



10

**PRINCIPLES
FOR
INCLUSIVE
COLLABORATION**



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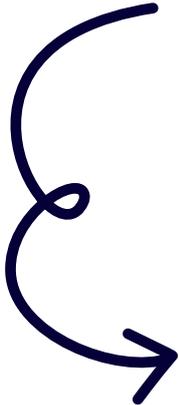


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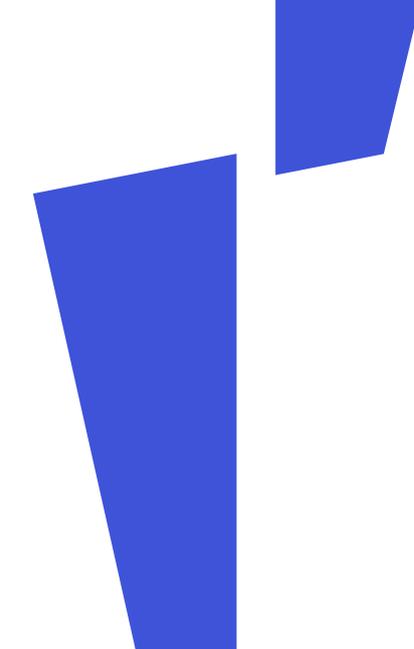
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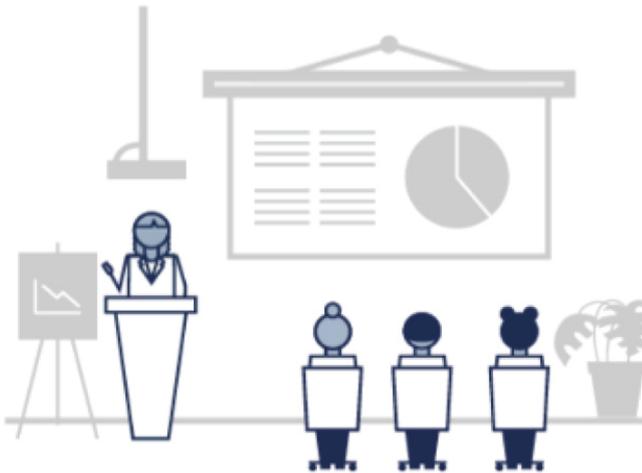


Introduction to inclusive collaboration principles

As the world of work continues to change rapidly, strong collaboration is more important than ever. The cross-functional projects that once unfolded face-to-face in the office are increasingly taking place in virtual or hybrid settings. In fact, the [International Data Corporation \(IDC\)](#) [predicts](#) that over the next 2 years, 65% of [Forbes Global 2000 companies](#) will aim to equalize their online presence and in-person experiences across the workforce.

The truth is, we still have a ways to go to achieve true inclusivity in our ways of working. In the recent past, visual ideation and collaboration were primarily in-person activities. Coworkers would gather together and use sticky notes, drawings, or diagrams to collaborate visually — and meeting face-to-face was assumed to be a necessary ingredient. Someone would take a photo at the end of each session, capturing their efforts as an artifact for later use.

In this traditional approach to visual collaboration, inclusivity was not guaranteed — and, indeed, often fell by the wayside. For people with additional needs, such as workers with disabilities, equal participation often hinged on the facilitator(s) involved. If facilitators were aware of and intentional about building more accessible spaces and processes, things went rather smoothly. But, in many cases, inclusivity was merely an afterthought and sight, sound, movement, and neurotypical thinking styles were assumed as universal abilities. As a result, people with disabilities or other access needs were often unable to engage as fully as their peers.



A shift from the conference rooms of the past to the modern collaboration spaces of today

Past

- Audio-only remote participation via conference phone
- Octopus of cables for projector in dark room
- Physical whiteboard
- Flip chart for notes
- Fighting over meeting room

Present

- Full remote participation via group video system or video appliance
- Wireless presentation via Wi-Fi or Bluetooth
- Whiteboard camera (basic) or full digital whiteboard (advanced)
- Collaboration canvas applications
- Meeting room scheduling

The good news is that things are changing. As teams and workers continue to adopt online tools to collaborate — whether creating, connecting, building on, challenging, sorting or selecting ideas — we encounter new ways to build more inclusive cultures and practices. As we navigate these shifting environments, it's critical to consider people who sense, move, think, or feel differently. This means being attuned to their experiences in all phases of a collaboration, from planning and setup to the session itself, retrospectives, and any events that follow. In order to harness the full breadth of our talent, we must learn to listen to individuals' needs and preferences and provide approaches that bring together diverse perspectives for better outcomes.

While no single tool or set of behaviors solves for accessibility and inclusivity, insights from Miro's research* shine a light on practical steps we can each take. By combining technology and behaviors, we can all work to build more inclusive environments where all participants can contribute and collaborate fully.

At Miro, we envision this ebook as a starting point to build more inclusive collaborations moving forward. Think of it as a quick-start guide to assess and rethink the distinct needs and experiences that you, your colleagues, or collaborators have when using visual collaboration platforms. Our goal is to help make it easier to work together within the constraints of multiple environments, tools, needs, and approaches. Take what is practical, test it, and progress it within your specific context. Inclusive collaboration is fabulously powerful — and both personally and professionally rewarding.

As you implement these techniques or any others, we'd love to hear from you about your results, ideas, or questions. Join our conversation in the [community](#) or reach out to us directly at accessibility@miro.com.

*In June/July 2022, Miro conducted a dozen in-depth interviews and three focus groups to better understand the needs of people with disabilities

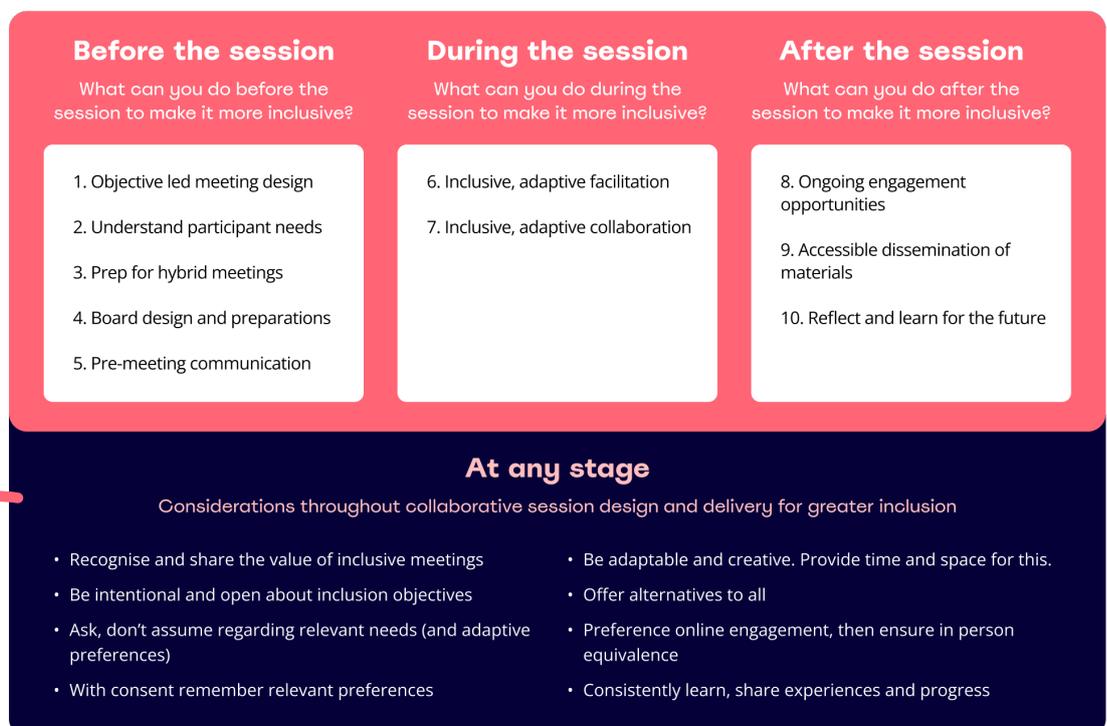
overview

Overview: Planning A to Z for inclusive collaboration

The key principles and considerations you need for running a great inclusive meeting or workshop do not begin at the time of the session — they must be part of every stage of the process. These principles fall into three specific time-oriented categories:

1. Before: preparation before the session
2. During: facilitation of the session
3. After: follow up after the session

Based on Miro's research, we have identified 10 principles, as well as eight considerations that can be infused at any stage. The figure below helps illustrate their influence throughout the design, delivery, and follow-up when using visual collaboration platforms.



