

Julius Bär

VISION

GREEN

GREEN

In the next decade, the global population will swell to an estimated 10 billion, with increased urbanisation meaning up to an additional 2.5 billion people living in urban areas by 2050. Demographic changes such as these, coupled with increasing extreme weather events, overuse of natural resources, and the threat of future pandemics, mean the case for building a more sustainable world is clearer than ever.

The responsibility to guarantee this lies with us all; each person, industry, and country has a role to play. This of course includes wealth managers like Julius Baer, and there has been much debate about how to achieve this goal in the financial services sector. It is of utmost importance for us to find ever more efficient ways to run our companies, and as a founding signatory of the UN Principles for Responsible Banking this is something we take very seriously. However, I believe that our most important role is to help our clients make educated choices.

If every Julius Baer client were aware of the potential impact of their investment decisions, the effect on the world around us could be considerable. We could accelerate the development of green energy technologies, or protect vast swathes of our oceans and forests for future generations.



This will of course be a challenging role to fulfil. We will need to continually learn and improve as science progresses and technology advances. We have made a positive start, having engaged in in-depth discussions with our clients and experts in the fields of sustainable finance and impact investing, but we still have much work to do.

Our contribution is just one of many needed to tackle the fundamental ecological issues we all face. In this issue of Vision, we look at how industries are approaching the topic of sustainability, explore the roles that governments, technology, and the markets play, and examine both the destruction and reconstruction of our ecosystems.

I hope it is a thought-provoking read and I encourage you to challenge us, and those around you, to work ever harder to build a greener future for coming generations.

A stylized, handwritten signature in black ink, consisting of a series of connected loops and a long horizontal stroke.

PHILIPP RICKENBACHER
Chief Executive Officer



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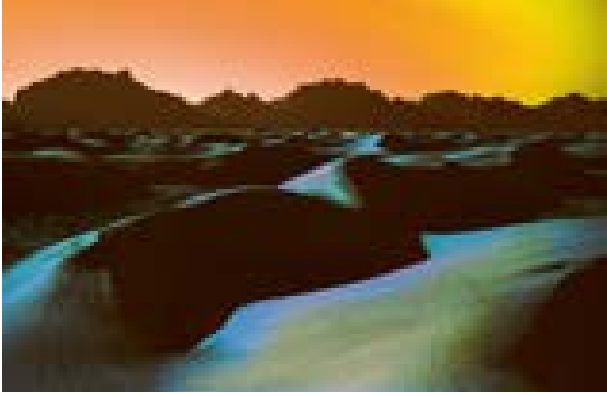


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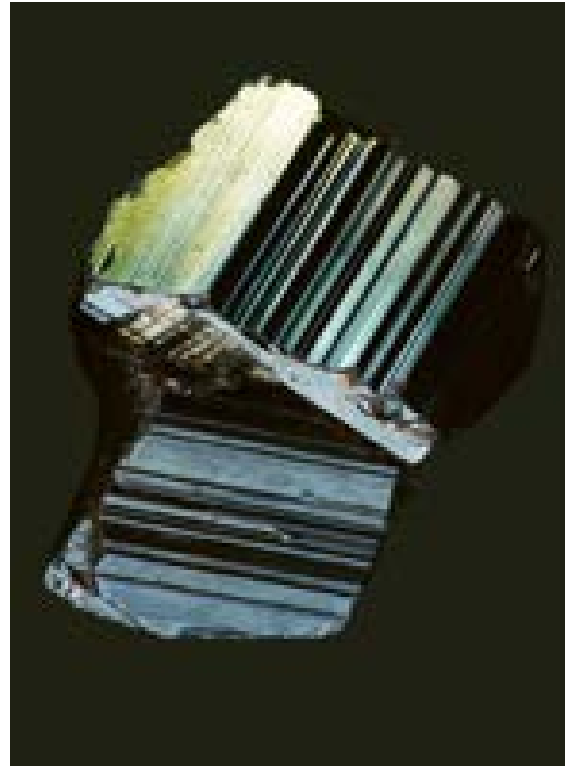
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JULIUS BAER AT A GLANCE

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VISION

THE NEW GREEN

By John Arlidge

REVOLUTION

Photos: © Thomas Meyer / OSTKREUZ



The Covid-19 pandemic has changed the way we live and work – but will these changes be long-lasting? This is another chance for humans to embrace more sustainable ways of life.

Question: what unites Alan Rusbridger, former editor of ‘The Guardian’ newspaper, the BBC’s Sir David Attenborough, creator of ‘Planet Earth’ and ‘Blue Planet’, and the CEOs of oil giants Total and BP, Patrick Pouyanné and Bernard Looney? Answer: the four very different men all agree that one of the long-term consequences of the Covid-19 pandemic is that the world will be a greener, more pleasant land.

“The main lesson we have to learn is this: Covid-19 is a dress rehearsal for climate change. You can’t ignore the science,” says Rusbridger. He is echoed by Attenborough. “Stop waste of any kind. Stop wasting power, stop wasting food, stop wasting plastic,” he urges business and consumers. Pouyanné has declared that he will devote 13 per cent of his company’s future capital spending to its renewable energy division, which develops solar, wind, and battery projects. Looney has committed BP to being net carbon-neutral by 2050.

The chances of these four men agreeing on anything, especially green matters, would have been unthinkable as recently as March, but the debate about the environment has been transformed by the ‘Great Lockdown’. Three things have happened all at once to reshape their opinions. First, the pandemic has focused attention on how fragile the world is and how we need to – and, when pushed, can – act globally to solve problems that threaten our existence. “We have seen that consumers will sacrifice comfort if they understand that catastrophe looms,” notes Gillian Tett of the ‘Financial Times’. “Social attitudes can change faster than anyone expects.”

Second, almost everyone on the planet has had time to rethink – maybe dream about – what the future might hold. How do we want to shop, work, commute, travel, eat, relax, go on holiday as we venture out again? One change most want to see is a healthier environment. Thanks to the near 40 per cent reduction in CO₂ and NO₂ emissions during the early days of the lockdown, people in China and India have had their first breath of the future.

Third, companies of every hue have stalled, forcing CEOs to figure out what to carry on doing to survive the looming recession – and what to junk. Some, notably Looney, are making interesting choices. The idea that an oil firm could commit to cutting more greenhouse gas emissions every year than produced by the whole of the UK – which is what it will take for BP to go net carbon-neutral – would have been laughable as recently as five years ago.

What does this green shift mean in practical terms? One thing seems clear – in Western economies, at least. Consumer behaviour will change, posing new threats to business but also creating new opportunities. Take flying (see page 44). Many people – young and old – now say they will fly less, including even the ultimate globetrotter, Bill Gates, co-founder of Microsoft. “Business trips will never go back to the way they were,” he says.

DRIVING CHANGE

Consumers will vote with their feet in other ways, too. Many who have enjoyed working from home will continue to do so, which means fewer people will commute to offices every day, reducing carbon emissions. Those who still have to drive to work every day are more likely to do so in electric cars. Sales of EVs surged in the spring, according to Bloomberg. Countries with strong auto industries, such as Germany and France, could build on this momentum with programmes like the ‘cash for clunkers’ trade-in scheme introduced in the US in 2009, which offered subsidies for drivers who scrapped old, polluting vehicles.

The sharp rise in online retail will further green our towns and cities. It is much more carbon-efficient for a supermarket to send an electric van or a cargo-bike to 100 homes in a neighbourhood than for all the residents of those homes to drive to the supermarket.

Many people also say they plan to consume less – and some brands are responding to the new mood, while also trying to show they are doing their bit for sustainability. Gucci has announced it will step off the carbon-spewing global fashion



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show carousel that can see brands stage half a dozen extravagant catwalk shows a year; it will instead stage just two. Alessandro Michele, the Florentine label's Creative Director, says: "We went way too far. Our reckless actions have burned the house we live in."

Shareholders are following the lead set by consumers, pressuring businesses of all types to adopt stricter environmental standards. A record two-thirds of proposals filed for upcoming shareholder meetings focus on green issues, data from asset manager Nuveen shows. In April LGIM, Europe's second-biggest asset manager, took the rare step of pre-announcing its vote for ExxonMobil's annual meeting, and declared that it wanted to oust the company's chairman over what it called his failure to address climate change issues and their likely impact on the firm.

RISK AND REWARD

The International Monetary Fund argues that climate risk should ultimately be made part of international reporting standards. The Task Force on Climate-related Financial Disclosures, an initiative led by former Bank of England Governor Mark Carney, has begun to outline how companies should calculate and disclose to investors their exposure to climate risk.

Governments are also pressuring businesses to go green by attaching environmental strings to Covid-19 state bailout packages. The European Commission has agreed a plan to invest up to EUR 750 billion in a greener future as part of its recovery from the coronavirus-induced economic crisis. Companies imperilled by the pandemic's effects will be propped up only if they meet green conditions. "This is Europe's 'man on the moon' moment," says Ursula von der Leyen, European Commission President.

Innovation in green tech is likely to boom because the virus-driven economic slowdown has highlighted the competitiveness of renewable energy, in particular in electricity markets. In many parts of the world, power demand fell sharply during lockdown. That has increased the percentage of power supplied by solar and wind, both because fuel from these sources is free and because of the production subsidies they get. The global crash has "fast-forwarded some power systems 10 years into the future, giving them levels of wind and solar power they wouldn't have had without another decade of investment", says Fatih Birol, Executive Director of the International Energy Agency (IEA).

The markets agree. Clean power stocks have weathered the crisis better than their peers in oil and gas. US clean power stocks rose 2.2 per cent in the first four months of the year, while their fossil fuel peers fell 40.5 per cent, according to a study by Imperial College London and the IEA.

Not everything is looking rosier. Most of the world will be in deep recession for at least the next 12 months. If unemployment and poverty soar, many firms and consumers will be tempted to put survival by any means, green or not, above anything else. The COP26 United Nations climate change summit in Glasgow scheduled for November has been postponed by a year, which is a significant hit to the global focus on the issue. A continuation of a US policy committed to coal and oil, coupled with a possible stimulus programme of infrastructure works, might see US carbon emissions rise sharply (at the time of writing, we were in the run-up to the 2020 Presidential election).

And, lest we forget, after the last big shock to the global economic system, the global financial crisis, we did not take the chance to change for good. In 2009, worldwide CO₂ emissions from fossil fuels and cement production dropped by 1.4 per cent. A year later, however, they were growing again by 5.8–5.9 per cent – faster than they had done since 2003.

However, a new mood among business and consumers, coupled with a new wave of innovation, could, at last, begin to change things for good. A once-in-a-lifetime event gives us a once-in-a-lifetime chance.

BEHIND THE IMAGES: ALGOMED

Algomed is the result of pioneering research into advanced microalgae production, an emerging and innovative industry that is less than 70 years old. The company behind Algomed has been growing algae such as *Chlorella*, a single-celled plant, in Klötze, Germany since 2000. Why algae? This fast-growing biomass contains up to 60 per cent of protein, is a good source of fatty acids, pigments etc, and can be farmed without the use of pesticides or antibiotics in closed reactors, with no need for arable land. As well as having existing applications in the food, feed, and cosmetics industries, algae are also promising candidates for a future bioeconomy and landless food production.

