

THE WORLD OF WORK IN 2020

Future Trends from the Global Partners of WORKTECH Academy



VISION 2020

Vision 2020. It makes the forthcoming year sound like the start of a completely new era for the workplace and not just the start of a new decade. We've reached that tipping point in exploring the future of work where recent innovations and trends in the field might just reach critical mass in the coming year or go into reverse. Anything seems possible.

To help members of WORKTECH Academy around the world to orient themselves to this changing landscape, we've again worked closely with our Global Partners in the Academy to create a short publication which draws together key themes and predictions at the start of the year. *The World of Work in 2020* doesn't pretend to be comprehensive, but it nevertheless touches on ten of the current challenges facing organisations everywhere under the headings of people, place and technology.

What ties all the contributions together is a Colour Wheel of Change, designed by BVN Architects, which starts with people issues, moves through aspects of place and concludes with a look at three of the most important trends in technology.

The people section draws on Aramark research into the best places to work listings in the US to discover the ingredients for creating a great workplace experience; BVN examines design in the age of anxiety and what can be done to improve mental health at work; and a study by 360 Workplace, part of Fourfront Group, forms the basis for a prediction that more attention will be paid to leadership style and strategy in designing workplaces in 2020.

As the wheel swings towards place, WORKTECH Academy writers investigate the rise of tactical urbanism, which is redrawing the boundaries of the workplace from the desk to the district, and question whether the open plan office can fight back in 2020 after years of heavy user criticism and negative scientific evidence. We ask if all the working world's a stage – if flexible, evocative theatre set can be the basis for new work interiors – and we report on a new green alliance between sustainable cities and responsible companies.

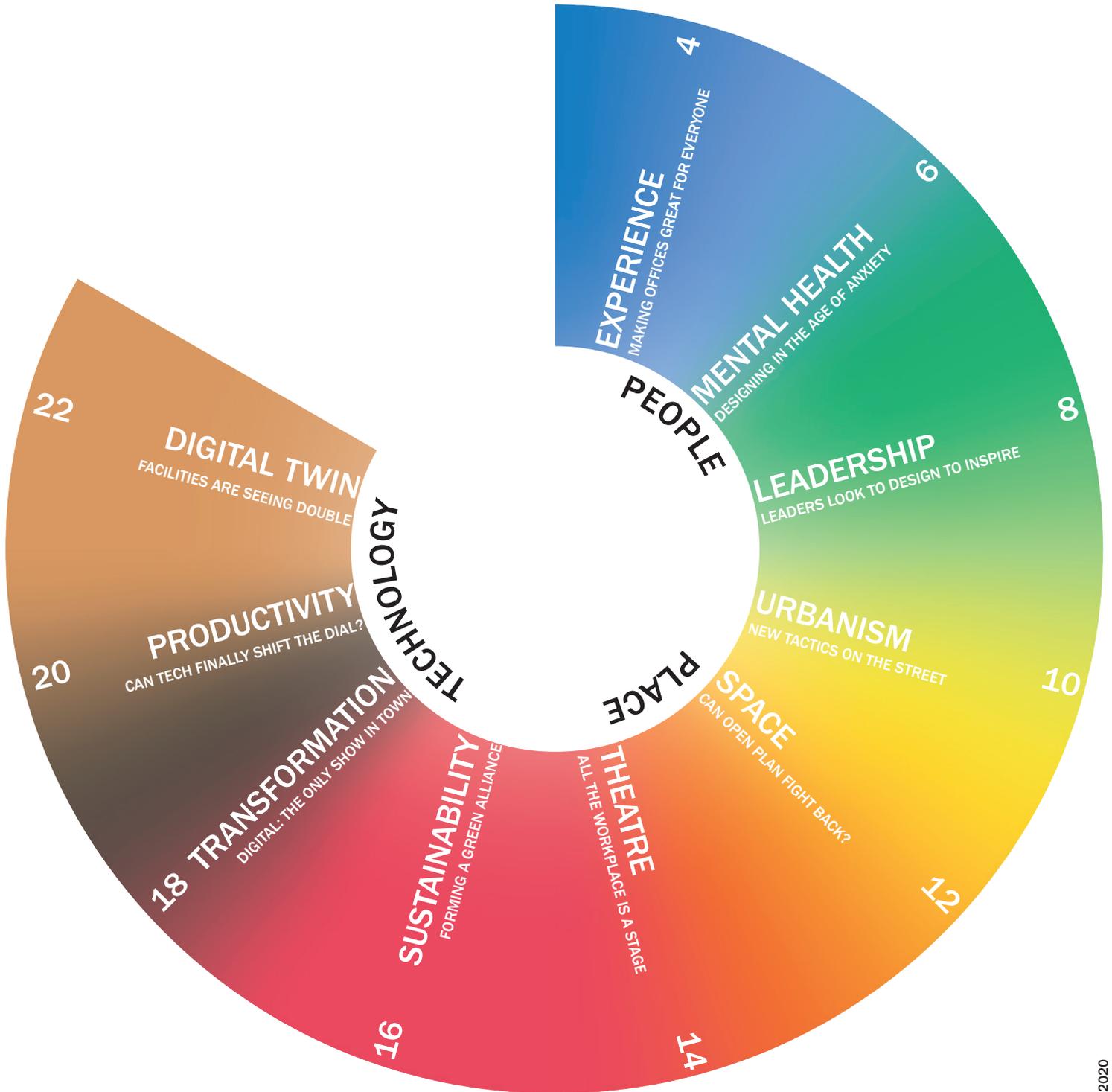
We round off *The World of Work in 2020* in the realm of technology. Haworth research informs the prediction that digital transformation will be the ultimate game-changer for many firms this year; a Condeco study underpins the belief that new digital technologies will finally shift the dial on productivity; and a report from Unwork explains how the rise of the Digital Twin is set to transform facilities management.

So, plenty to consider as we chart the big shape-shifters in the year ahead. I'm grateful to the Global Partners of WORKTECH Academy – Aramark, BVN Architects, Condeco, Fourfront Group, Haworth and Unwork – for their active participation in this publication and for their all-round support in ensuring we bring our members the very latest evidence and inspiration on the future of work and workplace from around the world. In 2020, we'll be gathering great ideas from WORKTECH conferences in more than 25 different cities. So let's give the Colour Wheel of Change a spin...

