES 2.1.2) to enhance PhD recruitment and collaboration on collections-led research projects. We will further develop our engagement with the type community globally in particular taking forward collaboration in China. We will take advantage of Reading's new Thames Valley Science Park to enhance relationships with knowledge-based companies. Our work in health communication will draw on partners from the Oxford Academic Health Science Network (OAHSN) and on the University's institutional multidisciplinary partnership with the Royal Berkshire Hospital (RBH).
- **ensure that all colleagues are supported** in producing key outputs deriving from funded or lone-scholar research, and in leading the development of ambitious funding bids and fellowships by providing time, mentoring and resource for travel and publication.
- **continue our commitment to early career research** by attracting and supporting post-doctoral research fellows with funding from prestigious schemes, and doctoral researchers with passion and enthusiasm for design for reading. We anticipate keen interest in our new practice-based PhD (launched for 2020/21).
- **build on our reputation for excellence in design and printing history and culture using the Lettering, Printing and Graphic Design Collections** and partner collections to support research in innovative and engaging ways, in particular through producing on-line resources, activities and events, and digital humanities methods and approaches; development of the Centre for Ephemera Studies will be key to this.
- **contribute to COVID-19 recovery** building on our current funded COVID-19 research, in relation to [adolescent mental health](#) and instructions for [home- and community testing](#). An

ongoing collection of COVID-19 communication material will contribute to planned work on everyday graphic communication in a pandemic.

## 2. People

T&GC's staffing strategy in this REF period has been to **ensure the vitality and sustainability of its distinctive disciplinary research**, to mitigate the effect of the loss of senior research active staff. A new professorial appointment (Poynor) has enhanced research in graphic design, while early-career new lectureships (Lickiss, Warner) and British Academy and Marie Curie Fellowships (Singh and Nemeth) have expanded capacity in information design, design history, typography and typeface design. Through new appointments and strategic support for independent research fellowships we have increased our returnable FTE since 2014 from 8.2 to 10.4 (headcount 13), and we have maintained our diverse international representation (USA, South Africa, Greece, India, Austria, The Netherlands). An increase in the number of teaching-intensive staff (Lloyd and Wyeth from September 2016; Warner and Smeijers from January 2020) serves to enhance the capacity of research-active staff (Warner was subsequently appointed to a T&R lectureship). We support the University's commitment to job sharing when appropriate and have benefitted from a fixed-term shared Collections Research Assistant role (Carnelos and Morris).

**Retired colleagues continue to enrich our environment** through their research with publications, PhD supervision and support. Publications completed during this REF period include Mary Dyson and Ching Y Suen *Digital fonts and reading* (World Scientific, 2016) and Paul Luna's contributions to *The history of Oxford University Press*, vol 4 (OUP, 2017) and his *Very short introduction to typography* (OUP, 2018). Michael Twyman continues in his role as Director of the Centre for Ephemera Studies and publishes extensively on aspects of the history of lithography. Black contributes user-centred design perspectives as lead- or co-author, on papers based on her completed inter-disciplinary funded projects. Gerard Unger's much-anticipated *Theory of type design* (nai010) was published shortly before his death in 2018.

### **Early-career research: supporting excellence and ambition**

We prioritise **support for and development of early-career research** including for members of academic staff, post-doctoral researchers and doctoral students.

Early-career members of academic staff for all or part of this REF period (Lickiss, Moys, Warner) were assigned a research mentor, and encouraged to take up 10 days per year for personal/professional career development in relation to research, e.g. training, leadership development and conference attendance. Further, Lickiss was fully-funded to attend the Oxford Digital Humanities Summer School in 2018: '*The focus on foundational skills for digital humanities and examples of the practical application of these skills has given me an understanding of how to apply digital humanities approaches to future research*'. Lickiss was also funded to attend the World Bank Understanding Risk Forum's 'Interdisciplinary 24hr Pressure Cooker challenge' in Mexico City (2018), which has resulted in collaborations leading to two journal papers, research-led teaching collaborations with the Environment Agency and, following a presentation, an invitation to submit a book proposal, 'Communication design for decision-making: disaster, health, diversity' (accepted) for a new Routledge series. Moys was funded to attend 'Engagement for Research: Power, Impact, & Collaboration', Leapfrog Summer School 2017, Lancaster, which she described as '*an invaluable networking opportunity with designers working united by an interest in participatory methods . . . I have built new connections that I have used in grant proposals*.' Moys was encouraged to develop her editorial skills through guest-editing a

special issue of *Visible Language* on inclusive design. Lickiss, from 2019, as part of career development, has been appointed to the Research Division Lead role as a job share (with Walker). Moys advises on and reviews all research ethics applications in T&GC gaining an overview of research being undertaken at undergraduate and postgraduate levels and by members of staff. Warner, newly appointed as a Lecturer in 2020, joined Walker's communication design research group for mentoring and introduction to the benefits and opportunities of cross- and inter-disciplinary working. Warner will be supported in her plans to engage in communication design projects that benefit third sector organisations, building on recent collaboration on a project with Liberty.

