

The State of Play: Public Engagement with Research in UK Universities

September 2016

This report was prepared for Research Councils UK and the Wellcome Trust by David Owen, Helen Featherstone and Kerry Leslie. The views and statements expressed in this publication are those of the authors and do not necessarily reflect those of RCUK and The Wellcome Trust

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Executive Summary

In recent years there have been a number of separate analyses that have sought to investigate the extent of public engagement within UK Universities. This includes new research, desk research, literature reviews, and evaluations. This report was commissioned by RCUK and the Wellcome Trust to synthesise these studies and help us better understand:

- What the sum of evidence tells us about the current key highlights, barriers and challenges for public engagement in the research and Higher Education (HE) sector;
- What the combined evidence indicates about the extent (breadth and depth) of public engagement culture change¹ within the research and HE sector as it stands;
- The feasibility of benchmarking the current state of development of culture change in public engagement with research against what is already known about other recent examples of whole sector culture change such as efforts to support research careers or research-led teaching.

To help answer these questions, we have adapted the National Coordinating Centre for Public Engagement (NCCPE) EDGE tool NCCPE (2016b) and mapped key findings from the literature and our subsequent interviews against this. This in turn has helped to assess the stage and trajectory of public engagement with research and provide a basis for further discussion on priority areas for intervention or support going forward. Findings from this research were used to stimulate discussion during a workshop in July 2016. The discussions from the workshop have been synthesised and included in this report where relevant.

Key Findings

1. Policy and Funder Landscape

From 2008 onwards there has been a major focus (reflected in investment) on creating a culture of PE within the research community and their institutions. A number of interventions and initiatives have been established to simultaneously foster a culture where PE is supported, rewarded and recognised whilst addressing the barriers to PE. At the policy level, these include the Concordat for Engaging the Public with Research² (RCUK, 2011) and the Manifesto for Public Engagement³ (2011). At the level of sector support and institutional interventions, these include the National

¹ Culture Change: where PE is formalised and embedded as a valued and recognised activity for staff at all levels, and for students.

² <http://www.rcuk.ac.uk/documents/scisoc/concordatforengagingthepublicwithresearch-pdf/>

³ https://www.publicengagement.ac.uk/sites/default/files/publication/manifesto_for_public_engagement_final_january_2010.pdf

Coordinating Centre for Public Engagement⁴ (NCCPE) (2008), and Beacons for Public Engagement⁵ (2008), RCUK Catalysts for Public Engagement with Research⁶ (2012) and RCUK Public Engagement with Research Catalyst Seed Funds⁷ (2015).

The research finds low awareness levels of key PE policy instruments (i.e. Concordat for Engaging the Public with Research, Manifesto for Public Engagement) amongst researchers (TNS BMRB, 2015; RCUK, 2016). Whilst these instruments are largely strategic and not targeted at researchers directly, it is important when considering the breadth and depth of culture change to note this as it raises questions about where researchers might learn about PE and its value. In contrast initiatives such as Athena Swann, or indeed the Research Excellence Framework (REF), are more widely known within the research community. Low researcher awareness does not however necessarily signify low impact. Whilst the knowledge of the specific initiatives is not wide spread across the sector, our review has found that the learning from them is being captured and shared across the PE community at all levels and that the PE community is growing.

There is evidence to suggest that the inclusion of impact in the REF alongside pathways to impact, has acted as a catalyst for further mainstreaming of PE within academia with PE playing a crucial role in how HEIs are generating and impact from their research. (Watermeyer, 2012; Kings College London and Digital Science, 2015; TNS BMRB, 2015; Townsley, 2016; NCCPE, 2016h). Whilst some researchers report concerns that the REF is turning PE into a box ticking exercise (TNS BMRB, 2015).

2. Mission, Leadership and Communications

2.1 Mission

Public engagement has risen up the institutional agenda with a marked increase in the number of universities with strategies for PE and who cite public or community engagement in their corporate mission (Hill, 2015; RCUK, 2016). The Concordat for Engaging the Public with Research survey conducted in 2015 reported that 94% (n=48) of institutions featured PE somewhere in an institutional strategy, and the number of Universities with separate strategies for public/community engagement doubled between 2009-2014 to just over 30% (RCUK, 2016; Hill, 2015). However, HEIs recognise there is more work to do on the degree to which these visions are filtered down, accepted, adopted and translated into practice within institutions (Hill, 2015).

2.2 Leadership

The RCUK Concordat for Engaging the Public with Research survey found that the vast majority (over 85%) of institutions have allocated responsibility for PE to senior staff who act as champions for PE. However, enablers interviewed for the Factors Affecting study state that PE still has an uncertain place within institutions and their structures and point to creating more senior roles within their institution with clearer visibility and responsibility for the agenda, 20% of enablers point to a lack of high level commitment from senior management as a key barrier (TNS BMRB, 2015).

2.3 Communications

PE now features more prominently in institutional internal and external communications. Information about research and events and opportunities to get involved with the University are

⁴ <https://www.publicengagement.ac.uk>

⁵ <https://www.publicengagement.ac.uk/work-with-us/completed-projects/beacons>

⁶ <https://www.publicengagement.ac.uk/work-with-us/current-projects/catalysts-project>

⁷ <https://www.publicengagement.ac.uk/work-with-us/current-projects/catalyst-seed-fund>

now more frequently visible on University websites (Hill, 2015). Researchers and enablers surveyed for Factors Affecting report that PE has risen up the institutional and department priorities in recent years, noticing more rhetoric around PE, for example in internal communications. This is also potentially contributing to perceptions amongst researchers that there is more engagement activity taking place (TNS BMRB, 2015).

3. Support, Learning and Recognition

3.1 Support

Whilst researchers report a marked increase in encouragement to undertake PE (64% report increases in encouragement), researchers interviewed for the Factors Affecting study report that levels of support are highly dependent on the attitudes of staff in senior management positions towards PE (TNS BMRB, 2015). 82% of universities (n=48) report that they provide practical support for PE, with approximately two-thirds allocating some staff capacity directed towards supporting PE (RCUK, 2016). However, dedicated support for PE is rare, with 55% of enablers surveyed in the Factors Affecting study spending less than 25% of their role supporting activities related to PE (TNS BMRB, 2015).

The majority of respondents to the Concordat for Engaging the Public with Research survey indicated that some form of funding was available for institution-led Public Engagement with Research (PER) and researcher-led engagement activities (RCUK, 2016), however researchers report that lack of available funding is a significant barrier to undertaking PE (TNS BMRB, 2015). The evidence could suggest that more needs to be done to raise awareness of the funding that is available or the schemes need to be revised to more adequately meet the needs of the researcher community.

3.2 Learning

Around a quarter of researchers have attended formal training on PE or communications. However, two recent surveys suggest that approximately half of researchers have not been offered training (TNS BMRB, 2015, Vitae, 2015). As training appears to be widely available, the evidence leads us to suggest that whilst more can be done to raise awareness of opportunities we may have reached saturation point with the type of training widely available, and that more needs to be done to tailor opportunities for learning to meet the need of the researcher community. The studies indicate a preference amongst researchers towards learning through doing, and 'just in time' training (TNS BMRB, 2015; Townsley, 2016). Many of the enablers involved with the Beacons for Public Engagement (BPE) and RCUK Catalyst for Public Engagement with Research (PER Catalyst) programmes utilised coaching and mentoring approaches (Townsley, 2016).

3.3 Recognition

Researcher's report the norm for recognition across the sector is informal and celebratory (e.g. praise, encouragement) as opposed to more formal recognition (e.g. promotions, allocation of time). However, the Concordat for Engaging the Public with Research Survey reports that 76% (n=48) of institutions include PER in recruitment criteria, 65% on promotions criteria and 61% in workload planning (RCUK, 2016). There is an apparent disparity between recognition processes that have been put in place (for example, including PER in recruitment, promotion and workload planning), and awareness and implementation of them, for example there are more institutions reporting that they have these mechanisms than PE enablers reporting awareness of them (TNS BMRB, 2015). For those who have fully embraced an engaged research agenda, and are strategic about their engagement

work, their recognition is likely therefore to come through usual academic routes (e.g. research income, outputs, impact and teaching quality).

4. Participation, Perspectives and Values

4.1 Participation

Since 2006, there has been a marked rise in the percentage of STEM researchers who consider that PE is important relative to other aspects of their role: from 28% to 37%. In addition, there are more researchers that would like to do PE (TNS BMRB, 2015). However, there has only been a small increase in the levels of participation over the past ten years. Whilst researchers, including those already active in PE to do more engagement, are keen to do more engagement, competing pressures on time emerged as the most prominent barrier for researchers undertaking PE in 2015 (62%) (TNS BMRB, 2015). An interim review of the PER Catalyst programme (Townsend, 2016) has shown that researcher-driven PE, for the primary benefit of improving or enhancing research, is more likely to be embedded in a researchers' workload model (formal, mental or actual) resulting in time being a less overt barrier.

4.2 Disciplinary Perspectives

The different disciplinary traditions of PE help to understand the different perspectives and levels of participation in PE between researchers from STEM backgrounds and AHSS backgrounds. These also provide a useful lens for the interpretation of policy to affect change in PER. For example, AHSS researchers have a longer and deeper involvement with PE at a disciplinary level where motivations for research can be about changing current situations, reducing power imbalance and challenging dominant narratives. The STEM agenda highlights the need for public acceptance of science and preventing repeats of perceived mistakes in the past. These differences in purposes and methods inevitably lead to different frameworks for valuing and incentivising PE (Burchell, K., 2015; Agusita, E. and Facer, 2012).

4.3 Values

The majority of researchers cite moral duty as a primary driver for engagement, although the Factors Affecting study reports that the primary emphasis here is on justifying public spending and 'selling' their subject to the public, rather than a genuine feeling (i.e. improving societal outcomes or enriching research) that there is an obligation to engage the public (TNS BMRB, 2015). The number of STEM researchers who strongly agree that researchers have a moral duty to engage the Public has risen sharply from 20% in 2006 to 36% in 2015 (TNS BMRB, 2015). Many researchers felt that their work was enhanced by engagement with the public: at least a half of all researchers felt that the public could either add value to or improve the quality of their research (TNS BMRB, 2015).

4.4 Benchmarking

This research synthesis attempted to benchmark the progress to embed PE-R against other attempts at sector-wide culture change to contextualise what has been achieved and the methods used. A distinctive strength of the investments in PE-R has been the effective sharing of learning emerging from the pilot projects. This is in comparison to HEFCE's teaching and learning initiatives which noted that many culture change interventions that use Beacons, Centres of Excellence or Pilot Approaches, often struggled with scaling or sharing the learning across these initiatives. PE-R has a much broader scope than (for instance) researcher development and equality and diversity, which are relatively much easier to measure. There is a marked difference in what has been spent on the

Public Engagement agenda compared to either Teaching Enhancement or Widening Participation. A review of the impact of investments in teaching and learning enhancement (Trowler et al, 2013) states that they have been far less successful in promoting the strategic development of quality enhancement across the sector as a whole. Our review of the final evaluations of the Beacons for Public Engagement and Catalysts for PE and suggests that these weaknesses have largely been avoided in those programmes. There are currently much stronger financial and reputational incentives to address WP, equality and researcher development than for public engagement and steps to address this are reflected in Recommendation 4.

5. Conclusion: The State and Trajectory of PE with Research

The public engagement (PE) agenda is now more broad than it ever has been at any point in its history (Burchell, K., 2015; Agusita, E. and Facer, 2012). It has become increasingly expansive, encompassing a wide range of disciplinary based practices, and underpinned by a variety of policy drivers ranging from public trust in science, accountability and relevance of research, and public access to knowledge, with an increasing focus on two-way exchange. The PE agenda has a range of different definitions throughout practice, institutional strategies, policy interventions and funding initiatives. For example, where HE and research institutions are embedding PE within their key strategies, each is doing so with their own unique emphasis. Some framing it around the “impact” agenda, others around research, some around civic and social purposes. Concurrently, researchers understand PE differently depending on a variety of different factors, with some preferring the term ‘engaged research’.

However, in amongst this variety, it is evident that clear progress has been made in embedding PE across research and the HE sector. PE is now more frequently cited in Institutional mission statements (Hill, 2015; RCUK, 2016), in internal and external communications (Hill, 2015; TNS BMRB, 2015, RCUK, 2016), and researchers are reporting that institutional environments are generally more supportive (TNS BMRB, 2015, Vitae, 2015). There is now more funding available, through a variety of mechanisms (RCUK, 2016) and the disciplinary differences are generating a diversity of approaches and methods (Burchell, K., 2015; Agusita, E. and Facer, 2012).

Figure one below shows our analysis of the current state of PE with Research against the metrics used in the EDGE tool. For each of the six major headings (i.e. mission, leadership, communications, support, learning and recognition) we have made an assessment as to what stage we are currently at (i.e. embryonic, developing, gripping or embedding). We acknowledge that are assessment works best as a tool for further reflection and dialogue amongst those involved with changing the sector.

