DELIVERING A BETTER NORMAL

THOUGHTS ON THE POST-PANDEMIC OFFICE
"A better normal workplace will..."
As the COVID-19 pandemic shutters communities and economies around the world, we face a global crisis of a magnitude never before seen. We don’t yet know how we will extricate ourselves or what the world will look like when we do, only that it is likely to be a very different place.

In these features, we will look in detail at how the office will evolve, from whether we could ever engineer a “virus-proof” environment to how a working-from-home revolution will affect demand for commercial space. How can employers transform their spaces into FOMO-inducing, must-go destinations, and what role will smart technologies play in all of this? Will sustainability be boosted by the adaptations we have made, and what does a “flexible” office mean as we consider resilience to future pandemics?

Our focus at WSP has long been on future-ready designs: ensuring that buildings and communities are equipped to respond to the change we know is coming, and flexible enough to adapt to the change that we can’t foresee. We will be redoubling our efforts, and we invite our partners and clients to engage with us as we collaborate to find new, better answers to the question of how we should live together in this complex, ever-changing world.

We need all of our collective creativity, ingenuity and insight now more than ever. Let’s keep the conversation going.

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Will physical distancing be the end of the office?

It could make it the place we've always wanted it to be.
COVID-19 has turned the world of work on its head, forcing through tectonic changes in the way we communicate and collaborate overnight. During lockdown and shelter-in-place orders, office occupiers have had to work remotely en masse — something many believed was impossible, or were reluctant to try. We have turned on our video cameras, and we have seen each other’s living rooms and worn-in hoodies and met families and Zoom-bombing pets. We have asked “how are you?” and meant it. We have new insights into what life must be like on the International Space Station, and into why actors dread working with children and animals. Whatever the future holds, it seems unlikely that we will ever look at our offices or our colleagues in the same way again.

So when we do finally go back, what kind of place do we want the workplace to be?

“This crisis is going to introduce some brand-new challenges, but it will also be the catalyst for change that was already bubbling and threatening to surface,” says William Johnston, a senior director with WSP in Canada. “Some people desperately want the office back. Rather than now wanting to stay working from home, or fearing human engagement, many people are thirsting for the opportunity to get out of their homes and re-engage in a stimulating work environment. We need to enable them to do that.”

It won’t be possible to resume business-as-usual straight away. There is likely to be a phased return, with physical distancing measures needing to remain in place — perhaps until 2022, Harvard epidemiology experts have warned, or even 2025 in the absence of a vaccine or effective treatment. This will mean much less dense plans — for each person to sit 2m away from anyone else, it would take 12.5m² or 113ft² per person, far higher than typical space ratios today. The ideal contemporary workplace had come to be defined by flexible spaces and free movement, all geared to encourage as much interaction as possible.

Now that very interaction is problematic, how can the post-COVID office keep its soul?

“When we can work anywhere, we go to work for social interaction with others,” says Jeremy Myerson, director of WORKTECH Academy and a design professor at the Royal College of Art in London. “In the last few years, the office has become a kind of social destination and designers have put great emphasis on bringing people together and creating a buzz with concepts like high-density open-plan working and agile scrums. If we have to design those elements out, that undermines quite a big rationale for why you go to an office.”

Indeed, office workers are so set in our ways that simply altering desk layouts is unlikely to be enough to maintain social distancing, warns Peggie Rothe, chief insights & research officer at Leesman, which has measured the experiences of over 740,000 employees in more than 4,900 workplaces around the world. “We know that it takes a lot to change people’s behaviour,” she says. “Sometimes, when companies have tried to do a transformation to activity-based working, they’ve designed all these amazing spaces and people still don’t necessarily use them unless they really understand why.” Anecdotally, she has heard that keeping essential office workers apart is already challenging: “People don’t want to be spread out. Even though there’s heaps of space, they still cluster together. We can design in all the features we want to nudge people, but we can’t control behaviour.”

Leesman is applying its methodology to our improvised workplaces, conducting surveys to find out how working from home measures up using the same benchmarks. Rothe hopes to be able to publish the first findings within the next few weeks. “Without knowing what people’s experience has been at home, we don’t know what their expectation will be in terms of continuing to do some work from home, nor how their expectation towards the office may have changed when they come back. We can see in our
data that some of the best supported activities in the office are learning from others and informal social interaction. That's what people are used to and what they are likely to expect from the office also going forward, especially if it turns out that those two have been unsupported while working remotely. I would hate to see that all of a sudden we’re building massive cubicles or places where people are isolated from one another. I don’t think it’s wise, and I don’t think it would work.”

Furniture may not be able to change behaviour, but a crisis can. The big question is how people will feel about coming back together when they are finally allowed to do so. Heroically struggling into work with a cold will certainly be less socially acceptable. But, as we well know, you can be infectious without showing any symptoms.

Will we ever be comfortable being in close proximity again?
“Initially it’s only natural for there to be a heightened sense of caution around others,” says Sara Silvonen, an employee wellbeing consultant at Great Place To Work UK. “Inevitably this creates a feeling of awkwardness and maybe even fear, which we’re sensing in the streets and supermarkets at the moment. In the workplace, a constant mental and emotional effort would be needed just to remember to distance, which in turn would not only make us feel less connected to our colleagues, but adversely impact productivity.”

Non-verbal cues such as facial expressions are integral to communication, she points out — that’s why enabling video on calls has become so important during the lockdown. Interpersonal relationships are one of the six key dimensions underlying employee wellbeing that Great Place To Work UK uses to assess organizations, so anything that disrupts that has the potential to negatively impact the employee experience.

The pandemic will undoubtedly have a lasting impact on workplace culture, says Silvonen’s colleague Dr Petrina Carmody, organizational psychologist and principal consultant at Great Place To Work UK. But what that impact is will be influenced by employers themselves: “The way that an organization behaves now will have an impact on whether that organization is thriving in a year or two’s time,” she says. “Those that come out strongest will be the ones that truly listen to the needs, preferences and experiences of individuals and work to meet them.”

The way people are treated at work can have a much longer-term impact on their willingness to go over and above: “If I don’t feel supported or listened to, or that the right precautions are in place, it may affect my productivity — I won’t be focused on my job. This is an opportunity for organizations to put people first. It’s the right thing to do, and it’s also the productive and profitable thing to do.”

The post-COVID office will have an even greater focus on collaboration
Despite the need or desire for physical distancing measures, the post-COVID office will have an even greater focus on collaboration, believes Nicole Hammer, a smart+connected building strategist at WSP’s ThinkBOLDR Innovation Center in Colorado. “In the long term, we’ll probably see more people continue to work at home more regularly and go to the office when they need to collaborate with someone or a group of people,” she says. “You can facilitate some really amazing sessions via Skype, Teams, Zoom, and there’s a lot that can happen to enrich the dialogue, but to drive innovation and especially culture forwards, we still need to have face-to-face collaboration.”

What we shouldn’t do is go back to how everything was, says Kay Sargent, director of HOK’s global WorkPlace practice. “We’ve been handed a really unique, once-in-a-decade or maybe even once-in-a-career opportunity to think about what we really want the office to be, and about how we create spaces that are human-centric. If we end up going backwards, we’ll be doing everyone a disservice.”

Right now, what humans want most is safety, Sargent says, the foundation of Maslow’s hierarchy of needs: “If people don’t feel their basic needs are met, if the bottom of the pyramid is not solid, you cannot achieve the things that are higher up like collaboration, trust, bonding.”

But if we miss the bigger picture, the building industry could face its “Kodak moment”. “There are other things on the horizon that are going to change the way we work. What’s keeping most CEOs up at night these days is not how fast they can produce something, it’s whether they can innovate fast enough to even stay relevant. Airbnb, Uber, Amazon have changed their entire industries not because they could do something faster but because they changed the game. What we need to be focusing on is our ability to ideate and connecting people to be able to innovate.”

Flexibility will be as important as safety, believes WSP’s William Johnston. “The workplace ought to be an environment that provides choice, freedom and comfort. We will need world-class IT, but also a culture and workflow that encourages a mobile environment where you are trusted...
to get the job done in a way that suits your personal disposition. The fundamentals of the office post-COVID will be trust, innovation and engagement — this crisis will start to initiate the performance-based culture that the workforce has been yearning for."

Over the last decade, workspaces have become increasingly dense, with more and more people crammed into hotdesking or agile environments. "Now we are going to have to spread back out a little bit and find that happy medium between safety and working within the footprint that we have," says Hammer.

Away from the desks, other office traditions are likely to look very different

"Think about the break room — how do we make sure that people have a level of comfort as they are interacting in a relatively small space and sharing a refrigerator and a coffee machine?" Instead of bringing in food from home, there might be more group lunch orders, suggests Hammer. "That might foster more community — because when the food arrives everyone’s going to stop at the same time versus at staggered intervals.

Finding those little opportunities, those little cultural wins, will be really fascinating. Working from home has given people a little bit of comfort in letting their guard down, in being exposed and being who they are a little more authentically."

Meetings too could become opportunities for health and wellness. Rather than cramming into any available space, Hammer thinks people will seek out larger, more open spaces to meet. "There probably won’t be a whole lot more five-person meetings in a tiny little huddle room. Things will happen in a cafe or multifunction area instead." Or maybe even outside: "One thing we’ve been doing at our office a lot lately, if we have a meeting where we’re just looking to brainstorm and we don’t need to be taking notes furiously, we’ll walk outside. It’s a great way to get fresh air and it definitely gets the creative juices flowing."

Improving air quality, circulation and filtration will be a top priority in a post-COVID world, but people may still feel anxious about being in confined spaces with many other people and want to be able to easily access the outdoors. This is a feature of many newer work environments designed around wellness, and Hammer expects the trend to increase.

Myerson thinks that the pandemic will kill outmoded office concepts once and for all. "This crisis will signal the end of the modern industrial office of fixed infrastructure, presenteeism, productivity as a machine output and a very strong demarcation between home and work." The new model will be an evolved version of the more recent networked office, with an acceleration of remote and flexible working, and a greater focus on health and hygiene, wellbeing and safety — "of treating people in a better way and using the workplace as a tool for recruitment".

There may also be knock-on effects from having to take more care as we walk around, says Hammer. "I do think that one of the unintentional things that might come from this is that people learn to slow down, and maybe be a little more thoughtful and intentional. We are just so rushed as a culture. But now if five people are making their lunch in the cafe, I might wait for that to clear. I’m not going to be so stressed when it comes to making the elevator. I’ll be more patient."

The pandemic poses many questions not only about the culture of the office but for how it looks and functions, and indeed how much office space will be required in a post-COVID world. We’ll be exploring these in detail over the following pages.

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Can we virus-proof the office?

Safety and reassurance will be paramount when we eventually return to work.
Returning office workers will have many questions, but one of the first will be: is it safe? Infection prevention and control has never been a parameter for office design, and with our new knowledge and sensitivity around the spread of disease, how will we feel about sharing desks, kitchens and lifts with hundreds of other people? “This is going to completely change the way we design offices and other buildings,” says Austin Wikner, head of building services in London for WSP. “Isolation and separation have only ever been considered in healthcare and laboratory settings. Now we’re going to have to rip up the rulebook for office design and see how we can introduce some of these things.”

There are many tried-and-tested strategies from healthcare and high-performance buildings that could be transferred to offices. These come with varying levels of disruption and viability, and there are always trade-offs in performance versus energy, cost or experience. There are also strategies that can promote health more broadly within a building but may not tackle coronavirus specifically. The conundrum for building owners and employers will be how much they need to change to make us feel comfortable, and what compromises are worth it. We discuss how this will interplay with the economics of changing occupier demand on pages 17-20. But first we need to understand what can be done.

Could a virus-proof office exist?

In theory, yes. “We could produce a virus-proof office — but that office would look like the highest-level containment lab and everyone would be in a plastic jumpsuit with a hose attached,” says Kevin Cassidy, WSP’s national healthcare lead in Canada.

In turning the office into a clinical environment, we could certainly risk diminishing its appeal and effectiveness. Over recent decades, knowledge workers have been crammed into increasingly dense open-plan layouts and encouraged to interact as freely and frequently as possible. Unfortunately, the conditions that promote the generation of ideas are also perfect for the spread of disease. “The reality is that the human factors involved have a lot more to do with transmission than the physical environment does,” says Cassidy. “There are a lot of technologies that we use in hospitals, but the question is, how much of that can we integrate in the office in a way that is cost competitive and gives people a level of comfort without intruding into their lives in a very blatant way?”

A related question is whether a virus-proof office would even be a good thing: “If you lived in a virus-free environment, you would lose your immune system, and then as soon as you were exposed to viruses, you would have a hard time fighting them,” says Gary Pomerantz, a building systems specialist and executive vice president at WSP in New York. “Before we jump to conclusions and make the air so clean that there’s nothing in it but air, we ought to find out if that’s good for people.”

How does disease spread in an office?

