

## **S2E9 transcript: Evaluating success of your engagement with Dr Jamie Gallagher**

Hello, hello, hello and welcome to the SciComm Toolkit podcast. The show for scientists and science communicators to gain all the tools they need to bring their science stories to life. I'm Soph, or some of you may know me as Soph talks science. I am your host and thank you so much for joining me on this little passion project of mine.

Way back when I started this podcast, in the first episode, or it might have even been in the trailer, I said that my new podcast was going to be called the SciComm Toolkit. BUT I didn't want it to just be about science communication. Instead I was using scicomm as an umbrella term for communication, public engagement, outreach and so on so this could be a useful resource for as many people as possible depending on your interests.

So today's episode is the first one to step outside of that communication bubble and take our first step into the world of public engagement and talk about evaluation. Now you might be thinking that I've skipped a whole bunch of things as evaluation is normally something that comes at the end. But this topic is so important that I just had to cover it on the podcast as soon as I could. And why will hopefully become pretty clear after you hear the chat I had with today's guest Dr Jamie Gallagher.

Jamie is an award-winning engagement professional specialising in engagement, impact and evaluation. He has worked with dozens of institutions and subject areas, improved the reach, profile and impact of research engagement in almost every academic discipline and in this interview shares an amazing guide to getting started packed with many examples of evaluation activities and fab analogies to bring it all to life.

So without further ado, I am delighted to welcome to the podcast Dr Jamie Gallagher.

Well thank you for joining me today and sharing your I'm sure all your wisdom with us. Maybe you can start off by telling us a little bit more about your career journey and what it is you do now.

So I, an engagement trainer, consultant and science communicator. So there's kind of three aspects to what I do now. And as a trainer, so I work with universities, charities, professional bodies. Around the world, looking at how they connect with non specialists. As a consultant, I work with, again, charities, museums, different organisations, looking at their evaluation practices. So how do they demonstrate impact and the value of the engagement work? And then my third strand is as a science communicator, so I've done some TV, radio I've written a book, but most of the work I do is live on stage taking science and making it interesting. So those are the three things I do and they have gradually grown over the past decade, I would say. So I started doing a PhD in chemistry and lead to engineering at the University of Glasgow while I was doing that, I dabbled in some training. So the Science Centre offers an afternoon exploring science communication. I'll go along to that. I enjoyed it. And then I did more training and more. And then once I felt like okay, I've had the training, I started getting the experience and the started writing sign shows and things like that. So that's that's

kind of it started with dabbling and training during my PhD, then getting some experience and it has just grown to be my career now.

Yeah, and I there's so many things I thought I'd want to talk to you about but yeah, maybe we'll have to just invite you back on for every little thing that you do. And then we're going to just look at evaluation. But just before I dive into that a little bit. This podcast is obviously got psychomotor science communication in its name, but I'm kind of using that as an umbrella term for kind of anything related to psychology, public engagement, outreach, and so on. But as someone who is probably more closely aligned to the public engagement side of things compared to me, I thought it might be interesting to ask you your take on what the difference is between patient and public engagement and where the lines are, because I always find they're a little bit

is such a vague and important question. And there's some people out there who really like definitions, and there's some people who don't really like giving definitions. I'm one of the definition people and I do two things that are very essential. I train people and that's normally public engagement, but I'm also a science communicator, and those are two separate worlds for me. As a public engagement, the definition I work to is a definition of public engagement from the National Coordinating Centre for Public Engagement. So they're a body to look after public easement across the UK. And the defined public engagement as the myriad of ways in which the activities of higher education can be shared with the public engagement is by definition, a two way process involving interaction and so for me, public engagement is that two way dialogue is me sharing something with you is speaking and listening. asking and answering. Communication, on the other hand, is normally about the delivery of information. So public engagement is effectively a conversation around the research topic. Communication of a research topic is maybe a press release or information that is outside of the Research Institute, and hopefully people respond to So engagement to a process communication, or when we process as we define

it. Yeah, I totally agree. But I also think there's obviously they kind of both meet each other as well, because it's an element of communication and engagement, and you also want your communication to be engaging. So, yeah, I can completely understand why it's all blurred and all that sort of stuff as well. So today, we want to talk about evaluation and I wanted to talk about something that is normally considered at the end of something towards the beginning of this podcast, because it's it's important, which we will discover today by talking to you a little bit more, but I think there's probably some listeners who don't know much about evaluation, or maybe haven't even heard of it. When it comes to public engagement, science communication. So maybe you can just give us a very brief introduction to what it is and what it can look like.

