Conferencing Design and Budget Guide

Supporting collaboration with audiovisual technology

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COVID-19

The COVID-19 pandemic has dramatically impacted all organizations. Now more than ever, collaboration technologies are critical for both working from home and as part of your re-entry strategy.

The content in this guide was developed prior to COVID-19, but we have made some updates to include the estimated safe capacity for each room setting using CDC's social distancing recommendations. The technology solutions remain relevant and reflect the newest solutions from Microsoft, Zoom and Cisco.

CONTENTS

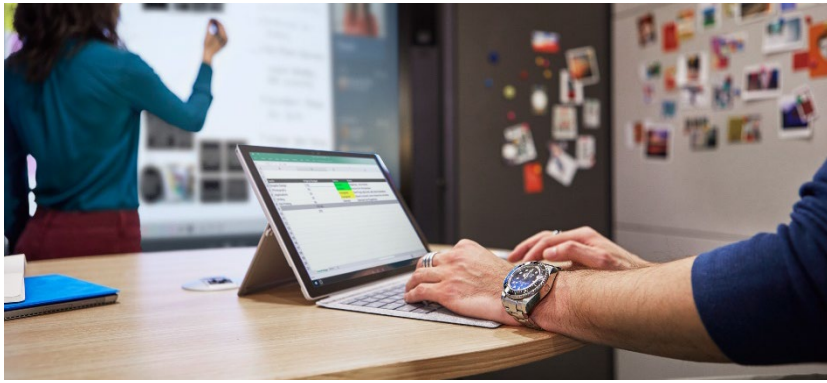
Introduction
Technology Goals Assessment
How To Use This Guide

Microsoft Conferencing Spaces
Zoom Conferencing Solutions
Cisco Conferencing Solutions

Appendix
- Featured Products
- Featured Cameras & Software
- SIP Business Phones

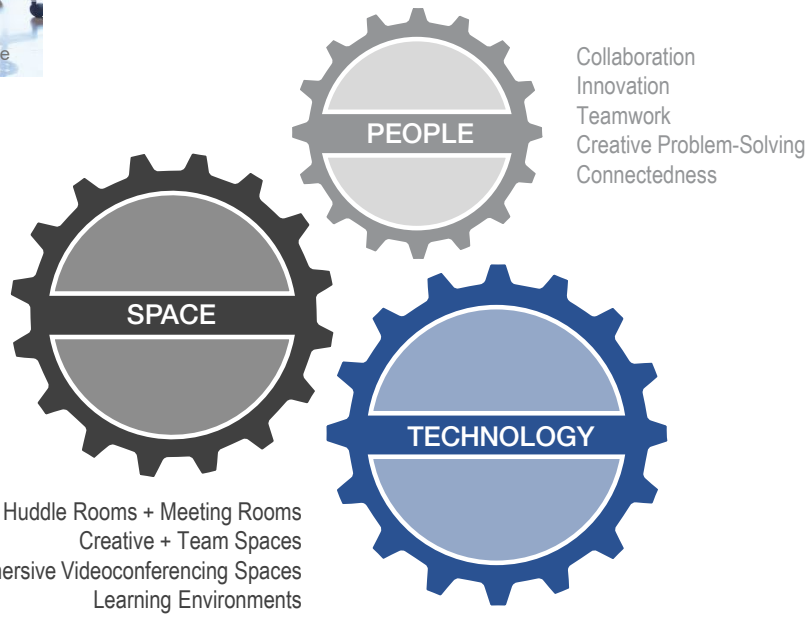
RED THREAD

INTRODUCTION



People + Space + Technology = WORKPLACE TRANSFORMATION

People, space and technology drive the way we work.



Collaboration
Innovation
Teamwork
Creative Problem-Solving
Connectedness

Huddle Rooms + Meeting Rooms
Creative + Team Spaces
Immersive Videoconferencing Spaces
Learning Environments
Work Café

Microsoft Surface Hub & Skype for Business
Video Conferencing Room Systems
Video Walls + Digital Signage
Flat Screens + Digital Whiteboards
Scheduling & Monitoring

Today's powerful mobile devices, ubiquitous internet access, and cloud-based applications make working anywhere, anytime, possible. Companies must employ strategies to support collaboration for a more tech-savvy workforce.

Every organization today is trying to boost their bottom line and rethink their technology strategy to best support their employee's productivity, efficiency and work experience, all while managing costs.

People + Space + Technology = Workplace Transformation

There is a critical need for workplace transformation today – creating flexible office environments that adapt to support how we work now and in the future.

When you thoughtfully combine people, space, and technology, it can foster new levels of collaboration and innovation.

TECHNOLOGY GOALS ASSESSMENT

What are your technology design goals?

Purchasing technology for your organization is a significant investment in time and resources, and needs to be well-thought out. There are a number of questions you should ask to discover the right solutions for you:

How is technology used in your organization?

- Is it for scheduled meetings?
- Impromptu collaboration?
- Displaying content?
- Interactive collaboration?
- Company-wide news and announcements?

How effective is the technology you currently use?

- What capabilities would make your people more productive?
- What are you currently not able to achieve that you would like to?
- How long does it typically take your people to start a meeting?
- Is the user experience consistent, whether someone is working locally in an office or remote?

Do you use web or video conferencing?

- Do people typically meet face-to-face using displays to share content?
- What percentage of your workforce works remotely?
- How frequently are people looking to collaborate with others that are both local and remote?
- Do remote workers have a satisfying and productive user experience?

Do you have a standard platform across the organization?

- Are you standardized on Microsoft or Cisco?
- Do you instead use a mixed platform of solutions?
- Do you have challenges with the interoperability of a mix of conferencing applications and/or video conferencing systems?

What is your workplace culture?

- Is your organization more “classic,” seeking practical, cost effective solutions that get the job done? These solutions might include basic engineered systems.
- Is your organization more progressive, seeking immersive technologies integrated holistically within the space to drive a creative and collaborative workplace culture? These solutions might include open and enclosed spaces with bundled systems and all-in-one solutions.
- Does your organization require integrated high-performance systems that provide the highest fidelity video and audio for local and remote participants? These solutions might include integrated conferencing systems.

HOW TO USE THIS GUIDE

To identify the technology for your collaboration spaces can be overwhelming. There are many decisions you will make throughout the decision process, and this guide offers a simplified framework for narrowing down the infinite technology options available. We don't provide every option, of course, but this guide will help you to begin the preliminary process of understanding your options and developing a technology plan and budget. It is important to engage with the right technology integration partner early in the process to take you through the decision making process, develop budgets, design and implement systems and provide ongoing support.

1. Choose your technology platform

Conferencing technology has rapidly evolved and is widespread throughout companies large and small. With a strong economy, organizations are expanding regionally, nationally and internationally. Better and lower cost mobile technologies are driving the need for remote offices and a distributed workforce to collaborate easily. Whether you have already invested in a unified communication platform, like Microsoft or Cisco, or have many different types of systems, your future technology investments should build upon your current platforms.

Microsoft Solutions
(page 6)

Zoom Solutions
(page 22)

Cisco Solutions
(page 38)

2. Choose your room type

There are many unique types of spaces in which people collaborate. Room size and physical attributes impact the functionality of the space. From our experience, there are several common room types that are ideal for different types of collaboration for specific group sizes. We have identified five of the collaboration room types that are most common in organizations: huddle rooms, meeting rooms, boardrooms, multipurpose rooms, and work cafés.

Huddle Room

Meeting Room

Boardroom

Multipurpose Room

Work Café

The images in this Guide do not reflect current social distancing requirements. Please consult the CDC's website for their most up-to-date guidelines. In the collaboration solutions by room type, we have documented both the illustrated and suggested safe capacity for each space.

3. Choose your system type

Technology systems fall into three major categories: all-in-one solutions, bundled systems, and integrated conferencing systems. Here are the differences between them:

All-in-One Solutions
All-in-one-solutions by manufacturers create a seamless user experience by integrating all of the technology you need into a single device. A flat screen display with interactive touch integrates web conferencing, microphones, cameras, speakers and an easy-to-use interface. These solutions are most often used in flexible spaces, like work cafés and multi-purpose rooms, or meeting rooms and boardrooms with non-traditional furniture that provides adequate space for users to interact with the board.

Bundled Systems
A Bundled System can provide a seamless user experience as it is a pre-packaged manufacturer- engineered solution with cameras, microphones, speakers and a control panel. They sometimes have limitations in available options (for example, only come with standard cameras and microphones), so they perform best in moderately-sized meeting rooms.

Integrated Conferencing Systems
An Integrated Conferencing System, designed by an AV/IT integrator, creates an immersive conferencing experience. The system is designed with a unified touch control that operates an integrated video conferencing codec, high resolution camera, makes the source selection and adjusts audio levels. Near and far-end participants are viewed on single or dual displays. These systems are custom engineered to accommodate your specific needs and unique spatial requirements.

Check out our appendix of featured conferencing products starting on page 54

Microsoft Conferencing Spaces

Huddle Room

Meeting Room

Boardroom

Multipurpose Room

Work Café

HUDDLE ROOM

Huddle rooms support planned and impromptu collaboration for small groups.

Footprint: 8’ x 10’ | 80 SF
Compatible Platform: Microsoft Teams

BUDGET RANGE: *

All-in-One Solution	
No Installation	$ 9,350
Includes Wall Mounted Installation	$ 10,350
Includes Mobile Stand and Battery	$ 11,850
Includes Wall Mount Installation & Mobile Stand and Battery	$ 12,500
Microsoft Teams Room License – 1 Yr	$ 180
Microsoft Extended Service – 3 Yr	$ 1,899
Collaboration System – Bundled	
No Monitor, Installed Collaboration System	$ 4,415
No Monitor | No Installation	$ 2,960
Includes 55” Display Installed	$ 5,190
Microsoft Teams Room License – 1 Yr	$ 180
One Year Service	$ 350

SYSTEM TYPES

- ***All-in-One Solution:*** For a seamless user experience, multiple features are integrated within a single device. Participants interact with a 50.5” touch-controlled display to share content and collaborate with local and far-end participants and facilitate using the digital whiteboard. The system has built-in cameras, microphones, speakers and integrated Windows 10 Microsoft Teams web conferencing.

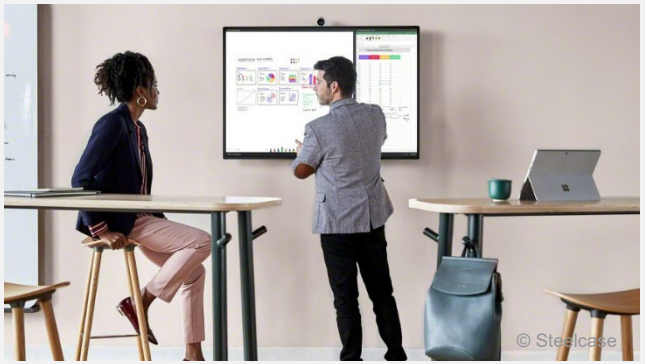
  Note: *Typically these small spaces do not have tables directly underneath display in order to provide adequate space for users to interact with the display.*

- ***Bundled System:*** For optimal simplicity for web/audio conferencing, pre-packaged manufacturer’s solutions incorporate a PC Nuc running Microsoft Teams web conferencing, 55” display, camera, microphones, speakers and control panel, integrated into various styles of tabletop consoles. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system. There are many bundled solutions compatible with Microsoft Teams web conferencing. The Logitech bundle solution was referenced for this pricing estimate, but there are solutions from Poly and Crestron available at a similar price point.

  Note: *Integrated Conferencing systems are typically designed for larger spaces and not provided for Huddle spaces.*

** Pricing is an estimate only and excludes tax, and delivery.*

HUDDLE ROOM | Specification



DESIGN CONSIDERATIONS

- Display height should be 48” from the floor.
- Display size should be between 4 and 8 times the distance from the furthest seat at the table.

