



THE BEDROCK OF UNIVERSITY RESEARCH:

SFC's Research Excellence Grant

 Scottish Funding Council
Comhairle Maoineachaidh na h-Alba

Scotland's tertiary education and research authority

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Cover Photos:

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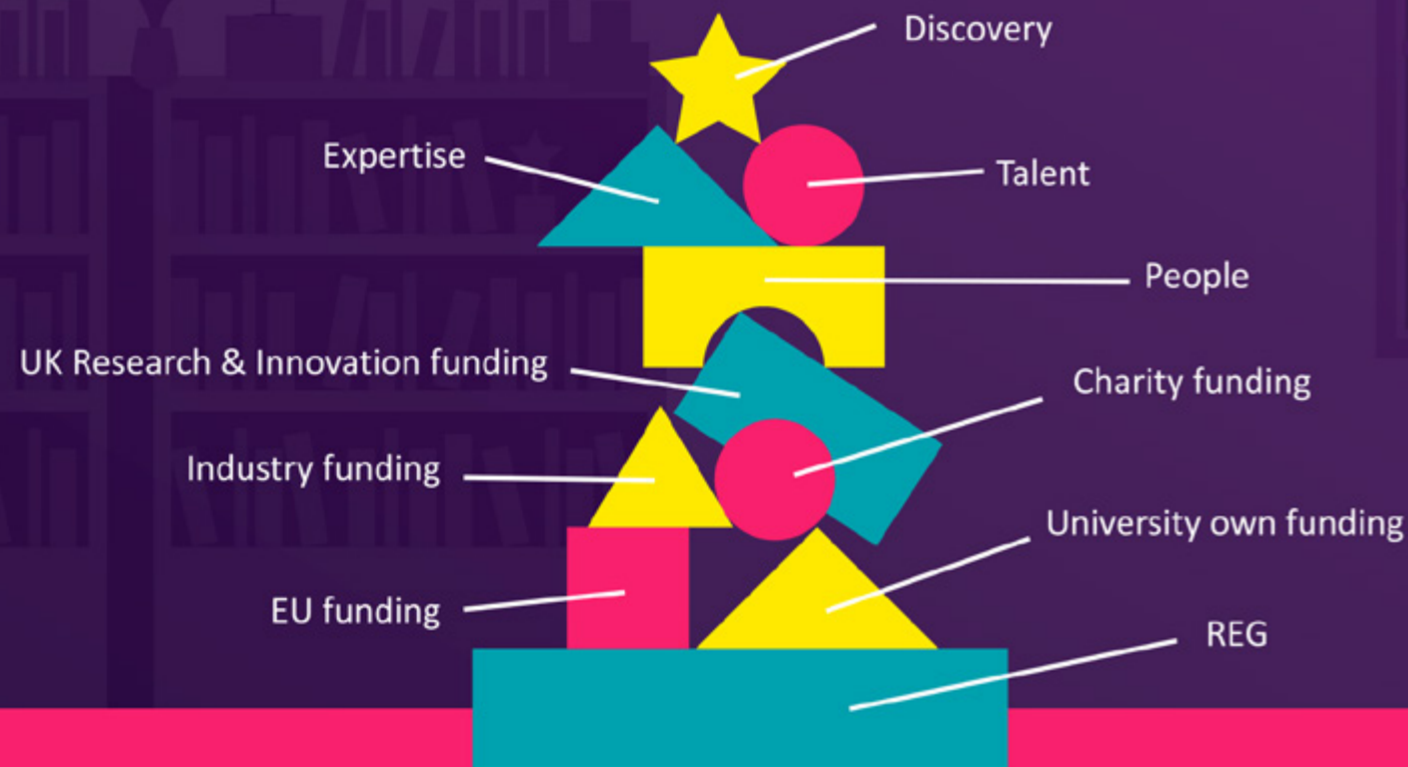
University of Aberdeen

University of the Highlands and Islands

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Underpinning Scotland's world-leading university research base



REG provides the foundations for Scotland's world-class university research base in which:



All Scottish institutions are judged to have world leading research.¹



Scottish research received 80% more citations in peer reviewed research than the global average.²

Over a third of research directly related to the Scottish Government's National Performance Framework (NPF) and UN Sustainable Development Goals (SDGs).³



A 14% share of UK-wide UKRI research funding is secured.⁶



A 13% share of UK-wide industry investment is secured.⁷



12% of the UK's postgraduate research students are enrolled.⁴

Between AY 2016-17 and AY 2021-22, Scottish universities enabled



The next-highest share of FDI projects in the UK after London is attracted⁵.



90 spin-out companies, 1374 startups and 116 social enterprises.⁸

Introduction

The Scottish Funding Council (SFC) provides core research funding for universities through the Research Excellence Grant (REG) to support world-leading research in Scottish universities that ensures Scotland remains globally competitive, attractive to the best researchers and teams and making an impact nationally.

This report outlines the role and importance of REG in Scotland's university research system and how it acts as a foundation to leverage further investment, provide for essential infrastructure and overheads and develop the pipeline of talented people and teams for Scotland's future.

As well as outlining how the system functions, the report includes a showcase of how REG is utilised across Scotland's research-active universities. Two case studies from each institution are included, highlighting the breadth and variety of ways that REG is invested in support of research in Scotland. These include a focus on how research underpinned by REG is delivering for Scotland's society and economy.

¹ REF2021 results [Results and submissions: REF 2021](#)

² Between 2010 and 2020, Scotland's Research Contribution to National and International Challenges [Scotland's Research Contribution to National and International Challenges \(sfc.ac.uk\)](#)

³ Ibid.

⁴ In AY21/22, HESA Open Data [Who's studying in HE? | HESA](#)

⁵ Ernst and Young Attractiveness Survey Scotland 2022 [Scotland leads the](#)

[way for FDI investment | EY UK](#)

⁶ In AY21/22, HESA Open Data [Table 5 - Research grants and contracts - breakdown by source of income and HESA cost centre 2015/16 to 2021/22 | HESA](#) Note – Data for Heriot-Watt University is not included.

⁷ Ibid.

⁸ In AY2016/17 to AY 21/22, HESA HEBCI survey data [Chart C- Spin Offs and Start-up Companies- HE Business and Community Interaction | HESA](#)



What role does the Research Excellence Grant play in Scotland's university research system?

The **Research Excellence Grant (REG)** is one of several different funding streams that support Scottish university research but, unlike other sources, REG provides flexibility and agility affording it a unique role and value in the system. This value stems from the fact that decisions on how it is deployed on research priorities are left at the discretion of universities themselves.

Upholding the dual support system in Scotland

As performance-based institutional block grant funding, REG forms one side of the UK's unique 'dual-support' system for university research, alongside grants from UK Research & Innovation (UKRI) that are competitively awarded to Scottish researchers and teams.

REG is complemented by other SFC core funding streams which provide dedicated funding for:



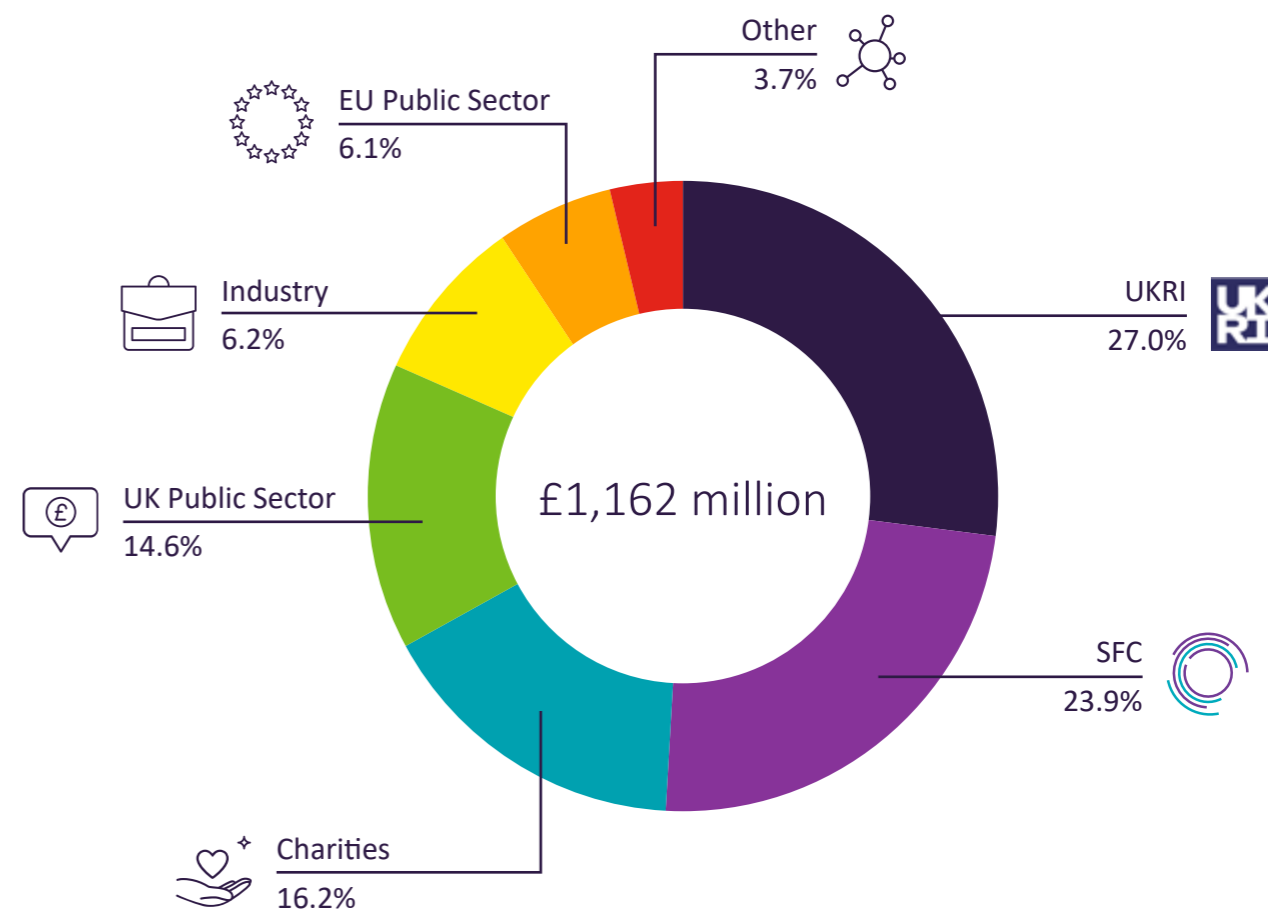
University-business interactions through the **University Innovation Fund** (UIF, £20.8m in AY23/24)