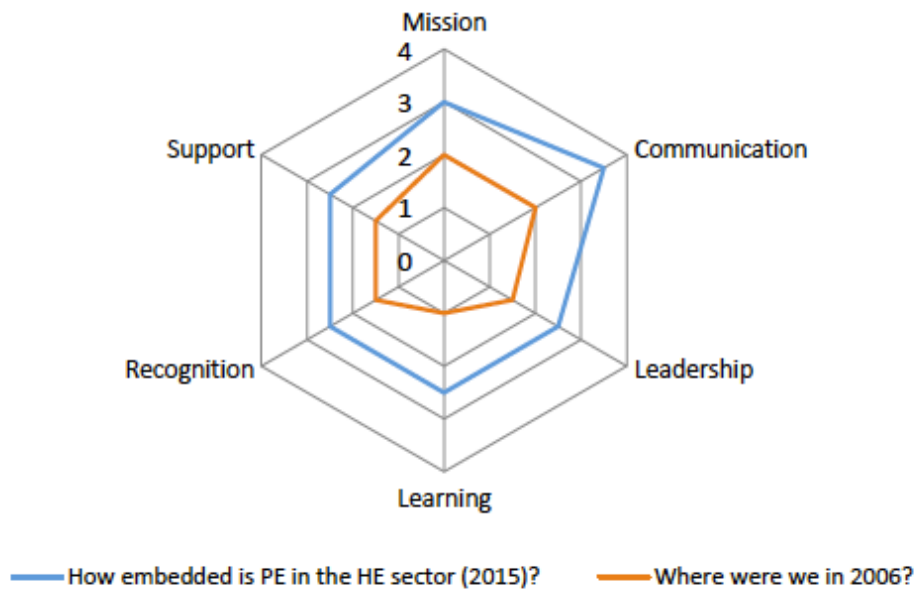


Figure 1: The current state of Public Engagement with research in UK Universities

Our review indicates that whilst positive progress has been made, on the whole, rather than a strongly embedded system, we see a system that is still fragile and in the language of the EDGE tool, between ‘developing’ and ‘gripping’. It is important to note that the sector is notoriously resistant to change (Trowler et al, 2013), and the progress that has been made has been made with comparatively low levels of investment, compared to other change initiatives (such as teaching and learning enhancement, see section 4)).

This study and subsequent workshop has identified key areas where further work is needed in response to our current state of play. These recommendations align with a vision for PER which was developed in the workshop - where PE is a normalised part of our research culture, where both researchers and enablers are supported in their skills development and resource is targeted effectively, where there is more rigorous and robust assessment of quality in PE and finally where institutions and senior managers are held to account for their commitment to PE and the quality of their support processes.

A number of recommendations can be seen in section five based on the conclusions from the synthesis and the outputs of the workshop.

1. Introduction

1.1 Context for the Review

From 2008 there has been a major focus (reflected in investment) on creating a culture of public engagement (PE) within the research community and their institutions, stimulated in part by the 2006 Survey of Factors Affecting Science Communication by Scientists (Royal Society, 2006). A number of interventions and initiatives were established to simultaneously foster a culture where PE is supported, rewarded and recognised whilst addressing the barriers to PE. This includes for example the establishment of the Beacons for Public Engagement (BPE), the Concordat for Engaging the Public with Research, the National Co-ordinating Centre for Public Engagement (NCCPE), the RCUK Catalysts for Public Engagement with Research (PER Catalysts), the Catalyst Seed Fund (CSF) and the Wellcome Trust Institutional Strategic Support Fund (ISSF) representing a combined investment of approximately £17.6M (see table 1 for a full timeline⁸).

In recent years there have been separate analyses that have sought to investigate aspects of the breadth and depth of PE within the culture of HEIs. This study was commissioned by RCUK and the Wellcome Trust to help better understand:

- What the sum of evidence tells us about the current key highlights, barriers and challenges for public engagement in the research and HE sector;
- What the combined evidence indicates about the extent (breadth and depth) of public engagement culture change⁹ within the research and HE sector as it stands;
- The feasibility of benchmarking the current state of development of culture change in PER against what is already known about other recent examples of whole sector culture change such as efforts to support research careers or research-led teaching.

The earliest data we look at comes from the 2006 Factors Affecting study (Royal Society, 2006). Since this time there have been a number of shifts both within the PE agenda and across the higher education sector as a whole. For example, the concept of PE has evolved, and become increasingly broad and encompassing, adopting a number of separate tracks such as Science Communication in STEM, Participatory Action Research in the Social Sciences and Patient and Public Involvement in the Health Sciences (Burchell et al. 2015; Agusita and Facer, 2012).

Likewise, developments across HE that have had a particular influence on how PER is carried out and perceived within the sector include:

- Inclusion of 'impact' within the Research Excellence Framework;
- Introduction of 'Pathways to Impact' by Research Councils;
- New funding for PE with research interventions;

⁸ Several other key organisations and initiatives form part of the bedrock of the public engagement landscape. These include funders of public engagement such as the Wellcome Trust who joined with RCUK for the BPE programme, Heritage Lottery Fund, Learned Societies; a range of infrastructure organisations that have been in existence prior to 2000 such as the Association for Science and Discovery Centres, the British Science Association and Involve; and intermediaries which range from individual freelance facilitators through to larger organisations such as the BBC, the National History Museum, the Science Museum Group; many of whom are currently represented on the National Forum for Public Engagement with STEM⁸. The Wellcome Trust is notable for a wide range of interventions, insight and funding schemes, influential across the Universities Sector. It was beyond the remit of this project to incorporate the insights gleaned from evaluations of all of these activities.

⁹ Working towards a system where PE is formalised and embedded as a valued and recognised activity for staff at all levels, and for students.

- Economic austerity and shrinking of the public sector;
- Reduction in public funding for universities and increase in student fees.

Alongside these developments sit a wider set of cultural and technical developments that influence how we produce, collaborate and share knowledge in the 21st Century which continue to influence the role of Universities in society today.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
EU/International Instruments			Science in Society									
									Responsible Innovation			
Policy Instruments						Concordat for Engaging the Public with Research						
Key HE Orientated Interventions	Beacon or pilot approaches		Beacons for Public Engagement (BPE)									
							Catalysts for Public Engagement with Research					
							Schools University Partnership Initiative					
										Catalyst Seed Fund		
	Allocated funding formula							Research Excellence Framework				
		Higher Education Innovation Fund (HEIF) ⁱ : HEIF 3: (2006-08), HEIF 4 (2008-11), HEFCE Knowledge Exchange Funding (2012-2017)										
	Conditional funding			RCUK Pathways to Impact								
									Provision for PE			
Professionalization					Researcher Development Framework							
Capacity Building and Delivery			National Coordinating Centre for Public Engagement									
							Connected Communities					
							Institutional Strategic Support Fund (ISSF)					
Key Insight	Factors Affecting Science Communication report		PAS; CROS; PIRLS; HE-BCI		PAS; CROS; PIRLS; HE-BCI		CROS; PIRLS; HE-BCI;		PAS; Factors Affecting; CROS; PIRLS; Concordat Survey; HE-BCI; HEIF		Taking Stock Report; HE-BCI; HEIF	

Table 1: A timeline of key policy interventions, investments and insights relating to PE in UK Universities

ⁱ HEIF is in England only. Equivalent funding exists in the devolved nations

1.2 Our Approach

This report was produced by following the steps as detailed below. Primarily, key reports were identified by the commissioners, these were added to by the research team to include further grey and academic literature. The reports were integrated for key insights around 'culture change' across four key areas:

- Policy and Funder Environment;
- Institutional and Department Strategies (i.e. Mission, Vision, Communications);
- Institutional Environment (i.e. Reward, Support, Learning);
- Participation, perspectives and values (i.e. Staff, Public, Students).

Ten interviews were conducted to deepen our understanding of the state of Public Engagement with Research (PER) in UK HEIs and sense-check emergent findings from the reports. Interviewees were selected who could comment in one of four broad areas:

- Those who have a picture of the HE sector, but from a non-PE perspective (e.g. ARMA);
- Those offering critical perspectives on PE and can offer a future-gazing perspective;
- Those with oversight of other culture change initiatives in HE (e.g. teaching enhancement, equality and diversity, and researcher development)
- Sense checking the overarching narrative of PE in different disciplines.

One of the key reasons for doing the interviews was to see if there were important omissions from the literature. Therefore, at times where there is a disconnect between findings from the literature, and what researchers and practitioners tell us through our discussions, these have been reflected in the report. Findings from this research were utilised to produce a draft report for RCUK and Wellcome Trust which was used to stimulate discussion during a workshop in July 2016. The key questions identified for discussion at the workshop were:

- The journey travelled: How far have UK Universities come since 2006?
- What challenges remain?
- What can we learn from other initiatives targeted at changing the culture of HE
- Where should we be aiming next?
- What do we need to get there?

The discussions from the workshop have been synthesised and included in this report where relevant. A separate event report was also circulated to delegates.

Another challenge we have sought to address in framing the report is how to discuss 'culture change'. Institutional cultures can be analysed at many levels, with no single level able to provide a definitive perspective. These levels are reflected in the variety of evaluation and research reports considered during the development of this report. For example, each of the reports we looked at for this study could be said to offer insight from four different perspectives (i) Public Perspectives (e.g. Public Attitudes to Science...), (ii) Researcher & Enabler Perspectives (e.g. Factors Affecting, CROS...), (iii) Institutional Perspectives (e.g. Taking Stock and Concordat for Engaging the Public with Research Survey...) (iv) Interventions (e.g. Catalysts for Public Engagement with Research and BPE Evaluations). The literature is most prominently on individual (researcher) and institutional (university) levels. We found a lack of data at departmental levels, or of institutions other than universities.

2. The extent of culture change

In this section the report explores the key highlights, barriers and challenges for PE by researchers and the extent (breadth and depth) of culture change at this time. It is broken down into three main parts:

- The policy and funding landscape;
- The institutional (including departmental) environment;
- The levels of activity and the motivations of researchers themselves.

2.1 The Policy and Funding Landscape

The PE agenda is now more broad than it ever has been at any point in its history. Whilst all research disciplines have a history of PE activity (Agusita and Facer, 2012), many of the early policy drivers originate in the disciplines of science, technology, engineering and maths (STEM) (Burchell, 2015). These policy drivers now operate across all research disciplines. In STEM PE ranges from risk management through to understanding users, to outreach and communication; in Arts and Humanities, there is a focus on public participation, exhibition and performance, in Social Science, community cohesion, democratic practices and social empowerment (Burchell, 2015; Agusita and Facer, 2012).

This breadth lends a lack of consistent form to the agenda. PE is defined differently throughout practice, institutional strategies, across policy interventions and funding initiatives. Researchers will understand PE differently dependent on a variety of different factors, with some preferring the term 'engaged research'. Likewise, our institutions are embedding PE within their key strategies but each with their own unique emphasis. Some framing it around the "impact" agenda, others around research, some around civic and social purposes.

It's difficult to understand whether our key policy instruments and initiatives have embraced this diversity or created it. The Beacons for Public Engagement (BPE) initiative and the Public Engagement with Research (PER) Catalyst programmes both encouraged institutions to 'define in the doing' within the context of their institutions and respective communities. The former was focused on PE in the round, whereas the latter more exclusively on PER with more emphasis on two-way engagement forms connected to research. The Manifesto for Public Engagement looks across the core purposes of institutions and looks at the role that engagement plays across teaching, research and civic missions. Other initiatives such as the Concordat for Engaging the Public with Research are perhaps more specific in their definition of PE, defining it through its associated activities.

Given the role that policy instruments play in signalling the importance of agendas, it is notable that in comparison with other HE agendas such as Athena Swann and Research Impact, there are low levels of awareness amongst researchers of some of the key policy instruments that relate directly to PE (e.g. the Concordat for Engaging the Public with Research and the Manifesto for Public Engagement etc.) For example, the Factors Affecting study shows that 51% of researchers (n=2,361) reported having a good understanding or some understanding of impact case studies, compared to 9% who had a good/some understanding of the Concordat for Engaging the Public with Research (TNS BMRB, 2015). Whilst the Concordat for Engaging the Public with Research is targeted at senior managers, the lack of PE policy instruments that are known by researchers is worth highlighting.

However, there is some evidence to suggest that the inclusion of non-academic impact in the Research Excellence Framework (REF) alongside pathways to impact in Research Council grants, has

acted as a catalyst for further mainstreaming of PE within academia. Watermeyer (2012) highlights the opportunities for PE to gain profile within the impact agenda.

“Where public engagement “pre-impact” was viewed by sections of the academic community as frivolous, faddish and tokenistic, it is now elevated as an integral component of impact-capture work and in plotting the pathways between research producer and research intermediary/end-user/collaborator. Where “impact” is a statement of the value of academic work, engagement is the method of its articulation and the means by which impacts are mobilized.”

