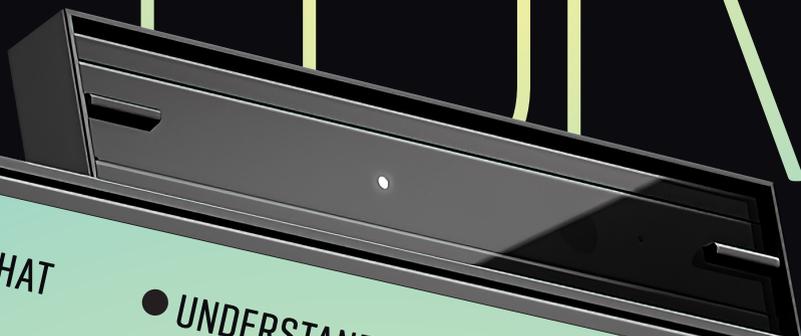


# INNOVATION

AN HP INC. PUBLICATION / SPRING 2022

# HYBRID



**HYBRID WORKHORSE:**  
HP's E24m G4 Conferencing  
Monitor with webcam  
DETAILS INSIDE

● OFFICES THAT  
MAKE YOU  
LOVE MONDAYS

● UNDERSTANDING  
THE METAVERSE  
HYPE

● A NEW ERA OF  
BUSINESS  
CONFERENCES

● EMOJIS  
GROW UP  
(SORT OF)

# WORK

THE  
SPACES,  
GEAR,  
TECH &  
ATTITUDE



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SPRING 2022

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## ON THE COVER

The new HP E24m G4 USB-C Conferencing Monitor (\$399) has an integrated 5MP, tilt-adjustable webcam, front-firing speakers, dual mics, improved color sensor, and Windows Hello support.

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COVER PHOTOGRAPH COURTESY OF HP INC.

**“THE OFFICE OF THE FUTURE IS HYBRID,  
AND IT IS GEARED TOWARD MOBILITY,  
FLEXIBILITY, AND COLLABORATION.”**

Enrique Lores / President and CEO



**TWO YEARS INTO THIS** pandemic, millions of us are still working from home at least some of the time. We’ve found new places to connect beyond the usual conference rooms and water coolers. And most of us now have close colleagues we’ve never met in person!

While none of us can know exactly what the future of work may look like in the long run, we can say with certainty that we’re never going back to the way things were. Hybrid work is not simply a feature of this transitional moment or a fleeting trend. It’s here to stay: The office of the future is hybrid, and it is geared toward mobility, flexibility, and collaboration.

At HP, we view this era as an unprecedented opportunity, both for our business and our employees. It’s an opportunity to create entirely new experiences for our customers. And it’s an opportunity to reflect on—and correct—some of the shortcomings of the pre-pandemic office.

Employees are still juggling a lot at work and at home. That’s not going to change, and we should never have to choose between our job and our family. Technology can help eliminate some of these tough trade-offs, which is why, as employers, we must support, encourage, and enable new ways of working.

Because ultimately, as exciting as the coming technological advancements are, the hybrid era is about people. We need to appreciate the ways their lives are changing, have empathy for the challenges they face, and help find ways to make their lives better. And as we usher in our hybrid future, we must do so in ways that break down the digital divide and promote digital equity to ensure millions aren’t left behind.

None of this will be easy. But over the years, our greatest advances have emerged from our willingness to push

the boundaries of what’s possible in pursuit of ambitious progress. This moment demands nothing less.

As we look toward the future, we can once again draw inspiration from our past. Our cofounder Dave Packard once said that a company “has a responsibility to recognize the dignity of its employees as human beings, to

the well-being of its customers, and to the community at large.” His words are a prescient reminder of what matters most as we navigate the road ahead.

In this issue of *Innovation*, we tackle the complexity of the hybrid world head-on, both for HP and the world at large. We explore the next era of enterprise, track the hybrid work world by the numbers, and dig into the new neuroscience of adult learning. And as March is Women’s History Month in the United States, the UK, and Australia, we also shine a spotlight on groups of very different but remarkable women, from the brave and determined Afghan football team that fled to the UK, to brilliant Black tech founders working to solve racial disparity in maternal healthcare, to professional female gamers demanding visibility and respect.

All this reflects our vision of harnessing innovation to drive extraordinary contributions to humanity. This is a defining moment for the entire HP community—and the world—and I look forward to working with all of you to meet it.

Saludos,

The Heart of  
**HYBRID**



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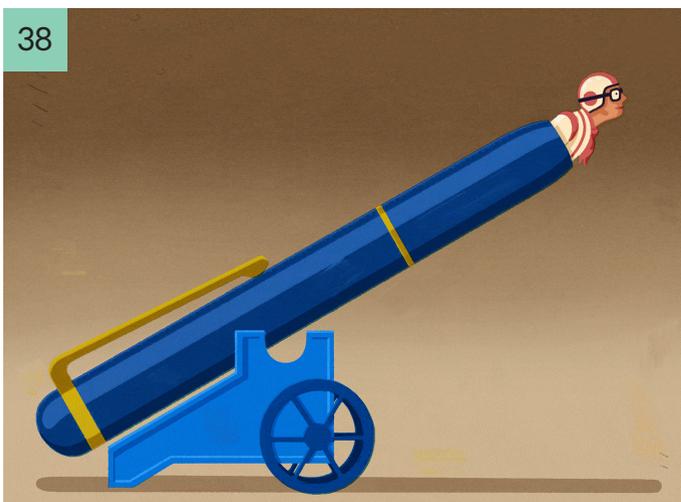




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We supercharge nonprofits closing the digital divide.

# The Digital Equity Accelerator

In an increasingly digital world, families are falling behind. **You can help.**



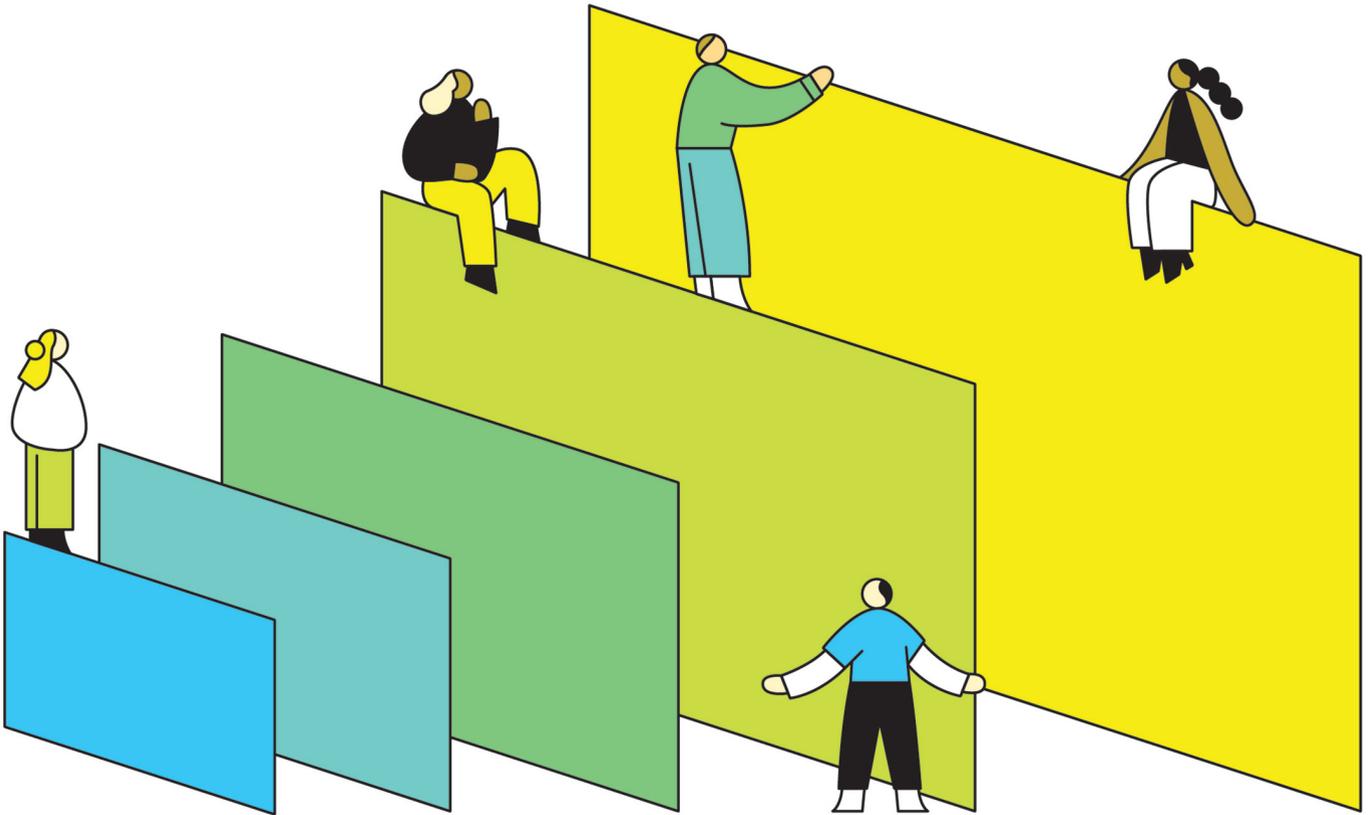
Have an idea for how to close the digital divide?

Established **nonprofits** in the **United States**, **India**, and **Morocco** are invited to join a pilot four-month, virtual program to **scale** their on-the-ground efforts to **advance digital equity**.

## Apply by March 21!

Learn more at [AspenDigitalEquity.org](https://AspenDigitalEquity.org)

# The OUTLOOK



## Why Services Are the Key to The Next Era of Enterprise

*Luciana Broggi, Acting Chief Commercial Officer, on the ways businesses must expand and strengthen service offerings to maintain a competitive IT infrastructure.*

*illustrations by ROSE WONG*

Today's world of work looks dramatically different than it did even a couple of years ago. The need for hybrid workforces has compelled companies to securely connect devices and employees in entirely new ways. At the same time, many organizations face IT talent shortages as the Great Resignation [continues to expand globally](#). Amid these changes, customers have expectations that demand companies innovate or be left behind.

Technology simply can't keep up, and there's a good reason why: As [global IT budgets tick upward](#), investments in [managed services](#) are also growing.

This landscape can seem overwhelming—but it doesn't have to be. While these shifts are redefining how we work and how companies operate, the IT industry is responding with innovative solutions for some of the most pressing business challenges. The rise of comprehensive services for hardware, software, and more enables companies to adapt, scale, and continuously innovate in a way that caters to the use cases and experiences today's customers crave. Services will not only fuel the next enterprise

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**THE SUCCESS OF INSTANT INK**

*Q&A with Diane Sroka*



Luciana Broggi  
Acting Chief Commercial Officer

transformation—they will be the foundation upon which it grows.

**New era, new challenges**

Today, 51% of knowledge workers—engineers, accountants, and writers—worldwide are remote at least one day per week, while an estimated 31% of the total global workforce is a mix of hybrid and fully remote, [according to Gartner](#). Creating IT systems and solutions that enable this hybrid workforce to be productive no matter where they're located is paramount. So, too, is securing an evolving combination of remote devices, cloud-based software solutions, and on-premise hardware.

It's a puzzle that demands a cohesive and agile response. Yet, finding the IT talent needed to achieve this remains a hurdle. While there's long



IT executives see talent shortages as the biggest barrier to adoption of 64% of emerging technologies.

Source: [Gartner](#)

been demand for IT workers, the shortage has grown more pressing in recent months, and [40% of tech employees in the United States left a job in the past year or are currently contemplating leaving](#).

They're looking for more money, greater flexibility, less stress, and new experiences,

according to Citrix. And with an IT unemployment rate half that of the general workforce, the ball is in the job seeker's court.

These dynamics create a perfect storm for IT teams, most of which are under-resourced at a moment when companies genuinely need them most. Fortunately, the right services can address rising challenges, even amid these struggles.

**At your service(s)**

At HP, we've been thinking deeply about what types of innovations will help businesses navigate this new era. Managed services and solutions have risen to the top of the list. Unlike outright device ownership, these end-to-end alternatives, like HP's Managed Print Services, offer convenience, flexibility, scalability, security, manageability, and more to customers who know their needs will evolve over time. Transactional technology is no longer enough, and personalization is quickly becoming table stakes. To win in today's market, companies require truly customizable solutions that meet customers' needs as seamlessly as they offer access to capabilities—solutions that allow customers to keep as much of an eye on the future as they do on the present.

This is where we believe the next generation of managed services comes into play: closing talent gaps while providing the solutions required to enable and secure a hybrid workforce. For example, HP Device as a Service (DaaS) helps IT reduce the cost and complexity of device life-cycle management, providing



In the next two years, the number of DaaS users is expected to grow to more than 150% of the level reported in 2020.

Source: NTT, "2021 Global Managed Services Report"

devices, repair services, and AI-driven analytics in a predictable payment. And we customize each offering to solve unique needs and budgets.

DaaS can provide usage analytics to optimize a company's IT spending and resources, minimize interruption to key business functions, or increase device security. Meanwhile, HP solutions can help organizations expand and up-level their capabilities, while managing more customer needs in less time. In fact, services are already showing their value among consumers. Last year, HP launched HP+, an integrated print service designed for new hybrid lifestyles that bundles HP Instant Ink, cloud and security capabilities, and added features to HP Smart App, which now has nearly 50 million monthly active users.

**Future-proof IT**

Comprehensive managed services bolster IT teams, providing the expertise and resources that companies need to overcome current headwinds. But forward-looking organizations recognize that's just a fraction of the benefit services offer.

Managed services empower

companies to flex and scale to meet current demand, as well as prepare for future growth. Access to additional expertise and the latest solutions makes it much easier for companies to innovate digitally, reducing the risk and cost of doing so. Even more, digital services will allow companies to scale capabilities at pace with shifting user needs—all without having to upgrade technology. HP's recent Teradici acquisition introduces a complementary set of cloud-based and remote capabilities to products like HP workstations, offering customers high-performance computing and the flexibility of virtual access that will cater to their individual needs.

Ultimately, service offerings empower IT organizations to face whatever comes next. Organizations capitalizing on these innovations will minimize disruption, whether that's ongoing workforce changes, talent shortages, or something else entirely. It's a new approach for a new digital era, one that promises to transform today's challenges into genuine opportunities. ●

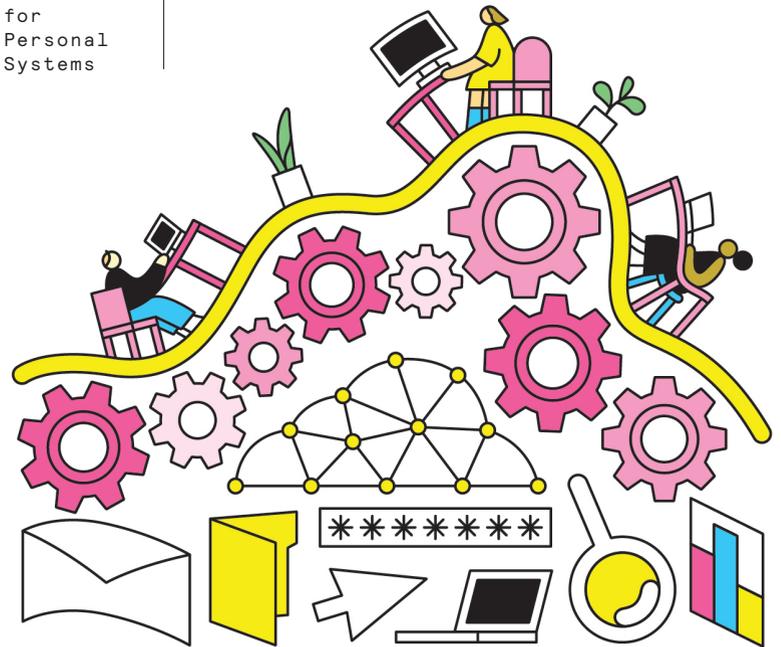


Sumeer  
Chandra

Global  
Head of  
Services  
for  
Personal  
Systems

## The Future of Work Depends on Your IT Department

Businesses must adopt modern IT architecture to keep their hybrid workforce productive and engaged.



