

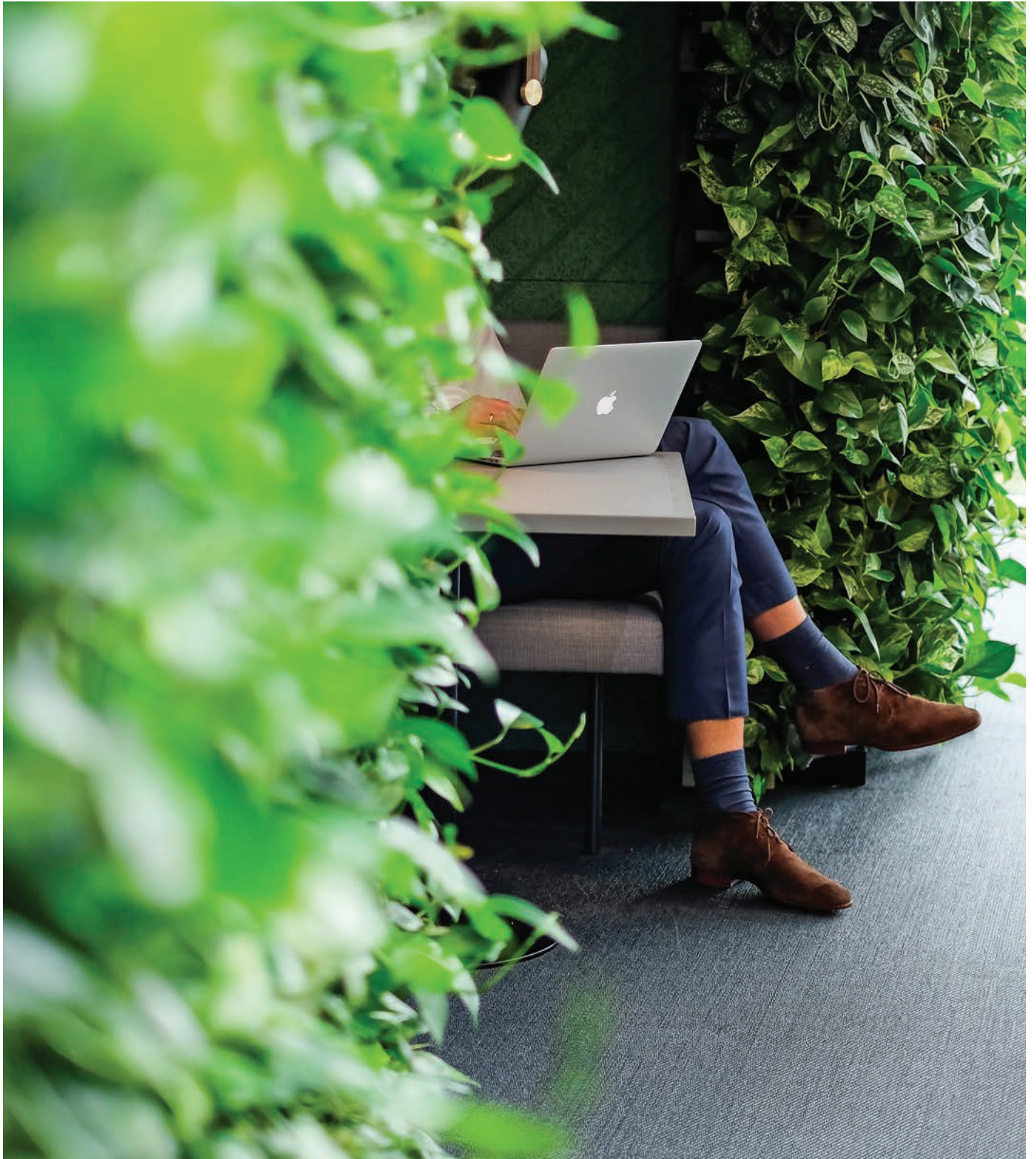


PEOPLE / PLACES / TECHNOLOGY

IN MAGAZINE

ISSUE 1 | JANUARY 2020

- WORKPLACE DISRUPTION
- SANDRA GRITTI ON THE EDGE
- SIEMENS' NEW ZUG CAMPUS
- THE UNSCIENCE OF DATA



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Editorial



A few years ago, when listening to office designers and suppliers about trends in the market, it became apparent to me that they were not merely holding new conversations about the workplace with their customers, but also holding them with new people within each organisation. As well as facilities and property managers, they were talking far more with senior executives, HR directors and managers, IT specialists, project managers and change managers.

This was not a new phenomenon as such because we've known for some time that the workplace sits at the intersection of people, place and technology, but it was a significant crystallisation of it. We had reached a tipping point in which conversations about the workplace had to pay at least as much attention to the digital and cultural space as the office itself.

What has emerged is both a new way of thinking about the workplace and a new group of people doing the thinking. It remains a discipline rather than a profession and we are pleased to be at the forefront of the drive for better work and workplaces, first with our online publication *Workplace Insight* and now with *IN Magazine*, the first of its type dedicated to the new era and a way of holding fresh conversations about it.

I hope you enjoy this first pilot issue, and I hope you subscribe to receive future issues when we begin publishing in earnest in 2020 and the coming years.

Mark Eltringham

Publisher, IN magazine

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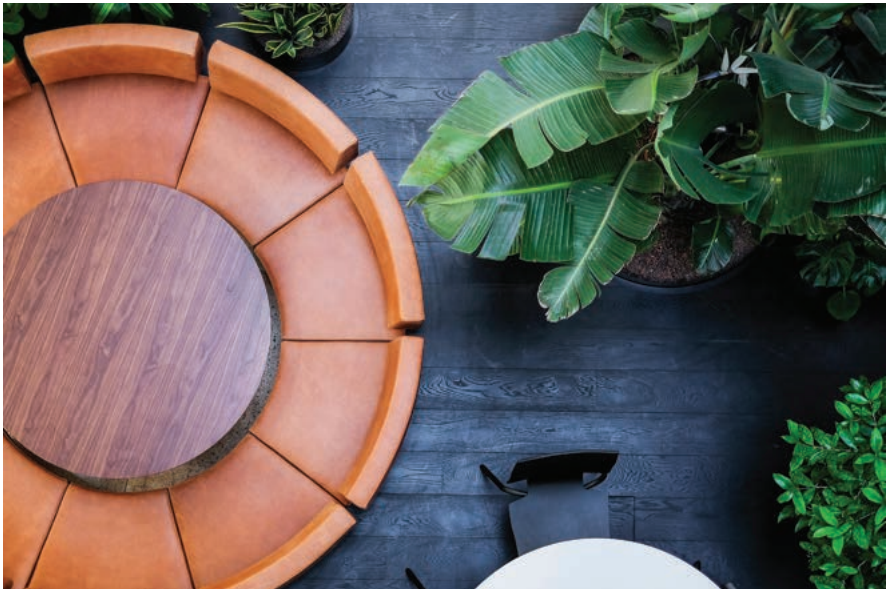


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COMMENT

07

The importance of patience

Antonio Argandoña Ramiz



Antonio Argandoña Ramiz is Emeritus Professor of Economics and Business Ethics at IESE. He received his PhD in Economics (summa cum laude) from the University of Barcelona in 1969. A Professor of Fundamentals of Economic Analysis (retired), he has taught at the Universities of Barcelona, Malaga and Navarra. *This piece first appeared on The Conversation.* www.theconversation.com

Empirical studies on patience have demonstrated the positive effects it can have on creativity, product quality, collaboration and productivity as well as the long-term sustainability of companies. Being patient means listening, observing, waiting for information to come, consulting other people and seeking relationships that provide new resources to make good decisions. Patience is good for ourselves and others.

In a workplace environment where we value speed, tangible results and immediate decisions made, it may appear that there is no room for patience. Even though research shows that very few decisions in the workplace should be considered truly urgent, business culture seems to embrace the idea that “he who hesitates is lost.”

Considering important judgements, negotiations and innovative ideas that may come up, it is important to practice patience so that we do better business and promote positive psychological and physical health in the workplace. To develop patience, we must know ourselves and be clear about our guiding principles, capabilities and limitations.

To practice patience, we must start with the following two practices to problem-solve and understand ourselves.

Identify the problem. What is upsetting you about the delay? There could be many reasons, dissatisfaction with the team, the loss of money, negative impact on others. No matter the problem, identify the source of the issue so that you can begin to deal with the problem.

Examine our human reactions and practice different responses. Analysing the outcome and its consequences is a learning opportunity and may even reveal some positive consequences to something initially seen as a setback.

In general practising patience can:

- Result in more realistic expectations and calm behaviour.
- Limit the task build up, lack of attention and disorganization.
- Denotes maturity, fosters a consistent identity over time and encourages people to assume responsibilities.
- Builds character and promotes steadiness, perseverance, strength and humility.
- It has positive effects on physical and psychological health.

And in relationships with others:

- It creates a better work environment because it prevents brusqueness and unnecessary arguments.
- It builds trust by facilitating understanding and collaboration, and it allows time for mistakes to be corrected or actions to be improved.

