



**Heriot-Watt University**  
**SFC Outcome Agreement 2021/22**

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## Statement by the Principal and Vice-Chancellor

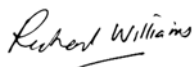
I am pleased to confirm Heriot-Watt University's commitment to this Interim Outcome Agreement, covering academic year 2021/22, between the University and the Scottish Funding Council (SFC) on behalf of the Scottish Government. Despite the on-going impact of the COVID-19 pandemic, we have continued to focus on setting and achieving ambitious targets in relation to widening participation in higher education coupled with practical plans to deliver significant outcomes.

Through the last two academic years we have been impacted by the pandemic, but I believe that Heriot-Watt continues to be well placed to deliver our *Strategy 2025, Shaping Tomorrow Together*, launched in January 2019. This reaffirms our Vision and Mission, to be world-leading in all our areas of specialism and to create knowledge that benefits society, and sets out our values-led approach and ambitions for the years ahead around four themes that align well with the priorities of SFC and the Scottish Government:

- **Building Flourishing Communities** – our ambitions for growth of the vibrant, diverse and inclusive community of Heriot-Watt staff, students and alumni, with emphasis on the engagement of the University with the wider community in all our localities, and our commitment to maximise contributions to sustainable and inclusive economic and social development and positive environmental impact;
- **Pioneering in Education** – our commitment to continuing innovation, excellence and relevance in learning, teaching and the student experience, with emphasis on increased flexibility, international mobility, work-related and professional skills, all in the context of increasing digital delivery. Growth in diverse entry routes including continued expansion of graduate apprentice pathways remains a priority.
- **Excelling in Research and Enterprise** – our ambitions for major expansion in research capacity and reputation by leveraging our strengths in fundamental research with interdisciplinary approaches, strategic partnerships and focus on key business and industry sectors; coupled with fostering and enabling the culture and eco-system of dynamic enterprise among staff, students and partners;
- **A Global, Connected University** – our intent to enhance the effectiveness and efficiency of our organisation through increased collaboration and connectedness, internally and externally. Providing further international opportunities for students is a key distinctive element of the University and this is especially relevant as we partner with the Scottish Government in the 'Expo2020' hosted by Dubai which started in October 2021.

Our mission is influenced by our heritage as the world's first Mechanics Institute, established in 1821 to provide the knowledge and skills necessary for emerging industries in a growing economy. We remain true to this heritage but have transitioned into a multinational organisation (62% of our turnover is transacted in the UK, 23% in the United Arab Emirates and 15% in Malaysia), well placed to drive economic growth and address social challenges through educating the future workforce, advancing research, building global collaborative partnerships and commercialising technology. Our international positioning imbues a diverse culture in our teaching, research and impact across the University.

This Interim Outcome Agreement is focused on the University's activities in Scotland in 2021/22. It illuminates the distinctive contributions Heriot-Watt continues to make to the economy and society, and the real benefits we offer to students, businesses and the many other partners we work with, in Scotland and beyond. Despite the considerable impacts of the pandemic, we continue to navigate through a challenging environment and take forward our strategy for the period to 2025, and I am confident we will further enhance our engagement and impact.



Professor Richard A Williams, OBE, FREng, FTSE, FRSE  
Principal and Vice-Chancellor

## Consultation

There has been broad consultation on this interim Outcome Agreement across Heriot-Watt University. The Deputy Principals for Education & Student Life, Research & Innovation, and Enterprise & Business, together with leaders of Professional Services, are closely involved in relevant sections. In addition, there has been substantive discussion and formal approval of the draft Agreement by both the University Executive and the Court.

# Outcomes for Students

## Fair access and transitions

Heriot-Watt continues to be responsive to inclusion and wider access, and the proportion of entrants from SIMD20, the most disadvantaged areas of Scotland<sup>1</sup>, has increased by more than 70% since 2011/12.

Widening participation student numbers continue to increase annually. Many adaptations were put in place to prioritise widening participation during the pandemic and a programme of enhanced engagement was developed in collaboration with Student Wellbeing Services, eg enhanced one-to-one contact with care experienced and estranged students; group coffee mornings/afternoons for young and adult carers, to encourage engagement and support from peers as well as staff. Pre-entry transitional workshops for widening participation students were moved online, and were redeveloped to fit into the University-wide programme of enhanced online registration, induction and engagement.

The University continues to support all partnership programmes in their efforts to provide additional support, including LEAPS, SWAP, the Hub for Success and the East of Scotland Pathways App, resulting in almost double the number of SWAP students this year.

Uncertainty continues within schools and colleges around both physical access and qualification discussions and it is challenging to plan engagement. Planning has been complicated by the need to accommodate social distancing restrictions, number limits, geographical variations and guidance issued by the Scottish government. Engagement is therefore a mix of online and face-to-face, and will continue to be so for 2021/22.

Moving forward we are planning a series of events on campus aimed at college students to re-engage with both HN and associate students. These will be subject specific in nature and account for the needs of students considering advanced entry. Back-up plans will remain to switch to online provision should pandemic-related restrictions change.

This year we will undertake a review of our schools' provision, including Brightest Watts Summer Programme, to assess the successes of recent amendments and the current needs of schools as they transition into wider access opportunities for their students. Where possible we will endeavour to continue to provide both face-to-face and online engagement to improve geographic access and reach.

Working with partners in the East of Scotland Regional Forum (ESRF) we have reviewed our existing articulation provision and improved both the availability of routes and, through online developments including amending our own website provision and the continued development of the Pathways App, resulting in improved information, advice and guidance (IAG) in this area.

We continue to support all partnership programmes in their efforts to provide additional support including LEAPS, SWAP, SCiP Alliance Scotland and the Hub for Success. In particular, the collaborative work developed through the ESRF and Pathways app has resulted in engagement at national level from Skills Development Scotland. This has improved the availability of tailored IAG on routes into higher education for learners from all backgrounds. The University believes this should be supported at national level by all interested parties to improve IAG and availability of information for all FE and HE institutions, not just those within the partnership.

We acknowledge that the transition from school to university continues to be particularly difficult for students given the disruption in their learning and the amendments to exams and course content. In order to support their academic development and bridge any skills gaps which may be caused by the disruption, we are developing a suite of revision modules in STEM subjects. Using the

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<sup>1</sup> In common with the wider Scottish education sector, the University uses the general measure of undergraduate entrants from relatively deprived neighbourhoods as identified by the Scottish Index of Multiple Deprivation (SIMD): SIMD20 and SIMD40 are used in the context of widening participation, with SIMD20 representing the most disadvantaged quintile.

expertise of our SCHOLAR colleagues and the director of the HWU Maths Gym all students in their first year will have access to revision modules in Maths. Work is underway to provide additional support material in Chemistry and Physics.

