

Evolving Engagement: Heriot-Watt University

Heriot-Watt University is a specialist, research-intensive university with strengths in engineering, physical sciences and business, with a variety of applied areas of research the deliver real societal impact. We have five campuses in three countries (3 in the UK), with central support for public engagement (HW Engage) focusing on activities on the Edinburgh campus.

Public engagement had been supported by 1 FTE Public Engagement with Research (PER) Coordinator since 2013, following on from the university’s involvement in the Beltane Beacon for Public Engagement. The profile of public engagement was raised significantly over the first 4 years, however the initiative was lacking strategic direction and leadership buy-in. Pockets of excellence in public engagement existed across the institution but was very much treated as an add-on for researchers, rather than an integral part of the research environment.

Heriot-Watt University

No. of Academic Staff: 763

No. of Professional Services staff: 900

No. of Students: 24,000 globally, with 9,200 based at our Edinburgh campus

Research income: £45 million

Our approach

We used an evidence-based approach to embed public engagement within the University strategy and management priorities (Figure 1). We consulted widely with stakeholders about how we can truly create a culture where public engagement is valued and supported – both internally within the University, and within our local communities. Our awareness raising activities included piloting high-profile activities, public engagement champions and networks, and training opportunities. Learning from these activities has enabled us to see what works and more importantly, what doesn’t. The success of the interventions is demonstrated by the high-profile of PER within the new university strategy, the imminent launch of the PER Implementation plan, and the revised structures and support mechanisms within the institution.

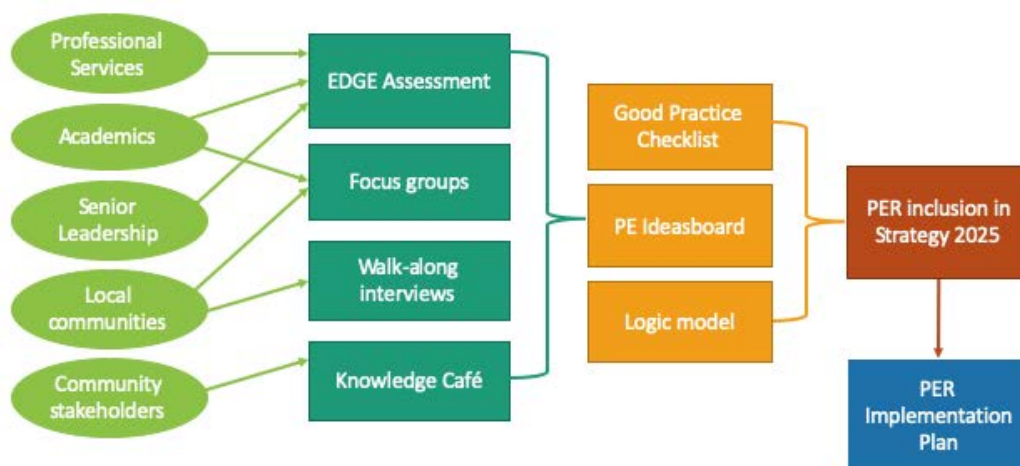


Figure 1. Heriot-Watt University Strategic Embedding of Public Engagement Programme. Green circles - stakeholder groups; Green rectangles - data collection activities; Orange rectangles – outputs from data collection; Red and Blue rectangles – outcomes of the programme.

UKRI Strategic Support to Expedite Embedding Public Engagement with Research

The UKRI Strategic Support to Expedite Embedding Public Engagement with Research (SEE-PER) call sought to help enrich and embed cultures within HEIs where excellent public engagement with research (PER) is supported, valued, rewarded and integrated within institutional policies and practices. The first year of this programme ran from October 2017 to October 2018. Two types of approach were funded:

‘Embedding change’ proposals that sought to enhance and embed an institution’s approach to supporting PER, building on the learning from the Beacons for Public Engagement, RCUK PER Catalyst and Catalyst Seed Fund programmes:

- Birkbeck College, University of London, led by Professor Miriam Zukas
- Heriot-Watt University, led by Professor Gareth Pender
- Keele University, led by Professor David Amigoni
- London School of Hygiene and Tropical Medicine, led by Professor Dame Anne Mills
- NERC Centre for Ecology and Hydrology, led by Dr Nick Wells
- University of Lincoln, led by Professor Carenza Lewis
- University of St Andrews, led by Professor John Woollins

‘Challenge’ proposals which addressed a specific challenge in supporting PER effectively, and which expanded the existing knowledge base about ‘what works’ in effectively supporting PER:

- University of Brighton: developing and incubator model for developing new community-university partnerships, led by Professor Tara Dean
- University College London: exploring how to make PER fundamental to the university's efforts to address global societal issues through cross-disciplinary research, led by Professor David Price
- University of Bath: examining the challenges associated with training and professional development for public engagement, led by Professor Jonathan Knight
- University of Southampton: tackling barriers to professional development in PER and developing a robust educational framework for such activity, led by Professor Simon Spearing
- STFC – Laboratories: investigating the take up and provision of PER training, led by Dr Neil Geddes

In May 2018, the SEE-PER projects were given the opportunity to apply for a second year of funding to embed and expand upon work done in the first phase. Ten of the twelve projects received funding to extend for a further 12 months, and the programme concluded at the end of 2019.

UKRI appointed the NCCPE to co-ordinate this work, ensuring learning was shared across the projects, and that evaluation was used strategically to inform and assess the value of the SEE-PER initiative.

Further learning from the SEE-PER initiative can be found in the ‘Support Engagement’ section of the NCCPE website.

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Year 1

In the first year of SEE-PER, the major focus was the integration of public engagement within the University Strategy. The timing of the project was such that discussions were underway at all levels across the University to develop the institutions new 7-year strategy, to launch in 2019. The key to successful integration was to use an evidence-based approach, and for that, we needed the evidence. We needed to take stock, take a step back and think about what we would like to achieve through HW Engage, and what an engaged Heriot-Watt could look like.

Year 1 objectives

1. To develop a new public engagement with research strategy for HWU across all our global campuses, co-developed with academics and community stakeholders. We will create an integrated consultation and policy making strand that ranges all the way from our publics to our Principal.
2. To establish a community consultation exercise to identify the future engagement desired by our publics and help establish the baseline of activity in our campus university.
3. To run a series of innovative workshops and activities for our university, to identify gaps in the provision of engagement, and obstacles to embedding PER in all our university activities.
4. To integrate our engagement unit with our expert global communications team to provide better understand of the importance of engagement and the purpose of our university.
5. To design an evidence-based millennial-centric training programme, and strategic and operational structures that are fit for our purpose of embedding PER in our institutional strategy.
6. To revisit our community consultations after a 12-month period, to measure differences from our original understanding of our activity baseline.

1.1 Activity Audit

To understand the interventions needed within the institution, we set out to understand where pockets of excellence existed, what differences were needed, and how we could use our limited resource to achieve the most.

Within HWU, academics are encouraged to submit their 'outputs', which include PER, to the 'Pure' database. This repository is primarily used for recording research papers, which feeds into the institutions Research Excellence Framework (REF) submission. From August 2013 – September 2017, only **235 activities** aligned with public engagement or outreach were recorded in the Pure System. Academics are encouraged to include all publications, grants and activities on this system, but uptake is low.

In addition to the activities reported on the Pure system, the HW Engage team collated information on PER activities on an annual basis from 2015 onwards (Table 1). These numbers are based on events and activities known to the HW Engage team and are likely an underrepresentation of the true numbers.

The data demonstrates that although PER is taking place, the majority of this is not recorded on Pure. Following discussions with senior leadership, it was decided that efforts should not be focused on increasing the number of academics using this database, but rather focused on other methods of reporting. These methods will be explored as part of the school action plans being developed, as need to be tailored for the differing needs of the school.

The data also suggests that in the most part, PER reporting per school reflects the size of the schools (Fig. 2). However, the Schools of Mathematics and Computer Sciences, and Energy, Geoscience, Infrastructure and Society demonstrate enhanced reporting/engagement relative to their size.

Table 1. Activity audit for 2015-2017

	2015-16	2016-17	2017-18
Academics seeking advice from HW Engage	129	55	148
Activities noted on PURE	73	20	19
PER Prize applications	10	17	n/a
No. academics/researchers engaging	244	301	498

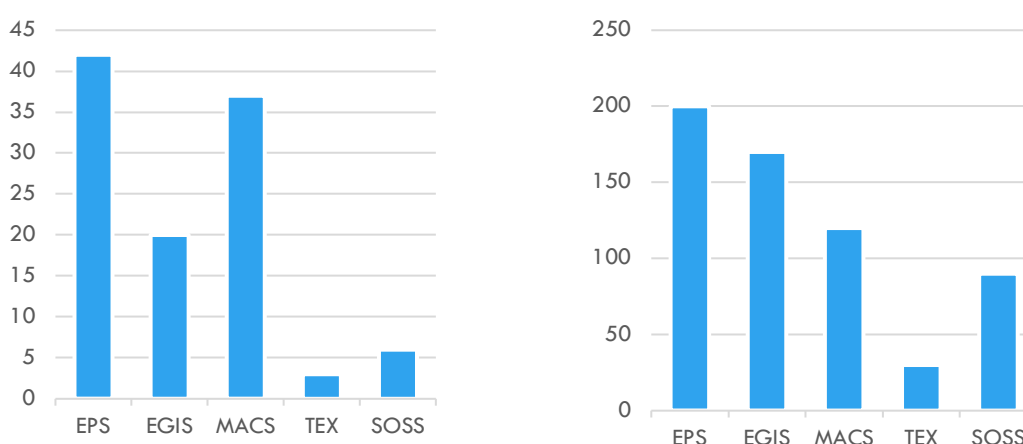


Figure 2. a) No. of academics from each school undertaking AND reporting PER activities from 2013-17; b) Size of schools (No. of academics).

LESSONS LEARNT: PURE IS NOT A USEFUL SOURCE OF INFORMATION AS UPTAKE IS POOR. METHODS TO IMPROVE UPTAKE OR OTHER CAPTURE METHODS SHOULD BE EXPLORED.

1.2 EDGE Assessment

The NCCPE EDGE assessment tool was used in year 1 to determine how PER is viewed at Heriot-Watt, both from an academic perspective, and by the senior management (Fig. 3).

There were clear differences in perceptions between academics, leadership and professional services, with differences noted in the areas of Students, Staff, Public, Learning, and Leadership. Similar views were found in the areas of Communication, Support and Recognition. Using the EDGE tool identified areas of focus for the next phase of the project, and findings were used in the development of the good practice checklist and action plan (Section 1.4).



Figure 3. Perceptions of embeddedness of PER at Heriot-Watt University using the NCCPE edge tool, where 1=Embryonic, 2=Developing, 3=Gripping and 4=Embedded. PS: Professional Services (n=16), SL: Senior Leadership (n=8); Ac: Academics (n=42).

LESSONS LEARNT: PERCEPTIONS OF EMBEDDEDNESS VARY BETWEEN THE SENIOR LEADERSHIP AND THE ACADEMICS, WHICH NEED TO BE ADDRESSED IN ANY SUBSEQUENT INTERVENTIONS

1.3 Community Consultations

The next stage of the project was focused on understanding what the barriers, challenges and opportunities were for PER – both for staff seeking to undertake PER, and from an external perspective – how our publics viewed our institutional engagement. To answer these objectives, a qualitative research design was adopted, and implemented by HWU social scientist Dr Ryan Woolrych, and an external consultant (Claire Wade, Mindspace). Full reports can be found in Appendix A.

