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Educational Study

Choosing the Right Microsoft Teams Rooms Devices for Your Organization

Created by:
RECON RESEARCH

Sponsored by:
CISCO

Microsoft Teams in the Enterprise

Hybrid work means that people in different countries, industries, companies, departments, and roles will work differently.

Some folks will work in the office most of the time, while others will spend most of their days at home or on the road. Regardless of where a person happens to be on a given day, they'll likely work and interact with people in other locations.

In fact, one global survey of knowledge workers revealed that 98% of all meetings will have at least one remote participant.

How are companies meeting the needs of today's hybrid workforce? That's easy.

1) By making almost every meeting a virtual meeting
2) By treating in-office and remote workers as "meeting equals" – all the time
3) By equipping their global employees and meeting rooms with video conferencing

Many feature-rich and reliable video conferencing platforms and services are available today, including Webex by Cisco, Google Meet, Microsoft Teams, and Zoom Meetings.

In recent years, many organizations have chosen Microsoft Teams as their go-to meetings platform. Unsurprisingly, many of those companies are using the room-centric version of Microsoft Teams, Microsoft Teams Rooms (a.k.a. MTR), for their meeting rooms.

[Author's Note – during its FY2023 Q2 earnings call in January 2023, Microsoft announced that "[T]here are more than 500,000 active Teams [R]oom devices, up 70 percent year-over-year." These statistics highlight the popularity of Microsoft Teams in meeting rooms.]

A successful video conferencing deployment requires the right platform and the right video conferencing devices.

Standardizing on a specific meeting platform or service is an important first step toward democratizing video within an organization.

But a successful global deployment requires the right platform (or service) and the right video conferencing devices.

This educational study highlights several key considerations to help IT managers make informed decisions for their MTR-powered video devices.

Item #1: Your Spaces and Use Cases

A few years ago, video conferencing systems were expensive and difficult to install, manage, and use. As a result, video conferencing was typically found in medium and large rooms only.

For many of the same reasons, most video spaces were used for meetings and presentations only. When team members wanted to brainstorm or collaborate, they either went old-school (dry-erase boards) or used a dedicated, expensive, and often hard-to-find collaboration space.

Over time, desktop video conferencing became more commonplace. However, video devices and collaboration systems were still beyond the reach of most users and smaller meeting spaces.

Video conferencing has moved beyond just meetings in the boardroom and into personal, small, medium, and large collaborative spaces.

The takeaway is that in the past, technology determined where and how people could work, meet, present, ideate, and collaborate.

But that was then, and this is now.

Today, workers choose how and where they want to work, and it is the IT manager's job to equip their workers' desks and global meeting spaces to support the needs of their workers.

Figure 1: Cisco Board Running Microsoft Teams

Fortunately, in addition to software apps on personal devices, affordable, easy-to-use, and certified Microsoft Teams Rooms devices are available in many forms, including:

- Personal video devices for use on workers' desks – either assigned or shared (hotdesking)
- Focus room systems for spaces with up to 4 seats
- Small room systems for spaces with up to 8 seats
- Medium room systems for spaces with up to 12 seats
- Large room systems for spaces with up to 20 or more seats

Also, all-in-one video conferencing and collaboration systems with touch displays are available in different sizes and at various price points for small, medium, and even large spaces.

IT managers in MTR environments should choose vendors whose MTR-certified device portfolios will cover their current and future video conferencing and collaboration requirements.

Item #2: The Intelligence & Power Within

Leading video conferencing platforms, like Microsoft Teams, offer a massive number of features. However, providing a strong meeting room video conferencing and collaboration experience requires features from both the meeting service and the video device.

Key features available on some MTR-certified video devices include:

- On-board compute to eliminate the need for external compute devices
- BYOD / USB passthrough support that allows users to host meetings on their laptops
- Background removal and replacement
- Artificial Intelligence (AI) camera framing to optimize the camera's capture of in-room participants
- Noise reduction to eliminate unwanted sounds (e.g., HVAC noise) from the outgoing audio
- Integrated meeting room control functions (e.g., display on/off, lighting control, etc.)
- Support for external (third-party) audio systems for acoustically challenging spaces
- Ability to use multiple cameras in the meeting room to best capture participants

Figure 2: Cisco Webex Bar Using Intelligent Camera Framing and AI Face Detection

For example, background removal is available on many desktop and mobile video apps, but many personal video devices do not offer this capability. As a result, people using those devices cannot mask their background and protect their privacy.

