Recording the results of public engagement:

A guide for STFC engagement grant holders when using Research Fish

STFC Public Engagement Programme
Version 2.0, March 2021

stfc.ukri.org

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Introduction

Effectively and appropriately evaluating public engagement is important to STFC. In publishing the STFC public engagement evaluation framework, we aimed to not only make our own approach transparent, but to aid our community in undertaking their own engagement activities.

Our evaluation framework lays out a clear series of measures by which we measure, review, and reflect on the effectiveness of the STFC public engagement programme. Within this programme, our range of public engagement grant schemes allow the STFC community to undertake high quality engagement across the UK: grant holders extend the reach of STFC science and technology to new audiences remote from our own STFC laboratories and campuses.

Our evaluation framework was explicitly designed to allow STFC to evaluate our engagement *programme*, not simply our individual activities. Our grant schemes are part of this programme, and so we have worked with grant holders to create a more detailed, and specific, approach to recording and reporting data on work undertaken via STFC's public engagement grants.

Our grant holders report their data via Research Fish. This guidance document is designed to help that process. We hope that this will help applicants better understand our expectations for the evaluation of public engagement and help our grant holders to record and report their work over the lifetime of their award, and beyond.

The STFC Public Engagement Team

Monitoring and reporting on STFC public engagement grants

All STFC public engagement grant holders must submit their data into the **Research Fish** data collection system. Data can be entered over the course of the year, though many users choose to complete the process annually, during the 'submission window' in February and March.

While all grant holders complete the questions relevant to engagement in the 'common outcomes' question set, STFC public engagement grant holders have an additional, bespoke set of mandatory questions. These are labelled, 'Engagement Activities (STFC)'.

If you have filled in Research Fish before 2018, you may notice that it looks a little different now. We have upgraded Research Fish, and it contains some new sections that provide us with more information about your public engagement grant project and how its impacts align with STFC's public engagement evaluation framework.

We are confident that it will give us considerably more insightful data about the programme, and a more structured way for you to report your findings. Guidance for completing these new questions in Research Fish is covered in Section A of this document.

To help you with answering some of the questions, we are also providing our engagement grant holders with a **Metrics Spreadsheet**.

This will help you to capture data as the project progresses and will help you to sum data to enter into Research Fish. It also has some additional information that Research Fish doesn't ask for. This includes, for example, the post codes of any schools you have worked with during your project. This information allows us to look at the data from multiple award holders and see what the total reach is for our grant programmes. Please include as many details as you can on the metrics spreadsheet, even if they don't appear to be asked for on Research Fish. Guidance for completing the metrics spreadsheet is covered in Section B of this document.

We would like you to submit the metrics spreadsheet via email to stfcpublicengagement@stfc.ac.uk by the Research Fish submission deadline each year.

We recommend that you update your engagement data as you are going along, to make it easier for you to collate your data at the end of the project, and during the annual Research Fish submission window.

Sections A and B of this document contain some sections of text presented in red. These paragraphs have been included to provide additional guidance to you when you are completing your data entry.

Section A: Completing the Research Fish Questions

First, complete the Common Outcomes section (see Research Fish guidelines).

You will then need to respond to the revised Mandatory Additional questions – Engagement Activities (STFC).

This section of Research Fish has been updated to reflect STFC's public engagement evaluation framework (hereafter referred to simply as 'the evaluation framework'). We recommend you download that document to assist you with completing Research Fish and the Metrics Spreadsheet.

Notes on the tables in Research Fish
o All dates refer to the calendar year 1 January – 31 December.
o Audience types are defined in the evaluation framework.

1. Did your project involve running any events?
See the evaluation framework for the definition of an event. If your project was producing a resource, rather than running events, please tick 'no'.

□ Yes

□ No (skip next question)

If yes then:
What are the key outputs from your project?
Outputs are the events you run and the resources you create.

The STFC definition of an event is an activity delivered for a distinct group of audience members. If an event is repeated for a new set of audience members with a new start time, then that counts as two events. If it runs for a long duration and people drop in and out throughout then it is one event.

Please indicate the total number of events delivered for each audience type in each calendar year that your project has run.

Audience	2017	2018	2019	2020	2021	2022
Public adult						
Public families						
Upper primary schools						
Lower secondary schools						
Upper secondary schools						
Influencers (e.g. teachers and educators, science communicators)						
Training events for influencers						
Other groups of children (e.g. uniform groups)						

Who are the key audiences reached?

