

Institution:

Edinburgh Napier University

1. Context and mission

Edinburgh Napier University (ENU) is a modern, impact-intensive and professional university in Scotland, comprising a community of 19,470 students and 1,583 staff. According to the Times/Sunday Times Good University Guide, it is the top modern university in Scotland. We have six Schools (Applied Sciences, Arts & Creative Industries, Business, Computing, Engineering & the Built Environment, Health & Social Care) and 555 FTE Category A Staff.

We teach face-to-face at three campuses in Edinburgh and at partner institutions internationally. While the majority of our undergraduate students are from Scotland, at postgraduate level a quarter of our UK-based students are from outside the EU and this has steadily increased over the past five years. In REF 2014, we were the top modern Scottish University in six UoAs for Research Environment; in four UoAs for Research Impact, and in three UoAs for outputs.

Our vision is to be “*an enterprising and innovative community renowned internationally*”, with a purpose to “*deliver high quality education and research to add value to the social, cultural, economic capital of the communities we serve, and to deliver research outcomes that together transform communities*”. The distinctiveness of the University is founded on our belief in delivering academic disciplines connected to contemporary challenges, ensuring wide-ranging and meaningful business engagement with the world around us. This mission is underpinned by strategic objectives to grow our academic reputation, build innovation, enterprise and citizenship, and to internationalise our work.

We underwent significant change in our focus and outlook with the appointment of a new Principal (July 2013). Following extensive consultation, we developed our ambitious *Strategy 2020*, which has underpinned all our work over the REF period.

Delivering the strategy required transformational change in our research environment. At the heart of this was the establishment of a Research, Innovation and Enterprise office (RIE, 2015), underpinned by considerable investment in the infrastructure needed to deliver a first-class service. This supports all aspects of the research and innovation pipeline and has been pivotal in developing our research capabilities and increasing engagement with end-users.

An additional structural change (2015) embedded research institutes (which had previously operated autonomously) inside each School. Each dean of school, working in collaboration with a school head of research, takes responsibility for delivering challenging research objectives in a discipline appropriate manner.

266 (48% of Category A) staff have been submitted to REF2021 in **13** Units of Assessment, compared **98.9** staff and **9** UoAs in 2014, demonstrating a significant increase. One Unit (UoA24 Sport and Exercise Science) is being submitted to a Research Assessment exercise for the first time. The UoAs are spread across panels as follows: Panel A (1); Panel B (3); Panel C (4); Panel D (4).

2. Strategy

Strategy 2020 prioritised the following areas (2014-2020):

- An academic environment that **fully integrates** research, knowledge exchange and teaching activity.
- **Increased quality and volume of research**, targeting a significant improvement in REF 2020 results.
- **Vibrant academic culture**, with all staff engaged in research, knowledge exchange or professional practice and a significant increase in the number of PhD students.
- **Knowledge Exchange and commercial activity** that generates mutually beneficial links with a wide range of external partners.
- **Improved indicators of esteem** such as active engagement with external bodies, and high-quality partnerships with business, industry, universities and public organisations.
- **Research and innovation** activity underpinning all areas of the portfolio.
- **Continued growth in business enterprise.**

We have:

- **Increased** the number of PGR students from 270 to 417 (including those in a writing up period).
- **Increased** the number of staff submitted to REF from 99 in 2014 to 266 in 2021.
- **Increased** the number of research applications by 88% from 146 applications in 2014-15 to 274 in 2019-20. The value of applications has **increased** by 75% from £16.4million (2014-15) to £28.7million (2019-20).
- **Increased** the total value of awarded projects by 41% from £4.4million in 2014-15 to £6.2million in 2019-20. Of particular note is the 482% increase in the value of Research Council awards: from £0.4million in 2014-15 to £2.4m in 2019-20.
- **Increased** the number of academic staff with doctorates from 201 in 2014 to 298.

