

Institution: Canterbury Christ Church University
Unit of Assessment: 4 - Psychology, Psychiatry and Neuroscience
<p>1. Unit context and structure, research and impact strategy</p> <p>1.1 Unit context and structure</p> <p>Our submission to the UoA4, Psychology, Psychiatry and Neuroscience combines theoretically-driven, applied, and practice-oriented research in psychology. Although no submission was made to UoA4 in REF2014, 10.4 FTE psychology staff were returned in other units across the institution. Our substantially strengthened research position, as well as simultaneous success and growth in undergraduate and postgraduate programmes, have facilitated this first submission to UoA4 of 26.8 FTE researchers, a portfolio of work with wide-ranging impact, and three case studies selected from a number of high-profile examples.</p> <p>The Unit sits within the Faculty of Social and Applied Sciences in the School of Psychology, Politics and Sociology. After the 2020/21 restructure it will move into a new Faculty of Science, Engineering and Social Sciences, within the School of Psychology and Life Sciences. The Unit brings together research activity from the Salomons Institute for Applied Psychology in Tunbridge Wells, an exclusively-designated facility for postgraduate research and training in close proximity to London and key NHS stakeholders, with the Psychology subject area in Canterbury, supporting over 500 undergraduate and postgraduate students.</p> <p>The Unit has been a key beneficiary of the University's major change initiative and launch of the Strategic Framework (2015-2022) (REF5a2.1), with investment in growth across psychology including new staff and bespoke provision in our new £65 million state-of-the-art STEM building (Verena Holmes). Psychology's new specialist laboratories and facilities represent a targeted £8-10 million investment, and are positioned alongside new facilities for Engineering, Sport, Exercise and Rehabilitation Sciences, Life Sciences, and the newly-formed Kent and Medway Medical School (KMMS) in the Verena Holmes building. Investment has led to a significant increase in student numbers and increased recruitment of academic, research, technical and graduate teaching staff. This has supported growth in staff with significant responsibility for independent research (SRIR) by 38% since 2014 (10.4 FTE in 2014 – 26.8 FTE in 2021).</p> <p>1.2 Research and impact strategy</p> <p>Research across this Unit is underpinned by our shared mission of conducting real-world research that is inclusive, improves lives and generates social transformation. Our structure is oriented towards enabling a research environment that can address social, health and environmental challenges across multiple domains and is drawn together around four overarching themes, consolidated around existing, and growing areas of expertise within the Unit:</p> <p>1.2.1 Research Themes</p> <p>T1. <u>Health and Well-being</u>: bringing together academics, clinicians and service-users focused on adult, child and adolescent mental health, psychological and health interventions, including mindfulness and arts therapy, and co-production in mental health services and training (Anson, Burns, Callanan, Hassett, Holttum, Hulbert, Jones (lead), Leeuwerik, Malovic, Roxburgh)</p> <p>T2. <u>Cognition and Consciousness</u>: focused on cognitive impairment and neuropsychology, attention and perspective taking, anomalous and comparative cognition (Burgess, Cane, Ulrich, Vernon (lead), Sabo).</p> <p>T3. <u>Society and Environment</u>: addresses contemporary issues in the social, political and environmental landscape, by examining groups and culture, prosocial behaviour and emotions,</p>

environmental sustainability, criminal offending and victim support (**Franz, Iredale, James, Nigbur (lead), Ntontis, Spruin, Osthaus, Zheng**).

T4. Learning and Development: centres around social and cognitive development in children and adolescents, with a particular focus on social behaviour and understanding, learning at home and at school, and young people and technology (**Carr, Galilee, Nurmsoo, Slade (lead), Ulber**).

1.2.2 Strategic aims

The Salomons Institute for Applied Psychology and Psychology were brought together at the start of the current REF period (2013) in the then newly-formed School of Psychology, Politics and Sociology (PPS). Since then we have worked together to develop a shared strategy for research and impact in order to facilitate growth and to ensure that research is placed at the centre of our activity. This was articulated through the identification of strengths in the four research themes described above, and the collaborative development of a Unit Strategic Research Plan (2014-2020), which identified four overarching aims:

- A1) enhance capacity to facilitate high-quality research activity;
- A2) facilitate impact that improves lives and generates social transformation;
- A3) grow income to ensure economic viability, sustainability and growth; and
- A4) enhance student-engaged collaborative research.

Unit strategic plans are embedded in the University's Research and Enterprise Quality Improvement and Enhancement (REQIE) process through delivery of the Faculty Research and Enterprise Portfolio Plan (FREPP) (REF5a2.1). These plans are then used within the annual business planning process to allocate Research and Enterprise Support Funding (RESF) to Faculties (REF5a 2.1). These funds are distributed to Schools to support the Unit's research strategy.

We have performed successfully against our aims and achieved targets across all four strategic areas (evidenced below). This has provided a solid foundation that has enabled innovative development, growth and, ultimately, facilitated this strong first submission to UoA4.

A1. Enhancing capacity: To facilitate high-quality research activity, we focused on three key objectives: a) workload profiling to release research time, b) ring-fencing the School's allocation of RESF to facilitate research, and c) increasing supervisory capacity.

a) Our workload profiling strategy ensures all those with Significant Responsibility for Independent Research (SRIRs) are allocated at least 0.20 FTE pro-rata time for research and Early Career Researchers (ECR) have 0.30 FTE equivalent. The effect of this has contributed to a 57% increase in the number of published outputs per year across the unit, from 27 outputs in 2014 to an average of 47 annually between 2015-2019. Of these, 154 of the top self-rated published outputs, out of a body of approximately 220 outputs, have been internally, independently rated in order to select the best 57 for REF2021.

