

# An examination of the culture and ethos of public engagement with research among the STFC community

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**January 2016**

I am immensely grateful for the support provided by the STFC Programme Directorate and Support Group, in particular Neville Hollingworth, Alison Smith and Jane Butt, which enabled me to complete the research underpinning this report at short notice and within a short space of time.

This research was commissioned by the STFC public engagement group as part of its project to examine the prevailing ethos of and attitudes towards public engagement with research and provide insights into engagement practice in key university schools/departments in receipt of STFC funding.

The research comprised a series of interviews with researchers from eighteen UK universities, undertaken in late November/early December 2015. I (Ann Grand) carried out all the interviews and analysed the data, and prepared this report.

### **Research objectives**

- To examine the value placed on public engagement in STFC’s research community
- To establish why researchers undertake public engagement and what value they personally derive from it
- To investigate the barriers to effective public engagement perceived by STFC’s research community
- To establish how STFC can offer support to overcome perceived barriers
- To establish what mechanisms of reward and recognition exist for public engagement activities
- To establish whether large-scale ‘institutional’ public engagement funding has contributed to changing research culture and practice in STFC’s research community
- To establish how large-scale funding complements the overall engagement activities of schools/departments/institutions

### **Sample**

The universities included in the series were selected by the STFC public engagement project group. Fourteen of the 18 universities were the receivers of the highest amounts of consolidated funding (2009–12); three received smaller amounts and one had no consolidated funding. Fifteen had researchers holding small and large STFC awards or public engagement fellowships (2011–15). The 41 interviewees included early-career researchers, heads of faculty, heads of department/school, professors/associate professors, PVCs, project PIs, outreach officers, engagement managers and directors of engagement. The majority of participants had primary research interests in physics; a small number were researchers in public engagement and the sample also included public engagement/outreach support staff. There were 28 male and 13 female participants.

#### **Universities:**

Birmingham	Cambridge	Durham	Edinburgh	Glasgow
Imperial College	Leicester	Liverpool	Liverpool John Moores University	
Manchester	Oxford	Queen Mary University of London		
Queen’s University, Belfast	Sheffield	Southampton	Sussex	
University College, London	University of the West of England, Bristol			

### **Interviews**

The interviews used a structured set of questions designed and reviewed by members of the STFC public engagement project group. Thirty-one were conducted face-to-face, nine as Skype video calls and one by email. With interviewees’ permission, the interviews were audio-recorded (one interviewee refused and in a small number the equipment failed) and I took extensive notes during the interviews. These notes and recordings form the basis of this report, supplemented by post-interview personal reflections.

## *Summary*

- The prevailing culture within the STFC community is one of **outreach** to schools and colleges
  - outreach is clearly linked with institutional objectives for **student recruitment**, widening participation and Fair Access
- A minority described **engagement** in terms of dialogue, collaboration, co-creation and co-production
- Most members of the community **value** engagement and believe it to be important
  - For researchers, the most important value of engagement is that it enhances researchers' **communication skills**
  - For the research process, the most important value of engagement is that it leads to greater **public support** and **funding**
  - For engaged publics, the most important value of engagement is seen as giving people the opportunity to **learn about and be inspired** by science
- The community identified multiple **barriers** to high-quality engagement
  - The majority felt they did not have enough **time** to include engagement in their workload
  - Many felt engagement had a **low priority** in their institution and was seen as **detrimental to career** progress
  - Many felt they lacked the skills and tools for high-quality **evaluation** of engagement
  - Some felt researchers had **poor engagement skills** and there was a perception that **little training** is available
- Awareness of institutional **support** available for engagement is patchy
  - The work of **outreach officers** is valued for maintaining long-term relationships with schools
  - **High-level institutional support** was seen as vital for creating a positive atmosphere around engagement
  - There was a call for **clearer articulation** of funders' aims and objectives for engaged research
- There is little consistency across institutions in terms of the **rewards and recognition** linked to engagement
  - Moreover, there is inconsistency within institutions in terms of researchers' awareness of current institutional rewards and recognitions
- Considered across the community, there is a **low level of awareness** of the legacy or work of the large-scale institution-level public engagement awards (**Beacons/Catalysts**)
  - However, there is **greater awareness** and **local impacts** in institutions that had been Beacons or Catalysts, for example rewards for engagement in promotions, legacy engagement platforms and partnerships, and the continuation/creation of posts such as Engagement Officers

