Why and How We Meet.
In many business circles, the word *meeting* has bad connotations, including “unnecessary” and “unproductive.” One researcher has asked more than 200 groups around the world what activities are their top three time-wasters. “In every case but three,” he writes, “more than three-quarters of each group indicated that half their time spent in meetings is wasted.”¹ Still, little would get done without getting together in the same space, real or virtual.
As much as we may dislike meetings, we understand that they are the real work of our age. Meetings are the way information and knowledge travel through an organization and ideas are made available to others so they can review, revise, and build on them. They are the means by which we collaborate. Meetings help an organization determine the relevance and impact of mega-trends (like globalization, advances in technology, sustainability, diversity, and the labor shortage), the opportunities and dangers those trends present, and the organization’s response. Meetings remain relevant because the problems of today are simply too complex for anyone to solve single-handedly.

Complexity is one reason meeting time doubled late in the 20th century and is still increasing. According to the National Statistics Council, 37 percent of employee time is spent in meetings. More than 11 million formal meetings are held every day in the U.S. alone. There are countless numbers of informal meetings happening on the fly in hallways, lunchrooms, and workspaces—wherever several people are either in the same physical space or connected via technology.

These meetings come at a cost. “One Fortune 500 company reports losses in excess of $75 million per year due to poor meetings.” The 3M Meeting Management Institute has a formula to calculate the cost of a meeting: .001 percent of the attendees’ annual salaries multiplied by the number of attendees multiplied by the number of hours the meeting takes. For example, if the average salary is $60,000/year and eight people are meeting two hours each week for a year, the cost is $49,920—and that’s just one regular meeting. Managers and knowledge workers actually spend between 25 and 80 percent of their time in meetings.

For an eye-opening experience, use Meeting Miser, a free online application from PayScale that allows users to see in real-time how much a meeting (or even a trip to the bathroom) is costing.

If meetings are our real work but we often feel they are a waste of time and money, then the real issue is meeting effectiveness.

If meetings are our real work but we often feel they are a waste of time and money—between 30 million and 100 million dollars annually—then the real issue is meeting effectiveness.

Companies are wondering if virtual meetings are one way of making meetings more effective. As technology improves and the cost of travel increases, companies have been exploring virtual meeting options that have been getting progressively better, from teleconferencing to e-mail meetings, web conferencing, and videoteleconferencing, which has been around since the invention of TV but became practicable only in the 1990s. Some companies are experimenting with Second Life, a 3-D virtual world. When Second Life was first introduced, anyone could eavesdrop on other people’s conversations, which prevented most companies from conducting substantive meetings there. But I.B.M and Linden Lab (creator of Second Life) have started a joint project to run Second Life technology behind corporate firewalls so that will no longer be an obstacle.

The newest meeting option is telepresence, in which some participants are in the same room and others are at a different location/s but each member can see every other
member. Completed telepresence rooms cost $350,000 for each location, but the technology is impressive. Images are life-size, the screen resolution is better than on high-definition televisions, and images can be magnified to examine product details.\(^9\) Purported benefits are lower environmental impact, better work/life balance for employees, and increased productivity.

According to an IDC report sponsored by Polycom, a company that sells telepresence and video solutions, one global pharmaceutical company reduced time to market for a new drug by 20 percent through its use of videoconferencing.\(^10\) Collaboration can also increase. Food and beverage provider SABMiller used videoconferencing to share ideas about how to tweak product marketing for specific locations. The company says it saw a 35 percent increase in collaboration because of the videoconferencing.\(^11\) Even conflict resolution can improve, according to DHL, which says it responded to "internal problems and issues 15 percent faster" with the use of videoconferencing.

But the most obvious payoff comes from lower travel costs; some estimate that 20 percent of business travel can be replaced by virtual meetings. "It's a simple equation—be out of the office for two days traveling to a one-hour meeting or stay local for just as effective a meeting using telepresence," Bob Hagerty, chairman and CEO of Polycom, told Reuters. "All else being equal, who wouldn't choose the latter?"\(^12\)

**Face to Face Still Has Its Place**

Although technology has made great strides, it's too soon to tell if all else really is equal. Meetings held via e-mail or instant messenger or conference calls combined with screen-sharing via the Web are fine for conveying information. In situations where team members need more than just content, however, face-to-face meetings are still most effective because cues like enthusiasm, commitment, and understanding are revealed in a way they cannot be electronically.\(^13\) Deirdre Johnston, a professor of communications, says that telepresence is better than other virtual media. The reason is that it allows participants to read most nonverbal cues. Even with this advanced technology, however, the level of intimacy of face to face is lost. "With technology, there is always a barrier or filter that is not present in face to face," she says. "As the level of intimacy decreases, so does perceived accountability, responsibility, and perhaps full honesty."\(^14\)