The hybrid workplace is here to stay. Not only do company leaders need to keep a distributed workforce connected and secure, they also need the appropriate tools to foster ongoing employee collaboration, engagement, and productivity, all while keeping their teams healthy and happy. Many are turning to IT for solutions to ensure their business and employees are empowered to thrive amid these challenges.

### Demands on IT continue to grow

Unpredictability is the primary challenge of the work-from-anywhere world. For IT teams, long-standing approaches to endpoint management and support aren't flexible or proactive enough to meet the needs of remote employees. For example, on-site device support and incident ticketing were once considered tried-and-true processes, but now are too slow and reactive. And traditional solutions such as VPN connections are now used excessively, making them unreliable and unstable.

Even the basic task of getting an employee the right technology is often sluggish and complex, as PC imaging and deployment techniques typically involve time-consuming manual processes, not to mention the logistics required to deliver and set up newly imaged PCs to many different home addresses.

Unpredictable workplaces and workstyles are also a nightmare for security, creating additional vulnerabilities to increasing daily threats. Malicious actors prey upon our lowered defenses outside corporate firewalls, while patches and software updates have become more difficult to deploy.

The harsh reality is that most IT departments don't have the resources to permanently support a broadly distributed workforce. And while the limitations of

**\$4.5B**

IT services spending is projected to hit \$4.5 billion in 2022, with enterprise software as the highest growth segment.

Source: [Gartner](#)

legacy systems may be well understood, they can't simply be upgraded overnight. New ways of working require modern technologies.

### Unpredictability requires flexibility

What employees really desire is flexibility—the option to stay home when it's necessary, but remain connected with office life while they work remotely. Likewise, they should be able to choose where they work best, whether at home in relative quiet or amid the energetic vibe of the office.

Organizations need this flexibility as well. Long after the pandemic, companies will be dealing with a growing number of external factors beyond their control, and flexibility in work models enabled by a cloud-powered, modern IT infrastructure will be a necessity.

The transformation to a more secure, digital, cloud-based modern IT architecture is not optional for most organizations. Some 86% of companies have already adopted a modern IT management strategy, according to HP research conducted by Forrester Consulting in 2020. Imagine being able to get employees up and running faster with personalized, cloud-ready PCs that arrive with the employee's applications, settings, and cloud registration and enrollment included—much like setting up a new mobile phone. Instead of reactive break/fix support that can leave an employee unproductive for days, a modern management solution allows IT to proactively address potential issues before they even know they have a problem.

With IT security protocols increasingly difficult to implement as physical work locations continue to fragment, an endpoint security strategy built on zero-trust principles and a more dynamic, cloud-based architecture to ensure timely and reliable patch management are more critical than ever to avoid employee frustration and potentially devastating data and financial losses.

### How HP supports the new normal

With in-depth analytics from the world's largest telemetry database of more than 26 million devices, HP garners real-world insights on how to best support employees, regardless of where and how they work. This helps organizations take the guesswork out of implementing and supporting the transition from traditional IT strategies to integrated, employee-driven, cloud-first infrastructures. These are purpose-built to deliver secure, reliable, intuitive computing experiences for hybrid workforces that can evolve with the technology demands of the future.

For example, the HP Adaptive Endpoint Management solution, fully managed by HP service experts, provides the flexibility of a cloud-based infrastructure while supporting both modern and traditional application deployment and management. This lets organizations use a cloud-first approach to leverage existing investments.

Cloud-powered digital tools like HP Proactive Insights Experience Manager gather performance and usage telemetry data from both applications and devices, as well as benchmark employee sentiment, which helps managers keep a pulse on employee satisfaction when they can no longer walk the floor. This helps ensure a more effective work environment, higher employee engagement, and increased productivity.

The year 2022 and beyond will be an era of rebuilding and reshaping what life and work look like. IT will remain the hero at the heart of business, enabling the flexibility and experiences people and businesses need to be successful in the hybrid-work reality. ●



Diana Sroka

Global Head of  
Consumer Print  
Services

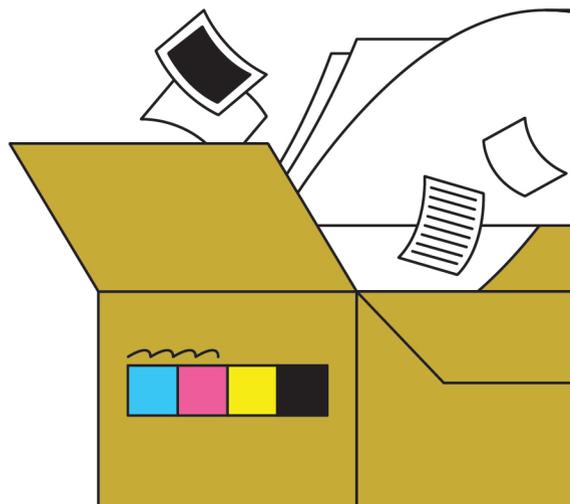
## Thinking Beyond Ink

Why subscriptions and Print-as-a-Service are growth opportunities for HP.

In the more than two decades that [Diana Sroka](#) has been at HP, her career has charted an uncommon course. With a background in mechanical engineering and an MBA, she's held leadership roles in finance, the office of the CEO (under Dion Weisler and Enrique Lores), the HP Store, investor relations, and more. Her current position as Global Head of Consumer Print Services has brought the breadth of her experience to the next step in her journey.

"I've had a winding road because HP provided so many interesting opportunities for what I'd call a nontraditional career path," she says. "When COVID-19 happened, I said to myself, 'What do I want to be next?'"

Today, she leads HP's [Instant Ink](#) business, which is paving the way for one of the fastest-growing areas of the company: subscription services.



Instant Ink was “an entirely homegrown success” for the company, Sroka explains. It enrolled its first customer eight years ago, and today counts more than 11 million active subscribers. Instant Ink is one of a few businesses at HP that are seeing double-digit revenue growth year over year, according to data shared with investors at the 2021 Securities Analyst Meeting.

“Instant Ink is the largest consumer service that HP has, and we developed the program from the bottom up,” Sroka says. “It’s proven that HP can transition from transactional to contractual relationships with our customers and bring innovation not just to the products we sell, but also to new business models.”

In 2022, her division is piloting a few new models in select markets, including an all-inclusive Print-as-a-Service (PaaS) subscription and add-ons to Instant Ink in adjacent categories, such as paper.

*Innovation* spoke with Sroka from her home office in Los Gatos, California, where she lives with her three teenagers and explores the waterways of the Sacramento Delta in her downtime.

### 1 / What do you see as the biggest challenge and the biggest opportunity for HP at this moment?

We now speak of individuals’ work and personal lives as blended, especially those working from home. That trend is HP’s challenge and opportunity. We need to leverage our innovation engine to develop solutions to address this hybrid space.

### 2 / What insights have you gained from the millions of customers who subscribe to Instant Ink?

We had a surge of new subscribers worldwide during the different lockdown periods in 2020 and 2021, which tells us that people realize printing is essential in their daily lives. One takeaway from the pandemic is that our value proposition for Instant Ink is even more relevant in this “new normal” life. For example, we make it very easy for customers to change their monthly plans, or roll over unused pages for a few months as their printing usage varies.

### 3 / What kind of feedback are you getting from Instant Ink subscribers?

They really love the convenience of the service. I read the customer commentary and laugh—some say they feel like Santa has come to their front door every time they get their ink replenishment package.

### 4 / And on the flip side, what feedback prompted improvements?

Every cancellation gives us insights on what to improve. For example, we were seeing cancellations due to extended summer or winter holidays. So we implemented a temporary hold option, which people use if they know they’ll be either away from their home or just away from printing for a period of time. We had some customers experiencing overage [charges], and we realized we have some truly high-frequency users, so why not have a really high-page plan? We now have plans that start at 10 pages per month and go all the way up to 1,500 pages per month. We also introduced a smart intervention tool so that if a customer is canceling, we

find out why, and provide them with alternatives at that moment that could perhaps retain them.

### 5 / What is the thinking behind experimental offerings like PaaS?

How do we help our customers just “set it and forget it” so all their printing needs are met? For a low monthly price, consumers will be able to select the printer of their choice with the page plans that Instant Ink has today. They will have the right to upgrade or refresh that printer at a point in time; or if they have an issue with their printer, we will fix it or get them a new one overnight. The top reported benefit is the convenience of a single, all-inclusive subscription service. A second benefit is no longer having to shop for printers and ink.

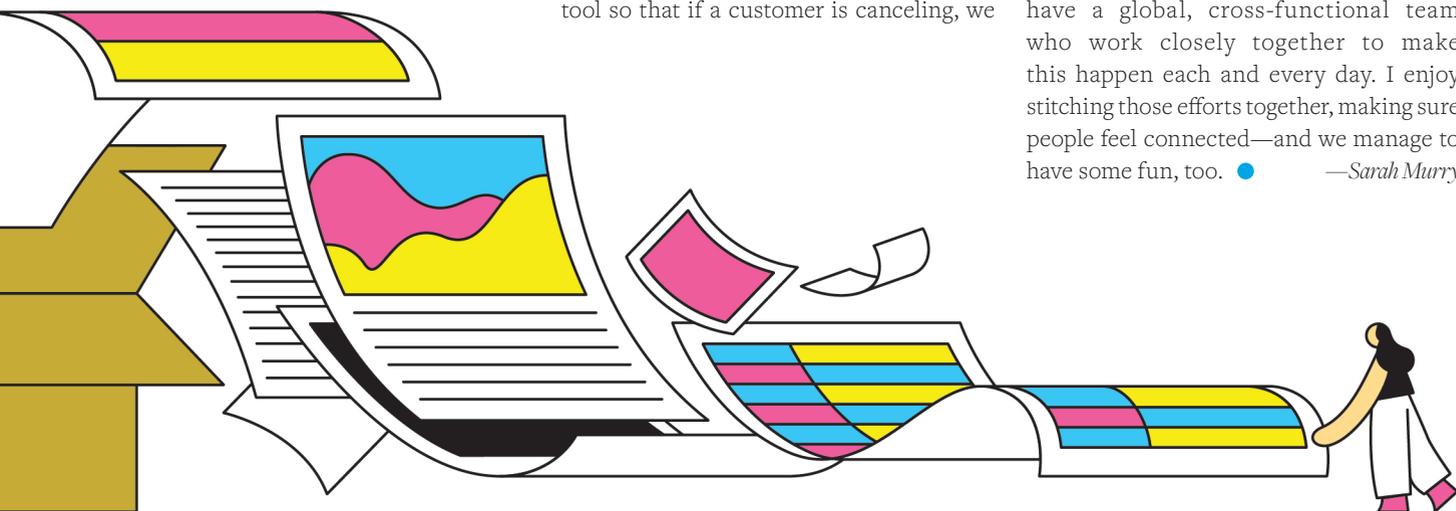
### 6 / How can a service like Instant Ink help small businesses that have fewer resources?

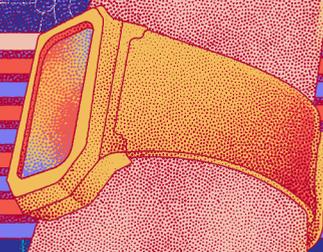
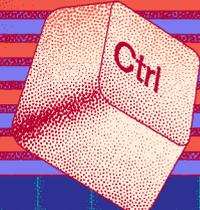
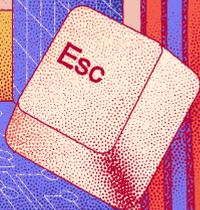
We’re expanding the features of the Instant Ink subscription service to address small-business customers, especially those with newly hybrid workforces. Think of a company that has fewer than 10 printers and isn’t large enough to have a managed IT environment. We believe we’re going to unlock a whole new market opportunity that we haven’t been able to address.

### 7 / What surprises you most about your job?

The concept of Instant Ink is so simple, but the technology and ongoing innovation required to deliver the service are complex. Behind the scenes, we have a global, cross-functional team who work closely together to make this happen each and every day. I enjoy stitching those efforts together, making sure people feel connected—and we manage to have some fun, too. ● —Sarah Murry

ILLUSTRATION BY ROSE WONG





# Welcome to The Metaverse

**Andrew Bolwell**, Chief Disrupter and Global Head of HP Tech Ventures, explains the next evolution of the internet.

illustrations by SATWIKA KRESNA

The buzz over the metaverse is new, but the idea of it is two decades old. In 1992, author Neal Stephenson [coined the term](#) for his virtual world in his novel *Snow Crash*. In the simplest description, the [metaverse](#) is the physical and digital convergence of experiences, services, and identity, enabled by an array of new technologies.

Think of it as the internet's next evolution, where people can work, learn, play, shop, meet, and explore in interconnected communities. Websites become interactive virtual worlds, links are replaced by portals between those worlds, a digital avatar replaces your username, and the keyboard and mouse are replaced by mixed-reality interfaces. Software and hardware will allow us to move seamlessly between physical and digital spaces, augmenting the real world and creating new shared digital experiences.

That vision is now leaving the realm of sci-fi pages and movies and coming closer to reality, thanks to new technologies, changing consumer habits, and the fact that businesses see [massive economic opportunity](#) ahead. Established brands are [staking their claim](#) in cryptocurrency, [gaming](#), and [NFTs](#). Facebook changed its name to Meta last year and announced its intention to be a metaverse company, not a social media company. This digital universe has also captured the growing [attention of venture capital firms](#), with startups (including [OpenSea](#), [Animoca Brands](#), and [Sandbox](#)) attracting millions of dollars in funding.

The rest of us may wonder: Has the metaverse's moment finally come?

We think so, but only if the technology that underpins all of its future activities can replicate (or improve upon) what's in the physical world. That means secure cryptocurrency that will enable us to buy and sell physical and digital items; customized avatars that can express our personalities, job roles, and moods; and interfaces that let us move in and out of digital worlds and interact with others where and when we choose.

## Jump into the metaverse

Imagine your persona in this virtual space is as richly detailed and unique as the "real" you. Your work avatar might wear [designer digital clothes](#), while your gaming avatar might don a custom pair of [NFT-certified Nikes](#). Picture having a wallet filled with cryptocurrency, tied to your real-world money, to invest in [virtual real estate](#), [buy concert tickets](#) to see your favorite band perform, or attend [sporting events](#) and [conferences](#). Going to work might look completely different: [Meetings won't require getting in the car](#) or launching Zoom; instead, you'll put on your VR headset and proceed to your [virtual office](#). In your off-hours, you might visit an NFT [art gallery](#) or dance to your favorite [AI-powered DJ](#) at a digital club.

The metaverse promises to be a digital twin of our physical universe but without physical limitations. It presents endless possibilities, but is the technology ready to deliver them?

