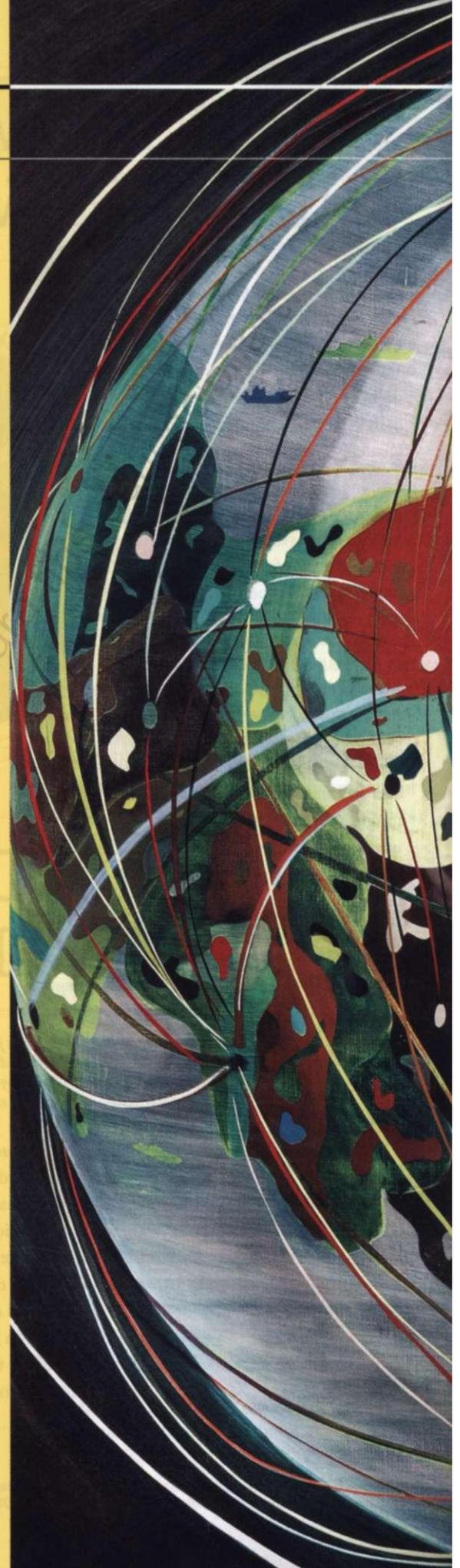
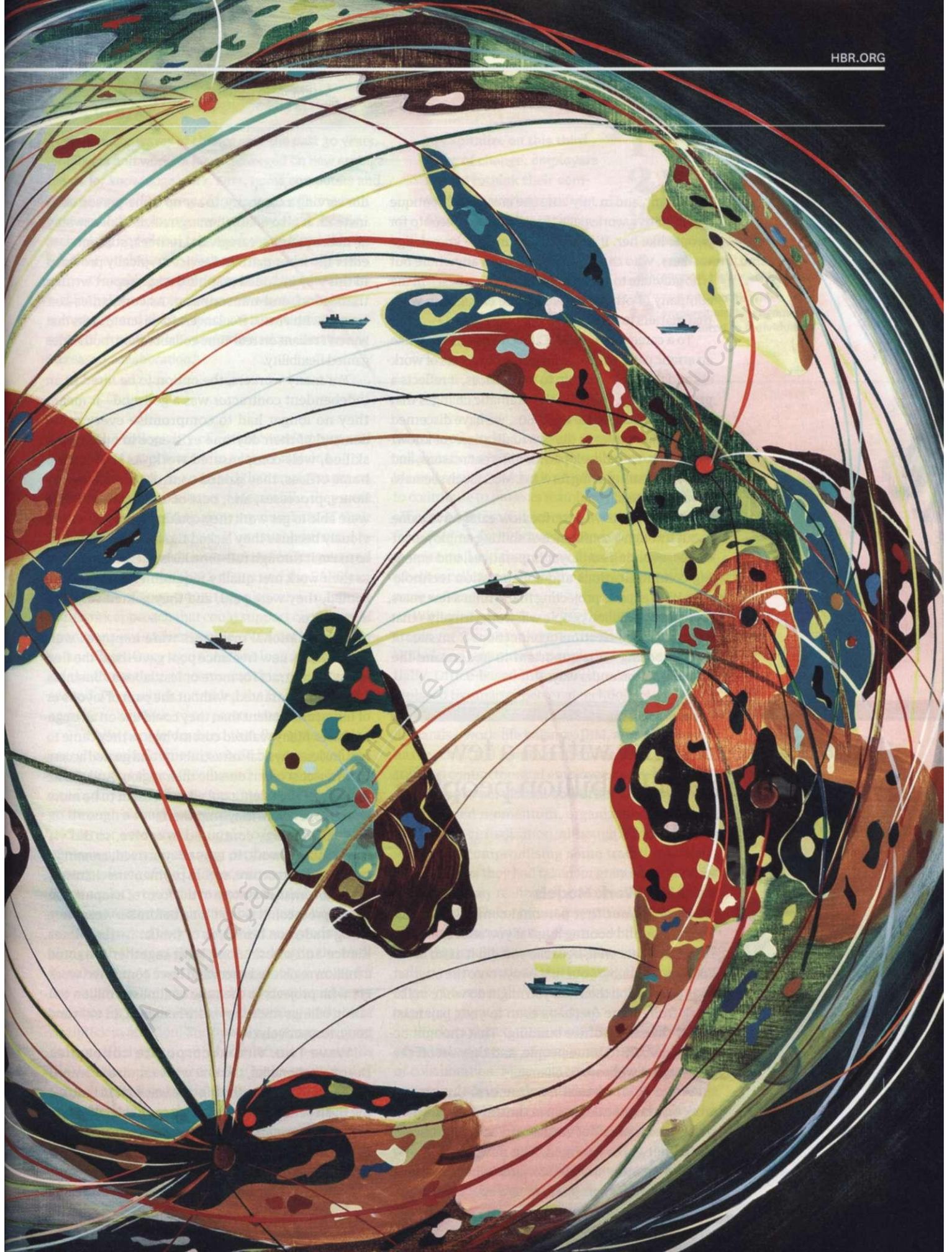