Postgraduate research training and support through the **Research Postgraduate Grant** (RPG, £36.9m in AY23/24).

In this way, Scottish university research is underpinned by a 50/50 mix of public funding of two distinct flavours from the Scottish and UK Governments. These form an important and synergistic balance and, in supporting this balance, SFC's core funding plays an important role in leveraging UKRI and other research funding sources including industry, EU and charity funding.

Total Scottish university research income, source HESA Open Data, 21/22.



Note: UKRI funding includes funding from eight research councils, Innovate UK and centralised UKRI funds.

Similar systems exist for universities in England, Wales and Northern Ireland with strategic institutional funding provided by devolved funding bodies: Research England, the Higher Education Funding Council for Wales, and the Northern Ireland Department for the Economy.

UKRI project funds differ from REG in that they are allocated competitively by peer review, and they support discrete areas of defined activity and specific research questions. Elements of UKRI funding are strategic, reflecting current (or future) priorities, but responsive-mode funding, supporting opportunities for scientific exploration identified by researchers, remains an important element of this strand.

UKRI awards contribute to the additional costs of undertaking the research projects they support. However, as part of the dual support system, they are only required to contribute up to 80% of the "full economic costs" (fEC) of the research they fund. In Scotland, the remaining costs, and academic staff time, are assumed to be met using REG.

Collectively, the two arms of the dual support research funding system enable efficiency through:

 Cost-effective investment in research and knowledge exchange activities.	 Sharing of equipment and allied professional services between projects.
 Achieving critical mass in new areas of interest.	 Building strong and responsive links to innovation.
 Aligning long-term strategic decisions with local and national priorities.	 Maintaining continuity in research areas in the face of unpredictable access to project-based funding.

This allows universities to make strategic investments across:

 The full range of academic disciplines and sectors.	 Research skills development.
 Infrastructure.	 Knowledge exchange.

UK public research funding: The dual support system in Scotland













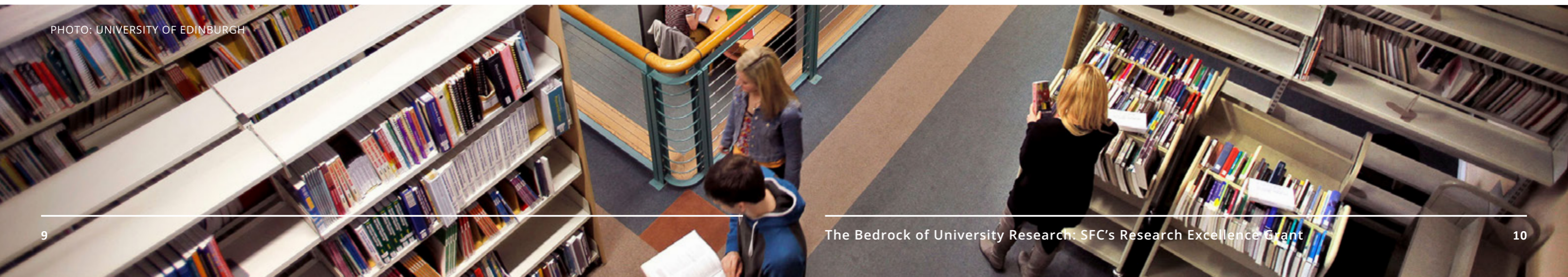
 UK Research and Innovation	 Scottish Funding Council Comhairle Maoineachaidh na h-Alba
 Provide grants for research projects	 Provide funding for research infrastructure / capacity
 Develop thematic programmed on national research agendas	 Funding is allocated by formula, based on assessment of research quality
 Competitive proposals are invited from single or groups of universities	 Quality is assessed via the Research Excellence Framework (REF)
 Institutions report on projects to the Research Councils	 Must be used to support high-quality research, internal allocations decided by HEIs
 Around £300m per year	 Around £300m per year

PHOTO: UNIVERSITY OF EDINBURGH



Why is the Research Excellence Grant important in Scotland's university research system?

No other university research funding source offers the unique combination of scale, stability and flexibility afforded by REG. The ambitions set out in the Scottish Government's National Strategy for Economic Transformation (NSET), Innovation Strategy and National Performance Framework (NPF), and the growth in mission-led funding, will all rely on strategic institutional support to underpin and deliver the coherent and efficient research system needed to achieve ambitious goals.

REG provides funding to crowd in new investment, test out the unpredictable, support existing activity, explore the difficult-to-fund, bring in new partners, and – not least – supplement competitive project funding that does not cover the full costs of research projects. It is the fund for the not-yet-done, the not-quite-clear, or not-quite-sure-if-it-might-work. It also covers key overheads and infrastructure costs, including the professional support required by researchers and their projects.

Some of the activities that REG supports in universities across Scotland include:



Recruiting and retaining talent, including internationally and at all career stages.



Promoting positive research cultures, research careers and the diversity of people involved in the research process.



Pursuing long-term research strategies, capacity building and strategic investment in research priorities.



Seeding or piloting cross-disciplinary activities within an institution and/or between institutions.



Supporting fundamental research and research into novel ideas that provides the foundation for later breakthroughs and impact.



Providing overheads or additional investment that support funding from other sources.



Developing, supporting and amplifying international collaborations and partnerships.

As the UK's research funding system undergoes a period of significant change and expansion, these activities will be more important than ever in maintaining Scotland's research competitiveness and supporting research impact for Scotland's society and economy.

The Research Excellence Grant

£246.8 million in AY23/24

The Research Excellence Grant is designed to recognise and reward excellent research and the effective translation of research in universities across the whole of Scotland.





Photo: Getty Images via University of the Highlands and Islands

The bulk of REG is allocated based on a UK-wide, peer-review assessment of research excellence, the most recent of which was the 2021 Research Excellence Framework (REF). An institution's performance in this highly-competitive process dictates the funding it will receive annually until the next assessment, typically six to seven years later. In contrast to other sources of public funding for research, the stable nature of this allocation allows institutions to develop and implement long-term research strategies.

Although funding is allocated according to: (a) quality and volume weighted by subject area; (b) the proportion of non-charity research income received; and (c) the proportion of charity research income received, institutions are free to spend the funding as they see fit in support of excellent research.

SFC funding through REG ensures that every university in Scotland is research active, and able to provide research-informed teaching.

The proportion of an institution's total research income that comes from REG varies by institution - for large, research-intensive institutions it is between 20-25% of total research income; for smaller or teaching-focused institutions it is around 40% of total research income; and for some small specialist institutions, it is over 80% of total research income – almost fully funding institutional research activity.

No matter the institution, REG plays an important role in supporting the leverage of UKRI income and income from other research funders. There is a positive correlation between UKRI income and REG income, indicating that both streams are aligned in backing quality research.



Photo: University of Abertay

Case studies

The following pages include case studies from every university in Scotland to illustrate some of the uses of REG and its unique value in the system.

They are divided into two categories that broadly reflect the different ways that REG is used to underpin Scotland's university research base:



1. Delivering impact for Scotland:
Addressing Scottish Government priorities and contributing to Scottish society and our economy



2. Building the foundations:
Maintaining and developing Scotland's research talent, infrastructure and capability

These categories are not mutually exclusive and the many ways that REG builds the foundations of Scotland's research base also contribute to realising and supporting Scottish Government priorities.

Scottish university case study index

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1. Delivering impact for Scotland: Addressing Scottish Government priorities and contributing to Scottish society and our economy



Photo: Kelly Loughlin (Getty Images) via University of Edinburgh



Reducing youth offending in Scotland through long-term research University of Edinburgh

The Edinburgh Study of Youth Transitions and Crime is a longitudinal study of pathways into and out of offending amongst a cohort of approximately 4,300 young people who started secondary education in the Edinburgh in 1998. Led by researchers at the University of Edinburgh, the study closely examined the experiences and behaviours of this group of children as they grew up and became adults. It is the biggest UK-based criminological life-course study, and data collection is continuing.