Similarly, while video bars offer the simplicity and convenience of built-in mic arrays, their internal audio systems may be unable to handle some acoustically challenging environments. The ability to use an external audio system expands the flexibility and expandability of these video devices.

IT managers seeking to MTR-video-enable their meeting rooms should look for solutions that provide the right combination of features, flexibility, and expandability.

Item #3: Video Interoperability

So, if you're not in the same place, jump on a video call. If only things were that easy. The reality is that meetings happen on many different platforms (e.g., Microsoft Teams, Webex, Google, and Zoom Meetings), but not all conferencing devices and platforms can communicate with each other.

Desktop/mobile users can avoid this problem by using different apps and platforms for different meetings. But this won't work with video devices as they typically support only one video app.

That's where video interoperability comes in. The table below provides information and the pros (in green) and cons (in red) of common video interop approaches.

Interop Approach	Description	Comments (Pros / Cons)
The Corporate Mandate	Demanding that everyone use the same platform or service	• Difficult or even impossible to enforce. • May force users to abandon platforms they know and like.
Bring Your Own Device (BYOD)	Hosting video meetings on a user's laptop connected to meeting room AV devices.	• Adds flexibility and some obsolescence protection. • Requires a user's laptop and BYOD-friendly AV devices. • Uses personal apps, so some features are not supported. • Offers limited remote monitoring/management.
Meeting Room PC	Running apps on a standard PC installed in a meeting room	• Same pros and cons as BYOD above. • Introduces security, performance & management concerns.
Integrated AV System	Installing AV equipment to add BYOD /multi-platform support	• Adds cost and complexity. • Not ideal for large-scale deployments.
Video Conferencing Standards	Using established protocols (SIP / H.323, H.264, G.722, etc.)	• Long-standing and field-proven approach. • Not all devices support these standards. • Lacks support for some coveted features and functions.
Gateway Services	Using service offerings that enable video calling between platforms.	• Adds interop quickly w/o need to install hardware/software. • Adds cost (typically recurring fees). • Not available on all platforms/services. • Supports dial-in meetings only. • May impact scheduling, workflow, or call quality.
WebRTC (Direct Guest Join)	Using APIs to add real-time communications to web browsers and other devices	• Low (or no) cost. • Strong ease of use (WebRTC is automatically invoked). • Many leading providers are investing in this area. • User interfaces and experience depend on service/platform. • Not all video devices or platforms support WebRTC. • Uses guest access which impacts workflow and features.
App Switching [1]	Using video devices that allow users to switch between video apps on the fly.	• Allows one device to offer multiple native experiences (e.g., Microsoft Teams and Webex by Cisco) • Supported by only some currently available video devices.

Figure 3: Pros and Cons of Common Video Interop Approaches

When it comes to video interop, the details matter. For example, some video interop approaches work with specific devices only, require additional products, add complexity, or impact usability.

IT managers choosing video devices for their MTR environment should understand their video interop requirements (and the pros and cons of each approach) before making purchasing decisions.

[1] App switching is the term Recon Research uses to describe the ability for a device to switch between calling apps on the fly.

Item #4: Enterprise Readiness

IT professionals working in large, medium, and even small enterprises know that managing technology in a multi-location organization is far from easy.

Fortunately, many video conferencing vendors offer a wide range of tools and systems designed to help IT managers operate and maintain their globally deployed devices, including:

Monitoring Systems – software applications that provide status information and detect and report device issues or failures. Today, most (not all) monitoring systems are cloud-based portals.

Management Systems – software applications that let IT managers remotely manage installed devices. Common capabilities of such systems include the ability to change settings and upgrade firmware.

Embedded Sensors – some devices include onboard sensors to provide IT managers with information about the physical space, such as the room temperature, light levels, sound levels, CO2 levels, air impurities, the number of people in the room, and more.