This is a crucial question and one that lacks a definitive answer. What we do know is that COVID-19 is spread from person to person through small droplets expelled by coughing, sneezing or speaking. These are relatively heavy and, in still air, do not travel far before sinking to the ground — hence the WHO recommendation that we keep at least 1m or 3ft apart. But the virus can survive on surfaces for a period of time from a few hours to several days. It spreads when we touch infected surfaces, and can be transmitted if we then touch our noses, eyes or mouths and ingest the particles. This means that in the case of this disease, the three main areas of focus will be people themselves, surfaces, and how air-handling systems that create turbulence may help the droplets to travel further.

Unlike the coronavirus that caused the SARS outbreak in 2002-03, the strain responsible for COVID-19 is not thought to be carried by fine particles called aerosols, so is not truly airborne. But future threats could transmit in a very different way, Cassidy points out. “We could change everything to fix COVID-19, but
that might not be right for the next thing. We need to find a balance that is going to give us the largest, broadest degree of protection from whatever comes down the road.”

**How can we minimize contact?**

Part of the solution will always be managing human behaviour — this is the case even in highly technical healthcare settings, points out Jonathan Ramajoo, head of healthcare at WSP in Australia. “Every time a nurse enters a patient room, before they do anything, they sanitize their hands and then wash them again before they leave. Good hand hygiene is the fundamental thing,” he says.

Until a vaccine or effective treatment is found, physical distancing measures will need to remain in place. Reducing the number of people in the office at any one time, introducing one-way circulation systems, and limiting occupancy of confined spaces such as conference or meeting rooms could all help to limit contact. There are also technologies such as thermal scanning that could be implemented to identify those who may be suffering from infection — we consider the effectiveness of these on pages 47-49.

Existing offices may not easily accommodate this: ideally, there would be separate entry and exit routes, but many buildings do not have two entrances and this would be an expensive modification. Taking the stairs could become a more attractive option than the lift, but this is problematic for wheelchair users or people with limited mobility and, beyond three or four storeys, all but the super-fit. We look in detail at the challenges of vertical transportation on pages 40-42.

Wikner suggests that layouts could be more decentralized so that common facilities like tea and coffee points serve fewer people. “Where you might have one per floor serving 100 people, you might want to put in distributed centres that serve only 10 or 20 or 30 people but you have four or five per floor,” he says.

The more touch-points we can remove as people move through buildings, the lower the risk. Automatic doors and contactless security could help to do this, as could motion-sensing taps, soap dispensers, hand dryers and toilet flushes in bathrooms, and even voice-activated coffee machines. “None of this is new technology and it’s not particularly difficult to install, but everything comes down to money,” says Wikner. “A touch-free tap is more expensive than a normal one. To provide a motor and a sensor on a door costs money and uses energy.”

Where touch is unavoidable, antimicrobial coatings or materials such as copper and alloys including brass and bronze can deactivate microorganisms that land on them. “These solutions can be easily imported from the healthcare environment,” says Tomer Zarhi, mechanical manager in the healthcare team at WSP in Canada. “Antimicrobial surfaces could be implemented, but especially important are cleanable, durable surfaces.”

There are trade-offs: should kitchen cupboards be replaced with open shelving to remove that touchpoint? Or would that leave crockery prone to droplets in the air? Should we close kitchens while the risks of transmission are high? Or would the risks increase further as people come in and out of the building more frequently to buy coffee?

And what about your commute? In major cities, many office workers travel in on crowded public transport systems. “That’s the weak point,” says Justin Turnpenny, who leads WSP’s fit-out team in London. “My commute is a half-hour train journey and the majority of the time it’s standing room only. You can create a safe working environment for your nine-to-five, but getting there and getting home is much more difficult.” (Read more about public transit responses to COVID-19 in WSP’s white papers for Canada and Australia.)

One solution could be to introduce flexible working hours so that people can avoid peak times — though this will have a knock-on effect on team collaboration, which might defeat the purpose of coming into the office in the first place.

**Do air-handling units spread the virus?**

The role of air-conditioning and ventilation systems is one of the hottest topics, and one of the most complex. We focus in detail on this aspect on pages 13-16.

**Is a clean desk policy enough?**

No. The relative cleanliness of assigned seating versus hot desks has been much discussed — who will want to sit at a desk after someone else? Actually, it’s more likely to go the other way. Offices will need to get closer to “terminal” cleaning practices from healthcare or laboratory settings. This might not be to the point of fumigating spaces with vaporized bleach, as in some laboratories, but it does mean no more personal items left overnight, as well as no desk phones or shared keyboards.

“Ideally, the new agile environment is a desk with a plug for your laptop and that’s it,” says Zarhi. “There’s no way of doing terminal cleaning when you have personal items.” Jack Maynard, who leads WSP’s mechanical and electrical
business in Canada, is working on a reintegration plan for an office right now, and his first job is to get rid of the clutter: “A cleaner coming through is not going to touch the picture of your kids or your personal artefacts. So the idea is to depersonalize — nobody has space anymore and we will do a deep clean every night. So you show up to a station that you know has been well cleaned the night before and that’s your station for the day.” Enhanced cleaning regimes could add significantly to running costs.

Who’s going to pay for all of this?
In the commercial sector, many of the costs of owning and operating a building are passed on to tenants. “So there needs to be a conversation between the building owner and the tenant about what is important to them,” says Maynard. Companies already make trade-offs, he points out, between giving employees more space and offering perks like free cappuccinos and yoga classes. “Lately they’ve been reducing square footage and focusing more on services. It will be very interesting to see how that changes.”

Turnpenny thinks occupier demand for buildings that promote health will drive greater adoption of standards such as WELL and Fitwel. “More people are going to want to work in those buildings because they do have enhanced ventilation, better air quality and sanitation. There will be much more emphasis going forwards on providing a work environment that is better for people’s health.” WELL buildings still have to meet low-energy regulations, so it can be done. “It is harder to achieve and there are costs associated with more efficient plant, but they don’t necessarily end up as running costs.” We cover the role that wellness standards could play on pages 45-46.

Measures to reduce the spread of COVID-19 will also work against seasonal flu and the common cold, so the reduction in employee sick days — if it can be quantified — could be factored into the payback. “We have done studies of the impact of indoor air quality on labour costs within healthcare facilities and we can prove pretty easily that it’s a good investment,” says Cassidy. On the other hand, we don’t yet know how people will react to perceived threats or their assumed remedies. Might more health-conscious employees refuse to come to buildings where they don’t feel safe or, in more litigious societies, even try to sue if they become ill in a sub-optimal environment ...? On pages 43-44, workplace safety expert Doug Crann argues that companies that fail to address these concerns risk irrevocable damage to business continuity, culture and trust in their leadership.

But perhaps the greatest risk is that by trying to make buildings safer, we take away the things that make people want to visit them in the first place. Before we try to make the office more like a clinical environment, we need to ask ourselves whether that’s really what we want.

If COVID-19 spurs the nascent trend for more healthful office environments, it will be welcomed by many. But it may, in the end, come down to economics. Just as the pandemic is forcing us to reconsider established strategies for controlling the office environment, it is also shining a very powerful spotlight on the ways that we have traditionally occupied and valued those spaces. That’s something we explore on pages 17-20.

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Can better indoor air fight COVID-19?

Strategies that will improve resilience in offices, and those that won't.
The role of air-conditioning and ventilation systems in spreading COVID-19 is one of the hottest topics, and one of the most complex. There are many tried-and-tested strategies from healthcare and high-performance buildings that could be transferred to offices. These come with varying levels of disruption and viability, and there are always trade-offs in performance versus energy, cost or experience. There are also strategies that can promote health more broadly within a building, but may not tackle coronavirus specifically. The conundrum for building owners and employers will be how much they need to change to make us feel comfortable, and what compromises are worth it.

Do air-handling units spread the virus?
Offices are typically air-conditioned by recirculating air systems. These might be centralized air-handling units in dedicated mechanical equipment rooms, or local distributed fan coil units positioned above the ceiling or around the perimeter of a space. Both function in basically the same way — they draw in air from the space, mix it with a proportion of fresh air from outside the building, pass it through a filter, then through a coil containing chilled or warm water, and finally blow it back into the space at high velocity to create a general mixing of room air. “The issue is that increased air motion may cause the virus to carry further than it normally would in still air,” says David Cooper, a mechanical engineer and president of global property and buildings at WSP. “So instead of the virus dropping out of the air within the 6ft social distancing guideline, it may well travel 10 or even 20ft or more before coming to rest on a surface.” So sitting the recommended distance away from someone else may not provide the expected level of protection if your workspace is fitted with these systems, even if they are fitted with enhanced filtration.

Traditional displacement or underfloor air distribution (UFAD) systems can minimize air currents and the horizontal movement of air, says Cooper. “UFAD systems basically create an air zone per occupant workstation.” Similarly, chilled beams or radiant ceiling panels also stimulate very little airflow and therefore reduce the risk of increasing the horizontal travel of coronavirus through the air.

Taking it to another level, “laminar air” systems in operating theatres and clean rooms are designed to minimize horizontal air movement to the greatest extent possible. “The concept is that you supply air up high and it moves vertically down through the space slowly, taking germs and contaminants out of the breathing zone, bringing them straight down to floor level where it is exhausted,” says Todd See, a specialist in laboratories and high-performance buildings with WSP in San Francisco. “It would be harder to put that into an existing building, but it’s certainly something we could consider as we’re designing new spaces.”

Can we clean viruses from the air?
Fan coil units do contain filters to catch dust and particles, but these must be maintained. “Over time, the filters get clogged and they need to be cleaned or replaced, and quite often this isn’t done properly,” says Justin Turnpenny, who leads WSP’s fit-out team in London. “Good maintenance is a key thing we need to manage going forwards.” (We discuss the role that smart technologies can play in remote monitoring of building health on pages 29–34.)
Improving filtration can improve the general quality of the air, but higher grades of filtration add resistance to the system: the finer the mesh, the more energy it takes to push the air through — which increases the energy consumption of the building. “All of the guidance and regulations are pushing us into a low-energy office, so improving air quality in this way would run contrary to that,” says Turnpenny. “It would definitely go against where we currently are in Building Regulations, so it requires a balanced approach.”

Gary Pomerantz, a building systems specialist and executive vice president at WSP in New York, has also been exploring options for clearing air within air-handling units. One way to do this would be to install larger air-handling units with better filters and UV light. “HEPA filters are probably the only ones that are proven to remove viruses — they’ll get things down to 0.3µm.” High MERV rated filters, which are typically specified in central air-handling units, can remove 90-95% of bacteria and small particulates, but not particles the small size of most viruses. A UV light could kill the rest — “but it would have to be really bright because there’s very little contact time.” Pomerantz’s rough calculations found that on a project in New York, equipping a 25,000 CFM (cubic feet per minute, equivalent to 11,000 litres per second) air handler with HEPA filters would add US$5,000 to the annual operation cost. Adding UV lights would add half as much again. “So it’s not small numbers and that’s just for one air handler. On a large project, there might be 75 of them.” That additional cost could be reduced by increasing the size of the air-handling units, reducing the impact of the added resistance, though that would increase the space required for each.

But a lot of particles never make it to the air-handling units. How to address those? One proposed solution is ultraviolet germicidal irradiation (UVGI), which uses short-wavelength UVC light to kill or deactivate microorganisms. However, this comes with its own risks — “humans are lifeforms too,” Pomerantz points out. Strong UVC light can damage our skin and corneas, as well as degrading plastics. It could perhaps be installed at high levels only, away from people — but that would not clean the air in the breathing zone.

Pomerantz has been exploring an alternative solution for capturing the droplets as close to the source as possible, talking to furniture manufacturers about integrating a clear screen and an exhaust slot into desks. “So when we talk, anything coming out hits the screen and gets drawn into the desk, and into a small unit with a HEPA filter and a light source.” The desks could be arranged in a line, all exhausting into the same unit.

**Could we increase the supply of fresh air?**

As SARS-CoV-2 particles tend to drop rather than travel through the air like an aerosol, increasing the proportion of outside air or leaving systems running 24/7 to purge spaces would probably not directly impact the spread of this particular disease. However, it could dilute other contaminants, improve air quality more broadly and certainly make for a more pleasant environment — which would in turn be reassuring to returning office workers.

This again comes with an energy penalty, as it takes more to cool or heat the air to the right temperature, and equipment would need to be sized to accommodate higher demand, as it is for hospitals. Exactly how much additional energy is needed depends on where you are. Using a greater proportion of outside air is already an established sustainability strategy in mild climates. In the UK, for example, the external air temperature is below 18ºC for 60-70% of the year, says Austin Wikner, WSP’s head of building services in London, so propelling that through the building using a displacement system can be up to 40% more energy efficient than fan coil units. “It’s not particularly new or innovative, but interest has been increasing as we’ve realized how energy efficient it can be. It’s the thing we default to now.”

Similarly, in San Francisco, the outside air can be used for most of the year, whereas in New York City (or generally on the eastern seabords of continents), it is very hot and humid in July and August and can be very cold in the winter months, which is typically the flu season. “With a clean sheet of paper, I would try to minimize the amount of extra energy or at least the times when you’d have to spend extra energy,” says See.

