StAnd Engaged

Final Report

Dr Mhairi Stewart

SEE-PER

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 an incubator model for finding and fostering community-university knowledge 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.

Contents

1. Context

Location

The University of St Andrews has a unique place in Scotland, historically and geographically. We are a research-intensive University ,with an international reach, composed of 19 academic Schools and a number of cross-disciplinary research centres or institutes.

The University is embedded in St Andrews, a small town of 16,800 permanent residents, in a rural area of Scotland. All residential areas of St Andrews score in the top 50% (least deprived) of the Scottish Index of Multiple Deprivation (SIMD), with 70% of areas in the top 20%. In contrast to this, many of our extended local communities in Fife could be considered rural and hard to reach, with many sitting in the lowest percentiles in terms of socioeconomic profile. As illustrated in figure 1, our nearest large urban areas are city of Dundee and the town of Glenrothes.
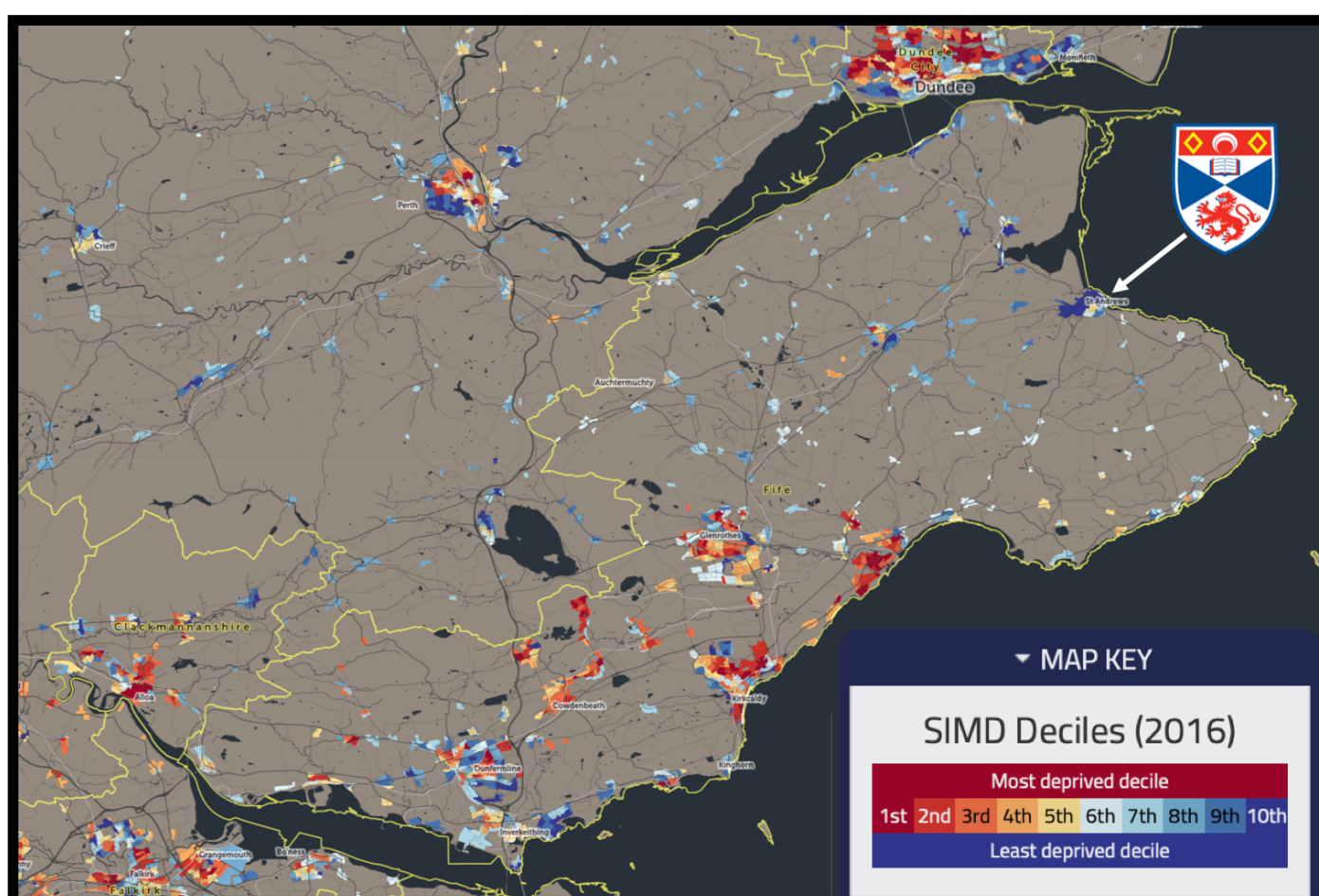

Figure 1. SIMD map of Fife showing areas of habitation and the SIMD decile values for these areas.

Engagement with Research in St Andrews

Until recently, public engagement was not fully embedded in our approach to research and scholarship. In 2015 the University had excellent but isolated examples of public engagement with research (PER), and harboured a small community of engaged, but largely unconnected academics. Support was through external provision of training or advice, or through peer support, with no input from in house public engagement professionals. Recognition for achievements in PER was mostly external. In 2015 a PER officer (Dr Mhairi Stewart) was appointed under the Wellcome Institutional Strategic Support Fund (ISSF). In October 2016 Dr Stewart was appointed Head of Public Engagement with Research with a remit to support University wide PER.

The Head of Public Engagement with Research manages three public engagement officers totalling 2 FTE which makes up a central public engagement team embedded in Corporate Communications. The Head of Public Engagement with Research and 0.5 FTE of a public engagement officer are currently funded through a Wellcome Institutional Strategic Support Fund, with all further funding for salary, embedding activity, and delivery opportunities derived from external grants held by the Head of Public Engagement with Research. The University has undertaken to maintain the Head of Public Engagement with Research's salary with core funding once the ISSF funding has expired. The work undertaken by the PER team has highlighted the potential for St Andrews to move from a community of 'many engaged academics' to an 'engaged university'.

In establishing the rationale behind our culture change activity, we gathered institutional context by using the EDGE tool with various groups in the University. This included all members of the Principal's Office and the Research Excellence Board, all individuals within the University with PER in their job descriptions and a brief internal survey, disseminated through Directors of Impact available to all researchers. We also consulted the 2015 PER survey informing the 'Factors Affecting PE by UK Researchers' report, to which St Andrews University directly contributed.

Following a successful SEE-PER funding bid, the StAnd Engaged project was designed and implemented to drive embedding of PER through five key areas of activity; establishing governance, increasing visibility, defining and raising quality, providing motivational incentives to participate, and creating steps to ensure sustainability of activities and opportunities. In designing our culture change activities sitting within these five priority areas, we drew on the learning from the Beacons, Catalyst, and Catalyst Seed Fund PER embedding projects

2. Short Overall Approach

SEE-PER support has enabled the University of St Andrews to capitalise on learning from the Beacons and Catalyst projects, avoiding pitfalls and leapfrogging ahead in its development of support for PER. High profile and highly regarded training and reward mechanisms are now in place and networks of engaged practice are gaining momentum and vitality, informing University policy and strategy. The central public engagement team contribute to institutional documentation and there is a noticeable increase in requests for support from across the University, including from professional service units supporting research and researchers. The ongoing challenge is now one of maintaining the significant momentum we have developed, as we lose capacity through, and funding for, public engagement professionals. We are confident however that the University of St Andrews has moved significantly towards becoming an engaged university and maintenance of current activities will be enough to keep us at our current point.

3. Synopsis of Year 1

In seeking to embed an institutional culture supportive of PER, our project concentrates on five interlinked areas of activity (see figure 2). In our first year we directed our activities to senior management as well as to individual researchers, as we were confident these were the areas in which the quickest progress could be made.
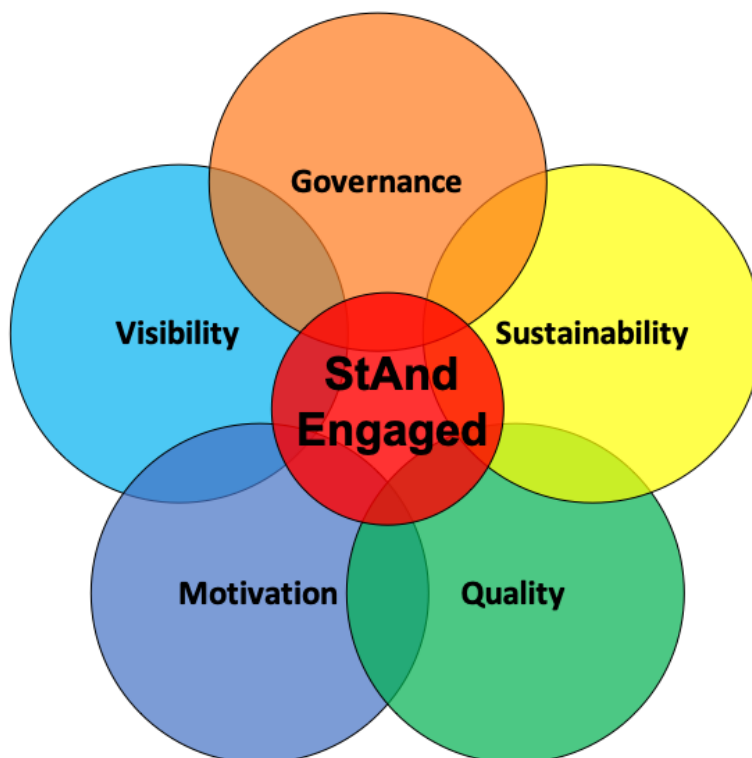
Figure 2. StAnd Engaged areas of priority.

The chosen areas of priority and their key outputs are outlined below. More detail on activities in year one in included in Appendix 1

Governance, meeting the SEE-PER call aim of 'developing a strategy that clarifies purpose and focus of PER and identifies critical actions to support it'. In this activity area we wanted to establish a framework which enabled PER to be responsive to institutional agenda in a manner that informed, and was informed by, institutional strategy and operational change, enhancing the quality of strategic decision making about PER institutionally, in academic schools, and in the PER team. Key outputs and outcomes included,

- Establishing a PER institutional working group which included a senior academic lead (Vice-Principal, Research and Innovation) and academic leads from four schools providing leadership within their disciplines.
- Establishing a network of PER professionals and facilitators including PE professionals, academic leads, and highly engaged staff.
- Holding an NCCPE facilitated session for professional service units to encourage collaboration and foster awareness of PER in a wider institutional context.
- A particular highlight of year one was receiving the Principal's approval for becoming signatories of the NCCPE Manifesto for Public Engagement. The University of St Andrews became full signatories in August 2018.

Visibility, meeting the SEE-PER call aim of 'increasing awareness and motivation across academic and professional staff'. This aimed to address the lack of visibility of support and opportunity within the institution by creating a dynamic digital presence on various platforms and a strong physical presence establishing and promoting a PER team with a strong identity. Key outputs and outcomes included,

- Establishing a digital presence through a centrally supported website.

- Hosting PER surgeries in academic Schools, providing an open drop in forum for interactions with researchers.
- A rise in the number of researchers seeking our support, an increase in disciplines contacting us, and in the variety of support requested.
- Recognition of PER as a positive contributor to many agendas within the University including widening participation, equality and diversity, and staff and student training, and a contributor to institutional level reports, self-assessments and strategic documents.