# The Third Wave Of Virtual Work

**Knowledge workers are now untethered, able to perform tasks anywhere at any time. What do the best of them want from your organization?** by Tammy Johns and Lynda Gratton

**IF YOU WANTED** to find three decades of the evolution of knowledge work encapsulated in a single career, Heidi McCulloch's would be a good one to consider. As a liberal arts graduate, McCulloch started out working in corporate marketing departments and then moved to an advertising agency, becoming an outside service provider to companies like the ones where she'd previously worked. After starting her family, she stepped away from that world and took on an entrepreneurial challenge: restoring and selling a historic inn. She came back to agency work a few years later and rose to vice president by playing specialized roles on global project teams. And now? She's on to new ventures. She is an independent





consultant, and in July 2012 she created a "boutique collaborative workspace" in downtown Toronto for people like her. It's an oasis for mobile knowledge workers, who can do their jobs from anywhere but who gravitate to where they can do them best—in the company of other creative people engaged in work that matters to them.

To a career planner, McCulloch's might seem like an erratic path. For us, as longtime observers of workers and their relationship to workplaces, it reflects a progression. In studying the dramatic changes that have taken place since the 1980s, we have discerned three major waves in the "virtualization" of knowledge work. They developed for different reasons, and they are all still moving forward. McCulloch seems to have caught each one.

In this article we describe how each wave came about through a confluence of shifting employee priorities, evolving employer imperatives, and emerging communications and collaboration technologies. With experts projecting that within a few years, more than 1.3 billion people will work virtually—that is, through rich electronic connections from sites of their choosing—it is important to understand the transformation under way.

## Experts project that within a few years, more than 1.3 billion people will work virtually.

### **Evolving Work Models**

Remember your first personal computer—bringing it home and booting it up? If you're over 50, you remember that well, because you did it as an adult. You also remember your first forays onto the internet. Did you envision then that you might do white-collar work from home (perhaps even in your pajamas) rather than in an office building? That thought occurred quickly to some people, and they set off the first wave of work-world change.

**Wave One: virtual freelancers.** Untethered work on a large scale began in the early 1980s, when a "freelance nation" of virtual workers using nascent e-mail networks emerged. The new connectivity allowed an individual who might otherwise have worked inside a company, or at a specialized ven-

dor serving a company, to set up a one-person shop instead. It also enabled marginalized talent—stay-at-home parents, caregivers, retirees, students—to enter the labor market. Services typically provided in this way included graphic design, report writing, translation, and transcription. As companies contracted with virtual freelancers for discrete tasks that weren't reliant on real-time collaboration, both sides gained flexibility.

