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***Ingenious***

**Round 18 Project planning template**

Lead applicant name:

Organisation:

Project title:

Grant reference: ING2324\

Date:

**1. Purpose of this document**

The aim of this document is to help you plan your *Ingenious* project and record the decisions you make. The plans you set out in this document should be more detailed than those in your original funding application. You should take account of the feedback you received on your original application and what you learnt during the kick-off workshops.

You are required to send a copy of the final version of this document to engagement@raeng.org.uk before starting your project. This is a formal requirement of your contract with the Academy.

You should refer to the information you provide in this document when you come to write the Final Report at the end of your project.

**2. Updated project objectives**

List your project objectives in the box below, taking account of any feedback you received on your application and any changes you have made to your original plans since submitting your proposal. Please ensure that these objectives are: Specific, Measurable, Achievable, Realistic and Time scaled.

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| **Updated project objectives** |
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**3. Key outcomes**

Grant-Holders are required by the Academy to conduct an evaluation of their project. You will be asked to summarise the results of this evaluation in your **Final Report Form**. In the following sections, you need to record the key outcomes you aim to achieve for both engineers who take part in the project and public audiences you reach with your activities. These outcomes have been divided into three categories:

* **Reach** – the number and range of engineers you will involve in the project and what training you will provide for them; the number of activities you will deliver and the type and number of public audiences you aim to reach through your activities. Which under-served audiences you intend to reach and how you plan to engage them.
* **Impact** – how engineers will feel about the training they received and the activities they helped develop and deliver. How the public will feel about the activities they participated in.
* **Learning** – the benefits that will be gained by the engineers and your public audiences. These learning outcomes should include knowledge and understanding gained, impact on attitudes, skills developed.

You will be asked to provide data in your Final Report about the extent to which you met these Reach metrics. Please be realistic in setting these targets, taking into account the time and budget you have available.

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| **Reach** | | **Notes** |
| Number of engineers you aim to involve in your project  Proportion of female or non-binary engineers you aim to recruit | % female or non binary |  |
| What training you will provide for the engineers involved in your project  *Please describe format and content of training* | hrs per engineer  online/in-person *(delete as appropriate)*    *(e.g. 3 hours per engineer, in-person afternoon workshop covering presentation skills and how to adapt content to different audiences)* |  |
| Number and type of activities that you aim to deliver | *(e.g. 4 x 1hr online webinars, 1 in-person full day museum celebration event)* |  |
| Target numbers and type of audience[[1]](#footnote-2) you aim to reach **in person** | *(e.g. 400 – 10-11 yr olds)* |  |
| Target numbers and type of audience you aim to /have reached **online** | *(e.g. 100 – 13-15yr olds teenagers for online webinar)* |  |
| Under-served audiences: who you aim to reach\* |  |  |
| Under-served audiences: Socio-economic data  *Please select most appropriate measure of deprivation* | **Schools:**       % Pupil Premium *(England only)*  or       % Free school meals  or       % of people in highest three deciles (30%) of deprivation using postcode IMD/WIMD/SIMD data  **Family and community groups**       % of people in highest three deciles (30%) of deprivation using postcode IMD/WIMD/SIMD data |  |
| Under-served audiences:  How you will achieve this. |  |  |

\*By under-served audiences we mean segments of the general population who are under-represented among STEM engagement audiences and/or among the engineering profession. They can include:

* Women and girls
* People of Black, Asian and other Minority Ethnic heritage
* People from socio-economic categories NS-SEC 5-8 or living in communities with above average indices of multiple deprivation[[2]](#footnote-3)
* People living in areas with high indices of Multiple Deprivation
* Pupils receiving Pupil Premium funding (or equivalent for the devolved regions)
* Young people not in education, employment or training (NEETS)
* People with a disability or are living with a long-term illness
* People in living in rural areas with limited access to services e.g. a science centre or university

We strongly recommend focusing on just one or two of these audiences rather than risk spreading your resources too thinly. We also encourage grant holders to look beyond the traditional under-served audiences to those who are less often targeted by STEM engagement activities.

Please note: when referring to people from underserved audiences please refer to the latest advice on the use of terminology. For example see:

<https://www.ethnicity-facts-figures.service.gov.uk/style-guide/writing-about-ethnicity>

The Academy requires you to collect data about the socio-economic profile of the public and school audiences you reach. To do this we ask that you to gather one, or both, of the following sets of data (depending on the type of audiences you aim to reach).