Our Education Liaison and Outreach Co-ordinator is working with local schools to encourage engagement with STEM subjects at an early age. A pilot project has begun in West Lothian involving Inveralmond High School and its feeder primaries to engage young students in Computing through the provision of classes and materials in coding. Interest in this has already grown and we are investigating ways to grow our provision to other schools and regions within Scotland.

We remain concerned about the large numbers of students who have been disadvantaged by the effects of the pandemic and who are either unreachable / unidentifiable due to current measures or who have disengaged with local and national WP partnerships. We continue to assert that existing government measures of disadvantage, such as SIMD, are not robust enough to quickly identify those learners who become widening access learners due to the pandemic. For example, it is a particularly precarious situation for those who will have seen a drastic reduction in family income and similarly those who may suddenly become carers. We continue to investigate ways to identify and support these groups and would encourage national bodies to do the same.

### High quality learning, teaching and support

An overview of the effectiveness of the University's framework for managing quality, academic standards and academic risk was provided to the Audit & Risk Committee of the University Court at its meeting in April 2021. This was in response to a request from the Committee and following a review of practices at other Scottish HEIs. The Committee concluded that the University's processes for managing quality, academic standards and academic risk in relation to learning and teaching, the student learning experience and responding to student views were 'Effective'. Furthermore, it was confirmed that there was no requirement for an additional annual effectiveness review of the institution's quality processes, as the Committee was appropriately satisfied with the robustness of existing processes. This internal judgement corroborates the commendation made in the University's recent Enhancement-Led Institutional Review (ELIR), as conducted by the Quality Assurance Agency Scotland on behalf of the Quality Assurance Agency UK in January-November 2020.

The formal Annual Monitoring and Review process highlighted Responsive Blended Learning (RBL) as an overwhelmingly positive development in response to the pandemic. Significant efforts were expedited by staff, with teams working globally for planning, developing and delivering/assessing courses. Positive comments from External Examiners and successful virtual meetings with relevant Professional, Statutory and Regulatory Bodies have provided external validity of academic standards. Some performance issues were highlighted and for some students RBL was a challenge (particularly earlier year students). Online supervision, progress reviews and vivas were well-received by PGR students, as were online conferences which increased participation, however wellbeing and mental health problems have increased.

Fifteen points of positive feedback, good and commendable practices were noted across the three institution-led periodic reviews. The most common points fell into two categories: delivery of programmes and student support. Similarly, twenty-nine recommendations were made and the most common fell into three categories: enhancing the curriculum; assessment practices; student support, particularly personal tutoring.

Student retention continues to be a key priority for the University and it has continued to focus on the implementation of its institution-wide 2016 Retention Strategy and Operational Plan, which is overseen by the University Committee for Learning and Teaching (UCLT). Consideration will be given as to how to continue to adopt a strategic approach to retention without a specific strategy in place; the continued focus on student support was emphasised, as was a more specific focus on the role of core teaching and assessment in relation to retention.

The University's actions related to retention are increasingly being aligned with its Widening

Access Strategy and its wider approach for supporting students. As a means of further addressing retention, the UCLT has highlighted as a priority area for action the need for learning analytics to support, in a more systematic way, identification and early intervention of students at risk.

*Retention: Supporting Student Success* was highlighted by the University as one of its contextualised themes for its fourth Enhancement-Led Institutional Review. The ELIR team made a recommendation regarding improved access to, and use of, data in relation to identifying and supporting students at risk. However, the Team also commended the University's integrated approach to student support, particularly the Student Success Advisors, which were a cross-institutional, strategic response to retention.

Initially conceived as the institution's approach to managing learning, teaching and assessment during the pandemic, RBL has accelerated the implementation of the Learning & Teaching Strategy (LTS) due to the major redesign and adaptation required for 2020/21. In addition to the LTS, the University has progressed a number of other significant, digital learning and teaching projects within the overall framework:

- Implementation of a new virtual learning environment resulting in a single, global platform (Canvas);
- introduction of a new Global Curriculum Management System, facilitating an integrated approach to curriculum design, programme/course management and business/academic approval processes;
- Introduction of an e-portfolio system, initially as a pilot for Graduate Apprenticeships and the Malaysia Campus' Empower skills-based programme;
- PGT Online Improvement Project, providing a more integrated, consistent approach to online provision.

In this way, systems developments have proceeded in parallel with, and be shaped by, the strategic direction in learning and teaching.

## Partnership, participation and student experience

In conjunction with its three Student Representative Bodies (SRB), the University has been externally recognised in the most recent ELIR Review for our improvement in student engagement and partnership. Sector-leading developments include: position of School Officers; Learning and Teaching Oscars; representation across multi-campus locations. In 2021/22 this engagement and partnership continues to be exemplified by the single Student Partnership Agreement (SPA) between the University and the three SRBs in the Scottish, Dubai and Malaysia Campuses.

Students are key members of all institutional committees and groups for UG, PGT and PGR student experience and for learning and teaching and quality. Students are also full members of all periodic Academic Review teams. The University student representatives are also actively involved in learning and teaching at a sectoral level, for example as one of the student members of the sector-wide Scottish Higher Education Enhancement Committee and the Enhancement Themes Steering Group, and as the Student Reviewer on the ELIR team of another Scottish HEI.

The single, global SPA provides the focal point for collaboration between the three SRBs and the University. Building on the 2020/21 SPA, the 2021/22 version now includes the following initiatives:

- Continue the "Big Feedback Conversation" (an initiative undertaken in collaboration with the Learning and Teaching Academy), with emphasis on RB; and its effects on the feedback culture within the institution;
- Develop a Global Postgraduate Taught Representative Structure;
- Enhance the monitoring of ethnicity attainment across global HWU
- Embed sustainability into the curriculum;
- Introduce a series of Enhancement Lectures, comprising extra-curricular lectures or webinars on topical or societal issues, drawing on institutional research and knowledge, or with a focus on professional development and becoming a rounded graduate, eg Black Lives Matter movement, fast fashion, enterprise, blue circular economy, financial wellbeing;

- Introduce a Global Virtual Conference open to all HW staff and students as part of Wellbeing Week/Global Mental Health Awareness Day;
- Better use of academic representative structures to close the feedback loop at local and institutional levels;
- Enhance globally connected clubs and societies, and global celebration of student volunteering;
- Celebrate diverse communities;
- Create safe spaces and safe places;
- Enhance Personal Tutor System.

