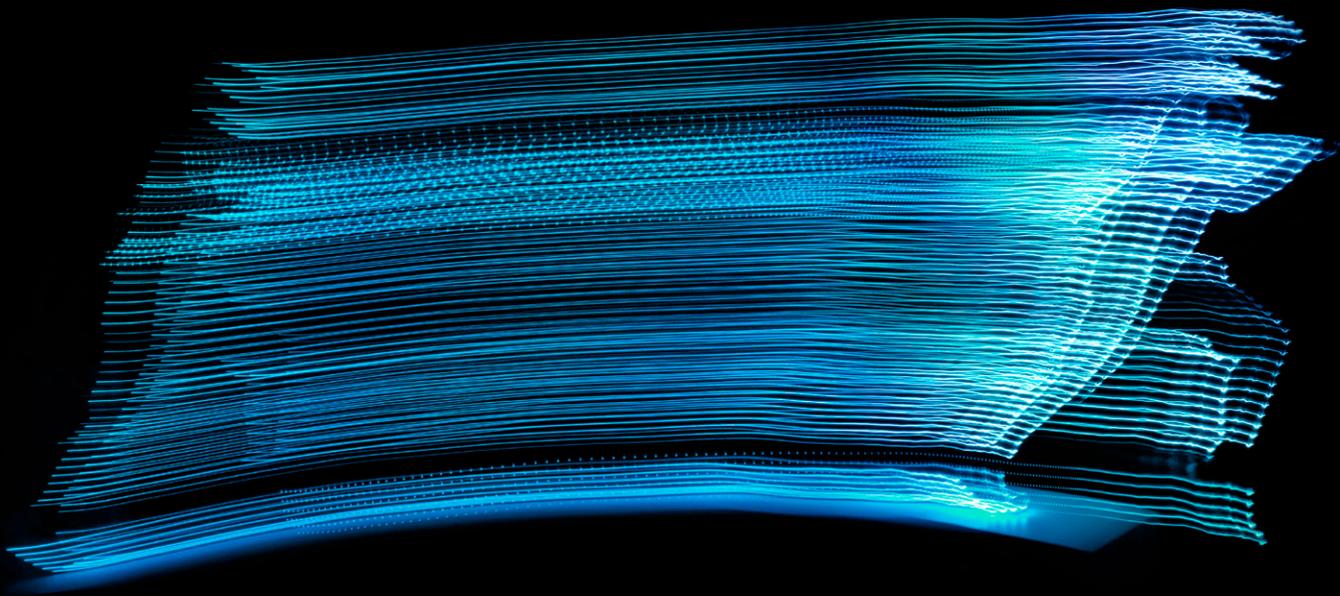


Operations Practice

# How virtual work is accelerating innovation

The age of assuming that innovation requires physical proximity is over. Innovators are embracing a new model.

*This article is a collaborative effort by Federico Berruti, Gisele Ho, Phil Kirschner, Alex Morris, Sophie Norman, and Erik Roth, representing views from McKinsey's Operations, Digital, Growth & Innovation, and Real Estate practices.*



**Despite the upheaval** caused by the COVID-19 pandemic—and partly because of it—innovation and digitization have been happening at a record-breaking pace. A McKinsey survey of top executives around the world found that companies accelerated their digitization of customer, supply chain, and internal operations by an average of three years.<sup>1</sup>

Indeed, over the past two years, countries around the world have set records for new business formation, new patents issued, venture capital invested, and more. The US Census Bureau's seasonally adjusted business formation statistics data show that through in 2021, a record 5.38 million applications had been filed to form new businesses—an increase of more than 50 percent over prepandemic 2019.<sup>2</sup> The brisk pace meant there were roughly 409,000 more US filings in 2021 than at the same point in prepandemic 2019. The World Intellectual Property Indicators also showed that aggregate global filing activity across 150 authorities grew in 2020, even amid the global health crisis.<sup>3</sup> Venture capital flows have also boomed: in 2021, global venture capital more than doubled from 2020, rising 111 percent.<sup>4</sup>

What's striking about these dramatic advances is that they largely entailed people collaborating remotely, leveraging technology in different ways, and being bolder with innovation, automation, and digitization than ever before. For decades, physical proximity has been considered essential to successful innovation. In an influential 1977 book, management professor Thomas Allen described a strong negative correlation between physical distance and frequency of communication, finding that people are four times as likely to regularly talk with someone six feet away from them as with someone 60 feet away, and people almost never communicate with colleagues on separate floors or in separate buildings.<sup>5</sup>

This proximity mantra guided everything from office layouts to urban planning. Cities such as Boston (with many counterparts around the world) have tried to fuel innovation by establishing districts where academia, research organizations, start-ups, and investors work side by side in purpose-designed “innovation ecosystems.”<sup>6</sup> Locating problem solvers together to encourage creative collisions of ideas, experimentation, and informal collaboration is also core to one of McKinsey's original eight essentials of innovation.

While the pandemic-related measures have thwarted the engineered serendipity designed into physical work spaces, making watercooler conversations and impromptu problem-solving interactions difficult to replicate virtually, it has led to a broad embrace of videoconferencing and virtual collaboration tools. Organizational network and collaboration analytics have also enabled innovative companies to help employees build and sustain the ties necessary to generate new ideas. As a result, organizations have, in the words of author Steven Johnson, “widened the pool of minds that could come up with and share good ideas”<sup>7</sup>—a vital ingredient for innovation. By connecting people into broader virtual networks, the pandemic has increased the collective speed and creativity of innovation efforts.