The research has benefited from funding from several sources since 1998, including the Nuffield Foundation, the Economic and Social Research Council and the Scottish Government. The Research Excellence Grant has been an essential source of funding by providing continuity between external grants to support long-term continuation, as well as covering shortfalls from these funding sources.

The study's findings show that a complex range of social and societal factors are linked to an individual's likelihood of persistent serious offending. They demonstrate that keeping young offenders out of the formal youth justice system, and in mainstream education, for as long as possible is important and is an effective way of reducing reoffending.

The research has underpinned a series of policy changes and incremental adjustments in the Scottish approach to youth justice, including the Scottish Prison Service's Vision for Young People in Custody and the Scottish Government's Youth Justice Strategy 2015-2020. Together, these contributed to a 34% fall in youth convictions, and a 45% fall in imprisonment for young people (with rates at their lowest level for at least 50 years), between 2015 and 2020.



Photo: Abertay University



Improving teachers' training and practice Abertay University

The Scottish Government's 2021 Education Recovery Plan set a goal that "every child and young person in Scotland will have the opportunity to fulfil their potential as they progress through the education system and on to positive destinations." The vision outlined in the plan placed attainment, particularly in literacy and numeracy, as one of four key priorities. To respond to this, teachers need to develop skills that allow them to maximise children's learning, and research at Abertay University aims to take this forward.

Abertay's Research-Led Innovation Nodes for Contemporary Society (R-LINCS) studentship programme is supported by the university's REG allocation. One studentship project developed understanding of 'self-referencing' (linking materials with the self) in education and showed how it enhances engagement and learning in classroom activities.

This work contributed to the award of a £484,000 Economic & Social Research Council grant for research on how improved understanding of self-referencing can be used by teachers to maximise children's learning. Findings have been disseminated to teachers through continuing professional development (CPD) and training. Although disrupted and delayed by Covid restrictions, CPD training has been delivered to approximately 80 teachers responsible for the education of over 1,500 children, in schools across three different local authorities in Scotland. Responses from attendees showed that 100% of them changed their practice to include self-referencing in class.



Photo: Queen Margaret University



Supporting children with persistent speech disorders

Queen Margaret University

Speech scientists and speech and language therapists at Queen Margaret University have applied their research to improve the speech communication of children with persistent speech disorders.

The research team has pioneered the use of ultrasound technology to view the movements of the tongue inside the mouth during speech in real time. This has allowed children to see where their tongue is positioned during speech and to master the production of key speech sounds. The research intervention has ultimately transformed the speech of many children and improved their quality of life.

The long-term continuity provided by the Research Excellence Grant is essential in supporting this research. REG has provided bridging funding to retain key contract research staff involved in the work when they were between the end of one research grant related contract and the start of another.

During the project two thirds of the children who were suitable for ultrasound-based treatment for apparently intractable speech disorders improved by a “clinically significant” degree. This was measured in terms of a reduction in perceptible errors in the consonants (or vowels) treated and in terms of in new words that had not been practiced in treatment. Further, the parents rated their children’s speech as improving from being “sometimes understood” to “usually understood”. The research team’s treatment model was more generally successful across a wider range of disorders than any other articulatory intervention research and required only one hour therapy sessions in a 10–12-week block.



Informing the framework for social work education in Scotland

University of Dundee

Research conducted in the University of Dundee’s Division of Education and Society aims to improve the lives of individuals, communities and society in Scotland.

The University’s REG allocation helps the Division to leverage investment from a range of sources including government bodies, UKRI Research Councils and charitable funders, and provides flexibility to support collaborative engagement activities with policy makers, the professional community, service users and marginalised groups.

The collaborative nature of the Division’s research has led to national impact. For example, researchers have explored key issues related to social work education, including philosophies of learning and approaches to integrated learning, the value of a generic and core curriculum for social work, and the professional learning needs of newly qualified social workers. This research highlighted the challenges facing social work education and practice in Scotland, with findings emphasising that qualifying education should be understood as the foundation for further professional learning and that education and professional learning is a shared endeavour requiring sustainable investment and infrastructure across career pathways.

The research was instrumental in the establishment of a new national Social Work Education Partnership that has brought together universities, employers and Scottish Government, resulting in significant changes to the Framework for Social Work Education in Scotland, and a reconfiguration of the partnership links between local authorities and universities.



Manufacturing experimental anti-cancer drugs for clinical testing

University of Strathclyde

The Cancer Research UK Formulation Unit within the University of Strathclyde’s Institute for Pharmacy & Biomedical Sciences develops putative anti-cancer drugs to a level suitable for early-stage clinical trials. Since opening over 20 years ago, the Unit has handled more than 100 compounds and manufactured more than 1 million units of anti-cancer drugs.

The University of Strathclyde’s REG allocation plays a key role in sustaining the Unit over the long-term, supporting up to £500,000 of the full economic costs of the Unit’s research each year since 2010 to underpin the investment from Cancer Research UK.

The Unit has dealt with compounds from across the therapeutic spectrum including polynucleotides, antibodies, vaccines, polymer conjugated agents and small molecule drugs. After analysis and formulation, drugs handled by the Unit have to be manufactured, often on a small scale for early studies or to enable innovative adaptive clinical trial designs.

Several of the compounds developed have been passed to pharmaceutical companies for further development and some are now used worldwide to treat cancer: for example, temozolomide, marketed as Temodal® by Schering Plough, and abiraterone acetate, marketed as Zytiga® by Johnson and Johnson. With these two drugs alone, the Unit has improved the lives of over 3.5 million cancer patients globally.

Photo: University of Aberdeen



Translating world-leading environmental research into advice for policy-makers and practitioners

University of Aberdeen

Researchers at the University of Aberdeen's Centre of Excellence in Soil Science are promoting the control of greenhouse gas emissions, reduction of soil degradation and sustainable food production.

REG funding has underpinned the development of the Centre and its contributions to environmental science by enabling inclusive investment in people, including research support infrastructure, and contributing to securing large external funding programmes.

The continuity afforded by REG has facilitated work by key figures including Pete Smith, Professor of Soils and Global Change, and Jo Smith, Professor of Soil Organic Matter and Nutrient Modelling, who together co-lead the environmental modelling group. The group models all aspects of the environment but specialises in soils, land-based ecosystems, carbon cycling, greenhouse gas emissions, agriculture, food systems, bioenergy, nature-based solutions, modelling these for sustainability and for developing actions to mitigate climate change and reduce soil degradation. Professor Pete Smith has pioneered the innovative Cool Farm Tool, an award-winning free app used by tens of thousands of growers and agri-food businesses worldwide to easily calculate greenhouse gas emissions, soil quality, biodiversity and water use. Professor Jo Smith has led the development of the Scottish Government Windfarm Carbon Calculator, a tool that aims to ensure windfarm developments reduce carbon emissions while not damaging sensitive peatlands.

REG funding also supports Aberdeen researchers' in-kind contributions to international initiatives under the United Nations including COP, IPCC and IPBES. At a national level, Aberdeen scientists advise on and shape policy through their contributions to Defra, NatureScot and Marine Scotland. In 2021, Professor Pete Smith was appointed to the First Minister's Environmental Council of experts to advise the Scottish Government on global best practice in tackling the climate and biodiversity emergencies.

Photo: University of St. Andrews



Informing debates around immigration policy and the interface between migration and Scottish constitutional change

University of St Andrews

Since 2014, researchers at the University of St Andrews Centre for Population Change have explored the distinctive demographic challenges that Scotland faces compared with the rest of the UK. The Centre is part of a REG funded institutional investment of circa £350,000 per year that supports Research Centres and Institutes across the University of St Andrews.

Research from the Centre has examined Scotland's migration needs and the extent to which Government policy, potentially, could better respond to them. Its finding and evidence-based arguments in favour of a distinct Scottish migration policy have influenced political debates around immigration policy in the Scottish and UK Parliaments, informing citizens' understanding of the interface between migration and Scottish constitutional change.

The chief focus of this body of research has been to assess the pressing issue of migration and Scottish immigration policy in the context of constitutional change. The key insights that have emerged are that Scotland's experience of and attitudes towards immigration are distinct from the rest of the UK. The research contends that immigration policies specifically suited to Scotland's needs are merited, and that there is qualified support for this amongst policymakers, practitioners and, to an extent, the public in Scotland.

Critically, given uncertainty over Scotland's future relationship with the UK, the Centre's research demonstrates that this is practical under various constitutional scenarios. It also finds that these issues are ever more pressing in the context of the demographic and economic vulnerabilities Scotland faces within a more restrictive UK immigration policy post-Brexit.



Photo: Heriot-Watt University



Mitigating child poverty and inequality in Scotland

Heriot-Watt University

Researchers in the Institute for Social Policy, Housing and Equalities Research (I-SPHERE) at Heriot-Watt University are investigating how families and children who are living with economic deprivation and inequality can be best supported.

Their research uses longitudinal methods to analyse child poverty – its measurement, causes, consequences, mitigation and prevention – and has had a direct impact on policy, health and education. As a result of the team's research, approximately 120,000 children annually who are living in poverty across Scotland now have access to a £100 school clothing grant and, in several local authorities, to free meals in breakfast clubs and during school holidays.

