
Microsoft
Module 3
Choosing the right device for the right space

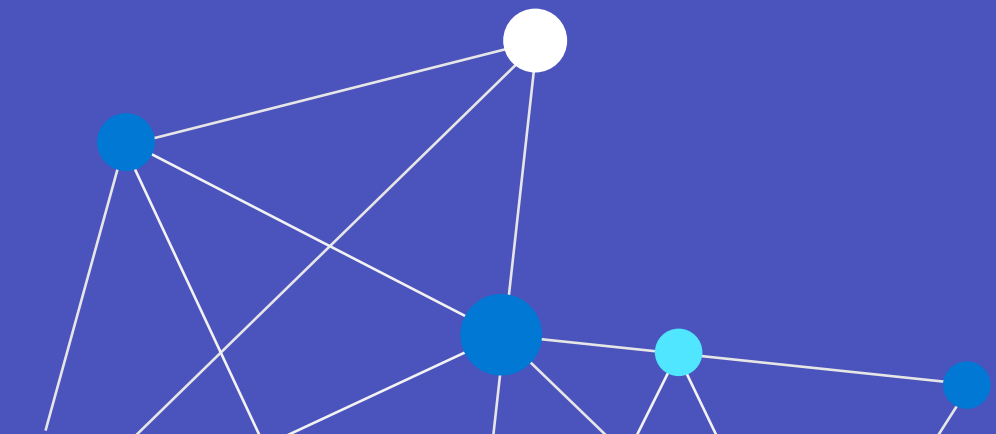
# Objectives

Things to consider when analyzing various meeting spaces

Learn about the different form factors and components that comprise Microsoft Teams Rooms

Understand the environmental considerations when designing Microsoft Teams Rooms.

# Spaces and considerations



# Room assessment guide

## Adopt & embrace

Size

Furniture

Materials

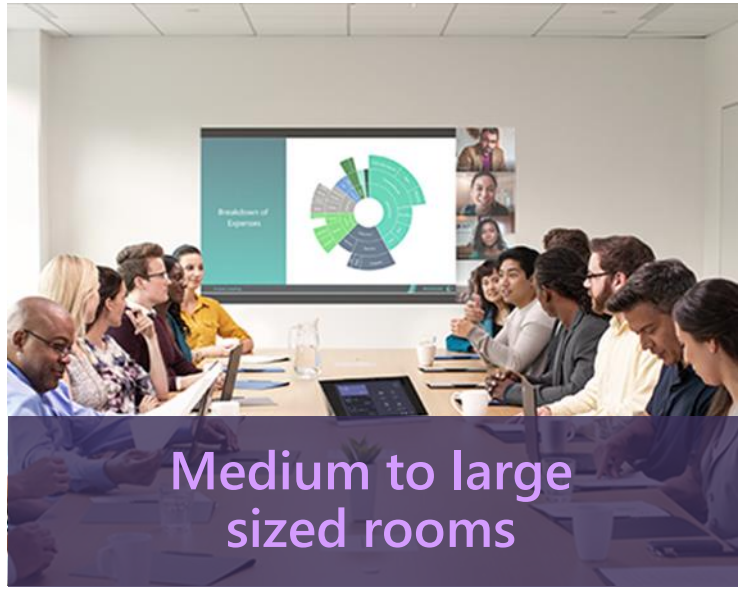
Light

Sound

# Understanding room spaces

Huddle to small sized rooms


Small to medium sized rooms



Medium to large sized rooms

## Considerations

- Camera
- Mic array
- Camera field of view
- Cable mgmt
- Acoustics
- Lighting

# Understanding room spaces

XXL (MPR)