ALL-IN-ONE SOLUTION

Display:
50.5” Interactive Display

Input Sources:
Built-in in PC with Microsoft Teams

Cameras:
Built into display

Microphones:
Built into display

Sound Systems:
Built into display

Control:
Touch control at display

COLLABORATION ROOM SYSTEMS

Display:
55” Display

Input Sources:
Mini PC Nuc with Microsoft Teams

Cameras:
Sound Bar Console

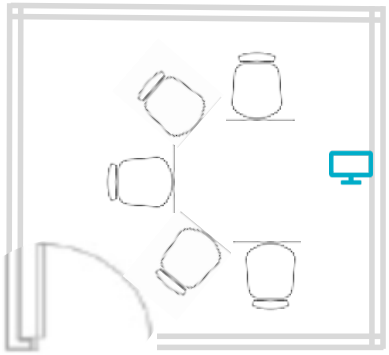
Microphones:
Sound Bar Console

Sound Systems:
Sound Bar Console

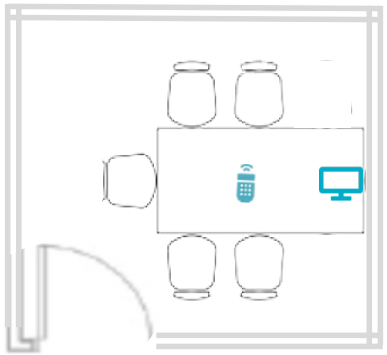
Control
10” Touch Panel Controller

HUDDLE ROOM | Infrastructure

PRESENTATION | WEB CONFERENCING
All-in-One Solution



COLLABORATION ROOM SYSTEMS
Bundled System



INFRASTRUCTURE BY OTHERS * *The following items would be provided by other contractors:*

Device	Location	Infrastructure	Trade Responsible
Display	On Front Wall at Display Height	Structural support	Construction Contractor
		Shared duplex outlet 20amp circuit	Electrical Contractor
		Installation of a plenum rated in-wall	Provided & Installed by Electrical Contractor
		LAN connections	Low Voltage Contractor
Control Panel	At Front Wall	1 grommet cut out	Construction Contractor
		2 x Poke thru with 1.5” conduit under table and floor core inside front wall for cable passage	Construction Contractor
		Duplex 20amp circuit	Electrical Contractor

** Infrastructure requirements vary by project and therefore represent a general guideline.*

MEETING ROOM

The Meeting Room is intended for moderate sized gatherings for presentation, audio or web conferencing.

Footprint: 12’ x 15’ | 180 SF
Compatible Platform: Microsoft Teams

BUDGET RANGE: *

All-in-One Solution	
No Installation	$ 7,000
Includes Wall Mounted Installation	$ 8,200
Collaboration System – Bundled	
No Monitor, Installed Collaboration System	$ 6,105
No Monitor | No Installation	$ 4,550
Includes 65” Display Installed	$ 7,850
Microsoft Teams Room License – 1 Yr	$ 180
One Year Service	$ 510

SYSTEM TYPES

- ***All-in-One Solution:*** For a seamless user experience, multiple features are integrated within a single device. Participants interact with a 65” touch-controlled display to share content and collaborate with local and far-end participants and facilitate using the digital whiteboard. The system has built-in cameras, microphones and speakers that will run on an owner-furnished computer with Windows 10 and Microsoft Teams web conferencing.

- ***Bundled System:*** For optimal simplicity for web/audio conferencing, pre-packaged manufacturer’s solutions incorporate a mini PC running Microsoft Teams web conferencing, 65” display, a camera, microphone pod, and speakers integrated into various styles of tabletop or wall mount sound bars. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system. All bundled systems are controlled by a touch panel. There are many bundled solutions compatible with Microsoft Teams web conferencing. The Logitech bundle solution was referenced for this pricing estimated, but there are solutions from Poly and Crestron available at a similar price point.

** Pricing is an estimate only and it excludes tax and delivery.*

MEETING ROOM | Specification

DESIGN CONSIDERATIONS

- Consider the acoustics to ensure privacy and sound quality, (i.e.) demountable wall STC ratings, sound absorption materiality of ceilings, floors and walls
- Lighting should be incorporated that properly illuminates room participants
- Consider far-end camera views to minimize distractions and confidentially
- For all in one system solutions, ensure that there is adequate space for users to interact with the display.

ALL IN ONE SOLUTION

Display:
65” Interactive Display

Input Sources:
OFE PC with Microsoft Teams

Cameras:
Built into display

Microphones:
Built into display

Sound Systems:
Built into display

Control:
Touch control at display

COLLABORATION ROOM SYSTEMS

Display:
65” Display

Input Sources:
Mini PC with Microsoft Teams

Cameras:
Wall Mount Camera

Microphones:
Mic pods

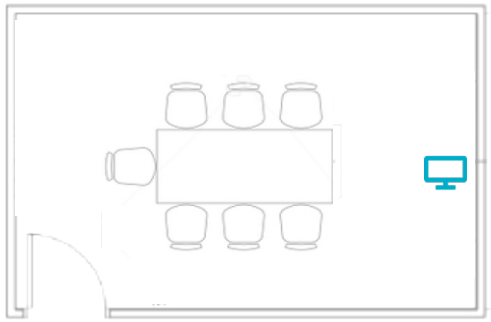
Sound Systems:
Sound Bar

Control
10” Touch Panel Controller

MEETING ROOM | Infrastructure

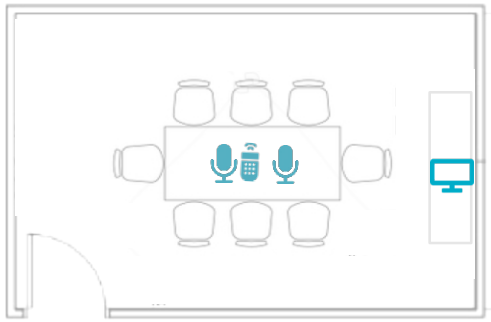
PRESENTATION | WEB CONFERENCING

All in One



COLLABORATION ROOM SYSTEMS

Bundled System



INFRASTRUCTURE BY OTHERS *		*The following items would be provided by other contractors:*		
Device		**Location**	**Infrastructure**	**Trade Responsible**
	Display	At Front Wall	Structural support per display	Construction Contractor
			Dedicated duplex outlet 20amp circuit per display	Electrical Contractor
			Installation of a plenum rated in-wall box per display	Provided by AV Contractor Installed by Electrical Contractor
			LAN connection	Low Voltage Contractor
**	Microphone	At Table	1 grommet cut out for each microphone pod	Furniture Contractor
**	Control Panel	At Table	1 grommet cut out	Furniture Contractor
			PoE Cable	Low Voltage Contractor
			2 x Poke thru with 1.5” conduit under table and floor core inside front wall for cable passage	Construction Contractor

** Infrastructure requirements vary by project and therefore represent a general guideline.*

*** Not required for all-in-one solutions as camera, microphones and speakers are integrated into the display.*

BOARDROOM

The boardroom's enhanced video & audio is optimal for more formal conferencing presentations.

Footprint: 20' x 35' | 700 SF
Compatible Platform: Microsoft Teams

SYSTEM TYPES

- ***Bundled System:*** For optimal simplicity for web/audio conferencing for medium to large sized boardrooms, a pre-packaged manufacturer's solution is comprised of a mini PC integrated with Microsoft Teams web conferencing, a 10″ wired touch panel, single or dual displays, wall-mounted sound bar with a high definition 4k camera, premium microphone and speakers. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system.

- ***Integrated Web/Audio:*** For engineered web/audio conferencing for medium or large sized boardrooms, an integrated system consists of a mini PC integrated with Microsoft Teams web conferencing, a 10" wired touch panel, digital media interface, audio sound processor, single or dual flat screen displays, ceiling array microphones, in-ceiling speakers, and a tracking camera specified to accommodate the size and sight lines of the room. Components are rack-mounted in an owner-furnished credenza with proper cable access and ventilation. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system.

BUDGET RANGE: *

Collaboration System – Bundled		
No Monitor | No Installation	$	4,500 – 5,000
75" Display, Wall Mounted	$	9,300 – 10,600
86" Display, Wall Mounted	$	10,900 – 12,100
Dual 75" Displays, Mounted	$	13,700 – 15,000
Dual 86" Displays, Mounted	$	17,000 – 17,700
Microsoft Teams License – 1 Yr	$	180
One Year Service	$	726 – 1,200
Integrated Conferencing Web/Audio		
86" Displays, Wall Mounted	$	20,100
Dual 75" Displays, Mounted	$	33,200
Microsoft Teams License – 1 Yr	$	180
One Year Service	$	1,400 – 2,250

** Pricing is an estimate only and it excludes tax and delivery.*

BOARDROOM | Specification

DESIGN CONSIDERATIONS

- Consider the acoustics to ensure privacy and sound quality, (i.e.) demountable wall STC ratings, sound absorption materiality of ceilings, floors and walls
- Lighting should be incorporated that properly illuminates room participants
- Consider far-end camera views to minimize distractions and confidentially
- For all in one system solutions, ensure that there is adequate space for users to interact with the display.

COLLABORATION ROOM SYSTEM

Display:
75”- 86” Single or Dual Flat Screen Display

Input Sources:
Mini PC with Microsoft Teams Web Conferencing

Cameras:
Built into Sound Bar

Microphones:
Built into Sound Bar

Sound Systems:
Built into Sound Bar

Control:
10” Touch Panel

INTEGRATED CONFERENCING

Display:
86” Flat Screen Display or Dual 75” Flat Screen Displays

Input Sources:
Mini PC with Microsoft Teams Web Conferencing

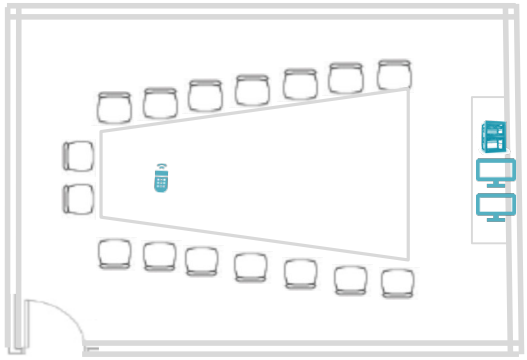
Cameras:
Tracking Camera

Microphones:
Ceiling Array microphones

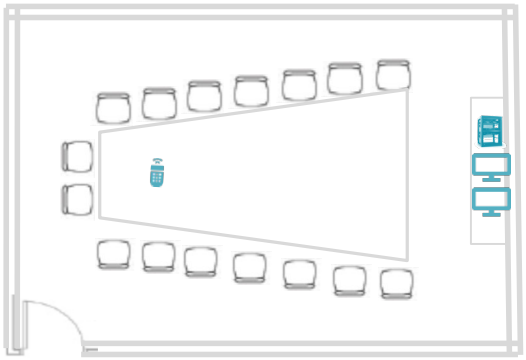
Sound Systems:
Audio Processor
Ceiling Speakers

Control:
10” Touch Panel

COLLABORATION SYSTEM
Bundled



INTEGRATED CONFERENCING
Web/Audio



INFRASTRUCTURE BY OTHERS *		*The following items would be provided by other contractors:*	
Device	**Location**	**Infrastructure**	**Trade Responsible**
Display	At Front Wall	Structural support per display	Construction Contractor
		Shared duplex outlet 20amp circuit per display	Electrical Contractor
		Installation of a plenum rated in-wall box per display	Provided by AV Contractor Installed by Electrical Contractor
		LAN connection	Low Voltage Contractor
Control Panel	At Table	1 grommet cut out	Furniture Contractor
		PoE Cable	Low Voltage Contractor
		2 x Poke thru with 1.5” conduit under table and floor core inside front wall for cable passage	Construction Contractor
Rack	At Credenza	2 x Dedicated duplex 20amp circuit power	Electrical Contractor
		LAN Connection	Low Voltage Contractor
		Plenum rated junction box with 1.5” conduit	Construction Contractor
		Provide adequate credenza ventilation	Furniture & AV Contractor

** Infrastructure requirements vary by project and therefore represent a general guideline.*

*** Not required for all-in-one solutions as camera, microphones and speakers are integrated into the display.*

MULTIPURPOSE ROOM

This flexible space provides multiple layouts for company presentations, seminars, training and team collaboration.