It's likely that flexible work and workplaces are here to stay, especially for organizations seeking to maintain or accelerate this elevated pace of innovation. More than half of corporate and government employees say they would like to work from home at least three days per week, and the number is even higher for innovation talent, such as programmers.<sup>8</sup> Location flexibility has become a de facto expectation for the latter group. Rather than seeing this as an obstacle, organizations seeking to innovate are doubling

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<sup>1</sup> “How COVID-19 has pushed companies over the technology tipping point—and transformed business forever,” McKinsey, October 5, 2020.

<sup>2</sup> “Business Formation Statistics, April 2022,” US Census Bureau, May 11, 2022.

<sup>3</sup> *World Intellectual Property Indicators 2021*, WIPO, 2021.

<sup>4</sup> Jordan Major, “Global VC funding hit a record \$621 billion in 2021, a 111% increase YoY,” Finbold.com (Finance in Bold), January 13, 2022.

<sup>5</sup> Thomas J. Allen, *Managing the Flow of Technology*, Cambridge, MA: MIT Press, 1977.

<sup>6</sup> Carmelina Bevilacqua et al., *Place-based innovation ecosystems: Boston-Cambridge innovation districts (USA)*, Joint Research Centre, 2019.

<sup>7</sup> Steven Johnson, *Where Good Ideas Come From: The Natural History of Innovation*, New York, NY: Riverhead Books, 2010.

<sup>8</sup> Andrea Alexander, Aaron De Smet, Meredith Langstaff, and Dan Ravid, “What employees are saying about the future of remote work,” McKinsey, April 1, 2021; “For programmers, remote working is becoming the norm,” *Economist*, August 11, 2021.

# Proximity to the customer, instead of to a physical office, can help organizations' innovation talent avoid the corporate echo chamber and identify and test new ideas faster.

down on the benefits that new approaches to innovation present.

## Diversity and inclusion

Innovators recognize that increased diversity and greater inclusion, both within teams and at the leadership level, produce more and better innovation results. A recent McKinsey study found that more ethnically and racially diverse companies outperform their less-diverse peers by 36 percent when it comes to financial targets.<sup>9</sup> As a result, innovators are tapping virtual work to attract more specialized and diverse talent and are building more inclusive workforces. One recently launched start-up that rapidly achieved unicorn status shifted to a virtual-first model, recognizing that the specific innovation talent its business required wasn't available in any single major city.

## Productivity

Innovators have also recognized that virtual teams, especially when managed effectively, can avoid unnecessary distractions, experience more effective and uninterrupted workflow, and achieve productivity gains. In a 2021 study, 83 percent of employees working remotely agreed that their

homes enabled them to work productively—a higher proportion than the average office (64 percent) and even outstanding workplaces (78 percent).<sup>10</sup> One innovative technology company recently started “time zone stacking,” the practice of strategically structuring virtual teams to positively leverage time differences and further accelerate innovation efforts.

## Customer-centricity

Perhaps paradoxically, an adjustment made because of the COVID-19 pandemic has enabled many organizations to get physically closer to their customers, as hiring is no longer tethered to geographic location. One global payment platform, for example, launched a remote engineering hub during the pandemic, hiring engineers from a range of locations and cultures. One year into the initiative, the company reports feeling “closer to customers—because we literally are.” Similarly, a government agency now describes being more citizen-centric thanks to hiring employees who live and work across the country, not just in the capital city.

Proximity to the customer, instead of to a physical office, can help organizations' innovation talent avoid the corporate echo chamber and identify

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<sup>9</sup> Sundiatu Dixon-Fyle, Kevin Dolan, Vivian Hunt, and Sara Prince, “Diversity wins: How inclusion matters,” McKinsey, May 19, 2020.

<sup>10</sup> “Workplace 2021: Appraising future-readiness,” Leesman, 2021.

and test new ideas faster. Getting closer to target communities is also easier than ever thanks to the proliferation of coworking sites and other “third places” to work and connect.

were largely developed through decentralized collaboration involving people around the globe. Pandemic-related changes simply expanded on the model rapidly, notably in the record-breaking development of the COVID-19 vaccines and a slew of new company and product launches over the past 24 months.

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The pandemic has made clear that lack of physical proximity need not hold back innovation—in fact, it can fuel it—but this is not a new phenomenon. Although it may come as a surprise to some, boldly innovating through remote collaboration has been a fixture in the scientific community for decades. In the 1980s, researchers adopted a way of working called the “collaboratory,” a virtual space where scientists interact with colleagues, share data and instruments, and collaborate without regard to physical location. Breakthroughs achieved through virtual collaboration include the Human Genome Project and the ATLAS project at CERN, which involved 1,800 particle physicists across 34 countries.

If the age of assuming that innovation requires physical proximity is behind us, with innovative companies’ full embrace of virtual teams and the role of technology, what comes next? One executive who leads a 50-person innovation group as part of a 15,000-employee organization said, “The pandemic made us realize that we never needed a swanky and costly innovation studio to do our work. What we want is community.” His plans are to make virtual work permanent, with monthly or quarterly in-person gatherings to strengthen trust, friendship, and connection.

More recently, innovators outside the science sphere have embraced the approach. Cryptocurrencies and metaverse platforms

How many more innovators will adopt this approach? Will bringing together the best of remote practices *and* the best of in-person experiences accelerate innovation even further? Let’s start experimenting to find out.

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