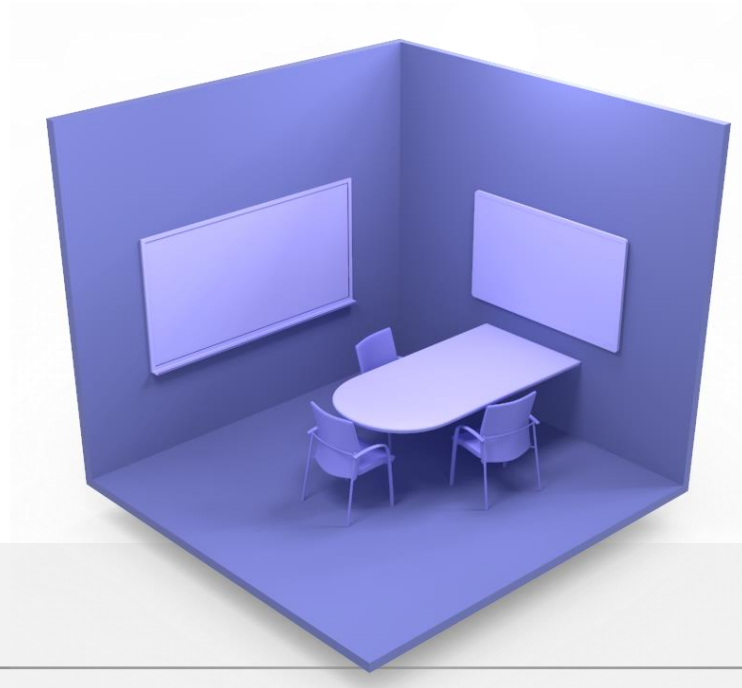

Exec rooms

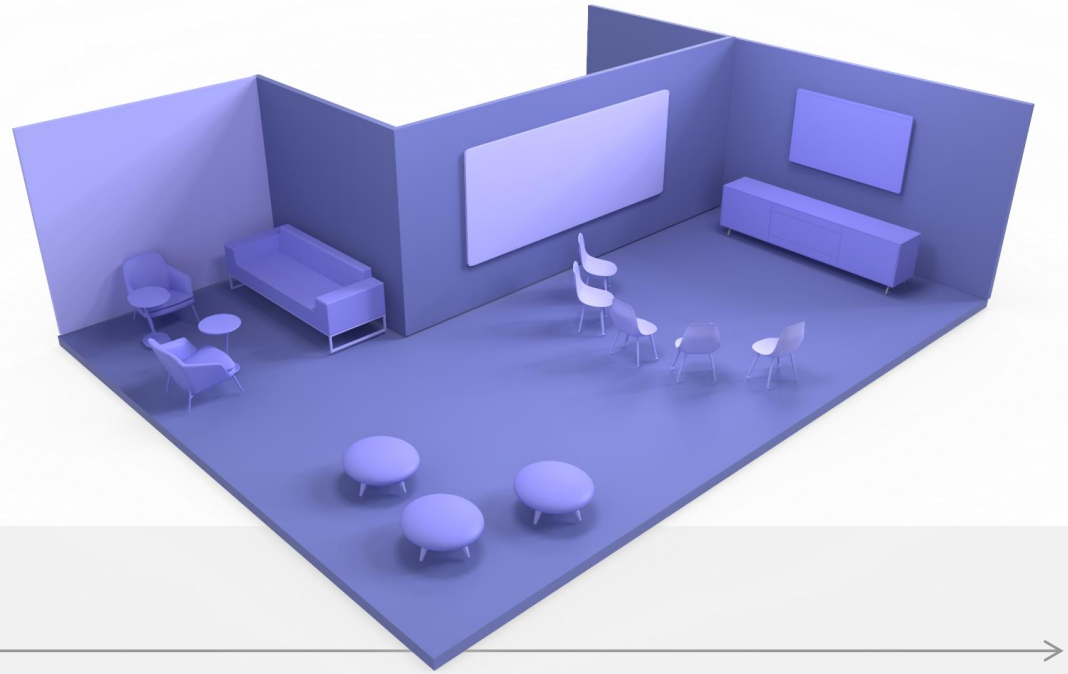
## Considerations

- Camera
- Mic array
- Camera field of view
- Cable mgmt
- Acoustics
- Lighting

# Meeting rooms (focus-huddle)

Microsoft Teams Rooms across all room sizes optimized for meetings





## Focus

10 x 10 feet / 3m x 3m

100 sq. ft. / 9 sq. m

3-5 People

## Huddle

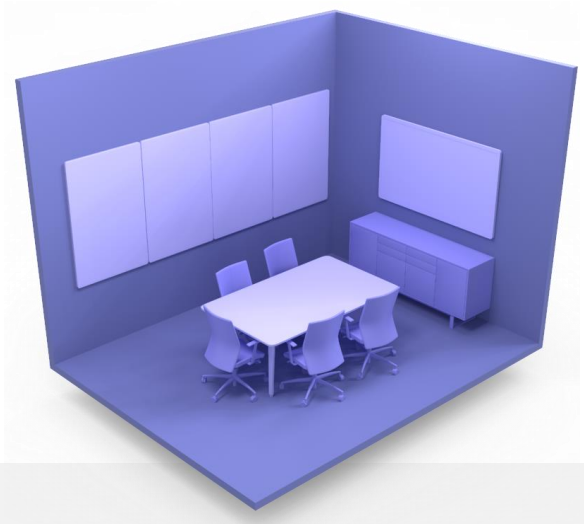
8-10ft feet  / 2.3-3m radius

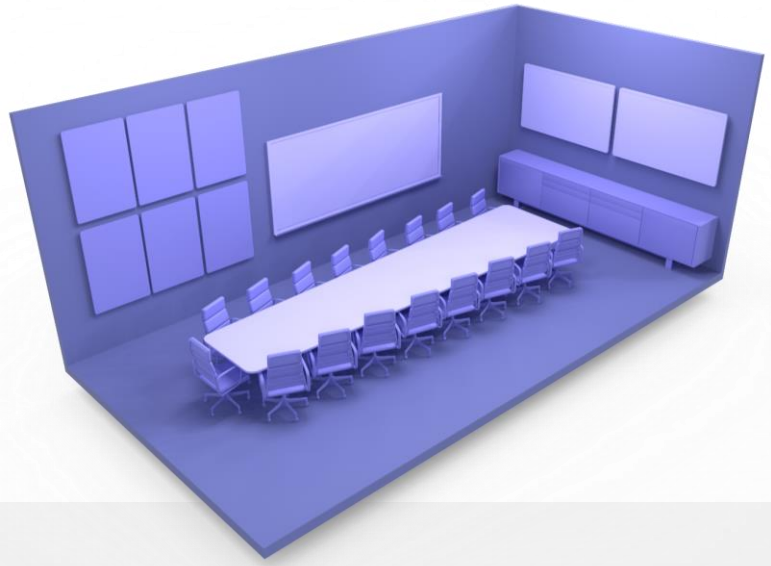
Open

3-5 People

# Meeting rooms (small-large)

Microsoft Teams Rooms across all room sizes optimized for meetings





**Small**
10ft x 15ft / 3m x 4.5m
150 sq. ft / 13.5 sq. m
5-7 People

**Medium**
15ft x 20ft / 4.5m x 6m
300 sq. ft / 27 sq. m
~11 People

**Large**
15ft x 28ft / 4.5m x 8.5m
420 sq. ft / 39 sq. m
~18 People

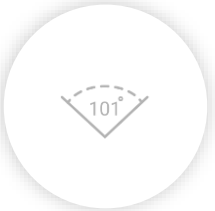
# In room considerations

## Camera

A camera is a critical element in any meeting room scenario. There are many aspects to consider around form factor, light handling, focus type (digital or mechanical), pan/tilt/zoom(PTZ), auto tracking, price, etc.

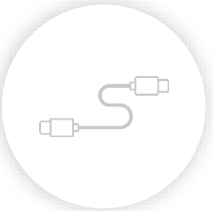
## Mic array

The microphone in any room system deployment is the single most important element; voice and audio are the fundamentals of all calls. You will need to consider mic pickup, ceiling or table, integrated into a device or standalone. Not all mics are created equal and the Teams certified devices require the highest level of fidelity.




## Camera field of view

The Field of View (FOV) is how much of the room you will see. This not only impacts how wide the view is, but also how well you will see the participants at the far end of the room.



## Cable management

Cable management is becoming simpler, but you need to consider how you will get the cables from your system to peripherals – plenum, conduit, drop ceiling - and what is your method for deploying and ensuring that they are secure.

## Acoustics

Many things impact acoustics from materials in the room to the size and shape of the space. Understanding how echo and reverberation will impact the audio in the room is fundamental for successful meetings

## Lighting

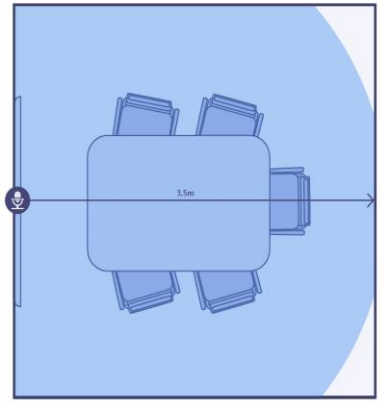
Lighting is a component that tends to be thought of last yet is a big part of the experience for remote participants.

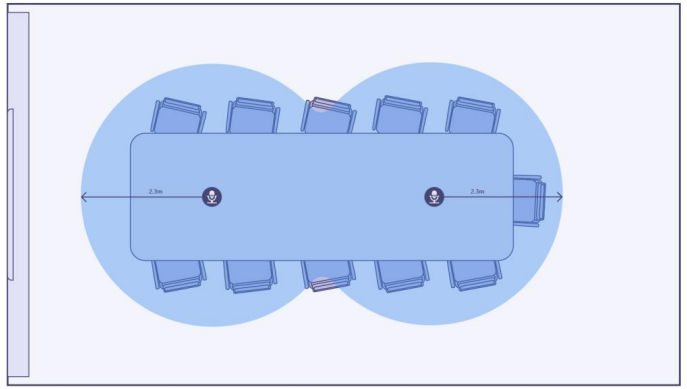
# Audio peripherals

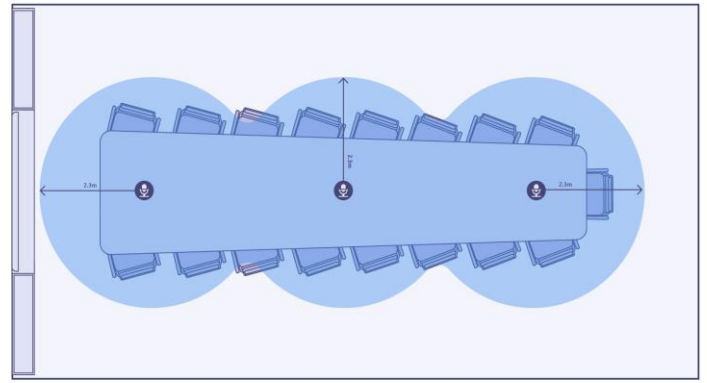
| Room Type | Number of People | Recommended maximum distance from microphone to speaker |
|---|---|---|
| **Focus**<br>10' x 9' | 2 – 4 | 1.5 m |
| **Small**<br>16' x 16' | 4 – 6 | 2.0 m |
| **Medium**<br>18' x 20' | 6 – 12 | 2.3 m |
| **Large**<br>15' x 32' | 12 – 16 | 2.3 m (per microphone) |

# Mic coverage visuals

Microsoft Teams Rooms across all room sizes optimized for meetings







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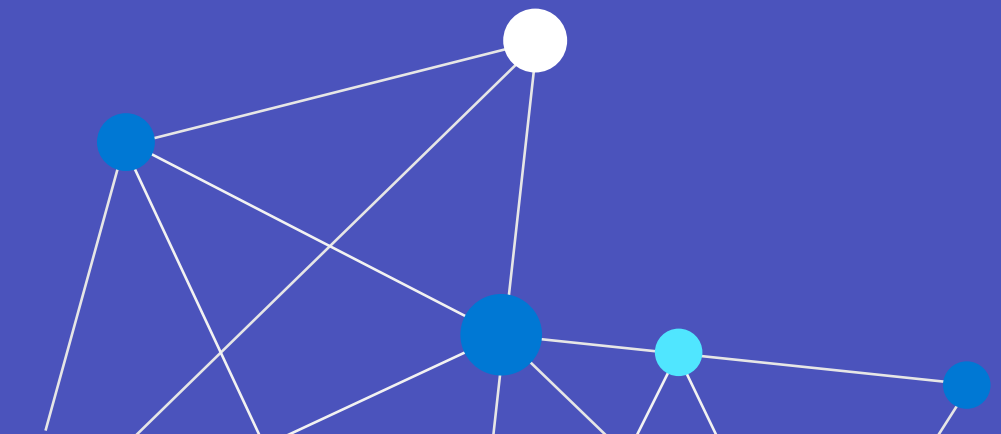
# Form factors and components