EQ

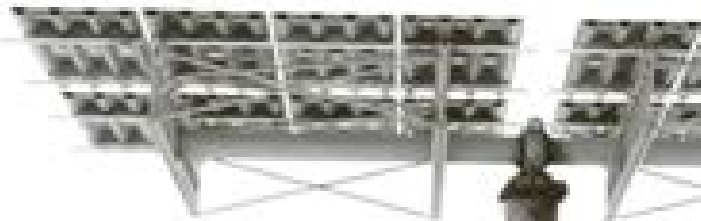
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A GREEN LIGHT FOR ECONOMIES



By Rhymer Rigby



No government can ignore the environment any more. Instead, all their major decisions – from taxes to subsidies and more – will now have to have a global green economy at their heart.

“If you look at the greening of the world economy, it’s largely about structural changes that are happening,” says Norbert Rücker, Head of Economics and Next Generation Research at Julius Baer. “What governments can do in their countries is either speed these changes up or slow them down. But the point you need to understand is that most of these changes are going to happen anyway.”

A good example of this is the oft cited statistic that more coal-fired power plants have closed under President Trump than under President Obama. The former has made anti-environmentalism part of his platform, while the latter proactively sought to green the economy. Yet here the winds of economic and societal change are blowing strongly in favour of renewables – and very much away from coal. Trump couldn’t save coal if he wanted to.

But none of this is to say governments should stand idly by. Rather, they should push economies in the right direction – and to do this they need to understand what works and why. Here, Rücker says carbon taxes are an interesting example. “Although there’s widespread agreement that a carbon tax would be very effective, you don’t see many countries which have one,” he says. This, he explains, is because such a tax would be very hard to sell to the public. “If you look at one of the very few successful examples of a carbon tax, it’s the Swiss tax on heating oil.” This works because you don’t have to sell it to consumers. Most Swiss people rent their homes and heating is usually included in rent. Thus, the tax becomes a small element of the rent paid and is effectively invisible to members of the public.

But Switzerland has been smart in another way too. “The take from the carbon tax is redistributed to everyone via healthcare insurance, which is mandatory. On the yearly contract that the Swiss get for their healthcare insurance, there’s always a discount which is a redistribution of the carbon tax. Economically, that’s a textbook example of how you should do it, because you tax something you want to discourage and you redistribute the proceeds without bias to everyone in the country.”

However, the flipside of taxes is subsidies, and here progress needs to be made, says Rücker. Although subsidies can encourage clean power and help new technologies get off the ground, they often remain (for historical reasons) on environmentally destructive industries and practices. “Look at Germany. You had the VW diesel scandal and a big outcry, but Germany continues to subsidise diesel relative to gasoline. In fact, diesel subsidies never even came up in the scandal.”

He adds that the Covid-19 recession may encourage short-term subsidies that may not be in the interest of the environment. Typically emissions will fall in a recession, but countries need to ensure that they structure incentives to ensure that when the rebound happens, emissions do not bounce back along with the economy. Germany’s Environment Agency said recently that earlier crises suggest that a temporary decline in emissions usually does not help the climate in the longer run.

The IMF estimates that globally fossil fuel subsidies cost about USD 5 trillion a year – over 6 per cent of the world’s GDP. In 2009, the G20 and APEC (the Asia-Pacific Economic Cooperation) committed to phase out fossil fuel subsidies, which encourage wasteful consumption over the medium term – but clearly there is much work to be done.

Rücker says it’s important to understand that if fossil fuels are to be phased out, it won’t be because people are forced into it. Rather it’ll be because the renewables are so cheap that oil and coal are no longer competitive. “The way these problems are nearly always solved is that the new technology becomes the better option.”

FORWARD THINKING

This points to another key way in which governments can green economies. They can create an environment that supports innovation and fosters scientific advances. In general, scientific and technological advances mean lower energy consumption, less polluting practices, or the replacement of inefficient technologies with better methods. They do this, Rücker explains, by building innovation

capability with institutions such as universities and technological research bodies, and a climate that leads to the commercialisation of discoveries. They encourage clusters (such as Silicon Valley and Cambridge), hubs, and specialisation, and they support SMEs with measures such as tax breaks and grants. “Governments can do a lot to support innovation and the high-tech economy,” says Rücker.

Here, they are effectively pump-priming certain areas of the economy. It’s worth mentioning that these tend to be the high-value-added areas anyway – the internet grew out of US Department of Defense research at universities, and the World Wide Web originated at CERN. So you are encouraging growth in the areas that successful countries want to grow in anyway. It’s pretty much the opposite of the resource curse. Indeed, many Middle Eastern countries are trying to diversify their economies away from oil.

Rücker says finance and financial regulation are going to have an ever larger role to play in greening the economy. “The EU Finance Regulation mandates that we have to be more transparent when it comes to environmental information in terms of investment. This is another way in which governments are trying to support the whole shift towards sustainability.” Again, it’s about pushing in the right direction.

A CONSTANT PRESENCE

Mark Carney, the former Governor of the Bank of England, recently said that climate considerations needed to be “embedded” in every financial decision. “In an ideal situation... professionals have the information they need to consider the impact of a company or asset on the transition to net zero and this becomes a natural way of judging its value,” adding that you cannot “wish away systemic risk”.

Increasingly, institutions ranging from lenders to insurers are taking these risks – ranging from companies’ contribution to climate change to challenges such as increased extreme weather – into account. Governments and organisations such as the UN are setting targets, some of which may be legally binding, and investors increasingly see greener ways of doing business as lower-risk and higher-return. They know that a shift to a sustainable economy is no longer optional – and they want to invest in the technologies that will deliver such a future because they are good investments and the right thing to do.

Of course, some areas are tougher to improve. Making green shifts in areas such as mining of minerals and metals are one example. But perhaps they don’t matter as much as they once did – not only is technology improving the situation, but also the world’s economy has also become far better at both using less and recycling (you can read more about improvements in the gemstone industry on page 52). Mining and other less environmentally sound industries may be part of the future, but it is a small part. It is also likely to get smaller, as regulations mean that companies will be required to pay for all the costs they used to be able to externalise.

The lion’s share of growth in the years to come will be from economies that don’t rely on primary industries – the future looks like Singapore, not Russia. A green economy, says Rücker, is one that is competitive. “It has no over-regulation, little bureaucracy and few barriers to entry. It is inherently flexible, and business decisions can be taken fast. There’s a high level of trust and low corruption, and these are all factors that governments can affect. These economies will go green faster – and they are the future.”

“Although there’s widespread agreement that a carbon tax would be very effective, you don’t see that many countries which have one.”

Norbert Rücker





VISION

PANDEMIC

By John Vidal

ECOSYSTEM

Photos: © Studio Johannes Bauer





The actions of humans in the modern era have resulted in a world where more and more potentially deadly viruses can emerge and spread with devastating speed and efficiency.

In 1997, fires burned uncontrolled for six months across a vast area of tropical forest in Indonesia. Palm oil companies and farmers had set fire to the land to clear it of trees during an intense drought, and a choking yellow haze settled over much of Southeast Asia.

Visibility was down to a few metres and hundreds of thousands of hectares of forest was scorched, killing trees, plants, birds, and rare animals like orangutans. Millions of people on the islands of Kalimantan and Sumatra and as far as Singapore suffered severe air pollution, and thousands of elderly and infirm people died from heart attacks and respiratory diseases. The sunlight dimmed, temperatures dropped, and rice and other crops barely grew, leading to food shortages. It is estimated that it cost USD 5.2 billion, the equivalent of more than USD 20 billion today.

One year later, a mysterious disease broke out hundreds of miles away from the fires, near a town called Sungai Nipah, west of Kuala Lumpur in Malaysia. In this centre of south Asian meat production, hundreds of thousands of pigs were being farmed among commercial mango and durian orchards. For no apparent reason, first pigs and then people were struck down by seizures, fevers, and headaches. To stop this strange disease spreading, millions of pigs were culled, but not before 105 people working in the farms and abattoirs had died.

It took two years to identify and isolate the new virus that had caused the disease, and four more years for investigators to make the link between the smog in Borneo and the pig farms in Malaysia. What had happened, it emerged in 2004, was that fruit bats that usually foraged on flowering trees deep in tropical forests had been forced by the fires to seek new food sources. Some had migrated to Sungai Nipah, where they roosted in the orchards, often dropping pieces of half-eaten fruit into the pig enclosures below.

Bats are well-known reservoirs of many viruses and have been linked to more than a dozen diseases, such as Ebola and Marburg in Africa, rabies, and Hendra, but the scien-

tists found those arriving in Malaysia carried the Nipah virus, which they had passed on to the pigs.

Nipah, which has now spread to Bangladesh and India, is just one of many hundreds of animal-borne, or 'zoonotic', diseases known to have jumped from wildlife to humans in the past 80 years. Increasingly, it is believed, many have done so as a direct result of the destruction of nature that now sees one million species threatened with extinction.

CAUSE AND EFFECT

"It's becoming very clear that the more we mess with nature, the more likely it will be we end up with a killer pandemic like Covid-19 or Nipah," says Jonathan Patz, Director of the Global Health Institute at the University of Wisconsin-Madison. Professor Patz researches how human-influenced climate change and the disturbance of nature affect human diseases. Emerging diseases such as dengue and Rift Valley fever are moving into new areas of the US and Europe as heatwaves increase in number, he says, and 'historic' ones such as cholera and dysentery are returning to developing countries as rainfall becomes heavier.

Prof Patz's work in Brazil has shown how deforestation and the clearing of land for farming encourage mosquitoes, which transmit diseases such as malaria, yellow fever, and dengue. By driving roads into forests, fragmenting ecosystems, mining in remote areas, and encouraging global trade, he adds, we are creating the perfect conditions for new diseases to emerge and turn on us.

According to Kate Jones, Professor of Ecology at UCL in London, "The coincidence of new diseases with the destruction of global biodiversity is highly significant." She and others have identified 335 infectious diseases that emerged between 1960 and 2004, at least 60 per cent of which came from animals. They include some of the deadliest encountered, such as HIV, Ebola, Lassa fever, Marburg, and Simian foamy virus in Africa; Chagas, Machupo and hantavirus in Latin America; Hendra in Australia; MERS in Saudi Arabia; and SARS and now Covid-19 in China.

“Almost every emerging disease in the last 30 or 40 years has come about as a result of encroachment into wild lands and changes in demography.”

Peter Daszak

Most zoonotic pathogens are unnamed and do little harm. They include those carried by micro-organisms, snails, ticks, worms, and insects, as well as some found in fungi and food. But any could theoretically become pandemics, given the right conditions in which to thrive. “Biodiversity loss is becoming a major driver in the emergence of some of these viruses,” says Prof Jones. “Large-scale deforestation, habitat degradation and fragmentation, agriculture intensification, our food system, trade in species and plants, anthropogenic climate change – all these are drivers of biodiversity loss and also drivers of new diseases.”

