



One of the lessons that the recent COVID 19 Pandemic has taught us all is that it is possible to deliver high quality training, workshops and other collaborative sessions that deliver value in a virtual setting as well as the more traditional face-to-face, physical delivery.

However, for a virtual event to be completely successful, there are certain technology pre-requisites that need to be in place as well as some agreed conventions and behaviours that should be observed. This note provides guidance for people taking part in an Excellence in Measurement virtual event.

Setting Up Your Workspace



Most people already have a setup that will be sufficient to enable them to take part in one of our online events. However, there are specific recommendations that we would make that will help you to get the most from these sessions. In terms of a virtual participation environment, there are three main aspects to consider:

1. What IT equipment will you need?
2. What software is necessary for a successful event?
3. What is the optimal configuration of your physical workspace?

N.b. the following sections describe both the minimum and preferred environments. By signing up to one of our online events it is your responsibility to ensure you satisfy the minimum requirements for participation.

Hardware Requirements

The hardware requirements for a virtual event do not require a specific type of platform to be used. Desktop, laptop or tablet configurations may all work adequately, provided the following components are available.

Internet Connection



A strong, stable internet connection is the most fundamental requirement for any virtual event. Specific upload and download speeds are not always helpful here because for home connections in particular, actual usable bandwidth may vary considerably depending on the load from other users on the same connection. Illustrative requirements from the ZOOM platform suggest that the following would be an appropriate target:

- For high-quality video: 1.0 Mbps/600kbps (up/down)
- For 720p HD video: 2.6Mbps/1.8Mbps (up/down)
- For 1080p HD video: 3.8Mbps/3.0Mbps (up/down)

These are indicative speeds only. However, a strong connection is a vital prerequisite for any virtual event. Low speed or narrow bandwidth connections will severely impact your ability to participate effectively.

Audio Setup



Another essential requirement is a reliable audio setup. The weak link here is often the microphone set up. Low noise external microphones tend to work better than internal laptop ones, although issues associated with poor quality microphones can sometimes be mitigated by quiet environments. External conference microphones work well and are inexpensive to obtain. Headsets also work extremely well, although it can be quite tiring to have to wear a headset for an extended period of time.

Webcam



Some of our courses have certifications associated with them which can only be granted if we are able to confirm that students have been present for the whole of the course. For this reason, a webcam is sometimes essential. Even for those cases where it is not, we recommend that you use a webcam wherever possible because it helps students to collaborate and work together. Using webcams does place an additional load on internet bandwidth, but if you have a good, strong internet connection, this should not be a significant issue.

Screen Configuration



Most of our courses are highly interactive and whilst presentations still play a part in the process, a lot of emphasis is on group and individual working, often through collaboration tools such as Mural. To make the most of these tools a large screen with a high resolution is recommended and a multi-screen configuration would be highly useful. Internal laptop and tablet screens are generally OK, but you are likely to find the experience much easier to follow and participate on a bigger screen if that is possible.

Workspace Requirements Summary

	Minimum Requirement	Preferred Requirement
Internet	Stable connection with good bandwidth	Stable connection with high bandwidth
Audio	Basic audio configuration (Speakers and microphone)	Audio Headset or conference speaker/Microphone
Webcam	Built in Webcam	HD Webcam (internal or external)
Screen	Built in laptop screen or high res monitor	UHD Monitor or multi-screen configuration

Software Requirements

By default, we use the Zoom platform to support our public training events. You do not need to have a personal or corporate subscription to Zoom to be able to participate in our classes. For private classes, we are happy to work on other platforms (e.g. MS Teams) provided they provide all the required functionality to support the class exercises.



We also use the Mural collaborative white-board tool to support class exercises and collaboration. Again, a personal subscription to Mural is not required.



Environment:



We fully appreciate that many people working virtually have to operate within whatever environment they have available to them. Ideally, however we recommend a quiet, distraction free room where you are unlikely to be disturbed. Because the class days tend to be quite intensive, we recommend a good ergonomic configuration of chair and desk to reduce fatigue. For obvious reasons, your workspace should have a strong Wi-Fi signal (or wired router connection).

If you are joining a virtual event from an office environment, we recommend trying to secure a separate meeting room rather than working at your desk, although we appreciate that this is not always possible.

Course Orientation Session

For all our courses, workshops and other activities that are delivered virtually we will invite participants to an orientation session the week before the event (where possible). This will be a short session (usually about 30 minutes) where all participants will be invited to join a zoom call to help de-risk possible technical and logistical issues ahead of the actual event.

All participants are strongly encouraged to attend this session if at all possible as it will help to make sure that the actual event runs smoothly.

By joining the call, it should be possible to identify possible technical problems that might arise (e.g. poor audio connection or slow internet connections) and allow enough time for these to be at least partially addressed.

Typically the agenda for an orientation call will look something like this:

- Initial introductions
- Confirmation of access to the course handouts and (where appropriate) the model viewer
- Confirm ability to log into the virtual meeting room and interact with its features
- Identify (and provide time to remedy) any technical issues
- Confirm class schedule
- Discuss and formulate the Virtual Event Working Agreements (see below)
- Introduce additional resources to be used in the event and confirm accessibility (e.g. Mural)
- Initial Q & A

Virtual Event Working Agreements



A successful virtual event is not entirely dependent on technological and environmental issues. Interactions between participants in an on-line environment can have a very different dynamic to those that would be had in a physical setting. For this reason, at the start of each on-line event (or prior to it in many cases), we work with our attendees to establish a working agreement. This is a negotiated set of agreements by which all participants agree to abide for the duration of the event.

Because a working agreement is negotiated with each class, the exact content of it will vary, but typically it will cover the following subjects:

Timekeeping



- Class start and end times
- Punctuality
- Time zone considerations

Lunch & Breaks



- Time of main breaks
- Frequency of minor breaks
- Duration of breaks

On-Line Etiquette



- Keep your camera on (where required)
- Go on mute if you are not talking to avoid background noise
- Procedures for asking questions (eg. interrupt vs raise hand)

Participation



- Degree and nature of participation required/expected
- Class exercise Provisions (Teams, breakout-rooms etc)
- Mutual respect for fellow students
- Confidentiality

Issues & Interruptions



- What to do when problems arise
- Loss of connection
- Bandwidth issues
- Personal emergencies
- Transparency and communication