Student surveys continue to be an important mechanism in gaining the views of the wider community on their educational and general experiences. In response to student survey feedback, UCLT agreed that the key areas of action for 2021/22 will be Assessment and Feedback, Student Voice, and Learning Community.

To support this, a variety of key internal student experience surveys will be run alongside external surveys such as NSS, PTES and PRES. Additionally, the established Survey Action Planning Process will be resumed in 2021/22, with full tracking at local levels of actions being taken in response to NSS 2021 and other key themes emerging from internal surveys.

A new Chair of the Research Degrees Committee was appointed in September 2021, with responsibility for the PGR student experience, and a proposal has been made to re-establish the post of PGR Quality Enhancement Officer, providing a dedicated resource for enhancing the PGR student experience.

## Learning with impact

With the establishment of the UCLT in 2017/18, “attainment” became a key element of the Committee’s terms of reference, and, as a consequence, “good degree classification” was re-introduced into the overall Learning and Teaching KPIs. The November 2019 analysis highlighted that the overall summary related to “Good Degree Classification” was positive and demonstrated that grade inflation (a current topic in the UK media) was not an issue at HWU, as confirmed by External Examiner Reports.

The University continues to engage in Scottish and UK sector-wide consideration of grade inflation. Such engagement is facilitated primarily by the Deputy Principal (Education and Student Life), who, until recently, was the Scottish sector representative on the UK Standing Committee for Quality Assessment (UKSCQA) and Chair of the Scottish sector’s Quality Arrangements for Scottish Higher Education (QASHE) Group.

The University has introduced and retained its Academic Safety Net and supporting procedures as a means of ensuring that 2021 and 2022 graduating students are neither overly advantaged or disadvantaged due to the situation, and has taken steps to support all of its Boards in managing potential grade inflation (briefing sessions, guidance and 5-year data sets).

The Learning and Teaching Strategy 2018-2025 confirms the institutional commitment to “employability”, with the aim that by 2025, the University’s curriculum will be *Globally and Locally Applicable; Research-Informed; Professionally and Practically Relevant*. The University’s Graduate Attributes (*Professional, Specialist, Creative, Global*) are core to delivering this strategy. In addition, the University’s seven-year strategic plan, *Strategy 2025*, highlights the institution’s commitment to develop resilient, emotionally intelligent and future-ready graduates who are highly sought after by employers. The University’s key Strategic Performance Indicator within Strategy 2025 is to be in the top decile for Graduate Outcomes.

The Careers and Graduate Futures division is transforming the provision of a professional, high quality careers guidance and information service and is collaborating with academic staff on curriculum design. Service Level Agreements (SLA) have been established with each School to support the development of careers and employability throughout the student journey at Heriot-



Watt, with the aim of engaging our students to develop the skills for self-efficacy and can compete to secure a graduate job and contribute to society.

For 2021/22, Careers and Graduate Futures will build on the work undertaken with the School SLAs to develop a more equitable offer to students which spans their entire period of study. A nine-month project has been developed to support early career graduates (up to two years after graduation) by providing these early graduates with access to 1:1 support and tailored workshops to help them navigate the current employment market which has been impacted by the pandemic. After the project completion date, the intention is to develop a sustainable model for supporting early graduates in the job market.

Careers and Graduate Futures, Development and Alumni and academic staff will continue to collaborate in providing programmes which develop personal and professional skills alongside knowledge and technical skills and which help students to understand how they acquire these skills, apply them and finally articulate these.

## Public health emergency

As the impact of COVID-19 continued throughout 2020/21 across all of the University's five campus locations, it remained critical to ensure that key quality processes continued, albeit in an adapted format, providing internal and external reassurance of steps taken to assure and indeed enhance quality, academic standards and the student learning experience.

The University's RBL framework combines active, supported online learning with contextually appropriate in person learning opportunities, responding dynamically to the changing external context. This approach enables students to proceed with their studies alongside their peers, whatever pandemic-related restrictions are lifted or imposed in specific contexts.

The principles of RBL are as follows:

- Prioritise the wellbeing of staff and students.
- Support students to thrive as part of global learning communities.
- Value our staff and their skills, knowledge and passion for their subject that underpins the University's learning experience.
- Build on our strengths as a global, multi-sited university.
- Blend online and face-to-face learning in a way that is pedagogically appropriate and practically deliverable.
- Ensure identical academic standards across learning contexts.
- Maintain a commitment to inspiring learning.

As Government guidance and restrictions change, the University will continue to keep its advice and guidance to students under review. The University has been responsive to changes in restrictions, increasing the in-person component where and when able, where it has been appropriate, and when it has been safe to do so.

Our agile learning and teaching response to COVID-19 was commended in the ELIR Review. Both the support given by the Learning and Teaching Academy to staff in implementing RBL and also the University's inclusive approach to managing its pandemic response, particularly in terms of student engagement, were positively viewed by the ELIR Team.

As the pandemic continued, the University had more time to consider and plan for its management of quality for 2021/22. Decisions were taken on the premise that while time needed to be freed to put in place measures to mitigate the impact of COVID-19 on learning, teaching and assessment and on the student learning (and wider) experience, it was imperative that procedures should, as a minimum, maintain quality and academic standards. The resulting adaptations are in line with wider sector practices and have been communicated to QAAS.

For academic year 2021/22, the University will progressively enhance the quantity and range of in person educational and student life activities available to our students. The wellbeing of our

students and staff is paramount in our planning. However, this year students studying in Scotland, across all our academic Schools and all years, have the opportunity for in person tutorials, seminars, laboratory and studio work.

The core objectives for 2021/22 are to:

- enable students to proceed with their studies alongside their peers, whatever pandemic-related restrictions are lifted or imposed in specific contexts
- progressively enhance the quantity and range of on-campus / in person educational and student life opportunities available to our student communities.

Delivery of these core objectives will be undertaken within context of relevant governmental and regulatory guidelines.

Further to the support for students outlined above, the University established a COVID-19 response group with senior management representatives from across our Schools and Professional Services Directorates to support staff during the pandemic. Co-chaired by the Senior Deputy Principal and the Director of Governance & Legal Services, this has representatives from Health and Safety, HR and the Trade Unions.

A range of supporting information and guidance was developed and maintained for staff along with information regarding the ongoing maintenance and review of our Health and Safety risk assessments. Senior managers meet fortnightly with Union representatives and this partnership approach has worked well, supporting the practical measures and wider communications approach to staff.

Many staff continue to spend time working from home, enabling the university to manage social distancing within our office spaces and the Responsive Blended Working arrangements have also supported staff safety, though the additional workload has been a challenge which we continue to actively manage.