Watermeyer, 2012

Analysis of the impact case studies in the last REF illustrate that PE has a significant role in how universities are articulating the impact of research (Kings College London and Digital Science, 2015; NCCPE, 2016h). There are some researchers who believe that it has helped changed the way departments prioritise activities:

“PE is coming up the agenda because of REF, so academics can no longer sit in ivory towers and work – we have to be accountable. But there needs to be more recognition for it. More and more funders are asking for evidence that there has been a policy change or somebody was influenced.”

TNS BMRB, 2015

Before REF and Pathways to Impact were implemented, concerns were raised in consultations that it would lead to PE as a box ticking exercise rather than a strategic approach to improving research quality and impact (People, Science and Policy, 2009). It’s evident from the research that some researchers tend to turn to approaches to engaging the public with research that they have tried and tested, rather than spend time considering whether there are any new ways of conducting public engagement that may be appropriate to use (TNS BMRB, 2015). There is also a growing amount of communication through social media (TNS BMRB, 2015). It’s conceivable that both REF and Pathways to Impact may be leading to increasing pressure to engage, however the systems for support, reward and recognition, including supporting more experimental or time-consuming public engagement methods, need to be implemented to support these changes.

The REF has had a significant effect on behaviour across the sector (RAND 2014). However, we know from Schein’s (2004) work on organisational behaviour that there are two main ways of understanding culture and in turn understanding how you change culture. The first suggests that the artefacts that an organisation creates *e.g. research papers, funding bids*) are a reflection of the deeper seated values, ideals and beliefs within the system. Whilst it is technically straightforward to change the artefacts that a system produces, it is extremely difficult to change the ideals, values and culture that produced them in the first place. Hence the culture would typically recreate the same artefacts even if you removed any necessity to. The second alternate way of understanding culture according to Schein is that if you reverse the argument and see culture as a consequence of the artefacts, then changing culture becomes a little more straightforward, as all you need to do is enforce a change of artefacts.

The REF has enforced the creation of new artefacts within our research system, namely impact case studies, by linking them to significant financial and reputational reward. This in turn is driving a change in behaviour across the sector in ways which we discuss throughout this paper (i.e. development of strategies, professional support, greater encouragement or rewards). It’s evident

that the 'impact' agenda has driven significant levels of change (RAND, 2014). The degree to which this is significant culture change, would probably best be answered by asking the question: *If UK universities were no longer required to produce impact submissions as part of the REF, would they still produce impact case studies?* In contrast the approach of the key PE interventions has been to drive a shift in culture from changing the deep seated values, ideals and behaviours, encouraging researchers and institutions to value PE as a core element of their work. We know from Schein's work that these types of deep-seated changes are more difficult to generate, but any progress made would appear to be more sustainable and less vulnerable to future policy shifts in the longterm.

Workshop discussion

The challenges highlighted in this section were reflected by discussions in the workshop. The broad definition of PER and the flexibility this affords for institutions and individuals when embedding PE was welcomed. On the other hand, the challenge this brings when trying to provide sector and institution-wide support was also highlighted.

2.2 Mission, Leadership and Communications

Institutional Strategy

Embedding PE within an institutional strategy can help organisations mobilise the resources and commitment necessary to affect significant cultural change, can support effective planning and open up valuable conversations about what engagement means for institutions (NCCPE, 2016). We have found clear evidence that PE is becoming a key part of the mission of UK Universities:

- Universities are more frequently citing public/community engagement within their corporate plans (Hill, 2015), and the number of Universities who have developed separate strategies for public/community engagement has approximately doubled to 33% in 2014 (Hill, 2015; RCUK, 2016).
- Universities report that they are at different stages of implementing their PE strategies, and the number of Universities with a fully implemented plan has almost doubled between 2009-2014 (Hill, 2015).
- The Concordat for Engaging the Public with Research survey conducted in 2015 reported that 94% (n=48) of institutions featured PE somewhere in an institutional strategy, though only 35% of respondents (n=48) had an institutional wide PER strategy (RCUK, 2016).

The way an institution embeds PE within strategic goals will affect the assessment and above reporting. Some PER Catalysts, for example, have actively chosen to not develop an institution-wide strategic plan, rather to embed PE within the research elements, or civic engagement elements of the university strategy. Moving forward, it may be important for policy makers and funders to consider is how to better capture the range of tailored approaches in their surveying techniques should further granularity be necessary.

We know from evaluations of the BPE and PER Catalyst programmes that the extent to which high level institutional strategies and plans filter down to department level is highly variable and that there are many factors which contribute to an effective cascading process including developing a shared understanding, communications, and working with champions at all levels (People, Science and Policy, 2000; Townsley, 2016; NCCPE, 2016c). In the interim review of PER Catalysts, the challenges of full institution wide adoption were noted:

“Senior management and the [public engagement team] are clear that public engagement involved bringing non-academic groups into the research process for mutual benefit, with the

ultimate aim of improving research quality, research impact and research visibility... the end of project survey and [the] evaluation highlights that this articulation of public engagement has not been fully adopted."

Interim Review participant (Townsley, 2016)

Indeed, changing the research culture of a department or individual is unlikely to be as a simple, trickle down / cascaded approach. The Pharmacy and Pharmacology departmental case study presented by the University of Bath in their Catalyst end of project report (Coleman et al. 2015) demonstrated that the transformation came about as a result of several interventions from within (e.g. PE Advocate, PE Award, seed funding) and outside the university (e.g. Wellcome Trust funded leadership for PE programme for Heads of Department), alongside take up of formal training, and more general consideration of research quality and impact (p11 Coleman et al (2015)).

To date the key indicators from investments in embedding a culture of PE within Universities have been focused on developing institutional strategies (BPE, PER Catalysts, CSF) with some focus on departmental strategies (Wellcome Institutional Strategic Support Fund (ISSF)), however there are other institutions which researchers align with. Learned societies and professional bodies have noticed member-demand for PE support and recognition. It is not unusual for an individual researcher to align themselves more closely with their learned society, professional body or funder than with the university which employs them. A review of these organisations would provide another indication of how embedded a culture of PE has developed. For example, the review could look for the extent to which these organisations have developed PE strategies, alongside the extent and quality of their support for PE. It is possible the EDGE tool could be used to inform the elements of this review because there are structural parallels between universities and learned societies, although this would need to be tested. From the interviews conducted as part of this work, all three organisations (Royal Academy of Engineering, Institute of Physics and British Ecological Society) have strategic and operational support for PE.

Leadership

The evidence from the PER Catalyst programme suggests that lead staff can significantly increase awareness amongst research staff of key policies and initiatives that pertain specifically to PE, such as the Concordat for Engaging the Public with Research and the expectations it outlines (Townsley, 2016). We found that:

- The vast majority (over 85%, n=48) of institutions have allocated responsibility for PE to senior staff (RCUK, 2016).
- However, PE still has an uncertain place within institutions with 20% of enablers pointing to a lack of high level commitment from senior management as a key barrier (TNS BMRB, 2015);
- We found very little data at national, institutional and departmental levels to help us understand the role that the public play in driving forward change within Institutions.

We know that senior staff with institutions face multiple calls on their time. For example, they may be called upon to be a spokesperson on PE when acting within senior contexts, they may be asked to endorse PE specifically (e.g. a prize or an introduction to a document), they may be asked to implement changes brought about in response to a strategic commitment (e.g. annual appraisal or appointment processes) or be called upon to be ambassadors or agents of change. The evidence would appear to suggest that whilst universities are appointing staff with responsibility for PE, there is more work needed to ensure that these staff can drive forward change within their institutions.

For example, given you would expect senior staff to be aware of the institution's key policies and initiatives, it is interesting to note that they can provide contradictory or incorrect information on their PE activity. For example, 18% (n=48) of respondents in RCUKs Concordat for Engaging the Public with Research survey indicated incorrectly whether their institution was signed up to the Manifesto for Public Engagement. This may be an indication of a 'lack of traction' of these policy instruments within institutions, but it may also indicate there is more work to be done to ensure that senior managers are supported in their roles.

Having reviewed other culture change initiatives (Appendix two) it is striking that some of the key policy instruments related to PE lack ramifications should institutions not comply with them. As a result, it is possible that PER will be perceived as a lower priority when compared with other areas with more powerful levers / consequences. For example, the Vitae's Concordat for Researcher Development aligns with the EU Excellence in HR award and therefore without ongoing reporting, monitoring and action the HR award could be removed.

Whilst staff leadership is important the EDGE tool also highlights the importance of putting in place mechanisms to facilitate public leadership in engagement work – both at an institutional and at an activity level (NCCPE, 2016i). This important issue is however beyond the remit of this research synthesis. It is worth noting that a lack of public voice was noted at the workshop and discussed during the Open Space session. Please see the workshop report for more information.

Communications

A key element in building a strong sense of institutional purpose for PE is to ensure that it features prominently and consistently in internal and external communications (NCCPE, 2016d).

- Researchers and enablers surveyed for Factors Affecting report that PE has risen up the institutional and department priorities in recent years, noticing more rhetoric around PE, for example in internal communications (TNS BMRB, 2015);
- The NCCPEs Taking Stock report indicates a visible rise in PE featuring on university websites. The report notes that 44% offer information about research and events, or a direct link for the public to access more information about their engagement activity (Hill, 2015).

The NCCPEs Taking Stock report indicates that universities' websites celebrate and promote a variety of different and interesting ways of engaging the public. There are numerous blogs and twitter feeds where the public can find out more about research and on the whole the activities appear more institutionally branded than in 2009 where there were visibly more individual departments or academics who have set up outward facing activities (Hill, 2015). This may reflect greater coordinating efforts within institutions as a result of increased pressure to show the relevance of their institution to society, to celebrate achievements and demonstrate evidence of 'impact'. The focus does however still seem to be on universities communicating to the public opportunities to get involved with existing events. There is far less evidence of universities being open to approaches from the public. Just over half of universities surveyed for the HE-BCI report have a brokerage gateway on their website, however these are mostly targeted at businesses. There is very little evidence of co-generation of knowledge, beyond the health subjects, where researchers increasingly seek to involve patients (Hill, 2015).

Workshop discussion

There was a feeling within the room that while universities have increased their coverage of PER externally, and the group noted the increased internal rhetoric about PE at a high level, there was

still a sense that internal communications about the support for PER was lacking and that core messaging about PER was not cascading effectively.

2.3 Support, Learning and Recognition

Support

Although PE often happens spontaneously, and is driven by the interests and commitment of individual staff and students, drawing on learning from the BPE project, the NCCPE suggests that there are important ways in which institutional support and co-ordination can enhance quality, improve efficiency and support innovation (NCCPE, 2016e).

The indications are that 'support' for PE is mostly available in the form of encouragement and informal recognition, as opposed to forms of practical support such as human resource and formal recognition within workload (TNS BMRB, 2015). For example:

- Whilst researchers reported a marked increase in PE activity and encouragement to undertake PE from HEIs and RIs (70% of researchers surveyed for Factors Affecting, perceived there has been an increase in activity, 64% report increases in encouragement), only 36% report that there has been an increase in practical support (TNS BMRB, 2015).
- Researchers indicate a preference for practical, logistical support, for example in terms of booking venues or paying bills and have expressed cynical views of departments which seek to coordinate or map existing activity, rather than practically support it (TNS BMRB, 2015).
- The RCUK (2016) Concordat for Engaging the Public with Research Survey reports that 82% of universities who responded [n=48] provide practical support for PE, but with only approximately two-thirds reporting that they have some staff capacity directed towards supporting PE (RCUK, 2016). Factors Affecting found that only 19% of enablers surveyed were dedicated resource, with the majority (55%) spending less than 25% of their role supporting activities related to PE.
- The Taking Stock report (Hill, 2015) suggests that very few institutions appear to have dedicated, stand-alone PE offices.

Although a number of universities do have PE teams, these tend to take different forms and sit within different areas or departments of the university such as Communications, Careers, Research and Knowledge Transfer, the Vice Chancellor's office or Social Responsibility sections (Hill, 2015). There could be several reasons for this, for example, it may be a reflection of the diverse ways in which Universities are embedding and supporting PE in line with their mission, or it may be a reflection of a sector in which support for PE is still piecemeal and dispersed throughout institutions, with staff potentially on time-limited project related contracts.

Enablers in the PE teams primarily characterise their role as managing the relationships and internal administrative processes which help which facilitate researchers' PE activities (TNS BMRB, 2015). The support offered by PER Catalyst programme staff for example includes many of these key areas, but there is a strong emphasis on internal advocacy, changing policies and processes, one-to-one training and advice including what was called 'just in time training' rather than events administration.