Significant investment has contributed towards achieving these goals, for instance, to celebrate our 50th Anniversary, 50 fully financed research studentships were awarded across all Schools. Seven were funded by philanthropic funds from a donor (aligned to STEM areas). In 2016 we launched a prestigious five-year Vice Chancellor's Research Fellowship scheme, to attract talented postdoctoral researchers with an established research record to become future academic leaders. Two appointments were made with an attached support package. Both fellows are submitted to REF; one was promoted to associate professor in 2019.

Strategy over Next Five Years

Mindful of the current pandemic and impacts of Brexit, and in recognition of an ongoing governmental review of the coherence and sustainability of academic provision in Scotland, we approved a new strategy (November 2020). This recognises:

- the importance of research and innovation for our reputation, financial sustainability and growth;

- a need to work collaboratively and across disciplines with both other educational institutions and industry;
- the need for clearer alignment with key government priorities;
- the consideration of our broader impact and contribution as a civic institution in the region.

The broad aim is to foster a sustainable, interdisciplinary and inclusive research environment that delivers societal, economic and environmental impact. Achieving this will place the University as one of the top modern academic institutions nationally and internationally. Challenging objectives capture the expectation that:

- 400 FTE will be submitted to REF27;
- Research and innovation (R&I) income represents 15% of the institution total;
- our RPG student-body grows by 50%;
- our research profile places us in the top quartile of modern universities in the UK and top 500 institutions globally.

Four pillars provide the mechanisms to achieve this:

- **People:** we are investing £4million in 10 new academic posts (at ECR/Professorial level) and 18 PGR studentships, targeting areas of critical research mass that align to external funding opportunities. New frameworks for staff development (e.g. ECR, contract researchers) will enable us to realise staff potential.
- **University Innovation Hub:** supported through a central, ring-fenced innovation fund, the Hub provides an ecosystem for building strategic partnerships with business and industry and creating opportunity. It will foster an academic culture with external engagement at its heart, including promoting public engagement activity.
- **Interdisciplinary themes:** recognising a long-term focus on wellbeing and sustainability, four themes will provide a structure for interdisciplinary research: Health, Environment, AI & Technologies, and Culture & Communities. These are characterised by research critical mass, strong alignment with external funding opportunities, and a high index of interdisciplinarity. They will be supported through a central fund of £200,000 p.a.
- **Internationalisation:** we will strengthen our R&I networks with international institutions through augmentation of current TNE partnerships for R&I and the development of joint (potentially virtual) research centres, where our expertise is complemented by other institutions to exploit opportunities for joint PGR supervision, staff exchanges and joint research bids.

New research entities (institutes and centres) are currently being developed in alignment with the new interdisciplinary themes. They will develop formal plans with agreed outcomes that will be monitored annually.

In 2021, we initiated a strategic partnership with Queen Margaret University (QMU) regarding research and innovation, recognising a shared vision. Planned activity will take place in three areas: developing a joint training and support programme for ECRs; funding jointly supervised PhD studentships; collaboration on the development of the QMU innovation park, based on our expertise in AI and Data Science.

Facilitating Impact

Impact has been facilitated as follows:

- **Research, Innovation and Enterprise Office (RIE):** this contains a team dedicated to Business Engagement (BE) and provides our main route to impact. The team comprises a Head of BE and IP Commercialisation, Head of CPD and Consultancy, and three Business Development and Relationship Managers, each dedicated to two Schools. The team works closely with five Research Funding Managers to support funding applications. The externally facing team provides routes to access expertise within the University and builds effective relationships with industry. Integration with Bright Red Triangle (see below) has enabled leveraging of additional resources from the Scottish Enterprise High Growth Spinout Fund. In 2021 we were awarded **two** entrepreneurs via the Royal Society Entrepreneur in Residence (EiR) scheme (from 16 in total awarded across the entire UK).
- Created in 2014, **Bright Red Triangle** (staffed by six people) provides a one-stop shop for innovation and enterprise support and external engagement for our staff, students, and local businesses and community organisations. Its mission is to impact the latter through enterprise start-up activities, business support, consultancy services, social innovation projects, enterprise skills training and business incubator facilities. From 2015/16 to 2018/19 we recorded the second highest total of student and graduate start-ups of the 19 Scottish HE institutions, 27% of all start-ups. It is a founder partner in the eBridge Alliance (a collaboration between 14 international universities offering a global entrepreneurship programme).
- **Innovation Panel:** This panel provides early-stage, pre-commercialisation advice for exploitation of IP and post-commercialisation support. ENU is ranked sixth of all Scottish universities and 42/100 in the UK for our record in turning research into world-changing companies according to the Octopus “*Spinning out Success*” report.
- **Knowledge Transfer Partnerships:** ENU hosts the East of Scotland KTP office and has a 90% success rate in obtaining KTPs.

