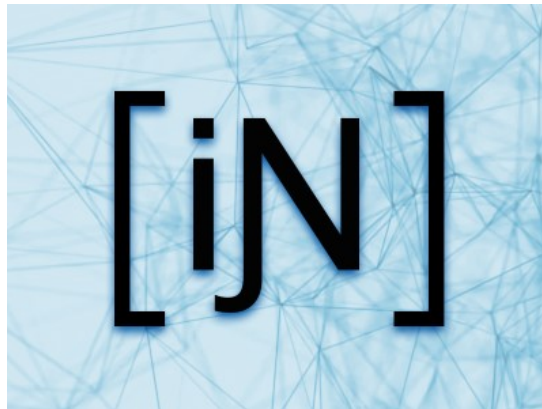


# Inventive Podcast: Evaluation of Project Participants

**Lead Author:** Dr Lara Harris

**Principal Investigator:** Prof. Trevor Cox

**Report Issue Date:** 30/06/2022



*I'd probably like to see more people being inventive with how they relate, and the stuff that scientists and engineers are doing, and the living aspects of technology, and how the things are made; and I think this is just the tip of an iceberg to be honest. There's so much more that can be investigated, but this blend that was used in Inventive podcast was really good ... long may it last.*

**Writer ID13**

## Contents

Executive summary .....	3
Introduction .....	4
1. Methodology.....	4
2. Data Collection.....	4
2.1. Ethics.....	4
2.2. Invitation and Response.....	4
2.3. Sample.....	5
2.4. Questions .....	5
2.4.1. Engineers.....	5
2.4.2. Writers .....	5
2.5. Written Feedback.....	6
2.6. Verbal Feedback (Interview) .....	6
3. Data Analysis.....	6
3.1. Feedback: Writers .....	7
3.1.1. Engagement and sentiment.....	7
3.1.2. Perception and understanding from working with engineers.....	8
3.1.3. Advice for engineers on story-telling.....	11
3.1.4. Project organisation.....	13
3.1.5. Creative aspects .....	15
3.2. Feedback: Engineers .....	16
3.2.1. Engagement and sentiment.....	17
3.2.2. Perception of their work in response to fiction.....	17
3.2.3. Project organisation.....	18
3.2.4. Impact and evidence.....	19
3.3. Additional themes.....	20
3.3.1. Publicity and reach.....	21
3.3.2. Never the twain shall meet.....	22
3.3.3. Engineers are people too .....	24
Summary of findings and recommendations.....	26
Conclusion.....	27

## Executive summary

The Inventive podcast project was devised as a novel format for 'mixing engineering fact & fiction': Each episode features both an engineer being interviewed, and a fictional piece created by a writer in response to that interview. The project aims to increase understanding and engagement with technical topics through using storytelling and creativity to bring those subjects to life and make them more relatable for general audiences.

The Inventive project released 11 podcast episodes from June 2021 to January 2022, featuring 11 writers and 12 engineers. One aim of this project was to understand whether taking part had driven a change in the attitude or approach of contributors - for authors, had their perception of engineering or how they approach their writing changed? For engineers, had taking part made them think differently about their work and how they describe it to other people?

To address these questions, the writers and engineers were invited to give feedback on their experience of being featured in the Inventive project. This was gathered through short semi-structured interviews. Findings from qualitative analysis of the feedback are summarised in this report, along with practical details on how collecting the feedback was organised and conducted.

All writers responded and gave feedback on their experience. Of the 12 engineers contacted, 7 responded and 5 of those gave feedback. The comments from both writers and engineers were perceived as very positive overall. Contributors were impressed with the quality of production, and skills of the podcast team in creative decision-making. Many people said they were happy, proud, or thankful to have participated. Writers felt creatively challenged in a variety of ways by the format, and engineers gained ideas for presenting their work to non-expert audiences.

Writers appreciated being able to develop their piece according to their individual artistic vision, and found the production team accommodating when they had individual requests, such as being given their brief very early in the project. Writers clearly valued the flexibility and open-minded approach of the team, enjoying the creative freedom and lack of 'editorial pushback'. The importance of good communication, organisation and preparation were important aspects highlighted in the responses, especially as pieces in this project were developed slowly, over a period of many months.

Writers had many ideas for how engineers might improve their storytelling, such as using language and examples that a general audience can understand. They also suggested introducing human elements to make a topic more relatable. Both engineers and writers welcomed the podcast as an unusual opportunity to portray engineers holistically, enabling their interests and 'backstory' to be featured alongside the technical details of their work. It was suggested that the interview questions and tone were important factors for success, creating an environment and framework that supported engineers in telling their own story in an engaging and coherent way. This support may be especially helpful for interviewees who are less confident or experienced in public engagement.

Collaboration was a theme throughout the feedback, especially from writers. The nature and extent of the collaboration varied across each pairing, and it was clear that there was no one-size-fits-all formula. Authors were highly individualistic in their approach to creating a piece, varying in how much contact they wanted with an engineer, how they approached their research and writing, and how much input they wanted with the production team around editing and sound design. The podcast's premise of pairing creative and technical partners was viewed very positively, and many people said that they hoped there would be more opportunity for this sort of direct collaboration in future, or in the words of one writer, for *'building bridges between the arts and science and people'*.

## Introduction

This report summarises participation feedback from writers and engineers who were part of the Inventive podcast<sup>1</sup>, series 1 and 2, released in 2021 and early 2022. Feedback was gathered mainly through brief interviews conducted shortly after episodes were released. The aim of this review process was to gather qualitative evidence to understand whether taking part in the podcast led to attitudinal or conceptual changes; in particular, whether it influenced how writers approached their work, and how engineers communicate with a wider audience about what they do.

## 1. Methodology

Feedback was obtained from two participant groups: engineers interviewed as guests for the Inventive podcast, and writers who created fictional pieces of prose or poetry based on those interviews. Every engineer and writer was invited to take part, by email directly or to their agent. Invitation to participate in the feedback process and the interviews were conducted by a sole researcher (author of this report) who was not involved in the podcast production or Inventive project aside from this review phase.

Feedback interviews were semi-structured and based around five questions developed by the project Primary Investigator. Interviews were recorded and manually transcribed into electronic documents for analysis. Interviewees were informed at invitation stage, and again during the call, that recording was required for the purpose of creating a transcription only, and that the files would be deleted once no longer needed for this purpose.

The data for analysis comprised complete transcripts from interviews, and written feedback in a few cases where people agreed to participate but preferred not to be interviewed directly. The data were manually coded by the author (interviewer) on both a structural and thematic basis. This was initially based around the core interview questions, then modified to also incorporate other aspects that were found to feature in the feedback.

Further detail on aspects of the methodology is given in the following section on data collection.

## 2. Data Collection

### 2.1. Ethics

This study was granted approval from the University of Salford ethics committee. Each participant was required to submit informed consent to participate, and for their comments to be used in analysis and reproduced in outputs such as this report. All consent forms were completed remotely (sent and returned by email).

### 2.2. Invitation and Response

Below is a summary of the general approach taken for sample recruitment - inviting people to take part in the feedback process. An effort was made to standardise the process, such as using a template text for email contacts, but some tailoring was necessary to allow for individual differences in each person's response.