Overview of key principles before, during, and after sessions and considerations at any stage

considerations

at any stage



Considerations to apply at any stage

Throughout your inclusive meeting planning, keep the following key considerations in mind to ensure you are accommodating all participants and creating the most equitable experience possible.

- 🗨️ **Recognize and become an advocate for inclusive collaboration:** Understand the importance of inclusion and be accountable for it in all your collaborative sessions to improve organizational value. If everyone in a meeting cannot contribute, you are sacrificing precious time and high-quality results — and without diversity of thought, [creativity](#) will almost certainly suffer.
- 🗨️ **Be intentional and open about inclusion objectives:** Share your intentions for inclusion with all attendees and colleagues working with you. This will set expectations across the team, help draw in support from those with experience and skills, and also help quickly identify challenges as they arise.
- 🗨️ **Ask, don't assume, relevant needs (and adaptive preferences):** You may or may not know the needs of those joining the session. Don't make assumptions, rather, ask about preferences and access needs in the context of designing and facilitating an inclusive collaborative session. Some attendees will be open about their access needs and others may not. Provide a safe space for people to share relevant needs when or if they wish.

- 📌 **Get consent to document preferences:** If you are inviting the same attendees to multiple sessions, remember their access needs and preferences. Then you can ask them to confirm that they require the same adjustments or accommodations, or to update their preferences. Note that you need to ask for consent before recording or documenting any personal information about your attendees.

- 📌 **Make time and space to be adaptable and creative:** Both in preparation and in facilitation, provide a bit more time for inclusive considerations and adaptations. Supporting a broader range of perspectives is more valuable, however it can take a little longer to plan ahead and during the session itself. Be prepared to adapt to changes in the session and have an alternative plan, such as prioritizing parts of the agenda you most want to cover and what you could come back to another time if required.

- 📌 **Offer alternatives to all:** Although some people may share their needs and preferred adaptations with you, not everyone will. Some people are not even aware that they have a strong preference or difficulty in a session until they are there. There may be many reasons that specific formats are preferred by some attendees that are not immediately obvious, so offer alternatives to all.

- 📌 **Prioritize online engagement, then ensure in-person equivalence:** Ensure that you design collaboration initially for attendees dialing in and then consider how to make it work for those in the shared physical space. Most of us are more familiar with in-room collaboration, so it can be easy to unintentionally exclude those participating virtually.

- 📌 **Consistently learn, share, and iterate:** Skills in facilitation, design of a visual workspace, and collaborative activities will develop over time and with experience. This is an ongoing journey where valuable inclusive and adaptive practices can be constantly improved and shared.

Hybrid meetings are challenging

Remote participants



- It's hard to clearly see the people in the room
- Can't hear the conversation clearly
- It's difficult to contribute to the conversation and work happening

Disengaged audience from lack of inclusion

In-person participants



- Can't keep up with remote participants using the meeting chat
- Not sure if they can be adequately seen and heard online
- The fear of being exclusionary disrupts natural conversation and collaboration

Feels like they're losing any benefits of being in person

It's important to consider all your participants' needs and give extra thought to those participating remotely who might feel excluded.

key principles:

before the

session

Key principles: Before your collaborative session



Principle 1: Objective-led meeting design

The first step for running an inclusive collaborative session is to ensure you have very clear goals and objectives, and that hosting a digitally-enabled meeting is the right way to efficiently meet these targets.

Think carefully about your aims to determine what style, format, and key elements would best achieve them. If you choose a meeting with online collaboration, there are a number of important planning considerations to help include participants with access needs. Give yourself enough time to think carefully and thoughtfully about this and plan with everyone's needs in mind. Consider the types of activities you would like to undertake, who should be involved, and how the discussion will be facilitated. Plan realistic agenda timings, allowing for on-the-day adaptation and clear breaks.

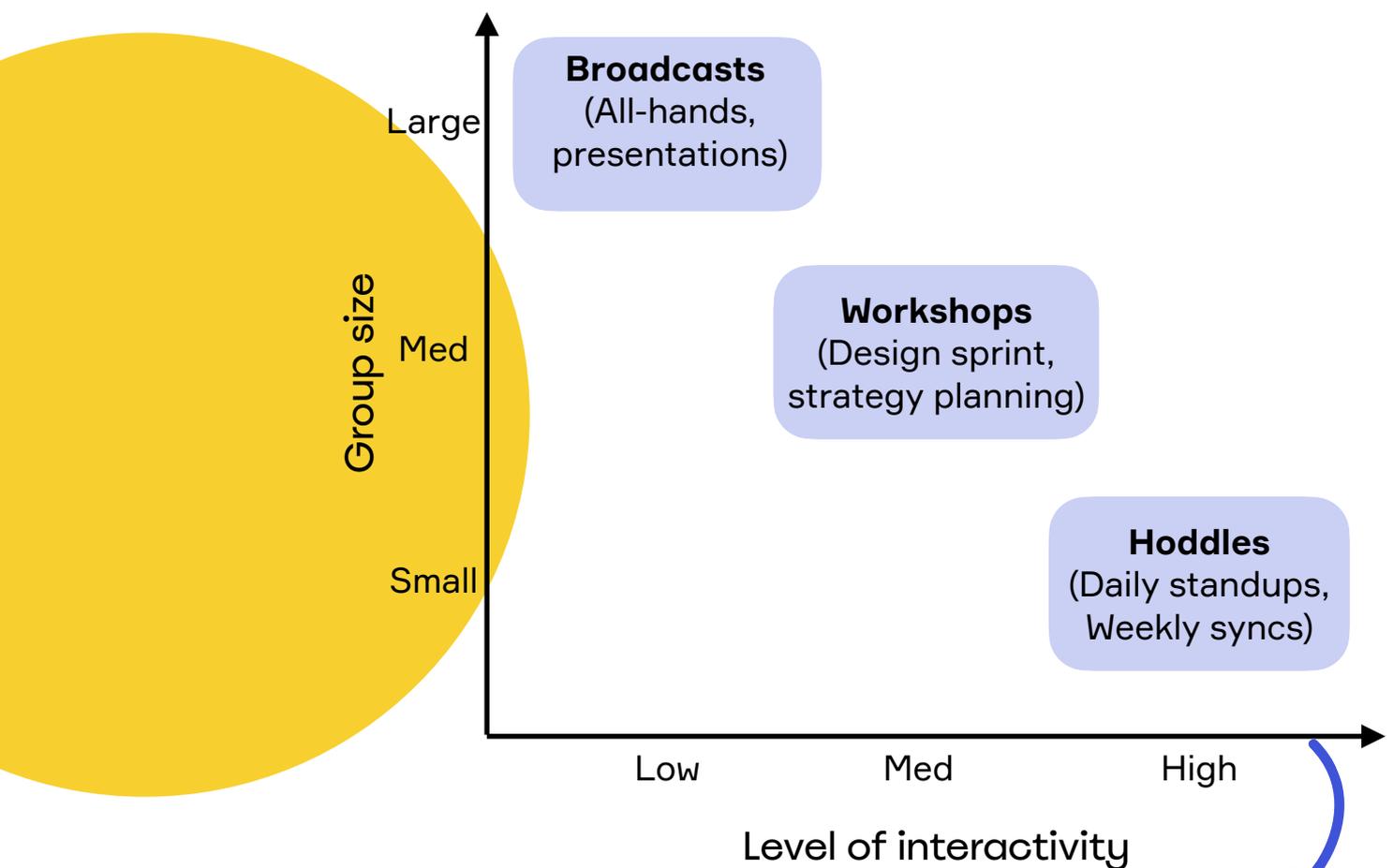


"If there is a specific objective that needs to be fulfilled I would definitely consider a whiteboard. If it's anything that has activities or purpose, or [a] prompt for people to discuss, then the whiteboard is very important."

[Academic researcher, facilitator of disability-inclusive sessions in the public and private sector]

Here are the key elements of Principle 1:

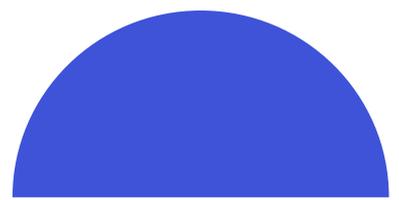
- **Be clear about the objectives for the meeting and determine whether a collaborative session is the best approach.** Collaborative sessions with digital engagement are useful for brainstorming, planning, goal setting, visualizing, co-creating, ideating, and idea synthesis. They are not usually preferred for one-way information giving or presentations.