Research in Indian and Arabic scripts was extended through the **independent research fellowships** of Singh (British Academy) and Nemeth (Horizon 2020, Marie Curie). Both were supported by senior colleagues in writing applications and assigned mentors who encourage and support outreach and promotion of their work as well as advising on research and publications. Singh has been encouraged to take advantage of his Fellowship to create networks and has co-organised a series of conferences with SOAS and the Royal Asiatic Society, for example, 'Technologies of print in South and Southeast Asia: the social history of modes of production', in March 2019 and 'Print unbound: the making/unmaking of newspapers and periodicals in Asia', convened in January 2020. His proposal, 'Typing in tongues: how does technology shape language, script, textual communication' was selected for the (virtual) [British Academy Summer Showcase](#) in June 2020. Nemeth's website [TypoArabic](#) explains his research and provides updates, using a [research.reading.ac.uk](#) template and support (available to all researchers). We take advantage of other opportunities to enrich and sustain our research environment with outstanding ECRs, e.g. Ricardo Olocco (Design Star CDT graduate) has been appointed as a Visiting Research Fellow and will contribute through his research on fifteenth-century typefaces.

We have an **excellent and sustained record of recruitment to externally-funded early-career research posts**. Since 2014 we have welcomed 8 colleagues to such roles (Lekka, Savoie, Lickiss, Bravo, Carey, Mole, Lee and Minns) increased from 5 in 2014. Each is expected to contribute with full acknowledgement as co-authors, co-curators, designers or for data collection/analysis as appropriate, and is supported by their respective PI. Lekka and Savoie, for example, are PDRAs on the Leverhulme-funded '[Women in Type](#)' project and have spoken about the project at conferences and events. Savoie gave the annual Beatrice Warde Lecture: 'Invisible women: the contribution of the type drawing office to twentieth-century type making' (November 2019). Each member of research staff, along with all members of academic staff, has access to training and development opportunities provided by the University and external trainers, aligning with the new Concordat to Support the Career Development of Researchers which has informed a University-wide 'action plan' to measure effective implementation of the Concordat recommendations.

#### ***Doctoral research: developing talent and confidence***

T&GC's research environment is enhanced by a **thriving cohort of doctoral researchers** which is critical to the sustainability of 'design for reading'. We currently host 27 doctoral researchers from the UK and overseas, including from China, Brazil, Singapore, Norway, Spain, Egypt, South Korea, Syria and USA; and who study full-time, part-time or working away (a status that allows researchers to work in their own country for example, with archival resources, and receive on-line supervision combined with two visits to Reading each year for intensive study).

Our commitment to doctoral research is shown through our leadership of the AHRC CDT, [Design Star](#) (Walker), working with colleagues at Loughborough, the OU, Brighton and Goldsmiths. The definition of design in this CDT is broad, providing opportunity for Design Star researchers at Reading (who work on topics relevant to design for reading) to experience research methods and projects concerned with product design, fashion design and sustainability, for example. The Design Star strapline 'strength in diversity' acknowledges this range, and also indicates a commitment to offering studentships to those with work experience as well as the more traditional academic routes and who may want to study part-time. In this REF period, 13 T&GC students have attracted funding through the rigorous competitive process for AHRC Design Star studentships. Design Star also disperses funding for creative, often student-led research and impact training (e.g. through Summer Schools, skills workshops and curated exhibitions), and this enhances the doctoral researcher experience.

Beyond Design Star, we have continued to attract funding from AHRC for **Collaborative Doctoral Partnership awards**, including with Tate for 'Forms, strategies and contexts of publishing in modern and contemporary art practice (1960s to the present day)' (PI Blacksell), and with National Museums Scotland for 'Democratising knowledge and visualising process: illustrations from Chambers's *Encyclopedia*, 1859–1892' (PI Banham). Our reputation for collections-based research attracted funding from family donors to work on the archive of the artist, Charles Mozley. This funding has supported a PhD student (Zlotea) and a part-time cataloguer (Morris) and this provides a distinctive and supportive environment for doctoral research. We have been successful in the competitive internal, University-wide international studentship competitions in this REF period (3 fees-only studentships). Others are self-funded, many of whom took advantage of Reading's alumni 10% fee discount.

All doctoral researchers are offered the opportunity to **contribute to undergraduate and MA teaching** and to reflect on the benefits of this to their research or career. Victor Gaultney, for example, has taught aspects of the history and theory of italics to MA type design students, with the benefit that it '*sharpens the focus of my research so that it remains relevant to current designers. It has also helped me to identify areas I may have overlooked or that need further investigation*'; and Alex Heslop taught 'History of Graphic Communication 1' and 'Printing and Printmaking' to Part 1 undergraduate students to support her ambition to pursue an academic career. Doctoral researchers are encouraged to **curate and design exhibitions, conduct workshops and lead symposia**, such as Borna Izadpanah's 2019 exhibition '20th-century Persian newspaper types: investigating the design process', an exhibition co-curated with his supervisor and that was featured by BBC Persia in their programming; and Darryl Lim's 2018 interdisciplinary symposium, 'Multiple impressions: the coexistence of scribal practices and printing technologies in texts' convened for graduate students and early-career researchers: jointly-organised by the Centre for Cultural, Literary and Postcolonial Studies, School of Oriental and African Studies, University of London, and the British Library. We are proud of the **publication record of our doctoral researchers** and encourage and support this as part of their doctoral training. In 2018, for example, Reading Design Star students Borna Izadpanah and Ricardo Olocco had work accepted in the *Journal of the Printing Historical Society* for 'Early printing and type founding in Europe, and 'The Jenson Roman' respectively. Andrew McIlwraith published in *Visible Language*, 'Two-dimensional and three-dimensional maps: which work best for museum visitors.'