An example of the positive impact patience can have on innovation would be Microsoft Corporation founder and CEO Bill Gates. Gates goes away twice-a-year solely to think about the future of his company on a retreat he calls Think Week. One of Gate’s early “Think Week” retreats lead to the conception of Internet Explorer, which changes the way we used the internet forever.

We’ve heard that patience is a virtue and although organizations themselves can’t be virtuous, there are places that encourage patience through their culture supported by incentives, training programs, codes of good practice and other mechanisms.

Although we are accustomed to highly competitive corporate environments, patience provides room to take a step back and better understand our circumstances, therefore we can thrive and meet objectives that benefit us all ●

“

Patience provides room to take a step back and better understand our circumstances

Life on the edge

Sandra Gritti of
EDGE on why
creating the best
office building in
the world was never
going to be enough

WORDS - MARK ELTRINGHAM
IMAGES - EDGE TECHNOLOGIES



Left
Edge Olympic
Amsterdam is
designed to raise the
bar for building design
yet again



Back in 2015 it was common to see one particular building described as the smartest, greenest and most intelligent in the world. This was the Edge in Amsterdam. There were some very good reasons why it was so well received. It achieved the highest BREEAM environmental rating ever recorded and generated all of its own energy.

The Edge, designed by PLP architects, used integrated tech to control not just the performance of the building itself but to improve the experience of everybody who entered it.

The Edge was also then the greenest building in the world, according to the environmental rating system BREEAM, which gave it the highest sustainability score ever awarded: 98.4 percent. The solar panels create more electricity than the building uses, and the building features a range of environmentally friendly features that make it stand out as an exemplar of green building design.

It was also designed to maximise people's wellbeing, a subject that is now inextricably linked to green design.

It achieved this primarily by getting the basics right, not least with fresh air and daylight which are rarer commodities than they should be at work.

As part of its focus on addressing the needs of the individual and his or her wellbeing, the building is linked to each person who works in it via a smartphone app which knows each person's schedule and so their needs for facilities such as parking spaces, workstations and meeting rooms. These spaces can be personalised both in terms of their furniture and layout

“

The Edge uses integrated tech to control the performance of the building and improve the experience of everybody who enters

Right
Greenery is essential both outside the building and inside.



but also the individual's preferences for light, temperature and ventilation. The Edge also follows the principles of agile working, empowering people to find the space just right for their needs.

Yet while the accolades came thick and fast, the firm behind the building -EDGE - has moved on, developing new buildings with new ideas and in new places around the world.

The building might even possibly still hold the accolades for its intelligence, green credentials and all round excellence although it has already spawned a new generation of buildings that are set to surpass it.

Accordingly, the people behind The Edge in Amsterdam have now extended its principles to a growing portfolio of new buildings across the world, featuring the latest developments in building technology, sustainability, user experience and wellbeing. This is especially important because buildings are the world's main source of carbon emissions, contributing about 40 percent of the total each year.

I had a chance recently to chat to Sandra Gritti, the Product Excellence Director at EDGE, a job title that tells its own story.

“One of the things that we're working hard on is to keep on monitoring that what we do makes sense,” she says. “We see almost every building as a proof of concept and try to measure whether the ideas we had are actually working out whether people are actually satisfied with the outcome whether the building



is performing as it should and whether we've made a difference in the different parts that we want to change.”

One idea Sandra is keen to dispel is that buildings as smart as those developed by EDGE are focussed primarily on measurement in their use of embedded technology.

“I think we've made offices almost like white collar factories,” she tells me. “They're made for efficiency and it's all about metrics such as square metres per desk and square metres per person and very much seen also as a cost factor. So, the office space was always about its cost and how much do we spend on our real estate.

“And I guess it's in many ways a missed opportunity because we have more and more knowledge thinkers, more creative people in highly demanding jobs working 24/7. Those people have different demands. They have very complex jobs and a very diverse workday - they don't just sit behind their desk all day typing away. And that demands a different kind of environment.”

How exactly these different kinds of environment might be adopted more widely is part of Sandra's mission, to show organisations what is possible.

“There's a risk that you don't know you're doing the right thing”, she tells me. “So, the fact that we have more and more examples which actually prove that this is the right choice even if it maybe initially seems to be a bit out of the box. Having the sensor data which shows that space is being used efficiently and having the surveys which prove that people are more satisfied and that they are performing >

“

People have very complex jobs and a very diverse workday - they don't just sit behind their desk all day typing away

better, all those things can really help to build up the case for people.”

It's not just organisations who are reluctant to make the shift but workers too, Sandra concedes. “There's a difference between understanding what's going on in a workplace and personal privacy. So we are very explicit about making sure that whatever we do is not invasive. We don't follow people through the building. We want to understand general occupancy. We want to understand if this area has been more used than another and in what ways.”

Having made its name with The Edge, the firm is now building on its achievements with Edge Olympic Amsterdam and developments in cities across the world, including in London, Boston and Berlin.

In the Summer of 2019, the firm announced its entrance into the UK commercial property market with the £50m acquisition of 60 St Thomas Street on London's South Bank.

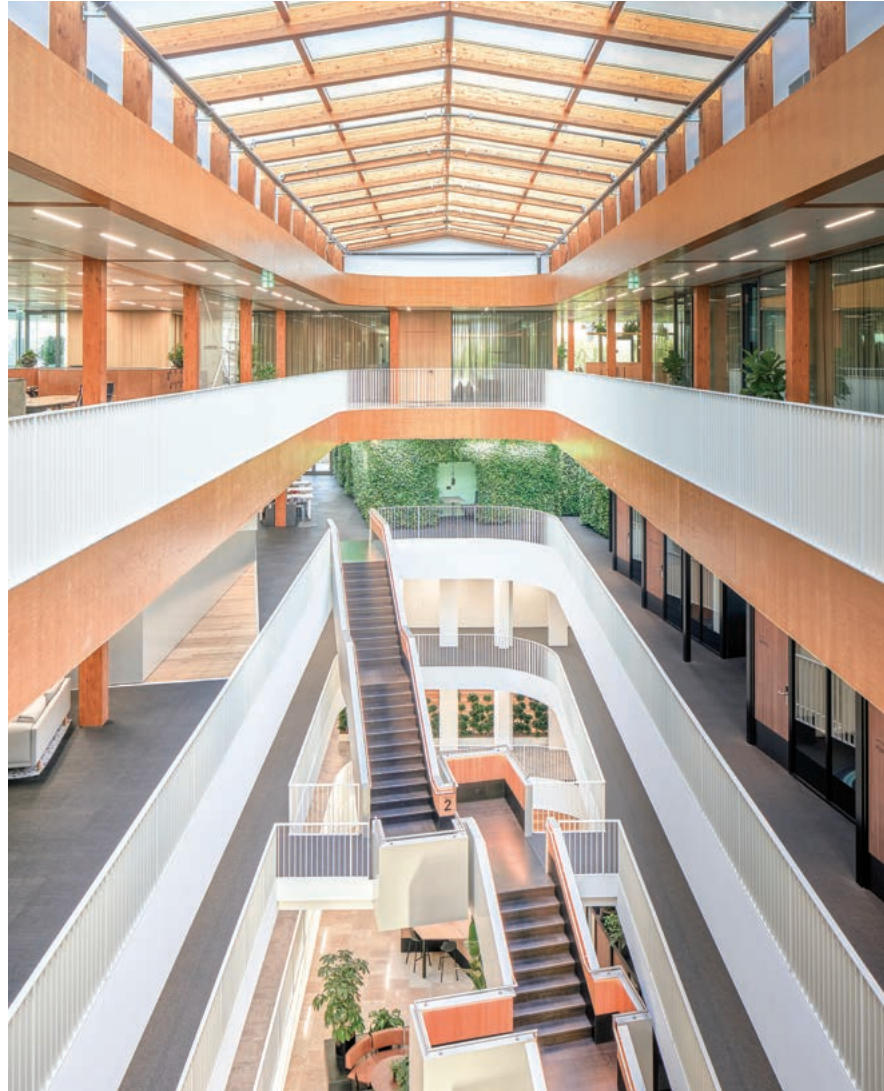
“We are expanding into new markets to address occupier demand for buildings with increasingly high sustainability standards that put employee wellbeing at the forefront,” said Boudewijn Ruitenburch, Chief Operating Officer. “We believe in building better places that are not only inspiring workplaces, but address the climate change emergency too.”

But how do they have to adapt ideas to local cultures and frameworks?

“We have standards on sustainability, technology and wellbeing”, Sandra Gritti says. “What you do see is that there are cultural differences, so hierarchies are very different in Germany compared to the Netherlands. .

“And so it's then a question of convincing them to say that's also where analytics comes in and trying to prove that what we do with our building makes sense because it results in a much more high performing real estate for tenants for which they are willing to pay a premium because they know it's going to be much better for them as a company.

“I think that it's a really exciting time to be working in this field because there's a lot going on. A lot of industries have been disrupted in various ways over the last few years and real estate seems to be one of the last ones on the list which has now over the last couple of years really



Above

Public spaces are as important, smart and well designed as the offices

been picking up the pace to understand how we can do things differently for a changing society.”

