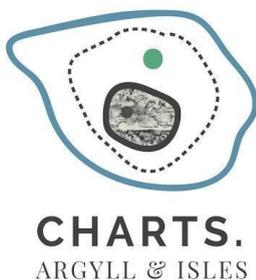


CHARTS Best Practice Guide To Live Streaming Culture, Heritage and Arts Activities

This report has been researched and written by Dougal Perman and Katie McGeary from live streaming specialist company Inner Ear for the benefit of CHARTS members. It draws on almost twenty years of experience in live streaming culture, heritage and arts activities from creative people who have an innate understanding of the process and technology. Advice, tips, techniques and recommendations are offered on how to get the most out of your live streaming experience.



Scottish
Government



Scottish Rural
Development
Programme



The European Agricultural Fund
for Rural Development:
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Introduction

Live streaming culture, heritage and arts activities brings your audience closer and increases opportunities. With readily available technology, barriers to entry have been significantly reduced in recent years. With a good idea, clear intention, basic technological grounding and a laptop or smartphone plus some inexpensive accessories, CHARTS members can use live streaming to facilitate remote participation in their events and activities, bring audiences closer and maximise the potential of their cultural, heritage and artistic work.

Following on from our report on “Evaluation of Live Streaming Activity and its Potential For CHARTS Members”, this guide highlights best practice, makes recommendations and offers advice on how to make the most of the live streaming opportunity.

We start with some examples, including several from around Argyll and the Isles. Then we talk about objectives and walk through the planning process taking into account equipment, hardware, software, platforms, roles and responsibilities. We offer practical advice on tips and techniques. Then we talk about engaging the audience, the potential for monetisation and analysing the response. Finally we sum up with some dos and don'ts and reflect on what we've learnt.

This guide aims to inform and inspire CHARTS members to try live streaming their own activities. The CHARTS Live Lab workshops that we have streamed during the course of this project has already provoked a positive response and prompted some experiments from across the CHARTS network. This guide provides aims to provide a useful reference tool and encourage more people in Argyll and the Isles to bring their audiences closer by utilising the potential offered by live streaming.

Examples

We can learn from other cultural, heritage and artistic activities that have been live streamed, including several in Argyll and the Isles. In each case we look at who did what, when and where, what happened, how it was done and why.

Highland Dancing at Cowal Highland Gathering

cowalgathering.com

- **Who?** Cowal Highland Gathering, live stream production by Inner Ear.
- **When?** August 2019 (and annually).
- **Where?** Dunoon Stadium, Cowal, Argyll.
- **What?** Live streamed coverage of the World Highland Dancing Championships. Filmed and live streamed annually to an international audience of tens of thousands. Dancers come from around the world and the event attracts an international audience. Inner Ear has streamed the championships three times, the first totally free-to-air, the second for a pay-per-view fee and the third accepting optional donations. The third model works best in terms of reach.
- **How?** Two robotic PTZ (pan, tilt and zoom) remote controlled cameras, a feed from the PA and an array of microphones capture the action. Streamed to Inner Ear's Livestream channel and simulcast to Facebook. The internet connection in the stadium is a decent optical fibre one, but it is augmented by Alan Davidson of Teckiebeard who secures it with professional 4G connectivity.
- **Why?** Live coverage of the event is demanded by its avid online audience who debate every step the dancers make. Streamed to Inner Ear's Livestream channel and then simulcast to Cowal Highland Gathering's Facebook Page.

Glenfiddich Piping Championship

thepipingcentre.co.uk/play/competitions/glenfiddich-solo-piping-championships

- **Who?** National Piping Centre, William Grant Foundation, live stream production by Inner Ear.
- **When?** October 2018 (and annually).
- **Where?** Blair Atholl, Perthshire.
- **What?** Live coverage of the world's most prestigious solo piping event. The 45th annual Glenfiddich Piping Championship features performances by ten of the best pipers in the world plus live and pre-recorded interviews and the winner's announcement and prize-giving.
- **How?** In the great hall at Blair Castle the action is covered by three cameras, one of which is discreetly operated from the balcony. A wireless roaming camera outside captures interviews and pieces to camera by the presenter. Pre-recorded interviews, filmed in the hotel the day before, are played out during breaks in the action. The internet connection in the castle is a low quality ADSL line. It is augmented by Alan Davidson of Teckiebeard who bolsters it with professional 4G connectivity but due to poor telecoms provision in the area there is very limited bandwidth to work with. The picture is scaled down accordingly but the sound is still decent. Everything is filmed in broadcast quality HD and made available online afterwards.
- **Why?** Four hundred people attend the event in person. By live streaming the championship its reach is extended massively as around ten thousand people watch live. Research by National Piping Centre and Inner Ear shows that audience members come to the event from all over the world because they have watched it in person. Each year donations are collected via the live stream for a partner piping organisation.

Scottish Ballet's Digital Season 2019 – Work In A Week

facebook.com/scottishballethq/videos/326894307983234/

- **Who?** Scottish Ballet, live stream production by Inner Ear.
- **When?** June 2019 (and biannually).
- **Where?** Scottish Ballet studios, Tramway, Glasgow.

- **What?** From the Scottish Ballet Digital Season section of their website: *“For a week, glimpse inside the rehearsal room with live streams each day following the creation of a new Work in a Week – Idle Eyes, by Sophie Laplane, Scottish Ballet’s Artist in Residence, Choreographer. The new creation featured Company dancers alongside members of Scottish Ballet’s Youth Exchange programme.”* Thirty minutes each day of the rehearsal process were filmed and live streamed for four days during the week. The final performance was then filmed, but not live streamed, edited and published online afterwards.
- **How?** The action was captured with four cameras, two of them operated, filming the rehearsals. Full remote studio vision mix, audio mix, graphics and a pre-recorded video (aka VT) added to the beginning of each programme. Sophie wore a wireless lavalier microphone as she directed the dancers and the cameras followed the action. Our vision mix operator was directed by Scottish Ballet’s digital producer. Each episode was filmed in the rehearsal studios using natural light only. Pre-recorded music was a techno track licensed for use in the production. The live stream was sent to Inner Ear’s Livestream channel and from there simulcast to Scottish Ballet and Dance Australia’s Facebook Pages.
- **Why?** This project took part of an intense rehearsal period that had to happen anyway, filmed and live streamed it and give people privileged access to peak behind the scenes. It drove engagement and documented the work in progress.