Reach has three main elements: the number of people engaged, the types of diversity of people engaged and the length of time that people are engaged – or 'dwell time'. Please leave any blank if you don't have the information.

Definitions for these all appear in the evaluation framework.

o *Schools that were 'new' to your organisation: This should be schools that have not engaged with your group or your type of activity before. They may have engaged with your wider organisation in the past.*

o *If you were running training events, here we have asked you to separate out teachers from other types of people being trained – 'other influencers'. This might include scientists, researchers or community group leaders for example.*

o *'Dwell time' is how long were they actually engaged in the activity. This should not include time spent at registration or lunch breaks, for example. It should be recorded in hours and minutes (hh:mm). For an exhibition it would be an average time that people spent at your particular stand, not at the event as a whole.*

o *Partnerships: This does not have to be a formal partnership, but should record organisations without which the event would have run very differently or reached very different or considerably fewer people.*

o *Audience rating: We recommend you ask your participants for a rating out of 5 at a sample of your events (i.e., not every single event, and not by all participants).*

Events:

	2017	2018	2019	2020	2021	2022
Number of schools engaged						
Number of schools 'new' to your organisation						
Number of teachers reached at training events						
Average dwell time at training event						
Number of upper primary students reached						
Average dwell time of upper primary students						
Number of lower secondary students reached						
Average dwell time of lower secondary students						
Number of upper secondary students reached						
Average dwell time of upper secondary students						
Average % female students						
Other influencers trained or supported (not teachers)						
Total public reached						

% female public						
Number of organisations with which you formed partnerships						
% of audience rating your event 4 or more out of 5						

2. Did your project involve producing any resources?

Resources are creative products that can be used by audiences. They might be hard copy, such as handouts, leaflets, brochures, models or demonstrators; digital resources such as websites, software, apps; or they may be artistic creations such as artwork, music, installations or photography.

You will have had the opportunity to input some information about these on the 'common outcomes' section of Research Fish. Please try to include reference to the same ones you mentioned there.

- ☐ Yes
- ☐ No (skip next question)

Please indicate the total number of resources developed each year

This is not how many copies you had printed, but how many individual resources you developed (e.g. how many leaflets you designed). Leave future years blank.

	Associated URL if applicable	2017	2018	2019	2020	2021	2022
Hard copy resources for teachers / students							
Hard copy resource for public audiences							
Software and technical products							
Other digital resources							
Artistic or creative products							
Exhibits or demonstrators							

Who are the key audiences reached?

Reach has three main elements: the number of people engaged, the diversity of people engaged and the length of time that people are engaged – or 'dwell time'. Please leave any blank if you don't have the information.

Resources:

	2017	2018	2019	2020	2021	2022
Number of unique visitors to your website						
Average number of website visitors per month						
Average website dwell time (in minutes)						
Number of downloads of online resources						

Number of downloads of other digital resources						
Number of subscribers to other digital resources						
Number of hard copy resources given to target audiences						
Number of organisations with which you formed partnerships						
% of audience rating your resource 4 or more out of 5						

3. Have you reached the stage of your project that you have some key findings to submit?

If you are at or close to the end of your project then you should report the conclusions of your report here as 'key findings'. The Research Fish submission will remain open for two years after the end date of Spark awards and Reaction awards, and for five years after the end date of other awards.

☐   Yes (go to next question)
☐   No (end of public engagement section)

4. Using the public engagement evaluation framework, please state how your activity has addressed the generic learning outcomes.

Below are STFC's generic learning outcomes. Each event or resource doesn't have to achieve all of them, but should aim to achieve at least one for each heading, including all of the 'feel' outcomes.

This is an opportunity to give us a short narrative on various outcomes of your project. If you carried out quantitative evaluation then please put those data here. Alternatively, quotes or examples would

Participants will...	STFC Generic Learning Outcomes				
Do	• explore our science and technology further for themselves • share their understanding of our science and technology with learners, peers, family and their community • consider choosing, or encouraging others, to study and pursue careers in science and technology				
Feel	welcome	At the right level	inspired	Involved	Satisfied
Value	• science and technology for its economic, social and cultural contribution to society • employment in science and technology at all levels • the sharing of their understanding and skills with others				
Have skills to	• carry out scientific or technical activities themselves • participate in informed discussion about science and technology • share their skills, understanding and values with others				

Understand	We study the universe on the very large and the very small scale. This involves:
	• Work in the areas of:
	  ➢ Big Telescopes
	  ➢ Amazing Materials
	  ➢ Inside the Atom
	  ➢ Big Data and Computing
	• The marriage of scientific method and large facilities
	• Finding benefits for society				

be good to include here too.