“More than 75 per cent of human diseases are zoonotic and most have a link to wildlife and domesticated animals like cattle or poultry,” says Peter Daszak, Director of the Eco-Health Alliance, a New York-based group that studies the root causes of disease. “Almost every emerging disease in the last 30 or 40 years has come about as a result of encroachment into wild lands and changes in demography.”

Raina Plowright, a bat specialist at the Bozeman Disease Ecology Lab at Montana State University, says, “What we are doing is destroying the natural world, constantly chipping away at wildlife habitats, bringing animals into situations where they have to interfere with humans, like road-building or the wild meat trade. We suspect that when you put animals in situations where they have to eke out resources in a human situation, you get disease. The trouble is we don’t know what else is out there.”

Several new studies have argued strongly that investing in nature protection not only makes financial sense, but also

must be a priority for humankind. In an article published by the world biodiversity body IPBES, leading scientists say the evidence shows that future pandemics will happen more frequently, spread more rapidly, have greater economic impact, and kill more people if nature is not better protected. Their call for more conservation is backed by the Geneva-based World Economic Forum, which says tackling the global nature crisis could create 400 million jobs and USD 10 trillion in business value each year by 2030.

PROTECTION IS POSSIBLE

Nearly a third of the world’s oceans and land area could be protected without harming the global economy, and could even produce bumper economic benefits if the right policies were followed. Spending just USD 140 billion a year – less than the personal wealth of Amazon’s Jeff Bezos – could double the area of land and quadruple the area of sea currently protected, according to a recent study in ‘Science’ magazine. Preventing further pandemics by protecting wildlife and forests would cost just 2 per cent of the estimated USD 11.5 trillion damage so far known to have been caused by Covid-19.

While the numbers – and common sense – clearly support the preservation of our ecosystems, as it stands world governments have failed to meet even one of the 20 Aichi Biodiversity Targets agreed in Japan in 2010 to stem the destruction of nature. It is the second decade in a row where the targets have been unilaterally missed. Taking action is not only an environmental imperative, it is also the economically sensible thing to do. But the window of opportunity is closing, and closing fast.



VISION

THE ART OF

By Simon Brooke

PERSUASION

Making bold statements about sustainability is easy, but actually changing the behaviour of individuals and companies is a complex task. Fortunately, international organisations and governments have a growing range of options available to them in order to drive sustainability.

Governments want a more sustainable economy, as do consumers and businesses. Given that everyone is agreed on this issue, how do you encourage all parties to ensure that it's put into practice? Regulation is an important lever. If you make it a legal requirement to do something that promotes sustainability or you ban an activity that's counterproductive, the chances are that most individuals and organisations will fall into line. However, there are subtler ways of achieving this laudable goal such as financial incentives, 'nudge' theory, and what psychologists describe as 'promoting the desirable norm'. We look at some of the methods and projects that are helping to improve our living environments.

A NUDGE IN THE RIGHT DIRECTION

For years, cities around the world have struggled to persuade people to use rubbish bins rather than dropping litter in the streets. Fines and cautions work to some degree, but in 2011 city authorities in Copenhagen took a different approach. Working with researchers from Roskilde University, they painted bright green footprints leading pedestrians to rubbish bins. Littering was halved as a result.

This is known as 'nudge' theory, and governments in Australia, Canada, the UK, and the US, among others, have set

up their own 'nudge' units. The Copenhagen litter bin is an example of a key element of 'nudge' theory: if you make doing the right thing easier for people, they're more likely to do it. Ariel washing powder persuaded consumers to wash their clothes at lower temperatures simply by including a simple, concrete message ('turn to 30') with a strong graphic on the packaging. Consumers saw the request at the moment they were doing the washing and adjusting their machine settings. As a result, the proportion of consumers washing at 30°C increased from 2 per cent to 17 per cent over five years, while 85 per cent of those who made the change said they did so as a result of the campaign.

KEEPING UP WITH THE JONESES

'Social proof', or 'promoting the desirable norm', is another way to drive more sustainable behaviour. In a study aimed at encouraging French farmers to continue their sustainable farming practices even though contracts were ending, one group was told that 80 per cent of their neighbours would continue to do so, while the control group was given no such information. Of those in the first group, 61 per cent said they were 'absolutely' or 'probably' likely to continue this type of farming, compared to just 43 per cent in the control group.

“Governments around the globe are now returning to timber buildings as a more sustainable way to house populations.”

Professor Robert Cialdini is Regents' Professor Emeritus of Psychology and Marketing at Arizona State University and one of the greatest authorities on the art of persuasion. Along with his team he looked at the notices that hotels use to encourage their guests to help the environment by re-using towels. They discovered that those who received a notice informing them that other guests staying in the hotel had reused their towels – an example of 'social proof' – were 26 per cent more likely to recycle their towels than those who saw the standard wording.

BRANCHING OUT

While concrete and steel are reckoned to account for about 8 per cent and 5 per cent of global emissions respectively, trees actively absorb carbon dioxide. Governments around the globe are now returning to timber buildings as a more sustainable way to house populations. HAUT is a 73-metre-high residential tower in Amsterdam. With 55 apartments, cycle parking, and a public indoor city garden in which residents can grow their own fruit and vegetables, it's typical of the new wave of timber residential buildings appearing around the world.

To encourage this trend, the US Department of Agriculture's Forest Service, with its grants of USD 9 million this year, is one of a growing number of governmental organisations providing funding for timber building research. Countries including Australia and Japan are nudging developers and planners with a 'wood first' or encouragement policy, which requires, among other things, developers to demonstrate that they have considered timber as an option. The French government has introduced a requirement that all new public buildings are constructed from at least 50 per cent wood or other natural materials.

ELECTRIC AVENUE

In the UK, discounts are available on new, low-emission vehicles with a grant of up to GBP 3,000 from the government for vehicle dealerships and manufacturers. These incentives appear to have been successful – despite a depressed new car market, sales of electric vehicles (EVs) in the UK rose by 144 per cent last year. The UK's transport secretary recently announced that the government's 'nudge' unit would be working to encourage the use of EVs, with initiatives including dedicated green parking spaces.

Many EU member states are increasing financial incentives to encourage the use of EVs. Meanwhile, new EU rules came into force on 1 January 2020 that severely penalise carmakers if average carbon dioxide emissions from the cars they sell rise above 95g per kilometre.

Sustainability and communications experts at the Rotman School of Management in Canada, where EV adoption is around just 1 per cent, suggest that consumers can be nudged into overcoming their reluctance to spend more on a car because it's electric.

To do this, they say, governments should consider “loss framing to communicate the long-term benefits of owning an EV. For instance, the monetary value of the benefits could be framed as a ‘loss’ that could be incurred with the purchase of a conventional gasoline vehicle in the long run. Additionally, these benefits could be made more salient with the use of visual cues, such as a speedometer with a red band indicating the lost savings.”

ONE-HIT WONDER

More than 120 countries have pledged to ban single-use plastics in the coming years. Denmark was one of the first to take action, placing a tax on plastic bags in 1994. Usage halved after the move. In Ireland, plastic bag consumption dropped by 90 per cent after a charge was introduced in 2002. Others, such as Hong Kong, are facing the dilemma of whether to penalise the irresponsible disposal of single-use plastics or to incentive their reuse. Last year Watson's Water, one of the city's largest drinks manufacturers, announced that it would introduce around 400 reverse vending machines, offering a rebate for every bottle returned.

Hong Kong has one of the lowest rates for recycling plastic bottles in the world, at less than 10 per cent, compared with an average of 73 per cent for cities that run deposit refund schemes, according to The Green Earth, a Hong Kong-based environmental group. Now Hongkongers who put bottles into the machines will receive a reward of a coupon valid at certain shops and worth up to HKD 50.

“Denmark was one of the first to take action,
placing a tax on plastic bags in 1994.
Usage halved after the move.”

GREEN SPACES

By Janet Anderson

The irresistible pull of the city is strong – as centres of culture and commerce, cities offer opportunities and draw in people the world over. By 2050, it is projected that 68 per cent of the global population will live in urban areas. But cities come with many problems – pollution, overcrowding, and stress – each with undesirable effects on physical and mental health.

As an antidote to these, city dwellers have long sought to bring nature into cities. The first green spaces introduced to larger towns were a luxury reserved only for the upper echelons of society seeking relaxation and diversion in private gardens, or in hunting grounds before the city gates.

It was not until the urban parks movement of the 19th century that these benefits were more widely shared, driven by a new recognition that green spaces could provide health benefits for residents suffering the ill effects of the industrial revolution.

The recent pandemic-induced lockdowns have shown again how relevant access to nature in the urban environment is for city dwellers. The importance of green spaces in cities is also backed by numerous scientific studies. The biological mechanisms may not yet be fully understood, but research shows strong correlations between physical and mental health and wellbeing, and exposure to nature.

HEART OF THE CITY

The healing and preventative powers of nature are wide-ranging, with positive effects for conditions such as depression, obesity, heart disease, and schizophrenia. Indeed, a 2009 Dutch study published in the 'Journal of

Epidemiology and Community Health' indicates that the prevalence of 24 disease clusters decreases as the amount of green space accessible in a one-kilometre radius of residence increases. Meanwhile, an Asian study published in the 'Journal of Cardiology' has indicated that spending time in nature lowers the risk of contracting cardiovascular diseases.

The Japanese have long known what science is now confirming: spending time in woods or a forest is good for you. Practised in Japan for decades, Shinrin-yoku, or 'forest bathing', is becoming a global trend. Over-burdened health services in many countries are slowly embracing nature as an alternative or complement to traditional treatments. It is no longer so outlandish an idea for a doctor to prescribe a dose of time outdoors as it was when New Zealand's national health service first introduced 'green medicine' in 1990.

Green spaces are essential assets in today's urban contexts, providing proven health benefits for residents and lowering costs for health systems through disease prevention and less expensive treatments. But beyond these material factors, there are also communal benefits – nature in the urban setting promotes social cohesion, improves the overall attractiveness of cities and makes for happier residents.

Naturally, the concept of green space is an essential consideration in urban governance and planning. Cities around the world recognise its value and make great efforts to preserve and rejuvenate existing parks, forests and waterways, even creating entirely new concepts with spectacular results.