JEREMY MYERSON
Director, WORKTECH Academy
Helen Hamlyn Professor of Design,
Royal College of Art

THE WHEEL OF CHANGE

TEN SHIFTS FOR 2020



EXPERIENCE

Making offices great for everyone

Workplace experience will continue to be a dominant trend in 2020, building on the globalisation of the workforce and the intensification of the race for talent that we have seen in recent years. But which organisations are creating great places to work? And what innovations are they introducing to create a sense of belonging and pride in the workplace?

Aramark analysed three US listings of the Top 10 Places to Work in 2019, compiled by LinkedIn, Glassdoor and Fortune magazine. The results of the study revealed that top-performing companies use a complex mix of strategies to create a better experience for their people. Seven major themes were evident.

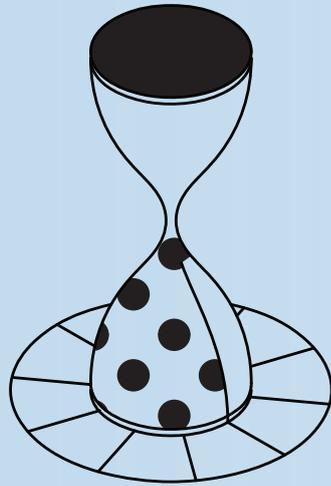
First, more space and services for comfort and relaxation is a growing trend – an approach common to many of the top-rated employers in the listings. Second, creating a healthier workplace through diet, exercise and mental health support is high on the agenda for the big power players in the global talent market; nutrition has a major role to play, so too does mental health awareness and training. Third, the best places to work seek to pull people away from their screens, building vibrant

social communities which foster a sense of belonging – food and drink often act as the social glue in this scenario.

Fourth, there is a special focus on purpose and identity: the new workforces in the top-rated firms are not just interested in the pay cheque at the end of the month – there needs to be a higher purpose to working for a large organisation. The companies that score highly on experience share a commitment to giving their people a special reason to come to work whether it is rewarding their efforts with great amenities or supporting their social causes.

Fifth, people in the top organisations are given a voice in how the workplace is run, with a platform for feedback and suggestions, and a sense that great

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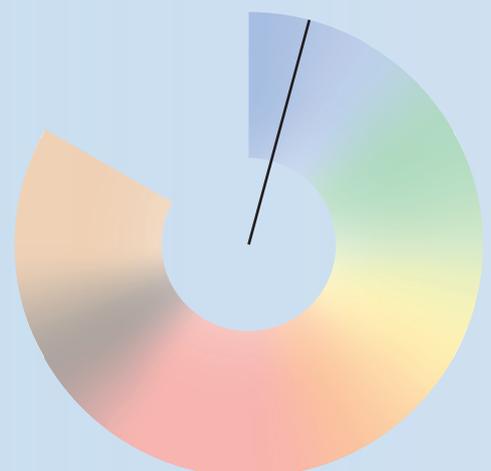


new ideas will be taken seriously. Employee preferences are key to shaping a more customised culture. Sixth, top-performing companies are bringing the outside in, using biophilia in the workplace to improve wellbeing and satisfaction. Natural elements, natural light and natural materials have also become part of the new office landscape to reinforce the message. Finally, high-performing workplaces in large world cities make a virtue of the diverse make-up of their workforces and regard diversity as a source of pride.

Aramark's analysis also revealed that the Top 10 Places to Work listings are dominated by employers in three specific groups: technology, software and social media; customer-facing firms in retail, hospitality and aviation; and financial, legal, consulting and professional services. Why are these industries are blazing a trail in workplace experience, leaving other sectors trailing in their wake?

The tech sector thrives on the competition for talent and the race to innovate. It is part of its lifeblood and the rewards are huge if the right talent can be assembled in the right place at the right time - and given the optimum experience. Customer service firms work on creating a great customer experience every day - whether in retailing, hotels or airlines. So, they have the tools to do the same for their own employees and create a great workplace experience. Financial, legal, consulting and professional service firms, meanwhile, are in a highly competitive sector - they understand the enormous demands that are placed on their client-facing employees, the need to alleviate the worst impacts of workplace stress and to offer a higher sense of purpose.

These are the sectors paying closest attention to workplace experience so that their people feel valued. The rest of the world is set to follow them in 2020.



MENTAL HEALTH

Designing in the age of anxiety

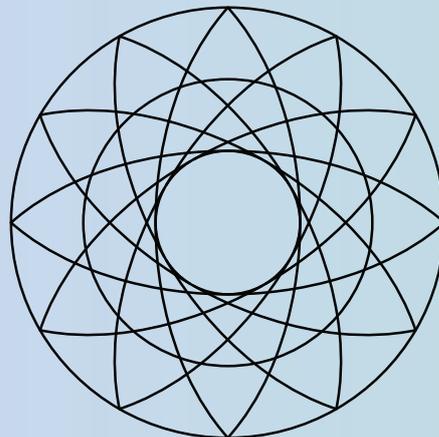
She'll be right mate. That's what we used to say in Australia, but the situation here is clearly not right. It's hard to breath and most of us can't tell whether our eyes are watering due to air quality or the visions we see on television of koalas suffering and people being evacuated from burning shores. We're no longer happy little Vegemite's.

Americans aren't much better. Life expectancy fell for a third year in a row due to 'deaths of despair', which is the phrase they use when one succumbs to alcohol, drugs or suicide. And not to be left out, one in four people in the UK suffer from loneliness. It's so bad a Minister for Loneliness has been appointed.

Selecting an uplifting moniker to define the dawn of this new decade may be a challenge. Some are already calling it the age of anxiety. For architects and designers, it's a conundrum. It pains us to look at the humanitarian crisis unfolding around us and feel we can't do more to solve problems. After all, our training taught us buildings should bring joy to the heart, and we drank the Christopher Alexander Kool Aid – 'a person is so far formed by his surroundings, that his state of harmony depends entirely on his harmony with his surroundings'.

Surely, we can fix this, but how? For some time, we have been keenly interested in sociology, neuroscience and psychology, but to date there has been scant application to our practice. This is understandable because measuring the cognitive effects of space and understanding its impacts on human behaviour isn't easy. What's easy is designing pretty breakout areas, popping in a plant and fruit bowl, and ticking the box that says wellbeing.