Please provide evidence of how your work has inspired participants to 'do' something new in relation to the top-level outcomes: (250 words)
This is not what they did in the activity. Rather it is about what their intentions are to do now that they have participated.

How did your activity change the way people 'feel' in relation to the top-level outcomes? (250 words)
This should be under the five headings: What percentage of people felt welcome, inspired and involved? Were the activities felt to be generally pitched at the right level? What average ratings out of 5 did your activities receive to demonstrate people's overall satisfaction?

How did your activity change the way people 'value' science or technology in relation to the top-level outcomes? (250 words)
How did people feel about science and technology, or the particular topic you were covering, before and after the activity? Do you have a quote that indicates a change in perception of science and technology, or of the topic covered? Do they generally think careers in these areas are something they would want for themselves, their family or other young people they know? For a training event, did the participants feel they wanted to share their new knowledge or skills with others?

How did your activity change the 'skills' your participants had in relation to the top-level outcomes? (250 words)
Was there an element of people learning how to do something for themselves – including learning how to ask questions or carry out research? For training events, did participants feel able to run an activity themselves and share it with others by the end?

How did your activity change your participants' 'understanding' in relation to the top-level outcomes? (250 words)
For this question, please focus just on the topic or research area that your project was about. Did people know more about the topic at the end than at the start? How do you know? If you were also able to discuss STFC and what we do, or if there is an obvious link to one of the subject themes in the Generic Learning Outcomes then mention it here too.

5. By combining the data above, please summarise the key impacts of your project. For example, describe the outcomes relative to the types and numbers of audience you interacted with; or the relative change in learning achieved considering the dwell time (up to 500 words).

Please give a detailed response to up to 3 of the following impact statements, which most closely match the outcomes of your project:
This is an opportunity for a more narrative addition to the submission to give us a flavour of the impacts of your project. What makes your project different from the others? Were there unexpected outcomes? Were you trying to do something new and different? How successful was that? We would like you to be using any evidence of the generic learning outcomes to back up your statements. These could be numbers, as recorded above, or quotes, examples and case studies if that is more appropriate.

o Describe the outcomes relative to the types and numbers of audience you interacted with.

For example, did your activity reach a very large number of people, perhaps via online videos or broadcast media? In which case, the evidence and depth of outcomes may be harder to quantify. Conversely you may feel the relative number of people reached appears small but give evidence of the outcomes that were reached with those people.

o Describe the relative change in learning achieved considering the dwell time.

For example, were you doing activities in a busy public place, and so people may not be expected to spend particularly long. Give evidence or quotes of how people have nonetheless changed their views, attitude or knowledge during their interaction. Conversely, perhaps your project worked with a relatively low number of people over an extended period of time. Discuss and give evidence of their change in knowledge, values or intentions as a result.

o Describe the scale of the outputs and reach considering the size of the grant and team.

Do you consider your project to have been exceptionally good value for money? Did you do something amazing for a relatively small amount of money? Or can you identify an individual who has gone the extra mile to increase the impact of your project?

o Describe the successes or challenges that the processes you put in place (e.g. the collaborative partnerships, or the systems to support the staff working with you) had upon the outputs and outcomes of your project.

If your project was very process driven (for example, it was about setting up a network, or creating new partnerships, rather than or as well as producing events or resources), describe and give evidence of the impacts that has had on the groups or people involved and their change in views, knowledge, skills or intentions.

Section B: Completing the Metrics Spreadsheet

The metrics spreadsheet has a number of worksheets within it. This guidance will go through them one by one. Not all of them may be relevant for you, but please read the guidance in full to help you understand what to complete.

Worksheet 1: Grant details

Please include the details of your grant, as entered on the Je-S form. If you have been able to publish any papers linked to your STFC-funded PE activity, please also add the details on this worksheet.

Worksheet 2: Live event reach

This is for keeping track of details of live face to face or online events. Definitions are in the evaluation framework.

Resources: If your project is mainly about producing resources or creative pieces then the first worksheet 'Live event reach' may not be relevant. However, if there are occasions when people are invited to see or engage in your resource then please do add as much information as you can to this worksheet.