Each PGR student is jointly supervised. The weekly postgraduate seminar is presented by a doctoral student and attended by staff and all postgraduate students. This seminar forms part of

annual monitoring of progress that, along with written work, is evaluated by two colleagues and reviewed by the Departmental PGR Committee. Confirmation of PhD registration in the second year of study, or part-time equivalent, is granted after review of a chapter-length piece of writing and an interview. These processes lead to timely completions and excellent pass rates. In this REF period we have had **20 PhD successful completions, an increase of 11 from REF 2014.**

Within T&GC, doctoral researchers benefit from a designated room with desk space that complements study space in the Graduate School, access to printing and studio facilities, exhibition space and support for and training in collections-based research. Our doctoral researchers participate in Graduate School events and competitions which provide an opportunity to share their research experience with students working in other disciplines. Bodil Olsen, for example, won the 2019 Graduate School Research Poster competition for 'Communicating health in food labelling in Britain 1850–1970'.

We encourage interest in potential future research by engaging with Reading's distinctive Undergraduate Research Opportunities Programme (UROP) that has led to 6 funded placements (with Banham, Black, Leonidas and Moys) that have inspired future postgraduate study or careers in information design.

### ***Supporting and rewarding people; promoting and celebrating diversity and inclusion***

Reading is committed to **rewarding research excellence and ambition** across all staff, whatever their career stage. T&GC has benefitted from Reading's Research Endowment Trust Fund (RETF) for:

- research and impact development within the research division (£19.5k)
- funding bid preparation and research leave (Banham, Leonidas Lickiss, Moys, Ross, Walker) and for research assistance (Walker). This included a Heritage & Creativity theme Collections Residency for Banham to work on a funding application about the reconstruction of historical printing processes, and to run a related cross-disciplinary 'Ideas Labs' to explore integration of digital humanities methods and that has resulted in a large AHRC grant application: 'Revisiting the heritage of printed images, 1780–1880: printing surfaces, reconstruction & interpretation' £995,000)
- research and impact excellence. Lickiss was awarded one of the University's prestigious 2020 Fellowship awards for an outstanding ECR, which has supported a monograph. This monograph was subsequently awarded the best ECR research output prize for the Heritage & Creativity theme in 2019. Walker's work to extend the reach and range of beneficiaries of her research was acknowledged through selection as a finalist in the 2019 and 2020 awards for Research Impact and Engagement for her work on antibiotic resistance in the UK and in Rwanda; and the graphic design pioneer, Marie Neurath.
- Design Star CDT doctoral studentships. Funding for each of the last five years for one Design Star PhD studentship (£281,220); contribution to the admin support for the CDT (c £25,000), and buyout for Walker as Director (£13K).

Research excellence and engagement has contributed to the **promotion of 7 members of staff** in this REF period: 3 to Professor (Kindel, Leonidas and Ross); 2 to Associate Professor (Blacksell and Moys), 1 to Principal Research Fellow (Burke) and 1 within the professorial zonal range (Walker). Of these promotions 3 were part-time staff; 4 were female, 3 male. All staff are supported in applying for promotion through workshops on the application process at University level, and through mentorship within the School. The promotion process allows for and takes

account of an individual's personal circumstances, including maternity, paternity and adoption leave, ill-health and caring responsibilities.

We have welcomed the University's commitment to equality and diversity through the appointment of a Dean for Diversity and Inclusion, and appointment of champions at Department level (Moys and Warner). Staff networks, for example, for BAME and LGBTQ colleagues and Women@Reading offer collegial and supportive spaces for discussions and events. We take active steps to promote the work of women in our research, for example, Ross's Leverhulme project 'Women in type', and Walker and Kindel's AHRC project about the designer, Marie Neurath. The research centre for Book Cultures & Publishing has four female co-directors, including Walker, and is committed to working in a collaborative and inclusive way, and to raising the profile of the contributions from under-represented groups in book and publishing history. Walker continues to serve as an Aurora role model and mentor. Moys has extended her interest in inclusive design by encouraging undergraduate students to be aware of different areas of diversity, including in research through workshops and a publication 'I am, we are ... different by design' supported by the University's Diversity and Inclusion Initiatives Fund. Doctoral and staff research reflects commitment to the representation of languages other than English, including Armenian, Greek, Arabic, Chinese, Hindi and Bengali. Our volunteers working within the Centre for Ephemera Studies are retired people and bring valued experience and expertise from librarianship, archive cataloguing and printing history. Our funded research demonstrates our **commitment to engaging with diverse groups of people** both in the development of research ideas and in their exploration. This engagement includes with children and young people, local communities in Rwanda and Ghana, carers of people with dementia and people who work with type and language in non-Latin scripts.