But perhaps our anxiety may elicit a greater call to action. If having the World Health Organisation deem depression as a leading cause of disability worldwide is not motivation, what is? The good news is today we have a little help. Researchers have identified specialised cells in the hippocampal region of our brains that are attuned to the arrangement of space, and cognitive scientists have leveraged new technologies to measure space's impact.



Wearable devices can monitor psychological arousal using skin conduction, smartphone apps conduct user surveys about our emotional state and EEG headsets measure brain activity relating to mental mood. All of these are important developments that will give us a much better idea of the kind of environments people like or find stimulating.

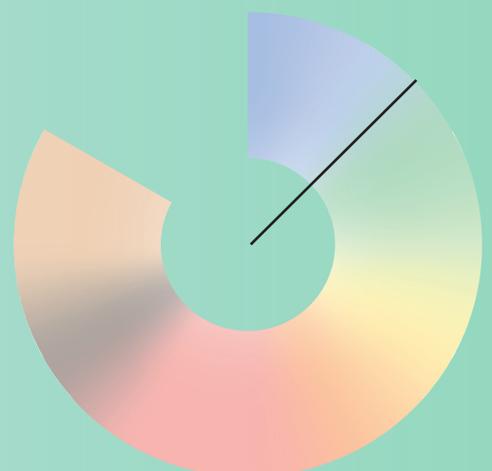
If we're serious about creating environments that address the maladies of our age, we also need to go back to basics and pepper what we know with science to leverage the properties of space to promote better cognitive engagement, for instance:

- Details and scale – both add visual depth which triggers sensory imagination.
- Tactile sensations – stimulate our visual and auditory cortices.
- Curved surfaces – generate an 'approach' behaviour, as opposed to sharp angled shapes and spaces that cause discomfort and fear.
- Architectural variation – it is so appealing that studies indicate humans will cross the road to be near buildings that have more variation.
- Volume - data indicates people think more creatively and have a better response to abstract concepts when seated in rooms with high ceilings.

The impact of space on human behaviour is not only a manifestation of the space itself, but a response to how it can be used. Neuroscientists studying navigation found that when people can relate things to one another they feel connected, and don't suffer the negative impacts of feeling lost or disoriented. Connection and belonging are further enhanced by our ability to exercise agency over the spaces we occupy, it leads to a sense of ownership.

Architects and designers possess an intuitive awareness of the impact of space on behaviour, but paired with better science and diagnostic tools, we can back that intuition up. Perhaps, in 2020, a combination of gut and data will give us the tools we need to take a stab at addressing the growing maw in our social fabric.

“Our training taught us buildings should bring joy to the heart ...”



LEADERSHIP

Leaders look to design to inspire

When new workplaces are commissioned, planned, designed and built, how much attention is paid to the style of leadership inside the organisation? In the quest to enhance productivity, how much focus within the briefing and development process is placed on what company leaders are trying to achieve?

The answer is probably not enough. While there is growing research that leaders make a critical difference when it comes to raising organisational productivity, there is rather less evidence that workplace design is really stepping up to the plate in support of new leadership strategies.

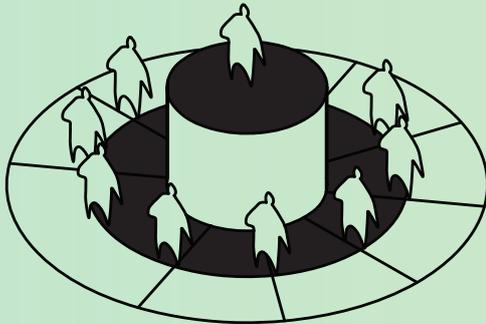
That could change in 2020, as design begins to play a more significant role in integrating leadership initiatives into the workplace. It is possible to foresee the relationship being re-set as a partnership in which workplace design becomes a canvas for new-generation leaders to express strategies that will entrust, enable and motivate people.

To test such a scenario, an exploratory research project was conducted by 360 Workplace, part of Fourfront Group, with WORKTECH Academy. First, design teams in a London innovation workshop

created imaginary workplaces based on five 'extreme' models of leadership (such as 'hero', 'zealot', 'founder', 'reformer' and 'power broker'); then, a survey of 70 client companies in the UK, Asia, Australia and the Middle East was conducted via The United Workplace network. The aim of the survey was to understand what companies engaged in the workplace redesign process thought about the links to leadership and performance.

The results sent a clear message: nine out of ten organisations in the survey believed performance could be improved if leadership style was considered when redesigning the workplace, but only around half put considerable emphasis on leadership intentions when formulating a workplace design brief – and only one in ten made it the main focus of the project.

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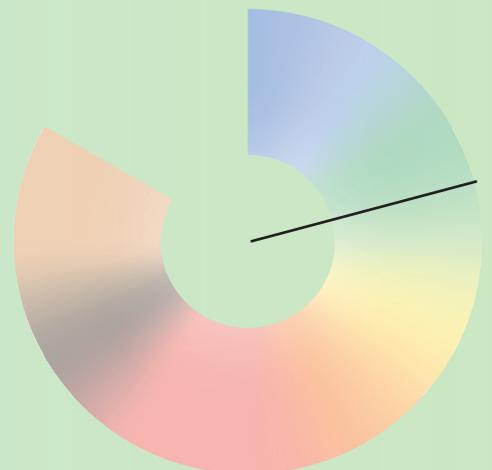


If this can be described as a missed opportunity then clients clearly don't intend to repeat the experience: 85 per cent of companies in the survey intend a closer relationship between leadership strategy and the design of the workplace in the future.

One can conclude that there now is an opportunity for a closer relationship between what workplace leaders intend and what designers do. Designers may no longer cling to the 'org chart' (organisational chart) for direction, but most workplace design projects are still informed by data around headcounts, net usable space and departmental adjacencies, some generic stuff about vision and values, and maybe a set of insights based on staff surveys, ethnographic or observational research.

Companies always talk about wanting to set the culture but designers don't probe in sufficient depth beyond the standard 'mission and values' capture what next-generation leaders are planning to achieve in the space being designed. That could now be coming onto the radar in 2020 – and it would a good thing if it did.