Workshop discussion

The workshop discussions considered the role of the enabler and reflected that recruitment panels often do not know what the type of person and key skills that they are looking for, and the roles are often poorly set-up within Universities. It was felt that some form of accreditation for enablers and

administrative roles that support engagement could be useful. The tension between roles that effectively administrate/produce engagement and roles that are focused on embedding was also noted. The learning from key PE interventions such as BPE, Catalyst and CSF suggest that the embedding and culture change focus was essential.

It was also noted that enablers employed on short and fixed-term contracts were leaving the sector, taking their expertise with them; many enablers at more junior levels don't appear to have the skills and expertise to affect change. It was felt that the lack of career progression opportunities within PER in HEIs was a factor for these departures alongside departments appointing at an inappropriate grade or without the right skills.

Suggested solutions to these challenges covered accreditation, professional development framework (akin to the Researcher Development Framework), and clarity about those who practically help/do public engagement vs those who work as change agents.

Learning from the BPE suggests that one of the key barriers to staff getting involved with PE is a perceived lack of opportunities and 38% of researchers in the recent Factors Affecting survey said that if someone invited them to take part, they would undertake more PE (TNS BMRB, 2015). However, in apparent contrast to this data, enablers surveyed for the Factors Affecting Research suggest that one of their biggest challenges is encouraging researchers to get involved with these opportunities. It appears that researchers are more likely to respond to requests that come directly to them via their own personal networks (TNS BMRB, 2015). More work may be needed within institutions to promote opportunities better and understand and develop activities that align and capture the imagination of researchers and publics alike.

Centrally organised opportunities are, by necessity, more generic but can be useful entry points to PE, can provide high quality and easy to access formats to reach audiences researchers have prioritised and provide evidence-based examples which can be used in a Pathways to Impact statement. But, the timing and format of these activities will only ever be appropriate for a small fraction of the academic community at any one time. Small institutional PE teams can never provide enough opportunities, of the right variety and at the right time to reach this 38% of researchers who say they would get involved if invited. We should also note that while 38% of researchers said they do more if invited, not all would actually take up the offer because asking people about their intentions for future behaviour can be a poor indicator of actual future behaviour (Jensen and Laurie, 2016).

Learned societies and professional bodies we talked with similarly described the challenge of needing to provide opportunities as a membership service, and some do this by providing centrally organised activities which members can participate in. Others provided resources and training which members request on demand, to be used in their local environment.

Training

The picture around training and its role within culture change is complex because of perceived and actual benefits of training, timing, communication, practical experience, formats and even what it's called. However, we can say that around a quarter of researchers have attended formal training on PE or communications:

- The Factors Affecting research finds that 28% of researchers attended training over the last five years. Vitae Careers in Research Online Survey at reports that 21% have attended training (no time frame) (TNS BMRB, 2015; Vitae, 2015).

- 36% of researchers who are very active in PE have had formal training for PER (TNS BMRB, 2015). The norm for researchers is informal training through experience or peer to peer learning (TNS BMRB, 2015).
- Around half of researchers say they would be receptive to training but have not been offered it (TNS BMRB, 2015; Vitae, 2015), however in institutions where researchers are more likely to have been offered training (i.e. BPE or PER Catalyst Universities) participation levels remain the same.

Looking at researchers who are active and confident in PER (over half of those surveyed in the Factors Affecting) while 28% of them had received formal training in the previous five years, they were more likely to attributed their feelings of being well-equipped because of their previous experience and peer support (TNS BMRB, 2015). Only 11% of these researchers link their confidence to training. However, turning to those who do not feel equipped to undertake PE (around a third of STEM and a quarter of AHSS researchers) they cite lack of training and lack of experience for this. We know from those who are confident that this combination of training and experience can improve feelings of being equipped which suggests that institutions should provide both of these aspects (which may influence the degree of uptake noted in the previous section). It is unsurprising that this combination of training and activity builds confidence. From a pedagogical perspective reflecting on practice to inform future activity is a key part of learning and confidence building. As with the section on participation, we should remind ourselves that what people say they will do, is very different to what they actually do, meaning that we should respond carefully to statements which suggest that 21% of researchers would do more PE if they had training.

Creating the time and space to enable the winning combination of training and practice is challenging. While half of researchers say they would undertake training if they were offered it, it is possible that many of these researchers *have* been offered training, but they may not have noticed. Communication is effective when people are receptive to the messages – it is possible that many researchers do not notice the communications highlighting training offers because it's not relevant to them at that particular time. Indeed, one of us (HF) notices that researchers will request training when they have a specific, practical initiative to deliver.

A second challenge to encouraging researchers to participate in training relates to the name and format. The learning from the PER Catalyst programme suggests that it important to appropriately 'pitch' training at the right level for academic staff:

"Is it training? Is it a masterclass? Is it advanced training? Is it professional development? The subliminal impacts of a name cannot be underestimated. They play a crucial part in whether people even read the course synopsis! Once framed correctly for the right audience, we found that cohort-based, practical workshops were the best received of our courses, and where there were obvious routes to follow-up and put ideas into practice beyond the course."

Participant in PER Catalyst Interim Review (Townesley, 2016)

PER Catalysts have often described that they tend to adopt a mentoring or coaching relationship with researchers which they will describe as training or professional development, but may not be described as such by the researchers themselves, hence the figures reported in the Factors Affecting research may not capture this activity (Townesley, 2016). The challenge of PE training provision is not only felt within universities. For example, the Institute of Physics is rethinking its training programme and are now aligning it with their wider chartership support.

Workshop discussions

The participants in the workshop readily agreed with the assessment described above. In the Open Space discussion suggestions were made around aligning professional development for PE (note that it wasn't described as training) in forms that are more familiar for broader academic development. Fellowships were discussed in this setting where individuals are fully supported to develop as rounded PE academics. However, this is not well established and trials to date have not been 100% successful. Working with a small number of fellow's contrasts with the more traditional mode of training provision that relies on individuals noticing a workshop and opting to attending. Other structures that were discussed included peer-to-peer structures with expert facilitation and the potential of working across interdisciplinary themes or challenges.

Funding

The majority of respondents to the Concordat for Engaging the Public with Research survey indicated that some form of funding was available for institution-led PER (RCUK, 2016). Similarly, most institutions (77%) had funding for researcher-led engagement activities. However, lack of available funding was cited as a significant barrier to involvement for researchers (TNS BMRB, 2015). This seems at odds with the reality, which is that many funders now embed provision for PE within their mainstream funding process e.g. researchers with a RCUK or Wellcome Trust research grant will all have had the opportunity to budget for PE within their research grant proposal. Watermeyer (2015) suggests that researchers who are committed to public engagement are often dismissive about the funding available for PE, noting that it rarely covers staff time and departments will often lose money when conducting PE.

Workshop discussion

While the participants in the workshop recognised the value of the Pathways to Impact and Wellcome funding, challenges were raised. In particular, that the peer review process for Pathways to Impact may not be undertaken by PER experts which means that feedback from reviewers can be unhelpful and contradictory to the guidance being given by enablers. These forms of funding are also felt to be limited and limiting. Project based funding results in short-term relationships, rather than long-term strategic planning which can result in lower quality engagement and may be riskier for the external partners. It was also noted that it is only a fraction of researchers who elect / are able to access funds in this way which means that a significant proportion of the academic community are excluded from this resource.

Reward and Recognition

Formal reward and recognition is a key way in which Universities may seek to value PE by researchers. This can take place in a variety of ways such as making PE a key part of appraisal and promotions criteria, including it in job descriptions and workload allocations, and through awards which celebrate achievement.

- The Concordat for Engaging the Public with Research Survey reports that 76% (n=48) of institutions include PER in recruitment criteria, 65% on promotions criteria and 61% in workload planning (RCUK, 2016).
- However, researchers report the norm for recognition across the sector appears to be informal (i.e. praise, encouragement) as opposed to more formal recognition (i.e. *promotions, allocation of time...*) (TNS BMRB, 2015).

Respondents to the factors affecting interviews frequently spoke of ‘brownie’ points and being viewed favourably within departments that are supportive of engagement, but there was very little indication of formal recognition in place throughout the report. Only 25% of enablers reported that PE was included in performance reviews and appraisals.

“There needs to be more recognition of public engagement by universities, e.g. when you’re going for promotion or deciding how to apportion your workload.”

Researcher, STEM (TNS BMRB, 2015)

The difference between perception on the ground, and reported levels of embeddedness mirror the discussion above around Institutional strategy. For example, Universities have made progress with embedding PE within their mission statements, and have appointed leaders with responsibility for PE, but implementation of these steps is still ongoing. We learnt from the BPE and RCUK PER Catalyst Programme, that Universities need to provide support for recruitment and promotion panels about what to look for and that a shift in values is required alongside changes to processes (People, Science and Policy, 2009; Townsley, 2016).

The evidence suggests that there is a prioritisation of research or teaching in selection and promotion situations which is unsurprising. The key drivers for institutional success are biased towards research and teaching as these inform national and international ranking systems. For example, QS ranking, publications, NSS. As we discussed earlier, recent changes such as the inclusion of impact in grants and research funding may have made have raised the profile of public engagement within these core systems, but these changes are still relatively young and more time is needed to see how they affect changes to reward and recognition systems within institutions.

Rather than a systematic or strongly embedded system, we see that levels of recognition are highly dependent on the attitudes of staff in senior management positions in departments and whether they are encouraging of activity (TNS BMRB, 2015). Interviewees in the Factors Affecting study with supportive senior teams said that they felt encouraged to undertake PE whereas those with less supportive senior teams felt that their efforts in terms of PE were not valued and this removed an important incentive to put in more time and effort.

“I think there is an enormous lack of recognition for the amount of effort people put in to this. I have a colleague at this institution who does an enormous amount of public engagement work.”

“A disjuncture as many in academia believe that public engagement is part of their role and that others, including research funders, expect them to treat it as such, but public engagement is rarely formally recognised as part of an academic job.”

Researcher interviews (TNS BMRB, 2015)

The majority of researchers (61%) continue to cite time as the biggest barrier to undertaking PE. The Factors Affecting research goes furthest to unpick notions of time and how this barrier might mean different things to different researchers. The review highlights how ‘lack of time’ could be seen as a proxy for the relative importance of PE against research (Burchell et al. 2015). The emergence of an impact hierarchy is also suggested by Watermeyer where PE competes against other impact categories, such as policy impacts that are perceived to carry more kudos (Watermeyer, 2014).

Whilst effective recognition for example through workload allocation is one mechanism through

which time pressures may be reduced. The danger here is that PE can still be perceived as separate entity to research, and therefore continue to lack integrity amongst some within the research community, or to be understood in limited terms (*i.e. outreach, communication etc.*). It is apparent from the RCUK PER Catalyst programme that recognition goes hand in hand with a shared understanding of what constitutes PER (Townesley, 2016). The Factors Affecting research also shows that where PE and research are conceived of as separate activities, they will be in competition for attention and resource, and research will be the priority:

“We spend our time doing the day job as it were. It’s a question of time if anything. Unless it’s actually built into the research you don’t say – ‘I think what I’ll do today is engage the public”.

Researcher interviews (TNS BMRB, 2015)

The degree to which time is cited as a barrier, goes some way to help understand the level of embeddedness within researcher, institutional and funder culture. The evidence suggests that PE still has a marginal role within the professional life of a researcher and it has been described by some as ‘a marginal call’ (Bauer and Jensen, 2011) or a ‘third space’ in which researchers are ‘lost’ (Watermeyer, 2015). ‘Lack of time’ is an issue that is pressing for those who are committed to PE, who see it as an important part of their role, but are threatened by its relative low position within the echelons of their institutions and the priorities of funders; alongside those who would may be less passionate say about PE, but would like to do more or at least some, because they do see it as being important (Burchell, 2015). It is also important to note that PE does take time, and practical support can therefore help. As discussed earlier, researchers indicate a preference for practical/administrative support (TNS BMRB, 2015) such as a department administrator who can help organise the logistics. It would be interesting to further research the factors that contribute to and alleviate time as a barrier. For example, it might be interesting to return to the data in Factors Affecting and to look at the number of researchers that cite time as a barrier and also say they lack practical support.

Workshop discussion

An Open Space dedicated to reward and recognition focused primarily on merits of and continuation of existing efforts in this area. A number of key action areas were identified for consideration by funders, HEIs, Learned Societies and NCCPE. Notable inclusions included:

Funders:

1. Non-cost extensions of grants to facilitate PE.
2. Including previous experience/track record in PE as a question on forms (*i.e.* grant applications).

HEIs

3. Look at implementing policies better within faculties, schools and departments.

Learned Societies

4. Further investment in awards and fellowships for PE.

NCCPE

5. Work with middle management to support implementation of policies.

Evaluation

The ‘impact’ agenda is playing a role in encouraging institutions to pay more attention to evaluating the quality and impact of activity (TNS BMRB, 2015; Townesley, 2016; RCUK, 2016; RAND, 2014), although there are tensions inherent in this relationship. For example, in addition to problems of

definition and focus (with the impact agenda and PE agendas sometimes pulling in different directions) the data that is captured for the REF framework, may not always be right for informing future PE evaluation practice.