This research is funded by the Nuffield Foundation, the Economic & Social Research Council, the Trussel Trust and Aberlour Scotland's Children's Charity. Charity funders only cover the direct cost of a research project leaving a substantial deficit compared to the full economic cost of the project. Contributions from Heriot Watt's REG allocation are therefore instrumental to address this deficit and unlock charity sources of income. This is particularly important for I-SPHERE as most of its research funding comes from charity funders.



Photo: Newsquest via Glasgow Caledonian University



Supporting Scottish Government ambitions to combat HIV and Hepatitis C

Glasgow Caledonian University

Glasgow Caledonian University's ambitious Beyond Blood Borne Viruses research programme supports the Scottish Government's aims to eliminate HIV transmission and Hepatitis C by 2030. It brings together leaders from research, public health, clinical practice and policy with a focus on combatting these viruses.

The programme's work is underpinned by the University's internationally acclaimed Sexual Health and Blood Borne Viruses research group, which is supported using REG funding, and whose outputs are central to key policy areas for Scottish, UK and wider global infection control within sexually transmitted infections and blood borne viruses.

Part of the team's work focusses on how we care for and treat HIV sufferers and a major project funded by the National Institute for Health Research aims at improving care for people with sexually transmitted infections in a digital NHS. REG also plays an important role in enabling this project funding by supporting the indirect costs of the research not covered by the grant. Other areas of the team's work have focussed on organising services for people at highest risk of HIV and developing best practice in delivering HIV Pre-Exposure Prophylaxis (PrEP) through evaluation of early implementation across Scotland. This research has been instrumental in reducing transmission of HIV by directly shaping policy in Scotland and the Republic of Ireland, changing models of care in Scotland, and influencing European HIV Pre-exposure prophylaxis (PrEP) guidance.

Preventing new infections and reducing infection-related poor health will have a direct and lasting impact on people and systems, by reducing the significant health consequences of infection. This will improve health and wellbeing at an individual level and reduce the economic burden of infection at societal level.



Photo: Royal Conservatoire of Scotland



Inspiring young people to take up music in Scotland

Royal Conservatoire of Scotland

In 2019, A-level music was 26th in a ranking of subjects by numbers of entries in England; in Scotland, Advanced Higher music was ranked 5th - behind only maths, English, chemistry and biology. A factor in this difference is the Youth Music Initiative (YMI), established in 2003 in response to What's Going On? - a detailed study of youth music in Scotland undertaken by the Royal Conservatoire of Scotland.

The Youth Music Initiative is a national funding and development programme for young people's music in Scotland. Since its inception, it has supported Scottish local authorities to provide universal initial music-making experiences in schools and funded local and national music initiatives in the informal and nonformal sectors, allowing countless young people to make music who would not otherwise have done so. Over nearly 20 years, the Scottish Government has invested over £175 million in the YMI.

Follow up research in 2019 was underpinned by investment from the Research Excellence Grant which was used to co-fund key researchers' salaries.

This research offered new and substantially improved insights into young people's music making in Scotland in light of the Youth Music Initiative and other developments and comprised a systematic investigation of young people and music in Scotland, taking in all genres of music and a wide range of contexts for playing.

The number of young people on whom the YMI has had an impact over its 18-year history is very large, and successive impact evaluations commissioned by Creative Scotland indicate the reach of the initiative: it is estimated that between 2014 and 2021, around 1.5 million young people had an initial experience of music at school through the YMI, and at least 500,000 had participated in out-of-school activities.



Photo: Edinburgh Napier University



Improving Scotland's cardiovascular health

Edinburgh Napier University

Cardiovascular disease is the primary cause of death globally. Researchers at Edinburgh Napier University are exploring the detection and management of the disease to improve patient care and survival rates and explore financial savings for NHS and other funding bodies.

REG funding underpins this work by supporting Napier's newly created Centre for Cardiovascular Health. The flexibility and agility afforded by REG means that the university can make investments, such as the Centre, that act on opportunities to develop key areas of research and strengthen visibility and networks with international partners and facilitate opportunities for increased knowledge exchange and impact.

REG is also pivotal in funding Napier's central professional support infrastructures and memberships, which are integral in attracting external income for research and knowledge exchange, this includes highly-skilled professional services staff, specialising in external funding and project management; knowledge exchange; research quality enhancement; and researcher development, training staff in key research and innovation skills.

Researchers at the new Centre for Cardiovascular Health have already developed significant research collaborations with NHS and other health bodies into innovative digital solutions for management of common cardiovascular health issues, including high blood pressure and atrial fibrillation. They have also developed collaborations that are exploring the positive effects of physical activity in managing chronic medical conditions, including COVID-19.

The Centre's work will lead to economic savings to government public health spending at a time when the NHS is under immense pressure as well as improvements in patient survival rates and changes to international policy and practice.



Photo: University of the Highlands and Islands



Improving community engagement in the Scottish uplands by influencing policy

University of the Highlands and Islands

Researchers at the Centre for Mountain Studies at the University of the Highlands and Islands have identified key benefits from community engagement for both community resilience and the sustainable development of upland estates in Scotland.

The research provided an understanding of the most important ways in which owners and managers of large, rural estates influence those who live and work on and around their estates. As a result, policies that regulate land management now emphasise mutual engagement between landowners and communities, and government guidance that draws on the research is given to landowners on how to meet these requirements. The research has also informed the policies and practice of Scottish Land and Estates and the Scottish Land Commission enhancing engagement and generating positive impacts for both communities and landowners.

The impact of the research is long-term: the underpinning research activity took place between 2007 and 2012 and it influenced the Land Reform (Scotland) Act 2016 and the development of the Scottish Land Commission and the Guidance on community engagement produced by Scottish Government in 2018.

The REG allocation received by the University of the Highlands and Islands is essential for supporting this research and its policy influence, which extends well beyond the lifetimes of external grants. REG has been used to support staff salary costs to continue tracking the development of this policy area, ensuring ongoing engagement and supporting staff between externally funded research projects. REG has also been used to fund time for researchers to engage in discussions and knowledge exchange processes that ensure that research evidence is taken up in ways that support decision making.



Photo: Queen Margaret University



Shaping Scottish Government refugee integration policy

Queen Margaret University

Researchers at the Queen Margaret University Institute for Global Health and Development have developed a framework which has shaped debate on refugee integration. It has focused attention on the need for social connection and its impact on access to rights and services, and refugees' opportunities to live independently.

REG funding supports the Institute by contributing towards the costs of research staff salaries and researcher development training to attract and retain high quality research talent. REG investment also supports staff time to facilitate work in partnership with policy makers to develop evidence-based solutions to big challenges.

The Institute for Global Health and Development's policy, practice and community focused research highlights the diversity of connections that are essential in building a new life and in developing integrated communities - including reuniting families and building friendships with other migrants, as well as between newcomers and settled community members.

This work has shaped the Scottish Government refugee integration policy, along with other integration policies globally – particularly in Australia and the USA. The knowledge gained from the research has influenced the design of major support programmes for refugees, helping agencies involved in service provision to prioritise building 'connectedness'.



2. Building the foundations: Maintaining and developing Scotland's research talent, infrastructure and capability

Building a world-leading inclusive workforce

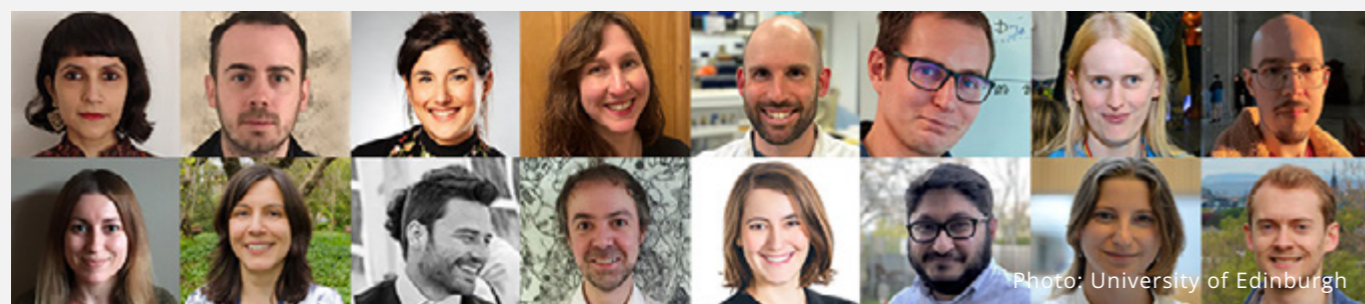


Photo: University of Edinburgh



Developing the pipeline of diverse and talented future research leaders

University of Edinburgh

The Research Excellence Grant is a critical part of the University of Edinburgh's plans to attract and retain talent and realise its ambition to deliver a step change in innovation and research.

The University is investing £14 million of its REG allocation to appoint 60 new Chancellor's Fellows, the first 30 of whom will join the University over the course of 2023. Aligned to its commitment to diversify their research community, the University's call for Fellows was opened to both internal and external applicants, and encouraged candidates with non-traditional career paths, including those with a track record in industry and other relevant sectors. As a result, 56% female and 20% black and minority ethnic candidates have been appointed so far. Targeted programmes for future research leaders in climate change and future health are also in development – again made possible via the University's REG allocation.