# Microsoft Teams Rooms components

## Touchscreen console

CRESTRON

hp

poly

Lenovo

logitech

Yealink

Partnerships with leading device manufacturers

# Microsoft Teams Rooms components

## Compute


Lenovo

hp

Yealink

intel

Partnerships with leading device manufacturers

# Microsoft Teams Rooms components

## Cameras

poly

AVer

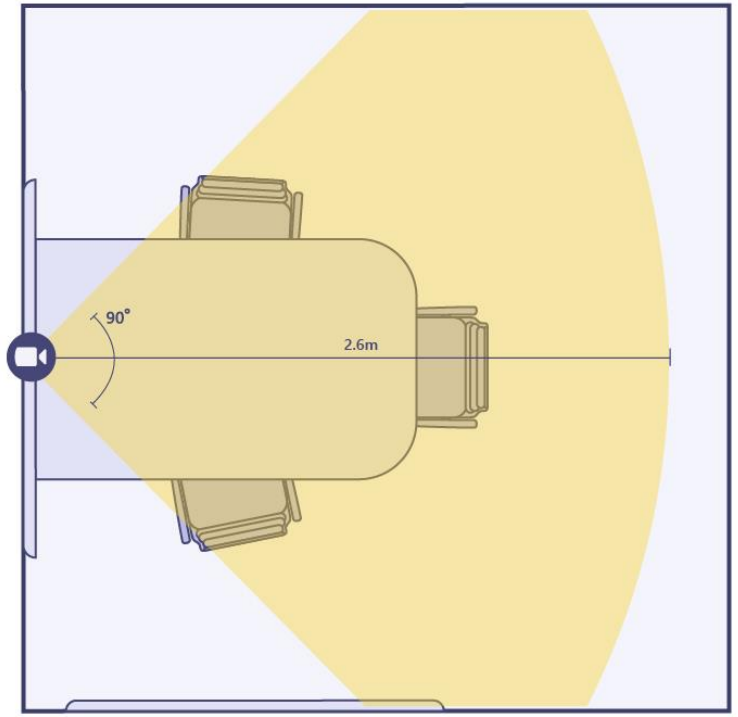
Yealink

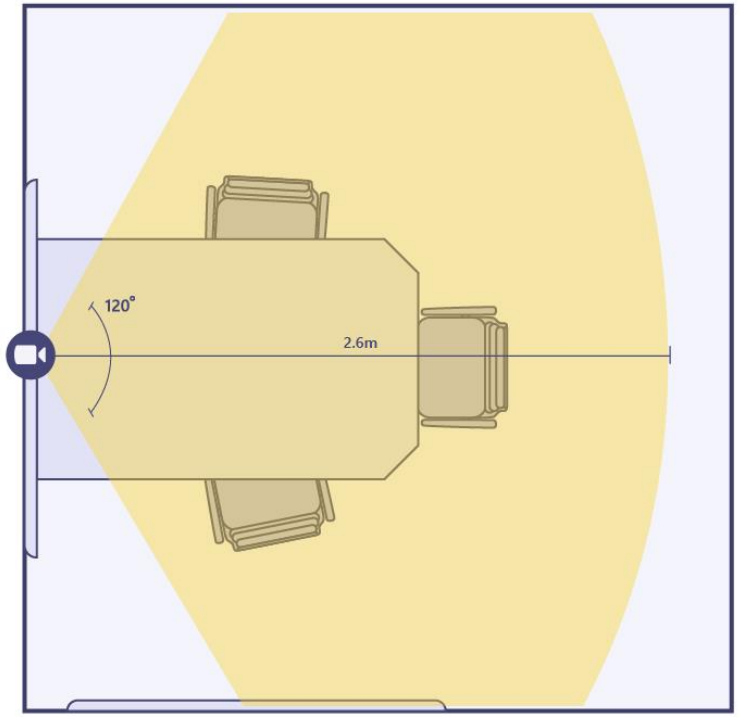
CRESTRON

Huddly

logitech

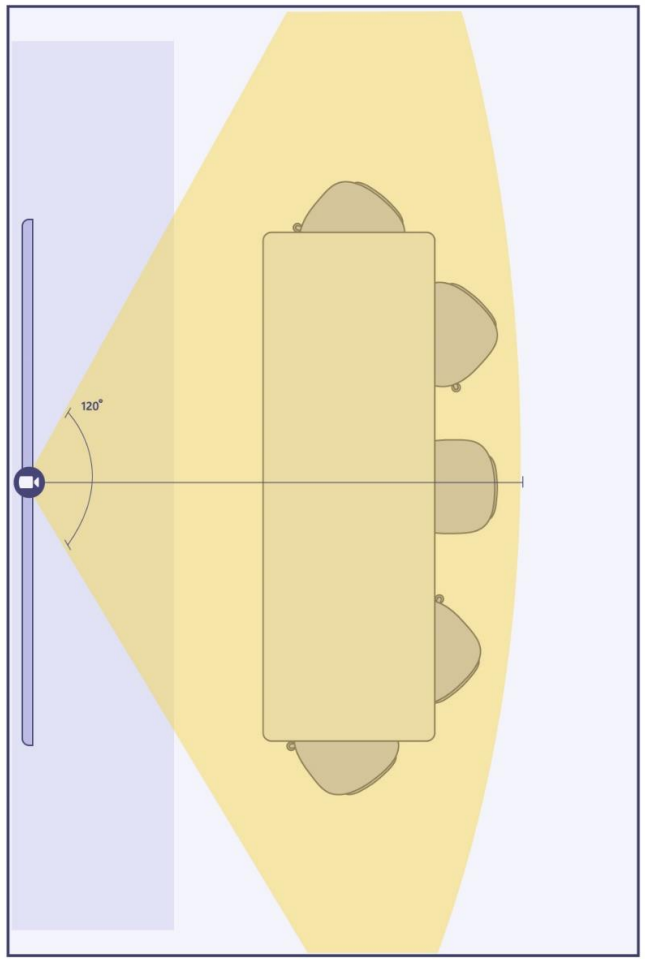