A forested area close to Tokyo

FOREST ON PRESCRIPTION

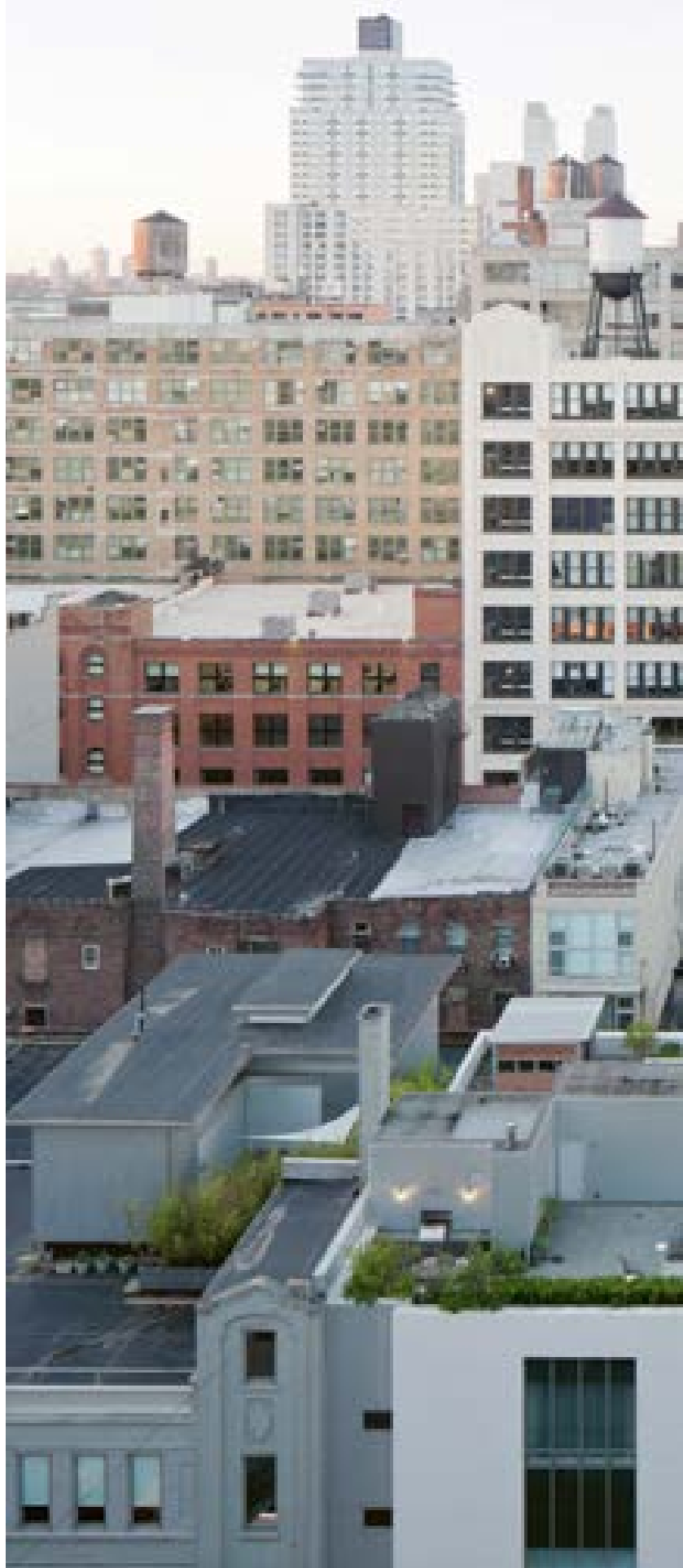
Shinrin-yoku is a Japanese term that translates roughly as 'experience the atmosphere of the forest', or, in short, 'forest bathing'. It was introduced by Japan's Ministry of Agriculture, Forestry and Fisheries to encourage citizens to take advantage of the healing powers of the forest. Over 90 per cent of the country's population lives in urban areas. But even in the densest metropolitan spaces, such as Tokyo, stressed-out urbanites are recommended to take a walk in one of the nearby forests of Okutama or Hinohara. The treatment has been proven in many studies to reduce the risk of heart disease and lower stress levels. Western health services have picked up on the trend and are increasingly prescribing nature as part of medical treatment and prevention.

URBAN REGENERATION AND TOURISM

In Seoul, 983 metres of decommissioned overpass have been transformed into an elevated park hosting trees, shrubs and flowers in 645 tree pots. Eventually, Skygarden or Seoulllo, which translates into 'towards Seoul', will include 24,000 individual plants. The park connects other green spots in the area. The 16-metre-high steel and concrete structure also fulfils a newfound purpose as a public walkway used by thousands of people every day. The Skygarden has had a transformative effect on the city, providing a greener and more attractive place for residents and visitors.

New York's High Line is another example of how disused and abandoned pieces of infrastructure can be successfully repurposed for the public good. The viaduct was part of the New York Central Railroad and was destined for demolition. A non-profit conservancy, Friends of the High Line, advocated for its preservation. Opened in 2009, the 2.3km stretch along the western parts of Chelsea is home to more than 500 species of trees and plants. The High Line also hosts numerous arts and public programmes, including teen engagement, making it an attractive social meeting point for residents as well as a popular destination for tourists.

Photo: © Ivan Baan





New York's High Line



Beautiful gardens line Marina Bay in Singapore

BIOPHILIC CITY PLANNING

Birmingham aims to become the United Kingdom's leading green city. According to proposals developed by the city council under the Green Living Spaces Plan, the city's network of rivers and canals – developed during the industrial revolution – is to be made accessible to the public through a grid of trails and pathways. Other recent developments include the revitalisation of the canals in the centre, which has attracted an increasing number of visitors. Birmingham has set itself impressive green ambitions and has clearly embraced the connection between nature and health.

From 'Singapore – Garden City' to 'Singapore – City in a Garden', the recently introduced new motto exemplifies the Southeast Asian city-state's efforts in becoming a truly biophilic city and shows how attitudes in city planning have changed within just one generation. Over the years, Singapore has successfully matched population growth with increased green area. The nature-loving city makes use of numerous green trails and pathways connecting parks and other green areas. Singapore also makes use of its abundant vertical spaces, turning rooftops into green areas and installing indoor hanging gardens. These also help to reduce the urban heat island effect.

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A close-up photograph of a rocky, moss-covered ground. The rocks are dark and irregularly shaped, with patches of green moss growing between them. The lighting is dramatic, with strong highlights and deep shadows, creating a textured and somewhat abstract appearance. The word "WILDLY" is overlaid in the center in a white, sans-serif font.

WILDLY

By Josie Cox

A close-up photograph of a rocky surface, likely a tide pool or a wet rock face. The surface is covered in a dense layer of green moss and lichen, with some darker, wet-looking patches. The lighting is dramatic, with strong highlights and deep shadows, creating a textured and somewhat abstract appearance. The word "AMBITIOUS" is overlaid in a large, white, sans-serif font, centered horizontally and slightly above the middle vertically.

AMBITIOUS

Photography by Jim Richardson





Danish billionaire Anders Holch Povlsen is devoting much of his money and time to work towards his dream of creating a greener world – as well as showing that ecological restoration can be commercially viable.

The privileges associated with being one of the richest people in Europe are extensive, but perhaps the greatest among them is choice. You can work or not work. You can buy a house or even an island. You can live wherever you please, or travel constantly with no single place to call home at all. Or, as Anders Holch Povlsen did, you can buy huge swathes of the Scottish Highlands and dedicate much of your life to preserving the environment and replanting trees.

Povlsen may not be a household name, but his determination to use his vast fortune and commercial might to tackle the huge environmental crisis has marked him out as an ecological role model. The Danish entrepreneur, whose net worth is estimated to be around USD 10 billion, is best known as the owner of clothing company Bestseller, which is the biggest shareholder in retailer ASOS, but in many parts of Scotland he's far more famous as an environmentalist with a rapidly expanding empire. In 2018, he and his wife Anne bought a 1,100-acre estate near Aviemore in the Cairngorms National Park which, together with their six other estates, made them the biggest private landowners in Scotland.

CONSERVATION CONVERSATION

Today, the Povsens, who generally shun publicity, do much of their conservation work through WildLand, Scotland's largest private conservation organisation, which the pair founded in 2010.

"When Anders Holch Povlsen presented me with his vision for ecological restoration on such a big scale, I knew this was something I wanted to be a part of," says Tim Kirkwood, the Chief Executive of WildLand and a close adviser to the couple. "Not just for me, but for my children and grandchildren."

Awareness around the need to preserve our natural environment has never been greater, and there's a growing acknowledgement among people that behaving and investing sustainably can create a bedrock for economic as well as ecological prosperity.

Analysis published by asset management industry bellwether BlackRock earlier this year showed that investment funds tracking the performance of corporations considered to be more committed to environmental, social, and governance (ESG) issues fared far better than others during the early stages of the global Covid-19 crisis. More companies than ever are vehemently committing to a model of business that treats every stakeholder with the same care as shareholders, and entrepreneurial ventures dedicated to a greener future are also prolifically emerging.

Berlin-based Ecosia, for example, is a search engine that channels advertising revenue directly into projects that plant trees in areas of the world where biodiversity is most under threat. Similarly, the clothing company tentree has committed to planting ten trees for each item it sells.

But although reforestation is widely focused on as an important goal within the broader sustainability mission, Kirkwood emphasises that it's just one component and that it's important to consider land and the environment in a far more holistic way. He explains that on Glenfeshie Estate, in the centre of Scotland's Cairngorms National Park, WildLand hasn't planted a single tree. "Instead, we have created the conditions for the ancient forest to regenerate itself through herbivore management and other practices," he says.

By contrast, on neighbouring estates WildLand has planted more than five million trees in areas that are too far from a natural seed source. "The result is a forest, yes," Kirkwood says, "but more importantly the return of an array of flora, fauna, and wildlife who call the forest home. A reviving, balanced ecosystem that can sequester carbon and support diverse new life."

THE PANDEMIC AS A CATALYST?

The spread of Covid-19 has presented perhaps the greatest test yet for the resilience of investment strategies built around sustainability. But so far, both quantitative and qualitative evidence show that the pandemic is likely to provide

a long-term catalyst for a general move towards a less shareholder-centric model of business – a model in which the environment is valued as precious global capital.

Philanthropists and environmentalists such as the Povlsens have become important role models and have contributed to shining a light on the ways in which conservation can be commercially viable while also being financially lucrative. WildLand offers a range of cottages and what Kirkwood describes as “artistic reimaginations of the Highlandsporting lodge” that attract international guests seeking a respite from their urban lives. “We are continually developing new ways to show that nature can pay her way, and look forward to sharing more about these opportunities in the future.”

THE GREEN DOLLAR

Yvonne Suter, Julius Baer’s Zurich-based Head of Corporate Sustainability and Responsible Investment, agrees that investing in a greener future is far from a zero-sum game. “The estimated total value of the world’s forests is between USD 50 trillion and USD 150 trillion,” she says. To put things into perspective, she explains that the top end of that range is nearly double the cumulative value of the global stock market. “The ability of forests to regulate our climate through carbon storage is by far the largest component of that total value, accounting for 65–90 per cent.”