The idea of the two-way street is essential. If the right leadership is not there, new ways of working won't happen; leaders must set an example in adopting new work practices. But equally, leaders need the right environment in which to set that example, which is where design comes into the equation. Unless there is a partnership, leaders can't get to work on raising productivity.



URBANISM

New tactics on the street

Workplace strategists and designers have known it for some time. The workplace doesn't stop at the desk or even the entrance lobby. The relationship with the surrounding area is increasingly important – and urban space and workspace are set to become even more intertwined in 2020.

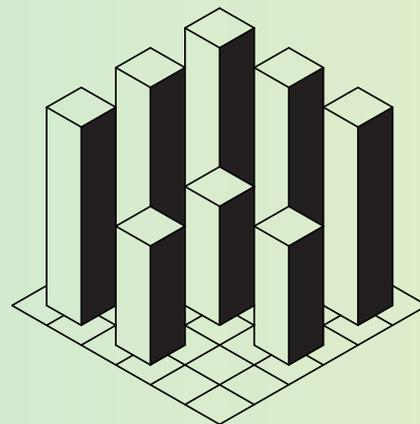
Such links are of special importance to the newer talent that all organisations are trying to reach – a study from Brickfields Consulting found that people under the age of 35 see their workspace extending beyond the office walls into the neighbourhood and wider city. Already we are seeing rooftops, balconies, building frontages, disused rail lines, yards and other urban nooks and crannies animated with plants, grass and seating to create integrated green spaces for a city's inhabitants.

The experts call it 'tactical urbanism' – the practice of making quick, inexpensive, small-scale urban changes to public space to improve social connectivity and community engagement – and it will be more prevalent than ever this year.

New York has led the way in making small insertions in the urban fabric which don't require big budgets or bureaucratic decision-making chains. Its Street Seats programme, for example, supports business owners who want to make improvements to their street frontage for public use. At a larger scale, the High Line in New York is a landmark of the approach and so successful that it is underpinning the growth of the new Hudson Yards business district.

Allied to tactical urbanism is the political commitment to ban cars from urban areas, so releasing spaces for communal use and greening them.

Barcelona has banned cars in six of its superblocks – play areas and running tracks are emerging where the traffic jams used to be. Other cities around the world are considering similar moves.



The point at which tactical urbanism touches the working life of the city is where things really get interesting. Local green spaces to rest or eat lunch take pressure off amenities in office buildings; they provide social connections to the wider neighbourhoods that many workers crave; they are also 'neutral' areas beyond corporate surveillance and can relieve stress. Some cities incentivise developers to build such spaces into their projects – these are Privately-Owned Public Spaces (POPS) and New York controversially has more than 500 of them.

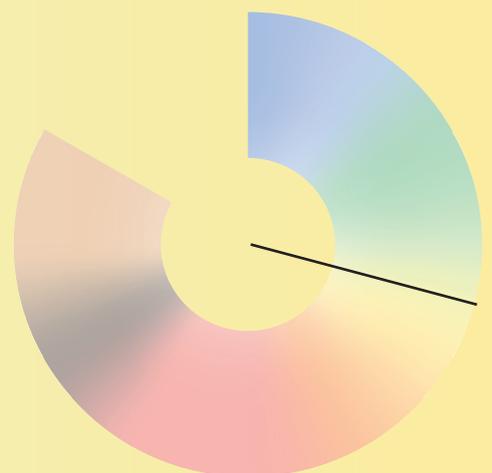
Cities are full of temporary events – markets, pop-ups, festivals and so on – that work some kind of alchemy in bringing people and place together for a shared experience. They are distinctive and memorable, and they generally deploy flexible, low-cost, high-impact structures and tactics. The workplace industry has been slow to recognise it can learn from this phenomenon, but it is beginning to catch on fast.

Temporary events in the city bring the promise of richness, spontaneity and unpredictability to space during the working day – popular values that are under-represented in the corporate workplace. The principle of achieving maximum effects with minimum means – often creating

great spectacles and experiences on a low budget – will appeal to hard-pressed real estate budgets. We can expect some of this lightweight and light-touch urban design to find its way back inside office buildings and campuses badly in need of variety and flexibility, animating atria and plazas and even enlivening large office floorplates.

At a time when businesses face two major challenges - attracting new talent and managing constant change – could the small-scale exemplars of tactical urbanism hint at a more flexible future? In 2020, we'll find out.

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SPACE

Can open plan fight back?

2020 feels like a watershed moment in how we should view office space. For the first decade of the new millennium, the main impulse was to tear down walls and create more open environments in the interests of creating better communication and teamwork (and, of course, lower property costs). From 2010 onwards, there was a backlash – slow and sly at first but then, more recently, fast and furious as bashing the open plan office became a global sport open to all.

But whisper it softly: could open plan space, much maligned and much misunderstood, make a comeback in 2020?

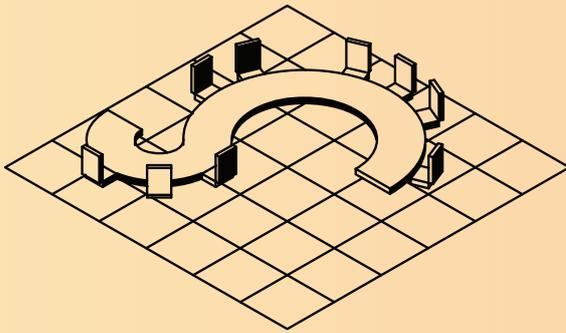
The omens aren't exactly encouraging right now. At the end of 2019, leading academic researcher Ethan Bernstein published an article in the Harvard Business Review with Ben Weber of Humanyze, entitled 'The Truth About Open Plan Offices'. Their argument was that although the physical and technological structures for collaboration (activity-based spaces, messaging, enterprise social media, virtual-meeting software and so on) have expanded, evidence suggests 'those structures have produced less interaction—or less meaningful interaction—not more'.

Their conclusion to the paper was damning: 'Although the open-office design is intended to encourage us to interact face-to-face, it gives us permission

not to. The "accidental collisions" facilitated by open offices and free spaces can be counterproductive. In many instances, "copresence" via an open office or a digital channel does not result in productive collaboration.'

Bernstein has form in this area. In fact, he could be described as the open plan office's tormentor-in-chief. As co-author (with Stephen Turban) of a famous academic paper published by the Royal Society, entitled 'The Impact of the "Open" Workspace on Human Collaboration', he presented the results of a study of two large organisations moving to open plan. The results measured a 70 per cent drop in face-to-face interaction with a corresponding increase in electronic traffic between staff.