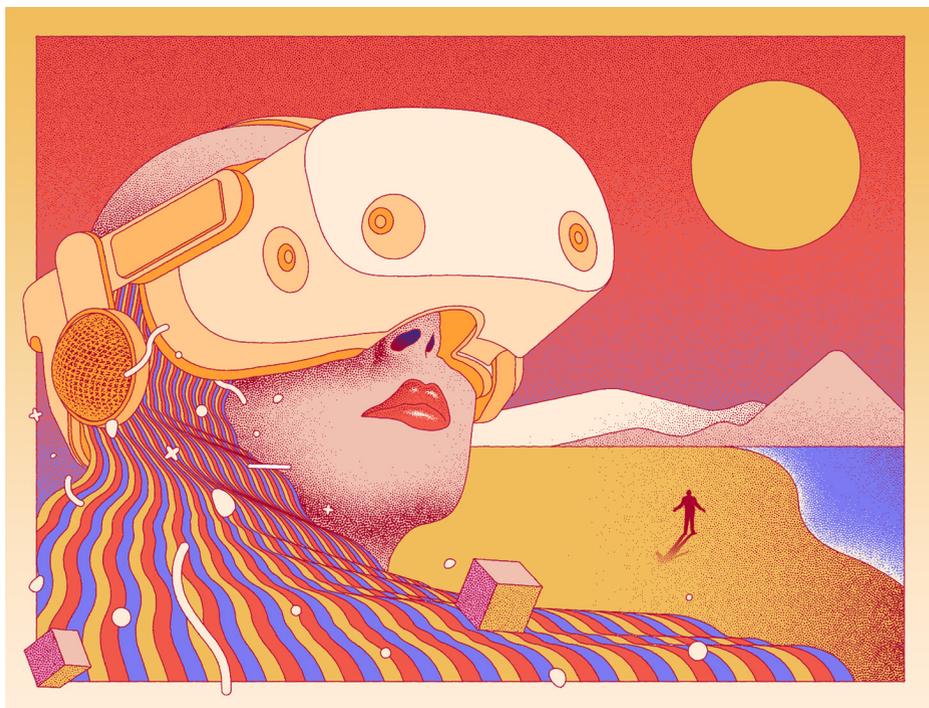
## Building the foundation

While there have been significant technological advances since *Snow Crash*, we are still years away from a truly immersive virtual world. For the metaverse to be fully realized, internet connectivity, compute technology, 3D modeling, virtual financial systems, and other critical building blocks have to get faster, more reliable, and more secure.

If your avatar is to accomplish feats such as speaking and moving naturally in the virtual world while simultaneously purchasing or interacting in the physical world, it will require an incredibly sophisticated technological symphony to happen in real time, and to scale.

Avatars that move, touch, and speak as fluidly as we can require access to the high-bandwidth, low-latency connectivity offered by 5G and even 6G networks with multi-access edge computing. We will need widely available, augmented- and virtual-reality hardware that enables hyperrealistic immersive experiences, and last but not least, a robust, trusted security infrastructure that can handle the demands of a blockchain-based metaverse economy.

VR and AR headsets and devices will be the interfaces and gateways to our metaverse world. AR will overlay virtual



“

Building these robust digital environments requires significant computing power.”

worlds on our physical world, blending characters, environments, objects, and information that can help us find our way in a new city or fix a broken machine on the factory floor. VR devices will allow users to move throughout virtual spaces, play games, and interact directly with others in the metaverse.

Blockchain provides a decentralized and secure way for transactions to occur in the metaverse. It creates the transactional foundation, from proving ownership of an NFT collectible to a virtual real estate deed, enabling smart contracts, decentralized governance, and interoperability between worlds. Cryptocurrencies allow virtual currencies to be converted to fiat currencies, creating a bridge between virtual economies and real-world economies.

#### Where HP can contribute

HP, for its part, is looking ahead to bring its own vision of product excellence to usher the metaverse into being and empower its users.

VR setups like the [HP Reverb G2](#), coupled with gloves and sensors, can offer hyper-realistic immersive experiences, allowing users to interact and transition to various virtual spaces, even “tunnel” from one world to another, and interact with others.

On the AR side, HP recently teamed with Microsoft to use the [HoloLens 2 AR headset](#)

with packaged HP software, to allow HP industrial print engineers to train and troubleshoot industrial printers virtually. HP Tech Ventures portfolio company [Mojo Vision](#) aims to push the envelope further with AR contact lenses.

Building these robust digital environments also requires significant computing power, which can be costly and have a big impact on the environment. [Z by HP](#), coupled with its recent acquisition of [Teradici](#), looks to address this by offering metaverse creators and developers the ability to build a cloud-based digital twin of their workstation, reducing costs and climate impact.

On-demand 2D and 3D printing will allow digital assets to be printed into physical assets and shipped anywhere. At the same time, immersive gaming peripherals such as those from [HyperX](#) will enable new gaming and entertainment experiences in the metaverse. HP also has a runway to build on its industry-leading endpoint and edge security solutions and add new capabilities to extend that leadership into the metaverse.

#### An economic lightning rod

The metaverse promises new revenue streams and business expansion, from hardware and software to social commerce, advertising, events, and a creator economy.

It offers a platform for brands to connect

with customers on a much deeper level, allowing them to go well beyond just producing NFTs to co-create experiences and products in a virtual setting. It’s already happening. For example, the [NBA](#) is offering courtside seats in the metaverse. The [Hyundai Mobility Adventure](#) on Roblox allows users to race, play games, learn about Hyundai’s technologies, and take part in festivals. At the same time, brands can find meaningful ways to give back in both the virtual and physical worlds. American snack brand [Slim Jim launched an NFT last year, with all proceeds going to World Central Kitchen](#), which provides emergency food relief programs.

While there is still a lot of uncertainty around how it will evolve, a mature metaverse should mirror the open, democratic ideals of the internet and provide a single immersive and interoperable platform.

Like the advent of the web, the metaverse will have a broad impact on every aspect of our lives. We are just in the early stages, similar to the dial-up days. Yet with each NFT sale, new virtual world, crypto blockbuster, and 3D breakthrough, Neal Stephenson’s vision of a fully immersive world is growing closer. The metaverse is coming, and fast, with a vibrant and expanding community shaping it. We now just need to open our collective imagination to its possibilities. ●



**GIRL RISING**

This **International Women's Day**,  
Girl Rising and HP Celebrate the Young Leaders  
**Remaking the World.**

**Meet the Future Rising Fellows:** Changemakers  
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Climate Activists  
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Problem Solvers  
Storytellers

**Now accepting applications for  
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### Meta mall

Visit app stores or digital marketplaces in virtual space. Drop into awe-inspiring digital hangouts to see concerts, entertainment, and fashion shows. Be enticed by storefronts and personalized offers. Browse with friends away from crowded physical malls.

### Virtual clothing

The possibilities are truly limitless for new fashions. Think exclusive or even one-of-a-kind digital clothes, shoes, makeup, and accessories. Trends are sparked by virtual fads, and all products are verified using NFTs.

### Digital workers and salespeople

Salespeople [that are created using AI](#) will interact with real-life virtual versions of ourselves. Businesses will fill the metaverse with a digital workforce that humans will converse with.

### Influencer avatars

The digital doppelgängers of stars and social media influencers guide shoppers around stores, encouraging them to try out products that they use or recommend, or are simply branded with their faces.

### Livestreamed shopping assistants

Expect real-life expertise on retail in the virtual world, where human-assistants-as-avatars offer advice on your real-world wardrobe, give out discount coupons, and inform shoppers of the latest sale. They also push personalized content to customers who then purchase a physical outfit. The metaverse knows your measurements, body shape, and preferences.

### Book a vacation

With a virtual travel agency, you can ski the mountain, tour your resort or hotel room before you book, sit in different rows on the plane, and get a preview of what you'll see on a cruise or safari. Then have the avatar agent help you choose destinations and book flights and accommodations.

### Paying for goods

Seamlessly connect your real-life bank account to your digital avatar. Use biometrics to authenticate that it's physically you. Click to make payments using [open banking](#).

### Virtual purchase, physical product

View a piece of digital art on the wall of your virtual home, or test out a digital tennis racket. See what it looks like, buy it online. It turns up on your actual doorstep, ready to hang on your wall or take to the court.



# Transforming Black Maternal Healthcare

These seven entrepreneurs are ensuring Black mothers have safer pregnancies and births, with new platforms that connect them to health professionals and supportive communities.

by **ARNESA A. HOWELL**  
*illustration by AARON MARIN*

**BEFORE HAVING HER FIRST CHILD**, Kimberly Seals Allers did her research. She consulted parenting blogs, scoured mom-focused Listservs, and read reviews and ratings of the hospitals near her home in New York City where her doctor was affiliated. She settled on one where she felt she'd get excellent care, but her experience not only didn't match her expectations, it left her feeling dismissed, disrespected, and disillusioned. She recalls being pressured into a C-section without explanation, nurses giving her newborn formula against her wishes, and having to fight to have her baby with her in the room. While it's not uncommon for many mothers to have experiences like these, Allers was surprised at the disconnect between the reviews she had read and the reality she lived.

"It hadn't dawned on me that people were going to the same place and not being treated the same way," she says. "But many of the people rating the hospitals were middle-class White women. Black women were not there."

---

## LAYO GEORGE /WOLOMI/

FOUNDER & CEO



“The healthcare system isn’t really built to understand our nuances, listen to us, or validate us.”

**AFTER EXPERIENCING** prenatal depression during her pregnancy, Layo George, a registered nurse, designed [Wolomi](#) to connect women of color to experts and one another, with a focus not only on the challenges of pregnancy, but also the thrills.

“Wolomi is a sisterhood navigating through pregnancy and motherhood with the support of midwives, pediatricians, and therapists,” she says. “I wanted to reclaim the joy of a new life.”

As a nurse, George saw very different approaches to maternal care. For example, staff coached new mothers on breastfeeding techniques in one hospital, while in another, formula was the norm. “It felt like pregnancy was just something happening to you instead of you owning the journey,” she says. “I want women to know they have options.”

Wolomi members have access to virtual group coaching, online courses, nurse-led community discussions, expert advice, weekly “pregnancy moments” with guidance and expertise from a midwife, and an online gallery to share personal experiences. George is also launching a new program, the [Wolomi Academy](#), bringing together a virtual group of pregnant mothers of color for conversation and digital classes about childbirth, breastfeeding, and creating a care team.

---

## KIMBERLY SEALS ALLERS /IRTH/

FOUNDER

“The community has been incredibly responsive to this idea that we can save ourselves by sharing our experiences.”

**BEFORE BUILDING IRTH'S** first line of code, Allers spent months asking Black and Brown mothers—in person and in virtual focus groups—about their birthing experiences.

“These stories have always existed, traveling in small circles,” she says. “Irth takes that to a digital platform and a national forum.”

The name Irth comes from the word “birth,” but without the “b” for “bias.” Launched in 2021, the mobile app provides a place for Black women to search for reviews and leave their own, and also detects patterns of racism and bias based on women’s experiences.

“The same microaggressions that happen in the world are happening during the pregnancy and childbirth journey,” says Allers. “The price we pay? An increase in stress levels, which is going to impact birth outcomes.” The Irth team uses data from the app to develop hospital and practice strategies to improve outcomes and care experiences for mothers and their babies.

Since 2019, Allers has raised nearly \$1 million in foundation grants, and in 2021, Irth received \$88,000 as a winner in the “Antiracist Technology in the US” category of the [MIT Solve Global Challenge](#), sponsored by HP and designed to elevate solutions to global challenges from tech-based social entrepreneurs.

“My vision,” says Allers, “is that Irth becomes our ‘Good Housekeeping Seal of Approval,’ a beacon of light for hospitals and providers we can trust.”

Black women in America are three times more likely to die from pregnancy-related complications than White women, a disparity the CDC attributes to factors including underlying chronic conditions, structural racism, and implicit bias. Celebrities like [Beyoncé and Serena Williams](#) have brought attention to the risks of childbirth for Black mothers by sharing their personal stories, and healthcare professionals have recognized the state of Black maternal mortality as a [full-blown crisis](#).

Allers’s ordeal inspired her to create [Irth](#), a mobile app that provides Yelp-like ratings and reviews from Black mothers for physicians, birthing hospitals, pediatricians, and postpartum care. She is part of a wave of Black women entrepreneurs on a mission to improve the birthing experience for their communities. “In technology, too many products have been built for us but without us,” says Allers. “I built a team of people of color, for people of color.”

Founders like Allers face challenges of their own: Despite the fact that Black women are among the [fastest-growing group of entrepreneurs](#), in recent years just 0.27% of venture capital investments have gone to startups led by Black women.

Brittany Davis, general partner with investment fund [Backstage Capital](#), which invests in companies led by underrepresented founders, says the lack of investment is a huge oversight—and opportunity. “If we can solve the challenges facing the most vulnerable in the system, the people being overlooked, it will impact everyone,” she says.

Meet seven Black female tech founders leading the charge to improve pre- and post-natal health for Black women, connecting them to providers, resources, and communities.



## ASHLEE WISDOM & EDDWINA BRIGHT /HEALTH IN HER HUE/

COFOUNDERS, CEO & CPO

**“We’re not advocating for a segregated healthcare system. We’re advocating for quality, culturally sensitive care for Black women.”**

**DURING EDDWINA BRIGHT’S** first childbirth, she remembers feeling ignored and traumatized by her doctor, a White woman who dismissed her questions and didn’t respond to her concerns.

“When I got pregnant the second time, I was very intentional about finding a provider who looked like me—a Black woman—so that I could feel seen, heard, taken seriously, and ultimately feel safe,” says Bright, shown above right.

In 2018, Bright joined her friend Ashlee Wisdom, above left, as a cofounder of [Health in Her HUE](#). Together, they’ve built a digital platform that connects Black women to culturally sensitive doctors, nurses, doulas, midwives, and therapists. The platform houses a health content library with articles and videos, a community forum for sharing personal stories, and a free 1,000-member provider directory with user reviews.

After the mobile app launched in June 2020—with 34,000 logins in two weeks—the company secured \$1 million in [pre-seed funding](#) in 2021. Wisdom and Bright are using what they learn from members to add to—and improve—the platform, with plans to launch a new website featuring curricula for providers. “Hearing from our members helps us be really thoughtful about how we develop products or programs to support them,” Wisdom says.



**“The racism Black women experience during the course of their lives takes a toll on their physical health over time, making pregnancy riskier.”**  
—ASHLEE WISDOM, CEO, HEALTH IN HER HUE



## MELISSA HANNA /MAHMEE/

COFOUNDER & CEO

**“People told me it’s charity work to help Black mothers. I knew they were wrong.”**

**MELISSA HANNA REMEMBERS** dinner conversations with her mother, Linda, a registered nurse and lactation specialist, about her frustration at not having the technology support to collaborate effectively with other providers who understand the needs of Black mothers. The mother-daughter team created [Mahmee](#) to bridge the gap.

The web-based app, launched in 2016 with funding from Backstage Capital, among other investors, now includes 1,800 participating providers in 45 states—ob-gyns, pediatricians, lactation consul-

tants, nutritionists, and more—who use the app to collaborate on care for Black mothers.

The HIPAA-compliant platform breaks down silos between providers, showing them a unique view of the mother’s and baby’s medical records together. “A unified healthcare record showing your maternity journey in one place eliminates someone making assumptions or providing less than appropriate care,” Hanna says.

Mahmee also connects mothers to breastfeeding and mental health support, doula and midwifery care, and nutritional and wellness support.

In 2019, investors including Serena Williams infused [\\$3 million](#) into the startup, and in 2020, the company—leveraging the expertise of cofounder Sunny Walia—started partnering with healthcare systems and insurance companies such as LA’s Cedars-Sinai Medical Center, the Los Angeles County Department of Health Services, and Blue Shield of California.

Now the Mahmee team is expanding, building a mobile app, and adding more maternity services.

“Taking care of all families, and specifically Black families that have faced some of the worst odds and experiences of healthcare in the United States, is meaningful work,” Hanna says.

PHOTOGRAPHS BY DAVID S. COY II (WISDOM & BRIGHT); JENNA SCHOENEFFELD (HANNA); NICOLE MAYHORN (HARDIGAN); JAY CARROLL (CHIDI)

## MAYA HARDIGAN /MAE/

FOUNDER & CEO

“When we talk about cultural competency in care, it’s really about a commitment to whole-person care and the entirety of their culture.”

**MAYA HARDIGAN**, a mother of three with 15 years of experience working in healthcare product innovation, says that the lack of cultural competency in maternal care—the ability to treat and respond to patients across cultural differences effectively—shows up acutely in how doctors address Black women’s pain and other symptoms.

“When we express concerns, we’re not responded to in the same way as others,” she says.

She launched [Mae](#) in September 2021 with a [\\$1.3 million round of pre-seed funding](#), to help Black mothers take control of their birth experience. The digital platform features pregnancy tracking tools, real-time physical and emotional risk escalation support, culturally resonant resources, and connections to a network of community-based birthing experts.