Quality, meeting the SEE-PER call aim of 'supporting learning and sharing of good practice across the institution'. The work strands within this priority area include training, internal and external networking, and developing guidelines on the ethical dimensions of PER. This has had the impact of raising visibility, disseminating good practice and facilitating networking. Key outputs and outcomes included,
- Development of the Public Engagement Portfolio, a suite of training activities mapped against the [Vitae Researcher Development Framework](#) and delivered to three cohorts: post-graduate students, academic staff, and professional staff. The three programmes bring all PER related training together under one umbrella,
- Investigating ethical frameworks for PER, as well as consolidating our networks, internal and external.
- Undertaking an audience segmentation analysis of our audiences' motivations and barriers in collaboration with the Byre Theatre

Motivation, meeting the SEE-PER call aim of 'removing barriers and consolidating incentives, through reward and recognition and alignment with other institutional priorities'. Here we aimed to raise individual and institutional pride and recognition of PER activity by creating and hosting new opportunities for reward and recognition and integrating PER into current opportunities. Key outputs and outcomes included,
- A full day internal PER conference and internal PER awards ceremony.
- Requesting to present at School management meetings leading to additional requests for support from the PER team for multiple new PER culture change initiatives, including PER committees within two Schools and establishing academic leads for public engagement in four.
- We also administered and evaluated an innovative seed-funding opportunity in our Biomedical Sciences Research Centre

Sustainability, meeting the SEE-PER call aim of 'developing a sustainable way of supporting PER'. It was envisaged that all of the above activities, combined with the capacity to measure and record the resulting culture change, would enable us to make a case for the continuation and expansion of institutional support for staff and budget for PER activity. Key outputs and outcomes included,
- This was done through encouraging uptake of grant support and training (see **'Quality'**), and evidencing this through evaluation.
- While not a key area in this project, engaged teaching was an interesting and novel area of development for us. We found that by encouraging undergraduate involvement in their research engagement work, many researchers are themselves undertaking more innovative and meaningful engagement activity.

4. Introduction

We achieved much in our first year as evidenced above. Having evaluated the outcomes, successes, challenges, and framing of our first year of delivery, we decided to continue with our previously identified five priority areas, and update our core aims for our culture change activities:

1. Much of our work has involved embedding PER knowledge, training, understanding, quality, reward, and recognition at an institutional as well as on a personal level. This continued to be a work in progress, and we further delivered, evaluated and revised as appropriate our work at these levels.

2. In the second year of activity we also extended our activities to include embedding of knowledge, training, understanding, quality, reward, and recognition at School level. This was strategically important, and the continuation of funding gave us capacity to undertake this.

Both these aims were broken down into our five strategic priority areas aligning with the overall aims as outlined below.

- **Governance:** meeting the SEEPER call aim of 'developing a strategy that clarifies purpose and focus of PER and identifies critical actions to support it'.
    - In this strand we were well-embedded at an institutional level and with support units with whom PER has areas of similarity of mission. Further activity aimed to engage more support units with PER activity in a strategic manner, especially in terms of collaborations and partnerships in development, delivery, and evaluation. In parallel, we expanded the PER working group as we embedded further with more Schools under our second strategic aim. This in turn helped to develop the aims of our project, embed support for PER throughout the institutional framework, and ensure that PER is valued, rewarded and integrated within institutional policies, practices and procedures at all levels.
- **Visibility:** meeting the SEEPER call aim of 'increasing awareness and motivation across academic and professional staff'.
    - We assessed through direct feedback methods the usefulness and accessibility of our digital and physical presence. We aimed to refine our presence to be optimally useful for our internal audiences, ensuring a continuously high level of awareness and access to professional support. We aimed to tailor this support to the disciplinary and administrative requirements of researchers, staff, and professional services. We also aimed to extend our external visibility to cultural and community partners by continuing as a hub through which external PER partners feel comfortable approaching the institute for collaborations.
- **Quality:** meeting the SEEPER call aim of 'supporting learning and sharing of good practice across the institution.'
    - An objective in year two was to evaluate its uptake and success, and modify where needed, to optimise our training provision in PER through the portfolio. We planned to investigate the potential of external accreditation, so that the portfolio can gain the recognition required to place it on a par with the widely acclaimed 'Passports to Excellence' programmes.
    Further objectives include to applying the learning from our audience analysis to institutional strategy and ensuring our researchers are able to benefit from and develop relevant, dialogic, and impactful engagement activities.
- **Motivation:** meeting the SEEPER call aim of 'removing barriers and consolidating incentives, through reward and recognition and alignment with other institutional priorities'.
    - Our objectives were to extend our institutional conference and PE awards for another year, support Schools in establishing their own PER awards, and assess the success of seed funding opportunities (matched funding from Institutional KE/Impact fund and ISSF stakeholder funding).
- **Sustainability:** meeting the SEEPER call aim of 'developing a sustainable way of supporting PER'.
    - While we have gathered evidence and intelligence into the sustainability of PER in the University structure and research lifecycle, there is not a clear pathway ahead in terms of funding for future sustainability. The University made one central PER position permanent

(ahead of this award) and we plan to provide further evidence for the necessity of additional permanent positions. We realise, however, that a key feature of sustainability will be in awards held by the central team and in salary buy-out of staff time from individual research grants. With that in mind we aimed to use the capacity in this extension to further develop our current PER staff and seek funding opportunities that further our embedding activities.

The aims and objectives for year two broadened our culture change activity to include School management. This broader audience gave us a more rounded view of our activity which has challenged our assumptions greatly. In year one, concentrating at senior management and the individual level we found that motivations and drivers overlapped and mostly complemented. Working with School level management has brought in an awareness of extensive complications to embedding PER in terms of competing priorities and pulls on time such as workload management and School level internal reporting and outputs. We would go as far as to say a whole new project is required at this point in order to allow the space to understand and implement activity.

In terms of the public engagement sector more broadly, there is learning here that needs to be understood. PER professionals are often not in senior enough or centrally located positions to be able to have this all-inclusive view from the individual to the School to the institutional levels of strategy and need. Those that are departmental or School based are not close enough to senior management and often lack a wide viewpoint that allows a deep understanding and significant contribution to embedding at an institutional level. This project has provided evidence of the advantage of a hub and spoke model of PER expertise in sustaining movement towards embedding the activity, the motivations, and the philosophy of an engaged university.

5. Project inputs

By far the most important resource in this project has been experienced personnel. Public engagement is a specialist area requiring knowledge in many related areas such as project management, partnership building and maintenance, training and workshop facilitation experience, expectation management, performance delivery and exhibition build knowledge, educational frameworks at all levels, and extensive internal and external networks. This broad knowledge base and professionalism is not created overnight, especially as it is also specific to place.

This was brought sharply into focus when our SEE-PER project officer relocated. The position was vacant for three months as we went through the recruitment process followed by a period of training and bringing the new project officer up to speed with activities and contacts. This unfortunately happened just as we started a major set of activities for SEE-PER, and for other projects, meaning there was no way of driving the SSE-PER project forward at the same pace until the new project officer was settled. This is partly an issue with short term contracts within the sector. The two year project being funded one year at a time meant we weren't able to guarantee employment for excellent public engagement professionals who naturally sought employment security elsewhere.

A major area of learning for the StAnd Engaged project, and for the field in general, is that the public engagement officer role was originally posted at Grade 5 (£27,511-£32,816). The strategic activity and responsibility levels are however more suited to a Grade 6 (£33,797-£40,322). As we had a very successful year one we realised that this success then drains resources due to more requests for input and consultation, and more initiatives being proposed and asking for direct assistance. For this reason a part-time project officer on an embedding project is not enough and we reflected this in our second year application. We would have been able to support more activity and driven embedding further with more personnel time. In

future we would recommend that embedding work require a Grade 6 or above role to be appointed full time.

Additional resource we gathered includes our relationships with internal professional service units who, in St Andrews, have been central to our culture change work in terms of both activity and in contributing knowledge bases and methodologies to inform and enact these activities. Alongside this has been other sources of funding for PER activity that allows researchers to participate in diverse public engagement activities, gain confidence in delivery, and to find a type of activity and delivery situation that suits them best. We did this through externally funded projects such as Cell Block Science (Wellcome funded project bringing informal science learning to Scottish prison learning centres), EXPLORATHON (H2020 funded Scotland-wide research festival held on European Researchers' Night), and through unfunded pilots with community partners such as libraries and the Fife Primary Science Development Officer. This also highlights a crucial resource in terms of relationships with external partners and potential partners, activity that must be taken into account in plans for culture change.

6. Assumptions and Context

In terms of assumptions, we assumed there would be wide support from individuals, the governing bodies of the University, and professional service units, beyond those we had already been in contact with. We were assuming that where there was initially no support, the evidence on benefit to the individual and the institution collected through this programme would create a convincing case supporting culture change to embed PER. Despite understandably competing priorities, this turned out to be accurate. We found that taking time to understand how PER contributes to those competing priorities, and contributes to mitigate potential risks, helped significantly in driving participation and embedding engaged practice.

We were in fact surprised by the number of stakeholder interactions and established activities, especially from our professional service units, were community-based engagement in nature. Especially those in units we would not normally consider as providers of engagement activity such as IT services and the university library. These units also undertake significant amounts of community engagement. A key point in collaborating with these professional services was the skills, training, and wide-ranging networks PER professionals could provide. This is evidenced by the number of professional services staff who are undertaking the PE portfolio in their own personal development. This has confirmed that a truly engaged university should be considering dimensions of engagement beyond research and teaching in becoming an anchor institution local, nationally and globally.

We were confident and have subsequently shown through the number of individuals wo engaged with our conference, our training and our awards, that there is a great deal more engagement activity throughout the University beyond PER which was not being widely supported or recognised. Due to this, best practice in delivery, approaches to hard to reach audiences, and opportunities of support, collaboration, and impact were not being communicated. We assumed that supporting the visibility, quality, recognition, reward and sustainability of PER would support more than just the research outcomes of the University, further adding to a robust business case for embedding PER and engaged practice. This has been borne out through the invitations to contribute to institutional documentation.

A further barrier to embedding PER in the University has been any perceived risk to reputation. In this context we assumed that raising the awareness of what PER can contribute, and indeed has contributed in the past, will be fundamental to removing the concerns. While this has been the case we remain concerned at the lack of an ethical framework and oversight of PER activity in our University and others. This is work we have contributed to on a national scale and one we would like to see driven more influentially by funders.

One further assumption lies in the appropriateness of the supporting structures we were creating and their use and perception by researchers. This was controlled for through the constant evaluation of activity through the PER steering group, the internal PE professionals' network and of course detailed evaluation of our training provision and embedding activities.