Granite Noir 2019 Crime Writing Festival

granitenoir.com/granite-noir-tv-2018-archive

- **Who?** Aberdeen Performing Arts, video and live link-up by Inner Ear.
- **When?** February 2018 (and annually).
- **Where?** The Lemon Tree Studio and various venues, Aberdeen.
- **What?** Produced by Aberdeen Performing Arts with partners including Aberdeen City Libraries, Granite Noir is a highly-respected Scandi Scottish crime writing festival featuring authors’ discussions, readings and performances from around the world. In 2018, Granite Noir featured a live link-up with a parallel festival in Crested Butte, Colorado in the US.
- **How?** Panel discussions, readings and performances are filmed “as live” with

three cameras, one of which is operated. The camera feeds and graphics from a laptops were vision mixed along with an audio feed from the venue mixing desk. Everything was recorded to hard disk. The final night features a play, live music and cabaret performances which are live streamed from the Lemon Tree Lounge. Contributor interviews are conducted and captured backstage. Content is post-produced and published throughout the festival and then made available behind a paywall (using the Cleeng platform) on a dedicated Wordpress website. For the “Murder In The Mountains” session live link up between Aberdeen and Crested Butte, a separate feed from the cameras coming from a second vision mixer and a split of the audio feed from the venue’s microphones were captured into a dedicated computer linked to Zoom. The picture from the Zoom computer, which showed the remote participants in Crested Butte, was split and sent to both the venue’s big screen and our primary vision mixer. Everything was recorded “as live” (and could have been live streamed) and made available for later viewing along with the rest of the Granite Noir Archive.

- **Why?** The festival is increasingly popular and features high-profile authors from around the world. The content is monetised and contributes to an expanding archive of valuable material. The live link up provided a dialogue between two festivals exploring the same topic at the same time in different parts of the world.

Scottish Opera Highlights from Bowmore, Islay

vimeo.com/239463796

- **Who?** Scottish Opera Highlights touring company, video and live stream production by Inner Ear.
- **When?** October 2017.
- **What?** Special programme filmed and live streamed from Bowmore Distillery Visitor’s Centre, Bowmore, Islay. Featuring four singers from the company’s new intake of recent graduates singing highlight tunes from popular operas. The touring company includes a pianist and musical director plus tour manager, props and set.
- **How?** Captured with two cameras and an array of condenser microphones. Lit with studio lighting to augment the bright daylight in the room.

Prepared by a video created on the job. The internet connection in the visitor's centre was very poor with extremely limited bandwidth so the picture had to be reduced in size and resolution but the audio was good and the programme recorded in broadcast-quality HD for archive and repeat viewing.

- **Why?** Part of the V&A Museum in London's "Opera: Passion, Power and Politics" season. Provide opera fans with a special show they would not otherwise have the opportunity to see unless they were on Islay, and even then this was a special edition of the performance especially for the stream.

CHARTS Showcase Event, Oban

livestream.com/innerear/chartsliveshowcase

- **Who?** CHARTS members, Icecream Architecture, CHARTS project team, video and live stream production by Inner Ear.
- **When?** September 2019.
- **Where?** St. John's Cathedral, Oban.
- **What?** The official launch of the CHARTS members network filmed and live streamed from St John's Cathedral in Oban. Featuring acclaimed traditional music and culture performers from across the region. The event incorporated the premiere of five short films, each capturing a different element of what working across culture, heritage and arts in Argyll and the Isles really means to the people living and creating work in the region.
- **How?** The action was captured with four cameras, three operated and one static. Graphics and pre-recorded video (VT) were also incorporated into the vision mix. Audio came from a feed from the front of house mixing desk and an array of live mics mixed by the streaming sound engineer. A live link up with a remote participant was also included (see below). The live stream was sent to Inner Ear's Enterprise account on Livestream and distributed to five Facebook Pages: CHARTS plus four promotional partners arranged by Inner Ear; Cowal Highland Gathering, National Piping Centre, XpoNorth and Joy Dunlop.
- **Why?** Extend audience reach, connect people around the region, promote the work of the CHARTS network and its members nationally and internationally and create valuable archive video for prosperity.

CHARTS Live Link Up Between Jura and Oban

livestream.com/innerear/chartsliveshowcase

- **Who?** Giles Perring at Sound of Jura studio with Peter Linneman from Inner Ear in Jura and the Inner Ear crew in Oban.
- **When?** September 2019.
- **Where?** Sound of Jura on the Isle of Jura and St. John's Cathedral in Oban.
- **What?** An interactive participatory performance.
- **How?** Four cameras fed into a vision mixer, sound mixed by the performer, captured with a Magewell USB 3 HDMI dongle and connected to a Zoom meeting. Collaborators joined in by phone from around the world.
- **Why?** Create a collaborative performance and connect it to the main event.

