

How to make a podcast

Written by Dr Anna Ploszajski

About the author

Dr Anna Ploszajski is an award-winning materials scientist, writer, presenter, podcaster, performer, trainer and storyteller based in London. She has produced and presented her podcast, Handmade, for five years, in which she interviews crafters, makers, movers and shakers about the world of materials and making. These conversations were the inspiration for her first book, Handmade: A Scientist's Search for Meaning Through Making, published by Bloomsbury.



Anna is an industry specialist in helping scientists and researchers translate their technical content for the audio medium; she has sat on the panel for the British Podcast Awards' Pulse Award and trains academics and students in planning and producing podcasts for science communication and public engagement. In her spare time, Anna plays the trumpet in a funk and soul covers band and is an ultra-endurance open water swimmer. Oh, and it's pronounced "Por-shy-ski".

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Introduction

Definition: a podcast is an episodic series of spoken word audio files that a user can download to a personal device for easy listening¹. Most podcasts are free to access, and are funded by advertising, sponsorship or the sales of merchandise or spin-off products. They can be fiction or non-fiction, scripted or non-scripted, and on virtually any topic you can think of; there are more than half a million active podcasts on Apple Podcasts in over 100 languages.

This guide is intended for university members of staff, researchers, technicians, support staff and students. In it, I'll be taking you through how to produce your own podcast to inspire, entertain and disseminate your work at the University of Warwick. By the end you'll have all the skills, tools and information you need to get started... and keep going!

¹ <https://en.wikipedia.org/wiki/Podcast>

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Part 1: Planning

Why start a podcast?

Podcasts can be a fantastic way of disseminating your research and there are lots of reasons to start one:

- To grow your audience; it's estimated that there were around 15.6 million listeners to podcasts in the UK in 2020².
- To widen your reach; podcasting is an accessible medium for the listener and can allow you to access otherwise difficult-to-reach audiences.
- To widen your network – asking if you can interview someone you admire on your podcast can be a great “in” to talk to the people you've always wanted to.
- To raise your profile in your industry and give yourself authority.
- To gain experience and skills with audio production and the media.
- It's got a relatively low barrier-to-entry in terms of money and equipment.
- To achieve certain aims (see below).

But be warned... there are plenty of reasons *not* to start a podcast:

- It takes a lot of time and effort – each episode can be hours in the planning, recording, editing and promoting.
- It costs money – audio hardware, software, and podcast hosting sites can set you back a couple of hundred pounds in your first season. The vast majority of podcasts are loss-leaders for their presenters and producers.
- There might be better media out there to achieve your aims – does your idea for a podcast really need to be communicated in a series or would it be better as a one-off audio piece? Would it be improved by visuals as a YouTube video? Or should it really be a written article in a newspaper, blog or magazine?
- Does podcasting give you as much audience engagement as you need to achieve your aims? It is possible to do audience interaction with podcasts, but there might be better ways for you to engage.

If you're absolutely certain that a podcast is the perfect medium for you, then read on...

² <https://www.statista.com/topics/6908/podcasts-in-the-uk/>

Generating your idea

First, get to know your medium – listen to as many podcasts as you can. Here are some great examples of podcasts produced by academics and researchers:



Why Aren't You a Doctor Yet

Science and tech journalism meets millennial pop culture.

From skin bleaching and genetic testing to facial recognition and data mining, this is the podcast that surgically dissects and disassembles the latest news and drops it directly into your ears.



Scientists not the Science

A podcast about the culture of being a scientist.

Dr Stuart Higgins talks to scientists, science communicators, journalists and comedians to find out what it means to be a scientist.



Back Garden Biology

In this fun and informative series Dr Lindsay Turnbull, Oxford University, looks at the biology of the back garden.

The series is for children missing school who would like to carry on practical work in their own garden and have an expert help them understand the theory behind everyday biology.

The key here is *engagement*. As with all engagement activities, it's important to ask yourself two key questions:

1. What are my aims?
2. Who is my audience?

What are your aims?

These might be to promote your work, debunk misinformation about your field, as an information source, to promote the university, to attract prospective students to apply there, to profile inspirational staff, and/or to simply entertain. Whatever it is, *be specific*.