For many workers, the option to be hired as an independent contractor was a godsend—it meant they no longer had to compromise every other demand of their daytime existence in order to do skilled, well-compensated work. As they set up home offices, they gained control over their work hours, processes, and, best of all, location. Some were able to get work they couldn't have gotten previously because they lacked the formal credentials to make it through full-time hiring screens. As long as their work met quality requirements, it was welcomed, they were paid, and they gained valuable experience.

Organizational managers were happy as well, because this new freelance pool gave them the flexibility to contract for more or less labor as business conditions warranted, without the pain of layoffs or of hiring more talent than they could use on an ongoing basis. Many realized cost savings as they came to require less physical infrastructure and gained access to lower-cost talent outside their region. And the expansion of the talent pool allowed them to be more selective in whom they employed.

As technology continued to evolve, so did virtual freelance work. In 1995 eBay arrived, creating a market infrastructure, secure payment mechanisms, and a governance system in the form of a reputation-rating protocol. It wasn't long before services were being traded on hundreds of similar marketplaces. Elance and oDesk alone have together attracted 2 million registered users and have connected workers with projects to the tune of almost a billion dollars in billings since they were launched, in 1999 and 2003, respectively.

**Wave Two: virtual corporate colleagues.** Despite its benefits, the first wave required compromises. For workers, the big one was that in embracing the freedom of contributing remotely, they had to give up formal connection to a company and all that went with it—from health and retirement benefits to leadership development and career progression to equipment and tech support. Many of them

## Idea in Brief

In three major waves of change over the past 30 years, employers and workers have converged on new arrangements for knowledge work. First, home computers and e-mail spawned an army of freelancers, offering both workers and employers new flexibility. Next, mobile technology and global teamwork made it possible for full-time employees to work anywhere and anytime without forsaking career progress and development within their companies. Now new ways of providing community and shared space are ameliorating a side effect of virtualization—worker isolation—and driving increased collaboration.

To capitalize on this third wave of change, employers should rethink their compact with workers on five fundamental dimensions:

- 1** THE STRATEGY behind the design of work arrangements
- 2** THE SETTINGS in which work is done
- 3** THE ORGANIZATION of workflows and how individual contributors add value
- 4** THE TECHNOLOGIES used to support higher achievement
- 5** THE DEGREE to which employment arrangements are tailored to individuals

missed the collegiality of a stable work group and the sense of involvement in a larger mission.

Organizations, too, missed that engagement on the part of virtual freelancers. Meanwhile, they were globalizing and asking growing numbers of their full-time employees to work unusual hours and to work on projects with international colleagues and customers. After the shock of 9/11 and the SARS pandemic scare of 2002-2003, they also came to appreciate a work approach that could support continuity of operations even when people could not be together in an office. Once again, technology helped both sides address their concerns and thus prompted the second wave, which extended the freedom to work anywhere, anytime, to corporate employees.

Initially people doubted that full-time employees who worked remotely would be as engaged and productive as their office-bound colleagues. Indeed, a company's early forays into untethered work often go through a rough patch as employees, managers, and senior executives struggle to learn new modes of managing and measuring performance. This was the experience of the UK telecommunications group BT. In a pilot project the company enabled a group of engineers to start working flexible hours at home and carefully tracked their engagement and productivity, along with those of their peers working in the traditional mode. At first the numbers looked worse for the experimental group, and they continued to deteriorate for a while—with the disturbing addition of an uptick in attrition. Fortunately, top management did not pull the plug on the pilot. After a few months the untethered team seemed to hit its stride, and ultimately it achieved significantly greater productivity and lower turnover than the traditional teams.

Part of the story at BT was that even as the pilot was running, home-based technologies were improving. (The culture of the organization adapted as well, and leaders became more skilled at managing

untethered work.) Corporate communications and collaboration systems have steadily grown more stable and secure, making it possible for more workers to contribute to projects seamlessly from their home offices. As interoffice communication has shifted from face-to-face conversations and paper memos to voice mail and then e-mail, it matters less and less whether colleagues are on the same wing or even the same continent.

With virtual work serving the interests of both employees and employers, the number of highly skilled and untethered people has risen exponentially. Office-based infrastructure is less relevant, replaced by smarter personal technology and cloud computing. Top talent increasingly values—and demands—work-life balance. IBM, an early convert, has reached the point where more than 45% of its 400,000 contractors and employees work remotely.

**Wave Three: virtual coworkers.** As the second wave gained momentum, organizations began to realize that virtualization, although a boon in many ways, was compromising some traditional workplace benefits they had taken for granted. Hoping for teamwork, they realized that too much division and distribution of labor meant less natural collaboration. Anxious for innovation, they missed the kind of ideation that results from serendipitous encounters and hallway conversations. Anticipating the retirement of baby boomers, they worried about the tacit knowledge that might go untransferred.