Whilst the Factors Affecting survey reports evidence of evaluation of PE activities amongst enablers [57%] we know very little about the role of evaluation within researchers' engagement experiences. The PER Catalysts' self-evaluation data also confirmed their awareness that further focus is needed on measuring the *quality and impact* of PER activities on public groups and communities (Townesley, 2016). Beyond a recent report conducted by Bultitude et al. (2016) for the National Forum for Public Engagement with STEM, we found very little within the evidence provided for this study which captured the state of play in evaluation across the sector. The data collected from interviewees similarly highlighted that evaluation was an area where more work was needed. They cited lack of cultural norms, and methodological challenges alongside the tendency to focus on positive endorsement. There was a sense that, for many, reflection to improve practice was not an overt research skill so was not something researchers are trained in and could apply to their engagement work. Evaluation and reflection to improve teaching was recognised, but not applied to engagement. Our interviewees also highlighted that undertaking evaluation requires a set of skills that often go beyond their disciplinary research skills which raised the question of how to do this well. Whilst we appreciate that we have only drawn on a small number of people for our interviews (and further research is needed), this is perhaps an indication that while PE practitioners and enablers see evaluation as an integral element of high quality PE, this is not widely perceived.

Workshop discussion

The workshop noted that public engagement with research should have thoughtful and quality evaluation embedded within it. It was felt that evaluation had a role to play in not only evidencing and learning from the activities, but also on improving and monitoring internal support mechanisms. Some noted that a drive towards evaluation should not come at the expense of innovation and experimentation (i.e. people should not count themselves out of doing PE because what they want to do can't be straightforwardly evaluated). The resource and support required was discussed. Evaluation tools and frameworks were put forward, it was also noted that the skills and experience to undertake evaluation may need to be bought in as it was unrealistic to expect enablers or researchers to have this as part of their skill set.

2.4 Participation, Perspectives and Values

Participation

The evidence indicates there has been a small increase in participation in PE during the past 10 years (TNS BMRB, 2015; Burchell, 2015; Vitae, 2015). The most reliable data we have indicates that participation levels are relatively high, for example eight in ten researchers (82%) have done at least one form of PE in the past 12 months (chosen from a provided list), but it should be noted that volume of activity is variable and often infrequent (TNS BMRB, 2015). Researchers from the arts, humanities and languages have the greatest propensity to undertake PE (TNS BMRB, 2015; Vitae, 2015). This is supported by analysis of the REF Impact Case Studies (KCL and Digital Science, 2015; NCCPE, 2016)

The Vitae Careers in Research Online Survey (2015) reports 44% of respondents have participated in PE activities within their current role, and that a further 39% would like to do so, while 18% had no

interest in these activities (Vitae, 2015). Looking at results over time, these figures are slightly higher than those reported in 2013.

Interestingly younger researchers are less likely than older researchers to be doing PE, but more likely than older researchers to want to do more. Anecdotally, the experience from the PER Catalyst projects would counter this finding. We know from experience that the barriers for researchers will be different at different stages throughout their careers. This may be an area for further research, perhaps through biographical interviews.

Disciplinary perspectives

According to a literature review by Burchell (2015) and reflected in our interviews, Arts, Humanities and Social Science (AHSS) researchers have a longer and deeper involvement with PE at a disciplinary level where motivations for research can be about changing current situations, reducing power imbalance and challenging dominant narratives. While the PE with STEM agenda can be seen as being led by policy drivers, the AHSS journey would point to more discipline orientated approaches such as Participatory Action Research (PAR) and co-enquiry which have emerged largely independently of official institutions before being subsumed into the wider PE agenda (Burchell, 2015). These differences may in part help to understand the different perspectives and levels of participation in PE between researchers from STEM backgrounds and AHSS backgrounds alongside providing a useful lens for the interpretation of policy to affect change in PER.

Values

Since 2006, there has also been a marked rise in the percentage of STEM researchers who consider that PE is important relative to other aspects of their role: from 28% to 37% (TNS BMRB, 2015). The majority of researchers cite moral duty as a primary driver for engagement, although the Factors Affecting study reports that the primary emphasis here is on justifying public spending and 'selling' their subject to the public, rather than a genuine feeling that there is an obligation to engage the public (TNS BMRB, 2015). The number of STEM researchers who strongly agree that researchers have a moral duty to engage the Public has risen sharply from 20% in 2006 to 36% in 2015 (TNS BMRB, 2015). Many researchers felt that their work was enhanced by engagement with the public: at least a half of all researchers felt that the public could either add value to or improve the quality of their research (TNS BMRB, 2015). The top four reasons for researchers include talking about the potential benefits of your research (64%), relevance of subject to everyday life (63%) enjoyment of subject (58%) and findings of research (56%).

A significant proportion of the public (68%) would like scientists to talk more about the social and ethical implications of their research (IPSOS MORI, 2014) whilst 48% of researchers feel this is important. The 2014 PAS Survey found that people are keen to hear more about science and often want to focus on the results of scientists' work, rather than how they go about their work. Combined, both Factors Affecting and the PAS survey found low levels of motivation from researchers and publics to discuss the process of research (TNS BMRB, 2015; IPSOS MORI, 2014). However, the latter report raises concern that public attitudes towards the research process has not changed since 2011, noting the peer review process seems not to be widely understood only a third disagree that scientists adjust their findings (IPSOS MORI, 2014).

Workshop discussion

There was not a specific discussion relating to values within the workshop. However, it is notable that the values-based approach to supporting PE was implicit throughout the day. With very few (if

any workshop participants) adopting an alternative rationale for PER e.g. linking PER directly to financial success and return.

3. The stage and trajectory of public engagement with research

Given the complex landscape and the range of factors affecting the embedding of PE with HE culture, how can we find an instructive and systematic way to represent what the data has revealed about the extent to which a culture of PE has been embedded in UK Universities and Research Institutes? A useful tool for this purpose is the aforementioned EDGE tool developed initially by the NCCPE to capture the learning from the BPE in a systematic way, and further developed in consultations and workshops it is now widely used across the sector. The tool identifies nine dimensions which underpin a supportive institutional culture:

- Mission
- Leadership
- Communication
- Support
- Leadership
- Recognition
- Staff engagement
- Student engagement
- Public involvement

Each of these dimensions is mapped against four states:

- **E Embryonic:** Institutional support for engagement is patchy or non-existent, although some engagement activity is underway
- **D Developing:** Some support has been put in place, but in a relatively unsystematic and non-strategic fashion
- **G Gripping:** The institution is taking steps to develop more systematic and strategic support
- **E Embedding:** The institution has put in place strategic and operational support for engagement

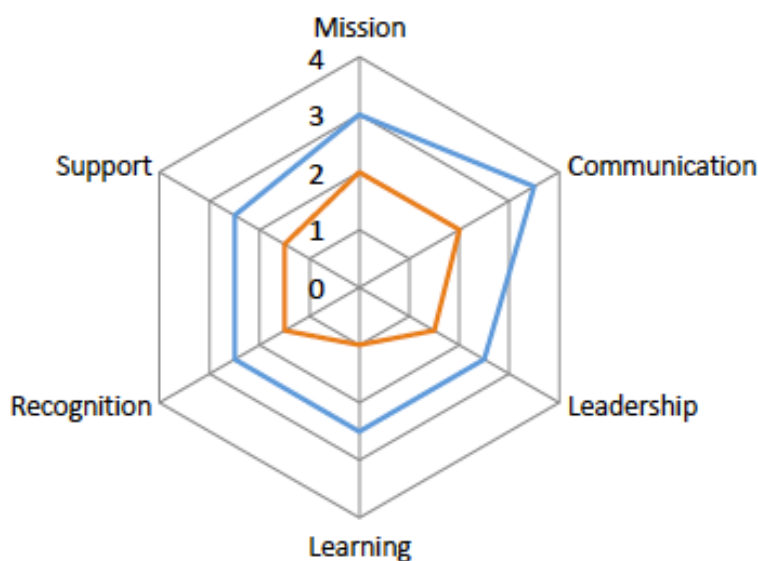
We have mapped the data from our review of the literature and the interviews against the EDGE tool. Due to a lack of available data, the third tier of dimensions (Staff, Student and Public) were difficult to benchmark against and therefore we focused on perspectives of researchers, participation levels and values. It was felt that perspectives, participation and values was not picked up in the other areas of the EDGE tool, and that these categories, largely reflected the principles that the people of section of the tool was attempting to encompass.

There clearly has been some progress across the sector. This appears to be around mission statements, communications and environments which are now seen by researchers as being generally more supportive of PE than ten years ago. There are some areas where progress against the EDGE tool framework would appear to be less evident, for example around leadership and reward and recognition.

In assessing the state of play of PE in UK Universities against the EDGE tool we would like to note the spirit in which the tool was created, that is, as a prompt for discussion. The tool has to our knowledge not been used at a sector level before, and as already remarked, there are also some significant gaps in the data.

The EDGE tool: where are we now?

Focus	Embryonic	Developing	Gripping	Embedding
Mission	There is little or no reference to public engagement in the organisational mission or in other institution-wide strategies	PE is referenced sporadically within the institutional mission documents and strategies, but is not considered a priority area.	PE is clearly referenced within the institutional mission and strategies and the institution is developing an institution-wide strategic approach	PE is prioritised in the institution's official mission and in other key strategies, with success indicators identified. It is a key consideration in strategic developments in the institution
Leadership	Few (if any) of the most influential leaders in the institution serve as champions for public engagement.	Some of the institutions senior team act as informal champions for public engagement.	Some of the institutions senior team act as formal champions for public engagement.	The VC / Principal acts as a champion for public engagement; a senior leader takes formal responsibility; other senior leaders informally champion PE
Communication	The institution's commitment to public engagement is rarely if ever featured in internal or external communications	Public engagement occasionally features in internal and external communications	Public engagement features in the institution's communications strategy and features in internal and external communications	Public engagement appears prominently and consistently in the institution's internal and external communications
Support	There is no coordinating entity (e.g., committee or department) to assist staff and students in the implementation, advancement, and embedding of PE.	There is a coordinating entity, but its function around PE is largely informal and an add-on to its normal duties.	There is a formal coordinating entity; it does not coordinate PE activities exclusively or it only provides services to a certain constituency or limited part of the institution	The institution maintains a coordinating entity that is explicitly focused on assisting the implementation, advancement, and embedding of PE
Learning	There is little or no opportunity for staff or students to access professional development to develop their skills & knowledge of engagement	There are some opportunities for staff or students to access professional development and training in PE, but no formal or systematic support	There are some formal opportunities for staff or students to access professional development and training in PE. The institution provides some strategic support for professional development	Staff and students are encouraged and supported in accessing professional development, training and informal learning to develop their skills and knowledge of engagement.
Recognition	Staff are not formally rewarded or recognised for their PE activities	Some departments recognise and reward PE activity on an ad hoc basis.	The university is working towards an institution-wide policy for recognising and rewarding PE activity.	The university has reviewed its processes, and developed a policy to ensure PE is rewarded & recognised



— How embedded is PE in the HE sector (2015)?

— Where were we in 2006?

Mission (Gripping)

Public engagement has risen up the institutional agenda with a doubling in the number of universities with strategies for PE (33%) and who cite public or community engagement in their corporate mission. Placing PE within the core work of the institution suggests that the 'business case' for PE has been developed or can be foreseen. This is clearly a positive step: the difficult work still centres around the degree to which these plans are filtered down, accepted, adopted and translated into practice within institutions. However, there is evidence from researchers that their departments and institutions are more supportive of engagement and PE is more prominently featured in internal and external communications.

Leadership (Developing-Gripping)

The RCUK Concordat for Engaging the Public with Research survey found that the vast majority (over 85%) of institutions have allocated responsibility for PE to senior staff who act as champions for PE. The evidence from the PER Catalyst programme suggests that these lead staff can significantly increase awareness amongst research staff of key policies and initiatives that pertain specifically to PE. However, 20% of enablers point to a lack of high level commitment from senior management as a key barrier. With very little data available on public leadership and signs that departmental and faculty leadership may still be highly variable across the sector we have placed our assessment between developing and gripping.

Communications (Gripping-Embedding)

The research suggests that PE features prominently in institution's external communications. The NCCPEs Taking Stock report indicates a visible rise in PE featuring on university websites. The report notes that 44% offer information about research and events, or a direct link for the public to access more information about their engagement activities. It would appear that resources may have been allocated to sustain this, although we do not have that data. However, this synthesis has provided a number of examples that suggest internal communications around public engagement are poor e.g. advertising of opportunities and training, information on reward and recognition.