---

<sup>1</sup> <https://hub.salford.ac.uk/inventivepodcast/>

Participants were initially approached by email, from a contact list provided by the podcast producer. The email contained a brief explanation of why they were being contacted, with a link to their episode. If there was no response to the initial invitation, a further email was sent approximately 4 weeks after the first. No further attempt at contact was made if there was no response to this follow-up. This approach during the recruitment process was found to be effective. Several people explained that they were keen to give feedback but had been busy with work or other life events, so appreciated another prompt several weeks after the previous contact.

If there was a negative response to the initial contact (declined to be interviewed), a follow-up was sent with a suggestion to instead submit feedback in writing (questions sent by email).

If the initial or follow-up email had a positive response (agreed to give feedback), the full study information sheet and consent form was provided, and a call was scheduled, or questions sent in writing if they requested this instead of being interviewed.

A spreadsheet was used to log the status of contact with each person invited to participate. This was found to be essential for tracking progress, especially given the long intervening periods between contact emails in some cases.

### 2.3. Sample

Feedback was gathered from 16 people who agreed to participate: 5 engineers, 11 writers. Each person was assigned an anonymised ID code based on the order in which the email contact details were provided i.e. somewhat arbitrarily.

All 23 people that took part in a podcast episode were invited to give feedback on their experience: 12 engineers and 11 writers. Of the 23 people invited:

- 5 (all engineers) did not respond to the first or follow-up emails – no response.
- 2 (both engineers) were contacted via their agents. Both agents declined to participate on their client's behalf, saying they were not able to take on extra commitments at this time.
- 3 (1 engineer, 2 writers) returned written feedback in electronic form.
- 13 (4 engineers, 9 writers) were interviewed.

### 2.4. Questions

This section lists the questions which formed the basis for the interviews. The questions were slightly different for the engineers and writers. Within each group (writer/ engineer), the same core questions were asked in the same order, but the interviewer prompted the interviewee to elaborate on or clarify points as deemed appropriate.

#### 2.4.1. Engineers

1. Did you listen to the podcast? If you did, overall, what did you think of your episode?
2. Did the fiction element of your podcast make you think differently about your work?
3. Did the podcast make you think differently about how you might communicate your work to others and the stories you might tell?
4. Do you have any feedback about the practical and organisational aspects of the Inventive Podcast?
5. Any other comments?

#### 2.4.2. Writers

1. Did you listen to the podcast? If you did, overall, what did you think of your episode?
2. You worked with engineer X on subject Y.

- a. How or to what extent has that made you think differently about your work?
  - b. Did it change your understanding about what engineers are and do?
3. If you were to make a suggestion for how engineers should improve their stories and story-telling, what would that be?
4. Do you have any feedback about the practical and organisational aspects of the Inventive Podcast?
5. Any other comments?

*Notes:*

The 'X' and 'Y' in question 2 were prepared in advance by the interviewer, tailored to the interviewee's episode.

Question 2a was initially presented as 'How has that made....'. This was modified to include 'or to what extent' on suggestion from a writer in one of the early interviews who thought that the question in its original form was slightly leading in assuming that the process *had* made them think differently about their work.

### 2.5. Written Feedback

Participants who requested to submit feedback in writing were sent a list of questions by email. These were the same questions used as the basis for the semi-structured interviews, so the questions were slightly different depending on whether the recipient was a writer or engineer.

The questions were sent with a suggested return date. Follow-up emails were sent if feedback had not been returned by this date. Polite but persistent reminders, spaced several weeks apart, were found to be effective. It took several attempts to get feedback returned from two of the participants, but this seemed to be because they were busy rather than a reluctance to take part.

### 2.6. Verbal Feedback (Interview)

Interviews were conducted using Microsoft Teams, except for two writers who requested it to be by telephone. The calls varied in duration but typically lasted around 15 minutes; this was the duration stated at the invitation stage. Care was taken to complete the core questioning within the stated time commitment, though the length of response to each question varied depending on the person.

The interview section was started promptly after brief greetings and giving the interviewee chance to ask questions about the process before starting the recording. An effort was made to restrict small talk or other conversation to the end of call; this was to avoid raising any topics that might bias or inform the respondent's answers in some way, either positively or negatively.

Transcription from the recordings was verbatim (as closely as possible), by the interviewer and done within 24 hours of the interview being conducted.

## 3. Data Analysis

Findings presented here are structured primarily around the themes of the core questions, though comments may have occurred elsewhere in an interview. For example, some people used to the final question ('any other comments') to express again how they felt about their episode and taking part in the project. Some quotes here have been very lightly edited for anonymisation or clarity, such as replacing an individual's name with '[the engineer]'.

### 3.1. Feedback: Writers

This section summarises feedback from the 11 writers who responded.

#### 3.1.1. Engagement and sentiment

Question 1 asked writers about engaging with the podcast and reflecting on it once the creation process had ended: *'Did you listen to the podcast? If you did, overall, what did you think of your episode?'*

At least 5 writers commented that they did not listen to their podcast episode, or listened reluctantly. This was not a reflection on their perception of the project, but rather that they did not tend to revisit their work once delivered. Some found the process of listening back to themselves and their work uncomfortable, even 'a nightmare'; others simply felt no need to revisit a piece once completed. However, many writers did listen to their own or others' episodes. The response was very positive, both towards the production quality and the format in general.

As well as a positive response to the podcast episodes, many writers expressed that they were personally pleased to have taken part in the project, either due to the creative challenge it posed for them, or simply because they enjoyed the process. Some expressed that they were proud to be part of the Inventive podcast and hoped it would have great success in future.

*I found this a really fascinating project. ... I was so thrilled to be asked, and just having the opportunity to take part in something like this was a real gem of an experience. ... The challenge of that [being randomly paired with engineer] was exciting and interesting so, thank you for the opportunity, I enjoyed it immensely and it was very rewarding. **W08***

*I never like to hear my own writing so I haven't listened to my bit I'm afraid. ... whenever I have stories on the radio for example, I don't listen to them ... I should say that the ones I have listened to with other peoples' work and other engineer's stories, I have found really successful actually, really good. **W09***

*I suppose in the same way that I don't read my novels when I finish writing them, I knew what it was and it was done and it was out there and so it wasn't for my consumption at that point, it was for somebody else's consumption. **W12***

*Just congratulations on it ... I've found it really humbling and a great privilege to be involved. So thank you. **W14***

*I listened to all of the first series actually, ... and in terms of my own episode ... yes overall I thought that the quality of the program, the identity of the program, across the series I suppose, Trevor Cox's presenting, I thought were all exemplary really. **W11***

*This blend that was used in inventive podcast was really good and I enjoyed it and long may it last. **W13***

*I did [listen] and very much enjoyed it – the interviews with [the engineer] were edited and produced wonderfully. The reading of my short story was also excellent (first time for me having my work performed by an actor – marvellous!). W15*

*I thought this was amazing. I was really kind of blown away by this actually; the quality of production was really nice and the person that was doing the reading was perfect, just absolutely perfect. W17*

*I think this is a brilliant initiative, wishing it every success! W10*

*I think there's lots to build on and I think it's been a fantastic project, and I'm really proud to have taken part. W11*

*I just kind of loved it all. ... for me yeah the whole process was amazing. ... It was brilliant, I absolutely loved it. Working on it for so long, it was good to hear the final product and everything that I'd expected and spoken to regarding the audio was done in the end product so it was excellent. W13*

*It's been a joy, really I've loved doing it. W16*

*I've been really impressed with the project. ... It's a really, really nice project and seems to be really, really, really well made and passionately made. So that's good. That's great. W17*

### 3.1.2. Perception and understanding from working with engineers

The second question had two parts, asking writers to reflect on whether the experience had changed their perception, both of their work and of engineering: *'You worked with engineer X on subject Y. How or to what extent has that made you think differently about your work? / Did it change your understanding about what engineers are and do?'*

Most writers indicated that they had at least some familiarity with this type of subject matter (engineering, science, or technology), and working with it as a creative source. However, a few said that the project had deepened their existing understanding, helping them appreciate the complexity and scale of engineers' work.