See designed a novel system for a fully air-conditioned space using 100% outside air without expending any fan energy, which was installed at a research facility for the US National Oceanic and Atmospheric Administration in Hawaii. This was inspired by the ancient Middle Eastern principle of allowing a space to stratify so that heat rises and cool outside air enters at a low level. “It uses chimneys where air is heated by solar energy to create some small forces that drive more and more air through the building.” The system has been installed in several other buildings, including a two-storey office for the Hilton Foundation in California.
Could we just throw open the windows? “Everyone talks about natural ventilation,” says Pomerantz. “I think it’s great — as long as I get to sit by the windward window. Someone’s going to be downstream, and they will get everybody else’s germs as the air migrates across the space before exfiltrating the building.”

Any strategy for resilience against a pandemic needs to take into account other heightened threats too. Sometimes the outside air is the problem, as in Australia when bushfires raged from October 2019 to January 2020. “In Sydney, the office smelled like smoke for three months and outside you could not see 100m away,” says Jonathan Ramajoo, head of healthcare at WSP in Australia. “They actually shut off outdoor air to the building for a number of hours. If you had a bushfire during COVID, that would really compromise the air quality in the space.” In a new building for the Australian National University, WSP has designed the air-conditioning systems with room for carbon filters that can be fitted when needed to remove smoke from incoming air, so that outdoor air could still be provided to the spaces. “This space provision could allow for other filter types to combat the environmental hazards that are presented to us,” adds Ramajoo.

What about humidity?

It is believed that the right relative humidity (RH) levels — ideally between 40-60% — decreases the infectivity of viruses, makes them settle out more quickly, and improves our ability to fight them.

That’s good news — but not necessarily the easiest strategy to implement. “Controlling humidity outside of a healthcare environment is almost impossible,” says Tomer Zarhi, mechanical manager in the healthcare team at WSP in Canada. “It would be very expensive to monitor and control in an office.”

It partly depends on local conditions. It’s not so much the humidity of the outside air as the temperature, says Jack Maynard, who leads WSP’s mechanical and electrical business in Canada: “As you bring air inside and warm it up, the percentage humidity decreases.” To compensate, water has to be added. Relative humidity of 40% would be a high target for an office, and achieving that would again require greater energy and water use.

Another complication is that many existing buildings are not designed for higher humidity levels, warns Cooper. “Humidification in the winter will result in condensation on windows and mullions, potential for moisture freezing inside wall cavities and damaging them, greater potential for mould and mildew if not controlled properly, and of course high energy costs,” he says. Even non-medical buildings that are designed to accommodate indoor humidification for comfort and general health are not usually able to maintain 40-60% RH during peak winter months. At that level, condensation would still be experienced even on high-performance glazing and thermally enhanced mullions.

If COVID-19 spurs the nascent trend for more healthful office environments, it will be welcomed by many. But it may, in the end, come down to economics. Just as the pandemic is forcing us to reconsider established strategies for controlling the office environment, it is also shining a very powerful spotlight on the ways that we have traditionally occupied and valued those spaces. That’s something we explore in the next article.

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How will COVID-19 change demand for office space?

Organizations have had to do without the office during lockdown. Will they ever go back?
COVID-19 has focused minds on exactly what the office is for and how central a role it should play in corporate strategies and budgets, as well as making the strengths and limitations of home set-ups all too apparent.

In this series, WSP is considering what the future holds for the buildings where so many of us used to spend so much of our waking hours. From a human point of view, we’ve already explored how we’ll feel about going back to the office and how we might behave differently when we get there. From an engineering point of view, we’ve looked at whether we can virus-proof the office and improve resilience in this and future pandemics. Both of these have implications for how much space organizations might need or want in future, how much that space costs to fit out and operate, and ultimately how much occupiers can, or choose to, afford.

This article is about those decisions: how is demand for office space likely to change as a result of COVID-19?

Why do we need offices? Hasn’t lockdown proved that we can work just as well remotely?

To the surprise of many, COVID-19 has indeed demonstrated that a considerable amount of the work that usually takes place in offices can carry on when they are closed. Some have discovered that they can be more productive at home, and enjoy the freedom of a more relaxed schedule. Few openly mourn their morning commute.

But if COVID-19 has accelerated the trend for home working, it has also revealed its limitations — in a knowledge economy, an organization’s success will still depend on face-to-face interaction, collaboration and serendipity. With universal flexible working, the office could become a vital anchor. “When you’re trying to attract, retain and nurture top talent, the workplace plays a really significant part in how people perceive a business,” says Michael Holloway, general manager of property investment at Kiwi Property, one of New Zealand’s largest real estate firms. “Rather than doing a job interview on a videoconference, you want to go into their space and see how they value other members of staff.”

The office has an arguably even more important role in providing learning opportunities for younger employees, says Jim Coleman, head of economics at WSP in London. “A lot of developing people is not formal training, it’s all the other interactions. There’s still a lot to be gained from being together as a team.” This will apply differently across demographics — with a tension between younger employees’ need for training and senior employees’ greater motivation to work from home. “For people at the start of their careers, there’s probably more desire to be with other people because you’re still learning and you want the experience and the social life that goes with it. Whereas as you get older and you may have settled down and have children, it’s much easier to work from home.”

A greater amount of home working will persist: for the sake of resilience as much as anything else. “The next time a coronavirus comes along, we know we need to move quickly to this model, which means that it has to be in play — at least in part — most of the time,” says Coleman. “I don’t think any business will want to go back to the way things were done, so that has an immediate implication for space.”

How much office space will companies want?

Changing working practices are not the only determining factor. The International Monetary Fund has described the “Great Lockdown” as the worst economic downturn since the Great Depression of the 1930s, and foresees a recession at least as bad as, or worse than, the 2007-08 global financial crisis.

Inevitably there will be a reduction in occupier demand, though it will vary from sector to sector. The worst-affected tourism and leisure industries will need less corporate space, while some professional services firms may be able to continue as normal with altered working practices. Booming sectors like technology and e-commerce are already more likely to embrace virtual working — Twitter CEO Jack Dorsey has said that employees can work from home permanently if they want to. “Companies could see this as an opportunity to downsize, to reduce operating costs and invest more in technology,” says Paul Stapley, vice president in the project management team at WSP in Canada. “Occupiers have already been moving to shorter lease terms. If they’ve only got, say, six months left, they may decide to walk away.”

Organizations had already started to shrink footprints so that they had less than one desk per person, and the recession is likely to accelerate that trend. “In a crisis, there is always a focus on trying to reduce fixed costs like offices,” says Magnus Meyer. “The typical tenant will start thinking that maybe they don’t need space for 100% of their employees, maybe only 75% or 60%. Or they might not expand because of the crisis, but just work with the space they have.”

What makes COVID-19 such a strange phenomenon is that its immediate impact will
be to push organizations in the opposite direction — they will need more space per employee. Companies have been squeezing more and more people onto floorplates for a long time, with just 8m² per employee becoming a typical density. For offices to reopen safely and maintain physical distancing, ratios will have to shoot up again, with shifts, staggered start times and continued remote working essential.

It’s too early to say whether we will ever again feel comfortable occupying space in such close proximity to others, which makes the longer-term impact on office requirements very hard to gauge. Perhaps the better question is whether organizations will want the same kind of space that they’ve occupied in the past.

What kind of office space will organizations want?
Companies will now be well aware that they could make do with less office space. But they may also have realized that they also need better, more resilient office space. “This crisis is probably going to accelerate the need for modern, flexible office space with lots of services,” says Meyer. “The buildings that suffer will be the older ones that tenants just don’t want any more. They’re just the wrong product.”

Landlords will have to differentiate themselves with added services: “You might call it ‘high-end’, not from a luxury perspective but from a content perspective — you won’t just lease a ‘stupid’ space, you need to fill it with services to help the tenant be more productive, whether that is sustainability or wellness solutions or digital technology.”

To justify its existence, the office will have to become a destination with a purpose, says David Gooderham, global account director with WSP in London. “If people continue to be the driver for change, as the most important component of an organization’s profitability, businesses will have to provide safe working environments that increase the feelgood factor and ultimately raise productivity and creativity. There’s much that we can learn from this lockdown period to make the workplace better and our interactions with it more effective.”

Holloway thinks the “hotelization” of office space will continue, with workplaces importing some of the home comforts that we’ve become used to. This might mean more relaxed dress codes, but also real planting and soft furnishings, to make spaces more cosy while helping to subtly create distance between people. “We need to think about furniture and other design solutions to create separation without losing the benefits of collaboration. If offices have a future, people need to feel safe in them.”

Coworking spaces have been leaders in the field of hotelization, and are perhaps the ultimate destination offices. But COVID-19 has left tumbleweed blowing through these buzzy, high-density communities. We consider whether this will be the death of the coworking space on pages 21-22.

Location, location, location: will we abandon cities?
This is another area where the short-term impact of COVID-19 may look very different to how things will eventually pan out. As workplaces start to reopen with physical distancing measures in place, offices in the centre of major cities are the most problematic, often necessitating commutes on crowded public transit. Suburban or out-of-town locations where workers typically drive will be able to resume something approaching normal operations much more quickly.

But if offices become destinations to meet coworkers, get inspiration and exchange ideas, rather than just to sit at a desk, those in buzzy locations make more sense. If organizations don’t need as much space because people work remotely more often, they may choose not to cut their rent bill but to spend the same amount on a smaller, more characterful building in an amenity-rich central location — a much more
attractive destination for employees than a featureless office park.

A shift to working fewer days in the office will benefit expensive central locations most, believes Tommy Craig, senior managing director at Hines in New York. "New York is a very challenging place to achieve good work-life balance because it’s extraordinarily expensive to live and raise a family. If you alter that paradigm and allow employees to work from home one or two days a week, the whole work-life balance shifts in the direction of something much more favourable. Commuting 40% less is a big deal, given how large New York is and the length of our commutes."

Economic activity has strongly clustered in the US’ larger cities over the last 50 years, as employment has shifted from manufacturing to services. Professor Bill Kerr at Harvard Business School has studied the progress of world-beating talent clusters such as Silicon Valley, which exert a powerful, self-perpetuating global pull for skills and capital. Will they continue to thrive in the post-pandemic world? “What made talent clusters so powerful is that ideas can jump from person to person — of course if viruses are also jumping from person to person, that’s going to make them a lot less attractive," he says. “This has always been a big challenge for places that were built around interaction and being in close proximity." If we can get back to work within the next few months, he thinks talent clusters will be secure for some time to come. "But if the pandemic continues for several years, these cities are going to struggle and we may see a more systematic pullback from the clusters. It’s a question of how it plays out over the next year.”

Another impact of COVID-19 could be that companies split operations between several locations, potentially benefiting smaller centres. "A lot of companies are going to be thinking about how they could make their workforce if not pandemic-proof, at least pandemic-resistant," says Kerr. "Opening a second office might not have made sense historically, but may be something that younger companies should do at an earlier stage. We have celebrated density and packing people together, but that’s putting a lot of eggs in one basket."

What about new office developments? Do we really need to build extra space?

This will be down to the dynamics of supply and demand in local markets. In some places, there was already a structural undersupply of modern, high-quality office space, and COVID-19 is likely to exacerbate this, even if the overall demand remains the same. Changes may also take a while to feed through. As CBRE Canada has pointed out, commercial real estate is a lagging industry — two years elapsed before office vacancy rates peaked following the global financial crisis.

The other side of the equation is the supply of capital for office projects. WSP director Gary McCarthy advises financial institutions, and he thinks real estate will still be attractive. “There is a deep pool of capital available for the right assets and real estate will continue to offer long-term investment managers a defensive strategy for their portfolio, and return yields sufficiently above government bonds. There will be specific challenges — regional offices will struggle more than prime city centre offices — but I don’t see there being a drop in capital commitment.”

The big question for investors in the commercial sector, McCarthy adds, will be how to differentiate your asset from the rest. How can you make sure that your office is the one that tenants and their employees want to go to. What will make an office a compelling destination in a post-COVID world? That’s a question we consider on pages 23-28.
What will COVID-19 mean for coworking?

Business models will have to adapt, but flexible space will be more valued than ever.
While the WeWork model of an informal ultra-high-density community is not compatible with COVID-19, the flexibility that coworking has brought to the market very much is. Coworking spaces in their current form were born after the carnage of the global financial crisis and flourished as a home for the newly redundant and entrepreneurial. But it wasn’t start-ups and freelancers that propelled the global flex space sector to annual growth of 31% between 2015 and 2019, according to JLL. Corporates started moving in, initially to profit from the feverish exchange of ideas, then on a much larger scale, to benefit from short-term leases and no-hassle premises under the space-as-a-service model.

Coworking business models will need to adapt, and the post-COVID market may look different. Tom Carroll, JLL’s executive director of EMEA research and strategy, has been tracking the dramatic rise of coworking and flexible space over the last decade: “In the short term, there’s quite a lot of pressure on that sector as lockdown has had a very tangible and real impact on occupancy within open coworking and shared space,” he says. “That’s going to put pressure on some operators, and we expect consolidation and some shifts as that shakes out.”