## Equalities and inclusion

The University adheres to all Public Sector Equality Duty and British Sign Language (BSL) requirements, with information available on our dedicated webpages, [www.hw.ac.uk/equality](http://www.hw.ac.uk/equality), including information relating to UG student intake by protected characteristic.

In April 2021 the University published our 2021-25 Equality Outcomes (EOs) under the banner Advancing Equality, Diversity and Inclusion (EDI). Our 11 EOs are an outline of our top EDI priorities across the University community developed over 2020/21, and include EOs that impact directly on the student community, namely:

- EO 3:** Reduce UG gender imbalance in target subject areas
- EO 4:** Support ending gender-based violence and achieve White Ribbon Status
- EO 6:** Implement SFC Racism on Campus Project recommendations
- EO 7:** Identify and reduce any ethnicity award gap
- EO 9:** Increase recruitment of Deaf UG students
- EO 11:** Establish an annual Student/University EDI Summit
- EO 12:** Measure culture change

These EOs demonstrate our commitment to quantifiable impact and tangible change.

The University's Learning and Teaching Strategy 2018-2025: Inspiring Learning, sets out the strategic ambitions of Heriot-Watt University over a seven year period, and is aligned with the Pioneering Education strategic theme within the University's Strategy 2025.

Our Global Access and Inclusion Strategy incorporates widening participation and outlines our strategic ambitions for access and inclusion across the following areas:

- Fostering student aspirations
- Inclusive recruitment and admissions

- Supporting student success

The University provides advice and support for students on a wide range of issues including settling into university life, money, accommodation, disability and personal safety. In addition, the Student Support team also provide support and counselling services.

In support of this activity, Equality and Privacy Impact Assessments (EPIA) are required throughout the University with work underway to enable access to completed EPIAs.

# Outcomes for Research

## Research Excellence

### Global impact

Our Global Research Impact publication outlines how the Heriot-Watt community is providing practical solutions to critical challenges and making an impact on the world. The publication features 15 inspiring case studies in the areas of Environmental Sustainability, Innovation for Industry, Inclusive Society and Health. These case studies all rely on continued and long-standing support from the Research Excellence Grant. In addition, the publication profiles three of our world-leading academics and showcases the progress of our Global Research Institutes - the Lyell Centre for Earth and Marine Sciences and the National Robotarium. It sets out our commitment to generating future impact in the areas of Net Zero, Robotics and AI, Medical Technology, Smart Construction, Quantum Technology and Marine Sciences.

#### ***Partnership in Action Case Study: Industrial Decarbonisation (IDRIC)***

The Industrial Decarbonisation Innovation Centre was formally funded and launched in April 2021, this aims to become a world-leading, high-impact research and innovation centre acting as the national and international gateway for UK industrial decarbonisation. IDRIC has secured £19m of funding and has begun to establish a team responding to the needs of over 80+ industry partners. As part of this, IDRIC has participated in several key events related to COP26 in Glasgow. Heriot-Watt intends to establish a new global research institute that tackles net zero related missions in line with government and industry challenges.

#### ***Partnership in Action Case Study: Medical Device Manufacturing Centre (MDMC)***

The Medical Device Manufacturing Centre (MDMC), established with funding from the European Regional Development Fund, Heriot-Watt University and three other Scottish universities. Since September 2020, it has hosted regular activities focused on industry-driven topics related to medical device design, regulations, and sustainable manufacturing. To date it has interacted with 47 Scottish businesses providing direct assistance to seven SMEs with product development. Work is underway within the University to assess the feasibility of building on Heriot-Watt capabilities through the creation of a global research institute.

Consolidating our experience in preparing for REF 2021, we have established an Impact Campaign to support our research community in using the PURE system to publicise their research, and to prepare them for the introduction of the Resume for Researchers.

### A vibrant and connected research environment for excellence and impact

We lead and partner in major UKRI funded projects that will deliver future impact. The Robotics Hub for Offshore Robotics for Certification of Assets (ORCA) brings together our robotics expertise with over 30 industry partners; the Centre for Sustainable Road Freight is working to achieve deep reductions in CO2 emissions from the road freight sector. The Innovate UK-funded collaborations in Quantum Technology is enabling partnerships with over 30 industry partners to commercialise quantum technology research, and the ReFLEX (Responsive Flexibility) project in Orkney supported by £28.5M investment from Innovate UK will demonstrate a first-of-its-kind Virtual Energy System (VES) interlinking local electricity, transport, and heat networks into one controllable, overarching system.

We are committed to working with other peer universities in local, national and international partnerships. For example, the Edinburgh Research Partnership in Engineering and Mathematics (Heriot-Watt and University of Edinburgh) underpins our joint REF21 submissions in Mathematical Sciences (Maxwell Institute), Engineering (Edinburgh Research Partnership in Engineering) and Architecture Built Environment and Planning. Our funded research projects support collaborations with 2,491 partners (1,213 industry, 772 universities, 251 charities, 156 professional societies, 86

government establishments and 13 NHS trusts). We are a strong supporter of the Scottish Funding Council's research pooling initiative, with active membership of eight pools.

### Building partnerships and academic capability to support impact

Over the REF21 period we have grown our strategic partnerships with business which include, AWE, DAR, Schneider Electric, Cisco, ASML, Chromacity, Renishaw, Shell and Energi Simulation. These are built on long-term joint planning, shared facilities, staff exchanges, and joint projects spanning different technology readiness levels.

The National Robotarium has been established with the recruitment of its first CEO and internationally-leading industrial Advisory Board. The building is on track for completion in March 2022.

Consolidating our experience in preparing for REF 2021, we have established an Impact Campaign to support our research community in using the PURE system to publicise their research, and to prepare them for the introduction of the Resume for Researchers.

### Celebrating a vibrant research culture

Our third annual Festival of Research and Enterprise saw 534 places booked across 18 different sessions themed in 4 categories: HWU's Global Research; Enterprise and Innovation; Researcher Development; Culture and community

The Festival had a particular emphasis on the topic of enhancing research culture and included a hybrid postgraduate networking event to build connections amongst the early career researcher community.

### Research sustainability

#### Excellence and impact – strategic investment in critical mass

Research grant income has grown during the period from £49m to £63m; a significant proportion of this is collaborative with other universities and aligned to UK priorities such as Net Zero, Quantum Tech, Robotics and AI. We continued to implement the commitments set out in our Prospectus for Recovery and Growth. We have identified a strong pipeline of opportunities to develop Global Research Institutes in areas of strength such as Net Zero, Healthcare Engineering and Social Inclusion. Impact is being designed into these new structures, to ensure they are responsive to global challenges and attuned to the needs of our local communities and places.