1.3.1 Internal focus groups

Phase 1 (completed in February 2018) examined staff (academic and non-academic) perceptions of public engagement. The development of the focus group schedule was aligned to answer the key research questions, focused on identifying perceptions of PER, reflections on what PER in universities is and what it is designed to achieve, experiences of the barriers and challenges to doing PER, and identifying ways in which PER could be better supported within universities.

Recruitment and Sampling

A recruitment email was sent to staff across four schools (School of Social Sciences (SoSS); Energy, Geoscience Infrastructure and Society (EGIS); Engineering and Physical Sciences (EPS); Mathematical and Computer Sciences (MACS)) outlining the aims and objectives of the research and the purpose of the focus groups. Recruitment was designed to reach a range of academic staff in terms of disciplinary expertise (hard and soft sciences) and levels of PER experience - ranging from those with little or no experience in PER to 'PER champions'. Inclusion criteria for participation in the study were that academic staff had to be employed at Heriot-Watt University at the time of the research. A separate information session was conducted with the School of Textiles and Design, who are based at the Scottish Borders Campus.

A total of 31 participants were involved across five focus groups. Of those recruited, 11 were lecturers, 9 professors, 3 senior lecturers, 2 post-doctoral researchers, 2 research fellows, 2 research support officers and 2 research administrators. In terms of discipline, 10 participants were from EPS, 9 from EGIS, 7 from MACS and 5 from SoSS. Of the five focus groups, two were undertaken with 'PER champions', two with less experienced members of staff and two with mixed levels of experience.

Key learning

Outputs of the focus groups can be found in Appendix A. The overarching messaging was positive – there is an enthusiasm and will for PER within the institution, and some clear barriers to be addressed. To summarise:

1. The understanding of the concept of PER is generally consistent – to share knowledge and inspire people - but what it comprises is not
2. No clear directive in terms of how it should fit into the job role
3. Incentive to participate is constrained by no obvious support or commitment from higher management
4. No stated requirement to do PER in terms of time or workload
5. All agree a coherent strategy will help what is currently a piecemeal approach

Key barriers to PER

- Lack of structure or identity
- Lack of support
- Limited co-ordinator resource
- Time
- Uncertainty over what it comprises
- Delivery
- Feedback
- Definition of purpose
- Personal perspectives
- Career implications (or lack of)

The recommendations put forward by the consultant were:

1. A PDR framework to shape and credit PER activities
2. Proper investment in resources to support academics' efforts
3. An entry point for those starting off in PER, with relevant training
4. Clear correlation between what senior management and academics consider to be PER objectives

1.3.2 External focus groups and interviews

Focus groups were undertaken with resident groups to explore attitudes to PER, perceptions of universities in relation to PER, and to identify ways in which universities can deliver effective PER. The full reports are available in Appendix A.

The project team first identified a range of geographical areas to focus the recruitment, chosen according to (i) varying levels of deprivation (as sampled from the SIMD (Scottish Index of Multiple Deprivation) and (ii) varying proximity to Heriot-Watt campus. - The following neighbourhoods were identified: Balerno, Fauldhouse and Wester Hailes (Fig. 4). Within each of these neighborhoods, contact was established with local community groups who were invited and asked to identify a cross-section of people from their local community to participate in the focus groups.

All focus groups were undertaken in April 2018. All community focus groups were carried out by a consultancy company with significant experience in the application of qualitative methods. All focus groups took place in community venues.

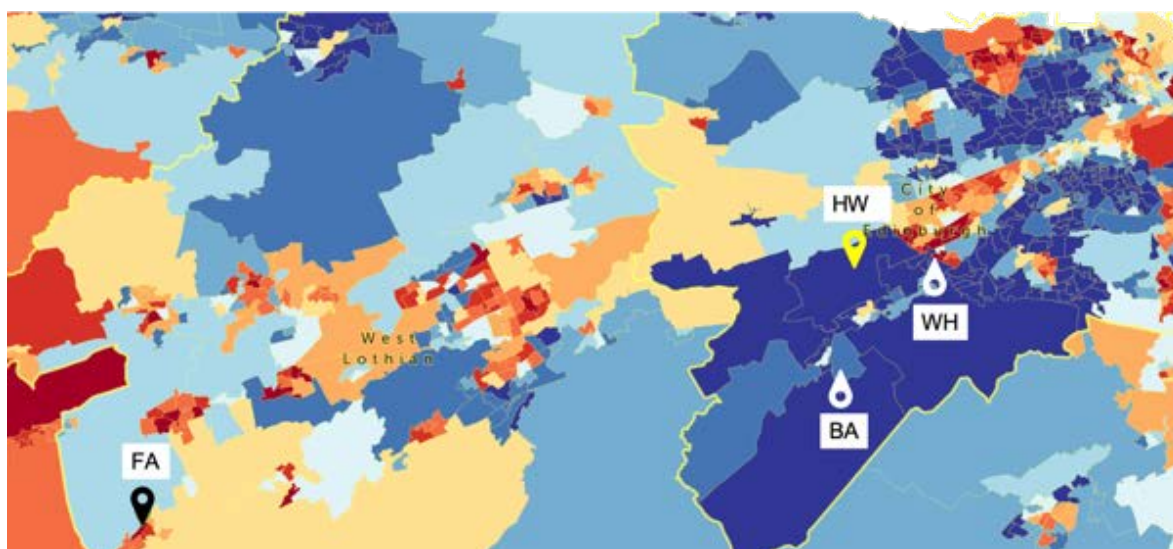


Figure 4. Location of Heriot-Watt University (HW) and focus groups undertaken in year 1, superimposed on Scottish Index of Multiple Deprivation map, where dark blue represents the least deprived decile (SIMD 10), and dark red represents the most deprived decile (SIMD 1). FA: Fauldhouse (SIMD 2); BA: Balerno (SIMD 9); WH: Wester Hailes (SIMD 1).

Key learning

The key learning from these external consultations is that PER by universities is neither sought nor expected by the intended audiences and has low recognition internally. Engagement is constrained by the following key perceptions:

- *‘University isn’t for me’ therefore I am not interested in them and they are not interested in me*
- *They do not advertise what they do/aren’t where I’m looking*
- *Limited knowledge of things universities do that might be interesting*
- *Passing interest in what you read or hear, but no connection with the institution*
- *Little or no spontaneous association with research or how this might be of value*
- *Interest and reference points are confined to education opportunities or facilities for public use*

However, there was interest in a ‘community university’ type approach, with an interest expressed in the university understanding the community’s individual issues to see where a contribution can be made.

‘I think the community’s got to see something for the community, not just the fact that every tenth kid might go to university’

1.3.3 Walk-Along Interviews: Community Residents

Following focus groups within the communities, we undertook walking interviews also known as ‘go-along’ interviews (undertaken individually or as a group), which provide the capacity to access people’s attitudes, perceptions and reactions to the surrounding environment as they walk through a setting. Group walk-along interviews were undertaken in this project to capture resident perceptions of the university space (as a place for public engagement), reflections on the built environment as a welcoming setting for the community, perceived barriers and facilitators to access and use, wayfinding around the university, and the purposing and programming of university buildings for PER.

A specific walk around the university was mapped out by the research team in advance of the group walk-along interview to ensure engagement with a mix of indoor and outdoor spaces, campus buildings, green space, sports facilities and recreational areas. A walk-along interview agenda was constructed with key questions to guide the walk and elicit responses from participants: ease of walkability, reactions to indoor and outdoor space, sensory aspects of place (sights/sound), feelings and emotions of being in a place, approachability of spaces, purposes and use of buildings, etc.

The walk-along interview agenda was intended to act as a guide to facilitate discussion and encourage participants to talk about reflections and perceptions of the campus. During the walk-along interview, the facilitator took an active role in co-creating dialogue and prompting the participants where necessary.

Following the walk-along interview a group discussion was undertaken to capture perceptions and thoughts about the walk with a specific emphasis on exploring how universities can be better designed to deliver PE.

Participants were recruited through follow-up contact with local residents who participated in the focus group exercise of the study.

Key learning

Attendees at the walk-along interviews provided insightful data, highlighting concerns and opportunities about the university campus which were unforeseen by the University staff who attend campus daily. The full report can be found in appendix A, but briefly:

1. The campus should be seen as an asset to the local community, with beautiful parklands and space to think. There is potential for a hub type approach, as seen in new community schools being built in the region
2. The current campus design is confusing, with the main reception hidden, poor signage and little information about what the university offers
3. More should be done to promote what the university offers in terms of research, teaching and assets available as there is an appetite locally to engage

Overall, our community data collation found that our local publics had no understanding of the term public engagement in general, nor did they have ideas about the purpose of a university, or that research is undertaken there. We also found that describing the impacts of research that might have benefits for our communities was well received and elicited a more emotional response from those publics.

The next step was to take this message to the University, and in particular to the University leadership. The public perceptions about PER were presented to the entire University leadership by Paul Manners and our external consultant. This exercise resulted in extensive conversation and enhanced the leaderships understanding about why we do PER, and our place and purpose within our locality. Indeed, the findings prompted our leadership to take a step back and think about why our university was founded, and the essential role that public engagement has in our strategic toolkit. Evidence of the impact of this work is the current close consultation between our senior leadership, the university executive and the public engagement team.

LESSONS LEARNED: OPPORTUNITY EXISTS TO PROMOTE OUR UNIVERSITY'S PRESENCE AND PURPOSE IN LOCAL COMMUNITIES, WHERE A DESIRE EXISTS TO ENGAGE ON DIFFERENT LEVELS

1.4 Good Practice Checklist

The next challenge was to bring together the vast array of data collected from the different stakeholders into a coherent action plan. We based this phase of the project on our successful ‘Athena Swan’ approach, centred around a good practice checklist.

The checklist had nine ‘benchmarks’ (Table 2), which we aspired to, based on the EDGE tool domains. Aligning to those benchmarks, we determined the baseline level from the evidence collated above. Combining the focus group evidence with the EDGE assessment enabled us to identify where actions were needed. A subset of the PE Steering group then pulled together actions, based on evidence collated and learning from good practice across the University sector. The full checklist is available in Appendix B, and details of the elements in Table 3.

This approach allowed us to collate the multiple findings from different audiences into one coherent document, which could be used to promote discussions. It also enabled us to see overlap in areas of the EDGE tool. For example, many of the actions needed to embed a supportive PER culture were linked to and overlapped with the mission and leadership domains. It also became clear that the EDGE tool does not go far enough in terms of the ‘Public’ domain, and there is perhaps an appetite for an extension of the tool to focus on external wants and needs.