Analytics and Reporting – tools that help IT managers process the incoming data from monitoring systems and sensors and uncover vital information (e.g., current and future issues, usage trends, opportunities for improvement, etc.).

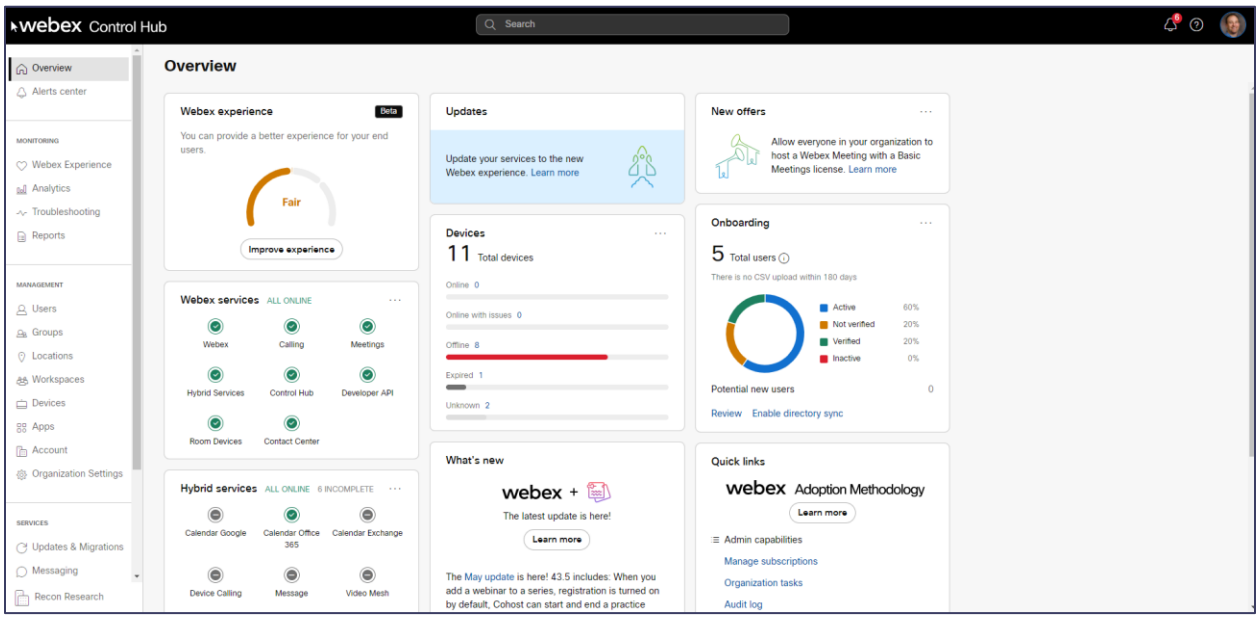

Figure 4: Webex Control Hub for Device Monitoring & Management

As with video interoperability, different platforms and devices support different levels of enterprise readiness. And for those with large-scale video deployments, missing features or less-than-ideal workflows can mean the difference between a manageable and unmanageable environment.

IT managers making purchasing decisions should understand the subtle but often critical differences between the enterprise readiness of different MTR-capable video devices.

Solution Spotlight

The sponsor of this study, Cisco, has added native MTR support to its current-generation video devices.

Broad MTR Device Portfolio

The following devices are certified for Microsoft Teams Rooms:

- Cisco Desk Pro personal video device
- Cisco Board Pro all-in-one touch display device
- Cisco Room Bar for small meeting rooms

These devices are expected to be certified for Microsoft Teams Rooms or for Microsoft Teams Display soon:

- Cisco Room Bar Pro for medium meeting rooms
- Cisco Room Kit Pro and Room Kit EQ for larger spaces
- Cisco Room Navigator table-top meeting controller
- Cisco Room Navigator wall-mount scheduling display

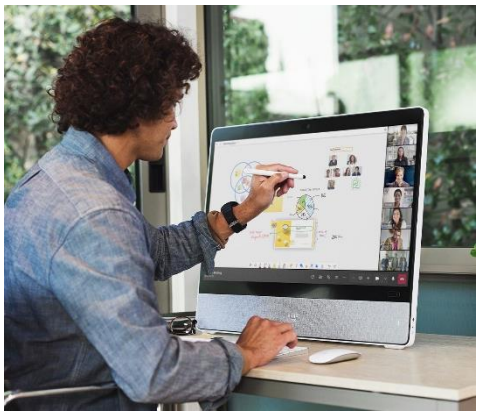

Figure 5: Cisco Desk Pro in a Teams Meeting

The takeaway is that Cisco offers MTR-certified devices for personal and shared workspaces that support both meetings and collaborative use cases.