Consider group size and interactivity before planning your session. Check out our blog to learn about the [best ways to prepare](#) for different types of meetings.

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- **Leave enough time to prep.** Great collaborative meetings take time to plan well so that everyone can contribute fully, confidently, and valuably. A little additional consideration and planning time can often save a lot of hardship or unanticipated adaptation later (see Principles 1 to 5).
 - **Think about how you will facilitate in the digital space.** Some attendees won't immediately know how to contribute content in the space independently, and others may find it difficult to do within a specified timeframe. Consider and build in alternatives to accommodate people who want to add content independently, but with some specific accommodations such as more time before, during, or after the session. You can also consider having a scribe take participants' ideas down onto the shared space.
 - **Think about the size of the meeting and who needs to attend.** For collaborative sessions the number of participants and the dynamics of the group are important. You will want to create a safe space for everyone to contribute. For people with some access needs it can be harder to contribute in a session that has too many participants or an imbalance of levels or roles. If you need to invite more participants or are concerned about creating a safe space for engagement, think about whether it makes sense to organize more than one session or use breakout rooms with separate visual spaces for collaborative activities.
 - **Assign additional meeting roles and facilitation support as needed and brief the team.** You may need note takers, extra facilitators, and technical support (particularly if you include breakout rooms). Everyone with a support or facilitation role in the meeting should be briefed in advance so that they understand the goals and objectives, the schedule, and their specific role in relation to individuals they are supporting and activities they are engaged in (see Principle 2).

- **Consider how time of day and meeting length can impact attendees.** Some people with access needs have reduced energy levels, physical, social, emotional, or cognitive, and long meetings can have a negative impact. If your meeting crosses time zones, think about who will have to stay late or get up early and how this may impact those with additional needs, such as requiring caretaker support or who are caretakers. Breaks should not be seen as reducing or limiting working time, but instead help to ensure it is optimized — helping maintain focus, energy, and performance. They are particularly important for attendees with certain access needs, for instance for those in chronic pain who might need to move around, those who need more regular bathroom breaks, or those who need a quieter, more introverted moment between more intense processing activities.
- **Consider the type and duration of activities you will include.** To be inclusive you should give participants time to think about the questions, or the visuals, before writing on the visual workspace. This accommodates those with needs related to processing and also anyone using a sign language interpreter, since they need time to watch the interpreter before reviewing the frame on the visual collaboration tool.
- **Add buffer time for entering and exiting virtual breakout rooms.** Participants need time to adjust to others in the virtual room and the tasks asked of them. At the end of the time, they will also need to wrap up conversations and get back to the main session.
- **Think about meeting management and how you will communicate with your co-facilitators (if using).** Everyone on the facilitation team needs to feel comfortable, clear, and confident throughout the session. Consider:



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- How will you set up the space around you? e.g. multiple screens
 - How can you minimize the risk of disruption from network or technical challenges? e.g. having more than one person ready and able to “drive” the session if someone has an issue.
 - How will you communicate in real time with others facilitating the session without interrupting the flow with participants? Select a “back channel” that takes into consideration facilitators’ needs.
 - How can you best manage facilitator energy, effectiveness, and support for participants? e.g. swapping between facilitators for longer sessions to bring in different energy and perspectives.
 - Have dedicated roles monitoring Q&A or chat, managing logistics such as breakout rooms, or observing to ensure everyone is engaging comfortably — and, if not, offering help.

- **Use virtual meeting management software that is inclusive and you are using it inclusively.** Understand the limitations of your meeting platform (e.g. Zoom, Google Meet, or MS Teams) and plan support as needed, such as speech to text live captioning. Also understand how your and the groups’ behaviors in the session can impact inclusion, such as using the chat actively, which can interrupt those using screen reader software (Also see Principle 3).
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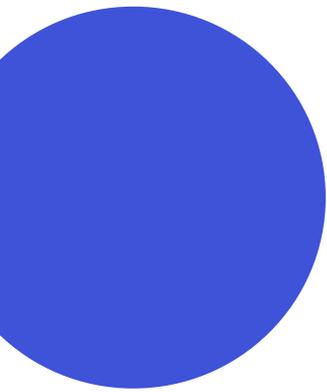
Some participants may have anxiety about real-time contributions in front of peers (this could be related to dyslexia or anxiety, or something else entirely).



Principle 2: Understand participant needs

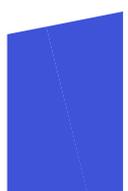
It is critical to understand participants' needs and preferences in advance of the session, and specifically in relation to using visual collaboration tools. Identify what supports or adaptive practices may be helpful, and arrange them ahead of the session. This supports an “Ask, don’t assume” policy.

- **Ask in advance if anyone has access needs.** This should be done well ahead of the session date to accommodate any adjustments (like booking a sign language interpreter) or factor in some adaptive practices, such as the use of color when setting up the board. However, remember that:
 - Not everyone will want to discuss access needs, so you should always manage the meeting in an inclusive way even if you don’t receive specific requests.

- 
- Not everyone will know how their access needs translate to your session, so give examples of possible accommodations.
 - Offer a range of contact options such as phone (or other internally used direct contact format such as Slack/Skype/Teams), email or direct messaging tools/formats used between this group to contact the session designer for further discussion. This co-created solution and agreement prior to the session will bring understanding between the facilitator and participant.
 - Depending on what is possible within the time, platform used, objectives, budget, and resources, be prepared to manage expectations of those who discuss their preferences. Get creative and collaborative to engage everyone as equitably as possible. Recognize that there may be some residual barriers and consciously consider how to manage these.

- **Consider and recognize where access needs may contradict or clash.** You might have someone in the session wanting to use the chat function to minimize verbal interruptions and other attendees using screen readers, for whom chat messages are automatically read out, interrupting the flow of other conversations. Workarounds might include using a Google doc for notes or, if someone is communicating directly with a facilitator via chat, having that conversation switched to private or a Q&A only seen by the facilitator(s).

- **Explore access needs related to the specific visual collaboration tools you're using:** Share with participants the outline of the session and that you would like to use an online collaboration tool.





Check in advance if participants have used the visual collaboration platform in the past, and if so, what barriers or difficulties they may have experienced, gathering suggestions as to how you could make the session better for them. This will help you design engagement approaches that can overcome known or potential barriers. For those without prior experience, ask about their general digital and collaboration preferences and consider how this session could best be designed to fully include them.

 **Create solutions for attendees who may not be able to participate using the visual collaboration tool.**

If attendees think the barriers of using a visual collaboration platform are significant, you have a range of options to incorporate their input. You can offer personal support for individual(s) to help them navigate, scribe, or describe for them. You can also translate the session into another format such as a Word document, survey tool, or easy read questionnaire. These can be completed separately and inputted later by the facilitator. You can also give people time before and/or after the session to engage with the collaboration platform to contribute ideas without the pressure of others concurrently in the space. It is also possible to equalize differences by having the board available and shared on screen, but the navigation and input controlled by a facilitator on behalf of all attendees.



“When scribing for a mixed abilities group to remove the pressure and inaccessibility of navigating the board or inputting ideas, I always repeat back what I actually wrote on the sticky note to the contributor. This checks that my summary of the idea they expressed was accurate and it builds confidence as they are in control of what is recorded.”

[Inclusive designer, regularly works with disabled co-creators]

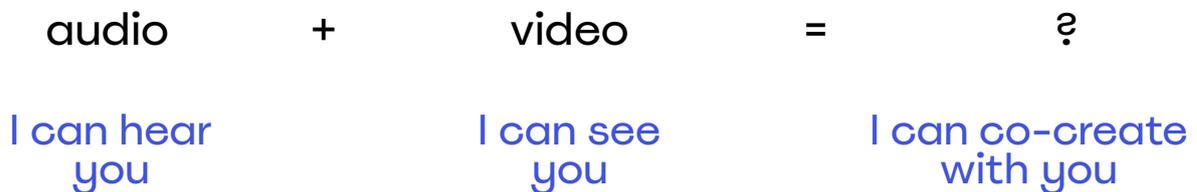
Understand your participants' technology setup. If possible, it is useful to understand the technology setup of your attendees. For instance, the screen size and/or number of screens used can impact their engagement with a visual collaboration platform, along with the way in which you guide them through it.