7. Activities / outputs:

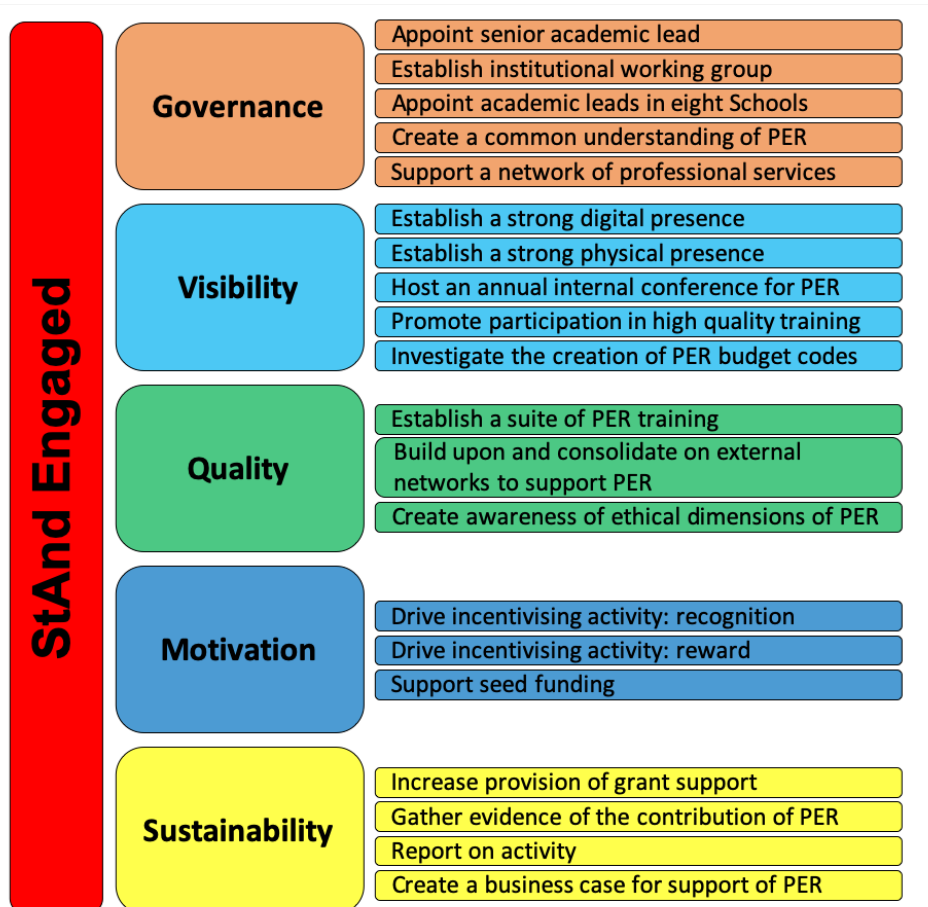A high level overview of activity over the whole period of the grant is summarised in figure 3.

Figure 3. An overview of StAnd Engaged priority areas and outputs.

Activities and outputs in year two are listed below under the key areas of activity identified in the StAnd Engaged logic model.

Governance
- Our senior academic lead in the form of our grant holder and the Vice Principal (Research and Innovation), Professor Derek Woollins relocated during the second year, and our newly appointed VPR, Professor Tom Brown, has stepped into the role. Professor Brown is as strong an advocate for PER as our previous VPR. As can be expected, there was a period of adjustment as other priorities were of more immediate concern. This did not stop the activity of the project but combined with the temporary loss of a project officer did mean there was less contact for a brief period.
- The institutional working group has had a brief suspension of meetings, due to the reasons outlined above, however these will now resume in the New Year.

- We planned to have new academic leads for PER appointed in at least four Schools bringing the total to seven.
- In working towards a common understanding of PER, StAnd Engaged has provided reports on the PER contribution to a new University strategy and a review of our institutional social responsibility activity to the Director of Corporate Communication. One change has been the appointment of a University social responsibility and community engagement manager. We have worked very closely and fruitfully with this appointee. As this individual sits directly in the Principal's Office our collaborations have been to the advantage of the SEE-PER project.
- We established internal networks for both PE facilitators and professional service units. These networks have flourished and are now key structures in the University.

Visibility
- Digital Presence. Our webpages were launched in October 2018. There was some discussion over who the audience for these pages were and if they should be behind a password if they were for internal use only. However the StAnd Engaged team argued strongly these should be externally visible and they were put into a public facing section of the University website. Initial evidence showed these were accessed by a mostly internal audience, however evidence collected in our second year of delivery has shown increasing external use. This has led us to consider what external audiences are using the site and what how we might like to develop the pages in future. We have also established a Facebook and twitter presence which is mostly used in promoting events and activities to a wider audience.
- Physical Presence. The PE facilitators and Units networks are flourishing and academic leads are appointed in Schools as contact points, so combined with regular coffee meetings for students on our PE Portfolio, we maintained a 'hub and spoke' model of support that seems to work very effectively for us.
- Training. The Public Engagement Portfolio was launched towards the end of year one and has become a key feature in increasing the visibility of the advantages that PER brings to the individual. Portfolio coffee mornings and special events for portfolio graduates have also boosted visibility.
- Internal Conference. We modified our internal conference based on feedback from the conference in year one. This included changing the day of the conference from a Friday to a Wednesday and introducing more quick sessions for individuals to showcase their work or workshop activity with attendees.
- We had also planned to enter into discussions about creating PE budget codes within research grants in order to ringfence funds from grants. However, there was no capacity for this in the end and very preliminary discussions with finance and contracts suggested this may not be feasible in any case. It remains an untested method for embedding engaged practice in research in St Andrews.

Quality
- Training. The Public Engagement Portfolio was launched towards the end of year one. The portfolio is delivered to three cohorts: post-graduate research students, academic staff, and professional staff. Participants are required to complete six core sessions and six chosen sessions, allowing for flexibility in an individual's portfolio journey reflecting their preferred methods and audience in their engagement practice. All portfolio trainees are required to complete a delivery session and a self-reflective report to graduate from the training programme. We have not changed anything in our delivery of the portfolio as evaluation and uptake is so far very favourable. For an example of a portfolio please see figure 4 below and for full details of delivery visit our portfolio webpage.
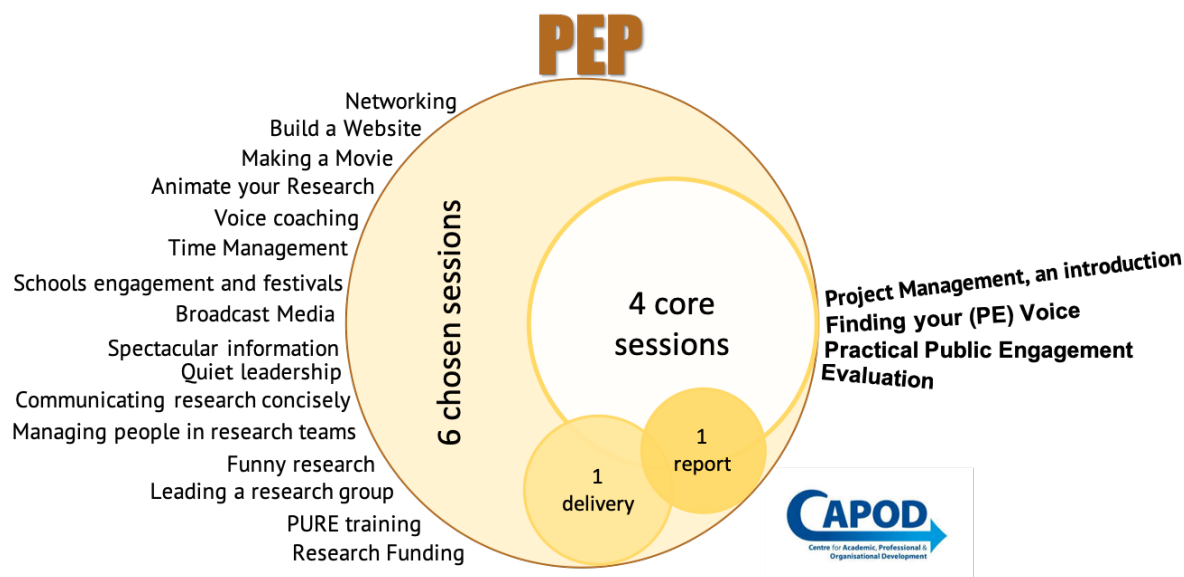
Figure 4. The structure of the PE portfolio for professional staff.

- An area we felt we should not neglect is the building of external networks which could aid the quality of PER development, delivery and evaluation in St Andrews. Work in this area has included being open to sitting on panels and advisory groups, opening up delivery opportunities to key partners, and sharing evaluation and training opportunities where possible. SEE-PER has enabled us to maintain relationships throughout the year with groups who contribute to our flagship events in March (Science Discovery Day) and September (EXPLORATHON).
- Ethical dimensions of PER. As previously mentioned, progress in this area has been slow and it remains a concern that the collection of potentially sensitive data, including GDPR sensitive data, in a longitudinal study with human subjects to demonstrate impact of an activity, in other words 'evaluation', could potentially put the positive influence of PER on our research at risk.

Motivation
- Incentivising activity. The PE Portfolio has become a key measure of recognition for skills development in PER. Our conference and internal awards have also become important ways to reward best practice and innovation in PER. In this second year of activity we have seen Schools maintain or start their own internal awards for PER. Another method of recognition has been in highlighting activity to the press office who compile our internal Newsletter, 'In the Loop'. All of these activities raise the visibility of PER activity and impact.
- Funding of activity through the KE/Impact Awards administered by the Research Impact team are also important in incentivising activity.

Sustainability
- Key to sustaining momentum is PER team capacity to drive culture change initiatives. There has been much activity to demonstrate the value of PER which will be presented as a business case to Principal's Office, but there is little progress other than this. We still rely on grants held by the StAnd Engaged team. However, PER is explicitly mentioned in the strategies of our Corporate Communications Unit and the Byre Theatre and we are assisting four Schools in creating PER strategies at the School level. There is significant embedding potential in these activities although their significance without investment in the expertise to advise and develop them in the future is uncertain.

8. Outcomes and Impact

An overview of outcomes mapped to activities and outputs is summarised in figure 5 on page 25.

Governance

- **Senior academic lead, Institutional Working Group, Academic leads**. The senior academic lead on this grant is Vice Principal (Research and Innovation), Professor Tom Brown. The VPR chairs the institutional working group which is also attended by School academic leads for PER and the director of corporate communications who has direct line management of the PER team. The embedding of the PER team in corporate communications has resulted in close links to internal, external, and digital communications. This has served to raise internal awareness, communicate our activity institutionally, and allow the team to be pro-active to institutional agenda. Evidence of this can be seen in the increase of pieces on PER published in the internal newsletter, 'In the Loop' (graph 1)
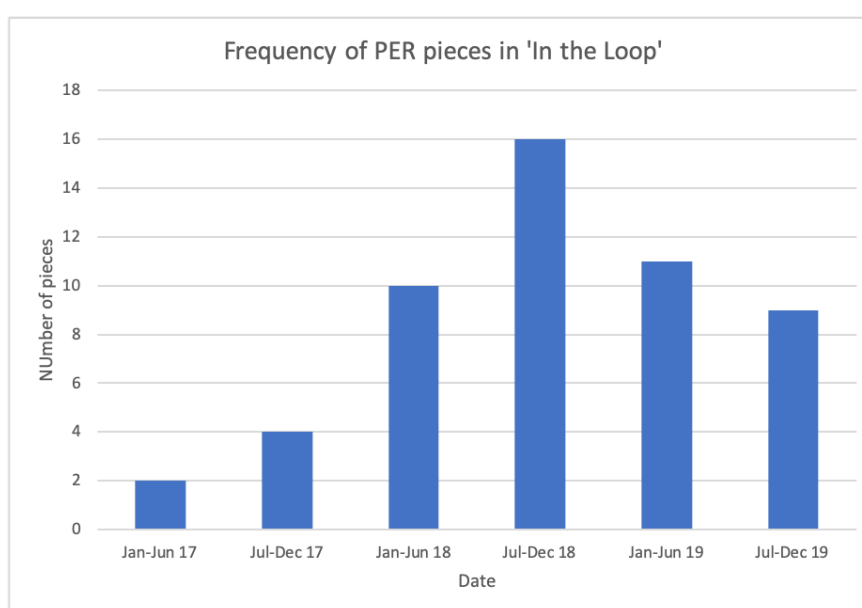
Graph 1. Number of articles included in 'In the Loop' related to PER.