- Opinion was divided on the **value of separate or embedded** public engagement funding
  - For most interviewees, outreach remains a low-cost activity, funded by a mixture of a small proportion of consolidated funding and departmental and charitable funding to support posts
  - Recipients of small awards and PE fellowships see the STFC small awards as pathfinders for **raising institutional awareness** of current engagement practice, **supporting creativity and innovation** in engagement and enabling **collaborations with** public engagement researchers and practitioners
  - The current **top limit** for small awards is felt to be **too low** and the effort involved in putting together an application is disproportionate to the funding available and a more **flexible process** is needed
  - Some felt **separate engagement awards** reinforce the **view that engagement is not integral** to good research and the STFC should move to an embedded model
- Many felt there is a need for **improved review and evaluation** of engagement
  - To enhance both the quality of and the status of engagement, engagement applications/Pathways to Impact should be seen to be **reviewed by engagement specialists**
  - Evaluation of engagement needs to be improved, especially the **development of more subtle measures** of levels of engagement, moving beyond head-counts
  - Many interviewees felt STFC was well-positioned to offer researcher support to **develop better evaluation practices**
  - Some interviewees suggested the STFC should monitor projects to ensure promised engagement is actually carried out

## *Recommendations*

The STFC should

- invest in leadership to engineer a convergence of the community's understanding of engagement by more clearly articulating its own core principles and strategies
  - for example regional engagement conferences exemplifying good practice
- celebrate role models of successful engaged research and publicise case studies of better research and greater impact achieved through engagement
- look to its own use of language and imagery (including job titles) to help promulgate a well-defined consistent message around engagement across the community
  - for example the STFC public engagement page, whose headline focusses on schools outreach
- connect the STFC community regarding available training and support for engaged research
  - for example feed back to the physics community the support already available in their institutions
- ensure engagement bids and Pathways to Impact are – and are seen to be – reviewed and monitored by experts in engagement
- review and enhance support and training for effective evaluation of engagement
- review the application process for small awards and work towards simpler and more flexible processes to encourage a wider range of applicants
- work with universities and research institutions to ensure engagement is recognised and rewarded as a respected and valuable aspect of research activity

### *The culture and ethos of engagement in the STFC community*

Public engagement with research begins with people, with engaged communities; with researchers, practitioners, support staff and members of the public. Therefore, to begin to understand the culture and ethos of public engagement with research within the STFC community, a vital first question to consider is how the interviewees personally conceptualise ‘public engagement with research’.

Across the STFC community, as one interviewee put it “the landscape of public engagement is so varied ... so difficult to bring together”. Within the community, public engagement with research is defined in multiple ways, covers a long spectrum of activities and targets a wide range of audiences. Yet, despite characterising it in multiple ways, the majority of the STFC community values public engagement and believes it to be important.

#### **The importance of language**

In the community, engagement and outreach are entangled to a high degree. In many ways, it would be more correct to speak of the community as having an ethos of outreach, rather than one of engagement. While this could be viewed as simply the use of one word rather than another, the content of the interviews show this is not the case. Despite questions consistently asking for interviewees’ reflections on ‘public engagement’, most respondents answered using the word ‘outreach’. And while the majority of respondents were self-consistent, in that the activities they described would certainly fall under conventional definitions of outreach, in one or two cases, activities described as outreach were actually closer to engagement.

The differences were recognised by a few interviewees, who emphasised the importance of separating engagement from outreach. For example, one interviewee explicitly described their work as “*not* being part of the widening participation and recruitment agendas”, while another said that “engagement isn’t about outreach, it’s about research and should be clearly distinct”.

#### **Engagement and outreach**

Broadly, I would divide the community into two conceptual systems: the majority, who speak of ‘outreach’ (mostly but not exclusively physicists) and a minority who speak of ‘public engagement’ (mostly but not exclusively people with research interests in public engagement, public engagement support staff and physicists who had received small and large awards or STFC public engagement fellowships).

**Outreach:** by far the most common definition was couched in terms of ‘outreach’: of working with schools, teachers and pupils. Definitions focussed on one-way transmission of information; interviewees often described outreach as “talking to” the general public, to children, teachers, politicians and the news media; of communicating and explaining science “in terms that people can understand”. Many institutions were deeply committed to outreach and physicists are certainly active outreachers. Interviewees described visiting schools, talking to students, giving lectures in schools, running masterclasses and lecture series in their university, training teachers, creating demonstration materials and resources and similar activities.

Outreach has the valuable quality of having very direct and clearly identifiable objectives; it is seen as a way to support institutional objectives for establishing a positive image of the institution and inevitably linked to student recruitment, both of disadvantaged (widening participation) students and good-quality students to physics departments. Outreach is a familiar concept and a deeply-embedded, long-standing tradition in most physics

departments, through established practice, through the existence of institutional or departmental support staff and outreach officers and through the language used. Noting this, some interviewees commented that this familiarity made it hard to “move people on” to what they believed to be “real” engagement.