Footprint: 30’ x 30’ | 900 SF
Compatible Platform: Microsoft Teams

BUDGET RANGE: *

Integrated Conferencing Web/Audio

No Monitors, Installed Integrated System	$ 37,900
Dual 86” Displays, Mounted	$ 47,200
Microsoft Teams License 1 Yr	$ 180
One Year Service	$ 3,200

SYSTEM TYPES

- ***Integrated Web/Audio:*** To accommodate larger spaces for web conferencing, a system was designed to provide the functional and space requirements of a multipurpose environment. The integrated system consists of a mini PC integrated with Microsoft Teams web conferencing, a 10” touch panel, digital media interface, dual 86” displays, audio sound processor, two ceiling array and two wireless microphones and in-ceiling speakers. Components are rack-mounted in an owner-furnished credenza with proper cable access and ventilation. Two tracking cameras are specified; one to capture the presenter and the second to capture the audience for far-end viewing. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system.

** Pricing is an estimate only and it excludes tax and delivery.*

MULTIPURPOSE ROOM | Specification

DESIGN CONSIDERATIONS

- If adjacent spaces are divide/combine, consider acoustics, privacy and sound quality.
- Divide/combine spaces would be an upgrade to this multipurpose design.

INTEGRATED CONFERENCING

Display:
Dual 86” Flat Screen Display

Input Sources:
Mini PC with Microsoft Teams Web Conferencing

Cameras:
Dual Tracking Cameras

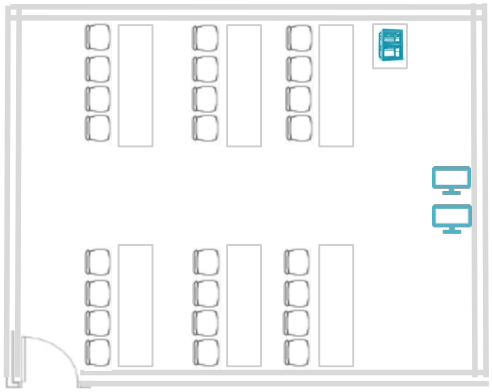
Microphones:
2 Ceiling Array Microphones
2 Wireless Microphones

Sound Systems:
Audio Processor
Ceiling Speakers

Control:
10” Touch Panel

INTEGRATED CONFERENCING

Web/Audio



INFRASTRUCTURE BY OTHERS *	*The following items would be provided by other contractors:*		
Device	**Location**	**Infrastructure**	**Trade Responsible**
Display	At Front Wall	Structural support	Construction Contractor
		Dedicated duplex 20amp circuit	Electrical Contractor
		Installation of a plenum rated in-wall box	Provided by AV Contractor Installed by Electrical Contractor
		LAN connection	Low Voltage Contractor
Rack	At Wall Next to Lectern	2 x dedicated duplex 20amp circuit power	Electrical Contractor
		Poe Cable and LAN connections	Low Voltage Contractor
		Plenum rated junction box with 1.5” conduit	Electrical Contractor
		Provide adequate OFE lectern ventilation	Furniture & AV Contractor

* *Infrastructure requirements vary by project and therefore represent a general guideline.*

WORK CAFÉ

This flexible, informal space supports individual work and collaboration in addition to presentations, trainings and events.

Footprint: 40’ x 40’ | 1,600 SF
Seats: 35
Compatible Platform: Microsoft Teams

BUDGET RANGE: *

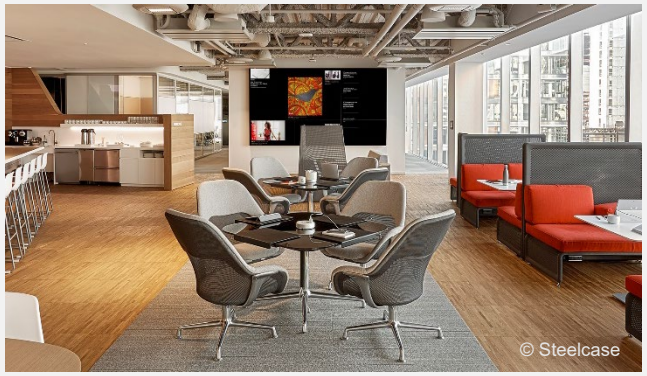
Integrated Conferencing - Web/Audio	
No Monitors, Installed Integrated System	$ 33,700
Dual 86” Displays, Mounted	$ 43,000
Microsoft Teams License – 1 Yr	$ 180
One Year Service	$ 2,850

SYSTEM TYPES

- ***Integrated Web/Audio:*** To accommodate larger spaces for web conferencing, a system was designed to provide the functional and space requirements of a work café. The integrated system consists of a 10” touch panel, digital media interface, audio sound processor, and a PC running Microsoft Teams web conferencing. The system design includes dual 86” flat screen displays, two wireless handheld microphones, two lapel microphones and in-ceiling speakers. Two tracking cameras are specified; one to capture the presenter and the second to track the audience. Given the scale of the space, audience questions are to be facilitated by the presenter to the far end of the web conference call. Components are rack-mounted in an owner-furnished credenza with proper cable access and ventilation. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system.

** Pricing is an estimate only and it excludes tax and delivery.*

WORK CAFÉ | Specification



DESIGN CONSIDERATIONS

- To ensure the legibility of images and text on the display, when determining the display size, the furthest person seated in the space can be positioned no more than 6 times the height of the display
- Consider the amount of ambient light in the space when selecting the display or projector brightness. Shades can provide better visibility on sunny days.
- To maintain visual sight lines, avoid hanging pendant fixtures that are lower than the top of the display image.
- Sound masking can minimize distractions for those seated in adjacent spaces.

INTEGRATED CONFERENCING

Display:
Dual 86” Flat Screen Display

Input Sources:
Mini PC with Microsoft Teams Web Conferencing

Cameras:
Dual Tracking Cameras

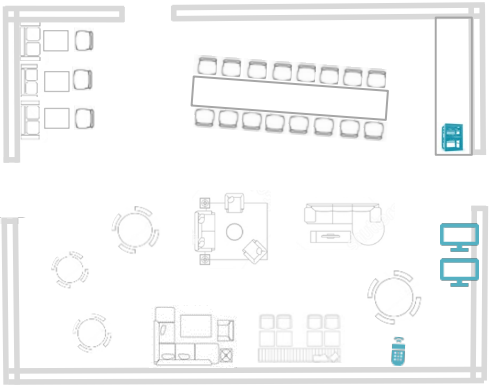
Microphones:
Wireless microphones

Sound Systems:
Audio Processor
Ceiling Speakers

Control:
10” Touch Panel

INTEGRATED AUDIO/WEB CONFERENCING

Dual Display



INFRASTRUCTURE BY OTHERS * *The following items would be provided by other contractors:*

Device	Location	Infrastructure	Trade Responsible
		Structural support at each display device	Construction Contractor
Dual Display	At Front Wall	Dedicated duplex 20amp circuit per display	Electrical Contractor
		Installation of a plenum rated in-wall box	Provided by AV Contractor Installed by Electrical Contractor
		LAN connection	Low Voltage Contractor
Rack	At Built-In	2 x dedicated duplex 20amp circuit power	Electrical Contractor
		LAN connections	Low Voltage Contractor
		Plenum rated junction box with 1.5” conduit	Electrical Contractor
		Provide adequate lectern ventilation	Furniture & AV Contractor
Control Panel	At Wall	Plenum rated in-wall back box	Construction Contractor
		PoE Cable	Low Voltage Contractor

** Infrastructure requirements vary by project and therefore represent a general guideline.*

Zoom Conferencing Spaces

Huddle Room

Meeting Room

Boardroom

Multipurpose Room

Work Café

HUDDLE ROOM

Huddle rooms support planned and impromptu collaboration for small groups.

Footprint: 8’ x 10’ | 80 SF
Compatible Platform: Zoom

BUDGET RANGE: *

All-in-One Desk Solution (1-2 ppl)	
No Installation	$ 1,670
Installed	$ 2,200
Collaboration System – Bundled	
No Monitor, Installed Collaboration System	$ 4,470
55” Display, Wall Mounted	$ 5,700
Zoom Licenses	$ 600
One Year Service	$ 350

SYSTEM TYPES

- ***All-in-One Solution:*** For one or two participants, a Dell Optiplex AIO 7760 with an integrated 27” touch display provides a seamless user experience. Participants can share content and collaborate with local and far-end participants over Zoom cloud-based web conferencing. The display monitor has a built-in camera, microphone and web conferencing.

- ***Bundled System:*** This Zoom bundled solution offers optimal simplicity for web/audio conferencing. The pre-packaged system incorporates a Dell Optiplex micro pc running Zoom web conferencing, a 55” display, and a sound bar with integrated camera and microphone. The users interface with a 9.7” iPad, housed in a table console and designed with a Zoom standard user interface for system control. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system.

Note: *Integrated Conferencing systems are typically designed for larger spaces and not provided for Huddle spaces.*

** Pricing is an estimate only and it excludes tax and delivery.*

HUDDLE ROOM | Specification

DESIGN CONSIDERATIONS

- Display height should be 48” from the floor.
- Display size should be between 4 and 8 times the distance from the furthest seat at the table.

ALL IN ONE SOLUTION

Display:
27” Flat Screen Monitor with web conferencing

Input Sources:
Dell Optiplex Desktop

Cameras:
Built into Monitor

Microphones:
Built into Monitor

Sound Systems:
Built into Monitor

Control:
At the display

COLLABORATION ROOM SYSTEMS

Display
55” Display with web conferencing

Input Sources:
Micro PC – Mounted behind Display

Cameras:
Built into Sound Bar

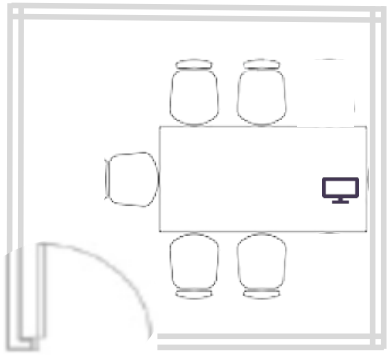
Microphones:
Built into Sound Bar

Sound Systems:
Built into Sound Bar

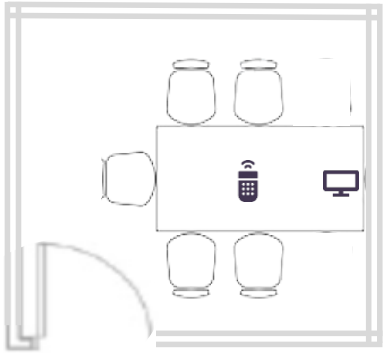
Control
9.7” iPad Touch Controller

HUDDLE ROOM | Infrastructure

PRESENTATION | WEB CONFERENCING
All-in-One Solution



COLLABORATION ROOM SYSTEMS
Bundled System



INFRASTRUCTURE BY OTHERS * *The following items would be provided by other contractors:*

Device	Location	Infrastructure	Trade Responsible
Display	On Front Wall at Display Height	Structural support	Construction Contractor
		Shared duplex outlet 20amp circuit	Electrical Contractor
		Installation of a plenum rated in-wall	Provided by AV Contractor Installed by Electrical Contractor
		LAN Connection	Low Voltage Contractor
Control Panel	On Front Wall / at Table Height	Dedicated duplex 20amp circuit power	Electrical Contractor
		Wall plate or grommet for bundled solution (control panel /speaker / microphone console)	AV Contractor
		2 x Poke thru with 1.5” conduit under table and floor core inside front wall for cable passage	Construction Contractor

** Infrastructure requirements vary by project and therefore represent a general guideline.*

MEETING ROOM

The Meeting Room is intended for moderate sized gatherings for presentation, audio or web conferencing.