How can you measure that you've achieved these aims? Most podcast hosting sites will provide statistics such as number of downloads and breakdowns of the listeners' geographical location, gender and age bracket. But how will you measure that you've persuaded your audience to apply to university? That you actually entertained them? That you changed their minds on something? That requires them to tell you in *two-way engagement*.

For true Public Engagement and to be able to measure your aims, the podcast has to work both ways – there needs to be meaningful information flow from you to your audience and *also from your audience to you*. So, how will you create engagement? You could:

- Include a segment at the beginning and end of each episode for audience questions/correspondence
- Create dedicated social media and email accounts for the podcast and actively engage in online conversations with the audience
- Put on live events – either in-person or live-streamed on social media – with elements of audience interaction such as Q&As

Who are your audience?

There is no such thing as “the general public” – they are a disparate and diverse group of the full cross-section of society. Aiming too wide dilutes your message and means you'll be less likely to create something that will engage with your audience.

Instead, be as specific as possible about the sort of person you want to listen to your podcast – conjure them in your mind's eye – and think about how your podcast caters for them. Descriptors could include:

- Age
- Ethnicity
- Gender
- Geographical location

- Level of expertise on the podcast's topic
- Occupation
- Sexuality
- Socioeconomic status

Once you've got your idea, check that it doesn't already exist as a podcast by searching the most popular apps; Apple Podcasts, Spotify, Acast and PocketCasts. If it does, consider changing the scope or audience.

For more training and support with developing public engagement ideas, contact the [Warwick Institute of Engagement](#).

Decide the details

Next, you'll need to decide on the details of your podcast:

What's your podcast's name? Make it short, catchy, original, on-brand and preferably descriptive of the podcast contents.

What's the style of your episodes? Will they be monologues, interviews, chat shows or recorded live shows? Will it be scripted or unscripted? Is it fictional drama or non-fiction documentary?

Will you have one host or multiple? One host can be logistically easier to edit and arrange recordings, though more than one host can bring audio interest and higher energy.

How many episodes are you planning? Will this be Season 1 of many? Plan out the contents of at least your first five episodes before you begin.

What's the right duration for your episodes? This can range from 2 minutes to 2 hours, depending on your aims and audience – are they more likely to be listening on a 25-minute commute or a 5-hour dog walk? Do they have a short attention span? Is your content a long-form conversation or a snappy news bulletin?

What's your regular release schedule; weekly, fortnightly, monthly? It's always best to release regularly to appease the podcast chart algorithms, as opposed to releasing them randomly whenever you get around to editing the next episode. Decide which day of the week your audience will prefer – Monday's good for factual podcasts aimed at commuters, Friday's good for fun comedy podcasts people listen to when they're cleaning the oven at the weekend. Choose a manageable schedule and stick to it so that your audience know when to expect the next episode.

Setting it up

Once you've ironed out your idea, you'll need a few other things before you start recording.

Artwork

This is hugely important! It needs to show the title clearly, be on-brand, be bright, eye-catching, with large, stylistic and easy-to-read fonts, without too much fine detail and to appeal to the podcast's target audience. Take a browse of your favourite podcasts and notice their choice colour pallet, visual style, font, detailing etc.

Here are some great examples and why they work:



You're Dead to Me Podcast

- Font and cartoons visually illustrate historical content
- Cartoon people imply light-hearted and comedic style
- Logo of producer in corner



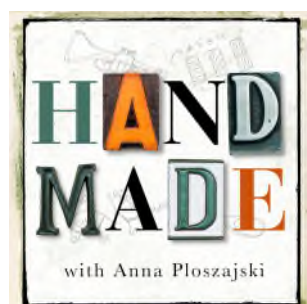
Out with Suzi Ruffell

- Photo of host indicates serious interview-style show
- Rainbow font implies LGBTQ+ content
- Photographed and named host implies host-led show



Fortunately

- Photo of hosts wearing smart clothes in casual pose indicates dual-hosted comedy chat show by off-duty radio professionals
- Use of only first-names implies informal tone
- Cool colour pallet lends a feeling of trustworthiness



Handmade

- Scruffy background, pencil drawings and enamel letters imply content about craft and making
- Scientific diagram indicates scientific content
- Named host indicates interview format

General rules for podcast artwork:

- Must be square aspect ratio
- Must be exported as high-resolution picture file; 3000x3000 pixels
- Must be .jpeg or .png file type

The simplest way to create artwork yourself is on Microsoft PowerPoint. You can change the slide aspect ratio to a square with Design > Slide Size > Custom. When you're done, export the "slide" as a .jpeg or .png.