On thinking differently about their work, several writers mentioned ways in which the project had positively informed their thinking: getting inspired by a topic or an engineer's story; gaining context through hearing engineering described from a personal or human-centric angle; and using the piece as an opportunity to research technical topics, which allowed them to make connections and see similarities with other scientific fields that they had written about in the past.

*I knew that I didn't know what engineers did, ... that's part of why I thought the project would be so interesting ... so it's definitely taught me more about [this technology] than I*



*ever thought I'd know, but it hasn't necessarily changed how I feel about, that inherent curiosity which is why I write in the first place, the chance to be nosy about other peoples' jobs and lives and how they live them. W12*

*It deepened, enriched, furthered [my understanding]. ... I just love what engineers do; I'm fascinated by the bringing to bear of the principles of maths and physics to impact on the world that we live in ... and so the chance to get up close and personal and in particular to an area of engineering that I have never really considered before, obviously you know there are going to be people who are specialist in [this topic], but I've never applied myself to those ideas or heard anyone talk about them specifically with respect to the actual engineering principles behind it. W14*

*I then did a great deal of background research myself to kind of start off with [the engineer's] subject and the things that they were talking about, ... all of which are subjects which interest me and have interested me in the past, but I don't know anything about really, so it was an excuse, ... it made me push my own research further, and I saw this piece in a way as building on some work I did last year and in the first half of this year ... and out of that I could then explore further into [those themes] and the parallels between biological systems and technological systems. W16*

*it hasn't made me think differently about my work but it was a really wonderful enriching experience ... anything that you do like that is bound to offer a huge fund of ideas and inspiration; any out of the way experience is going to feed back into your work, ... it was in line with my interests anyway which is why I wanted to do it, but it was so enriching, and really kind of energising. ... when I first listened to the uncut interview I just was alight with the enthusiasm for who they were, what they did, and the ideas that gave me for fiction. W14*

*I don't necessarily think I've had a particularly closed view of engineering, you know, I have female friends who are engineers, I have students, so young people who I know who are in engineering, so perhaps compared to some people my view of engineering wasn't particularly, what shall we say, old fashioned or stereotypical anyway. W09*

*I think I'm not the average person to ask about that because I've always been an avid follower of engineering and scientific discoveries and technology, ... so I've done a lot of looking into what engineers do but also what kind of mindset they have, what kind of problem solving approaches they take, so yeah I've always had a very broad idea of what they do and deep respect for engineers. W08*

*... I suppose it made me realise quite how extraordinarily complicated it is ... I hadn't thought about quite how complex mathematically and logistically a proposal like that was before. W07*

*I was amazed by the breadth of their work, the scales they work at ... W10*

*It has inspired me to make the science in my science fiction stories cleaner and more renewable – it is better to imagine a future that has taken this onboard and therefore it's imperative to research this as thoroughly as possible. W15*

*it did give me insight into [their] role and how you could bring an engineer's everyday life to life, W13*

Though the questions did not specifically refer to approach, many responses from the writers mentioned the way in which the project had influenced their creative process (method of working). Most of the writers explained that they were already working in a particular style, based around technological subject matter and / or starting from interviews with real people, but a few of them alluded to significant new challenges, working in ways they hadn't done before.

A more common theme identified in responses from writers regarding their approach was that of a modification to their usual way of working, rather than a fundamental change. This took different forms depending on the individual. One person said this project had given them confidence in their system for being able to respond to any writing brief; in that sense, it was exactly within their usual method, but writing a creative piece based on an interview with a real person was new for them. Other writers routinely based fictional pieces on interviews, so for them this aspect for them was familiar, but it was unusual focusing on the story of one specific person or being paired with someone that they themselves didn't choose. Some authors found novelty in the form, being forced to write in a shorter format than normal.

Overall, it appeared that writers felt positive about this challenge and were glad to have experienced it, or at least felt that the final piece was better as a result.

*I've never worked where the radio or podcast sound is the primary means of dispersal as it were ... so it did make me think about that, about the nature of the piece and not being on the printed page, being an oral piece, so that was actually really interesting for me ... it allowed me to experiment with some new things, which I enjoyed. W09*

*I do this sort of thing all the time but being effectively randomly paired with somebody made it an extra interesting challenge, because I didn't know what kind of engineer I was going to get, it was like a lucky dip, and so when I first listened to what they were doing I was thinking oh my goodness, how am I going to make this interesting, ... and then I thought ah ok this is something I can make relatable to a listener, but yeah the challenge of that was exciting and interesting. W08*

*... when I write fiction generally I tend to start from fact, but I think I felt much more of a responsibility because I knew that this was being paired with the actual fact, I felt a real responsibility to sort of honour the truth of what was being said, ... I found it was a really interesting challenge to know that the two things would be listened to effectively*

*simultaneously ... that made me really be aware of the weight of getting it right. And because you know part of the brief was this will be listened to by the scientific community, so then you think well I absolutely need to be sure of the science in this as well ... it put really interesting constraints on it. W12*

*It was a real intellectual challenge and that real responsibility was great; it was nice to working on something that was paired with a polar opposite, to be working with a scientist. W12*

*... making a story out of this was an initial challenge because I had serious impostor syndrome about, 'can I tell a convincing story' and 'will it work' and 'will it cover all the things that's needed for stories' ... I'm a stickler for information so I knew that that would be fine. The main thing was just trying to get the story out and just get it to sound like something that would be a story. W13*

*I've got an approach that means I can respond to any brief, and so having such an unusual brief and being able to meet it just gave me confidence that the method that I've developed over the years is functioning and credible, so it was just confirmation really of the path that I was on. W07*

*From a point of view in terms of materials for practice, you know materials for writing, then [the engineer's] story was great and there were loads of things I could have used from it, but in some ways that's not different to ... anybody else's story that I might use as the basis for a piece of writing, it just happens that they're an engineer, but I suppose yes, from a practice point of view definitely it was the kind of form [that was interesting]. ... It also, actually it was quite a long time since I'd written a short form piece, a short story, so it also enabled me I suppose to go back to that as a genre and think about that too, so yes there were lots of really good things from my practice that came out of the project. W09*

*I loved the challenge, firstly because I very rarely write that short, ... it has been absolutely fascinating to discover that actually I can do it, apart from anything else, so it's a wholly positive thing. W14*

### 3.1.3. Advice for engineers on story-telling

Question 3 asked writers to consider what advice they would give to engineers to be more effective at disseminating their work: *'If you were to make a suggestion for how engineers should improve their stories and story-telling, what would that be?'*

Only one writer could not think of suggestions in response to this (and they submitted feedback in writing, so could not be prompted further). The other replies contained a range of ideas. Several authors commented that they thought some of the engineers were already accomplished in telling their stories in a compelling way, but one person thought that engineers in general could improve

how they 'present themselves as characters or as narrators of their own story'. One practical suggestion was to consider the platforms for dissemination carefully to enable wider reach. Another writer suggested crafting a story based around a specific time period, such as a particular stage in an engineer's life or career.