Footprint: 12' x 15' |180 SF
Compatible Platform: Zoom

SYSTEM TYPES

- ***Bundled System:*** This Zoom bundled solution offers optimal simplicity for web/audio conferencing. The pre-packaged system incorporates a Dell Optiplex micro pc running Zoom web conferencing, a 65" display, table microphone pods and a sound bar with integrated camera. The users interface with a 9.7" iPad, housed in a table console. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system.

- ***Integrated Web/Audio:*** This is a Zoom engineered packaged solution. For optimal viewing, far-end participants and content are shown on dual 65" displays utilizing Zoom cloud-based web conferencing. For high fidelity audio conferencing, two ceiling array microphones with an audio processor and distributed in-ceiling sound system support clear verbal communication. Components are rack-mounted in an owner-furnished credenza with proper cable access and ventilation. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system. The users interface with a 9.7" iPad, housed in a table console and designed with a Zoom standard user interface for system control.

BUDGET RANGE: *

Collaboration System – Bundled	
No Monitor	$ 5,950
65" Display, Wall Mounted	$ 7,750
Zoom Licenses	$ 600
One Year Service	$ 475
Integrated Conferencing Web/Audio	
No Monitor	$ 12,650
Dual 65" Displays, Wall Mounted	$ 16,450
One Year Service	$ 1,250
Zoom Licenses	$ 900

** Pricing is an estimate only and it excludes tax and delivery.*

MEETING ROOM | Specification

DESIGN CONSIDERATIONS

- Consider the acoustics to ensure privacy and sound quality, (i.e.) demountable wall STC ratings, sound absorption materiality of ceilings, floors and walls
- Lighting should be incorporated that properly illuminates room participants
- Consider far-end camera views to minimize distractions and confidentially

COLLABORATION ROOM SYSTEMS

Display:
65” Flat Screen Display

Input Sources:
Micro PC – mounted behind display

Cameras:
Pan Tilt Zoom Camera

Microphones:
Table microphone pod

Sound Systems:
Sound Bar

Control
9.7” iPad Touch Controller

INTEGRATED CONFERENCING

Display:
Dual 65” Flat Screen Display

Input Sources:
Micro PC – mounted behind display

Cameras:
Pan Tilt Zoom Camera

Microphones:
Ceiling Array Microphones

Sound Systems:
Ceiling Speakers

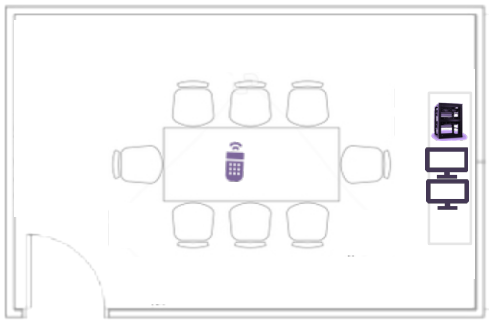
Control
9.7” iPad Touch Controller

COLLABORATION ROOM SYSTEMS

Bundled System

INTEGRATED CONFERENCING

Web/Audio



INFRASTRUCTURE BY OTHERS * *The following items would be provided by other contractors:*

Device	Location	Infrastructure	Trade Responsible
Display	At Front Wall	Structural support per display	Construction Contractor
		Dedicated duplex outlet 20amp circuit per display	Electrical Contractor
		Installation of a plenum rated in-wall box per display	Provided by AV Contractor Installed by Electrical Contractor
		LAN Connection	Low Voltage Contractor
Control	At Table	Dedicated duplex 20amp circuit power	Electrical Contractor
		2 Poke thru with 1.5” conduit under table and floor core inside front wall for cable passage	Construction Contractor
		1 grommet cut for passthrough or terminated plate	Furniture Contractor
Microphone	At Table	1 grommet cut out for each microphone pod	Furniture Contractor
Rack	At Credenza	2 x dedicated duplex 20amp circuit power	Electrical Contractor
		LAN connections	Low Voltage Contractor
		Plenum rated junction box with 1.5” conduit	Electrical Contractor
		Provide adequate OFE lectern ventilation	Furniture & AV Contractor

** Infrastructure requirements vary by project and therefore represent a general guideline.*

BOARDROOM

The boardroom's enhanced video & audio is optimal for more formal conferencing presentations.

Footprint: 20' x 35' | 700 SF
Compatible Platform: Zoom

SYSTEM TYPES

- ***Integrated Web/Audio:*** This Zoom engineered package system is designed to meet the requirements of medium and large sized boardroom environments. Participants display and share content on a single 86" or dual 75" flat screen displays from a Dell OptiPlex computer with integrated Zoom web conferencing. One to two ceiling array microphones and a pan/tilt/zoom camera (wall mounted at the display) will capture local room audio and video for remote participants. Audio is distributed through the ceiling speakers. Components are rack-mounted in an owner-furnished credenza with proper cable access and ventilation. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system. The users interface with a 9.7" iPad, housed in a table console and designed with a Zoom standard user interface for system control.

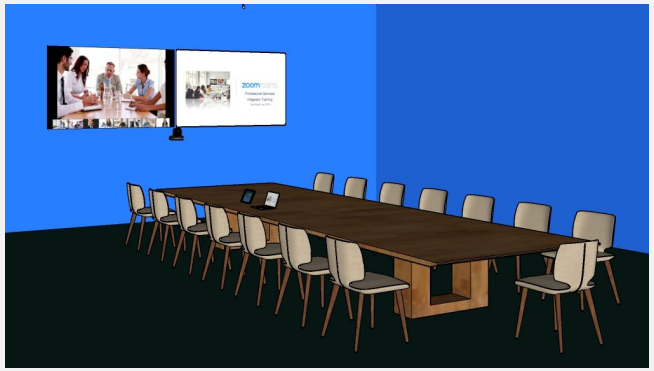
BUDGET RANGE: *

Integrated Conferencing Web/Audio

No Monitor, Installed Integrated System	$ 13,800
Single 86" Display, Wall Mounted	$ 18,500
Zoom Licenses	$ 600
One Year Service	$ 1,200
No Monitor, Installed Integrated System	$ 19,200
Dual 75" Displays, Wall Mounted	$ 25,700
One Year Service	$ 1,700
Zoom Licenses	$ 600

** Pricing is an estimate only and it excludes tax and delivery.*

BOARDROOM | Specification



DESIGN CONSIDERATIONS

- Consider the acoustics to ensure privacy and sound quality, (i.e.) demountable wall STC ratings, sound absorption materiality of ceilings, floors and walls
- Lighting should be incorporated that properly illuminates room participants
- Consider far-end camera views to minimize distractions and confidentially

INTEGRATED CONFERENCING

Display:
Single 86” or Dual 75” Flat Screen Displays

Input Sources:
Rack Mounted PC

Cameras:
Pan/Tilt/Zoom High Res Camera

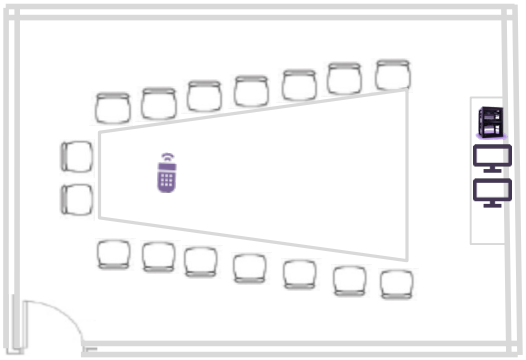
Microphones:
1- 2 Ceiling Microphones

Sound Systems:
Audio Processor
4 - 8 Ceiling Speakers

Control:
9.7” iPad control panel

INTEGRATED CONFERENCING

Web/Audio



INFRASTRUCTURE BY OTHERS *	*The following items would be provided by other contractors:*		
Device	**Location**	**Infrastructure**	**Trade Responsible**
Display	At Front Wall	Structural support per display	Construction Contractor
		Shared duplex outlet 20amp circuit per display	Electrical Contractor
		Installation of a plenum rated in-wall box per display	Provided and Installed by Electrical Contractor
		LAN Connection	Low Voltage Contractor
Control Panel	At Table	Dedicated duplex 20amp circuit power	Electrical Contractor
		2 Poke thru with 1.5” conduit under table and floor core inside front wall for cable passage	Construction Contractor
		1 grommet cut for passthrough or terminated plate	Furniture Contractor
Rack	At Credenza	2 x Dedicated duplex 20amp circuit power	Electrical Contractor
		LAN Connection	Low Voltage Contractor
		Plenum rated junction box with a 1.5” conduit	Electrical Contractor
		Provide adequate credenza ventilation	Furniture & AV Contractor

** Infrastructure requirements vary by project and therefore represent a general guideline.*

MULTIPURPOSE ROOM

Dual confidence monitors not shown in photo.

This flexible space provides multiple layouts for company presentations, seminars, training and team collaboration.

Footprint: 30’ x 30’ | 900 SF
Compatible Platform: Zoom

SYSTEM TYPES

- ***Integrated Web/Audio:*** This Zoom engineered package system is designed to meet the requirements of similar sized multipurpose environments. Participants display and share content on dual 86” flat screen displays from a Dell OptiPlex computer with integrated Zoom web conferencing. Two ceiling array microphones, two wireless microphones and a pan/ tilt/zoom camera (wall mounted at the display) will capture local room audio and video for remote participants. Audio is distributed through the ceiling speakers. Components are rack mounted in an owner furnished credenza with proper cable access and ventilation. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system. The users interface with a 9.7” iPad, housed in a table console and designed with a Zoom standard user interface for system control.

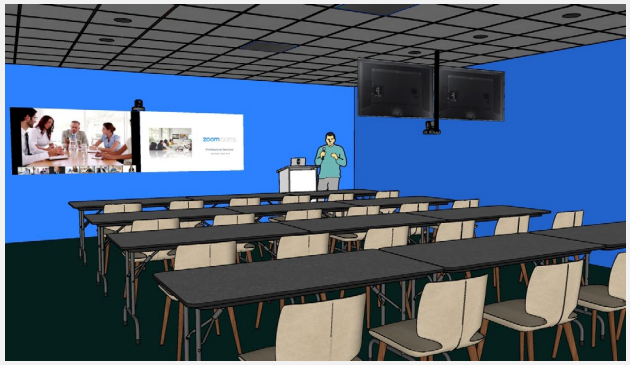
BUDGET RANGE: *

Integrated Conferencing Web/Audio

No Monitor, Installed Integrated Systems	$ 28,700
Dual 86” Displays, Mounted	$ 38,000
Zoom Licenses	$ 600
One Year Service	$ 2,400

** Pricing is an estimate only and it excludes tax and delivery.*

MULTIPURPOSE ROOM | Specification



DESIGN CONSIDERATIONS

- If adjacent spaces are divide/combine, consider acoustics, privacy and sound quality.
- Divide/combine spaces would be an upgrade to this multipurpose design.