Workers shared these concerns: Their work lives often lacked a sense of community and the richness of collaboration. Many experienced far too little unstructured social contact. Indeed, at IBM a sardonic comment started circulating among employees: The company's initials, they said, stood for "I'm by myself."

Somewhat paradoxically, then, a new wave of complex, global virtualized work has surged, as

many workers physically reunite and retether to specific spaces. A major focus of the third wave's new technology is to give workers the feeling of being in a shared environment. But virtual platforms can go only so far. As we'll see, organizations and workers are also investing in a return to the collocation of colleagues in the real world.

## The Urban Hub

When Heidi McCulloch first laid eyes on an "urban hub," she knew it would be her new remote base. Recall that McCulloch is a work-from-home veteran—self-motivated, technically savvy, and fiercely independent. The hub she saw was a well-appointed space for mobile workers. Picture a frequent-fliers lounge without the airport. Citizen Space, in San Francisco, San Jose, and Las Vegas; Somerset House, in London; and the Hub, in Amsterdam and about 30 other cities worldwide, provide open workspaces, current technology, and creative environments. They strike a balance between comfort and function, with features from couches to worktables to boardrooms.

Immediately McCulloch saw that a work hub offered what she loved about virtual work: It involved almost no commute, because it was located near her home. With its wide-open floor plan, high unfinished ceilings, and simple furnishings that could easily be rearranged, it was a far cry from a cubicle farm. She could sit wherever, and with whomever, she wanted, and could come and go as she pleased. At the same time, the hub provided the one aspect of a traditional office she sorely missed: the company of other professionals.

We are seeing a proliferation of such workspaces, specifically designed to connect and inspire people who generally work alone. Today more than 2,000 coworking spaces exist across the globe—an increase of 250% over two years—and new ones are opening every day. Some of them are created by companies for their own untethered workers; they may be reconceived spaces carved out of existing facilities. They are open, casual, and even cool, signaling a sharp contrast between the old and new work models. For organizations, the investment pays off in greater engagement by mobile workers and more innovation. Other coworking spaces are independently operated to serve people who might previously have been fixtures at the local Panera, Starbucks, McDonald's, or other purveyor of caffeine and free wireless connections.

There is even a magazine devoted to coworking spaces: *Deskmag*. According to a global survey it recently conducted of people who use them, the three most important aspects of such spaces are interaction with other people, flexible working hours, and an environment that encourages serendipitous discoveries.

Coworking spaces are to knowledge work what bike-share programs are to personal transportation: a community-based, low-cost, convenient, and eco-friendly solution. Some spaces are organized around particular communities of practice so that, for example, independent web and game developers or writers or social entrepreneurs can rub elbows. But the concept is not limited to idea people and etherware creators. If anything, it is better suited to the growing ranks of "makers," most of whom could not do their tinkering, fabricating, and prototyping without access to machine-shop equipment in a shared-cost facility. TechShop, for example, which started in Menlo Park, California, is a membership-based workshop that provides novice inventors with design and fabrication tools and equipment, instruction, and a community of creative and supportive people.

When hubs serve particular communities, they tend to take on distinct cultures, which can translate to varying terms of use. They can also become hotbeds of talent where techniques, contacts, and passions are shared, just as they were in the medieval guilds—and as they are today in massively multiplayer online gaming guilds. Where visionaries have built these hubs, and people have come in search of productivity, fellowship, and mentorship, we are beginning to see talent clusters emerge.

## Make the Change

For employers today, the imperative is to learn how to capitalize on all three waves in the virtualization of work. One of us, Lynda Gratton, hosts a consortium of forward-thinking organizations that are learning jointly about the opportunities and challenges of new work models. From the efforts of those organizations and others, we have distilled five pieces of advice.

**Focus on collaboration.** Any strategic plan must begin with clear goals. In the 21st century a new approach to work in a large organization must be aimed at supporting greater collaboration—the heart of an enterprise's ability to innovate better and faster. With this business outcome in mind, design decisions can be made about the right culture, talent sources, and leadership to cultivate.