I love evaluation. I, I thought it was something I would see. Like a few years ago, I think it'd be saying that but I love evaluation. And the way I describe evaluation to people for the first time is really it's just a structured way of listening to people. It's listening to people that you are working with to work out. What do they know what are they concerned about? What they're interested in? And by really listening to people, you're able to work out? Am I doing the right thing? Is this working for the people I'm connecting with? What am I learning from the people that I'm working with and what are they learning from me? So all of the evaluation

work I do is really just helping people to find their voice and listen to it. We listen and then we respond. So why should we

be doing it? The big picture question.

Yeah, I mean, really, the practical reason why we're doing evaluation is because in the end Institute's that people will be working when they're doing engagement or communication. They are funded by someone and someone wants to know that they are spending their time in a productive way. So if we are getting a grant, then the grants would expect us to report on the benefits that their funding is achieved. And so we're evaluating to learn, Have we had any positive impact? Do people know more about the science that we're talking about, and just to improve as well. So if we're listening to people and working out how they're responding to our content, and we can improve, we can get better all the time. And also just a really key component of finding people's voice empowering people, and we can only do that through listening to them. And that's where evaluation comes in. So really three reasons to evaluate one is to improve. One is to report on the benefit of change that you've had. And also crucially, to give people a voice.

I've never heard of like finding a voice or anything like that before but I really like that. When I guess going through my like why what why? All those kinds of questions. When did we start thinking about evaluation?

To me? evaluation begins right at the start of the process. So I bet it was going along to any of my training courses before they will know I explained things through these four questions and normally through analogy of Lord of the Rings, and I'm gonna throw you through this so bear with me as spoilers ahead if you've never read, Lord. So, Lord of the Rings, big journey to destroy the Ring of Power. Why are we doing this clarity of purpose is incredibly important. We're doing this to stop so on taking over mental air, we have clarity of purpose that gives us our mission. We think about who's involved in the projects and Lord of the Rings, you have the Fellowship of the Ring group of different individuals with different skills and attributes, all of whom come together to deliver a project larger than themselves. And then we think about what we need, how are we going to do this journey will be mapping out the resources that we need. And so we thought about the practical elements of our journey. And then crucially, the fourth question for me is, what is the marker of success? And this is where we think back to our initial aim so we're trying to stop so on taking over Middle Earth, what are we going to be able to point to to demonstrate success? And if you know you're talking you'll win the ring is destroyed power of Baradar the terror that like either at or collapses. Totally spoilers. But that's our marker of success. We set out to try and stop solo taking over middleware, and then we're able to point to this big collapse terror. All of our heroes, all of our enemies know that the terror has collapsed. So long has been destroyed. We have been successful. And that's evaluation. So that's when we're right at the start of our journey. We're thinking or people will be trained to do what we tried to do with this project. And from that, and immediately from that, you think, Okay, what am I gonna be able to point to at the end of this process that says, Yes, I have achieved that. So as soon as you can aim, internal aim and to something that you can evaluate

fantastic and what I guess it's going to be completely project individual dependent, what what sort of things can you measure and how do you know that you're, how do you find the right things to analyse given your goals and things like that?

You know, although each project is is different. There are common elements that come up time and time again. And so, one of the first things I do is I separate out the information into four different areas. The first of those areas, is demographic information. And here I want to know who's involved in the project. And this isn't just for thinking about science communication. This isn't just the people that we're speaking to. This is also our sales, who's involved in the project. Why are they involved? What is the background of the researcher? who's hosting the event? If you're working in collaboration and museum, why is it happening? So who was involved? Also feedback information and feedback information? I tend to just ask fairly standard questions. Was it the right lens that people like it was interesting was enjoyable, all of these things tell me whether I've created something that is fit for purpose. So that's my feedback information, I create something of quality and then have evaluation information and this is where I look for the change that's been created. So as there has been change in thought, knowledge, behaviour, attitude was different because of my project. And then the fourth area that I look into is going forward information. And this is me listening to people or working out what they would like you to be thinking for evaluation of this, we could be asking the listeners, what topic would you like to hear about next, that tells me nothing about the quality of the current episode that they're listening to. But it does give you some information that's going to allow you to plan for the future. So for areas of evaluation that I also can demographic, who is involved in the project, both audience and presenter. Then we think about feedback as this fit for purpose. Are we creating something of quality evaluation information? What change has been fostered changes in thought, knowledge, attitudes, or behaviour, and then going forward? What information would be useful to you to plan for the future?