b) We ring-fenced RESF (REF5a4.2) funding to facilitate research by increasing the research resources available to all staff. We recruited two Research Assistants (1.8 FTE) to provide funded time to support staff research across the Unit and created two funds; a 'seed fund' to generate new research activity and an 'environment fund' to which staff could apply for support. We have also funded six University Instructors (UIs) over the period. UIs are postgraduate research students undertaking a part-time PhD, whilst working 0.5 FTE supporting teaching activity across the Unit. The success of this strategy is detailed in Section 3.1.

c) We enhanced supervisory capacity across the Unit and increased capacity for postgraduate research, through planned progression for new supervisors through MSc by Research to PhD,

and by mentoring and partnering on supervisory panels with experienced supervisors. The D.Clin.Psychol. provides additional supervisory opportunities for staff from Psychology to supervise in the Salomons Institute. In addition, staff are encouraged to join supervisory panels for students in different Schools and Faculties, facilitating cross-disciplinary working. The number of approved supervisors has more than doubled from 24 in 2014/2015 to 46 approved PhD supervisors across the Unit in 2020/2021 (~52%) (Sections 2.1; 2.2).

A2. Facilitating impact: Facilitating impact was an identified priority when allocating the Unit's RESF resources, and used to incentivise interdisciplinary working across theoretically-driven, applied and practice-based research. As a result, £38,100 (2014-2020) of the seed and environment funding (see 3.1 below) was specifically targeted towards increasing the impact of socially-inclusive, relevant and impactful projects. Funding proposals had to specify what and how impact would be leveraged and higher grading was awarded to those demonstrating interdisciplinary working and involvement of the end-user in the project. In addition, research assistant time was prioritised to gather impact, and dedicated staff development workshops organised, facilitated by external consultants, to educate staff about maximising impact. From a number of options, the following impact case studies have been submitted and further impact described in Section 4: **ICS4.01** - Utilising the human-canine relationship to support vulnerable people in the criminal justice system (**Spruin**, interdisciplinary collaboration with Unit 18); **ICS4.02** - Transforming the inclusion of people with intellectual disabilities in elite sports (**Burns, Jones**, interdisciplinary collaboration with Unit 24); **ICS4.03** - Using art-based interventions to improve the well-being of older adults with dementia (**Camic, Hulbert**, interdisciplinary collaboration with Unit 3)

A3. Growing income: To ensure research activities are economically viable and sustainable in order to facilitate growth and development, we focused on developing the skill base of staff and providing additional support to submitting bids. Staff development workshops have been provided to support staff to develop their grant writing skills within the Faculty through the University's researcher development programme and the Supporting Progression in Academic Research Careers (SPARC) programme (REF5a3.2). ECRs have been encouraged through the individual research planning process to identify mentors within other institutions to build collaborations and joint bids with (e.g., Ntontis' ESRC grant with UK Alliance for Disaster Research, see section 4.1). Within each research theme, specific funders have been targeted, around which a programme of applications has been built. These are growing in significance, as funding is attained. For example, within the **Health and Well-being** theme, NIHR funding, specifically the Research for Patient Benefit scheme, in the **Society and Environment** theme, the ESCR, **Learning and Development** the EPSRC, and for **Cognition and Consciousness** specific charities which support this type of research. Collaborations with external UK and international HEIs and partner organisations are actively encouraged, and are seen as a key strategic step to increasing the significance and reach of the funding applications. Staff have been supported through the Research and Innovation Funding Unit (RIFU) by a designated Research and Innovation Manager, who directs staff to the support available at each stage of the bidding process. They also work with staff within each research theme to build their profile of applications (REF5a2.4). The success of this strategy is detailed in Section 3.1.

A4. Enhancing student-engaged collaborative research: Enhancing both the student and researcher experience through a philosophy of engaging students in collaborative research with staff is one of our key strategic aims. As we are a teaching-intensive University, the link between active researchers and the student experience is close and we have prioritised student involvement in current research. The impact we want to achieve through this engagement is that our students see the value of research, are skilled and evaluative consumers of research, and remain as potential research partners in their future careers. The success of this approach is well-evidenced e.g. in the Salomons Institute by the high volume of co-produced outputs: 60 joint staff/student outputs between 2014-2020, the majority also co-authored by NHS staff. 26% of

the outputs submitted to REF2021 are co-authored with students. Within the Unit all supervised research is aligned to one of our research themes via supervisors. It is expected that undergraduate students will be engaged in each research theme and that each theme has attached postgraduate students, who will make a significant contribution to the portfolio of that theme. Students are actively encouraged to participate in research group activity such as research seminars and workshops, as well as our annual student conferences including the international 3-minute thesis competition for postgraduate students and the undergraduate research poster conference. We also run a research internship programme which has seen 11 interns from the student body funded to work alongside Psychology staff on research between 2014-2020.

1.3 Future Strategy

The purpose of the 2014-2020 Unit strategic plan implemented above was to support the Unit towards a strong independent entry by 2020. In doing so, it has consolidated and strengthened research activity across the Unit, established clear research themes and embedded support strategies across the spectrum from ECRs to SRIRs, and research leaders. The Unit also now accounts for 25% of all Postgraduate Research students across the University. This has significantly strengthened research and impact across the Unit, facilitating a step-change in both the quantity and quality of research during the period. All staff are attached to at least one research theme, with a lead, who has put a developmental plan in place, considering the content, consolidation and expansion of the research within that plan and identified a strategic progression of bidding activity. As part of a Faculty business review and to recognise the growth of the discipline, the School structure was revised in 2020 in order to provide a strategic platform for future development, and both Psychology and the Salomons Institute formed a new School with Biological Sciences and Sports Sciences, titled the School of Psychology and Life Sciences. The new School is a research-rich environment, which comprises three UoAs where the majority of staff have, or are aspiring to have, SRIR. Our future strategy is to consolidate, further enhance our achievements, and build on the research standing of the Unit and the School. This will be achieved by continuing to focus on the four pillars of our success: enhancing capacity, facilitating impact, growing income and enhancing student engaged collaborative research, and by introducing an additional three specific aims:

F1. Facilitating inter-disciplinary working: We will capitalise on the recent investment in our enhanced laboratory and technical facilities as one of the major subject stakeholders in the new purpose-built Verena Holmes building (REF5a4.2 and Section 3.2). We will use this position to broaden the scope of empirical research which can be carried out, and position ourselves with other STEM subjects to facilitate new inter-disciplinary and transdisciplinary working (for example with Design, Engineering and Technology in relation to the children and technology research in the Learning and Development theme (**Carr, Slade**), and the research on placebos in Sport and Exercise Science aligned to our Cognition and Consciousness theme (**Burns, Cane, Vernon**) and Biological Sciences (**Osthaus, Vernon**),) in relation to animal behaviour research. The establishment of the joint Kent and Medway Medical School (KMMS) (REF5a4.2) with the University of Kent provides the opportunity to further progress our **Health and Well-being research** theme, joining with our new medical colleagues. A strategy has been developed to establish a vibrant culture of collaboration between KMMS with the wider institutional research community in which Psychology will play an integral role.

F2. Increase service and industry partnerships: We will prioritise increasing our partnerships with external stakeholders building on our strong existing relationships with clinical services within and beyond the NHS, third sector organisations such as Public Health England, and charitable and non-governmental sectors. The KMMS development in particular is expected to expand the reach of our current Health and Well-being research, bringing psychological

perspectives into a wider range of health care delivery. The increased interdisciplinary STEM work is also expected to expand exposure to a greater range of potential industry partners.

F3. Facilitating staff progression across all levels: The expansion of Psychology has led to new posts being developed, attracting recently-qualified staff and a greater number of ECRs (30% of current staff base). This has added vibrancy to the team, but also a recognised need to ensure that these staff are supported and developed. Each ECR will work with a mentor to develop an Individual Research Plan (IRP) to plan and resource this development. In addition, through individual alignment with the four core research themes, each ECR will be linked with ongoing established research. Established researchers will be supported in building on their successes, through ring-fenced time, access to a personal research expenses budget and prioritised access to bid development support through RIFU (REF5a4.1).

1.4 Research integrity and governance

Strategic objectives have been achieved through the development and implementation of clear, transparent, and fair policies and processes that have ensured a high standard of research integrity and governance across the Unit (section 3.2). RESF funds are allocated to projects (2014-2020) through an open bidding process with clear criteria published. All decisions on internal funding are made by a reviewing panel comprising Unit research leads and chaired by the Head of School. The IRP process outlined below (section 2.2) sets clear expectations for researchers and aligns individual research activity with the Unit's strategic objectives. The IRP process has been identified as an area of best practice, and similar processes have been implemented across the institution.

Unit members are also active in the research integrity and governance of the wider Faculty with the Chair of Faculty Ethics Committee twice selected from the Unit since 2014 (**Nigbur** 2014-2019; **Zheng** 2020-present). The Salomons Institute has its own ethics panel chaired by one of the Professors in Applied Psychology (**Callanan**), and has service users and NHS representatives as members.

The unit is committed to the principles of openness, transparency and reproducibility of research, and members are active in discipline-wide engagement with pre-registration and open data (e.g., **James, Sabo, Ulrich** and **Vernon**). 100% of our REF submitted outputs are open access compliant, and all SRIRs have received training in making their work accessible, with registration on dissemination platforms such as ORCID and Research Gate encouraged. We have further embedded these principles in students' research methods training. For example, final year undergraduate students submit a 'project proposal' designed to mimic the research pre-registration process as part of their assessment before completing their empirical project.

2. People

2.1 Staffing strategy

The overall strategy within Psychology is to firstly attract staff who have research capability, set expectations about research activity and develop staff as both excellent teachers and researchers, facilitating and supporting career progression through the institutional promotional grades. All academic staff, apart from research assistants, have teaching and research contracts. The profiles of staff teams in Psychology and the Salomons Institute for Applied Psychology vary, reflecting the activities in each context. All academics in Psychology (22.2 FTE) have 0.20 FTE built into their workload to facilitate research, enterprise or scholarship of practice activity. The majority (20.2 FTE) have SRIR and are expected to produce outputs that can be submitted to REF, in addition to seeking external funding. Seven are designated as ECRs and have additional time allocated to promote their research (0.3). When external income is secured, there are processes to ensure specific time is released for staff to deliver the research (REF5a3.1).

In the Salomons Institute, there is a small research team (6.6 FTE), including three Professors who are defined SRIRs and have responsibilities to deliver research outputs and seek external research funding, with designated workload allocation to deliver this. The remainder of the staff team in the Institute (10.65 FTE) are qualified Clinical Psychologists and/or CBT Therapists, some working part-time for the University, delivering scholarship of practice rather than research.

The strategy to develop the research capability of all staff in the Unit, regardless of whether they have been designated a Developing Researcher (see REF5a3.2 for definition), ECR or SRIR, is managed through the annual appraisal system, at which the Individual Research Plan (IRP) is reviewed. IRPs for those with SRIR are supported by an allowance of up to £1,500, subject to annual review and alignment to the Unit themes. This process feeds into workload management to allocate the designated ring-fenced time for research or scholarship of practice activity. Additional research leave is enabled through a combination of RESF funding and advance workload profiling through the IRP process, to enable one Unit member annually to devote a semester to their research, including part-time staff and those returning to work.

