

Changing the Way We Work

Technology implies change. When a caveman first realized that a flint flake made a good knife, he increased his chances of survival. Typewriters changed the way we wrote, calculators changed the way we did math, and emerging Internet technologies are changing the way we work. The world, to the surprise of few, is becoming more interconnected every day. Most of our products are created elsewhere. It is time for our work to become more interconnected as well. Everything seems distributed and dispersed, and we have tools that make connecting and working with others easier, cheaper, and faster than ever.

These tools can change what it means to work with others. Besides phone and e-mail, we also have instant messaging (IM) and text messaging (SMS). Such tools have become so ubiquitous that they can be integrated into other tools, are customizable, and allow people to converse using the technology of their choice wherever they can access the Internet. IM and SMS have affected our personal lives and, for some, are starting to replace older methods of communication, such as the telephone. However, many other tools are also starting to change the way people work.

These new work tools are robust, multifunctional, and customizable, and they are leaving e-mail and videoconferencing in the dust. Though there have not been studies to show how many organizations are using these new technologies, I believe that their flexibility and functionality will cause them to eclipse more traditional tools. E-mail has been a boon to business, but it has also been a curse. It takes too much time. Out of the hundreds of e-mails I receive at work, excluding spam, less than 10 percent actually require my reading or attention. That number is based, of course, on personal observation, but others have also noted problems. According to an *MIT*

Sloan Review, e-mail can encourage miscommunication, team dysfunction, and information overload.¹ All in all, e-mail sometimes causes more problems than it solves. Videoconferencing has its own problems as well. It is harder to record and archive than an e-mail or document, and thus it is harder to integrate into other collaborative software. It also “shifts the focus to talking heads rather than on shared artifacts” when a team is working together.²

I am not predicting the demise of e-mail, videoconferencing, the f2f meeting, or the telephone. All of these tools have a place in business and in the flow of work, even work that makes use of newer tools as well. Work can be more productive, though, when some traditional methods of work are used less and new and emerging technologies are used more.

At the same time that technology has become cheaper, more accessible, and more user-friendly, f2f meetings have continued to be the base for most organizational operations. It seems as if f2f meetings have become more frequent, but not more productive. Before Internet technology was ubiquitous, the work done in meetings could not be done elsewhere. Documents were circulated to be discussed at meetings. Discussions took place. Votes were taken, decisions made. All these tasks in f2f meetings took work time, and work time is the backbone of business. Now, all these tasks can be done virtually, using communications technology instead of meeting in person. People can be more productive because they can now collaborate online, whenever and wherever they have the time. Distance and time no longer keep people from working together. It is logical that increasing technology use and decreasing f2f meetings increases productivity.

This issue of *Library Technology Reports* will be most useful for managers looking for ways to allow their employees to be more productive; for work groups that

are dispersed geographically, whether around the world or in separate parts of the same building; for managers needing to decrease the time that they or their employees spend in f2f meetings; and for institutions that need to increase flexibility and do more with less. Choosing the correct technological tools and implementing them properly can solve many work flow problems facing libraries, and technology can also open up a realm of new possibilities for collaborative work.

What Makes Technology-Enhanced Work Different from Traditional Work?

Traditional work, for the purpose of this writing, is defined as work using a combination of f2f meetings, the telephone, e-mail, and videoconferencing. The word *technology* in this writing means any tool that can be used to communicate and collaborate over the Internet.

Teams that use technology to enhance their work have more flexibility in composition and location than teams that rely on traditional work. If all of a team's work is reachable with an Internet connection, then team members can be anywhere. This flexibility allows teams to be more diverse and to benefit from the differing views that diversity brings, connecting members from different geographical areas, different departments, and different levels of an organization. (And sometimes the distance between departments can seem as large as the distance between people separated by actual miles.) If a team member cannot attend meetings for a time because of sickness, family matters, or an assignment elsewhere, a work space online can keep the group moving forward. When a traditional work team loses a member, large numbers of files, both paper and otherwise, may need to be transferred from one employee to another, and the work can often be stuck in the doldrums. If all of a team's documents and work are in a shared online space, the loss of a member need not cause a major disruption of work. Technology can bring teams together from anywhere and keep work going.