Postgraduate research students add greatly to our research culture, and we have invested into James Watt Scholarships to recruit 40 talented research students per annum over the past 5 years. This investment sits alongside funding we have received from EPSRC DTP awards and our success in securing EPSRC and NERC Centre for Doctoral Training Centre awards.

#### Supporting through the challenges of COVID-19

Heriot-Watt University utilised the SFC COVID-19 Additional Funding in a broad and inclusive way, consistent with the aims of the funding. We directed the funding towards meeting the diverse needs of our research community based on feedback from Heads of Schools, our COVID-19 Response Group, and Equality and Diversity Working Group. Our learning from allocating UKRI Co-A funding enabled us to identify the types of issues being encountered by our research community. These included supply-chain issues restricting the availability of equipment and materials, travel restrictions hindering fieldwork and collaborative research; the impact of caring responsibilities on research productivity and well-being and the need to redesign experimental work around pandemic restrictions.

The SFC COVID-19 funding supported 58 PhD extensions, supporting our researchers of the future. In supporting PhD extensions, we implemented a best practice process and scoring criteria developed collaboratively with Scottish universities; we asked applicants to complete a monitoring form, and non-study related disruptions formed part of the application and scoring process. The requests were reviewed and moderated by a central panel, with representation to reflect an

appropriate disciplinary balance of awards. A complaints and appeals process was implemented.

### Supporting researcher development

HR Excellence in Research (HEEiR) accreditation was retained during Autumn 2020. The award recognised the positive actions we have taken to support the career development of researchers and our ongoing commitment to the principles of the Researcher Development Concordat. In committing to both the Concordat and HREiR initiatives, we are underlining our continued support for our researchers as well as the wider requirements of the Concordat in contributing to sector-wide initiatives to improve researcher opportunities and experiences.

We initiated a new pilot PI Development Programme focussed on Getting Grant Funding; the programme ran for the first-time during spring 2021 and enabled a cohort of researchers to gain practical skills in writing funding bids, with peer and professional support and feedback. A further programme has commenced in November 2021 and will incorporate workshop sessions on writing Horizon Europe funding bids.

As a direct result of reflecting upon the experience of our research community during the pandemic, a research recovery culture fund has been established (£125k per annum for two years from 2021/22) to support researchers to renew their focus on activities that have been impacted by COVID-19 such as networking and developing career skills.

In addition, forging new collaborative partnerships with industry, public sector organisations and other universities sits at the heart of the strategic initiatives linked to our Research and Enterprise strategic theme. In the current funding environment partnership with business is critical to their success.

***Partnership in Action Case Study: UK-first Wireless Electric Van Charging Collaboration***

The University has commenced a £1.6m project to pilot an electric commercial vehicle testbed without the need for cables and increasing the speed of charge. The goal of the project is to encourage more firms to use electric vehicles and cut emissions.

The project is in partnership with City of Edinburgh Council and Flexible Power Systems and involves specially adapted university and council vans with charging equipment from Momentum Dynamics.

In November 2021, it was announced that Waitrose is to become the first supermarket in the UK to trial a new generation of electric vehicle that uses the technology developed through this project. The move follows an ambition for Waitrose to end the use of fossil fuels across Waitrose's transport fleet by 2030 – estimated to save 70,000 tonnes of CO2 per annum.

# Outcomes for Economic and Social Renewal

## Responsive institutions

Our Recovery Prospectus was published in autumn 2020, and highlights the University's role in social and economic recovery. It places collaboration, partnership and accelerating commercialisation at the heart of our approach, drawing on our research strengths and supporting our students, researchers, businesses and communities to recover and prosper.

It sets out the following commitments:

- Build a global net zero network
- Develop and exploit the capacity of the National Robotarium
- Build a new medical technologies cluster
- Create a research focus on a fairer inclusive society
- Focus on the skills and expertise required for the future
- Align our teaching portfolio to support economic growth
- Support upskilling through flexible lifelong learning

## Confident and highly capable work ready graduates

In response to the COVID-19 pandemic, all Careers and Graduate Futures services moved online, including 1:1 appointments with Careers Consultants, careers and skills development workshops and employer events such as our four careers fairs.

A new careers system, GRADfutures, has been implemented across all campuses during the pandemic to manage appointments, events and job vacancies. We also introduced a fortnightly newsletter highlighting events, tips for job hunting, job/internship vacancies and news on the job graduate market. The team also introduced new 'Bitesize' careers videos, online recruitment bootcamp and PGR programme in collaboration with Research Futures. To support the delivery of the Strategy 2025 SPI for graduate activity (to be top decile for Graduate Outcomes) the team monitors underperforming programmes and identify how we can offer these students additional targeted support. Such support includes the Stand Out programme for our Textiles and Fashion students to prepare them for the job market and opportunities to run their own business in a sector that has been particularly affected by COVID-19.

The Careers and Graduate Futures team introduced Service Level Agreements with each School to map current careers interventions across the individual student journeys, working in collaboration with academic colleagues. The team also secured funding for a full-time Graduate Careers Consultant to support unemployed and under-employed graduates to help them secure graduate level jobs. They also developed an annual programme of events including the GRAD2020 and GRADS2021 summer programmes to support graduates enter a very uncertain job market which included mentoring and virtual internship programmes in collaboration with Santander, which had a focus on charities/third sector which had been particularly hit hard by the pandemic. The Get Ahead event also supported graduates advance their careers or secure employment. The Service also contributed to initiatives including Future Made for Success to support the post-pandemic economic recovery by supporting students to develop skills for industry.

The Service is expanding its offer to include workshops on Imposter Syndrome, Adapting to an Uncertain World, How to Work Effectively in a Team and others in consultation with students. We are also collaborating with the other Scottish universities to deliver the SFC funded Graduate Support project to engage graduates and employers. This project will deliver 350 internships and benefit 500 graduates who are from widening participation backgrounds, have a disability, are from a non-white background, or are in a subject adversely affected by COVID-19. In October 2021 we have updated the GRADfutures platform to offer a significant variety of career resources, including an interview practice tool, company profiles, occupational videos, and the Career Edge+ career

planning tool. It also provides links to job boards, which list a range of vacancies across different sectors. The team are also planning to introduce InPlace during 2021/22 to better manage our placement provision.

## Collaboration

In 2021, Heriot-Watt prioritised key areas that are critical to economic recovery and future sustainable growth. Priority themes include robotics and AI, medical technologies, decarbonisation and earth and marine technology.