To complement the Chancellor's Fellows appointments, the University is also investing £6 million in a new Edinburgh Career Development Scheme. The scheme will provide critical 2-3 year fellowships for those immediately post-PhD to help address a significant gap in research career support; the transition from PhD to an externally funded post-doctoral fellowship or equivalent, as well as promotion of interdisciplinary research. The fellowships are targeting under-represented groups, including women, ethnic minority researchers, and those from socio-economically disadvantaged backgrounds who face challenges in building research careers. This investment in talent will support researchers to publish their PhD research, exploit impact and commercialisation from their research, further build their research and knowledge exchange skills, and prepare strong applications for prestigious external fellowships, thus strengthening the future pipeline of talented people and teams.



Photo: The Glasgow School of Art



Developing collaborative leadership culture, capacity and capability The Glasgow School of Art

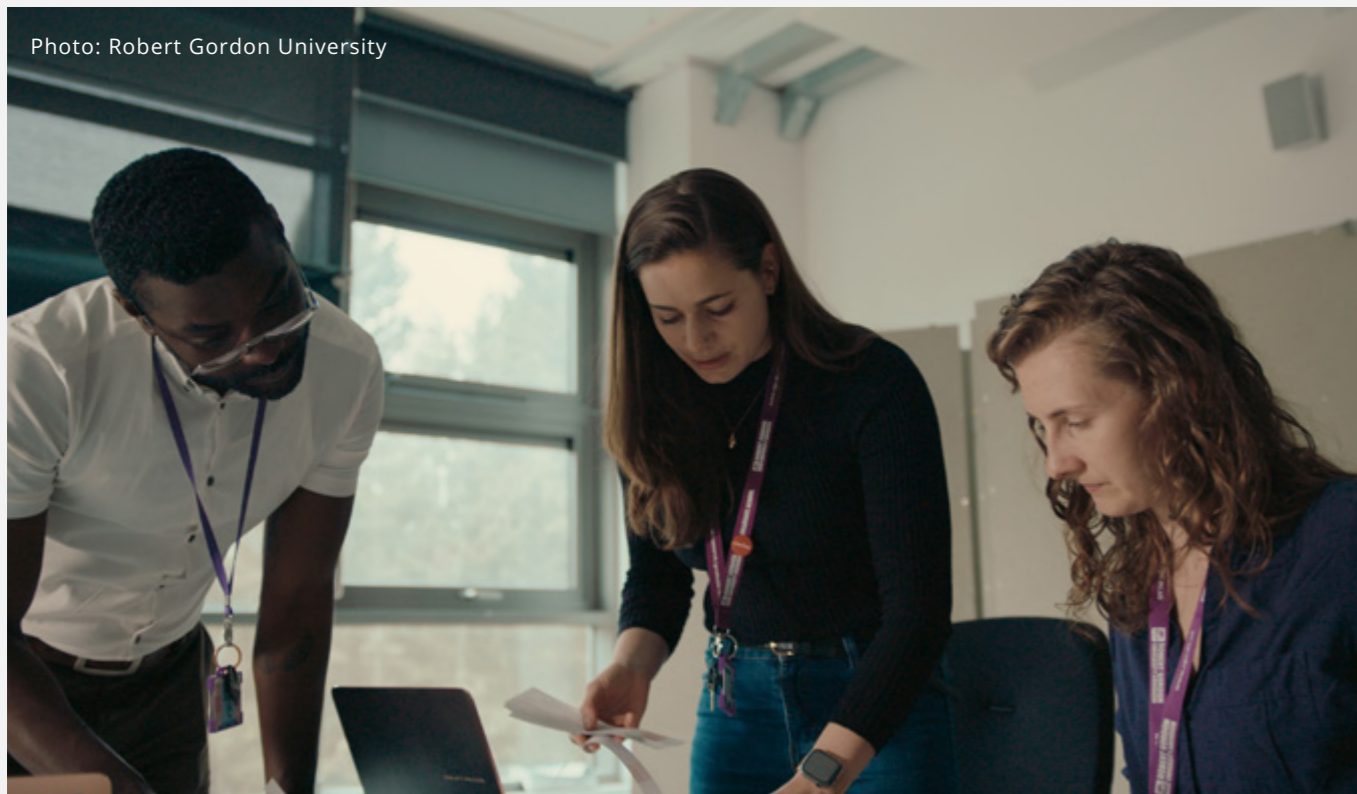
The Glasgow School of Art (GSA) is one of Europe's leading higher education institutions for education and research in the visual creative disciplines.

In 2021-22, GSA allocated more than £175,000 of REG to the formation of a Research Leadership Group to enhance the research culture in each of academic Schools and support a more integrated approach – between Schools and the central Research Department – to the development and implementation of strategic plans for research, KE, and innovation.

Recognising the importance of such an approach, a strategic decision was taken to establish a permanent structure through which knowledge could be deployed and further developed for the ongoing improvement of research at GSA. As well as taking on responsibility, with Heads of Schools, for ensuring that the needs of each of GSA's core disciplines are appropriately reflected in research policies and objectives, the Research Leads chair their school research committee, oversee the communication and implementation of good practice within their fields, play a key role in the mentoring and development of research staff, conduct and coordinate internal peer review, promote integrity and provide ethical oversight.

This approach is contributing to GSA's research excellence.

Photo: Robert Gordon University



Cultivating positive and productive research cultures through researcher development

Robert Gordon University

Robert Gordon University (RGU) has an ambitious strategic plan to strengthen its research excellence by investing in a vibrant, collaborative and inclusive research environment that can deliver high quality outputs, impact and public value.

The Research Excellence Grant plays a vital role in supporting the underlying principles for excellent research at RGU. For example, the University is investing £24,000 of its REG allocation in a Researcher Development Programme. The programme is a vital component of RGU's ongoing plan to cultivate a positive, healthy, and productive research culture.

The Researcher Development Programme was instigated in recognition of the importance of providing support for the continuing professional development of post-graduate and early career researchers. The Programme's offerings are aligned with the domains of the Researcher Development Framework, providing researchers with opportunities to build their research knowledge, personal effectiveness, their understanding of research governance and organisation, and their ability to achieve engagement and impact through their work.

In 2022-23 the Programme's activities reached more than four hundred participants and provided benefits from professional development to employability skills, support for wellbeing, opportunities to build professional networks, and fostering an increased culture of inclusion, collaboration, and interdisciplinarity.



Photo: University of the Highlands and Islands



Investing in fundamental capacity for research

University of the Highlands and Islands

The University of the Highlands and Islands (UHI) is one of the UK's foremost tertiary education institutions, serving the Highlands and Islands; Moray; and Perth and Kinross in post-school provision in both further and higher education. Its teaching and research are deeply connected to community needs.

UHI's growing base and range of research activity and research degree areas is underpinned by a university-wide research office and graduate school, whose leadership, administration, training and development, support structures and quality assurance processes are funded in large part by the Research Excellence Grant. In AY 2022-23, UHI invested 17%, or £475,000, of its REG funding in this way.

The research office and graduate school provide support for postgraduate research student engagement. This support extends from application to final degree award and includes training, development and support for UHI's growing number of researchers. It encompasses both early career and established researchers in both applied and blue skies exploration. Graduate school funding is also used to support several institutional PhD studentships, programmes of researcher training and development (for researchers, research students and supervisors), and a range of practical support. This includes initiatives for targeted research sabbatical leave; staff and student travel to key meetings and conferences across the globe; a comprehensive mentoring scheme; and support for public engagement, knowledge exchange and external research grant capture where the University is increasing successful.

None of this underpinning capacity would be possible without funding through the Research Excellence Grant which supports investment in the fundamental capacity and infrastructure required to create an environment where excellent research can flourish.



Photo: University of the West of Scotland

 Leadership and development of early career researchers
University of the West of Scotland

The University of the West of Scotland's Crucible programme is the University's esteemed early career researcher leadership and development programme which encourages, supports, and celebrates innovation and collaboration.

Crucible places are offered to 30 participants, competitively drawn from all research areas across the University and involve three two-day workshops. The programme focuses on promoting positive research cultures, research careers and amplifying research collaborations; nurturing and retaining talent from a diverse pool; and seeding cross-disciplinary activities and supporting research into novel ideas designed to achieve significant impact.


By the end of the programme, the purposefully formed cross-disciplinary teams pitch their novel research ideas to a panel of senior leaders. Selected projects are awarded seed funding to allow the teams to conduct pilot studies or experiments over a period of 12 to 14 months, ahead of applications for external funding.

Crucible is part of UWS' broad investment plan to retain talent and help researchers reach their potential and contribute to economic growth and prosperity. It is funded by investment from the Research Excellence Grant and delivered tri-annually with costs in the region of £26,000, with a pot of £20,000 - £30,000 reserved for seed funded projects the following year.

In December 2022, an evaluation determined that participants in the Crucible had published 176 peer reviewed research outputs, gained research and innovation grant funding awards totalling £2.8m, supervised 23 doctoral students, and won numerous external awards.



Photo: Royal Conservatoire of Scotland

 Underpinning strategies to support research activity and training
Royal Conservatoire of Scotland

Excellent research is undertaken by staff across the Royal Conservatoire of Scotland, led and supported by the team of academics and support professionals in the Research and Knowledge Exchange directorate, known as the Exchange.

The Exchange leads by example in all areas of research, impact, knowledge exchange and innovation and drives institutional policy and strategy, promoting external collaborations and supporting staff research and researcher development. It also oversees doctoral degree provision (validated by the University of St Andrews) and all research office functions.