Mae’s birth plan tool lets mothers tailor their goals and create a written road map that can guide them and their providers through the experience they want to have. The platform also has personalized, culturally specific care tips—encouraging women to book a gestational diabetes screening, for example, recognizing that Black women are more likely to experience complications from the disease.

“Disparities not only put us at risk, but can also lead to long-standing health consequences for our children,” says Hardigan. “So many of these complications are avoidable. They also drive significant costs into the healthcare system.”

## ERICA CHIDI /LOOM/

COFOUNDER & CEO

“We can’t make decisions about caring for Black women without having Black women at the table.”

**WHEN ERICA CHIDI**, a trained doula, was first developing the idea for [Loom](#), a well-being educational platform for women’s reproductive health, she recognized the need to focus on Black women and the disproportionate challenges they face in getting quality care.

“There’s a quote that’s often said: ‘We’re not free until we’re all free,’” she notes. “Care disparity creates a negative impact for everyone.”

Launched in 2017 as a physical space in Los Angeles, Loom transitioned to a digital platform in 2020 amid the pandemic. The platform offers educational resources and support related to pregnancy and postpartum care, including on-demand videos, audio conversations, guides, and live community support sessions, or Gather Groups, facilitated by Loom experts.

Loom also features content designed specifically for Black women, including resources like [“Protecting Your Birth: A Guide for Black Mothers”](#) and [“Antiracist Prenatal and Postnatal Care Preferences,”](#) which expectant mothers can proactively share with their care providers. ●

“With tools like these, mothers feel a sense of reduced anxiety, are more confident and prepared, and are better able to speak with their care providers.” —ERICA CHIDI, CEO, LOOM





# Made to Measure

Arize is changing the future of custom orthotics with 3D printing technology.

**ORTHOTICS ARE NOT** a modern invention—as early as 1200 BCE, devices to increase mobility were crafted from materials like wood and leather. Fast-forward a few millennia and the use of plastics, rubber, and metal alloys allowed orthotics to become lighter, more durable, and more comfortable.

While digital technologies like glass-plate scanning and computerized milling have been around for nearly 30 years, they've also left podiatry clinics with elaborate processes to tackle. Today a game-changing, more streamlined system is at hand with HP's Arize Orthotic Solution and HP 3D printing technology.

Podiatrists can prescribe orthoses through the touch of a button thanks to a proprietary algorithm and an easy-to-use clinical application. In less than two minutes, clinicians are able to capture ultra-precise digital scans with a 3D scanner. With this intuitive interface, highly accurate 3D scanning solution, and 3D visualization tools, podiatrists can preview their designs before submission and demonstrate the benefits to their patients. The clinician is able to prescribe custom orthoses with familiar orthotic styles and industry standard modifications, as well as request specialized modifications only possible with 3D printing. Plus, Arize offers a flat-rate pricing model.

"We're hearing more about 3D printing and the profound impact it could have on our industry," says Jason Riffle, president of W.T. Hinnant Orthotics and Prosthetics in North Carolina. "We looked for an easy way to incorporate it into our workflow without making a big, risky investment and without a huge learning curve. Arize did just that." ● —Sarah Fones

Available at [myarize.com](http://myarize.com).

# The Garage by



## NEWS

### At CES 2022, innovations to improve life in the new normal

What lies ahead for 2022 and beyond in the way we work, live, and play? These five tech trends from CES provide some surprising clues.

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## INNOVATION

### Can VR change people's behavior?

Stanford scientists are finding out

The researchers at the Virtual Human Interaction Lab are using the HP Omnicept and other cutting-edge virtual reality tech to better understand how people think and act.

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## THE WAY WE WORK NOW

Watch our film series



## IMPACT

### Meet the teacher empowering visually impaired students with next-gen tech

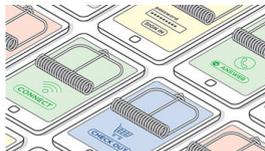
Special equipment and tech provided by HP is helping make education accessible at this historic North Carolina school for the blind.

[Read More](#)



## BUSINESS

### You can't spell hybrid without HR



## BUSINESS

### 4 ways to keep hybrid workers and critical systems secure in 2022



## TECH@Work

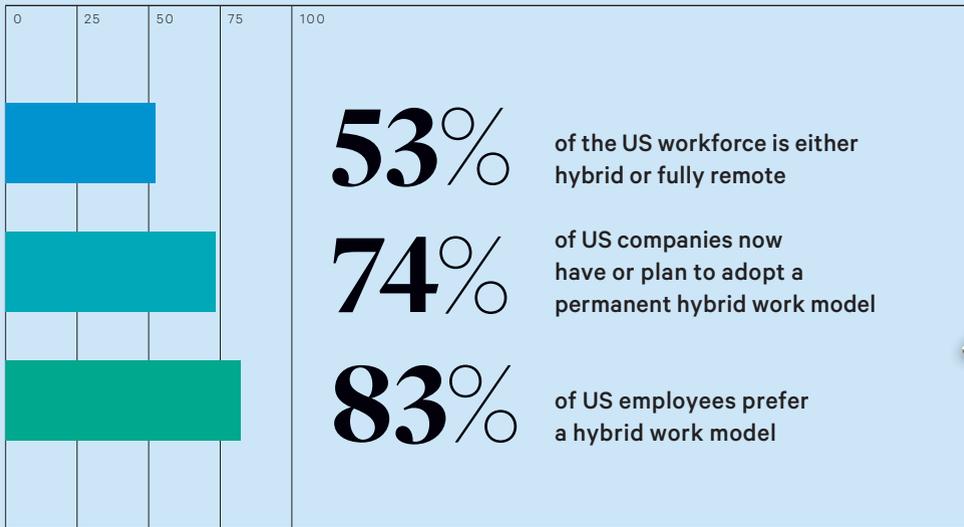
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# The Garage by

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# Highs and Lows of the **HYBRID** Work World



NUMBER

# 1

technology concern is cybersecurity; number two is cloud migration

# 140 billion

Estimated reduction in commuter miles by 2025, assuming 36.2 million Americans are working remotely



# 1 OUT OF 2

C-suite executives is now more likely to invest in artificial intelligence

C-suite executives believes they have to provide upskilling opportunities for employees



SOURCES: GARTNER (REMOTE WORKFORCE); ZIPPJA (COMPANIES/HYBRID MODELS; HYBRID PREFERENCE); FLEXJOBS (COMMUTER MILES); NORTHEASTERN UNIVERSITY, CENTER FOR THE FUTURE OF HIGHER EDUCATION AND TALENT STRATEGY (C-SUITE EXECS); ENTERPRISE TECHNOLOGY RESEARCH (CYBERSECURITY CONCERNS)

PHOTOGRAPHS BY (CLOCKWISE FROM LEFT): HP (ELITE BOOK LAPTOP); UNSPLASH/ANDREW TEOH (EXIT SIGN); STOCKS/ELOISA RAMOS (OFFICE)



# 1 in 4

American workers is currently looking to change jobs

# 54%

of employees would consider leaving their job for one with more flexibility

# 12%

Reduction in turnover when employees are allowed to complete at least some work remotely

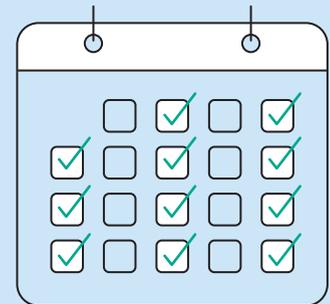
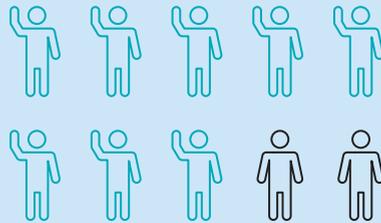
# 100-200 sq ft

Average size of a home office in the United States



# 8 OUT OF 10

workers cited an improved work/life balance as the top reason they prefer flexible work



You're on mute...

Ugh sorry!

# 16%

of hybrid/remote workers say difficulties with collaboration is their No. 1 challenge

# 62%

of CEOs believe a strong company culture can thrive with employees on-site two to four days a week

# 1 OUT OF 4

professional jobs will be remote by the end of 2022



SOURCES: OWL LABS (JOB CHANGE); QUANTUM WORKPLACE (FLEXIBILITY); ZIPPYA (TURNOVER); HOUSTON CHRONICLE (HOME OFFICE SIZE); FLEXJOBS (WORK/LIFE BALANCE); BUFFER (COLLABORATION); LADDERS (2022 REMOTE JOBS); ENTERPRISERS PROJECT (COMPANY CULTURE)

# GOING

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# TO

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The hybrid office is here to stay. Innovative companies can optimize this seismic shift and build a productive, creative, future-proofed workforce.

BY HEIDI MITCHELL

ILLUSTRATIONS BY PETER ARKLE

# WORK

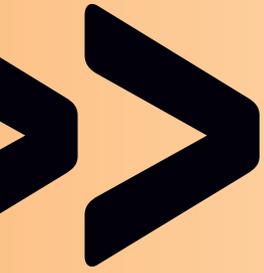
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Think back on the past two years:  
A sudden lockdown. A never-ending  
series of pivots. Plans to return to  
the office. Plans scrapped. A brief

FORWARD

An illustration of a man with brown hair, wearing a light blue button-down shirt, blue jeans, and white sneakers. He is carrying a brown briefcase in his right hand and has his left hand on his chest. He is standing next to a small orange and white cat. The illustration is positioned to the right of the word 'FORWARD', appearing to be part of the letter 'D'.

reprieve with the introduction of  
vaccines—followed by new variants.  
And at last, a vision of the future  
that accepts this virus as a fixture  
of our lives, one that requires new  
thinking, novel approaches, and  
creative strategies. Because,  
let's face it, hybrid isn't temporary.  
This paradigm shift is permanent.  
**But what about the office?**



# The office was once the place

that gave us much of our professional identity and a sense of belonging to something larger. And while productivity has gone way up in the past two years ([58% of executives report improvements in individual productivity across their organizations](#)), working from home works great for some people, and not so great for others. The pitfalls can be countless: There is the loss of professional interaction, new employees who aren't learning the nitty-gritty of how to complete tasks in an office environment, the difficulty of making work friends, a lack of flexibility from bosses and managers, and the list goes on. Just look to the Great Resignation for how challenging hybrid work can be. [From the start of the pandemic through November 2021, more than 3.9 million workers quit their jobs each month on average](#), far above typical levels. That mass exodus is a clear sign that people are seeking a workplace that fits their needs, schedules, and values.

For companies that don't get hybrid "right," the stakes are high. They risk hemorrhaging talent amid this moment of low unemployment and high job demand. They also risk not attracting the type of future hires who will help their firms grow.

But this is not a moment for panic; it's a time to reimagine the workplace, from physical buildings to ongoing learning to the interactions that help workers thrive—all enabled by technology. As organizations look to formalize a hybrid model that works best for them, the most successful are operating much like entrepreneurs: testing out ideas and spaces, redesigning the hiring process, and listening to employees' concerns and needs.





# WHY THE OFFICE



**RECENT STUDIES HAVE SHOWN** that [61% of employees want to work from home three days a week](#). But still, many are itching to see their colleagues in real life. Research has also shown that [87% of workers feel that the office is critically important for building a sense of community and collaboration](#). “People miss those informal chats with coworkers,” says Tammy Allen, a professor of industrial-organizational psychology at the University of South Florida. “They want to come to the office not just to get a break from the kids, but to have those human connections.” As Molly Fischer wrote in *New York* magazine, “[I miss ducking into empty conference rooms to debrief. I miss being told to shut the door.](#)”

But not everyone is going to get what they want all the time. An employee who has a large house, a home office, and doesn't lament their hour-and-a-half commute might feel differently about what they need from the office than someone who is working from their bed or living room sofa in a small space or has multiple roommates or children. A Gen Z employee who started their job remotely might not want to go into the office ever because they enjoy the flexibility, while a mid-career employee might be missing the ability to get work done in a focused environment free of leaf

blowers and Amazon deliveries, as well as their office culture and work friends. “We make a lot of assumptions about what ‘home’ is for people,” says Lisa Finkelstein, a professor of social and industrial organizational psychology at Northern Illinois University, “but there are so many variables.”

The key is to optimize the office so it nurtures, engages, and is fluid and flexible. Successful hybrid offices need to create a culture where remote and in-person workers don't operate within a two-tier system, where those who get in-person time are first-class citizens while those working from home are considered to be literally “phoning it in.”

To get to that sweet spot of productivity and a sense of belonging, leaders need to arrange their hybrid workforce so that the office doesn't mimic the work-from-home experience. “We want people to feel like a commute is worthwhile, that it provides enjoyable connections with coworkers,” Allen says.

Thought has to go into why leaders are bringing people into the office, what they hope will happen during those in-person days, and what the markers of success should be. Employees are increasingly saying that the office is the preferred space for all sorts of work and tasks, including collaboration *and deep thinking*. Before teams come in, there should be a plan for what activities they are doing together.

“You can't just say, hey, this came up, let's go to the conference room,” says Robin S. Rosenberg, CEO and founder of [Live in Their World](#), a program to upskill employees to address issues of bias, respect, and other soft skills. “People should come to the office to be acculturated, particularly new hires; for team deepening; for collaborative work; or just to have chance encounters.”

Loretta Li-Sevilla, Head of Future of Work, Collaboration, and Business Incubation at HP, explains that the office's key role will be as a place that builds a sense of community and drives collaboration.

That means creating spaces for quiet, individual work and others for collaboration; making sure that hot desks are bookable and confirmed by IT to be in optimal working order; offering activities like cooking classes or yoga that serve to foster fellowship; and even possibly providing childcare on-site or expanding commuter credits.

“You want to give people a reason to come into the office,” Li-Sevilla says.

# EMPLOYEE- FIRST MANAGING & HIRING



**TO BUILD THE BEST** workplace experience, everything—from creating camaraderie and energy to driving innovation and retaining talent—must be centered around the employee. Experts agree that

hybrid work has to be formalized, with rules for email response times, Slack-use cases, Zoom cameras, hours on the clock, and every other minor detail we never thought about, so there is no room for ambiguity.

Smart hiring managers can build unique workflows around specific roles. Technology enables companies to offer contextual and personalized work experiences so that employees feel nurtured and heard and have schedules that accommodate their needs. “Someone who is a big power user, like an engineer, has different needs than a support person who may be interacting with clients all day, versus a knowledge worker,” Li-Sevilla explains. “Everybody’s looking for the best place to work. And if they find companies that aren’t flexible, they’re going to go and find another company.”

Approaching hybrid work from an employee-centric perspective will ensure that everyone feels a sense of professional identity both at home and in the office and will result in talent that self-selects into companies that align with their values and career goals.

Rosenberg, who leads workshops on respect in the workplace, says everyone needs to be open—and trained—to think differently about work, most especially leaders. Engaging in regular one-on-one meetings with direct reports is critical even if you have nothing specific to discuss, to learn about their career goals, connect them with a mentor, or just to listen.

“People want to know that their bosses are paying attention to what they are doing well and that they’re paying attention to career development,” says Northern Illinois University’s Finkelstein. “Leaders should devote the same amount of time to people whether they are only online or in person so that they don’t start to feel that they are hitting ‘the [Zoom Ceiling](#)’”—when home workers are being passed up because they



## NEW SPACES

Employees will interact in areas like this roof terrace in an office building in East Austin, Texas. A turnkey video conference space from ROOM, HP, and Zoom, lower right.



aren’t being recognized for their work. Such a scenario is more likely to affect women, people of color, and people with disabilities.

Remote workers’ fears aren’t unfounded: [One survey showed that they are promoted](#) at a rate roughly half that of their in-office counterparts.

“The successful manager of the past was all about making sure that you’re overseeing the output of the team,” Li-Sevilla says. “Now, the best managers are empathetic and have the social skills and emotional intelligence to be able to network.”



