







How Owl Labs is addressing the office evolution through flexible, immersive experiences in meeting rooms.





Analyst

Dan Root

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This eBook highlights the findings of a recent Experience Evaluation conducted by Wainhouse Research. The objective of this research was to assess market-leading front-of-room video conferencing solutions against the center-of-table perspective of the Meeting Owl Pro across remote and hybrid in-room meeting experiences. As requirements for testing, all solutions included camera(s), microphone(s), speakers, USB-control and connectivity for bring your own device (BYOD) environments. The solutions tested are intended for small and medium-sized conference rooms, with the option for large conference rooms through expanded audio and video pick-up options. To address the performance of the Meeting Owl Pro within this eBook, results are compared to industry benchmarks. These benchmarks are derived from an averaging of results across the alternative market-leading solutions: Poly Studio, Jabra PanaCast50, and the Logitech MeetUp. This evaluation was hosted by, but not done in conjunction with, Owl Labs.



Table of Contents

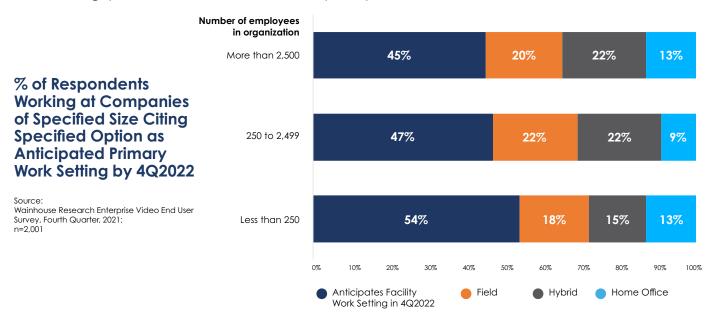
A Changing World	4
Meeting Perspectives - Experience Evaluation	5
Results Overview	6
Presenter Tracking AI	9
The Game-Changing Owl Connect	12
About Owl Labs	14
About Wainhouse Research	14
About the Research Team	15



A Changing World

Across the globe, teams and organizations are finally meeting in-person again. While this transition is exciting for most, it brings a new set of challenges into focus for those of us trying to meet with our teammates. One dreaded question that's bound to come up: How will my team meet and collaborate when some of us aren't in the meeting room?

A recent Wainhouse study of both information workers and IT decision makers indicated that 51% expect to work remotely, to some degree, indefinitely. If this holds true, enterprises must evolve their meeting spaces to accommodate remote participants.

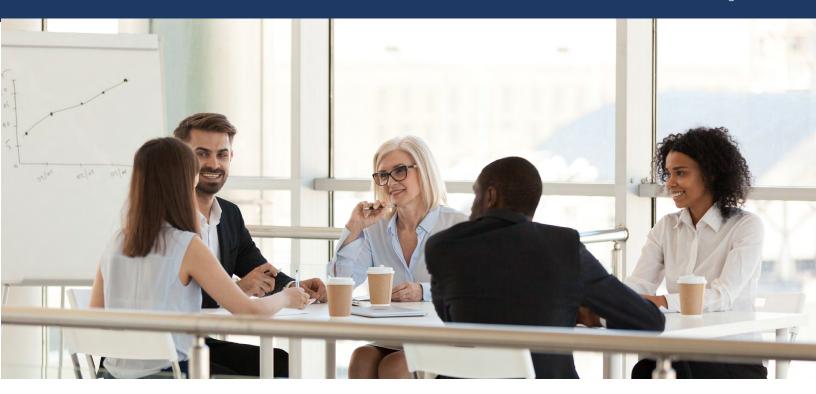


Without a doubt, work approaches and meeting room strategies have changed during the past two years. Here are some of the biggest trends fostering change in the way people work (and driving demand for solutions like the Owl Labs device profiled in this eBook):

- Temporary COVID fixes have become permanent necessities for workers even as they
 return to the office.
- Decision makers need to embrace strategies that encourage flexible work environments, as embodied in increasing interest in hoteling and hot-desking.
- IT teams are playing a larger role than ever before in formulating investment decisions for AV and collaboration gear.

These considerations led Wainhouse to conduct an experience evaluation to facilitate decision makers assessing front-of-room and center-of-table video conferencing solutions. The results of the evaluation across various meeting rooms indicate a correlation between in-room workflow and remote participant engagement: the more action in the room, the more perspective matters to the remote participant.