“What we definitely see is that there are more and more companies which are putting more emphasis on secondary benefits such as corporate wellness programs, on things like providing gyms or offering healthier food in the cafeterias. So even on an organization level they're starting to adopt those methods.

“The thing that we now see switching in the consciousness of employers is that they think: hey we have all these square meters of office space. What do we do with that space for our people? The great thing is if you work in an innovative field you get other innovators who come to you. So, we've also been able to really raise the general ecosystem of advisors, suppliers and others which are striving to make a difference. So, it's very cool because it's working.” ●



Hear Sandra Gritti in conversation on the Workplace Insight Podcast

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Childhood's end for the workplace

Our conversations about the future of work must reflect the need for a new reality

WORDS – MARK ELTRINGHAM



Arguably Arthur C Clarke's finest novel, *Childhood's End* is the story of an Earth that is invaded by a force of alien Overlords. This is not a destructive colonial invasion, which is why there's no Hollywood blockbuster in the tale, but a seemingly benevolent intervention which ushers in a golden age for humanity. Although humankind initially does not get to meet the Overlords in person (for reasons I won't give away here), the aliens unite the world's governments, eradicate crime, conflict and the nation state and do away with the need for creativity and hard work. It is the literal end of history.

The book's pivotal chapter describes a world in 2050 in which strife and striving are no longer needed or even allowable. Even the newspapers have vanished because there is nothing to fill their pages. Good news writes white.

This is the true Age of Reason. Most people have two homes and are prosperous without the need to work themselves to death. Some people remain drones, but the vast majority are freed of drudgery by robots. At most they work 20 hours a week, and spend their time in sporting pursuits and leisure, thereby rendering professional sports obsolete too.

Although education has allowed the majority to fill their time without boredom, some of the more educated people become tired of their lifestyles

And yet, some people are still unsatisfied. Although improved education has allowed the majority to fill their time without boredom, some of the more educated people become tired of their lifestyles. There is no creativity, less of value to read or watch and even the simple pursuit of watching sport is denied them. The chapter ends by asking the ancient, great unanswered question 'Where do we go from here?'

The answer to that comes later in when – spoiler alert – humans transcend their physical selves and the childhood of humanity referenced in the title.

The book was written in 1953 but it explores many of the ideas we are now faced with in the 21st Century. We are now addressing many of the questions

raised in the novel, including our purpose in a potential world without traditional forms of work and the splicing of the real and non-physical world.

While Clarke relied on a benevolent alien invasion as a way of raising these questions, we are addressing them in response to the advent of automation, artificial intelligence and other forms of immersive technology. The dialogue is just beginning about what we do with ourselves and how we maintain the economic and social order in a world in which we automate the basic tasks that many or most people have relied on for an income and some sort of meaning.

Of course, Clarke was not alone in addressing the potential repurposing of our lives and social systems as the consequences of exponential technological development became clear in the middle and second half of the 20th Century.

As long ago as 1930, the economist John Maynard Keynes was addressing the issue in an essay called *Economic Possibilities for our Grandchildren*. Although sharing his thoughts to the backdrop of the Great Depression, Keynes put forward the idea that capitalism could deliver a 15-hour working week for the majority and the possibility of a world in which drudgery was replaced by leisure.

His premise was based on an extrapolation of the wealth creating potential of technology. In the essay he notes that the age of innovation that began in the 18th Century had materially improved the living standards of the majority of people for the first time in two millennia, even while the world's population increased as a result of better nutrition and medicine.

He predicted that by 2030, living standards in advanced capitalist countries would be "between four and eight times as high" as they were in 1930 and that the grandchildren of his readers would be working five shifts of three hours each week without any consequence for their living standards.

"For the first time since his creation man will be faced with his real, his permanent problem – how to use his freedom from pressing economic cares, how to occupy the leisure which science and compound interest will have won for him, to live wisely and agreeably >

Left

The Sedus Smart Office in Dogern, Germany



and well”, he wrote. “The love of money as a possession – as distinguished from the love of money as a means to the enjoyments and realities of life – will be recognised for what it is, a somewhat disgusting morbidity, one of those semi-criminal, semi-pathological propensities which one hands over with a shudder to the specialists in mental health.”

The complexities of this, not least the fact that people don’t just work for the money, were explored by the still underappreciated Hannah Arendt in her 1958 book *The Human Condition*.

Leaning on the ancient Greek philosophical ideas of the *vita activa* (active life) and *vita contemplativa* (contemplative life) she argues that centuries of debate about their merits ignored the fact they were not interchangeable. Knowledge is acquired not simply by learning and thinking, but also by creating.

Work meets our material needs and preserves our existence, it connects us to our fellow humans, expresses our identity and in the creative spheres offers us the chance to meet the most basic compulsion of existence – to create something that outlives us. Knowledge is acquired not simply by thinking, but also by creating.

This could explain the dissatisfaction felt by those who rebelled against a life of leisure in *Childhood’s End* but also provides a framework for the historic debate about the leisure society and our

contemplation of a post work world.

The idea of the leisure society was most evident in the 1960s and 1970s when the potential of computers became evident. It seemed a simple matter to suggest that technological developments would mean we could generate the same wealth with less labour and this would free people’s time to do other things.

As Keynes had done, this idea was based on a simple extrapolation. In 1966, an article in *TIME* magazine considered what the rise of automation would mean and concluded that by 2000 machines would be so productive that they could provide everybody with an annual income of \$40,000 a year (in 1966 prices).

This simplistic formula was rendered untrue within twenty years. The bottom line may have stayed the same but the variables had changed. By the 1990s authors like Charles Handy were highlighting the increasingly precarious nature of work and the role of technology in allowing organisations to employ fewer people to do more and more work.

We can see the truth of this. We work longer hours and in a more unstructured way than at any time in our history, and not necessarily in a more productive way. At the same time living standards are stagnant or increasing in almost imperceptible ways.

At the same time we are approaching the point at which technology might

“

The answer is not simply a new era of leisure. We still yearn for creativity, competition, structure, strife and striving

render a significant number of people not merely unemployed but unemployable in the traditional sense and the real prospect of a widening of economic divisions between those people who can exploit new technology, retrain or transfer their skills and those who cannot.

So, we may must put away childish things and instead address the reality of a world that echoes the one created by Clarke in *Childhood’s End*. We need to think seriously at last about the very real possibility of offering a Universal Basic Income in developed countries and a genuine leisure society for many people who receive it, not to mention those rendered unemployable to some degree or other by automation.

Hannah Arendt offers the same question about the meaning of existence raised by Clarke. What happens when a society of workers is freed from work, she asks. In the work of both writers, the answer is not simply a new era of leisure. We still yearn for creativity, competition, structure, strife and striving.

As Susan Ertz puts it in her 1943 book *Anger in the Sky*: Millions long for immortality who don’t know what to do with themselves on a rainy Sunday afternoon. If we don’t take account of these complexities of human behaviour and motivation, we run the risk of infantilising what should be a far more grown up discussion of the role of work and workplaces in our lives ●

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Hard facts

Having data about people and their behaviour does not create a science

WORDS – JOHN RAPLEY
ILLUSTRATION - SIMON PEMBERTON

Two questions: is it good or bad that professional athletes earn 400 times what nurses do, and is string theory a dead end? Each question goes to the heart of its discipline. Yet while you probably answered the first, you’d hold an opinion on the prospects of string theory only if you’ve studied physics.

That annoys economists, who wonder why everyone feels free to join economic debates instead of leaving them to the experts, as they do with physics or medicine. What economists don’t usually admit is that, on a range of topics they examine, they often had an answer to the question before they began their studies. Scientists are supposed to reach their conclusions after doing research and weighing the evidence and data but, in economics, conclusions can come first, with economists gravitating towards a thesis that fits their moral worldview.

It was the holy grail of economists to make their art into a science

That shouldn’t surprise us. Economics has always been an ethical and social exercise, its purpose being to produce the rules by which a community organises its production. It’s not accidental that Adam Smith, whose work *The Wealth of Nations* (1776) is often seen as the founding text of economics, was a moral philosopher.

Yet ever after, it was the holy grail of economists to make their art into a science, using it to uncover the codes supposedly buried in their heart of human existence. They experimented with mathematics and pondered Charles Darwin’s revolution in biology, but it

“
It was the holy grail of economists to make their art into a science, using it to uncover the codes supposedly buried in their heart of human existence

would be the late 19th century before economics finally found a model for itself. It found it in physics.

Alfred Marshall, one of the architects of the ‘marginal revolution’ that gave birth to modern economics, no doubt had the predisposition that inclined him towards a physical view of the world. A former seminarian who enjoyed unwinding with long walks in the Scottish highlands, he was undoubtedly attracted to the view of a universe that was inherently orderly.

Yet the marginalists had another reason to adopt the physical view of the world. Physics was then emerging as the most canonical of the sciences. As a model, it had no rival. Besides, with a few basic assumptions, the physical model seemed to transfer rather neatly to human behaviour.

Think, for example, of that high-school lesson on energy transfer. You stick a piece of hot iron into a bucket of cold water,

steam rises, the rod cools, and the water warms until the two eventually reach the same temperature: equilibrium.