It's more obvious to me how you can sort of collate the demographic information, the feedback information, but but they change type information like a change in attitude or change in behaviour. How can you kind of measure those things?

Well, for most of you need something before and something afterwards. And that can be it varies depending on the project. So one really nice project one of these projects that I like, this came from the University of Warwick, and they were looking at Children's knowledge and attitudes towards animals. So this was a project with zoos, and what the zoos that was the went to primary schools and the got the children to draw some animals. So that's just a fun little activity for the draw some animals and tell us about where they left. And all those drawings were taken away. And they were kind of looked through and thought, Okay, right. That's that's what the children drew. And they're going to put in a box for a while. Then the zoo went back to the schools, and they did a lot of talks on animals and their habitats and their life. And then they did some animal handling. And then we took the children to the zoo. And then six months later, they gave the children some paper and some pens and asked them to draw some animals and we are the left. And this was repeating the same exercise that happened six months earlier. They then took all those joints away and what they did was they looked for any changes in knowledge. They coded the drawing, was there. One a positive change? Was there to no change in knowledge, or three? Was there a negative change knowledge really drawing worse examples of animal habitats afterwards? And what

the dead what we discovered was that six months after all of these interventions after zoo versus after animal handling, the children were drawing more accurate representations of animal habitats than they were before. So that is a showing that there has been a positive change and knowledge linked to the interventions that we were delivering.

So probably, probably going back to when we were saying think about it, right? At the beginning, because you need to kind of create those baselines for certain things. You might need to factor them into your planning earlier in the project and fitting in with your timeline and so on.

Yeah, definitely. Because if you're going to change knowledge, behaviour attitude, you need to be able to tell me what the current landscape is like. So if we are saying, oh, you know, people know lots more about physics because we have delivered the science show to them. Well, you're gonna have to show me that they didn't know it beforehand. We can't wait until we've delivered all this content and then see we've radically changed the world. If we can evidence that people thought or behave in a different way before the matters.

Do you have to do that with the same audience that you would deliver your show to, for example? So the example you gave was with, I'm assuming the same sort of class of schoolchildren, or could you go out and just use any literature that would be out there and research done before or just a similar sample population?

Yeah, again, it all depends slightly on the project. And it's very nice if you're able to work with the same people over the long term, but that's not always going to be possible. And as you said, what you can do is you can look to the literature, or you can do general surveys. And so there'll be lots of information out there that is able to tell you that this is a particular attitude that people might have towards a certain subject. For example, there was a lot of work done by the Royal Society of Chemistry and public attitudes to chemistry, and they went out and they did a big social science project to work out. What do people think of chemistry. Now that gives you a good baseline. You're not able to see that sort of that you had a chemistry project you're not able to see that. That is necessarily exactly how your audience think. But you could see that on average people in the UK, think chemistry as this, this and this. We worked with people for a long time. We showed them all the different career paths that chemists go down, and the group of people we worked with have demonstrably different views after the knowledge compared to the general UK population. So we can use data that is about a whole population. And then we can still see that the people that we work with have different knowledge or attitudes compared to that baseline survey. So you can use data that's already in there.

So when you have been sitting down to plan your evaluation, what are the most important things to consider?

Most important things to consider. I have a few rules before I even think about the information I want to capture has to be ethical for a start. So we need to think about how we're answering asking questions. How we are making people aware of how the data is being used must be ethical. I also refuse to let evaluation interfere with engagement processes self. I've seen engagement projects we are an overly complex evaluation process is burdensome to the people that we're working with. And it's putting people off or leaving a

bad taste in people's mouths. So the evaluation can interfere with the engagement process. After that, I start to think about who I'm working with, so I separate everyone that's involved in the project. So if it's working with schools, then I have pupils I have teachers, maybe I have parents, I have researchers, collaborators, I separate them all out. And then I work out when I might be able to speak to them. I'm able to speak to them before I'm able to speak to them during I'm able to speak them afterwards. Then I start to think well, okay, when I'm speaking to them, what can I be doing? Can I give them a quiz? Can I give them a survey can I run a focus group or an interview? So I start from the kind of ethical standpoint and making sure I'm not interfering with the engagement process itself. I work out everyone who's involved in the project, when I can speak to them, and then I think about how I can speak to

them. And how do you balance sort of the one of a better word like the time commitments of each like, if you want someone to engage with your activity for an hour say, how can you? Can you then use some of the hour to ask them the questions or how long can you then ask them for like additional time to answer some questions, if that makes sense? Yeah, yeah.