We now have academic leads in seven Schools, Biology, Medicine, History, Physics and Astronomy, Psychology and Neuroscience, Philosophy, and Film Studies. The leads in Biology and Medicine head up their School working group for PER. Biology, Physics and Astronomy, and History are undertaking surveys to inform a School strategy or policy on PER.

- **Common Understanding.** A landmark in creating a common understanding was our signing of the NCCPE manifesto for Public Engagement in 2018 which was driven by this project. As discussed in the year one write up, an understanding of how PER can contribute to various agenda has resulted in the StAnd Engaged team being invited to contribute to various institutional documentation such as the UKRI self-assessment document, the institutional Living Lab report on sustainability, and the Environmental Association for Universities and Colleges LiFE Matrix.

- **Internal Networks.** Contributing to priority areas on governance, visibility, and quality, these networks were set up in year one and have evolved into structures that now have impact on University strategy and policy implementation.
  - **PE Facilitators Network**: We have several posts totalling 5.9 FTE supporting PER in the University beyond the central public engagement team. This network was initially very one way in terms of information flow from the StAnd Engaged team to others, but with facilitation

has grown into a network that supports members in many ways, including training, collaboration in and provision of engagement activity, schedule planning, and activity development. Originally meeting monthly, we now meet every second month, alternating with the cultural partners meeting described below. We have a SharePoint folder where we share resources, evaluation materials, reports, training materials and a variety of events for engagement professionals, research staff, and students. We also have an events calendar where we highlight collaboration opportunities to build audience and impact, and also to help prevent any clash of events diluting audiences.

o **Professional Service Units Network**. Our initial NCCPE facilitated consultation with internal professional service units resulted in an engaged practice network. This has evolved into a 'Cultural Partner's' Network including the Museums, the Music Centre, Byre Theatre, the Sports Centre, Transitions (sustainable development team), the Library, the PER Team, and the Press Office. Outcomes from this included collaboration on successful funding bids for external bodies (Scottish Libraries Information Centre), and several units beyond our team participating in and organising engagement activity, creating opportunities for researchers to participate and developing of external audiences for all contributors. This network is also now undertaking work towards creating a cultural strategy for the University, reporting to the Vice Principal (Collections, Music and Digital Content).

Visibility

- **Digital Presence**. From the 1st November 2018 to the 1st November 2019, the total number of page views across all the public engagement webpages, was 3406, 75% of which were unique users. This is a 255% increase in page views and a 1041% increase in unique users, indicating that more individuals are using the pages to find information and support. This finding is reinforced by the fact that the parent landing page and the support pages have the lowest bounce rate (the percentage of a page session with no interactions; 25% and 22% respectively). However, as some of the pages are informational or, as in the case with the opportunities page direct users to email the StAnd Engaged team, comparing the bounce rate across the different pages may not show an entirely accurate representation. There seems to be an increase in external interest in the public engagement webpages, compared to last year with 1389, 40.9% of total users using an IP external to the University.

Graph 2 below shows the number of page views alongside the number of unique users and the average time each user spent on the page. Users were most interested in the opportunities page and the portfolio training pages and spent long enough engaging on the webpage to read the information. The webpage which people spent the most time using, was the awards page, indicating that people who used this page were interested in reading the full content. The graph below also indicates that the webpages are used by internal users mostly for informational purposes, which is what they were primarily designed for.
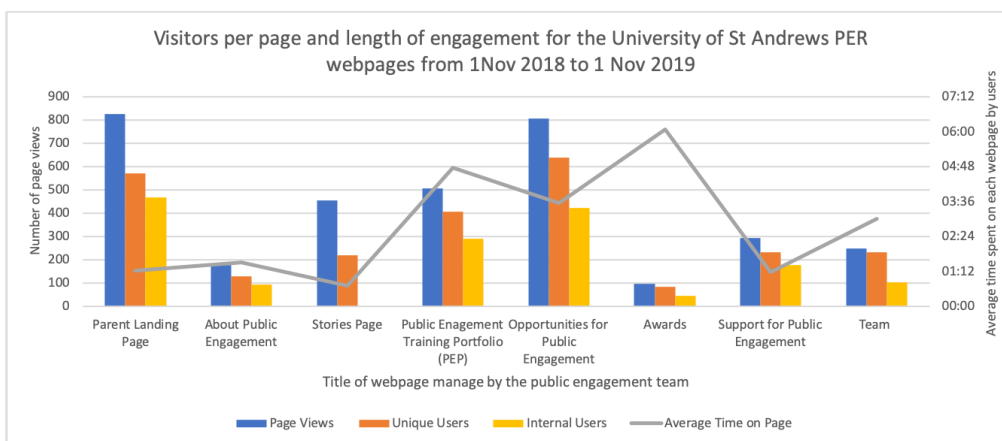
Graph 2. Various data relating to St Andrews PER webpages.

Our social media presence has also grown. On Twitter we have had fairly steady growth and currently have 567 followers, up from 293 in May 2018 with an average reach of 13,000/month. On Facebook, we currently have 346 followers up from 202 in May 2018. We see definite increases of followers and reach around Science Discovery Day and EXPLORATHON corresponding with paid reach through advertisements for events.

- **Physical Presence**. As shown in graph 3 below, our PER surgeries were initially useful but for reasons described in the outputs section we replaced these with our networks, the establishment of academic leads for PER in Schools, and the PE Portfolio coffee mornings creating a 'hub and spoke' method of dissemination.
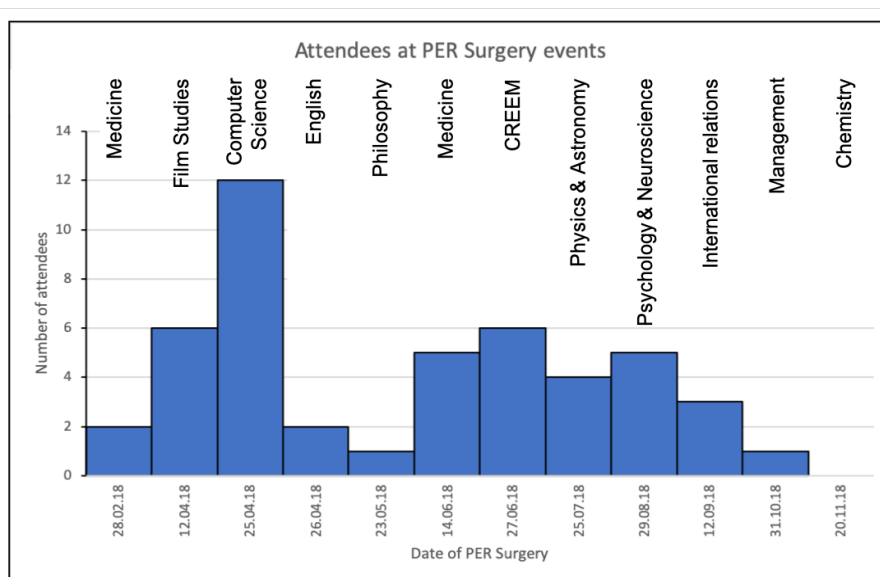
Graph 3. Attendance at PER surgery events

- **Internal Conference.** Our internal conference is very well regarded by attendees. We had 18 internal contributors in the form of talks, workshops and posters, and four external contributions. Evaluation highlighted the invited speakers and the interactive formats as highlights, and the main reasons for attending being self-development, networking and curiosity, similar to year one.

'Great invited speakers.' – Professional Services Staff

*'Very much enjoyed the conference!'* - Academic Staff

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'Enjoyed the cafe style session which gave participants a different and more intimate interaction with individual speakers.' – Professional Services Staff

'I really enjoyed all the talks/activities, and appreciated the opportunity to network across the university (and beyond) with others interested in PE.'- Postgraduate Researcher

'It was really helpful and inspirational' -Professional Services Staff

There was a drop in attendance by 38% this year, largely due to a change in date from a Friday to a Wednesday, which was a decision informed from previous feedback, and a number of conflicting events which were scheduled after our date was fixed. This was the main negative observations from attendees. In response to this we sent out a further questionnaire regarding timing and format of future conferences and received a response that suggested a one-day event in October would be the most popular, as shown in Graph 4. For this reason, we will revert to a Friday event, in October with a stronger emphasis on communicating the event early. In fact, despite the event being in the internal newsletter on three separate occasions, being distributed through our networks and being on our social media and webpages, we still received three separate communications after the event expressing unhappiness at not being able to attend due to not knowing about it. For this reason, we are sure the appetite for the event is high, however we also realise that we aren't reaching many of our potential audience and have plans to counteract that at future events including posters on School notice boards and direct emails distributed through School administrators or academic leads.
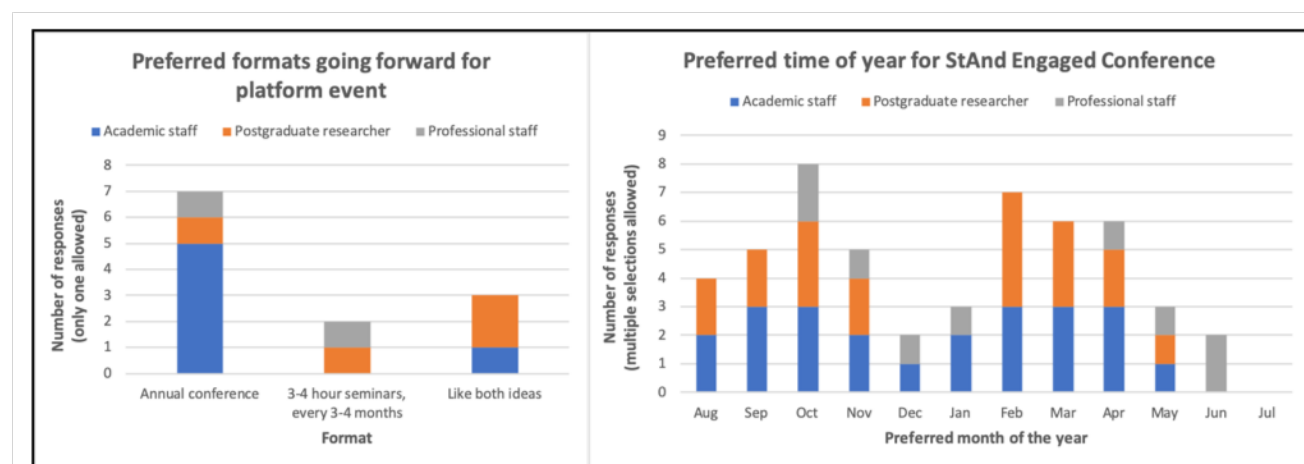
Graph 4. Attendee preferences for structure and timing of the internal PER conference

- **Participation in Training for PER.** Discussed in more detail in '**Quality**', in the year since the PE Portfolio was launched, there have been five individuals who have graduated from the programme. There are currently 45 individuals signed up and working towards completing the portfolio across all three staff and student cohorts from 12 different Schools and eight professional service units from across the university. In comparison, in 2019 the Passport to Administrative Excellence has 22 participants; Passport to Management Excellence has 40 participants; and the Passport to Research Futures has 10 participants.

- **PER budget codes.** This was suggested as a method to introduce accountability for PER spending into the system and to make funding easier to track. While we have not been able to create budget codes, we know of £608,000 of external income, specifically for public engagement, that has been awarded to the University since 2017, the time period of this SEE-PER award, compared to £94,000 in the

period from 2015-2017. Considering we know there is a significant amount of public engagement we are not aware of or directly involved in, as shown by our awards and conference contributions, we believe this financial contribution could be a highly significant driver for embedding public engagement if we could track it properly.