The Exchange is 100% supported by investment from the Research Excellence Grant and the University Innovation Fund and therefore funding from SFC underpins the Conservatoire's strategies for the support of research activity and training.

The most significant aspect of the Exchange's structured support for research is the Athenaeum Awards, an internal awards scheme for research and knowledge exchange directly funded from REG since 2010. Although the Awards are competitive, all applicants are offered mentoring as they make their application and, where applications are unsuccessful, colleagues are directed to a Research Clinic and provided with mentoring and other support. It is usually a condition of funding that successful applicants undertake some public engagement, and many awards contribute part funding to projects that are also supported by industry, charities or government. Several have led to further externally funded projects.

Driving entrepreneurship and university-industry collaboration



Photo: University of Strathclyde



Boosting the commercialisation of quantum technologies with a cluster approach

University of Strathclyde

Quantum technologies have the potential to revolutionise computing and create new industries. The University of Strathclyde's Quantum Technology (QT) cluster aims to provide enhanced capabilities across a range of sectors and applications to drive the translation and commercialisation of ground-breaking quantum research into industry. The cluster builds on Glasgow's leading spin-out SME businesses in QT and photonics, as well as the Fraunhofer Centre for Applied Photonics and Strathclyde's Institute for Photonics.

The cluster is enabled by investment from the University's REG allocation. This flexible undirected funding enables Strathclyde to take advantage of new ways of working that cut across disciplines and scale up successful models for academia and industry collaboration.

The vision for the QT cluster is to create a vibrant, internationally competitive centre of activity that will provide the translational ecosystem required to develop, test, validate and demonstrate disruptive quantum technologies, and respond to current and future market demand. It will consist of an expansion of the current academic activities, the provision of additional on-campus industrial co-location space and a further emphasis on advancing the technology readiness of research outputs towards commercial applications.

Highlights for the cluster so far include securing a number of UKRI Industrial Strategy Challenge Fund projects, including those with a focus on quantum computing supply chain components (with SME M Squared Lasers), Quantum Key Distribution (QKD) for 5G Networks, magnetometer based battery monitoring and an atomic clock project.



Photo: SRUC



Enterprise Academy for the Rural and Natural Economy

SRUC

SRUC has established Scotland's first Enterprise Academy for the Rural and Natural Economy to work with students, researchers, and entrepreneurs, as well as wider communities, to help accelerate the uptake and delivery of sustainable enterprise while developing enterprising mindsets and enhancing the business skills of the next generation.

The Academy is supported by funding of around £250,000 per year from SFC's Research Excellence Grant and University Innovation Fund. The flexible funding supports the Academy's building blocks; a Reader in Entrepreneurship and Enterprise, a project manager position and key consumables which support network development and the work of the SRUC Entrepreneurs in Residence.

The Academy has three main strategic areas of work. It aims to nurture a sustainable enterprise culture at the heart of SRUC; to develop enterprising mindsets, knowledge and skills and to facilitate new ideas and businesses; and to champion sustainability and innovation and promote active engagement in the natural economy.

Accomplishments of Academy so far include establishing a vibrant internal Knowledge Exchange for Enterprise Network (KEEN) which helps identify, champion, and boost cross-institution and externally linked enterprising activity and developing an enterprise training programme for all SRUC students and staff to develop entrepreneurial thinking and knowledge to drive sustainable innovation in the natural economy.



Photo: Robert Gordon University



Optimising supply chains to support the energy transition

Robert Gordon University

Supply chains have become highly complex as advanced engineering services increasingly operate across multiple sites and jurisdictions to support global markets. The Net Zero Operations Group (NZOG) at Robert Gordon University use optimisation algorithms and machine learning to support robust, resilient, lower-carbon industrial operations through the energy transition.

Key research in the NZOG was jointly funded by BT and The Data Lab, an SFC-funded Innovation Centre. The flexibility of RGU's Research Excellence Grant allocation meant that funding could be deployed to mitigate the impact of COVID-19 on the research and successfully complete the externally funded industry project.

Researchers in the Group worked with the Sustainable Resource Management and Operations team at BT to develop an ensemble classifier to match fields across multiple large databases and enable supply chain relationships to be identified at the data level, reducing data fragmentation and enabling better communications.

The project has produced software and algorithms for further academic study and for industrial application and produced two patent applications (EU and US) submitted by BT and the RGU team.

The Net Zero Operations Group is working with a large offshore contractor on a potential follow-up application project to optimise the offshore energy supply chain realising carbon reduction, improved resilience and cost efficiencies.



Photo: Abertay University



Driving innovation in Dundee's creative industries

Abertay University

The creative industries sector in Dundee forms a larger percentage of the local economy than any other UK city of comparable size and is dominated by an established computer games development sector. Dundee is in the top towns/cities with the largest Gross Value Added in the UK (£30.9 million), with 33 game companies and 306 full-time employees.

University-business collaboration plays a key role in driving innovation in Dundee's creative industries sector. For example, two of Abertay's Research-Led Innovation Nodes for Contemporary Society (R-LINCS) studentships have developed understanding of how users interact with computer games and digital media. The R-LINCS studentship programme is enabled by the University's REG allocation and means Abertay can support the development of research talent in key areas.

Abertay's research on computer games has been used by end users including games companies, museums and cultural organisations to increase their income and public engagement. Most significantly this expertise contributed to the creation of the £11.5 million Arts & Humanities Research Council (AHRC) and SFC-funded InGAME R&D centre, a partnership with the Universities of Dundee and St Andrews, which delivers innovative research and R&D support to games companies in the city of Dundee and beyond.

InGAME has provided mechanisms to de-risk creative experimentation and commercialisation, developed scale-up capacity, and drives diversification, growth, and innovation throughout the cluster and beyond. To date, InGAME has funded 177 Collaborative R&D projects, leveraged £11.1 million of co-investment and supported upskilling of 2,283 industry professionals. InGAME underpinned Abertay's funding bids to UKRI's £75.6 million investment in CoSTAR, Convergent Screen Technologies And performance in Realtime.

Forming partnerships and leveraging investment

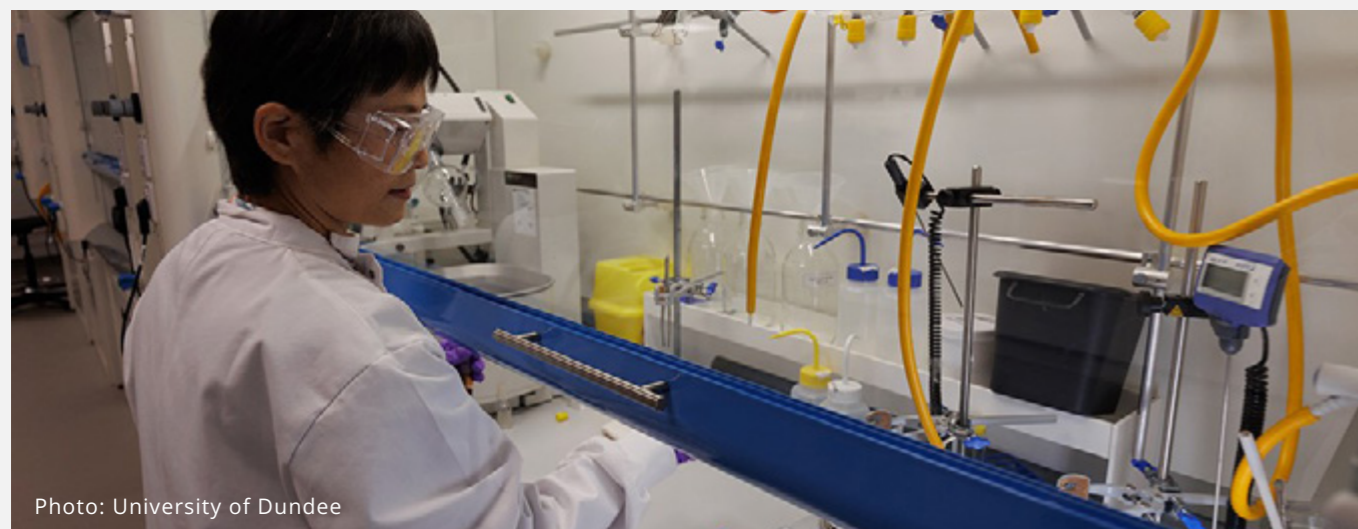


Photo: University of Dundee



Creating a major area of investment for global pharmaceutical companies

University of Dundee

The University of Dundee's Centre for Targeted Protein Degradation, which opened in January 2023, is one of the UK's leading centres for biological sciences research in a field that is revolutionising drug discovery. The Centre focuses on a new class of drugs that work with a cell's natural processes to target and degrade the proteins that cause disease. The approach can be used across diverse therapeutic areas, including oncology, dermatology, neuroscience and respiratory diseases.

Funding from the Research Excellence Grant (REG) has underpinned the development of the Centre by helping the university to meet the full costs of key externally funded research projects as well as leveraging and supplementing competitively awarded grants from the European Research Council, UK Research Councils and others. REG contributed over £500,000 towards the full economic costs of the research between 2013 and 2018.

The Centre builds on initial research which has attracted over £1.9 million in public funding since 2013 and has changed what used to be seen as a niche area of chemical biology into a major area of investment for global pharmaceutical companies.

