

White Paper:

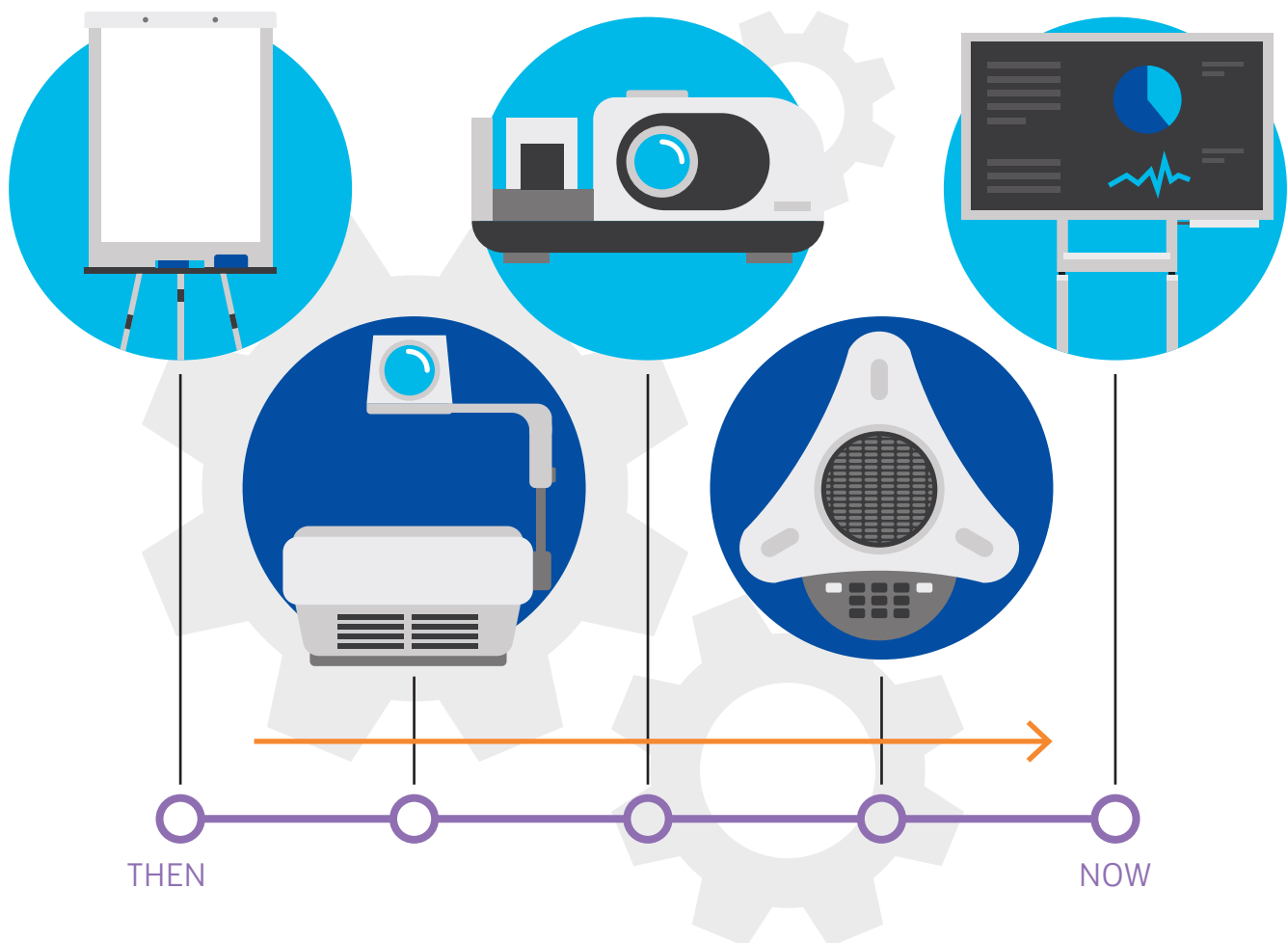
# Modernizing Meetings: The Ultimate Guide to Conference Room Technology



# Introduction

Meeting room technology has been a source of aggravation and inefficiency for generations of workers. Display connectivity challenges, garbled audio on conference calls, or the need to dim lighting in order to compensate for struggling projector bulbs are among the perennial issues that undermine meeting efficiency and effective collaboration. Today, however, the conference room is now equipped with new technologies that make the most of everyone's time and effort through a series of digital transformations. This white paper looks at how meeting spaces are evolving, as well as the technologies that are boosting productivity and effectiveness and, in some cases, cutting costs by realigning conference room technology to real-world needs.