INTEGRATED CONFERENCING

Display:
Dual 86” 4k Displays

Input Sources:
Rack Mounted PC

Cameras:
Dual Pan/Tilt/Zoom High Resolution Camera

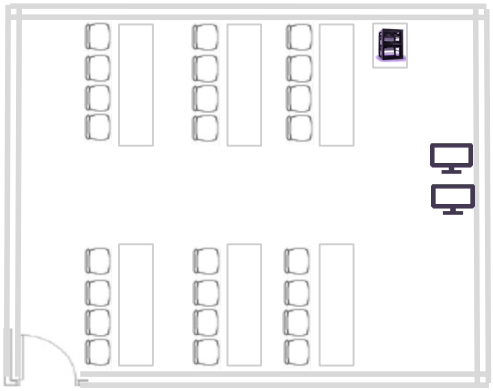
Microphones:
Ceiling Array Microphones
Wireless Handheld Microphones

Sound Systems:
Ceiling Speakers
Audio Processor

Control:
9.7” iPad control panel

INTEGRATED CONFERENCING

Web/Audio



INFRASTRUCTURE BY OTHERS * *The following items would be provided by other contractors:*

Device	Location	Infrastructure	Trade Responsible
Display	At Front Wall	Structural support	Construction Contractor
		Dedicated duplex 20amp circuit	Electrical Contractor
		Installation of a plenum rated in-wall box	Provided by AV Contractor Installed by Electrical Contractor
		LAN Connection	Low Voltage Contractor
Rack	At Wall Next to Lectern	2 x dedicated duplex 20amp circuit power	Electrical Contractor
		LAN connections	Low Voltage Contractor
		Plenum rated junction box with 1.5” conduit	Electrical Contractor
		Provide adequate lectern ventilation	Furniture & AV Contractor

** Infrastructure requirements vary by project and therefore represent a general guideline.*

WORK CAFÉ

Dual confidence monitors and dual repeat monitors not shown in photo.

This flexible, informal space supports individual work and collaboration in addition to presentations, trainings and events.

Footprint: 40’ x 40’ | 1,600 SF
Compatible Platform: Zoom

SYSTEM TYPES

- ***Integrated Web/Audio:*** To accommodate larger spaces for web conferencing, this Zoom engineered package system is designed to meet the functional and space requirements of a work café. Participants display and share content on dual 86” flat screen displays from a Dell OptiPlex computer with integrated Zoom web conferencing. Four wireless microphones and dual pan/tilt/zoom cameras will capture local room audio and video for remote participants. Given the scale of the space, audience questions are to be facilitated by the presenter to the far end of the web conference call. Audio is distributed through the ceiling speakers. Components are rack-mounted in an owner-furnished credenza with proper cable access and ventilation. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system. An iPad controller is designed with a Zoom standard user interface for system control.

BUDGET RANGE: *

Integrated Conferencing Web/Audio

No Monitors, Installed Integrated Systems	$ 27,300
Dual 86” Displays, Mounted	$ 36,600
Zoom Licenses	$ 600
One Year Service	$ 2,300

** Pricing is an estimate only and it excludes tax and delivery.*

DESIGN CONSIDERATIONS

- To ensure the legibility of images and text on the display, when determining the display size, the furthest person seated in the space can be positioned no more than 6 times the height of the display
- Consider the amount of ambient light in the space when selecting the display or projector brightness. Shades can provide better visibility on sunny days.
- To maintain visual sight lines, avoid hanging pendant fixtures that are lower than the top of the display image.
- Sound masking can minimize distractions for those seated in adjacent spaces.

INTEGRATED CONFERENCING

Display:
Dual 86” 4k Displays

Input Sources:
Rack Mounted PC

Cameras:
Pan/Tilt/Zoom High Resolution Camera

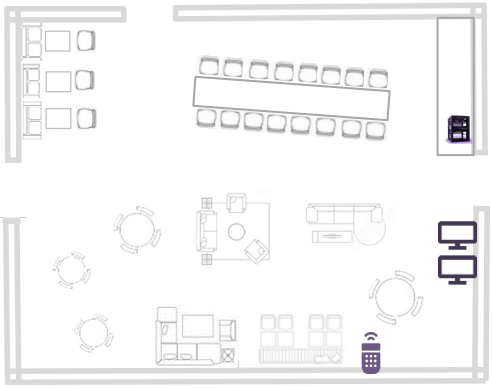
Microphones:
Wireless Handheld Microphones

Sound Systems:
Ceiling Speakers
Audio Processor

Control:
9.7” iPad control panel

INTEGRATED WEB/AUDIO CONFERENCING

Dual Display



INFRASTRUCTURE BY OTHERS * *The following items would be provided by other contractors:*

Device	Location	Infrastructure	Trade Responsible
Display	At Front Wall	Structural support	Construction Contractor
		Dedicated duplex 20amp circuit	Electrical Contractor
		Installation of a plenum rated in-wall box	Provided by AV Contractor Installed by Electrical Contractor
		LAN Connection	Low Voltage Contractor
Rack	At Wall Next to Lectern	2 x dedicated duplex 20amp circuit power	Electrical Contractor
		LAN connections	Low Voltage Contractor
		Plenum rated junction box with 1.5” conduit	Electrical Contractor
		Provide adequate lectern ventilation	Furniture & AV Contractor
Control Panel	At Wall	Plenum rated in-wall back box	Construction Contractor
		Dedicated duplex 20amp circuit	Electrical Contractor

* *Infrastructure requirements vary by project and therefore represent a general guideline.*

Cisco Conferencing Spaces

Huddle Room

Meeting Room

Boardroom

Multipurpose Room

Work Café

HUDDLE ROOM

Huddle rooms support planned and impromptu collaboration for small groups.

Footprint: 8’ x 10’ | 80 SF
Compatible Platform: Cisco Webex Teams

BUDGET RANGE: *

All-in-One Solution	
55” Cisco Webex Board, Installed	$ 6,300
Collaboration System – Bundled	
No Monitor, Installed Collaboration System	$ 6,850
55” Display, Wall Mounted	$ 8,050
Cisco Licenses	$ 1,200
One Year Service	$ 560

SYSTEM TYPES

- ***All-in-One Solution:*** For a seamless user experience, multiple features are integrated within a single device. Participants interact with a 55” touch-controlled display to share content and collaborate with local and far-end participants using the digital whiteboard. The system has built-in cameras, microphones and web conferencing.

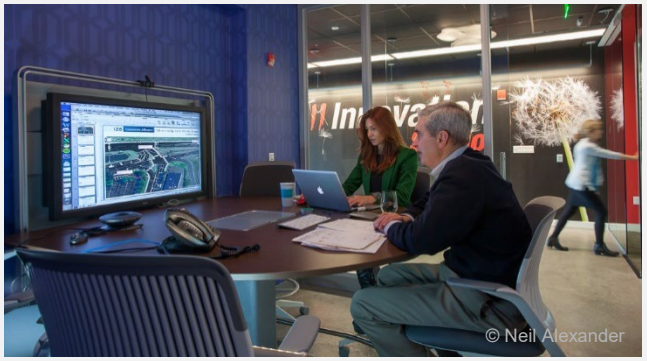
  Note: *Typically these small spaces do not have tables directly underneath display in order to provide adequate space for users to interact with the display.*

- ***Bundled System****:* For optimal simplicity for web/audio conferencing, a pre-packaged Cisco Room Kit incorporates a sound bar with integrated camera, microphone, speaker and codec running Webex conferencing software. far-end participants and content are shown on a 55” display. The users interface with a Cisco Touch 10” wireless control panel. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system.

  Note: *Integrated Conferencing systems are typically designed for larger spaces and not provided for Huddle spaces.*

** Pricing is an estimate only and it excludes tax and delivery.*

HUDDLE ROOM | Specification



DESIGN CONSIDERATIONS

- Display height should be 48” from the floor.
- Display size should be between 4 and 8 times the distance from the furthest seat at the table.

ALL IN ONE SYSTEM

Display:
55” Interactive Display

Input Sources:
Built-in PC with integrated web conferencing

Cameras:
Built-in

Microphones:
Built-in

Sound Systems:
Built-in

Control:
Touch control at the board

COLLABORATION ROOM SYSTEMS

Display:
55” Flat Screen Display

Input Sources:
Cisco Web Conference Codec

Cameras:
Cisco Room Kit Sound Bar

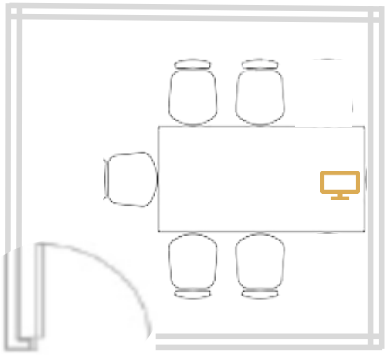
Microphones:
Cisco Room Kit Sound Bar

Sound Systems:
Cisco Room Kit Sound Bar

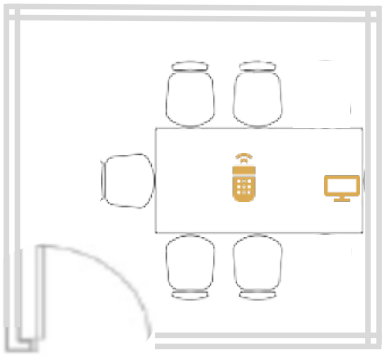
Control
10” Touch Panel Controller

HUDDLE ROOM | Infrastructure

PRESENTATION | WEB CONFERENCING
All-in-One Solution



COLLABORATION ROOM SYSTEMS
Bundled System



INFRASTRUCTURE BY OTHERS * *The following items would be provided by other contractors:*

Device	Location	Infrastructure	Trade Responsible
Display	On Front Wall at Display Height	Structural support	Construction Contractor
		Shared duplex outlet 20amp circuit	Electrical Contractor
		Installation of a plenum rated in-wall	Provided by AV Contractor Installed by Electrical Contractor
		LAN Connection	Low Voltage Contractor
Control Panel	At the table	POE cable	Low Voltage Contractor
		1 grommet cut for passthrough or terminated plate	Furniture Contractor
		Poke thru with 1.5” conduit under table and floor core inside front wall for cable passage	Construction Contractor

* *Infrastructure requirements vary by project and therefore represent a general guideline.*

MEETING ROOM

SOCIAL DISTANCING SPACE PLANNING

Illustrated capacity: 8-10 people
Estimated safe capacity: **2 people**

The Meeting Room is intended for moderate sized gatherings for presentation, audio or web conferencing.

Footprint: 12' x 15' |180 SF
Compatible Platform: Cisco Webex / VTC

SYSTEM TYPES

- ***All-in-One Solution:*** For a seamless user experience, multiple features are integrated within a single device. Participants interact with a 70" touch-controlled display to share content and collaborate with local and far-end participants using the digital whiteboard. The system has built-in cameras, microphones and web conferencing.

  Note: *Typically these small spaces do not have tables directly underneath the display to provide adequate space for users to interact with the display.*

- ***Bundled System:*** For optimal simplicity for web/audio conferencing, a pre-packaged Cisco Room Kit incorporates a sound bar with integrated camera, microphone, speaker and codec running Webex conferencing software. far-end participants and content are shown on a single 65" display. The users interface with a Cisco Touch 10" wired control panel. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system.

- ***Integrated Web/Audio*:** For large meeting rooms that require enhanced video and audio and dual display, a pre-packaged Cisco Room Kit Plus incorporates Cisco Touch 10" control panel, a sound bar with integrated quad camera, 2 table extender microphones, ceiling speaker and codec running Webex conferencing software. far-end participants and content are shown on a single 65" display. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system.

BUDGET RANGE: *

All-in-One Solution	
70" Cisco Webex Board, Installed	$ 11,300
Collaboration System - Bundled	
No Monitor, Installed Collaboration System	$ 9,400
65" Display, Wall Mounted	$ 11,200
Cisco Licenses	$ 1,350
One Year Service	$ 800
Integrated Conferencing Video/Audio	
No Monitor, Installed Integrated System	$ 16,600
Dual 65" Display, Wall Mounted	$ 20,200
Cisco Licenses	$ 1,350
One Year Service	$ 1,460

** Pricing is an estimate only and it excludes tax and delivery.*

MEETING ROOM | Specification

DESIGN CONSIDERATIONS

- Consider the acoustics to ensure privacy and sound quality, (i.e.) demountable wall STC ratings, sound absorption materiality of ceilings, floors and walls
- Lighting should be incorporated that properly illuminates room participants
- Consider far-end camera views to minimize distractions and confidentially
- For all in one system solutions, ensure that there is adequate space for users to interact with the display.