Productivity is increased dramatically when team members can work efficiently outside of f2f meetings. If team members can work when they have time in their schedule, as opposed to being limited to the time in f2f meetings, they will be able to do more. In the past, the only ways to have discussions and work collaboratively on documents was through e-mail, over the phone, or in f2f meetings. A committee must make many decisions during its work life. Postponing decisions until everyone can be assembled in one room is impossible for some groups and for others merely slows down the work process.³ A f2f meeting is not always necessary for decisions and discussions any longer. Decisions can be made over e-mail, a discussion list, IM, or a wiki. "Multichannel synchronous

communication supports the need for all members to share information by allowing rapid feedback that clarifies issues and provides referential integrity with a common document or drawing."⁴ When a team leader has integrated technology into the work flow, it is a sign to me that my precious time is respected. I am trusted to do my work instead of being made to attend rounds of pointless meetings that take up time that I could have used to actually work on the work of the committee.

Most librarians and library staff are, at any given time, members of multiple local, state, and national committees and working groups. In libraries, we love committees, and everything from holiday parties to presidential initiatives has its very own group of people slaving away to make it great. Efficiently tracking the work of each of the teams of which a person is a member can require a large amount of that person's time. When a work group uses technology to track time lines, documents, discussions, and work products, however, the technology does the tracking. Team members can check in and contribute as needed. No more lost e-mails. No more searching for the contact information for a committee member. The support provided by the technology reduces the frustration felt by all.

Integrating technology into the work process increases productivity in other ways as well. Many employees prefer to do work in their own environments, whether that is in their office or cubicle, in the coffee place down the street, or at home. Studies have shown that employees are happier and more productive when they can stay in familiar and comfortable surrounds and still have access to the information they need to complete their work.⁵ Sometimes, workers need information from the file drawer at their desk or notes saved on their office computer, but I do not know many people who would rather work in a noisy cube farm than over a nice cup of coffee at the local wifi hotspot. Some businesses, like Best Buy, are recognizing this trend and allowing workers to make their own schedules and work from anywhere.⁶ Trusting employees and team members is very empowering. Employees who feel trusted are more likely to produce better work because they feel engaged. Even if your organization is not as radical as Best Buy, there are reasons to move more work online. It blurs the distinction between committee time and work time, allowing individuals to do committee work whenever they have time available. Always-open technology means that you can do committee work anytime, from your desk or somewhere else, so there is less separation between time at your desk and time spent in committee work.⁷ Organizations trying to do more work, or the same amount of work, with fewer employees, need to heed the idea that if your staff members have better access to productivity-enhancing technology, they can get more done.

Although technology does not guarantee a problem-free work process, it helps solve some process problems frequently found in more traditional teams. Virtual teams, using a variety of tools, have different problems. They have to keep momentum, but they are “. . . free of many of the psychological and practical obstacles to full and effective participation that hobble their transitional counterparts.”⁸ In observing the online behavior of teams, Majchrzak concluded that virtual teams have fewer instances of crafty Bcc and Cc, fewer meetings after the meetings, and less inability to have full and honest discussions. Of course, this observation is a generalization, and it would not necessarily hold true for a virtual working group with a weak leader. Leadership and management of virtual teams are extremely important and are discussed later in this issue. However, if a virtual workspace is designed well and utilized well

by a team, information can be “. . . more effectively shared and disagreements can surface and be discussed earlier.”⁹

Team members who have access to technology options also tend to feel more engaged in the team itself. Many online communication structures, such as IM and message boards, feel less formal than f2f meetings. Informality can help team members feel more comfortable with each other and form closer ties.¹⁰ The most productive teams have a sense of identity, which is discussed later, and informal communication can feed this identity. Some people find it hard to imagine that virtual teams get to know each other well, especially when the group never meets together in person, but in a study of virtual teams from many different high-profile businesses, Majchrzak found that “effective teams spent time to get to know each other and create a group identity.”¹¹