Support (Developing-Gripping)

Effective leadership around PE can have a significant influence within institutions, when supported with resource. However, the support and resource for PE is a very mixed picture. Dedicated professional support for PE is rare. Researchers appear more likely to get into PE through their own networks (if they have relevant networks) and therefore access PE, and the support for it, through multiple entry points and then progress through multiple routes. Whilst some oversight and co-ordination of PE has been initiated, many of the enabler roles are supporting PE alongside other functions (i.e. communications, PR, impact etc.). Data on the perspective of researchers suggests a preference for administrative support.

Learning (Developing – Gripping)

There are formal opportunities for staff to access professional development, however the take up of these opportunities is low. As discussed above (pp. 20-22) around a quarter of researchers have attended formal training on PE or communications. However, two recent surveys suggest that approximately half of researchers have not been offered training. The Concordat for Engaging the Public with Research Survey reported that 82% of respondents provide practical support for PE, with approximately two-thirds reporting that they have some staff capacity directed towards supporting PE. This difference between uptake and provision suggests that more can be done to raise awareness of opportunities and more needs to be done to tailor the training to more adequately meet the needs of the researcher community. However, there is also a suggestion that where training offered by institutions uses a coaching / mentoring approach this may not be perceived (and therefore reported) as training.

Recognition (Developing-Gripping)

There are some systems and processes in place for recognition of PE and whilst some institutions may be working toward policies to support recognition, the feeling on the ground is that PE is not formally recognised as part of academic success. Researchers report the norm for recognition across the sector appears to be informal (i.e. praise, awards...) as opposed to more formal recognition (i.e. promotions, allocation of time...). There is a disparity between recognition processes that have been put in place (for example, including PER in recruitment, promotion and workload planning), and awareness and implementation of them, with more institutions reporting that they have these mechanisms than PE enablers reporting awareness of them. For those who have fully embraced an engaged research agenda, and are strategic about their engagement work, their recognition will come through usual academic routes (e.g. research income, outputs, impact and teaching quality).

Where are we now?

Looking across the EDGE tool, we appear to be closer to 'Embedding' within Universities missions, leadership and communications, whereas in comparison, some of the work in supporting, recognising and learning from engagement is less advanced across the sector. We are seeing a sector in which Universities are increasingly:

- Responding to the PE agenda and developing appropriate strategies and strategic links to maximise the potential for their Institutions;
- Appointing senior leaders with responsibility for PE;
- Celebrating PE activity both internally and externally.

However, we continue to see a mismatch between the steps that universities and funders have taken to embed PE and how these are actually experienced by researchers.

4. Comparisons with other culture change initiatives

As part of this study we sought to better understand how significant the progress made in Public Engagement has been when compared to other culture initiatives. To help address this, we have looked at other attempts at sector-wide culture change, to contextualise what has been achieved and the methods used. The data collected for this section, was brought together through a mixture of review of key evaluations of these initiatives and interviews with stakeholders. We have looked at Researcher Development (Vitae), Equality and Diversity (Equality Challenge Unit) and Widening Participation (AimHigher) to get a sense of how culture change has been implemented in these areas. We have also reviewed evaluation data collected from a review of the role of HEFCE in teaching and learning enhancement (Trowler et al, 2013) and several papers exploring the impact of AimHigher (Waller et al, 2015; Harrison, 2012; Doyle and Griffin, 2012). The evidence was reviewed against five prompts:

- **Stimulus for action:** What were the key governmental/policy/institutional drivers for investing in change?
- **Approaches taken:** What were the key components of interventions initiated (i.e. Beacons programme, Centres for Excellence etc.)?
- **Ramifications:** What were the key ramifications for non-compliance with change processes?
- **Levels of investment:** What were the respective investments of the programmes?
- **Longevity:** Are the schemes still going, how are they being sustained, what happened after funding ceased?

It's important to note that whilst the findings have been useful, robust direct comparisons between initiatives has not been possible within the scope of this project. Primarily because each of these different initiatives have different theories of change, operate different change methodologies across different areas of focus and with varying degrees of investment. Furthermore, like PE they have been evaluated in different ways, using different approaches etc. Given this context we feel it is inappropriate to offer direct comparisons of success, by way of benchmarking, but instead to reveal comparisons.

[Key Findings](#)

Sharing of learning

A distinctive strength of the investments in PE-R has been the effective sharing of learning emerging from the pilot projects. It is evident from our review that the learning from the BPE has played a significant role in informing the policy instruments such the Concordat for Engaging the Public with Research and the Manifesto for Public Engagement alongside later investments such as the RCUK Catalysts and CSF. It is also evident that the PER Catalyst programme has benefited from lessons learnt, failures and successes within the BPE initiative. One of our interviewees confirmed that their CSF has been made immeasurably easier because of BPE and PER Catalyst. She's "avoiding all the bear pits". This is in comparison to a review by (Trowler et al, 2013) of HEFCE's teaching and learning initiatives which noted that many culture change interventions that use Beacons, Centres of Excellence or Pilot Approaches, often struggle with scaling or sharing the learning across these initiatives.

Breadth of scope

PE-R has a much broader scope than (for instance) researcher development and equality and diversity, which are relatively much easier to measure (e.g. high quality researchers remaining in academia and a workforce that represents wider society). The public engagement agenda encompasses a very broad range of outcomes (e.g. more research being driven by the public voice,

greater acceptance of research, more research being translated and taken up by wider society leading to change; and more people deciding to take up research careers). Linking these outcomes back to the interventions taken is more difficult.

Levels of investment relative to outcomes realised

There is a marked difference in what has been spent on the Public Engagement agenda compared to either Teaching Enhancement or Widening Participation. For example, the Beacons for Public Engagement had an investment of £9.2M (2008 – 2012), compared to the £315M that was invested in the Centres for Excellence for Teaching and Learning (CETLs) (2005 and 2010). A review of the impact of investments in teaching and learning enhancement (Trowler et al, 2013) states that while HEFCE's enhancement initiatives have played an important role in signaling the centrality of teaching as well as supporting individuals in developing their innovative practices, they have been far less successful in promoting the strategic development of quality enhancement across the sector as a whole. The report identifies the following weaknesses:

- Inadequate project timescales including projects being curtailed because of a need to spend money quickly;
- Insufficient evaluation of impact within the projects;
- Challenges with embedding projects beyond funding period;
- Lack of collaborative activity between various agencies involved;
- Ill-defined or contested project aims leading to mission-creep and difficulties in evaluation;
- The development of ghettoised identifies for Beacon/Pilot projects - centres for excellence but limited sharing of expertise;
- Lavishly-funded projects often resulting in more waste and ineffective wider influence;
- Poor, non-explicit, theories of change often underpinning the hypothesised effects of projects, which are not realised (e.g. scaling up to system-wide level).
- Projects often attract enthusiasts but fail to extend beyond that group, who tend to move from one project to the next;
- Whilst raising standards the projects failed to address reward and recognition structures leading to a lack of sustained cultural change.

(Trowler et al, 2013)

The limitations they identify provide a useful checklist to assess the relative effectiveness of any investments in culture change. Our review of the final evaluations of the Beacons for Public Engagement and Catalysts for PE and suggests that these weaknesses have largely been avoided in those programmes.

Ramifications for non-compliance

Having implications for non-compliance is one way to help raise the profile of the agendas amongst staff. There are currently much stronger financial and reputational incentives to address WP, equality and researcher development than for public engagement. Although it should be acknowledged that the invitation to include PE-R as a potential pathway to impact within the REF is beginning to shift behaviour, albeit it with some unintended consequences (for instance, narrowing attention to a specific type of 'REF-able' PE-R). Robust and procedural processes such as the Athena Swan appear to gather momentum and buy-in through-out organisations and can assist in driving changes to institutional practices. For example, in July 2011, in a letter to the Medical Schools Council, the Chief Medical Officer Professor Dame Sally Davies announced that the National Institute for Health Research (NIHR) would only expect to shortlist medical schools for biomedical research centre and unit (BRC/BRU) funding if the school holds a Silver Athena SWAN Award (Davies, 2011).

There are currently much stronger financial and reputational incentives to address WP, equality and researcher development than for public engagement and these have evidently driven compliance and uptake in significant ways.

Workshop discussions

Workshop participants agreed with the overall conclusions about the direction and degree of change. They noted the challenge of attempting to assess a whole sector when there was such diversity within and used the EDGE assessment that straddled two ratings as reflecting this inconsistency across the sector.

Participants noted that the comparisons between culture change initiatives had been helpful. Most attention was given to the comparatively low levels of investment in PE and the lack of ramifications for non-compliance. The discussions mainly focused around metrics and whether there should be a league table or Public Engagement with Research Charter. The idea of a charter or kite mark to benchmark support for PE was further explored in an Open Space session which concluded that any model should be flexible and piloted at both a school and institutional level. League tables were generally seen as being unworkable because of the broad conceptualisation of PE we have discussed already. The funders also expressed concerns around initiating a scheme, whilst the quality of institutional support for PE was so variable across the sector. Particularly noting that those institutions that had received funding for culture change may be at a distinct advantage.

There was also a degree of scepticism about the value of league tables or charters for fostering genuine culture change. Although parallels were drawn to student satisfaction where student scores of their experiences rapidly influenced change within HEIs – participants wondered if there was a similar ‘external’ assessment of PE that could be undertaken. Some participants noted that interventions such as the Research Excellence Framework or Responsible Research Innovation were to some extent ‘regulators’ for PE, and making effective strategic links within these agendas would assist in ensuring the PE agenda had more regulatory weight.

5. Conclusion and Recommendations

Policy and Funding Landscape

Public Engagement with Research is more diverse than ever. This diversity is evidenced in its range of practice and purpose. This lack of coherency, or ‘grand narrative’, for the value of PE presents both an opportunities and challenges. While it is clear that the range of purposes, entry points, practice, and disciplinary traditions are useful when supporting culture change within HEIs. For example, the success of the Beacons, Catalysts and Catalyst Seed Funds has been reported (at least in part) because institutions have the freedom to position PER to meet their own institutional goals; it can also mean there is a lack of clarity across the sector. This is reflected for example in the variety of measures used to evaluate and report on PER in this report, which can lead to a lack of precision when seeking to develop more robust measures of quality, enhance professional practice through recognised standards or through benchmarking. In contrast, many of the other culture change initiatives we compared with PER for example, were underpinned with specific metrics and areas of focus. These in turn can be used to develop more robust rewards and ramifications for non-engagement with the agenda. It is notable that we found low awareness levels of key PE policy instruments (i.e. Concordat for Engaging the Public with Research, Manifesto for Public Engagement) amongst researchers (TNS BMRB, 2015; RCUK, 2016), when compared with other agendas such as Athena Swann and Research Impact. Whilst the policy instruments associated with PER are largely strategic and not targeted at researchers directly, it is important when considering the breadth and depth of culture change to note, and it also raises questions about where researchers might learn about PER and its value. Crucially there is evidence to suggest that the inclusion of impact in the REF alongside pathways to impact, has acted as a catalyst for further its profile amongst researchers, but concerns have been raised about whether PE would lose its distinct identity (Watermeyer, 2012; Kings College London and Digital Science, 2015; TNS BMRB, 2015; Townsley, 2016; NCCPE, 2016h).

Building on the findings from this synthesis, the workshop also raised issues related to sector-wide recognition and standards of PER. The suggestion of some form of accreditation was discussed in detail, and whilst there was no clear consensus of what such accreditation should consist off (i.e. whether it should happen at department, faculty or institutional levels; whether it would include external assessment etc.) there was a sense that that this accreditation should bring benefits e.g. access to funds (or could restrict access to funds if a department was not accredited). Concerns were raised around how institutions that had already been in receipt of funding to support culture change may be at a distinct advantage.

We recommend further research and scoping into accrediting public engagement, investigating and piloting possible models and exploring the possible benefits that participation and accreditation may bring to researchers, departments, faculties and institutions.

While not yet overt in the literature, but evident in the workshop and in institutional settings, there is an emerging term: *engaged research* which for many encompasses a broader range of partners and audiences than public engagement with research (i.e. media, industry, policy makers). This aligns with the REF and with Pathways to Impact which don't prioritise particular forms of engagement on the basis of audience groups or partners. The emerging concept of engaged research may be helpful in this translation of concepts and demands to operational practice. For example, engaged research may allow individuals and Heads of Department prioritise their engagement work with fewer concerns about deciding between the myriad of demands (i.e. of engaging with publics, industry partners etc.). Participants from the workshop suggested that HEIs should only adopt this term ‘when they were ready’. However, whilst this term may make sense on some levels and instances, it risks losing unique elements of public engagement in what is already a

broad landscape. By maintaining a focus say on Public Engagement we enable groups of people to coalesce around shared goals in order to action change and develop policy and practice.

While outside the remit of this synthesis, further work could be undertaken to examine the typology of public engagement within a broader engagement context (such as industry, policy, knowledge exchange etc.). The typology should also seek to identify specific components within PER through which communities of practice could coalesce and seek to develop excellence in practice and more robust measures of quality.