- **Further evidence** of an increase in visibility derives from our network of PE professionals and of research service units. Previously we received referrals from our research impact team, and in this second year we started to get referrals too from our business development, finance and careers teams. As mentioned above, we also had requests directly from these groups for collaborative activity and evaluation support. We were also asked to support four undergraduate work shadow placements. One of these individuals has now gone on to study an MSc in science communication, another is seeking employment in the public engagement sector.

Quality
- **PER Training**. In the a little under a year since launch, there have already been five graduates from the portfolio. This includes three from the postgraduate cohort and two from the professional staff cohort. There are currently 45 individuals signed up and working towards completing the portfolio across all three staff and student cohorts. In total there are 18 trainees in the postgraduate cohort, with six from science Schools and 11 from art/humanities background. Twelve different Schools from across the University are represented within this cohort, with the School of Social Anthropology, Philosophy and Film Studies being the most represented (three trainees). In the academic and research staff cohort there are 14 trainees in total, with nine from a science School and five from an art/humanities based School. There are 11 different Schools represented in this cohort, with the School of Biology (three trainees) and the School of Psychology and Neuroscience (two trainees) being the most represented. Within the professional staff cohort, there are 13 current trainees. Only three of these trainees work within an academic School (School of International Relations, School of Medicine, School of Earth and Environmental Science). The other trainees represent eight different professional services units from across the university. Our Estates and our Museums and Collection Units are the most represented with two trainees coming from each. In total there are 17 trainees from a science School, 17 trainees from an Art/Humanities School and eight trainees from a professional services unit. This demonstrates that the training offered is applicable to a wide variety of backgrounds.

  Our workshops, especially the core workshops, have been fully booked, requiring extra workshops to be scheduled. Since the start of the new academic year, attendance to portfolio workshops has been at 92% of the optimum capacity, with the most popular workshop, Evaluation of Public Engagement, having attendance of 163% of the optimum capacity.

  We use the in house evaluation provided by CAPOD. Where, for each event, the delegates are asked to rate along a 5-point likert scale the following questions:

  - Currently, how would you rate your competence in the relation to the areas addressed in the event objectives?
  - Currently, how would you rate your confidence in relation to the areas addressed in the event objectives?
  - How well the event met its stated objectives
  - Quality of materials
  - Ability of presenter(s)
  - Structure of event

      o   How relevant was the event for your personal/professional development?

      o   How likely are you to make a change (to a process or behaviour) as a result of attending this event?

      o   How well did the event meet your personal objectives?

In assessing the quality of training, we have used the evaluation from the core sessions of the portfolio as measures of quality. These are delivered by the public engagement with research team and are attended by all portfolio trainees. In the optional courses generally less than half of the delegates are attending as a portfolio trainee, and therefore it is felt that the answers given in the feedback will not be representative of the portfolio.

The first two questions are asked before the event to capture delegates perceived baseline confidence and their reasons for attending the workshop. Generally, across the core portfolio workshops, delegates' average scores for their confidence and competence were 3 (average) on the likert scale. This demonstrates delegates generally believe they have some knowledge and expertise in the workshop area, but feel they need some further training to increase their competence and confidence.

The questions 'how relevant was the event for your personal/professional development?' and 'how likely are you to make a change (to a process or behaviour) as a result of attending this event?' were scored between point 4 (relevant/likely) and 5 (very relevant/very likely). When compared to the scores of competence and confidence, this suggests that people feel they have gained some skills or ideas to take forward to improve their public engagement.

With the exception of the first two questions (as discussed above), for all the core portfolio workshops, the average rating was between 4 (good/relevant/likely/well) to 5 (excellent/very relevant/very likely/ very well), demonstrating the quality of the portfolio core workshops is very high. Additionally, in answer to the question 'what would you say to others who may be considering attending this event in the future?' answers such as *'…do it!'* regularly occurred. On every feedback form analysed from the core sessions there were answers encouraging people to *'come along'* and *'definitely attend'/ 'definitely come'* to the sessions. Other examples of this include:

> *'very worthwhile!'*

> *'well worth coming to….'*

> *'it is invaluable….'*

Delegates are clearly enjoying the workshops and feel they are worth recommending to others.

Delegates also answered questions regarding 'what [they] found most useful about the event', '…least useful about the event' and 'what actions [they] will take as a result of the event'. The answers to these questions are generally positive. For example, people enjoyed that the sessions were *'practical [and] transferable'*. Many people also wrote specific aspects of the session they enjoyed. For example:

> *'practicing the elevator pitch'*

> *'logic model'*

'the [different] activities the [university] does'

'notes of caution (traps not to fall into!)'

Often when people didn't write about a specific task from the session, they wrote that they enjoyed *'everything!!'*. Clearly the sessions are well delivered and enjoyed.

The enjoyment of the sessions can also be seen in the answers to the question 'What did you find least useful about this event?', as answers such as *'none', 'nothing', 'not much'* and *'n/a'* repeatedly occurred. People also wrote that they enjoyed the whole session in answer to this section

There was no general theme across the workshops that people did not find useful. Those who gave feedback discussing sections they did not like were often highlighting specific section they felt did not relate to them. For example:

'Funding information – just because my research is voluntary….'

'Framework/generic learning outcomes not hugely relevant for activities I am considering'

In the feedback that was analysed there was however one comment from this question which is being considered for future development of the workshops:

'doing the logic model in small groups – might be better done as one big group because it's quite new and challenging'

Overall, the feedback from this question again demonstrates that the core portfolio workshops are enjoyed and found useful by the delegates and the portfolio trainees.

In regard to the reflection question asking delegates 'the actions [they] will take as a result of this event', many of these answers were considered positive. The answers given split into three categories: reflecting on what they've learnt; relating learning to current research; and exploring future public engagement. The most frequent answers were from the reflection category. In this category, delegates discussed how they were going to reflect on the strategies they've learnt in the workshop and apply it to their public engagement and/or research. For example:

'Think more about the audience….'

'Will think more about evaluation and impact of my public engagement'

'Think deeper and research further on how to engage my audience'

'Think more about engagement and how to embed it in my research from the start'

'Think about evaluation in a more connected way'

Answers given in the relating category discussed how they are going to apply what they learnt in the session to their research. For example:

'developing impact case studies'

'looking for funding'

'Sharpen the shape and objectives of public engagement project'

'Add evaluation techniques to my activities'

In the third category, future public engagement, delegates discussed how the session has inspired them to investigate future public engagement opportunities. For example:

'Look into some of the mentioned [public engagement] events'

'…getting more involved with [PER] events'

'browse local engagement initiatives to take part in'

Overall, these comments demonstrate that the sessions were beneficial to the delegates and often encouraged or reignited enthusiasm for public engagement. The relating category suggests that current public engagement work will be elevated in the future.

To conclude, in the first year of the portfolio, there have been many successes. From our session and graduate feedback, we have raised skills and confidence within people who wish to be involved in public engagement. Over the next few years, we hope to see an increase in the quality of public engagement as a result of the portfolio. Additionally, we still have the goal to get the portfolio externally recognised in order to elevate the training portfolio to a 'passport' level.

- **External Networks**. The SEE-PER grant gave us capacity to develop external networks of benefit to PER in our University. These approaches have opened up more opportunities of funding, development, and delivery. For example, we are now being approached by external groups to be co-applicants on funding bids, e.g. Largo and Communities Hub in their application to the Engaging Libraries award. Our partnerships have also been a driver in a recent change in the demographic of individuals engaging in our flagship events. Through building these relationships with communities we are attracting audiences we would not normally reach. For example, Science Discovery Day 2018 recorded only 18% of visitors in the lower 50% of the SIMD, none of which were in the bottom quintile. In 2019 21% of visitors were in the lower 50% of SIMD, with nearly 6% in the bottom quintile. Many of these were first time visitors to the University and the event.
Evidence of the building and consolidation of external networks includes:
  - o Membership of the advisory board for the Dundee Science Centre's new ground floor redevelopment. We are also developing a Memorandum of Understanding with the Dundee Science Centre.
  - o We have developed close ties with Fife Council, especially the primary and secondary science development officers. Of concern were the number of one-off visits to schools. While these are often all a researcher has time to do, these become what our collaborators refer to as 'candyfloss' visits; very good at the time, but after delivery dissolving to have very little impact in the long run. We are trying to counteract this by having a sustained 'umbrella' relationship with schools with multiple researcher visits over the year, although any one researcher may just visit once. This has driven more requests for participation from communities and from researchers, solving issues in time and delivery that all parties have. This collaboration also

hosts a pool of teachers willing to act as advisors for researchers as they develop their activities, also driving quality of PER output. This framework overcomes the problem of 'candyfloss' visits and takes into account the barrier of time for researchers and teachers, making stronger partnerships and nurturing future opportunities. We have already been approached by the primary science development officer to put together a joint funding bid to support this programme more officially.

o   Developing an existing relationship with the Scottish Prison Service and Fife College the prison learning centre provider beyond the original project meaning we could work with vulnerable and hard to reach individuals including those with family in prison. Through the prison project we were introduced to the charity Churches Action for the Homeless (CATH) that support homeless and vulnerable adults in Perth. A successful joint funding application has allowed us to create an opportunity for researchers to engage with this very underserved group of individuals. Early evaluation shows there is great value placed on these interactions by all stakeholders.

o   We have previously worked with the Scouts and Guides to invite them to large events or provided the occasional contribution to their meetings. The capacity here has allowed us to program interactions throughout the year. This has led to more requests from groups further afield to work with researchers and collaborative opportunities such as beach cleans led by researchers from our Oceanographic Institute including activities on microplastics.

- **Ethical dimensions of PER**. Outcomes here include conference sessions, ongoing development with the NCCPE, and the development within the School of Psychology and Neuroscience of off-the-shelf ethics forms for common delivery and evaluation activities. An informal cross-institutional network has also been convened to take this issue forward.

- **Further evidence of a raise in quality** includes the increase in requests for help in high profile activity, including two Royal Society Summer Exhibitions events, one British Academy Summer Exhibition, and a large semi-permanent exhibition in the Dundee Science Centre. This includes projects that started as facilitated collaboration sessions which are now major museum exhibitions and are likely to become part of infrastructure development on the Dundee waterfront. The rise in the funding successfully applied for is another indicator discussed more fully in **'Motivation'**.

Motivation

- **Incentivising activity: Recognition**. As discussed above, the PE Portfolio has become a key measure of recognition for skills development in PER. PER is represented in workload planning in some Schools, but not consistently across the institute. A group of four researchers are now paying their PhD students to do public engagement at the same rate they would be paid to do teaching.

  Recognition also comes from peer groups. Driven by this we have seen an increase in the number of individuals requesting to take part in centrally organised events, encouraged by their peers. For example, Science Discovery Day in 2018 had 160 participants while 191 individuals took part in 2019. For Explorathon the numbers of participants stayed level, however the number of activities increased by 50% indicating that individuals were now willing to take part in multiple events.

  In increasing recognition we are also supporting all institutional PER award winners in featuring their work on the University research blog. Two posts are already published, [Whispers from Psychiatry's Past](#) and [Happy Healthy Honey Bees](#). To boost the visibility of these posts, and the awards, digital communications are developing a way to have these posts highlighted as newsflashes on our PER landing page.