Narrative, structure, and using language that most audiences can understand were general themes (though the question did not specifically refer to audiences with any specific level of subject matter expertise). One writer was particularly clear that specialists, including engineers, should be wary of using 'professional vocabulary':

*when people get so deep into their work and they get lost in acronyms and professional practices and they talk to other people within their work then they get to the point where only six people in the world can understand them and they can't actually communicate what they're doing....* **W07**

Introducing a human or personal aspect was another theme suggested by several writers as a way to help audiences relate to technical topics. Complicated or unfamiliar concepts might be better understood if presented in a way that allowed individuals to imagine the impact in terms of their own lives. One writer suggested to 'emphasise the connection to lived life, the enablement of lived life'. Another focused on the human aspect in terms of demonstrating personal passion for a subject, explaining to an audience why they should be excited about it too.

*It seems to be a common problem that the more advanced your understanding becomes, the further you get away from being able to translate that into something which is understandable for the general public, and I think that is a really underrated specialist skill ... so in terms of engineers specifically, I think that always taking a moment to take a step back from their work and look at the application in terms of the real world impact it will have on the average person, even if it isn't immediate or even if it's not necessarily something that is going to affect lots and lots of people, if you can say 'and this could lead to', to get people excited about that ...* **W08**

*A big thing for me is just be personal ... talk about it from the perspective of why you love it, and your excitement is the very beginning because it allows you to be excited in the way you tell your story, and to show your excitement for it ... so how would you convey your nerdy passion to somebody who doesn't feel that way, ... just keep simple as saying, you know this is really useful to your life for these reasons, and it's different if it's a seventy year old to a twenty year old to a five year old, and so yeah think about your audience, think about who you're talking to, think about why it's relevant to them, and then, absolutely, again, first rule of everything, talk from your heart about why you love it and remember why you love it so that can be conveyed in your message.* **W13**

*Certainly from the interviews I heard, people had really fantastic things to say and things that connect very clearly with very important contemporary concerns and pressing issues, I think making it clear that they deal with big questions, up to date big questions, ... they're dealing with major questions that have an impact on all our lives.* **W09**

At least 6 of the writers suggested greater collaboration with creative partners as a way to help engineers communicate their work; several had the opinion that engineers should not be expected to become skilled storytellers, any more than writers should be expected to be engineers. There was a clear sense that these are separate areas of specialism, and that allowing each party to work to their strengths would produce better outputs than forcing engineers to also develop expertise in a skill very different to their core work.

*Find a good writer to help with your story. ... I don't know that everything has to be a narrative, but that's the world we live in. You know, that's kind of the media landscape we live in. If you're gonna do that, don't feel that that has to fall on you. You don't have to be a writer to do this stuff, right? You can work with somebody. ... you've got your own set of skills, don't feel like you have to take on other sets of skills... stick to your lane and be good at what you're good at and be proud of that, don't feel like you have to be like a polymath or someone that goes off and does lots of different things. It's helpful for everybody including yourself if you can find someone to help you with those. **W17***

*Having someone come in from the outside and look at [the engineer's] work and just kind of pick out a quirky moment, that's useful for anybody's work, to have an objective and creative view of what you do, ... having someone come in and perhaps challenge the way that they look at their own work and then create a framework for looking at differently or looking at it more creatively or taking one aspect of it, I think all of that is very valuable, but not just to engineers. **W09***

*I'd suggest they do what they do best, and I'll do what I do. ... Not everyone can tell their own stories, I don't think they should have to. ... journalists and writers are the bridge between scientists and engineers and the rest of the world. It's our job to create compelling stories to get people interested. **W10***

*I suppose it's unfair to ask them to do that because that's not really what they're interested in, so I suppose ultimately my answer would be that I wouldn't have the temerity to suggest that they do anything other than continue to [do engineering]. ... But then I suppose this podcast is in the field of the communication of science, of engineering, rather than just engineering per se so by default I suppose you want to have some storytelling, but my feeling would be that they should be left alone. **W07***

#### 3.1.4. Project organisation

The last core question asked writers about delivering work for the project from a process perspective: *'Do you have any feedback about the practical and organisational aspects of the Inventive Podcast?'* This elicited many comments related to working with the podcast production team. Two themes appeared in the responses. The first was more concerned with the topic explicitly mentioned in the question - organisation and communicating with the team (how and when the work would be delivered). The other theme related to more creative aspects of the production process, so those are summarised separately in section 3.1.5.

The feedback on practical aspects was very positive, eliciting comments such as ‘everything was very straightforward and easy’, ‘it seemed great’, and ‘it was all very smoothly done’. The importance of good communication between writers and the production team emerged through these responses, and it appeared that the production team had done a good job of handling the different working styles and timescales, responding flexibly and efficiently.

It was clear that most of the pieces had a long period between initial briefing and delivery, often many months. There was one example where a writer said they would have liked more communication as they felt that the brief had changed over time; had they known sooner, they would have altered their approach to research and writing. It is not clear whether the brief did actually change, but this example emphasises why the team must keep in touch with partners as a project develops. Another writer, though not specifically reflecting their own experience in Inventive, highlighted the time pressures many writers face in producing work, and how important it is for collaborators to appreciate this:

*When you're a creative, it's a really difficult balance between writing and producing content that you can monetise and pay your mortgage with, and keeping on top of the admin ... I would say if anyone wants to do anything like this again, please do appreciate that authors in particular are incredibly time strained and stressed because we don't get paid very much for what we do so we have to do a lot. ... there are lots of writers who cram it in around full time jobs, and that's obviously even more difficult in terms of time management. **W08***

There were several comments referring to feeling supported by the production team, with a general sense that they understood how to work effectively with creative partners. The writers clearly appreciated the team's relaxed attitude, flexibility, responsiveness, and willingness to accommodate individual practical requests, such as being given the brief and interview material very far in advance. For example, one writer wanted their thanks to be ‘put on record’ to the production team member who continued to stay in contact during a period when it seemed that they (the writer) might no longer be able to take part, adding ‘I was very, very glad that she persevered’.

*That was all very good, [the team were] very, very clear, communicated very well, knew exactly what I was doing, knew exactly what the deadline was, knew exactly what was asked of me, knew exactly why, it was all very clear and straightforward, yeah it was a very good brief. **W07***

*I felt that I was able to give it enough time myself to do as excellent a job as I could in terms of writing time, and I had a feeling that I was being supported and that there was some flexibility about how long the story might take and things like that... **W11***

*I'm just absolutely stoked by the whole process and how it turned out and how chilled they were in the timescales for getting it done, cos that's a real difference where you're not being hassled too much to get it finished but you know there's a deadline to get it done too, so yeah I kinda liked it all. **W13***

*I thoroughly enjoyed working on Inventive (and would happily come back again if asked!) ... it was an excellent professional experience. W15*

### 3.1.5. Creative aspects

Though the core questions referred specifically to practical and organisational matters of the podcast production, most writers made some reference through their responses to creative or artistic aspects of their experience within the project. One facet of this was expressing approval for creative decisions made by the production team, including editing (the way sections were arranged in the final episode), sound design, and selection of actors for narration. This feedback was very positive, suggesting that having a highly skilled team, experienced in creative production, is essential for a project like Inventive where the artistic element is such a key feature.