2.2 Staff Development

As set out in REF5a3.2, we are signatories to the Concordat to Support Career Development of Researchers. All staff in the Unit are included in these principles, particularly ensuring that staff from practitioner backgrounds have these development opportunities. All staff within Psychology have an IRP and, within the annual review of this plan, the individual is encouraged to consider their long-term aims and short-term objectives in relation to publishing, optimising impact, seeking funding and building collaborations. This is an opportunity to discuss their support and training needs with their appraiser. Outcomes across the IRPs are collated to provide a profile of the Unit, monitor progress, and feed into the Faculty, then Institutional FREPP process (REF5a2.1). Training needs are also collated and where a collective need is identified, this is communicated at Faculty level, but may also be addressed at School level. For example, earlier in the REF cycle, needs were identified to upskill staff. A member of the Psychology research team was subsequently funded (0.2 for 12 months) to provide this support and organise a seminar series on specific areas of identified interest such as working with big data, structural equation modelling, and preparing research proposals. Faculty-level support is also available. For example, seminars on finding funding and applying for research grants, and informal writing groups take place both at Salomons Institute and on the main campus. Mentors within the University and outside have also been found for those seeking this type of support. All ECRs have been encouraged through the IRP process to have research mentors and provision has been made for ECR monthly workshops to provide additional support devoted to their needs.

Institutional support also includes the Supporting Progression in Academic Research Careers (SPARC) programme for ECRs (see section 3.2 and REFa3.2), which has been enthusiastically taken up by the Psychology teams. Six have completed the programme so far, three of whom have since attracted external funding. All academic staff may also apply for seed funding to develop their research and environment funding to fund activities or tangible assets which improve the research environment for all (sections 1 and 3). This funding is over and above an allocation provided to all academics to attend conferences and professional meetings nationally and internationally (see section 4.1).

Staff have also taken the opportunities offered at the institutional level to both attend and be mentors within the Aurora programme (Advance HE's leadership development initiative for women) and the Director for Psychology (2015-2018) attended the senior leader and management programme within the University. The School of Psychology, Politics and Sociology was the second School within the University to be awarded the Athena Swan Bronze award. An area of Good Practice was identified as:

'Supporting Progression for Academic Research Careers (SPARC) programme allowing "protected" monthly afternoons for early career researchers to learn about and discuss Research and Knowledge Exchange (RKE) related issues.'

2.3 Support mechanisms for training and supervision of PGR students

The Unit has 146 PGR students registered, the majority attached to the Salomons Institute (N=135) enrolled on the D.Clin.Psychol. or the PhD in Professional Practice. In addition, Psychology receives 1-2 scholarships funded by the University annually, and funds its own UI posts.

The D.Clin.Psychol. has the second largest number of NHS commissions in the UK, is one of the founding training programmes of the profession, and holds a nationally and internationally recognised leading status in Clinical Psychology. Trainees receive extensive research training consisting of formal teaching sessions, seminars and research groups and the Institute has its own ethics panel, to ensure efficient progression (see section 1.4). The Salomons Institute holds an annual research fair where external practitioners from the NHS and third sector are invited to 'pitch' issues which could be addressed through doctoral research. If successfully matched, students are then partnered with an internal academic supervisor to deliver the research. This research frequently results in a co-authored publication, commonly in practitioner-facing journals and feedback direct to the service. The PhD in Professional practice is taught in a cohort at the Salomons Institute and participants attend four, week-long learning sets, in addition to individual supervision. All Psychology PhD students can also attend research sessions on the D.Clin.Psychol. which attracts external experts to deliver teaching. The UIs play a unique role in the Unit and have access to both the research development opportunities available to PGR students, as well as the staff development opportunities available to academic staff. All PhD scholarships have an attached annual £500(pro rata) to support their research.

PGR students have access to the Researcher Development Programme (RDP) based on the Vitae Researcher Development Framework (REF5a3.3). These events are captured digitally through our 'ReCap' technology and made available on Blackboard, the virtual learning environment. PGR progression and support is managed through *ResearchSpace* described in REF5a3.3, and further formal and informal support is provided through the PGR Association as described in REF5a3.3. Within Psychology, there is a lively seminar series and 'research in progress group' which PGRs and PGT students regularly attend. There is also an active Student Union Psychology Society (PsySoc) attracting both PGR/PGT and UG students. PGR representatives attend the Faculty Board and the Faculty Research and Enterprise Committees, and regularly join joint task groups with staff e.g. Athena Swan.

Enhancing supervisory capacity was a Unit objective and good progress has been made in this area (see section 1.2.2 A1.c). The Graduate College sets clear criteria by which supervisors may be designated as either 'approved' or 'experienced' PhD supervisors. Potential Psychology supervisors are encouraged to apply through this system and once eligible, apply to become an experienced supervisor, allowing them to become the lead supervisor for a PhD. This is monitored through the IRPs. A third designation of 'associate' supervisor is permitted for specialist PGR programmes such as the D.Clin.Psychol. to allow external staff, such as NHS clinicians, to be involved in supervision. This builds strong links and increases staff/student opportunities between the research activities of the Salomons Institute and clinical services such as those of the NHS. Currently the Unit has 46 approved supervisors, including 18 designated experienced, and 11 who are external associates based largely in the NHS, reflecting our strong industry links to clinical services, which ensures relevant and impactful research. Supervisors are encouraged to access the Graduate College's Supervisor Training Programme (REF5a3.3).

2.4 Equality and diversity

It is widely acknowledged that there are generally significant gender inequalities in the discipline of Psychology, and this Unit has been particularly active in trying to address these and other inequalities. Psychology was in the second School in the institution to be awarded the Athena Swan Bronze award (2017), which was led by a female Psychologist and Head of School. Many of the Psychology team contributed to this application, and continue to enthusiastically engage as we drive forward towards a Silver Award. Female staff are traditionally overrepresented in Psychology, (60.8% HEFCE data, 2016/17) but in this Unit the ratio is about 58%, slightly better than average. In Clinical Psychology about 80% of the workforce and applicants for training are

female, but in this Unit, we have a slighter better balance both in terms of staff and considerably better for applicants in comparison to national statistics e.g. 2017 29% males accepted onto the Salomons programme compared to 17% nationally. We also monitor equality within the career progression of the staff team and currently two of the three professors in the discipline are women. From the Athena Swan analysis, no gender bias was identified in terms of career progression. BAME characteristics are underrepresented within the staff groups in this Unit, which is consistent with the national profile. A number of significant continuing actions monitored through Athena Swan, have however been instituted to address this issue, including a review of marketing material, staff training on unconscious bias, and de-colonising the curriculum.

