

Technology

This One Sheet will help you think about the factors to consider when it comes to the technology you deploy for your virtual interactions.

Top Tips:

1. Relying on built-in webcams & microphones is a really bad idea. Almost anything you buy, will be better than the default.
2. Choose equipment that works best in your environment. What works for others, might not be optimal for you.



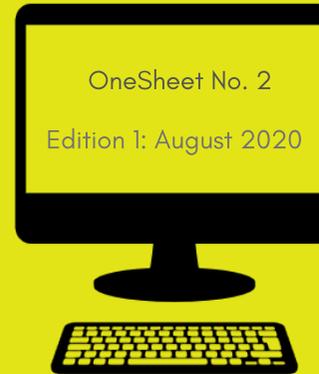
Dedicated external webcams offer 'plug'n'play' solutions with significantly better video than built-in options. Aim for a resolution of >720p (ideally 1080p) & a frame rate of >15 fps. For still image capture you'll want >2 megapixels.



For the ultimate in video quality, use a 'proper' camera (eg. DSLR or Mirrorless). You'll need a camera that produces 'clean' HDMI & potentially a video capture card/dongle as well as a 'dummy battery' for uninterrupted streaming. Don't forget a tripod or 'rig' to securely hold your equipment.

Where is your camera positioned? Ensure your camera is located at eye-level, directly in front of you so that you can effortlessly look into the lens to directly engage with your audience. If you're using notes or an autocue, place them as close to the lens as possible.

- **Make sure your camera is compatible** with your OS & processor capability before buying
- **Limit your video quality to what your processor can practically handle:** recording, editing & streaming video are all processor intensive
- Minimise buffering; **close down all unnecessary background processes** to free up capacity
- Remember to **turn off push notifications**



- When **sharing your screen**, remove distractions & things you'd rather not share
- Pay attention to your **background**: are there distractions you need to hide or blur out?
- If you're using a higher quality lens, you can **limit the focal point** to blur your background
- Consider whether **virtual backgrounds or blurring** might help, but recognise the limitations & risks
- For the ultimate 'false' background, use a **Green Screen**



How fast is your connection? Higher quality audio & video requires more bandwidth, so don't choose equipment that needs more speed than you have. **Upload** speed matters more than download speed for video.



How are you connecting your equipment? Your signal will be faster & more reliable via **Ethernet** cables vs WiFi. Equally cabled devices are more reliable than Bluetooth.



What other devices/users will be consuming **bandwidth** when you need it? Does your router allow prioritisation of traffic? Reboot your router & computer before a session.



What level of natural **light** do you have & from what direction? Higher quality lenses can compensate for lower light levels. **Front-lit** or **side-lit** environments give better results than rear-lit ones.



Don't neglect **audio quality**: high-quality audio won't rescue low-quality video, but low-quality sound can heavily undermine high-quality video. To avoid audio-syncing issues, try to capture audio via your video input (ie. connect it to your camera/capture card if you can). Headsets are convenient, but might not capture the highest quality audio. For that you'll need a dedicated microphone, like these:



Boom/Shotgun Mic

Positioned on a stand.

Captures directional sound. Can therefore be placed out of sight of camera. Captures background noise, so best for quieter environments.



Condenser Mic

Used by radio broadcasters.

Positioned on boom arm or stand in front of presenter. Offers highest quality audio capture, but size means it can be obtrusive when filming video. Perfect for podcasting/voice only.



Lavalier/Lapel Mic

As seen on TV/conference stages.

Allows discrete positioning of mic on clothes making it virtually invisible. Tethers the wearer so limited movement range. Offers high quality capture, so perfect for video.



Treat every mic as if it's 'hot'



How are you listening to your audio? Don't forget that you also need to hear clearly, so use the highest quality speakers or on/in ear audio you can afford.

Using speakers as opposed to ear/headphones? Some mics may pick that up, so test your setup to minimise this.