There was a sense from some writers that they felt they had collaborated with the production team; it was a co-creation, not a transactional process with one side supplying a brief and the other delivering a self-contained piece that fulfilled it. The level of interaction varied according to the working style of each writer. One person said that they were heavily involved in producing the final edit, something they were very pleased to be able to do, this being the way that they normally like to work. Others had minimal input on production but were similarly pleased with the final result.

*I thought it was put together really well, and I appreciated that the different engineering experiences and the different stories needed slightly different structures of program, so I was very pleased with how my story was set into the centre of the program, and I thought that the performer was really good on my story. ... I was very pleased with [the choice of performer] and with how the story and the interview kind of complimented each other, there was no repetition from one to the other but they kind of illuminated each other better than I could have anticipated, I think. Obviously, I heard a rough interview when it was first recorded but I didn't know what was going to make it through to the final program. W11*

*It wasn't just a question of listening back to something that somebody else had made, I feel that we sort of made it together in a way. ... I was \*really\* pleased with the outcome, it was fantastic, and I'd like particularly to say I was very pleased with Adam's sound design on the piece ... I think the whole thing came together really well. W16*

*I thought that the actor was excellent, and they really, really got it, and I was delighted with how it was read, the story. The episode I thought was very well intercut how they went from what [the engineer] was talking about to the story and it was relevant, and they drew the connections between them. ... I was asked if I wanted to do it and I manifestly did not, and then I had no idea who was going to do it and just heard who it was when I listened to the podcast. W07*

*I don't even think I'd specified accents in some of it, but [the team] picked ones that were just spot on. Yeah, I just thought that the quality of the actual podcast was great. It sounded great. Reading was great, the editing was great. Use of interview material. Yeah, it was all really nice. W17*

*I didn't do any of the sound effects, all the sound effects were added by the guys. I went 'can we have this, can we have that', ... and so they done all the sound effects, so that was awesome to hear that put in. W13*

Another aspect of the process that writers commented on related to creative freedom - the ability to develop their piece however they wished. There were several positive references to this 'lack of editorial pushback'. Though some writers chose to create a more realistic or true-to-life narrative, it appeared to be more from a sense of duty to honour the engineer's inspiring story than a strict brief. Writers clearly appreciated this supportive and open-minded approach from the production team, some expressing surprise that they were permitted this freedom – either due to the subject matter, a fear that they were straying too far from expectations, or that they were being too specific in terms of their vision for the creative delivery of the final piece (for example, giving exact timings for how each section would be intercut with the engineer's interview).

*I loved being asked to write something and the openness of the producers to my hybrid piece, they didn't mind that I didn't write a 'traditional' short story. W10*

*I'd basically written a movie script with all the directions in it, and [the team] were like 'brilliant, the more information the better', ... so in the end the edit was on their side but I'd already pre-edited everything to say 'this is the finished product I'm heading towards', and they just went 'yep, we can make that happen', which was brilliant. W13*

*... that kind of free-hand approach, as I'd say the non-intrusive approach, is absolutely ideal for me; I knew I could go to people if I had questions or concerns, or time problems, or anything at all. Anyone I had contact with on this project were fantastic, but no one was in my face and it was just up to me to schedule my work and I did it, and it worked, it was great. W14*

*My concern was like 'I really wanna send this story back'. I was really worried, 'cause it wasn't what they'd asked for, wasn't what you guys had asked for, ... And I didn't want to upset anybody and I didn't want to offend [the engineer's] ideas ... but they were the things that when I read their interview that jumped out at me as the things I couldn't not comment on, you know.*

*[Interviewer: ... it sounds like you were worried that you might be told to change it or almost censor it in some way, but is it right that you were allowed to have your vision and you weren't told to change it?]*

*Oh, nothing was changed at all, nothing in the slightest, which was great. ... But no, there was no editorial pushback at all. In fact, quite the opposite. People were like 'this is great. We're excited about it'. So that was good. So it was really nice. W17*

### 3.2. Feedback: Engineers

This section summarises feedback from the 5 engineers who responded.



### 3.2.1. Engagement and sentiment

Question 1 asked engineers about engaging with the podcast and reflecting on it once the interview process had ended: *'Did you listen to the podcast? If you did, overall, what did you think of your episode?'*.

All of the engineers expressed positive sentiment about the podcast, either about their episode or towards the experience of taking part. Three said they were proud and/ or grateful for being able to participate in the project. Several of them appreciated attention to detail in their fictional piece, seeing aspects of themselves reflected in the characters, or recognising accurate technical descriptions that would have required research on the part of the writer to depict correctly.

*I did listen to it yes, and actually I really liked it, I was really pleased with the result, really, really pleased ... I loved the way that it was made more interesting by the fact it had [the writer's] work over the top of it, it just made it a little bit different, ... I'm very grateful to have been part of it. I was really impressed with the way that the podcast came together, how it sounded ... it was a really positive experience, I was happy to be part of it. E18*

*... I could see bits of my personal story which inspired the story which was written by [the writer]. So yeah, I just remember being delighted when I heard that part ... I definitely enjoyed the episode. E22*

*I listened to many clips of the podcast ... and they are so inspiring, so exciting. E04*

*Think there's always a cringe moment, when you listen to yourself, but overall pleased with the episode. ... a very interesting and novel experience. E05*

### 3.2.2. Perception of their work in response to fiction

Questions 2 and 3 asked engineers to reflect on whether the creative piece inspired by their interview had changed their attitude towards their work in engineering and how they describe it: *'Did the fiction element of your podcast make you think differently about your work?'*, and *'Did the podcast make you think differently about how you might communicate your work to others and the stories you might tell?'*.

Three engineers thought that the writer had given a realistic portrayal of what they do as an engineer, with one person saying that they were expecting a piece more fiction than reality, adding of their story, *'it's real'*. One engineer did say that the story had made them think differently about their work, being a sort of realistic but imagined future; they said it had made them excited to think about it coming true so that they could experience that scenario for themselves one day.

All five of the engineers said that the podcast had informed their approach to communication and storytelling - either through the process of being interviewed, or from listening to the fictional element of their episode. Two people referred specifically to outreach in schools; others talked in a more general sense about how they would approach telling their story and engaging an audience. Ideas included thinking more carefully about structure, and making content less objective and impersonal by including human elements that other people might relate to. One of the engineers

expressed a lack of confidence in the creativity required to be an effective storyteller, but implied that the podcast had given them some ideas for improvement.