That's a really, really great question. And it's one of those asked a lot. I think there's two routes to fall down here. So if your evaluation is embedded within the work that you're doing, then you can evaluate the entire session through. If the evaluation and engagement are one in the same then you can do as much as you like, if you are having a separate discrete evaluation process. So let's say you want to give people a survey afterwards, I would make sure that the evaluation takes up no more than 10% of the activity. So if you had an hour long session, you can have six minutes of an evaluation ask. So maybe three questions in a survey. If you are doing a drop in science kind of tabletop activity and people stay with you for 10 minutes, then you're not going to get a whole lot of time to evaluate them. So that's that's one revised and said if you can build in the evaluation to the activity, all the better. So when people come over to your tabletop activity, ask them a question. Get them to draw something, get them to vote on something that can be part of the activity. It can also be useful for your own evaluation. And then you can you can carry on the evaluation throughout because people think it's a quiz, but actually this is part of you really listening and learning to

great tip. Great tip. So when you're making your Evaluation Plan that what what does it actually look like on paper? Is there a particular structure we should follow?

Oh, well, there's lots of different planning tools that are out there. And really, for me, it's about separating everything out. So really, really common tool is used as a logic model. And a logic model starts off with what you're putting into the process. So what do you have available in terms of resources? The money, the buildings, the time it tracks through and asks you about what kind of out puts you're going to have, what are you going to produce? What kind of outcomes a way to have was maybe different result of your project? And what kind of impact are you hoping to have that overall change? And whether you use a logic model or something else, it's just about answering some very set questions. And the three most important ones for evaluation I would say are, what are the outputs? Are you producing outcomes? What is different because of your project? And what is the impact was the overall change you've created? outputs, your record, you just count them outcomes. You measure them. So focus groups, interviews, surveys, impact, you demonstrate them, you write a

report you write a convincing arguments to show the overall change that your projects achieve.

Yeah, I think I've used a logic model once or twice before and I always get confused between outputs and outcomes. But just to maybe give another sort of example, out, put a kind of the the workshop you're delivering or the particular activity right.

Yeah, that's exactly right. The analogy I use and everything I explained is through analogy, is school. So everything about the schooling system, a pupil start school, at about five goes through a multi year process, emerge at the other end, well educated, well rounded individual who's ready for the workplace, further study or another. If we think about the outputs from the schooling system, those are the best artwork that decorate the fringes. Those are the essays are produced the artwork that is produced, the plays are performed. These are products of the education system. If we think about outcomes, then we tend to measure schooling outcomes and a subject specific way. So an improved read in English and improve paid in mathematics. The pupil knows more about the subject area, the outcome leads to the overall impact and the impact is that well rounded, well educated individual. So outputs, we record them, outcomes we measure them, and impact and demonstrate

another fantastic analogy. I'm loving all these analogies. So we've mentioned a couple of sort of evaluation methods throughout this I think we've mentioned surveys, focus groups, like voting polls, etc. Do certain evaluation methods match better with certain activities? Or can you just give like a questionnaire to see all activities?

Oh, no, definitely not. Certainly for all activities. It really, you need to think about what's suitable for your audience. You know, if you are giving a lecture to a group of middle age professors at university, and you little postcards and you ask them to draw an animal habitat, they might not respond well to that because it's just not the done thing. This is not what we expect. And they might be happier with a survey might if you go into a classroom full of seven year olds, and you do an activity and then you give them a survey. That's not going to get done well. So you're thinking about what is the expectation? What might people be interested in engaging with? What format is going to be appealing for them, and you work with that? So you could get them to draw things. You can have graffiti walls, you can do quizzes, you can do interviews, and focus groups and surveys. I mean, I'll tell you the creepiest form of valuation as well. This is this is what museums use. If you are going to a museum and you've noticed someone lurking in a corner. What you know where I'm going left me in a corner with a stopwatch, they will be there to follow a random member of the public around the museum. tallying up what you do. If you stare at a painting for five minutes. They're writing that down. You spend 10 minutes on the toilet they have written. It's goofy, but they try and work out where people go, how the museum is used. And so there's a lot of hidden evaluation going on. How do they get that through ethics committee? I'm not telling

you Yeah, I guess it just shows though, that maybe we're thinking of evaluation methods as the graffiti walls the I don't know dropping coins in boxes, things that happen at the end of activities, but there are things you can like observational things. That's the word I'm looking for. I think as well as