**Engagement:** a minority of the interviewees were people with research or interests or a role focussed on public engagement, together with physicists who had received small or large STFC public engagement awards or public engagement fellowships. This group was notably more likely to describe engagement in terms of a two-way process, of dialogue, of asking questions and listening to the answers, and conversation. Some described working towards the “holy grail” of collaboration, co-creation and co-production. Interviewees described the importance trying to reach new, unengaged groups and drawing on the skills of new partners in the research process and working with stakeholders from the pre-award stages. This group also tended to describe existing outreach as lacking creativity and innovation; that researchers were “just doing what they’d always done”.

Within these two concept-streams, I identified some distinct sub-themes:

**Education:** public engagement as public education is a strong theme. Commonly, interviewees said that “people need to understand” the – often quite complex – science that STFC funds. For these interviewees, outreach was about educating and informing the public. Researchers believed there is an appetite for learning among the public; that people want to learn and understand. Education is carried out in a variety of ways; interviewees mentioned writing (books, newspapers articles, blogs), giving talks to special interest groups, such as astronomy societies, exhibits and events at festivals (mostly science festivals), running masterclasses for older school pupils, giving public lectures and supporting school science teachers through training and development of resources for use in schools.

**Inspiration:** allied to education, the majority of interviewees wanted to share the excitement, fascination and fulfilment that they find in their work. Interviewees tried to celebrate science, to inspire new generations of scientists, to increase public awareness of science, to share the beauty of their work and to show how science functions and progresses. “Showing how science is really done” was important for many people as a way to demonstrate the public good of science. Many interviewees explicitly linked communicating scientific knowledge to the general public with research funding; that raising awareness of science was a way of “persuading people that they want to fund science”.

**Responsibility:** many interviewees described engagement and outreach as being an obligation for researchers; that it is their responsibility, as publicly-funded researchers, to be accountable and show people what their money is funding and achieving. Interviewees described wanting to “give something back to society” in return for the immense privilege of being funded to do work they find personally fulfilling, interesting and meaningful. This duty included an element of wanting to present a positive image of science, even to combat “anti-science feelings” in society.

## *The value of engagement*

For many interviewees the value of engagement is of a piece with their concept of engagement or outreach. As I have noted above, many felt they had a responsibility to engage, to be accountable for the public money spent on their research; that as public servants, they have a moral obligation to show tax-payers they are doing good work. Justifying their funding in this way was also explicitly seen as a way of maintaining support for research and for meeting institutional objectives for recruiting more and better students and generally raising children's aspirations to become university students, thereby indirectly increasing research and teaching income for their group, department or institution.

### **Value for researchers**

With the exception of two interviewees who were not convinced that outreach had any value for researchers and that researchers should focus on producing peer-reviewed publications and other outputs (the "actual metrics of success"), everyone offered at least one suggestion about the value of engagement for researchers. The major themes I identified are:

**Development of communication skills:** almost every interviewee mentioned the improvement of communication skills as a valuable outcome of engagement for researchers. Interviewees believed engagement built communication skills, enhanced transferable skills, meant researchers learn how to explain their work better, helped them write better funding applications, helped them clarify their ideas, enabled them to better engage in discussion and built their confidence and ability in new situations. The development of communication skills is generally believed to be particularly important for PhD students and early-career researchers.

**Intangible rewards:** in other words: "it's good fun!"; involvement in engagement helps researchers avoid becoming blasé and "remember that our science is amazing". Interviewees believed engagement boosted morale and offered a way of renewing purpose and creating a space in which they could see their work from a different perspective and in its social context. In opening up their work to different communities, researchers found personal inspiration, heard new questions and had the opportunity to hear different points of view.

**Tangible rewards:** in tandem with personal rewards, interviewees also recognised a "cynical self-interest"; they were aware that outreach was a way to advertise their work, get public support and justify existing funding, and attract more funding. A few suggested engagement could be a way of raising a researcher's personal profile – and thus indirectly a way of getting more funding.



### Value to research

It was less easy for interviewees to articulate the value they felt engagement had for research itself; the volume of data on this question is much less than for others. Most struggled to answer the question and their answers rather reflected value to researchers than to research itself.

**No value:** Several straightforwardly said engagement had no value to research, with a sense that research should definitely remain the province of professional researchers, especially in nuclear physics and astronomy, where the science is costly and complex and demands long experience and training. One or two suggested that there is a danger that the quality and value of public contributions to research can be over-emphasised.