Well, you can similarly think of the hot iron as a shopkeeper, the bucket of water as a customer, and energy as money. The item the shopkeeper has to sell is hot – everyone wants it – but, as a customer, your empty purse makes you a bucket of cold water. Either the shopkeeper drops the price to reach equilibrium with you, or waits until a hotter customer, one with a full wallet, enters the shop. That way, the handbag will sell at an equilibrium-price more pleasing to the shopkeeper.

That’s sort of how the marginalists conceived of market transactions. Some of the early marginalists went so far as to explicitly liken pleasure, or what they would call utility, to energy. From there, it was a short leap to say market transactions revealed the laws of nature.

In the 1930s, Lionel Robbins laid down the basic commandments of the discipline when he said that the premises on which economics was founded followed from ‘deduction from simple assumptions reflecting very elementary facts of general experience’, and as such were ‘as universal as the laws of mathematics or mechanics, and as little capable of “suspension”’.

Ah yes, general experience. What did Albert Einstein allegedly say about common sense? A funny thing happened on its way to becoming a science: economics seldom tested its premises empirically. Only in recent years has there been serious investigation of its core assumptions and, all too often, they’ve been found wanting.



The social nature of human beings makes any laws of behaviour tentative and contextual

Unlike in physics, there are no universal and immutable laws of economics. You can’t will gravity out of existence. But as the recurrence of speculative bubbles shows, you can unleash ‘animal spirits’ so that human behaviour and prices themselves defy economic gravity. Change the social context – in economic parlance, change the incentive structure – and people will alter their behaviour to adapt to the new framework.

That’s something that ‘physics envy’ can’t capture – that the social nature of human beings makes any laws of behaviour tentative and contextual. In fact, the very term ‘social science’ is

probably best seen as an oxymoron. In the early years of the neoclassical revival, in the 1970s, the Nobel laureate Wassily Leontief warned against the drift that had begun in economics towards what was subsequently called ‘physics envy’.

Noting that human data differed from that in the natural sciences by its fluid nature, Leontief said that economists would do better to spend less time perfecting their maths, and more time getting down and dirty with their data.

However, he also acknowledged his warning would likely fall on deaf ears. The apogee of economic ‘scientism’ came in the 1990s, a decade in which economists such as Alan Greenspan were lionised as gurus, Bill Clinton was describing globalisation as a force of nature to which governments had to submit, and whizzkid

John Rapley is a political economist at the University of Cambridge, as well as a journalist and co-creator of the Caribbean Policy Research Institute in Jamaica. He is the author of *Twilight of the Money Gods: Economics as a Religion and How it all Went Wrong*. This was originally published on Aeon under the headline *Few things are as dangerous as economists with physics envy*

experts such as Jeffrey Sachs were jetting into one country after another advising former communists how to re-align their countries with this presumed natural order.

Hindsight has revealed the misplaced hubris of that decade, one during which Greenspan helped to fuel a speculative bubble that nearly destroyed the world economy and the Soviet Union’s failed reform knocked seven years off its life expectancy. Many economists, Sachs included, defend themselves on the grounds that their advice was not taken: bad politics got in the way of good economics.

But that only vindicates Leontief’s point. Economies are social constructs. That necessarily entails politics. Precisely because economic policies affect them so profoundly, people take much more interest in them than they do in physics debates. The method of economists at the turn of the century was to go through data sets looking for patterns – economics at 30,000 feet (sometimes, literally). Had they instead taken Leontief’s advice, and spent more time on the ground getting to know their subjects, they might have been able to anticipate the ways that politics would affect their models.

Given this willful blindness, the current reaction against economists is understandable. In response, a ‘data revolution’ has prompted many economists to do more grunt work with their data, while engaging in public debates about the practicality of their work. Less science, more social. That is a recipe for an economics that might yet redeem the experts. ●

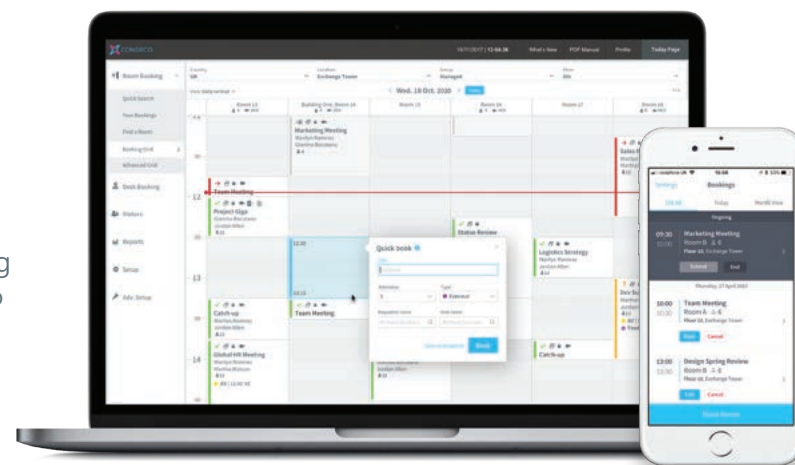
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Siemens – Zug, Switzerland

WORDS – NEIL FRANKLIN

Campus Life

Below
 The Spark innovation centre contrasts aesthetically with the more corporate areas of the building



When it comes to creating an office to call home, all of the usual challenges are magnified by several degrees for a company like Siemens. It can't afford to skip on the building's services, green credentials, integrated technology and all-round smartness then hold meaningful conversations on the same subjects with its clients.

So, the new Siemens Campus in the Swiss town of Zug has to showcase the best the firm has to offer as well as delivering for the people who work there. The investment of CHF 250 million at the site has delivered a new headquarters for the Siemens Building Technologies (BT) Division, which has 29,000 employees worldwide which incorporates both offices and a new production facility.

Construction of the office and production buildings began in May 2016 and pioneered the use Building Information Modelling (BIM) for design and construction. This involved the creation of a digital twin, essentially a 3D model of the building, which ensures that

the ongoing management of the building is accounted for completely in its design.

The campus's attention to its green credentials is evident in the way it pipes water from nearby Lake Zug to heat and cool the offices. Toilets flush with water gathered on the grass covered roof which also incorporates a photovoltaic system to ensure the use of fossil fuels is not necessary for the energy consumption of the building. Material used in the construction are locally sourced, which in this case means from no more than 800 km away.

The office building has earned a LEED Platinum accreditation while the production building has been accredited to LEED Gold. An integrated building automation system with energy optimisation based on the Desigo CC integrated building management platform controls the energy consumption of the buildings.

The main building at the campus is a seven storey, 184,000 sq. m. office space which sits alongside the three-storey production facility. The offices

are designed around an activity based working model allowing people to choose the best place for whatever it is they are doing or the people with whom they'd like to work.

This same element of agility and personalisation is also apparent in the use of a workplace app called Comfy which was acquired by Siemens from its original developers Building Robotics in 2018. The app allows employees to adjust temperature and lighting as well as book rooms for meetings and identify empty spaces which they can use. It also allows them to report issues directly to the facilities management team.

One floor of the building is given over to the innovation team in a space called - appropriately enough - Spark, which contrasts aesthetically with the more corporate style in the rest of the building. Spark is evidently modelled on the stripped back feel of coworking spaces, with its exposed services, bare chipboard (even used to create the now ubiquitous amphitheatre in such buildings), table tennis table, cafes, booths, project

rooms and dynamic layouts of decidedly uncorporate office furniture.

It is led by Innovation Manager Franziska Dolak who says that "Spark is all about driving innovation and driving transformation for us as a smart infrastructure operating company. That means we wanted to create a space that is super inspiring, flexible and collaborative that allows us and our customers to build our future together.

"Here at Spark we wanted to make sure we offer various types of environments for teams to be creative, just hangout, relax, take a step back and gain new inspirations. We do buildings and beer, knowledge sharing sessions, culture cinema, even a fail night to really address how we deal with failure and learn from it and grow not only as an organization but as individuals as well. But we also said we want to make sure we could use the space as a testing field to visualise customer and future customer experiences early."

One of the interesting ideas that has been introduced to the space is that when people book one of the seven project

“Staff are empowered to control aspects of their workplace environment such as temperature and lights, space availability and booking, work requests, maps and amenities

rooms for a period of time, they are first met by an empty space to force them to think about what it is they want from the space and how it should be configured to get the best results. People then choose how they want to use vertical space, the types of furniture they would prefer – inevitably including standing desks – and how information should be exchanged between people.

As in the rest of the building, the space is packed with embedded sensors which are integrated with the building's light fixtures with which they share power and include a Bluetooth beacon, infrared cameras to track the movement of people and other technology that allows them to monitor space use, light levels, temperature and so on.

Siemens claims that the use of smart sensors in an integrated network of this sort can lead to a reduction in energy consumption of over a third in buildings of this type by adjusting energy usage intelligently based on occupancy levels and space use. Similarly, the sensors can adjust light levels based on natural light >



Right
Green roofs also incorporate rainwater collection and solar panels

Left
The on-site manufacturing facility shares the same approach to the environment as the office buildings



levels to reduce energy consumption even further.