Engagement with National and International Research Priorities

ENU agrees four-year Outcome Agreements with the Scottish Funding Council. This includes the University Innovation Fund (UIF), which provides funding for the knowledge exchange infrastructure within the University and incentivises collaboration with other Scottish universities. The UIF articulates activities relating to seven outcomes, which include:

- stimulating demand for IP commercialisation;
- simplifying business access to university expertise;
- increasing entrepreneurialism;
- delivering inclusive growth and impact that benefits all areas of society.

RIE staff work with researchers to address external priorities. A 0.5 FTE post was created to increase applications to the UK Government’s priority Industrial Strategy Challenge Fund (ISCF). Through the ISCF University Network, opportunities for inter-institutional collaborations were developed based on each institution’s expertise. In 2019 ENU was part of a consortium awarded a portion of the largest-ever single investment in the creative industries sector, The Creative Informatics Project, bringing the city’s world-class creative industries and tech sector together. We won one of six projects awarded through the EPSRC Transformative Healthcare Technologies call (2020); £167,000 was awarded for three interdisciplinary COVID-19 projects in response to the Scottish Government’s ‘rapid research’ programme (2020).

Our strategic plan for formula GCRF allocation from SFC prioritises areas that have the strongest impact and demonstrable expertise to deliver maximum benefits to developing countries. In 20/21 £97,699 of funding was allocated to projects in India, Africa and Indonesia following an internal competition.

Support for Research Collaborations

ENU is proud to be part of a large number of external research networks and partnerships and actively supports these by providing staff time, physical space, and centralised funding for subscription fees. For example:

- We are host and administrative lead for the **Construction Scotland Innovation Centre (CSIC)** which brings together industry, academic and public sector partnerships to deliver change in construction across Scotland.
- Dr Liz Aston was appointed Director of the **Scottish Institute for Policing Research (2018)**, a strategic collaboration between 14 Scottish universities and Police Scotland for conducting relevant, applicable research to 21st-century policing.
- A collaboration agreement (2015) with **St Abbs Marine Station** (a registered charity funded by private donors) saw Professor. Karen Diele being seconded to the marine station as Co-Director of Research.
- Subscription to the Scottish Government Research Pools opens up collaborative opportunities and strengthens our networks across Scotland. Several staff have been appointed to high-level roles within these pools, specifically within SICSA (Computer Science); SULSA (Life Science) and MASTS (Marine Alliance). ENU supports this by funding the time needed by these academics to deliver on these roles.

Wider Contributions to the Economy/Society

ENU leads the Housing, Construction and Infrastructure (HCI) Skills Gateway, a £6million project supported by the Edinburgh South East Scotland City Deal, delivered by the region's universities to support upskilling within the industry. This leverages research from our Institute for Sustainable Construction which forecasts a construction skills supply shortage of over 3,500 in south east Scotland in the coming years. Via the Data Driven Innovation Gateway, also funded via the City Deal, we are leveraging our expertise in data-science/AI to embed these skills in a variety of courses in schools, colleges and universities.

We lead the award-winning Built Environment Exchange (BeX), which is undertaken in partnership with industry and Saltire scholarship and provides industry internships. We host the Mountain Bike Centre of Scotland which, as part of the Mountain Bike Partnership, was awarded £19million in 2019 through the Borderlands Growth Deal.