Individual research plans are prepared annually and take account of strategic objectives identified in a research division 5-year plan that in turn aligns with the University's research strategy. Research Division Leads (RDLs) oversee and support individual plans and assist in making sure objectives are achieved, that both full- and part-time colleagues are aware of internal and external research support schemes, and that personal circumstances (such as COVID-related home-schooling) are taken into account. Staff Performance and Development Reviews include discussion of personal research plans and the opportunities and challenges associated with these. Within the Department research-related meetings are scheduled to accommodate part-time staff; and flexible working arrangements in agreement with the Head of Department support people with caring responsibilities. All research-active members of staff are invited to contribute to strategic research planning discussions and related meetings and workshops. The RDLs meet termly with the Research Dean to discuss research progress and highlights, and to raise issues and questions about resource.

Our approach to **REF preparation has been inclusive**, ensuring that all REF returnable colleagues have been involved in drafting the Environment statement; and that individual research plans have been taken into account in drafting our forward strategy. One of our impact case studies derives from research undertaken by full- and part-time members of staff and combines ECR research with that of senior colleagues. Output selections were based on quality, assessed through peer review, and consideration of equality and diversity issues. Our output selection is a balanced portfolio that represents the range of research in this small UoA. We reflected on the outcomes of the University's interim Equality Impact Assessment (2020) and bias analysis (2021), which identified no statistically significant differences for protected characteristics in our selection. Items were selected from up to 10 outputs from returnable colleagues and have taken account of gender, career stage, nationality and whether full- or part-

time. For example, the average number of outputs per staff member is 1.8 (M) and 2 (F); 13 of 25 outputs are from full-time staff; 9 from part-time staff, and 2 from a retired colleague; 12 of 25 outputs are from professors (split equally between full- and part-time); ECR research is represented with 5 outputs, 2 of which are double-weighted; 11 of the outputs are from staff with nationalities other than British.

### 3. Income, infrastructure and facilities

#### ***Diverse sources of funding for research, knowledge transfer and impact***

We have built on our strong track record of attracting research income, **extending our range of funding sources**, as planned. We received £1.4m in the assessment period deriving from external sources including UKRI, the EU, charities and government, and from internal competitive funds such as from Reading's GCRF allocation. This funding success demonstrates our commitment to cross- and inter-disciplinary working and to global contexts.

Our success in grant capture has been underpinned by **internal support mechanisms**, for example, collaborative thematic workshops that support networking. Walker's AHRC project about antimicrobial resistance arose from discussion at a Health Humanities workshop, and Black's and Lickiss's research collaborations with Meteorology stemmed from internal cross-disciplinary workshops. Researchers from T&GC (Banham, Lickiss, Leonidas, Ross and Walker) have contributed to Heritage & Creativity funded workshops and events related to digital humanities and using collections and archives in research. Further, from 2018 research applications have been supported by internal peer review from an institutional Grant Development College. Within T&GC colleagues writing grant applications are supported by senior colleagues, in particular when applicants work part-time or are at the early stage of their research career. Walker, for example, supported Ross in her successful Leverhulme bid.

Our research excellence in typeface design has resulted in funding from **Leverhulme** for 'Women in type: a social history of women's role in type drawing offices' (Ross); from the **British Academy** for 'Merchants of alphabets: networks of typographic design and technology in Indian language publishing, 1900-1950' (PI Singh) and from **Horizon 2020** for 'TypoArabic: towards historically-informed practice in contemporary Arabic typography' (Nemeth). For research in information design, we secured funding from **AHRC** for a project (2018-19) concerned with the role of pharmacies in communicating information to combat antimicrobial resistance (Walker). Black was Co-I (with Lickiss as RA) on a **NERC**-funded project (2013-2017) as part of the PURE (Probability Uncertainty Risk and the Environment) initiative and worked on the communication of forecasts of risk and uncertainty to audiences from air-traffic controllers and property insurers. A second **NERC** project (Black Co-I; Lickiss RA) with GCRF resilience funding on the communication of risk and uncertainty to low-literacy agricultural communities in sub-Saharan Africa raised the profile of information design. Black extended her work on this project as Co-I with RA support on a project for **DfID** about how to improve the provision of seasonal forecasts to aid decision-makers. Walker is Co-I on an **ESRC** Cross Council Mental Health Network Plus project, bringing an information design perspective to 'Emerging minds: action for child mental health' with Psychology and Computer Science, Sociology, Media Studies and History at other HEIs. Black, and then Moys, were Co-Is on the **EIT Food KIC** project 'Developing a digital toolkit to enhance the communication of scientific health claims' which aims to help manufacturers and marketers communicate more effectively about the health benefits of food and help consumers make more informed choices. Walker was successful in internal competitive funding for **GCRF for Equitable Partnerships** for a project in Rwanda about communicating information about antibiotic resistance. Walker is Co-I on an Oxford University-led MRC/AHRC/ESRC **COVID-19**



**rapid knowledge mobilisation project:** 'Evidence based mental health and well-being resources made by young people for young people in the COVID-19 context'.