Alternatively, if you have budget and means, pay a professional graphic designer/artist to create your artwork for you. Find one in your personal or professional network, or through a freelancer search engine website such as [fiverr](#).

Social media and contact

In order to engage with your audience, they're going to need to get in touch with you. Create dedicated social media accounts for your podcast on Facebook, Twitter and Instagram, or at least those sites you frequently use yourself. Create a dedicated podcast email address for correspondence too.

- Try and register the same handle across all of them to help your listeners find you easily.
- Remember you're going to tell people what your handle is out loud on the podcast, so avoid long ones or ones that are difficult to spell.

Make a dedicated website for your podcast. Here you can embed the audio files, upload supplementary visual and written content and host episode transcripts for widening accessibility.

Sounds and music

All podcasts need good introduction music, or at least a catchy jingle. For this, it's really important that you use Creative Commons, Royalty-free or Public Domain licenced music; it's illegal to use copyrighted music on your podcast.

Ideally you would create the music yourself or commission a friend or professional to do it – then it's truly and originally yours. To find someone, tap into your personal and professional networks or commission a freelancer from a directory such as [fiverr](#).

If you don't have the means to commission someone, there are paid-for and free-of-charge royalty-free music and sound-effect libraries online:

- [Pixabay](#)
- [YouTube Audio Library](#)
- [The Free Music Archive](#)

The BBC also has a [library of its sound effects](#). [Check their licencing carefully before use](#).

With any audio content you use, always check the Licences and Usage.

Finding and booking guests

If you're producing an interview style podcast, you can find guests in the following places:

- Through your existing contacts
- Through contacting professional organisations
- Put callouts on social media. Twitter is particularly good for this – search e.g. “materials scientist” on Twitter, or use Twitter Lists
- Just google for people who align with your podcast
- Look at New Releases or Coming Soon books on Amazon that align with your podcast and contact the authors to see if they want publicity
- Tap into online communities and forums that align with your podcast
- Ask previous guests if they can recommend anyone in their networks
- Use a free online matchmaking service like [Matchmaker](#)
- Once you get your podcast up and running, ask your audience for guest suggestions or ask them to get in touch if they think they could be a good guest themselves

Once you've found your guest, get in touch with them with a quick email. Here's an example:

Dear [Guest],

I'm writing to invite you to be interviewed on my podcast [name].

A bit more about the pod - it's called [name] and it's about [topic]. Each episode, I interview a [type of guest] about [topic]. For example in pervious episodes, [examples]. You can listen to past episodes here [links to podcast feed].

A bit of background about me, I'm [short bio]. [How the podcast came about]. Here's my website for more info [personal website].

I'd absolutely love to chat to you on the podcast about [topic], such as [potential areas of discussion]. The style is [style e.g. informal, conversational], and I can supply some questions advance if that aids your preparation.

We'd be recording [online/in-person] via [platform/location], and it usually takes about [recording duration].

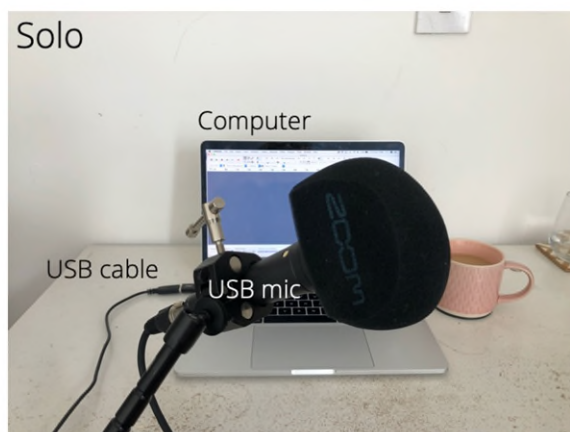
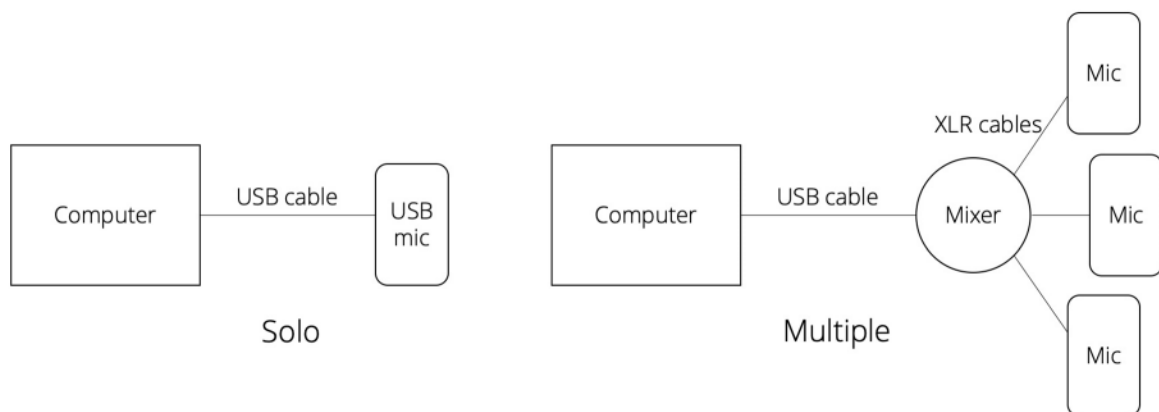
Do let me know some convenient times for you in the coming weeks and we'll set this up.