Principle 3: Hybrid meeting engagement

For inclusive engagement in hybrid meetings or work sessions, it is important to ensure sufficient quality of both your technology and approach (for audio and visual clarity) and that your facilitation consistently incorporates contributions from both those inside and outside the physical room.

Inclusive hybrid meetings require:



Additional workspace considerations:



Hardware interoperability



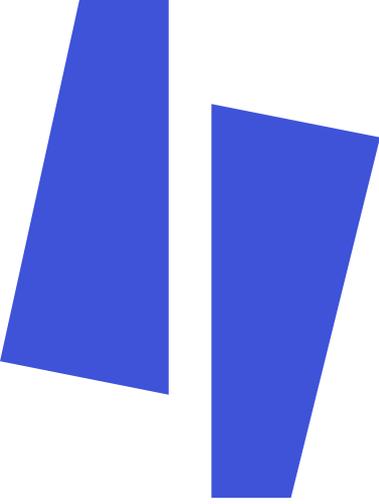
Different meeting solutions across the Enterprise



Multiple configurations for various types of spaces

Inclusive meetings require audio, video, and shared digital workspace tools.





Hybrid meetings with two or more people in the physical room and other attendees dialing in provide flexibility for those who cannot attend in person and give options to select a format that best suits them.

One of our overarching principles, “prioritize online engagement, then ensure in person equivalence” ([Considerations at any stage](#)) is relevant here. We have more established practices of engagement and inclusion in person, and we can see body language as well as the facial reactions of those around us. It is easier to exclude those dialing in virtually. By prioritizing engagement with virtual attendees, then fitting in the needs of those in the room, we are more likely to provide a more balanced and inclusive session.



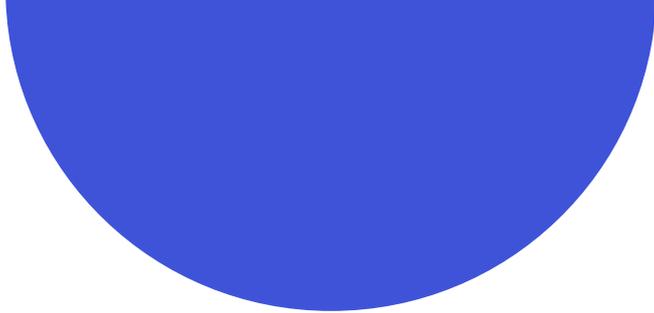
“In my case I was one of the people at home. It feels like there are two meetings happening. All the people in the room are having their own meeting and you don’t really know what’s going on there. It just added to the complications of trying to use the whiteboard tech.”

[Female, 30s, Deaf]

Recommendations for technology:

Audio

Ensure all voices in the room can be clearly heard by all attendees dialing in and the interpreter, captioner, or auto-captioner if you have one. This may require a spider microphone, or a single microphone passed around in a well-disciplined way. Equally, ensure that the amplified sound in the room is of sufficient quality for all to hear virtual contributors clearly.



To minimize feedback and echoing, it is best practice to only have one audio source active in the shared space. All contributors can be on the collaborative visual platform, but just one with the access to the microphone and speakers dialed into the conference call.

• **Visual (video + workspace)**

It can be helpful to have one big screen in the shared space that shows the virtual participants' faces. The visual collaboration platform can be displayed on the personal devices of each person in the shared space. This also allows for inputting and engaging independently as required.

Ensure the camera used in the meeting room captures footage that is helpful for virtual participants. Recognize that one camera across a whole room limits nonverbal communication clarity. As facilitator, if you are in the shared room it can be helpful to verbalize some nonverbal communication for the virtual attendees and anyone with sight loss. For example, you might say, "Sam and Akhi, I see you are both nodding in agreement to that comment. Sarah, you look less certain. Would any of you like to comment?"

• **Test & iterate on technology**

In advance of the workshop, make sure the technology is working as needed. Have the key team practice running hybrid meetings in lower pressure settings before doing one where the stakes are higher.

It's also important to explore new technologies if the ones you have aren't meeting your needs. This is a fast-emerging area with new tools regularly arriving in the market.





Hybrid Workshops

Facilitated strategy session, design sprint

Group size: medium (5+ in-person & remote) 🧑🧑🧑
Interactivity: medium 🗣️🗣️

Video conferencing enabled room

Remote participants join via video

No devices needed during discussion

Use device only when need to contribute

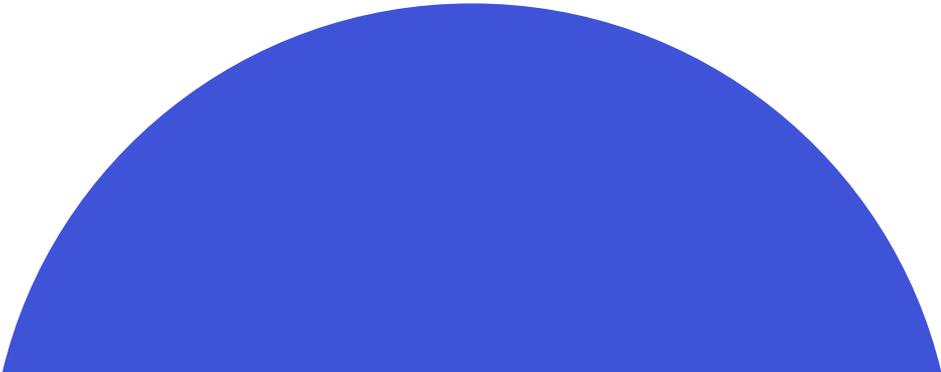
Video conference + screen share + Miro on personal device

Collaboration platforms can complement inclusive hybrid workshops by providing a shared workspace for all to use simultaneously, regardless of location, accommodating a broad range of communication styles.

Miro Value:

- 🔵 **Create an equitable participant experience** when everyone can access and contribute to the workshop - exactly the same way
- 🔵 **Save prep time** with workshop templates that can be standardized and reused
- 🔵 **Improve efficiency** when all work product is already digitized and collaboration can

Recommendations for facilitation:

- **Balance the conversation between in-person and virtual participants.** There can be a tendency for two meetings to emerge, where those dialing in are more observers than collaborators. Keeping everyone equally engaged requires active and sensitive facilitation, especially when there are significant power inequities or different communication styles.
 - **Use an approach that democratizes the activity.** Ask everyone (inside and outside the physical room) to submit questions virtually or using a virtual “raise hand” feature so the format is equalized between those in a physical space and those who are not.
 - **Prompt for feedback from underrepresented voices.** Consider having help from another moderator in the meeting for “nudges” to those outside the room or to monitor any alternative space such as digital sticky notes, a chat function, or Google Doc. This is especially important if you have attendees who prefer to write than speak their thoughts.
 - **Consider what remote participants might miss and identify ways to level the playing field.** This can include scheduling preliminary informal chats or reviewing presentation materials in advance, and making sure they are added to the visual collaboration space used for the session. In real time, add any new diagrams, drawings, or other content generated in the shared room into your virtual collaboration space so virtual attendees can see them clearly.
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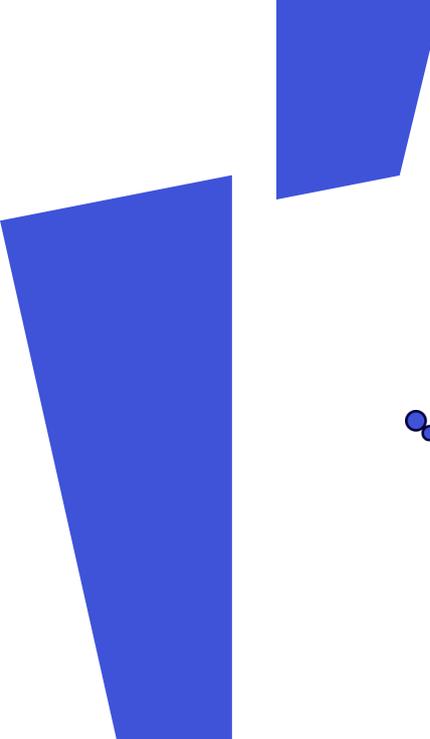
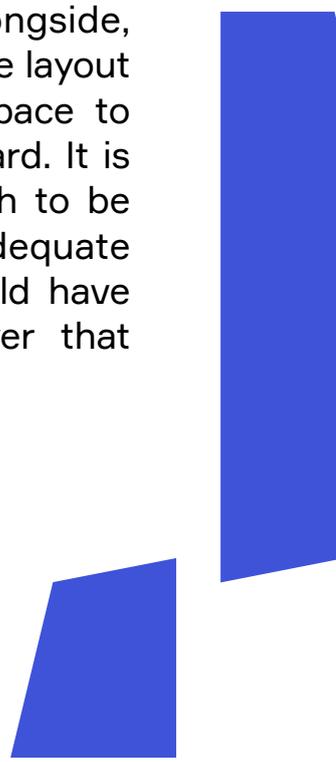


Principle 4: Visual collaboration design

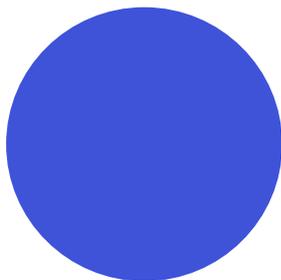
Optimizing inclusive engagement in the session will be supported by pre-emptive design considerations such as the way you structure your collaborative space, use of color, preparation of activities, and the content you incorporate.