**Cultural value:** a few interviewees suggested that the value to research lies in the cultural value of engagement; that it shows what scientists are doing on people's behalf and increases public awareness of research and researchers. However, despite being described in terms of cultural value, most interviewees who discussed value in these terms went on to tie it to increased public support for research and thus increased research income.

**Public participation:** a very small number of interviewees mentioned the value of public contribution to research through citizen science projects in which members of the public gathered or organised data, although none had personally been involved in such a project. One interviewee had worked with local communities in a co-created research project that had been highly successful in showing that "research shouldn't stop at the university door".

### Value to engaged publics

Interviewees also offered fewer thoughts on the value that engagement has for engaged publics and again, the data focussed on a small number of themes. It was particularly noticeable that responses were preponderantly instrumental; that is, that reflections tended to focus on the value to researchers, and to research funding, of having more engaged publics, rather than the value to the publics themselves.

**Increased support:** as might be historically be expected, a corollary of the value of scientific literacy is that increased scientific literacy would lead to an increase in support for science. Most interviewees suggested that that engagement/outreach would generally "increase the general public's support for science" and, specifically, "lead to more funding for science". A few interviewees felt engagement helped improve the image and identity of their university in its city, showing its relevance to the city's people and increasing student recruitment through widening participation and fair access agendas.

**Inspiration:** a strong theme was that people had a fundamental interest in science and that engagement gave them the chance to feed that appetite. Interviewees felt that interacting with real scientists, seeing that scientists are people who look "just like them" had the power to inspire people to make more informed choices and better decisions, which would benefit society as a whole. For children, they hoped interacting with scientists, and showing that "real science" is very different to school science lessons, would widen children's aspirations to go to university (this was a key

factor in universities in economically-disadvantaged regions), and perhaps even become scientists, which would bring long-term economic returns.

**Learning:** alongside inspiration, many interviewees said in their experience people were “keen to increase their knowledge” and engagement offered people the chance to “learn something from listening to scientists”. Several interviewees suggested that people “should be more scientifically literate” and so communicating their scientific knowledge, “clearing up people’s scientific misunderstandings” and offering people opportunities to learn was socially important. Two interviewees mentioned the value of engagement for policy-makers, suggesting that engaging with policy-makers would help educate them about the value of science and consequently help them make the “right choices” for society.

**Contribution:** a few interviewees (all of whom had research interests or public engagement funding) suggested that engagement could have a cultural impact on publics, building social capital, “giving people a voice”, and providing routes through which people could explore new intellectual challenges. No specific examples of contribution to research were offered; citizen science projects were mentioned in a general way but none of the interviewees had been involved in such projects. One interviewee had led a well-regarded research project co-created with members of the local community and hoped to use this experience to support researchers in their institution to develop more collaborative projects.

### *Barriers to public engagement*

When reflecting on the barriers that militate against high-quality public engagement/outreach there was one word that was common to every interviewee: time.

For many “Time!” was uttered with a capital letter and exclamation mark, complete of itself and unadorned by explanation. But when I probed a little further and asked them to discuss what “Time!” meant, two themes emerged:

*Engagement isn’t approved work:* a strong thread of comment focussed on institutional workload models that stress contributions to research and to a lesser degree teaching and management. Even where engagement time was built into a project, some had found themselves expected to use their work time for ‘real’ work, and so “outreach ha[d] to be built on”, often carried out in researchers’ spare time.

However, it is important to note that not everyone was unhappy about engagement being a personal, spare-time, voluntary practice – a few interviewees preferred to keep engagement “under the radar”, because then there was no pressure to evaluate their success and assess the impact of their engagement. Keeping engagement voluntary also meant they could keep work time for activities that are valued by their institution.

*Low return on investment:* many interviewees said the level of funding in STFC small awards does not allow researchers to buy out enough of their time to undertake high-quality engagement. They also felt the process of putting together a strong application was too time-consuming and therefore it is not cost-effective for researchers to spend the time they need to work up a sound proposal.

Beyond ‘Time!’, interviewees were eloquent and forthcoming about the barriers they perceived as disabling for engagement. The major themes were:

**Low priority:** although, as noted above, the priority accorded to engagement is a function of time for some interviewees, others specifically mentioned that engagement is not “seen as part of the research community endeavour” and is “low on the department’s priority list”. Low priority is also seen in the fact that engagement is only rarely a criterion (or believed to be a criterion) for promotion, to the extent that one or two suggested that engaged researchers are not seen as “real scientists”. Despite engagement often being written into institutions’ missions and published objectives, this kind of support is seen as “hollow and just rhetoric”, because where engagement is not integrated into workload models, this implies it is not regarded as a proper activity, and it is an activity that can be sidelined.