Meeting Perspectives — Experience Evaluation

Within the evaluation, Wainhouse independently examined and tested 1) initial experience; 2) deployment and provisioning; 3) in-meeting experience; and 4) audio and video assessments. While the devices evaluated do not share a single deployment style, they do share a prime use case. Each of the devices selected provides similar coverage of meeting spaces and is designed to enable hybrid meetings. If available, Wainhouse included testing of expanded video and audio offerings in a large meeting room. Wainhouse did not purchase or subscribe to any add-on services provided by the vendors, as this was not the focus of the evaluation.

The evaluation followed a script containing more than 450 unique tests with additional measurements covering out-of-box setup to daily meeting experiences. All results were documented and scored following a low-to-high scoring system. An example of the Wainhouse common scoring scale is found below.

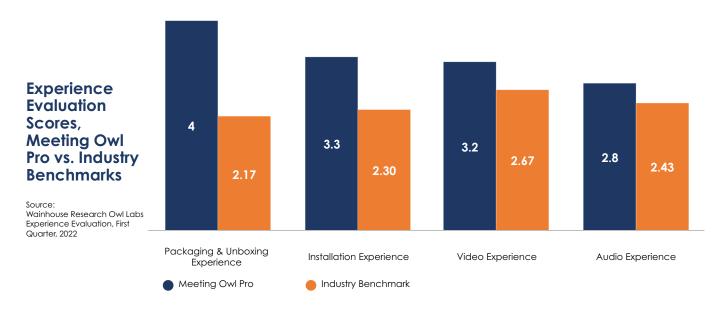
Wainhouse Test Script Example Scoring Scale

Scoring Scale
0 = feature unavailable
1 = poor experience
2 = good experience
3 = great experience
4 = exceptional experience



Results Overview

At a high level, the Wainhouse evaluation team came away impressed with the Meeting Owl experience - as shown by its strong performance across the areas of assessment below.



From the outset, the Meeting Owl distinguished itself among the competitors. The packaging and unboxing experience set the solution apart, so much so that it received the top score of any device, as seen in the above evaluation scores. The reason for this is simple, Owl Labs is the only vendor packaging a video conferencing device in line with "direct-to-user" or "consumergrade" experience best practices. This extends to the clarity of instructions within the box. The Owl Labs approach is again on par with the best practices of consumer-grade experiences, leveraging simple step-by-step graphics to convey information.

This is important as we move to a post-pandemic world where offices are stretching resources and AV integrators are reducing specialized technicians. The ability to easily deploy and provision a device cannot be understated, as non-technical members of staff are leaned on to facilitate deployments. This is especially true of start-ups, and small and medium-sized businesses.

Owl Labs logged the fastest time-to-install of the devices tested, at a total time to first meeting of just 6 minutes 15 seconds. The installation and initial setup process is simple to follow, designed specifically for end-user or small-medium business (SMB) environments. As seen below, the Meeting Owl beat the industry benchmark in every aspect of the setup and provisioning assessments. Further reducing time to initial meeting was the recently introduced Owl Labs desktop app. Often used in conjunction with the mobile app, administrators can facilitate provisioning, bringing the process in line with enterprise best practices.



Installation and Initial Setup Results

Source: Wainhouse Research Owl Labs Experience Evaluation, First Quarter, 2022

Assessment	
Initial Installation	
Initial Setup	
Total time to first meeting	
Time of firmware update	

Meeting Owl Pro	Industry Benchmark	
2:30 minutes	6:30 minutes	
3:45 minutes	4 minutes	
6:15 minutes	10:30 minutes	
2.0 min	3:15 minutes	

The initial process to locate, name, and update a Meeting Owl is very straightforward. Once registered, users can join a meeting or a call, change default meeting settings, or make ad-hoc changes to the device. Within the browser or app, there are a variety of features available to users that enhance the capabilities of the device.

The default when joining a meeting is for both the 360-degree panorama ribbon and a cropped view of in-room meeting participants to be visible within one video stream. This is interesting, as most solutions require separate video feeds that fight for control of the online meeting real estate, instead of working in concert. Owl Labs has differentiated itself by leveraging a proprietary intelligence system (the Owl Intelligence SystemTM) to capture and frame in-room participants. The resulting video stream shares a view of the entire space with a highlighted gallery of the speakers as they work and move within a space, as seen below.