Although there is some criticism of the use of such technology in the ways that it measures how people behave in a building, the general manager of the campus Christoph Leitgeb says that the important thing is to engage people so that they understand the benefits that such systems bring, both to themselves and the organisation and society.

He extends the same thinking to the benefits of BIM which can manifest in the overall performance of the building as well as people’s day to day experiences of it.

“For Siemens, digitization is the key to maintaining its success in the future,” he says. “That’s why we wanted to use the latest technology here. This is the first showcase from Siemens Real Estate for the way we can plan with BIM. Thanks to BIM, digitization is now also being used in the construction industry.”

But what makes the building truly smart as an experience for its users are the 12,000 connected data points spread

throughout the campus. In total, 6,500 data points are connected in the office building, with a further 5,500 in the factory.

“These data points can tell us what temperature a room is, if there is a wiring fault or if there is a blockage in the air conditioning,” says Christoph Leitgeb. “They also allow users to interact with the building, to set the temperature of their workplace and to adjust the lighting. It allows us to quantify things that used to be intangible. A smart building is flexible, it learns from previous interactions and it continually adapts to the needs of building users, actively contributing to their success.”

The generation of data is currently anonymised as a way for managers to make decisions about the way the building functions, but the use of Bluetooth and the Comfy app does make it possible to track people through their devices such as smartphones. Siemens and its workers are currently discussing how this might be addressed at some point in the future. It’s a conversation about

“
The use of Bluetooth and the Comfy app does make it possible to track people through their smartphones



Left
The amphitheatre is made up of reconfigurable modules

Right
People are free to create their own environment, including how they use vertical spaces

Above
An intimate meeting space in Spark

privacy and data that parallels that being held in wider society.

The Siemens Campus is defined by its contrasts. On the face of it a perfectly decent if unexceptional office building, but one that holds thousands of little secrets and one big secret about the integration of physical and digital space and how we are adapting to it.

Siemens is driving this conversation in the new campus as well as in other projects such as Siemensstadt in Berlin which has been around since the 19th Century but is now pioneering smart city technology for the 21st.

It is also involved with the €30 million Triangulum project which since its inception in 2015, has followed three ‘Lighthouse’ cities: Manchester, Eindhoven and Stavanger as each implemented and tested smart solutions to create sustainable urban environments.

In the UK, Manchester looked at the key issues of ICT, mobility and energy. Manchester City Council, The University of Manchester and Manchester Metropolitan University – partnered



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We want to make sure we could use the space as a testing field to visualise customer and future customer experiences early

FRANZISKA DOLAK

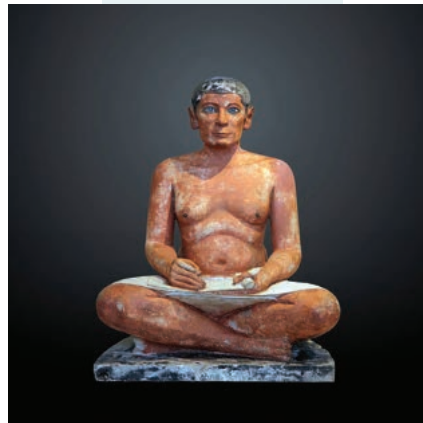
with Siemens as the technical partner to investigate how to balance energy consumption and demand, reduce costs and carbon emissions and increase the use of renewable energy.

Siemens has been working with Manchester Met University on a 400kWh lithium-ion battery, installed at the University Birley Campus which integrates with new solar panels also installed on the roof as part of the project.

The findings from the Manchester pilot will be used to develop smart city quarters in other cities around the world. With 68 percent of the world population projected to live in urban areas by 2050 according to the UN devising sustainable urbanisation solutions will be key to managing future growth and development.

What such projects have in common is a series of laudable goals to improve people’s lives and the environment at the same time navigating the creation of a new era in which technology is embedded in the things that surround us. We are all going to have to adjust. ●





A brief history of workplace disruption

WORDS – ANTHONY BROWN

Office work has existed in some form ever since people started writing on tablets and papyrus. Depictions of clerical staff are common in the Bible and on the walls of pyramids. In the mid 14th Century the Church of San Nicolò, commissioned the artist Tomaso da Modena to create the fresco in the chapter room of the church depicting forty monks of the order hard at it at their desks. The word office itself derives from the famous Uffizi in Florence, created in 1560. Things picked up after the Industrial Revolution, as is evident from the work of Charles Dickens amongst others. The first recognisable swivel chairs were developed by the likes of Thomas Jefferson, Albert Stoll and Peter Ten Eyck. These developments have tracked wider social, economic and cultural trends so the history of office furniture design holds a mirror to the world.



Early 20th Century

The first widely recognised example of a modern office is the 1904 Larkin Building designed by Frank Lloyd Wright. Shortly after Frederick Taylor introduces his theories of scientific management which applies industrial principles of the division of labour and time and motion to the office.

Soon, the likes of Steelcase and Herman Miller are founded to create products for the new forms of workplace. In 1939 Frank Lloyd Wright completed his work on the Johnson Wax building including The Great Workroom, an early form of open plan, and all the furniture within. Still truly breathtaking.

In the 1920s and later in Europe the development of new materials such as tubular steel combined with the rise of the Modernist movements and its figureheads such as Mies van der Rohe transformed the world of architecture and design.

In their wake and on the other side of the Atlantic, designers like Eero Saarinen and Charles and Ray Eames designed genuinely iconic products that endure to this day.

Mid 20th Century

While the Eames continued to create designs in a range of new materials, George Nelson introduced the first L-shaped workstation in 1947.

In Europe in the early 1950s a new conception of open plan was forming around the idea of Bürolandschaft. In contrast to the open plan bullpens that were common in the US, the brothers Wolfgang and Eberhard Schnelle developed the idea based on a new focus on the needs of individuals and the flow of information between them. Although still open plan, it opened up a new idiom that still distinguishes European open offices from those in the US.

Also in Europe in the 1950s, Arne Jacobsen began to design his own generation of furniture icons for Fritz Hansen. Many of the designs from this era continue to be widely specified and copied as they have achieved iconic status and serve as easily recognisable design signifiers. >



Left, this page
The Johnson Wax building

Below
Arne Jacobsen's Ant Chair for Fritz Hansen.

Opposite page
The Seated Scribe, a sculpture dating back over 4,000 years now in The Louvre

1960s and 1970s

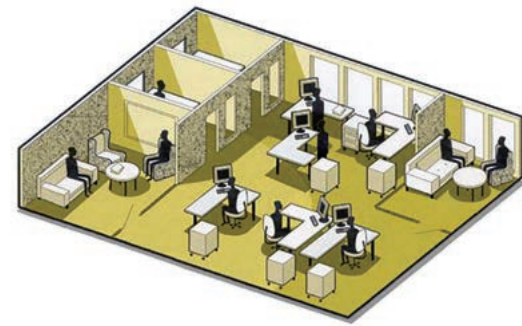
The defining furniture system of the 1960s was Action Office by Herman Miller. Originally launched in 1964, it was updated in 1968 but this time supported by a Manifesto written by its designer Robert Propst which was just as influential as the furniture itself. Many of the statements about the design of spaces for people are just as relevant 50 years on, even if the furniture now looks anachronistic. It was to form the blueprint for American panel systems for the next few years.

Meanwhile in Europe Herman Hertzberger's designs for the Central Beheer building herald the idea that even a fixed form such as a building can have inbuilt adaptability to cope with changing technology and working cultures. It's brutal aesthetic may have dated but its thinking remains current.



Right
The Central Beheer Building and its modular elements

Top right
A typical combi-office, a forerunner of activity based working



1980s

Computers with their large CPUs and CRT monitors start to appear on workstations and in response the desks become bigger and more heavily engineered. Cable management become a major issue and in response Douglas Ball designs the Race system for Sunar and Steelcase introduce their context core unit.

Europe follows suit with a range of solutions including sliding tops. As much attention is paid to the structure of the desks as their surfaces. A similar revolution is taking place with office seating as mechanisms become more complex and five star bases adopted as the norm in response to growing interest in ergonomics for computer users.

The idea of the combi-office, in which people choose between an open plan workstation and an unassigned personal office is an early progenitor of activity-based working. People start using terms like hot-desking.

“
Office seating mechanisms become more complex and five star bases adopted in response to growing interest in ergonomics



1990s

The miniaturisation of technology and the Internet change everything. There is a great deal of talk about new ways of working but they remain more talked about than implemented.

The use of laptops and mobile phones begins to drive a reduction in the size of workstation footprints and desks. In the UK, the most talked about building is BA's new Waterside building which had at its heart a 'Street' with cafes, shops, trees, plazas and road signage. It is an early example of both activity-based working and the idea that workplaces can function like communities or even cities.

Chiat Day's vivid and playful New York offices from 1994 designed by Gaetano Pesce becomes the progenitor of creative offices with quirky features. In London a firm called Michaelides and Bednash working around a single shared long table that clearly announced the arrival of the bench desk that was to become the de facto default desk solution in the years that followed.