## The Evolution of Meeting Room Tech



# Changing Workplace Dynamics

Top organizations around the world are reconfiguring their workspaces because so many of their employees are mobile and remote for at least half of their workdays.

Some of the changes in the conference room landscape stems from equipment upgrades, but the real story behind conference and meeting room modernization is a sea change in how people and companies work today.

First, a lot of meetings now include remote participants — those who work part-time at home or others who are based full-time from their home or small satellite offices. Research shows as many as 90 percent of U.S. office workers would prefer to telecommute.<sup>1</sup>

The population of work-at-home company staff has grown by 115 percent since 2005, notes GlobalWorkplaceAnalytics.<sup>2</sup>

UK-based Workplace Insights noted that many desks are only occupied an average 44 percent of the time. The upshot is that offices are becoming more dynamic, as people move around the environment more and engage in a variety of smaller conversations and informal meetings.<sup>3</sup>

Second, many meetings have changed and become increasingly collaborative environments where attendees are encouraged to pitch, work through problems and generate ideas. There's a growing recognition that meetings consume at least 15 percent of a company's collective working hours,<sup>4</sup> rising to an average of 40 percent for senior executives.<sup>5</sup> Technology needs to keep pace with these considerations and enable productive, collaborative and efficient meetings. In addition, technology can help ensure that meeting decisions and outcomes are recorded.

Third, meetings are smaller, less structured and often impromptu. The fixed weekly meeting is far from gone, but as workforces grow younger and work styles evolve, meetings now often begin organically as groups get pulled together to huddle and talk.

## Changing Work Styles



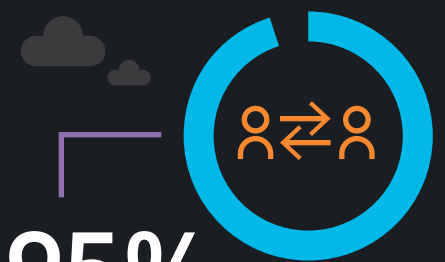
Highlights from a 2017 global survey of 25,000-plus workers

Source: The Human Face of Remote Working



75%

Nearly 3 out of every 4 employees say their company offers flexible work arrangements, and 32% say they regularly work remotely.



95%

of those surveyed use collaboration technology to connect with co-workers, and more than a third use it multiple times a day.

# The Total Cost of Unused Meeting Rooms

Large conference rooms with a dozen or more seats aren't being used as much as they were designed to be. The days of meetings for the sake of meetings are ending.

We're all familiar with offices that have a fancy executive boardroom, a large main conference room with a dozen or more seats and a sprinkling of smaller rooms — the amount and quality of the equipment seemingly tied to both who uses the room and its size. In many cases, the smallest rooms aren't much more than a cheap table and a few chairs.

It turns out that those larger rooms aren't being used as much as they were designed to be, however. Office furniture manufacturer Herman Miller studied the size and actual occupancy rates of meeting spaces, and found an average of two to four seats occupied in conference rooms designed to accommodate six to 12 people.<sup>6</sup>

Organizations can credit some of those unoccupied chairs to remote workers that still need to attend meetings via phone or video chat, reducing the in-office footprint. Partly, though, it's down to meetings just shrinking in size, as organizations re-evaluate the value of meetings and the necessary number of participants. At last, the days of meetings for the sake of meetings are — hopefully — ending.

Smaller meetings mean smaller rooms, and that's led to the rise of what have been dubbed "huddle rooms" or "huddle spaces," where smaller teams can gather on short notice, yet still access all the tools they need to develop ideas or sort out challenges.



The Herman Miller research also cited two Finnish organizations that outlined "different spaces for different kinds of work tasks." Along with traditional meeting rooms, they described more casual spaces for creative and brainstorming sessions, quiet rooms for concentrated tasks, ad-hoc spaces such as huddle rooms, and social spaces such as coffee lounges.

## How Much Do Empty Meeting Rooms Cost?

Empty seats in meeting rooms aren't just wasting space — they cost you money.



Imagine a typical mid-level firm with 500 employees and two or three offices. The average North American office provides approximately 150 square feet per person, so that creates a total footprint of about 75,000 square feet.