But agility will remain a significant driver for occupiers: “Flexible space has become an integrated part of portfolio strategy so we’d expect that to continue. In fact, we may quite quickly see a requirement for teams to set up or to leverage more flexible space solutions, even in the re-entry process and certainly as we move further forward. In the long term, we’re only going to be seeing more flexible, agile, dispersed and distributed work and portfolios.”

Bill Kerr, professor at Harvard Business School and co-director of its Managing the Future of Work initiative, thinks that the impact on coworking operators will depend on how successfully they can present themselves as healthy places. “Some coworking spaces have set themselves apart as having world-class facilities. Historically that’s been defined in terms of computing infrastructure and office furniture and peanuts and perks like that. I think increasingly they will also be defined in terms of the quality and health of the environment.”

As technological solutions such as temperature scanning and contact tracing develop and become more widespread, some workers may seek out places that implement higher levels of monitoring. “Coworking spaces could be very forward-leaning in terms of creating some of those work conditions, so it almost becomes a safer spot.”

This could become a strategy for managing elite talent. “Imagine a professional sports team with players that are paid $10-$20 million a year. If one of their stars goes out, that’s going to kill the team. That seems like an environment where you might put in place extra checks and technology to monitor any level of exposure that the players could be having. You might find that’s true in some of the most elite investment banks. We’ll see people experimenting with this to keep employees healthy, especially where their talent is exceptionally valuable and business-essential.”

Coworking will continue to influence traditional office space, as all leases become more flexible, with expansion and contraction clauses to allow occupiers to flex the amount of space they have around a core requirement. After the Christchurch earthquake in 2011, “no access in emergency” clauses began to appear in leases in New Zealand. “The landlord agrees to abate a fair proportion of the rent during a period when the tenant cannot access the premises, for a variety of reasons including earthquake, flood, pandemic,” explains Michael Holloway, general manager of property investment at Kiwi Property, one of New Zealand’s largest real estate firms. “There’s a debate to be had about what ‘fair proportion’ means, but I could see that well-advised tenants elsewhere in the world will want to build in these kinds of clauses.”

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Continue the conversation
Can we make the post-COVID office a destination of choice?

A seven-step plan for putting the wow factor back into the workplace
If work really is a thing you do rather than a place you go, where does that leave the office?

Mass working from home during the lockdown has given us a new perspective on the office, and perhaps the most fundamental shift is that going there will now be a conscious decision. For decades, offices have enjoyed an unquestioned status as the default location for knowledge work, places that we could — and sometimes did — go to with our eyes closed.

Over the coming months and years, individuals and organizations will make their own assessments about the role and value of a dedicated workplace, and they may reach very different conclusions. But one thing is for sure: if we decide that the office is still important — for productivity, for collaboration, for identity — it will have to become a destination of choice.

Successful offices of the future may have more in common with retail or entertainment venues that compete for every visit by offering a compelling, constantly evolving experience. We need to eliminate the barriers or frictions that make offices uncomfortable or unpopular, enhance and complement the positive, and go beyond to add some intangible chemistry or magic that lures people in and keeps them coming back time and time again.

Could an office ever inspire that most potent of 21st-century emotions, “fear of missing out”? We’ve compiled a seven-point plan to help it get there.

1

Don’t fail on the hygiene factor

Infection control will continue to be a top priority until a vaccine against COVID-19 is available. But even when the immediate threat has passed, there is likely to be a lasting mindset change as we better understand how disease can spread. Employers will need to make changes to the office environment, and demonstrate to employees that they have taken proper precautions to protect them. We’ve already looked at ways to virus-proof the office through physical distancing, enhanced cleaning and improved air quality, as well as strategies for managing vertical transportation. Safety is an essential prerequisite: if you don’t get this right, nothing else matters.

I THINK WE WILL STILL SEE THE OPEN OFFICE PLAN, BUT WITH DIFFERENT CONFIGURATIONS THAT ENSURE PEOPLE HAVE ENOUGH SPACE BETWEEN THEM

Diane Hoskins, Gensler
Give people space

This is a barrier that we need to remove. Apart from the immediate need for social distancing, the combination of unassigned desks and extreme density is one of the biggest reasons why some people do not want to go to the office. It is a trend that has perhaps run its course, believes Gensler co-CEO Diane Hoskins. “Health is a new lens with which to view the workplace, and this will force new approaches, including more sensible density,” she says. “But beyond health, from an individual effectiveness or business sense, our pre-COVID research had begun to reveal that densification may not have been fulfilling some of our fundamental functional needs in the office.”

When Gensler surveyed US office workers during lockdown, it found only 12% didn’t want to return to the office at all. There was no one type of person in that group, but what many of this cohort had in common was that they did not have a desk of their own before the pandemic, and that they found this a very uncomfortable experience. “In many cases, it is more of an indictment of the workplace rather than that they love working from home,” says Hoskins. “It is because the office was not a good place to be.” In fact, Gensler’s workplace surveys have shown a decline in workplace effectiveness over the last few years, which correlates strongly with increasing density. “We may be getting more people to come into the office, but we are not necessarily creating a better workplace for them. I think we will still see the open office plan, but with different configurations that ensure people have enough space between them. For those who come into the office every day, they should have dedicated individual work areas.”

Be clear about what the office is for

To truly be a destination for work, the office needs to be better adapted to what it actually involves. What we call “work” encompasses many types of activity, from tasks that require head-down concentration, to writing emails and making calls, to collaborating, brainstorming or informal social interaction with colleagues. So while we need our own space, we also need different types of space. At home, we’ve been able to choose where to sit — albeit between limited options — and it will be hard to give this up. The best activity-based working environments cater for the cadences of the working day, offering a variety of well-designed, freely accessible spaces.

“Being able to move around and have a different outlook or ergonomic situation or connection to the life of the office, that really changes the quality of the workspace,” says Ron Bakker, founding director of PLP Architecture in London. He designed The Edge in Amsterdam, one of the world’s smartest and most sustainable office buildings, which not only has a range of settings but synchronizes with employees’ calendars to make sure they can always find the space they need. “After a few years, we’ve found that people plan their day differently and make very conscious decisions about their diaries and workloads.” Occupier Deloitte has also recorded a 55% drop in absenteeism compared to its other Dutch offices.

Noise is probably the greatest source of stress in the open-plan environment, whether you’re struggling to concentrate amid the chatter or making calls against a backdrop of aggressive silence. Zoning should take acoustics into account, says Seiko Kurokawa, a designer at WSP in New Zealand, but employers also have to make it clear what’s appropriate where. “It’s really a matter of education and etiquette, and working together to support each other,” she says. “That needs to be discussed too when we come back to the office.”

Given the choice, many will stay home for solo focused work. Offices will still need some dedicated quiet areas for those who can’t, but the balance may flip. Why not take out some of the desks and dedicate open-plan areas to collaboration instead, suggests Heather Smith, national director of workplace strategies at Architecture49 in Canada. “We will hopefully see the end of 15 people packed into a meeting room, and maybe that type of meeting will be
conducted in a more open environment,“ she says. “I think we have to fight the urge to put up walls and barriers and dividers. Loads of us are desperate to get back to the office because we thrive on the social interaction, but if there are ten people there instead of 50 and you can’t even see them, we’re not getting what we need.”

But how do we know that the people we want to see will even be in the office that day? We will need to plan our visits more carefully to get the greatest value from them — reinforcing the idea of the office as an appointment destination. Smart technologies can help with this, a topic that we’ll be considering in the next part of the series.

Give people the things they can’t get at home …

This is a relatively easy win because the office already has a lot to offer that remote working can’t match. Not everyone has the space or set-up to work from home productively, and few enjoy enterprise-grade technology and big-budget equipment. “Giving people really great hardware like 3D printers or fantastic large computer screens is definitely a real attractor, especially for young graduates,“ says Carolyn Solley, senior associate at Hassell in Brisbane. “They are often motivated by a really cool workplace because it becomes like an extension of their own personal brand.”

Another pull is having a great restaurant, coffee shop or juice bar, or failing that, inviting a rotating cast of local caterers to serve on site. This potential for novelty is the office’s most compelling USP, particularly in downtown locations: “People crave variety — in their day, in their week and in their scenery,“ says Solley. “It can be a bit one-note doing the same thing, day in day out, in the same environment. Mix it up a bit and offer something others might not."

YOUNG GRADUATES ARE OFTEN MOTIVATED BY A REALLY COOL WORKPLACE — IT BECOMES LIKE AN EXTENSION OF THEIR OWN PERSONAL BRAND

CAROLYN SOLLEY, HASSELL
Returning office workers will be reluctant to give up their home comforts, and less willing to endure sub-optimal conditions or situations. So to encourage people to make the effort, offices need to make it as easy as possible for them to feel good while they’re there.

Natural light, fresh air and greenery are all typically more abundant in our homes than in commercial buildings and districts. For many, the positive impact of these simple things on their health and wellbeing has been a lockdown revelation. Similarly, daily exercise has become a habit that some will be keen to keep up, while others will choose to walk or cycle to avoid the risks associated with crowded public transit. Facilities that enable and encourage healthier lifestyles create additional reasons to come in, from secure bike parking and end-of-trip showers and changing rooms to fitness studios and classes on site. Building owners can also help to make offices essential lifestyle destinations in other ways too, by offering services such as child care, dry cleaning, parcel delivery hubs, or even personal shopping.

It’s not enough to look more like home, there must be a culture of genuine flexibility too — greater tolerance of personal calls, for example, or an acceptance that people may take breaks at different times of day. “We have devices that mean we’re at our jobs nearly 24/7, so it’s only fair that the home should be allowed to infiltrate the workplace,” says William Johnston, structural engineer and senior director with WSP in Canada. Smith agrees: “We may not be able to recreate all the comforts of home, but people are still going to want to feel that sense of connection back to their families. It’s really important that organizations continue to evolve the culture and clearly articulate that.”

More than ever, seeing other people will be the biggest reason to go to the office. A lot of the social life of an office is organic, but employers and building owners can nurture it by creating more opportunities for people to cross paths. A programme of social events is another easy win, but it’s the meetings we don’t plan that can really make the workplace into a genuine destination.

Above all, the office should be a place of inspiration, says Johnston: “Particularly in the knowledge industries, and as more and more tasks become automated, we need to create an environment that stimulates creativity and great ideas. We need dynamic, varied spaces that invoke curiosity and encourage people to think.” One way to support this is by prioritizing connectivity in the design. “This includes visual connections, such as atriums or common areas, but also areas that support accidental connectivity — bumping into people that you may not otherwise have encountered, learning what they do, and discovering that you can help each other.”

PLP’s office is one big space, defined by a 100m corridor through the middle. “It’s almost designed so that you do meet people,” says Bakker: “You go past all the different teams, and there are breakout spaces and all the printers and photocopiers in the middle. It’s from all these chance encounters that we have progress and innovation and creativity. It’s not just about communicating and exchanging ideas but also fresh ways of thinking. Group dynamics are a big part of how we function as a species, and we don’t quite get that on Zoom.”

These ad hoc interactions will be even more prized post-COVID, says Kurokawa. “The typical office will shift to become more like a coworking space, where we’re more conscious of opportunities to collaborate,” she says. Organizations might choose to capitalize on this by integrating actual coworking spaces where external collaborators can set up for the day, or by equipping front-of-house areas to host evening events. “There will still need to be private areas to secure sensitive equipment and information, but offices may have more layers of semi-public spaces.” The most compelling office destinations will not only be a magnet for employees, but for clients, partners and the wider community too.
Become a virtual destination too

Creating a seamless experience for virtual visitors enhances the office’s status as a physical destination, both directly and indirectly. With more people working from home and less business travel, almost every meeting will have virtual participants. Offices need to bring them into the room so everyone can contribute on an equal footing, as we’ve been able to do on video calls during lockdown. So collaboration technology needs to be intuitive and work flawlessly — something we’ll look at in the next article.

“I think we will start to see office meeting environments that look more like television studios and less like drab conference rooms with a camera stuck in the corner,” says Narada Golden, vice president at WSP Built Ecology in New York. “Virtual participants need to see and hear everyone in the room. To do this you need great lighting, good acoustics, engaging backgrounds and cameras that allow you to actually see everyone’s face.”

If the vibrancy of the office environment comes across on screen, those who’ve dialled in may be inspired to come in person next time — looking good on social media is, after all, a cornerstone of FOMO. But this will also help companies to reduce their carbon footprint, believes Golden, by reducing the need for employees to travel. “I love meeting people face-to-face but it would be wonderful to know that I don’t have to commute or fly just because the virtual experience is so limiting.”

Meanwhile, adopting the protocols that have made online meetings successful can also make the in-person experience better. Making sure that everyone has a chance to speak, for example, or using the chat window for questions can make it easier for those who are less comfortable breaking into the discussion.