[Sign-off]

Part 2: Doing

Recording – Hardware

Hardware is the largest up-front cost of podcasting but is an important investment to get you sounding your best for your listeners. The main difference in equipment needs are if you're going to be recording solo or with multiple guests:



Solo

For solo recording, I recommend getting yourself a USB microphone which you can plug straight into your laptop and off you go. The Rode Podcaster is great.

If you want to shop around, your search term is “USB dynamic microphone”.

For any microphone you get, you'll want to get a foam cover to cushion plosive sounds (the bang sound in the recording when strong blasts of air from your lips hit the microphone, particularly with 'p' and 'b' sounds) and a table stand for hands-free recording.

Multiple speaker recordings

For recording with multiple microphones, you'll need to plug these into a mixer first, then connect the mixer to your computer. The [Rode Procaster](#) is great, and you'll need as many XLR leads as you have microphones, as well as foam cushions and table stands.

If you want to shop around, your search term is "XLR dynamic microphone".

The best mixer for podcasting is the [Zoom H6 Audio Recorder](#). It can do ambient recording and has up to four inputs for microphones. It can be battery-powered so you can record out in the field.

If you want to shop around, your search term is "multichannel USB mixer".

Setting up the room

Before you start recording, make sure you minimise the noise in the room (unless you're purposefully including background noise in the recording, such as a busy street or audience chatter). Things to check for:

- Windows and doors closed
- All devices on silent
- Noisy appliances switched off
- Hard surfaces dampened – sit far away from flat walls or corners of rooms if possible, and place a towel or cloth across your table
- Noisy zips, jewellery or rusty clothing removed

Sit with your microphone about a fist-width away from your face and be aware that any movement away from it will be heard in the recording. If you're speaking to one or more guests in the same room, then position yourselves so that you'll be talking across your microphones, not turning your heads to look at one another.

Recording software

Once you've got your microphones and/or mixer plugged in, you'll need software to record what people say. The best free audio software to start with is [Audacity](#). It's relatively intuitive to pick up, and there's lots of support for specific problems online. See this video for an [in-depth tutorial](#) on how to get started.

If you want to move to the next level of audio recording and editing, I recommend [Adobe Audition](#). This is available as part of the Adobe Creative Cloud package which staff can request through IT services for an annual cost, and students can access at a discounted rate. [Click here for more information](#).

Recording online

For the best sound quality when recording with someone over video conferencing software, ask them to follow the same 'Setting up the room' instructions as above.

Ideally, when recording over videoconferencing software, your guests or co-hosts at the other end will record their side of the conversation locally on a lovely microphone set-up and send it to you post-recording for editing. This will allow for higher quality audio. Unfortunately, lots of guests don't have the means to do this, but you can use your video conferencing software to record it for you. Ask them to use a microphone attached to headphones if possible, rather than their in-built computer audio hardware.

Zoom

The next best thing is using Zoom's record function because it allows you to get separate audio files for each participant. Download Zoom, open it, and go to:

On a Mac: Zoom.us > Preferences > Recording and tick "Record a separate audio file for each participant."

On Windows: Click the settings cog on the home screen > Recording and tick "Record a separate audio file for each participant."