1994 proves a watershed in office furniture design with the introduction of the Aeron chair, Vitra's Ad Hoc designed by Antonio Citterio and a product too ahead of its time called Kyo from President. All point to the world that was to arrive very soon after their launch.

The 21st Century

In many ways the crystallisation of ideas that had formed at the end of the 20th Century. Work had become uncoupled in both space and time and as a consequence we saw a convergence not only of the places we work, and their design idioms, but an almost inability to distinguish between work time and the other facets of our lives.

Perhaps unsurprisingly wellbeing became as big a concern for firms as productivity, as did the war for talent. A greater focus on empowering people was one of the consequences.

A new way of occupying property also became evident with the growth of coworking as an alternative to traditional property models. Although in essence a development of serviced offices, the coworking phenomenon tapped into a perfect storm of change in the way people worked, globalisation, excessive rents in tech hot spots, organisations still smarting from the 2008 downturn and technological developments that facilitated new models of space.

In design terms, the century started with a clear focus on bench desks in open plan offices, often supported by break out spaces, meeting and team spaces and has evolved into something more sophisticated and adaptable – activity-based working. ●



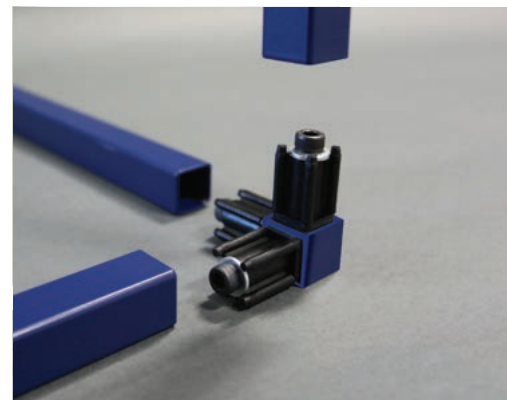
Left
The now ubiquitous Aeron Chair which came perilously close to never entering production

Below
WeWork may have had its problems but it ushered in a new era for the workplace



This piece is taken from the White Paper from BW Workplace Experts: *Indistinguishable from magic: What we need to understand about disruption and what it means for the workplace*

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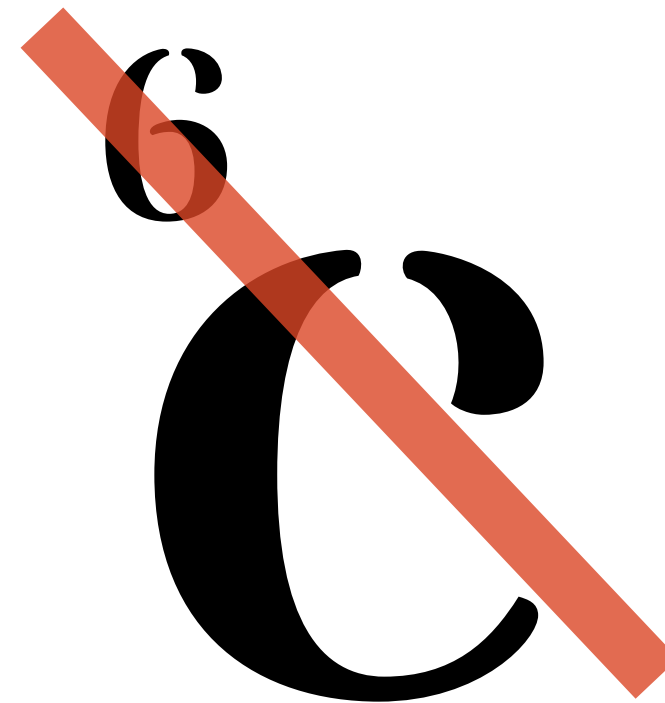


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A life after carbon for the built environment – by Peter Plastrik and John Cleveland

A new urban model is emerging worldwide – transforming the way cities design and use physical space, generate economic wealth, consume and dispose of resources, exploit and sustain the natural ecosystems they need, and prepare for the future. This emerging new urban paradigm has profound implications for players who care about and depend on the design of a city's built infrastructure – including architects, engineers, builders, real estate developers, and office building tenants.

The model is upending the pillars on which our modern cities were built. It is most evident in several dozen cities, half of them in the United States, that are widely regarded as leaders in making extraordinary efforts to prevent global warming and protect themselves from climate turbulence.

These pioneering cities—we call them “urban climate innovation laboratories”—are trying, in just a few decades, to eliminate fossil fuels from their immense, complex systems of energy supply, transportation, buildings, and waste management. Just as systematically and rapidly, they are preparing their built infrastructures, ecosystems, economies, and residents to handle the grave impacts of extreme storms, rainfall, heat, drought, and rising seas—conditions already experienced by many cities and projected to get much, much worse.

THE CITY AS INNOVATION LAB

The laboratory is the entire city, the complex, real urban world with its messy swarms. A city innovation lab isn't a facility with highly controlled conditions, high-tech equipment, and scientists in white coats. The laboratory is the entire city, the complex, real urban world with its messy swarms of businesses, governments, and organizations; urban systems; ideas, interests, and politics; built infrastructure, natural ecosystems, economic sectors; and, of course, all manner of people and groupings.

These city labs exist on every populated continent, but have concentrated mostly in the U.S., Canada, China, western and northern Europe, Australia, and Japan. Most are well-known global cities, including Austin, Berlin, Boston, Copenhagen, London, Minneapolis, New York City, Oslo, Paris, Portland, Rotterdam, San Francisco, Seattle, Shanghai, Singapore, Stockholm, Sydney, Toronto, Vancouver, and Washington, D.C. Some are smaller, high-spirited cities: Boulder, Colorado, and Melbourne, Australia. Several—Cape Town, Mexico City, and Rio de Janeiro—are stepping energetically onto the world climate stage.

These cities are innovating aggressively and radically—by developing and implementing experimental projects, tackling entire urban systems, and reweaving the physical and cultural fabric of the entire city. Their numerous innovations contain a set of profound ideas that are changing the city's wealth, metabolism, ecology, and identity.

These ideas contain the seeds of a new urban paradigm that is reshaping what people think a city can and should become. They introduce new ways for cities to compete successfully in a global 21st-century economy that is shifting to renewable energy. They herald new ways for cities to more efficiently use the vast quantities of energy and materials they need. They announce new ways for cities to value and obtain the benefits their wetlands, forestlands, open space, and other ecosystems provide. They signal new ways for cities to develop the social and physical adaptability needed to anticipate and prepare for uncertain future conditions.

Many of these ideas have been hovering off-stage, even for decades, looking for traction in cities. They were incubated within conceptual frameworks for sustainable development, environmental services, eco-efficiency, urban metabolism, and New Urbanism, or the urban agendas of UN-Habitat and the >

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The fossil-fuel sector continues strenuous political resistance to changes and many governments have failed to pursue sensible policies

Club of Rome’s Earth Charter, or thought-leader formulations such as the “economy of cities” revealed by Jane Jacobs, the Cradle to Cradle™ principles of designer William McDonough, the “biophilic urbanism” of professor Timothy Beatley, or the Third Industrial Revolution economic vision of Jeremy Rifkin.

Now they are being moved onto the world’s urban stage by leading cities responding to the imperatives of climate change. They are spreading to other cities, carried through robust global networks that share information, support innovation adoption, and collaborate on further experimentation. At the same time, the mounting “climate smart” requirements of consumers, corporations, investors, professions, and state and national levels of government are forming enabling conditions that accelerate and globalize the trajectory of this urban evolution.

Since cities came into being 6,000 years ago, they have often evolved fundamentally in response to war and conquest, trade and technologies, and earthquakes and other natural disasters, as well as demographic shifts, social reforms, and political revolutions. This time climate change is driving a full-scale evolution.

The new urban model is still in an early stage of emergence. Its elements have not yet been fully defined and assembled into a coherent practice by cities. It has not yet locked in as the comprehensive new way of doing business in cities, and it faces considerable obstacles. The fossil-fuel sector continues strenuous political resistance to sweeping changes and many national and state-level governments have failed to pursue sensible policies. Cities have limited control over many factors needed to implement radical innovations.

Innovation by cities is an age-old phenomenon. The experiments of ancient cities produced profound and enduring innovations: markets, democracy, libraries, bureaucracy, universities, and writing. Cities “have been engines of innovation since Plato and Socrates bickered in an Athenian marketplace,” notes urban economist Edward Glaeser. “The streets of Florence gave us the Renaissance, and the streets of Birmingham gave us the Industrial Revolution.”

But cities are more than a platform for innovation; they, themselves, are an innovation. Born out of experimentation thousands of years ago, they are a great and sustained invention that reveals, realizes, and refines the collaborative potential of our species.

WHY CITIES MATTER MORE THAN EVER

The City is more important than ever. When the modern city began to develop around 1800, there were few large cities – only about 3 percent of the world’s one billion people lived in cities. Just a few cities – London, Beijing, Tokyo (known then as Edo), Baghdad, and Istanbul among them – had ever contained as many as one million residents. In North America, only Philadelphia held more than 40,000 people. When Britain invaded New York City in 1776, its force of 32,000 soldiers outnumbered the city’s inhabitants.