**Career implications:** an extension of the sense that engagement has a low priority is the belief that the prevailing culture in physics is that “engagement is career suicide”. Although some suspected that this might no longer actually be the case, this attitude is still powerful, with sceptical supervisors sending out subliminal messages to students that engagement is “not a good thing” and deflects their energies from real work. One interviewee had directly received “helpful suggestions” from their supervisor that they should spend less time on engagement. For early-career and post-doctoral researchers, going against supervisors’ and managers’ advice is a risky strategy.

**Evaluation:** many interviewees struggled to know how to measure and monitor the quality of engagement. They felt they lacked both understanding and practical skills; that they were unsure of the theory and principles of evaluation, what to evaluate and how to evaluate: “how to count what counts”. On the one hand, some felt this meant some good engagement work is going unrecorded and unacknowledged, reducing its impact. On the other hand, because researchers aren’t sure what works in engagement, how to reach the right audiences and engage with them appropriately, or the terms on which engagement works, some felt that poor-quality engagement was being allowed to continue. Interviewees directly asked for more STFC support to develop better evaluation practice.

Some interviewees, especially public engagement specialists, felt that even where researchers attempted to evaluate, it was often shallow; that researchers “tended to confuse spectacle with engagement”; just “looking at the numbers and weighing the clapping”, rather than reflecting on the nuances, for example going beyond head-counts to disaggregate levels of engagement, to think about how to compare the value of interacting with  $x$  thousand people at a science festival compared to the value of working in depth with  $y$  people in a community over the long term.

**Lack of funding:** several interviewees commented that engagement isn’t funded, although most were well aware of support for outreach offered by charitable bodies such as the Ogden Trust. In many institutions, charitable outreach funding is matched by institutional funding and supports the work of Outreach Officers, Outreach Managers or Widening Participation Officers. There is strong support for the work of outreach officers but interviewees mentioned that they still perceive there to be a lack of funding for development of resources and materials for outreach.

**Lack of training/poor skills:** several interviewees noted that “not everyone has the skills to be a good outreach lecturer”. Others said that the skills needed for effective engagement are – in the physics context – “somewhat niche” and *recherché*. (This is interesting in view of the rich seam of comment that one of the values of engagement was that it improved researchers’ communication skills.) Even in universities where I know there to be public engagement or science communication research or support personnel, interviewees commented that there were “no workshops or training available”. In their turn, public engagement specialists and managers noted there was a general lack of awareness about the services and support available within their institutions, whether for skills training, access to platforms for engagement, advice or networking. In terms of what training was needed, there was no settled view on what support was required. A few interviewees felt STFC and other research councils could do more to identify and promulgate good training opportunities in institutions across the country, especially in doctoral training centres.

**Lack of understanding of engagement:** particularly among the public engagement researchers, there was a sense that scientists “don’t get it”; that there is a limited understanding and awareness of what engagement is and a limited willingness to break the boundaries of familiar practice, for example the tendency to define engagement conservatively, focussing on outreach to schools, and using a limited creative palette of activities.

**What funders want:** interviewees’ views of the ‘rules’ around what funders want and are willing to fund under the heading of engagement were highly varied and contradictory. One set of views was that funders only fund “new, novel and sexy”, probably one-off engagement projects and thus there is no funding to expand the reach and remit of proven and effective projects. Similarly, others felt STFC awards “only go to teachers or engagement projects” and that “consolidated funding can’t be used for outreach”. These interviewees felt these perceived rules don’t “echo what we do”, which is largely ongoing outreach programmes. In contrast, others perceived funding as largely going on outreach to schools audiences and thus it was difficult to get funding for creative projects that would reach new and wider audiences. Some interviewees mentioned changes in funding criteria and award design that meant there was limited support and funding available to draw on the expertise of professional public engagement practitioners to work alongside scientists, thus enabling them both to learn on the job and develop more creative and innovative proposals.

**Targeting audiences:** a few interviewees who had been involved with large-scale events mentioned the difficulties of “connecting with the right audience”. They acknowledged that they tend to reach the same kinds of audiences – the already-interested, amateur astronomy groups and similar audiences – and would welcome support on how to target and reach new audiences.

### *Support for public engagement*

Data on support structures and mechanisms for public engagement is not as rich as that from other questions. Although only one or two interviewees explicitly said they were unaware of any support mechanisms in their institution, many struggled to answer this question in any depth. Moreover, people from the same institution often gave contradictory answers. This is more of a communication and awareness problem for institutions, rather than the STFC, but is perhaps reflective of the multiplicity of views held by the STFC community around engagement.