And Cisco uses app switching to provide native MTR and native Webex experiences from the same video device. The operative word here is "native." [2]

The Power of the Platform

Cisco's ability to provide native MTR and Webex experiences comes from the multi-layer architecture of its current video devices.

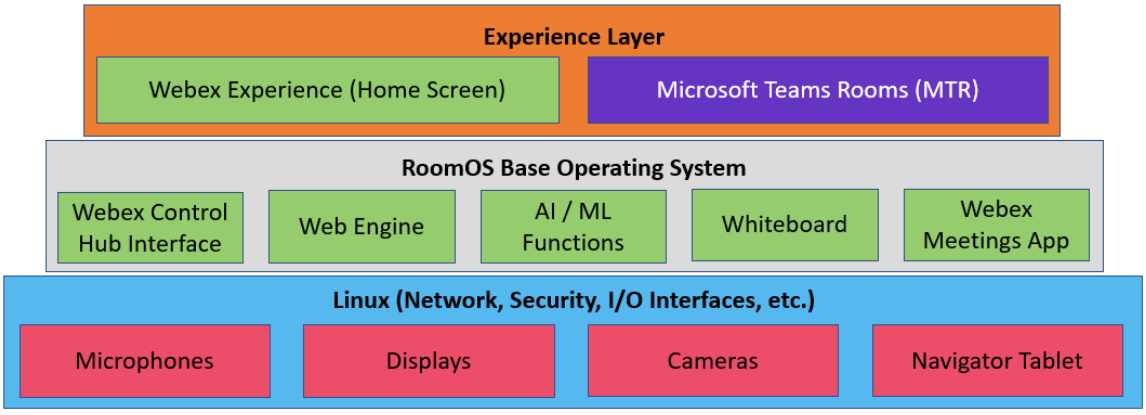

Figure 6: Simplified View of the Hardware / Software Architecture on Cisco Video Devices

As shown in the blue rectangle above, the underlying Linux layer handles the physical I/O and the connection to the Cisco Navigator tablet.

The RoomOS Base Operating System handles the AI/ML features of the device (room framing, speaker tracking, noise reduction, etc.), provides additional services (e.g., whiteboarding), runs the Webex

[2] A native experience is the experience a user would enjoy while using the provider's own meeting room video app.

Meetings Application, and connects to the Webex Platform Control Hub.

The top layer (dubbed the "Experience Layer" by Recon Research) lets users choose the default experience (default meeting room app) to use on their Cisco video system.

During the system installation process, customers choose which platform they want to use.

The screenshot at the right shows the platform selection page allowing customers to configure the system using Cisco RoomOS or as a Microsoft Teams Room with access to additional RoomOS features.

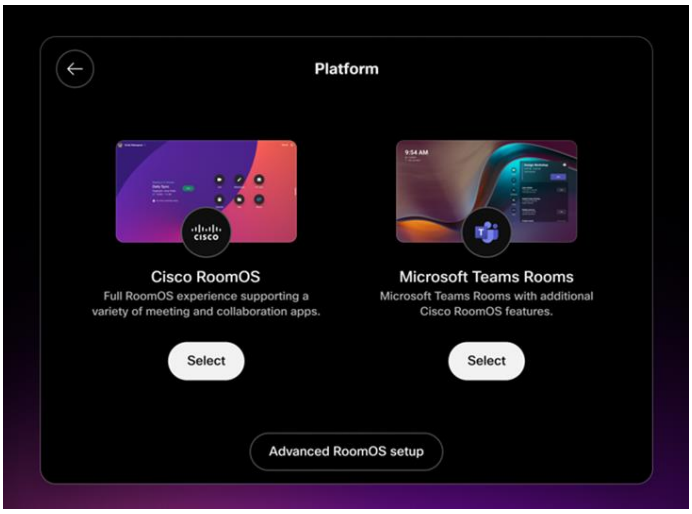

Figure 7: Platform Selection Screen

Option 1 = Cisco RoomOS (the Full RoomOS Experience)