If 20% of that space is dedicated large meeting rooms, and their occupancy rate is only 40% as suggested by the Herman Miller study, then an average of 5,000 square feet are effectively wasted each year. At average Chicago rents of \$2 per square foot monthly, you're losing about \$120,000 annually. Jump to New York, with average office rental rates of \$6.15 per square foot monthly, you're burning through \$369,000 per year.<sup>7</sup>

# Meeting Room Tech: What's In and What's Out



Let's find a huddle space to talk

1

See me in my office

Digital whiteboards that save files

2

Taking pictures or scrawling  
**DON'T ERASE!** on whiteboards

Digital door signs with all the meeting's details

3

Disputes over who booked meeting rooms

HD audio from integrated sound bars

4

Muffled or tinny remote voices



Wide angle HD cameras

5

Leaning in and waving to be seen on video calls

Super-bright LED screens

6

Turning the lights down and pulling blinds to see presentations

Simple, fast screen-sharing tools

7

Passing cables and fighting to get presentations on screens

Flexible huddle spaces with built-in tech

8

Big rooms, few people

# Emerging Technology for Workplaces

Modern meeting room technology greatly improves the meeting experience. Agile spaces leverage technologies that allow staff to connect and interact with their colleagues.

You'll know your meeting spaces are due for an upgrade if you look around and see projectors on the table or hanging from the ceiling, projection screens on walls, whiteboards, flip charts and a giant conferencing phone everyone needs to share during a conference call. There will also typically be a lot of cables running every which way, bins of marker pens and handful of orphaned remote controls.

Modern meeting room technology cleans all that up and greatly improves the meeting experience for everyone involved, whether they're right in the office or at home office desk three time zones away.

The contemporary term for these new spaces is agile — the idea that the office is malleable and ready for activity-based work, as opposed to tasks specifically done at desks and in offices. Agile spaces leverage technologies that allow staff to connect and interact with their colleagues — whether that's in a planned meeting, or an informal, impromptu discussion. Here are some of the key technologies used in the modern meeting room:

**Collaborative Displays:** These are whiteboards on steroids — interactive displays that allow small groups to brainstorm or flesh out plans, with styluses and fingertips replacing ink markers. With new solutions such as Samsung Flip, content can be shared straight from your smartphone, as well as a laptop or USB drive. The Flip solution is also portable, with an optional easel stand that can be wheeled from one space to another. Meeting outcomes can easily be saved and shared, so no one ever needs to pull out their phone at the end of a meeting to take a photo of what's scrawled on the whiteboard.

**Video Conferencing:** Video conferencing technology has become increasingly affordable and should now be a standard feature in mid- to large-sized meeting rooms. Rather than viewing video conferencing as an add-on to existing meeting room technology, today's bundled solutions featuring large-format displays, video conferencing soundbars and collaboration systems offer a reliable, turnkey approach. Samsung and HARMAN offer a range of Huddle Space solutions for meeting rooms of different sizes. While a standard bundle pairs a microphone and camera with an LCD display to enable presentations and remote participation, premium and enterprise versions layer in high quality audio, dedicated sharing devices and interactivity.

**Sensors:** Different types of IoT sensors can dim or shut off lights when rooms are unoccupied, then turn on when someone enters. This saves on energy usage, while more sophisticated sensors tied to software can even activate equipment and screens for the people who booked the room when they arrive. To optimize planning, the sensors can also provide overall analytics on room usage.

**Digital Meeting Room Signs:** Small displays mounted immediately outside meeting room doors are now mapped to scheduling or calendar systems to indicate whether that specific room has been booked, by whom and for what period. Many systems allow users to use a touchscreen to find another available room, or book that room for another time window. LED light bars allow people to see if a room is free or booked across an open-plan office. Booking systems also provide data on room utilization — which tends to be lower than generally perceived. In fact, Workplace Insights says average meeting room occupancy across 24 organizations showed a utilization rate of only 38 percent, though the office perception is often that the rooms are never available.<sup>8</sup>

## Huddle Rooms Everywhere

# 50M

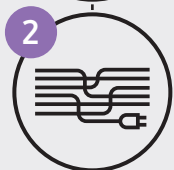
Wainhouse Research estimates there are already as many as 50 million huddle rooms globally, but the vast majority of huddle rooms have little or no technology in place.