Public Engagement (PE)

Mechanisms for engaging with diverse communities to promote the impact of our research include:

- In-house public engagement professional and public engagement leads based in each School, and a public engagement forum.
- Specific centralised funding devolved to the Schools for PE activity each year.
- Signing up to the Coordinating Centre for Public Engagement's *Manifesto for Public Engagement*.
- Partnering with the Beltane Public Engagement Network, which brings together the four universities in Edinburgh. Example activity includes training of academic researchers as Beltane fellows (three hosted at ENU); participation in the "*Cabaret of Dangerous Ideas*"

in collaboration with the Fringe and Stand Comedy Club; membership of the Scottish Parliament Academia Network; participation in Scotland for European Researchers' Night, Explorathon.

- Identifying underserved communities where activity from researchers, staff and students can make a positive impact. We were one of 25 universities to receive UKRI funding in 2019/20 for the project *Enhancing Place-based Partnerships in Public Engagement*.
- Coordination of Scotland's first "Soapbox Science" event in Scotland, giving a platform to 12 female STEM researchers. Staff take part in UK initiatives such as "Pint of Science" and regularly run events at the annual Edinburgh International Science Festival.

Research Practices and Integrity

ENU's *Code of Practice on Research Integrity* defines the research principles and practices to which all students and staff at the University must adhere when carrying out research. Each School has a system of ethics gatekeepers and committees to provide oversight of ethical issues, supporting a culture of research integrity through guidance, training and visibility of research integrity matters.

A new research data management (RDM) policy was introduced in 2015, with a 0.5 FTE post to oversee this area. New supporting infrastructure includes a research data storage/archive and a research management system (RMS) which includes a repository to support research including open research. RMS covers the management of all University research information. Regular training courses and annual roadshows foster general awareness of best-practice in open research, provided by both RIE and the library.

The University signed up to DORA in May 2019 and has since updated its responsible metrics policy (Nov 2019) and updated promotion guidance and application in line with DORA in spring 2020. A new working group champions the DORA objectives and informs adaptation of University policy.

3. People

Staff Development

In 2015, a new *Academic Appointments and Promotions Framework* was adopted. It provides well-defined progression pathways that recognise and value individual achievement and contribution, embeds equality and diversity (E&D) issues, and ensures that part-time research staff have parity with full-time staff. The framework (benchmarked against other leading universities) describes four pathways for academic career progression for permanent staff: research, learning & teaching, professional practice and enterprise. Pathways share the underpinning principle that promoted staff should be at the leading edge of their disciplines. They have an expectation of active leadership, linking individual success to a wider responsibility for community building and academic growth. Most staff identified as "Significantly Responsible for Research" according to our Code of Practice align with the research pathway (80%); 2% with enterprise, 11% with the professional practice pathway and 7% with learning and teaching. A *Researcher Promotion Framework* for contract research staff was introduced in 2018, recognising the importance of providing structured career progression opportunities for staff on research-only contracts.

A new process for objective setting ("*My Contribution*") was successfully embedded across the University during 2017, enabling staff to consider developmental opportunities and career planning holistically. The annual one-day "*Researcher Skills Forum*" provides training and networking for researchers at all levels (including PGR students). We hold an EU *HR Excellence in Research* award (retained in 2014, 2018). We became a formal signatory to the *Concordat for Career Development of Researchers* in December 2019, which requires us to consider our current compliance against the Concordat principles through a gap analysis and annual action planning. Specific actions include:

- **Policy development:** introduction of a *Research and Innovation Time* policy to ensure transparent processes for allocating research time; a *Career Progression for Researchers* policy, developed specifically for research-only staff; a new policy to support existing staff who wish to complete a research degree.
- **Principal's Research Excellence Awards:** awarded at the annual University research conference, these recognise and value the work of our researchers.
- Embedding a range of **online courses** into the wider researcher development programme, including contract research staff and PhD students.
- Introduction of a centrally funded **Researcher Development Fund:** this annual call invites researchers to apply for up to £1,500 to support initiatives which enable researcher career development. Funded activity has included: seminar series, writing retreats, symposia, and resource creation. Since 2015, over £40,000 has been provided.
- **Mentoring:** a new mentoring scheme provides a framework for task-based and developmental mentoring. In response to COVID-19, in 2021 we also introduced a cross-institute mentoring scheme with Queen Margaret University.