# THE NEW WORKPLACE SPACE

TMRW:SE

PHOTOGRAPHS BY © GENSLER AND DWG (ABOVE); ROOM (RIGHT)



**WHEN EVERYONE MOVES** forward to work, they should expect a completely new breed of office. Architect Todd Heiser, co-managing director of the Chicago office of Gensler, a global architecture and design firm, says we should not be looking to the old office for inspiration.

“Let’s put the ‘place’ back in ‘workplace,’” he says. Talent, he argues, wants a workplace that provides a platform to thrive, putting flexibility, connectivity, and equity at the forefront.

“Thoughtful spaces plus smart technology should amplify the benefits of being in a room together. If we model the workplace on places of learning,

we’ll hit it out of the park,” he says. That means thinking about the office as having “amenities” that aren’t consumable but that foster growth, such as spaces that act like college quads, yoga studios, test kitchens, and artist-in-residence rooms.

That means no longer optimizing square feet but optimizing flexibility. “We have these ‘jump

# The New Work Week

DELETE :	INSERT :
<p>9 to 5</p> 	<p>Flexible work schedule</p>
<p>The 90-minute commute</p>	<p>Rolling out of bed to the home office</p> 
<p>Lunch at your desk</p> 	<p>Office lunch "speed dating"</p>
<p>Staying on mute</p> 	<p>Facilitated socializing</p> 
<p>Filing tickets with IT department</p>	<p>Mobile IT teams</p>
<p>Kitchen counter as makeshift desk</p> 	<p>The third space</p>
<p>Racing to pick up kids</p> 	<p>On-campus childcare</p> 
<p>Company off-sites</p>	<p>The office as off-site</p>



**MEET AND GREET**  
Spaces designed to encourage virtual and in-person collaboration, original art (here, a mural by Mosher and Sentrock), and specified outdoor areas are redefining office life.





spaces' in our Palo Alto headquarters that might be used for informal meetings but may be located in social areas, the cafeteria, or even outside on the patio," notes Li-Sevilla. "We roll in mobile carts, and our technology binds everyone—both in the office and at home—all together."

HP recently announced a [collaboration with ROOM](#) for a prefabricated office space that is purpose-built for hybrid workplaces and outfitted with an [HP Collaboration All-in-One PC](#) with built-in webcam. It's pre-installed with Zoom Rooms software, a sit/stand desk, a whiteboard, lighting

for videoconferencing, and walls made from recycled polyethylene terephthalate engineered to reduce outside noise. But that same room could also be a place for silent thinking or even meditation.

Other design features that can accelerate serendipity, says Gensler's Heiser, are open stairwells, lobbies that contain multiple spaces like a café or lounge, on-site public gardens, and terraces or roof decks. "Anything that spurs spontaneous contact will lead to some great conversations," he says. Conversation can be engineered, notes Rosenberg, through "forced serendipity" like professional "speed dating" at lunch.

Increasingly, the smartest companies are adopting entrepreneurial practices when reconsidering the office. "Our most astute clients are thinking about the next one to five years as an amazing opportunity to test and

experiment," Heiser says. Now that we know that no one knows what the future is going to look like, he says, "maybe we don't aim for the solution but we instead use this as a time to prototype."

THIS PAGE, PHOTOGRAPHS BY © GARRETT ROWLAND, DESIGN BY GENSLER (ABOVE); © ROBERT DEITCHLER (RIGHT). OPPOSITE: PHOTOGRAPH BY © TOM ROSSITER; DESIGN BY GENSLER. LANDSCAPE BY HOERR SCHAUDT



## Tech at the Heart of Hybrid

Even before the current shift in how and where we work, HP created tools and technology for all workers, whether they are mobile, remote, or in the office. For 2022, new features such as AI-adjusted audio, smart cameras, bigger displays, and future-proofed designs mean these products make it easy to move seamlessly between remote and hybrid work.

### **HP Presence Audio Video Bar**

The Audio Video Bar includes a 36-inch camera with 5X zoom and four unidirectional mics with a pickup range of nearly 20 feet, part of the new HP Presence Meeting Space Solutions, a suite of conferencing products and services that takes collaboration to new heights with AI-adjusted audio and cinema-quality video. HP Presence is the world's first conferencing solution that contains ocean-bound plastic.

### **HP Z2 Mini G9**

The world's most powerful mini workstation measures just 8.3 x 2.7 x 8.6 inches. Inside that small space you'll find next-gen Intel Core processors, including K-Series, DDR5 RAM, PCIe Gen4 SSD storage, and low-profile NVIDIA RTX professional graphics. It's a technology solution ideal for architects, graphic designers, and anyone involved in 2D and 3D workflows.

### **HP Elite Dragonfly G3**

The new Elite Dragonfly G3 is the world's lightest and most powerful premium notebook, and it will even help you look good, too. The G3 includes AI features like an "appearance filter" to tweak your video feed and reduce noise. It has 12th-generation Intel processors that support the vPro platform.

### **HP ENVY Inspire 7955e**

The new HP ENVY Inspire 7955e is designed with home users in mind. A quiet mode assures that others sharing a home office won't be disturbed, and it is compatible with Chromebooks, especially helpful given their popularity with schools and educators. HP+ is included, providing six months of Instant Ink and an extra year of warranty.

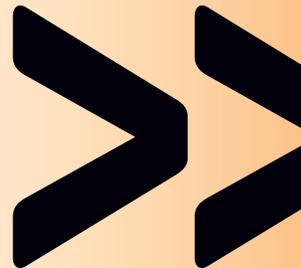
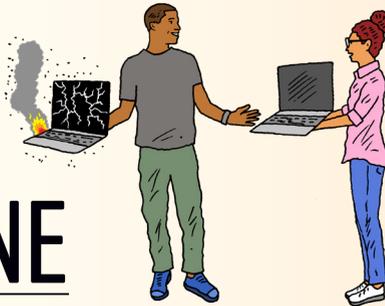
### **HP ENVY Desktop PC**

HP ENVY has long been a popular multipurpose favorite, suited to everything from emails and streaming to serious video editing and design tasks. The updated model for 2022 is future-proofed, taking a cue from HP's OMEN PCs and laptops that make it easy to upgrade memory, storage, and graphics. It comes with the HP Palette digital workspace, which includes Duet for HP and QuickDrop.

### **HP Z40c G3 Curved UHD Display**

HP's series of Z monitors are known for their craftsmanship and carefully calibrated color, ideal for everything from design tasks to conferencing. The new WUHD display is bigger than the earlier monitors in the series, with a 40-inch diagonal screen and 5120 x 2160 resolution. —John Newton

# TECH AS THE BACKBONE



**BUILDING THE ULTIMATE** hybrid workspaces where people can connect, grow, and carve out a career requires hardware and software to pull all the pieces together.

“Technology plays a key role, especially around collaboration, because it’s important to enable anybody, no matter where they’re working, to feel like their well-being is a priority for their employer,” says Li-Sevilla. She notes that more companies are likely to adopt agile frameworks where team structures are based on projects, rather than on more traditional organizational structures. This will require upskilled leaders who are attuned to individual needs and drivers and can clearly communicate expectations—from transition time between back-to-back meetings to whether cameras are on or off during meetings.

With most employees owning several devices, companies need to consider 24-hour IT departments that can quick-fix in real time, video-enabled rooms optimized for hybrid teams, portals for workroom bookings, as-a-service models, even deployed technicians to tweak home offices.

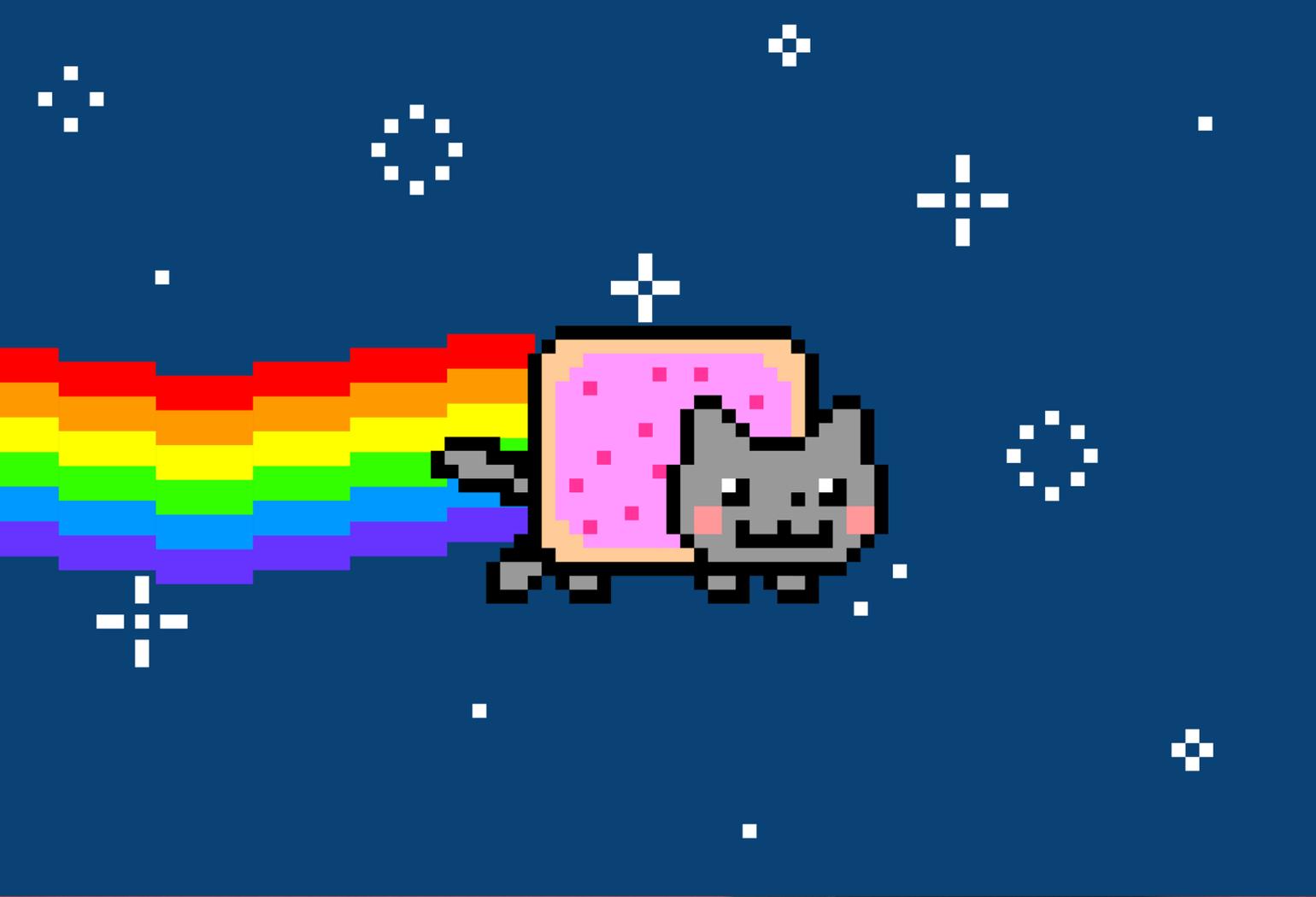
High-quality audio and video are also now critical to get workers in the same virtual space, whether for social or professional meetups.

[HP Presence Meeting Space Solutions](#) are a suite of conferencing products and services for everything from a small huddle to a large meeting room, including an audio/video bar and a smart 4K camera with an HP Auto Framer to bring only meeting attendees into view as well as speaker tracking that follows the speakers in the room. HP Presence technology also enhances PCs and displays, recognizing that remote workers want to look and sound as good as those who are in person. Tools like these allow home workers to be as engaged in a meeting as someone at the office.

As we move forward to a permanent hybrid workforce, companies should listen to employees and provide what they need to succeed, be it technology, a safe space, soft skills, or even some fun.

“By asking what workers need, an organization is sending a signal that they care, that they want them to stay,” says Finkelstein. “That makes all the difference.”

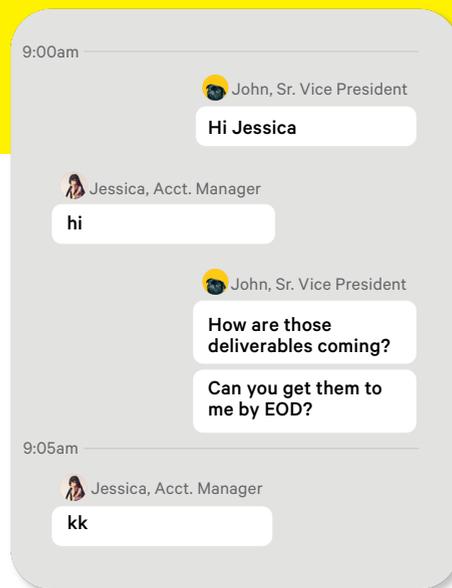




# Are We Speaking the Same Digital Language?

Figuring out the etiquette for sending emails, GIFs, and emojis can be a minefield.

by STEPHANIE WALDEN  
illustration by  
GUILLEM CASASUS



Does this type of exchange at work look familiar to you? Perhaps something you'd send or receive on Slack or Teams instead of email? Does it feel too brief to you? And what about the double *ks*? Too informal?

If you feel ambivalent about those questions, you're not alone. Stephen Connolly, a

writer at [Interact Software](#), a company that provides intranet products for enterprises, was recently chatting with a younger colleague about how 20-somethings communicate. Connolly, 41, left the conversation a little bewildered. First off, his Gen Z coworker had explained, his use of [email](#) is *aggressively* formal.

This was news to Connolly.

So is his form of "okay" in his communications. "Apparently, there are multiple ways to write 'okay,' from uppercase ('OK') to lowercase ('kk' or 'k') to lowercase and punctuated ('ok.),' he says. If you get a text from a Gen Zer that uses that latter form, with a [period](#), you're in trouble. But "kk" is much more [congenial](#) and warm.

Connolly's experience is just one example of how having a digital conversation can be an exercise in code breaking. Our reliance on an ever-evolving rotation of platforms combined with differing intergenerational communication styles poses a critical question: How do we learn to speak the same digital language? →

### Four generations, one Slack channel

Thanks to a confluence of factors—the explosion of social platforms like [TikTok](#) and others during the pandemic, a near-overnight shift to [remote work](#), and the entry of [Gen Z into the workforce](#)—the Venn diagram overlap of internet-speak and workplace banter has expanded in recent years. With four generations now working together—including Gen Z and millennial digital natives who are accustomed to getting their point across in online realms—opportunities for communication misfires abound.

Teams that once relied on in-person meetings and desk drop-bys have largely transitioned to [digital channels](#) like [Slack](#) and [Microsoft Teams](#). With a lack of face-to-face meetings, eye contact, and body language, what we type has to do a lot more heavy lifting when it comes to communicating our attitudes, subtext, and office mores. Like that period.

“The pandemic has pushed the evolution of workplace communications into an accelerated state because companies are not only transforming, they’re also transforming how they work,” says Allison Hemming, CEO of talent agency [The Hired Guns](#). Data backs this up: In a recent [survey](#), Slack found that more than half of IT decision makers said they think email will be replaced as their organization’s primary communications tool by 2024.

### A confusing set of unwritten rules

It seems each communication platform has its own set of best practices—and faux pas. At work, lost-in-translation snafus are high stakes. Something as seemingly innocuous as a misplaced emoji in an email might result in a miffed client or a meeting with HR.

That meme of a sad-eyed puppy in response to a meeting running late, which may be perfectly appropriate on a team Slack channel where there’s a close-knit vibe, might not be as well received by a client via email. “These new channels can create a new type of friction,” says Hemming.

And should you be using emojis in an email, anyway? The jury is divided. For every article that says [yes](#), there’s one that [disagrees](#) and yet another that opines, “[Only in three specific cases](#).” (The least objectionable emoji, according to [one study](#), is the “thumbs-up.”)