Traditional Work	Technology-Enhanced Work
Team members must be geographically close enough to attend f2f meetings.	Team members can be drawn from anywhere there is an Internet connection.
If a team member is sick or away, that person cannot participate in the group's work.	An absent team member can continue to participate from another location.
If a team member leaves, that person's files must be transferred to another employee.	All documents and work are in a shared virtual space, so the team continues to have access when someone leaves.
Discussions and decision making are often done in meetings, so the group's work slows or stops until everyone can meet.	Communication happens through a variety of technological tools, so discussions and decisions need not be postponed.
Team members must work where the resources they need are available. They must leave their desks to attend meetings.	Team members access team resources from anywhere. They can take part in discussions from their desks.
A person who is on several teams needs to spend a lot of time tracking each team's work, schedules, contacts, discussions, and decisions.	All of a team's information is in a shared work space, so members do not need to track it individually.
Team members may feel that their time is wasted by having to attend meetings.	Team members participate in the group's work when their own schedules allow.
Team members may feel as if they are not trusted to work on their own.	Team members are more likely to feel trusted and engaged in the team process.
Meetings feel formal, and some team members may be reluctant to take part fully.	Electronic communication feels informal, and team members tend to participate more fully.

Table 1
Some ways that technology can enhance group work.

When Using Technology Is Not the Norm

In some libraries, locked-down IT systems greatly inhibit the ability of employees to use the Internet and tools available on the Web. This is unfortunate. Any tool can interfere with work when used irresponsibly, but for most tools, the benefits far outweigh the chance of misuse. We allow employees to have phones and e-mail even though they can, especially in the case of e-mail, waste a lot of time playing with these tools. Even if your library prohibits or blocks access to something, your staff may have figured out a way around this problem. Most employees use technological tools that they find helpful, whether or not that use is sanctioned. A recent study on employee practices and IT environments found that 86 percent of workers use unsupported tools to increase their productivity.¹² Eighty-six percent is a huge majority of our staff. If use of these tools were sanctioned, imagine the levels of sharing and productivity in your organization. If there were an organizationally accepted way for employees to share tools that they find useful, productivity could increase immeasurably.

People tend to use whatever tools help them to do their jobs better, faster, and in the manner that they find the most comfortable. The use of virtual tools is not limited to virtual teams. E-tools are chosen “regardless of geographic distance . . . because they support the way project teams work. . . .”¹³ The best use of e-tools is in a combination of traditional and new methods. Each group should choose the combination of tools that will best suit its needs. Some teams may not be ready for an all-virtual work environment, but teams and employees should have the chance to integrate more technology into their work flow. Technology is making our work more productive. It is making our work more mobile. It is allowing us to take the next step in the evolution of the workplace.

Notes

1. Arvind Malhorta and Ann Majchrzak, “Virtual Workspace Technologies,” *MIT Sloan Management Review* 46, no. 2 (Winter 2005): 11-14.
2. Ibid.
3. Ann Majchrzak, Arvind Makhorta, Jeffrey Stamps, and Jessica Lipnack, “Can Absence Make a Team Grow Stronger?” *Harvard Business Review* (May 2004): 131-137.
4. Malhorta and Majchrzak, “Virtual Workspace Technologies.”
5. Majchrzak, Makhorta, Stamps, and Lipnack, “Can Absence Make a Team Grow Stronger?”
6. Michelle Conlin, “Smashing the Clock: No Schedules. No Mandatory Meetings. Inside Best Buy’s Radical Reshaping of the Workplace,” *Business Week*, Dec. 11, 2006. www.businessweek.com/magazine/content/06_50/b4013001.htm (accessed Sept. 10, 2007).
7. Majchrzak, Makhorta, Stamps, and Lipnack, “Can Absence Make a Team Grow Stronger?”
8. Ibid.
9. Malhorta and Majchrzak, “Virtual Workspace Technologies.”
10. Ibid.
11. Majchrzak, Makhorta, Stamps, and Lipnack, “Can Absence Make a Team Grow Stronger?”
12. Yankee Group, “Zen and the Art of Rogue Employee Management,” report issued July 19, 2007.
13. Catherine M. Beise, Fred Niederman, and Herb Mattord, “IT Project Managers’ Perceptions and Use of Virtual Team Technologies,” *Information Resources Management Journal* 17, no. 4 (October 2004): 73-88.