Work can be accomplished without trust, but not without an effect on quality and speed. And the intimacy and trust that are developed through face-to-face meetings are especially critical to the transfer of tacit knowledge, or knowledge that is difficult to articulate.\(^15\) When it comes to tacit knowledge, "knowing is in the doing,"\(^16\) and people need to meet face to face—at least initially—to trust what they are being shown.

Sometimes this trust is referred to as emotional capital, and researchers say it can be built up between individuals only through face-to-face meetings.\(^17\) People do additional work when they are together, basically banking goodwill, information, and context they can draw on when they are apart "to help make sense of their distributed interaction."\(^18\) Let's say, for example, that Bob has attended a face-to-face meeting with Sue and
other team members. He sees in that meeting that Sue is by nature reserved. A few weeks later, he’s on the road so he has to phone into the team meeting. When everyone at the meeting reacts to his idea except Sue, Bob doesn’t jump to the conclusion she isn’t supportive. Instead, drawing on his experience with her, he realizes he should call her and speak to her one-on-one.

Another element that face to face offers is the opportunity to interact with representational artifacts, which can be anything from a model to a paper document or something that has been pulled up on a computer screen or sketched on a whiteboard. There is a body of research showing that these artifacts help team members arrive at a shared understanding about what constitutes the task they need to complete. The artifacts become “critical sites of collaboration” through a process so subtle and ingrained we don’t even realize it’s occurring. A simple but telling example is an air traffic controller who, seeing an unexpected blip at the upper right of his computer screen, calls over a few colleagues. He’s busy keying in codes, so he nods toward the screen and says, “That one.” A colleague leans in for a closer look and asks, “Right there?” The first controller can tell from where the second is looking that she is focused on the right one. “Yes, that’s it,” he says.

When people work together with an artifact, researchers say, they rely on these almost undetectable shifts in posture to confirm understanding about the business at hand. “Without the ability to refer to the visible attributes of these objects for such discussions, the activity would develop far more precariously, demanding extended and complicated descriptions of things and situations.”

Interacting with objects also lends itself to collaborative imagining, in which participants in a meeting “build off of each other’s talk, gestures, and object manipulations to jointly imagine… an imaginary thing (e.g., a building) that can then become the target of comments, critiques, and changes.” An example of this is a group of architects who bring a blueprint of an area to life by using their hands to show how they are imagining how a gate might move. “Because they provide information that verbal language cannot, representational gestures, when combined with speech, are often viewed as the purest way to examine internal cognitive processes.” Imagining, then, can be “a product of, and resource for, group interaction, especially in problem-solving situations.” In this way, the combination of artifacts and face-to-face interaction aids creativity and synergy.

Enclosed Rooms, Semi-enclosed Spaces

If changes in space utilization are any indication, companies believe that face-to-face meetings still have a place in the workplace. Whereas in 1999, space allocation was 73 percent individual and 27 percent group, by 2005 that had shifted to 52 percent individual and 48 percent group. The ratio of people to meeting space used to be 75 to one; now it’s 10 to one and in the future it will be five to one. According to research conducted by Herman Miller, 70 percent of companies who have repurposed their space have changed to open collaborative spaces; 50 percent have shifted space so they have more conference rooms. (Companies could choose more than one kind of space on
The preliminary findings of a Herman Miller study show that, on average, conference rooms are only being used 30 percent of the time they are available.

Employees claim they need more meeting space and yet the preliminary findings of a Herman Miller study show that, on average, conference rooms are only being used 30 percent of the time they are available. What gives? “Employee behavior is a huge piece of this,” says Debra Cesaro, senior manager, Sales and Marketing, for Herman Miller Services. She’s discovered through research using a motion sensor placed on the bottom of chairs that indicates six times per hour, in real-time, when chairs are occupied that 15 to 20 percent of the time conference room reservations are not being kept. When someone else tries to reserve the room and can’t because it’s already reserved (but not being used), “that leads to people telling the facility manager there’s not enough meeting space,” says Cesaro, when actually there might be. In addition, people who reserve a room for repeat meetings forget to cancel it once they stop meeting.