# Camera field of view examples

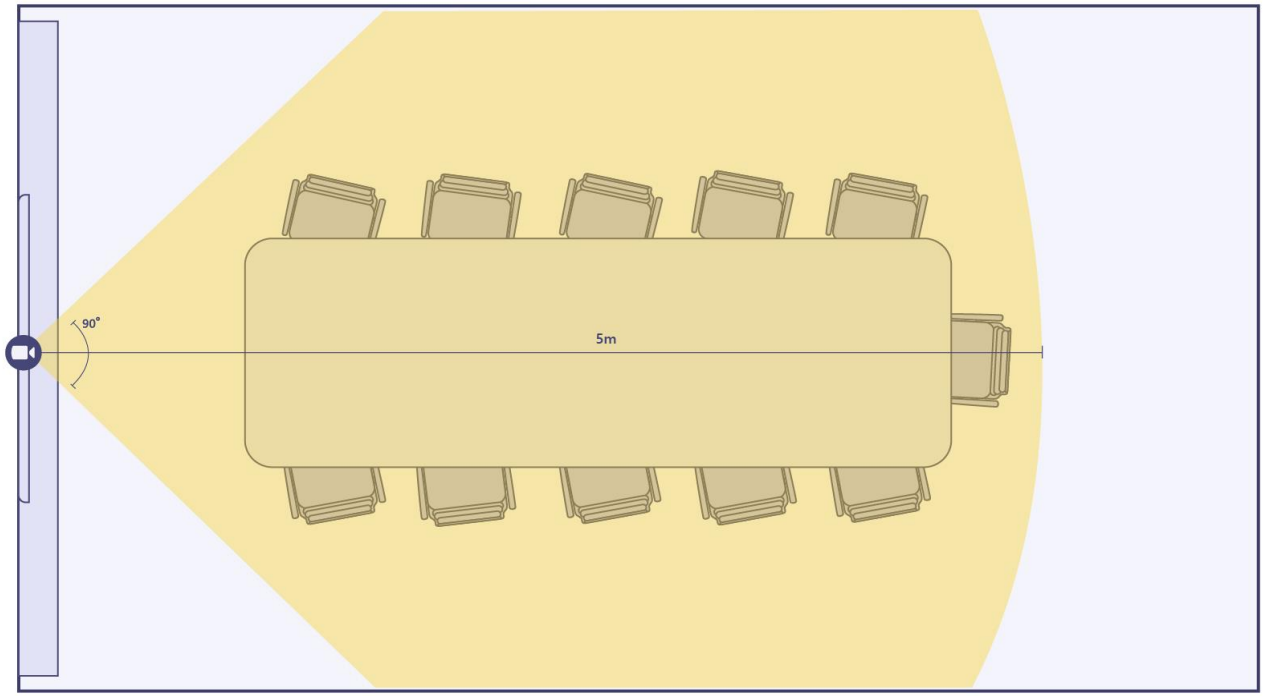


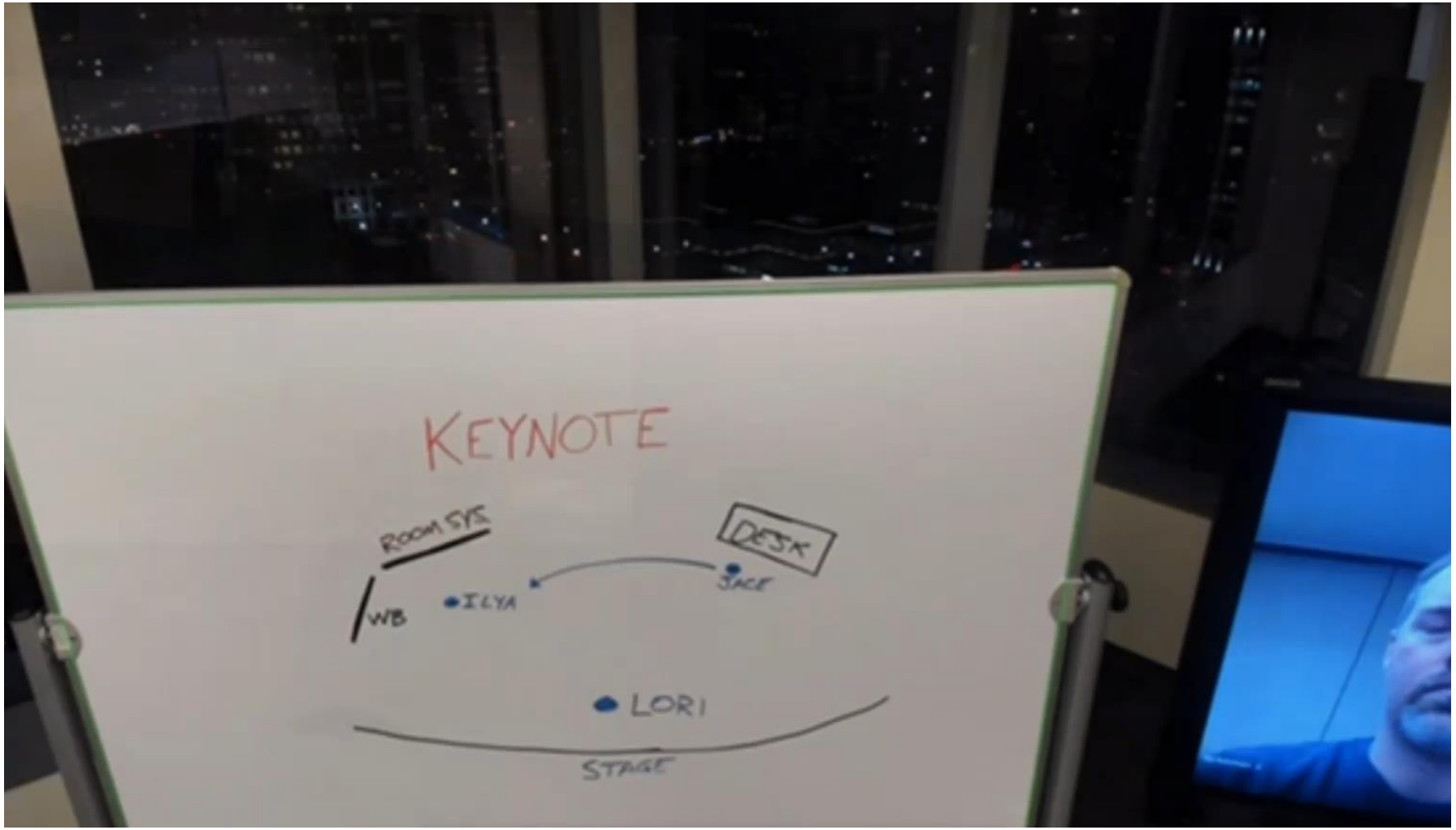

**Considerations:** FOV, PTZ, focal range

# Camera field of view examples



# Content camera



# Cameras that Support Content Capture

Logitech
Brio 4K Webcam

Logitech
C930e

# Content camera whiteboard sizing

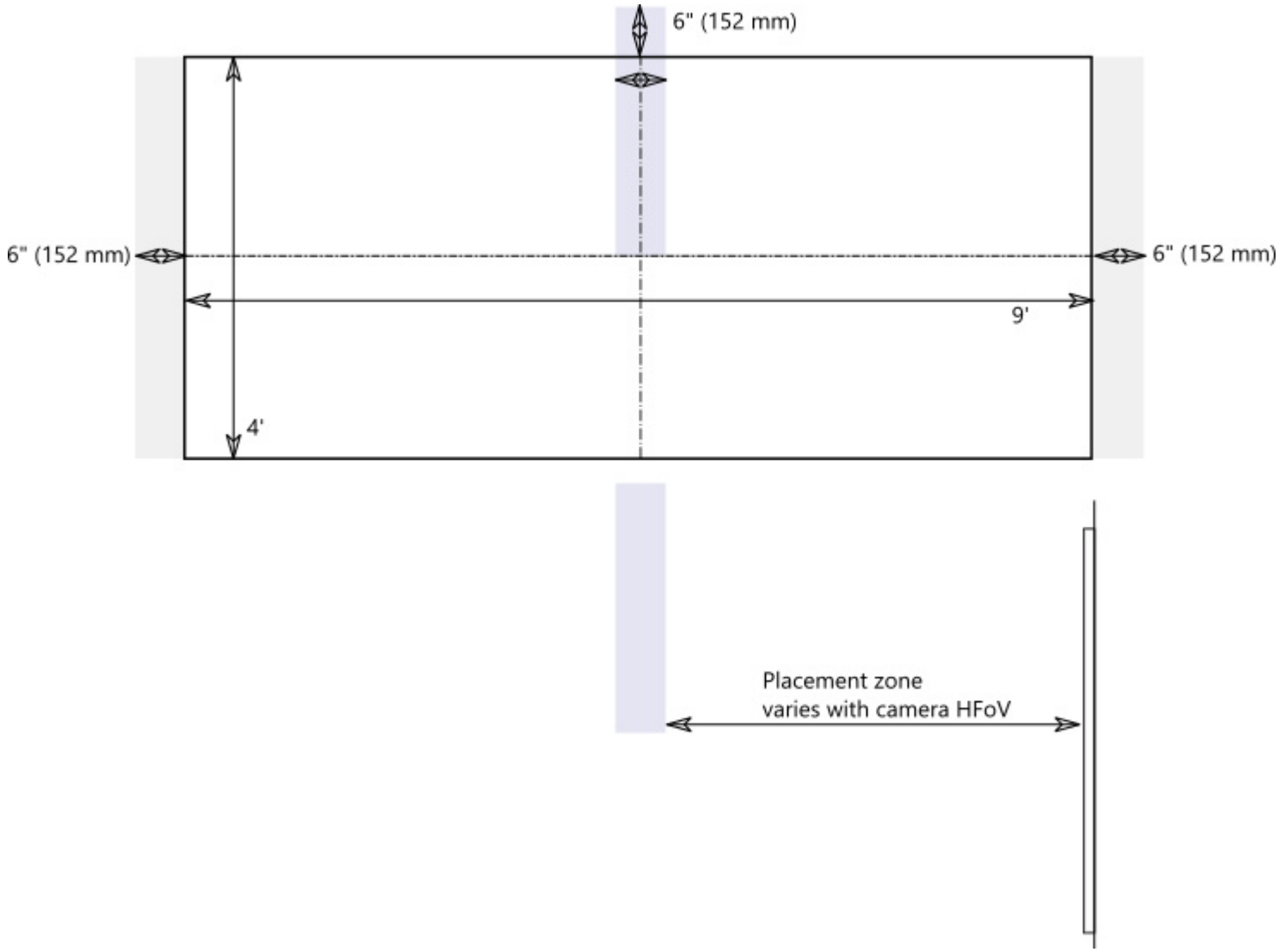
The size of the whiteboard used for sharing affects the placement of the camera. Board size recommendations are:

| 3–6 ft. (0.9–1.8 m) wide | 6–9 ft. (1.8–2.7 m) wide | 9–12 ft. (2.7–3.6 m) wide | Above 12 ft. (3.6 m) wide camera covers 9–12 ft. (2.7–3.6 m) and crops the rest. |
| --- | --- | --- | --- |
| **Supported** | **Recommended** | **Supported** | |

# Content camera distance from whiteboard

| Camera HFoV | 3 ft. (0.91 m) | 6 ft. (1.8 m) | 9 ft. (2.74 m) | 12 ft. (3.65 m) | Max distance from Whiteboard |
|---|---|---|---|---|---|
| 80° | 1.79 ft. (0.54 m) | 3.58 ft. (1.09 m) | 5.36 ft. (1.6 m) | 7.15 ft. (2.17 m) | 7.51 ft. (2.28 m) |
| **90°** | **1.5 ft. (0.45 m)** | **3.00 ft. (0.91 m)** | **4.5 ft. (1.37 m)** | **6.0 ft. (1.82 m)** | **6.3 ft. (1.92 m)** |
| 100° | 1.26 ft. (0.38 m) | 2.52 ft. (0.77 m) | 3.78 ft. (1.15 m) | 5.03 ft. (1.53 m) | 5.29 ft. (1.61 m) |
| 110° | 1.05 ft. (0.32 m) | 2.10 ft. (0.64 m) | 3.15 ft. (0.96 m) | 4.2 ft. (1.28 m) | 4.41 ft. (1.31 m) |
| 120° | 0.87 ft. (0.26 m) | 1.73 ft. (0.52 m) | 2.60 ft. (0.79 m) | 3.46 ft. (1.05 m) | 3.64 ft. (1.10 m) |