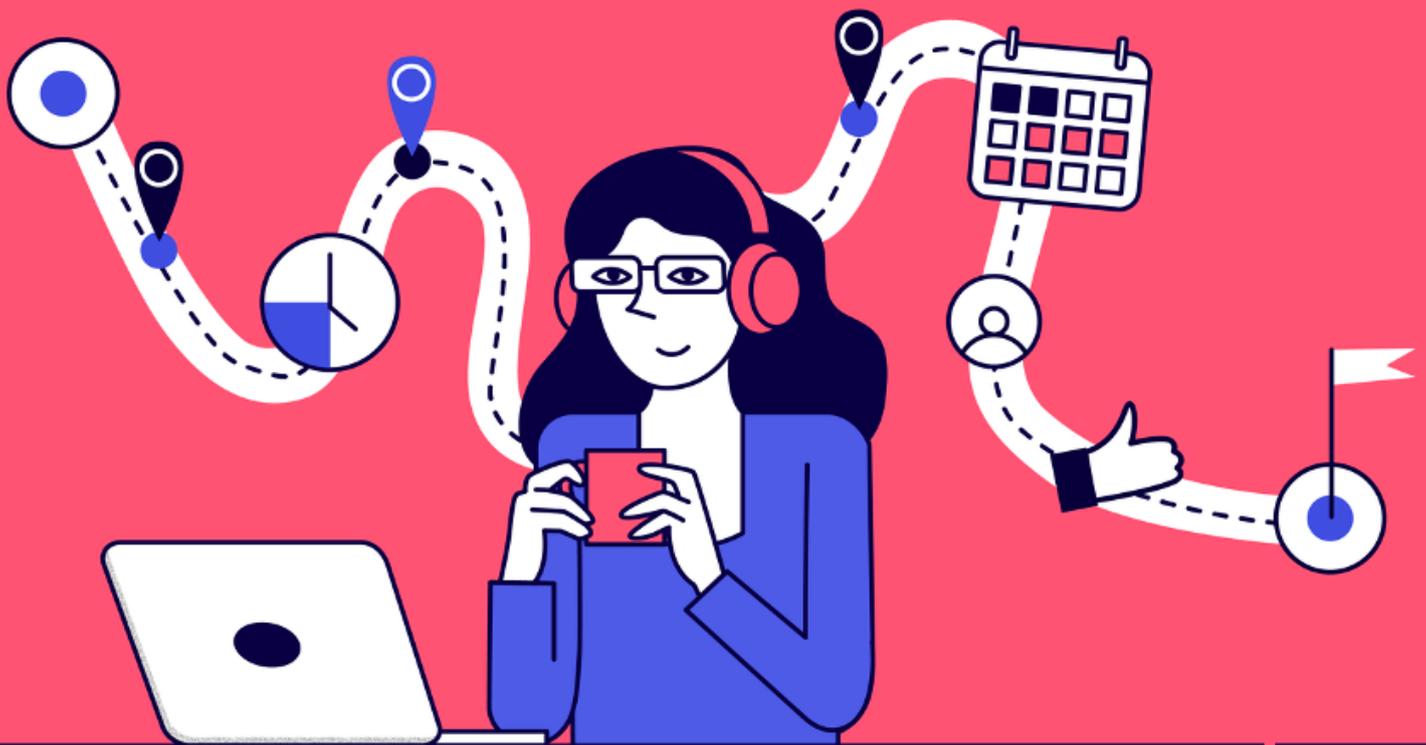
There are many ways in which accessibility can be embedded into the design of the visual collaboration space. They relate to good practice in terms of accessibility, usability and readability.

- **Start with a logical sequential structure.** Think about the order of your content relative to the sequence of the session and relative to each other. Place them in the most obvious sequence. Test the logic with others if possible, ideally with a diverse group of people with different work styles and skill levels. Think about adding indicators for ordering to help participants navigate their way around the board if they want to go back to previous activities (e.g., numbering slides or using arrows) or adding clear titles to each slide or section in an accessible font (fonts like Tahoma, Calibri, Helvetica, Arial, Verdana, and Times New Roman score highly on accessibility).
- **Add clear contextual information in the shared workspace.** This could include a schedule of activities, facilitators' names, clear objectives, and explanations of each activity. Helpful contextual information can be delivered both verbally by the facilitator and read by those who are distracted or find it easier to read than listen. Basic instructions on how to use the collaboration tool should also be provided, especially if they are important for accessibility such as reducing distractions or explaining how to set preferences.

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- **Consider color contrast (visual clarity) and meaning.** Ensure sufficient color contrast (preferably a ratio of at least 4.5:1) between foreground and background colors. You can test this using tools such as [WebAIM's color checker](#). Do not rely on color alone to convey meaning, since people with color perception difficulties can find this challenging. Provide text, icons, numbers or other alternatives. For example, rather than using a simple traffic light system of red, green, or yellow circles to denote different status of an activity, you could add R, G, Y in each circle. You'll also want to consider the color, size, and style of the font being used – avoid use of italics and all caps.
 - **Be thoughtful about media such as graphics or video.** Images are much easier for some people to process. Others can find them hard to perceive or to understand their meaning, especially when highly simplified. Where using images, graphs, or other visual elements, provide alternatives in text alongside, unless they are simply decorative. Consider the layout of content and ensure there is sufficient space to insert images into the collaborative visual board. It is important to ensure images are large enough to be legible, are high resolution, and have adequate contrast. Any embedded video content should have captions or link to an external video player that provides captioning.
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- **Prepare what you can to save time and energy in the meeting.** Arrange piles of virtual stickies in each area of the workspace in advance so that participants have something to start with. If you are aware of access conditions that [make some colors easier to see](#) for some participants, consider allocating the color of stickies to particular individuals before the meeting.
- **Be careful when adding timers to activities.** Some attendees may welcome this but be aware that some will not. Provide a guide in the instructions that can also be verbalized in the room just before their use to describe how to turn this off.
- **Minimize activities that require mouse-only functions.** This way those who need to or prefer to can use a keypad or keyboard.





The planning and communications stages are critical to a successful inclusive meeting. This gives the facilitator the opportunity to understand what's needed and allot the appropriate resources.



Principle 5: Pre-meeting communications

Communicate to participants ahead of the session to ensure that everyone attending has the agenda and understands the objectives and expectations of them. Sharing pre-session information can build confidence and familiarity with the activities, terminology, visual collaboration platform, attendees, and interaction required.

The dynamic of spontaneous idea-sharing and strategic thinking can be a great advantage of collaborative meetings. However, for some attendees, on-demand participation can be a barrier to contribution. Minimize this by relaying information in an accessible format before the meeting that shares the goals, objectives, and desired outputs. In addition, check in with participants to gauge whether everyone has a basic level of confidence about the tools and approaches to be used.

Besides those attending as contributors, it's helpful to provide a detailed brief to colleagues supporting the session e.g., co-facilitators, personal scribes, live captioners, or sign language interpreters.



“Make it clear what people are supposed to do, and let people know in advance. If [I am put] on the spot that's where the pressure is. For instance, you have two minutes to think of a solution right now. I really don't like that.”