Within the University Innovation Fund (UIF), we have continued to collaborate and support other organisations and key stakeholders where we can make a significant contribution to the Scottish business landscape. The UIF community also contributed to a series of videos celebrating the knowledge exchange and innovation underpinned by UIF, promoted on SFC social media at the start of 2021.

As a university, we have continued to engage through the Edinburgh and South-East Scotland City Region Deal, working with the University of Edinburgh through the National Robotarium and Venture Builder Initiative. In the Highlands and Islands, we have engaged with key stakeholders in Orkney to develop the business case for an Islands Centre for Net Zero. In the Borders, we have begun early discussions with the newly established South of Scotland Enterprise around collaboration opportunities in net zero and digital innovation.

Following the publication of the Prospectus for Recovery and Future Growth, we have engaged 25+ stakeholders to assess demand and opportunity to develop on our existing Research Park. Economic impact modelling and a review of options has been undertaken and plans are underway to progress this through the University's new strategic planning approach. This is highly aligned to national, regional, and local policy and fits within the broader context of Heriot-Watt University's Strategy 2025. Moreover, we have supported the growth of existing residents such as Celestia who have expanded their R&D activity and hired new graduates from the University. Through a strategic MoU with Schneider Electric, we are scoping opportunities for R&D relating to net zero testbeds utilising our campus.

## Climate emergency

### Strategy and climate role

In 2020/21 the University adopted a new Global Environmental Sustainability (GES) Strategy featuring a range of key commitments to enhance the institution's sustainability outcomes across operations, research, teaching and global advocacy. These included a central commitment to establish a suitably ambitious date between 2030 and 2035 for achieving net zero greenhouse gas emissions.

Development of the University's Net Zero Plan has progressed during 2021, via the establishment of a new 2018/19 global emission baseline including Scope 1, Scope 2 and selected Scope 3 emissions and extending, for the first time, to emissions associated with the Dubai and Malaysia campuses. An emission reduction trajectory has been developed to support the Net Zero Plan, mapping the impact of potential decarbonisation opportunities and testing compliance with science-based target criteria to ensure compliance with best practice. Supporting exercises have included a comprehensive study investigating options to address one of the University's major net zero challenges: the decarbonisation of heat at the University's Edinburgh Campus. The University intends to finalise and launch the new Net Zero Plan later in 2021.

The University's broader climate role includes significant impact from our research activities. The UK Industrial Decarbonisation and Research Innovation Centre (IDRIC), based at Heriot-Watt University, is currently in its launch period, backed by £20M of investment. In conjunction with this a Global Research Institute (GRI) in Net Zero has been proposed to operate alongside our two current GRIs, The National Robotarium and the Lyell Centre. Engagement with our academic



research base has identified key areas of opportunity where the University can offer a world-leading contribution to Net Zero.

Linked to our GRI in NetZero Carbon, we have the ambition to further drive change through creating a skills academy for “green jobs” and an enterprise accelerator programme to support start-up companies with radical approaches to carbon innovation.

### Emission reduction progress

The table below presents the University’s greenhouse gas emission baseline data and emission reduction performance, as reported within annual Public Bodies Climate Change Duties (PBCCD) submissions. The data relates to the Scotland campuses, following the existing reporting boundary defined within the Carbon Management Plan (CMP) 2015/16-2019/20, and includes emissions associated with the operation of University buildings, business travel, management of wastes and water consumption.

Annual emission performance – Scottish campuses (2020/21 figures pending):

	<b>(Baseline) 2014/15</b>	<b>2015/16</b>	<b>2016/17</b>	<b>2017/18</b>	<b>2018/19</b>	<b>2019/20</b>
Target emissions (tCO <sub>2</sub> e)	21,583	20,936	20,288	19,641	18,993	18,346
Actual emissions (tCO <sub>2</sub> e)	21,583	20,414	20,059	18,789	17,474	14,092
CMP target reduction (%)	–	3	6	9	12	15
Actual reduction (%)	–	5.4	7.1	12.9	19	34.7

### Support for the UN Sustainable Development Goals

Research carried out at the University is now mapped against the UN Sustainable Development Goals (SDGs), enabling researchers, collaborators and potential funders to identify where our researchers are contributing to achieving these goals. Academic profiles and research output are linked to each of the 17 SDGs.

## University Outcome Agreement Impact Framework: Supporting Data

Measure	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
A Number of Scottish-domiciled Undergraduate Entrants	1,175	1,211	1,363	1,422	1,420	1,541	1,292	1,479
B Total number of Scottish-domiciled HN entrants from Scottish colleges to undergraduate programmes		293	332	342	308	309	288	206
Number of Scottish-domiciled HN entrants from Scottish colleges to undergraduate programmes with Advanced Standing		144	171	154	177	167	167	83
Proportion of Scottish-domiciled HN entrants from Scottish colleges to undergraduate programmes with Advanced Standing		49.1%	51.5%	45.0%	57.5%	54.0%	58.0%	40.3%
C COWA measure: Total number of Scottish-domiciled full-time first degree entrants	1,153	1,209	1,349	1,371	1,416	1,497	1,247	1,478
COWA measure: Number of Scottish-domiciled full-time first degree entrants from the 20% most deprived areas	125	119	114	153	154	164	167	183
COWA measure: Proportion of Scottish-domiciled full-time first degree entrants from the 20% most deprived areas	10.8%	9.8%	8.5%	11.2%	10.9%	11.0%	13.4%	12.4%
D Number of Scottish-domiciled undergraduate entrants with care experience	1	1	5	10	13	16	16	19
Proportion of Scottish-domiciled undergraduate entrants with care experience	0.1%	0.1%	0.4%	0.7%	0.9%	1.0%	1.2%	1.3%
E Number of Scottish-domiciled full-time first year entrants	1,371	1,142	1,200	1,333	1,407	1,407	1,522	1,280
Number of Scottish-domiciled full-time first year entrants returning to study in year 2	1,254	1,039	1,078	1,229	1,266	1,267	1,407	1,171
Proportion of Scottish-domiciled full-time first year entrants returning to study in year 2	91.5%	91.0%	89.8%	92.2%	90.0%	90.0%	92.4%	91.5%
F The difference (+/-) from the individual institution benchmark figure for students satisfied with the overall quality of their course of study in the National Student Survey	4	4	-2	-3	2.1	1.6	3.96	
G1 The number of Scottish-domiciled undergraduate qualifiers responding to the Graduate Outcomes survey				523	527			
The proportion of Scottish-domiciled undergraduate qualifiers responding to the Graduate Outcomes survey in a positive destination				505	482			
The number of Scottish-domiciled undergraduate qualifiers responding to the Graduate Outcomes survey in a positive destination				96.6%	91.5%			
G2 The number of Scottish-domiciled full-time first degree qualifiers responding to the Graduate Outcomes survey in employment				421	382			
The number of Scottish-domiciled full-time first degree qualifiers responding to the Graduate Outcomes survey in employment in professional employment				321	273			
The proportion of Scottish-domiciled full-time first degree qualifiers responding to the Graduate Outcomes survey in employment in professional employment				76.2%	71.5%			
H Number of Scottish-domiciled Undergraduate Qualifiers	885	989	1,139	1,059	1,061	1,133	1,256	~1,110