Stage 1 of the institutional Equality Impact Assessment (EIA) as described in our REF2021 Code of Practice has been completed and is fully reported in section REF5a3.4. Due to small numbers and GDPR, the analysis remains at Faculty, rather than Unit level. The results show that there has been an improvement between the 2014 and 2021 REF submissions, with the profile of staff submitted to REF2021 now closer to wider staff profiles. The gender distribution of eligible staff in 2019 compared to those submitted in REF 2014 has improved significantly within this Faculty to nearly an equal distribution (F 51.2%, 2019: F 37.3%, 2014). Institutionally, whilst the pool of eligible staff is dominated by White staff (at 77% White and 17% BAME) our BAME staff are much more likely to be submitted to the REF2021 than our White staff (rate of SRIR at 46% and 27.1% respectively), and for BAME staff, the rate of inclusion since 2014 has increased by 34%. The rate of inclusion of disabled staff compared to non-disabled staff is roughly similar (29.5% and 30.6% respectively) and has improved by 11% since 2014.

In relation to REF, there is an equal distribution of genders within the Unit steering group. Both Unit co-ordinators and the majority of panel members attended School-commissioned training on unconscious bias and both Unit co-ordinators completed the University's online module about avoiding bias in evaluating research. The criteria and process for inclusion in REF was made transparent to staff through staff forums, individual management meetings and dissemination of written material. Prior to internal and external review, academic outputs had the authors' names removed to try and avoid implicit bias. Positioning REF as a developmental process was made explicit within the Unit's terms of reference; asking for self-ratings and providing feedback on output ratings was part of the standard process. The REF auditing of outputs was seen by staff as an important process to improve the quality of the generated research, and facilitated positive conversations with individuals across the Unit. This included reviewing publications prior to submission and a commitment to continue with a formal peer review process post-REF2021.

3. Income, infrastructure and facilities

3.1 Income

Significant advances have been made since the last REF cycle, which have enabled Psychology to give more emphasis to research, underpinned by the Unit Strategic Research Plan (2014-2020), and submit for the first time to UoA4. The overall income over this six-year period was £390k, averaging an annual income of £65.4k (previous REF period total income £35,397, average £5,900 p.a. 600% growth). This represents 20 projects, with the following spread of size of award.

Unit 4 income 2014-2020

Income range	£0-£10k	10+-£20k	£20+ -£25k	£25+ -£90k	£90k+ -£100k	£100k+ -£150k
No. of awards	12	4	1 (£23k)	0	1 (£98k)	2 (£146k)

In terms of source of income, 66% has come from UKRI Research Councils, The Royal Society, British Academy and The Royal Society of Edinburgh, 20% from charities, and 10% from other bodies. The staff who generated this income represent 43% (12/28) of those designated as SRIR. Whilst this income generation is modest, it does represent a discipline that has grown in strength, with a now well-established strategic direction in relation to research, and

demonstrated value for money in terms of the impact and research outputs generated from limited external income.

The strategy has been to distribute internal RESF funding (REF5a4.2) that largely originated from Applied Psychology's previous submission to UoA3, to support our four strategic aims (Section 1. A1-A4). Specifically, for A1 *Enhancing Staff Capacity*, our strategies of using workload profiling to release research time, making research resources available to staff, developing staff skills and providing support to research bids, has been very successful in achieving A3 *Growing Income*. We operationalised these strategies by:

- a) Employing two peripatetic Research Assistants, one in the Salomons Institute and one in Psychology at Canterbury, to support staff in advancing their research. This resource was managed to support projects which might lead to external funding and to assist in promoting and gathering impact for ongoing projects. Approximately 80% of staff have used this resource.
- b) Creating a 'Seed Fund' for staff to initiate previously unfunded research. From 2015-2020, 46 awards have been made to 24 staff totalling £92,262. As a direct consequence of the seed fund, 40% (£154,700) of the external income was attracted, 24 papers published, 10 in preparation, and 27 conference papers presented.
- c) Establishing an 'Environment Fund' for enhancing the research environment to benefit the entire Unit. An investment of £102,000 was made over a 5-year period from 2015. This fund supported staff in making bids which would enhance and sustain the Psychology research environment. Inclusion criteria were that the project: provided benefit wider than the individual researcher, fitted within one of the four identified research themes (see 1.2.1, T1-T4) and addressed an identified need. This has funded 40 different projects including software licences, IT and audio equipment, technology (e.g. eye tracking), additional RA time, interns, both attending and organising conferences, seminars and professional meetings, books, student research awards and psychometric test equipment.

The outcome of these strategies was a total of 45 bids involving 25 members of the Unit being submitted for external funding from 2014-2020. Of these, 27 (51%) have been successful totalling £390,00 of external income. Our strong links with industry and across the Higher Education sector is demonstrated by 55% of our total bidding activity, and the greatest proportion of successful bids, involving collaborative or joint bids with external partner. These include HEIs, public sector organisations, charities and regulatory and statutory bodies and has led to building on these links being prioritised in the future strategy (section 1 F2). Examples include:

- i. **Carr** - EPSRC multi-site, interdisciplinary project exploring Internet of Things technology to support children's outdoor play addressing the current 'playing out' deficit in urban settings (£118,481);
- ii. **Camic** – Museums on Prescription, AHRC, Arts-based therapies for individuals with dementia and their carers (£149,149) (**ICS2**);
- iii. **Burns** – Intellectual Disability and Equal opportunities for Active and Long-term participation in Sport, (IDEAL) Erasmus, European Commission with seven European partners (£31,309) (**ISC3**).

