

HOW DIGITAL IS ENABLING A COLLABORATIVE FUTURE

WIRED



This is the age of WFA (Work From Anywhere)

The new remote economy and hybrid working models are transforming every sector, from government to healthcare – but they bring unique challenges

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riots were quelled in Italian jails when family visits were restored to restive prisoners [virtually](#). In University Hospital Galway's Intensive Care Unit, video conferencing enabled patients to communicate with remote clinical teams and loved ones. In the Czech Republic, a primary school [went from in-person to interactive](#) almost

overnight. As Covid surged across the continent, the gradual yet inexorable transition to digital was accelerated.

From remote working to distance learning, and telemedicine to e-commerce, many of these shifts look set to be all but irreversible as a post-pandemic hybrid-landscape begins to emerge, with clear benefits for both employer and worker. For the former, these include reducing the need for costly prime-location bricks-and-mortar and opening up access to talent globally, while appearing to offer – according to at least one study – meaningful productivity gains. [New research](#), meanwhile, which surveyed 10,000 office workers across Europe, the Middle East and Russia, found that employees prize the flexibility the hybrid-model offers, so long as they have the technology and training to support them.

Yet while this new era of hybrid-working may sound like a win-win, it also presents a number of challenges for top executives around isolation/mental health, effective communication (including brainstorming), data safety and security, mentorship for younger recruits, performance evaluation, regulatory compliance and company culture (if colleagues aren't face to face, company culture can quickly wither on the vine). Speaking to Cisco thought leaders and focusing on three sectors – education, government and healthcare – this e-book explores how collaborative technology is transforming the world of work in the new remote economy and considers the takeaways for CIOs.



Hybrid working can open up a world of global talent, and cut dependence on costly bricks-and-mortar real estate

How education proved a quick study in remote learning

From primary schools to universities, video-conferencing technology enabled interactive, effective and inclusive teaching to continue

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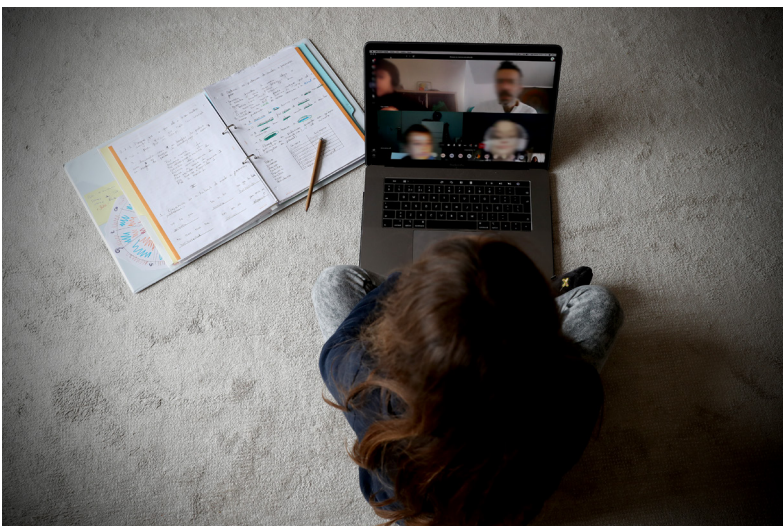
s the pandemic's first wave ebbed away with the arrival of summer in Italy, the Politecnico di Milano launched an ambitious project: to build, as far as possible, the exact same learning experience for students connecting remotely from their homes as for those who were physically present. In just 40 days over the summer break, 340 classrooms across the Politecnico's seven campuses were kitted out with audio and video equipment, including Cisco's Webex

video-conferencing platform, to allow up to a thousand students to participate in a single session simultaneously. By the time lessons resumed in September, 70,000 students and 2,000 teachers had switched to a hybrid learning model.

Similar shifts had already taken place across Italian academic institutions at every level, from primary schools to universities, early in the pandemic's first wave, recalls Michele Dalmazzoni, Cisco's collaboration leader for Southern EMEAR. "It was as if we were updating the firmware of an entire society in a single week," he says of the sudden spike in digital activity following the Italian government's initial lockdown order. "The key factors in the nation's resilience have been, first, our infrastructure, which supported the explosion of digital connectivity, including the surge in HD video use, pretty well. And second, was the ready availability of cloud services which allowed for very quick on-boarding, adoption and consumption of applications which were

originally designed to be implemented in complex enterprise environments. Today, they are available not just to large corporations, but also to small businesses and, crucially, schools too."

Ensuring this transition to the new paradigm of blended learning – which entails the digitization of the physical classroom – was as painless as possible meant prioritising two key elements in particular, Dalmazzoni continues. "One is that the teacher has full control of the classroom and visibility of the students to create a completely secure environment. The other is creating a set of functionalities that virtualises the experience." This is enabled by a mix of hardware, artificial intelligence and cloud-based technology, which means, for example, that a dedicated camera – known as the Presenter camera – can track the teacher as they move around the room or teach at their traditional board, so that students always get the best view and never lose the interactive element of the class.