She acknowledges that forests are disappearing at a rapid pace – driven by deforestation and degradation – and that this is a serious concern, but she’s also optimistic that in the financial industry, for one, attitudes are changing. “ESG investing has already become mainstream investing, and the lines between the two have become blurred,” she explains, adding that the “ever increasing pressure by investors to integrate relevant ESG considerations in any investment decisions will lead to a 100 per cent alignment over time”. The next step now, she says, is to elevate the

popularity of so-called impact investing – which refers to investments that intentionally create a positive impact on the environment or society rather than just protecting them from harm.

“While the market [for impact investing] has grown to about USD 700 billion already, we still need more proof points of successful investments and better ways to measure and monitor impact so that large asset owners and managers feel comfortable deploying significant allocations through this investment approach,” Suter says.

DIRECTION OF TRAVEL

Asked about the greatest challenge faced by WildLand and the Povlsens, Kirkwood says it’s about demonstrating that conservation can be sustainable on a major scale. Mass tourism has for years been in the crosshairs of environmental campaigners, and Covid-19 has in many cases sharpened the focus on the damage wrought by extensive travel around the planet.

Scientists estimate that at least a million species face extinction in the next few decades, mostly driven by human activities including habitat loss, pollution, and climate change. Although travel restrictions have decimated the tourism industry and pummeled national economies around the globe, they’ve also highlighted the extent to which nature can thrive if left undisturbed by humans.

“Our abiding hope is that by demonstrating how nature and good business can work hand-in-hand, we can be part of a global movement for change,” Kirkwood says. “We fundamentally believe that a rising tide lifts all boats, and already we are seeing new ventures take root here in Scotland and much further afield that place an emphasis on conservation and commercial outcomes. The opportunity is clear – Scotland is different but we all share one world.”

“The result is the return of flora, fauna, and wildlife who call the forest home. A reviving, balanced ecosystem that can support diverse new life.”

Tim Kirkwood





MOVING WITH

By John Arlidge

THE TIMES

Photos: © Peter Fischli / David Weiss
Courtesy the artists; Galerie Eva Presenhuber, Zurich / New York;
Sprüth Magers, Berlin / London; Matthew Marks Gallery, New York



PETER FISCHLI / DAVID WEISS: Untitled (Tokyo/ANA), 1987

Photos: © Peter Fischli / David Weiss
Courtesy the artists and Galerie Hauser & Wirth & Presenhuber, Zurich



PETER FISCHLI / DAVID WEISS: Untitled, 1998/2000



PETER FISCHLI/DAVID WEISS: Zurich, 1997/2000



Photos: © Peter Fischli/ David Weiss
Courtesy the artists and Galerie Hauser & Wirth & Presenhuber, Zurich

The climate crisis was already forcing us to reconsider the way we travel for both business and pleasure. Now Covid-19 is leaving a lasting legacy of change, both up in the air and on terra firma.

There are lots of predictions of how the Covid-19 pandemic will change consumer behaviour. Most will, alas, turn out to be wishful thinking. The moment the weather gets bad, we'll stop cycling to work. Try getting a teenager to give up buying cheap, fast fashion. But one area looks like it might change for good: travel.

"2019 will prove to be the year of peak travel," says Simon Calder, Britain's best-known travel journalist, referring to leisure travel. Airbnb CEO Brian Chesky goes further. "Covid-19 is a reset for everything and everyone," he says.

Analysts certainly predict a dramatic slump across the sector in the short to medium term. The International Air Transport Association says seven years of air passenger traffic growth will be wiped out by the pandemic and lockdown-induced recession. Global aviation sector losses will total USD 314 billion in 2020, it adds. Morgan Stanley predicts it will be at least six years before hotel occupancy rates return to 2019 levels.

Both holidaymakers and big companies acknowledge that they and their employees have been travelling too much for the good of the planet and the corporate bottom line. The tipping point for many was the huge bush fires in Australia last winter and in the US this summer. They provided terrifying visual proof of the effects of global warming. The combination of Covid-19 and the climate emergency means our attitudes to travel will be different. But how?

The way international business is conducted will certainly change. 'Fortune' magazine quizzed the CEOs of 100 major US companies and asked when business travel would get back to 2019 levels. Their overwhelming answer was: never. We're all 'Zoombies' now. Google, Microsoft, and Facebook have rushed to popularise their video streaming platforms. Many business leaders believe that these tools will drastically reduce the need to travel, or at least mean when they do travel they will be more efficient with their time. Whether video conferencing can replace the face-to-face meeting remains to be seen.

What is certain is companies and industries have realised they can function with fewer air miles. Productivity does not seem to have suffered while staff have been grounded – a recent Deloitte survey revealed 70 per cent of respondents to be as productive, if not more so, when working from home. Small wonder that companies are rushing to reduce their real estate footprints and overheads – BP is considering halving its property portfolio in some locations and Fujitsu will cut its office space in Japan by half.

Personal travel will change, too, with consumers taking the lead. Many people – both young and old – now say they will fly less often and buy electric cars. One long-haul family vacation a year could become the norm for many.

UPROOTING ROUTES

What do all these shifts mean for airlines, airports, companies, and investors? Some consequences are obvious. British Airways, Virgin Atlantic, and the Gulf super-connectors – Emirates, Qatar Airways, and Etihad – are facing such severe financial turbulence that they have cut a third of their workforce. That means there will be fewer routes and lower flight frequency around the world.

Some of the glamour and pioneering spirit of travel will be lost, too. Qantas has shelved its plans to start flying non-stop from London to Sydney next year. Travelling direct from Heathrow to Darling Harbour for lunch will have to wait. Expect fewer first and business class seats on jets in future, and larger economy and premium economy cabins.

Some major infrastructure plans will be scrapped, including most likely the long-planned third runway at Heathrow, Europe's busiest international hub. Dubai has already canned its proposed new five-runway hub – its name, World Central, now an eerie echo of an earlier soaraway era.

All over the world, airport operators are revising their business models. With fewer flights, prices for take-off and landing slots at consolidated and, therefore, still busy hub airports, such as Heathrow, are likely to rise to meet

airports' fixed costs. That could mean higher ticket prices. The reverse could happen at secondary airports. Virgin Atlantic has already pulled out of London Gatwick and British Airways may follow.

As consumers cut spending and duty-free and other airport retailers suffer, some people predict airports will go back to being calm, pleasant hubs again, rather than the runways with shopping centres attached that they've become. (That would be progress.)

Dubai, a major business travel hub, overall will suffer. Its remaining airport, Dubai International, could shrink as passengers opt to fly direct, rather than transiting through potentially crowded Gulf airports, in order to limit risk of infection. Some analysts predict that Etihad and Emirates will merge to produce a single UAE flag carrier flying from dual hubs, one in Abu Dhabi and one in Dubai.

HOTELS OF THE FUTURE

The hotel market will be transformed. Ask Ian Schrager, the most influential hotelier of the modern era, who created the 'hip' or boutique hotel. Mid-market hotel chains are finished, he predicts. In future, there will be four distinct kinds of accommodation: "extreme luxury at extreme prices" for the super-rich who want and are still prepared to pay for full-service hotels, such as Peninsula and Aman Resorts; boutique hotels "with a very distinctive identity" that attract the in-crowd, such as Edition and W; Airbnb, "which will grow quickly because, unlike traditional hotels, it doesn't need capital"; and affordable properties that "can match Airbnb on price but also offer the things that Airbnb can't easily do – really distinctive bars and restaurants, communal spaces to relax or work, gyms, and events".

The environment will be an overall beneficiary as airlines reduce routes and trim fleets. BA has retired the last of its old gas-guzzling Boeing 747s and is moving to an all-new fuel-efficient twin-engine jet fleet. Airlines everywhere are racing to dump the four-engine Airbus A380 superjumbo. The first electric aircraft are being approved for commercial flight and could soon be taking passengers short distances, for instance from London to Amsterdam. Airbus is preparing to launch a new, greener aircraft as early as 2025, says Guillaume Faury, the firm's Chief Executive.

The race is on to find greener aviation fuels. Etihad has partnered with aircraft manufacturer Boeing and engine

maker GE to establish a sustainable aviation fuel research facility in Abu Dhabi, fuel from which has already been used in flight. Like many airlines, Etihad aims to achieve net zero emissions by 2050, starting by halving emissions by 2035. Synhelion, a Swiss company, is working on a completely green jet fuel that is made by using solar heat to recombine carbon dioxide and water vapour, effectively reversing the process caused by burning fossil fuels. Jeff Engler, CEO of Wright Electric, which is developing a 180-seat electric jet in collaboration with budget carrier Easyjet, predicts: "All short flights can be hybrid or all electric by 2040."

STAYING GROUNDED

Where will we be in 10 years' time? Perhaps we'll go back to driving – in electric cars, *s'il vous plaît* – to neighbouring countries for our holidays. A long overdue resurgence of rail, especially sleeper services that once crisscrossed Europe until cheap flights put paid to many routes, seems likely.

Indeed, it's already beginning. You can now board a train in the North Sea German holiday island of Sylt and meander through the night to Salzburg with views of the Austrian Alps by way of Hamburg, Frankfurt, and Munich. Austria's state railway, ÖBB, has won plaudits – and made profits – with its Nightjet trains. They travel across Europe, mostly through Germany, using rolling stock bought from Deutsche Bahn, the German national rail operator, which abandoned its own sleeper services three years ago.

Governments will drive the green rail boom. In return for a EUR 7 billion bailout, President Macron of France has barred Air France from flying domestic short-haul routes of less than 2.5 hours' rail journey time. If you want to go from Paris to Lyon or Bordeaux, you'll have to take le train.

We might see second-home property booms around easy-to-reach rail hubs on the continent. London St Pancras to Avignon is already the most stylish way to vacation. Book now with added carbon-neutral smug factor! Some cruise ships may go to the breaker's yard. Private jets will boom – as will any travel product with 'private' in the title. The super-rich will be keen to put safety first. But private jets may also face higher taxation or a carbon or green levy.

Whichever way you look, it's clear that Travel 2.0 has landed. Boarding now.



PETER FISCHLI/DAVID WEISS: Untitled (Airport), 2008



Photos: © Peter Fischli/David Weiss
Courtesy the artists and Private Collection

ALL CHANGE AT THE CUTTING EDGE

By Rebecca Burn-Callander

Precious stones are at the heart of an industry that has endured for several millennia without major innovation, but thanks to technology and shifting consumer attitudes, change is now coming.

Everyone who works in the gemstone industry – from gemologists in European cities to the top brass at Zambian mining companies – is in agreement that the biggest trend shaping the market today is the ethical trading movement. From promoting social welfare to protecting the environment, every organisation in the supply chain is feeling the pressure to offer absolute transparency. The catalyst for this transformation? The consumer.

Jack Cunningham is the Group Sustainability Manager for London-listed Gemfields plc, which owns mines in Zambia and Mozambique and also owns the jewellery company Fabergé. “Consumers are putting pressure on all brands to operate ethically, and our industry is no exception,” he says. “Many parts of Africa, for example, are unstable or corrupt. Industry players can’t solve all those problems, but they can highlight what they are doing to tackle them in a positive way.”