# Content camera location



# Microsoft Teams Rooms components

## Audio

poly

Yealink

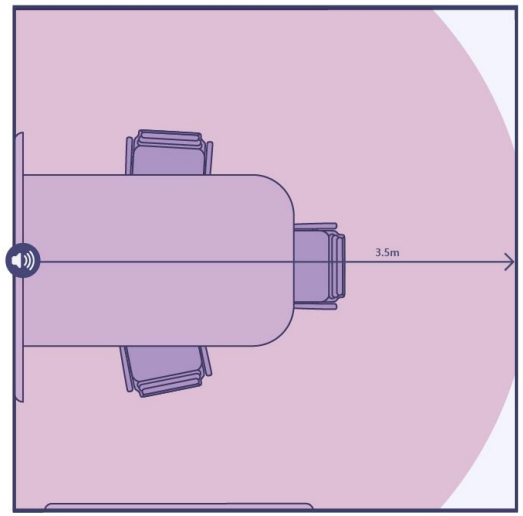
CRESTRON

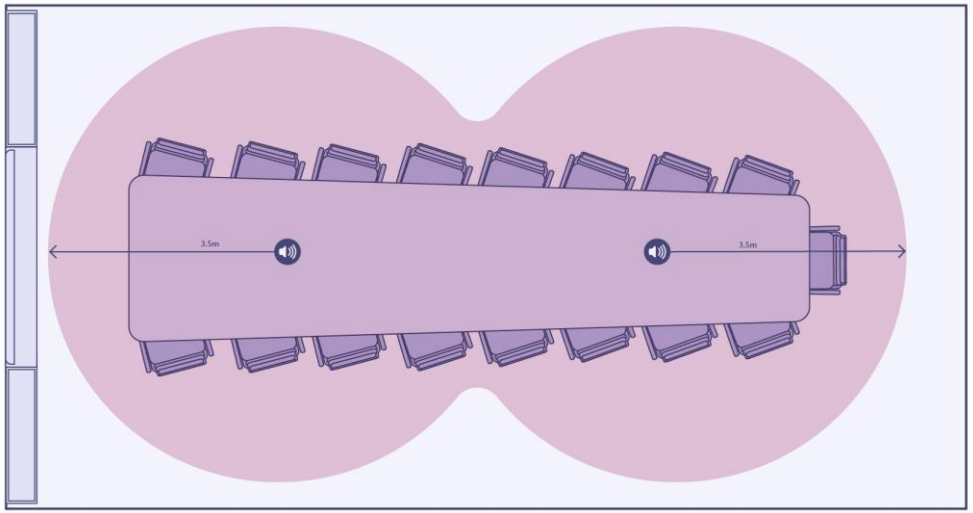
logitech

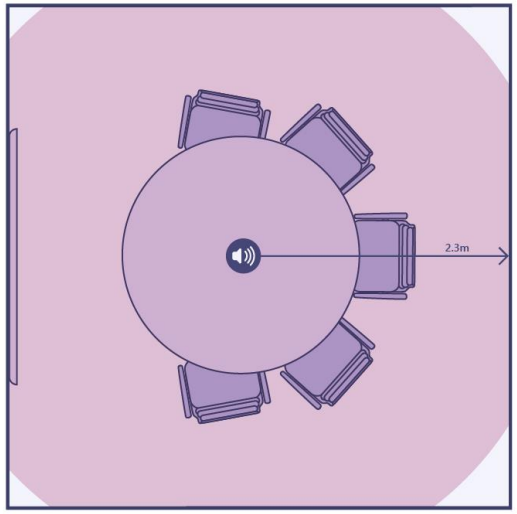
SHURE

SENNHEISER

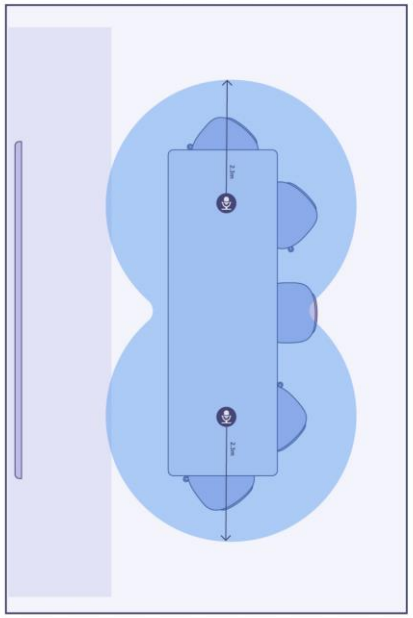
# Speaker radius examples

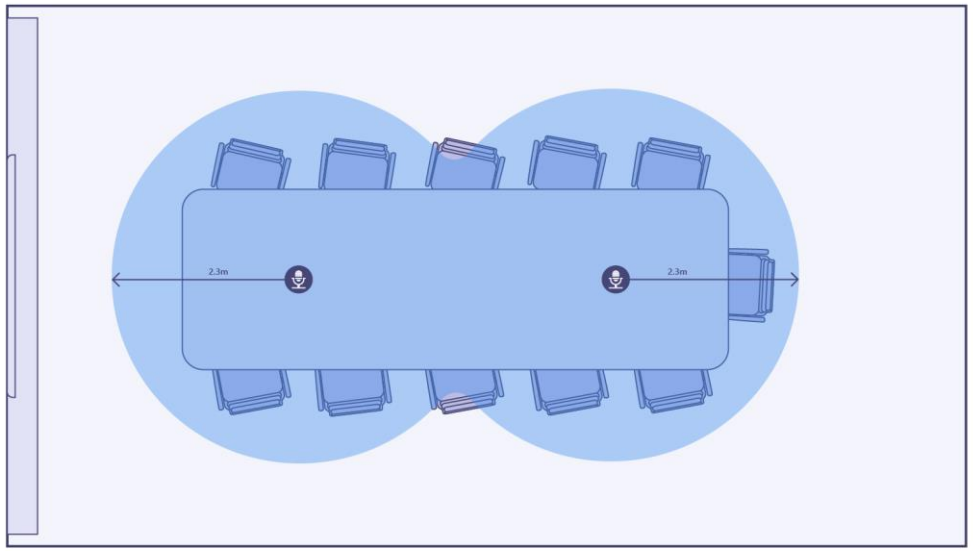


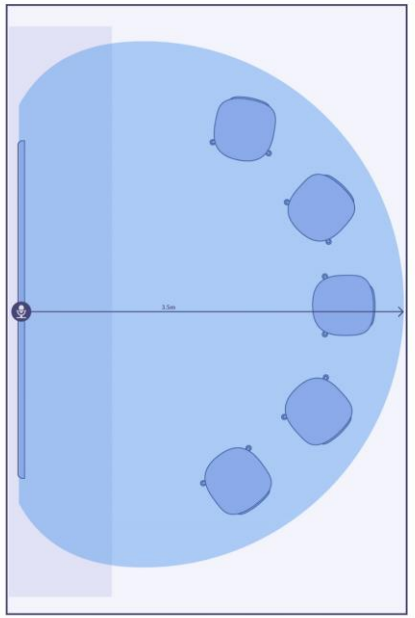



# Microphone coverage examples





**Considerations:** Certified mic pickup range, mic/speaker location, wiring, full room coverage

# Displays

## Choosing the right equipment

### Considerations

**Size**

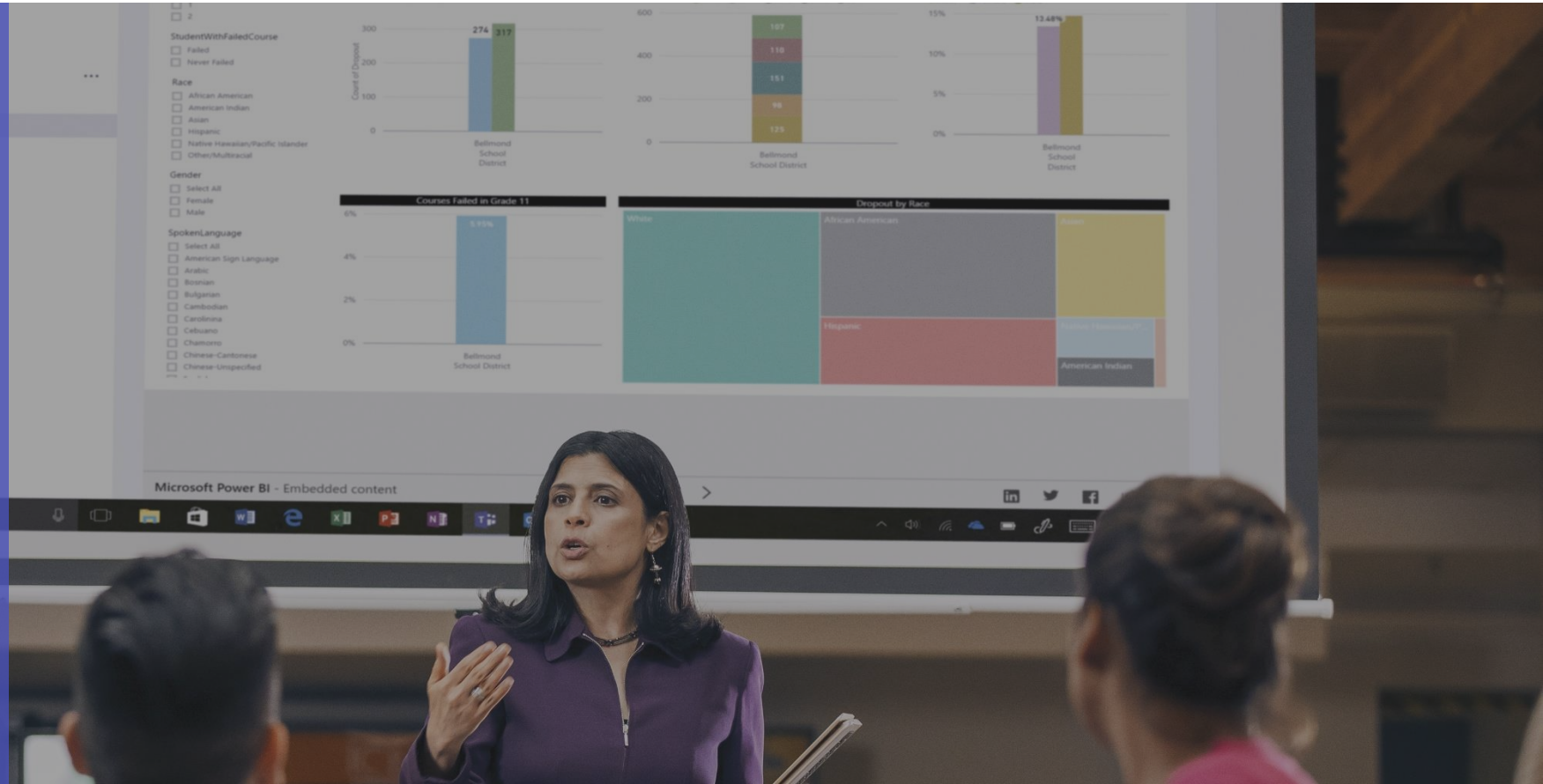
Should be appropriate for distance and content

**Power**

Commercial display should sleep and wake on HDMI sync

**Resolution**

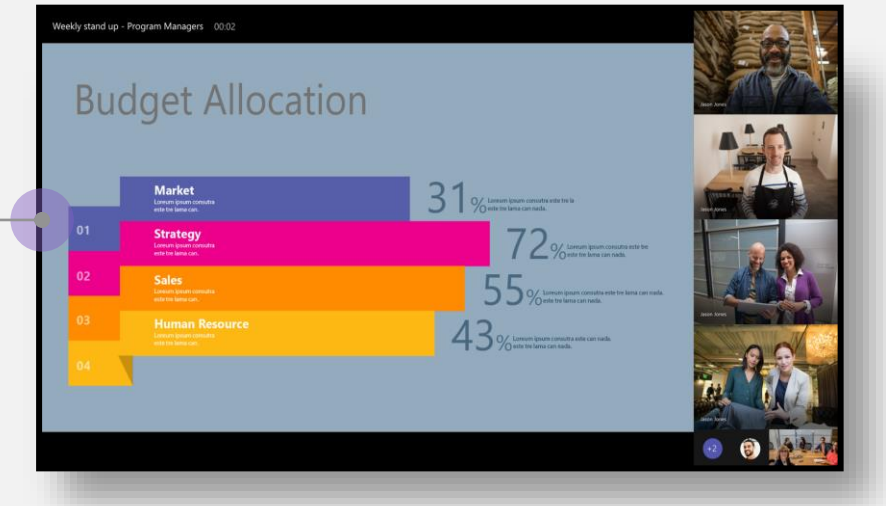
4K displays are supported but Teams only shows up to 1080p