you can and even these questions that we're asking don't necessarily need to be the end all the activity you're doing. And I'll give you another little example that I really, really liked and its simplicity. A tabletop activity, and the tabletop activity was about drones. So these were researchers who are looking to draw and when you approach the table, they would give you a little piece of paper, and they would say before we let you explore all the drones and we're going to show you a demonstration of them flying. What we'd really like is for you to draw a little drawing for our wall back here. We've got a gallery of drones that people have drawn, could you draw one for us, and they got people to draw out a drawing and then they stuck it up on the wall. Then they explored the activity. That's what half of the people experienced. The other half of people experienced the approaching the table. And the researchers immediately said well, let's get exploring. Let's show you this. Let's do a demonstration of the drones Bobo law was thrown the material and then said on before you go, can I give you this little piece of paper and can I ask you to draw a drawing for a wall up there? Now, what the participant didn't know what the member of the public didn't know was, they were either being asked to draw drawn before the export material or after the export material. Only the researcher knew they were doing before and after. So we're not able to say that yes, this individual person has learned for change their knowledge, but what they're able to do at the end of activity is sure that people that drew the drawing before they interact with researcher drew this people that drew the drawing after the interaction that researcher drew this. And if we can demonstrate that those drawings, on average are demonstrably different, then there's been a pretty convincing change created by that activity. So even if we aren't thinking about those simple, asking questions, voting on something separate them out. Alternate them, one person is asked before one person is asked afterwards. Do the people after the activity show a difference in attitude than The people before  
I guess some of these things you've mentioned, you mentioned the ethical side of things.

What would make a particular evaluation method ethical or not ethical? Absolutely.

For me, the ethics come down to clarity is about informed consent. So do people know how their data is going to be used? How long that data is going to be stored for who to get in touch with FD, decide that they don't want to be included in this study? And so it's about commodity, if someone fills out a survey, and do they really know what they're submitting that information to, you also need to be making sure that you ask only for information that you require. So it's very common that people will ask about people's postcode because they want to know where they're coming from. But if you don't know why you need that information, you can't be asking, you can't just ask for quickmask information, because you feel like oh, you normally see that one surveys, know every question you ask, I should be able to say to you, why are you asking that? What are you going to use the data for? And you need to have an answer for that. So be clear with the information that you're asking for, and how you're going to use that data, make sure that the data you're capturing actually has a purpose. And also just make sure that you're asking questions, and a clear and inclusive way. So often, I will see options presented particularly for demographic questions, they will ask, Which of these do you identify as this, this, this or other and imagine how it feels to constantly throughout your life tech, the other folks that are peek box that says you're something outside of our normal data set, we don't care. So always making sure that when we're asking questions, people are able to get a true reflection or their answer, and allowing people to articulate their own answers, make sure that you know how you're going to use the



data, make sure people know how you're going to use the data, and make sure that you're asking only for information that you need. And you ask it in an inclusive way. Say for the drone example that you gave, how much did you need to tell each participant whether they were being told before or after giving all the information, and so on? Well, this is where it gets even more complex.

So very often, if we are evaluating projects, and there we then it will involve surveys and interviews. And these are very easy ways of

having an ethical framework around it. So before people do a survey, you're explaining all this information with the drop and activities is often seen as reflective evaluation. So this is evaluation that has no intent to be fully analysed, published or available as elsewhere, effectively for the drawn example, there was no

ethical framework put in place for one of our banks or wait work, because this was seen as information just for the researchers own interest. So there is no intent to publish or use the data. Now this is an ethically grey area. So I will be making sure that even if I was asking people to draw something, maybe on the card that I was giving them, I might have a couple of people a couple of bits of information, I might say, we will be analysing these drawings and interpreting the data, we may be putting up some of these drawings on social media, or publishing the results of our work. And if you have any questions, you can contact me and I'd have my email there. So although Researchers are currently getting round the fact that like don't need to be really upfront and clear with all this data use because I'm just doing it for my own interest. There are simple steps that we can take. So even for as writing drawing voting, have information presented that says we will be recording this data, we may put the results up on social media, we may even publish it, but we're not capturing any personal or identifiable information. And that would just involve a little sign for a little quick conversation at the start of the activity. Great. Something to think about in advance again, with all your planning.

So we know hopefully everyone now realises why evaluation is so important and the benefits, why we need to do it. What about the other side of things, what kind of the challenges or the limitations that we probably need to be aware of before we start, one thing to think about is what you can and can't.

So, a prime example

One saw many surveys, I will see the question, have you learned something new?