David Johnson, Head of Strategic Communications at diamond miner and jewellery brand De Beers, says ethical and sustainable practices are the primary focus for the diamond industry too. “Diamonds represent emotional meaning and are chosen to celebrate some of life’s most important moments, so they must live up to people’s expectations for such an important purchase,” he says. “It will become increasingly important for brands to demonstrate these credentials to today’s socially conscious consumers.”

QUESTION OF PROVENANCE

One way to reassure buyers that their gemstones are conflict-free and fairly traded is through proof of provenance. Certificates that specify where stones were mined have been around since the 1930s.

“Almost all diamonds that you buy to wear or as an investment will have a certificate from the GIA, the industry body that evaluates and certifies diamonds for quality, just like a birth certificate,” says Lydia McCarthy-Keen, an ethical jeweller and the UK’s leading lab-grown diamond specialist. “There is also the Kimberley Process, a United Nations-

backed certification scheme that says this diamond was not used to fund conflict.”

However, the Kimberley Process has been widely criticised. “Even when you do have a Kimberley Process certificate, that doesn’t protect against other crimes. There are many loopholes in this system,” says McCarthy-Keen.

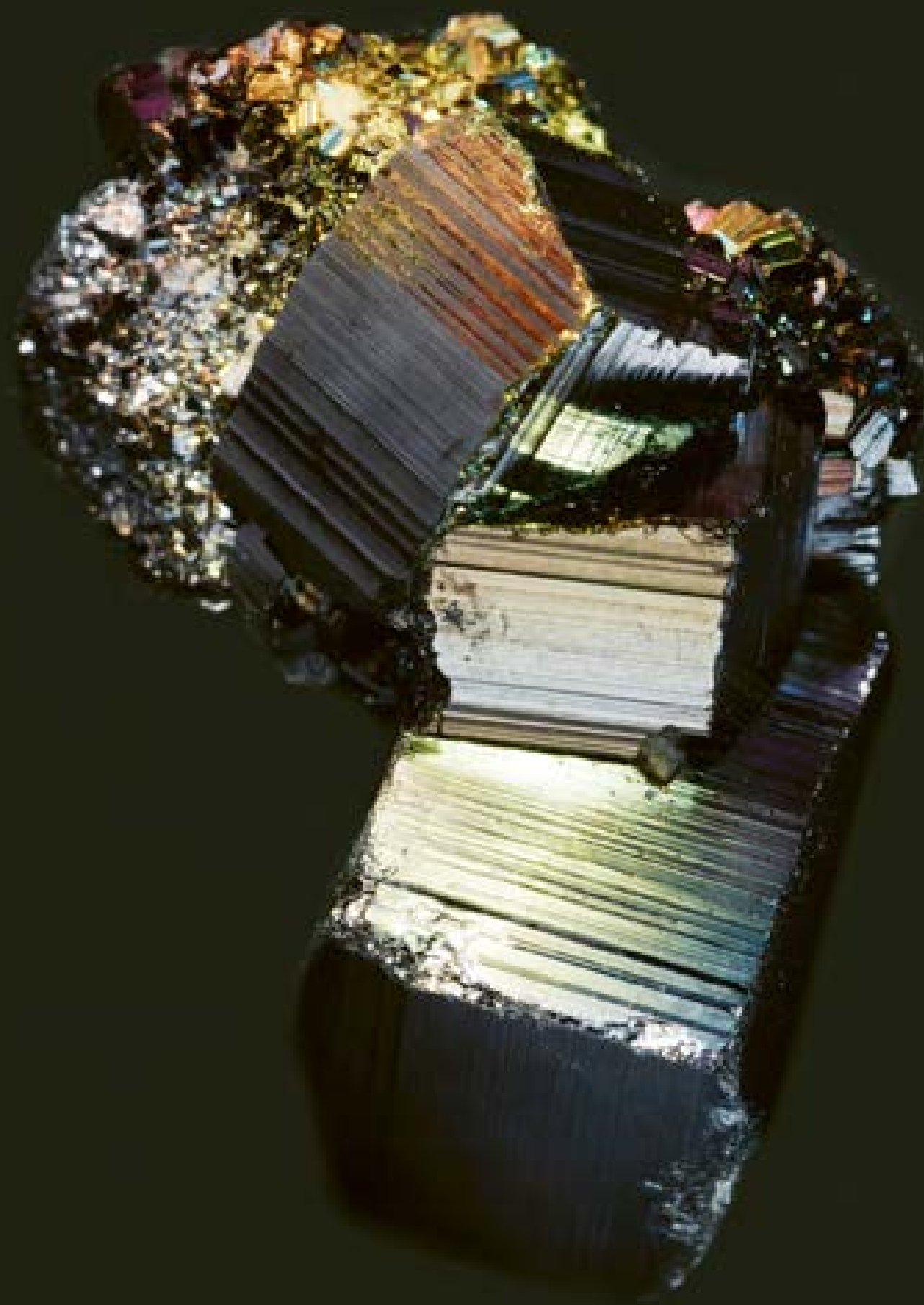
Private companies have taken matters into their own hands and devised innovative techniques for adding invisible branding to diamonds. Start-ups such as Opsydia, an Oxford University spinout, are helping the venerable diamond houses to adapt. The company has done a deal with De Beers to license its laser technology to imprint diamonds with unique codes beneath the surface of the stone. It affects neither the grading nor value, but cannot be polished off without dramatically reducing the worth of the stone.

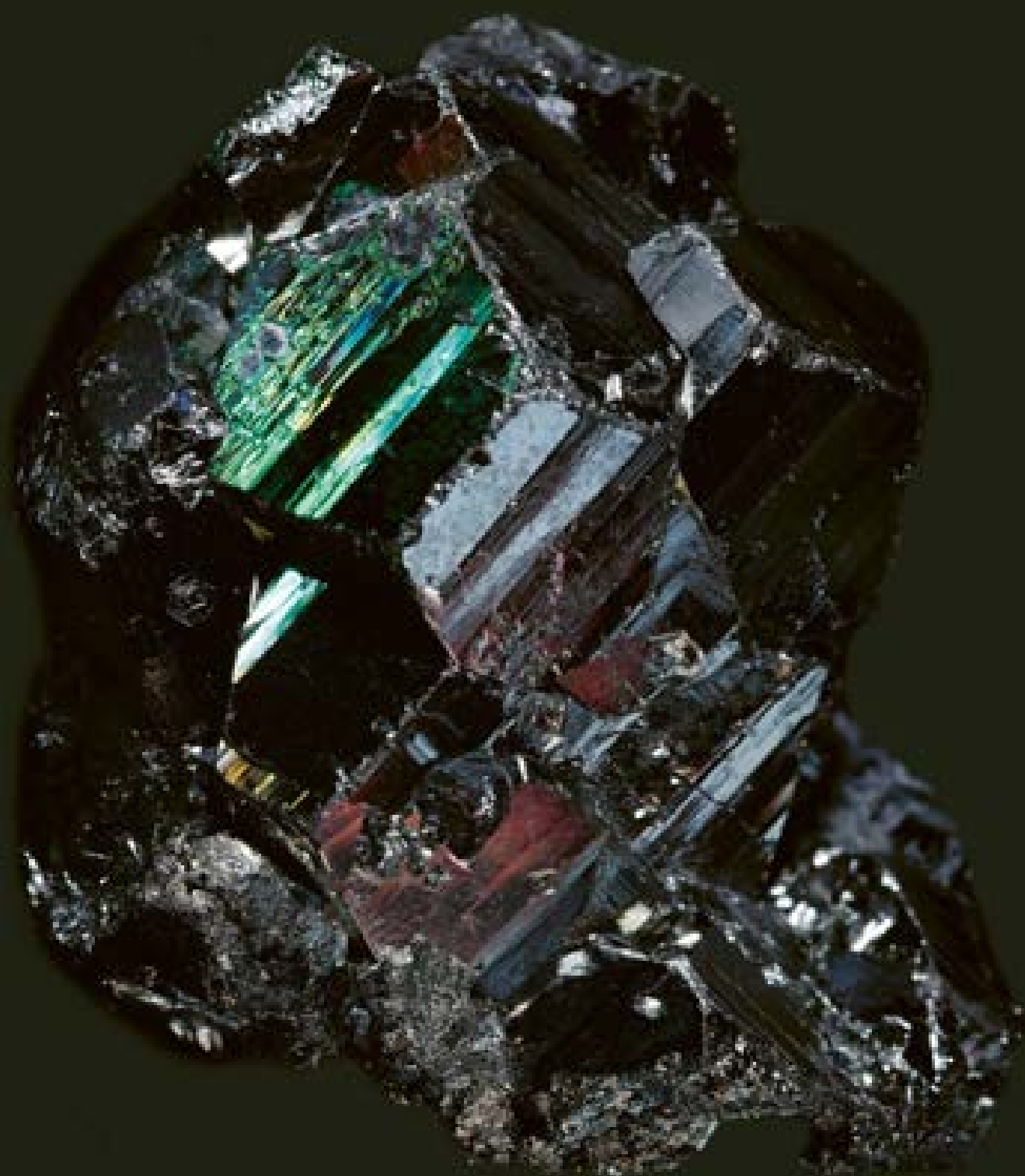
TRACK AND TRACE

De Beers has a number of initiatives to help both consumers and the wider industry easily access the life story of diamonds. It recently launched Tracr, a blockchain-backed platform that provides “an immutable record of a diamond’s journey throughout the value chain”. The platform will be open to anyone in the industry.

Switzerland’s House of Gübelin, a family-owned firm known for its high-end jewellery, watches, and gemstone expertise, is now trying to bring this level of transparency to the world of coloured gemstones. The company, which was founded in 1854, has created an initiative called Provenance Proof.

“My great-uncle found that when you look into coloured gemstones and study the inclusions – the inner world they have – you can pinpoint the gem to its place of origin,” explains Raphael Gübelin, President of the House of Gübelin. “But the challenge is knowing when it was mined. You may not want to buy gemstones that were mined in an area of conflict right now, but if the stone is 20 years old, that area may have been OK.”







“The modern view is: do we really need to dig huge holes in the ground and displace communities when we can just build a lab, power it sustainably, and make diamonds that way? My clients can afford mined diamonds, but they want lab-grown.”

Lydia McCarthy-Keen

The House of Gübelin has developed the first technology under the Provenance Proof banner, dubbed the Emerald Paternity Test. “This is a physical tracker that we can put into emeralds in their rough state at the mine,” says Gübelin, “that will remain inside the gemstone throughout the supply chain. This tiny nanolabel is invisible to the human eye.” Gemfields is among the early companies to adopt this technology.

Gübelin says the specific surface qualities of the emerald make it the easiest stone to label in this way, but his company is also looking at techniques to apply similar technology to sapphires and rubies. Crucially, these nanolabels can be combined with Gübelin’s Provenance Proof blockchain, an open-source ledger that cannot be altered and is free for the whole industry to use, which will record the gemstones’ journey through the supply chain.