Choosing the Cisco RoomOS Experience provides customers with a native Webex experience, offering access to these benefits:

- On-prem, cloud, and hybrid deployments
- Webex Calling / UCM
- Hot desking (on Desk Series models)
- Webex Whiteboard
- AV controls using macros / UI extensions
- Access to 3rd party web apps
- Digital signage functionality
- Cisco Building Management or Cisco Spaces
- ThousandEyes integration for end-to-end visibility
- And more.

Also, while operating in Webex mode, customers can use Cisco's video interop capabilities, including SIP / H.323 support, BYOD (USB passthrough), WebRTC, and VIMT (Video Integration for Microsoft Teams).

Option 2 = Microsoft Teams Room (MTR) Experience

Choosing the MTR experience turns the Cisco video device into a certified Microsoft Teams Rooms (MTR) video conferencing system offering a native Microsoft Teams experience.

But the best news is found within the architecture. The drawing above shows that the Webex Meetings App resides in the RoomOS layer. Why does this matter?

Customers using a Cisco video device in MTR mode can join Webex meetings and enjoy a native Webex experience without admin support or a reboot.

Because it means Cisco video devices operating as MTR devices have ready access to the Webex app and can provide native Teams and Webex experiences without admin support or a reboot. Providing a dual-native experience is the main benefit of "app switching." For now, only Cisco offers this capability.

Also, since the RoomOS layer also provides the AI / ML functions, Cisco's advanced camera and audio control features are available to users in both MTR and Webex modes.

Finally, the interface to the Webex Control Hub also runs in the RoomOS layer. As a result, Cisco video devices can be managed with the Cisco Webex Control Hub at all times (license required) and using Microsoft Teams Admin Center while in MTR mode.

- Webex Control Hub provides access to environmental information, device details, various settings, scalable deployment wizards, telephony management, and Webex meeting management.
- Teams Admin Center lets admins manage Teams- settings and Teams meetings.

Recon Research – Hands-On Testing

Recon Research did not perform an in-depth evaluation of Microsoft Teams Rooms support on Cisco video devices as a part of this research. However, we:

1) Installed the MTR-capable Cisco beta firmware on a Cisco Room Bar and Desk Pro video system.
2) Registered those devices to our Microsoft Teams instance and Cisco Webex Control Hub.
3) Placed a few Teams and Webex video calls.

Figure 8: A Microsoft Teams Rooms (MTR) Video Call Hosted on a Cisco Video Device

In all cases, the Cisco video devices offered a native Microsoft Teams video experience.

Conclusion

It has never been more critical to video and collaboration-enable global workers and workspaces.

Many organizations have chosen Microsoft Teams as their primary communication platform. These companies must now choose video devices that meet their current and future requirements.

Cisco, the sponsor of this study, offers a compelling combination of a broad portfolio of video devices that offer native Microsoft Teams Rooms and Webex experiences, a robust AI-powered feature set, support for a wide range of interop approaches, powerful device management and analytics, and strong enterprise readiness.

IT managers purchasing MTR video devices should carefully consider Cisco's MTR-ready video systems.

About Cisco

(Information below provided by Cisco)

Cisco is the worldwide leader in technology that powers the Internet. Cisco inspires new possibilities by reimagining your applications, securing your data, transforming your infrastructure, and empowering your teams for a global and inclusive future.

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About Recon Research

Recon Research (RR) is an analyst/market research firm focused on enterprise communications. Our coverage areas include unified communications (UCaaS), video conferencing (VCaaS), collaboration and ideation platforms, audiovisual (AV) solutions, wireless presentation systems, and more.

RR provides enterprise customers, vendors, channel partners, and investment professionals with the information and insight to make fact-based decisions.

What makes RR different is the depth of knowledge and experience we bring from our 20 years of company briefings, market analysis, and hands-on testing of products and services in these markets.

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