Although it may sound simple and even obvious, having a clear statement of purpose is instrumental in addressing conflict and changing mind-sets. Tata Consultancy Services, where more than 85% of workers are in some form of untethered work, has outlined four ways in which clarity is achieved for any collaborative project: (1) Goals are decided up front, along with key roles, commitments, and the rules of play. (2) Leaders define the vision, set the boundaries, and then relinquish control. They understand that project leadership is not a power game. (3) Roles and commitments are measured against well-communicated metrics. (4) The culture mantra is to trust someone until he or she becomes unworthy of trust.

**Reconceive physical workspaces.** The *raison d'être* for physical workspaces is being turned upside down. Previously, they were designed to house the expensive technology and tools that workers needed for output, to support efficient processes and maximum productivity, and to reinforce the hierarchy of management. Unintended side benefits that arose from colocation were cultural alignment, idea generation, and fellowship that led to greater trust, teamwork, and quality. Now, in the realm of knowledge work, those extras are the whole point of colocation, and physical space should be optimized to deliver them.

Thus private offices and cubicles are being replaced by more flexible, communal, and transparent workspaces. Companies even use physical space redesign as an opportunity to rethink work processes and organizational design. One global consulting firm initially created coworking spaces because offices were lying empty while consultants worked at client sites, at home, and on the road. Surprisingly, in addition to reducing costs, the redesign modernized the firm's culture. Its leaders fully expected the newest hires to thrive in these coworking spaces, but corner-office executives gravitated to them as well.

For some companies, the space in Grand Rapids, Michigan, known as GRid70 (for Grand Rapids innovation and design at 70 Ionia Avenue SW) is an attractive hybrid of the two types of coworking hub—company built and independent. Four stories and 28,000 square feet, it was established for joint use by workers for four companies: Amway, Meijer, Wolverine Worldwide, and Steelcase. Each company has space of its own in the building, but the 10,000 square feet of open space that they all share, most of it on the top

floor, is almost always fully occupied. Members of this consortium also share processes, some research findings, and resources including rotating college interns. Cross-company teams have collaborated on projects such as evaluating cloud-based technology options. John Malnor, the vice president of growth initiatives at Steelcase, justified its investment in GRid70 this way: "Our belief is that mixing creative

---

## Coworking spaces are to knowledge work what bike-share programs are to transportation: a community-based, low-cost, convenient, and eco-friendly solution.

teams from different industries will spawn happy accidents that inspire innovation, new products, and different ways of thinking."

One can imagine extending the benefits of bringing creative workers together by opening up coworking spaces to outsiders—customers, for example, who increasingly expect to collaborate in the development of products and services.

We mentioned TechShop above. Ford Motor Company partnered with TechShop's founders to launch TechShop Detroit, a 33,000-square-foot "do-it-yourself" workshop that is open to employees, nonemployees, and retirees. For a \$99 monthly membership fee, the space makes available to them equipment that would be well beyond the means of most hobbyists. (Current and past Ford employees get a 50% discount.) What's in it for Ford? The company cares about innovation—it already has a portfolio of more than 17,000 issued and pending patents—and the energy of experimentation in the building fuels that. Venkatesh Prasad, a senior technical leader at Ford, likes to say, "If Henry Ford were starting today, he would almost certainly be a member of TechShop Detroit."

**Reconstruct workflows to tap remote talent.** Efficiently combining the contributions of highly specialized people to produce a valuable outcome is always a complex challenge. It is especially tricky when collaboration is required and the people are working

virtually and independently. A previous HBR article ("The Age of Hyperspecialization," by Thomas W. Malone, Robert J. Laubacher, and Tammy Johns, July-August 2011) asserted that organizations must learn to parse projects and distribute tasks to specialists around the world. Ensuring that the value gained by tapping world-class talent sources is not lost in clumsy handoffs requires a deep understanding of dependencies and careful attention to integration.

TELUS, a leading telecommunications provider in Canada, estimates that by 2015 only 30% of its employees will work full-time in a company building

they are easy to use and because employees see them not as just a new layer of administrative process but as a way to facilitate the work that must be done.

Organizations are discovering that the closer a work technology experience is to an individual's personal use of devices and software, the faster the technology is adopted. For example, Infosys relied on the popularity of social networking sites to drive adoption of its internal collaborative tools, which use similar features to connect workers around the world. Many organizations are moving quickly onto mobile platforms with their collaboration technology. It's a smart move, given analysts' predictions: IDC expects the world's mobile worker population to reach 1.3 billion by 2015, and Forrester projects that the number of mobile broadband users will exceed the number of PC broadband users by 2016.