It's a really, really common question. Have you learned something new? And people will say, yes, yes, I've learned something new. Now, this is a really interesting thing, particularly when universities, engage with people, and then ask have you learned something new? Because think for a second, not about Science Communication, public engagement, think about the university system. University, the students start, they go through a four year degree. And imagine at the end of those four years, we went to each student and said,

Have you learned something new? And they go, yes, we will. Congratulations. There's your degree. It wouldn't work that way. How do we do it? We put them through this multi year

process. And we get them to demonstrate that they're wearing something new. We get them to write reports, we get them to answer questions, they show that they have learned something new. And then we accept that they have, and we give them a degree. But for some reason, in the realms of public engagement, we ask people, do you know something? Oh, yes, yes, I definitely know more about this topic, though. And that's not actually enough. We can't have people self articulating changes in thought, knowledge, behaviour, attitudes, we need to get them to demonstrate it. And also, we need to stop trying to capture huge changes and single questions. So if people set out to inspire the next generation of scientists, that is a huge and a noble goal.

But you're not gonna be able to ask a single question that demonstrate success at the end of that process, you can't demonstrate that people's lives have been radically altered by having three questions in a survey. Did you enjoy this activity? Yes. Are you going to want to study science? Yes. Would you do this again? Yes, I've had impact. It's not enough. We need to drill down, ask smaller questions. And think like social science, evaluation of social science, you're going to have to build up a convincing argument is going to be bigger than one or two questions. So for a goal, like wanting to inspire the next generation of scientists, is that a goal that is simply too big for an engagement project? Or is it a matter of making sure that you can, in a way, stay up to date and catch up and follow up with people years and years in the future? To see how much impact you can have long term? Yeah, well, I would hate to put people off, I'm not saying that you shouldn't try and inspire the next generation of researchers. But what I will say as if that is your only goal, if your goal is to inspire the next generation of scientists, you're not going to be able to demonstrate success on that. So what you need to do is you need to have multiple goals in mind. So let's let's take this example as the inspiration. So I will inspire the next generation of scientists, I will also aim number two go to 10 schools from lower socio economic areas. Goal three, I will speak to 200 pupils who did not know this was an active area of research within their community. So now I've got three goals. And goal number two, going to 10 schools from low socio economic areas. Well, that's something I'm going to be easily able to record and demonstrate. So I can show that I've gone to these schools, this is where they're from, I can ask whether these schools have had previous connections with this university before. Number of pupils, I can count the number of pupils, I can ask what the pupils know about research, I can ask what they know about local research. And again, I can maybe demonstrate that I'm speaking to people about this topic for the very first time. So then what I do when it comes to write that report, again, thank you all these markers of success. I see, I set out to inspire the next generation of scientists. And I did this by taking research into places that hadn't been before. Giving people a positive experience, making people feel empowered and positive as related to this topic. So if it's my singular goal, I'm setting myself up for failure. So what I do is I keep it as a goal, but that then I add in sub goals that I am going to be able to record, demonstrate and measure. And when I write my report, write all this information down, people will be convinced that I am at the very least contributing to a culture of inspiration around science. So it's when you're making those goals. It's ensuring that they're the SMART goals. So Specific, Measurable, Attainable, relative, relevant and timely. And it's kind of the inspiring, a next generation is kind of the big picture goal, but it's probably not necessarily that SMART goal. That's exactly yeah, yeah. So don't get read off.

but he can still have it there. But certainly most of your aims, and I'd normally advise that you have about three or maybe four aims. And three out of those four or two of those, the must

be readily measurable. So we've spoken a lot about probably more in person events. And obviously, with everything that's gone on over the last couple of months, a lot of events have shifted online become digital. Do you approach evaluating those differently to in person events?

I don't think there's a huge difference between evaluating online events, or in person to be honest, in some ways, some of it's a little bit easier. Online, everyone sitting in front of a computer or phone, it's very, very easy to bring up a poll on zoom, to link people to Kahoot or Mentimeter, to ask questions.