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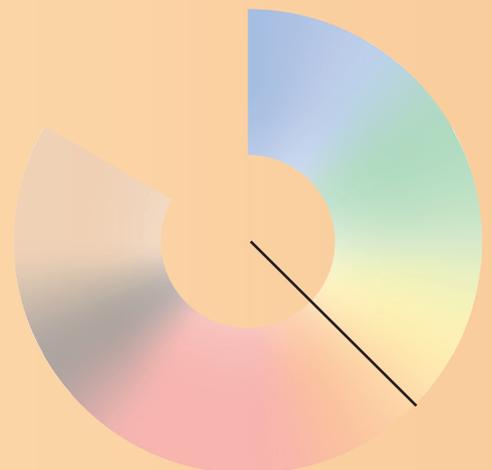


Faced with such evidence, the temptation might be to throw the whole open office movement into reverse. But some workplace designers and strategists are sticking to their guns, arguing that it is not open plan *per se* that is at fault but how it is designed and implemented. It is perhaps significant that one of the top-rated articles on the WORKTECH Academy online platform in 2019 was a spirited defence by Kay Sargent of architects HOK, entitled 'Open and shut case: why critics of open plan are behind the times'.

Sargent argued that 'many people are conflating all environments with fewer private offices and more open space and truly open plan offices, thereby mislabelling many environments that don't fit into that planning concept. Open plan is a very specific planning model, defined as spaces with low or no panels or dividers, limited or no private offices, and assigned seating...Not having choice or the ability to move when you need more privacy or to find a quieter space to limit distraction is the true crux of the issues many have with open plan spaces.'

Sargent dismisses most of the arguments against open plan as 'ill-informed and centred on out-of-date, misapplied, or simply mislabelled planning concepts, and sometimes, just poorly designed spaces'. Indeed, few would argue that there has been a spatial shift in recent years away from static, fixed, assigned seating associated with basic open plan schemes to more agile and activity-based concepts with a variety of settings and choices to encourage movement and empower people to select the right spaces for what they want to achieve.

Companies are now talking more and more about creating an ecosystem or a balance of spaces to reflect different workstyles. In this context, the old arguments about the rights and wrongs of open environments become less relevant. In 2020, will we finally move the debate forward and allow the open plan concept to be reassessed in a less polarised way?



THEATRE

All the workplace is a stage

Here's a conundrum. As a means of expressing identity, enriching experience and creating 'wow' moments that encourage employees to talk up the brand, workplace is of strategic importance. But, set against this, the pace of business change continues to accelerate and it's difficult to predict what corporate real estate needs will be against the traditional timescales of workplace fit-out.

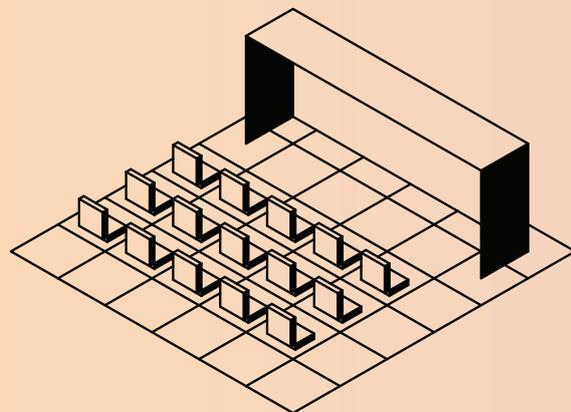
This means that, in 2020, workplace design will attempt to meet two seemingly contradictory needs – to create enriched, branded spaces that foster a sense of inclusivity and belonging, whilst also remaining low-cost and responsive to rapidly changing needs.

The obvious answer is to look to the people who do it best for inspiration. While workplace design – however beautifully done – has tended to lean on over-engineered, heavy furniture settings, theatre designers have a long history of creating rich, evocative environments using simple, inexpensive components which can be quickly changed out.

The basic requirements of touring or swift scene changes mean that they work with lightweight, highly flexible elements which can often be moved by just

one or two stagehands; this is in sharp contrast to the need to bring in a boiler-suited maintenance team to work over an entire weekend. However, this flexibility doesn't mean sacrificing richness or psychological expression. Theatre designers are experts in using scale, depth, light and framing to create visually interesting spaces with a strong spatial narrative.

Modernist theatre of the early 20th century is a particularly rich source of inspiration in this regard. This was an approach that drew heavily on symbolism – the theory of correspondences between ideas, colours and moods – to create evocative environments without having to lean on 'realistic' props or scenery. This saw designers developing rich settings using a very simple palette of low-cost, flexible



elements. Pierre Quillard, an early proponent, described the theory by saying ‘a backdrop with a few mobile draperies will be sufficient to give an impression of an infinite multiplicity of time and space.’

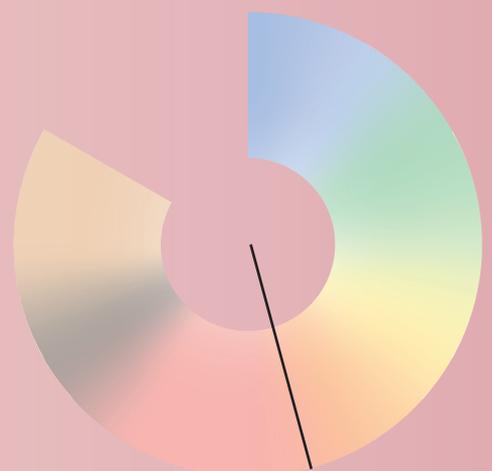
Within this approach, a number of key techniques can be identified that are transferable to the modern workplace. The idea of creating vistas or framing the narrative to create varying spatial conditions can be used to locate fixed points within a flexible landscape, ensuring that employees still feel grounded in regularly changing environments. While screens and space-dividers are a familiar element in any workplace today, they are typically bureaucratic in form and function. Conversely, theatre designers use them in a huge variety of ways, forms and materials to suggest spaces and atmospheres.

Finally, the use of colour, projection, effects and lighting to effect dramatic changes at the click on a screen all provide opportunities to create fully interactive settings that can respond to changing moods, occupants or activities.