Table 2. Domains of the NCCPE EDGE tool, and embedded level used in Good Practice Checklist

Mission	<i>PE is prioritised in the institution's official mission and in other key strategies, with success indicators identified. It is a key consideration in strategic developments in the institution</i>
Leadership	<i>The VC acts as a champion for PE and a senior leader takes formal responsibility. All senior leaders have an understanding of the importance and value of public engagement to the university's agenda</i>
Communication	<i>PE appears prominently in the institution's internal communications; its strategic importance is highlighted, and resources and strategic support have been allocated to sustain this</i>
Support	<i>The institution has a strategic plan to focus its co-ordination, a body/ies with formal responsibility for oversight of this plan, and resources available to assist the embedding of PE. There are a number of recognised and supported networks</i>
Learning	<i>Staff and students are encouraged and supported in accessing professional development, training and informal learning to develop their skills and knowledge of engagement</i>
Recognition	<i>The university has reviewed its processes, and developed a policy to ensure PE is rewarded & recognised in formal and informal ways</i>
Staff	<i>All staff have the opportunity to get involved in public engagement, either informally or as part of their formal duties, and are encouraged and supported to do so</i>
Students	<i>All students have the opportunity to get involved in PE and are encouraged and supported to do so. The institution offers both formal and informal ways to recognize and reward their involvement</i>
Public	<i>The institution has assessed need & committed resources to supporting a wide range of groups to access its facilities and activities, and to systematically seek their feedback and involvement.</i>

Table 3. Elements of the Good Practice Checklist

Domain	Taken from the NCCPE EDGE Tool domains (Table 2)
Benchmark	‘Embedded’ level on EDGE tool, which the University aspires to
Baseline	Data collated from focus groups and the HW Engage team on the state of play
Leadership	EDGE tool grading by Senior Leadership
Support	EDGE tool grading by Support staff
Actions	Suggested actions to move from baseline to benchmark

LESSONS LEARNT: EXTENSIVE WORK TO COLLATE MULTIPLE INFORMATION STREAMS HAS HELPED PROVIDE DIRECTION AND A FRAMEWORK FOR AN IMPLEMENTATION PLAN

1.5 Campus Engagement

1.5.1 Family Fun Day

To raise the profile of PER at the institution and with senior leadership, we explored the potential for hosting public events on the campus; a relatively new endeavour for the HW Engage team. As a campus university, we struggle from being behind a gate, with no passers-by. However, we have a beautiful campus with a huge amount of space and parking; something many city-centre universities struggle with in terms of the logistics of events.

In the first year of SEE-PER, we piloted a large-scale event on campus, in collaboration with Edinburgh Science Festival (ESF). The festival is internationally renowned, high profile, and a sought-after public engagement activity by University academics. Over recent years, HWU academics have taken part in the events of the festival, which take place within the city, and predominantly cater to a relatively affluent audience already high in science capital. Extensive discussions took place between senior management, the PE Lead and the ESF to help the ESF understand that the venue would attract a large audience and be delivered at the high-quality associated with the ESF.

The Family Fun Day took place in Oriam, the National Performance Centre for Sports based at Heriot-Watt’s Edinburgh campus; a venue for both performance athletes and community sports. The centre is starting to develop its role as a hub in the local community, but it is not generally viewed as being part of the University.

Further, our campus is located particularly close to SIMD40 areas (Scottish Index of Multiple Deprivation, where SIMD40 represents the most deprived 40%), and our focus groups showed that the communities do not typically attend the city-centre cultural offerings, due to cost and distance. To ensure that the event appealed to our local communities, and was accessible for those who do not typically engage with the science festival, we considered how we could *reach in* to these communities and address some of the barriers that may be present, both psychological and physical.



Figure 5. Printed promotional materials shared with our local communities to promote our Family Fun Day as part of Edinburgh Science Festival 2018

We worked with community groups and local businesses to ensure that the event was well known, well received, and tailored to the needs of the audience. We promoted the event digitally via Facebook and in print through local businesses, as well as through the ESF corporate channels (Fig. 5). By working with a local bus company and primary school, we aided families from SIMD40 areas to come to the event.

We also sought to host the event on campus to address the needs of the university – our academics are keen to engage with new audiences that do not typically attend science festivals and feel more confident engaging in a Heriot-Watt space. Finally, by hosting a high-profile event on campus, we raised the profile of PER, and helped the leadership understand the multi-faceted benefits to PER.

The day, packed full of workshops and drop-ins, attracted >5200 people from local areas, highlighting the appetite for science within these communities. Academics and PhD students from across Heriot-Watt (n=87) and neighbouring universities shared their research in a variety of ways, and were supported pre-event by training, advice sessions and opportunities to test events with family audiences.

Extensive evaluation was performed by ScotInform (Appendix C), revealing that the majority of visitors had never engaged with our university (80%), nor had they experienced the EISF before (63%). A success from this event has been the commitment of the University to fund further family fun days on campus, demonstrating an advance in the valuing of PER and our local communities.

1.5.2 Themed Years

Throughout 2018, we kept the profile of PER high with our themed years, which through a series of events sought to spark debate and dialogue on topical issues.

The themed years were introduced in 2017, with our ‘Year of Robotics’. The themed approach was an opportunity for the public engagement team to focus their limited resource on a strategically important area for the institution, with flagship activities aligned to the theme, and academics in related areas encouraged to be involved. The key aim was to raise awareness of public engagement at a senior level, which was evidenced by the increasing involvement of senior leadership and other departments across the institution.

The theme for 2018 was ‘Year of the Sea’ and was an opportunity to involve campuses outside of Edinburgh. Colleagues from the Orkney campus were heavily involved, and events also took place at our Malaysia and Dubai campuses. The involvement of both academic and support staff grew, with the learning from the Year of Robotics allowing us to shape our activities based on outcomes from the previous year. Further information on the themed years can be found in section 2.4.2.

A summary of data aligned to our themed public engagement years can be seen in Table 4.

LESSONS LEARNT: A THEMED APPROACH CAN BE USED TO RAISE AWARENESS OF PER, AND BE A TACTIC TO ADDRESS LIMITED RESOURCE FOR PER SUPPORT

Table 4. Involvement of Heriot-Watt University staff and publics in themed years for public engagement. For context, Heriot-Watt University has ~ 763 academic and research staff at its UK campuses

	Year of Robotics 2017	Year of the Sea 2018
Academic Staff	81	134
Support Staff	42	45
Students	44	516
School pupils	1800	1500
Schools	100	30
People	13,000	19,000
MSPs, MPs, Peers	40	21
No. of public events/activities	27	41

1.6 Strategic and Operational structures

1.6.1 Steering Group

Prior to the instigation of the SEE-PER programme, an advisory group had been in place for public engagement since 2013. The group mainly consisted of academics from across the university with an interest in PER, and although it was chaired by the Deputy Principal (Research & Innovation), various changes in this position had led to a lack of strategic direction and no route for upward communications.

Table 5. PER Steering Group (names reflect 2019 membership)

Name	Position	Steering Group Role
Prof. Garry Pender	Deputy Principal for Research and Innovation	Chair, Reports to University Executive
Prof. Gill Hogg	Deputy Principal for Staff Development and Engagement	Community engagement
Dr. Fiona Armstrong	Director of Research Engagement	Advises on industry and research engagement
Prof. Rory Duncan	Senior Academic	Academic Representative
Rob Flett	Head of Global Communications	Communication Strategy
Dr. Laura Wicks	Public Engagement Lead	Public Engagement Expert
Carolyn Brock	Impact Manager	Pathways to Impact
Prof. Graham Turner	Professor of Translation and Interpreting	Beltane Fellow
Prof. Alan Gow	Professor of Psychology	Academic Lead for Themed Year
Dr Ryan Woolrych	Associate Professor of Urban Studies	Community Perceptions of Place

In 2017, we launched a new PER Steering Group chaired by the Deputy Principal (R&I) and involving key senior stakeholders from across professional services and academia (Table 5). Recognition of the growing importance of PER was evidenced by the request of other senior leaders to be involved in the group.

1.6.2 Operational

Prior to the SEE-PER Project, the HW Engage team was located within the Centre for Academic Leadership and Development, which had a focus of training and development of academics and researchers. The instigations of SEE-PER coincided with a structural reorganisation ('Building our Commonality'), and it was recognised that the remit of HW Engage extended beyond training. The team now sits within a newly formed Policy, Strategy and Impact Team, within the Research Engagement Directorate. This has the effect of highlighting impact as a key element of our PER strategy within the overall purpose and direction of the university. The move into Research Engagement was finalised in Year 2 of the programme, and the short-term impact is described in section 2.4.4.

LESSONS LEARNT: THE LOCATION, DIRECTION AND LEADERSHIP OF THE PER TEAM IS IMPORTANT, AS IS AN OPPORTUNITY TO INTEGRATE WITH OTHER UNIVERSITY AGENDAS

Year 2

2.1 Introduction

Following on from successful interventions in year 1 that raised the profile of public engagement, and ensured its inclusions within the University Strategy, we sought to capitalise on the momentum into year 2. The second year of SEE-PER focused on extending the embedding of PER beyond the university strategy, moving the agenda from what is written to what is realised. We developed an implementation plan and created awareness and buy-in for future initiatives. We further developed discussions with our local community stakeholders, relaunched our PRIME Awards, and navigated the path between PER, outreach and community engagement.

Our aims were:

1. Work with middle-management and Campus Champions to develop bespoke support structures for PER at School level, including appropriate recognition and reward procedures
2. Build on our baseline understanding of PER activity to develop a heat-map of PE across our organisation to identify hot spots and cold spots and connect areas of good practice
3. Upskill our PER Champions to continue embedding PER, sharing best practice with their colleagues
4. Launch the University strategy for PER, bringing together senior management, Campus Champions and external stakeholders to explore next steps
5. Understand an apparent disconnect between our focus group opinions and evaluations gathered from engagement activities in Phase 1
6. Evaluate whether our actions have made a difference, by repeating the community consultations and walk-alongs, after a 12-month period
7. Use the knowledge gathered from our community focus groups to implement a series of pilot interventions based on community wants, with an overarching aim of increasing conversations between our academics and the publics affected by or involved in their research

Many of these aims are still a work-in-progress, as is common for culture change programmes, and reflects a variety of changes happening across the institution. At the time of writing the year two business plan, we were in a period of strategy development and were awaiting clarity on timings and PER inclusion. As the second year developed, we adapted our approach to reflect opportunities that arose, which meant that some of our proposed aims have been postponed.

The primary outcome of the second year of SEE-PER was the launch of a series of activities to develop the PE Implementation plan, which was delayed in year 1 due to the timing of the University strategy. The strategy launched in January 2019, and we then undertook workshops and discussions with leadership to understand what was needed to achieve the strategic outcomes of the institution.

A draft implementation plan was put to the PER Steering Group in December 2019 and will be launched in early 2020. As further detailed in section 2.4, PER champions, senior management and external stakeholders have been involved in the development of these plans, to ensure that we capitalise on the opportunities that SEE-PER has given us.

Throughout both years of the SEE-PER programme, our focus has been on the mission and leadership of the institution; raising the profile of PER such that it is recognised within university strategies and structures; clarifying the purpose and focus of PER; and identifying critical actions to support it. Our evidence-gathering approach was particularly appropriate for our institution, which is very much an applied, STEM-based university. This, we believe, is a crucial early step for embedding

a supportive culture. Unless PER is valued and promoted by senior management, and its importance acknowledged within university strategies, then the other culture change aims identified in SEE-PER will be even more of an uphill battle.