Please note that 2018-19 and 2019-20 figures for measure G2, 2019-20 figures for measures F and H and all 2020-21 figures are impacted by the COVID-19 pandemic and may not be directly comparable to other years

## Heriot-Watt University – University Innovation Fund Plan Update:

In 2021, Heriot-Watt prioritised key areas that are critical to economic recovery and future sustainable growth. Priority themes include robotics and AI, medical technologies, decarbonisation and earth and marine technology.

In addition to this, we have supported several entrepreneurship initiatives and grown a stronger pipeline of intellectual property. This has been achieved by taking a proactive approach to stimulating demand engaging industry partners and academic groups (**PA1 – Demand Stimulation**).

Within the UIF, we have continued to collaborate and support other organisations and key stakeholders where we can make a significant contribution to the Scottish business landscape. The UIF community also contributed to a series of videos celebrating the knowledge exchange and innovation underpinned by UIF, promoted on SFC social media at the start of 2021.

### Engagement with City and Regional Deals

The City and Region Deals are a significant investment in specific regions, with university partners playing a unique role. Through UIF collaborative activity, a network of KE staff has been established for HEIs to share experience of their City and Region Deals, to learn from each other, expand opportunities, build capacity, and drive outputs to positively impact cities and regions across Scotland.

We have continued to engage through the Edinburgh and South-East Scotland City Region Deal, working with the University of Edinburgh through the National Robotarium and Venture Builder Initiative. In the Highlands and Islands, we have engaged with key stakeholders in Orkney to develop the business case for an Islands Centre for Net Zero. In the Borders, we have begun early discussions with the newly established South of Scotland Enterprise around collaboration opportunities in net zero and digital innovation.

#### ***Partnership in Action Case Study: Industrial Decarbonisation (IDRIC)***

The Industrial Decarbonisation Innovation Centre was formally funded and launched in April 2021, this aims to become a world-leading, high-impact research and innovation centre acting as the national and international gateway for UK industrial decarbonisation. IDRIC has secured £19m of funding and has begun to establish a team responding to the needs of over 80+ industry partners. As part of this, IDRIC has participated in several key events related to COP26 in Glasgow. Heriot-Watt intends to establish a new global research institute that tackles net zero related missions in line with government and industry challenges.

#### ***Partnership in Action Case Study: Medical Device Manufacturing Centre (MDMC)***

The Medical Device Manufacturing Centre (MDMC), established with funding from the European Regional Development Fund, Heriot-Watt University and three other Scottish universities. Since September 2020, it has hosted regular activities focused on industry-driven topics related to medical device design, regulations, and sustainable manufacturing. To date it has interacted with 47 Scottish businesses providing direct assistance to 7 SMEs with product development. Work is underway within the University to assess the feasibility of building on Heriot-Watt capabilities through the creation of a global research institute.

## Advancing Industry Engagement and Commercialisation

Further progress has been made towards advancing our commercialisation and industry engagement plans and have secured funding to expand our business development and proposal development capability (**PA2 – simplification/commercialisation**).

The UIF Challenge Fund Network group meets quarterly to share knowledge of the complex funding landscape and strategic relationships with key stakeholders, foresight upcoming opportunities and facilitate collaborative bid development. We have begun to incorporate challenge-based concepts within our global research institute plans.

Global Research Institutes and other areas of research excellence are being prioritised with business case development commencing for Net Zero and Health Technology. This will support the creation of new growth opportunities aligned to industry needs – helping to create the products and solutions of the future.

In relation to commercialisation, the University has secured external funding from the European Institute of Innovation & Technology through the InnoChange Project focused on building capacity within innovation and entrepreneurship. This provides us with an opportunity to promote best practice, learning from experiences in Scotland and identify new partnerships within the European ecosystem. (**Greater Innovation, PA3**)

### ***Partnership in Action Case Study: UK-first Wireless Electric Van Charging Collaboration***

The University has commenced a £1.6m project to pilot an electric commercial vehicle testbed without the need for cables and increasing the speed of charge. The goal of the project is to encourage more firms to use electric vehicles and cut emissions.

The Project is in partnership with City of Edinburgh Council and Flexible Power Systems and involves specially adapted university and council vans with charging equipment from Momentum Dynamics.

In November 2021, it was announced that Waitrose is to become the first supermarket in the UK to trial a new generation of electric vehicle that uses the technology developed through the Project. The move follows an ambition for Waitrose to end the use of fossil fuels across Waitrose's transport fleet by 2030 – estimated to save 70,000 tonnes of CO2 per annum.

Forging new collaborative partnerships with industry, public sector organisations and other universities sits at the heart of all strategic initiatives linked to our Research and Enterprise strategic theme. In the current funding environment partnership with business is critical to their success.

In response to the introduction of the KE Concordat, a network of KE professionals have convened to share knowledge and best practice around the process through UIF, this is an area Heriot-Watt University intends to build from in 2022 to ensure the knowledge exchange and commercialisation function meets the needs of industry.

Through our GRID activities, we have nurtured ideas into robust business propositions through competition and grant support, mentoring, training, and advisory services. We have helped our spin-outs secure additional support through ICURe and Lean Launch Innovation UK Programmes.

We have contributed to the Enterprise Support Group, a formal subgroup of RCDG, to establish a joint programme of support and share best practice between Universities in Scotland for the creation of new enterprises which includes both spin-out and start-up companies.

Within Heriot-Watt, we were a core partner of the GO FURTHER Investment Initiative designed to engage, showcase, and celebrate progressive businesses who are achieving their aspirations through access to investment, impactful collaborations, and the foresight to inform and respond to the changing world around them. Heriot-Watt partnered with Global Corporate Venturing and UMI to deliver the inaugural event in November 2021 (delayed due to Covid) with other Scottish universities participating.

#### **Commercialisation Case Study: Chromacity**

In December 2020, the University signed a new five-year Strategic Relationship Agreement with Chromacity to transform academic research into commercial innovation.