In her book [Digital Body Language: How to Build Trust and Connection No Matter the Distance](#), author and communications expert [Erica Dhawan](#) writes, “Our word choices, response times, video-meeting styles, email

sign-offs, and even our email signatures create impressions that can either enhance or wreck our closest relationships in the workplace.”

### As the medium evolves, so does the message

Seemingly gone are the days of watercooler whispers and passive-aggressive notes on the office fridge. The remote or hybrid office of today is a melting pot of GIFs, emojis, and other forms of digital shorthand. Some hardware is adapting to these shifting trends—a new [HP Desktop All-in-One](#) features a keyboard that lets users access the emoji keyboard at the touch of a button.

In many ways, communication shifts have led to new opportunities for employees to show off their personalities and creativity, says [Cynthia Gordon](#), a Georgetown University associate professor who studies digital dis-

course. “We all know that coworker who seems to have the perfect GIF for every conversation,” she says.

Sometimes, having the time to think through a reply—or search for that perfect meme—allows someone who may be shy in person to blossom from behind the screen. But at the same time, navigating the nuances of different digital

platforms can be perilous. Unlike nonverbal cues and facial expressions, internet acronyms and emojis aren’t intuitive. The human brain has not spent millennia learning how to automatically interpret these signals.

That means there’s a lot of room for ambiguity, explains Gordon. “You might use a smiley face to say, ‘I’m being friendly,’ or ‘This is a soft request.’ But it can be interpreted as having a negative motivation,” she says. Consider the message: “Can you get me that draft by 3 p.m.? :)” The sender may intend the emoticon as polite, but the recipient may read passive-aggressiveness.

And it’s not just the language people use, but also patterns of participation in a conversation that make an impression—like tapping a [“reacj”](#) in response to something someone posts on Slack.

“We’ve realized the limits of text-based communication, and so we have created other opportunities. We now have things like voice memos and emojis and ‘likes,’” says Gordon. “These mechanisms are important—they show we want to be connected, and that we need ways to convey the tone of our message.”

### Perceptions and power dynamics

Tone and style in digital communications become extra fraught when factors like racial or gender dynamics and corporate hierarchy are part of the equation. For

“With four generations now working together—including Gen Z and millennial digital natives who are accustomed to getting their point across in online realms—opportunities for communication misfires abound.”

instance, [anecdotal evidence](#) suggests that women, [particularly Black women](#), are often perceived as “unfriendly” if they don’t use exclamation points. (But if they use too many, it’s also a problem.) Gordon, who is White, admits that she struggles with these considerations herself. “When I send emails, I sometimes go back and take out an exclamation point or two...I try to take it down a notch,” she says.

She notes, too, that [punctuation](#), emojis, and tone are often entangled with power dynamics. “The use of these things indicates something about your relationship with the other person,” she says. Emails from students, for instance, tend to display a lot of deference (“Dear Professor”) and [hedging language](#) (softeners like “should,” “would,” or “might”).

Meanwhile Black employees and people from other underrepresented communities may find that [common colloquialisms are misunderstood or viewed as unprofessional by colleagues](#) who aren’t familiar with them. This can lead to [code switching](#), or changing communication styles to blend in with perceived norms. Constantly analyzing if a message will be taken “the right way” can be time-consuming and emotionally draining.

### The onus is on companies and leaders

For the sake of clarity, sometimes it’s worth putting these unwritten rules in, well, writing.

“In the ‘real world,’ we often don’t have to [explicitly state] the rules,” says Gordon. “But the truth is, with social media, Slack, and email, sometimes meta-communicating—communicating about communicating—is necessary.” What this looks like, from outlining best practices in an employee handbook to pinning guidelines to the top of a Slack channel, varies from company to company.

That said, a company-wide communication policy often softens or evolves when it comes down to the team level or one-on-one interactions. In these cases, team leaders may set the tone. “Many people who are low-ranking in an office might err on the side of formality, and follow the lead their [superior] sets,” says Gordon.

In *Digital Body Language*, Dhawan suggests that in professional communications, people should pause—frequently—and ponder the possible ways their phrasing, or even use of a particular punctuation mark, might be misconstrued.

Employee training for digital body language can help break down silos and build trust, writes Dhawan. “[That], in turn, will lead to enormous efficiencies, as people will spend less time wondering about that period or (lack of) exclamation marks.” Flexibility, adaptability, and a willingness to engage in continuous learning are key.

After all, today it may be Slack and Zoom, but tomorrow, we may be “kk-ing” in the [metaverse](#). ●

# Work-Safe “Reacjis”



“I got it.”



“Sorry I missed that.”



“This is the best.”



“I’ve seen this and I’ll work on it.”



“Thank you so much.”



“Exactly!”



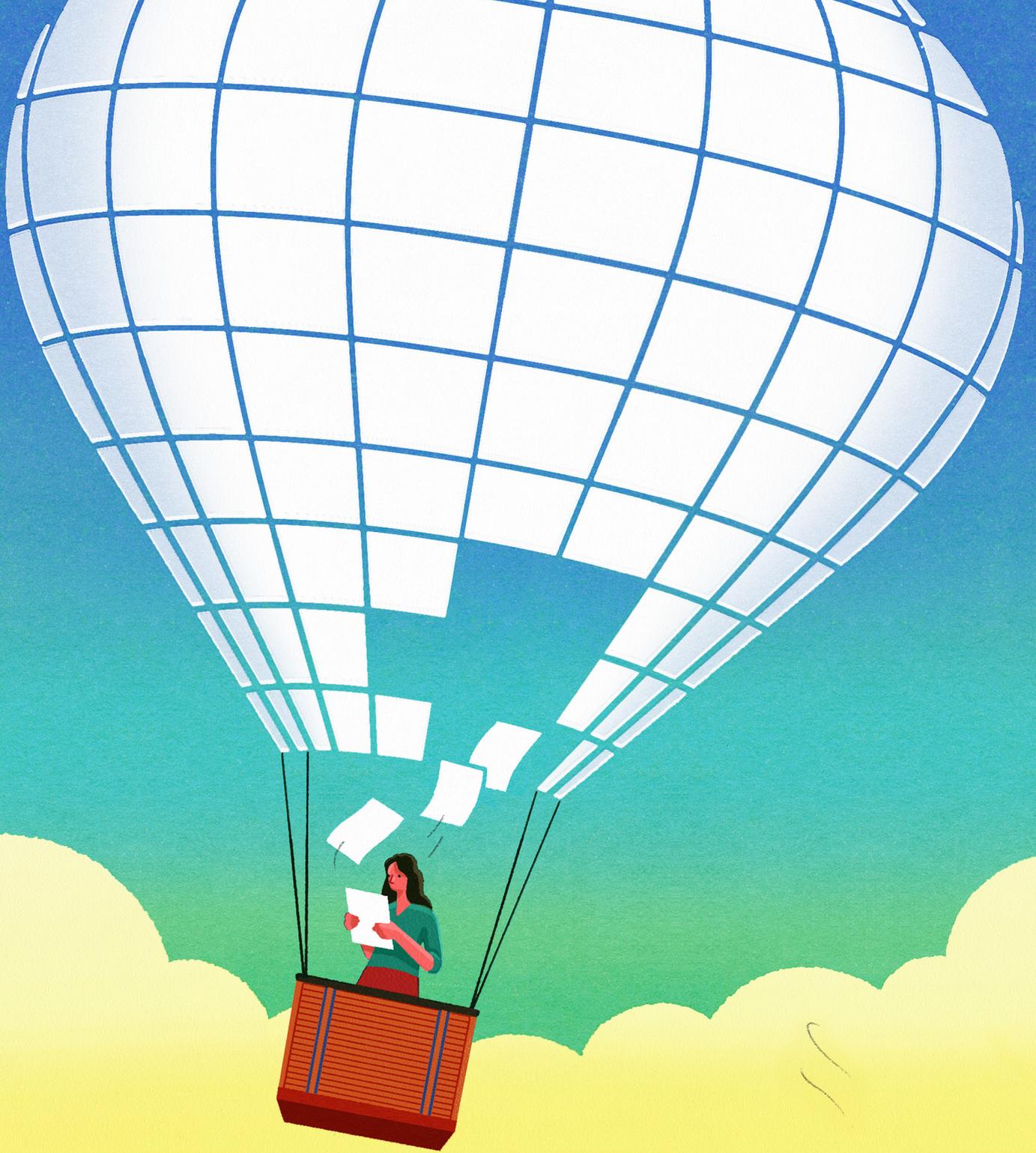
“I love this.”



“Well done” or “Great job.”



“I agree with you.”



# Mind Games

Six strategies to give your brain a boost, including one or two you probably know about but don't use enough.

by **DANA G. SMITH**

illustrations by **PETE RYAN**

# W

**WE ALL WISH** we could be a little sharper, a little quicker, or have a better memory. Like when you read a paragraph over and over again and it still doesn't make sense. Or when you walk out of a meeting and immediately draw a blank on what the takeaway was. Or you swear you could finish that task if you could just make yourself *focus*.

The good news is that after decades of research, there are some science-backed ways to strengthen your cognitive abilities. The less good news: Just like with physical health, there are no hacks or shortcuts to a better mental performance. In fact, the best thing for your brain is also the best thing for the rest of your body: [exercise](#). [Study](#) after [study](#) shows that breaking a sweat can improve attention, memory, and overall cognition. The reason is that exercise may be the only thing that helps [new neurons](#) grow in the adult brain.

Another biggie is getting a full night's sleep. This one is less about positive benefits and more about avoiding negative ones. Simply put, you're never less sharp than when you're a sleep-deprived zombie.

Fortunately, even if you're not exercising or sleeping quite as much as you should (though try if you can!), there are some relatively quick changes you can make to give your brain a boost. Some of these strategies actually rewire your brain to make it a little stronger and faster; others take advantage of the right tools to make things easier on your noggin. The key is tweaking your existing habits, and maybe adding a new one or two, to help you and your brain work smarter.

## The pen is mightier than the keyboard

We're so used to rapidly tapping out our thoughts on keyboards or smartphones that it can seem like the devices are an extension of our thinking. But it turns out the best tool for writing is one that makes us slow down.

Research has shown that when people type up notes, the speed they gain compared to writing by hand can be disadvantageous when it comes to remembering the material. In 2014, psychologists found that college students who took notes longhand [were better](#) at remembering complicated concepts presented in a lecture than students who typed notes on a laptop. The

two groups did equally well on straightforward fact-based questions, but the writers had an advantage over the typers on the more conceptual questions.

The researchers hypothesize that because typing is faster, students working on a laptop were more likely to take down notes verbatim. In contrast, the students taking notes by hand could only summarize the lecture. But rather than that being a handicap, it led to deeper encoding and understanding of the material.

"In order to take notes in your own words, you have to think deeply enough about the content to identify what is important and how to best articulate the main points," says Daniel Oppenheimer, a psychology professor at Carnegie Mellon University who led the research.

A [study from Japan](#) found a similar benefit of paper notebooks over digital devices for an even simpler task: recording future events in a calendar. People who wrote down appointments on paper were more likely to remember them than those who used a tablet or smartphone to record the dates. The researchers say that people's memory may be aided by the visual cues that paper provides—i.e., you're more likely to remember something if you envision it in the top left corner of the page. These types of spatial reminders are missing when you record the information digitally.

Of course, handwriting isn't always better. If your goal is to have a verbatim transcript, then typing is your best bet. And pop-up calendar reminders on your computer or smartphone will definitely help you make it to a meeting on time. The key, Oppenheimer says, is making sure that the tool you use supports your goals. →

Meditation has been shown to be about

**30%**

effective at treating depression and anxiety, on par with some traditional antidepressant medications.

[JAMA](#)

## When in doubt, print it out

Not only does paper have an advantage over digital devices when it comes to note taking and writing, it also wins out for reading. Even though we read on phones and laptops seemingly all day every day, we're not reading the same way as when we peruse a book.

"It's not that the medium by itself is a killer, it's the assumptions we have about how we use that medium," says Naomi Baron, professor emerita at American University and author of [How We Read Now: Strategic Choices for Print, Screen, and Audio](#). "If you have a digital device that has internet access, you are used to using that device for a whole range of things that don't take a lot of concentration."

When you use your phone or laptop to jump back and forth between emails, Twitter, YouTube, and online articles, your brain becomes used to being distracted and not paying close attention to what you're consuming. When you then try to read a technical white paper on that same device, it's tough to switch out of that skim-and-scroll mindset.

People also tend to read faster on a screen than they do in print, which often means they're not reading as deeply. [Numerous studies](#) have found that people are better at remembering information when they read it in a book than on a screen, especially for complicated questions. Length also seems to matter, with the largest advantage in comprehension being for texts longer than 500 words. So the next time you're staring down a long article or legal brief, white paper, or academic work, do your brain a favor and print it out.

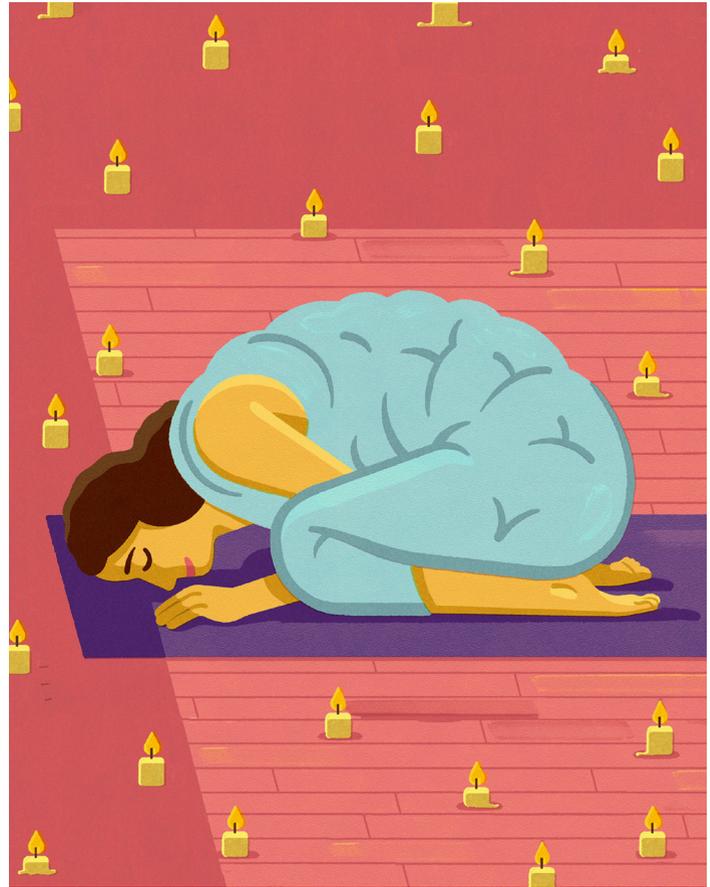
## Just breathe

These low-tech hacks are great, but what about the days when no matter what you do, you can't get your mind to focus? That's when it's time to take a break and meditate.

Meditation has been shown to help with everything from [attention and memory](#) to reducing feelings of [stress, anxiety, and depression](#).

"It seems really simple—just sit and watch your breath—but there's actually all these different cognitive skills that are happening at the same time while you're doing it," says Sara Lazar, an assistant professor of psychology at Harvard Medical School.

First and foremost, the act of meditation is a practice in attention. As your mind starts to wander, your cognitive control kicks in to bring your focus back to your breath. That means you have to keep monitoring your mind, something called metacognition. If your thoughts turn to an emotional topic, you get practice



controlling your stress response. And keeping all this in your mind is a challenge for your working memory.

Lazar and others have found that by employing all these cognitive processes, meditation can actually [rewire your brain](#), particularly the areas important for learning, memory, and emotion regulation. Think of meditation as a workout for your brain. Just like with physical exercise, the parts of your brain that you work the most will get bigger and stronger. Repeatedly focusing your attention, staying calm, and resisting the urge to let your mind wander will strengthen the regions responsible for those actions.