Our initial proposal was based on an understanding of where we were pre-SEE-PER, and knowledge of interventions taken across the sector to embed a culture supportive for PER. However, a key learning throughout this programme is that one-size does not fit all, and you have to be adaptive to initiatives and priorities of the institution, changing focus when opportunities arise, and accepting when great ideas may not be the right fit for your institution. While we aimed to have school specific PER action and evaluation plans in year 2, the university is still at the stage of developing school specific plans to deliver the overarching University strategy, and our focus has been to build relationships within the schools to ensure PER is part of their plans. A standalone PER plan will not be taken up by the school unless it reflects the other aims of the schools, and thus we are taking a similar approach to the top-level embedding of PER.

2.2 Project inputs

The primary resource, and perhaps even the only resource needed for such a culture change project is time. **Time** for the public engagement professionals and other staff to develop initiatives, have conversations with key stakeholders, and understand the institution and what initiatives will work.

The SEE-PER programme gave us this opportunity – HW Engage had been in place for four years, however many of the initiatives were reactive, and there was little time for evaluation and strategic planning. The timing of the funding was such that we were not able to capitalise on the time available in year 1, due to unforeseen staff changes and restructuring. However, into year 2, we were fortunate to have additional funding for PER from the institutional EPSRC IAA funding, and from the EC European Researchers Night proposal. These posts allowed the PE Lead time and space to focus on the delivery of the SEE-PER project and was the most valuable asset. The success of the programme has been driven by the PE Lead and coordinators, with dedicated time required to enable the development and integration of PER programmes into the research life cycle and university mentality.

The time of the PER Steering Group was a particularly valuable asset; by ensuring bi-monthly meetings, PER remained high on the agenda of these who have the power and resources to make change. This will continue post-SEE-PER and we believe this asset is crucial for most-HEIs seeking to embed a culture where PER is valued and supported.

Additional inputs included **funding for consultant's time**, which was particularly valuable for our evidence-based approach. Focus groups and evaluation workshops were conducted by external experts; it would not have been appropriate or as valuable for institutional staff to run these activities as would lead to biased evidence.

Creating opportunities for academics to engage the public in their research was enhanced by resourcing; by using UKRI funding, we created a variety of **activities** on campus to share best-practice, raise awareness of the value of PER, and allow academics new to PER to take that first step in a safe and supported environment. Funding for the development of online resources and marketing collateral for internal audiences enabled us to start our awareness raising campaign and will be used for the next few years to continue this journey.

Knowledge from previous culture change programmes was also incredibly valuable, including using the EDGE tool to enable people to think about where we are, and where we want to be. Interestingly, the Catalyst and Beacon reports were particularly useful in showing that not everything you do will work, and that it is not a personal failure, but the nature of these types of projects. The nature of academia is such that failure is not discussed, the focus is very much on results and success – nobody talks about failure despite it being at the centre of all scientific endeavour. Within PER, institutions do not want to be seen to be failing, particularly when it impacts on their reputation, and so are risk averse. PER professionals have to tread the thin line of pushing for new endeavours that will benefit the researchers and will enhance the culture and recognition of PER, while at the same time ensuring that PER is not seen as frivolous or at worst damaging the university reputation. Sharing what does not work across the sector is crucial if we want to create a country of inclusive, open HEIs, valued by the taxpayer and seen as a force for good.

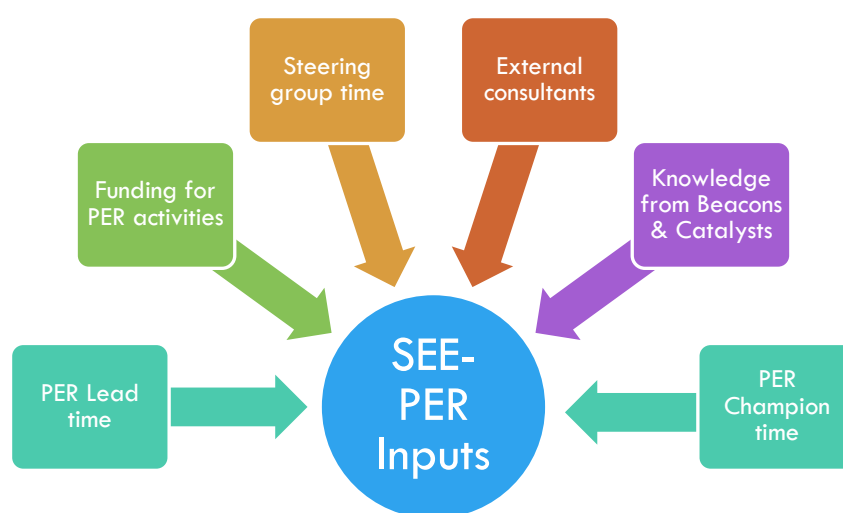


Figure 6. Key inputs to the SEE-PER programme at Heriot-Watt University

Finally, an input that we requested in phase 2 of the programme, but in hindsight was not as valuable as could have been, was the **time of the academic champions** from across the schools. Inclusion of a small amount of time with little lead time does not allow the academics and the PE lead the chance to develop valuable interventions for their schools. A key learning is that this needs to be an official role supported by the Heads of Schools, similar to other recognised roles, with clear job descriptions and deliverables.

Our objectives for both phases 1 and 2 of SEE-PER were incredibly ambitious, and not achievable within the short time period of the programme. However, they have set a framework for activities and interventions which we will conduct over the next few years.

LESSONS LEARNT: TIME IS THE MOST VALUABLE ASSET; SMALL POTS OF FUNDING FOR PER ACTIVITIES ALONE WILL DO LITTLE TO ENHANCE CULTURE

2.3 Assumptions and context

The key assumption made when designing the project was that change was needed. HW Engage had been in place for 4 years, had won awards and funding, and the appetite for PER was increasing within the institution. However, the approach that we were taking at the time for not sustainable and not the best use of the limited resource. The assumption was that a more strategic approach was needed, and this assumption has proved correct.

The project was designed to complement the timescale of the delivery of the university strategy and as such as been dependent on developments at a senior level, outside of the control of the project team. The second phase of SEE-PER was designed to build on the momentum from year 1, and so moving on from the embedding of PER in the university strategy to the school level interventions. However, the University strategy was only launched in January 2019, which was already a few months into year 2, and thus our focus remained on capitalising on the inclusion of PER in the University strategy, which was required before we could move to a school level.

The adaptive approach we adopted, whilst not planned, enabled us to take large steps forward in embedding the culture we aspire to by focusing on priority areas. The timescale was not sufficient to deliver the aims we put forward in phases 1 and 2 but are still goals we are working towards; culture change cannot be sown up in a 2-year programme.

The primary assumption that was not met was that institutional resource was available for the PER team. Delays in recruitment in year one led to delays in some areas of the programme, with a reduction in support and postponement of activities. This had ramifications for year 2, which was conflated with the change in personnel of the Director of Research Engagement who has budget oversight for the PER team.

LESSONS LEARNT: CHANGING THE CULTURE IN AN INSTITUTION REQUIRES AN ADAPTIVE APPROACH, ALIGNING HIGH LEVEL PRIORITIES AND TIMELINES

2.4 Activities and outputs

Throughout the two-year period, various interventions took place to raise the profile of PER, embed PER in the University strategy, and create fit-for-purpose structures and resources. In January 2019, Heriot-Watt launched 'Strategy 2025', which included the following key outcomes for PER in the 'Building Flourishing Communities' strand:

Public Engagement with Research: we will strengthen our reputation as an engaged university that does not treat public engagement as an add-on. A structured public engagement team will support our academics to drive culture change and mainstream dialogue between all our communities and publics on the excitement and value of our research.

Outcome: We will design an implementation plan for Public Engagement, co-created with our global-local communities, and prioritizing societal needs, by 2020. This will help us inspire and understand the mutual needs of our global local communities and provide measurable pathways to global impact through our pioneering research.

Our Vision

Our vision is to be world-leading within all our areas of specialism.

Our Mission

Our mission is to create and exchange knowledge that benefits society.

Our Ethos

We put our community of students, staff and alumni at the heart of everything we do. Our distinctive strengths will continue to build a global University that pioneers innovation in education, research and enterprise.

Figure 7. Heriot-Watt University vision, mission and ethos, as launched in Strategy 2025

Additionally, PER is referenced throughout the strategy, and aligns with the universities vision and mission (Fig. 7). With PER high on the agenda, it was key to focus on how we could build on that momentum, through activities that raised awareness and looked to the future. Building on year 1, the following activities and outputs allowed us to further the culture change journey.

2.4.1 Awareness Raising

Reward and Recognition

In December 2018, we recognised the efforts of our academics and researchers in our annual public engagement awards, which had been refreshed to reflect the learning from our SEE-PER endeavours. The new categories of ‘Pioneer’, ‘Impact’, ‘Partnership’ and ‘Themed Year’ were determined by the PER Steering Group and were well received. We received 17 applications (up from 10 in 2017) and awarded an extra prize in the Pioneer category to reflect the high quality of applications (Table 6).

The Public Engagement Awards and Showcase event took place in December 2018 (previously conducted in the summertime, but analysis had shown this was a difficult time for academics). Attendance at the event increased from 2017 to 2018, reflecting the increasing interest in PER. There was also an increased number of attendees from the senior management team, and several emails to the HW Engage team, congratulating them on the event.

The awards were continued in 2019 and have been further adapted to integrate impact in light of the close ties between impact and engagement and are now known as the Principals Research Impact and Engagement Awards (PRIME). Applications in 2019 increased, and a special Changemaker prize was awarded to an academic who had helped the HW Engage team drive culture change over the past year.

Table 6. Public Engagement Awards 2017-2019. *The 2019 Awards were changed to the ‘Principals Research Impact and Engagement Awards’ to reflect the integration of PER with impact and its growing importance

	2017	2018	2019*
Applications received	10	17	28
Prizes awarded	4	5	4
Event attendees	53	89	76



Figure 8. Winners of the 2018 and 2019 Heriot-Watt Principals Public Engagement Awards

Promotional and Marketing

A learning point from our external community consultations in year 1 was that there was an interest in the research undertaken at the University, and a wish for more to be shared. We also knew we needed to continue to raise awareness internally, with the launch of the new University strategy giving us an opportunity to address some of the challenges of embedding PER raised in our year 1 focus groups. Many of the interventions aimed at raising awareness and opportunities for dialogue externally also raised awareness internally.

'Konecting' with our communities

A first step in sharing our research with our local communities has been the launch of the 'Local Labs' column in a free monthly magazine, 'Konect', that is circulated to all households across the west of Edinburgh and West Lothian (over 50,000 households). Launching in July 2019, the column is used to share research aligned to opportunities for the public to speak to the featured researcher. For example, in September, we featured Dr Heidi Burdett whose research into the impact of climate change on marine ecosystems formed part of the Doors Open Day event happening that month. This partnership will continue beyond SEE-PER and has been well received internally.

Each month, the article is also featured on the Heriot-Watt website and publicised internally using HW news and social media. This has led to an increase in requests from researchers to be part of the column, and consequently, an increased awareness by the HW Engage team of research being undertaken across the institution.

Although the impact of this small intervention has not yet been evaluated, one of the featured articles on 'Eco-bricks' was seen by the lead for the new Community High School and has triggered discussions about using this new technology in the build. Evaluating the impact of this activity will form part of the HW Engage Evaluation framework moving forwards.