CHARTS Live Lab Tour of Dunoon Burgh Hall

facebook.com/CHARTSArgyllandIsles/videos/vb.157114948217290/755810698188126/

- **Who?** CHARTS members, youth arts network, live stream production by Katie McGeary of Inner Ear.
- **When?** August 2019.
- **Where?** Dunoon Burgh Hall, Argyll.
- **What?** The series of CHARTS Live Lab experiments and workshops in the lead up to the Showcase Event were streamed to CHARTS members across the region. Live Labs were designed to introduce members to live streaming and other digital media technologies and provide information and examples of how live streaming can be used to reach and engage potential new audiences for their culture, heritage and arts projects. On 31 August a youth arts network event took place at Dunoon Burgh Hall. Inner Ear were asked to deliver a live streaming workshop and to try streaming a tour of the building.
- **How?** The tour was captured and streamed using the native Facebook app on a Samsung Galaxy S7 Edge smartphone which was gripped by a gimbal stabiliser with a Rode VideoMic Me mini shotgun microphone, a wide angle lens and the camera's torch as a light.
- **Why?** This experiment employed creative treatment that demonstrated the potential for using a smartphone to provide museum, gallery and visitor

attraction tours.

Ruddington Village Museum Tour

[bbc.co.uk/news/uk-england-nottinghamshire-48758680](https://www.bbc.co.uk/news/uk-england-nottinghamshire-48758680)

- **Who?** Ruddington Village Museum, live streaming by Feixue Huangdu, a Chinese student at Nottingham Trent University.
- **When?** June 2019.
- **Where?** Ruddington Village Museum, Nottinghamshire.
- **What?** Nearly half a million people in China tuned in to watch a live stream tour of a tiny English village museum. A Chinese student at Nottingham Trent University visited Ruddington's Village Museum as part of a series of heritage-themed live streams. The Nottinghamshire attraction (exploring 'Ruddington's shops of yesteryear') has only had 75,000 visitors since it opened in 1968. The live stream welcomed 434,000 virtual visitors from China.
- **How?** A live smartphone stream to a Chinese platform. Feixue Huangdu interviewed museum staff and translated their responses into Mandarin.
- **Why?** As part of her university course Feixue is interested in local heritage and wanted to find out what kind of reaction her online broadcast would get from an audience back home.

Beat The Retreat

[facebook.com/WorldPipeBandChampionship/videos/1335237053305643/](https://www.facebook.com/WorldPipeBandChampionship/videos/1335237053305643/)

- **Who?** Pipe bands, live stream production by Katie McGeary of Inner Ear.
- **When?** August 2019.
- **Where?** City Centre, Glasgow.
- **What?** A pipe band promenade performance through Glasgow's City Centre as part of the World Pipe Band Championship celebrations.
- **How?** The tour was captured and streamed using the native Facebook app on an iPhone 8 smartphone which was gripped by a gimbal stabiliser with a Rode VideoMic Me mini shotgun microphone and a wide angle lens
- **Why?** Follow the action and provide tens of thousands of piping fans around the world the opportunity to experience the event from a privileged point of view. Live streaming the event also created a lasting video archive on

Facebook.

Objectives

Why do you want to live stream?

Before you go live, you need to know *why* you're streaming. But, as we have encountered many times, often people don't. The juxtaposition of in-the-moment live streamed content paired with a carefully considered content marketing plan is a winning combination that drives meaningful connections and results. Do you want to sell tickets to an upcoming show? Reach potential new audiences and customers? Make an important announcement? Your intentions will inform what sort of platform you use and what type of content you create. You must also consider why live streaming will work not just for you, but most importantly, for your audience.

Watch: [YouTube Creator Studio Successful Live Stream Formats and Planning](#).

What Works Well

Live streams create a shared experience online. They work well when there's a reveal or some kind of jeopardy. The exclusive content that live streams can offer are effective ways to keep an audience interested and engaged. Examples include behind the scenes tours, Q&As, sneak peeks and other privileged access. Are you a maker? Why not give a glimpse of a work in progress with a sneak peek of you painting a corner of the canvas? Are you in an upcoming performance? Why not host a rehearsal or an artist Q&A ahead of an upcoming show and share to generate buzz?

What Do You Want To Achieve?

Your desired outcome from the live stream is your key focus and should be at the forefront of your planning process. What is the purpose of your stream? What key pieces of information do you want to convey? What content will you feature? Is it content that can easily be shown on video?

Why stream live?

Getting started with live streaming is easier than ever before. With the rise of the smartphone, barriers to live streaming have been lifted. Creative individuals, community groups and organisations have the potential to curate a great live stream experience for an online audience.

Engagement

One of the main reasons why live streaming is so important for creative individuals is the level of interaction and engagement it can offer those working across a vast area like Argyll and the Isles. No other form of content allows for such a high level of real-time interaction with your audience – live streaming has the highest rate of engagement of all content types online.

Read: [62 Must-Know Live Video Streaming Statistics](#).

Content Ranking

Platforms like Facebook, Periscope and YouTube are simple to use and designed to favour live content. If you go live on Facebook, the chance of your followers seeing it on their newsfeed is more than double than if you were to share an image or an on-demand (non live) video instead.

Cost

Live streaming can act as cost-effective promotion. In 2019, a live stream can be created, promoted and shared on a small (or non-existent!) budget and still yield great results.

Growth

Live streaming is one of the fastest growing industries in the world and showing no signs of slowing. The video streaming market is currently worth more than £20 billion – and it's expected to be worth more than £60 billion by 2021. This is the perfect time to upskill and get involved in the industry.

Why not?

There may be times where live streaming isn't possible. We will cover these circumstances below. However, there are simple workarounds to give your audience an authentic live experience, allowing you to moderate the conversation while a pre-recorded video airs "as [if it were] live". One such workaround is to use specialist streaming software such as the free, open source, cross platform application OBS. Another, which is more simple, is to upload the video to your YouTube channel privately and then schedule it as a YouTube Premiere.

Watch: [Streaming a pre-recorded video using Open Broadcast Software](#).

Read: [YouTube Help article on YouTube Premieres](#)

Planning

Like many people, we love it when a plan comes together. Planning is vital. Ensure you allow for adequate planning time in your project. We follow the same strategic planning process for every live streaming project.