Monitoring of promotion data gives confidence in our procedures. From 2016-20, the average success rate for promotion across all grades is 46% (female), 46.5% (male), based on 80 female applications and 88 male. Considering promotion to professor and within the professorial grades, the average success rate for females is 41% vs 33% male. Within the research pathway (which accounts for 80% of submitted staff), the success rate averaged across all grades is 45%:49% female:male.

Wellbeing of our staff is taken particularly seriously, with a *Health and Wellbeing Plan* and *Mental Health Charter* aligned with sector standards. Flexible working policies are in place (and have been updated since COVID-19). In addition, specific carers and disability leave policies embed equality and diversity in our practice.

Staffing and Recruitment

Of the 266 staff returned, 58% are grade 6 (lecturer); 22% grade 7 (associate professor/senior lecturer) and 20% are professors. 98% of these staff are on permanent contracts.

Recruitment across the period has been driven by local strategies and objectives at School level (as described in Ref5b's). As a result of the new appointment framework and recruitment criteria, the number of academic staff holding a doctorate has grown by 32% since 2014. As noted above, going forward, there will be significant *institutional* investment in new staff to meet the objectives of the new strategy.

Early Career Researchers (ECR)

An ECR framework is in place that ensures consistency across the institution for ECR support and development, with School-level variations where appropriate. **65%** of the Category A eligible pool of ECRs are submitted with at least one output, representing **18%** of our overall submission. This is reflective of the new appointment and promotion framework (described above), with its strategic focus on recruitment of staff with an active research profile, and continued development opportunities for ECRs. Example activities include:

- **Early Career Forum:** this provides a route for ECRs to feed into policy development and committees to ensure their views are considered. An elected ECR represents this community at the University Research and Innovation Committee.

- **Targeted Funding:** We run an annual ECR internal research funding competition (since 2014), mimicking the processes of applying for external funding. A maximum sum of £7,000 is available. Since its inception, 137 researchers have received funding and over £700,000 has been awarded. Funding has been used for equipment, travel, contributing to RPG fees, improving impact, and improving publications.
- **Training:** Grant factories, externally run workshops and an annual “*Winning Research Funding*” course provide support for ECRs to develop an idea through to submission to an external funder

Research Student Training and Supervision

Postgraduate research (PGR) students are guaranteed a supervision team consisting of at least two supervisors and an independent panel chair (who ensures processes are correctly followed and meets independently with the student to ensure their wellbeing). A supervision agreement between students and supervisors sets out expectations of both parties, reviewed and refreshed bi-annually. A formal progress monitoring programme includes bi-annual reviews with the entire team. Students keep a personal development record (via Vitae) which determines personal and professional development needs. A “*Proposal Review*” (month 4) and a “*Confirmation Review*” (month 12), determine the target degree (MPhil, PhD). Review forms are monitored by Schools and the institutional Research Degrees Committee. Total completions have increased by 62% (272 vs 168) from REF2014, evidencing an improved monitoring process and increased investment.

Training is provided via a blended programme of face-to-face events and webinars, ensuring that distance and part-time students have appropriate support. Events are mapped against Vitae’s *Researcher Development Framework*, and all PGR students have access to Vitae’s online planner to support career development. Our 2019 PRES data showed we were in the top quartile of UK universities for professional development of our students. PGR students have opportunities to undertake teaching or demonstrating via a specific contract ensuring appropriate remuneration. This is supported via a bespoke “*How to Teach*” course and introducing HEA Fellowship via ENRoute. An annual research conference showcases the achievements of our RPG students: a highlight is the three-minute thesis competition, with the winner forwarded to the UK 3MT competition. The University Research and Innovation Committee has an elected representative from the PGR community ensuring they have a voice.

Comprehensive training and development are provided for our supervisory community, including induction for new supervisors. In our 2019 PRES results the most highly rated factor was the skills and subject knowledge of supervisors (93%).