ALL IN ONE SYSTEM

Display:
65” Interactive Display

Input Sources:
Built-in PC with integrated web conferencing

Cameras:
Built-in

Microphones:
Built-in

Sound Systems:
Built-in

Control:
Touch control at the board

COLLABORATION ROOM SYSTEMS

Display:
65” Flat Screen Display

Input Sources:
Cisco Webex Codec

Cameras:
Cisco Room Kit Sound Bar

Microphones:
Cisco Room Kit Sound Bar

Sound Systems:
Cisco Room Kit Sound Bar

Control
10” Touch Panel Controller

INTEGRATED CONFERENCING

Display:
Dual 65” Flat Screen Display

Input Sources:
Cisco Webex Codec

Cameras:
Quad Camera

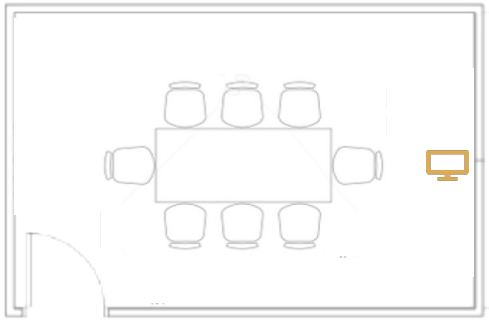
Microphones:
Table Microphone

Sound Systems:
Ceiling Speakers

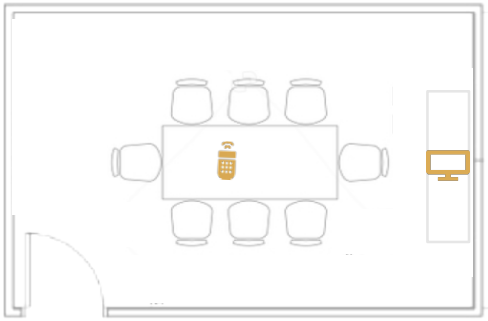
Control
10” Touch Panel Controller

MEETING ROOM | Infrastructure

COLLABORATION ROOM SYSTEMS
All In One



COLLABORATION ROOM SYSTEMS
Bundled System



INTEGRATED CONFERENCING
Web/Audio and Video/Audio

INFRASTRUCTURE BY OTHERS * *The following items would be provided by other contractors:*

Device	Location	Infrastructure	Trade Responsible
Display	At Front Wall	Structural support per display	Construction Contractor
		Dedicated duplex outlet 20amp circuit per display	Electrical Contractor
		Installation of a plenum rated in-wall box per display	Provided by AV Contractor Installed by Electrical Contractor
		LAN Connection	Low Voltage Contractor
Control panel	At Table	POE Cable	Low Voltage Contractor
		Grommet cut out	Furniture & AV Contractor
		Poke thru with 1.5” conduit under table and floor core inside front wall for cable passage	Construction Contractor
Microphone	At Table	Grommet cut out	Furniture & AV Contractor
Rack	At Credenza	Dedicated duplex 20amp circuit power	Electrical Contractor
		LAN connection	Low Voltage Contractor
		Plenum rated junction box with 1.5” conduit	Electrical Contractor
		Provide adequate credenza ventilation	Furniture & AV Contractor

** Infrastructure requirements vary by project and therefore represent a general guideline.*

*** Not required for all-in-one solutions as camera, microphones and speakers are integrated into the display.*

BOARDROOM

The boardroom's enhanced video & audio is optimal for more formal conferencing presentations.

Footprint: 20' x 35' | 700 SF
Compatible Platform: Cisco Webex / VTC

SYSTEM TYPES

- ***Integrated Web/Audio:*** For optimal simplicity for web/audio conferencing, a pre-packaged Cisco Room Kit incorporates a Cisco 10" Touch control, a sound bar with integrated quad camera, ceiling array microphones, ceiling speakers and a codec running Webex conferencing software. far-end participants and content are shown on either a single 86" display or dual 75" displays. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system.

BUDGET RANGE: *

Integrated Conferencing Video/Audio

No Monitor, Installed Integrated System	$ 25,500 – 29,800	
86" Display, Wall Mounted	$	30,000
Cisco Licenses	$	1,350
One Year Service	$	2,000
Dual 75" Displays, Wall Mounted	$	36,500
Cisco Licenses	$	1,350
One Year Service	$	2,500

** Pricing is an estimate only and it excludes tax and delivery.*

BOARDROOM | Specification

DESIGN CONSIDERATIONS

- Consider the acoustics to ensure privacy and sound quality, (i.e.) demountable wall STC ratings, sound absorption materiality of ceilings, floors and walls
- Lighting should be incorporated that properly illuminates room participants
- Consider far-end camera views to minimize distractions and confidentially
- For all in one system solutions, ensure that there is adequate space for users to interact with the display.

INTEGRATED CONFERENCING

Display:
86” Flat Screen Display

Input Sources:
Cisco Webex Codec

Cameras:
Quad Camera

Microphones:
1 Ceiling Microphone

Sound Systems:
4 Ceiling Speakers

Control
10” Touch Panel Controller

INTEGRATED CONFERENCING

Display:
Dual 75” Flat Screen Display

Input Sources:
Cisco Webex Codec

Cameras:
Quad Camera

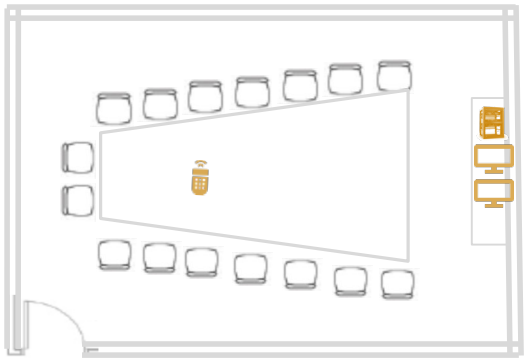
Microphones:
2 Ceiling Microphone

Sound Systems:
8 Ceiling Speakers

Control
10” Touch Panel Controller

INTEGRATED CONFERENCING

Video/Audio



INFRASTRUCTURE BY OTHERS * *The following items would be provided by other contractors:*

Device	Location	Infrastructure	Trade Responsible
Display	At Front Wall	Structural support per display	Construction Contractor
		Shared duplex outlet 20amp circuit per display	Electrical Contractor
		Installation of a plenum rated in-wall box per display	Provided by AV Contractor Installed by Electrical Contractor
		LAN Connection	Low Voltage Contractor
Control Panel	At Table	POE Cable	Low Voltage Contractor
		Grommet cut out	Furniture & AV Contractor
		Poke thru with 1.5” conduit under table and floor core inside front wall for cable passage	Construction Contractor
Rack	At Credenza	Dedicated duplex 20amp circuit power	Electrical Contractor
		Plenum rated junction box with 1.5” conduit	Electrical Contractor
		LAN Connection	Low Voltage Contractor
		Provide adequate credenza ventilation	Furniture & AV Contractor

** Infrastructure requirements vary by project and therefore represent a general guideline.*

*** Not required for all-in-one solutions as camera, microphones and speakers are integrated into the display.*

MULTIPURPOSE ROOM

SOCIAL DISTANCING SPACE PLANNING

Illustrated capacity: 24-30 people
Estimated safe capacity: **12 people**

This flexible space provides multiple layouts for company presentations, seminars, training and team collaboration.

Footprint: 30’ x 30’ | 900 SF
Compatible Platform: Cisco Webex / VTC

BUDGET RANGE: *

Integrated Conferencing Video/Audio

No Monitor, Installed Integrated System	$ 45,400
Dual 75” Displays, Wall Mounted	$ 54,500
Cisco Licenses	$ 1,750
One Year Service	$ 3,800

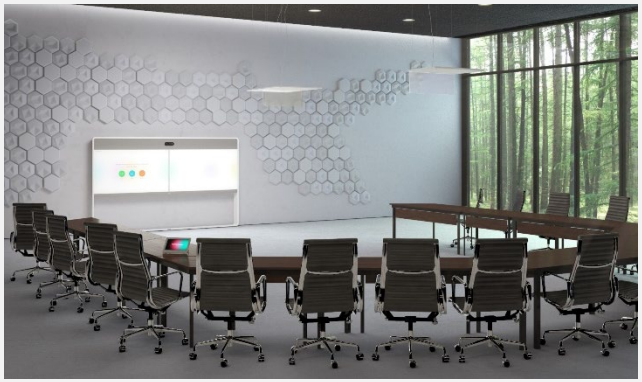
SYSTEM TYPES

- ***Integrated Web/Audio*:** To accommodate larger spaces for web conferencing, the Cisco Integrator Kit allows you to customize your solution. For this system, we have the Cisco codec running Webex and dual Cisco Precision Cameras to capture the presenter and audience for far-end viewing. Two ceiling array microphones and two wireless handheld/lapel mics provide speech reinforcement for the presenter, panelist and/or audience members. Audio is distributed through the ceiling speakers. Components are rack-mounted in an owner-furnished credenza with proper cable access and ventilation. Local content and far-end participants are shown on dual 86” displays. The users interface with a Cisco Touch 10” wired control panel. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system.

***Note:** Cisco’s Collaboration Room systems do not accommodate the spatial needs of a multipurpose room.*

** Pricing is an estimate only and it excludes tax and delivery.*

MULTIPURPOSE ROOM | Specification



DESIGN CONSIDERATIONS

- If adjacent spaces are divide/combine, consider acoustics, privacy and sound quality.
- Divide/combine spaces would be an upgrade to this multipurpose design.

INTEGRATED CONFERENCING

Display:
Dual 86” Flat Screen Displays

Input Sources:
Cisco Webex Codec

Cameras:
Dual Cisco Precision Cameras

Microphones:
2 Ceiling Microphones
2 Wireless Microphones

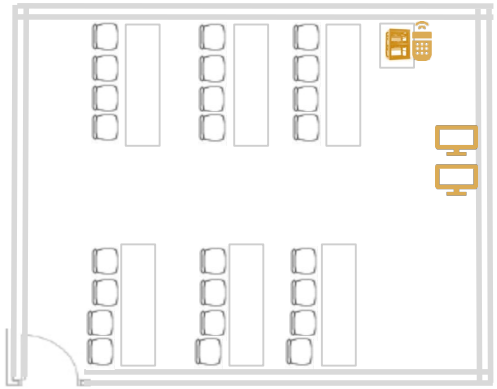
Sound Systems:
Ceiling Speakers
Audio Processor

Control:
10” Control Panel

MULTIPURPOSE ROOM | Infrastructure

INTEGRATED CONFERENCING

Video/Audio



INFRASTRUCTURE BY OTHERS *	*The following items would be provided by other contractors:*		
Device	**Location**	**Infrastructure**	**Trade Responsible**
Display	At Front Wall	Structural Support	Construction Contractor
		Dedicated Duplex 20am Circuit	Electrical Contractor
		Installation of a plenum rated in-wall box	Provided by AV Contractor Installed by Electrical Contractor
		LAN Connection	Low Voltage Contractor
Rack	At Wall Next to Lectern	2 x dedicated duplex 20amp circuit power	Electrical Contractor
		Plenum rated junction box with 1.5” conduit	Construction Contractor
		LAN connections and POE Connection	Low Voltage Contractor
		Provide adequate lectern ventilation	Furniture & AV Contractor

** Infrastructure requirements vary by project and therefore represent a general guideline.*

WORK CAFÉ

This flexible, informal space supports individual work and collaboration in addition to presentations, trainings and events.