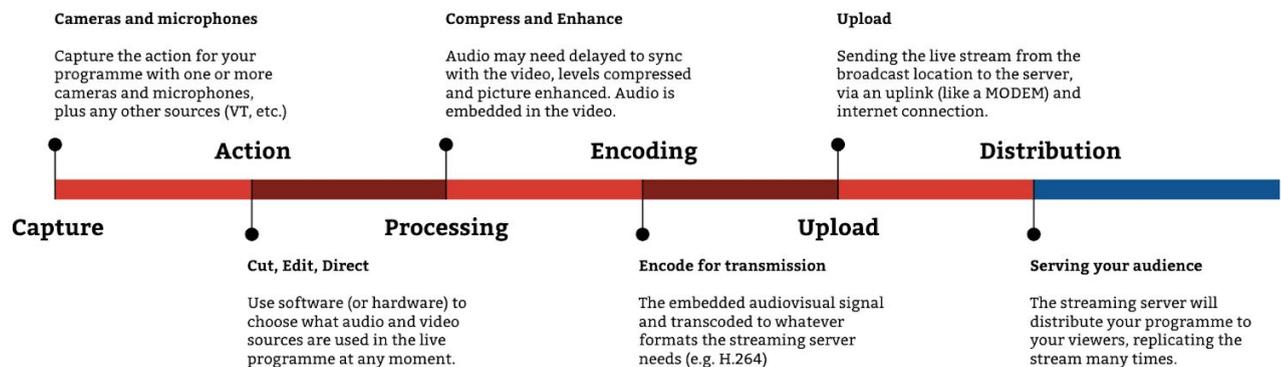
While this process may seem like overkill if you are streaming a simple ad hoc stream to Facebook Live or Periscope, it is still a useful process to go through.

What goes into a live stream?

A grassroots music venue owner once asked us:

“If you can live stream on your phone, why is what you do so complicated?”

It’s a good question. Answering it requires some deconstruction. As you can see from our graphic timeline of the process (below), live streaming is an involved technological activity from beginning to end.

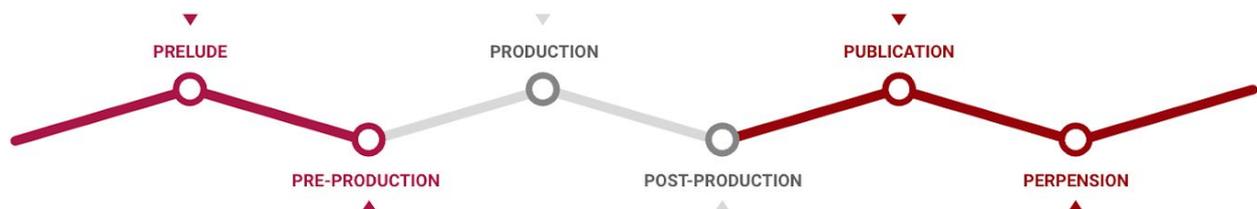


Your smartphone has the potential to do the first five parts of the live streaming process!

Even if you are only using your smartphone for your live stream, it's important to understand what's going on.

Live Programme Making Framework

For every production we undertake, we use this programme making framework.



- **Prelude** (style and format, research and storyboarding, marketing campaign);
- **Pre-production** (planning, risk-assessment, scripting, location scouting, procurement/hire, talent liaison, crew management, clearance, permissions, licensing and budgeting);
- **Production** (studio or location live streaming, recording and backup);
- **Post-production** (file management, editing, graphics, music and sound design, draft delivery, client feedback, amendments, quality control, approval and finalisation);
- **Publication** (archive content utilisation, further audience engagement);
- **Perpension** (reflection, analysis, evaluation and reporting, capturing lessons

learned for future use).

Crew and Roles

Every media production entails a certain amount of roles and responsibilities. Even if you are the only person working on the production, it is important that you understand the roles and responsibilities required to make a live programme production happen. Here is an overview of key crew roles and responsibilities.

- **Producer:** this is the person who makes it all happen. They have overall responsibility for the production, the crew and interaction with the client (or stakeholders, audience, customer, etc.). The buck stops with this person (and it's probably going to be you).
- **Streaming Engineer:** comparable to a broadcast engineer in TV, the streaming engineer may also be the producer, or production manager if you have one. Or, it may just be you! But whoever it is, they are responsible for the encoding and connection to the streaming server (see Platforms, below).
- **Director:** only the director gets to call the shots, direct the action, shout "cut", and, when the whole thing is finished, proclaim, "It's a wrap!" Often the director and the producer may be the same person but their roles are distinct and different. Both have some creative input but the director tells the story and the producer makes the project possible.
- **Production Manager:** assisting the producer there may be an assistant producer, line producer, location manager and many other roles. One of them is the production manager who coordinates logistics and equipment.
- **Assistant Director:** helping the director call the shots, direct cameras and work with on screen talent, the AD needs a loud voice and a calm disposition.
- **Technical Director:** usually also the vision mix operator, the TD will communicate with the camera crew via specialist headsets, or, if you don't have those, whisper instructions or use predetermined signals. Often this person is the same as the Director and AD. This person cuts between the cameras and pre-recorded video (VT) and any on screen graphics used.
- **Camera Operator(s):** the scale of your production and flexibility of your budget will determine how many operated cameras you need, or can afford.
- **Sound Recordist/Engineer:** a small production with a simple audio setup may not need someone dedicated to this role but sound is nonetheless a vital

element of your live streamed programme.

- **Lighting Designer/Technician:** famously known in the film and TV business as “the gaffer”, the person in charge of lighting has a vital role to play. This is far less important for outdoor streams, of course, but wherever you are filming, you need to consider the lighting conditions.
- **Production Assistant(s)/Runner(s):** many hands make light work and if you can afford them, enthusiastic people to help out are a bonus. Like everyone in the crew, they need direction, kindness and consideration.