The initial public funding stimulated collective investment of over £36 million from global pharmaceutical companies into collaborative research with the University of Dundee between 2016 and 2022, plus commercialisation income of more than £1 million in royalties and milestone payments. In 2017 Amphista Therapeutics was spun-out from the University with co-founding venture capital investor Advent Life Sciences, enabling the commercial exploitation of the research with £6 million in Series A financing raised from co-investors in 2020 and a further £40 million in Series B financing in 2021.



Photo: University of Glasgow



Leveraging additional research funding to expand resources and increase impact

University of Glasgow

The University of Glasgow works with a wide range of research funders and partners to deliver its research programme. REG funding has been crucial in leveraging additional research funding and supporting many of the University's research centres to expand their resources and increase impact.

The Medical Research Council-University of Glasgow Centre for Virus Research (CVR) has been supported through a partnership between the Medical Research Council and the University of Glasgow since 2010. The Centre's mission is to carry out fundamental research on viruses and viral diseases, translating the knowledge gained for the improvement of global health and benefit of society. The Centre supports the global response to viruses and the diseases they cause, as evidenced by its research response to the COVID-19 pandemic. The CVR has just successfully completed its quinquennial renewal process, securing £30m of core funding from MRC to support virology research over the next five years. The flexibility and continuity brought by the University's REG funding has been crucial in securing this award and demonstrating the University's ongoing strategic commitment to this research area.

Supported by a £38 million UK Government investment, the Living Laboratory for Precision Medicine brings together a range of partners to address the biggest challenge currently facing precision medicine: the adoption of healthcare innovations into clinical practice for the benefit of patients. Securing the funding for the lab was underpinned by strategic use of REG over a number of years. Sustained investment allowed the University of Glasgow to invest in internationally competitive research expertise and position Glasgow as the ideal home for this investment which will deliver savings for the NHS, improve health outcomes and drive economic development in Govan, Glasgow, across Scotland and beyond.

Photo: Heriot-Watt University



Underpinning support for large strategic bids

Heriot-Watt University

The process of developing and submitting large, ambitious, strategic bids for research funding requires additional resources compared to those needed for standard proposals. Plus, when these large bids are costed using the full economic costing model, a substantial contribution is required from the university to ensure the project costs are fully covered.

Long-term investment through Heriot-Watt's REG funding helps to underpin the University's large bids by contributing to the environment to support them, including research development, legal and business and enterprise teams.

Heriot-Watt has submitted a number of bids for large strategic funding in the past few years. One example led to the University's Industrial Decarbonisation Research & Innovation Centre which aims to support the development of innovative decarbonisation solutions at pace and scale in the places where it matters most. The University's research development team were integral in supporting the development and submission of this bid and continue to support the Centre in delivering project activities.

The unfunded element of the £24 million Engineering & Physical Sciences Research Council IDRIC bid was £5.4 million and REG funding has also been invaluable in supporting some of the University's contribution to this unfunded portion. Without this contribution, this large, ambitious and impactful project would have been unsustainable for the University to undertake.



Photo: The Glasgow School of Art



Leveraging investment into arts-focused research

The Glasgow School of Art

Between 2014 and 2019, The Glasgow School of Art (GSA) invested a proportion of REG in a number of dedicated Research Fellow posts to develop new areas of knowledge that would build research capacity in specific disciplines and enhance its impact. With these roles now fully integrated into academic schools, the investment is continuing to yield high quality research and leverage additional funding.

A recent example from 2021-22 involved collaborative research on the painter and GSA School of Fine Art graduate, Steven Campbell (1953-2007). The research examined the role of fashion in his work, aspirations, and cultural identity, and culminated in an innovative, interdisciplinary digital exhibition, which enhanced public understanding of the artist's career and forged stronger links between GSA, cultural and civic partners, and the creative industries.

With the support of GSA's REG-funded research office team, the researchers worked with an independent curator to secure funding from Creative Scotland to develop the project, and an Interface Innovation Voucher which enabled the use of gaming technology to create an immersive, 3D sound environment for the interactive exhibit.

Together with fellow project partners ISO Design and the Tramway (part of Glasgow Life), the project team demonstrated the novel possibilities of digital exhibition in a post-pandemic context.

Developing world-class infrastructure



Photo: University of Glasgow



Stimulating new research with strategic research infrastructure investments

University of Glasgow

Strategic research infrastructure projects underpin the University of Glasgow's research capacity and capability. The stability and flexibility of the University's REG funding has been key to the development of these projects.

REG funding is crucial for the upkeep and development of core equipment across the University's research laboratories. For example, REG funding is used to maintain key equipment within the University's chemistry laboratories. In 2022/23 this included £400,000 to update and maintain equipment in the Nuclear Magnetic Resonance facility, and £300,000 to support the Scanning Electron Microscope facility.

REG funding supports the Centre for Quantum Technology, a facility which brings together physicists, engineers, and computer scientists in an internationally recognised hub of excellence in quantum technology, from theoretical understanding through to the translation of ground-breaking quantum technologies to industry. Research at the Centre focuses on themes such as quantum computing, quantum communications, quantum sensors and timing, quantum enhanced imaging, algorithm development, and the manufacture of quantum components. REG funding has ensured Glasgow is well positioned to compete for a new Quantum Technology Hub grant (value up to £20 million).

The new £50 million Clarice Pears Building has recently opened and provides state of the art research and teaching space with a focus on health and wellbeing themes including the determinants of wealth and health inequalities, data science, and solutions focused research. REG funding has supported the Clarice Pears Building project from the outset and will continue to support the maintenance and upkeep of key equipment and interdisciplinary research space. The building provides an ideal setting to support partnerships with external practitioners from the NHS, government, industry and the voluntary sector.

Photo: University of Aberdeen



Driving net zero technologies with a National Decommissioning Centre

University of Aberdeen

The National Decommissioning Centre is an ambitious and innovative £38 million collaborative partnership between the University of Aberdeen, the Net Zero Technology Centre and industry developed as part of the Aberdeen City Region Deal.

The Centre is leading research and technology development to tackle current and future challenges in the decommissioning of assets within the oil and gas, renewables and nuclear sectors. With an estimated annual UK decommissioning spend for oil and gas of between £1.2-2.5 billion and for nuclear decommissioning of approx. £4 billion, the Centre aims to provide industry with cost effective, environmentally responsible and sustainable solutions to their challenges. It also provides the basis for the University's Masters programme for Decommissioning, the world's first and only degree in decommissioning oil rig platforms and offshore structures, through which students benefit from research capacity, through hands-on projects with our researchers as well as industry stakeholders.

REG funding has been pivotal to the establishment of the Centre, providing the stable and long-term funding needed to secure a strong basis of cutting-edge research and expertise through salary costs and funding research support infrastructure.

Since its inception, the Centre has leveraged £4.2 million from the Scottish Government's Decommissioning Challenge Fund, £992,000 from the Scottish Government's Energy Transition Fund and £1,726,374 from industry partners. Ongoing research projects encompass a value of £17 million and rely on academic expertise provided by REG-supported academics across the University of Aberdeen – with input provided from business, biological sciences, chemistry, law, computing and engineering. To date, 15 PhD studentships across these disciplinary areas have been secured, nine of which are part funded by the University's REG-funding.



Photo: University of Stirling



At the forefront of environmental science with Scotland's International Environment Centre

University of Stirling

The University of Stirling leads Scotland's International Environment Centre (SIEC), a pioneering collaboration that will create an innovation community in the Forth Valley, drive the creation of a net zero regional economy and act as a global exemplar of low-carbon growth.

Established as part of the Stirling and Clackmannanshire City Region Deal, the Centre is funded through an investment of £17 million from the Scottish Government and £5 million from the UK Government, with additional funding leveraged through private and match-funded investment. The Centre builds on the University's global reputation for environmental science and the Forth Valley's established status as a hub for environmental and conservation activity in Scotland.

The University's strength in environmental science research had been achieved with sustained support from the Research Excellence Grant, enabling the recruitment and retention of academic staff and the positioning of Stirling as a leader in environmental protection and biological conservation.

Through SIEC the University of Stirling's research using sensors, satellites and models is being translated into the Forth Environment Resilience Array to create a digital observatory of the Firth of Forth's catchment. This will enable the Forth catchment's diverse organisations, from heavy industry to national parks, to take data-led, evidence-based decisions and plan for a sustainable and just transition to a net zero future.



Photo: SRUC



Biorefining & Advanced Materials Research Centre

SRUC

SRUC's Biorefining & Advanced Materials Research Centre (BAMRC) is focused on the synthesis, bioprocessing, properties, and biomanufacturing of bio-based and functional materials. It aims to transform bio-renewable and sustainable materials for the future and support the large-scale industrial implementation of these materials.

Funding from SRUC's REG allocation plays a critical role in the Centre by supporting the salaries of staff who undertake the Centre's research.

BAMRC brings together researchers and industry to provide a forum where all can gain an understanding of the entire biorefining and sustainable materials chain, identify current and futuristic issues, explore, and develop innovative, integrated solutions. It will enable the circular bioeconomy, energy savings and emissions reductions that are inherent in most of the synthesis and manufacturing routes.

The Centre works closely with governments across the UK, national and international research partners, and industrial partners, on the development of sustainable, innovative and environmental solutions for the global circular bioeconomy challenges.

