

## **LRAT Meeting Room Specification**

### **Space Guidelines**

A Meeting room would typically be used to hold meetings or as a breakout space and has the following properties:

- Flat floor space
- Guideline size: Up to 56 m<sup>2</sup> = Up to 20 people, Up to 84 m<sup>2</sup> = up to 30 people, Up to 112 m<sup>2</sup> = Up to 40 people

### **Display Screen**

1. A wall mounted LED or LCD display screen of 16:9 widescreen format with RS232 control should be fitted of an appropriate size.

The height of the display screen should be no less than the distance from the centre of the screen to the furthest audience member divided by 5.3.

In larger rooms with viewing distances that cannot be satisfied by LED or LCD display screens then a larger projection screen and projector with RS232 or IP control should be used.

2. The screen or projector should be capable of displaying a 4K resolution. Rooms will have capability to switch between various inputs.

### **Audio**

3. Sound output should be from a separate sound bar for LED or LCD screens as most internal screen speakers are not up to the job. For larger rooms with projection screens external wall speakers should be used either side of the projection screen.

### **Video Conference**

4. A video conference system with soundbar including speakers, microphone and integrated camera or similar can be used within rooms that use LED or LCD screens. It should be placed under the display screen at the correct height so that all participants can be viewed by the camera. The soundbar video conference system should also be able to be used for audio playback of presentations when not used for video conferences.

In larger rooms with projection screens a separate wall mounted camera should be placed at the front of the room at an appropriate height and position to capture all the participants in the room. Make sure that the height of the camera is above the height of the projector lens to minimise the amount of projector light output captured by the camera.

In projection screen rooms a separate microphone system needs to be installed. In rooms with fixed furniture these can be placed on the desks, in rooms with movable furniture a ceiling tile microphone system is recommended.

### **Connectivity**

5. An input plate either wall or floor box mounted must be provided with the following inputs connected to the appropriate equipment within the room

a. HDMI, VGA, USB & Network connections.

6. A wireless connection device should be provided to allow mobile devices to be connected to the display. The device must not rely on using an internal wireless router for connections to devices. The device must be supplied with a 5-year software subscription.

7. University of Birmingham PC and associated audio/visual and control equipment will need to be installed either in a cage underneath the screen or under the desk in smaller rooms and in a cabinet or lectern with equipment racks in larger rooms.

## **Control**

8. Control of input switching is via a Push Button Control Pad or Touch Panel mounted either on the wall or on/within the desk in fixed furniture rooms to allow:

- a. Screen Power On/Off
- b. Source Selection of all inputs
- c. Volume Control – Up/Down, Audio Mute
- d. Blank Screen (if supported by display)

9. When a button on the control panel is pressed the button should illuminate to indicate the command was received.

- a. The Power On/Off button should remain illuminated whilst the system is powered on
- b. The Power On/Off button should flash whilst the system powers down (this may be brief or not included if the screen is quick to power down)
- c. The chosen source button should remain illuminated when that source is selected
- d. The volume up and volume down buttons should briefly illuminate for each press
- e. The audio mute button should flash slowly whilst muting is active
- f. If present the Blank screen button should flash slowly when active