Footprint: 40’ x 40’ | 1,600 SF
Compatible Platform: Cisco Webex / VTC

SYSTEM TYPES

- ***Integrated Web/Audio:*** To accommodate larger spaces for web conferencing, the Cisco Integrator Kit allows you to customize your solution. For this system, we have the Cisco codec running Webex and dual Cisco Precision Cameras to capture the presenter and audience for far-end viewing. Four wireless handheld/lapel microphones provide speech reinforcement for the presenter, panelist and/or audience members. Given the scale of the space, audience questions are to be facilitated by the presenter to the far end of the web conference call. Audio is distributed through the ceiling speakers. Components are rack-mounted in an owner-furnished credenza with proper cable access and ventilation. Local content and far-end participants are shown on dual 86” displays. The users interface with a Cisco Touch 10” wired control panel. An additional laptop (wired or wireless) input is available as an optional upgrade to the base system.

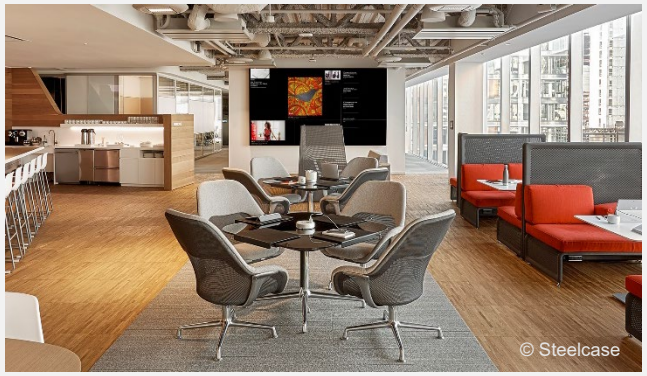
BUDGET RANGE: *

Integrated Conferencing Video/Audio

No Monitor, Installed Integrated System	$ 41,200
Dual 86” Displays, Wall Mounted	$ 50,300
Cisco Licenses	$ 1,750
One Year Service	$ 3,800

** Pricing is an estimate only and it excludes tax and delivery.*

WORK CAFÉ | Specification



DESIGN CONSIDERATIONS

- To ensure the legibility of images and text on the display, when determining the display size, the furthest person seated in the space can be positioned no more than 6 times the height of the display
- Consider the amount of ambient light in the space when selecting the display or projector brightness. Shades can provide better visibility on sunny days.
- To maintain visual sight lines, avoid hanging pendant fixtures that are lower than the top of the display image.
- Sound masking can minimize distractions for those seated in adjacent spaces.

INTEGRATED CONFERENCING

Display:
Dual 86” Displays

Input Sources:
Cisco Webec Codec

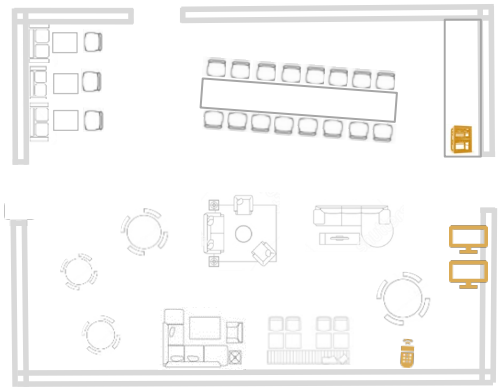
Cameras:
Dual Cisco Precision Cameras

Microphones:
Wireless Microphones

Sound Systems:
Ceiling Speakers

Control:
10” Touch Panel

INTEGRATED VIDEO/AUDIO CONFERENCING



INFRASTRUCTURE BY OTHERS * *The following items would be provided by other contractors:*

Device	Location	Infrastructure	Trade Responsible
Dual Display	At Front Wall	Structural support at each display device	Construction Contractor
		Dedicated duplex 20amp circuit per display	Electrical Contractor
		Installation of a plenum rated in-wall box	Provided by AV Contractor Installed by Electrical Contractor
		LAN Connections	Low Voltage Contractor
Rack	At Built-In	2 x dedicated duplex 20amp circuit power	Electrical Contractor
		LAN connections	Low Voltage Contractor
		Plenum rated junction box with 1.5” conduit	Electrical Contractor
		Provide adequate lectern ventilation	Furniture & AV Contractor
Control Panel	At Wall	PoE Connection	Low Voltage Contractor
		Plenum rated in-wall back box	Construction Contractor

* *Infrastructure requirements vary by project and therefore represent a general guideline.*

Appendix

Microsoft Conferencing Solutions

Zoom Conferencing Solutions

Cisco Conferencing Solutions

Featured Cameras

Featured Software

SIP Business Phones

FEATURED PRODUCTS

Microsoft Conferencing Solutions

All-In-One Solutions

Microsoft Surface Hub 2S

Microsoft Surface Hub 2S is a powerful all-in-one integrated solution for team collaboration. The 50.5″ 4K+ display has interactive touch and built-in Microsoft Teams, camera, microphone array, speakers, wireless Miracast display and Windows 10. Take Surface Hub 2S anywhere with the Steelcase Roam Mobile Stand and APC Charge Mobile Battery.

- ✓ **Huddle rooms**
- ✓ **Meeting rooms**
- Boardrooms
- Multipurpose spaces
- Work cafés

Windows Collaboration Display by Avocor

Microsoft and Avocor team up to create an all-in-one collaboration device. The 65” 4k display with In-glass touch technology for interactivity and built-in Microsoft Teams, built-in in camera, 4 microphone array, stereo speakers, USB connectivity and Windows 10. And, there are built in sensors to measure environmental data such as room temperature to improve facilities.

- Huddle rooms
- ✓ **Meeting rooms**
- ✓ **Boardrooms**
- ✓ **Multipurpose spaces**
- Work cafés

Bundled Systems

Crestron Flex B160

The Crestron Flex B160 is a bundled solution perfect for medium to large sized spaces. It is controlled by a 10″ wireless touch panel and includes a UC sound bar with integrated high definition camera, premium microphone and speakers for stellar audio. Connect wirelessly or with the HD to USB video converter to share content. It seamlessly integrates with Microsoft Teams, Skype for Business, and Zoom Rooms software.

- Huddle rooms
- ✓ **Meeting rooms**
- ✓ **Boardrooms**
- Multipurpose spaces
- Work cafés

Polycom Trio 8800

Polycom® Trio™ is a Microsoft Teams/Skype for Business bundled collaboration system with a 5″ touch control dialing pad, built-in speaker and microphones and table top camera. Add a single display to share content within a Teams/Skype call or using the proprietary wireless or USB wired connection. Not included in the system is a PC with software or room system.

- ✓ **Huddle rooms**
- ✓ **Meeting rooms**
- Boardrooms
- Multipurpose spaces
- Work cafés

FEATURED PRODUCTS

Microsoft Conferencing Solutions

Bundled Systems

Logitech Tap - Meetup

Logitech Tap Meetup offers a web conferencing room solution with a 10” tap touch controller, small form factor computer, in-wall rated cabling, and Logitech MeetUp sound bar with integrated camera, microphone and speaker. The Tap has calendar integration, touch-to-join and instant content sharing. It is pre-configured with room-optimized software from Microsoft or Zoom.

- ✓ **Huddle rooms**
- Meeting rooms
- Boardrooms
- Multipurpose spaces
- Work cafés

Logitech Tap - Rally

Logitech Tap Rally offers a web conferencing room solution with a 10” tap touch controller, small form factor computer, in-wall rated cabling, and table top HD Logitech Rally conference camera, table mic pod and speaker sound bar. The Tap has calendar integration, touch-to-join and instant content sharing. It is pre-configured with room-optimized software from Microsoft or Zoom.

- ✓ **Huddle rooms**
- ✓ **Meeting rooms**
- ✓ **Boardrooms**
- Multipurpose spaces
- Work cafés

Engineered Systems

Crestron Flex C160

The Creston Flex C160 is an engineered solution comprised of a 10.1” wireless touch panel, digital media interface, audio sound processor, and a UC engine running Microsoft Teams and Windows 10. Connect wirelessly or with the HD to USB video converter to share content. Requires additional camera. Depending on the size and sight lines of the space, it may require additional microphones and speakers.

- Huddle rooms
- Meeting rooms
- ✓ **Boardrooms**
- ✓ **Multipurpose spaces**
- ✓ **Work cafés**

Zoom Conferencing Solutions

All-In-One Solutions

Dell Optiplex AIO 7760 Touch

For one or two participants, a Dell Optiplex with an integrated 27” touch display provides a seamless user experience. Participants can share content and collaborate over Zoom cloud-based web conferencing. The display monitor has a built-in camera, microphone and web conferencing.

- ✓ **Huddle rooms**
- Meeting rooms
- Boardrooms
- Multipurpose spaces
- Work cafés

Bundled Systems

Zoom DIY

Zoom DIY is a bundled solution incorporating a Dell PC with Zoom web conferencing, a sound bar with integrated camera and microphone. Far-end participants and content are shown on a single 55” display. Users control the interface with a 9.7” iPad, housed in a wireless table console.

- ✓ **Huddle rooms**
- Meeting rooms
- Boardrooms
- Multipurpose spaces
- Work cafés

Polycom Trio 8800

Polycom® Trio™ is a Zoom bundled collaboration system with a 5″ touch control dialing pad, built-in speaker and microphones and table top camera. Add a single display to share content within a Teams/Skype call or using the proprietary wireless or USB wired connection. Not included in the system is a PC with software or room system.

- ✓ **Huddle rooms**
- ✓ **Meeting rooms**
- Boardrooms
- Multipurpose spaces
- Work cafés

Zoom Conferencing Solutions

Engineered Systems

Zoom PRO AV (1)

Zoom PRO AV is a pre-engineered integrated solution incorporating a rack-mount Dell PC with Zoom conferencing, table or ceiling microphones, a wall-mount pan/tilt/zoom camera and distributed ceiling speakers. Content and near and far-end participants are viewed on dual 65”/75” flat screens. An iPad installed in a wireless table console provides system control.

- Huddle rooms
- ✓ **Meeting rooms**
- ✓ **Boardrooms**
- Multipurpose spaces
- Work cafés

Zoom PRO AV (2)

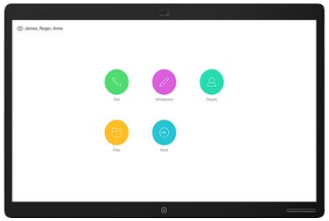
Zoom PRO AV is a pre-engineered integrated solution incorporating a rack-mount dell PC with Zoom conferencing, wireless microphones (and ceiling mics for multipurpose spaces), a wall-mount pan/tilt/zoom camera and distributed ceiling speakers. Content and near and far-end participants are viewed on dual 85” 4K flat screens and dual 55” confidence monitors for the presenter’s reference. In work café-sized spaces, an additional set of 65” repeat monitors support audience viewing. An iPad installed in a wireless table console provides system control.

- Huddle rooms
- Meeting rooms
- Boardrooms
- ✓ **Multipurpose spaces**
- ✓ **Work cafés**

FEATURED PRODUCTS

Cisco Conferencing Solutions

All-In-One Solutions



Cisco Webex Board 55 and 70

Cisco Webex Board is a powerful all-in-one integrated solution for team collaboration. The 4K 55″ and 70″ displays have interactive touch and built-in web conferencing, cameras, microphones, speakers, wireless or wired connectivity and Cisco Cloud.

- ✓ **Huddle rooms**
- ✓ **Meeting rooms**
- ✓ **Boardrooms**
- Multipurpose spaces
- Work cafés

Bundled Systems

Cisco Webex Room Kit Mini

Cisco Webex Room Kit Mini is a bundled collaboration system with a 10″ touch control dialing pad, built-in speaker, microphones and 4k camera console. Add a single display to share content within video or web conferencing call with a wireless or wired connection. Capable of 4-way multipoint calls.