- **Incentivising activity: Reward**. In 2019 we received 20 applications for public engagement awards and awarded six awards over four categories. Judges, including two external PE professionals, the Vice Principal (Collections, Music and Digital Content) and an internal academic lead for PE all commented on the quality of the applications. The awards were presented by the Vice Principal (Research and Innovation) and feedback from the evening indicated there was a high degree of appreciation for the awards.

  'Enjoyed the awards ceremony, it is great to see people being recognised for their talents.' - Awards ceremony attendee

  Alongside the awards all winners received a gold pin badge, highly commended received a silver badge, and other entrants received a blue enamel badge. These seemed a very popular addition. As opposed to a static trophy we think these are a very useful way of increasing visibility of the awards and of instances of best practice in PER.

  In addition to the institutional awards, the Schools of Medicine and Biology now also hold awards for their staff and students.

- **Seed Funding**. We chose not to directly fund PER activity from our SEE-PER award. We have instead administrated seed funding from the Wellcome Institutional Strategic Support Fund and supported applicants to the KE/Impact Awards administered by the Research Impact team. In year two, the number of KE/Impact award applications made was 21, with 20 of these including PER in their delivery. Total funds asked for were £71,664. An increase from year one of 7%.
  Funding is of course a significant motivator at the individual and the institutional level. For this reason, being able to evidence the external income as previously mention in '**visibility**' is a valuable statistic to have on hand. Being able to understand the contribution of PER activity to Research Excellence Framework (REF) impact case studies will also be valuable, once these have been released.

Sustainability

Key to sustaining momentum is PE professional capacity to drive initiatives and keep up momentum. There has been much activity to demonstrate the value of PER which we hope to present as a business case to Principal's Office for funding an additional PE officer, but there is little progress other than this. We still rely on grants held by the StAnd Engaged team.

- **Increase provision of grant support.** We now receive referrals from various units, such as research business and contracts, finance, and research impact to help with grant applications or evaluation plans. Several activities we have helped have been integrated into REF impact case studies, and also School environment statements for REF.

- **Evidence of contribution of PER.** PER is explicitly mentioned in the strategies of our Corporate Communications Unit and the Byre Theatre and we are assisting four Schools, Biology, History, Philosophy and Physics and Astronomy in creating PER strategies at the School level. There is significant embedding potential in these activities although their significance without investment in the expertise to advise and develop them in the future is uncertain. One School in particular, Physics and Astronomy, has received significant help from the PER team and the academic lead has secured an STFC PE Leaders Fellowship and an Ogden Trust award for a new officer to work on widening participation which includes PER work.

Two schools, Biology and Medicine have formed PER working groups, which work in close association with the PER team, one of the PER officers sitting on the Biology working group. There has been an increase in School led initiatives through our support, including a revival of the 'BioBlitz' an event identifying as many different species in St Andrews over 24 hours, and plans for a new Film Festival with a strong emphasis on participation. Participation for Units is also apparent with a collaboration with the Byre Theatre to host 'collider' events bringing researchers and individuals from the creative industries together to support engaged cross-disciplinary and creative activity.

The PER team is also frequently asked to contribute to a variety of events from engaged teaching in the form of undergraduate projects and Masters courses, to inter-disciplinary workshops where we contribute as expert facilitators to stimulate conversations on creating partnerships, managing expectations and driving forward collaborations. We have also been asked to contribute to away days for four separate Schools and to provide bespoke training for several student cohorts including the Masters in Astrophysics, and the CRITICAT (chemistry) and physics doctoral training programmes.

We are also contributing to the sector as a whole. Four former engaged students are now in PE professional roles or further training, one of whom has cited the PE portfolio as important in this career trajectory.

A summary of outputs and outcomes can be seen on the next page in Figure 5.

Priority Area	Outputs	Outcomes
Governance	Appoint senior academic lead Establish institutional working group Appoint academic leads in eight Schools Create a common understanding of PER Support a network of professional services	Senior Academic lead established. 7 Schools have academic leads. All contribute to institutional working group. NCCPE Manifesto and institutional documentation working towards a common understanding of PER. Flourishing networks contributing to embedding activity
Visibility	Establish a strong digital presence Establish a strong physical presence Host an annual internal conference for PER Promote participation in high quality training Investigate the creation of PER budget codes	We have a strong web and social media presence. Our physical presence is growing. Our conference and internal awards are well regarded, as is our training. The financial contributions of PER we can track are significant but are very likely only the tip of iceberg.
Quality	Establish a suite of PER training Build upon and consolidate on external networks to support PER Create awareness of ethical dimensions of PER	The PE Portfolio of training is a highlight. We have attendees across the University and, a year in, we have 5 graduates. External networks have been consolidated, with requests to collaborate on funding, and there has been some progress on ethics considerations.
Motivation	Drive incentivising activity: recognition Drive incentivising activity: reward Support seed funding	PEP graduates recognised with preferential booking for training events. Some Schools include PER in workload planning. As well as institutional awards two Schools host awards. Institutional winners are featured on the institutional research Blog. Seed funding requested, and awarded, for PER continues to increase.
Sustainability	Increase provision of grant support Gather evidence of the contribution of PER Report on activity Create a business case for support of PER	An increase in requests and referrals for support. Evidence in all priority areas of contribution and value of PER. PER is referred to in Byre Theatre and Corporate Communications strategies and three Schools are developing PER strategies. This is building a business case for institutional PER support of structures.

*(Left vertical banner: **StAnd Engaged**)*

Figure 5. Overview of the StAnd Engaged priority areas, outputs and outcomes

9. Sustainability

Our internal networks and steering group will continue beyond this funding as will discussions about the ethical dimensions of PER. These ethical considerations are relevant to the field and we are taking this forward with colleagues at several other institutes, with the steering group, including ourselves, administering the ScotPEN Wellcome Engagement Award, and the NCCPE. We are already producing resources in this area such as 'off-the-shelf' ethical approval forms for PER activity in our School of Psychology and Neuroscience, and we will monitor the usage and usefulness of these.

In terms of external stakeholders we have ongoing projects and programmes of activity that are building networks, providing opportunity, and deepening partnerships with our team and our researchers. For example, our Cell Block Science project has been recognised as the winner of a Herald Higher Education Award sponsored by the Scottish Funding Council, in the category of best partnership. This has opened up much wider stakeholder engagement including a proposal to create a new national qualification, recognised by the Scottish Qualification Authority which would serve as the basis of a framework on which more university PER activity within Scottish prisons can actively contribute towards the curriculum. This activity among others is key to building a value based business case for maintaining activity.

Centrally organised, innovative activities like that described above are crucial to embedding an understanding of best practice, broadening perspectives on audiences and their needs and involvement, and in providing drop in activity for researchers to start their PER activity with. This builds confidence and skills in researchers, and we find that many researchers who have participated in these centrally organised events go on to undertake excellent PER projects themselves.

The activities at School level, including School strategies, the inclusion of PER in job descriptions, promotions, recruitment and workload will continue the mission of embedding well beyond the funding period. We anticipate this will also provide a significant amount of information which will be of interest in understanding the workload PER places on our staff and students and will provide a more nuanced view of barriers and motivations in different disciplines. In addition, our continued interaction with service units in support of researchers and students, for example the training portfolio in collaboration with CAPOD, will continue. As we work with further support units the sustainability of the team and our activity will be promoted through both opportunity and culture change.

10. Final Thoughts

Culture change in academia is a slow process and PER is most often valued in terms of a good-to-do activity. With numerous priorities ahead of PER, e.g. funding, undergraduate teaching, various excellence frameworks, PER will remain good-to-do, not become need-to-do, unless it is seen to contribute positively to these priorities. These contributions must be evidenced and included in an institutional definition of 'quality' public engagement.

In order to effect culture change we absolutely need the long term capacity and senior leadership to drive embedding activity. Public engagement officers at Grades 5 or 6, on one or two year contracts, will have very little possibility of effecting meaningful change, even with the most supportive backing of senior University management figures. The work the NCCPE is undertaking to evidence the skills and contribution of PE professionals, including leaders in PE, will highlight these points. Funders could also consider creating funding streams for senior PE professionals to investigate PER challenges in a cross-institutional and cross-disciplinary manner.

Another area of influence which could stimulate change lies with accountability of funding of public engagement. Funding is a great driver, however there is inconsistency from funding panels on what' quality PER' is, and on what can be funded. For example, while funder guidelines often state that PE professional time can be bought out in order to drive engagement activity, on multiple occasions panels have returned decisions to fund the activity but not PE professional time in order to facilitate the activity. Regularly including PE professionals on research funding panels, or at least their feedback on Pathways to Impact, or similar, would go a long way to helping this situation. However, it is only half of the solution. In addition to up front reward in terms of funding quality planned activity, there needs to be strict accountability of PER activity in grant feedback from researchers. This feedback should be fully assessed and should have consequences for a lack of progress.

We also need to be aware of the networks around us that can assist in the embedding process. We have been rewarded for seeking out interactions with groups we would not normally approach, such as our finance and business contracts teams.

The outlook however is getting better. We are aware of a significant change in attitude toward PER activity in our early career researchers in St Andrews. The risk is now that we are not able to deliver the same level of support due to a lack of capacity, both from growth of activity and from a lack of funding for staffing.

11.Reflections from Senior Leadership

Our SEE-PER project, StAnd Engaged, has been instrumental in embedding a culture of high quality, thoughtful and reflective engagement in the University of St Andrews. Public Engagement with Research (PER) has been an influential factor in supporting and continuing to develop St Andrews as an anchor institute in our unique setting, helping us to learn from and support our communities, researchers and the institute as a whole. We have also used the project to further reach out to the non-academic community and have enhanced our reach into groups who do not traditionally engage with university research.

The StAnd Engaged team have particularly impressed with their inclusive and collaborative working method. Real gains have been made through the use of existing frameworks and collaborating with Schools and professional service units, for example the public engagement portfolio (portfolio) created in collaboration with our professional skills development team, CAPOD. Only a year into implementation of the portfolio, which delegates are given three years to complete, we already have five graduates and 45 further delegates signed up to this scheme. The delegates come from 12 different academic Schools across the arts and sciences, as well as from eight professional service units. This means the portfolio is raising the quality and the inclusivity of our engaged PE-practice across the university. It has also broadened horizons for our postgraduate students, four of whom have now gone onto careers in public engagement or further education in science communication.

I was delighted to present the portfolio graduates with their certificates, and trophies to the winners of the StAnd Engaged awards at this year's PER conference. The judges and I were struck by the diversity of projects applying for the awards, from a music album by top industry professionals inspired by whale song to a portrait exhibition at the Edinburgh Festival linked to the History of Psychiatry. A key area of note to me was the evidence awardees were able to produce in support of their applications showing both impact for and on all stakeholders and occasionally direct input into the research question resulting from the engagement activity.

The effort the StAnd Engaged team have put into network building has also created new institutional frameworks. What started as a Unit's consultation event on PER became an engaged practice group. This

group has now had a natural evolution into our cultural partners group including the Music Centre, Museums, Library and the Byre Theatre. This group is developing a sustainable and inclusive strategy for cultural delivery in the University, of which PER is a large contributor.