Live lessons make for more engaged students, no matter where they learn



Blended learning, combining digital tools with live interaction, is the future of education

Immersion gets real

Live and interactive equals engaged and effective when it comes to learning, and the mainstreaming of this approach will transform education and training

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ome institutions have gone even further than this by using devices such as Webex Board, an all-in-one whiteboard which enables full-scale collaboration and co-creation. Luiss University in Rome,

which pre-Covid had already completed the migration of its servers to the cloud and introduced a range of innovative learning tools, shifted all teaching to Webex Meetings. They were able to run lessons as usual, but also deliver 2,200 exams for 11,400 students online with enhanced security measures. Collaboration tools are also being deployed in the university admissions process. The University of Portsmouth [uses Webex](#) to conduct remote interviews with applicants, creating a less formal and stressful environment, while saving candidates the (sometimes prohibitive) cost of travel.

Dalmazoni thinks the shift to blended learning – which many CIOs had already planned for – will be permanent, not only

because it will allow students, parents and institutions greater flexibility, but also because it will help ensure a more sustainable future, reducing the need for commuting and physical infrastructure. Its rapid mainstreaming may also prove transformative for an already-thriving area of further education: massive open online courses (MOOCs), which are designed to promote unlimited participation in digital learning. “Whereas the MOOC model was typically digital-only and on-demand, and offered a huge library of education, it wasn’t live and interactive. This new technology means digital learning at scale will become real-time and immersive, taking the entire experience to another level,” he says.

The public sector goes distributed

Governments and providers of critical infrastructure have been playing collaboration-tech catchup – but the benefits have already become clear

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Compared with the pace of change in

so many areas of our everyday lives, the fundamental operations of government have altered little over the years. But a range of critical factors – technological, demographic and socioeconomic – have converged to herald a new era for governments, from local to federal. [Research by Deloitte](#) argues that, among other things, government is set to become an enabler rather than a provider when it comes to creating increasingly personalised, distributed and data-led solutions.

Yet if these shifts have been in the works for a while, the pandemic has once again hit the fast-forward button – especially in the area of remote working and collaboration. In the Netherlands, thousands of public sector employees were redeployed in their homes over a 48-hour period. (The country incidentally also developed an online toolbox to equip public servants with information and videos about working from home and how to maintain a work-life balance.) When New York's governor issued stay-at-home orders on a Friday, the [city of Buffalo](#) had to relocate its “311 Call & Resolution” helpline agents (“the lifeblood of the city”) from a physical call centre to a distributed service in their own kitchens and living rooms by the following Monday morning, so that services to the city's 250,000 residents wouldn't be interrupted.



The offices may be empty, but technology has enabled the business of government to go on

With similar accelerations in distributed working taking place across governments and civil services globally, it comes as no surprise that since the start of the outbreak, it's the public sector that has been investing most heavily in remote working and collaboration tools. “It would be fair to say that we're seeing a ratio of at least two-to-one in terms of how quickly governments have moved towards this technology versus the private sector,” says Vaughan Klein, director of collabo-

ration EMEAR at Cisco. “The reasons for this are, first, necessity and the critical nature of their work: the functions of government need to continue. Second, they have budgets in place to support that. But third, they also found themselves very office-centric before the pandemic, and so had significant ground to make up.”



Secure collaboration is critical to both governments and corporations

Security needs to be built-in, not bolt-on

Collaborative platforms must ensure privacy and trust at every level

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any legislatures went even further towards a hybrid digital-physical future, says Klein, by adopting solutions such as [Webex Legislate](#), which enables legislative bodies to function virtually and securely away from parliaments and other public buildings. “We released Webex Legislate which utilises our SDK, with a

contribution from [Industrial Internet of Things company] Davra, which allows you to conduct government business using Webex. We put all sorts of attributes in there that they would ordinarily find in parliament – right down to things like voting and interpretative and real-time translation services – all constructed over a very secure platform. In fact, it’s the first question that CIOs [or their equivalents] ask.” Cisco has been delivering [Connected Justice](#), a system of services and hardware for courtrooms for over a decade. Cisco is helping justice speed information sharing, power continuity of courts, enable inmate services and enhance post-incarceration programs, all with industry-leading security.

Klein – who’s been with Cisco since 2000 and believed he’d “seen it all until the global pandemic struck” – says

collaborative technology has gone from “nice to have” for public sector technology leadership to “critical infrastructure” in a matter of weeks. “If you think about elected members of parliament, there’s an extraordinary travel requirement on many of them; certainly in my home country, Australia,” he says. “The fact that you can utilise this technology, and have better engagement with your constituents and spend more time with your family, instead of being in a car or a plane and away for weeks at a time, just means you can have a better quality of life.”

Klein predicts a digital world for interactions between government and citizens, where expertise is available remotely. “We’ll also see more AI in government services, where you can see what people are searching for [on government websites], and you can proactively approach them with solutions to their problems,” he says. “We’ve seen this progressive self-service throughout the internet era and we’ll see it accelerate in the way government operates, too.”