* For adult and family audiences: the full post-codes from a representative sample of **adult** attendees (NB we **don’t** want you to ask children for this information)
* For school audiences: the name and address of each school and the number of pupils from that school who took part in your event

Using this data, and the links that we will provide you with, you will:

1. Use the Government post-code look-up tables to calculate the proportion of adults/parents who come from areas of high IMD (Indicators of Multiple Deprivation) or the equivalent data for Scotland and Wales

and/or

1. Use the Government data on school level allocation of Pupil Premium funding (or equivalent data for Northern Ireland, Scotland and Wales e.g. access to free school meals) to estimate the proportion of pupils you engaged who are receiving this funding.

The Academy will provide you with links to the relevant Government post-code look-up tables and school data spreadsheets.

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| **Impact**  We require all grant holders to provide some standardised feedback about their impact upon public audiences, **in addition** to their own, more detailed, evaluation. To do this we have designed standardised questions for public audiences that need to be incorporated into your surveys or questionnaires (see below). You will be asked to provide the results of from these questions in your final report. |
| **Two standardised questions for children aged 8-13 years**  A. Thinking about the [activity][[3]](#footnote-4) you just took part in, did you …   |  |  |  |  | | --- | --- | --- | --- | |  | **Yes** | **Not sure** | **No** | | Enjoy the [activity]? |  |  |  | | Find out more about what engineers do? |  |  |  | | Find out how engineering improves our lives? |  |  |  |   B. Are you …?   |  |  |  |  | | --- | --- | --- | --- | |  | **Yes** | **Not sure** | **No** | | Interested in finding out more about engineering? |  |  |  | |
| **Standardised questions for teenagers (aged 14+) and adults**  Thinking about the **[activity][[4]](#footnote-5)** you just took part in: to what extent do you agree or disagree with the following statements?   |  |  |  |  | | --- | --- | --- | --- | |  | **Yes** | **No** | **Not sure / Not applicable** | | I enjoyed the [activity] |  |  |  | | I have a better understanding of how engineering improves our lives |  |  |  | | It inspired me to find out more about engineering |  |  |  | | I would like to pursue a career in engineering |  |  |  | |

If for any reason you experience difficulties using these standardised questions – or if you want to change the wording or format - please contact the Academy’s evaluation consultant Ben Gammon on [benjamin.gammon@btinternet.com](mailto:benjamin.gammon@btinternet.com).

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| **Learning**  The Academy requires you to gather data about the learning outcomes from your project for **both** engineers and your public audiences. To help you plan this part of the evaluation we ask that you define your intended learning outcomes in the table below. These learning outcomes should be described as **bullet point objectives**. We have added some examples in the section below for guidance. These must be modified and add to define the learning outcomes for your project | |
| **Learning outcomes for your engineers** | |
| **Knowledge and understanding of public engagement** | * Increased knowledge about how to engage the public through the use of … * Increased understanding of how to plan … * Increased understanding of the challenges around engaging under-served audiences such as … |
| **Attitudes towards public engagement** (in what ways do you intend to change their attitudes) | * Increased awareness of the benefits of public engagement to industry such as … * Increased awareness of the benefits of public engagement to engineers such as … |
| **Motivation** (to do what) | * Increased confidence to … * Motivation to do more public engagement with audiences such as … |
| **Specific public engagement skills** | * Develop skills of … |
| **Learning outcomes for your public audiences** | |
| **Knowledge and understanding of engineering & engineers** (what in particular will they learn about) | * Increased understanding of the role of team-working and creative problem-solving in engineering * Increased understanding of how engineering benefits society through … [what specific benefits will your project demonstrate] * Increased understanding of how engineering … |
| **Attitudes towards engineering and engineers** | * Perceive engineers as … * Increased awareness of … |
| **Motivation** (to do what) | * Increased motivation to find out more about [what specific areas of engineering are you trying to inspire people about?] |
| **Specific skills developed** (if relevant) | * [What specific skills will your audiences develop through taking part in your activities?] |

**4. How you will evaluate your project**

Describe below **how**, **when** and **where** you will gather data from the participating engineers and your public audiences (including postcode data from adult visitors if relevant). Please also describe **how** you will encourage them to provide thoughtful and candid feedback.

To conduct this evaluation, you will probably need to use one or more of the following methods:

* Hand out self-completion questionnaires
* Conduct an on-line survey
* Conduct interviews in person, video-link, phone
* Conduct focus groups
* Run online discussion panels
* Observe engineers engaging with members of the public
* Analyse data from bookings, social media, website usage etc.