[Female, 20s, Neurodiverse and Mobility related conditions]

Recommended pre-session communication with participants:

- The meeting objectives and who will attend
- The agenda and timings for the session including breaks. Break timing can be particularly helpful for those with caretakers or with caretaker responsibilities.
- An introduction to the visual collaboration platform, how it works, and how you will be using it. This could be a document, video, or orientation session.
 - Explain the tool and provide a demo, screenshots, or video of the workspace.
 - Describe or demonstrate options for participants to engage, and let them practice using the tool.
 - Showcase ways for people to adapt the platform to better suit their needs, such as changing the colors of stickies, turning off distractions, or uploading offline work.
 - 1:1s or offering a short orientation can be especially helpful for those who are new to the platform and need personalized support.

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- **Notification about communication support options** such as sign language interpreters, scribes, or live captioners.
 - **Pre-read materials** such as presentations, a description of key terminology, or other content that may be difficult to process in real time during the session.

Recommended pre-session communication with co-facilitators or session contributors:

- All that is provided to participants (as per the above).
- Clear roles and responsibilities, including a range of ways they can help participants who may find the session difficult for any reason.
- Value-based expectations, e.g. prioritizing a safe, inclusive space over speed, and developing a preliminary set of ground rules.
- Plan for when things don't go as expected, e.g. if running behind, which elements need to be prioritized and which could be left to a later session or asynchronous engagement. Determine a backup plan for tech failure, illness, or other issues for any of the key attendees.
- Create a dedicated communication channel like Slack where participants can get clarity, note personal needs, or raise new ideas to make the session better.
- Outline adaptation options with some “cheat sheets” of helpful hacks participants with specific needs.

key principles: during the session



Overview of key principles before, during, and after sessions and considerations at any stage

Key principles: During your collaborative session

● Principle 6: High-quality facilitation

Inclusive facilitation provides clear, adaptive guidance and participant engagement in collaborative meetings so that the objectives are met in a way that equitably and sensitively supports all individuals' needs. This includes monitoring behaviors and identifying challenges to ensure everyone is participating in the most effective way for them.

Inclusive session facilitation is the foundation for ensuring collaborative meetings work well for all involved parties, delivering a good experience to all participants while also achieving the objectives.



“With interpreters, there is always an element of time lag. I think that some people interject before the interpreter has stopped speaking or signing, and it needs to be on the meeting manager to interrupt and give guidance, saying ‘the deaf participant is still speaking, the interpreter is still signing’.”

[Male, 50s, Deaf]



 **Do not make assumptions about access needs.** Observe good inclusive practice in your meeting regardless of what you know, or think you know, about your attendees.

 **Jointly agree on behaviors and ground rules at the beginning of the meeting.** Building on any you drafted with your facilitators, establishing ground rules helps avoid behaviors that can disrupt the experience. Some of these can be:

- **Safe, respectful space:** Jointly agree to create an environment that is safe for everyone to contribute, allowing people to challenge ideas rather than people, maintaining high respect and consideration for each other. This will also make it comfortable for people to more confidently ask for what they need.
- **Turn taking:** This is particularly important for attendees who are D/deaf or with hearing loss (to watch captions, sign language interpreters, or lip reading), those who are blind (to know who is talking) and those with cognitive or processing access needs. Agree with your group on a way anyone can indicate they want to contribute something (e.g., virtual hand raise).

- **Contribution clarity:** Ask each attendee to say his or her name before speaking so those with sight loss or who have difficulty following will know who is speaking. This is also useful practice for those reading live captions.
- **Cameras on or off:** “Cameras on” makes it easier for lip readers and anyone who needs or prefers to watch facial expressions to pick up additional communication cues. However, some participants may find that having cameras on is overwhelming or difficult. The generally accepted practice is to encourage people to have cameras on, but be accepting of those who keep them off. If you know that some attendees are lip reading, ask that at minimum participants turn on their cameras when speaking and ensure they are well-lit.
- **Clear audio and visual spaces:** Ask that people keep themselves on mute unless speaking and have backgrounds that, as much as possible, are free of motion or distractions.
- **Ask for consent:** If you are recording the session ask for consent from all participants prior to turning it on and describe how it may be used in the future. If things change down the road, always ask participants’ permission before making any unilateral changes as a facilitator.

 **Introduce any adaptations, alternatives, or adjustments to the whole group.** Here are some common solutions you may encounter:

- Explain how to find and switch on Closed Captions or how to get the link for Live Captioning if they are being displayed on a separate platform.

- 
- Introduce sign language interpreters to the whole group and ensure that anyone using a sign language interpreter knows about how to “pin” a specific person to their screen.
 - Ensure the whole group knows how to contact you or your co-facilitators with a private message should they need your help
 - If the collaboration platform allows, ensure all participants understand that they can use the keyboard, keypad, or [switch controls](#) as well the mouse.
 - Show people how to turn on or off different features such as timers and cursors

 **Communicate clearly.** Throughout the meeting use clear language being wary of acronyms or jargon. Practice facilitating at a pace appropriate for adaptive communication support. Keep recapping where you are in the meeting and relate activities back to the agenda and objectives.

 **Repeat important points.** Reiterating key points or complex ideas ensure participants understood them correctly and to make it easier for those who may have missed the point for any reason the first time. This is particularly important if you are scribing for someone and you are paraphrasing, rather than writing it verbatim.

 **Thank people for their contributions as you go.** It can be intimidating to go against a view that is popular among the group. Those with disabilities often bring unique insights due to differentiated lived experiences, which can be hugely valuable. Encouraging them to speak up and using collaboration tools that support many forms of contribution means more new ideas and less groupthink, which helps ensure *all* ideas are heard, not just the loudest, most dominant ones.



 **Be creative, adaptive, and people-centered.** Despite even the best planning, you might still experience unexpected disruptions. Inclusive practices help everyone feel safe, comfortable, and supported, even when hiccups arise. Meeting stated session objectives follow as a close second. You may need to reprioritize in the session, or simply manage disruptions, such as tech failures or people needing to step away for a while. Stay calm, maintain your sense of humor and poise, and involve the group in the adaptive ideation and decisions.

 **Breaks are important and should be prioritized.** Participants with a range of access needs that require breaks will be relying on them to move about, stand up, lie down, go to the bathroom, drink or eat, take medication, recoup their energy, have some quiet space, get or provide some caretaker support.



Principle 7: Inclusive virtual collaboration

Positive collaboration enables accessible and inclusive in-meeting experience for all to interact, contribute, and collaborate as they wish. This includes using online visual board functionality to democratize contributions and support collaborative outcomes.

In-meeting contributions are more inclusive when reinforced with opportunities to add ideas before or after the session for those who need or prefer additional time or space.



”...with my ADHD and autism, if I try to type something it comes out wrongly but if I speak it and someone else types, it comes out clearer and easier to understand.”

[Male, 30s, neurodiverse and mental health conditions]

Help participants overcome residual barriers when interacting with the collaboration platform. The design of the collaboration tool ([Principle 4](#)) sets the foundation for inclusive interactions during the session. However, even collaboration platforms that have been in the market for a decade still have residual inaccessible elements. Monitor and adaptively support individuals who encounter these barriers. These can be very specific depending on an individual's needs, preferred assistive technology (AT), skills, browser, and operating system. Barriers can impact people who fall into the following categories:

 **Reliant on assistive technology (AT)**

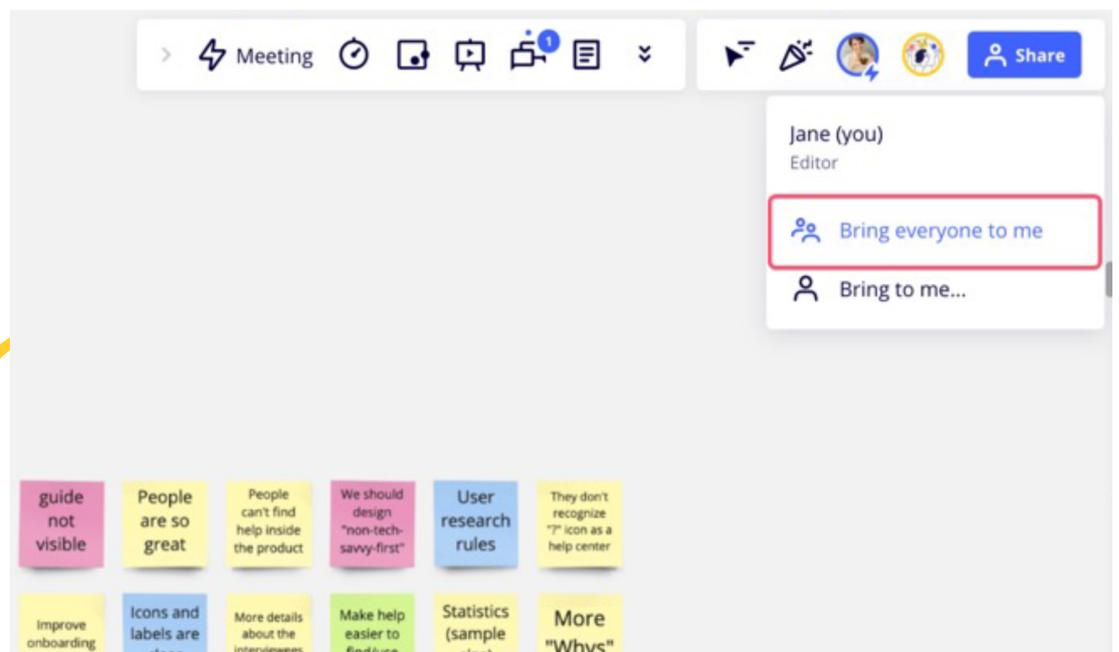
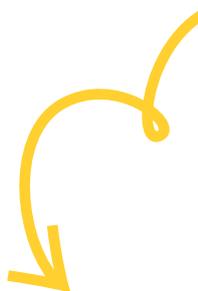
- Many visual workspaces do not work well or at all with screen readers, voice dictation software, or other assistive technologies. This will change in time, but to ensure the inclusion of AT users today, allocate someone to scribe and interact for them. Depending on individual access needs, the scribe can also read out content as it is generated. If the person scribing isn't the facilitator, it can be helpful to set up an audio "back channel" such as using breakout rooms, or a preferred separate platform such as WhatsApp or FaceTime to not disturb others in the room.
- The facilitator can read out new content being created and connections made for those who can't see the board. This will also help anyone who has lost focus or finds reading difficult. Not every sticky note needs to be read out. Like scanning with the eyes, the facilitator can select a sample of new content to represent the range of views being contributed.

 **Limited dexterity:** Good board design and facilitation can reduce mouse-only operations and interactions that require a high level of dexterity, such as sliders and creating new stickies. As with AT users, it can be helpful to allocate someone to support those with low dexterity to help them manipulate the interaction elements during the session.



Cognitive focus: The expandability or large scale of visual collaboration platforms can become overwhelming for some participants on busy boards, making them difficult to navigate or interact with. Solutions to consider include:

- Progressive discovery or hiding parts of the workspace that are not yet required for the discussion.
- Locking elements of the workspace so they cannot be moved by accident.
- The facilitator regularly summons attendees (drawing their cursor to where you are) or asking participants to follow the facilitator. If you summon participants, make it clear that this is going to happen and allow people time to complete current actions.
- Using clear headlines and titles to help people reorient and wayfind.



In a Miro board, you can use the “Bring everyone to me” command to bring anyone on the board to your position.



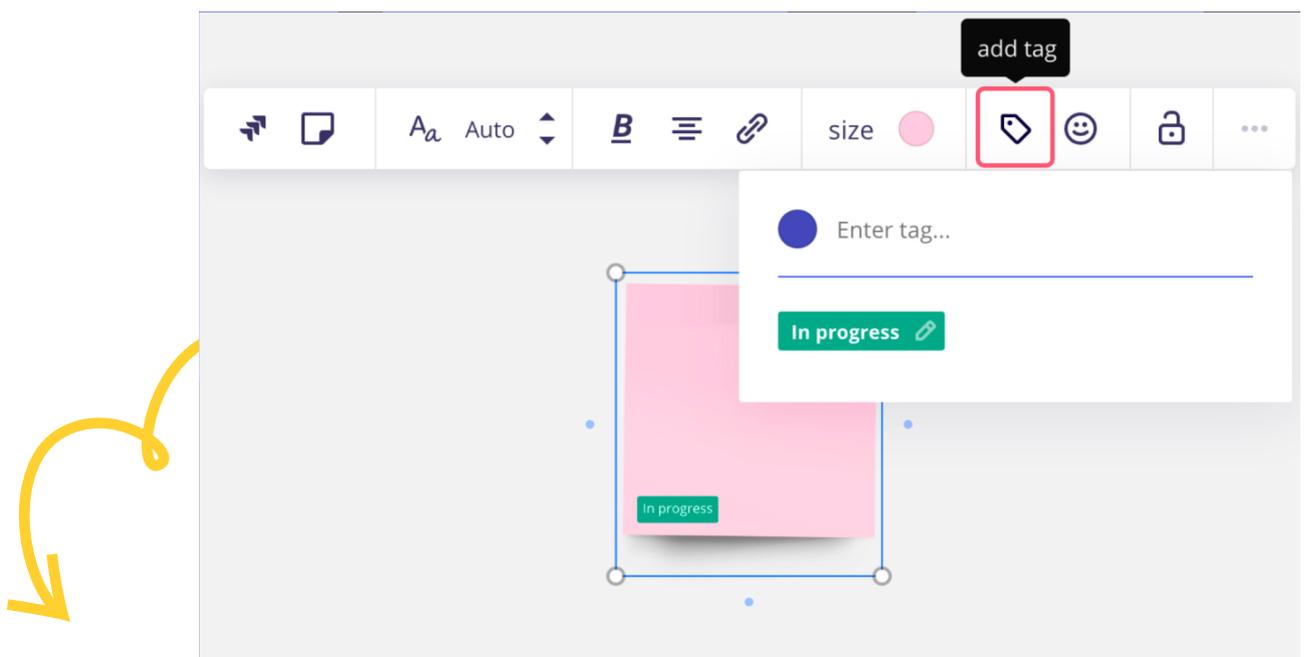
It's important to allow participants to work separately from the group. A sense of time, space, calmness, and control is central to this approach.

📌 Social pressure and anxiety: The pressure of group interactions in a real-time activity can be a significant barrier for many, such as people who are neurodivergent or have certain mental health conditions. The following steps can be helpful:

- Ask the whole group to take a few minutes to think before typing in a task, allowing people to reflect.
- Offer a quiet digital visual space away from the activity for participants to work on the board, or encourage them to make notes separately and add them in afterwards.
- Ask if anyone needs someone to type verbatim for them.
- Remind participants that they can switch off other people's cursors (if the tool has this option).
- Give encouragement and motivation to participants throughout the activities without singling out those with additional needs.

Support the continuing development of inclusive and accessible content. As content is added to the collaborative workspace by the facilitator or other participants during the session, be mindful to maintain a high degree of accessibility by:

- Maintaining structural clarity
- Using color contrast for key content
- Avoiding the use of color alone to depict meaning
- Adding text descriptions for images and graphics
- Reducing amount of text and simplifying text format in each sticky



In Miro, you can use different sticky note colors, or use “tags” for identifying sticky note authors or categorizing sticky notes on the board.

key principles: after the session

Key principles: After your collaborative session

Principle 8: Post-meeting engagement

Some attendees may prefer to complete their feedback in the collaboration tool or in other separate spaces after the session. By being flexible about where feedback is gathered, you can help people with different needs give input in a timely manner.

If contributions are documented outside the session, it is imperative they are not lost. It is the role of the facilitator to ensure participant content gets entered into the session documents prior to final distribution as soon as possible after the session.



“It would be really good to have somebody help when the meeting has finished...tell people in advance that there’s going to be this [support to help me] feel buoyed up and not alienated.”

[Female, 50s, sight loss and long term condition]

- 📌 **Be available to participants after the session is over.** Help them organize their thoughts on the collaboration platform if required or add in content to your feedback documentation that they have generated in quiet spaces away from the meeting on paper or on other devices.
- 📌 **Keep the collaboration workspace open after the meeting to allow for additional content to be added.** You might want to ask for additional contributions to be entered in a separate space or in a different color to make new content stand out. Depending on the tool, can lock down content already generated with facilitator only rights to protect existing content.



Principle 9: Dissemination of accessible materials

Ensure that any feedback materials shared in the collaborative workspace used adhere to accessible formats.

Dissemination of session documentation and assets is an important part of closure and capture for most collaborative sessions. This is the final stage when exclusion can cause friction among participants or any other recipients of the documentation, limiting the value of the session.

Accessible formats for post-session communication are a must-have so that outputs can be read and actioned by all.