When the meeting starts, click Record at the bottom of the screen.

For better-quality audio, disable the participants' video feeds and click "Turn on original sound" in the top left-hand corner – that disables Zoom's echo cancellation and audio-enhancing features.

Microsoft teams

When the meeting starts, click More Actions > Start recording.

At the end of the meeting the recording will be available as a video in the Chat tab. You'll have to download this and convert it to an audio file before editing. This audio file won't differentiate between voices on the call, so you won't be able to edit voices separately.

Record smart

Experience has taught me that recording smart can drastically reduce editing time later. My top tips for recording smart are:

- Leave a couple of seconds of silence between segments or questions in case you want to change the order later.
- If you stumble on words or want to re-record a bit, you can click your fingers near the microphone. This will look like a sharp spike in the audio file waveform and will be quick to spot during editing. This is useful if you've got a particularly long recording.
- Speak more slowly to reduce the number of verbal ticks (like "umm", "err").

Guests

Unless your podcast is monologue or scripted, at some point you're probably going to feature someone else's voice, either through back and forth interviews or small monologue features. Here's how to get the best out of them:

- Start the recording but don't tell them you're hitting the big red button. Ask them how their day's been or what they've been up to to put them at ease.
- Seamlessly start the interview by asking them to introduce themselves. You may or may not want to use this audio, but it's an easy first question and will help your guests to relax.
- Phrase questions as asking them to tell stories and signpost what you want them to use. e.g. don't ask "how did you become a blacksmith?" ask "tell me the story of how you came to become a blacksmith. Feel free to go back to your childhood, family, schooling and training"
- If you're asking someone about their work, don't just say "tell me about your work", ask them "what piece of work are you most proud of?" – that'll allow them to go into detail about something that puts their work in its best light.
- Towards the end of the interview, ask them what's next? Are there any unanswered questions? What are their hopes and dreams?

If you have guests on your podcast, you should always ask them to sign a [Podcast Guest Release Form](#) or undertake a written agreement on what you'll be doing with their audio.

Editing

Audacity is quite intuitive software, but there are lots of online help pages if you get stuck, and there are some [great tutorials](#) out there to get you going.

Top editing tips:

- Always edit with each voice in a different track. This will allow you to make edits like cuts, mutes and control the volumes of each individual person.
- Don't bother taking out every 'um' and 'ah' – it will take hours and the audience won't notice if you do or if you don't

- Increase the play-back speed on your editing software so it takes less time to listen through, particularly if you're editing with a light touch.

To make your audio sound optimum with any software, you might want to use the following Effects:

- Amplify: makes it the right volume. Use the recommended amplification, and uncheck the box to not allow clipping.
- Equalisation ("Filter Curve EQ"): makes it sound bassier and smoother. Boost lower frequencies (below 200Hz) to between 10dB and 20dB. Lower the higher frequencies (above 4,000Hz) to between -3dB and -6dB.
- Compressor: makes the audio consistently loud. Set the threshold between -10dB and -16dB, leave the rest as default.
- Pan: pan each voice different amounts left and right (their track will be slightly louder through one headphone than the other) so that it sounds to the listener like they're hearing people all standing in different places in the same room.

Check out this recording for a demonstration of these effects:



It's not always easy to tell which section of your podcast is which on your recording just by looking at the waveform. Use the Labels tool in Audacity (Edit > Labels > Add label at selection) to annotate the tracks.

Exporting

Once you're done editing your voices, have added music, jingles and listened to it all through one last time, you need to export your track. I recommend exporting as an .mp3 file using Audacity's pre-sets for a reasonable file size (if you're interested, you want about 160 kbps).

Distribution

Once you've got your file for uploading you need somewhere to put it where people can find it. This is called a host. Some of the most popular podcast hosts are:

- [Acast](#)
- [Buzzsprout](#)
- [Libsyn](#)
- [PodBean](#)

- Soundcloud

You can expect to pay for your podcast to be hosted by these services. Prices vary but are around £10-15/month. Some, like Acast, will automatically put adverts at the beginning, middle and end of your episodes, and pay you money back, depending on the number of listeners. Shop around and see which host is best for your needs.

Your host will give your podcast its own RSS Feed. This looks like a web address, and you need to give it to podcast distributors like Apple Podcasts and Spotify. Each time you upload a new episode onto your hosting website, this RSS Feed will pick it up and automatically push it onto the distribution platforms, so that if your audience are subscribed on a platform, they'll get a notification and download it.