Ultimately, the most important lesson to take forward might be this central principle of scenography – that spatial elements should adapt and respond to the action, rather than being static decorative

objects. Organisations have had to accept flexibility as part of daily life in business practice; in 2020, they’ll need to accept transience in their spaces as well. Already many corporate offices and coworking spaces are experimenting with customised scenography and stage sets. Could 2020 finally be the year that the curtain rises on a new theatre of work?

“Theatre designers have a long history of creating rich environments using simple components ...”



SUSTAINABILITY

Forming a green alliance

We enter 2020 burdened by the fragile state of the world's natural environment, but with great problems come great opportunities for innovation and change – this year will see an unfamiliar pairing of urban policy makers and corporate employers working in tandem to create more proactive eco-cities. The theory behind this new alliance is that proactive cities will attract innovative companies who want to attract innovative talent.

Japan has pioneered this movement into 2020 by using green policy-making as a tool for urban change and economic gain. While the USA has bowed out of the Paris Climate Change Agreement, Japan has pledged to be carbon neutral by 2050. The Tokyo Metropolitan Government held a conference at the end of 2019 highlighting its commitment to use environmental, social and governance principles to attract fintech companies to Japan. This commitment is further fuelled by its promise to use 'clean energy' for the Tokyo Olympic and Paralympic Games in 2020.

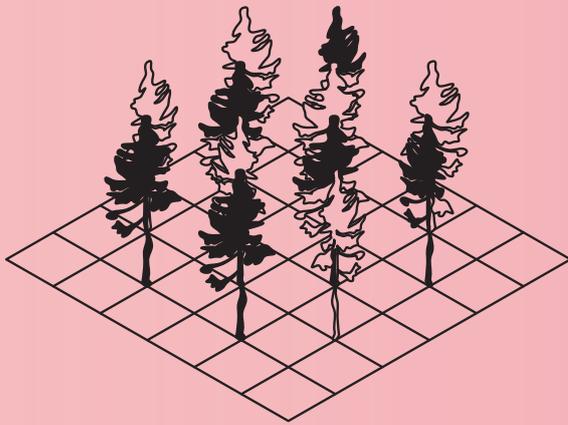
Other cities around the world have followed Tokyo's carbon-reduction lead, mindful that digital technology companies want to be located with other eco-conscious companies in environmentally-

friendly cities. A particular focus for 2020 is transport and mobility. Corporate travel has come under major scrutiny for its liberal use of flying – teenage eco-warrior Greta Thunberg has criticised this mode of transport, opting instead for trains or boats to travel around the globe.

This activism has sparked a feeling of 'Flgyskam' – a Swedish term for 'Flying Shame'. It has already hit passenger numbers in Sweden's 10 busiest airports according to The Economist and Bloomberg has reported the number of people flying between German cities dropped by 12 per cent in November from the beginning of 2019.

While no one is suggesting the CEO of a corporate giant sails to Australia from the UK to conduct business, there is growing interest in using virtual technologies for

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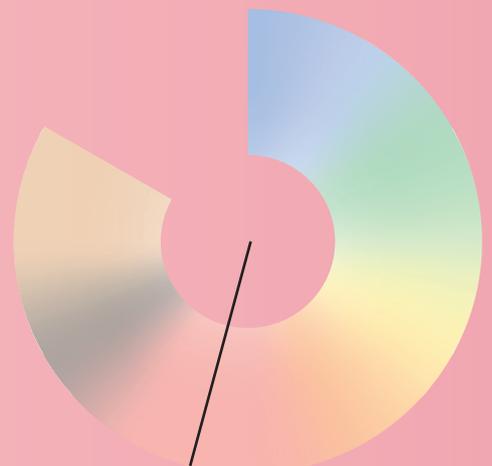


international communication. This will place additional pressure on technology companies to significantly improve the sophistication of their collaboration technologies to work seamlessly across borders,

While flight travel is a significant carbon contributor, there is also a considerable effort to improve sustainable transport closer to home. Anne Hidalgo, Mayor of Paris, has promised 870 miles of bike lanes by 2020 in a 'Plan Velo' for the city. Since this intervention has been implemented, bike use in Paris is up 54 per cent – bicycles now outstrip the number of motorcycles and scooters being used on trips per day. This change in urban use will affect infrastructure and in turn determine the commuter experience for employees. One can envisage far more showers and bike parking spaces for employees in corporate offices.

Delivery services are also looking to increase the efficiency and sustainability of their distribution methods. Amazon has partnered with the city of New York to trial a new cargo bike delivery service to reduce the amount of trucks they deploy in the city each day. DHL and UPS are other delivery services which have used bikes to deliver goods where appropriate. This marks a significant opportunity for 2020; companies which carefully consider their own – and their employees – carbon footprint will be rewarded with new talent attraction and innovative partnerships.

In 2020, corporate firms will carry the burden of responsibility for raising the green flag and signalling that employees and cities should do more to build a sustainable future. In the words of Hiroshi Nakaso, chairman of FinTech City, at the Tokyo conference: 'Sustainable development is a mega trend....and transparency is a critical element of fostering this move.'



TRANSFORMATION

Digital: the only show in town

Digital transformation will herald a paradigm shift in the workplace – it is about adopting, harnessing and integrating digital tools and strategies to achieve an organisation's goals better. It's complex, multifaceted and it will change both the landscape we work in and how we work in it. It's the ultimate game changer for 2020.

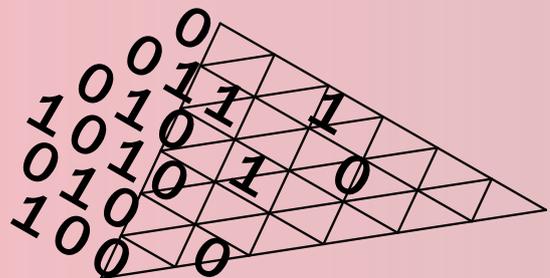
Already digital transformation has changed the rules of competition. Forrester's Nigel Fenwick said that, by 2020, all companies will be either a digital predator or digital prey. This year will set apart those who have digitally transformed their business, as they will receive the lion's share of the market against those who digitally lag behind.