*I think it was very interesting their approach ... those guys are very friendly and the way they interrogate, well not interrogate, maybe interview, ... I was expressing my story in a very friendly way, it was a story, not like a scientific investigation, so I liked that, and it made me, it has relaxed me; now next time when I'm telling my story I could follow the same example that's used for the podcast. So it is useful to simplify my story, to be in a friendly way, ... something that people are interested to listen [to]. E04*

*It emphasised for me the importance of storytelling ... yes, I'm gonna try to make sure that I do more of that in the future. I've been invited to go back to my old secondary school, and I had that in mind actually, I thought I really need to make sure there's a storytelling element in it, or at least aspects of me as a person rather than just the job that I do. E18*

*What the podcast helped me do is refine my thinking in terms of what I do and how I communicated with others. So I guess the answer is yes, because I was forced to do that for the podcast, so that helped me put together my own thoughts and in a [talking size] format, which I can use going forward. E22*

*As an individual, unsure I have the same creative flair that was used for the podcast. However certainly some food for thought, especially when involved with STEM activities within schools. E05*

*... it was nice to have an opportunity to tell a bit more of an honest story if you get my point, so I think in the future I will continue to tell a more honest story E03*

### 3.2.3. Project organisation

The last core question asked engineers about taking part from a procedural perspective: *'Do you have any feedback about the practical and organisational aspects of the Inventive Podcast?'*

Every engineer responded positively to this question, reflecting a common experience of efficient and well-planned interview recordings, no technical complications, and good communication with the production team that exceeded expectations. One engineer referred to a potentially sensitive topic arising during recording, and how much they appreciated the support and concern that they received from the team about whether to include this in the final episode.

One person expressed slight disappointment that their interview was shortened in the edit but understood that only certain parts could be included due to time constraints. They felt that there had been a lot of discussion on interesting topics, suggesting that they had enjoyed and been engaged in the interview process. This view was echoed by another engineer who said that they would have welcomed more questions about their work, and the chance to explain any technical aspects that weren't clear, but overall, they seemed satisfied with what was included.

*It was all handled very smoothly, and working with [the team] was great; they always kept me in the loop via email. We managed to find the time that we were both available, which was good, so that was actually relatively easy; they gave me a range of options to choose from, and all of the technical side of it went perfectly well. E03*

*Really well organised and structured process, with friendly approachable people. E05*

*I think the way that the headsets and webcams, the equipment, ... the way it was sent out before the episode for us to get prepped and then the way it was sound checked and everything, I thought that was pretty, pretty good. I didn't expect that to be the case and I thought that was, you know, above and beyond activity that was really appreciated. And on the day everything went smoothly as well. That must have been obviously down to the prep that you guys have put in beforehand. E22*

*Only positive things, I think it was organised very well, ... I don't remember there being any difficulties with it, the technology all worked seamlessly, and I don't remember it being a pain to fit it in the diary or anything like that, so I would say it was all positive feedback, yeah it was very well done. E18*

*I was really impressed by how everybody involved in the creation was very sympathetic to my requests; ... they kept asking, is it okay, this question, and this recording are you happy with the way it's going to be released. So I really appreciated that, that was very nice, and ultimately I was more than happy with how it was so that wasn't a problem but it was nice to be asked. E18*

*I remember during the interview I was giving some other stories, they asked me some very interesting things, they could put those things [in] also, yeah, it's okay. I don't know the objectives of the project, but I think I'm happy with what was covered E04*

#### 3.2.4. Impact and evidence

Throughout the feedback process, several engineers mentioned the podcast as a way to raise their profile, or otherwise create an impact and aid dissemination of their work. Some mentioned an increase in positive engagement on social media, and most said that they were proud and happy to share the podcast with others. One person said that they had felt confident in sharing their episode online because it felt like promoting a piece co-created with the writer, rather than just an interview (which may be perceived more as egocentric self-promotion). Another engineer said that they had shared their episode with family members, implying that the podcast was an accessible way to reach demographics that would not usually be exposed to engineering topics.

Another aspect mentioned by some of the engineers was using the podcast as evidence in some way, such as the person who said that they now listened back their episode to support and motivate them if they are having a difficult time at work. Notably, one engineer was very thankful to have been featured on the podcast, not only because of the increased publicity it brought to them and

their projects, but because they had been able to use their episode as evidence of impact in a funding application to a major organisation.

*I think sometimes It's a little awkward self-promoting something that's essentially me talking for an hour about my job and my life, but the whole [fictional] element made that, turned it on its head really; all of a sudden I was a lot more confident to promote that in my social networks because it wasn't just me, it was me and [the writer] and they had created something really amazing around it, so it was a nice bit of media to share rather than 'oh just listen to me talking' you know, and I have shared it quite a lot. E18*

*It's helping to promote my innovation because the more people talk about this the more it is exposed by different third parties, it is adding a lot of credit to me. ... so this kind of clips and work, these are the information I normally send for my grant application, it adds a lot of reputation that there are third parties who are talking about my innovation. So I can't thank you enough, just thank you very much, whoever did this work, thank you.*

*[Interviewer: it sounds like you're using the podcast as evidence of the work and the engagement.]*

*\*Yes\*, evidence. That's a big word, evidence, and evidence that is not fabricated, it's coming from a third party; that's very, very important. E04 <is this anonymised?>*

*I've personally had a lot of very good feedback about it, you know I've had people messaging me on LinkedIn saying oh I've listened to this, it was really interesting, and you know they've got other questions about different things, so overall it was a very positive experience. E03*

*they are so inspiring, so exciting, the photos, the videos, ... they connected with my personal twitter so I was getting all the communication; it's just powerful, ... I am grateful. E04*

*When I showed the episode to my mom, she was just delighted like her face lit up like 'Oh my God, this is my son' ... and you know she was happy and showing her friends at work and stuff... so I know that my family are very happy about it. E22*

*I like listening back to it because it's like this in my job, some days it's just like any other office job, and then other days we get really exciting moments ... so actually I love that that feeling has sort of been immortalised in that podcast because if I am having a bit of a down day I can listen it an re-energise and remember just how cool this project is that I'm working on. E18*

### 3.3. Additional themes

Some other themes were identified across responses from both engineers and writers, and are summarised here.

### 3.3.1. Publicity and reach

There were some specific comments throughout the feedback relating to promotion and publicity of the project. Writers appeared more concerned, or perhaps aware, of this as an issue, though one engineer mentioned promotion several times and it seemed an important aspect for them. One writer felt that hiring PR (public relations) professionals to handle promotion could have increased audience reach significantly, and strongly suggested this for future iterations. Other writers simply expressed that they hoped the podcast would reach a wide audience; they felt that the project played an important role in publicising vital issues to non-specialists, but perhaps felt frustrated that they couldn't do more to promote the podcast beyond sharing on their own social networks.