In parallel with attracting funding for research, we have successfully explored funding routes for the application of our research, for impact and for knowledge transfer. Black co-ordinated a range of commissioned health communication projects including with **Southampton CCG** to develop materials for long-term patients explaining how they could help reduce medicines waste, and that resulted in cross-media approach of print and digital resources for use in different contexts (GP surgery, pharmacy, hospital); and with **Royal Berkshire Hospital** on a tool to improve communication between hospital staff and carers about patients' experience of pain. Walker was appointed by **Public Health England** as a consultant on a project to design information materials to support antimicrobial stewardship in community pharmacies. **AHRC Follow-on funding** enabled Walker and Kindel to raise the profile of Marie Neurath's work on science communication in her Isotype books for children.

Support from Reading's **HEIF** (£40k) has enabled Lickiss and Walker to initiate the Innovation in Communication Design (InCoDe) project that is **committed to partnership working and knowledge exchange**, in relation to immersive technologies, health and the environment. Current InCoDe collaborators include Royal Berkshire Hospital on a project about penicillin allergy, the McPin Foundation and Mental Elf in relation to adolescent mental health, and HM Prisons Service on structured communications in prisons. As part of InCoDe, Lickiss undertook a University-wide survey of VR capability at Reading which has resulted in investment in equipment and its application in health-related information design in discussion with Reading's Knowledge Transfer Centre.

#### ***Support for collections and archives to enliven research and engagement***

The **research importance of the Lettering, Printing and Graphic Design Collections (LPGDC)** was affirmed in this REF period by the positive response to our Collections Research Development Framework commissioned as part of a University-wide Collections Project. The [LPGDC](#) comprises mainly C19 and C20 material including the Otto and Marie Neurath Isotype Collection; the Non-Latin Type Collection; the Rickards Collection of Ephemera and the C20 Poster Collection; the work of designers such as Hans Schmoller, Colin Banks and John Miles as well as a unique collection of printing presses spanning technology from the C16 to the C19. The framework set out plans to increase the research potential of the LPGDC, in particular cross-disciplinary engagement through partnerships and collaboration, attracting funding for research and impact and enhancing access through workshops, cataloguing and digitisation. Approval of the plans led to **substantial University strategic funding:** for a Collections Research Assistant (£43k); Heritage & Creativity theme funding for digitisation and access projects (£5k), and Research Infrastructure & Equipment Funding for additional collections storage and refurbishment for exhibitions, including new lighting, vitrines and digital display equipment (£35k). As a result of this support, funding and profile, during this REF period, we have had **4 successful funding bids that have drawn on our collections** (Ross [Leverhulme], Singh [BA], Walker x 2 [AHRC]); as well as **7 AHRC-funded doctoral students**. This research has also benefitted T&GC through connections with other national and international collections, including AHRC-funded CDAs (with National Museums Scotland and Tate).

Recognition of the research value of the collections in T&GC is further demonstrated by **donor contributions** to the 'Michael Twyman Fund', established after Emeritus Professor Michael Twyman was awarded the Misha Black Award in 2014 for his stellar contribution to 'design for reading' including for collections-based teaching and research. This Fund is used to support

collections development and research, for example, as shown in the 2016 exhibition '[A-Z ephemera](#)'; and bursaries for postgraduate students undertaking collections-based research. Serjio TrijilloPerez, who won a Twyman Bursary in 2015, acknowledged the value of the LPGDC: *Everything from antique books, newspapers, posters and ephemera, to original sketches, production pieces and printing tools, has been at our disposal. The close contact with these collection pieces provides the historical context needed to better understand, appreciate and practice any design profession. It is definitely a unique experience to work in such a historically rich and creative environment, and I am extremely thankful that I was able to do so.*

As well as collections housed within T&GC, our **research is supported by the University Special Collections service**, including material in the [Archive of British Publishing and Printing](#) and the [Printing Collection](#), both of which have been developed in consultation with researchers in T&GC. Further, T&GC research is enhanced and supported by the University Library which has extensive holdings. T&GC researchers benefit from the range of disciplines represented in a broad-based HEI, and take advantage of books and journals, for example, in linguistics, psychology and economic history as well as holdings in typography, graphic communication and printing and publishing history. A reading room in T&GC holds additional key books and journals in the AF Johnson Collection and the Otto and Marie Neurath Isotype Collection.