Equality and Diversity (E&D)

Our E&D practice is embedded and led by our *Inclusion Strategy*. Inclusion in all aspects of research is monitored at University and School inclusion monitoring groups, which meet quarterly. The Code of Practice (CoP) sets out the criteria for *identification* of people as “*Significantly Responsible for Research*” (SRR) who form the submitted population. *Output selection* is based only on quality, following a 3-stage scoring process including external rating and selection by an algorithmic selection process described in the CoP. Regular equality impact assessments have provided robust confirmation that there was no evidence of discrimination regarding any of the protected characteristics in application of the selection criteria outlined in the CoP. This data is reported to the University inclusion committee and at School inclusion monitoring groups to inform local analysis. ENU has not received any formal cases of appeal with regard to the implementation or decisions on SRR status. The data is shown in the figure below. Gender data suggests that males are more likely to be submitted than females, however the variance in proportion is not considered significant and is actively monitored at School level.

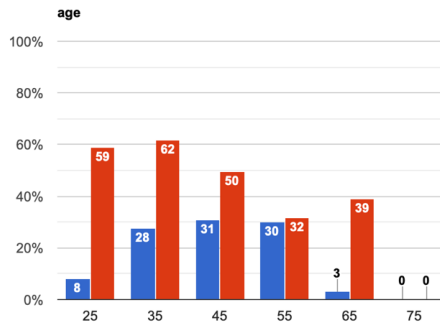
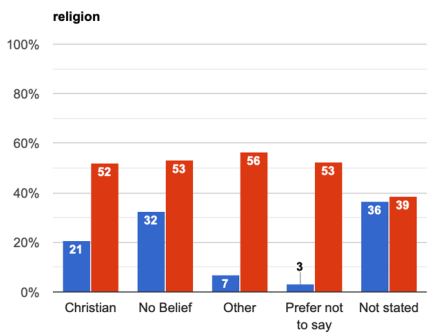
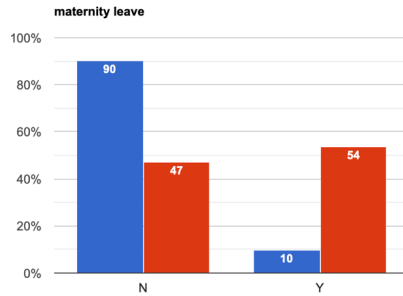
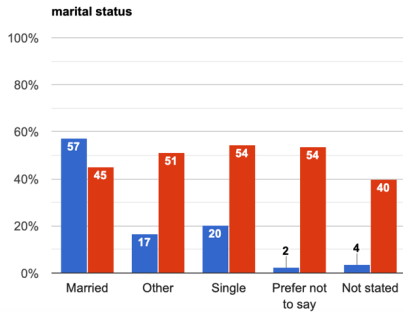
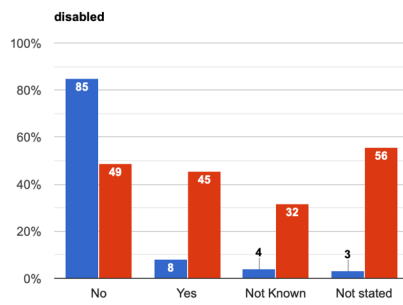
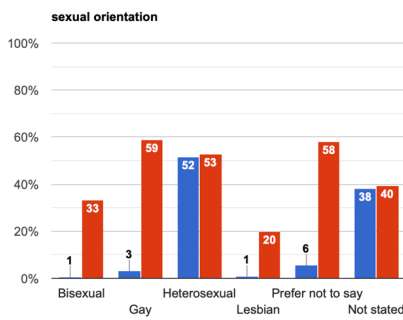
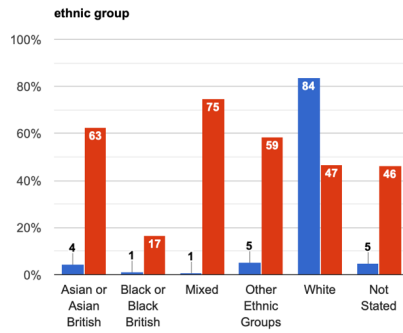
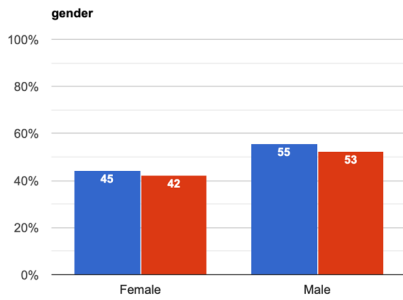
E&D data is tracked for internal funding applications. For ECR funding awards mentioned previously: averaged over five years, the breakdown in applications by gender are approximately 44% female, 48% male, 8% unlisted. Successful applicants are 35% female, 49% male, and