Internal awareness

Internal publicity within the university has been achieved using the digital screens throughout campus, which at all times throughout the year feature an opportunity from the HW Engage team – from prizes, to events, to networking. The awareness of these screens is difficult to measure, but the

increase in attendance at events, and prize applications is a solid indicator that this method is appropriate.

We have also launched a new Sharepoint site; originally a stand-alone site, this has now been integrated into the new University sharepoint and will be officially launched in early 2020. This portal will enable researchers to see upcoming opportunities for engagement and funding and will allow us to monitor views.

Public Engagement will also become more prominent on the university website, which is undergoing a transformation. Within the SEE-PER project period, there were ~ 25,000 page views of the HW Engage webpages and PER news articles (Fig. 9). Awareness of the webpages has increased over the project, with peaks around the time of the event complemented with increased views at non-event times.

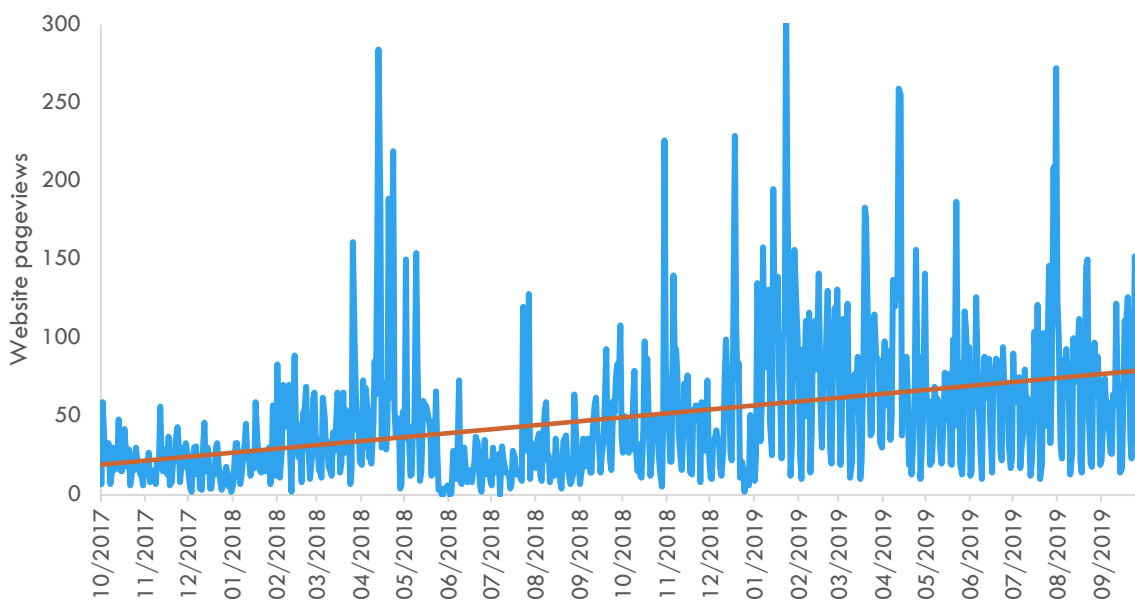


Figure 9. Views of the HW Engage webpages from October 2017 – September 2019, with the trendline demonstrating an increase in views over the project period

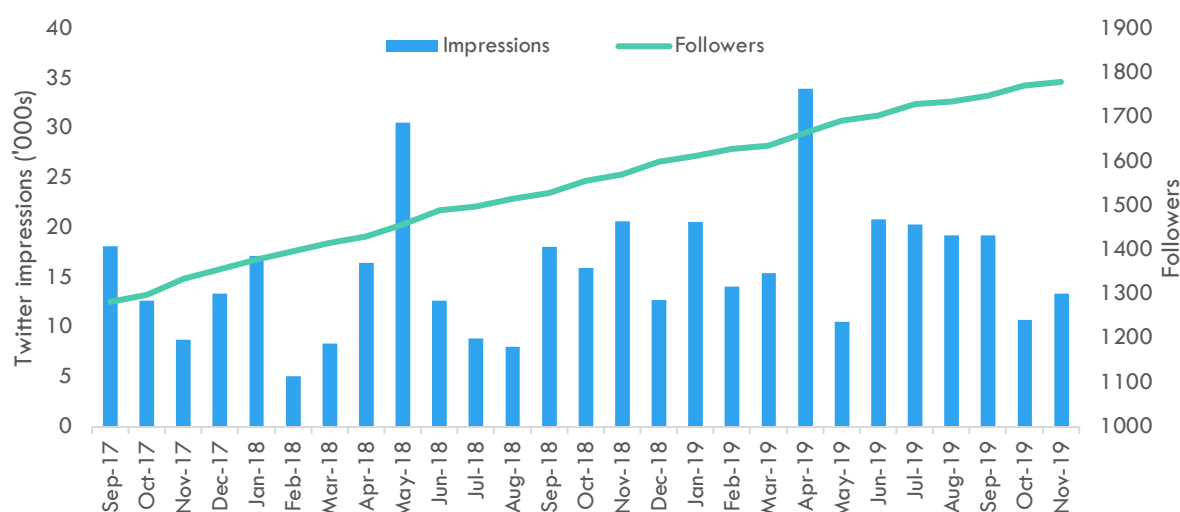


Figure 10. Twitter impressions and followers for @HWEngage

Throughout the project, events and activities have been promoted by the HW Engage Facebook page and Twitter feed. Facebook is primarily used to promote events to an external audience, whereas twitter is focused on the internal university audience.

HW Engage Facebook has 326 followers, with the family fun days registering 2.4K and 2.9K interested in the event in 2018 and 2019, respectively. The HW Engage Twitter channel has 1,794 followers, up from 1283 at the start of the project (Fig. 10).

In terms of promotional materials, the launch of the PER Implementation plan in 2020 will be complemented by two new booklets that have been developed through SEE-PER. One will be a showcase of Heriot-Watt Public Engagement, focusing on our champions, and the second a ‘How to Engage’ guide, based on the NCCPE tools and Heriot-Watt processes.

The content of these has been developed in collaboration with the champions and based on evidence gathered during the focus groups. Generic PER guidance is included and will also be signposted to on the NCCPE website. The aim of such collateral is to reduce the time resource required for the PER team, and increase the understanding of how to develop and cost high-quality PER.

2.4.2 Campus engagement

Our themed year approach to engagement continued into year 2 of SEE-PER, wrapping up the ‘Year of the Sea 2018’, into the ‘Year of Health 2019’. Within the year, we hosted a range of events for different audiences, and promoted the initiative internally across all available channels, including the ‘HW News’, via emails from senior management, on social media, and on promotional screens across the campus. There were 60 events and activities that took place within the year. In contrast to other themed years, additional activities were developed and led by academics and other professional services department, taking the remit wider than Public Engagement with Research. One such event was the ‘Health Technologies and Innovations Festival’ which brought together academics, industry, patients and stakeholders at a two-day event at the Edinburgh campus, attracting 150 attendees. This increase in events, particularly those led by colleagues outside the HW Engage team is an

indication that the themed approach is raising awareness of PER, and of the value in working collaboratively towards a common goal. Some of the events from the themed year are detailed below, with further information on the university website (www.hw.ac.uk/engage).

Engineering the Future

The HW Engage team co-hosted an event which enabled local primary schools to discuss health research with undergraduates and academics. The project involved 8-year olds setting research challenges for the undergraduates to solve, with classroom activities in the schools then being solved and showcased in an interactive fayre. Now, in its second year, the event had increased from one local primary school to three, and the interest and uptake in the project by academics has increased (5 academics in 2018, 12 in 2019).

The event was also attended by a representative from the Scottish Funding Council (SFC), who was impressed by the way the event connected primary and university students. The SFC published a blog about the event (<http://www.sfc.ac.uk/news/blogs/Blog-70251.aspx>), with the primary schools involved by sharing their enjoyment on their websites and social media.

Helen Raftopoulos, SFC Assistant Director

As a person who is constantly thinking about funding (might have something to do with my job), it was fantastic to see the teams all able to answer questions about translating their ideas into products, and even which companies might be interested in taking these ideas forward.

Best of all was seeing the benefits of 'Engineering a Healthy Future' for all involved. From the school children who authored and assessed the challenges (and already displaying the skills that make a good Council member) to the undergraduates' teamwork and confidence building in communication, and the PhD student mentors who developed their own teaching skills giving them some experience for their future academic careers.

Miss Strange, Currie Primary School

The opportunity you gave them enabled the children to use their creativity skills (a big initiative in Scottish Education at the moment). And, then seeing their ideas come to life was very exciting for them. In addition, the way the children were interacting with the students (adults in their eyes) was fantastic. I saw some of my children, who are usually really shy, chatting away to adults they don't know - it was great.

Family Fun Day

For the second year, the HW Engage team hosted a family fun day on campus as part of Edinburgh Science Festival, this time aligned to the health theme. We strove for further community involvement in the event and were successful in bringing along collaborators from seven organisations, including Hearts Football Club. We also worked closely with a local youth group who developed activities with our PhD students based around their research. We conducted extensive evaluation both on the day, by trained student ambassadors, and in follow up surveys through social media.

On the one-day event, >4500 people from our local communities attended (Fig. 11), with 94% satisfied or very satisfied with the event. Similar to our event in 2018, 42% had never been to a

science festival before, which shows that even in its second year we were attracting a new audience. Our learning from the first year allowed us to focus marketing on the local areas to the university, particularly those in deprived areas. We marketed the event as a ‘Family Fun Day’ rather than a Science Festival, as we knew the latter term could be off-putting to some of our target audience.

A summary of the event can be found in Appendix C, with a selection of images in Fig. 12.



Figure 11. Locations that attendees to the Family Fun Day travelled from



Figure 12. Family Fun Day at Heriot-Watt’s Oriam, as part of Edinburgh Science Festival 2019

Table 7. Key statistics from the themed years for public engagement. Data for the Year of Health is incomplete, as does not include December events

	Year of the Sea 2018	Year of Health 2019
Academic Staff	134	139
Support Staff	45	51
Students	516	730
School pupils	1500	1550
Schools	30	40
People	19,000	18,800
No. of public events/activities	41	60

Key learning

The evolution of the themed years from solely public engagement events and activities led by the HW Engage team, to a variety of non-PER events is testament to how high-profile the themed years have become (Table 7). However, the uptake and popularity of these events also provided a challenge for the HW Engage team with its limited resource.

The evidence we collected throughout the events enabled the PER Steering Group to make the following key decisions:

1. The Themed Year approach would be moved to biannual, to allow the HW Engage team time for planning and reflection. The next themed year will be in 2021, aligned with the Universities Bicentennial celebrations
2. The Family Fun Day will no longer take place as part of Edinburgh Science Festival. Being part of the ESF for two years demonstrated that there was an appetite for these type of events on the outskirts of the city, with 74% very likely to return to campus for future community events. However, the timing and logistics of being part of ESF were prohibitive for a vast number of academics. It was thus decided that a similar event, led by Heriot-Watt, would be launched in 2021, to allow for scoping and resourcing

2.4.3 Community Consultations

Building on the focus groups conducted in the community in Year 1, we sought to develop these discussions with community stakeholders. We invited stakeholders onto our University campus to discuss how we could better engage with our local communities, in terms of our research, teaching and wider assets. Stakeholders included representatives from the City of Edinburgh Council, local councilors, MSPs, teachers and health services (Fig. 13).