**Outreach officers:** Several interviewees mentioned that their department or group supported the position of an Outreach Officer, frequently part-funded in collaboration with the Ogden Trust. The work of outreach officers was always explicitly linked with supporting institutional aims for student recruitment into physics subjects, both of high-quality students and students from disadvantaged groups, under Fair Access guidelines. Vice versa, institutional support for departmental outreach was often linked to objectives for student recruitment and linked to Widening Participation and Fair Access agendas. Outreach officers were valued because they were able to maintain long-term relationships with schools, take on much of the organisational load for school visits and maintain databases of talks and lectures. In some institutions, outreach officers were the people who actually visited the schools and gave talks or led demonstrations, in others, their role was to facilitate visits by physicists.

**Other organisational support:** a few institutions organised local or regional *science festivals*. Interviewees said that these festivals offered both opportunities for engagement, sometimes a source of small amounts of funding for developing materials and sometimes help with evaluation and data collection. A few interviewees said they worked with institutional *media and communications teams*, specifically for creating and distributing press releases. A very few mentioned there was institutional support for developing engagement elements of *funding bids*.

**High-level support:** the value of high-level institutional support (whether for engagement or outreach) and celebrating success, was mentioned by several interviewees. Vocal support from VCs, PVCs, and top-level management was seen as vital for creating a positive atmosphere around engagement, especially in universities that are trying to embed engagement in researchers' practice across the institution.

**Sharing good practice:** for most, sharing good practice happens informally, at the colleague-to-colleague level of "what works in schools". A very few institutions held small monthly seminars focussing on topics in engagement and two (both recipients of Catalyst Seed Funding grants) were planning to start regular masterclasses related to engagement theory and practice.

**Training:** very few interviewees mentioned that their institution offered training in public engagement and it was most often mentioned in terms of skills training for doctoral students so that they could take on the outreach activities for their department.

### **Sustainable support**

When reflecting on support they would like to see to create sustainable engagement practice, many interviewees stressed the importance of clear, undeniable, demonstrated support for engagement from the top down. Interviewees felt institutions and funders need to find ways to show that engagement is respected at the same level as research – indeed a vital part of the process of research – whether through funding (including supporting researchers to spend time in engaged research), institutional public engagement awards, fellowships, and formal pathways for engagement as a route to career progression.

Several interviewees said they would like more support from STFC. This could be via strong and unequivocal statements – visibly backed up by the grants actually funded – that engagement is valued within grants. This kind of support would help engagement managers overcome the view that while funders “say engagement matters, they really only look at the science”. Interviewees wanted STFC to offer role models of success, to publicise case studies of people who had done better research and achieved greater impact through engagement.

*Inter alia*, many interviewees felt that the standard of reviewing of engagement proposals and Pathways to Impact proposals needs to be improved, in particular that proposals should be seen to be reviewed by experts in engagement.

Some wanted more support from STFC for developing high-quality bids, both inter-personal support, in the sense of there being someone to talk to before the application goes in and also clearer articulation of the STFC’s aims and objectives for engagement and its criteria for what makes a good engaged research proposal. A few interviewees suggested STFC could offer more feedback on unsuccessful applications, to enable applicants to understand where their applications had not met STFC aims and objectives and enable to improve future bids.

Some interviewees felt that, given the sense that understandings of what constitutes engagement are changing, that the STFC and other research councils could invest in leadership to help change researchers’ understanding of engagement and identify where they can access support to implement the changes in practice. To help institutions make the culture shift to engagement, messages from funders, both in terms of documentation and in how funding is allocated, need to be clear and unambiguous. Some felt that this shift in culture would be supported if engagement became a mandatory, well-reviewed and well-monitored part of all funding bids, as this would raise the status of engagement at management and institutional level. However, just as many felt it was important that engagement shouldn’t become compulsory, arguing that while engagement remains a self-selected activity, those who choose to engage will generally be those who are good at it and that engagement is not for everyone.

### ***Reward and recognition for engagement***

The picture is very mixed in terms of reward and recognition for public engagement. A considerable number of interviewees were either unaware or uncertain whether public engagement was part of their institution’s promotions criteria. Several times, researchers from the same institution gave contradictory answers to this question, suggesting this is an area where information filters through institutions fairly slowly.

A small number of interviewees recognised that criteria in their institutions were changing and that although there might have been no encouragement for engagement in the past, it was making its way into promotion criteria, often by way of inclusion of a discussion of contributions to engagement (or, more commonly, outreach) in annual appraisals.

Across institutions where engagement is part of promotion criteria, it is couched in a variety of language. In some institutions, it is an element of Knowledge Exchange, in others it forms part of Community Responsibilities or Civic Service. In very few is named in its own right. A few interviewees knew of colleagues within their institution for whom engagement activities had formed part of a promotion case and two interviewees had personally been promoted at least in part on the basis of evidence of high-quality engagement.