Owl Labs Meeting Video Stream

Source: Owl Labs, 2022

Rounding out the installation evaluation was an assessment of the gear provided with each solution. The Meeting Owl utilized accessories very well, with no unused parts after install. This is an advantage within enterprise deployments, as keeping accessories can be difficult over the long-term.



Like the first two areas of assessment, the Meeting Owl performed better than industry benchmarks for the video experience. To test the user video experience, Wainhouse leveraged multiple methods to calculate the strongest performance. From capturing face percentages, to calculating eye contact and measuring the auto-framing capabilities, areas of assessment were selected to gauge the real-world meeting performance of the devices. These tests demonstrated the power of in-room dynamics for the Meeting Owl. While the angle of a face looking at the display is greater than front-of-room devices, the Meeting Owl is the standout whenever meeting participants are speaking or looking at each other. Collaborative workflows are strongest with the Meeting Owl, as the front-of-room perspective relegates remote participants to a side-line view of in-room conversation.

The final area of evaluation was the audio experience, which found most devices competitive. From simply capturing the frequency range, to measuring audio distortion, and noise cancellation capabilities, these assessments were selected to gauge real-world performance of the devices.

Owl Labs Audio Performance Results

Source:
Wainhouse Research Owl Labs
Experience Evaluation. First Quarter. 2022

Assessment	Meeting Owl Pro	Industry Benchmark
White Noise	Suppression at 5 seconds	Cancelled in 6 seconds
Voice Quality	High	Slightly Compressed
Brown Noise	Suppression at 4 seconds	Cancelled in 7 seconds
Voice Quality	High	Slightly Compressed
Ambient Noise	Ineffective	Ineffective
Voice Quality	High	High

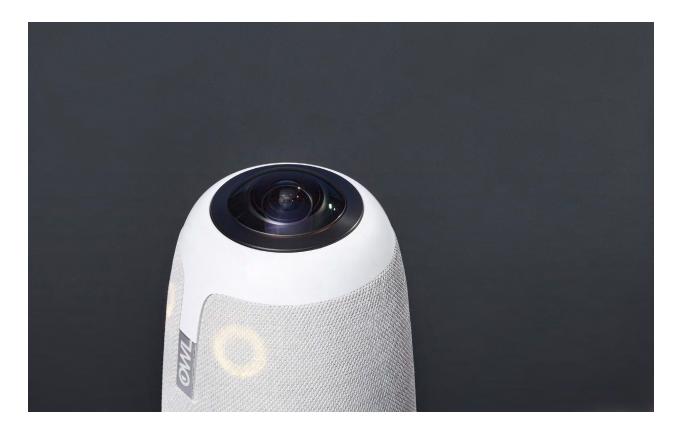
While the Meeting Owl does not completely cancel static background noises, it does suppress noises up to 9dB within 4-5 seconds, without sacrificing voice quality. This approach is in line with one of the prevailing theories on noise cancellation, which prioritizes retaining voice quality over absolute noise elimination. Additionally, Wainhouse found the Meeting Owl exceeded its specified 18' radius microphone range easily.

Given the challenges of a reduced support workforce, workflow specialization, and ease of use, this evaluation considered many aspects of product viability within the hybrid work environment. The findings of the evaluation speak to the importance of alternative camera perspectives and multi-stream meeting rooms. The Meeting Owl, in particular, established that it is well suited to address the needs of organizations regardless of size. From the proprietary intelligence system and differentiated placement at center-of-table, to the category-first over-the-air pairing Owl Connect technology, the Meeting Owl is built for simplicity and ease of use.



Presenter Tracking Al

In today's world, easily managed, streamlined deployments are considered ideal for small and medium-sized spaces. Yet, these are not the only considerations for these meeting rooms, as a select few solutions now accommodate a variety of room arrangements that allow for flexibility while concurrently framing in-room participants as they move within the space. During the evaluation, Wainhouse tested the impacts of what many vendors call "presenter tracking" technology across different perspectives within the meeting room, using the Meeting Owl to challenge the industry-standard front-of-room deployment.