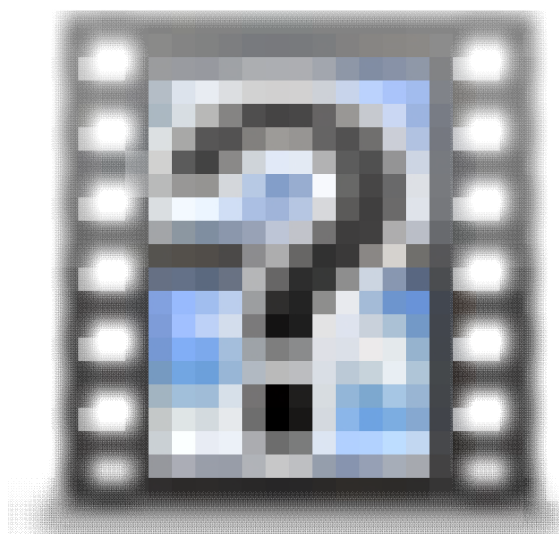
Your chosen hosting site will probably help you submit your RSS feed to the major distributors, but if you need to do it manually, you'll want to give your RSS feed to:

- Apple Podcasts
- Spotify
- Google Podcast
- Stitcher

When you upload your episode, you'll have to give it a title (it's generally a good idea to make these consistent in style and format), and you can do an episode artwork too if you like. This is separate from the title podcast art, and could show the episode name and/or an image of the guest or content.

Marketing

You'll want to advertise your new episodes across your social media. A great way to do this is with images of your guests or subject matter, and creating a snippet video using a site like Headliner.



Growing your audience

It's always best to be as specific and targeted as possible with reaching audiences, but here are some general tips to follow too:

- Share with family and friends across your personal social media
- Post content on your podcast's social media feeds, using relevant hashtags
- Promote on web forums and social media groups relevant to your audience
- Start a mailing list
- Pay for targeted ads across social media
- Cross-promote with other similar podcasts; create a 30s audio advert you can send to your friends to put on their podcasts, and return the favour with theirs
- Film your recordings and upload them to YouTube to access new audiences on a different platform

Accessibility

Whilst podcasting is a very accessible medium, you can broaden your accessibility by creating transcripts of your episodes. There are various [clever ways to do this for free](#), or you can pay a small amount for an online service to do it for you, such as [Scribie](#). Put the transcripts on your podcast's website.

Part 3: Maintaining

So, you've made your first one, five and ten episodes. What's next?

Engage with your audience

Keep engaging with your audience on social media, put on live events or live-streams and sell merchandise. Do whatever you have to do to make them feel involved and keep them involved.

Data storage and archiving

Audio files are large, and after a while you'll run out of computer storage space. Get hold of an external hard drive for archiving your audio. You never know when you'll want to cut some from an old episode in a future episode or advert.

How to not stop podcasting

Most podcasts only last a handful of episodes because it takes a lot of time, effort and money to keep them going. So how do you keep your podcast going?

- Don't be afraid to mix up the format or completely re-brand the podcast into something else. Create fresh artwork, get new music, change up the hosts, add new hosts, even mix up the format.
- Divide the content into series of manageable lengths and give yourself a break in between them.
- Outsource the editing or marketing to someone else if it's too time-intensive.
- Guest on other people's podcasts and invite them onto yours.

Final words of wisdom

Most podcasts take at least ten episodes to really find their stride so don't be disheartened if it takes you a while before you "find your voice".

Listener stats aren't everything – a small audience of engaged and specific listeners is infinitely better than a large disparate audience who don't engage.

It's okay to stop doing the podcast when you've met your aims and/or it comes to its natural end.

Summary Checklist

- Define aims
- Define audience
- Generate idea
- Decide the details
- Artwork
- Social media, website, email
- Music
- Plan first episodes, invite guests
- Acquire hardware
- Download software
- Record
- Edit
- Distribute
- Marketing
- Consider accessibility
- Engage with audience

Further resources

- Online podcasting communities – e.g. Helen Zaltzmann's Facebook group [Podcasters' Support Group](#)
- Buzzsprout's [How To Make a Podcast](#) guide
- [Warwick Institute of Engagement](#).