According to Gübelin, this technology has the potential to give the entire industry a fillip. “The consumer wants transparency and they do not want to wait. If we don’t give them that transparency, they don’t have to buy jewellery; they can buy other luxury products instead.”

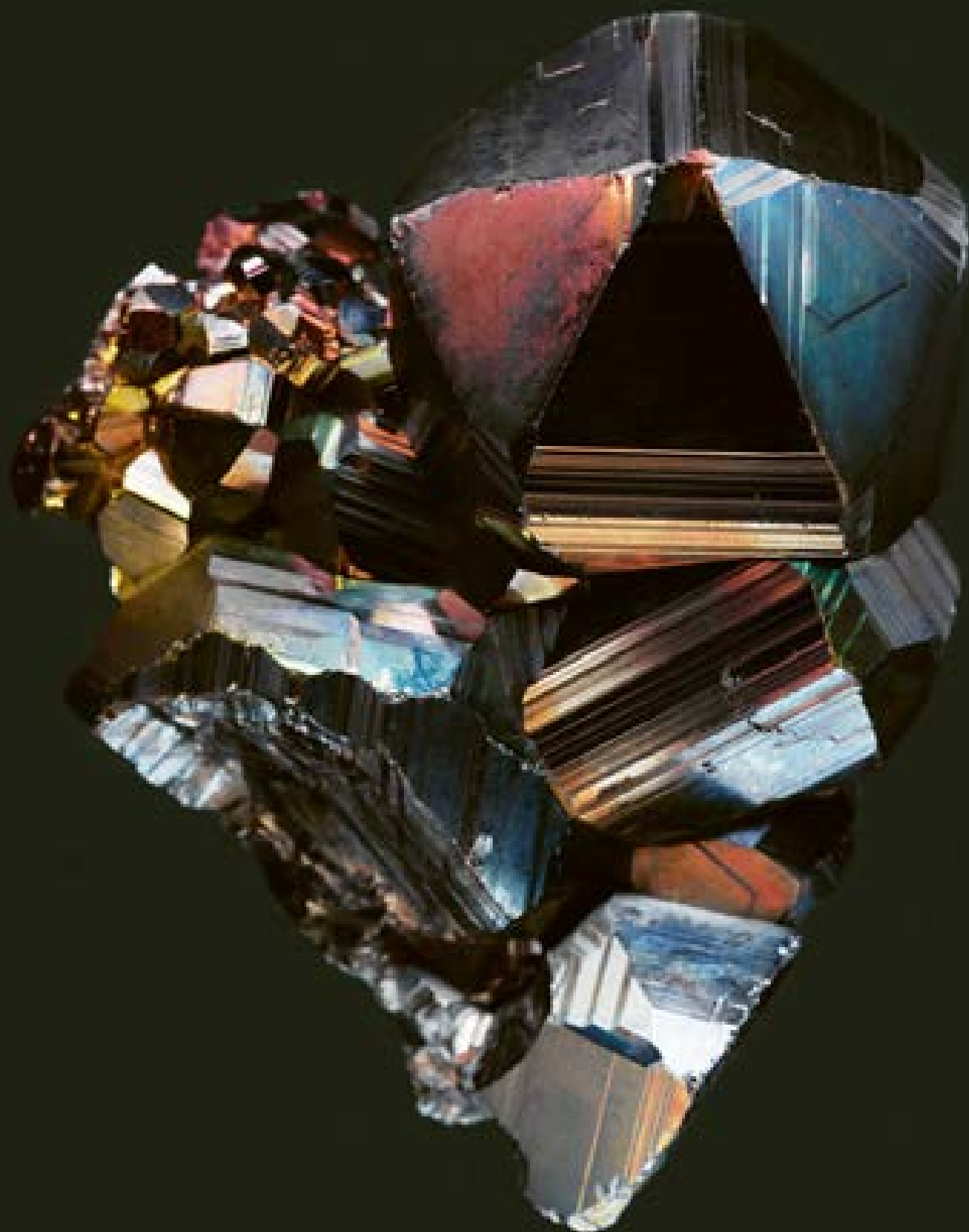
MAN-MADE TREASURES

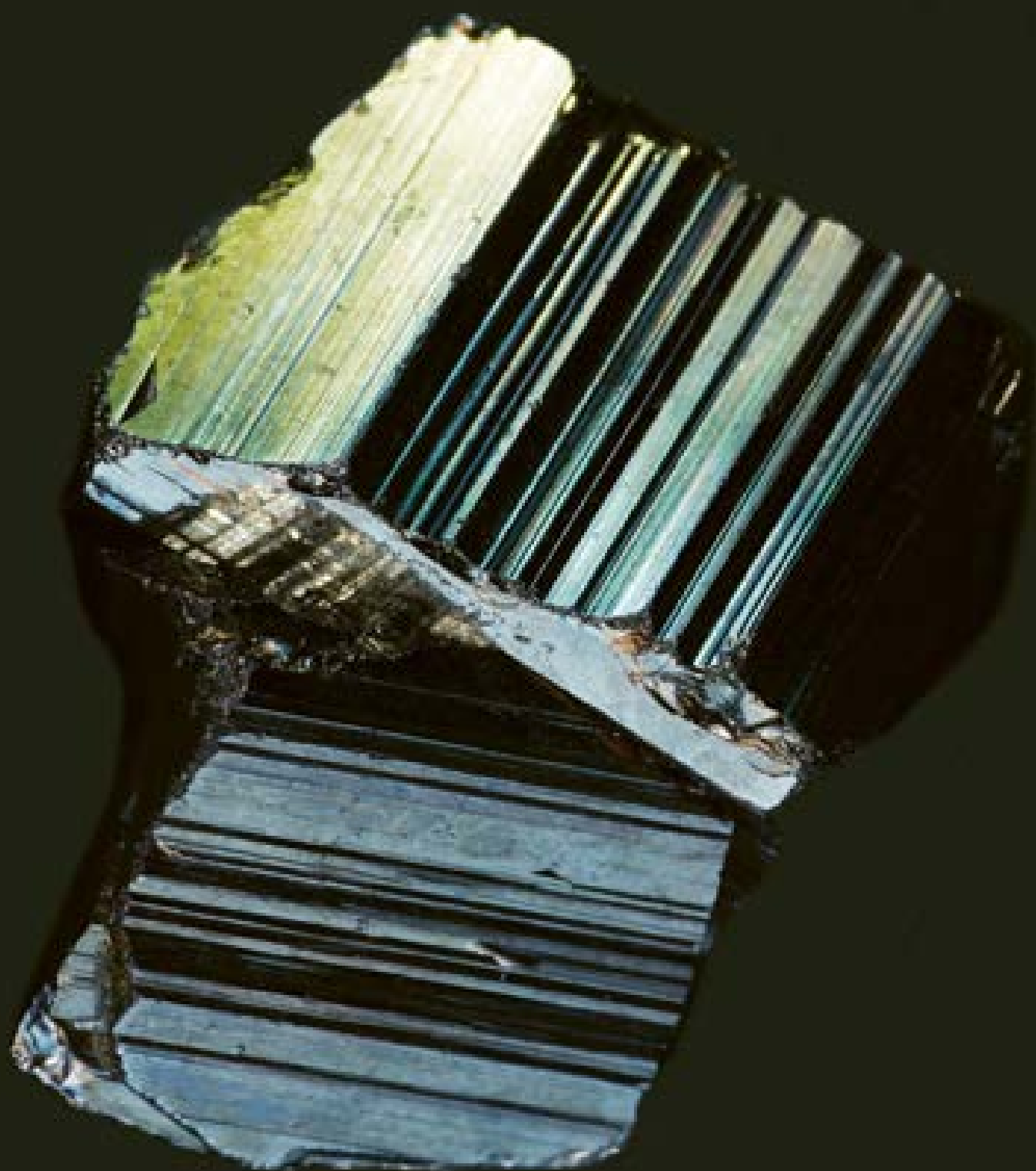
The other guaranteed way to buy an ethical gem is to choose lab-grown. According to last year’s Global Diamond Industry report by the Antwerp World Diamond Centre and Bain & Co, the lab-grown diamond market grew by between 15 and 20 per cent in 2019.

Lab-grown gemstones have been used for industrial applications for the best part of a century, but it is only within the past decade that the technology has been capable of creating stones of a high enough quality to set in jewellery. They may look identical, but they come at a much lower price point. In diamonds, the cost of man-made tends to be between 20 and 40 per cent lower than for mined stones; a good rule of thumb is that you can get a three-carat lab-grown diamond for the price of a two-carat mined one.

The majority of McCarthy-Keen’s clients are high-net-worth individuals. When she pivoted to focus on lab-grown diamonds last year, she worried that she might alienate her key clientele. Instead, she found that the majority were keen to make the switch and 99 per cent of the diamonds she now sells are lab-grown. Every sale provides a prosthetic limb for an amputee victim of the blood diamond trade. “The modern view is: do we really need to dig huge holes in the ground and displace communities when we can just build a lab, power it sustainably, and make diamonds that way? My clients can afford mined diamonds, but they want lab-grown,” she says.

It is clear that the definition of luxury is changing. It is no longer acceptable to have the very best at any cost, and while provenance remains important, the focus has changed from the brand at the end of the supply chain to the producer at the very beginning. With consumer desire for ethically produced products showing no sign of slowing down, the gem industry is having to rapidly transform to ensure that the only negative impact of buying jewellery is on your wallet.





AN INDUSTRIAL REVOLUTION



By Rhymer Rigby



With roughly a third of climate change impact coming from industrial systems, rethinking the way we build the world – from factories and industrial processes to business models – could be an efficient way to create a more sustainable future.

Where do you think the world's most efficient production car is likely to come from? A car that does approximately 100km to a litre of petrol. Germany? Japan? Silicon Valley? In fact, the answer is a start-up in Wales.

The car – which should be on the market in about 18 months – runs on hydrogen via a fuel cell and is a ground-up rethink of what constitutes a passenger road vehicle. Among other things, it has very few moving parts (the motors are in the wheels), is almost entirely recyclable, and is designed to last for close to 20 years. It emits only water and uses a fraction of the energy of a normal car.

It's not just the car, though. The company that makes it, Riversimple, is no ordinary company. Indeed, part of the reason the car is so different is that it's built around a completely different business model. For starters, you can't buy one. Instead, you pay a monthly rental fee (this includes maintenance, depreciation, and fuel too) and give it back when you're done. It is designed not only to be completely recoverable but also to retain considerable value at the end of its life. This is down to a very green idea that externalities (the costs a normal company pushes out into the wider world) such as air pollution should be internalised.

The company's governance specifies six sets of stakeholders: investors, the environment, staff, customers, commercial partners, and the community. The idea comes from balancing the rights and responsibilities of running a company. "It's the future of business," says founder Hugo Spowers. And lest anyone think that Spowers is a naive green in the world of cars, his background is in motor-racing.