Even the meeting space being used in these companies wasn’t used very effectively. The conference rooms studied had 12 chairs, on average, but only three or four people met in them at a time. Sometimes there were smaller conference rooms available, but those rooms were occupied only 10 percent of the time because people couldn’t reserve them and the smaller rooms didn’t offer any technology support—not even speaker phones.

Clearly, designing and outfitting a collaborative room or space is as important as determining the right amount of collaborative space. But first, a decision must be made about whether to make it a meeting room or a meeting space. In general, the advantages of enclosed meeting rooms are that they provide visual and acoustical privacy and work can often be left in the room, allowing the group to quickly pick up where it left off. Furthermore, everyone agrees on the appropriate use of these rooms, so there isn’t much conflict. Drawbacks are that meeting rooms are less flexible and serendipitous encounters are unlikely, since the uninvited stay out. Also, if the room is too formal, it can inhibit creativity. Some of these can be mitigated through design by using demountable partitions, so one large conference room can become two smaller ones, using flexible furnishings, and changing the colors, materials, and finishes of the room to make it less formal.

Semi-enclosed meeting spaces are spaces that offer the option of more enclosure through things like retractable partitions or a heavy curtain. The advantages of such spaces include flexibility from a facilities standpoint and flexibility in visual privacy, resulting in a heightened sense of personal control. These spaces allow little auditory privacy, however, although the visual privacy may give the impression of auditory privacy. People may feel uncomfortable in these spaces at first. Sound masking such as pink noise can help, as can strategic “out of the way” placement of the room and including a Mylar membrane within a fabric curtain.
Supporting the Flow of Ideas

There is still a need for the meeting rooms that support knowledge transfer because listening to a presentation is the purpose of some meetings. But when the purpose of the meeting is collaboration or the kind of fluid, synergistic thinking and sharing that leads to innovation, a different kind of space is called for. Spaces that support collaboration (some call these collaboration rooms) are more concerned with the flow of ideas than with having a controlled, set environment. Effective collaboration spaces allow people to move around the space, make their ideas visible, add onto their own and others’ ideas, cross them off, and basically reshape them. The result can be “chaotic, messy, and loud…but that’s creative collaboration at work, and when the energy is high, when the ideas are flowing and people are fully engaged, peak performance happens. When that happens, the results often look like magic.”

Is there a kind of space that can increase the likelihood the magic can happen? If so, what are the characteristics of that space? What environmental conditions influence the flow of knowledge through groups? Research by Herman Miller and architecture and design firm Gensler found that, in general, unexpected elements in an environment—an oversized toy or a child's desk, for example—energize people who meet in a space. Second, people need and want to be able to work in a variety of postures during a meeting, so a space should offer opportunities for that. Finally, as mentioned above, artifacts of work (e.g., models, documents, or notes on a whiteboard) help put the work in context and support collaborative imagining.

To support idea generation and flow in meetings, you can:
• Offer people a variety of meeting room choices so they can select the best configuration for a particular type of meeting.
• Give people control over the size and configuration of a space. Most meetings evolve and space must support the changes. If the space has been carefully planned, it can flex enough to support these mid-meeting changes.
• Include tools for making ideas visible and provide easy access to all kinds of technology tools.
• Make the meeting spaces big enough that participants can freely stand, stretch, walk around, and, in general, vary their posture. Also, provide enough circulation space that they can huddle or share the same perspective when looking at a computer screen or document.
• Locate group workspaces near moderate traffic paths or ebb-and-flow spaces (casual meeting spaces not owned by one team) to promote cross-fertilization and encourage chance encounters: “Interactions result largely from movement patterns and spatial visibility that make workers available for recruitment into conversations.”

There are other things to keep in mind when planning a meeting space. A sense of being away from the normal work environment helps participants focus. In addition, novelty can help infuse a group with energy and give it a fresh perspective. The brain needs restorative “nano-breaks,” and toys that can be manipulated provide those.
that the environment signals what type of interaction is possible and communicates the unspoken rules of engagement; make sure it’s sending the message you want. Use visual stimulation—e.g., art, posters, mobiles, furniture, window treatments—to set the tone and create ambience for the meeting space. Finally, food can enhance a meeting by giving people a mental break, boosting energy, and building a feeling of community.