Could virtual workers be integrated into the physical space in other ways too? “It would be great to walk over to one of our design teams in the office and see that every member is active and present, even if some of them are working remotely that day,” adds Golden. “Perhaps there is a beacon coloured red, yellow or green like your Skype status that you can tap to talk to them. That ability to have informal quick interactions is really helpful, but the conversation can stall if a colleague is working remotely and you have to walk back to your desk to patch them in. The office should be a place that creates maximum surface area between people, and to do this we need a fluid physical-virtual space.”

In the longer term, making virtual participants more visible might actually encourage the more introverted to come into the office — potentially one of the toughest groups to entice back. “When you’re working from home, there’s an onus to share your work more consciously,” points out Solley. “You have to reach out, set a meeting, whereas in the workplace it can be a little more natural. Some introverts may want to stay home longer and some extroverts might be ready to get back to the workplace — but who knows if that will turn out to be the case in reality?” In other words, when you can no longer hide at home, it may be more comfortable to blend into the crowd.

To reassert its value and retain its status, the office will have to work hard to meet new expectations and balance conflicting demands — and it will have to take full advantage of technology to do so. Smart building solutions can support health, convenience and comfort, while emerging collaboration tools will leverage augmented and virtual reality to supply the connection, novelty and excitement that we all crave in our working lives. We explore these over the following pages.

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Can smart save the post-COVID office?

Digital technologies can enable healthier, safer, more efficient buildings — and leverage assets that owners may not realize they have.
COVID-19 has presented some profound challenges to the office as we know it, from how commercial buildings can operate safely in the event of a pandemic to whether anyone will still want to go to work when they can collaborate with colleagues around the world from home. In this series, WSP has considered the post-pandemic office from many angles, and we’ve found that many people do still see enduring value in a workplace where they can come together and exchange ideas in person. But it’s also clear that there are many things that could be improved — to make offices safer, more productive, more inspiring places to be.

Smart building technologies can support this in many ways, from enabling transparent, data-driven building management to creating a compelling, frictionless experience for employees and guests. Next week, we’ll explore the emerging solutions that will transform the way the office looks and feels, and turn it into an essential destination for collaboration. But first, we need to tackle the fundamentals of operating in a post-COVID-19 world — the concerns that building owners must address before anyone will be prepared to come back at all. Some of the changes that we have to implement may be temporary, such as limiting occupancy of spaces to maintain physical distancing. Others around hygiene and reducing touchpoints may become permanent, as we internalize new behaviours. When we haven’t touched a door handle without slathering on hand sanitizer for months or perhaps years, will we ever really feel comfortable touching one again? Once enhanced cleaning becomes the norm, why would we lower our standards?

Smarter buildings are safer buildings in many ways, offering greater transparency about who is in them, how they are used and how well they are functioning. As occupiers reassess both the size of their footprint and the quality of their space, owners that can’t provide this will find themselves on the back foot, says Colin O’Gallagher, senior associate and smart building consultant at WSP in New York. “Landlords are receiving a lot of questions from tenants about how their building is going to be made safe, how it’s going to be disinfected and how that information is going to be communicated. I think there will be a dramatic shift towards deploying smart building technologies to gain a competitive edge, either to attract new leasing or keep existing tenants.”

None of this is at the bleeding edge
The new, better normal is about familiar technologies in a through-the-looking-glass
world. Up until now, features like touch-free entry or occupancy sensors have been nice-to-haves, found on a handful of brand-new exemplars or flagship retrofits, and implemented for a very different purpose. Now health is replacing hospitality as the primary motivation, and instead of optimizing for ever higher densities, we will need to set strict limits on occupation.

COVID-19 has given new impetus to a movement that has been in the wings for decades, believes James Whalen, chief information and technology officer at Boston Properties. “The term ‘smart building’ has been around for 20-plus years and the industry is still in the first or second innings. There are buildings with smart technologies, not smart buildings.” In February, Whalen gave a keynote speech on the next decade for property technology, or proptech. Reviewing it just a few short months later, he thinks that the key themes still hold true but the emphasis has changed: “Prior to COVID, links between healthy office environments and the productivity of your talent were beginning to enter design conversations based on emerging science. Now healthy buildings have taken on a completely new and elevated significance.”

The paradigm may have changed, but that doesn’t necessary mean the hardware has to. In many cases, making a building smarter involves reconfiguring existing systems, exploiting their functionality for another purpose, or using the data they produce in a different way, to support new business needs. Greatest attention has focused on the entrance, lobby and elevators, as the areas with the highest levels of traffic and the frontline of defence against infection. Employers will be able to use smart solutions to limit the number of people coming into the office on a given day, something we’ll consider in the next article. But as a back-up and to prevent too many people entering at peak times, an access control system can be set to stop the turnstiles from operating once a certain threshold is reached. For one client, O’Gallagher has discussed linking the access control system into presence sensors in the lobby and the elevator banks, as well as the automatic front doors. Then when a set occupancy level is reached in either or both spaces, the entrance doors and turnstiles can lock until they have cleared out. “We could also leverage the digital signage to trigger a notification so people know the door isn’t broken,” he says. “They’re the kind of discussions that we’re having right now, looking at the existing systems that we’re already putting into buildings and augmenting and integrating them to create safer and more informed environments for the landlords and the occupants.”

Where systems are already installed and integrated, programming in this additional functionality is relatively straightforward. But it will depend on what systems a building already has and their current level of sophistication: “It’s going to be a pretty wide range from one project to the next depending on the physical footprint of the systems, the desired functionality and how many we’re tying together.”

How do we make entrances touch-free?
Creating a completely touch-free experience is much more involved, and something few owners will have chosen to invest in before COVID-19. Automatic doors, turnstiles and elevators could all be set to interface with personal devices, to authenticate someone, let them in, summon the elevator and tell them which one to board. “It’s not VC-backed brand-new technology, it’s all stuff that has been around forever, it’s just that nobody needed to put it all together in that package and it’s not cheap to do so,” says Jonathan Flaherty, senior director, sustainability and utilities.

THE TERM ‘SMART BUILDING’ HAS BEEN AROUND FOR 20-PLUS YEARS AND THE INDUSTRY IS STILL IN THE FIRST OR SECOND INNINGS. THERE ARE BUILDINGS WITH SMART TECHNOLOGIES, NOT SMART BUILDINGS

JAMES WHALEN, BOSTON PROPERTIES
at Tishman Speyer. Flaherty has overseen one such project, on Tishman Speyer’s corporate headquarters in New York. This involved upgrading the access control system, turnstiles and guest registration system, originally installed just after the 9/11 terrorist attack on the World Trade Center in 2001. “For that type of equipment, 20 years is a reasonable lifespan and the technology has changed enormously,” says Flaherty. “Now I can email you a QR code and you can use that on your personal device to open the turnstiles.” There is also provision to link the turnstiles to the elevator dispatch system: “In the future, you’ll tap your badge or show your code, and it will not only open the turnstiles, but call the elevator and tell you which one to go to.”

Flaherty says that they will now look at rolling out the same technologies through the rest of its portfolio, depending on the age of the building and the solutions currently installed. “We buy buildings as well as building them for ourselves, so you get all sorts of diverse systems, and it’s hard to get that perfect, seamless experience. But anything we’re planning on holding for any period of time, we’re going to look at that as soon as we can.”

This does take time, not least because any failure of an access control system can very quickly become a customer nightmare. Boston Properties has been piloting and implementing touchless access solutions for several years: “You just don’t turn the switch,” says Whalen. “The technology is getting there, but it’s going to take time to meet the requirements of certain use cases. In a large multi-tenant building, you can have thousands of people coming through a set of turnstiles in an hour, so you need absolute reliability and performance.”

**A mesh of sensors: the new essential**

Beyond the entrance, a mesh of sensors throughout a building can support a whole range of use cases. In a COVID context, as well as identifying when there are too many people in a space, they can also be used to direct enhanced cleaning to where it is actually needed. “A landlord could have a very aggressive cleaning strategy that is comprehensive, so that every six hours a cleaning crew is cycled through the building,” says O’Gallagher. “But it will be a lot more efficient to target disinfection at spaces that have been used.”

There are various sensor solutions, offering different levels of granularity. The highest resolution data, and the most intrusive, is provided by people-counting cameras, which track occupants based on their physical descriptors,
such as hair colour, glasses or types of clothing. “We can get the most meaningful data out of a system like that because we can know that there are 15 people using the space and track to some extent the places they go to within the office, as opposed to just using cameras for security,” says O’Gallagher. “The system doesn’t necessarily know that it’s looking at you, as personally identifiable data is not assigned to any other records, so it is anonymized to some degree, but it is seeing very descriptive information about individuals.”

For simple people counting, infrared or ultrasonic sensors merely detect a presence — which may be sufficient for cleaning purposes. “If I see multiple subjects in a space for a long duration, I know it was used heavily and that it needs to be disinfected,” says O’Gallagher. “I don’t necessarily need to know that there were 20 people there in order to make that judgement call.”

In the middle, and most versatile, are Bluetooth beacons, which can be standalone or connect to mobile devices to track their movements through a space. These can be anonymized or not, depending on what the data is needed for. Because they identify individual devices, these can be used by the access control system for secure touchless entry, for space utilization analysis or for asset tracking of equipment.

**Maximum impact, minimum investment**

All of these upgrades can be bundled as part of other projects, and the data they produce can be used for multiple purposes. The crucial thing when making any improvement to a building is to look at how it can be leveraged for maximum impact, says Herbert Els, national leader of the building technology systems group at WSP’s ThinkBOLDR Innovation Center in Colorado. Presence sensors can be installed as part of a lighting upgrade to support space utilization or room bookings; video surveillance can also be used for people counting. Building owners may already have access to rich, untapped seams of data. “There are many ways of leveraging the same infrastructure,” says Els. “I think there’s going to be tremendous investment in what we would call a building analytics platform, that actually gathers data from these various control systems — the building management system, lighting controls, your vertical transportation, surveillance, space

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I THINK THERE’S GOING TO BE TREMENDOUS INVESTMENT IN BUILDING ANALYTICS PLATFORMS, WHICH ACTUALLY GATHER DATA FROM THESE VARIOUS CONTROL SYSTEMS

*HERBERT ELS, WSP*
A lot of these systems are already present in buildings, and most are already able to exchange data. This isn’t about throwing everything out and putting something new in; it’s really an evolution of these established systems.

It doesn’t matter how you get the information, the point is to use it, says Whalen: “Whatever technology you’re applying and sourcing data from, the ultimate goal is to have insights that are actionable, to gain visibility into what’s occurring so you can proactively optimize the performance of your operations and buildings.”

Smart can be used for quick fixes, but it has much greater potential as an enabler of effective, efficient and transparent building management, as well as resilience against future shocks. The data that a mesh of sensors can provide would have been invaluable in the early stages of the lockdown, points out Matthew Marson, head of smart places at WSP in London. “If companies had done this already, then they’d know exactly how their spaces were used and they could have updated them as necessary to maintain social distancing. They would have had better operational agility too, in that they’d have been able to turn parts of the plant on and off as things were ramping down then ramping back up. Now someone’s got to go in and do it manually, and they’re not making decisions based on real data. There’s a lot of wasted energy and maintenance and management time.”

COVID-19, and the likelihood of future pandemics, should indirectly improve the management of buildings, he adds, through enabling energy analytics. “Maybe we should think of it as a springboard into zero carbon. If we’ve now got a building that is basically running on zero, we have the baseline. So it’s not a question of taking energy away from people, it’s about what we allow to be added back on.”

As well as offering new opportunities, smart technologies do open up real estate to new vulnerabilities — cybersecurity is not a new threat, but it increases with more building systems being tied together. Privacy too will come to the fore as employees become more conscious of the amount of personal data they are indirectly handing over to buildings. “I think that if people can swap a little bit of privacy for guaranteed health, they will,” says Marson.

In fact, office users could stand to gain considerably more in return for their data in tomorrow’s smarter offices. From a customer-facing point of view, there are a host of value-added services that buildings can provide when combined with smartphones and wearables, to remove frictions so that going to the office becomes easier and more pleasurable, and to add an all-important wow factor to inspire people to come to work instead of staying home. We’ll consider all of these and more in the next article.
How can smart transforms the office experience post-COVID?

The fusion of building tech, smartphones and wearables could make the post-pandemic workplace not just possible, but much, much better.
You’re cutting it fine to get to your first meeting — but that’s okay. You’ve already ordered your coffee via the office mobile app, and as the turnstiles open automatically on your approach, you can see it’s just ready for you to collect. You’re excited about the day ahead. Yesterday, you were ploughing through reports at home, but today you’ve come into the office to catch up with colleagues — your team has a brainstorm to prepare for a pitch you’re due to deliver next week via hologram. You can see from the company portal that it’s going to be busy, but you’ve already booked your favourite desk, facing out on the building perimeter, as well as a mid-afternoon yoga class on the terrace.