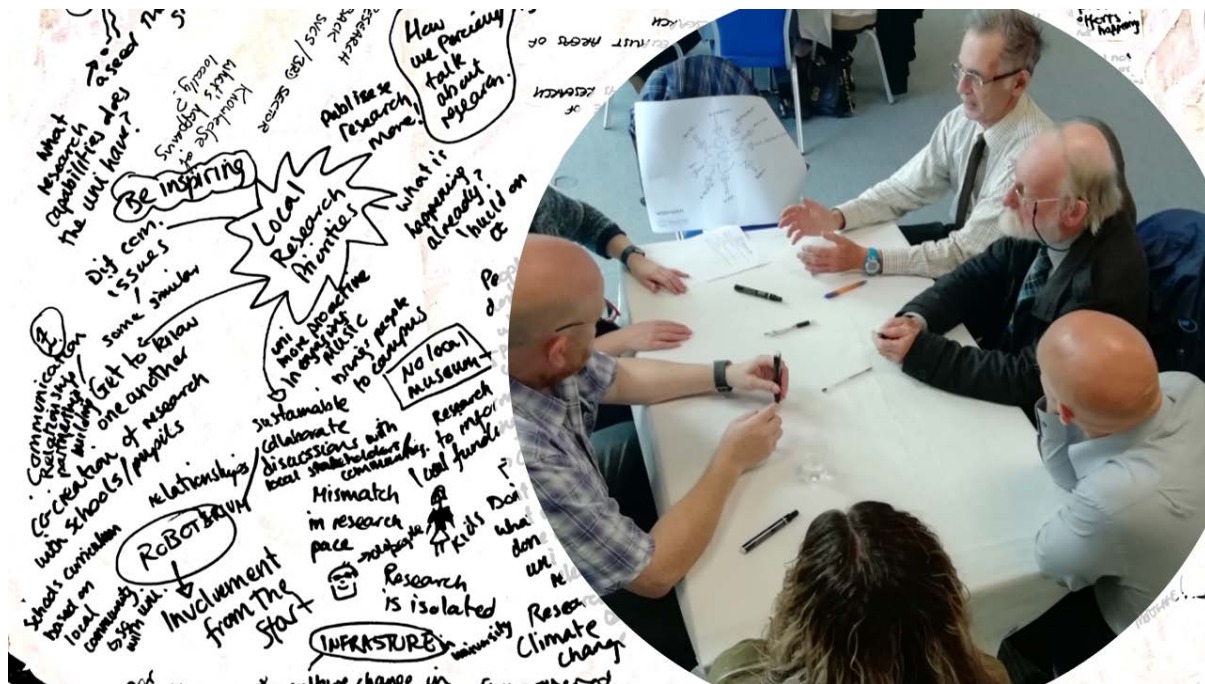


Figure 13. Time to Talk Event at Heriot-Watt’s Edinburgh campus

A full report is in Appendix A. The key messages from the event were:

1. Those people that took part in the “Time to talk” event were not only open to the idea of deepening engagement between the University and local communities, but enthused by the prospect
2. They saw real benefits all round, where the University could be a greater asset to the local community and the local community can be a greater asset to the University
3. Underpinning all of this was the key theme of openness, both from the University and from local communities
4. There is some scepticism in local communities as to whether engagement is something that is “tokenistic” and not a genuine guiding value of the institution
5. A common theme in the discussions was that engagement is not something that the University should “do” to communities. Importantly, it should be about a sharing of ideas, experiences and capabilities between the University and communities

The outputs of this event have been shared with those who took part in the workshops, as well as the senior leadership. The next step will be to set up a community advisory group and develop discussions with our new stakeholders to ensure we sustain and build these relationships.

2.4.4 Developing the PER Implementation plan

With a PER Implementation Plan a key deliverable of Strategy 2025, a number of activities allowed us to bring together evidence collected in year 1 and 2 of SEE-PER.

These included a workshop hosted by Evaluation Support Scotland with PER Champions and professional services colleagues, which focused on what we do now, and what we want to achieve. Our definition of PER and vision for Heriot-Watt were presented to the group for discussion and agreement.

Definition

Public Engagement involves creating an opportunity for people to consider, participate and debate ideas. It is a two-way, mutually beneficial process, which may involve activities like participation, conversation, interaction and listening - from hands-on activities for children, to artists inspired by research issues, to public debates and community focus groups

Vision

We will embed and sustain a culture in which staff, students, departments, and the institution as a whole proactively listen to and engage with communities.

By creating opportunities for people to discuss, create and participate in research, our research will be more relevant, impactful and trusted

We will strengthen our reputation as an engaged university that values public engagement as central to our mission.

This followed on from similar workshops with Evaluation Support Scotland in Year 1, in which the PER Steering Group and HW Engage team developed a logic model, and outcomes and indicators for PER.

Outcomes from the workshops are detailed in Appendix D. These reports were compiled into an Ideasboard (Appendix D), which was presented to the PER Steering Group in November 2018 and further discussed at the University Leadership Forum in December.

2.4.5 Strategic and Operational Structures

Year two marked the final stage of the university restructuring of research support, with the HW Engage team moving into the newly built 'Research Engagement Hub' (Fig. 14). Being co-located with teams responsible for research grants (pre and post award), training, business development and legal services is proving hugely beneficial for the HW Engage team as they have developed a better understanding of how PER fits into the wider context of the university.

The presence of the team in the space that academics come to speak to experts about developing grants reminds the academics of the importance of PER within pathways to impact, and has led to increased demand for HW Engage expertise. Additionally, the Research Development team (responsible for developing grants) has a better understanding of PER and its importance, and now signpost the team to academics developing their proposals.

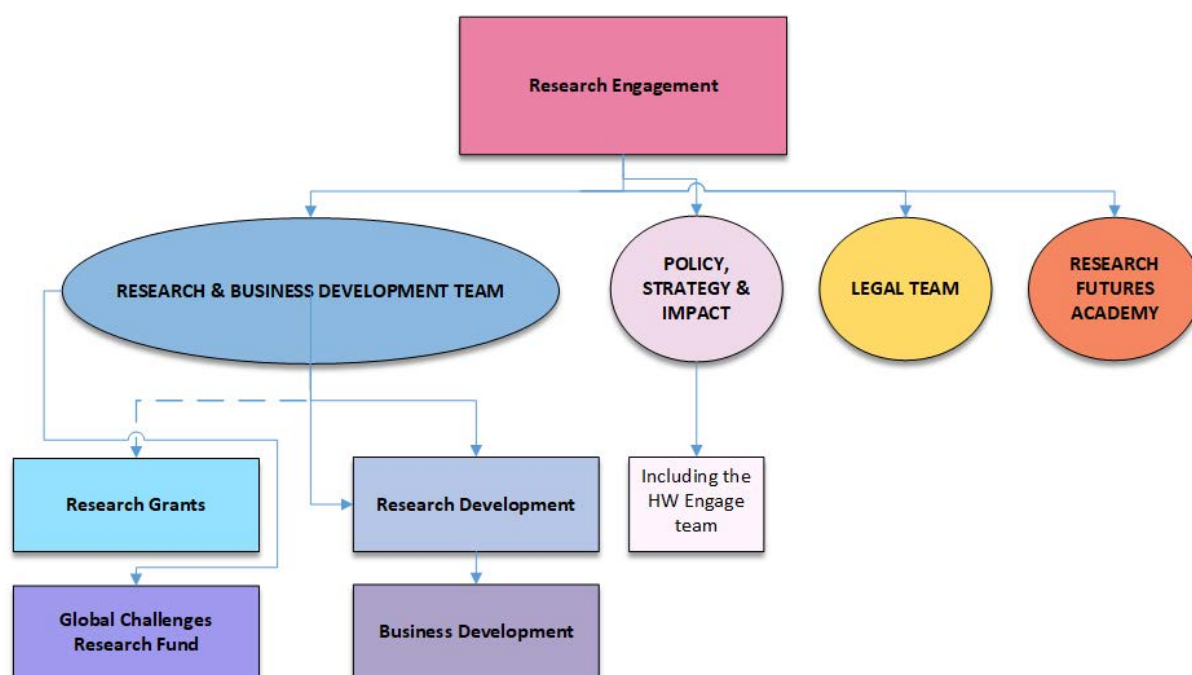


Figure 14. Structure of the Research Engagement Hub, into which the HW Engage team were relocated during SEE-PER

The increased demand for PER expertise, along with feedback gathered in year 1 of the project led to the development of a suite of new tools to help the HW Engage team deliver a service for the academics to deliver high quality PER. These include a logic model for the team, with short-term outcomes detailed (Appendix D). This model enables the team to understand the priorities and make evidence-based decisions when new opportunities arise.

Guidance was created for meetings with academics, to ensure that their public engagement projects were well planned, resourced, and evaluated.

Finally, an evaluation framework was created for the HW Engage team, based on the outputs of workshops with evaluation support Scotland (Appendix D). This framework will also us to gather evidence to identify where the ‘hot-spots’ of engagement are, and which areas require further support.

Throughout Year 2 of SEE-PER, the PER Steering Group continued to meet bi-monthly, with Terms of Reference for the group drafted (Appendix D). This group will continue to meet beyond SEE-PER as it has demonstrated to be an effective method of governance and communication.

2.4.6 Upskilling

While training was not a key focus of our SEE-PER programme, as was a priority of the challenge projects, we ran a series of training and networking events, with the following aims:

1. Enable academics to share best practice in an informal environment
2. Gain an understanding of what training is sought by academics, and (more importantly), whether they will attend
3. Keep the profile of PER prominent in people’s minds



Figure 15. Public Engagement Networking events at the Marriott hotel on Heriot-Watt's Edinburgh campus

Networking

In February 2019, we held our first PER Brainstorming Breakfast, bringing together people with an interest in PER in an informal manner (Fig. 15). The event was held at the Marriott hotel on campus, as a drop-in breakfast between 8.30 am-10.30 am on a Friday. This enabled people to attend before lectures, or after school drop-off where appropriate.

The second Networking event took place in May, combined with a celebration of the successful Family Fun Day in April. The event included a speech from the University Principal, and a discussion of opportunities coming up over the next few months. There were 29 attendees from across academic and professional services.

Co-creation was the theme of our August breakfast, with our SEE-PER colleague Dr Mhairi Stewart talking about co-creation, a topic of interest for many of our academics. This third breakfast again brought new colleagues into the network and justified the usefulness of holding these events.

Each networking event was followed up with an evaluation survey to help shape future events.

Training

In addition to the networking events that enable academics and researchers to share best practice, we also piloted a series of PER training and development events, led by external facilitators (Table 8). Prior to the SEE-PER programme, ad hoc and on-demand training had been conducted over the past few years, in addition to presentations at University inductions for staff and students.