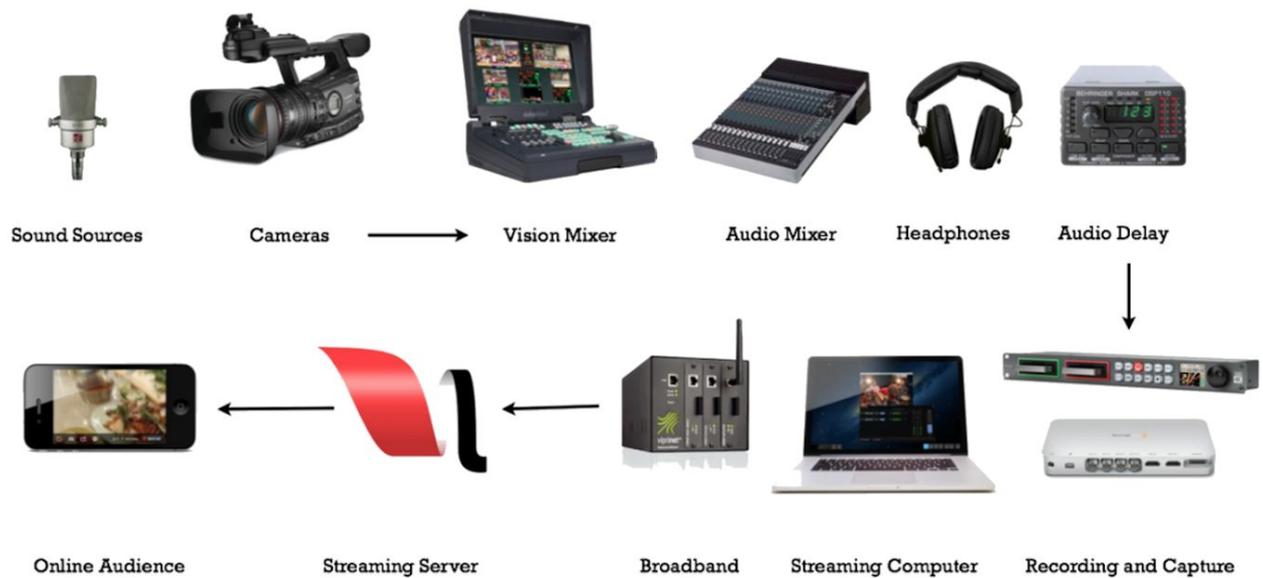
Approach

With every live stream, start with your objectives, scope out your desired outcomes and then work up a strategic plan from one to the other. Once you have your first plan, simplify it as much as possible and then work out what resources you have and think about who is going to do what and how they are going to do it (even if it is you doing everything).

Will you try a multi-camera show or will you go for a simple single-camera stream? Either way, the same process applies. Let’s examine a multi-camera workflow.

Multi-Camera Workflow

The constituent parts of a multi-camera workflow are the fundamental elements of a live TV studio. You capture the action with microphones and cameras, mix them, monitor them, process them (delaying the audio if required because computers typically capture audio quicker than video), feed the audio and video into capture devices (which convert the audio and video signals into data that the computer can understand) connected to a streaming computer (or hardware equivalent) to encode the stream via an internet connection and a streaming server (like Livestream, Facebook Live, YouTube Live, Periscope, etc.) to serve the stream to an online audience.



Watch: [Professional Multi-Camera Video Studio for Facebook Live Streaming.](#)

Smartphone Stream Workflow

When streaming with just a smartphone, the workflow is very simple. You take your phone (which may be augmented with accessories like microphones, lights, lenses and some kind of grip to hold it with), connect it to your streaming server of choice (like Facebook Live) and serve it.



To get the most out of your smartphone stream, use some low-cost accessories to improve its video production capabilities.

Watch: [Best Live Streaming Setup for Smartphones \(iPhone & Android!\)](#)

Live Programme Making

The moment you stream something, you are making a live programme. Always think about the audience experience. Ask yourself some challenging questions. Why are you live streaming this activity? What is the content of the programme? What will your audience make of it? How will they know what is happening?

Will you have a presenter? If so, who will it be? What will they say?

Will you conduct interviews as part of your programme? Will there be a live (studio) audience at the event? Will you have any pre-recorded video content (VT)?

Recording

Live streamed content is usually recorded on the streaming server (Facebook Live, YouTube Live, etc.). You may need to turn some settings on in order for this to happen. Be aware that if your internet connection fails, or the stream breaks or is interrupted for any reason, then your recording will be split, broken or possibly even lost. Therefore an offline recording is always advisable.

You can record your stream locally using software or hardware.

Read: [Learn how to easily record a live streaming video.](#)

Read: [How to record a live stream: instructions, benefits, and things to remember.](#)

Practical Production Tips

Being aware of these practical tips can save you time and help you gain greater understanding of what to expect either working solo or as part of a team.

Rehearsal

The more planning and preparation you can do, the better your live streamed programme will be. It is true that one can over-prepare but given that there is seldom enough time to do everything you want to do, that seems like a good problem to have.

Practice, walk through, brief and rehearse. You will feel calmer and more confident as a result. Here is some advice on directing the action:

Read: [Directing Live Video](#).

Vision Mixing

With a multi-camera show, which can be achieved with a single special device, like the [Mevo](#), or by [connecting several phones and tablets with specialist software](#), you will need to cut and mix cameras (and anything else that appears on screen, like graphics and pre-recorded video, or VT).

For software vision mixing, or switching, the best all-round, entry-level software is free, open source and cross platform: [OBS](#).

If you want to explore hardware vision mixers there are a couple of low cost devices to consider:

- Blackmagic Design have a very low-cost versatile mixer for less than £300. Check out the [ATEM Mini](#).
- Roland make a compact, versatile vision mixer for around £800 called the [V-1HD](#).

Cameras

We are not going to go into how to use video cameras in this guide. This document offers best practice advice on live streaming and does not go into the specifics of video production. Video camera features and functions vary greatly. Get to know your camera as well as you can. Even if it is just your phone, play with it, practice, record your rehearsals, watch them back with a critical eye, note the best and worst bits and work on improving the process.