It's evident that clear progress that clear progress has been made in embedding PE across HE since 2006 which without a seismic policy shift, is notable in itself, but is worth celebrating when we compare the level of investment to other change programmes within the sector. The key investments in culture change have enriched and informed each other avoiding several of the pitfalls that beset other initiatives within the sector such as challenges of embedding projects beyond funding periods, ineffectual wider influence and non-explicit theories of change. The data suggests that key PE initiatives (i.e. BPE, Catalysts, CSF) have driven success within the participating HEIs including some substantial sustainable change. Furthermore, key learning from these initiatives has been effectively captured and shared across other programmes and a wide range of stakeholders.

We recommend continued investment in mechanisms and approaches that effectively harvest and mobilise the learning from key initiatives to a broader range of stakeholders and networks.

Public Engagement for Institutions, Departments and Researchers

The evidence suggests to us that we appear to be closer to embedding public engagement within Universities missions, leadership and communications, whereas in comparison, some of the work in supporting, recognising and learning from engagement is less advanced across the sector, although cohorts of excellence will no doubt exist. The national picture of our sector is one in which Universities are increasingly:

- Responding to the PE agenda and developing appropriate strategies and strategic links to maximise the potential for their Institutions;
- Appointing senior leaders with responsibility for PE;
- Celebrating PE activity externally.

Whereas within Universities themselves, we see that:

- Professional support for PE is emergent and variously resourced;
- The type of support that leads to quality PE is not currently fully understood;
- Departments and Institutions are beginning to recognise PE but often through informal rather than formal mechanisms;
- The roles and purposes of public involvement in research are poorly articulated.

On the whole, participants at the workshop noted that the assessments made by the research were broadly reflective of their own perceptions.

This set of circumstances may be leading to a disconnect between the institutional policies and support in place and the experiences of researchers themselves. In response to these findings we

feel the concept of “institutional support” for PER needs further refinement. There is a need for roles that mobilise change within institutions as well as for administrative support for enabling PE activities to take place. Support in the form of professional development for researchers would appear to be not working for many researchers, and support in the form of leadership is largely assumed to be held at the top of the organisation, but the rotation of senior managers has highlighted that leadership for PER at this level is vulnerable. This suggests that leadership could usefully be conceptualised and enacted at many levels so that as leadership at the top ebbs and flows, the broader research environment remains steady.

We recommend four areas for development to deepen institutional support for PER:

- **Map examples of good practice for general researcher development that are/could be linked to PE development and that focus on creating researchers where PER is routine/’normal’ (capitalising on the Public Engagement Lens on the Researcher Development Framework).**
- **Explore developing radical new ways of researcher development for PER or for rolling out existing models but tuned for PER (based on the mapping exercise described above).**
- **Develop leadership programmes for researchers.**
- **Strengthen the role of middle managers in developing a culture for PE within their departments, for instance through the PE Watermark (see Recommendation 1)**

It is evident from the research data and discussions at the workshop that there are surface tensions around what constitutes effective support for PE. Whilst researchers express a need for administrative support at a project or department level, enablers and to some extent senior managers point to the value of a culture change focus to support the embedding of PE within research. The workshop pointed to a lack of knowledge within Universities about the types of support roles required, their positioning within Universities and their focus.

We recommend further research leading to the development of a professional framework for enablers and administrators supporting PE including the provision of leadership courses.

Time is perennial limitation on any researchers’ time and is not unique to public engagement. Citing lack of time is the acceptable way of saying that it’s not a priority for the individual. However, it would be useful to unpack the realities of researchers’ workload paying particular attention to workload models (and how they are used/not used), teaching, research, supervision, engagement, student recruitment, widening participation and administration. This unpacking could be undertaken with Heads of Department who manage the overall priorities. The emerging concept of Engaged Research may be helpful in this regard.

We recommend mapping researchers’ workload to understand further their time pressures and priorities. It would also be useful to understand how personal development reviews impact on the priorities of researchers. This could be undertaken by Heads of Departments as part of the PE Watermark recommendation from the workshop.

The funding landscape for PER is not coherent or clear for researchers. While Pathways to Impact in Research Council schemes is a clear source of PER funding it is underutilised. The literature did not provide much evidence for this reason, but the workshop discussions highlighted that the peer review process was not always perceived as adequate by applicants who reflected that feedback on Pathways to Impact could be contradictory or unhelpful. The value of having piloted PE activities outside of a research grant is valuable as it provides evidence for the effectiveness of the suggested impact activities in a research proposal.

We recommend that Research Councils seek to provide training or more guidance for peer reviewers and/or to include PER professionals in the review processes.

While we recognise the value of the RCUK pathways funding route, and Wellcome Trust's provision for PE, it is worth noting that not all researchers are funded through this route. This leaves a significant proportion of researchers who don't apply for these grants without access to this financial support.

We recommend that the sector does not rely only on Research Council and Wellcome Trust funding for PER within research grants as this will severely constrain access, quality and public provision for those not receiving funding from these organisations.

The interventions and initiatives established to simultaneously foster a culture in PE (i.e. BPE, NCCPE) have played an important part of the change ecosystem. The initiatives have been largely successful and they have performed a role in promoting the culture change that we have seen. More work is needed to understand the type of support needed to underpin both culture change and delivery agendas within PE, and also to ensure that they align with areas of future focus / policy shifts. But we know these initiatives have been a success.

In addition, the value and benefit of specific PE teams within universities, particularly with a change remit, is clear. Core funding of this nature ensures that PE is integrated into the institution's strategic goals, captures institutional memory, provides institution-specific training and opportunities, and delivers reward mechanisms.

We recommend that funding (external or internal) continues to exist to support culture change within institutions.

Evaluation is not perceived as a core element of PER for many researchers, yet is key to ensuring quality and evidencing the value of PER for all participants and contributors. This could arguably be considered to be within the broader demands of administrative support for PER that researchers would value. The types of roles required to support PER operate at several levels: with senior level advocacy and change agency, evaluation and evidence gathering, and general administration. The change agency and evaluation roles are specialist roles with their own professionalism and commensurate grades. With PE teams often being small or fractional there is a need for investment in a greater range of roles to support PER.

We recommend the development of incentives that support evaluation experts becoming embedded into HEIs to complement the existing enabler roles.

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Appendix 1: Descriptions of key Public Engagement with Research initiatives and interventions

EU/International Instruments

Science in Society

The FP7 Science in Society (SiS) programme was part of FP7 Capacities and had a budget of €312 million allocated for the period 2007-2013. It attracted a total of 841 proposals, of which 184 were funded.

An evaluation can be downloaded here: http://bookshop.europa.eu/is-bin/INTERSHOP.enfinity/WFS/EU-Bookshop-Site/en_GB/-/EUR/ViewPublication-Start?PublicationKey=KI0216493

Responsible Research and Innovation

Responsible Research and Innovation (RRI) implies that societal actors (researchers, citizens, policy makers, business, third sector organisations, etc.) work together during the whole research and innovation process in order to better align both the process and its outcomes with the values, needs and expectations of society. It is a key action of the 'Science with and for Society' initiative and a cross-cutting theme in Horizon 2020.

Key HE Orientated Interventions

Beacons for Public Engagement

The six beacons were university-based collaborative centres that were set up in 2008 to support, recognise, reward and build capacity for public engagement, with a lifespan of four years. The beacons were at the forefront of efforts to change the culture in universities, assisting staff and students to engage with the public. Their partners included further education colleges, museums, galleries, businesses, charities, TV and press, and public bodies.

Evaluation reports of all the projects can be downloaded here: <https://www.publicengagement.ac.uk/work-with-us/completed-projects/beacons>

RCUK Public Engagement with Research Catalysts

Following the success of the Beacons for Public Engagement, Research Councils UK launched the Public Engagement with Research Catalysts project in 2012. Eight universities were funded to establish support for public engagement with research, drawing on the lessons learnt from the beacons. The aims of the Catalysts were to create a culture within the grant holding HEIs where excellent public engagement with research is formalised and embedded through:

- strategic commitment to public engagement

- integration of public engagement into core research activities of universities, including measuring quality and impact of public engagement with research activities
- reward and recognition of researchers and staff involved in public engagement
- encouraging and supporting researchers and staff at all levels to become involved (e.g. by building capacity for public engagement amongst researchers)
- creating networks within institutions to share good practice, celebrate their work and ensure that those involved in public engagement feel supported
- contributing to a wider network supportive of public engagement including the NCCPE, other Catalysts and the wider higher education community
- building on experience to develop best practice that recognises the two-way nature of public engagement with research

Further details: <https://www.publicengagement.ac.uk/work-with-us/current-projects/catalysts-project>

Schools University Partnership Initiative

Funded by Research Councils UK the School-University Partnerships Initiative (SUPI) supported 12 universities to work in partnership with local schools to develop more effective engagements between researchers and pupils. SUPI projects are seeking to inspire a broader range of pupils to develop inquiring minds, by engaging them in a diversity of exciting hands-on research related activities. Researchers and teachers also benefit by sharing their expertise and resources, and through opportunities to enhance and develop their skills. As well as enriching the curriculum, the ultimate aim of SUPI is to motivate young people to be excited about research and raise their aspirations for further study and future lives.

Further information and reports available here: <https://www.publicengagement.ac.uk/work-with-us/current-projects/school-university-partnerships-initiative>

Catalyst Seed Fund

Building on the momentum generated from the [Beacons for Public Engagement](#) and the [Catalyst projects](#), RCUK launched funding to support a new cohort of HEIs: the Catalyst Seed Funds.

Higher Education Innovation Fund (HEIF (England only))

Administered by HEFCE - Funding for knowledge exchange to support and develop a broad range of knowledge-based interactions between universities and colleges and the wider world, which result in economic and social benefit to the UK. Allocations are performance based, and institutions are eligible to receive an allocation if they exceed a £250,000 allocation threshold related to their external income earnings and performance of the sector overall.

Further information: <http://www.hefce.ac.uk/kess/heif/>

Research Excellence Framework

The Research Excellence Framework (REF) is the current system for assessing the quality of research in UK higher education institutions. It was the first assessment exercise to assess the impact of research outside of academia. Impact was defined as ‘an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia’.

Further information: <http://www.ref.ac.uk>

Pathways to Impact

Research Councils now require academics to consider the future impact of research at the point of applying for funding. These plans are articulated within the pathways to impact statements.

Further information: <http://www.rcuk.ac.uk/innovation/impacts/>

Researcher Development Framework

The Vitae Researcher Development Framework (RDF) is targeted at doctorate, research staff, pursuing an academic career or thinking about applying the skills developed during PhD/research in another career. One of the four dimensions of the framework is focused on ‘engagement, influence and impact’.

You can find out more here: <https://www.vitae.ac.uk/researchers-professional-development/about-the-vitae-researcher-development-framework>

National Coordinating Centre for Public Engagement

The NCCPE seeks to support a culture change in the HEI sector. The three strategic aims of the organization are:

1. Inspire a shift in culture
 - By supporting universities in bringing about strategic change that embeds public engagement
 - By identifying, developing and disseminating evidence-informed practice
2. Increase capacity for public engagement
 - By brokering and encouraging the sharing of effective practice
 - By capturing learning from the beacons and beyond and sharing it widely
3. Build effective partnerships to encourage partners to embed public engagement in their work
 - By informing, influencing and interpreting policy
 - By raising the status of public engagement

Further information: <http://publicengagement.ac.uk/>

Connected Communities

Connected Communities is a multi-million-pound research programme designed to help us understand the changing nature of communities in their historical and cultural contexts and the role of communities in sustaining and enhancing our quality of life. It aims to achieve: new insights into community and new ways of researching community that put arts and humanities at the heart of research and connect academic and community expertise.

For further details: <https://connected-communities.org>

Institutional Strategic Support Fund (ISSF)

The Wellcome Trust's Institutional Strategic Support Fund (ISSF) enables UK universities to invest strategically to address fundamental health challenges. Funds can be used to support talented researchers and create the environments they need to do world-leading research.

For further information: <https://wellcome.ac.uk/what-we-do/our-work/institutional-strategic-support-fund>

Appendix 2: Benchmarking cultural change in complex organisations

In this section we discuss the feasibility of benchmarking the current state of development of culture change in PE against what is already known about other recent examples of whole sector culture change. We begin with a short review of some of the literature on cultural change, and look at approaches to benchmarking. We are grateful for the insights and support of the Bristol Leadership Centre based at the University of the West of England, most notably Professor Richard Bolden and Anita Gulati.

Writing on organisational change within private industries, Kotter (1996) identifies a number of key phases in which change initiatives may founder:

- **Step 1:** Generating a sense of urgency,
- **Step 2:** Establishing a powerful guiding coalition,
- **Step 3:** Developing a vision,
- **Step 4:** Communicating the vision clearly and often,
- **Step 5:** Removing obstacles and empower others to act,
- **Step 6:** Planning for and creating short-term wins,
- **Step 7:** Consolidate improvements and change, and
- **Step 8:** Embedding changes in the corporate culture.