# Single vs dual monitor

**Single monitor** is good primarily for small rooms

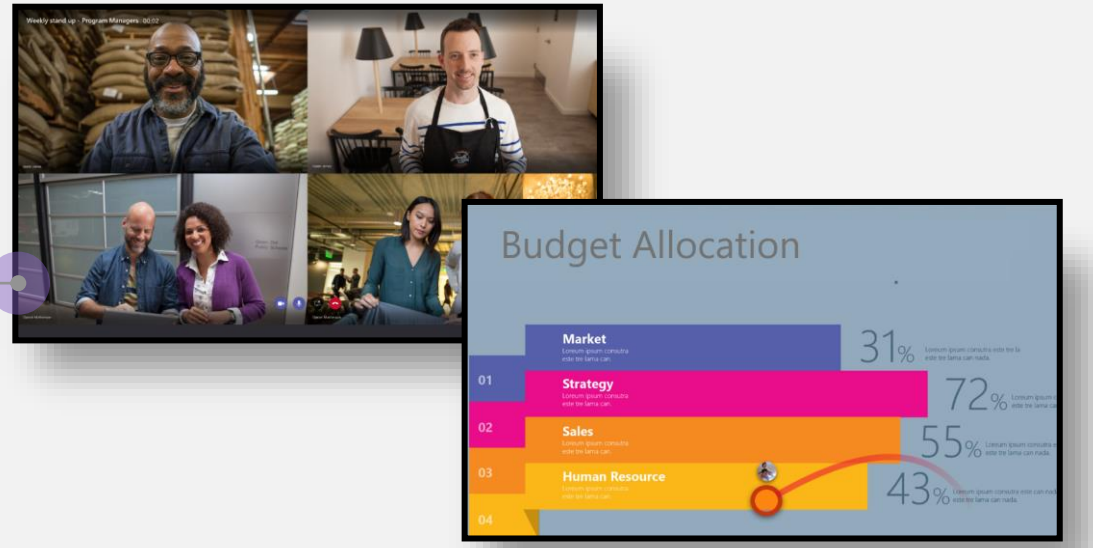
Single monitor is useful if your primary focus is on content sharing




**VS.**

**Dual monitor** configuration is good for larger rooms

Dual monitor configuration is also good for collaboration when one of the screens is touch-enabled



# Touch screen

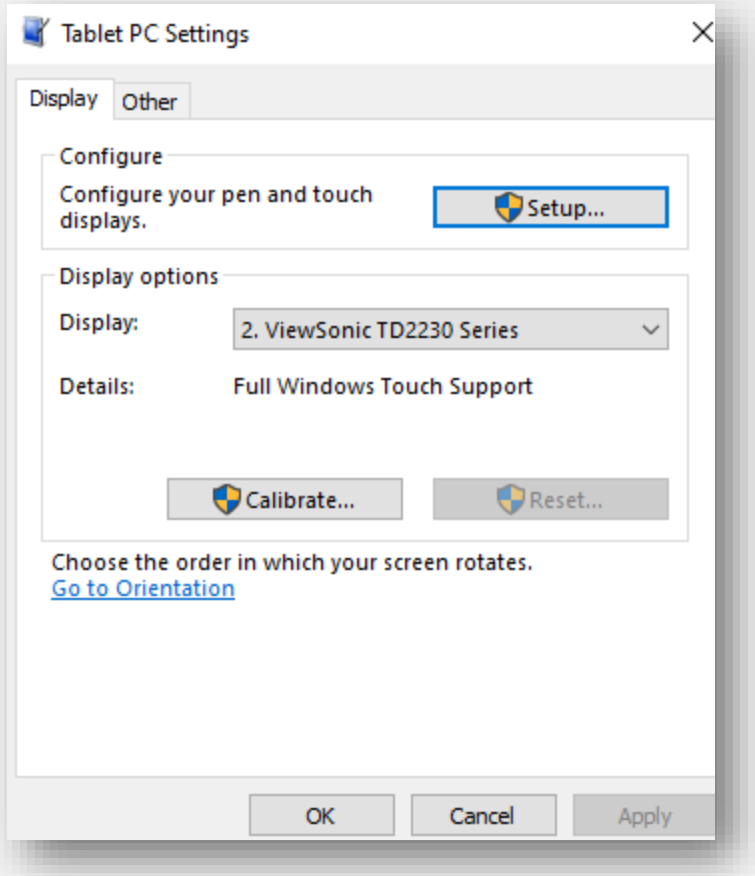
## Requirements

If a monitor is touch capable, it can be used as a white board within a Teams Rooms meeting. Collaborate with remote meeting attendees directly on the Teams Rooms display.

Touch screen

Whiteboard enabled in tenant

Tablet PC enabled




# Display attributes questions

Will it be possible to mount displays on the desired wall if needed?

Current or desired location of display 1

Current or desired location of display 2 (if applicable)

Display 1 make and model (LCD or projector)

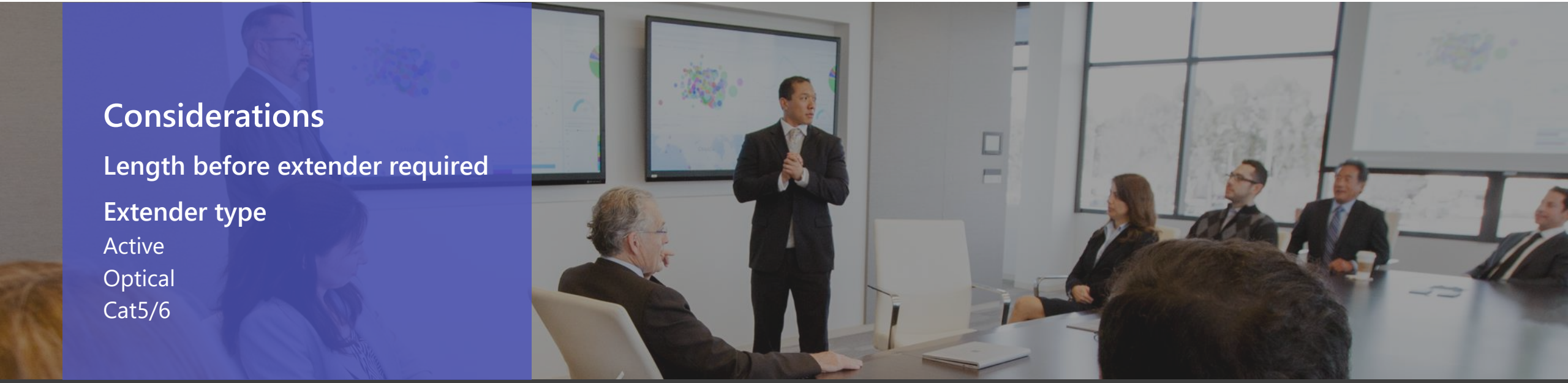
Display 2 make and model (LCD or projector)

Any additional displays (additional content displays for example)?

Require general contractor to install?

# Cables and extenders

## Choosing the right equipment



### Considerations

**Length before extender required**

**Extender type**

Active

Optical

Cat5/6

**Considerations:** Certified mic pickup range, mic/speaker location, wiring, full room coverage

# Cabling considerations

Maximum distance per the cable type before requiring an extender solution.

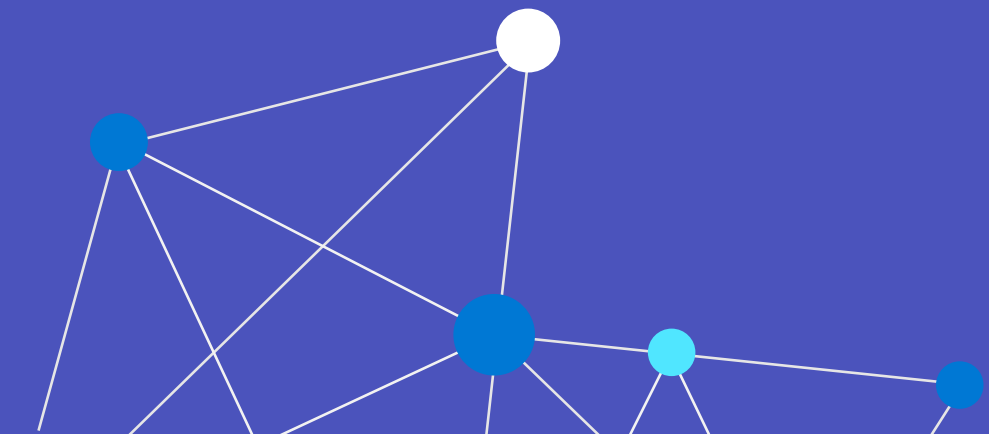
Connection head size. Some are large and therefore difficult to connect to some MTR systems.

Connection locking capabilities.

Overall build quality.

Plenum rated for in-wall or conduit installation.

# Environmental considerations



# Room attributes

What are the goals for this room?

Is it an executive meeting space? Is it in an open area?

Number of walls? Fully enclosed with a door? Can walls support display weight?

Are there conduits available for cable pulling in the desired locations (under table to front of room would be most common)

Will cables need to be run on top of the floor?