If you are using video cameras, rather than your smartphone, remember these important points:

- You need a camera that provides a clean, full screen output via HDMI or SDI.
- A camera with a built-in, fixed, lens is easier to use and often more practical but can be lower quality in terms of picture quality.
- Camcorders are a good option because they can record what you shoot – but remember the recording media.

Consider: [cameras with built-in streaming encoders](#).

Sound

Good sound improves an average stream. Bad sound will spoil a good picture. Even if you are just using a smartphone, we do not advise using the on board mic on your device. It is not great quality and is designed for phone calls, not professional-sounding videos. Thankfully, there are many low-cost options for improving the sound of your live streamed show.

There are several kinds of microphones to consider. Note that even camcorder mics may not work with your phone because of the connector required (a [TRRS input](#)).

- **Shotguns** are very *directional* condenser microphones that pick up sound from a specific source. Generally the more you spend, the better the mic is, but you can get some great quality kit for the budget conscious creator.
 - Consider: [the Rode VideoMic Me](#).

- **Wireless lavalier** (aka “tie clip”) microphones are small and discreet, worn by the subject and intended for close capture of speech or song.
 - Read: [4 best budget wireless microphones for Smartphones?](#)
- **Handheld interview dynamic microphones** can be useful for a presenter, event host or interviewer, especially when they need a closer capture than shotgun mics can provide but want to be free to move from one subject to the next without having to reposition a lavalier mic.
 - Consider: [Rode Reporter](#).
 - Consider: [iRig Mic](#) or (if you already have a stage mic) [iRig Pre](#).

Here is a useful [summary guide to microphones for smartphones](#).

Lighting The Action

Like your eyes, cameras need lots of light. People like talking about what cameras and lenses are good in low light. In truth, very few decent cameras are good in low light. Therefore you need to light the action as well as you can. Again, we are not going into detail about video lighting techniques here, but do learn as much as you can, practice, record your tests and compare what you have done with work you admire. Observe the fundamentals: light the background then light the subject.

Read: [Best Lighting For Streaming & YouTube Videos – The Complete Guide](#).

Other Practical Considerations

So you will rehearse your programme, practise with your camera, light the scene and sort your sound. You should also think about how you will approach these other live programme making considerations:

- **Set and staging:** how does your event or interview setting look on camera? What’s in frame? Is there something you need to cover up or move? Can you get better chairs? Is the scene a bit empty? Ah, yes, adding that vase of flowers makes all the difference.
- **Costume, hair and makeup:** how do your presenter, interview subjects and guests look? Do they need different clothes, more makeup or tidier hair?

Logistics

Project management is an essential part of planning. The more kit you have, the more of it you need to move around on location. Your transport needs may therefore increase. And someone then needs to pack it, transport it safely and, at the end of the shoot, take it back to your studio, kit store, or home. Make sure you have considered all these things in respect to who does what and when and how much time this will all take.

Work out how long it will take you to setup and then, if at all possible, double that time when planning your live stream production. Something we have learned over our almost 20 years of live streaming shows is to expect the unexpected. You can never have too much time. Schedule in breaks and adequate food and drink too.

Connectivity

A recurrent theme in conversations with CHARTS network members, which is in evidence in our Evaluation report, is connectivity.

A strong internet connection is at the heart of a consistent live stream. If your upload speed isn't fast enough, your stream will suffer with issues like pixelation, buffering and cutting out.

To find out your speeds, go to Google and type in "speed test". Go to [speedtest.net](https://www.speedtest.net). Click the big blue button at the top of the results that says "Run Speed Test" – this will give you both download and upload speeds.

Make sure you know the difference; download speeds aren't too important to live streaming – upload speeds are crucial as they will determine how fast and at what quality you can push your content up through the internet to the streaming server.

The upload speeds you need depend on your video file size and bandwidth. Bandwidth refers to the capacity of your network for uploading or downloading data. You could think of it as the pipeline for information transfers between the internet and your local network. Larger information requests need more

bandwidth to squeeze through. Smaller pipelines of bandwidth cause stoppages, slowing the transfer of the live stream data. Read [this Boxcast article](#) for a detailed yet easy to understand breakdown of what speeds you need for healthy live streams.

Testing your internet speeds and network equipment are the first steps in ensuring a stable live stream. However, you never know exactly how a live stream will perform until you go live. Take time to run a test, simulating the conditions of the event you intend to stream as closely as possible.

You don't host a live event without proper rehearsals – so you shouldn't broadcast a live event without a proper run-through.

Legal Considerations

Live streaming platforms have Terms of Service (TOS) that prohibit users from violating the copyright of others. This means that using any copyrighted recorded music in the background may be a violation of the platform's terms, in addition to any copyright you may have infringed. This could result in being struck off the platform – so be cautious. Facebook regularly mutes videos that it thinks contain copyright-infringing recordings. YouTube and Livestream are more flexible.

There are also other copyright issues, like copyright of performances and written materials. Incorporating work that isn't yours into your live stream without permission exposes you to liability you may not have intended. Have you ever noticed some television programmes have pixelated artwork on the walls? It's because it's a copyrighted work and they didn't get permission. That's easy to do when you have the ability to edit. However, with live streaming there is no ability to edit and if you infringe on someone's copyright there can be consequences you didn't anticipate.

Even if you're live streaming for personal use, you have to make sure you have the right to be where you're filming. If you're on your own property, that makes it simple. However, if you're in public or on private property there are legal concerns to manage. On public property, you are usually safe to use the property but that's

not to say you have an absolute right. For example, a school may be public but they also have the right to limit your actions for the safety and security of others. If you need to get permission, it's always best to do so in writing. Notify audiences and members of the public that filming and live streaming is taking place.