Some fields are marked as required. This means that you should aim to provide this information for every event you do.

Overview data

This is summary data about your event.
o   Location of event (postcode or online)
    This is for live face to face or online events, for on demand videos or content please include the number of views/downloads in the 'Resources' tab.
o   Event Name
o   Start date
o   End date (this is usually the same as the start date)
o   Duration of event (hours and minutes)
o   Average dwell time (hours and minutes)
    'Dwell time' is how long were they actually engaged in the activity. This should not include time spent at registration or lunch breaks, for example. It should be recorded in hours and minutes (hh:mm). For an exhibition it would be an average time that people spent at your particular stand, not at the event as a whole.
o   How many events is this?
    How many events: This would usually be '1' and just allows a simple addition. Occasionally you may wish to group a few events together and sum the total attendees, in which case please be sure to change this number to reflect that.

Reach

o   Total number of attendees
o   Was this a public event?
    ➢   Number of children aged 8-14? *(can be an estimate)*
    ➢   Percentage of all attendees that identify as female *(can be an estimate)*
o   Was this a training or CPD event?

     ➢ How many groups / schools attended? *(add details of schools or groups to relevant tab)*
     ➢ Total number of people completing the training
- Was this a school event?
  - ➢ Number of schools attending *(add details of schools to 'Schools' tab)*
  - ➢ Number of accompanying adults *(this may be the number of teachers, but include other accompanying adults such as parents)*
  - ➢ Number of students
  - ➢ Percentage of students who identified as girls *(can be an estimate)*
  - ➢ Number of students from each age range
    - Upper primary *(Key Stage 2/Second level, Years 3-6 in England and Wales, Years 4-7 in NI, and P5-P7 in Scotland)*
    - Lower secondary *(Key Stage 3/Third & Fourth level, Years 7-9 in England and Wales, Years 8-10 in NI, and S1-S3 in Scotland)*
    - Upper secondary *(Key Stage 4/Senior phase, Years 10 & 11 in England and Wales, Years 11 & 12 in NI, and S4-S6 in Scotland)*

Worksheet 3: Participant outcomes

These questions relate to the Generic Learning Outcomes from STFC's public engagement evaluation framework. Completing this worksheet will help you to collect data on these for a sample of your events so you can report your impacts on ResearchFish.

If you are a project involved in the Wonder Initiative (https://stfc.ukri.org/public-engagement/wonder/), then this worksheet is not mandatory. Please report your outcomes in the 'Wonder toolkit' tab and leave the 'Participant outcomes' tab blank.

Some fields are marked as required. This means that you should aim to provide this information for every event you do as we need to report on these particular GLOs across all of the programme. Other fields are marked as 'optional'. The recommendation is that you complete these fields for a reasonable sample of your events, but not for everyone. For Spark awards and Reaction awards you should select the most appropriate ones that represent the desired outcomes of your project. For awards where you are working with an STFC mentor, they will help you if you wish to tweak the GLOs for your own project.

The recommended way to ask these questions is with a rating or 'Likert' scale. You should record the number of people who answered the top of a three-level Likert scale, or the top two options of a five-level Likert scale. For example:

The science and technology I found out about is something I would encourage young people I know to do as a career (please circle):

Disagree strongly   Disagree   Neither agree nor disagree   Agree   Agree strongly

Include all 'agree' or 'agree strongly' responses for this question in the spreadsheet.

OR

Please rate this event out of 5

○ 1. 🙁

○ 2. 🙁

○ 3. 😐

○ 4. 🙂

○ 5. 😃

Include all '4' and all '5' responses for this question in the spreadsheet.
OR

Will you tell others about what you have heard and seen today?
○ Yes definitely
○ Maybe
○ No

Include all 'Yes' for this question, but not 'Maybe' or 'No'.

Process
If this was evaluated, what was the sample size? (i.e. how many people completed the evaluation?)
Please include this number as it allows us to see the total numbers as a percentage of those who filled in the evaluation, rather than a percentage of the total attendees, which is not always an accurate picture.

Qualitative data
Please capture any quotes or comments here, along with a non-identifying description of who said them (e.g. Teacher, Farm Dale primary school; or 'Mrs J, age 65'; or 'Amelia, age 5')

Worksheet 4: Wonder toolkit
If you are a project involved in the Wonder Initiative (https://stfc.ukri.org/public-engagement/wonder/), then this worksheet should be used to report the data gathered using the Wonder evaluation toolkit. Please report your outcomes in this tab instead of the 'Participant outcomes' tab. If your project is not involved in Wonder, then please leave this worksheet blank.