The app has an elevator waiting to take you to your first destination. It knows you’re trying to increase your step count so it’s allotted you a multimedia huddle room on the other side of the building, but you find it easily with turn-by-turn directions. As you approach, the door opens and the room controls appear on your smartphone screen, telling you it’s set to your preferred temperature. You’ve made it with a minute to spare — just enough time to open your laptop and watch the large, high-definition screen on the wall come to life. One click and your colleague is there, speaking to you — it’s as if they’re in the room, even though you know they’re on the other side of the world, preparing to log off for the day. They want to walk you through a new project, so you slip on your augmented reality glasses …

It’s office life, not as we know it, but as it could be, and sooner than you think. Digital technologies can already do all of this, and COVID-19 will accelerate their adoption in offices. In this series, we’ve already considered the many ways in which the knowledge workplace is likely to change, from the impact of physical distancing to changing occupier demand. It is clear that for an office to be successful — as a place for collaboration, as an embodiment of corporate culture, as commercial real estate — it must become a destination of choice. That means giving people more space, greater freedom and flexibility, and a stimulating, unique experience, as well as placing much greater emphasis on health and wellbeing.

Smart technologies can support all of this, easing the transition and helping to create a frictionless environment that, at its best, just works.

“This is going to push us further towards technology adoption that people have been wanting for a long time,” says Natalie Engels, technology leader at Gensler in San Jose. “It’s much like the airport experience that we had to adapt to after 9/11. At first, all of the screening and new processes seemed cumbersome and overwhelming, and there’s going to be an aspect of that as we move back into the office. So we’re considering how we can take the technology that’s needed and make it pleasant.”

In the last article, we looked at how building owners can take advantage of smart technologies such as mobile access control and Bluetooth beacons to make post-COVID operations safer and more efficient — to enable touchless entry and circulation, for example, target cleaning where it’s needed or run building systems according to occupancy levels. Essentially, these use smartphones as proxies for people, identifying or anonymizing them as required. The flipside is that they also allow users to interact with the building using their personal devices, with the same platform connecting different data streams together to support a whole range of value-added services. “Building apps have been around for a while but they’ve been on the periphery,” says Roneel Singh, smart technology specialist and a director at WSP in Melbourne. “They’ve been seen as a gimmick, rather than something that can actually enhance the lives of building users. I think that there will be more demand for these and that we’ll see better, more holistic versions.”

The endless possibilities of building apps
Building systems could reassure occupants by providing real-time information about the environment itself, such as occupancy levels, air quality or how recently spaces have been cleaned. One example is the CleanPulse app, which WSP developed for Canadian transport and tour
operator Ontario Northland, so passengers or hotel guests can check the cleaning status of their bus or room. This could be easily rolled out to offices, either linked to the building management system or, more simply, as a cloud-based app.

“People are going to want that sense of safety — they want to feel comfortable that they’re not exposing themselves to risk,” says Randy Howder, Gensler principal and managing director of its San Francisco office. “The only way to really know that is with the kind of data that sensors provide. Before, this was just used to help facilities managers understand whether they needed more conference rooms or to turn the lights off when nobody was there, but now it’s going to be much more important to show data on spaces being maintained or cleaned.”

As well as facilitating touch-free entry, apps could also help to resolve common gripes about contemporary offices, such as a lack of dedicated space. “Your phone acts as your access card to move around the building,” says Jaco Cronje, an Internet-of-Things solution architect with WSP in Houston. “You could use the app on your phone to call the elevator, and it could send you a note to let you know where there’s a free seat so you know which way to turn when you reach your floor.” Connecting access control to the presence sensor network and room booking system could facilitate genuine activity-based working, by enabling people to view occupancy levels in different areas and reserve spaces. If the room booking system is integrated with individuals’ schedules, they could be automatically allotted appropriate spaces for each part of the day. Then if you want to speak to a colleague, the app could show their location so that you don’t have to wander fruitlessly.

Building amenities could also be accessed through the app, enabling people to place orders for food or book fitness sessions, and check on queues for the lunchroom. Queueing is set to become an all-too-familiar experience in the post-COVID world, and this will drive an expectation for virtual solutions, believes Fran Heller, CEO of Californian start-up Good2Go. Its restroom app was commercially launched in 2019 in response to the lack of public restrooms, and offers keyless, touchless access and virtual queueing to a network of facilities. Post-COVID, touchless restrooms will be even more valued, but it’s the virtual queueing component of the app that is suddenly fulfilling a critical need. “No one likes to stand in a queue, so having your position held virtually — so your phone stands in line for you — is a highly desirable feature,” she says. “If you could get into the queue for the restroom while you’re sitting at your desk, that is way more efficient. But it doesn’t matter what’s on the other side of the door, it’s applicable to any resource.” Heller is now talking to office owners about using the app to manage elevator capacity.

Giving occupants control
Occupants could not only understand but control their environment via their own device too. “We can create integration that allows people to walk into a meeting room and scan a code to enable room control on their own phone while they’re there,” says Colin O’Gallagher, senior associate and smart building consultant with WSP in New York. “Then they don’t have to touch a communal control pad, but there’s a wow factor in it too. I think landlords are going to want to invest in

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**NO ONE LIKES TO STAND IN A QUEUE, SO HAVING YOUR POSITION HELD VIRTUALLY — SO YOUR PHONE STANDS IN LINE FOR YOU — IS A HIGHLY DESIRABLE FEATURE**

FRAN HELLER, GOOD2GO
strategies that are highly visible and really have an impact on the occupant experience by giving a technology-rich feel to their spaces.”

Going a step further, the building could connect with wearables or smartphone health apps to support health and wellbeing or fitness goals. “Maybe the more data you are willing to share, the more the smart building management system takes care of you,” suggests Oliver Larsson, telecoms director at WSP in Sweden. “In the app, you could say ‘this week, I want to be a bit more healthy,’ so it might tell you not to take the elevator or book the conference room that’s furthest away from your office space so you have to walk more.” This could be coupled with “nudges” to help people adopt healthier behaviours, he adds — he gives the example of a Swedish developer that deliberately makes the elevators slower to encourage people to take the stairs. To address concerns about privacy, this could be opt-in only: “It’s like a cookie on the web — if you want to have a new layer of information, you can accept it. If you don’t want to have that opportunity, you don’t have to.”

All of this is likely to span both landlord and occupant systems, so there needs to be some integration between them. The developer or facility manager could provide the core application and then issue modules to individual tenants, which can be reskinned for a different look and feel. Or if a tenant already has their own application and portal, they can use APIs to exchange information with the building systems. “We can build a robust network infrastructure in such a way that building owners can easily add apps to the set of services they offer their tenants,” says Lucy Casacia, vice president, smart solutions at WSP in Canada. “That enables the space to be adaptable and to evolve to meet needs in real time as they arise. We know we’re going to need a greater awareness of where people are, but we also need to inject some kind of interactivity so that people can be in a space and feel the excitement. It would be terrific if we could make our workplace feel like we’re at a sports or entertainment event, and get that sense of camaraderie. You just can’t recreate that vibe through platforms such as Zoom or Teams.”

Video calls will, however, be an unavoidable part of working life from now on. A substantial number of people will be working from home at any one time — to comply with occupancy restrictions, because they prefer it, or as part of a greater corporate shift to remote working — and travelling to attend a meeting will be less common. Pandemic working has also unleashed much greater inter-office and international collaboration: if everyone’s on video, it doesn’t matter where you are.

This is one of the most significant areas where the physical office will be found wanting.

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Continue the conversation
Corporate IT setups were already compared unfavourably with the simplicity and intuitiveness of consumer tech. While consumer tech isn’t expected to meet the same level of security or robustness, corporate tech does have to keep up with consumer expectations. “People will expect to be able to walk into the space and for it to work as simply as you turning on your laptop at home,” says Singh. “You shouldn’t need to have a Masters degree to figure out how to connect to the WiFi or display content on a meeting room screen. We need to move away from the gadget-focused approach and look at the functionality of the room.” Audio-visual equipment needs to operate so well that you don’t even notice it, and it needs to work across all platforms. There will also need to be many more smaller soundproof huddle rooms for two or three-person calls — or the open-plan office risks turning into a call centre.

**Our new virtual reality**
The pandemic will also drive innovation in collaboration technologies themselves, says Howder. During the pandemic, Gensler has been using the Miro digital whiteboard to share work: “That’s easy when everyone is virtual, but when we’re back in the office, we’re used to ways of working where you might pin a drawing to a wall and then everyone stands back and looks at it. That can’t really happen when some of your team are virtual. There has always been a bias towards people in the office in terms of their experience and their ability to interact and collaborate. We’ve been thinking a lot about how you make a seamless connection between those who are remote and those who are in the room.”

Within the next few years, Howder thinks it could be possible to have virtual participants sitting at a conference table in holographic form. Holograms have already been used to bring dead rock stars back to life for eerily convincing “live” shows — as the technology develops, they could be used for virtual presentations or pitches. Even more commonplace will be augmented reality: “Instead of sharing your screen, you’re sharing that augmented reality experience,” says Singh. “You’ll be able to be in a physical space, walk through it with someone and have a conversation.” He thinks this could be added to video conferencing platforms within 18-24 months.

It’s not just the in-person meeting experience that we need to replicate for virtual workers. They also miss out on the more passive awareness of office interaction and the sense of community. “These are some of the aspects of work that will be accelerated faster because now everyone understands what it is like working from home, and they don’t want to lose this connection regardless of how far apart we are,” says Engels. Howder suggests that each workspace or neighbourhood could have a large monitor showing the group’s latest activity: “You could see where people are and a feed of conversations going on, so you have the same awareness of chat threads that you do in a physical space. In our office, we have a digital board of all the employees and their quirky photos. You could imagine extending that to a more real-time display of what people are doing now.”

In the post-COVID market, smart will become one of the most important points of differentiation for developers and landlords, believes Singh. “It has always been very hard to quantify the business benefit of the user experience,” he says. “But if it’s done well, people won’t want to give it up.” He compares it to the way that airlines and consumer electronics companies seek to secure loyalty, beyond simply selling flights or gadgets. Apple made its television available at a heavily discounted price to keep consumers purchasing media content from its library and using its smartphones; Qantas rewards frequent flyers with access to its premium lounges. “Once people have been in the Platinum lounge, they really want to get their travel spend up to reach it again. We need to create that sort of feeling in a building: if people are able to transition seamlessly and they have access to all of these amenities, you create an ecosystem that they won’t want to leave.”

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**THERE HAS ALWAYS BEEN A BIAS TOWARDS PEOPLE IN THE OFFICE. WE’VE BEEN THINKING A LOT ABOUT HOW YOU MAKE A SEAMLESS CONNECTION BETWEEN THOSE WHO ARE REMOTE AND THOSE WHO ARE IN THE ROOM**

RANDY HOWDER, GENSLER
COVID-19 has challenged vertical transportation strategies in tall buildings, probably more than in any other building type. As real-estate prices surged in downtown areas, elevators have come at a premium both in higher operational costs and reduced rentable areas. As a result, vertical transportation design focused on optimizing services by increasing speed, sizing components efficiently and installing smarter control systems, to reduce the number of elevators required and therefore the size of the building core. Office buildings have a high density of population, ranging from 1 person per 6m² to 1 person per 12m². As they reopen in the aftermath of the pandemic, there will be concerns about physical distancing and about touching surfaces. Both of these are particularly relevant in the case of elevators: by definition, people are required to be in close proximity inside elevator cars, and systems are normally operated by pressing buttons. This presents immediate issues for tall buildings, as well as longer-term strategy issues.

Reducing elevator occupancy will significantly impact building operations. Under social distancing guidelines, the maximum occupancy of a large, 21-person elevator car might be just four people.

**WHAT ABOUT THE ELEVATORS?**

Vertical transportation is what makes multi-storey buildings possible. So what happens when enclosed spaces, push buttons and efficiency become the problem rather than the solution?

*By Steven Truss, director — head of vertical transportation, and Michael Seddon, associate director, WSP*
For a 17-person car, it would be two and for smaller cars that would normally hold 13 people, one. That’s a huge reduction in capacity and will require a rethink of how we use space. What will be the new “acceptable personal space allowance” that vertical transportation design will have to accommodate, and what impact will this have on existing buildings?

As offices start to reopen, occupancy levels may need to be restricted because the elevator system cannot move the required population at peak times of the day, due to the need to observe social distancing. There will have to be restrictions on the number of people entering a building, with staggered arrival times and enforced stair use on lower levels. Elevators will also have to be cleaned much more frequently, with hand sanitizer provided in the lobbies and inside the cars. People may try to avoid touching the controls with their hands by using other methods, which could cause further delays in the system and a higher rate of breakdowns. In a world where automation and optimization have become key, staff will be required to control the flow of passengers into elevator lobbies.