*I felt that if a kind of prestige PR professional had come in and done that, and there are a few who have specifically done PR on art and science projects, they would have been able to get you press ... but I think that would have needed a professional PR person to come in and have a plan and execute that, ... you've got a great evidence base now to build on with the first series, so there'd be a lot to show in terms of PR, and I think that the project is so good that it should have had press. ... The engineers are so good and the writers are so good ... yeah I'd like to see it get more attention. I think if there was another iteration, I think having just an extra £5k in the budget for a PR person would really bring big exposure. All you need is one story in one of the weekend arts pages of a newspaper and you'd suddenly find that you'd get thousands of people tuning in. **W11***

*... these podcasts in general ... I hope they get a really wide take-up because I think they're a marvellous method of getting people interested in the subjects. ... just congratulations on it, and I just really hope it gets out there. These building bridges between the arts and science and people, I feel it's more and more important in the age that we are in, with Covid, with climate change, with it being more and more urgent for people on the ground to understand what scientists do, how they work, how they are ... just people who have chosen a particular vocation, and that could be them, I just think it's really crucial to forge these links and get people excited about the potential and the possibility... **W14***

*I've been really impressed with the project. Like I wanna see it do really well ... Is there any way we can... [anything] I can do to you know... I tweeted about it and mentioned it on social media and stuff like that ... it feels like it should be getting to a really big audience. But that's the eternal f--ing question these days is how do you get anybody to pay attention to anything, ... I know that that's eternally, you know, frustrating and kind of mysterious, how you get people to pay attention to stuff; you can do everything right and still it doesn't happen. So I'm just fingers crossed, I'm just really hopeful that it's getting a good response from people listening to it 'cause you guys totally deserve it. It's a really, really nice project and seems to be really, really, really well made and passionately made. **W17***

*My issue was the audience .... I want this story to go viral... there are many young Africans who are struggling to expose their story. I think this is the very best way to reach them but I don't know how they found me, if that could be used to get more other people to tell their story because there are many stories that are untold, many scientists who are coming with very interesting inventions, but it ends up into shelves and the bookshelves and the*

*publications, but unless this kind of creative organisations come and uncover these stories in an exciting way ... so personally I'm grateful, I hope it will go viral, and please help more other people to express their stories as you did for me. E04 <want to include as seems a clear example of why promotion can be really important, but don't think I can really anonymise this and leave much of the quote remaining!>*

### 3.3.2. Never the twain shall meet

None of the questions specifically asked writers or engineers about whether they wanted or had contact with each other during production of their podcast episode, but it came up in many of the responses (sometimes after prompting by the interviewer in follow-on questions to comments). Engineers didn't express especially strong views about this but appeared happy to comply with requests from the writers for information or even separate interviews.

Writers had quite a lot to say on this topic. Some appeared to take as given that contact with the engineer would be part of the creative process, with one referring to the extensive discussions they arranged as research time that should have been included in the fee. Other writers either expressed no interest in speaking to the engineer (didn't feel it was required), or actively did not want to speak with them out of a fear that it would bias their creative approach (feeling obliged to write a certain way or stifled by a sense of personal expectation from the engineer).

Several writers expressed to a desire to be involved in the decision on whether they could speak with the engineer, either sitting in on the interview, or developing their own questions. This is perhaps not surprising given that some said they use their own interviews with people as creative sources for writing. At least two writers said that they found the interview material quite hard to work with, more like a 'fact sheet', and therefore felt they had to do more research to find a 'way in' to the material as a source for fiction.

*if conditions had been different it would have been really good I think to meet the partner, and not just have a recorded interview; I think that would have made a real difference probably to the whole process, but given that we weren't able to do that, no it all seemed great.*

*[Interviewer: In terms of meeting, was that just so that you could build a rapport or so that you could ask your own questions and focus on your own aspects to pull out for the creative part?]*

*I think both actually, because in some ways, creatively, you're building a character around or part of this person that you've been 'given' ... it's in conversation isn't it, that funny little things get thrown up which you wouldn't necessarily have in a recorded interview but might impact on what you finally did and the work that emerged. But that said, otherwise I thought it worked pretty smoothly to be honest. W09*

*I think the interview was fantastic, so it's not so much that I wished I'd done it myself but I think having listened to it, I then had further questions that, things where I might have prodded ... and although it was feasible for me to get in touch, I emailed [the engineer], but there's a limit to how much you want to take up somebody's time when they've already given so much time and we did this over email and the answers didn't actually get me what I was hoping to achieve from it even though they were good answers; if I'd been talking to*

*them in person I would have just have dug until I got what I was after. But I think from a practical standpoint that would be more or less impossible to organise. W12*

*I think I was given the option of being in touch with [the engineer] actually, ... but it never happened for one reason or another, and I wonder how different the piece would have been if I had talked to them personally. ... I think I would have found this even more enriching if I'd been able to interview them alongside Trevor Cox really, or be there when Trevor Cox was interviewing them. I do like to work collaboratively, as I've suggested, right from the start and being collaborative in that part of the podcast as well would have helped me I think; ... so if I'd been able to be there either online or actually in person when the interview was happening, I think that would have worked for me, but that's not true I'm sure for every writer, everyone's different, it's just that's the way I tend to work anyway... W16*

Comments from some writers who made contact with 'their' engineer suggested that this added significant value for them. One author had several in-depth conversations and email exchanges; this led them to develop a new understanding of core themes within their own work over the last decade, also implying that they felt the fictional podcast piece was a collaboration, writing 'with' the engineer, not just about them. Though not everyone felt that their experience of the creative process was so collaborative, one writer suggested that fostering working partnerships in projects like this could be an interesting way to challenge the perceived hierarchy between engineering and the arts.

*I really enjoyed taking part. I got a lot from it and I think it's a great project. I suppose my only comment would be a slightly structural one really ... I know that it was funded by engineers and the nature of it was about revealing engineering stories, but I suppose long term I would be interested as a writer, in breaking down that, for want of a better word, hierarchy; so we as writers were given engineers and asked to write about them and respond to them, but ... so the implication of that is that the engineering story is the important one and the fictional one is kind of appended onto it, whereas I would like to see it be a more genuine mutual two-way conversation where also the engineers were asked to respond to the creative writing, and so it is a much more collaborative process where there isn't such a clear kind of, 'this is the important story and this is the secondary one', so I suppose that would be my main comment, about the nature of the whole framework that in some ways sets up quite a problematic relationship between fiction and the engineers, but that's for a broader discussion. W09*

*I picked up on something in their interview that wasn't explored very deeply in the interview, that felt kind of the core of their story ... and I had two or three further conversations with [the engineer], which were quite in depth because I wanted to explore those things; and so we spoke twice, for an hour each, and we also had some email conversation, and I realised that a big part of my work as a writer is to do with access to education, ... so my ears pricked up when they alluded to that in their interview, and when we spoke about it ... what I've realised is, and writing this with [the engineer], is that actually there's a whole strand of work that I've been working on the last ten years which is*

*short stories ... where access to education is the kind of fulcrum of the story you know, and I hadn't quite realised that; so it gave me that sort of insight into my own work. W11*

*I think I already had quite a broad understanding of what engineering is, ... but this was an opportunity to actually talk to an engineer who'd faced a particular set of challenges, so that was what I found interesting about it. W14*

### 3.3.3. Engineers are people too

Presenting the engineer as a human being was a theme mentioned by both writers and engineers in various ways throughout the feedback. Engineers seemed to reflect positively on their experience of being interviewed, appreciating being asked about their background and interests. This appeared to be important for the engineers' sense of identity, and some suggested that the podcast was an unusual but welcome opportunity to see themselves represented as a whole person, not just a role.

Writers felt that some of the engineers were already adept at incorporating personal details into their narrative, including elements of their 'backstory', and there were some comments indicating that the interview questions were an important factor in enabling this human aspect to be extracted and explored.