### **University infrastructure and support**

Since 2015 the **University has invested over £1 million in new research support posts**, increasing the resource available to researchers from several central functions, including theme-based research development managers, impact support officers, and business relationship managers. This support has benefitted researchers in T&GC, for example, by suggesting funding routes; supporting costing for applications; identifying opportunities for impact and knowledge transfer. Typography's impact work has been supported through Reading's award-winning Building Outstanding Impact Support Programme (BOISP), with £16,300 awarded to support exhibitions, user-engagement and data analysis. The University's support for interdisciplinarity is evidenced through recognition after a competitive process of 10 interdisciplinary research centres. Successful applicants (including our new Centre for Book Cultures and Publishing) received RETF financial support for research and engagement pump-priming projects. T&GC shares the University's commitment to Open Research and has been supported through the Open Access fund to support publication of journal articles in peer-reviewed journals (Lickiss, Walker, Black). Where relevant and appropriate, Creative Commons licenses are used, for example, with design templates produced as part of research projects.

Within T&GC all staff have networked computing facilities in dedicated offices, have professional Creative Cloud software as required and access to scanners, cameras, audio and VR equipment. All staff have access to the Lettering, Printing and Graphic Design Collections, and are supported by Assistant Curator, Dr Emma Minns, who can arrange photography and scanning as required to support research projects. The University's Research Communications Office provides templates and support for research project websites and as part of our strategy to extend the reach of our research we make use of this opportunity as with, for example, [Women in Type](#) and [TypoArabic](#).

In our 2014 REF submission we anticipated a new location for T&GC and in 2015 the University set in motion plans to rehouse T&GC in a distinctive 1970s-era brutalist building located in the centre of the Whiteknights campus. The redevelopment, budgeted at over £30m, aimed to bring together the Schools of Construction Management, Architecture and of Art, as well as T&GC. The project reached a stage 2 design phase, when in 2017, the building was listed by Historic

England and the project was unable to continue. To mitigate this, T&GC's current building has been prioritised for a programme of redevelopment. Work has started on refurbishing our current facilities and creating additional space for a new print workshop that will house our outstanding collection of historic presses.

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

Information design research is concerned with making a difference to people's lives and we seek to engage users both in the conception of research projects as well as evaluation of their effectiveness and resulting benefits. Public-facing outcomes such as exhibitions and accessible digital assets are integral to our collections-based research, for example. And our research and practice in type design and book design is undertaken in close association with readers, industry professionals and publishers.

##### ***Collaborations within and beyond the University***

Our work in information design has prioritised **cross-disciplinary collaboration and stakeholder and user-engagement**, evident in Black's work as Director of the Centre for Information Design Research (CIDR), with research links with schools and departments across the University (Food Science, Henley Business School, Linguistics, Meteorology, and Psychology) and to users of research beyond the University (Government Digital Services, Parliamentary Digital Services, DWP, Berkshire Healthcare Foundation Trust, Royal Berkshire Hospital, Clarity (professional legal society), the Met Office and Environment Agency). CIDR provides an identifiable focus for T&GC's information design research, leading into the publication of the co-edited *Information Design Research and Practice* (2017), which included 49 contributions from colleagues around the world, and was launched in collaboration with the All-Party Parliamentary Design and Innovation Group (APDIG) at an [event](#) at Westminster in 2018, attended by over 100 guests. In response to COVID-19, Walker is working with colleagues in bio-medical engineering on a project about anti-body testing kits to ensure that instructions for doing the tests are clear and easy to use. This research is funded via a crowd-sourcing campaign organised by Reading's Development Office.

During this REF period, Black, Moys and Walker have been members of the EU COST-Action, '**Evolution of reading in the age of digitisation**' (E-Read), collaborating with colleagues across Europe. Our attendance at workshops in Slovenia, Hungary, Croatia and Lithuania raised the profile of 'design for reading'. Moys collaborated with E-read colleagues in Ireland on a project 'Investigating the interplay between typographic differentiation, motivation and recall in e-learning interfaces'; Black organised a working seminar attended by 25 delegates on the theme 'Reading to do' that focused on instructional text. Walker collaborated with Theresa Schilhab, Aarhus University on an edited volume, *The materiality of reading* (2020), and was lead author on a chapter, 'Designing digital texts for beginner readers' in an edited book *Learning to read in a digital world* (Benjamins, 2018). As a result of this engagement T&GC contributed to and signed [The Stavanger Declaration](#), outlining future research on reading from paper and screens.

Work across disciplines characterises our **historical approaches to 'design for reading'**. In 2019, Kindel commenced an interdisciplinary collaboration with musicologists and codicologists at the Institut de Recherche en Musicologie (IReMus), Paris, inaugurated at the conference, 'Le livre de musique pochoir: techniques, répertoires, ateliers' (Valenciennes), attended by 30 people. To accompany her co-edited special issue of the journal *Architecture & Culture* (2016), Blacksell collaborated with Dr Stephen Walker, University of Sheffield to organise two one-day

conferences at the ICA (London) in 2015 and 2016 under the title 'Architecture and the spaces of information', each with around 180 international delegates. Ross was invited by the British Library (BL) to contribute an [online article](#) 'Two Bengali grammars – a typographic perspective', and Singh was awarded funding (£15k) in 2019 from the BL's Endangered Archives Programme for a [project](#), 'Preserving the history of Indian cinema through digitising early Urdu film magazines'. Singh's growing national and international reputation has led to symposia in collaboration with the Royal Asiatic Society, the Centre for Printing History and Culture and The Bibliographical Society. His 'Drafts of history' [project](#) is creating a publicly-sourced archive of a single day with newspapers from around the world.

