

Design your work environment to manage unintended tech consequences

Article

Accepted Version

Soga, L. ORCID: <https://orcid.org/0000-0002-5471-9673>, Bolade-Ogunfodun, Y. and Laker, B. (2021) Design your work environment to manage unintended tech consequences. MIT Sloan Management Review. ISSN 1532-9194 Available at <https://centaur.reading.ac.uk/100373/>

It is advisable to refer to the publisher's version if you intend to cite from the work. See [Guidance on citing](#).

Published version at: <https://sloanreview.mit.edu/article/design-your-work-environment-to-manage-unintended-tech-consequences/>

Publisher: MIT Sloan School of Management

All outputs in CentAUR are protected by Intellectual Property Rights law, including copyright law. Copyright and IPR is retained by the creators or other copyright holders. Terms and conditions for use of this material are defined in the [End User Agreement](#).

www.reading.ac.uk/centaur

CentAUR

Central Archive at the University of Reading

Reading's research outputs online



Design Your Work Environment to Manage Unintended Tech Consequences

Collaborative technologies enable many benefits for organizations in a time of widespread remote work, but they also come with risks of isolation, exclusion, surveillance, and self-censorship.

Remote work has given many of us the opportunity to adapt to new ways of interacting with our colleagues. The ubiquity of collaborative technologies throughout the pandemic has amplified the push toward virtual work, by allowing teams to collaborate even when physical offices are closed. The market for collaborative technologies [grew nearly 25%](#) in 2020 alone, and with continued growth and demand expected, experts predict it will be a [\\$50.7 billion industry by 2025](#). However, as this new gold rush for collaborative technologies increases, organizations risk developing a blind spot to the impact they have on relational dynamics between managers and employees.

In our recent research, we looked at virtual interactions among managers and employees in a Fortune 500 multinational organization. We explored how managers navigated work with employees across different locations and time zones using various collaboration platforms. Our analysis of platform activities of nearly 1,200 employees along with interviews of 64 managers turned up important insights about the transformative impact of new technology on organizational behavior.

In this article, we examine how employees and managers understand the effects of collaborative technologies on their working relationships, what nontraditional roles emerge as a result of these technologies, and the unintended consequences that result from this new way of working and how managers can mitigate them.

We found that when managers narrowly view collaborative technologies such as Zoom, Slack, and Microsoft Teams as mediators, they're assuming that the technology is passive and only a medium or a tool for working with employees. Our research suggests that these technologies are not only mediating tools but active participants in the relationship in subtle ways that influence all parties. For instance, [research](#) shows that leadership in virtual teams plays out differently than in groups that meet in traditional face-to-face ways. This is because the virtual nature of the relationships draws on a different skill set. Our research further suggests that virtual work can reduce traditional hierarchical influences such as the effects of visible signifiers of rank. Simultaneously, however, virtual work potentially increases the [manager-employee interpersonal distance](#), even though virtual meetings may occur regularly. We also saw that new, nontraditional roles emerge as a result of these technologies. For example, a tech-savvy employee may become the organization's platform community moderator for leading conversations and troubleshooting issues. Although this new role may not be a formal title in the company, it is recognized by the virtual community in terms of its value.

A critical part of the research is understanding what unintended consequences emerge from technologized relationships. The dynamics of virtual, tech-mediated collaboration provide many benefits to employees and managers but also come with risks of isolation, exclusion, surveillance, and self-censorship.

Risk of isolation. An overdependence on technology in the manager-employee relationship creates conditions for increased isolation between managers and their employees. Our research found this isolation becomes amplified in many settings — when the technology fails, when videoconferencing or Zoom fatigue sets in, and when technology cannot adequately

replace less formal social interactions in remote work environments. In these instances, technology can add friction and widen the manager-employee gap as the opportunities for spontaneous face-to-face interactions are lost. Given the rise of remote and hybrid work models as a result of the pandemic, these issues are here to stay, and leadership runs the risk of becoming tele-leadership if the isolation is not addressed.

Risk of exclusion. Generational differences may inhibit full participation in organizational life for all employees, despite the best intentions of collaborative technologies for virtual teams. This is true not just because of the varying levels of technological savviness across generational groups, but also because of [generational gaps](#) along nontechnical domains, including team values, expectations regarding work relationships, perception of leader behaviors, and loyalty to the organization. While we caution companies and managers not to design policies based on assumptions about generational groups, as blanket generational classifications are often [overly simplistic](#), it is important to understand that individual and contextual factors account for different attitudes to technology.

Just as in-person work has the ability to create different social dynamics and structures, [research](#) shows that technology also has the ability to (re)shape “in-groups” and “out-groups” — and in some cases, more easily. For instance, collaborative technology offers a platform for individuals to signal visibility and engagement through participation in virtual team activities, while unintentionally excluding those who are perceived as not participating or unable to do so. This could be due to challenges in the learning curve for [digital immigrants as opposed to digital natives](#) or problems with technological infrastructure. Other reasons for nonparticipation relate to the clarity of the task, the context of the gathering (formal or informal), and the [personality types](#) of individuals involved.