For more on music copyright, read up on the [Limited Online Music Licence](#) from PRS For Music (which covers songwriting and publishing rights) and the [online licenses on offer from the PPL](#) (which covers use of music sound recordings and recorded performance).

Platforms

One of the first decisions you will need to make is choosing the best live streaming platform for your content. Each offers different strengths, so it's important to consider what you hope to achieve and what platform can help you accomplish those goals. Below is a breakdown of the top three most popular platforms you are likely to use to stream for your cultural, heritage or arts project:

YouTube Live

This platform is designed with impressive analytics and a simple interactive platform for communication.

Pros:

- You can pre-schedule a live event.
- Your followers (subscribers) will be notified.
- You can access in-depth analytics on your audience after you stream.
- Audience engagement tools like chat are embedded into the stream.
- Videos show up in search results (YouTube is owned by Google).
- Provides earning options to streamers through advertising.
- Anyone can watch – a YouTube account is not needed to tune in.

Cons:

- You must have a Google account to stream.
- YouTube is one of the most blocked websites in the world!
- No live stream autoplay. Unlike Facebook, you need to click on a link to view the live stream (this is enough to make 40% of people switch off versus Facebook Live).

Facebook Live

Just like YouTube, Facebook Live sends messages to all followers about your broadcast. You have a built in audience and it's great for reach, interactivity, on-demand catch up numbers and quick analytics.

Pros:

- Auto streaming – Facebook plays the stream as it appears on the timeline.
- Great engagement potential through comments, shares and reactions.
- You can repurpose your stream into a Facebook advert or post.
- You can broadcast exclusively to a closed group.
- You can pre-schedule a live event.
- Your followers will be notified.
- You can discover in depth-analytics on your audience after you stream.
- Audience engagement tools like chat are embedded into the stream.
- It's huge in comparison to other platforms – Facebook Live currently generates more than 3,000 years of watch time every day.

Cons:

- You can't easily monetise your content in-platform (there are ways round this, which we share in the guide).
- Facebook Live broadcasts are practically impossible to find through search engines.
- Engagement statistics are misleading because they include people who skip past the video after only three seconds.

Periscope

Owned by Twitter, users can choose to share their Periscope broadcasts on the platform by tapping the bird icon before they start broadcasting. When they go live, they can also tweet a link so that their Twitter followers can watch either on the web or in the app. You then appear on a map pinpointing where you are in the world, along with all others live streaming around the globe.

Pros:

- Periscope allows videos to be played back for up to 24 hours – this is a great platform for on-the-go content that doesn't need to be too polished.
- You can be discovered by anyone with a Twitter account. Your potential reach is huge and you could discover a whole new audience for your work.
- Viewers can invite others to watch your videos.

Cons:

- After 24 hours, streams disappear unless you've archived the video using #save when your broadcast ends.
- No built-in monetisation support in the platform.
- Auto sharing the link to Twitter means larger audience – but more potential for spam comments.

Audience

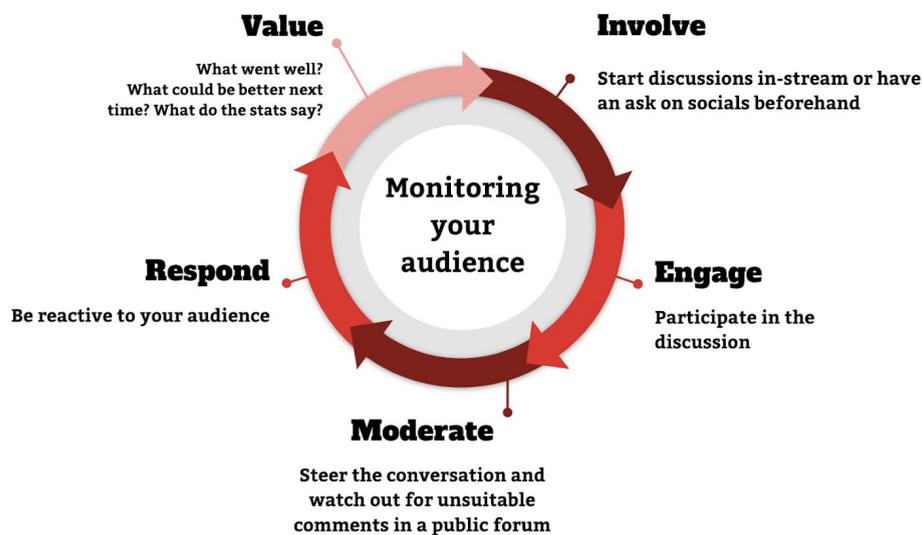
The core purpose of live streaming is to create a shared experience, so your videos should act as a two-way street, not just a one-way “push” of content. To do this, you can utilise techniques that make your audience feel included – it is as simple as curating a conversation in this online space, much as you would in real life.

Welcoming your viewers periodically throughout the broadcast is a great way to connect personally with your audience. Throughout your stream, be sure to ask questions – even simple ones like, “Drop your thoughts below”, or “Let me know where you’re all from”. Easy interactions can move them from passive viewer to active participant and they will feel they are authentically sharing your experience.

In certain circumstances, it’s sensible to have somebody with you to monitor the stream, field questions and moderate the conversation. If you are performing, this takes the pressure off you and means you can concentrate on producing the programme.

Monitoring and Moderation

Chat and comments are critical to engagement. They allow for the two-way flow of information that is essential for keeping your audience interested. Most successful live streams allow viewers to comment or chat in real-time. Periscope, Facebook Live, and Twitch have built-in commenting and chat features.



Welcome your viewers at the beginning of the broadcast. Thank people for tuning in then provide them with some context and personal connection by explaining what the stream will be about. Providing this basic information is common courtesy and it will also make viewers more likely to stick around.

Provide your viewers with *value* to keep them interested and engaged. Often, value is about solving problems, inspiration, or food for thought. In culture, heritage and the arts, the value you offer could be informational, entertainment, skill-based, emotional, or something else. The possibilities are endless.