## 8 Clues That It's Upgrade Time For Your Meeting Room



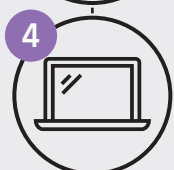
1 The overhead projector on a cart in the corner



2 Tangles of connector cables and power bars



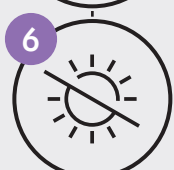
3 "DON'T ERASE!!!" scribbled on a note-filled whiteboard



4 It's easier to huddle around one laptop than try to get it on the projection screen



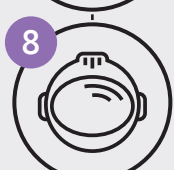
5 On conference calls, remote workers have to open e-mailed presentations to follow along



6 Presentation up, means lights out



7 Meetings are often interrupted by someone dipping in and asking, "When do you have this room until?"



8 Remote participants look and sound like they're calling in from Mars

**4K Displays:** Much of the buzz around 4K displays revolves around the quality of entertainment and gaming visuals, but the incredible pixel density of a 4K resolution display also provides extremely high-level detail for varied applications. These capabilities appeal to a variety of applications, such as product developers showing off new designs and imaging for industries like healthcare and energy exploration. The latest displays also offer brightness and contrast levels that allow everyone to see the screen even under high ambient light conditions.

**Direct-view LED:** Larger conference rooms and corporate presentation theaters need and want very large digital canvases for audiences that may be in theater-style seating. Fine-pitch LED displays offer the high resolution needed for these settings, but also offer three critical benefits: They're bright enough that lights don't even need to be dimmed for presentations, they have no seams (unlike LCD video walls), and presenters can walk in front of the screen without casting projection shadows or being blinded by the projector lamp.

**Wide-Angle and 360 HD Cameras:** HD quality cameras end the "fish-eye" camera experience and give remote participants a far more natural view of the main meeting room and the people there. Cameras on pivots can automatically look for and pan to speakers in a meeting setting for the benefit of people viewing remotely. Some systems make controls available, via software, to those remote viewers. Other camera/microphone gadgets have multiple camera lenses to capture 360 degree views and auto-focus on the person speaking.

**HD Audio:** Tinny telephone speakers and limited range microphones are being supplanted by HD audio systems that end the days of coworkers yelling into the mic to be heard and struggling to hear what remote participants are saying. Harman has created speaker bars for meeting room settings that use Sound By JBL, the same hardware employed in high-end commercial and residential audio speakers.

**Wireless Tools:** Passing around cables and looking for adapters that will make various laptops play nice with a display or projector becomes a thing of the past once a wireless presentation solution is in place. Wi-Fi takes the place of cables, and sharing is as simple as a button click. Wireless technology can also tidy up meeting spaces through charging pads integrated right into tabletops.

# Planning Your Meeting Room Upgrade

To truly modernize meeting spaces, organizations need a plan. This means assessing the types of technologies that are most suitable, based on what optimal meetings look like.

Technology upgrades, it should be stressed, are the means to the desired end. They're not the answer on their own. Everyone has those gadgets they bought, at home or in the office, that are never really used as intended.

To truly modernize meeting spaces, organizations need a plan. All key stakeholders must remain in communication about needs and aspirations, and on the same page about objectives. This means assessing the types of technologies that are most suitable, based on what optimal meetings look like.

That might change the current model from one master conference room and a set of smaller satellite meeting rooms, to a variety of smaller rooms and huddle spaces equipped with plug and play technologies that make snap, impromptu meetings possible.

Here are the essential steps to successfully planning your meeting room technology refresh:

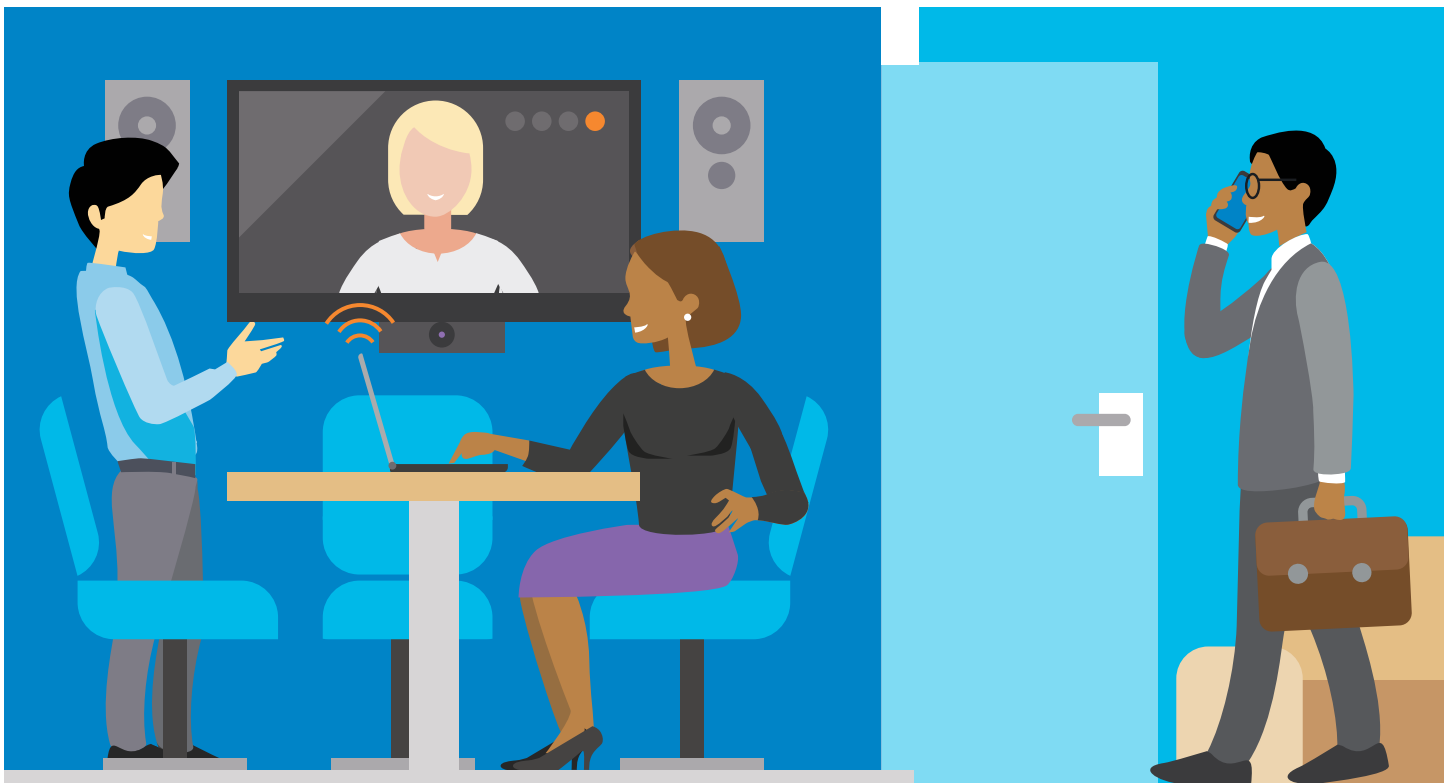
## 1. Get A Baseline On Current Usage

Before you start planning a big technology upgrade for your meeting room spaces, get a baseline understanding of what happens now in your workplace. What meeting spaces are in place now? How often are they used? Are the seats filled? What technologies are heavily used? What kinds of meetings are being held? Are there remote participants?

Establish what staffers like and dislike about the current meeting room configurations, and get their suggestions on what they'd like to see improved, as well as what should be retained.

## 2. Right-Size Meeting Spaces

If the baseline shows, for example, large conference rooms with a dozen or more seats and giant tables going unused or under-utilized, consider renovations that will turn that space





into two or several smaller meeting rooms. On the flip side, with open office designs increasingly common, does the office space actually have enough meeting areas set aside for focused group work? On average, how large are those groups when they meet?

Different conference and meeting spaces are going to have different dynamics and needs.

**Shared Spaces:** When meeting rooms are fully booked, shared spaces such as an employee lounge can become a venue for informal meetings. Outfitting these spaces with portable display solutions like Samsung's Flip enables effective collaboration for small groups, who would otherwise be gathered around a laptop screen.

**Huddle Space:** A wall-mounted display and video conferencing soundbar, like Harman's Acendo Vibe, is probably enough to bring remote workers into a quick meeting. The Vibe combines high-quality speakers, far-field microphones and a wide-angle camera in one unit with simple USB connectivity.

**Conference Rooms:** Larger spaces are not as intimate, which means more participants, more voices and possibly a need to share files from several presenters. Larger rooms require multiple microphones, a more powerful speaker and devices like the Harman Acendo Core, a plug and play unit that allows users to do things like instantly launch Skype for Business meetings and use one device — instead of multiple laptops — to show and share presentations, spreadsheets and other files.

**Boardrooms:** The largest spaces require more sophisticated audio and video systems, including live-streaming and broadcast capabilities. The footprint of the room drives decisions for new technologies like direct-view LED to create the scale of digital canvas executives want and require.