However, crucially, even where engagement was part of promotion criteria, it is commonly perceived as being regarded by departments and institutions as less prestigious and counting for less than achievements in teaching or research. I have no data on whether this is actually the case at the institutional level but it is certainly a widely-held perception.

More interviewees discussed ways that engagement was informally recognised. Researchers might be “mentioned in dispatches”, via newsletters or websites, or their contributions noted in departmental meetings. One or two interviewees had been rewarded monetarily through discretionary achievement bonuses or had received institutional public engagement awards.

(A point to note is that although I have used the word ‘engagement’ above, most interviewees in fact referred to rewards for outreach, or the presence of outreach in promotions or appraisal criteria. As noted above, the value of outreach was closely linked to institutional aims for student recruitment.)

### ***Public engagement and REF 2014***

The picture of the extent to which the inclusion of public engagement in REF 2014 has altered researchers’ perceptions of engagement is mixed. Although very few interviewees said it had had no effect, many were uncertain, or unsure of its effects. Some felt it was too early to tell, after just one iteration, and one or two were sceptical of the relationship.

Positively, a few interviewees suggested that the REF had led to an increased willingness to engage and made researchers think about embedding engagement earlier, and to some extent had “woken up the management” and legitimised engagement, “giving permission” to researchers to include engagement within their personal practice.

However, the major point of discussion concerning the REF was the difficulty of knowing “what impact looks like”. Physicists said they weren’t used to capturing evidence of social impact and that it was hard to capture, since it had “no real numbers”. Some felt that a legacy of the REF would be to make them think more carefully about the importance of evaluating social impact, especially since in the past, outreach has not always been effectively recorded and outcomes captured.

Where evidence had been collected and incorporated into REF case studies, there was a feeling that it might not have been effectively assessed. One or two commented that engagement needed to be reviewed by people who “got it”; that too often it was reviewed by people who don’t understand engagement.

Although many interviewees felt that social benefits provided a route to impact in fields, such as particle physics and astronomy, where industrial and economic impacts are rare, some felt that their institutions had placed a lower value on social impact than on other forms, and therefore the drive for substantial numbers had changed engagement practice, since engagement activities tend to target smaller audiences.

## *Seeking funding*

### **The legacy of the Beacons/Catalysts**

The large-scale institution-level public engagement awards (the Beacons for Public Engagement and the Catalysts for Public Engagement with Research) have made little impact on interviewees; most answered this question with a blank look or a puzzled shake of the head. The strongest recognition was from interviewees whose institutions had received Beacon or Catalyst funding. However, even then, recognition was not universal; some interviewees were unaware of the projects.

Some who were aware of the initiatives were, none the less, unable to identify any specific benefits. Among the few who could identify benefits for their department or institution, these fell into four categories: platforms for engagement (e.g. Bright Club, a festival, a new journal), intangible benefits such as social responsibility agendas, new partnerships and roles (e.g. Beacons Officer) instituted, and income to the institution.

### **Effective sources of engagement funding**

There was no single clear opinion on effective funding sources.

It is important to remember that the majority of interviewees were from institutions in receipt of the largest amounts of consolidated funding from STFC. For most of these researchers, engagement (or rather, outreach) was something built into their funding at a minimal level; several mentioned “around 10%”. Most had never applied for engagement awards; indeed some didn’t know that such sources existed. For them outreach is a low-cost activity that can be achieved on small amounts of institutional funding or a small slice of consolidated funding, supplemented by funding from charitable organisations to fund outreach officer posts.

Among interviewees who had received STFC small awards or PE fellowships, a strong sentiment was “please don’t let [STFC] take away separate public engagement funding streams”. For this group, the small awards are excellent pathfinders for the deep changes and commitment to strong engagement practice they feel is needed in their institution. They see the small awards particularly as having a role for supporting creative and innovative projects whose focus isn’t “instantly physics but science in its broadest sense”. As noted above, interviewees felt that the value of separate awards is that they enable physicists to collaborate with a wide range of stakeholders, from public engagement researchers and practitioners to amateur groups, which isn’t possible in an embedded model of scientist-led engagement.

A cautionary note is that despite the positive view of the small awards, there was a general feeling that the amount of effort expended in putting together applications is disproportionate to the sums received. The current level of the grants was felt to be too low to buy out enough researchers’ time at the levels demanded by institutions and suggested the top limit of the awards should be increased, perhaps to around £15,000. Another problem with the level of funding in the small awards is that some researchers felt the low level of funding was perceived as further evidence of STFC’s lack of encouragement for engagement.