- ✓ **Huddle rooms**
- Meeting rooms
- Boardrooms
- Multipurpose spaces
- Work cafés

Cisco Webex Room Kit

Cisco Webex Room Kit is a bundled collaboration system with a 10″ touch control dialing pad, built-in speaker, microphones and camera console. Add a single display to share content within a web conferencing call with a wireless or wired connection.

- ✓ **Huddle rooms**
- ✓ **Meeting rooms**
- Boardrooms
- Multipurpose spaces
- Work cafés

Polycom Trio 8800

Polycom® Trio™ is a Cisco bundled collaboration system with a 5″ touch control dialing pad, built-in speaker and microphones and table top camera. Add a single display to share content within a Teams/Skype call or using the proprietary wireless or USB wired connection. Not included in the system is a PC with software or room system.

- ✓ **Huddle rooms**
- ✓ **Meeting rooms**
- Boardrooms
- Multipurpose spaces
- Work cafés

Cisco Conferencing Solutions

Engineered Systems

Cisco Webex
Room Kit Plus

Cisco Webex Room Kit Plus is a bundled collaboration system with a 10″ touch control dialing pad, built-in speaker, microphones with a quad camera tracking console. Add a single display to share content within a web conferencing call with a wireless or wired connection.

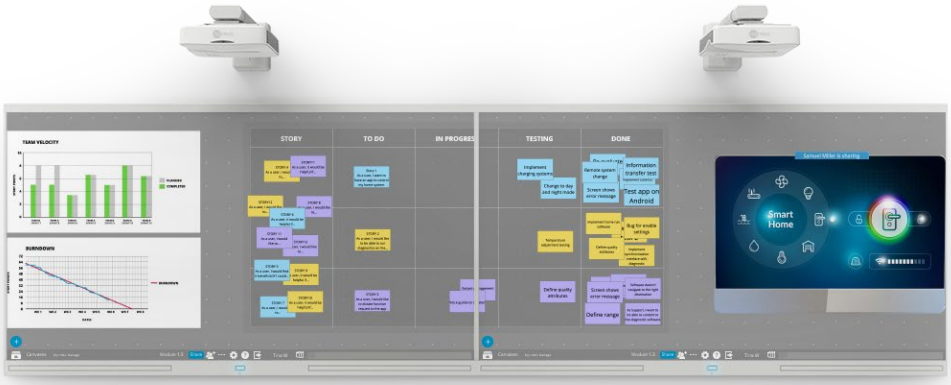
Huddle rooms
Meeting rooms
✓ **Boardrooms**
✓ **Multipurpose spaces**
✓ **Work cafés**

Cisco Webex
Room Kit Pro

Cisco Webex Room Kit Pro is an pre-engineered integrated system with a 10″ touch control dialing pad, built-in speaker, 8 microphones with a digital sound processor and a 5K quad camera tracking console. Add up to three displays to share content within a video or web conferencing call with a wireless or wired connection. Capable of 5-way multipoint calls

Huddle rooms
Meeting rooms
Boardrooms
✓ **Multipurpose spaces**
✓ **Work cafés**

FEATURED PRODUCTS



Nureva Wall

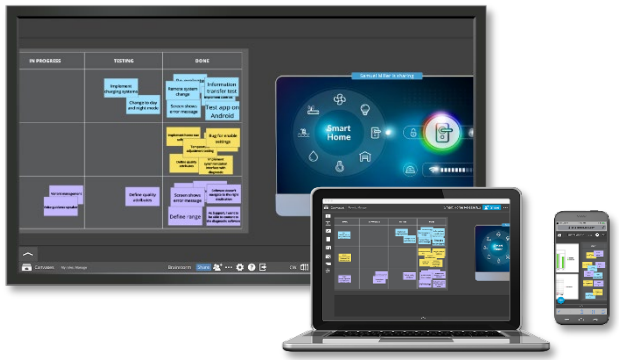
Supersize your team space.

The Nureva Wall system combines a capacitive touch surface with an ultra-short-throw HD projector support highly collaborative teams. You can create a workspace tailored to your team's needs. Nureva Wall configurations can be as small as 7' 6" (2.30 m) wide or as large as 60' (18.29 m) wide. They can span the length of a wall, be placed in a corner or wrap around an entire room for immersive visual collaboration.

Span Workspace

An expansive canvas for visual collaboration.

Span Workspace is a cloud-based solution that lets you create an unlimited number of digital canvases to visualize ideas and map processes. Anyone with a subscription can invite other users or guests to a canvas, and everyone can work together on it in real time, using any device. Familiar tools, including sticky notes, sketches, images and templates, help you shift from paper to digital collaboration without compromising your proven processes.



FEATURED CAMERAS

Meeting Owl

Meeting Owl is a 360° all-in one audio and video conferencing device. Its intelligent software provides a panoramic view of the room and automatically focuses on the active speaker.

Polycom Eagle Eye Director

Polycom Eagle Eye Director uses automatic people-tracking technology for an engaging, natural meeting experience. It automatically zooms in on the active speaker and identifies everyone within the room.

Vaddio RoboSHOT 20 UHD

Vaddio RoboSHOT is a 4K pan/tilt/zoom camera that offers pristine image quality and outstanding low light performance. It provides IP streaming and network control via a web interface, and is perfect for medium and large spaces.

Polycom Studio

Polycom Studio provides exceptional audio and video quality for smaller huddle spaces. It integrates a USB video bar with speaker, microphone and camera for plug-and-play functionality. Requires a computer and web conferencing software. Compatible with Microsoft Teams, Zoom, GoToMeeting, Cisco Webex and more.

Logitech Meetup Camera

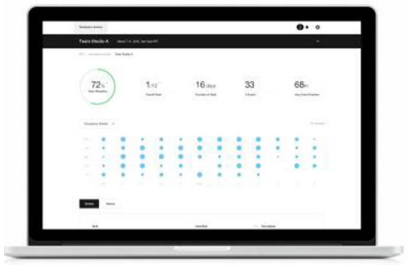
MeetUp is Logitech's premier ConferenceCam for small conference rooms and huddle rooms. Stop crowding around laptops. With an extra wide field of view, motorized lens and RightSight™ auto framing plus a pan/tilt lens, MeetUp makes every seat at the table clearly visible. With integrated audio optimized for huddle room acoustics, everyone can be heard as well as seen.

Logitech Rally Camera

With premium industrial design and an Ultra-HD imaging system, Rally Camera tops the lineup of standalone video cameras from Logitech®. Packed with advanced optics and breakthrough technologies, Rally Camera delivers premium performance in professional meeting spaces of all shapes and sizes. With whisper-quiet mechanical Pan/Tilt/Zoom, razor-sharp 15X HD zoom, expansive 90° diagonal field of view, and powerful 4K sensor, Rally Camera captures every person in the room with truly phenomenal video quality.

FEATURED SOFTWARE

Steelcase



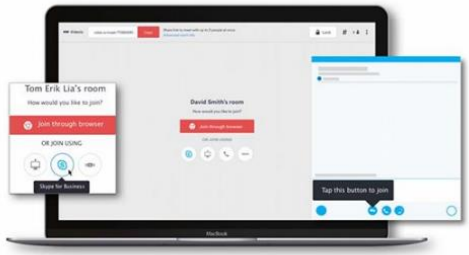
Steelcase Workplace Advisor + Steelcase Find App

Big data. Better places.

Steelcase Workplace Advisor is a cloud-based sensing and analytics system that tracks and analyzes room usage data over time. Steelcase Find is a mobile app that works with sensors to help users find the perfect space to work.

- Precise, real-time, searchable data
- Security via Microsoft Azure
- Scalable
- Remote management of hardware
- Ease of installation

pexip



Pexip *(formerly Videxio)*

Simple, productive video calls and meetings from anywhere.

Pexip is a cloud-based videoconferencing platform that brings codec and web conferencing systems together in a simple, easy-to-use service. It seamlessly launches professional video and audio meetings from any device. Pexip is fully compatible with Microsoft Teams and many other conferencing platforms.

- Makes video simple
- Use any device to join
- Invite anyone
- Enjoy high-quality HD video

quicklaunch™

Quicklaunch

Powerfulone-touch meeting space.

Quicklaunch™ is a room-based conferencing system that allows you to launch any kind of web conferencing meeting from a dedicated PC. Any web conferencing meeting is launched right from your calendar's meeting invitation automatically. Quicklaunch can utilize Pexip software to connect to codec-based room systems.

- One-touch join calendar
- Share devices and data sources
- Ad hoc collaboration
- Line of business applications

SIP BUSINESS PHONES

Yealink SIP-T48S

The Yealink SIP-T485 is a powerful, yet intuitive expandable office phone built for executives and managers. The touch screen features an intuitive smartphone-like interface.

Interface
- 7” color touch screen

Audio
- Optima HD Audio
- 16 lines

Platforms
- Microsoft
- Mixed

AudioCodes 450HD

The 450HD is an executive IP desk phone that is Microsoft certified for use with Skype for Business. It runs SIP, which makes it interoperable with a broad selection of other VoIP providers.

Interface
- 5” color touch screen

Audio
- HD voice
- 8 lines

Platforms
- Microsoft
- Mixed

Polycom® VVX® 600 & 601

The Polycom VVX 600 Series Business Media Phones are powerful, yet intuitive expandable office phones that deliver best-in-class productivity for corporate executives and managers.

Interface
- 4.3” color touch screen

Audio
- Polycom HD voice
- 16 lines

Platforms
- Microsoft
- Mixed

Crestron P100

The Crestron P100 provides Microsoft Teams users with a simple and tailored communication experience. It is a premium media phone for C-level users and executive rooms.

Interface
- 7” color touch screen

Audio
- Optima HD Audio

Platforms
- Microsoft
- Mixed

Cisco 8865

The 8865 combines high-fidelity voice with HD video communications and mobile device integration. It offers easy-to-use, one-touch collaboration over video and two USB ports for charging personal devices.

Interface
- 5” VGA backlit color display

Audio / Video
- 720p HD Video
- 5 lines

Platforms
- Cisco
- Mixed

ABOUT RED THREAD

We help organizations and their partners create workplace environments to support productive, engaged employees. Through the integration of technology, furniture, and architectural systems, we create holistic spaces that address your current workplace issues while flexibly accommodating for your future needs.

Learn more at red-thread.com/expertise/audiovisual/

Massachusetts

BOSTON, MA
Corporate Office, Sales, Showroom
101 Seaport Boulevard, Suite 600
Boston, MA 02210
617-439-4900

MARLBOROUGH, MA
Sales Office, Showroom
293 Boston Post Road West
Marlborough, MA 01752
508-449-6550

WILMINGTON, MA
Sales, Warehouse, AV Lab
100 Fordham Road
Wilmington, MA 01887
617-439-4900

SPRINGFIELD, MA
Virtual Sales Office
413-736-1802

Connecticut

EAST HARTFORD, CT
Sales, Showroom
300 East River Drive
East Hartford, CT 06108
860-528-9981

NORTH HAVEN, CT
Sales, Warehouse
297 State Street, Building 4
North Haven, CT 06473
203-907-4687

STAMFORD, CT
Sales, Showroom
700 Canal Street, Third Floor
Stamford, CT 06902
203-487-1850

Northern New England

PORTLAND, ME
Sales, Showroom
One City Center
Portland, ME 04101
207-774-4900

MANCHESTER, NH
Sales, Showroom
Center of NH Office Tower
650 Elm Street, Suite 103
Manchester, NH 03101-1160
603-668-6831

BURLINGTON, VT
Virtual Sales Office
800-635-4874

We'd love to partner with you!
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