I found that much easier to run focus groups online as well, because people are, it's easy to drop in for a quick meeting. So I can go back to participants and say we're looking for two or three people to come together and really share what they thought of this experience. And I've been people much more willing, and able to do that online than in person. So even things like graffiti walls, you can bring up on whiteboards, and zoom or teams and ask people to write or draw answers. So a lot of it can just be adapted to the online space. And if anything, I think evaluation is easier online. For some things that are evaluating podcasts and YouTube videos. That's a challenge. A whole nother kettle of fish that one? How would you kind of approach measuring those kind of maybe like social media, maybe more communications side of things? It's tricky. It's really tricky. So I think one of the hardest things to evaluate is something like a YouTube video or a podcast. And for that, the first thing I would say as watch what the professional YouTubers and podcasters on doing what you will notice as the the content is replete with calls to action, enjoyed this video, then like below, make sure you subscribe and hit the bell notification. So you know, when a new video was posted. You'll see that at the start, they'll see that in the middle, they will see that at the end. I've got a question, leave it down below, we'll get right back to you constantly throughout the content, enjoyed this use the hashtag. And we'll get back to you're on Twitter, we're really curious to know what you think of it's filled with questions. It's filled with calls to action. And what they are trying to do is trying to create a communication process and to an engagement one, by inviting contribution. So what they're able to do is then look through the comments. What are people commenting on? What did the light for the interested in? Are they asking for? When they are subscribing when they're liking? They can work out which video is more successful than other videos and maybe try and work out? Why did that one work? What did they do differently? Was it the topic? Was it the format was it the length, and so creating opportunities for engagement rather than just communication? So, so important, you can also think to expert reviewers as well. So if Mark Kermode, the film reviewer says a film is really, really fantastic, they're going to sell more tickets, because they've brought someone in a position of knowledge or expertise to review the content. And he has said this is a quality, and people trust his voice. So as you were creating YouTube videos, social media content podcasts, you could look to someone who is at the top of their game, who really knows this, invite them to experience some of the content and write up their reflections. So if you have uproar YouTuber seeing this channel is absolutely fantastic. That is an expert statement of endorsement and can be used for evaluation. So create opportunities to take it from communication into the engagement space. And ask someone who really knows their stuff, what they think of it. There have been probably hundreds of 1000s of public engagement activities like say science festivals, that would have a sort of accompanying social media campaign. So when you're looking to evaluate festivals or any similar event like that as a whole, how much does that social media campaign contribute to the success or showing

impact of the success of the festival? And well, I'm not sure social media is difficult to evaluate because it's such a numbers game.

The first thing I'd say is go into the backstages of these platforms, whether it's Twitter or Facebook, they have analytic pages, which are going to help you work out who you're reaching. And so you can be starting to tell a story or

Are you reaching the average user on Twitter? Or are you reaching a niche demographic? How connected? How expert are these people? So you're going to get some numbers, you can start comparing certain things. So if I was a science festival and I was running each year, then I may be looking to continually grow my content my following Am I actually inconsistent growth, consistent growth that outstrips the average growth of a Twitter account, I'd be looking to see who is sharing my content and as a clear statement endorsement. So a retweet isn't necessarily an endorsement. But if someone is retweeting your podcast, you send out a tweet saying you have sort of up and someone retweets and saying, This is a really fantastic episode, you should listen to this. That's a clear statement endorsement. And I'd be bookmarking that. So I'll go back and look at the analytics and the backstage, I'd be looking for changes in behaviour. So like consistent growth? Or I be looking at who I'm connecting with. So does it match with my target demographic? And I'd be looking for how my content is shared or celebrated online?

Yeah, great. I would never thought to bookmark things like, it's easy enough to then just screenshot cut and paste into your report

showing some more impact. Yeah, great tip. So once you have all your feedback, your numbers, your responses, again, it's probably going to depend on what you're looking for. But what sort of classes as meaningful or impactful? Is there kind of an arbitrary limit of say, a 5% increase? Or something? Is there a minimum increase? You need to see to say, Yes, this is meaningful, what we've done, I wouldn't say there's, there's a kind of say, at level, I mean, what I tend to do, you have ideas of where the evaluation data might lead. And it's not until you start to interpret that, that you find the story starting to emerge. And this is, the most interesting part of evaluation is sitting down with the data. And particularly if it's comments from people, if you've done lots of interviews, or focus groups, and you start to sort that data, and you start to see, okay, this is a really important storyline. And when I'm being consultant for charities, or universities, a lot of the story would make it into the final cut of the paper. And sometimes the main story will actually be a little bit different from what we expected. And I'm not looking for a certain number of changes a certain type of change, it really is trying to be led by

what people are seeing. And this is where giving people a voice comes in. So one particular project I worked on was with a visual impairment, charity visibility in the West of Scotland. And they brought me in to try and work out

what it was like to live with visual impairments, and how connected or disconnected from your local community you were, and, and that that's an evaluation job. But I really was brought in to listen, and to structure people's voice to bring a group of disparate individuals together, who had never met each other, to get them to share their experience with me, and then get me to interpret their story to take all these different individuals and turn them into a

chorus and use that chorus to tell a story. And that's the change that we're reporting. So you sit down, you go through all the data, and you then try and think, What is the story here, and there's no set quantity to it, it may be a big change, it may be a small change, it may be something unexpected, that this is where at the end of the day, you're reporting on a story. So I'm hoping that this anyone that hadn't heard evaluation before is just going to encourage them to take that first step to start thinking about it, and then start making those evaluation plans for their activities. But if someone wanted to kind of, then take the next step level up a little bit further, what are the next level type things to start thinking about? incorporating into your evaluation lens? So I think the starting book is even if you're totally new to valuation, don't call it evaluation, call it listening. Build in a section to your activity, where you listen to the people you're working with. That's step one, step two, you can start calling evaluation, and you can start doing it a little bit more rigorous way.