You don't need to be a Zen master to experience the benefits of meditation. [In one study](#), meditating 20 minutes a day for just five days lowered people's feelings of stress and fatigue. [Another study](#) showed that two weeks of meditation training reduced students' distracting thoughts, which helped improve their scores on the GRE. "The more you practice, the more you're going to benefit," Lazar says, "but even 10 minutes a day will be of some benefit."

If you're new to meditation, there are plenty of apps, like [Headspace](#), [Calm](#), and [Insight Timer](#), to help

On average, people who play action video games are about

**10%** faster than non-gamers on an array of cognitive tests, including visual search, working memory, and task switching.

[NCBI](#)

you get started. These programs provide helpful tips on how to focus your attention and reminders during the guided meditation sessions to bring your awareness back to your breath.

## Get your game face on

What you do outside work can also boost your brainpower. For the millions of people who use computer or video games to unwind, the type of game you play could make a difference when it comes to your cognition. And no, it's not the latest word game that has the biggest benefit. Surprisingly, it's first- or third-person shooter games.

Shawn Green, a psychology professor at the University of Wisconsin, says these types of games give your brain a workout by forcing it to think and react quickly. "What makes them action games is that they have really severe time constraints," he explains. "You have to take an input and very quickly make fast responses. Often things are changing or moving quickly, so you're having to integrate information that's rapidly changing."

That time pressure places a higher demand on your cognitive systems, which makes your brain work harder and eventually get better at the tasks required in the game. Green and others have [found improvements](#) among gamers in everything from basic visual abilities to higher-level cognitive processes like multitasking.

However, it's important not to use certain shortcuts that make the game easier

**2%**

Increase in the size of the hippocampus—an area crucial for memory—in older adults after a year of exercise. Adults who didn't exercise had a

**1.4%**

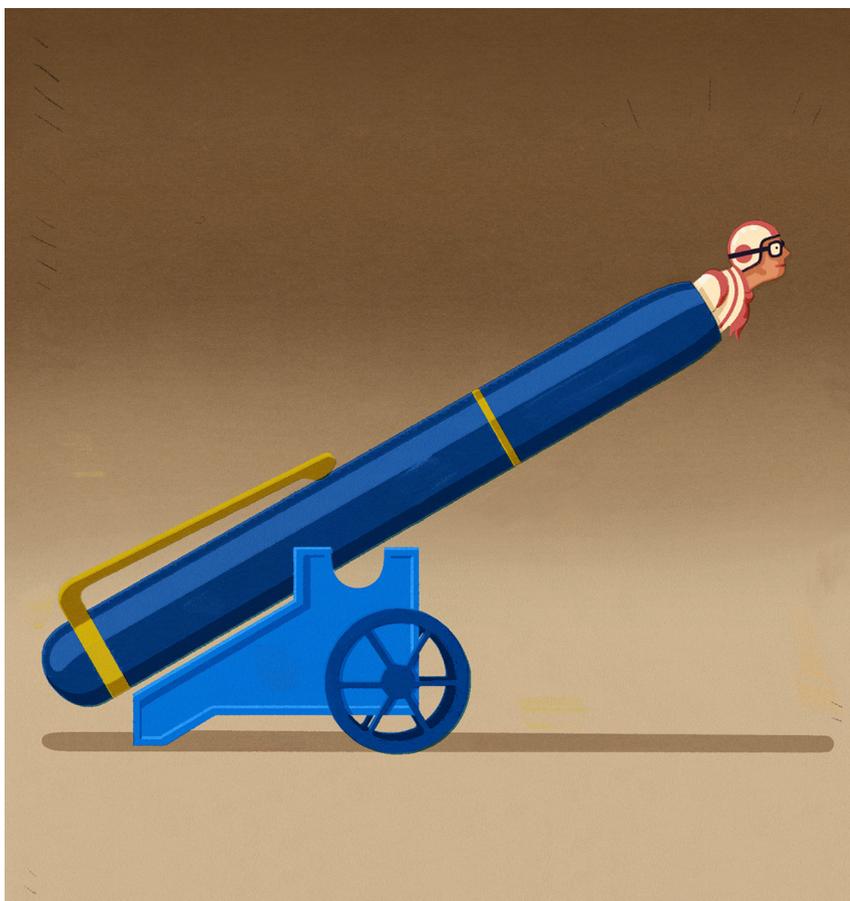
decrease.

[PNAS](#)

## The key is to challenge your brain in the ways you want to make it stronger.

but don't exercise the brain. Researchers in Canada discovered that people who navigated an action game using spatial strategies like landmarks had [increased volume in the hippocampus](#)—the brain's primary memory center. But if they used counting or memorization to find their way around, their hippocampi were smaller.

As with meditation (and physical exercise), the key is to challenge your brain in the ways you want it to be stronger. The brain is a powerful organ that learns and grows through adulthood by forging new connections between neurons. All you have to do is give it the right tools and a little bit of practice. ●



# HEROES'



# A

MEMBERS OF THE AFGHAN WOMEN'S YOUTH DEVELOPMENT FOOTBALL TEAM ARE MAKING NEW LIVES FOR THEMSELVES IN THE UK.

PHOTOGRAPHS BY SAM TODD

# WELCOME



The Afghan Women's Youth Development Football Team: Top row: Sevin, Zeynap, Hadise, Sabriah, Dina, Sosan, Asma; bottom row: Fatemah, Fatemah, Narges, Sahar, Saweeta. The team's goalkeeper, Narges, is in position during a team exercise, opposite.

# IN

**THE CONFUSION AND TERROR** caused by the stunningly swift fall of the Afghan government to the Taliban after the United States' formal withdrawal last summer, the most pressing question was, "What will happen to the women?" Journalists, doctors, politicians, teachers, athletes—any [women who had a profession outside their home would soon find they no longer did](#) and that their lives, in many cases, were in danger. For members of the Afghan Women's Youth Development Football team, who were well known in their communities, leaving the country was the only option.

The team members, support staff, and their families gathered in Kabul and, after weeks of trying to fly out, finally were able to enter Pakistan overland. It took an international effort led by Khalida Popal, the former Afghanistan women's team captain who now lives in Denmark, and supported by Leeds United Football club chairman Andrea Radrizzani, various nonprofit organizations, and New York-based Tzedek Association, [to get the team on a flight out](#) that was chartered by Kim Kardashian. In all, 132 people, including 18 team members, coaches, support staff, and their family members, arrived in the UK last November.

"I used the power of my network, the power of sport, to get them out. Now they are in a safe country and have support," says Popal. "They left their dreams, but they want to learn English, go to university, engage in society, go to work."

The team members are currently in temporary accommodations in the north of England, near Leeds. "The players have been through a very difficult journey, living in a hotel for more than four months," says Valeria Ignarra, managing director of [Play for Change](#), the organization founded by Radrizzani that is supporting the team's everyday needs. Play for Change has helped them enroll in school, organized their twice-a-week

practices and social activities, and is aiding them with mental health support, job counseling, and permanent accommodations.

The team has been back on the pitch since December, practicing at Leeds United Academy. "When the Taliban took over, I said to myself, 'Sevin, you are no more,'" recalls Sevin Azimi, 20, a right midfielder. "My goal and dream in life was gone from one day to another. Now in the UK I'm happy I can continue to study and play football."

Team captain Sabriah Nowroozi, 24, who started playing football at 13 in her home province of Herat, was previously studying psychology in Afghanistan. "Now I will captain my team, go to university, and get my coaching license."

Part of outfitting the group who left Afghanistan with nothing—not even phones—included finding them laptops and other technology. A [call went out on LinkedIn](#), and HP was one of the companies that answered. "We had the power to make this happen," says Dave Prezzano, Managing Director of Northwest Europe at HP. "We all saw our role clearly, to provide the laptops that could help these courageous young women, who risked their lives to find a place of safety, to resume their education."

HP UK's Head of Ecommerce Rebecca Robinson says that once her group got the necessary approvals, they were able to get the laptops to the team and their families in just a couple of days. "To be in a position to do something to materially support these brave young women who were denied basic freedoms and had to flee for their lives was humbling and gratifying," says Robinson, who is also cochair of the UK Women's Impact Network at HP. "There was never a question of if, just a question of how."

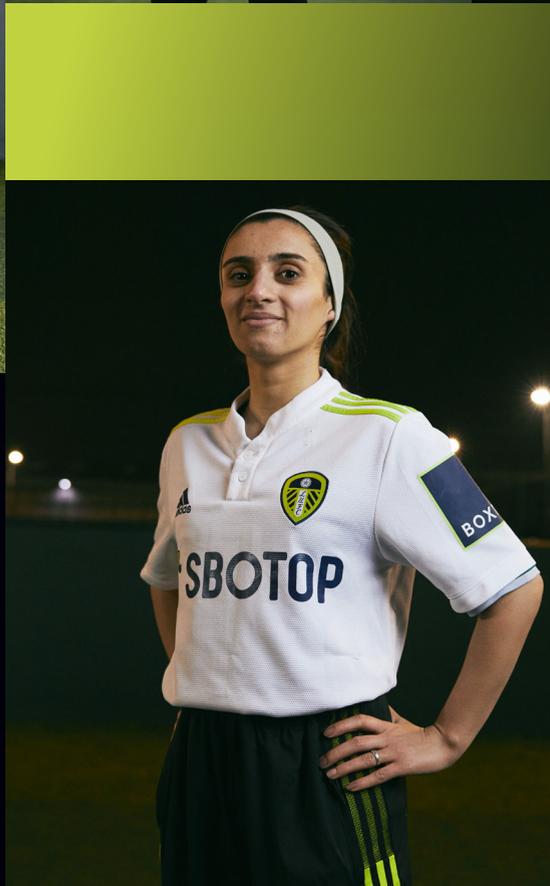
The laptops were not only a way of helping the team with their education, but to stay in touch with family, friends, and teammates still in Afghanistan. As they adjust to life in the UK, they fear for the safety of the women and family members back home, and they're resolute in their commitment not to forget them. "I can keep up with my studies and stay in touch with my friends and family I had to leave behind," says captain Nowroozi.

By January the under-18s were fully vaccinated, and many of the team members have been able to start school and pursue their education on their way to their wide-open future.

And for a group who experienced the deep trauma of their country falling to the Taliban in mere days, and leaving everything they ever knew to live as refugees in an unfamiliar land, they are determined to dream big in their new lives.

"In five or 10 years I see myself as a role model for women and girls in Afghanistan and coaching under-18s football teams," says Nowroozi. "I am very passionate about this." ● —*Sunshine Flint*





**TEAMWORK**  
 The players of the Aghan Women's Youth Development Team during an evening practice session. Clockwise from top right: On the field; midfielder Zeynap; team captain Sabriah; Sevin, left, who plays midfield, and defender Sahar cheer from the sidelines; Sevin on a break; Sahar shooting a goal.



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# WORK / LIFE

Managine Director Stephanie Dismore recommends taking the office outside. Here, she works on her Elite Dragonfly near her home in Austin, Texas.

PHOTOGRAPH BY JEFFE WILSON

## THE WAY WE WORK NOW

*Tips on thriving in a hybrid work world*

## TALKING A GOOD GAME

*These female all-stars are transforming gaming*

## BUILDING A BETTER CONFERENCE

*How to reach virtual and in-person audiences*

## YOU MUST REMEMBER THIS

*The appeal of nostalgia in uncertain times*



**ALL IN A DAY'S WORK**

For Stephanie Dismore, her HP Elite Dragonfly Notebooks and HP ENVY Curved 34 monitor are essential tools for hybrid work.



**WALK THIS WAY**  
Dismore takes a call near her house; her "shattered glass ceiling paperweight," right.

# The Way We Work Now

## > STEPHANIE DISMORE

> Managing Director, North America

**HP OFFICES**  
PALO ALTO, CA  
HOUSTON, TX  
BOISE, ID  
TORONTO, CANADA

**HOME OFFICE**  
AUSTIN, TX



PHOTOGRAPHS BY JEFF WILSON; HAIR AND MAKEUP BY MEREDITH JOHNS

**What is the greatest challenge of hybrid work?** Finding balance while being at home 24/7 required a big shift given how much I was traveling before the pandemic. Also maintaining relationships and building new ones are a different skill set when you're not going out to dinner or grabbing a coffee. I think that's the most significant thing—learning how to continue to build relationships with customers, partners, and your team.

**Do you have advice on doing that well?** Communication is more important than it's ever been. In a Zoom world or a Teams world, or as I call it "a virtual world," you really have to be intentional about it. "Hey, before we start this

meeting, let's just catch up. How are you?" Being intentional drives engagement on a personal and a professional level.

**Do you have other hybrid-work tips?** It's so important to keep meetings productive and engaging given the high volume of virtual meetings. Try to be very clear and concise in terms of an agenda. It's even more important now to stay focused and diligent in accomplishing those goals.

**Do you have any regular home-office routines?** I take my Dragonfly laptop, which I love, to my treadmill and I will walk during as many calls as I can. Just being able to move and take care of my

body really improved my whole mental outlook. I also try to get outside as much as possible, especially when the weather is beautiful. It just puts you in a different mindset versus sitting in your home.

**Are there objects in your office that have special significance?** Flowers and candles: They change your mindset and reset you. My favorite object is a picture of my kids, to remind me what I'm here for, and one of a sunrise, to remind me that tomorrow is a new day and a new start.

**What about that paperweight?** My friend Karyn Schoenbart, the CEO of market research company NPd, sent one to several female



WATCH NOW

THE WAY WE WORK NOW,  
an HP video series >>

leaders as a powerful symbol of how important it is for women to support and encourage other women. When I got it, I thought it had broken in the mail—it's all cracked. Then I read "shattered glass ceiling paperweight." It's a reminder that we are in this together and that we have an incredible opportunity to lead. ●  
—Interviewed by John Newton

# Talking a Good Game

This year's OMEN Challenge winner and three other all-star female gamers on inclusivity, representation, and why competitive gaming is a great opportunity.

When the virtual curtains closed on this year's [OMEN Challenge](#), only one woman was left standing.

This year's victor, [Kat "Mystik" Gunn](#), beat out a roster of all-star female streamers and content creators, including [Blushi](#), [MsAshRocks](#), [QTCinderella](#), [Sparkles\\_QT](#), [StoryModeBae](#), [Tsikyo](#), and [YouGelly](#).

Eight contestants faced off in a multi-round video-gaming and trivia tournament—aptly named "The Video Game Game Show"—where fans bantered with players as the competition streamed on the [OMEN Twitch channel](#). Hosted by actor, comedian, and writer [Ron Funches](#) and featuring OMEN squad member [Cupahnoodle](#), the live broadcast had competitors battling through four rounds of trivia and four rounds of gameplay.

Gunn, a pro esports veteran and cosplayer, stayed on top as her fellow competitors were voted out one by one. She not only won bragging rights, but also the "ultimate gaming battle station" complete with the [OMEN 30L desktop](#) and [OMEN 27i monitor](#), a slew of [HyperX peripherals](#), a mini fridge, and mood lighting. She'll also get to present a donation of [HP Victus laptops](#) to her local [Boys & Girls Club](#).

Gunn, who grew up in Los Angeles, followed in her dad's footsteps into the world of gaming after hanging around the comic book and card store he owned. "Being a hypercompetitive person, I will always find ways to compete, whether it's video games, TV game shows, or chores," Gunn says. "I love a challenge!"

*Innovation* spoke to Gunn and a few of the other OMEN Challenge participants about their careers, this year's biggest trends, and advice for women in gaming.

## In what ways have you seen gaming becoming more inclusive over time?

**KAT GUNN:** Growing up, gaming was never a career option. Now with social media, esports leagues, and pioneering influencers helping make it mainstream, it has become not only acceptable but something kids want to pursue.

**STORYMODEBAE:** I love seeing games start to incorporate storylines with main characters of diverse backgrounds, including those who are Black, POC, and LGBTQIA+. Proper lighting for skin tones and hair textures/styles are addressed more frequently. While these are great things, I look forward to the day that these are not questioned and met with backlash.