*... I definitely appreciated in the other episodes I was actually going to learn about the person there, not just the technical, the ones and zeros and measurements and the sensors, but you're actually going to really learn about the person and a bit more about who they are, and that is really useful because sometimes you stereotype an engineer in your own head, you know someone who just wants to get their hands dirty and doesn't really have emotions and get on with it. Yeah ... that is a great thing about the podcast. E22*

*... to see some of their other motivations behind it, and the journey they took to get there was also really cool because even though I know the general routes it's always good to hear someone say it and to hear their particular route and the particular little things that got them from step a to step b ... often people don't take those opportunities or get those opportunities and so seeing how they managed to get that opportunity, take advantage of it and end up somewhere totally different from what they planned as a kid, I thought that was refreshing because I see that with a lot of people but it often isn't mentioned, that you might end up somewhere else than you planned but the experience helps you to deal with wherever you end up. W13*

*... the project touched on a lot of broad topics so I think there were opportunities to have real debate and real opinions on things. ... it wasn't just focused on what I do for work, so the way that all of those things linked together gives you a bit more of an opportunity to show your personality and talk about who you are ... in some ways it was nice to do something which was a little bit more related to me and to my character, and it's not just about being a very sterile role model ... It gets boring, having to not be who you are. E03*



*it's quite easy as an engineer just to talk about the project you work on when actually I think people are really interested to hear personal anecdotes and to really get a sense of what it's like being you, but not even just the technical stuff, the engineering stuff, I think [the writer] put some elements of my own life in there ... these things are important to me in my life and probably give a better impression of what I'm like as a person than if I just said oh you know I do this project that does x, y, z. ...*

*[Interviewer: I've spoken to a few people now and that is something that comes out a little bit, that the podcast has given the opportunity for, particularly the engineers, to come across as whole people and what it's like behind just the technical work, so it's clear that you felt the same thing as well and that you think that's something valuable. ]*

*Yeah a hundred percent, and also I think the questions that were asked if I remember rightly, was a nice mix of what is it that you're doing, talk to us about your job, but also a little bit of a personal element to those questions as well so yeah it was nice and well rounded. **E18***

*[Interviewer: so do you think that's maybe the trick then is thinking about the person who's going to be listening who's not from that technical background and putting it in terms they can understand?]*

*Definitely, and I think that must be an acquired skill; I'm sure [the engineer] has done this before because they seemed to have really perfected this thing. They're not in any way dumbing down the subject, there's all the technical detail there for people who want it... but in the main what they were doing was telling a story, telling their story, how they got into engineering in the first place which is again, really inspiring... **W14***

## Summary of findings and recommendations

**Practical matters** - Be polite but persistent when working with partners; be empathetic and accommodating of individual circumstances. Engineers may have high workloads and struggle to fit in an interview; authors may be juggling several projects or fitting writing in around other full-time work. Both writers and engineers appreciated a flexible and responsive team, with good preparation to ensure the scheduling and technical aspects went smoothly. Clear and regular communication between all parties is important, especially if a project is moving away from the original brief.

**Perception of engineering** - Working on an engineering story motivated some writers to conduct in-depth research into technical subjects and allowed them to make connections with topics they had written about in the past. Some said the project helped them better appreciate the scale and complexity of engineering; others said they had been inspired to write about new topics in future.

**Approach to work** - Many writers had prior experience in working from interviews or using technical subject matter as a source for creative fiction. Despite this, they found the format creatively challenging. The nature and scale of this challenge varied across individuals but was viewed very positively. It might be useful when selecting writers for a brief to consider how familiar they already are with a subject area, to make sure that match is appropriate for the objectives of the project.

**Creative production support** - Writers varied in how much they wanted to be involved with making their podcast episode, from nothing except delivering the story, to working closely with the team in describing the structure, choice of narrator, and making the final edit. Across this spectrum, it was clear that writers appreciated the skilled judgements of an experienced production team. They also valued the creative freedom they were afforded, being able to develop their piece in any way they wished with no 'editorial pushback', even when they felt they were challenging expectations.

**Collaboration** - Aside from the suggestion that creative and technical partners should collaborate more in general, the personal experience of collaboration on the project varied. Some felt that making their episode had been a real partnership. The subject of communicating directly with the engineer was addressed by many of the writers. Some wanted no contact, others felt that talking to the engineer was important for the creative process. Those who arranged personal communication with the engineer found it valuable. It may be helpful to give writers the option to be present at engineer interviews or help them to arrange conversations to ask their own questions. As well as enhancing the final fictional content, this may also make the writers feel like more equal partners.

**Promotion and impact** - Engineers spoke positively about the attention that being featured in the project had brought to themselves and their work. All said that their experience had influenced their thinking on how they could better communicate their work in future. One engineer who is normally uncomfortable about self-promotion said that the unusual format of Inventive, a piece made in collaboration with a creative partner, made sharing and dissemination easier for them. Another said they had submitted their episode as evidence of impact for a significant funding application.

Writers were conscious of the difficulties of promotion and reaching a wide audience. One suggested budgeting for prestigious PR professionals to handle marketing, in particular, ones with experience in science and arts communication. Helping the press to make timely connections was suggested as a way to increase listenership significantly, such as being mentioned in a feature article coinciding with the release of a new book by one of the podcast contributors.

**Advice on storytelling** - Writers strongly encouraged greater collaboration of the type enabled by the Inventive podcast. Most thought that engineers should not be expected to become expert communicators by themselves, but should get support from a creative partner. Suggestions to improve storytelling included being mindful of the intended audience; using language and examples that most people can understand, and introducing human elements to make unfamiliar or complex concepts more relatable.

Presenting the engineer as a whole or rounded person, not just their role, was mentioned by both groups. Engineers appreciated the chance to talk about their interests outside of work, and presenting some personal 'backstory' to becoming an engineer was suggested as a good way to engage and interest audiences. Some engineers may already be adept at telling their own story, but others may need more guidance. Several comments suggested that the interview format was a good way to achieve this - being interviewed in a relaxed and friendly way, with structured questions carefully designed to bring out certain aspects of an engineer's life and character.

## Conclusion

Feedback was collected from all 11 writers and 5 engineers who contributed to the Inventive podcast (series 1 and 2). Short semi-structured interviews were conducted around 5 core questions which were slightly different for each group. Everyone was asked about their impression of the podcast, what they thought about the practical aspects, and they were free to give any other comments about their experience. Engineers were asked whether the fictional element had changed how they thought about their own work and how they communicate it to others. Writers were asked whether the project had made them think differently about engineering or their own work. They were also asked if they had any advice for engineers on improving their storytelling.

Though some writers were reluctant to revisit a story after delivering it, response from both writers and engineers to the podcast in general was very positive. Many enjoyed the experience, were proud to have been involved, and were happy to share their episode with others. Feedback was very positive regarding the high quality of production and creative skills of the production team. There were positive comments from both writers and engineers about good communication and organisation, stressing the importance of these practical aspects on a project with long delivery times, as well as giving creative contributors freedom and flexibility when producing work.

Writers found the project creatively challenging, and suggested several ways that engineers might improve their storytelling. These included making stories more human and relatable to a broader audience. Engineers also commented on being more relatable as a person, not just a role. They felt that Inventive was unusual in portraying them this way, but appreciated the opportunity to reveal more of their personality and see themselves represented as characters in the fictional pieces.

Inventive's premise of mixing fact and fiction was overwhelmingly viewed as positive. Many authors commented that creative writing and engineering are separate skillsets, and that more collaboration between them would not only be beneficial for both sides, but could enhance the quality of the outputs. As one writer stated, *'journalists and writers are the bridge between scientists and engineers and the rest of the world. It's our job to create compelling stories to get people interested.'*