Our expertise in collections-based research, history of printing and design and in describing the material attributes of text that inform workshops, symposia and exhibitions has nourished **partnerships** including the Centre for Ephemera Studies working with the John Johnson Collection at the Bodleian contributing material and expertise to the 2020 exhibition 'The art of advertising', and with Université Cergy Pontoise on an EU-funded project 'Patriméph' leading to a French-language edition of the 'Thesaurus of ephemera terms'. Many of our workshops involve hands-on sessions with presses and other artefacts to demonstrate the major and minor printing processes, supported by a print technician and material relating to the making of prints using these processes. Working with the Institute of English Studies London Rare Book School, we convened a 3-day collections-led and hand-on workshop on Colour Printing, 1830–1950 (2018), which was the first time the Book School moved outside London, and that will be continued as part of our Centre for Book Cultures and Publishing activities from 2022.

Much of our collections-based research results in **public-facing exhibitions** curated in collaboration with national museums and galleries. These include Poyner's 'National Theatre Posters: A Graphic Design History, 1963–2017' at the National Theatre, London, 2017/8; and Kindel and Walker's 'Marie Neurath: Picturing Science' at House of Illustration, London in 2019. In his role as Curator of the Otto and Marie Neurath Isotype Collection, Kindel has provided research-informed consultation and expert curatorial support to colleagues in museums and galleries in the UK and Europe. These include: 'Exemplary: 150 Years of the MAK – from Arts and Crafts to Design' (Museum für angewandte Kunst, Vienna, 2014); 'Bildfabrik. Infografik 1920–1945, Fritz Kahn, Otto Neurath et al' (German National Library, Leipzig, 2017–2018; and a contribution to an exhibition publication and keynote address to exhibition opening); 'Bilston's Happy Housing' (Bilston, West Midlands, 2015); 'Can graphic design save your life?' (Wellcome Collection, London, 2017–2018 and a contribution to exhibition publication); and 'Society of Signs', Leopold Hoesch Museum (Düren) and Museum für Neue Kunst / Städtische Museen Freiburg, 2020.

Within T&GC, a refurbished exhibition area has supported displays curated by staff, students and external members including, 'Pelican books by design' the public-facing inaugural exhibition of the Centre for Book Cultures & Publishing, curated in 2019 by Lickiss. We have extended the reach of our collections-based research through on-line exhibitions, for example, about [Marie Neurath's children's books](#) (2020).

### ***Research and impact globally, nationally and locally***

The global reach of T&GC's research has been significantly developed and enhanced during this REF period often in response to requests for collaboration, consultation and curiosity to find out more about what underpins T&GC's approach to research in 'design for reading'. Leonidas has led **work in China**, for example, with Tsinghua University where a research group on design in digital reading is investigating partnership with us, including PGR training and research

collaboration. Leonidas's global influence is also seen as a founder member of the **Granshan Foundation** that celebrates 'non-Latin typefaces and typography, design and communication that enable communities to develop culture and enterprises in a balance between local, regional, and global'. Under Leonidas's direction, Reading hosted the 2015 Granshan conference which attracted 200 international delegates.

Now in its 12th year, our two-week **Type Design Intensive (TDi) summer course** has been instrumental in creating a global community that spans industry and research, education and practice. Run by Leonidas, the course attracts engineers and managers from companies such as Google and Microsoft, senior designers from companies such as Jaguar, and educators from institutions around the world. Group sizes are maintained at around 20 to ensure exchange of ideas and TDi utilises a research-intensive approach to illuminate how typography matters across these different perspectives, and to build bridges between decision-makers, engineers, educators, and practitioners.

Leonidas and Ross continue to work in collaboration with Google. Leonidas' research informed the development of Source Serif 2 through designing character sets for historical and current Greek; and Google in 2020 released Ross's fonts developed for the acclaimed [Murty Classical Libraries of India](#) project for Harvard University Press in their Open Source Library in 2020, in line with their policy of making freely available exemplars of best typographic practice and the research and design processes that inform them.

Much of T&GC's research results in **outputs or materials that offer direct benefit to people**. An example is Black's '[Handbook for Carers of People with Dementia](#)', produced with Berkshire Healthcare Foundation Trust (BHFT), to help them navigate local services available to them. The Handbook contributed to the Outstanding rating in BHFT's quality of care provision, and was specifically cited as an example of excellence. The success of the handbook in Berkshire resulted in new editions relevant to Essex and the Isle of Wight. In 2016, Health Education England commissioned an e-book and app version for trainee professional carers that is available in their website and via Kindle and e-book where it has had over 8000 downloads and has been commended in reviews for its ease of use and clear structure. Other examples of the application of our information design research include invitations to present to UK Parliamentary Digital Service (Black and Moys) on 'User focused information design in a multiplatform environment' in 2018; Moys contributed recommendations to a confidential report for the Office of Parliamentary Council in 2014; and Walker offered an information design perspective to the Grenfell Tower Enquiry: a sector workshop 'Redesigning Building Regulation Guidance'.