3.2 Infra-structure and Facilities

At both of the geographical bases (Salomons Institute, Tunbridge Wells and Psychology, Canterbury), a Research Director has been appointed who is responsible for facilitating and monitoring research activity within the team. This includes co-ordinating PhD and MSc by Research applications, identifying and helping to secure resources for staff development from RESF funding, providing advice and enabling peer review for funding bids, and monitoring research activity. The two Research Directors work closely with the Faculty Research Director and sit on the Faculty Research and Enterprise Committee.

Part of the responsibilities of each Research Director is to manage and advise on the physical infra-structure, equipment, software and other resources required to support the research of the

unit and the PGR community. The existing resources available on the Canterbury campus, which will be significantly enhanced in 2021 (see below), includes specialist labs supporting neurophysiological feedback, EEG monitoring and eye tracking, in addition to a specialist computing lab to run digital experiments, and an observation lab with a one-way mirror, used to support child development research. Six small general-purpose labs are also available. These facilities are supported by two full-time specialist technicians who manage a resource bank of equipment which may be borrowed, e.g. psychometric tests, video cameras, transcribers, etc. in addition to supporting specialist software such as Noldus Obs Software, Sona-Systems (RPS), BioTrace, Mangold MVision (Eye tracking), Mangold video Sync Pro.

In liaison with the School of Law, Policing and Social Sciences (LPSS), Psychology has access to the Mabb Lovell Court Room which historically was the original Court attached to the neighbouring prison, which has now been refurbished to resemble an actual Court, allowing life-like simulations. Psychology also accesses the Hydra Suite, managed by LPSS, allowing simulations of criminal proceedings to be run. Both resources have encouraged interdisciplinary research between UoAs 4 and 18. Another unique resource supporting this research theme is Oliver, Europe's first Justice Facility dog. Oliver is the only Assistance Dogs International (ADI)-accredited facility dog worldwide to be placed in a University for research purposes. Oliver, his transport from the USA, the training of the CCCU researchers and the dog's upkeep have been funded by Duo Dogs International (St Louis, Missouri) (£30,000). Oliver's key role is to provide support to vulnerable people within the criminal justice system, which has provided a unique opportunity to investigate innovative interventions in this area (see **ICS4.01**).

The capacity of the Unit to deliver the research strategy has been further enhanced by two significant physical infrastructure developments. The University has invested in the development of a new £65m specialist Verena Holmes building, opened in early 2021 (REF5a4.2) which accommodates new Psychology labs, in addition to Natural Applied Sciences (NAS), Engineering and Computing, and space for the new Kent and Medway Medical School (KMMS). This represents a 60% increase in specialised and general lab space for Psychology and allows additional space for more specialist research equipment to be accommodated and available for day-to-day use. Our observation labs will increase to five, all with new state-of-the-art integrated audio-visual recording equipment. This is particularly significant for our child development research, allowing more capacity to carry out simultaneous observational and experimental studies involving children of different ages groups (e.g., an infant room and a toddler room), and needs (e.g., children with autism).

The new building will also house a large, flexible teaching space with 120 computers. Room dividers will allow this space to be configured for four groups of 30 or as one large space. This represents a 300% increase in our current computing facility for Psychology, enabling innovative teaching practices as well as large-scale data collection and co-production (e.g., using Qualtrics). The building will also provide our postgraduate students with access to dedicated social learning spaces and a state-of-the-art collaborative 120-seater lecture theatre. Interdisciplinary working has been designed into the functionality of the building by ensuring there is a balance of shared and disciplinary-specific space. To integrate research into teaching, many of the facilities will service the dual purpose and PGR students have access to all research areas. Bringing together STEM disciplines within the Verena Holmes building will also facilitate the sharing and optimisation of expensive technology such as eye-tracking, EEG and other physiological technology, based in dedicated accessible labs. This will particularly help to advance our research on children and technology within our **Learning and Development** theme, and also multiple projects within our **Health and Well-being** theme. In line with the development of the Verena Holmes building, technical support has been reviewed and enhanced to support interdisciplinary working, with the establishment of a new post of Director of Technical Services. The building will also act as a public showcase for our research, with a lively events calendar planned engaging the general public, education services, industry, health and the third sector.

Unit-level environment template (REF5b)

In 2017, the University invested in a bespoke new building for the Salomons Institute. The Lucy Fildes building includes three large teaching rooms, several smaller group/seminar rooms, a series of small consultation rooms, a student common room with computers, a dedicated computer space with 15 stations, printing, and a large specialist, staffed library. This collection is one of the most extensive bespoke psychological therapies collections in the UK and is recognised by PGR students for its excellence: “*The library facilities are excellent also – the physical copies available, the great library staff and the range of online journals accessible.*” (Clinical Psychology Alternative Handbook). Two of the seminar rooms have one-way mirrors allowing clinical simulations to be run e.g. family therapy. There is a comprehensive test library housing clinical and developmental psychometric tests and other technical equipment immediately available to be borrowed for research purposes by staff and PGR students in the Unit. The availability of a PGR common room has built a much more collegiate culture, resulting in the launch of a new PGR ‘Salomons Society’. The building, central to Tunbridge Wells, has also allowed us to put on a programme of public lectures showcasing our research, with all events filled to capacity.