Overview data
This is summary data about each event.
○ Location of event (postcode or online) *(same information that is entered in the 'Live event reach' tab)*
○ Event Name *(same information that entered in the 'Live event reach' tab)*

Context
These questions help to establish your starting point – the personal characteristics of your Wonder audience and their pre-existing relationship to science. If you can, it's best to collect this data in advance.
○ Number of 8-14 year-olds

- o Percentage of 8-14 audience from Wonder demographic *(if exact proportion is unknown, please estimate. The Wonder toolkit provides information on links how to identify Wonder participants.)*
- o Is your percentage an estimate? *(enter 'y' for yes or leave blank for no)*
- o Someone in my family is really into science or works in science *(Enter the number of responses for each answer)*

Reaction

These questions aim to capture the immediate reactions following engagement with a Wonder event.

- o I felt able to join in and ask questions *(Enter the number of responses for each answer)*
- o I want to find out more about science *(Enter the number of responses for each answer)*

Reflection

These questions try to capture more substantial change, which takes time to emerge.

If you evaluated your event once at the end, enter your data in Option One:

- o Do you feel more or less interested in studying science or working in science after [event]? *(Enter the number of responses for each answer)*
- o *Do you feel more or less certain that science will have a positive impact on our future after [event]? (Enter the number of responses for each answer)*

If you evaluated your event multiple times, before and after an event, enter your data in Option Two:

- o I would like to study science or work in science *(Enter the number of responses for each answer)*
- o I feel science will have a positive impact on our future *(Enter the number of responses for each answer)*

Worksheet 5: Resources

We are keen to know how far new resources are distributed. Please use this worksheet to record when you have distributed resources, either at events, via post/contacts or online. In particular we are trying to calculate how many hard copy resources reach schools. If you have targeted particular schools for receipt of resources, then please add those schools to the list of schools on the 'Schools' worksheet.

Worksheet 6: Schools

This sheet is where you should write the names and the postcodes of any schools that attended your events, or who were targeted for receiving resources, for us to carry out postcode analysis.

Please don't duplicate schools, they should only appear once each on this sheet.

If your project involved running training or Continued Professional Development for schools, other education establishments or community or other groups, then please list the organisations of the attendees here. If they were from a number of different organisations, please list them all. You will need to remember to ask them to give you the name and postcode, perhaps on a register. If the training was for a group of people from one organisation, please include how many people were trained from that organisation when listing it here.

IMPORTANT: For data protection purposes please do not include information on home educated families if it would indicate their full name and address. We suggest 'home educator' and a postcode in these situations.

Worksheet 7: Partners and groups

This sheet is where you should list any organisations or groups that you partnered with. This may have been a formal partnership or simply someone you had discussions with to prepare an activity. They may be national, regional or local and include other providers, networks and venues. Please provide a postcode for that organisation and a short description of the nature of the partnership or collaboration.

Worksheet 8: STFC staff

To help us to understand where STFC-funded staff and researchers have contributed to the project please list all STFC scientists, engineers, researchers or students who contributed to the development or delivery of public engagement activities and resources. This includes anyone who works in a department that received STFC funding, or a facility user on an STFC facility. Please do not list individuals more than once. Undergraduate students should not be counted here. There is a drop-down list of the role that they played. If 'other' please write a short description of the nature of their involvement.

You do not need to include their name and can group a number of people together if that is simpler. For example, 6 Post Docs from the same department could be in a single row – but please include how many of them you are talking about in the 'how many' column.

Worksheet 9: Capacity building

If you have been awarded a STFC Public Engagement Leadership Fellowship a significant proportion of your work should be devoted to leadership/capacity building activity and filling in this tab is mandatory. Other grants may also include capacity building activity and we encourage you to fill in this tab with relevant data even though it is optional.

We have included some examples of leadership and capacity building activities, but appreciate they can be varied and take many forms. Please include details of individuals or groups involved and a brief description of the activity. If your capacity building has led to the development of another project, activity or event, please give an estimate of the audience reached if possible. Please also provide any other information you feel is relevant to reporting the activity such as weblinks, longer term outcomes or audience details.

At the end of a calendar year we suggest you do a totals row. Be careful not to include the original examples that were at the top! This will help you when you are doing your Research Fish submission the following February.