Catalysing and experimenting with multidisciplinary and interdisciplinary ideas



Photo: University of Stirling



Capitalising on social science collaborations University of Stirling

Researchers in the Faculty of Social Sciences at the University of Stirling put improving quality of life for marginalised and excluded groups at the heart of their research.

The success of the Faculty's research is based on a wide network of collaborations and partnerships with key organisations across government, the police, university centres and voluntary sector organisations. Across the Faculty, REG funding provides the flexibility and stability to develop interdisciplinary teams with backgrounds in social policy, social work, criminology, sociology, urban studies, dementia studies and social gerontology.

For example, Stirling researchers are involved in the Centre for Population Change (CPC) with the universities of Southampton and St Andrews. The CPC investigates how and why our population is changing and what this means for people, communities and governments. It is funded primarily by the Economic and Social Research Council and the research agenda is planned in collaboration with the Office for National Statistics and the National Records of Scotland.

University of Stirling researchers are involved in the CPC Longer Lives research theme which investigates how living longer impacts our lives, how our younger years affect our experience of ageing, how being 'older' has changed and what the experiences of older people are globally. In particular, researchers are finding out how unpaid carers use their time and if they need any extra help or support. The outcomes from this research will be used to advise policy makers and contribute to policy debate on a wide range of areas from the implications of a change in pension age through to provision of social care in the community.



Supporting new and novel interdisciplinary research approaches University of St Andrews

The University of St Andrews provides interdisciplinary research support to drive high-quality, collaborative and novel research that is closely aligned to the University's Strategic objectives.

The University launched a catalyst funding scheme, St Andrews Interdisciplinary Research Support (STAIRS), in May 2021 which has pump-primed 10 interdisciplinary research projects totalling £535,000 so far through a competitive process. The flexibility of the Research Excellence Grant allows the University to invest £270,000 per year in the successful scheme.

STAIRS has enabled research that addresses a wide range of interdisciplinary topics including new data science methods from the Schools of Computer Science and School of Mathematics & Statistics to be used in the School of Medicine's key research area of multimorbidity. Expertise from the School of Geography & Sustainable Development has enabled new insights regarding sociodemographic inequalities in disease trajectories, and a project looking at political, economic, and societal barriers to the adoption of carbon-reducing technologies that is harnessing the strengths of chemistry, political science, and management.



Delivering cross-disciplinary evidence for policy-makers and practitioners in culture, sport, tourism, and events University of the West of Scotland

The University of the West of Scotland's Centre for Culture, Sport and Events (CCSE) undertakes collaborative research across the social sciences, arts and humanities and focuses on translating research into useful evidence for policymakers and practitioners in the spheres of culture, sport, tourism, and events.

The Centre's research has delivered demonstrable local, national and international impact. For example, its researchers work in partnership with Renfrewshire Council and its Future Paisley cultural regeneration initiative to provide research and evaluation support.

UWS' Research Excellence Grant allocation of £61,200 provided underpinning investment which brokered a funding partnership with Renfrewshire Council to create the Centre in 2018.

CCSE has successfully secured grants from UKRI Research Councils, the British Council, the Royal Society of Edinburgh and Social Sciences and Humanities Research Council (Canada) totalling £1.7 million. It has made a significant contribution to bringing communities together, enhancing social cohesion. It helps local authorities to help study the influence of festivals through projects including the Great Place Scheme in Renfrewshire and Festspace in Europe, contributing to the UN's SDGs: 8 "Decent Work and Economic Growth" and 9 "Industry, Innovation and Infrastructure". CCSE also undertakes research commissions for the British Council, including a Review of the Contribution of Arts and Culture to Global Security and Stability and Cultural Heritage for Inclusive Growth in Kenya.

Supporting agility and responsiveness

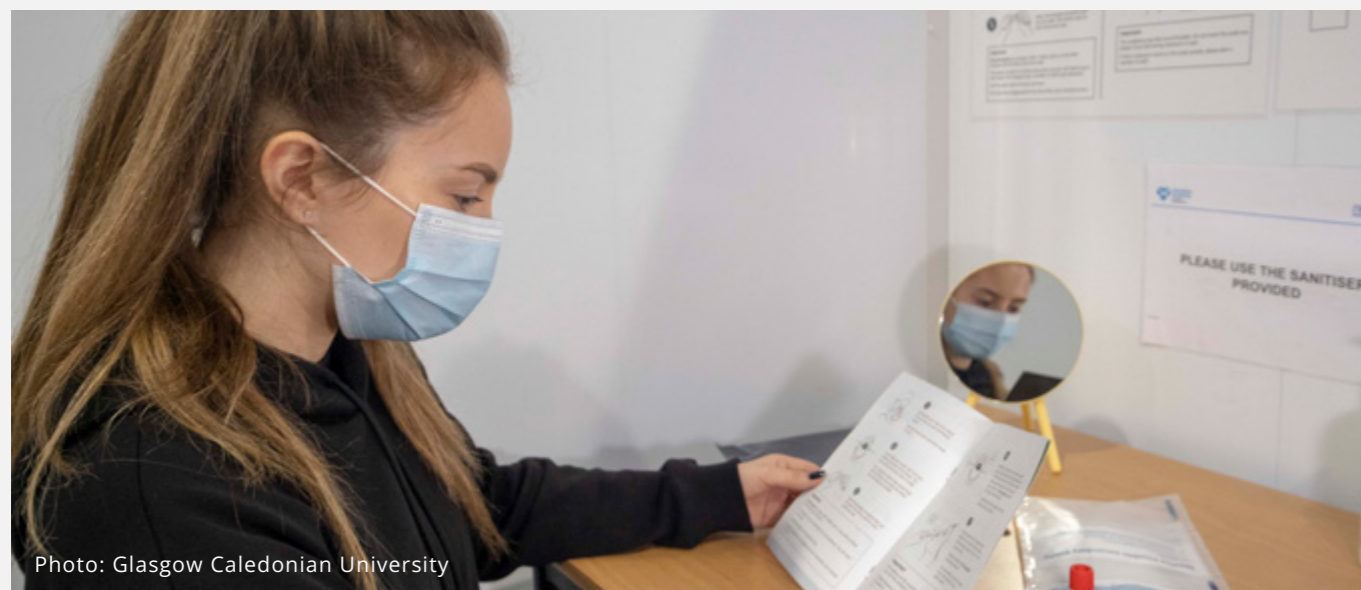


Photo: Glasgow Caledonian University



Pivoting to support recovery from COVID-19

Glasgow Caledonian University

Glasgow Caledonian University's Research Centre for Health brings together expertise from the allied health sciences, social sciences, nursing, epidemiology, population health and life sciences.

Researchers at the Centre rapidly responded to the impact of COVID-19 at both a local and an international level. The Centre is supported by REG funding and the pivot to COVID-19 research was made possible by this long-term, stable and flexible funding. REG meant that the Centre's research programme could be agile and quickly support its researchers to shift their efforts and expertise towards the questions that emerged as the crisis unfolded.

For example, the PRECIOUS project (PREdictors of COVID-19 OUTcomes), attracted funding of £500,000 from the National Institute for Health Research (subsidised by REG). Researchers created an international, multidisciplinary COVID-19 database, synthesising long-term outcomes, predictors and costs. Whilst early work focused on stopping COVID-19 spreading and saving lives, the researchers have now shifted again to build evidence on the nature of the long-term problems, the people that suffer these problems, and how to predict who will need support, in order to provide more effective care.

Another group within the Centre was awarded a total £900,000 from Public Health Scotland, subsidised by REG funding, to lead the Scottish arm of a study specifically looking at the impact of the detectable anti-SARS-COV2 antibody on the subsequent incidence of COVID-19 in healthcare workers. The study has provided valuable evidence on immunity following SARS-CoV-2 infection and COVID-19 vaccination as well as surveillance data on infection and emerging variants. This has played a critical role in informing governments' responses to the pandemic.



Photo: Edinburgh Napier University



Innovative cyber security protection in an increasingly virtual world

Edinburgh Napier University

Research at Edinburgh Napier University has led to innovative new solutions that are revolutionising the fight against cyber-criminal activity. These innovative techniques have been adopted by numerous private and public sector bodies and have resulted in the creation of four successful spin out companies.

The Research Excellence Grant has underpinned Edinburgh Napier's capacity and capability in cyber security research. It has enabled direct investment in new staff in the School of Computing, Engineering & the Built Environment and ensured that they have protected and uninterrupted time for research. REG also supports the physical infrastructure of the School through investment in bespoke equipment, including the creation of a pioneering new research lab.

REG funding is also pivotal in supporting some of Napier's central professional support infrastructures and memberships, which are integral in attracting external income for research and knowledge exchange.

Napier cyber-security researchers have developed a range of outputs including patented techniques for rapidly detecting online illegal content (such as indecent images of children), new 'Digital DNA' methodologies to map computer activity and identify cyber-crime and a range of new research collaborations with Police Scotland, the NHS and various private sector companies.

This work has led to the creation of four high value spin out companies delivering jobs in Scotland: Symphonic Software (providing large-scale data integration solutions for UK and US healthcare providers); Zonefox / Fortinet (developing cyber threat detection software); Cyan Forensics (developing products to detect illegal online content); and Memcrypt (providing ransomware attack detection solutions).



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