The partnership with ultrafast laser manufacturer Chromacity helps enhance close collaboration between [Chromacity and Heriot-Watt](#), with the company ideally positioned to commercialise academic research in the field of laser-related photonics.

To date, the partnership has produced innovative laser solutions to global challenges by focusing on the development of next generation optical parametric oscillators which are critical for applications such as detection of gases which are harmful to people, assets and the environment.

In August 2021, the Company announced completion of a growth funding round of £1.2m from investors Kelvin Capital, EOS and the Scottish Enterprise, as well as new investor ESM Investments.

## Driving Entrepreneurship

Through our annual Innovation Challenge led by GRID, we attracted submissions from 157 prospective student start-up ideas and 7 potential staff spin-outs. Total funding of £48,350 was awarded to 27 recipients, ranging from £100 for early-stage ideas through to £8,000 for trading companies. Ten incorporated or trading start-up companies benefited from funding.

A total of 4 projects, involving students and senior academics are progressing through the Lean Launch Programme and 2 projects are progressing through the Scottish Enterprise High Growth Spin-out Programme. Heriot-Watt University made its inaugural £20,000 Impact Fund investment into a student start-up company, Turtle Pack, leveraging funding from institutional investors and high net worth individuals. The company went on to secure a licence with global media company Viacom.

The Edinburgh Business School within Heriot-Watt University reopened and expanded Incubator support with 23 resident start-ups (**Entrepreneurialism, PA4**).

#### **Case Study in Entrepreneurship: Converge Challenge**

Converge is Scotland's largest company creation programme for staff, students and recent graduates of all Scottish universities and research institutes and has been hosted within Heriot-Watt University since its inception. In 2021, a total prize pot of £300k was shared amongst entrepreneurial students from Scottish universities. A new start-up developing medicines for patients with chronic conditions, a digital platform bringing the craft of knitting into the 21st century, and robotic glove empowering patients with hand weakness - were some of the winners at the 2021 Converge Awards that took place in October.

Converge has recently extended its geographic reach and has supported the appointment of new staff in the University of Strathclyde and University of Aberdeen. This year also featured a new partnership with Cisco who announced the Cisco Future Tech Award.

## Internationalisation

Work on the UIF International theme **(PA5)** has been significantly hindered due to Covid-19, however we are leading on a major programme of activity relating to the Dubai Expo. As part of this, we will be promoting entrepreneurial skills and opportunities for international collaboration. This activity has involved UK Government and we are helping local companies gain exposure on the international stage through Expo.

Although progress on specific international engagements continue to be challenged by Covid, we have contributed through the Edinburgh Chamber of Commerce's Roundtable on Economic Strategy and Recovery. An element of this activity was discussing the need to promote Edinburgh and Scotland to the international community more effectively. Furthermore, we have engaged with stakeholders involved in the UK-UAE Partnership for the Future which has a major focus on international trade and collaboration. **(PA5)**

## Engaging our public and communities

In line with our vision to inspire and understand the mutual needs of our global – local communities and provide measurable pathways to global impact through our pioneering research, we are currently supporting our academics to drive culture change and mainstream dialogue between all our communities through media activity and news releases.

Enhancing researcher skills for public and business engagement is a core focus for UIF. In 2021 we held 18 events through the Festival of Research and Enterprise which celebrated Heriot-Watt's global research with talks and panel discussions, providing opportunities for researcher development and enhancing culture.

We launched five PRIME awards in June 2021 as part of the University's celebration week and opened our Discovery Trail at the Edinburgh Campus, with staff, students and communities encouraged to learn more about what goes on within the buildings on campus and how our research is shaping the future. Feedback from our communities was excellent and the trail was promoted during the Edinburgh Science festival and a Climate Detectives interactive walk was also set up.

From an academic perspective, during 20/21, we established a network of academic leads to build awareness and capacity for engaged research; the leads form an important advocacy and outreach network and have been involved in crafting and delivering an action plan of activities.

The HW Engage team continues to work collaboratively within the Beltane PE network and has leveraged other funding for public engagement with research (eg EC-funded Explorathon and Carnegie/Wellcome/Wolfson-funded Lothian Lugs project).

## Supporting sustainable recovery and future growth

Following the publication of the Prospectus for Recovery and Future Growth, we have engaged 25+ stakeholders to assess demand and opportunity relating to a West Edinburgh Innovation District building on our existing Research Park. Economic impact modelling and a review of options has been undertaken and plans are underway to progress this through the University's new strategic planning approach. This is highly aligned to national, regional, and local policy and fits within the broader context of Heriot-Watt University's Strategy 2025. Moreover, we have supported the growth of existing residents such as Celestia who have expanded their R&D activity and hired new graduates from the University. Through a strategic MoU with Schneider Electric, we are scoping opportunities for R&D relating to net zero testbeds utilising our campus.

## Promoting Diversity and Equality

As UIF lead on Diversity and Equality (**PA7**) we have previously collaborated with Strathclyde and Dundee to deliver a Diversity on Boards pilot where delegates learned to recognise diverse opinions and understand how to achieve more diversity amongst non-exec directors. This is an area we intend to develop and would require further funding to achieve this.

During 2021 we delivered a program of activity on responsible innovation with 15 internal participants taking place through the initial pilot and a further 40 participants taking place from all Scottish HEIs as part of the Festival of Research and Enterprise.

Through Converge, a diverse number of audiences are reached across different disciplines of academia and a greater focus has been placed on social impact, with partners including Social Investment Scotland.

### ***Partnership in Action Case Study: Sustainable Manufacturing***

During 2021, development of a £1.8m Sustainable Manufacturing bid was developed working with partners Diageo, CNC Tennents, Briggs of Burton, Cisco, Schneider Electric and a variety of partners. A wider programme of work is planned to address challenges in sustainable manufacturing process relating to brewing and distilling, a major contributor to the Scottish Economy. The University worked with industry leaders to develop an outline business case with the intention of securing a larger programme around talent, research and infrastructure, building on strengths through the International Centre for Brewing and Distilling.



**Outcome Agreement between Heriot-Watt University and the Scottish Funding Council for AY 2021-22**

**On behalf of Heriot-Watt University:**

Signed:

Print name: RICHARD ANDREW WILLIAMS

Position: Principal and Vice-Chancellor

Date: 1 June 2022

Signed:

Print name: MORAG MCNEILL

Position: Chair

Date: 1 June 2022

**On behalf of the Scottish Funding Council:**

Signed:

Print name: Karen Watt

Position: Chief Executive

Date: 28 July 2022