**Recognize idiosyncrasy.** Success in the new wave of work will also require that employers encourage and support individual work preferences and customize approaches to engaging and motivating differing work personalities. This will entail a delicate balance between best practices and flexible accommodations. Most work environments have committed heavily to standardized HR practices in the interests of fairness and efficiency, yet this one-size-fits-all assumption ignores the fact that wants and needs vary even over the span of an individual career. As the impact and importance of features such as flexible hours, relocation, and travel wax and wane, the ability to adapt to life's changes is vital to workers and a significant value proposition for an employer to offer.

A model company in this regard is HCL Technologies, with its central management philosophy of "Employees first, customers second." In the way that many companies strive to accommodate customers' special requests, HCL focuses on making the company work for its people. Some of this takes the form of work/life assistance such as Genie, a personal shopper and concierge that gives employees the gift of time by running errands, making appointments, and so forth. More deeply, the philosophy supports individualized arrangements. Employees rate the performance of managers whose decisions have an impact on their work lives, all the way up to the CEO. If this level of indulgence seems unsustainable in a competitive marketplace, consider HCL's business results: The company consistently reports highly satisfied customers and strong financial outcomes. Since 2005 its revenues and earnings have tripled.

---

## “Presenteeism” has come to mean showing up at an office even when you could be more productive elsewhere.

and the rest will work virtually. Its teams now come together around a purpose rather than a function or a department such as sales or finance. So, for example, people who serve the same client can sit together, regardless of their functional expertise. Leveraging technology, TELUS team members can work on any floor in the building, in shared spaces. When working remotely, they can connect virtually with their team members across Canada. The company reports that productivity has risen by 5%—a gain it attributes to reductions in lost work time and improved adjacencies for employees. Taking a cue from coworking space design, TELUS has created an open, friendly, configurable urban hub in Toronto to accommodate its virtual workers and encourage them to retether to their colleagues and to the company brand.

**Invest in intuitive technology.** Too often, attempts to support remote work and encourage collaboration are dominated—sometimes crushed—by an obsession with sophisticated technology. It is important to avoid that by keeping the focus on desired business outcomes. At the same time, those who succeed do rely on a fast-evolving IT tool kit. The surest route to greater innovation and efficiency is to invest in intuitive collaboration technology that becomes part of the regular flow of work. Enterprise social networks such as Salesforce.com's Chatter and Microsoft's Yammer are growing in popularity because

## New Work, New World

In three waves, transformation has come to how knowledge workers do their jobs and where. These waves are not cleanly sequential global phenomena. They surge forward at differing velocities across sectors and geographic areas and mix together in societies. Understanding how your business participates in the three waves will help you focus your attention and resources on the right challenges and opportunities and make wise decisions about technology, work models, talent sources, and people practices.

Even in companies at the leading edge of the third wave, workers and managers still make compromises. "Always on" technology and global team membership can mean greater imbalance in employees' work/life patterns. (One manager told us that his company had "crossed the line" when it announced that employees using Telepresence could not turn off the cameras, regardless of when a meeting occurred in their home time zones.) Measuring achievement remains difficult; managers fret about not being able to observe people at their desks and about how to gauge productivity in knowledge work. Some employees are subjected to remote surveillance technology that they find demeaning, such as software that counts their keystrokes. And in a world where many promotions are won through social bonding, highly skilled virtual workers may feel underappreciated. Employees still complain that "presenteeism" makes them feel they need to show their faces. The term gained currency

when people felt obliged to come in to the office even when they were sick. Now it means showing up at an office even when they could be more productive elsewhere. Setting up technology so that people can work efficiently outside their cubicles turns out to be the easiest part of virtualization.

As companies, employees, and freelancers gain experience with remote working arrangements, and technology developers continue responding to their needs, we can expect progress on all these fronts. And as the models we implement work better for everyone, we can expect the positive impact to redefine the communities we live in. Communications technologies allowed us to expand our networks far beyond our geographic locations and gave us access to new possibilities for work. At the same time, they weakened the local connections that were our source of social interaction and fun. As workers become increasingly untethered, neighborhoods and communities are more important than ever. In the third wave of virtualization, we stand to recapture the best of what we had before globalization, when the citizens of communities felt their mutual dependence in every working moment, and human connections were deep. ♥

HBR Reprint R1301D

 **Tammy Johns**, formerly the senior vice president for innovation and workforce solutions at Manpower-Group, is the CEO of Strategy and Talent Corporation. **Lynda Gratton** is a professor of management practice at London Business School.



"Well, that concludes the meeting. All I need to do now is choose a team leader."

CARTOON: PAUL WOOD

January-February 2013 Harvard Business Review 73