Digital transformation includes the implementation of emerging technologies such as augmentation and AI. These digital tools are changing traditional work practices to become faster and more efficient. This shift towards implementing advanced digital tools needs to come with a robust digital strategy – companies armed with the right strategy will rise to the top.

Currently only 38 per cent of enterprise business have digital strategies in place, compared to 55 per cent of start-ups. George

Westerman, digital economist with the MIT Sloan Initiative, suggests this might have something to do with larger organisations finding it more challenging to switch from a formal, rigid workplace hierarchy to a collaborative, communicative, transparent workplace without silos.

Embracing a digital future sooner rather than later leads to better gross margins, earnings and net income, according to one Harvard Business School article. This states that three-year average gross margins of 55 per cent are achieved in comparison to 37 per cent for digital laggards. Leaders also outstrip laggards in three-year average earnings and three-year net income. Customer expectations, new economic realities and revenue sources, population shifts and environmental disruption are making emerging digital technologies an imperative.



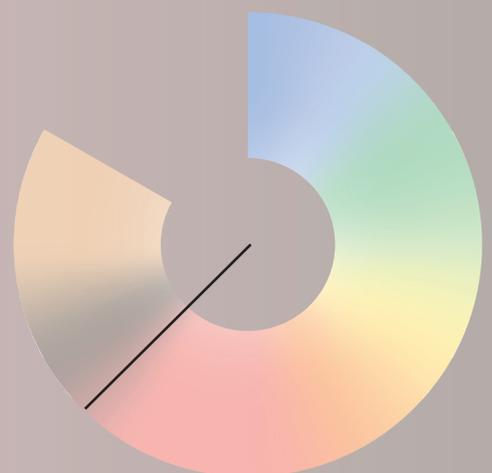
While much of digital transformation is fixated on the tools, platforms and processes that can be digitised, this is only one part of the equation. There is also a human shift – the ‘transformation’ part of digital transformation. The human shift increases competitiveness and speed to market using algorithms, artificial intelligence and predictive indexes to inform decision-making processes.

The new digitally-enabled workplace requires a radical rethinking of how you use big data to challenge the status quo, maintain an agile workforce and adjust performance to meet changing demands. It isn’t just about leaving our analogue ways behind, it’s about rethinking and transforming your business model to leverage digital technology in a way that will bring innovation, operational flexibility, process optimisation and much-improved end-to-end customer experience.

This is why digital transformation needs to enter into every facet of the business. Haworth has introduced a range of digital tools, sensors and feedback systems into its products to help organisations collect and analyse real-time workplace data. This data can inform the business how to best inspire the workforce to do their best work.

There’s no choice for businesses but to opt for digital transformation. Digital transformation is no longer new territory, it’s a natural force – what can be digitised will be digitised. It is the companies that are quick to adopt and devise strategies that will grow fast in the new digital economy.

“In 2020 all companies will be either a digital predator or digital prey...”



PRODUCTIVITY

Can tech finally shift the dial?

Productivity is one of the biggest challenges that businesses are currently facing. More than a decade after the global financial crash, companies are still struggling out of a slump and recent drops in investment mean that this is a problem which won't be going away soon. But in 2020, the dial on performance is set to move with new technologies reimagining the efficiencies of collaboration spaces and meeting rooms to boost productivity in the workplace.

An independent global study conducted by Condeco in 2019 asked 750 business leaders in six countries – the UK, USA, France, Germany, Australia and Singapore – about the future workplace. The report, *The Modern Workplace*, looked at the key impacts of people, places and technology and it was no surprise to learn that increasing digitisation and productivity go hand in hand.

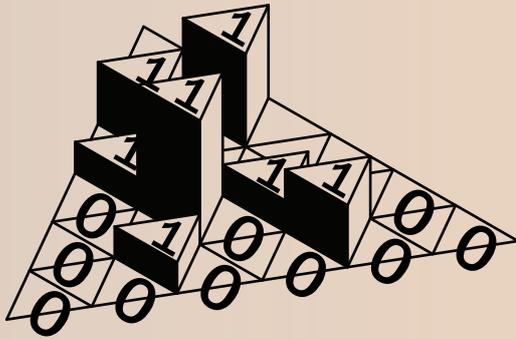
Leaders reported the integration of technology into all areas of the workplace the biggest challenge they face in their organisation, yet they also prioritise improving productivity as the greatest benefit of investing in the workplace of the future. The view ahead is clear: 2020 will see these two areas align as more sophisticated technologies work in the round along with employee experience and workplace design.

There is a further dimension

in the tech/productivity equation: good meeting resources and practices. As collaboration and meeting spaces in the workplace become the new norm, productive meetings become a key component for a successful outcome. In an age where employees are increasingly dispersed, achieving productive meetings is becoming more challenging. According to the Condeco survey, more than half of business leaders struggle to adapt to changing employee expectations which demand more flexible work environments to align with their nomadic work patterns.

In the past, companies tended to focus on a specific workplace element such as design or technology to drive productivity, but a new era could herald the start of a more integrated strategy. When

“In an age where employees are more dispersed, productive meetings are more challenging to achieve ...”

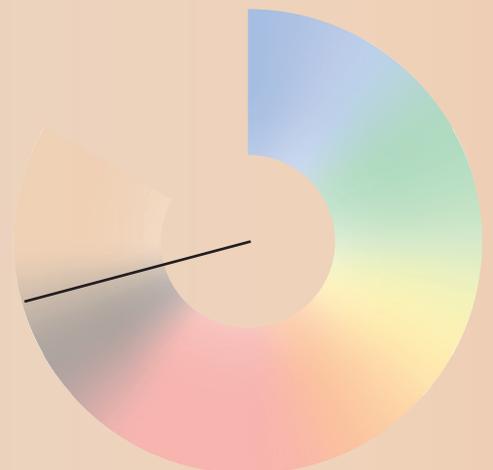


asked what workplace developments should be prioritised by their organisation, respondents put new technology to drive productivity in their top three top considerations. This includes the use of sensors and other technologies to understand other employee performance.

A good indicator of how space is being used is through room booking systems. As the workplace is increasingly designed with collaboration spaces and tailored meeting spaces, the data collected through room booking systems can inform the future design of the space. Bearing this in mind, this year will see more companies using data-driven design to focus on usage, utilisation and satisfaction to help make better design decisions. With this information, it is possible to improve layouts and facilities to encourage better employee productivity.