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

4.1 Partnerships, networks and end-user engagement

As a result of our strong links to the NHS, locally and nationally, and to health-related professional bodies, we have strategically built on these partnerships both within the NHS and third sector health providers to engage in collaborative research, attract joint external funding and develop research capacity within and beyond the institution. The Unit currently has ongoing research projects with all NHS Trusts within our geographical region and a number of services more geographically remote. For example, **Hassett’s** work on young people and trauma has led to collaborations with service providers including Child and Adolescent Mental Health Services (CAMHS) in Kent and Medway NHS Trusts, Essex Social Care Academy, the Drive Forward Foundation (helping young adults leave care), schools regionally and nationally, and for the Health Care Executive in Ireland. His research has influenced local, regional and national policy e.g. Public Health NHS England Kent and Medway, the Isle of Wight Health Training and Development Consultancy and the Institute of Recovery from Childhood Trauma. This research has influenced practitioners in this field through underpinning training programmes delivered locally and nationally for teachers, probation officers, social workers and care workers. Research within the Unit has also brought together collaborations between multiple NHS Trust, HEIs and third sector providers. For example, **Jones’** research on mindfulness, compassion and wellbeing involves collaborations with the Sussex Mindfulness Centre, Oxleas NHS Trust, Sussex Partnership NHS Foundation Trust, University of Exeter, Balanced Minds and the Citizen Advice Bureau. This research has assisted in releasing further investments in providing mindfulness as an effective intervention through NHS-funded services.

The research of the Unit and the collaborations it has built have also resulted in improvements in clinical practice and interventions which have had a direct impact on efficacy and user experience of specialist services. For example, **Burgess’** work with Oxleas NHS Trust in the field of clinical neuropsychology has led to the development of a screening tool for autism characteristics among people with intellectual disability used across the NHS. His collaboration with Hogrefe Publishing has brought to market a neuropsychological psychometric test (SPANS), now used widely across the NHS. **Holtum** leads research for the British Association of Art Therapists (BAAT) and led the research underpinning the development of the first national BAAT Guideline on Art Therapy for people with a Psychosis-Related Diagnosis (2020). **Holtum** also collaborates with the veteran’s charity, Combat Stress, on research on art therapy treatment for Post-Traumatic Stress Disorder (PTSD), and worked with British Psychological Society (BPS) as a lead author on the publication ‘Understanding Depression’ (2020) written for the general public and practitioners working with adults. **Camic’s** research includes collaborations with prestigious organisations such as the Royal Academy of Music and the Royal Society for Public Health. It has led to effective arts-based interventions for older people with dementia and changed national policy to include arts in social prescribing (see **ICS4.03**).

The Unit has endeavoured to maximise the impact of our health-related research by placing the service user central to the research process. To operationalise this, the 'Salomons Advisory Group of Experts by Experience' (SAGE) was established in 2012. This serves as a service user forum providing input into research at the Salomons Institute to ensure research is relevant and impactful to users and beneficiaries. All staff, supervisors and D.Clin.Psychol. research students are expected to involve and consult SAGE early on in research-design and planning. SAGE has produced guidance on involving service users in research within the University, consistent with INVOLVE and NIHR guidelines and influenced research outputs e.g. **Holtum's** work on the BPS Understanding Depression report. The work of SAGE has resulted in co-produced outputs focused on service user and carer involvement in psychological practitioner training, shaping national dialogues about developments in this area.

We have also sought to engage and influence organisations through translational research which has both action research and end-point impact on the health and well-being of its members. For example, the international research of **Burns (ICS4.02)** on sports and people with intellectual disabilities (ID), involved active collaboration with the International Paralympic committee (IPC), the World Federation for Intellectual Impairment Sport (Virtus) and the Special Olympics UK. **Burns'** work contributed to the re-inclusion of athletes with ID in the Paralympics and in recognition of her significant contribution to the lives of people with ID, **Burns** was awarded an MBE (2015). Linked to this work are externally-funded projects with **Malovic** examining the take-up of exercise for people with ID through Mencap and the Special Olympics. Likewise, **Spruin's** research as the Director of Justice Support Dogs International (JSDI) (**ICS4.01**) and her work with national and international criminal justice services to support vulnerable people has impacted significantly on end-users of these services, as well as those delivering the services. Collaborations have occurred with UK Witness Services, Medway Magistrates, Kent, Nottingham, Derbyshire and Sussex Police, Kent Social Services, the Police and Crime Commissioner and High Sheriff of Kent and, internationally with the Royal Canadian Mounted Police (Canada), Courthouse Dog Foundation (USA) and the American Bar Association. Animal-focused research has also expanded to both animal behaviour and welfare. **Franz's** research on canine attachment has led to collaborations with DEFRA and also the EFRA inquiry into dangerous dog breeds. **Osthaus'** research on canine cognition has attracted much media attention e.g. BBC Radio 4, and her work on equine behaviour and welfare has led to funded research in collaboration with The Donkey Sanctuary.

Our strategic focus on applied research that improves lives and generates social transformation has led to research focused on contemporary and impactful issues. For example, **Ntontis'** work on a large ESRC-funded research project in collaboration with Prof Stephen Reicher (St Andrews University and Government SAGE sub-committee on behavioural science) and others investigating how the public response to Covid-19 can be harnessed by group processes. This is a growing programme of work in the Unit led by **Ntontis** in collaboration with the UK Alliance for Disaster Research and the European Centre for Disease Prevention and Control. **Carr's** work on the social-cognitive development of children has a focus on home-learning and the use of novel technology and has led to collaborations with BECHANGE, a charity supporting young parents to develop parent training and education. **Carr** has also collaborated with CBeebies Research and Development in her work on the impact of digital technology on very young children's development and well-being. The work of **Vernon** and **Roxburgh** on anomalous cognitive experiences have led to direct applications such as **Roxburgh's** contribution to the All Party Parliamentary Group for Integrated Healthcare. **Vernon's** work on the neurological processes underpinning anomalous experiences has been in collaboration with the UK Society for Psychical research and he has led a number of research-informed webinars, attracting a worldwide audience.