Risk of surveillance. Collaborative technologies create [surveillance](#) power for companies and managers through the transparency they enable. Remote work technologies [generate information](#) about employees that can be used in organizational decision-making. For example, an individual’s performance and engagement with the technology may serve as an unintended evaluative tool.

Consider that most collaborative technologies track user activity and duration of time spent on these platforms. The data can tell platform managers about individual user engagement and can potentially be used to make judgments about employee productivity, even though this is not the technology’s main purpose. As a result, you may end up unfairly monitoring employees who engage online because of their data usage trail. For instance, Microsoft Teams’ ability to provide automated user analytics in great detail can be used to show how people are working together.

While we acknowledge the existence and value of surveillance technologies, it is important to inform employees what data is (and isn’t) collected by the technologies they use, how it is collected, and for what purpose. [Research](#) shows that negative perceptions of managerial surveillance reduce employees’ sense of personal control and negatively impacts trust in the manager-employee relationship. Broken trust diminishes a manager’s ability to influence employees and subsequently adversely affects employee performance and satisfaction on the job.

Risk of self-censorship. Collaborative technologies allow for synchronous and asynchronous modes of communication and provide a sense of openness in which individuals are able to work together. Managers and employees can easily text, call, or see each other and even take

note of calendar availability in order to arrange meetings or freely share information. However, we found that this openness also may make some people feel they will be judged if they say the wrong thing.

An employee may be willing to contribute her thoughts in a recorded online strategy meeting only when she's confident about sounding intelligent. That's self-censorship. We found that collaborative technologies do not necessarily translate into a free flow of information and instead create conditions for self-censorship, even if the technology is perceived to be user-friendly. While [research](#) shows that information sharing is one way employees speak out among their peers or speak up as they engage with their managers, we also found that individuals tend to share information mainly if it relates to their [personal motivations](#) or tasks to be done rather than personal stories. This may limit opportunities to build closer connections, as [research](#) suggests that self-disclosure contributes to group cohesion, trust, and camaraderie. As a result, by holding back, individuals in a technologized relationship inadvertently widen the manager-employee distance.

As a manager, you can take steps to overcome these issues by connecting with employees at a personal level so that even with the apparent physical distance, you avoid managerial distance. [Research](#) shows that before people decide what they think of your message, they decide what they think of you.

Foster social connection. To address the risk of isolation, managers and employees can benefit from finding ways to incorporate meaningful social interaction into the relationship. This helps make technology not only a means for achieving work-related outcomes but also a way to simply connect at an individual level. For example, there is value in having weekly virtual lunches between employees and managers, when both sides are genuinely present to share in the moment.

Prevent exclusion through meaningful participation. To mitigate the risk of exclusion in technologized relationships, managers and employees must actively participate in the virtual relationship, as a ["provide and pray" approach](#) simply does not work. Managers can encourage employees to engage in specific online collaborative events so as to mitigate exclusion occurring within teams. If you believe a lack of participation may be a result of team members being non-tech-savvy, then you could provide specific training opportunities to address knowledge gaps without making assumptions about adeptness because of an employee demographic.

Lead with transparency when it comes to surveillance. It is important to inform employees about what data is being generated by the technologies they use, what that data is used for, and company policies regarding personal data. For targeted employee data like biographical information, set guardrails such as encryption and inform employees accordingly in order to safeguard unauthorized access. When employees are not well informed about the company's policies and suspect that [surveillance](#) may be taking place, trust is broken and your managerial influence will be adversely affected. These concerns about being watched can be relieved by shaping your organizational policies to prevent ill-intentioned, malicious, or unnecessary employee surveillance.

Leaders can also go further to show a commitment to transparency by empowering individuals to speak up without fear of reprisals. Where possible, managers should consider giving employees some administrator rights to the privacy settings of the collaborative technologies. If you have the technological means, you could further anonymize the data generated by

collaborative technologies through encryption in order to increase employee confidence. Additionally, you could crowdsource ideas from employees as you all work toward a no-surveillance organization. Similarly, you could also deploy a number of applications that by design address concerns around managerial surveillance, such as apps that allow employees to provide anonymized feedback.

Technology is intricately woven into the manager-employee relationship not only as a mediating tool for communication and collaboration but also as an intermediating influencer of the relationship. Despite the current challenges brought about by the pandemic, social distancing, and the closure of many office spaces, we can appreciate the benefits of being able to carry on with our work remotely from home. Technologized working relationships have brought about gains in the areas of transparency and potentially enhanced communication speed within a globalized, expanded labor market.

To make the most of collaborative technology while ensuring trust with employees, companies and managers must take into account and mitigate associated risks, as they will have significant impacts on employee engagement, attitudes toward participation and disclosure, team cohesion, and perceptions of managerial surveillance.