There are various ways in which we can modify elevators to limit the number of people travelling in them, depending on the age of the system. The design life of an elevator is typically 15-25 years before it needs to be modernized or replaced, but many buildings have units that are older — there’s a huge back stock ranging back to the 1970s. There’s no way that we could bring the technology and control systems within all of those elevators up to modern standards quickly. It might be possible to limit the number of occupants by setting a lower weight limit for each car. Most elevators have a load weighing device, used to prevent it carrying a higher load than it was designed for. This is typically set at 80%, but could be reduced to 20% to restrict the number of people to a safe level.

More complex vertical transportation systems that use destination control or energy-saving technology based on complex algorithms might be more difficult to adjust. In recent years, vertical transportation strategies have been designed to minimize energy use. For example, newer elevators are fitted with much more sophisticated electronic load weighing devices, which measure the strain on certain components in order to apply the minimum amount of torque to the motor to move the weight in the car. The other area of efficiency is in the management of passengers. With hall call allocation control, for example, you present your swipe card at the lobby entry speed gate or elevator control system. It knows where you need to go to, summons an elevator and tells you which one to board. The advantage is that this is completely touch-free, but the problem is that the efficiency works directly against social distancing. Hall call allocation clusters people who are going to the same floor or sequential floors, so that the car only makes a limited number of stops with a greater number of people inside. That has two effects: it makes the cars busier and it means that people cluster around a specific entrance in the lobby, both of which work counter to social distancing. WSP’s VT team is working with elevator suppliers’ R&D teams to explore options for reducing the sensitivity and efficiency of these control systems, to allow the elevators to be dispatched containing fewer passengers.

Can elevator manufacturers detune or desensitize the control systems or reset the load weighing devices? At the moment, we don’t know how easy it is to do that. Offices that use these complex controls may need to introduce a temporary concierge stationed before the speed gate or turnstiles to restrict the flow of people into the elevator lobby, to help manage crowding during times of high demand. Each tenant in the building can control the lobby on their level, but it will still be crucial to address the underlying algorithm technology, to make sure that the elevator isn’t stopping and allowing more people into the car.

Post-pandemic, people may remain reluctant to interact with elevators. With advances in smart building and smartphone technology, there are...
already solutions that reduce the need to touch the controls. For example, sensors in residential buildings can enable the system to understand when a resident appears to be approaching and send an elevator to that level.

Technology coming on to the market could almost remove the need to touch anything at all. In smart buildings, building users might wear keyrings or fobs integrated to the security system that would enable their movements to be tracked. Sensors in lobbies would detect that you’ve turned left towards the elevators and start preparing a car for you. Many security systems now support virtual fobs, by interacting with your phone or smart device. They could potentially go one step further, allowing employers to schedule arrival time elevator access to spread out peak demand. This strategy may ultimately be the best for larger commercial tenants occupying multiple floors, who have greater control over the occupancy of elevator cabs. The bigger question is whether people really want their phone to be controlling their lives to that degree. Do you want to be mapped by your mobile phone signal and for your phone to exchange that information with the building? That’s a whole different debate.

Stairs may become a more prominent consideration in buildings. They are more open by definition, and there is better visibility, which makes social distancing easier. Stairs also support wellbeing strategies by encouraging people to move more. But there are only so many flights we can expect people to walk up. Industry standards recognize that if people work on the first floor of a building, 90% of them will walk up. On the second floor, that drops to 50%, and the third 25%. Above that, it’s elevator-only traffic. For tenants taking multiple levels in commercial buildings, convenient access stairs should be encouraged within their individual domain. As with elevator buttons, handrails are likely to become high-traffic touch points so they will require enhanced cleaning, as well as hand sanitizer dispensers at entry and exit points.

In the longer term, it’s unlikely we will be designing buildings to allow 20m² per person to accommodate social distancing. For a building to make commercial sense, the rental stream has to support the business case, so it has to have a reasonable population. To make a large building practical, the total area of elevator cores has to be as small as possible and it’s always a fine balance between space-take and elevator performance. In very large buildings, we already use double-deck elevators to increase capacity without taking up extra space, as well as algorithm-based controls to manage it efficiently. The shape and size of buildings may change, but the population will still have to be fairly high in order for them to make financial sense. The crucial consideration will be the amount of space that has to be allocated to a person within the building and how much space will be acceptable for a person travelling in an elevator car. This might mean that future buildings are designed to accommodate fewer people in the same size footprint, with larger elevator cars to provide increased personal space.

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A WORKPLACE SAFETY REVOLUTION

The health and safety landscape has changed completely for businesses

By Doug Crann, senior safety consultant, WSP

This is a pivotal moment for the culture of workplace health and safety. If companies drop the ball on decontamination protocols or any other key element in their recovery plan, it could do irrevocable damage to business continuity, company culture and trust in their leadership.

For workers, the pandemic has made health and safety an increasingly personal issue. It is not just about protection for themselves any more, it’s about protection for their families and social circles. That’s a huge transition, and it means we’re all far more likely to demand accountability and more relevant, substantiated investments in workplace safety. I can’t imagine coming into work on day one after this pandemic without knowing that my employer had put all the measures in place that they said they would.

Leaders within organizations will have to put their money where their mouth is if they want to attract and retain quality people. Investments in enhanced non-pharmaceutical interventions, response protocols, health screening, contact tracing and proven decontamination protocols will be the new minimum expectations. We will also see an uptick in demand for defensible safety programs and training on new safe work practices.
as a result of greater awareness of workers’ rights and appropriate protective measures. Not to mention that businesses will need to be alert to the mental health toll of working within these new restrictions, and of changing family demands. Failure to advocate for employee safety and wellness will likely result in a higher number of employees becoming disengaged and looking for a new work environment with a more aligned set of values.

At the same time, there is a clear operational imperative for defined protocols and a real opportunity to define your company values. We don’t know what the next six or 12 months hold, and we can’t lose sight of the fact that we may have to address a second wave or additional exposure to COVID-19. Businesses will have very important decisions to make, and they can’t be taken lightly or unilaterally. For example, if a worker without symptoms says, “I’ve got a family member who has recently travelled and probably has COVID, so I’m going to self-quarantine for 14 days,” how thoroughly do you decontaminate that employee’s workplace? Do you shut down again for a couple of days or weeks to decontaminate adequately? Listening to our employees’ concerns and requesting their input at every stage of this recovery phase is essential to successfully reopening businesses while reinforcing company values and a “people come first” approach to managing your risks.

One thing that safety professionals agree on for sure is that it’s not enough to simply follow government guidelines or to adopt procedures from competitors. Companies need to adopt a more disciplined risk-management approach and develop, for example, a decontamination code of practice tailored to their own organization that addresses specific exposures and scenarios. The at-risk factors for each workplace, each community and indeed each employee are different. Is your office close to high-risk businesses that are now hotspots, such as retirement communities or hospitals? How many lifts does your building have? Can you control the flow in and out effectively while maintaining social distancing? Where does your community stand on rolling out widespread testing? What local restrictions are still in place, for your business, partners and suppliers? All of these factors contribute to the unique risk profile of every organization. Finding qualified internal and/or external support to adequately identify and address these critical risk factors will make or break recovery efforts for many employers.

Another vital question is whether there is sufficient decontamination support available locally. Four months ago, I would have had no problem finding a contractor in Toronto to deliver office decontamination, probably within 24 hours. Is that feasible in this new normal? We’re not sure. The loosening of restrictions and opening up of businesses will require a tremendous amount of monitoring and ongoing analysis so we can adapt appropriately to supply chain demands. Companies will also need to implement a vetting process to validate the skills and qualifications of those carrying out facility decontaminations and other on-site service work — and make sure they have their own continuity plans and safe work practices in place. This is all part of the due diligence that employers will have to undertake before they can confidently say to staff: it’s safe to come back to work.

Taking these extra steps can make all the difference in terms of performance, continuity, culture and employee trust. Businesses are going to have to learn more — and quickly — about risk management, and relying on internal expertise may not always be an option. We will have to collaborate, share ideas and adopt a closely monitored trial-and-error approach, and then be quick to adapt as we learn more about the constraints of our new working environments. How can we afford not to?

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Do building wellness standards address infection control? At the onset of the pandemic, the International Well Building Institute went into action quite quickly to review the WELL standard, examining how it affects the spread of infection and whether it can help to prevent it. WELL is organized around 10 themes, ranging from air and water quality to other concepts that have relevance for infection control, such as fitness and mental health. It does contain a lot of guidance to promote hygiene: it starts with very simple things, such as using signs to encourage people to wash their hands, but it also has very detailed policies for designers and facilities management staff. It looks at the types of surface that are specified — are they easily cleaned, do they harbour contaminants? On an operational level, it addresses aspects such as staff training, cleaning products and protocols. So with handwashing, for example, soap dispensers should be touch-free so that we can clean our hands without picking up pathogens, and we should be able to dry our hands using tissues or touch-free devices.

We don’t need “chemical bombs” — we can still use environmentally friendly and healthy products. When you look at the chemicals that
will kill the coronavirus, scientists have found that some very basic products, mainly containing alcohol and other standard ingredients, are the best way to deal with it. Using the right products is not just about containing viruses, but also ensuring that we don’t compromise air quality and health more broadly.

The air quality criteria of WELL make a huge difference. The WELL air concept aims to ensure high levels of indoor air quality across a building’s lifetime, and if you are carefully controlling the airflow and the supply of fresh air, you can reduce the risk of cross-infection. For mechanically ventilated buildings, it’s absolutely crucial, for example, that the right filters are installed and regularly cleaned or exchanged to ensure that no bacteria or viruses are brought into the space. WELL contains strict requirements both on equipment specifications and maintenance regimes.

Perhaps now other areas of wellness standards will come to the fore. A key aspect of WELL is that organizations have to prepare an emergency management plan, to deal with risks such as fires and earthquakes as well as infections. So in the case of a pandemic, they need to have measures in place for informing staff of the risk, providing alternative ways of working, implementing strategies for at-risk groups and so on. All of this was already in the standard — therefore buildings with a WELL strategy in place might be a bit better prepared for the current situation.

Buildings that promote use of stairs over lifts will fare better post-COVID. Giving people access to stairs and making them a prominent feature of the building is a key aspect of WELL, because it encourages occupants to move about, socialize and stay fit. It will be easier to socially distance in a building with a well-dimensioned feature stair that provides enough space to allow people to go up and down at the same time, rather than a narrow fire escape stair or a small elevator.

Clearly, the WELL standard needs to work in parallel with other guidance. A standard such as WELL is both guidance and — through certification — an assessment of conditions and intentions at a certain point in time. Organizations will still need to assess and adapt to how their particular space works for their staff and the activities they need to do. I am also curious to see how the current trend of increased working from home and its inevitable impact on workplace design will shape future versions of WELL.

The crisis has illuminated a wider point about wellness and why we need to keep people healthier. It’s important to remember that there is more to reducing risk than good hygiene and social distancing. Aside from age, the groups that seem to be most vulnerable to COVID-19, are those with pre-existing conditions such as asthma, heart disease, obesity or type 2 diabetes. Quite often this is linked to an unhealthy lifestyle or poor living and working conditions. Taking one example, poor air quality is thought to be responsible for 400,000 premature deaths every year in Europe alone. A well-designed “healthy” building can contribute to physical and mental wellbeing — then if people do become infected with a virus, they have a better chance of a speedy and full recovery.

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COVID-19 has been a global traumatic experience. It has brought anxiety and apprehension about how we’ve previously operated and how we will learn to operate as we navigate our new normal. Today, many of us are in the unique position of having to quickly become subject matter experts in roles newly defined overnight. It is crucial we make informed decisions and don’t lead with fear-based haste. There are situations where turning an office on its head or deploying technologies we’ve never used does not support logistical or economic reason, or is potentially misaligned with business objectives.

I look at this in terms of how we can optimize the current environment to provide employees the normalcy they are seeking, while implementing new policies and procedures. We know building technologies are dated to a large degree. Efficiencies can be gained with subtle improvements to achieve desired operational performance — this could include simple enhancements to systems such as access control. Considerations and risk assessments should include:

- When was the last time a system was independently assessed or audited?

We need to give ourselves time to take informed decisions and make incremental improvements.

By Terri Govang, security specialist and director of technology for Western Canada, WSP
- What is the age of technologies deployed?
- Are devices secure by current standards?
- Does the plan include provisions for small renovations to augment frictionless access or contact tracing?

Leaning into the often-overlooked intelligence of security, we gain insight from analytics. For example, should a known individual with an infectious disease access an area, we can identify subsequent users, then action accordingly. Ideally, leveraging the intelligence of systems can better protect the business and its people.

Many organizations are still using outdated paper logbooks, which does not serve auditing or safety purposes. When we automate visitor and contractor management, we gain a record of who is entering the building and can privatize any information they may have been asked to provide about where they have been or how they are feeling. This contributes to protection of personal identifying information (PII), which should not reside in any paper book. Integrating visitor management with an access control system also informs us of where the individual has been within the property. Capturing who they have come to meet, the purpose of their visit, if they’ve been on site more times than previously believed, or if they are rotating employees, provides vital insight for the business. This knowledge benefits not only from a health-and-safety perspective, but also overall business continuity, security and risk because we then hold an auditable record of individuals accessing the organization.