A further major piece of work supported by the SEE-PER award has been the audience analysis and segmentation exercise undertaken in collaboration with the Byre Theatre. Learning from this work, including audience motivations and barriers, has led to changes in delivery that have driven an increase in attendance at our flagship festival events of around 40% and a significant change in the demographics attending. For example, at Science Discovery Day in 2018, of our 533 visitors, only 18% reported postcodes in the lower 50% of the Scottish Index of Multiple Deprivation (SIMD), none of which were in the bottom quintile. In 2019 we had 1292 visitors plus a further 325 in satellite events in the run up to the Day. Feedback on the day showed 21% of visitors were in the lower 50% of SIMD, with nearly 6% in the bottom quintile. We know however that this is not capturing the full picture, as groups from satellite events in low SIMD areas, whom we engaged with in the run up to the event, all attended the Day.

The University motto is 'Ever to Excel'. We apply this to all aspects of our teaching and research, and PER is no exception. The work the StAnd Engaged team have undertaken has meant that St Andrews, a University that has only recently signed up to the NCCPE manifesto for public engagement (August 2018), now stands out as a leader in engaged practice. Outstanding activities in embedding and evidencing PER as described above, combined with strong support for innovation in the development and delivery of activity, have led to external recognition of our programmes and requests from colleagues in other HEIs requesting to participate in our initiatives or replicate our initiatives within their institutes. Further evidence is the increase of PER funding awarded outside of research grants. Funding for PER activity awarded to the team and to researchers who received direct support in the time period of this award has reached £608,000. In the two years previous the comparable figure was £94,000.

During the period of this award, the PER team have developed a great deal of experience and expertise in embedding and driving innovation in PER. This has been shown by frequent invitations to present at conferences across Europe and beyond, including Germany, Malta, a keynote talk at the 8th Engagement Thailand conference in Uttaradit, Thailand, and as participants in a Newton Trust funded workshop in Beijing, China. This continuous development of our team is significant as it brings a wealth of knowledge and networks back to St Andrews, further developing our researchers' opportunities of novel activity development and understanding of best practice.

One lesson we have learnt is that the enabling activity our PE professionals undertake is essential to our success. We know we have to secure, nurture, and retain expertise in this area. The role of Head of Public Engagement is currently funded by the Wellcome Institutional Strategic Support Fund. The University has undertaken to make this role permanent at the end of the current funding period. Resourcing for further staff, maintaining the capacity we require, is however most likely to be gained through research or PER specific awards.

In short, this SEE-PER award has created capacity for us to develop frameworks supporting excellence in PER, embedding these institutionally. Our staff and students now have a much clearer and more connected vision of what quality public engagement entails, what skills are needed to implement it, and how to effectively evidence the impact of engagement.

Professor Tom Brown
Vice-Principal (Research and Innovation) and School of Physics and Astronomy
University of St Andrews

12. Talking Points

Culture Change

Culture changes initiatives that work well in academia are well documented. Training, awards, internal networks and conferences, all work well in all contexts. The most important lesson, and enabler, of the successful application and implementation of these initiatives in an individual institute, is the capacity to drive them. The capacity afforded the University of St Andrews by this award, in terms of PE professional time, is by far the most important aspect of our culture change activity. This has enabled us to have awards and an internal conference. We have set up networks internally, including professional service units (e.g. finance, admissions, professional development, museums, development, corporate communications) who inform and support much of our work. In turn we support the engagement activity of our units through our knowledge of best practice in engagement and our external networks.

With our added capacity we have been able to develop our external networks bringing opportunities of partnership, co-creation, and delivery to our researchers. Where possible we used existing frameworks, such as personal development frameworks, to create new initiatives including our PE portfolio suite of training which covers and highlights all the skills that PER brings to our staff and students, including time, budget, and project management, grant writing and reporting skills, and of course communication, influencing, and partnership skills.

Our activity has led to St Andrews becoming recognised as a growing centre of excellence in PER, despite only recently having signed up to the NCCPE Manifesto for PER. Some of our initiatives, such as our training portfolio, our policy of providing example of best practice by creating, evaluating, and reporting on innovative opportunities for delivery (e.g. Cell Block Science), have been replicated and built upon by several institutes in their own local contexts. This helps to raise the awareness of PER activity and the contribution PER makes institutionally, which is reflected in our contributions to institutional reporting documentation such as the UKRI self-assessment and the Environmental Association for Universities and Colleges LiFE Matrix

Challenges

We started out with an ambitious number of activities to drive embedding or engagement. We achieved, and built on, all of these activities. This however meant we became victims of our own success and highlighted one of our major challenges.

With greater demands for our expertise and resources, and more involvement in our training and delivery events, keeping up excellence and not being distracted into delivering activity not central to our culture change workplan became more of a challenge. For example, our PE training portfolio became very popular, very rapidly. The challenge then, became one of delivering extra training sessions to allow all delegates to undertake the training in a timely manner. This was also reflected in the training and information sessions we hold for participants in flagship, festival style, events. Previously we only needed to deliver one per event, but as participation increased so did requests for more training sessions and development of an individual's activity. We addressed this by having 'train the trainer' sessions with our central PE team and sharing the training load. On occasion we also enabled our academic leads to deliver training. Those that participated appreciated this as a new skill and a way of evidencing leadership in public engagement. We also had to allow for more time for initial consultations for PER in grant applications and the follow up needed as more researchers applied for larger and more high profile PER grants.

This capacity issue came into sharp focus when our project officer moved on to a new, well deserved, position. Our project lost significant momentum which we are only just picking up again. This in turn reflects an issue in the sector of short-term funding and contracts. If addressed, this will drive embedding of engagement forward with greater momentum, as is evidenced in the advance in engaged practice in institutes which have made permanent senior PE professional posts with support appropriate to their contexts.

A final challenge which we have both addressed in the context of the aims of this award and still continue to struggle with is one of visibility. Our web presence and our reward and recognition activities (e.g. PER awards, blogs about activity on the main University website, inclusion in internal newsletters, and graduations from our training portfolio) has driven visibility of the support our team can offer, and also brought to our notice activities we were previously unaware of. Despite these gains, however, we still receive regular communications that individuals were unaware of a particular opportunity or activity. This is frustrating as we are using all the channels open to us to communicate our work. We hope, however, that in developing strategies with individual Schools we will be able to understand, in a more nuanced manner, how to connect successfully with our internal audiences.

Success

Success isn't always about reaching a high-profile endpoint. Sometimes enabling, undertaking, and sustaining, the most seemingly unexciting, routine, or minor activities are a greater measure of success than the big banner headlines. For example, we set up networks with both PE professionals and with professional service units. The units' networks include units we would not have normally considered approaching, such as alumni development, the sports centre, and our finance and business development teams. Attendees shared delivery opportunities, barriers to activity, and discussed best practice across all facets of engaged practice.

The outcomes from these networks included a shared understanding of the value of public engagement in each individual's field of expertise, and how each of us can support each other. This shared understanding has resulted in greater collaboration in activity, sophisticated and informed strategy in audience development, professional skills development, and in successful funding applications across network members. It's easy to overlook, and even disregard, the smaller successes, but we would urge you to recognise these, to record them and celebrate them as much as the big headline achievements.

A big success has been our PE Portfolio of training. To set up some kind of portfolio of training was in our original workplan as an important if not a priority activity. Driven however by closer connections to our professional development team gained through our internal networks, it became much more significant than in our original plans, influencing many of our other activities. The University of St Andrews has a culture of training and of hosting passport programmes which are externally accredited. This meant there was a pre-existing framework and culture we could build upon. Guided by our professional development colleagues we set up a programme for PER which included the obvious skill sets gained through engaged practice (e.g. communication skills), but also the less obvious transferrable skills such as grant writing, budget, project, and people management skills. In doing this we created not just a tool for raising skills in PER, but also a way that we could raise understanding of the contribution of PER including all the areas of personal development it contributes to, for example widening participation, equality and diversity, social responsibility, responsible research and innovation, and researcher development.

We found other successes in unexpected places, such as working with the Byre Theatre on audience segmentation and development. This has meant we have a very clear understanding of the current audiences for our researcher's events, their motivations and barriers, and who we are not engaging with. We have been able to use this information to drive audience development for many activities. Our main learning from all this has been that, when undertaking any programme of culture change, an openness to diverse sources of knowledge which can inform your work, a wide view of potential collaborators, and an anticipation that success will sometimes occur at its own rate will create success through collaboration and an understanding of common goals and mutual benefits.

Appendix 1.
Year One outputs and outcomes in full

Governance - Outputs
Under 'governance' we planned to establish a PER working group and institutional leadership and encourage a common institutional language and purpose regarding PER. Activities in this area included appointing a senior academic lead for PER and a minimum of three academic leads for PER in individual Schools who formed an institutional working group. We also established a network of PE professionals and an 'engaged practice' network of professional service units. Through these activities we hoped to encourage a common understanding of PER, allowing mission, strategy and support units to have a common language.

Governance - Outcomes
The outcomes for this priority area moved rapidly. The PER team became established in Corporate Communications and quickly actualised benefits from this association. We established a PER institutional working group which included a senior academic lead (Vice-Principal, Research and Innovation) and academic leads from four schools providing leadership within their disciplines. The working group was able to reach out to both senior management and individual researchers assuring that the strategic aims of the project are understood, and through communicating with our working group, ensure our activities were timely, informed, and relevant. We also worked closely with the University managed Byre Theatre, and PER is now established in the strategy of the Theatre.

While we encountered difficulties with establishing universally understood definitions for PER and PER activity, there were three activities that countered those challenges. We established a network of PER professionals and facilitators including PE professionals, academic leads, and highly engaged staff. This group meets monthly to update on activity, discuss barriers and drivers, trouble shoot, and create opportunities for collaboration and peer support. We also held an NCCPE facilitated session for professional service units to encourage collaboration and foster awareness of PER in a wider institutional context. Thirdly a particular highlight of year one was receiving the Principal's approval for becoming signatories of the NCCPE Manifesto for Public Engagement. The University of St Andrews became full signatories in August 2018.

Visibility - Outputs
The use of the EDGE tool in our formative evaluation indicated that there were differences in the perceptions between different groups regarding the level of embedding of PER in St Andrews (e.g. Principal's office, public engagement professionals, researchers). These differences could be at least partially explained through the lack of visibility of support and opportunity within the institution. As such we saw visibility as a key strategic priority in our pathway to embedding PER.

The outputs in this priority area included establishing a digital presence through a centrally supported website, a physical presence in terms of School PER surgeries, establishing academic leads, hosting an internal conference and institutional awards for PER (discussed in **'Motivation'**) and leading on high profile, capacity building grants providing opportunity for delivery and examples of best practice. We also established a 'PE Portfolio' of training with our Centre for Academic, Professional and Organisational Development (CAPOD) which as well as providing training for PER, also raised visibility and is discussed more below under **'Quality'**.

Visibility - Outcomes

Our [website](#) was launched toward the end of year one, in October 2018 and in the first three months (end of year one) there were 1335 pageviews from a total of 241 unique users, 67% of whom used the university network, although we suspect a large proportion of the external views are also from University staff and students using a private network access. The most popular pages were the 'landing' page followed by the 'opportunities' page and the ['PE Portfolio'](#) page, totalling over 900 views, again suggesting the majority of visitors are internal to the University. Being situated in the Corporate Communications Unit we were also able to feature numerous items in the Institute's internal Newsletter, 'In the Loop'.

We also hosted PER surgeries in Schools, providing an open drop in forum for interactions with researchers. We consulted with Schools on the best time and place to hold these and they were initially helpful. We thought it might be useful to expand these surgeries to include the Research Impact and Press Office teams, however the pressure to change locations and times of the surgeries, and possibly the lack of focus for them, led to a decrease in researcher attendance.