### 3. Profile Meeting Room Conditions

There are many contributing factors to optimizing a meeting space, not all of them obvious. How the room is designed and the configuration of the table and seating actually wield a strong influence on the flow of meetings. Collaboration and discussion is a very different dynamic, for example, than training or presentations that may be better suited to a lecture theater design.

The dimensions and positioning of the main screen should be tied to where people sit,<sup>8</sup> and ensure the people furthest from the screen will be able to view a presentation as easily as someone at the front. If there will be collaboration on a screen, can everyone see the screen and do the people at the front using the screen have enough room to move around comfortably between the display and the audience?

If there are outside windows, with natural light filling the room, does it make more sense to have extra-bright LCD or even fine-pitch LED displays instead of pulling blinds and dimming lights.

## 4. Determine How Meeting Rooms Are — and Will Be — Used

Fit the technology to the meeting dynamics, as opposed to kitting out meeting rooms with a generic set of features that may or may not be suitable. Meeting spaces that are about small group discussions and presentations demand flexible audiovisual tools and displays, while group work areas that are highly interactive need to be kitted with tech that enables collaboration.

If your workforce has remote workers, how are they participating in meetings? Is audio sufficient? Or do they need to fully participate with live video, screen-sharing and other tools?

Consider how the technological infrastructure will be able to scale over the next few months or years. Figure out if each purchase is able to connect to newer technologies that might be introduced as conference rooms are upgraded.

## 5. Evaluate Cost and ROI

When generating any type of plan for a technology upgrade, organizations should evaluate how much maintenance these systems require in addition to initial cost, product life cycles and if they have the proper staff to keep everything running properly.

## 6. Set the Privacy Tone

Solid walls and frosted glass can do part of the job, but sensitive conversations and presentations in meeting spaces will benefit from proper acoustic damping that reduce sound transmission and high-quality audio systems that enable remote callers and presenters to be heard without cranking the volume — at the risk of them being heard through doors and walls.

## 7. De-Clutter From The Start

The days of tangled cables all over meeting room tables are ending. There are one-click wireless presentation solutions that remove the need for cables, adapters and dongles. Instead of passing around a cable, or switching seats in a room, users just press a button and push their presentation or document to the screen.

New technologies like USB-C also make it possible for staffers to grab a huddle space and plug in to a USB-C equipped monitor for a quick meeting or demo using just one universal cable that handles the video signal, enables peripheral devices like a keyboard, and even passively charges the laptop while the meeting continues.

# Benefit from Your Workspace Modernization

Upgrading workplace meeting technology has budget implications, but modernization efforts have some clear benefits to operating budgets, as well as some less-obvious but still tangible cost reductions.

**Space:** Commercial real estate giant CBRE's 2017 Office Fit-Out Cost Guide says the average cost per office employee seat is \$32,103 annually, so just finding ways to make working remotely feasible and effective for four staffers can save approximately \$128,000 per year.<sup>9</sup> Analytics generated by meeting room systems, such as room booking, can help right-size the amount and type of space needed for offices. This brings enormous cost savings implications, especially with the 2016 average annual office space cost ranging from \$59 to \$223 per rentable square foot.<sup>10</sup>

**Time:** Meeting leaders or assistants often turn up 15-30 minutes early to meetings, just to ensure the right equipment is there and everything is working. Modern systems are largely plug and play. Staff don't need to cross the city or even an office campus to get to meetings when virtual meetings allow the face-time, video and audio quality, and collaborative tools that make staying put just as feasible.

**Resources and Productivity:** Larger organizations with dozens of meeting rooms have IT or A/V staff who spend their days running around getting projectors to cooperate with laptops, wheeling around displays and scrambling to find and provide adapter and signal cables.



# Conclusion: It's Time to Modernize

As outlined, there are many pragmatic reasons to modernize meeting spaces and the entire dynamic of how organizations conduct business and get things done. It's particularly true as older workers begin to retire, replaced by a majority millennial generation that wants and expects engaging, creative and flexible work environments.

Modernization would seem a big, daunting task for any organization. But it comes down to a simple question: what can we do and use to make meetings better?

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Learn more:

Samsung Flip  
[samsung.com/flip](https://samsung.com/flip)

Huddle Bundles from Samsung and HARMAN  
[samsung.com/huddlespace](https://samsung.com/huddlespace)

## Footnotes

0 <http://globalworkplaceanalytics.com/telecommuting-statistics>

1 *ibid.*

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10 CBRE North America Fit-Out Cost Guide 2016

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