Each of these methods has strengths and weaknesses. It is important to choose those that will most effectively address the research objectives set out in this document. If you have any questions please contact the Academy’s evaluation consultant Ben Gammon on [benjamin.gammon@btinternet.com](mailto:benjamin.gammon@btinternet.com).

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| **Evaluation methodology** |
| **Participating engineers:**  **How** will you collect data from engineers? {NB this is **in** **addition** to the pre-project questionnaires and long-term tracking survey}  **When & Where** will you collect data from engineers?  **How** will you ensure they are willing to take part & provide candid, thoughtful responses?  **Public audiences:**  **How** will you collect data from your public audiences?  **When & where** will you collect data from your public audiences?  **How** will you ensure they are willing to take part & provide candid, thoughtful responses? |

**4.1 The pre-project questionnaire & long-term tracking survey**

Complementing the evaluation you will conduct, the Academy will additionally gather information about your engineers using two surveys.

**At the start** of your project, we will gather background demographic information about your engineers via an online ‘pre-project questionnaire’. Approximately eighteen months **after** your project has finished, the Academy conducts an online ‘long-term tracking survey’ of all the engineers involved in *Ingenious* grant funded projects so as to assesses the longer-term impact of the scheme.

The results from these surveys are reported to our funder, the Department for Science, Innovation and Technology. This helps the Academy secure future funding for the *Ingenious* grant scheme.

To run the pre-project questionnaire and long-term tracking survey the Academy requires all grant holders to do the following:

1. At the start of your project e.g. when you run your training for the engineers or at an early briefing session - provide all the engineers with a link to the online pre-project questionnaire. This gathers basic demographic data about them and their email addresses so that they can later be sent the long-term tracking survey
2. Remind and encourage your engineers to complete the pre-project questionnaire – providing any background information they require
3. Brief your engineers about the forthcoming long-term tracking survey – when they will receive the invitation, how it is administered, what it will be covering, and why the Academy requests this information
4. Nominate 2 engineers to take part in the Academy’s additional qualitative research for which they would receive cash incentives.
5. Brief nominated engineers about what is entailed in the qualitative research.

Provide the Academy with contact details for the 2 nominated engineers.

All data that the Academy receives about or from the engineers is gathered, stored and used in compliance with the General Data Protection Regulation as described below.

**5. Declaration**

**Your promise**

□ {Please tick} I confirm that I have read all the sections of this document covering the requirements of the *Ingenious* grant funding and have/will brief other members of my team about them as required

□ {Please tick} I confirm that we will distribute the link to the pre-project questionnaire to all of our participating engineers and brief them about the forthcoming long-term tracking survey

□ {Please tick} I confirm that we will conduct our own evaluation with the participating engineers at the end of our project

□ {Please tick} I confirm that we will conduct our own evaluation with school and/or public audiences which will include, but not be limited to, the standardised questions described in this document

□ {Please tick} I confirm that we will provide the Academy with: information about the proportion of school students attending our events who are receiving Pupil Premium / Free School Meals funding; and/or information about the percent of adult visitors attending our events who live in areas of high Indices of Multiple Deprivation

**Our promise**

The Royal Academy of Engineering is committed to ensuring that the personal information entrusted to us is processed in accordance with the Data Protection Act 1998, the Privacy & Electronic Communications Regulation 2003, and the General Data Protection Regulation (EU) 2016/679 (GDPR). The Academy will ensure that all data provided by the engineers is securely stored and is only used for the purpose stated on the questionnaire. Once the long-term tracking survey has been conducted any contact details provided will be securely deleted unless individuals have asked to stay in touch with the Academy. Full details of our privacy policy are available at <https://raeng.org.uk/privacy-policy>

1. This could include the following groups: Families with children aged …, school children (specify age group or Key Stage), university students, primary &/or secondary teachers, higher education professionals; teenagers outside of school; adults without specialist knowledge of STEM, adults with specific interests in … [↑](#footnote-ref-2)
2. See <https://en.wikipedia.org/wiki/National_Statistics_Socio-economic_Classification> for a definition of these categories; see <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019> for more information about IMD [↑](#footnote-ref-3)
3. You may want to change the word ‘activity’ to something that more clearly describes what your audience actually experienced e.g. workshop, theatre performance, film, festival etc. [↑](#footnote-ref-4)
4. As above you may want to change the word ‘activity’ to something that better describes what your audience experienced e.g. workshop, theatre performance, film, festival etc. [↑](#footnote-ref-5)