Raising performance will be the key priority. In Australia alone, more than half of the business leaders surveyed said they are using new technology to drive productivity. But digitisation is also predicted to be the greatest workplace challenge in five years' time in every region apart from Australia. This means a realignment design and technology will be on the cards for all organisations eyeing an increase in productivity.

Workforce priorities are changing and so organisations are having to prioritise finding a more flexible and technology-led way of working. Poorly managed meeting rooms or inadequate facilities can leave employees feeling unmotivated and frustrated. Your staff have important tasks to undertake each day and in 2020 the challenge is address those organisations that feel over-worked but still underproductive.



DIGITAL TWIN

Facilities are seeing double

As we move into 2020, the traditional role of FM (Facilities Management) – which included delivering a timely schedule of soft services such as cleaning and an efficient management of hard services like HVAC - is in accelerated transition. A new, expanded FM role must respond to growing expectations of occupant comfort and increased social pressure to operate as better ‘global citizens’.

Today, FM requires management of everything from workplace change to waste control, and from air quality to crisis response – all the while maintaining a certain level of technological sophistication and mitigating the omnipresent threat of cyberattack. An unenviable feat. Until now.

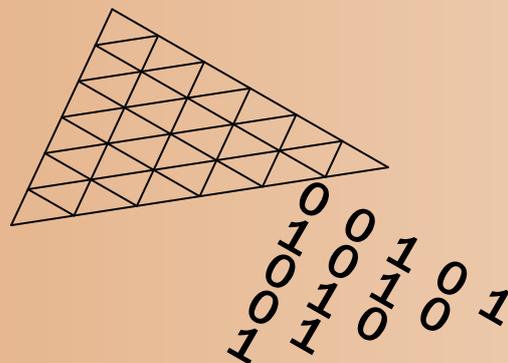
Technology has been evolving alongside FM and we have now reached a point where there is an all-encompassing solution that consolidates all the new FM services into a single, operable model that runs off personalised and accurate real-time data – the Digital Twin.

Powered by an interconnected network of sensors (the Internet of Things) and programmed by human expertise, digital twins are dynamic virtual representations of the elements and dynamics of a physical asset, created using

an amalgamation of artificial intelligence and machine learning and depicted as an exact digital replica of the physical counterpart. Digital twins provide a clear real-time overview of how each component of the building is operating, whether they require maintenance and how they’re likely to respond to different stressors.

It is perhaps easiest to think of the technology as a way of running infinite virtual ‘test-drives’ on buildings, without ever actually having to physically do them. The difference being, unlike physical simulations, you can jump backwards and forwards to any moment in the lifecycle of the asset, engineer various tweaks to see how the replica reacts and then run the simulation multiple times to gauge probabilities of each outcome.

While this technology has only recently made its way to the fore in mainstream workplace



management, digital twins are not an entirely new technology, first making an appearance almost 20 years ago. The term was first coined in 2002 by Florida Institute of Technology professor Dr Michael Grieves to describe a 'digital informational construct of a physical system, that could be created as an entity of its own.'

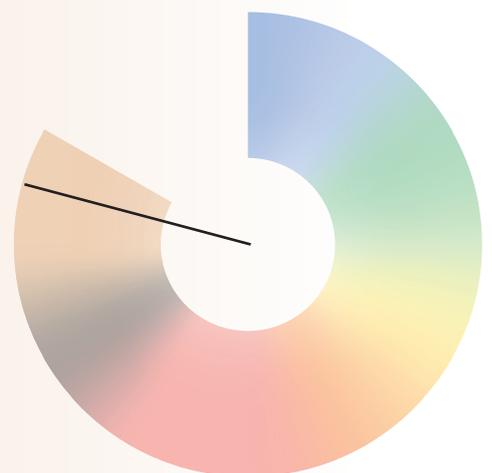
The digital twin can identify system faults, wasted energy or overcrowding in the building before it occurs in the physical world. Scenarios such as power cuts, fires, terror threats and natural disaster can be mimicked, allowing facility managers to not only prevent the minor disturbances before they occur but also plan for potential major incidents, maximising the safety of tenants.

For businesses hoping to reap the rewards of the digital twin, the most pertinent questions are centred around its reliance on the business world's most valuable currency: data. Digital twin technology is not just reserved for smart buildings rich in multiple streams of real-time data. It can also be used by any organisation that collects data and carefully identifies the necessary streams that will provide the most insight and drive the biggest value to the business in the smallest amount of time.

Enhanced employee satisfaction usually translates as increased productivity and wellness. But to warrant the adoption of progressive technologies such as the digital twin, facilities management will likely need to see the tangible cost efficiencies usually associated with reduced energy consumption and minimal downtime.

In 2020, the digital twin is set to revolutionise the world of commercial real estate and a new era of smart FM, bringing about previously unprecedented levels of resource optimisation and flexibility in service.

“Digital twins provide a clear real-time overview of how each component of the building is operating...”



THE WORLD OF WORK IN 2020

CONTRIBUTORS

EXPERIENCE

Simon Elliot, Aramark | Lifeworks

MENTAL HEALTH

Laurie Aznavoorian, BVN Architecture

LEADERSHIP

Guenaelle Watson, 360 Workplace, Fourfront Group

URBANISM

Jeremy Myerson, WORKTECH Academy

SPACE

Esme Banks Marr, WORKTECH Academy

THEATRE

Imogen Privett, WORKTECH Academy

SUSTAINABILITY

Kasia Maynard, WORKTECH Academy

TRANSFORMATION

Jennifer Celesia, Haworth

PRODUCTIVITY

Craig Seager, Condeco

DIGITAL TWIN

Luke Bailey, UnWork



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More information: Kassiani Kappelos
Membership and Marketing Manager
E: kassiani.kappelos@worktechacademy.com
M: +44 (0)7910 528 908
www.worktechacademy.com

WORKTECH Academy team

Chairman: Philip Ross
Director: Professor Jeremy Myerson
Development Director: Esme Banks Marr
Marketing and Membership Manager: Kassiani Kappelos
Senior Research Associate: Imogen Privett
Writer and Researcher: Kasia Maynard

WORKTECH Academy
Unwired Ventures Ltd
7 St Johns Mews, St Johns Road
Hampton Wick
Kingston upon Thames
KT1 4AN, UK