### ***Getting involved in the sector: affirming research value of typography and graphic communication***

**Contributions to the research base** in the UK include Walker's appointment to the Art and Design REF 2021 panel and membership of the Advisory Group for the AHRC Design Research Leadership Fellow. UKRI support includes membership of AHRC Peer Review College (Black, Kindel, Walker) and of the Strategic Review College (Walker); membership of the mid-term EPSRC DTP/CDA review panel (Walker). Drawing on her Design Star experience, Walker was one of Reading's leads in the development of the successful South West and Wales DTP2, which helped to ensure that design is one of the topics eligible for funding and that training in collections-based research is available for doctoral research; Black, Kindel, Leonidas and Walker contribute to the SWW2 review process. Although a small UOA, T&GC's broad range of research makes a significant contribution to the research base. Our contribution in this REF period from 12.7fte (including returnable and retired colleagues) reflects this: 40 articles in

refereed journals, 55 chapters in edited books, 10 books, 7 edited books, 14 practice as research outputs, and around 200 papers that focus on critical practice in design from a research perspective or that serve to extend the reach of our research to professional as well as academic readers in publications such as *Eye*, *Print* (USA), *Design Observer*, *Medium*, *Creative Review*, *Art Monthly*, *Baseline* and *The Ephemera*.

Members of staff have taken **leadership roles in subject associations with international reach**, including the Printing Historical Society (Singh) and the Ephemera Society (Twyman). Leonidas was elected President of Association Typographique Internationale, the primary global body for bringing together research and practice in typeface design and served until 2019. Walker continued as Co-Chair of the Information Design Association until 2017 and was a conference organiser and chair of the 2014 'Information Matters' international conference held at RIBA in London attended by 250 delegates. As well as these major discipline-leading events, colleagues have organised smaller influential conferences and symposia that reflect T&GC's research or methods relating to it. For example, ephemera-related research underpinned a 'Poster Network Study Day' in June 2017, in collaboration with the V&A and the Arts Council, and a 'Letterforms and Ephemera' symposium with the Ephemera Society in June 2019. Both these events provided opportunity to showcase material from the Lettering, Printing and Graphic Design Collections, to the delight of more than 50 delegates attending each event. Overseas invited committee memberships include Type Directors Club, Beatrice Warde Scholarship Committee (Ross), Council of Higher Education, Israel, panel member for national sector review of communication design (Leonidas); Non-Latin Advisory Board of the Type Directors Club (Leonidas, Nemeth, Ross). Other contributions have been **acknowledged through awards**, including the 2018 TDC Medal for Distinguished Contributions to the Fields of Typeface Design and Education' and the 2014 SOTA award (Ross), the 2017 TDC medal (Unger), and an Antibiotic Guardian Commended award for antibiotic resistance materials for Rwanda (Walker). Staff have served as **reviewers of journal articles**, and Leonidas is editor-in-chief of the 'Typographic knowledge for global communication' series, published by CITIC Press.

Our reputation for research leads to many **invitations to deliver keynote lectures**. Of particular note are 'Representing technical information for everyday communication' at the Visualisation of Knowledge conference at Aalto University, Helsinki in 2017 (Black); 'The illustrator as public intellectual: Russell Mills – a case study' at the 6th Annual Illustration Research Symposium at Rhode Island School of Design in 2015 (Poynor); 'Type more examined than ever: now more than ever is the time to ask relevant questions: interrogating research and practice' Type Drives Culture conference at the Type Directors' Club, New York in 2019 (Ross), 'Heritage and creativity, productivity and innovation' at the Symposium on the Creative Chinese Character at CCC Association, Beijing in 2017 (Leonidas) and 'Progress? On the evolution of Arabic type', The Justin Howes Memorial Lecture, 2019 (Nemeth). In addition, staff delivered high profile lectures in Europe, USA, Brazil, China, Sri Lanka, and India on a wide range of 'design for reading' topics: book design for children, book design and spaces of publishing, women in type, Isotype, key figures such as David King, William Sandberg and Stanley Kubrick; and methods of working including collections-based research, and design skills for environmental risk communication.

T&GC's research in this REF period has been supported and sustained through alignment with the University's strategic ambitions for research: collaboration, openness, impact, leadership and resource. We have engaged with partners locally, nationally and internationally in an open and inclusive way. Our approach to impact is built into our research to take accounts of the needs

**Unit-level environment template (REF5b)**

and skills of partners and user communities. Colleagues continue to provide leadership in respective research fields and to provide encouragement and guidance in research in alignment with senior research leadership at Reading, T&GC's ambitions have been recognised and have benefitted from University of Reading support. This has resulted in a research environment that has enabled a small, distinctive UoA to thrive.