Temperature screening is a sensitive topic, one which is not as simple as swapping a traditional camera for an infrared. This is showing not to be as effective as initially assumed, offering little more than a comforting placebo effect. There are several variables: someone may trigger an alarm because they operate at a higher body temperature or have been exercising, or skin may be colder because of a winter climate. Viruses such as COVID-19 have a lengthy incubation period, where an infectious asymptomatic person

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Delivering a Better Normal

could have no fever at all. Temperature screens can cause additional risk, whereby if individuals feel everyone on the premises is checked and healthy, they are more likely to lower their guard and flout social distancing protocol. Information obtained by automated and manual temperature checking generates a medical health record. An organization must be equipped for the handling and storage of PII, upholding privacy applicable to local and federal regulations in whichever region of the world it resides.

Simple improvements that impactfully enhance the post-COVID environment embrace mobility. We know access cards and plastic fobs are insecure and susceptible to hacking. Once breach has occurred, an organization no longer has control or knowledge of who has accessed the property or where, and loses the ability to protect most critical assets. A better option is encrypted credentials via smart-card or mobile device. Enabling Bluetooth long-range triggering of a card reader further benefits if the door is powered by an automatic operator. Programming the door to open on valid credential-read, so that we no longer physically touch either device or door, facilitates secure seamless entry. Discontinuing use of plastic cards introduces other improvements such as enhanced user experience, reduction of waste, and authentication of remote workers.

Encrypted credentials converge physical security with information security. It is no secret that passwords can become easily compromised, especially if short or common. The industry has been attempting to digitize while retaining cumbersome legacy processes. Deploying secure mobile credentials for physical access control integrates digital identities, logical access and multifactor authentication of computers and other network devices. Enhancing end-to-end integrity means the organization knows who is entering the building and where, but more importantly who is accessing specific equipment.

Technologies with multiple use cases produce a single solution benefiting multiple departments. A fantastic example is a real-time location system (RTLS) using Bluetooth beacons. These are flexible and scalable, with many use cases such as application-based wayfinding, optionally enhanced via embedded software development kit (SDK) into your organization’s own mobile app. Post-pandemic office environments with occupancy limitations or hoteling desks are improved by displaying allowance and available seats when the RTLS interfaces with access control and audio-visual systems. Beyond data about who and how people muster in an emergency or evacuation, RTLS empowers first responders with the location of an individual who may be in harm. Alternatively, RTLS could double as a secondary alarm protecting restricted areas, or for asset tracking of critical equipment. A cohesive mindset within an organization streamlines collaboration over siloed ad hoc attempts.

The key message is to optimize technologies we already have and make informed decisions that support business strategy. Navigating the new normal by modernizing offices and digitizing workflows brings forth a great deal of change. Bear in mind, there is not a one-size-fits-all approach. Before overhauling the enterprise, take time to assess solutions and the ripple effects such changes will have on people and technology. If we grant ourselves time to make informed decisions, implementing small changes first with the end result in focus, we will be best able to support the organization and its people towards achieving the normalcy they seek.
Over this series, we’ve asked many questions about how the office will look and function after COVID-19. And whether we’re talking about design, air quality, vertical transportation or technology, it’s clear that we don’t yet have the answers. In the past we’ve been able to reference standards that have been written and published, so as designers we often act as translators for an established body of research. But in this case, that body of research is still to emerge.

This raises profound questions for the design community about how we manage uncertainty in the strange new world that we are now operating in. Design and construction is a risk-averse industry in which many things are codified or accepted as best practice. Our response to design post-COVID is not going to look like that. So how do we provide advice to our clients knowing that we don’t know the answer for sure? How do we apply nascent ideas in a prudent way, without over-reacting or over-promising? The way we manage our clients’ expectations will be critical because as much as we want to do the right thing, we don’t want to give a false sense of security or claim that a building is quote-unquote “safe”.

We do know that some building designs are

THE POST-PANDEMIC OFFICE: WHERE DO WE GO FROM HERE?

COVID-19 has raised profound questions for the design community, and we don’t yet have all the answers

By Jay Wratte, smart-connected building strategist, WSP
emerging as inherently more resilient than others. Perhaps they’re in better condition, or they’ve got better indoor air quality or better access to light so people stay healthier in general, or they are only three storeys tall so you can walk upstairs rather than taking the elevator. There are going to be these Goldilocks buildings that are fundamentally less risky, and there are going to be other buildings that are more challenging. The harsh reality is that some are going to be safer than others — so what should the minimum standard be? Where would we want to work?

Over the next six to 12 months, we’re going to see a whole range of responses to these questions. We are going to see people put plexiglass up, we are going to see some companies overstep on privacy. In the Bay Area, Twitter has said it will never require people to come back to work, but there are also a lot of firms that are trying to get their offices open as soon as they can. What will come next is a period of experimentation within the workplace. The people who come out of this well, on both the design and the ownership side, will be the ones who are ready for the ride, who are willing to take a fail-fast mentality, and to question what we were doing before. At the same time, we’re all thinking about how we prepare for the future, so that we come out of this more resilient, more agile to the challenges ahead.

Going forward, there will be a much greater cultural awareness of health and the ways in which buildings affect our wellbeing, and that will impact the workplace too. When my grandfather died, my uncle gave the eulogy and he talked about how grandpa always took the little sliver of old soap and mashed it into the new soap. Once my uncle asked him why, and he said that in the 1920s and 30s, in the Great Depression, they used all the soap. People came out of that period with this frugality mindset that stayed with them for the rest of their lives. I think that coming out of this we will all be different in some way too — more aware of the things that we touch, the air that we breathe, the people that we are near. That will affect the way we behave as a culture, and it will stay with us for a long time, maybe forever.

We will have to go through the growing pains before we find the right balance. The silver lining is that all of this has caused the industry to really think about why we design the way we do and what we’re trying to achieve. COVID-19 has shaken the whole trajectory towards workplace densification, and at the same time, we are increasingly living two lives — physical and digital, with our digital avatars becoming an ever greater part of our work personas. There’s the person that everyone sees in physical reality in the densified office, and then there’s your digital self — the 2am Yammer-post version, your LinkedIn face, the thinking you put out on social media. We are now in a place where that digital side is becoming mature enough that it has value. If coronavirus had hit a decade ago, we would not be talking on video from our homes.

“Smart” can mean many things. Having an equitable meeting experience whether you’re working from home or in the office is just as smart as using sensors to see whether people are socially distanced. So while the silver bullet that we’re all looking for may not exist — yet — we are at a very exciting point as we start to ask these questions. At WSP, we may not have all the answers, but we do have a deep understanding of workplace. We’re looking forward to applying that expertise to help our clients, colleagues and societies find whatever that better normal will be.
“A better normal workplace will...”
“...be a safe, healthy destination where people want to go to socialize, collaborate and innovate”
Tom Smith, WSP

“...be safe, agile, dynamic, inclusive, diverse and inspiring”
William Johnston, WSP

“...balance the economic model of work with a set of wider social roles and responsibilities”
Jeremy Myerson, WORKTECH Academy

“...support both individual and collaborative activities and give employees control of when and where they work”
Peggie Rothe, Leesman

“...focus now more than ever on fostering trust between the organization and its employees”
Petrina Carmody, Great Place To Work UK

“...treat employee wellbeing as a necessity, instead of a nice-to-have”
Sara Silvonen, Great Place To Work UK
“...seize the opportunity to evolve beyond the ‘office’ and create an ecosystem of spaces”
Kay Sargent, HOK

“...act upon building systems data to foster a healthy and collaborative environment for occupants”
Nicole Hammer, WSP

“...facilitate a better balance between work, home and personal wellbeing”
Kevin Cassidy, WSP

“...be flexible, adaptable and able to accommodate new trends in office working”
Austin Wikner, WSP

“...empower our scientists and engineers to develop the means to solve this pandemic and those which will occur in the future”
Gary Pomerantz, WSP

“...be one that extends beyond the four walls of our old offices”
Jonathan Ramajoo, WSP
“...create a destination but not an obligation, an environment people want to attend, collaborate and excel”
Jack Maynard, WSP

“...be an inspiring, truly safe space where teams meet without fear of intimidation, harassment or discrimination”
Doug Crann, WSP

“...provide an environment that establishes culture and fosters collaboration, connection and innovation”
Michael Holloway, Kiwi Property

“...enable people to balance productivity and convenience, while also allowing personal and collective creativity to flourish”
Jim Coleman, WSP

“...allow our people to feel safe and once again thrive on the energy of an office environment”
Paul Stapley, WSP

“...place people where they and their teams are most productive and safe”
Bill Kerr, Harvard Business School
“...be vibrant, technology-enabled, sustainable and represent a great long-term investment for all stakeholders”
Gary McCarthy, WSP

“...include more sensible density and better optimize individual performance”
Diane Hoskins, Gensler

“...allow focused communication, but also moments of peace and quiet”
Ron Bakker, PLP Architecture

“...be a variety of places that inspire, delight and entice people to work at their best”
Carolyn Solley, Hassell

“...be a community of people conscious about the impact we make on our future”
Seiko Kurokawa, WSP

“...integrate smart technologies with workplace operations teams to track and improve environmental performance”
Narada Golden, WSP
“...be highly informative, highly efficient and highly comforting”
Colin O’Gallagher, WSP

“...be a revitalized environment for interaction and collaboration, with responsive health measures and resiliency. Welcome back!”
James Whalen, Boston Properties

“...focus on in-person interaction that enables building a culture of trust and collaboration, deepening human relationships”
Herbert Els, WSP

“...be one that embraces new rituals and healthy habits”
Natalie Engels, Gensler

“...be part of a seamless experience, no matter where one is working”
Randy Howder, Gensler

“...breathe life into a stale environment, transitioning it into a collaborative, inspiring and creative destination!”
Jaco Cronje, WSP
“...provide apps sharing real-time information so I can make smart choices while I collaborate with colleagues”

Lucy Casacia, WSP

“...offer access to office lobbies, elevators and restrooms through contactless technologies and virtual queueing solutions”

Fran Heller, Good2Go

“...be more like Lego — it's just the user’s imagination that sets the asset function and shape”

Oliver Larsson, WSP

“...be somewhere I am excited to go to, and enhance collaboration with clients and colleagues wherever they are”

Roneel Singh, WSP

“...be where people come together to collaborate, share and grow in harmony with their surroundings”

Steven Truss, WSP

“...be responsive and flexible to evolving culture and norms”

Jay Wratten, WSP
It’s better to know what you don’t know than to rush into making decisions, and it’s clear that there will be no single answer to the workplace after COVID-19. The solution will be different for every organization, and encompass many elements — from healthier environments to transportation, to productivity and emotional wellbeing.

At WSP, we have a deep understanding of workplace, so we’re well placed to help our clients to navigate to that better normal as a partner and a trusted advisor. With 50,000 employees around the world, we have also been thinking hard about our own response. Culture is important for any organization, but particularly for professional services firms. Having the best people, the best thinking and the best ideas is our competitive advantage — and when your mission is to enhance communities through great buildings and infrastructure, there’s no substitute for being there physically.

Many organisations have been able to work from home very successfully during the pandemic. This is partly because everyone has buckled down in a crisis, but it’s also because we’ve accumulated a lot of social and cultural capital. If this situation was to continue for years rather than months, how much of that capital would be left? For those of us who have already had the opportunity to develop great networks, working from home has been a revelation. But you can’t build a career that way. Emerging professionals need to be mentored, and to have face-to-face discussions with colleagues and clients. It’s easy to collaborate virtually with people you know, but how do you forge new relationships and win work in a virtual world? Ultimately, offices will always be part of the DNA of businesses because we need to go to the office to interact, to socialize, to collaborate and innovate, to learn.

Perhaps we should look at it from a different angle. From now on, we’re going to have a more distributed workforce. There will be people working from home, from the office and from clients’ offices, people working in different geographies and in the cloud, and people working different shifts to fit around their family commitments or lifestyle. So the real challenge for any organization is to provide the right environment and the tools to support that distributed workforce to be productive and achieve the right work-life balance.

There are positives to working from home, but the flipside is that it can feel as if you’re sleeping in the office. That’s not good for our health and it’s not sustainable for the long term, so we need to find better ways of making a demarcation between our home and work lives. Next in this series, WSP will be looking at how healthcare can respond to the lessons from COVID-19. The pandemic has emphasized that health begins not in the hospital but at home — in the places where we live and work, and in cities that nurture, nourish and sustain. The way we organize and accommodate work is crucial to our wellbeing, but it has wider implications too. What if instead of working from home, I decided to walk to a flexible office space on my local high street? What if there was a whole new community of people all walking or cycling in, sharing the same office space, buying coffee or having a pint in the evening? Wouldn’t that be a great way to revitalize our town centres?

COVID-19 is forcing us to rethink our built environment in many ways, and it presents us with a unique opportunity. If we can create a better normal workplace, we will be one step closer to a better normal world.

**Last word**

A better workplace can be the catalyst for a better normal

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