**MSASHROCKS:** Gaming brands are speaking up about inclusivity and how it is important to them. In the streaming space, having brands highlight and uplift our stories has been a great start.

## What do you think the biggest trend in gaming is for 2022?

**STORYMODEBAE:** I noticed more people are beginning to hop into VR gaming. If the demand for new games can keep up with the number of players jumping into the world of virtual reality, I see the possibility for a lot of cool things to happen this year.

**MSASHROCKS:** More indie and story-driven games being introduced with content creators, and more console exclusives making it into PC gaming.

**KAT GUNN:** Hopefully more OMEN Challenges! Opportunities like this are originally what reinforced the idea that I could make a full-time job out of playing video games.



KAT GUNN



STORYMODEBAE



MSASHROCKS



BLUSHI

starts to take over. Having outlets for yourself to rest, relax, and recharge is so important, and taking these steps to better your mental health pays off not only for your mind, but often for your content, too.

## What is a common misperception about female gamers?

**KAT GUNN:** Women can be dismissed for their looks or what they wear. When, really, we are all humans trying to find enjoyment in what we do.

**BLUSHI:** That we are not very good at the games we play. But I've seen some amazing gameplay by the women in this community! Every day, females are proving the haters wrong.

**STORYMODEBAE:** The biggest one is that women don't play video games. I'm not sure why it's so hard to grasp the idea that not only do women enjoy playing games, we can kick your butt in them, too.

**MSASHROCKS:** The most common are that women are only playing for attention and we are not "true" to the game. Another one is that we are only meant to play support characters/roles. This industry doesn't believe women deserve to be "top frag" or aggressive since we aren't "good" enough. It doesn't bother me anymore, since I know I'll do better than them!

## What would you say to women who want to get into gaming?

**KAT GUNN:** Do what you are passionate about. With the gaming scene and social platforms constantly changing, I want to remind women to stay adaptive and creative.

**STORYMODEBAE:** Be authentically you, and know that it's not always easy, but my biggest piece of advice is just to start. Despite what some may say, there's space for us, and the biggest step is you believing in yourself.

**MSASHROCKS:** There is so much more work to be done for women to be included in all areas of gaming, but we dominate the scene. We belong in gaming, and we are here to stay. —Sarah Murry



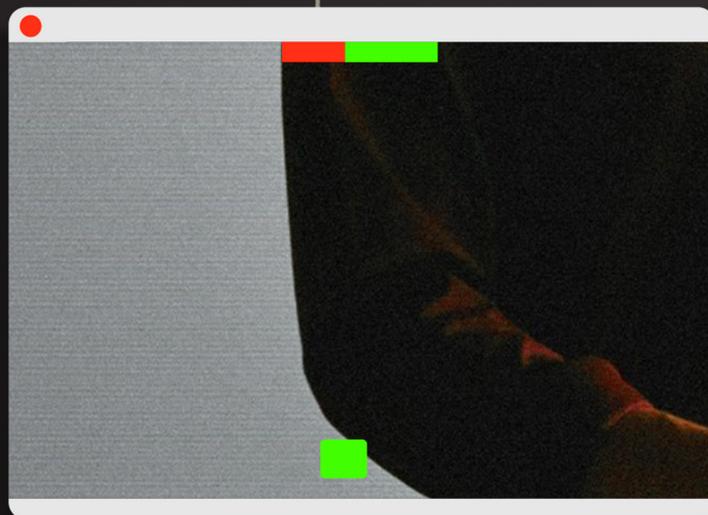
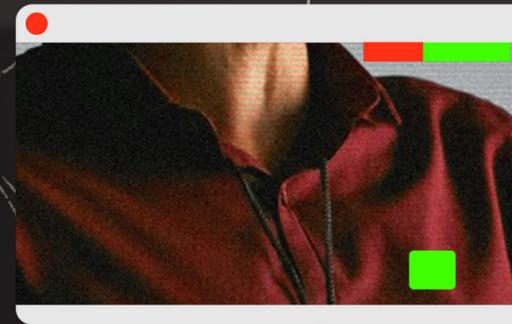
# Saving Our Forests

Last year, HP planted over a million trees through our partners in the 1 Trillion Trees initiative. Today, HP is proud to be a founding partner of Dr. Jane Goodall's Trees for Jane program.

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# BUILDING





A BETTER



When events are hybrid, new tools and technologies can help both in-person and virtual attendees participate equally.



CONFERENCE

by  
DEBORAH  
LYNN  
BLUMBERG

illustrations by  
TYLER  
COMRIE



**TWO YEARS AGO**, COVID-19 prompted the Santa Fe, New Mexico–based cloud accounting software firm [Sage Intacct](#) to go virtual with [Sage Transform](#), its annual 4,000-person conference where accountants mingle and learn new skills. But late last year, with people yearning for face-to-face networking, Sage Transform went hybrid. Some 2,000 people convened in Las Vegas in early November, while another 2,000 joined online. Organizers planned 100 in-person breakout sessions and delivered livestream and on-demand content to remote attendees, along with branded notebooks sent in the mail.

“Tons of people are tired of traveling to events and appreciate that they can consume content online,” says Rachel Heller, senior event content manager at Sage Intacct. “But just as many are itching to go back in person.”

The inevitable peaks and valleys of the pandemic, which prompted a spate of cancellations in winter amid the rapid rise of Omicron, are far from over.

The much-anticipated annual [Consumer Electronics Show](#) (CES) saw only [45,000 in-person attendees](#) in Las Vegas in early January, down from its usual 170,000-plus participants. [The World Economic Forum postponed its annual meeting in Davos](#) to early summer. And [the Sundance Film Festival went almost entirely virtual](#), without the annual crush of film fanatics to Park City, Utah.

And yet, event planners are able to take it in stride, armed with new tech tools and key insights they’ve gained over the past two years. Hybrid events—in which some attendees participate in person and others join online—offer opportunities to rethink business conventions and the potential to engage conference-goers in entirely new ways.

### Ensuring remote participants feel included

About [50% of corporate event attendees](#) believe that hybrid events are the right format—even beyond the pandemic—because they offer the benefits of in-person attendance with the convenience of virtual participation.

Hybrid events allow more people to participate since an airplane ticket and a hotel room are not requirements. “It makes an event more accessible, and it can bring new folks into your community,” says Sage Intacct’s Heller.

Heller and her team used the [RainFocus](#) event platform to integrate in-person and virtual elements, paired with [the CLEAR app](#) to verify COVID-19 vaccination status for in-person attendees. They planned 100 in-person breakout sessions and delivered livestream and on-demand content to remote attendees, along with branded notebooks sent in the mail.

Jenny Burke, chief marketing officer at [Shared Assessments](#) in Santa Fe, says it’s critical to choose a host and concierge who are available to virtual attendees via chat throughout an event. During livestream Q&As, the moderator in the room should coordinate with the virtual moderator to make sure questions are split evenly between in-person attendees and those joining online.

Virtual moderators should ask questions in the chat to engage participants and encourage activity—where are attendees logging in from? Who’s a first-time attendee?

Shanee Kraus, manager of HP’s Experience Lab, which is responsible for organizing and hosting big events, notes that the inclusion of far-flung participants also means accounting for their different time zones. Even before the pandemic, the Experience Lab produced separate, synchronous events for audiences (including some 50,000 HP employees) by setting up studios for panel discussions and presentations in several continents so participants could tune in live during their own business day.

“It’s not an American, European, or Asian event,” she says. “It’s a global event.”

### Connecting attendees near and far

Hybrid events aren’t as simple as broadcasting what’s happening in the room. To give everyone valuable content and foster connections between in-person and virtual attendees, event planners have been tapping into new technology and tools to create a cohesive experience.

Don’t think of it as two separate forums, says Kraus. “It’s one event where you’re connecting everybody.”

Kraus suggests choosing one robust event platform that works for both in-person and virtual attendees. The best ones have interactive features and opportunities for networking. She uses [Canapii](#), which offers features that mimic the feeling of networking and mingling; and [Hopin](#), which has built-in email marketing tools, a registration feature that gives insight into attendee preferences, and a networking component where participants can link up for one-on-one video calls. [Pigeonhole Live](#) is another app that provides Q&As, polls, chat, reactions, and surveys.

Shared Assessments' Burke is planning a hybrid conference for risk management experts in April and chose [Vario Productions](#), a virtual planning platform with a social area where participants can create their own profile, as well as an integrated polling feature. "It's a nice way for people to interact," she says.

In addition to tuning in for livestreamed event sessions, remote attendees can use virtual reality platforms like [EXVO](#) to feel more present, with opportunities to explore virtual event halls as avatars and socialize in online lounge spaces.

"People want to be connected—especially when they're on the virtual end of an event," says Natasha Miller, founder and CEO of San Francisco-based [Entire Productions](#), who has helped companies set up video booths in quiet conference hall corners where in-person attendees can network with virtual ones. "Giving them access to the people and energy of those on-site will really amp up their feeling of engagement and being seen and heard."



**“Tons of people are tired of traveling to events and appreciate that they can consume content online, but just as many are itching to go back in person.”**

—Rachel Heller, senior event content manager, Sage Intacct

### Getting creative with content

High-quality content is table stakes for any conference, but especially for a hybrid one, where attention spans of remote attendees are shorter. Virtual attendees want to participate in sessions live but also access them on demand.

To up engagement, Heller and the Sage Transform team had around 70 speakers pre-record 15-minute “lightning talks” that were made available to attendees on the first day.

Jean Foster, senior vice president of marketing and communications for the [Consumer Technology Association](#), which produces CES, says that when the event went virtual last year, “we threw out our playbook on conferences.” An hour-plus keynote is just too long to engage a virtual audience, she explains, noting that about 25 minutes is more digestible. She coaches speakers on how to perform for a virtual audience by alternating between looking at the in-person audience and the camera.

As more events go hybrid, expect faster-paced, shorter segments that include a variety of formats, among them speeches, interactive talks, and experiential presentations. Conference organizers are also

trying virtual breakout sessions, one-on-one video chats, and gamifying elements like virtual scavenger hunts. Recording also makes it easier to repurpose content in blogs and social channels.

Another benefit is the ability to tap into data to improve events. Planners can gain insights for future events, such as measuring engagement by examining how many users dropped out of a particular session and after how many minutes. One colleague of Heller's used virtual conference data to discover who the top 10 favorite speakers were at her hybrid event, and then planned to bring those speakers back over the course of the year for a series of webinars.

With these new opportunities to enhance the event experience, along with the flexibility and accessibility hybrid events provide, Kraus envisions more and more organizations embracing the model.

“It gives us more options,” she says. “Hybrid is here, and it will stay.” ●



# YOU MUST REMEMBER



# THIS

Photos, videos, and keepsakes become more precious during tough times and help us tap into the comforting, hopeful power of nostalgia.

by **DEBORAH LYNN BLUMBERG**  
illustrations by **TRISHA KRAUSS**



**DURING A ROAD TRIP** last summer, I spent hours alongside my mother delving into crumbling file boxes filled with old photos, gala seating charts from New York City's Plaza Hotel, caricatures, and restaurant menus from decades ago belonging to my great-grandpa and great-grandma Gertz. We imagined what life must have been like for them back then, and reminisced about more recent family gatherings.

This interest in the past is part of a wave of nostalgia that has swept the country during COVID-19, with people digging up old family photos, movies, and keepsakes as a way to cope with anxiety and uncertainty, and feel more connected to family and friends.

"We naturally use nostalgia as a way to comfort and energize ourselves," says Clay Routledge, a leading expert in existential psychology and a professor of management at [North Dakota State University](#), as well as the author of [Nostalgia: A Psychological Resource](#). "When there's a collective threat, that pushes a lot more people in that direction."

Researchers have found that nostalgia, or a sentimental longing for the past, [can help people cope with feelings of loneliness, support psychological health and well-being](#), and even [improve relationships](#). During the 2020 shutdowns, sales at scrapbook supply company [Creative Memories](#) jumped 50%, while a [study of 17 trillion songs](#) played on [Spotify](#) showed people preferred songs from the 1980s and earlier. [Ancestry.com](#) posted a [37% increase](#) in subscribers from March to July 2020, compared with the same period in 2019. At the same time, many people have also been creating new mementos for future generations, including COVID-19 road trip photo albums or [pandemic time capsules](#) stuffed with items like quarantine grocery lists and remote-learning classwork.

Whether you're revitalizing old photographs or videos, revisiting special letters or invitations, or creating new items of significance, here are a few ideas on how to preserve family memories and gift new keepsakes your loved ones will cherish.

#### **Digitize old photos and home movies**

While stuck at home during the height of COVID-19, Wendy Dykan spent months digitizing and organizing

decades-old VHS movies of birthday parties, Passover meals at Grandma's house, and trips to the beach. In one, her mother cradles Dykan's newborn brother as beaming grandparents lovingly look on.

"It gave me something to do outside of just kids and work, which I badly needed," she says. "Watching my grandparents on video felt very special."

With HP's new service [HP Memories](#), you can have your old photos, home movies, film reels, and cassette tapes expertly digitized. Order an [HP Memories kit](#), fill the box with your keepsakes, and a few weeks later, you will receive them back along with a convenient link to download the enhanced images, and optionally receive a USB drive with the digital files. At the secure HP Memories facility, all items are tracked and monitored from the time they arrive until they're returned to you via UPS.

"We take the privilege of working with our customers' one-of-a-kind memories incredibly seriously," says Anderson Schoenrock, CEO of Memory Ventures, HP's partner for HP Memories. "In most cases, we are being trusted with the only copy of a particular memory, and we treat it with the utmost care."

#### **Customize photo books and other keepsakes**

Digital service [Shutterfly](#) offers book themes like the "What a Year" book or "Best Grandparents Ever." You can also add family photos to items like [tea towels](#), [playing cards](#), [pillows](#), [puzzles](#), and [ceramic coasters](#). With services like [Photowall](#), you can even [turn old family photos into wallpaper murals](#) for your home.

"Photographs can be really reassuring," explains Krystine Batcho, a professor of psychology at [Le Moyne College](#) in Syracuse, New York, and an expert on nostalgia. "That person in the photograph can be a trigger to remind you of all the good times."

Artifacts like old family recipes or letters could fade if displayed. Instead, [archivists recommend scanning older keepsakes in color at 300 dpi or more, printing the file, and then displaying the printed copy](#). Electronic files of the keepsakes can also be sent to family members. The original documents should be stored in an acid-free, lignin-free folder.

For preserving your more recent digital photos in print, the [HP ENVY Inspire](#) has the ability to print in different sizes like social squares or panorama and automatically add a date and location with two-sided printing. You can get creative with templates to make greeting cards and photo keepsakes using the [HP Smart app](#).

#### **Create shared family artifacts**

Ami Neiberger-Miller, a writer in the Washington, DC, area, got free access to [Ancestry.com](#) through her public library and lost herself in family stories as she created custom PowerPoint presentations for family members' birthdays, complete with old photos, a family tree,



Remember When

1967



**Industrial designer** and San Francisco native Roy Ozaki was integral to the design of the HP9100A desktop calculator, shown here in a 1967 photograph of the device’s first clay model. Ozaki was interned with his family at the Heart Mountain Relocation Center in Wyoming during World War II, but after the war he enlisted in the US Army as an interpreter. After graduating from the ArtCenter College of Design in Pasadena with an industrial design degree, he worked for IBM, Whirlpool, and Goodyear before joining HP. The HP9100A was described as a “powerful computing genie” that was the first personal computer and the catalyst for the personal computing revolution. Bill Hewlett himself took an active interest in its development, using much of his free time to monitor it after a skiing accident landed him in a hospital. But even though the HP9100A was essentially a desktop computer (weighing in at 40 pounds and costing \$4,900), it was never marketed as one. Hewlett explained: “If we had called it a computer, it would have been rejected by our customers’ computer gurus because it didn’t look like an IBM [computer]. We, therefore, decided to call it a calculator, and all such nonsense disappeared.”

—Andrea Bell-Matthews

PHOTOGRAPH COURTESY OF HP INC.



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