Webex was already the leader in secure government collaboration, in use with 8 out of 10 of the largest US state governments. Webex is top of mind because of security, privacy, reliability and a long-standing rapport with world governments that has built trust.

Telemedicine's health tech transformation

From co-ordinating responses to Covid to ensuring access to your family GP, remote consultation and collaboration have been mainstreamed

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While still widely considered somewhat niche, telemedicine was already on the rise – as evidenced by the \$2 billion valuation of UK online doctor Babylon Health – when Covid struck. Family doctor practices were shuttered and most elective surgeries put on hold as a result of widespread lockdowns, so in early March, NHS England wrote to the nation's 7,000 GP surgeries advising doctors to “change face-to-face appointments

booked online to triage appointments via telephone or video”. Simultaneously, digital doctor apps like PushDoctor and Sweden's Kry (trading as Livi in the UK and France) began to see adoption surge. “The Covid-19 crisis is acting as a catalyst for the whole digital healthcare and telemedicine industry,” Kry's VP Luke Buhl-Nielsen [told Sifted](#). “Consumer behaviour is changing very rapidly.”

Caught in the eye of the pandemic storm, the healthcare sector scrambled to adjust, as remote consultations and virtual collaboration between medics swiftly became the norm. In the US state of Georgia, for example, the Department of Public Health faced the daunting challenge of [on-boarding and training](#) 1,200 telemedicine service providers in the space of three months in an effort to reduce in-person consultations. Using Webex Meetings, Teams and Room Kits, the GPH was able to deploy at scale more than 50 telemedicine services,

including dental, diabetes clinics and paediatric care in just 30 days.

Video technology was also used to support the scaling up of intensive care capacity for critically ill patients. In London, the ExCel exhibition space in the Docklands was transformed over the course of just seven days into an [NHS Nightingale Hospital](#) – effectively an intensive care unit the size of an aircraft hangar, capable of handling up to 4,000 patients at once. Alongside NHS clinicians and managers, British military planners and engineers, and many others, 100 Cisco volunteers helped build a highly secure medical-grade network on the site so that multidisciplinary (medical) teams (MDTs) could collaborate both in person and virtually, while securely sharing patient data and laboratory reports.



From triage to prescriptions, digitisation is changing how we access healthcare



Expertise can now come from anywhere, thanks to hybrid health

Hybrid health

From remote diagnosis to collaborative procedures, telemedicine means clinicians can provide patients with secure, multi-device healthcare

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nsuring MDTs could continue to function effectively has been a top priority for healthcare providers, says Justin Woolen, regional sales director at Cisco.

He cites the example of a remote radiologist, working from home, having to share radiology images, case files and other pieces of critical content with a distributed multidisciplinary team in real time. "That becomes quite complex," he says, "but Webex – as a platform that can integrate into the radiology system and the electronic patient records system – allows it to happen seamlessly." Another key application is diagnostics,

continues Woolen. "A paediatrics unit in Galway, Ireland, didn't have a paediatrics ENT consultant at the hospital, so they performed an endoscopy on the child, while a consultant made the diagnosis remotely from Dublin."

One concern voiced regularly by CIO clients is over security of medical records and data, he says. "We emphasize that security is built in and not bolted on, so no external party can break into video communication because it's encrypted end-to-end, and your data sits in our UK data centre where it's completely secure." However, Woolen goes on to argue that post-Covid, hospitals and GP surgeries alike will need to allow time for patients to adjust to a new culture where telemedicine becomes the default approach to care.

"As technologists we're very good at innovation and developing products," he explains, "but sometimes you need to wait for the culture to catch up with the technology. There will always be a section of the public who may not be ready or willing to use – or even have access to – the technology required for digital healthcare, so ensuring that they can still access

and use traditional healthcare is essential."

Yet, just as we talk about the hybrid work model, hybrid health is already here, he says. "A clinician's day will consist of some in-person appointments mixed with video/remote consultations, and moving seamlessly between the two. So having a platform that can integrate and inter-operate across devices, while providing a simple user experience, will be key to making hybrid healthcare a success."

Five Takeaways_

- Don't wait for the next crisis. Organisations who had already invested in digital, were in pole position when Covid struck
- Adoption happens fast: collaborative technology went from "nice to have" to "critical infrastructure" in a matter of weeks – and it's going to impact every sector
- It isn't just about the technology. People need training as well as new tools
- No matter the sector, security is the priority, and should be built-in, not bolt-on
- This isn't a blip or a fad that will rolled back. The future of work really is hybrid

About Cisco

Cisco is the worldwide leader in technology that powers the Internet. Cisco inspires new possibilities by reimagining your applications, securing your data, transforming your infrastructure, and empowering your teams for a global and inclusive future.

Cisco Collaboration Webex solutions offer industry leading video conferencing, team collaboration, calling, contact centre and devices, and is trusted by 95 percent of the Fortune 500. With Webex, businesses can simplify communication, inspire innovation, and empower people to engage with each other anywhere on any device.

For further information, please visit www.cisco.com/c/en/us/solutions/collaboration

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