Are there any acoustic issues

Does the room have lighting concerns?

Does the room have any apparent ambient noise issues (open space noise, HVAC, other)?

Does the room include a physical white board? If so, where is it located?

Will this room require any external automation controls, such as Crestron/Extron lighting/shades etc.?

What is the size of the room (LxWxH)?

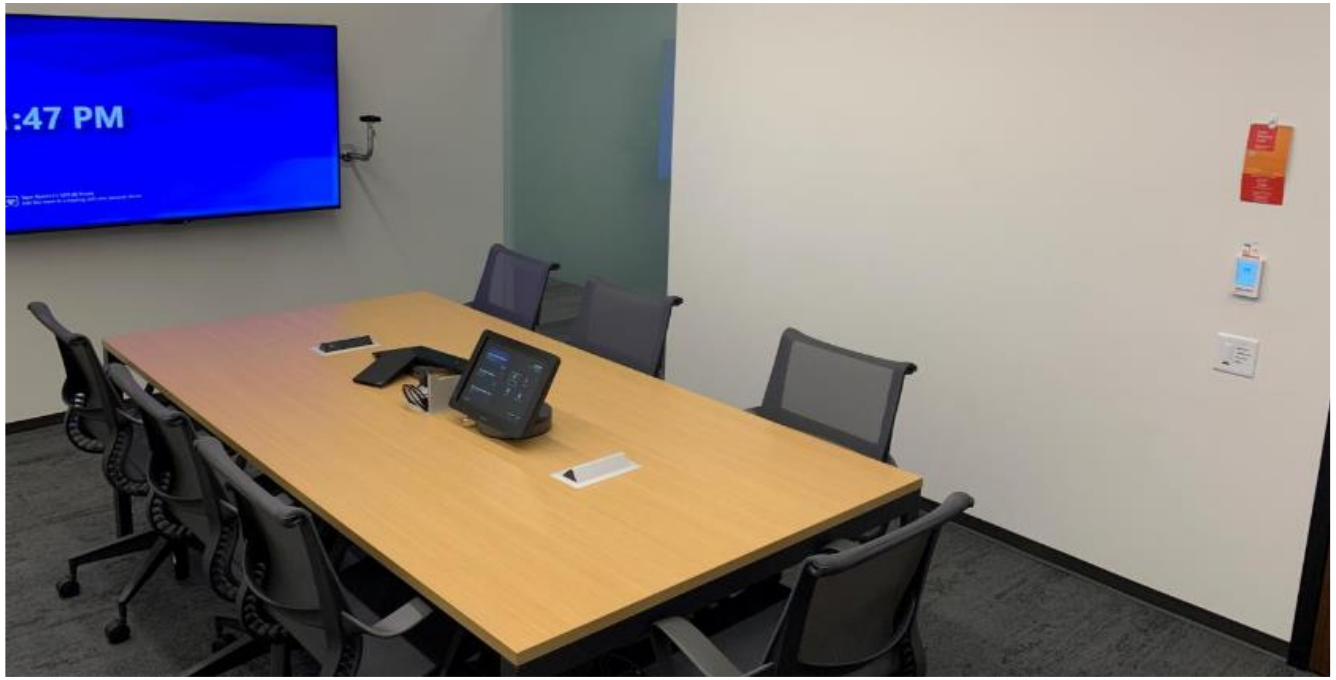
# Photos!

Take photos of the entire room. This will help find areas that can be standardized.

If working with a System Integrator, photos will help them design the rooms properly as they may not be able to visit every location.

Take a photo of outside the room, looking toward the door or open space.

Take a wide shot from each corner of the room.

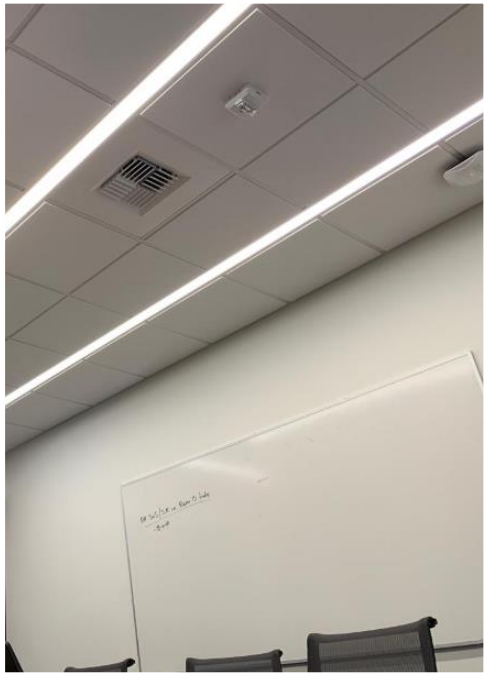
# Photos!

Photos of the ceiling.

Photos of the table, including grommets.

Photos of underneath the table, enough to see possible cable routing locations and equipment mount points.

Include table surface features.

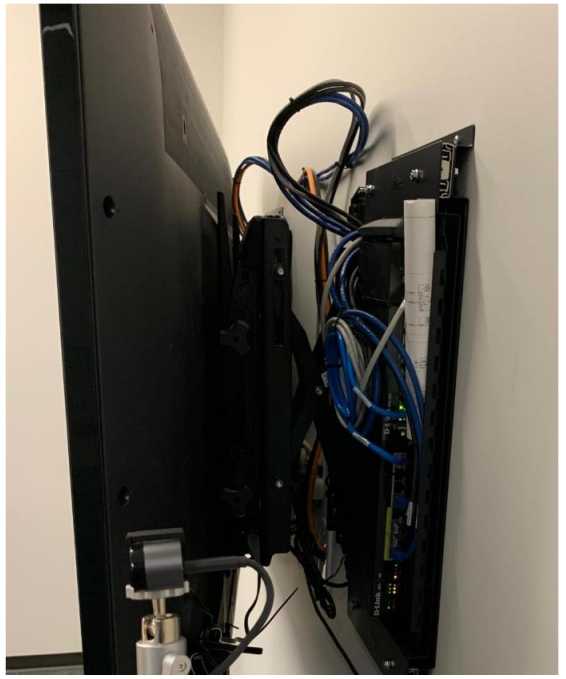



# Photos!

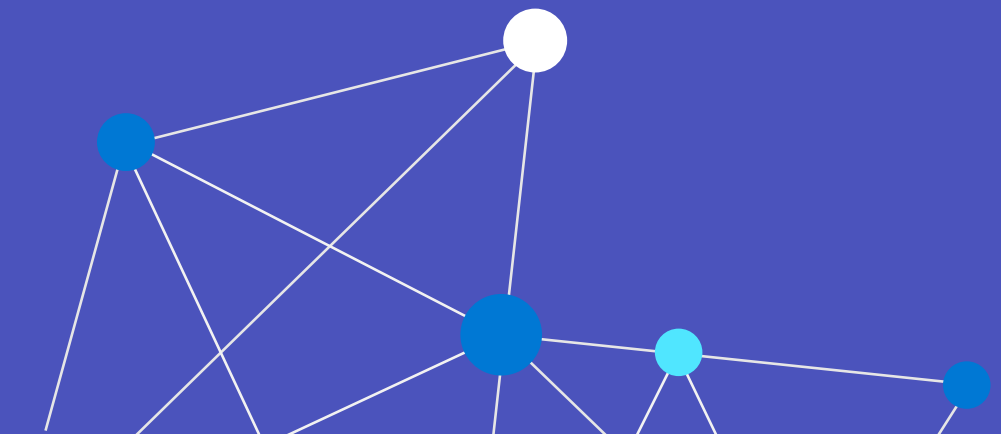
Detailed photos of any existing technology in the room, including stickers that include device models etc. TVs, phones, USB devices, audio/video equipment, etc.

Photos of any in-floor cable routing holes/outlets/boxes/conduit outlets.

Photos of any on-wall cable outlets or routing points, network/video/conduit/etc.



# Summary



# Summary

Teams Rooms can fit in any sized meeting room.

Be aware of requirements for different sized spaces.

Take inventory of everything in the room – desks, power locations, cabling options, etc.

Document all rooms in the same, standardized way.

# Questions?

Microsoft