There was a rise in the number of researchers seeking our support, an increase in disciplines contacting us, and in the variety of support requested. This showed that we were establishing buy-in from individuals, and that a knowledge of the range of support and expertise we provided was becoming much more widely known. Linked to this was an upturn in support and service requests, e.g. training, grant consultations, seed-funding administration, evaluations, and REF case study input.

Through StAnd Engaged, PER became recognised as a positive contributor to many agendas within the University including widening participation, equality and diversity, and staff and student training. Being embedded within Corporate Communications, we have weekly meetings which have served to raise awareness, communicate our activity institutionally, and allow the team to be pro-active to institutional agendas. Our team was also consulted or included for the first time in institutional level reports, self-assessments and strategic documents. Starting with the UKRI self-assessment process we have also been consulted on an Institutional Living Lab report on sustainability, and the Environmental Association for [Universities and Colleges LiFE Matrix](#). The increase in visibility from the Principal's office was also demonstrated when we signed the NCCPE Manifesto for Public Engagement in August 2018.

Quality - Outputs

Outputs here included the development of the Public Engagement Portfolio, a suite of training activities for all staff and research students, which launched on the 26th October 2018. The portfolio is supported by CAPOD, which facilitates all students and staff development at the University of St Andrews. CAPOD supports the portfolio in a multifaceted manner, by collaborating on the strategic development, assisting in the administration, and facilitating workshops, activities, and evaluation. The portfolio is modelled on a range of tailored training packages developed by the CAPOD team, the 'Passports to Excellence' schemes. These include the ['Passport to Research Futures'](#), and the ['Passports to Management Excellence'](#) which are recognised by the [Institute for Leadership and Management](#). Upon graduating from the programmes, alumni are recognised and invited to alumni events and workshops on more advanced theory and practice in PER.

This programme-based approach implemented in St Andrews has resulted in a robust delivery and evaluation framework and an ingrained culture of personal development in our staff and students. As well as the in-house support from CAPOD, the development of the portfolio was informed by learning from the Beacons, Catalysts and Catalyst Seed Funding programmes which emphasise utilising existing frameworks. The portfolio has now been embedded into the CAPOD training structure and is colloquially described as a 'passport' training package among the trainees.

The portfolio training opportunities are mapped against the Vitae Researcher Development Framework and delivered to three cohorts: post-graduate students, academic staff, and professional staff. The three programmes bring all PER related training together under one umbrella, from dedicated PER training, e.g. PER practice, evaluation, and communication skills, to other training that facilitates PER such as project, time and budget management or grant writing and reporting. The core compulsory workshops also include a delivery session and a self-reflective report, both facilitated by the PER team, which also serves as evaluation of the portfolio. In this way we sought to not only enhance the quality of PER but to also highlight the skills that are developed through participation in engagement. The illustration below (figure 6) is an example of a portfolio workshop suite of training from the professional staff cohort. More details of all programmes can be found on the dedicated portfolio support webpage.
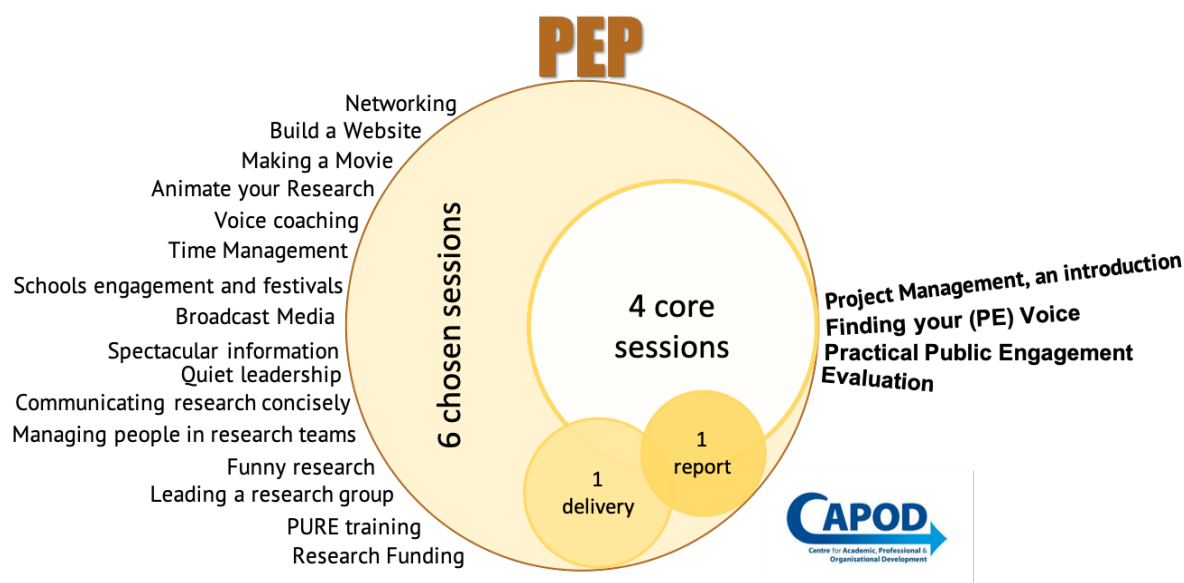

Figure 6. The structure of the PE portfolio for professional staff.

We also considered ethical frameworks for PER, as well as consolidating our networks, internal and external. Finally, we undertook an audience segmentation analysis of our audiences' motivations and barriers in collaboration with the Byre Theatre.

Quality - Outcomes

Our portfolio programmes officially launched on 26th October 2018. Within six weeks (the end of year one) we already had 19 individuals signed up, seven to the postgraduate research student cohort, eight for the academic staff cohort, and four for the professional staff cohort, including two individuals who are employed as public engagement facilitators. Due to waiting lists of up to double the workshop capacities, we had to schedule an additional three workshops from the core sessions and these additional sessions were also booked beyond capacity.

The evaluation from our core workshops is consistently extremely positive. For example, participant feedback in our core 'Practical Public Engagement' workshop consistently evaluated in the highest brackets of 'excellent' or 'very likely/relevant' in the areas of
   ▪ How well the workshop met the stated objectives
   ▪ Quality of materials
   ▪ Ability of presenters
   ▪ Structure of event
   ▪ How relevant is it for your personal/professional development

- How likely are you to make a change as a result of attending this event
- How well did the event meet your personal objectives

In driving forward the conversation regarding ethical considerations of PER, Dr Mhairi Stewart hosted a session at the NCCPE Engage! Conference on ethics in 2017, and again in 2019. There has been some inter-institutional work, however limited progress institutionally.

In terms of internal networks, the buy-in and awareness from professional services was kick-started by the NCCPE delivering facilitated workshops for professional service units. For some, there are obvious overlaps of mission such as the widening participation agenda within our Admissions office, and research impact and ethics in our Research and Innovation Services. In others, more work was needed to develop a deeper understanding of potential partnerships and collaborations, however from all there was recognition of activity that was benefitting from engaged practice.

Our audience analysis revealed in-depth issues with our assumptions and clarified our strategies for engaging with our hard-to-reach audiences, including a deeper understanding of what groups are underrepresented in our engagement work. This analysis has become a key factor in how we support and motivate our researchers, our Schools, and the institute in best practice, and highlight routes to meaningful PER in our local area.

Motivation-Outputs
In terms of motivation we had three areas of activity: recognition, reward and seed funding.

Recognition and reward were directly driven by our full day internal PER conference and internal PER awards ceremony. We also drove recognition of PER within academic Schools by requesting to present at School management meetings. We also administered and evaluated an innovative seed-funding opportunity involving the identification of, and engagement with, research stakeholders based in the Biomedical Sciences Research Centre.

Motivation-Outputs
Our conference attracted 73 delegates and 11 internal contributors in the form of talks, or posters. Among the reasons given for attending were, networking (65%), self-development (58%), inspiration (51%), and curiosity (37%). In evaluating the day, we requested all delegates complete the EDGE tool. Alongside data from our network of PER facilitators, these results showed culture change driven by our first year of SEE-PER activity (graph 5)
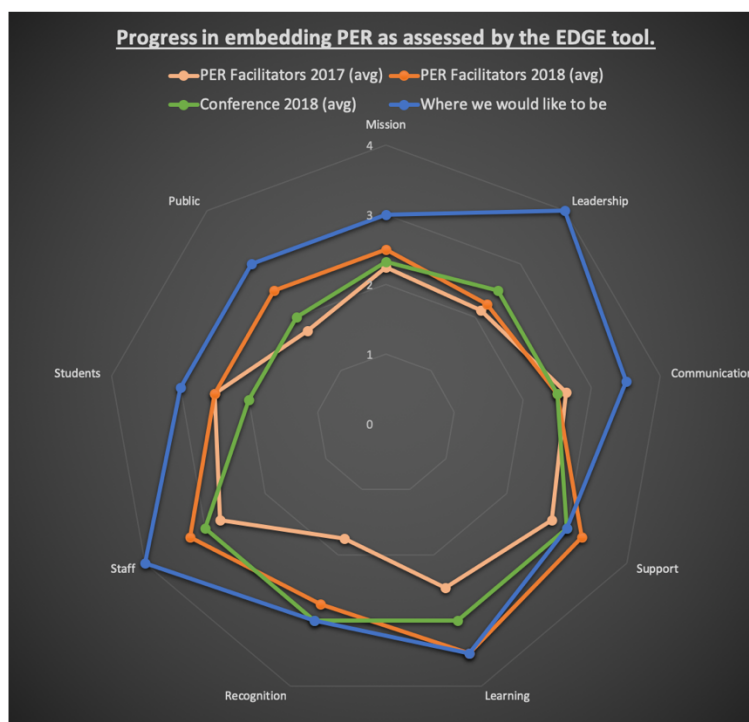
Graph 5. EDGE tool results from year one

Recognition of PER in Schools was evidenced by requests for support from the PER team for multiple new PER culture change initiatives, including PER committees within two Schools. Two Schools also held PER awards and four Schools, including one within the Arts and Humanities, appointed academic leads for PER. An academic lead in Physics and Astronomy was supported by the PER team to obtain an STFC PE Fellowship award.

The seed funding pilot resulted in £4875 of funding for stakeholder engagement initiatives from bat conservation societies in the UK and Germany to facilitating a hack day for a project designing an innovative citizen science activity. The PER team was also included in the funding panel for KE/Impact awards administered from the Research Policy Office. An increase in PER related applications to this funding source has meant the estimated £45,000 matched funding in our initial application for the year, rose to £66,363.

Sustainability - Outputs
We endeavoured to establish activity that would encourage the ongoing sustainability of PER institutionally. This was done through encouraging uptake of grant support and training (see **'Quality'**), and evidencing this through evaluation.

Sustainability - Outcomes
We found there was an increase in the number of researchers seeking grant support, and in the referral of these individuals to the PER team for support. Some researchers also included requests in their research funding applications to buy out PER team staff. However, while some of these were funded for activities, the funding for salary was rejected at the panel stage, so this has not yielded any results. Our work in evidencing the role of PER in many aspects of institutional strategy and varying agendas has been of more help in starting to build a case for sustainability.

While not a key area in this project, engaged teaching was an interesting and novel area of development for us. There are now many opportunities for St Andrews undergraduates and taught postgraduates to undertake PER projects or courses. Our team has been invited on many occasions to contribute and have chosen to do so in select cases. We found that by encouraging undergraduate involvement in their research engagement work, many researchers are themselves undertaking more innovative and meaningful engagement activity. Engaged teaching has provided a mechanism of increasing PER activity for research intense academics, demonstrating its value.