With the industry benchmark for small and medium-sized rooms being front-of-room camera bars mounted near a display, the Meeting Owl's 360° panoramic camera placed on the meeting table is an innovative take anytime in-room participants are leading the collaboration. The device itself is tall enough to ensure it captures the faces of participants over laptop displays and most normal table items, while remaining passive enough that in-room participants hardly notice it.

The more meeting room dynamics change, and participants stand or move around the space, the better the Meeting Owl experience becomes. The device returned some of the



best framing and accuracy scores of any device tested, more than demonstrating the power of its proprietary intelligence system. In addition to the standard speaker tracking AI (Artificial Intelligence), the Meeting Owl also includes a Presenter Enhance mode for single and tandem presentations. With Presenter Enhance enabled, the Meeting Owl beat the benchmark of 92% accuracy by achieving a perfect 100% accuracy when tracking moving participants, across both small and large conference rooms.

Beyond the accuracy of the tracking software, Owl Labs delivered on the speed of capture. Wainhouse found the Meeting Owl was able to accurately capture participant movement within 3.8 seconds, on average. While there was a single competitor that delivered a tracking time of 3.2 seconds, this same device delivered a 92% accuracy rate, leaving the Meeting Owl as the strongest contender when considering both results in context.

It's noteworthy that Presenter Enhance tracks the speaker and their gestures from the perspective of being at the table, delivering remote participants a far more engaging experience than that of a standard wall- or display-mounted device. The Meeting Owl's Intelligence System is also pivotal in returning unparalleled on-axis facial presence whenever conversations shifted from the display to in-room participants.

When settings need adjusting, the downloadable Owl Labs desktop, tablet, and mobile apps are available. These tools are built for the everyday user, in line with the best consumer brand practices. Interactions are simple and require minimal clicks to complete a request. The daily use experience is more in line with consumer-grade solutions than the enterprise alternatives, which Wainhouse believes will be a strength for adopting organizations.



Meeting Owl desktop app for in-meeting device control.



There is no better example of the Meeting Owl's capabilities than how it scales into larger spaces. To address larger rooms and more participants, Owl Labs has developed the Owl Connect technology, which wirelessly connects two Meeting Owl devices seamlessly into a single video stream. This approach enables Meeting Owls to capture faces from multiple angles, delivering an improved remote participant experience. This unique approach is just one of the ways Owl Labs is improving the meeting experience. In addition, Owl Labs has two other devices available in the US, the Whiteboard Owl™ and Meeting HQ™ to facilitate digital transformation and collaboration needs across organizations large and small. While vendors have adjacent offerings, it's the combination of solutions under one brand that creates the seamless experience decision makers and meeting participants are looking for.

The Meeting Owl excels in all the areas needed for great meeting experiences. The simplicity of the BYOD workflow makes the unit the perfect small to medium-sized meeting room device. Connect to a room system and the Meeting Owl seamlessly hands off the feed to Teams, Zoom, Meet, BlueJeans, or any online meeting platform. The Meeting Owl's Intelligence System captures more in-room eye contact, better facial framing when compared to front-of-room cameras, and features strong noise suppression. The resulting meeting experience is more engaging for remote participants, with fewer disruptions.







To address all meeting spaces Owl Labs didn't just add a second device to the room. The Owl Connect capability enables two Meeting Owls to work seamlessly in concert as they capture inroom participants. This capability is made more impressive by the over-the-air video connectivity, which means users only need power for both devices and to connect via USB to the primary Owl. The connected Meeting Owls mesh the video streams, leveraging the proprietary intelligence system to track in-room participants across both devices without noticeable latency to the audio or video experience. The results enhance both the in-room and remote participant experience by conveying more eye contact and in-room non-verbal cues.

Pairing two Meeting Owls is simple: from the mobile app, a user selects Owl Connect, the device they wish to connect, and accepts the primary Owl. Once connected, the two devices operate as a single video stream to either a personal device or room system. This approach of multi-feed, single-stream video is decidedly different from most vendors in the space, especially among competing meeting room devices. Until recently, if a vendor offered a multi-feed solution, it consisted of two cameras wired to an endpoint. In more recent applications, those installed systems featured presenter tracking to stay focused on a speaker. Most recently, Microsoft and Zoom have enabled multi-feed, multi-stream solutions through computer processing in conjunction with room deployments. The challenge becomes switching between these distinct flavors of tracking software when leveraging a different platform. Owl Labs has addressed this by supplying its own Owl Intelligence System, which acts as a common experience between various platforms.