Table 8. Training and networking sessions in 2018-19 (academic year)

Training/Networking	No. of attendees
Introduction to public engagement	30
PhD Induction (x2)	61
Evaluation: Made to Measure	9
Evaluation: Getting started	14
Storytelling	15
Gamification	22
Brainstorming breakfast	26
Staff development day	31
Co-creation breakfast	25
Celebration event	29
Institute PER training	11

Feedback from the events is being fed into the new Public Engagement strand of the ‘Supporting our Researchers’ framework being developed by the Research Futures Academy at Heriot-Watt. These will take the form of ‘bite-size’ sessions over the course of the year, focusing on developing academics understanding of:

1. Why engagement is important – REF/Funding landscape/society
2. Developing an impactful public engagement strategy
3. Presenting with confidence/storytelling
4. Gamification – Creating a hands-on activity around your research
5. Creating engaging written/online content/social media
6. Evaluation and legacy – measuring and disseminating the impact of your public engagement

These key training areas have been approved by the Deputy Principal (Research and Innovation) and will launch in 2020.

2.4.7 Champions

To ensure a two-way transfer of information between the senior leadership and the academics, PER Champions were recruited in each of the University schools. Champions were nominated by Head’s of School, and throughout SEE-PER Phase 2, champions were tasked with the following:

1. Undertake PER training to develop their understanding of best practice
2. Work with the PER Lead to identify priority areas for their school and the institution more widely
3. Lead PER forums within each school

Due to the focus of SEE-PER Year 2 remaining at the University-wide implementation plan level, the champions have been mainly focused on feeding their ideas and challenges into the wider plan. In the next 12 months, the identified champions will continue to work with the PER Lead to develop school specific plans that align with the University Implementation Plan for PER.

Key learning

Although champions were nominated by their Heads of School, this was not officially recognised within workloads, which meant that it was an additional activity for the member of staff nominated, without any reward or recognition. Moving forwards, the PER Implementation plan will include provisions around recognition of these roles, to ensure that they are seen as an opportunity, not a burden.

Lessons Learnt: Without time-recognition, the role of PER champions can be seen as a burden rather than an opportunity.

2.5 Outcomes and impacts

Taking a moment to step back and look at what has been achieved through the funding period, we are looking at a very different culture from where we begin in 2017, and fundamentally different to 2013 when the HW Engage team was created.

There is clear evidence of change, particularly when you contrast our new university strategy, with the previous strategy, which neglects to mention PER in a meaningful way. Evidencing this change is difficult, as with all culture change projects, but some intangible and unforeseen evidence can be seen in Table 9, which summarises the outcomes and impacts across the two-year period.

A key learning from the SEE-PER programme is that while it is difficult to evidence change robustly, it is useful to take the time to pause and reflect on what works and what does not. Collecting numbers is not always the best indication that an intervention worked. Running a training programme for a few people may not seem like value for money, however if those few people change their engagement approach based on that training, the ripple effect from the change could be immense.

The brevity of the project did not allow us to measure meaningful long-term change, and the restrictions that exist within the institutions did not allow us to conduct all staff surveys. However, learning from the University wide staff satisfaction survey will be available in early 2020 and may provide some key learning in addition to our own interventions.

Many of the activities from year 1 were repeated in year 2, using the lessons learnt from the first year, and continuing to collect data for future programmes. This raft of information will be fed into the PER Implementation plan to ensure a fit-for-purpose programme moving forward.

Table 9. Outcomes and impacts of the SEE-PER programme at Heriot-Watt University, interventions used to achieve the outcome, and evidence gathered of changes.

Outcome/Impact	Interventions	Evidence of change	Key learning
Shared understanding of PER and its value to research	Focus groups with academics EDGE tool assessment	Reports from focus groups EDGE tool	There are varying views across the institution (disciplines and seniority) as to the value of PER. Key actions could be identified from the barriers
PER is embedded in strategy and therefore is supported more effectively across the institution	Attendance at university-wide strategy forums Presentations at University Leadership Forums and senior meetings Focus groups (internal and community) Awareness raising activities	University Strategy Involvement of PER Lead in strategy development discussions. PER Implementation Plan Requests for PER lead meetings from senior management regarding Research and L&T strategies.	There is a lack of awareness of what the University does, and how it can be joined up across students and schools. Making sure that PER is discussed at every opportunity and with senior leaders is crucial in embedded PER in strategy.
Engaged Leadership	Regular meetings with senior team. High profile events promoted by senior team.	Increased requests from senior management for advice and input Increase in number of senior managers involved in PER Steering Group	There was a lack of knowledge and understanding about senior support and engagement, which was not realised by the senior management.
More effective governance structures for PER	HW Engage team moved into Research Engagement as part of new 'Policy and Impact Team'. Steering Group established and Terms of Reference agreed.	Steering Group Terms of Reference Continued Steering Group meetings beyond project period Business case developed for continuation of posts from core funding. PER team contracts extended using core funds.	The location of PER support is crucial, and for HWU fits best within the Research Engagement hub. This increases the profile of PER with academics and those involved in sourcing grant funding.

<p>PER recognised in reward and recognition, leading to staff promotions which recognise their PER work</p>	<p>Initial discussions with senior leadership about inclusion in PDR/Recruitment/Promotion.</p> <p>Public Engagement Awards act to raise profile with those in senior positions who have the power to change promotions and recruitment processes.</p> <p>Encouraging academics involved in PER to mention PER in their PDRs, to upwardly influence line managers.</p>	<p>Academic Lead for Year of Health promoted to Professor, in part for PER efforts.</p> <p>PER is mentioned by some line managers in PDRs, although this is not a formal recognition. One Head of School encouraged all academics to consider PER in PDRs.</p>	<p>Baseline shows no official recognition but has been raised as an issue by the focus groups. There is a desire for this both from academics undertaking PER, and senior leadership.</p> <p>This also aligns with the impact agenda and will be taken forwards as a collaborative effort, so that both engagement and impact are recognised.</p> <p>It is a key priority moving forwards.</p>
<p>Improvement in the quality of PER activity</p>	<p>Evaluation training piloted</p> <p>Training and opportunities to engage on campus</p>	<p>Uptake of training high relative to similar training programmes.</p> <p>Increase in number of academics seeking advice from HW Engage team</p>	<p>PER activities generally not evaluated due to lack of resource and understanding, identified by focus groups and PE team.</p> <p>The development of evaluation tools does little to help this, but a stealth approach of demonstrating their value to academics and leadership can help overcome this.</p>
<p>Staff motivated to participate and get involved in PER</p>	<p>Focus groups</p> <p>Public Engagement Awards</p> <p>Nominating academics for external awards</p> <p>PER opportunities led by the HW Engage team to create a safe space to engage.</p>	<p>PER Champions nominated by HoS</p> <p>Increased applications to awards, and attendance at awards event</p> <p>External awards recognising PER</p> <p>Increased uptake of PER opportunities</p>	<p>PE champions motivated by own passion and beliefs but taking the time to discuss this with them led to new ideas of how to address these challenges.</p> <p>Disillusion over why senior management claim to support PER needs to be addressed as is a key barrier to embedded PER.</p>

<p>Increased recognition of support for PER, and an increase in the take up of this service</p>	<p>Promotional campaign for HW Engage, including social media and new SharePoint site.</p> <p>How to Engage Booklets</p>	<p>Increased uptake of HW Engage advice, with PER a key component of large-scale bids.</p> <p>Increased applications for PE specific funding</p>	<p>Increased awareness needs to be backed up with team resource, otherwise the workload becomes unmanageable.</p>
<p>Communities have raised awareness of opportunities to work with university, and participate in PER activity</p> <p>Increased public understanding of the relevance and value of university/ies</p>	<p>Community stakeholder focus groups</p> <p>Konect magazine</p> <p>Co-creation activities with youth group</p> <p>Involvement of PER lead in external community stakeholder groups and partnership discussions</p>	<p>Co-created engagement events, with positive feedback</p> <p>Word of mouth feedback on impact of Konect articles</p> <p>Increased requests from community groups and schools for engagement activities.</p>	<p>Prior to SEE-PER, a large number of initiative and projects has already taken place with community groups, but these have been ad-hoc, and not reported. The new PE Implementation seeks to address this challenge and improve reporting.</p>
<p>More partnerships with external organisations, based on a shared understanding of mutual benefit</p>	<p>New relationships being explored with various external partners, including the National Marine Centre, St Abbs Marine Station and Visitor Centre, Edinburgh Council, the Centre (Livingston), and West Lothian Libraries</p> <p>Events and activities have taken place in collaboration with many of these external partners.</p>	<p>Increased requests for engagement</p> <p>Successful 'Engaging Libraries' funded project with West Lothian Libraries.</p>	<p>Taking the time to explore the objectives of each partner at the beginning is crucial to a useful and mutual relationship.</p> <p>Moving forward, we must assess how we maintain these relationships, and who's responsibility this is. This will be addressed within the 'Flourishing Communities' strand of Strategy 2025.</p>

<p>PER embedded into research strategies and into grant applications</p>	<p>PER Guidance for P2i Involvement of PER lead in Strategy workshops Discussions between HW Engage team and Research Development team on a shared understanding of PER. Presentations on PER to the wider research engagement directorate and University Leadership Forum.</p>	<p>Increased mention of PER in grant applications. Increased PER specific funding applications PER in 'Excellence in Research and Enterprise' Strategy, and regularly discussed at University Committee for Research and Innovation.</p>	<p>There was variable advice given to academics regarding the inclusion of PER in grants. PER support not properly costed. The involvement of the HW Engage team at the early stages of grant development is important, and becoming more common, however resource will be needed to maintain this involvement.</p>
<p>Results used to inform future planning/ decision making/ funding</p>	<p>Focus groups PER Strategy PER Ideasboard Presentations of PE ideas at University Leaders Forum.</p>	<p>PER Implementation Plan to be launched in 2020, created from evidence gathered during SEE-PER.</p>	<p>Staff need to believe that senior management support PER for its value to research, not as a recruitment or PR tool.</p>
<p>Improved efficiency enabling more people to get involved</p>	<p>Sharepoint site PE How to guides</p>	<p>Increased use of HW guidance webpages. Use of PE guides (when launched in 2020)</p>	<p>Lack of people resource means that other mechanisms need to be used to support staff in their PER.</p>

2.6 Sustainability

Beyond SEE-PER, we are looking at how we sustain the momentum gathered through the interventions and activities delivered over the past two years, much of which is dependent on PER staff time.

The PE Coordinator was promoted in 2018, and is now the PE Lead, which is a positive outcome of the SEE-PER fund. In the short-term, the HW Engage team is funded through to March 2020, and a business case has been submitted for core-funding from 2020.

In terms of the continuation of activities, these are resource dependent, with continuing resource to be determined early in 2020. The PER Steering Group will continue to meet, and the momentum gathered through SEE-PER has secured strong buy-in across the institution. Additionally, the university has committed involvement to the [‘Engaging Libraries’](#) programme, with West Lothian libraries, and thus will ensure a team is in place to deliver this important activity.

For the institution, evidence of impact can be seen in many ways, and beyond the funding period we have four examples of the success of SEE-PER:

1. Promotion of the PER Lead from grade 7 to 8
2. Commitment of EPSRC Impact Acceleration Account funding to the HW Engage team
3. Success in the ‘Engaging Libraries’ call in late 2019, a collaboration with West Lothian Libraries
4. The University success in the EPSRC ‘Industrial Decarbonisation Champion’ call, which included a Public and Community Engagement Coordinator role

The vast array of evidence collated during the programme allows us to understand what actions we need to take in this culture change journey. Our evaluation framework will allow us to monitor how we have progressed against our benchmark, which we will aim to do annually if possible. The key indicators are detailed in the evaluation framework (Appendix D).