4.2 Academic collaborations

Members of the Unit are actively engaged in a wide-range of national and international collaborations with world-leading researchers, communities and networks in Higher Education. Of the body of outputs considered for the REF2021 submission, 48% had co-authors who were academics or practitioners external to this University. The following are examples of

collaborations which have led to successful grant awards and/or publications and include work in the areas of: sports participation for young people with intellectual disabilities (**Burns**: Technical University of Madrid, Reykjavik University, Northumbria, University of Gavle, University of Physical Education in Warsaw), Arts, wellbeing and dementia (**Camic**: UCL), children and technology (**Burgess**: University of Windsor, Canada; **Carr**: UCL, Northumbria, Newcastle, KTH Stockholm); mental health, identity and therapeutic intervention (**Anson**: King's College; **Hulbert**: Hong Kong Polytechnic University; **Jones**: Sussex, Sheffield; Exeter; **Leeuwerik**: Sussex; **Roxburgh**: Northampton, Buckingham); theory of mind and perspective taking (**Cane**: Kent; **Carr**, **Slade**: Sussex, University of Otago, NZ; Roehampton); Public behaviour during disasters (**Ntontis**: Sussex; St Andrews, King's College; South Wales, University of Queensland, Australia), clinical services and assessment (**Burgess**, Leicester; **Holtum**: UCL, Liverpool); offender behaviour (**James**, **Spruin**: Kent); ethnic diversity and friendship (**Nigbur**: Leipszig, Kent, Sussex and Georgetown), animal welfare and behaviour (**Osthaus**: Southampton, Exeter); precognitive priming (**Vernon**: Derby, Northampton).

4.3 Wider contribution to the discipline

Across the Unit, staff make a significant contribution to the wider discipline in a number of ways. Several staff contribute expertise to the British Psychological Society, including Committee for Training of Clinical Neuropsychologists and Committee for Test Standards (CTS) (**Burgess**); Presidential Taskforce on Diversity and Inclusion (**Holtum**); Social Psychology Section Committee (**Nigbur**). The expert standing of staff is also recognised through elected positions in professional bodies and societies including: UK Alliance for Disaster Research (**Ntontis**); International Society for Emotion Focused Therapy (**Callanan**); Elected Board Member of the Parapsychological Association (**Roxburgh**); Research Grants for the Parapsychological Association, USA (Chair, **Vernon**).

Unit staff recognise the important contribution they can make to the research process through peer-reviewing and membership of editorial boards and have peer-reviewed articles for over 80 journals, and served on editorial boards including: Journal of Mental Health (**Burgess**); British Journal of Educational Psychology (**Carr**); International Journal of Art Therapy (**Holtum**); Mindfulness (**Jones**), Frontiers in Developmental Psychology (**Nurmsoo**), Journal of the Society for Psychical Research (**Vernon**) and PLoS One (**Vernon**). Staff are also called upon regularly to review grant applications and awards for example, Economic and Social Research Council (ESRC; **Ntontis**, **Carr**), National Society for the Prevention of Cruelty to Children (NSPCC, **Hassett**), National Institute for Health Research (NIHR, **Holtum**, **Jones**, **Burns**), Leverhulme Trust (**Jones**), Medical Research Council (MRC, **Jones**), Alberta Children's Hospital Research Institute (ACHRI, **Galilee**).

The national and international standing of staff is reflected in external examining over 30 PhDs, both in the UK and across Europe, for example Anson (Birmingham, Bath); **Burgess** (Leicester; Coventry; Warwick); **Hassett** (London Met, UKC), **Holtum** (UCL, UEL, King's, Birmingham, LSBU and UWE); **Jones** (UCL, UCD, Royal Holloway, Exeter); **Nigbur** (Queens); **Slade** (Luxemburg); **Spruin** (Sunderland); **Vernon** (Greenwich, Goldsmiths), **Burns** (Lancaster, UCL, Leuven Belgium, Maastricht, Netherlands).

Dissemination of research findings both within the academic community and to end-users plays a central role in our research activities. Our researchers are regularly invited to present key note addresses both to subject specific international (e.g. **Holtum**, British Association of Art Therapists' Attachment and the Arts, 2015; **Spruin**, International Courthouse Dog Conference, Seattle, 2019 and American Bar Association International Law Section, 2020) and also interdisciplinary/practice conferences (e.g. **Hassett**, Healing from Trauma and Moving On, Glasgow, 2018 and Essex Safeguarding Children's Board Conference, Colchester, 2015; **Burns**, International Association for the Scientific Study of Intellectual Disabilities, World congress, keynote, 2018; **Roxburgh** Welcome Trust conference Other Psychotherapies, Glasgow, 2017). Members of the Unit have also organised and hosted seminars and conferences including: a BPS-funded seminar series on Scaffolding: Integrating social and cognitive perspectives on children's learning at home, 2014/15, hosted at CCCU and University

of Sussex (**Carr**); BPS Social Psychology Section Conference, 2014, hosted at CCCU (**Nigbur**); The impact of touch-screens on early child development: is it really all bad news? Learnus mediated-workshop, 2016, hosted at CCCU (**Carr**); European Association of Social Psychology General Meeting, 2020 (**Ntontis**).

Innovative ways of engaging the public in research outcomes is encouraged. At the Salomons Institute, the blog 'Discursive of Tunbridge Wells' provides commentaries on psychology and mental health, with some posts having over 4,000 views. Within Canterbury, knowledge exchange events have been delivered in the local community through the ESRC Festival of Social Science (2015, 2016, 2017), with the last event in collaboration with UoA19. Funding has also been received by the BPS (2014/15/) to host a series of seminars on 'Children's Learning at Home', leading to publication of a special issue of the British Journal of Educational Psychology (2018, Vol 88(2)), edited by **Carr**. Finally, the excellence of some research contributions has been recognised by two members of the Unit, having won Emerald Literati Awards; **Spruin** for Highly Commended Paper (2016) and **Holtum** for Outstanding Reviewer (2019), and Outstanding Article (2017; 2018).