Now, though, 3.9 billion people live in cities, more than half the world’s population; and millions more arrive every month by birth or migration from rural areas and small towns, in search of economic advancement or personal development. In the United States, about 300 cities each have 100,000 or more residents. Worldwide, more than 500 cities contain at least one million people and there are thirty-one “megacities” with more than ten million people each.

A single megacity, the Greater Tokyo Area, is home to more people than lived in all cities in the world just four lifetimes ago. From now on, the majority of our future generations’ children will be born and raised in cities. By 2050, the United Nations projects, population growth could add two billion people to cities. Two of every three human beings will dwell in cities.

As we became an urban-dwelling species, we made cities in the same basic modern image. Whatever a city’s age, history, or location, affluence and stage of development, economic niche or governance model, it has developed and manages massive, complex systems for buildings, transportation, energy supply, waste, water, and more. And these systems use essentially the same technologies and processes and are professionally managed in much the same way everywhere.

It was no accident that the spread of modern cities coincided with the spread of the Industrial Revolution. Starting in Britain, cities became the places where investors in new coal-burning factories could most profitably organize and obtain the necessary mass labor and consumer markets they needed, as Andreas Malm explains in his award-winning book, Fossil Capital. As cities grew into centers of population and economic activity, they also became the locales from which as much as seventy percent of all greenhouse gases (GHGs) are emitted.

RADICAL TRANSFORMATION, NOT TWEAKS

Now, city laboratories around the world are pursuing radical goals for climate change. While climate scientists suggest that it is critical to reduce greenhouse gas emissions (GHG) by at least 80% to avoid a two degrees Celsius temperature increase, many of the most ambitious cities are pursuing a goal of total carbon neutrality by 2050.

To do this, they seek to eliminate the use of fossil fuels in the production of electricity, heating and cooling of buildings, and powering of vehicles – replacing it with renewable energy sources. They seek to end the dominance of automobiles and trucks over city streets – replacing it with flows of pedestrians, bicyclists, buses, trams, and light rail that invigorate city life.

They seek to ensure that every new and existing building, from single-family houses to office and apartment towers and industrial facilities, uses only a small fraction of the energy and water that is currently consumed, or produces surplus energy for sale. They want to eliminate the vast amount of solid waste that cities bury in landfills, dump into waterways, or ship to other places – replacing waste management with a “circular economy” that reduces consumption of materials while reusing and recycling nearly everything. So what innovations might we see?

Cities where the majority of commutes are by walking or biking (Copenhagen); where Bus Rapid Transit is an efficient and cost-effective way to rapidly ramp up public transit (Mexico City); where new office buildings are 40%, 50% or 60% more efficient (Amsterdam, Sydney, Boston); where cars are restricted from large sections of the city (Stockholm); where electric vehicles are already becoming a dominant form of transportation (Oslo), and large investments are being made in electric vehicle (EV) charging infrastructure (Shanghai).

Cities where 90% or more of waste is diverted from landfills and mandatory organics recycling is producing compost that feeds regional agriculture while sequestering carbon in the soil (San Francisco); where large investments in car-free transportation infrastructure, like new bridges built exclusively for pedestrians, bicyclists, and public transit (Portland).

Cities where green infrastructure is being systematically re-woven into the urban fabric to reduce temperature extremes (Melbourne and Singapore). and cities that are investing in natural barriers to protect from sea level rise and storm surge (New York).

Cities where fossil fuel heating is systematically being phased out and replaced with renewable sources (Vancouver); where

distributed energy is replacing centralized electricity systems with city support (Boulder); where local residents and businesses are being supported to purchase renewable energy directly instead of relying on their utility (Washington DC); and where entire districts of low-carbon living – housing, workplaces, retail stores, and transport – are being designed and built.

Making this scale of change happen means re-engineering the large complex urban systems involved. As a result, a focus on changing urban systems is a defining feature of innovation lab cities. It is only by transforming the performance of citywide systems that a city can become carbon-free and strongly climate-resilient.

Cities striving for high-impact climate action tend to target what we call delivery and spatial systems. Delivery systems supply a city with energy, transportation, shelter, waste disposal, water, health care, and other essential services – a handful of which produce the bulk of a city’s GHG emissions. Spatial systems organize a city physically, the use of land, into individual building sites and blocks of buildings; neighborhoods, shopping, industrial, and other districts, and campuses (usually for universities, hospitals, and corporations); parks, forests, rivers, and other natural features; and networks of streets, roads, sewers, electricity distribution, communications channels, and other physical infrastructure.

These systems have massive through-puts; they involve large sums of money; and they have rigorous performance requirements. As a result, as ambitious as climate innovators may be, they have to be careful when intervening in their city’s core systems. They cannot disrupt the performance of these indispensable urban systems too much; breakdowns are not an option.

The systems must meet multiple performance requirements, such as for service availability and reliability, not just climate-related standards. Changing the systems is likely to have impacts on the city’s social and economic systems, generating financial gains for some people and new costs for others, which may generate political conflicts.

THE EMERGING TRANSFORMATIONAL IDEAS

A little more than a century ago, few cities in the world had electricity, cars, or skyscrapers. When the first central power station went online in New York City in 1882, thanks to inventor Thomas Edison, it lit up 400 light bulbs in nearby buildings, and Edison had no way of measuring the energy supplied or billing >

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Making this scale of change happen means re-engineering the large complex urban systems involved

his customers. Today, New Yorkers spend \$15 billion a year on electricity—to do a lot more than just keep the lights on.

When five European-made cars arrived in Beijing in 1907 for the start of the first “Peking-to-Paris” race, they were the only cars in the city. Local officials didn’t want them to be driven in the streets; they were supposed to be pulled by mules. Today, Beijing contains five million cars, which contribute so much exhaust emissions to the city’s hazardous air pollution that they are sometimes banned from the roads.

In the early 1900s, few buildings stood more than ten floors high. But the use of reinforced steel frames and other techniques produced the skyscrapers that now form signature skylines in most major cities worldwide. Today, Shanghai’s stunning 21st-century skyline contains more freestanding buildings above 1,200 feet than any city other than Chicago.

Modern cities were built on a mix of ideas that began to take hold in the 19th century. These ideas worshipped the use of markets and capital to create massive wealth and meet social needs. They celebrated the role of ever-increasing material consumption in producing personal and societal benefits. They revered the control of the planet’s natural systems through science and engineering. And they admired acts of will that sought to shape the future.

Over time, the ideas that formed the modern city turned into a global juggernaut. As we became an urban species, we made cities worldwide in the same basic image with the same systems. The similarity of modern cities is pervasive, observes Wade Graham, a Los Angeles-based writer on urbanism:

These days, local variation is hard to spot. In the modern era (since about 1850 in Western Europe and America and now everywhere), cities look more alike than they do different, from Singapore to Ulan Bator to Boston to Moscow to Buenos Aires. Aside from those parts of them built before the modern era—the odd churches, squares, and low-rise historic districts—there is a remarkable, global urban monotony: here are tower blocks, there freeways, there shopping malls, over there pseudo-historic suburbs, here a formally ordered civic center, beyond that, mile after mile of car-dependent sprawl.

While in some cases the modern city design was imposed through colonial force, for the most part the modern cities arose because the new ideas we’ve described became a widespread way of thinking that urban leaders – elected and appointed government officials, entrepreneurs and business owners, architects, engineers, and other professionals, consumers, and civic activists – found extremely appealing and used to make decisions. These decisions changed city space and, in turn, reshaped cities’ economic, social, and environmental fundamentals.

Today cities that are aggressively following a climate-

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More recent thinking recognizes that the city is a primary driver of economic innovation and growth

innovation pathway are abandoning the very ideas that made them modern and got them this far. They are turning to a set of new ideas – four transformational ideas that are embedded within the hundreds of climate innovations emerging in lab cities and spreading from city to city. These are not just ideas that cities should be using; they are in play in the cities responding most ambitiously to the imperatives of climate change. These ideas are gaining traction in markets, professions, and with consumers and national and state levels of government, an essential development for supporting and accelerating change by cities.

FRAMING NEW ROLES

We frame these transformative ideas as new roles and capacities of cities for the climate-change era.

Cities can employ their unique advantages to turn the emerging renewable energy economy into urban wealth and jobs.

Modern economic ideas have treated cities mostly as an afterthought: companies, markets, and nations were the drivers of economic growth, and cities were supposed to facilitate companies’ efforts by holding down local costs and providing the infrastructure needed for commerce.

More recent thinking, however, recognizes that the city is a primary driver of economic innovation and growth. Cities “are assuming an even greater importance in today’s knowledge-driven innovation economy, in which place-based ecosystems are critical to economic growth,” explains urban studies professor Richard Florida. “Cities are the key economic and social organizing units of the Creative Age.”

The primary reason that cities pursue carbon-free energy systems is to address the problem of excessive GHG emissions, but the many innovations they use – offshore wind turbines, on-site solar installations, and more – provide more than clean energy at competitive prices. They also provide local and regional economies with transformational economic opportunities. Cities are developing local clusters of “clean economy” businesses that sell products and services worldwide. They are localizing the production, storage, distribution, and management of renewable energy production, in a shift that creates jobs.