Table 10. Resourcing of HW Engage team pre- and post-SEEPER

Year	SEEPER	Resource
2013 - 2017	Pre-SEE-PER (2017)	1 FTE PER Coordinator (Grade 7)
2017-2019	SEE-PER	0.8 FTE PER Lead (Grade 8) 1 FTE PER Coordinator (Grade 7, EPSRC funded) 1 FTE PER Project coordinator (Grade 5, EU and UKRI funded)
2019-2020	Post-SEE-PER – short term	0.8 FTE PER Lead (Grade 8) 1 FTE PER Coordinator (Grade 7, EPSRC funded) 1 FTE PER Project coordinator (Grade 5, EPSRC funded)
2020 →	Long term	0.8 FTE PER Lead (Grade 8) TBC

In the longer term, the inclusion of PER in the university strategy and the associated implementation plan are springboards for further embedding of PER. However, we are submitting the report at the time of the COVID-19 lock down are finding it difficult to commit additional resource to PER and it is unlikely that our Public Engagement provision will increase beyond the 0.8FTE Public Engagement Lead in the short term. To ensure that momentum is sustained, we are looking to shift the role to an advisory role, with support from other departments to deliver the following key areas identified in the Strategy:

1. **Supporting** our academics to drive culture change and mainstream dialogue between all our communities and publics on the excitement and value of our research.
2. **Maximising the benefits** our engaged university can make for the public and enhancing the understanding of these impacts amongst our global – local communities.
3. Demonstrable **widening of participation** and diversity in public engagement of all flavours, at all of our locations
4. Creating an **institutional culture** where proactively engaging the public and communities in research is recognised as a core part of the research life cycle and student experience.

The PE Steering Group at looking at how working groups across the institution can support the aspiration of the steering groups, with a number of teams identified in table 11.

Table 11. Teams identified to support the PE lead in the aspirations of the PE Implementation plan.

Aim	Supporting teams
Supporting Academics	Research development team
Maximising Benefits and impacts	Policy Strategy and Impact team Development and Alumni team
Widening participation/diversity	Widening Participation team, and new 'Education Liaison' post
Institutional culture (including training)	Research Futures Academy

Sector Resources

For the sector, key resources created during the SEE-PER programme will be useful for institutions at any early stage of the culture change journey. In particular, the good practice checklist and focus group methodologies are transferrable to other institutions and can be used to develop actions for an embedded PER agenda. A full method is available in Appendix B, but briefly, the checklist utilises the EDGE tool as benchmarks to aspire to, and with various data collection methods can be used as a tool to set outcomes to achieve 'embedding' in each of the domains. It is a tool for discussion across all levels of management and was particularly useful in bringing together a vast array of evidence into one tool for scoping out the PER implementation plan.

3. Final thoughts

Culture change can be a slow and frustrating journey, but the key to success is being flexible in your approach. We had many ideas at the beginning of the process and even at the end of Year 1, but many of those were pushed to the side when other institutional priorities arose, which gave us new opportunities. To make change in a university, you have to align with the other agendas, which may all seem to be at odds with each other but can help you achieve your goal. Taking the time to get to know the people in charge, or operationally responsible for each of these agendas is hugely valuable, but time consuming.

The timing of SEE-PER for Heriot-Watt aligned perfectly with the development of our institutional strategy; if we had been in a mid-strategy cycle, the approach would have been very different. There is no one-size fits all – activities undertaken in our small institution that brought about change may not work as well in larger institutions.

For other institutions addressing similar challenges, we have the following words of advice:

1. Understand the agendas, hurdles and drivers of different facets of the institution and how they can help you, and equally how PER can benefit them
2. Gather as much evidence of PER and its perceptions as possible, and share with senior management, even if not requested to
3. It is all about people; university leaders, public engagement professionals, internal and external communities. Talk to people, understand their values, and explore how PER can align with those values

For funders and policymakers, our recommendations are centred around holding universities and academics accountable for PER:

1. Pathways to Impact need to be rigorously assessed, with this assessment having more direct input into funding decisions
2. Universities should demonstrate their commitment to the PER agenda, with sustainable resource allowing for the development of high-quality engagement support
3. Robust lines of engagement for the university / RO sector to engage with UKRI and other influential funders should be opened

For the NCCPE:

1. Spend time within a variety of institutions to help understand how it works at the coal face
2. Appreciate the diversity in the sector; of place, scale, discipline expertise and resource
3. Support institutions that do not already have a wealth of PER funding and resources

4. Reflections from Senior Leadership

Professor Garry Pender, Deputy Principal (Research and Innovation)

The SEE-PER award from UKRI arrived at an extremely opportune time for Heriot-Watt University for two reasons:

- I had been appointed to the role of Deputy Principal (Research and Innovation) with the task of increasing our level of activity and profile in PER activities across the university.
- The university had just embarked on an exercise to develop a new strategic plan and the existence of the SEE-PER award ensured that PER activities played an important role in influencing the development of this strategy.

The influence of SEE-PER on our strategy development went beyond the setting a strategic target to grow PER, as thinking about the importance of PE and its relevance to the university resulted in our strategy reflecting not only the importance of PE, but our wider role in the places where we have a presence. Our strategy, *Shaping Tomorrow Together*, states:

True to our heritage, through our public engagement we will strengthen mutually-beneficial connections between our staff, students and wider society. We will develop a framework for public engagement that addresses the needs of society, enriched by our international footprint to deliver thoughtful, well-planned initiatives rooted in our specialist expertise.

The strategy also contains the specific PER initiative:

Public Engagement with Research: *we will strengthen our reputation as an engaged university that does not treat public engagement as an add-on. A structured public engagement team will support our academics to drive culture change and mainstream dialogue between all our communities and publics on the excitement and value of our research.*

As a consequence of this strategic focus we now have a strong senior leadership team actively supporting the development of PER across the university, see Table 5. In addition to facilitating the creation of this team the SEE-PER award has resulted in the following high-level outcomes:

- A better understanding of what activities constitute PER across the university.
- Clarity on who our core publics are for our UK based campuses (work out with the SEE-PER award is ongoing to achieve the same level of clarity for our overseas campuses).
- Improvements in the variety of methods we use to effectively engage with our publics.
- An extremely positive team spirit across the professional services supporting PER and the academic staff community engaged in delivering PER.

The strong collaborative ethos the SEE-PER award has engendered between professional services staff and the academic community has significantly strengthen the quality of our PE activities.

Examples include:

- The growing success of our “Year of ...” Events. These begun due to the reputation and profile of our research activities in robotics and artificial intelligence growing and as a consequence encouraged us to run a themed PER year - Year of Robotics. This success provided a model for future development and we have followed this with subsequent themed years: Year of the Sea and Year of Health. The growing success of these has been a consequence of the high-level outcomes listed above.
- The staggering success of our Family Fun day with 5,200 members of the public visiting the campus to participate in a daylong celebration of PE activities covering a wide range of our research activities was a consequence of our growing confidence in organising PE events, which arose out of the collaborations facilitated through SEE-PER.

As a consequence of the SEE-PER award, Heriot-Watt University now has PER firmly embedded within its strategic plan with PE recognised as an essential part of the university's activities by the senior management team. Of course, the challenge with PER never ends, there is always new science to be communicated, new publics to be engaged and more resources necessary. I am confident however that PER at Heriot-Watt University will go from strength to strength and this is in no small part due to the SEE-PER award.

5. Talking points

5.1 Culture change

The two-year SEE-PER programme has seen us take massive steps forward in our university culture, many of them intangible as is the nature of culture change. Many of the same battles around resourcing and future planning remain, but the signs are positive. PER is mentioned throughout the University strategy, with a Public Engagement Implementation plan a key deliverable in 2020.

Without SEE-PER, we would still be functioning in a reactive, ad-hoc manner. Taking the time to gather evidence, speak to those involved and those who might potentially be involved has given us both the clarity and the confidence to understand what we need to focus our efforts on for the maximum impact. Much of the steps forward have been people centred, with the burden on the shoulders of the PER lead. To bring about change and ensure PER remained in strategy discussions relied on the PER lead inserting themselves into discussions about the strategy at all levels; from open forums led by the principal, to online surveys and conversation boards, to senior level gatherings – building and maintaining the high profile of PER took a concerted effort by the PE lead that was to the detriment of other initiatives.

Many of the challenges addressed during SEE-PER are not unique to PER. There is growing pressure on academics to deliver high-quality research leading to grants and papers, high-quality teaching leading to satisfied students, an ever-increasing administration workload compounded by cost-savings on professional services; add to that PER and impact, and the system is not sustainable. The funders have a key role in supporting universities to change their culture, such that PER is valued. If the funders do not demonstrate value for PER, more than a tick box exercise, then it is difficult for universities to demonstrate the value.

5.2 Challenges

The primary challenge encountered throughout the SEE-PER programme has been the uncertain resourcing and unmanageable workload, driven both by university systems and the format of the UKRI programme.

Our proposed programme was ambitious, and reliant on having enough resources internally to deliver. However, at the start of SEE-PER, one of the PE Coordinators (0.5FTE) left the institution for a new opportunity, and it was therefore the responsibility of the remaining PE Coordinator to deliver both the SEE-PER programme, and continue to support academics from across the whole institution with their PER activities and funding applications.

The restructures taking place in the institution, coupled with the short time scales between notification of success and the project starting meant that it took 11 months for a new post to be appointed. In the first year, the majority of the planning initiatives took place and were hugely successful, however the support role that the PE coordinator had previously undertaken suffered, as there was not the time for the 1 FTE to do both.

The second year of funding from UKRI, while welcomed, was again confirmed with a restricted timetable which made planning difficult. A key challenge in public engagement more widely is planning. With a large proportion of PE posts subject to short term funding, setting up new initiatives and support systems within the institution can prove difficult. To address this, we focused our limited resource on embedding PER in the university strategy, knowing that longer term this would create buy-in for resource. We also sought to raise awareness of the benefits and opportunities with PER across the institution, to further grow buy-in and increase the chance of sustainability.

Moving forward we are now trying to plan future initiatives and activities to support our growing academic body, but without knowing what resources exists to support these initiatives this proves difficult.

5.3 Success

Our main success was the inclusion of PER in the University strategy and the significant increase in buy-in across the institution. This was not the result of one thing, rather a series of interventions and conversations that sought to raise awareness of why PER should be at the centre of our research culture.

While many of these interventions were ad-hoc, and reactive in terms of what was going on across the institution, we also delivered high profile public engagement events that were new to the institution. These events were hugely successful, primarily because we had the time and resource to plan events based on the audience and with a clear outcome. The success of these activities has allowed us to demonstrate their value to senior management. In a risk-averse sector, such activities which could have a negative reputational impact if done wrong are generally shied away from. We collected evidence of the want for such activities, and piloted them over two years, learning from each activity how to improve latter ones.

The aim of the events and activities was two-fold – to provide an opportunity for our researchers and our local communities to start dialogue around their research, but importantly, to get senior management talking about such activities. This was very much a marketing exercise internally, selling a product to an institution which is risk averse and lacking understanding of the value and spectrum of PER.

Springboarding from these activities has allowed us to create a PER framework based on evidence. This will be a flexible plan, but by piloting activities to understand what our communities want, we have a better appreciation of how to achieve outcomes moving forward, and to secure buy-in from a risk averse leadership.