Be Social

Using social media effectively is key to building your live stream audience. Consider this: how do people know you are going live at a certain time, on a certain platform? Have you posted reminders and teasers to your followers on your timeline? Have you tweeted a link to the upcoming Live to your other social media accounts? These may all sound like obvious steps to take, but it is easy to overlook the marketing and audience development aspects of live streaming. The focus on the run up to the livestream, and on the day, is often the content of the stream and niggles within the technology and platform you're using.

On Facebook, you can create a scheduled event within the platform for your live stream, which you can access to go live on your chosen time and date. You can list

dates, times, and locations and invite people to attend to increase turnout. You also have the option to include a description of the event – use this to tell a story to help people understand why they should tune in. It's also worth noting that when a user RSVPs that they'll attend your event, Facebook notifies their friends of their decision, increasing the likelihood that their friends will tune in as well.

On Twitter, you can post relevant information including event times and links. By pinning an upcoming live stream to the top of your page, everyone who visits your Twitter account knows about the event. When you go live on Facebook, the platform notifies the people who like your page and highlights the content in their news feeds. On YouTube, your audience receives an automatic email notification. When you stream to Twitter via Periscope, your followers will see the video as they scroll.

Monetisation

Through live streaming, you are pursuing an outlet for creative expression, creating a means to share your work and process, or simply utilising a platform through which you can communicate with like-minded people who are interested in your work. Live streaming itself can also be rewarding in a more pragmatic way. It can generate income for your creative work when utilised in the correct way. Make sure you have considered everything that's going into your stream, from promotion to content to all of the practicalities detailed above, before you think about monetisation.

There are several ways you can generate an income through live streaming. Some of these approaches are direct; others are indirect. For example, you can sell video online via pay-per-view streaming, or by requiring subscriptions from your viewers. You could enable paths to allow the audience to donate or form a relationship with a sponsor.

Below is a breakdown of monetisation options.

Pay-per-view	Control pricing but limit the audience. Be aware of transaction and platform fees.
Subscription	Regular money but responsibility to serve your audience as promised.
Ads & partnerships	Potentially lucrative deals but possible compromises on content and rights.
Donation	Flexible with low transaction costs but unpredictable return.

Donations

Viewers can support your creative endeavors through donations quickly and easily. If the platform you choose to stream on doesn't have built in "Donate" button monetisation features like YouTube does (good examples of platforms that make donation challenging are Facebook, which requires your channel to have verification status – which is not easy – and Periscope which has no built in monetisation features) you could utilise OBS such as [streamlabs](#) which provides a pretty neat workaround. If that sounds a bit too complicated, you could instead include a link in the description of the stream to your PayPal account.

Paywalled content

- Example: [Cleeng.com](#)

The pay per view model asks fans to pay a certain amount to unlock access to an item creator's "hidden" live content. This content is usually more specialised and unique than the open content (it has to be worth paying for).

Watch: [How to set up your first Live Pay Per View event.](#)

Subscriptions

- Example: [Patreon.com](https://www.patreon.com)

A subscription gives access to all of a creator's exclusive content for a period of time. Subscriptions are essentially scheduled monthly donations. If you have a "friends" scheme then this community of supporters can be subscribers.

Commercial Relationships

- Advertising and Sponsorship

Think about how to engage local supporters. Value your brand, your audience and your content. Approach brands and businesses who want to reach your audience.

Analysis

When you live stream your creative project, you are sharing an experience with your audience. This gives you unique insight into what your audience appreciates. Because you can monitor metrics such as spikes in views, levels of engagement and demographics, you can see which parts of your live streamed event coverage are working.

You can find out how to access the analytics for each platform through the following videos:

- Facebook: [How to check your Facebook video insights.](#)
- Periscope: [Twitter's live streaming app Periscope gets an analytics dashboard.](#)
- YouTube: [Getting to know your YouTube live stream analytics.](#)

You can use your live stream analytics to find out:

- How many people watched.
- Where your audience are in the world.
- What platform works best for you to stream from.
- Most popular content.
- What kind of device they are watching on.

These insights are important for a number of reasons. You can gain an understanding of what content worked well through levels of engagement at particular times in the stream. On a platform like Facebook, you can use this information to create targeted posts tailored to the demographics that engaged with your stream. These targeted posts could point to an event your are holding, an upcoming performance or a link to your online store.

Analytics also provide you with invaluable data you can use to approach potential collaborators or sponsors. For example, if you had a particularly high level of engagement from women aged 45–54, based in Scotland with an interest in crafting, why not approach another creative working in the crafting space with a highly engaged following? You can team up to host a stream, share audiences and grow your reach organically.

You can also use this information to approach potential sponsors – using the example above, you can prove there is a captive audience on your stream that would benefit a small Scottish crafting business.

DOs and DONT's

Taking everything in this guide into account, we would like to leave you with some Dos and Don'ts.

	DO
1 Ensure your bandwidth availability	✓
2 Consider your lighting and camera views	✓
3 Plan, rehearse and test everything	✓
4 Have someone monitor your live stream	✓
5 Engage with your viewers – be social	✓

	DONT
1 Use equipment without testing it thoroughly	✗
2 Neglect contingency plans and backup kit	✗
3 Complicate your setup and programme plans	✗
4 Neglect sound and lighting quality	✗
5 Expect your early live videos to be perfect!	✗

Read: [The 5 Dos and Don't of Live Streaming.](#)

It's A Wrap

We hope you have found this guide interesting and useful. There is so much to learn that it could go on forever, but the important thing to do is think about what you want to do and why and start practising.

Share your experiences through CHARTS, collaborate where you can and enjoy creating live streams for your culture, heritage and arts activities.

References

We have linked to useful guides throughout this document.

Watch: [CHARTS Live Lab live streaming workshop](#) we presented in August 2019.

Browse: [our list of useful bookmarked resources](#).