As technology changes the structure of work, the economic development paradigm is getting stood on its head. Instead of talent migrating to where employers decide to locate, companies are migrating to where the talent wants to live. In this context, city innovation labs are becoming increasingly appealing to young, talented entrepreneurs and employees attracted to carbon-free urban life styles, which in turn attracts employers looking for this talent. This virtuous cycle of wealth creation gives climate innovation cities an enormous leg up in the global economy.

Cities can more efficiently use energy, materials, natural resources, and space to generate a new kind of urban abundance.

In the modern-city era, economic ideas about abundance drove vast increases in material consumption and shaped worldwide expectations about rising standards of living and social progress. Pursuit of this type of abundance brought on improved living conditions for many; but in the process, it sacrificed environmental and human health and other non-economic values, promoted short-term growth at the expense of long-term sustainability, and yielded pervasive economic disparities that hobble social wellbeing and individual development.

Now cities pursue greater efficiency in their core systems, especially energy for buildings and transport, and seek to eliminate all waste, which reduces GHG emissions and increases climate resilience. In the process, they are redefining abundance to embody long-term sustainability of resources, a comprehensive set of non-economic values, and a wider base of participants sharing in the bounty. “It’s a world of sharing and abundance,” declares world-renowned architect and product designer William McDonough. “We imagine our cities reducing the things we don’t want, increasing the things we do want, and letting our children lead us into this future.”

Cities can restore and tap the power of natural systems to enhance and protect urban life.

The huge expansion of built urban space in the 18th and 19th centuries embodied the idea that a city’s physical, economic, and social needs are met by dominating natural systems near and far – sweeping away, reengineering, or overriding them. “Man’s dominion,” boosted in philosophies that promoted human agency, was facilitated by emerging engineering and scientific prowess. As a result, observes biologist Edward O. Wilson, an early conceptualizer of biodiversity, “Humanity has destroyed a large part of the natural world and withdrawn from the remainder. We have also expelled it needlessly from our daily lives.”

Cities that once turned their backs on nature are now turning to it to provide environmental, social, health, and economic benefits, as well as reduced emissions and greater resilience. Their “re-naturing” innovations invert the modern idea-hierarchy by restoring nature, instead of the city, as the dominant context for urban development.

Cities can cultivate the capacity of inhabitants and core systems to adapt successfully to the future’s new requirements.

As modern societies developed, they embraced the idea that people could create the future they desired by planning for it, instead of waiting to see what nature’s cycles, divinity, or fate imposed upon them. Planning practices emerged as a way of actively constructing the future – to discern the possibilities,

assess potential benefits and risks, and decide what to achieve. In cities, planning took on the role of articulating the public interest in determining a collective future.

However, given climate change and the destabilizing social and economic forces, the future seems less knowable and controllable, more uncertain and riskier. “The ideal of progress and a blind faith in social control no longer guide our collective futures,” observes professor of environmental planning David Connell. The uncertainties of climate change, notes professor of urban planning Yosef Jabareen, “challenge the concepts, procedures, and scope of conventional approaches to planning.”

Urban planning has begun to emphasize preparing for and adapting to unpredictable change and minimizing risks. Cities are investing in the capacity of residents and civic leaders to understand, deliberate about, and collectively determine responses to complex, changing problems. They are designing the physical infrastructure and service capacities of urban systems so they can be readily adapted as climactic conditions change and technological advances emerge.

A NEW URBAN FUTURE?

The potential urban transformation we describe has decades to go before it can become the new normal for cities. Climate change is not the only driver of urban disruption and innovation, but it has several momentous characteristics. Its threat is planetary; every city must pay attention, and the sooner the better. Its causes and effects are comprehensive and systemic; nearly every core urban system’s performance and viability is at stake. It impacts the private, public, professional, and nonprofit sectors, as well as the individual, family, neighborhood, city, metropolitan region, state, nation, and international levels.

The ideas that serve this revolutionary purpose can be woven together into a new model for the development of cities, as innovation lab cities are doing at district, system, and citywide scales. Economic innovation based on renewable energy is compatible with zero waste and circularity; these are compatible with realizing nature’s full benefits; and all are compatible with developing a city’s capacities to adapt in the future.

Because of climate change cities around the world will be different at the end of the 21st century. Whether they will be prosperous, healthy, and safe, better places for everyone to live in, remains to be seen. There’s no guarantee that a climate-driven transformation will occur in all cities or many cities or even just a few. But a possible future city, a radically different city than the one we know, is coming into view. It is emerging all around us, in the cities that have decided to turn the climate disaster into an opportunity, cities that are making the urban future now. ●



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Viva Bisley

BISLEY TRANSFORMS ITS MADRID SHOWROOM TO LAUNCH ITS COLLABORATION WITH MIG GROUP, VETROSPACE AND NARDI BRAND.



Bisley's Madrid showroom was first opened in the Spring of 2017 to great acclaim, situated in the smart district of Salamanca the showroom fast became a destination for architectural and design practices. This year Bisley Spain has partnered with the Mezzalira Investment Group (MIG), whose brands include Sinetica, Sitland, Jesse and Rotaliana. This heralds a new and exciting time for Bisley Spain who have created a multipurpose, productive and personality-filled space. The revamped showroom tells the story

of today's working environments, utilising a curated selection of Bisley's product ranges to create an immersive experience in the characterful space.

Speaking about the collaboration, Bisley's Director of Spain, Nuno Esteves said, 'Bisley has always designed products of the highest quality. Our collaboration with MIG Group, means that we are now able to offer a full and versatile range of office solutions and experiences to the Spanish market, designed to support the needs of any particular space.'

Flex gives teams extra control

THE STEELCASE FLEX COLLECTION IS DESIGNED TO SUPPORT TEAM-BASED WORK WITH THE UK NOW SPENDING 55% OF THEIR TIME



Steelcase has launched the Flex Collection, in response to new research that suggests many workplaces do not support the growing trend of agile and team-based work. Team-based work is increasing as people in the UK now spend 55% of their time working with others, according to new Steelcase

global research. This global trend toward collaboration is critical for organisations which need to quickly generate new ideas and solve complex problems.

Starting in 2017, Steelcase researchers observed the daily activities of creative and high-tech teams in North America, Europe and the Middle East. They saw teams who became frustrated and hacked their offices to improve their space—claiming territory with makeshift barricades, repurposing everyday objects to create places for group work and covering walls and ceilings with sticky notes to display information.

These high-performing teams inspired the Steelcase Flex Collection.

Sports Direct London office

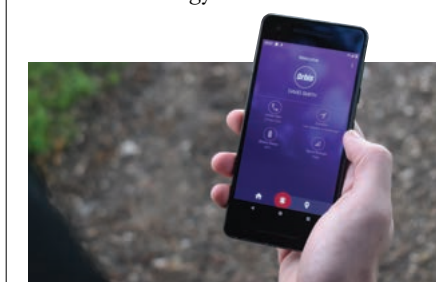
PENSON, the Architecture and Interior Design Studio whose visionary projects include new hospitality brand JO&JOE and Google's UK HQ has turned its expertise to Sports Direct International's new London offices.

Working with Michael Murray, the retailer's Head of Elevation, PENSON has created a unique interior experience over four floors, designed to promote a retail connection in an inspiring and sleek environment. The London office sits above its newly opened Flannels' flagship store in Oxford Street and has been designed to spearhead the elevation of the group, bringing together creative teams across Sports Direct International Plc.



Red Alert

More than 33,000 of Orbis Protect's specialist Red Alert devices and applications have been sold to employers up to June this year – an increase of more than 8% when compared with the same period the previous year. In addition, a rise in interest is being partly driven by organisations whose staff work in low risk professions and have not previously sought protection from traditional lone worker technology.





Object

– Eames House bird



Designers often turn out to be cultural magpies, assimilating the ideas and objects they find into their lives and work. For the world's greatest designers, the things they acquire become part of their iconography. This is why the Eames House in Los Angeles retains its fascination for fans of the work of Charles and Ray Eames. Built in 1949 it remains open to the public.

Far from the minimalist ideals that might be associated with two of the giants of 20th Century design, the house is thoroughly lived in, cluttered with books, artefacts, trinkets, pictures and mementoes. Perhaps the best known of these is the figure of a black wooden bird that stands in the centre of the house's living room. Its renown lies in both its enigmatic appeal and the way it was frequently used as an accessory by the Eames in their

photography. Perhaps the best known of these photographs is one in which the bird appears amongst the legs of a cluster of Wire Chairs, as if it were trapped or hiding in a woodland thicket.

The precise origins of the statue are uncertain although it originated in Illinois where an artisan called Charles Perdew built a reputation for carving wooden bird decoys. His works continue to appeal to aficionados of American folk art, drawn to their purity of design and fetch high prices at auctions. The original bird is certainly unbuyable, but you can still get one from Vitra in Europe and Herman Miller in North America. It is not only beautiful in its own right, but also replete with history and cultural associations which is why it's often found perched in images of interiors. ●



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