Kotter 1996

Taking Kotter's model, If we investigate the policy landscape non critically, we could suggest that the earlier reports of Bodmer (Royal Society, 1985) and the Science and Society Select Committee (House of Lords, 2000) have helped to generate a sense of urgency; that the coalition was formed around the BPE initiative, and Concordat for Engaging the Public with Research and that it is still forming for example with the creation of the National Forum for Public Engagement with STEM; and that the Concordat for Engaging the Public with Research and the Manifesto for Public Engagement and embody the vision for the change initiatives (steps 1-3). It would appear that steps 4-6 of the above model are happening simultaneously with the investment in Beacons for Public Engagement, PER Catalyst and Catalyst Seed Fund, targeted at generating change within participating institutions. And finally, whilst some have declared we are at a "tipping point" (Duncan and Manners, 2014) we have avoided a declaration of victory, and therefore by process of deduction we must be at step 8.

However, we suggest that the picture is more complex than this linear narrative suggestion. It is apparent that in our context each of these stages are occurring and cycling simultaneously. Therefore, if Bodmer and the Royal Society helped develop the sense of urgency, this urgency needs constant refreshing and updating. As the agenda evolves, its dimensions' change. For example, the narratives and evidence within these reports may not resonate to all constituents who are currently involved in driving the PE agenda forward (i.e. we have seen that the Arts and Humanities disciplines bring their own practices and terminology into the PE agenda). The narrative in Bodmer is now more evolved in comparison to the Concordat for Engaging the Public with Research, or the BIS Charter for Science and Society, with an increasing focus on the two-way nature of engagement. In some ways the "Impact" and "Responsible Innovation" agendas have developed a sense of urgency of their own in which PE clearly plays a part.

The majority of linear step-based change models, including Kotter (1996), are based on Lewin's unfreeze-change-refreeze model of culture change. The model consists of three steps:

- **Unfreezing**
 - create a need for change through analysis of current situation (forces for change)
 - Strategies for involvement, disconfirming information to create felt need

- Minimize resistance (forces against change)
- **Changing (or moving)**
 - implementation of new systems of operation.
 - employees learn new attitudes and behaviours.
- **Refreezing**
 - positive reinforcement of desired outcomes to promote internalization of new behaviours.
 - evaluation to ensure new ways habituated.

(Bolden, 2016; Dawson and Andriopoulos, 2009)

Our analysis is that the different stages of culture change detailed above and in numerous papers¹⁰, have a tendency to work well as a thought experiment and as a tool for reflection and generating understanding amongst people involved with change. There is a fundamental problem in understanding the degree to which the different phases are really ‘out there’ in the world or the extent to which they are a construct used to make sense of a complex landscape. Those that have written more extensively on culture change within Higher Education have a propensity towards understanding the formation of policy and its implementation as a complex organic process. Within this interpretation there is an inter-connectivity between the formation of policy and its implementation, where policy making is a socially constructed process, where different players whether researchers, heads of departments, vice-chancellors, civil servants have agency and influence (albeit to varying degrees) over the process of implementation and each player are from their respective perspectives responded to wider societal, economic and cultural changes. Their analysis tends to move away from more linear interpretations of the policy process, whereby those with power recognise a problem, and propose solutions through policy to address the problem (Trowler, 2012).

Likewise, within the literature on organisational change, there is growing appreciation the complex and chaotic organisational reality, acknowledging unplanned change, political processes, negotiation, diverse interpretations and misunderstandings (Alvesson and Sveningsson, 2008). This has led in part, to a lack of currency of the aforementioned linear approaches. Kotter himself has adapted his model to acknowledge two systems of change: The operating system (characterized by hierarchical structures, daily operations and processes) and the strategy system (characterized by networks, change agents at all levels, flexibility and agility). He adapted his original 8 step approach into 8 accelerators, no longer linear steps but key components within successful change environments (Kotter, 2012). Others have sought to understand and characterize the messy characteristics of change, to look at processes and capacities within the system. For example, Buchanan and Badham (1999) focus on the processes of and influence of different forms of power within change process. Dawson (2014) includes this, and adds two further dimensions, the substance (i.e. the defining characteristics, materiality, social perception, temporality and the scale and type of change), and the context (i.e. external elements such as market environment and internal elements, including history and culture). Finally, and more recently writers are more frequently introducing the notion that we don’t know where we are going, that includes the leaders of change. As Stacey (2007) writes:

“The future is thus under perpetual construction in the interaction between people and it is the processes of interactions between differences that amplifies these differences into novelty. The explanation of novelty lies in the properties of the processes of interaction.”

¹⁰ See for example: Kanter et al. 10 Commandments for Executing Change (1992) and Luecke’s Seven Steps (2003) in Todnem (2005).

This is relevant given the EDGE tool, used throughout this document does imply an end point, and is in many ways a linear model.

A major driver behind benchmarking culture in the private sector, is the aspiration to identify and understand standards and transfer them across organisations (Dennison, 1984; Wilkins and Ouchi, 1983). Of course, in keeping with our commentary above, the critique that arises centres around the degree to which elements of culture can be revealed fully, and that transference across organisations with unique values, behaviours and patterns is possible. There are tools out there that may be worth exploring to investigate the extent to which a culture of engagement could be benchmarked within HEIs. One such example, the Situational Outlook Questionnaire, seeks to capture the essence of a learning climate (rather than culture). The tool has been used by researchers in the Bristol Leadership Centre to benchmark learning climates across different organisations. It measures nine dimensions:

- **Challenge and Involvement** The degree to which people are involved in daily operations, long-term goals, & visions
- **Freedom** The independence in behavior exerted by people in the organization
- **Trust/Openness** The emotional safety in relationships
- **Idea-Time** The amount of time people can (and do) use for elaborating new ideas
- **Playfulness/Humor** The spontaneity and ease displayed within the workplace
- **Conflict** The presence of personal and emotional tensions in the organization
- **Idea-Support** The ways in which new ideas are treated
- **Debate** The occurrence of encounters and disagreements between viewpoints, ideas, differing experiences and knowledge
- **Risk-Taking** The tolerance of uncertainty and ambiguity exposed in the workplace

Situational Outlook Questionnaire (2016)

Given the prominent role of reflection and learning within a ‘culture of engagement’ there would appear to be some areas of synergy between this tool and our needs, although further research, adaptation and testing would be required.

One further model that may be of relevance to our discussion is the Diffusion of Innovations model. Originally located in the consumer tech industry, it has been applied to look at innovations within policy making and institutional development. Focusing on the adoption of innovation, the model describes how a “product” might be adopted by five different consumer types and how businesses could engage differently with each type. The five groups are:

- **Innovator.** They are a small group of people exploring new ideas and approaches.
- **Early Adopters.** Considered to be opinion leaders who may share positive testimonials about new ideas and approaches, seeking improvements and efficiency. Engagement requires little persuasion as they're receptive to change. Provide guides and support.
- **Early Majority.** These are followers who will read reviews by earlier adopters about new ideas and approaches before adopting. They can be engaged with reviews for example.
- **Late Majority.** To generalise, these are sceptics who are not keen on change and will only adopt a new idea or approach if there is a strong feeling of being left behind or missing out. They can be engaged with providing marketing material, evidence, reviews from Opinion Leaders and case studies to show how it works.
- **Laggards.** Typically, they prefer traditional communications and will adopt new ideas and approaches when there are no alternatives. Laggards will come on board when 'others' have written about it, they have research evidence, statistics or felt pressure from others.

Adapted from Hanlon (2016)

The model is useful when thinking through the segmentation of culture change efforts, and potentially benchmarking the relative percentages of researchers who might fit into each group.

One of the major challenges facing any benchmarking exercise is the different ways in which PE has been defined and implemented across the sector alongside the variability in how researchers themselves understand and conceptualise PE. This in turn would lead to a certain degree of uncertainty in the results across institutions and affect the extent to which results would be comparable in a meaningful way.

Appendix 3: Recommendations

Recommendations

Recommendation 1: We recommend further research and scoping into accrediting public engagement, investigating and piloting possible models and exploring the possible benefits that participation and accreditation may bring to researchers, departments, faculties and institutions (such as the PE Watermark*).

Recommendation 2: We recommend continued investment in mechanisms and approaches that effectively harvest and mobilise the learning from key PE initiatives to a broader range of stakeholders and networks.

Recommendation 3: We recommend further research leading to the development of a professional framework for enablers and administrators supporting PE including the provision of leadership courses.

Recommendation 4: We recommend mapping examples of good practice for general researcher development that could be linked to PE development. The focus for researcher development should be on creating researchers where PER is routine/normal, capitalising on the Public Engagement Lens on the Researcher Development Framework. This work could be supported by a seed fund for developing new models for researcher development.

Recommendation 5: We recommend developing leadership programmes that researchers and professional services staff can participate in.

Recommendation 6: We recommend mapping researchers' workload to understand further their time pressures and priorities. It would also be useful to understand how personal development reviews impact on the priorities of researchers. This could be undertaken by Heads of Departments as part of the PE Watermark* recommendation from the workshop.

Recommendation 7: We recommend that Research Councils seek to provide training or more guidance for peer reviewers and/or to include PER professionals in the review processes.

Recommendation 8: We recommend that the sector does not rely only on Research Council and Wellcome Trust routes for funding for PER as this will severely constrain access, quality and public provision.

Recommendation 9: We recommend that funding at institutional level (as per BPE, PER Catalysts and CSFs) is continued, however consideration given to the focus of initiatives that could support developments in the quality of PE.

Recommendation 10: We recommend the development of incentives that support evaluation experts becoming embedded into HEIs to complement the existing enabler roles.

Additional recommendation: While outside the remit of this synthesis, further work could be undertaken to examine the typology of public engagement within a broader engagement context (such as industry, policy, knowledge exchange etc.). The typology should also seek to identify specific components within PER through which communities of practice could coalesce and seek to develop excellence in practice and more robust measures of quality.

* The purpose of the PE Watermark is to assess support for embedding high quality public engagement with research against the NCCPE's EDGE tool; to assess understanding and awareness of PE across the institution; to assess the institution's strategic intent: how effectively it is focussed on enhancing the quality of its support and to provide an external benchmarking of the institution's activity, to allow for comparisons with other HEIs and to monitor its own ongoing activity.

Appendix 4: Author Biographies

David Owen is a consultant, researcher and project producer with expertise in public engagement and systems thinking. He enjoys working with a wide range of organisations, facilitating others talents, organising, mobilising and helping ideas find their place in the world. He has over ten years' experience working nationally and internationally with universities at the interface of teaching, research and public engagement.

He was formally Head of Research, Engagement and Impact for Exeter University Business School where he was responsible for supporting the Business School's research portfolio including the development of corporate partnerships, fundraising and external communications. He is currently an associate with National Coordinating Centre for Public Engagement and a visiting Research Associate at the University of Bristol.

Helen Featherstone, PhD, is an independent public engagement consultant. Helen specialises in helping others to develop their public engagement strategies and practice, evaluation and understanding the publics' needs and roles. Alongside her consultancy work, Helen is the joint Head of Public Engagement at the University of Bath. As part of the Public Engagement Unit, Helen works across the university supporting engaged research and creating the conditions for engaged research to flourish.

Prior to working within Higher Education Institutions supporting cultures of public engagement with research, Helen was a post-doc researcher at UWE, Bristol looking at the publics' roles in public engagement. Helen continues to teach on the MSc Science Communication and Science Communication Masterclass courses at UWE and is a mentor on the National Coordinating Centre for Public Engagement's PE Academy. Helen has extensive experience in practical STEM engagement activities primarily in interactive Science and Discovery Centres. For 14 years she has been responsible for all aspects of these activities including fundraising, project management, content and event delivery, collaborative working and evaluation.

For 3 years (2010-2013), Helen was Chair of the Visitor Studies Group. The group for audience researchers in non-profit visitor centres such as museums, galleries and botanic gardens. The VSG advocates putting visitors at the heart of cultural experiences.

Kerry Leslie worked for the Research Councils for over fifteen years and was the Head of the Research Council UK's (RCUK) Public Engagement with Research (PER) unit, leading on high-level policy and strategic direction for the RCUK PER agenda. This included conception and production of the Beacons for Public Engagement, the National Coordinating Centre for Public Engagement (NCCPE), the Concordat for Engaging the Public with Research and the Public Engagement with Research Catalysts. She now runs her own public engagement consultancy specialising in working with funders, academic researchers and the higher education sector acting as an external advisor to assess public engagement capability, advise on public engagement strategies and draw on evidence to inform future investments. Kerry's PhD in Astrophysics was gained at University College London's Mullard Space Science Laboratory.

This report was prepared for Research Councils UK and the Wellcome Trust by David Owen, Helen Featherstone and Kerry Leslie. The views and statements expressed in this publication are those of the authors and do not necessarily reflect those of RCUK and The Wellcome Trust