Meetings Morph

One of the unexpected findings of the Herman Miller/Gensler research was that spaces adjacent to teams are used for information exchange rather than idea generation. Adding display capabilities to make information visible (e.g., a whiteboard) may shift use toward idea generation. This is one reason why war rooms (spaces in which team members not only meet but also do their individual work during the lifespan of the project) can double the productivity of project teams. There are other reasons, as well: the ability to problem solve around a whiteboard, coordinate team members’ actions around artifacts, and leave out and visible the “information we put in the environment that we wish to re-consult and that helps us get situated” so it’s easier to remember where we left off (referred to as “persistent state”). “The aesthetic of clutter promotes the flow of ideas,” says Bill Dowell, director of Research at Herman Miller.

Of course, even the best meeting space—war room, conference room, or collaboration room—can't by itself guarantee a productive meeting. That's up to the participants. Given the many ways a meeting can derail, it's not surprising participants have a hard time. The group may be too large and unwieldy for problem solving (the ideal size is six to ten people); one person may try to dominate and may mistake other people's silence for assent; there may be a lack of leadership or a lack of focus. And then there's always the danger of groupthink, i.e., reaching consensus quickly without critical analysis in order to minimize conflict.

The biggest predictor that a meeting will go smoothly, however, is how prepared the leader is—how well she's thought through and communicated the purpose of the meeting and her expectations for how others will prepare for the meeting before it even begins. For a meeting in which information will be exchanged, a prepared leader will ask:

- What is the meeting’s purpose? What do you hope to achieve?
- Is a meeting the best way to achieve the purpose, or is there another way? If the purpose is simply to share information, e-mail may be sufficient. If you want to share information and reinforce corporate culture or make sure the attendees understand how the work ties into the direction of the company, a meeting is best.
- Who needs to attend the meeting in order for the purpose to be achieved? Who is the decision-maker?
- What are the expectations about how attendees should prepare for the meeting ahead of time and participate during it?
- What should be on the agenda, and how much time should be allotted for each item?

Preparation for a brainstorming or exploration meeting might include all of the above, and more. It's best if the person running the meeting has a plan for what will happen to
While the facilitator could be the person who called the meeting, the right skill set and personality are more important than the person's title or rank.

Particularly critical is a skilled facilitator, who can establish and enforce ground rules, keep participants focused on idea generation rather than judgment, provide reassurance that all ideas will be accepted and then capture those ideas on a whiteboard, encourage those who are shy about sharing their ideas, and summarize next steps and who is responsible for accomplishing them. While the facilitator could be the person who called the meeting, the right skill set and personality are more important than the person's title or rank.

While these meeting basics won't change, the forms meetings take will continue to evolve. Technology can't yet replicate the richness and subtleties of the human response, but in the near future, it might. Immersive environments, in which the user actually feels he is part of a simulated universe (such as a meeting happening somewhere else) are under development. Meeting spaces, too, will have to evolve to accommodate the new technologies. In that way, planning for and creating effective meeting spaces involves the same challenges as the rest of the work environment. As workplace experts point out (and anyone who has ever worked in an office knows), “Workplace design is not a one-time strategy.”

Notes
2 Tom Spears, “Like Meetings? Chances are you've got nothing better to do,” The Ottawa Citizen, March 1, 2006.
3 “Meetings in America,” A Verizon Conferencing White Paper, prepared by Infocom.
14 E-mail exchange, September 24, 2008.
16 Ibid.
20 Ibid., pp. 541, 555.
21 Keith M. Murphy, “Collaborative Imagining: The Interactive Use of Gestures, Talk, and Graphic Representation in Architectural Practice, Semiotica 156 (1/4), 113-145.
22 Ibid., p. 127.
23 Ibid., p. 140.
26 Herman Miller, Inc., Oak Street Research, internal report, February 2008.
27 IFMA, Research Report #28, 2007, p. 35. Common support space includes auditoriums, workrooms, fitness facilities, etc., as well as conference rooms.
28 Phone interview, November 24, 2008.
29 Interaction + Place, Herman Miller, 2007.
33 For more detailed information, see Interaction + Place, Herman Miller, 2007, and Making Teamwork Work: Designing Spaces that Support Collaborative Efforts, http://www.hermanmiller.com/hm/content/research_summaries/pdfs/wp_Collaborative_Settings.pdf/
34 G. Lynne Snead and Joyce Wycoff, “Simulating Innovation with Collaboration Rooms.”
37 David Kirsh (chair of the Department of Cognitive Science at the University of California, San Diego), phone interview, September 2006.
38 Bill Dowell, personal interview, September 16, 2008.
40 Ibid.
41 Institute for the Future presentation, Herman Miller, February 2008.