“Quite often, people use whiteboards in very different ways... they are trying to make text visual. It often comes down to facilitators knowing what is accessible and what isn’t.”
[Male, 50s, blind]

 **Ensure that the records of the meeting are accessible.** When sending out post-meeting assets documenting the outcomes to stakeholders and attendees, someone should always capture and share materials in an accessible format. For example:

- Add alt text to all images on your visual workspace
- Structure the board in a way that is easy to navigate
- Text has sufficient contrast against the background

It’s also possible to export information from many collaborative workspace tools into various formats. For example, you can download the content as a CSV that can then be restructured as needed in spreadsheet software, or notes can be taken in a text editor and

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- 📌 **Tidy up the collaborative workspace after the meeting.** For users who can engage with the content directly on the collaboration platform, take some time to ensure content is cleaned up and ready to be shared (e.g., sticky notes are correctly sized and readable, spelling errors are corrected). This will help keep the living document in good shape as a comprehensible and usable snapshot.
 - 📌 **Sharing session output that was not generated in the platform.** In addition to the core asset of the workspace content, the facilitator should share in accessible formats any other key session outcomes that may not be on the digital workspace. This may include meeting notes, decisions, or “parked” issues that may need consideration outside of the session and any other follow up actions.



Principle 10: Reflect and learn for the future

Ensure that you capture, build on, and share the learnings you get from each session.

Collaborative meeting processes and technologies are becoming more important as working models continue to evolve. Technologies and practices are continually transforming and our experience in a session can help us learn how to best use collaborative tools within the context of our organization and team. This allows for continuous learning, building capability, and confidence for future sessions that offer even better adaptive practices for all participants to contribute fully and equitably — irrespective of access needs.



“I have experimented with lots of bits and pieces. I am always on the lookout for better ways to collaborate, being more accessible.”

[Male, 50s, blind]

- 📌 **Run retrospectives after major collaborative sessions to reflect on what went well and what didn't.** Ask attendees what they thought, and consider asking them to fill out a quick feedback form or survey. Document your learnings and share them with others to improve collaborative meetings for all.
- 📌 **Customize the practices in this guide for your team.** For instance, for meetings where you know your colleagues and have an established history of working in visual collaboration tools, some of these principles may be less relevant. For international meetings with multiple languages or cultures there may be other important principles that are not noted here you may wish to add.
- 📌 **Keep exploring new and emerging technology for virtual collaboration and meeting management.** Prior to buying any new solution, ask about the accessibility of its features and functions. Look for a Voluntary Product Accessibility Templates (VPAT), people with accessibility experience in the development team, an up-to-date and well-written accessibility page, or any other indicators that it was designed with consideration of users with access needs. Replacing an inaccessible tool with another that is equally inaccessible won't close the gap.

Keep listening to the experiences of those facilitating and participating in your collaborative sessions. Keep an eye out for new or improved solutions, and also learn from leading practices being shared. This will keep the team progressing so that everyone feels that their needs are being met and they can contribute fully through the selection and combination of tools, approaches, and adaptive practices used.

conclusion



The value of Miro for inclusive collaboration

Miro for hybrid meetings

Different versions of [hybrid work](#) models are becoming more and more pervasive. Although this new era of work comes with flexibility, it also brings new challenges around providing an equitable and inclusive experience for team members in different locations and using digital tools.

Organizations are learning that they must design for a consistent experience for all workers, including individuals with disabilities. This is especially important when we think about [meetings and workshops](#), which are core to collaboration and the employee experience.

Inclusive meetings rely on three things to be true for all participants: **being seen**, **being heard**, and having the **ability to co-create**. These require a combination of technology solutions and behaviors that accommodate a diverse array of needs, whether individual or shared. Pairing equipment and conferencing software with Miro help solve all three pieces of the puzzle.

[Miro](#) is the first and leading visual collaboration platform. It is a digital, infinite canvas that participants from any location, team, or ability can access and interact with in real time. Every participant can see where others are on the board and contribute to the work happening there – whether it is joining an icebreaker, building a strategy, diagramming a process, or joining a breakout group.

Miro's digital workspace creates a safe and welcoming environment for users of all backgrounds and abilities. Live cursor tracking lets collaborators see where people on the board are in real time (and can be hidden when too distracting). Activity apps like breakouts, timer, and voting are built in, and colorful reactions and emojis give participants a range of ways to express themselves aside from verbally.



It's important to allow participants to work separately from the group. A sense of time, space, calmness, and control is central to this approach.



Miro is invaluable for all stages of meetings and workshops — before, during, and after. You can choose from over one thousand [templates](#) to map out your session using designated areas called “frames” with icebreakers, breakout rooms, and activities that will help your session go smoothly.

After the meeting you can add a retrospective right on the board, and leverage your digital record of the discussion for post-meeting actions and execution. You can also get teammates who might have missed the session up to speed using [TalkTrack](#), a feature in Miro that lets you create immersive audio or video board recordings. This not only makes the content of the meeting more accessible to everyone, it also saves a lot of time in documentation. The Miro board can live on well after the workshop and be iterated on indefinitely.



Miro accessibility features

Here's how we are making Miro more accessible for users with disabilities.

- For [screen reader](#) users:
 - Sign up or sign in using a keyboard and screen reader
 - Access frequently used objects like sticky notes, frames, shapes, and text
 - Navigate the dashboard using your keyboard
- Visual impairments:
 - Able to increase UI size up to 200% to help make elements larger
 - Color contrast of all UI elements on our boards is WCAG2.1 AA compliant
 - Sticky note colors and tags to differentiate between contributors
- Motion sensitivities:
 - Turn off cursors to reduce distraction
 - Attention management features and links for better board navigation
- Light sensitivities:
 - Use dark background to reduce eye strain
 - Create sticky notes and shapes with dark colors as well as white/gray text colors

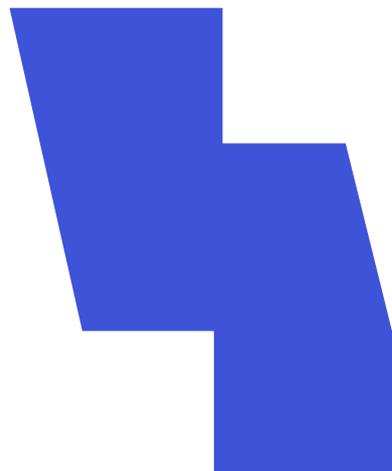
Read more about how to [get the best experience](#) in Miro.

Learn more about Miro with the following resources:

[Miro's latest accessibility improvements](#)

[Miro for meetings and workshops](#)

[Miro's guide to hybrid collaboration](#)



Glossary

- **Inclusive:** Something that is inclusive doesn't exclude a person or a group of people on the basis of their personal characteristics or contexts of use.
- **Disability inclusive:** Something that is disability inclusive doesn't exclude a person or a group of people on the basis of their functional capabilities, access need(s), adaptive or assistive engagement approaches.
- **Accessibility:** Accessibility ensures information and/or environments are provided in ways that can be reliably perceived, understood and engaged with, by users regardless of their access need(s) and assistive technology or adaptive approaches.
- **Inclusive usability:** In addition to encompassing accessibility, inclusive usability also considers ease of use and clarity of understanding for product or service usage, tasks and journeys.
- **Adaptive:** Providing multiple alternatives for people who choose or need to adapt their engagement approach. This solution flexibility allows people to achieve the product or service outcome(s) in multiple ways.
- **Caretaker:** A caretaker is a person who provides support to someone to help them manage their day-to-day activities.
- **Equivalence/equivalent:** Service or product options which provide the same outcomes or benefits irrespective of the user's approach and needs.
- **Scribe:** A scribe is someone who is responsible for typing or writing accurate records from personal dictation.
- **Screen reader:** A screen reader is a software application. Screen readers for people with sight loss will convert text and image content as speech and/or braille output. Other screen reader technology can provide speech output or text reading for sighted people who prefer this option such as those who have dyslexia.

- **Mobility:** Mobility related conditions will typically include people who have disabilities that typically restrict their movement in certain situations. This can include: wheelchair and mobility scooter users, restricted ambulation, balance challenges, lower limb loss or loss of function, reduced stamina or weakness.
- **Neurodiverse/neurotypical:** We all think differently – this is neurodiversity. Neurodivergent individuals are people who receive and perceive new inputs, process information, or respond to stimuli or information in ways that are different to a neurotypical person. ADHD, Autism, Dyspraxia, Dyslexia, Dyscalculia, Dysgraphia, and Tourette's syndrome are examples of neurodiverse conditions.
- **Equitable participation:** Having the opportunity for equal participation and representation.