As you get farther, you get more experienced, you may want to get a little bit more in depth and a little bit clever for the information that you're asking. You may also want to think about how you're going to write it up or maybe publish your work as well. So there's engagement journals, like research for all which publish and communication and engagement work. So you might decide, Okay, step one, I'm just

going to be exploring evaluation, I'm just going to listen to step two, I'm going to start asking set questions to learn about specific aspects. Step three, I'm going to think about the reporting that I'm going to be doing and capture the information that would require for my report, step on for,

as I'm going to publish my work as well. So I'm going to need enough information for my report. Also robust evaluation. So be able to publish my work. But good gradually, start by listening and get a little bit more professional with your listening. Given everything that we've mentioned today, what would be your number one tip or best piece of advice when it comes to creating a public engagement event and then evaluating it success?

Create space for the people that you're working with? Engagement, as I said, at the start, by definition, to reprocess listening, asking, answering the conversation, step one is to build in that conversation end to your work, lots of questions, lots of silence from you, that is going to create space for people to share is going to also make your engagement more engaging. Then as you continue to grow, structure, that conversational space structure the conversation, so you're getting information that you need. But the main thing, make engagement engagement, make it to we create space for people to share.

Fantastic advice. So my final question is something completely different. It's just another passion of mine that I'm just like to ask questions about. So my final question for you is, where in the world would you recommend travelling to and exploring and why

we're in the world? Oh, I don't know. Terrible question. And I've travelled to some extraordinary places through communication and engagement. I looked at community, community engagement and Tanzania, so they did sessions out there. I went over to to Hong Kong and, and spoke about being a science communicator.

And well, here's here's one that no one else will suggest.

Jersey, if you're interested in science, communication, public engagement, go to Jersey, there's a museum there called the jersey war tunnels, and it's done beautifully. It is the most fantastic experiential emotive Museum. They have built in space to listen to people, their built in activities and a huge array of different ways. So if you are interested, and engagement and communication go along to Jersey war tunnels, and if you're just looking for a lovely weekend trip thing go to Jersey. There's my recommendation jersey. Great recommendation.

Great. Thank you so much for giving up your time sharing amazing tips and advice. But before you go, maybe you can just let everyone know where they can find you online to find out more and how people can work with you. Yeah, I'm all over the internet and I'm happy to connect with people. So my name is Jamie Gallagher and you can find me online by looking for Jamie B Gall, Jamie BG A L L and you'll find me there on Twitter and Instagram and Facebook and Twitch and YouTube all the places and I'm happy to connect with people

Welcome back to the DIY section of the podcast. This is the place where I share an activity, a resource or tool that you can take away right now, add to your own scicomm toolkit and put into action straight away to build your scicomm confidence.

Today's tool is one that Jamie mentioned and I have used many times before and it was so useful to help me start thinking about evaluation when planning a project and thinking about what I needed right from the beginning. And that is a logic model. This is a worksheet where you can fill in your project aims, inputs, audience demographics, outputs, outcomes and so on. You can use it over and over for all the projects that you do and just helps to outline all you need so you can plan your engagement project effectively.

As always all the links to Jamie's website and socials and all the useful tools and websites like Kahoot, Mentimeter and the NCCPE can be found in the show notes on my website. You can find all from this episode and all other episodes at [sophtalksscience.com/scicommtoolkit](http://sophtalksscience.com/scicommtoolkit).

You can also come and join me on Instagram. I'm @soph.talks.science or you can follow the pod to stay up to date on the latest announcements and such @scicommtoolkit. If you enjoyed this episode, please share it with your friends, your family or your lab mates. It all helps me to get this podcast into the ears of more people and hopefully grow our community of confident science communicators even further. As always, I would be hugely grateful if you wanted to rate, review or subscribe to the podcast, and any feedback or wishes for what you want to see in future, let me know as I want this to be a super useful resource for YOU.

That is all from me. Have a fab time until I see you again here on the SciComm Toolkit podcast. See ya.