Throughout testing, the Owl Connect capabilities were a recurring differentiator that other devices couldn't answer. The two Meeting Owls easily offered the most on-axis facial capture of any tested device. At under \$1000 per Meeting Owl, and with no additional servicing fees required to leverage Owl Connect, there are no competitive offerings. To achieve this level of fit and finish, meeting rooms would require a video codec and/or wired connectivity. Even then, the costs are exponentially higher than Meeting Owls.

There was a trade-off noticed by Wainhouse when testing front-of-room devices against the Meeting Owl, even with Owl Connect, and that's eye-contact when looking at the far-end participants on the display. The reason front-of-room solutions are so popular is that they give the impression you are making eye contact with the remote participant when speaking to them. In this instance, the Meeting Owl underperforms the industry benchmark for in-room participants closest to the display. As participants move further away from the display, however, the Meeting Owl experience improves. Add in a second Owl to the meeting table and the experience is further improved. The head of the table is always conveyed well, with the Meeting Owl providing enhanced audio, with it being closer to the participant.

While eye contact is crucial, so is being a part of the meeting. Front-of-room offerings quickly devolve to a spectator sport for remote participants, watching in-room conversations from the end-zone. Mix in someone approaching the display or whiteboard and the remote participant may be better off switching to an audio-only call. Wainhouse feels strongly that having multiple angles of capture closer to the participants is clearly the best way to solve for these workflows.





Next Steps

While the office evolution is happening across the globe, it's nothing more than assessing the workflows now in place and aligning meeting room technology to meet your needs. It's becoming ever clearer that equipping rooms with immersive and adaptable devices built to accommodate BYOD, room systems, and capture participants regardless of where they move in the room are central to post-pandemic deployments.

The results of the evaluation are clear, the Meeting Owl Pro performed better than other devices when capturing in-room gestures and non-verbal cues. The immersive perspective is closer to the perspective of having a seat at the table, increasing remote participant engagement whenever there's movement or a change in the room dynamic. These strengths are only enhanced by Owl Connect, as the two-device wireless pairing approach isn't just unique, but truly game-changing.

To explore the Meeting Owl for yourself, please contact the Owl Labs sales team for more information.

About Owl Labs

Owl Labs builds 360-degree video conferencing solutions for hybrid organizations. Its suite of products makes meetings more inclusive and collaborative by bridging the gap between remote and in-room participants. The company's flagship product, the award-winning Meeting Owl, is the first Al-powered, 360-degree camera, microphone and speaker that automatically zooms in on whoever's speaking with the highest quality video on the market. Over 100K organizations use Owl Labs products, including 84 of the Fortune 100 companies. Owl Labs has raised \$22 million in funding and is based in Boston, with remote and hybrid employees all over the world. To explore the Meeting Owl for yourself, please visit the Owl Labs website.

About Wainhouse Research

Wainhouse Research (http://www.wainhouse.com) provides strategic guidance and insight on products and services for collaboration and conferencing applications within Unified Communications. Our global client base includes established and new technology suppliers and service providers, and enterprise users of voice, video, streaming, and web collaboration solutions. The company provides market research and consulting, produces conferences on technology trends and customer experiences, publishes a free weekly newsletter, and speaks at client and industry events.



About the Research Team

Daniel C. Root, Senior Analyst. Located in the Boston, MA area, Dan focuses on workplace communications & collaboration technologies, with an emphasis on the intersection of cloud-based collaboration software and hardware deployments (e.g., whiteboard-style co-authoring) necessary for adoption. He has close to a decade's worth of experience in enterprise hardware and software with roles in business development, partnerships, product growth, strategic planning, and product development.

Bryan L. Hellard, Researcher. Located in Cincinnati, OH, Bryan is a Researcher and operates the test lab at Wainhouse Research. His primary focus is product evaluation and testing. He has 20 years' experience in the industry across several roles including product engineering and management, R&D, and end user consulting. Prior to Wainhouse Research, he was President of True View Video where he developed video conferencing related products and consulted with end users on best practices for collaboration. Bryan has also been a consultant to video collaboration vendors providing product design services. He lives in the Cincinnati, Ohio area.