16% unlisted. While the balance leans in favour of men, the differences year on year are negligible and reflect the higher number of male employees. Success rate is continually monitored in order to determine if further action is required. A new policy approved in 2021 covers internal allocation of research funding from an E&D perspective, mandating BAME representation on decision-making panels.

The University holds *Disability Confident*, *Carer Positive* and *Stonewall Scotland Diversity Champion* status. Active staff networks include the *Women's Network*, *LGBT+*, *Carers*, *Armed Forces* and *BAMEish*.

Blue: percentage of Category-A pool with the characteristic

Red: from the sub-pool consisting of Category-A staff with the given characteristic, % that are SRR



4. Income, infrastructure and facilities

REG funding received by ENU is allocated across the six Schools using a formula which mirrors that of the SFC selective funding model. The University top slices REG funding by 45% to fund centralised initiatives, research subscriptions, and memberships. UIF funding is top-sliced by 42% (£228,000) to fund RIE staff costs, 18% (£100,000) to enable research impact through innovation and enterprise strategic activities and a further 9% (£50,000) is held centrally to pay for central public engagement activity (£20,000) and patent costs (£30,000). The remaining balance is distributed to the Schools using the annual SFC knowledge exchange income figures earned by each School.

The Research Postgraduate Grant (RPG) budget is used to invest in our environment for high quality research training and development of PGR students. It is distributed to each of the Schools based on the proportion of PhD students and used to enhance research students' experience and learning.

Research Infrastructure

A dedicated research management system **Worktribe** was introduced in 2014. Centralised IT services provide a dedicated system for storage of research data across the University to comply with data management plans as well as providing support, networking, collaborative and communication software and data security. Over £1.1million is invested by the library annually in books and publications; it provides a resource of 65 databases and approximately 64,000 journals in full-text electronic form. Subscription to **Research Professional** facilitates identification of funding opportunities and includes tailored alerts.

ENU hosts a number of significant collections that include the **War Poets Collection** (more than 800 items); **The Scottish Centre of Tagore Studies** and accompanying website (that receives up to 1,000 visits a week); the **Ernest Mehew Robert Louis Stevenson** collection (almost 4,000 items that have been assembled over 60 years by the late Dr Mehew); the **Jim Haynes Living Archive**; and **The Edward Clark Collection** (around 5,000 items illustrating the development of the book from the 15th century).

Examples of additional research infrastructure supporting reported impact includes:

- The **Simulation and Clinical Skills Centre** is a 1,000m² centre run by a specialist team of nurses, doctors and midwives, and covers several practice areas from community and critical care to general and labour wards.
- £2.5million investment was made into the **FOSCROC Sport Scottish Rugby Academy**. The new two-storey sports centre extension provides rehab spaces and a studio facility where students and academic staff can undertake research.
- The **Mountain Bike Centre of Scotland** (MTBCOS) has become the world's first academic-industry centre for open innovation in the mountain bike sector: academics from a range of disciplines provide support services including innovation clinics, market research and concept testing.

Significant Benefits in Kind

The Research, Innovation and Enterprise Office works with the Development Team which is focused on securing philanthropic income. Since April we have received support of £118,961 for enterprise and innovation; £145,727 for research programmes. Notable donations include Leonardo di Caprio Foundation funding for Mangrove Sustainability; and Nesbitt-Cleland Trust funding for St Abbs Marine Station (part-funding salary costs). Industry partnership gifts in-kind provide access to state-of-the-art design tools for use in research and teaching, e.g., the Trimble Lab, a philanthropic investment valued at £4million over five years enabling a hands-on experience of technological tools to transform how buildings are designed and constructed.