Furthermore, several interviewees wanted the system for application for the small awards to be more flexible, so that they could allow for greater creativity. They felt the current processes are over-complicated for the amount of money available and would like to see quicker turnaround times for applications, with simpler, less bureaucratic application processes. They felt this would make the schemes more attractive to early career researchers, as they could fit smaller, more short-term projects in and around their research.



However, the positive view of separate awards is not completely universal; a few interviewees felt that the separation of engagement awards reinforced the view held by some researchers that the STFC does not see engagement as integral to research. They felt the council should consider moving to an embedded model, providing it takes steps to monitor the quality of engagement sections of applications, demands evaluation of the quality of engagement activities, and if necessary uses sanctions to ensure promised engagement is actually carried out.

### **Institutional funding**

Most interviewees said their department or group could usually find small amounts of money to support outreach (“at the train fare level”). These funds were garnered in various ways; one or two departments took a small fixed amount or percentage from all grants, others used part of departmental funds or group funds that were unspent at the end of the financial year and one had donation income. Access to these vired funds was always informal, at the level of “if someone comes to me with a good idea I’ll try to fund it” but this was not seen as negative; rather, interviewees felt informality offered benefits in flexibility and speed of response.

A small number of interviewees said they were unaware of institutional funding for engagement. One interviewee suggested there was no point in finding out if the institution offered funding as the department wasn’t active in engagement and nor were they sure it was a good idea. Another noted the institution didn’t have engagement funding, as engagement was already integrated into full proposals and most funders expected to see engagement in bids.

### **Embedding engagement in funding bids**

A very few institutions had formal procedures for prompting the embedding of engagement in funding bids although a few more were currently developing their processes. Two institutions were developing website-based systems, with information on multiple routes for engagement and including example costings for different activities. The intention is that as these systems develop, they will help research facilitators understand the role, value and implementation of engaged research.

Only one interviewee mentioned that outreach/engagement “features in staff meetings at all levels” and that a Research Co-ordinator ensured that all budgets included “impact as part of planning”. For the majority of interviewees, involvement in engagement is still “up to individual academics” and so prompting to include engagement remains informal: “people know who are the people to ask”.

Some favoured an informal approach because their groups were very small; one person (such as the Head of Department) was able to review all applications for coverage of engagement and promote its inclusion where it had been left out. In others where outreach was the default approach, they believed the level of resources required was too small to need formal oversight. Furthermore, some interviewees preferred to keep outreach “under the radar”, fearing the administrative burden of ‘official’ outreach.

Responsibility for oversight of applications varied. In some institutions, it was the responsibility of institutional Business or Strategy units, which were felt to focus largely on industrial partnerships and the commercial potential of research. In others, faculty, department or group engagement officers reviewed bids. This route was usually an outcome of the level of bidding activity; one interviewee said there were simply too many bids for one person to review them all and a strict review process was impractical. A few institutions had

several people with responsibility for reviewing bids at faculty, group or school level, depending on numbers. This meant that, despite efforts to keep things consistent, review processes were affected by the skills and interests of the reviewers, so engagement might miss out. The lack of coherence in assessing bids was noted by other interviewees, especially where a system of funding by “taking slices from PtI funding from multiple grants” was in place.

This question picked up some negative views on including engagement in bids. Some commented that review panels did not often contain people with engagement expertise, so that engagement (or lack of it) in funding bids “wasn’t always picked up” or bids were not reviewed by people who “understand the principles”. Further, there was a sense of a lack of consistency around engagement across different funders – that they are “not all on the same page” – and that impact criteria are inconsistent and vague. Pathways to Impact were also criticised, particularly for work under the consolidated fund, where a few interviewees felt PtI were an “empty exercise” and were not being used as advertised, and should be reviewed and enforced by experts.

### *Final thoughts*

From this examination, it would appear that the prevailing culture in the STFC community is of an ethos of outreach, rather than of engagement. This is perhaps unsurprising, as outreach is a long-standing practice and considerably pre-dates the turn to engagement. For the majority of interviewees, ‘outreach’ remains the language that most naturally comes to their lips, and the examples they discussed were examples of working with schools, teachers and pupils.

This is not to condemn outreach; interviewees were deeply committed to outreach work and undoubtedly, carry out some high-quality activities. However, it is narrowly-focussed in terms of audiences, and draws on a conservative and limited range of activities. It is also explicitly linked to institutional objectives for student recruitment which, it could be argued, is the responsibility of institutions, not the STFC.

The STFC clearly has a wider engagement agenda, demonstrated by the existence of its public engagement manager and team, and its public engagement awards. Despite this, it is clear that this more nuanced view of engagement has not yet entirely pervaded the STFC community.