We need to see more businesses like Riversimple. These are not for-purpose companies that often exist to fund charities or accomplish social change. They are businesses that exist to turn a profit for their owners or investors. But, crucially, those behind them believe that the best way to turn a profit in the long run is to completely internalise what is often still thought of as CSR. And these companies may just save the world.

Once you start looking at business in this very holistic way, you realise that doing the right thing opens up all sorts of possibilities, says Steve Evans, Director of Research in Industrial Sustainability at Cambridge University's Institute for Manufacturing.

Professor Evans recently worked with a jeans manufacturer in Vietnam; the company was using 800 litres of water to make one pair of jeans, while the industry leader would use about half this. One of the tasks was to get water usage down. They managed to get the figure down to one litre per pair – which is essentially from evaporation that takes place in the factory. This, Prof Evans says, gives companies much more flexibility and control over where they produce. "If you're hardly using any water, you don't have to locate your factory near a river and there is no longer an incentive for countries to compromise their environmental laws to attract business."

DISTANCE LEARNING

Other enormous savings come from thinking holistically about everything you do. "If you take clothing manufacturing, the cost of shipping bras from China is about one cent per bra," says Prof Evans. This, he explains, is negligible, and while it may not be desirable in environmental terms, economically it looks like a slam dunk. But then you think about it more carefully. Making clothes in China often means you have to order everything a year in advance. And this makes you very slow to react to fashion trends – and even though everyone loves blue T-shirts now, they might love yellow T-shirts in a year's time. So you'll have to sell all the blue T-shirts you ordered at a discount – and that loss of income, not the one cent per bra, is the true cost of manufacturing half a world away.

Companies, says Prof Evans, should be constantly thinking about the logic of value exchange, when people pay for services. "We often think in very narrow terms and choose from a known and small list of business models." And yet we really should think outside the box. "Toyota's factory in Derby happens to be one of the best in the world in terms





of energy efficiency, yet this cost them almost nothing. They reduced energy use by 8 per cent a year over 14 years – which means a 77 per cent reduction.”

It was done mostly via natural system updates – small, continual improvements that cost them a few thousand pounds, plus careful choices when making major upgrades. “We are always looking to improve labour productivity but not energy productivity,” says Evans. “So getting 3 per cent more energy productivity is often very easy, while getting 3 per cent more labour productivity is very hard.”

LOCAL ANGLES

Prof Evans believes clean green factories will mean other changes too – manufacturing facilities are likely to shrink in size and become hyperlocal. “There are considerable diseconomies of scale but at the moment we don’t calculate them.” Soon you might have a factory at the end of your street that makes goods highly personalised for your neighbourhood. This would mark a return to an almost Victorian model, where factories were built within walking distance of those who worked in them and bought their products. The difference here, though, is that the factory will be quiet and emit almost no pollutants at all. “The water coming out of the factory will be cleaner than the drinking quality water that goes in,” says Prof Evans.

This may seem utopian but it’s the start of rethinking the economy. For instance, if you were a CEO, would you double your profitability if it meant halving your revenues? There is, after all, a good reason for the enduring popularity of the old saying, “Turnover is vanity, profit is sanity, cash is king.” And if you are thinking this way, how do you design a business that is more profitable while delivering what society needs? When sourcing materials for Riversimple, Spowers said at one point, in all seriousness, he suggested to the owner of a mining business that rather than buy his platinum, he leased it.

The ultimate goal, says Prof Evans, must be “an industrial system that treads lightly on the earth”. How long would this take? “We could do it in 20 years.” But the worry is we’ll only do it when the cost of not doing it becomes too obvious and painful – by which time it may well be too late. “We need to do it within 30 years to save the planet.”

CASE STUDY: VITSOE

In a consumer environment in which many companies are focusing on short-term relationships to optimise profit, or building products that will become obsolete and incompatible with future releases within a few years, finding a company that does quite the opposite is rare. Vitsoe is one of the exceptions. Founded in 1959, it sells just three products: the 606 Universal Shelving System, 620 Chair Programme, and 621 Table. It builds products that are designed to last as long as possible by using durable materials, ensuring forwards and backwards compatibility, and offering a system that can be reused, repaired, and wherever possible recycled.

“Of course sustainability is about materials, but fundamentally it’s about ensuring that we make and support things that will last as long as possible. There’s no point having so-called sustainable materials if they are discarded too quickly after the energy has been expended on their creation,” says Mark Adams, MD of Vitsoe. The company follows a ‘sufficiency’ business model, as laid out by Bocken and Short in their 2015 paper: “Sufficiency-driven business models seek to moderate overall resource consumption by curbing demand through education and consumer engagement, making products that last longer and avoiding built-in obsolescence, focusing on satisfying ‘needs’ rather than promoting ‘wants’ and fast-fashion, conscious sales and marketing techniques, new revenue models, or innovative technology solutions.”

Vitsoe actively encourages customers to buy less, helping them to look after their furniture. It takes all its margin upfront and makes a loss on all subsequent support provided, sacrificing potential short-term gains in favour of pursuing a sustainable, long-term strategy that engenders customer loyalty. At any one time, between 50 and 60 per cent of orders are from existing clients, and its new factory (pictured on pages 60–61), designed in conjunction with academics from the Cambridge Institute of Industrial Sustainability, of which Vitsoe is a founding member, was entirely funded by customers.

Resilience is another key component of the Vitsoe business model. It has local supply chains with most components sourced from within two hours of the factory; it has direct contact to customers, selling exclusively through its online store and physical stores; and it has been fully cloud-based since 2005. This has allowed it to keep working throughout the Covid-19 pandemic, selling to more than 45 countries during the lockdown period. “We are doing what we believe is right for us, right for our customers, and, frankly, right for the creaking planet around us,” says Adams.

PUTTING THE 'S' IN ESG

By Simon Brooke

Environmental, social, and governance is at the forefront of every company's thinking in 2020 – but the social part of it is proving the most complicated to measure.

Environmental, social, and governance (ESG) investing has been steadily increasing in popularity in recent years. Investments in this sector grew by 34 per cent to USD 30.7 trillion in the two years to April 2019, with Europe the largest region, accounting for USD 14 trillion, according to the Global Sustainable Investment Alliance.

Analyst EPFR calculates that equity funds with a focus on ESG brought in nearly USD 70 billion of assets over the year ending February 2020, while traditional funds saw outflows of almost USD 200 billion over the same period. But as the sector grows, so too does a recognition that more analysis and benchmarking are needed – especially when it comes to the 'S' element of ESG. Quantifying, benchmarking, and comparing a company's social impact can be difficult. How well is it treating customers, employees, suppliers, its local communities, and other stakeholders? How sure can investors be that its supply chains are free of sweat shops and modern slavery contraventions?

Around USD 8 trillion of the debt rated by Moody's is subject to these social risks – quadruple the amount exposed to environmental ones. Conscious investors often base their analysis on the United Nations' sustainable development goals, which have 223 metrics by which improvement can be measured annually. Investment research firm MSCI identifies ESG social factors that companies should be measured on in four key areas: human capital, product liability, stakeholder opposition, and social opportunity.

DEFINITION ISSUE

"It's certainly more challenging, and some way behind the other two elements," says Robert Gertner, Joel F Gemunder Professor of Strategy and Finance at the University of Chicago Booth School of Business, of the social impact of ESG. "Information about governance is publicly available and easily visible, and often tied to legal requirements. It's more difficult to define and evaluate the relevant social aspect. For instance, in some sectors supply chain might be the most important factor, while in others it could be communities or employees. There needs to be a more industry-specific definition and evaluation. There are companies collecting data here, but it's also difficult to aggregate these data in order to develop some kind of recognisable score."

He adds: "Identifying different criteria for different sectors and measuring them might be one approach that could begin to create a set of reporting standards for issues such as

supply chain management or the way a company treats its local community. There are already companies that assess supply chains in terms of ESG reporting, for instance."

The risk, he warns, is that companies try to game the system – perhaps by skewing their reporting, operations, and procedures so that they tick the boxes of whatever regulations are developed, rather than embracing the spirit of them. He points to the fact that companies might sometimes spin off or divest the part of their business that might not meet requirements, just so they can be included in the portfolio of an ESG fund – without addressing the fundamental ESG issue in their sphere of influence.

SECTOR DIVERSITY

"The diversity of perspectives is really broad," says Livio Scalvini, Executive Director of the Leonardo Centre at Imperial College Business School in London. "If you're talking about mining, food, or technology – these companies have little to do with each other. There needs to be deep sectoral expertise in order to analyse their social impact. Second, there are challenges involved in analysing the impact on multiple stakeholders at a global level – suppliers, employers, customers, local communities. Whose perception is more relevant?"

He believes that it's essential when measuring social impact not just to do so on a sector-by-sector basis but to take a more granular approach, from a company level to a single-initiative level.

"Even if you're looking at mining, you might be considering the working conditions of miners as well as tracking where a diamond comes from," he says. "You need to build a completely different model for each case. For example, during the 1990s, champions in the fashion industry claimed they could not control their suppliers, but over about six or seven years they began to address most relevant problems with these suppliers, not just first-tier but second and third-tier. Today, a new set of hybrid technologies – such as blockchain, AI, IoT [Internet of Things] – can be used to reveal the origin of any products, even diamonds."

There are more data available from sources outside companies themselves that can be used to check social risk and elements. RepRisk is an ESG research provider that leverages the combination of artificial intelligence and machine learning with human intelligence to systematically analyse

the publicly available information of more than 150,000 public and private companies and more than 35,000 infrastructure projects in 20 languages.

“Essentially, RepRisk serves as a reality check for how companies conduct their business around the world – do they walk the walk when it comes to human rights, labour standards, corruption, and environmental issues?” explains Alexandra Mihailescu Cichon, the company’s Executive Vice President for Sales and Marketing. “This perspective, together with a transparent, rules-based methodology and daily updates, ensures that our clients have consistent, timely, and actionable data at their fingertips.”

One of the world’s largest industrial manufacturing firms has embedded RepRisk ESG risk data into its global human rights due diligence system. It uses RepRisk data to identify and assess the ‘S’ risks related to the countries in which it operates and the companies it partners with and sources from, and to conduct due diligence on the projects it builds and operates around the world.

This kind of risk mitigation might be demanding and lack the glamour of high-profile support for charities and worthwhile projects, but it is essential, according to Ms Mihailescu Cichon. “A company’s impact and influence are greatest not when they focus on one-off CSR initiatives, but rather in their day-to-day operations,” she says. “For example, if a company is a major manufacturer of personal consumer goods, the impact of their supply chain has a bigger influence than a one-time donation or a volunteer day. For banks, where they direct their money has the bigger impact.”

VIRAL SOURCE

Inevitably, the effect of Covid-19 is increasingly focusing minds on social impact. “As the virus spread, the data revealed the extent to which social impact has become a dominant issue for stakeholders of corporations,” says Susan Lundquist, Chief Marketing Officer of Truvalue Labs, which quantifies company ESG performance by mining unstructured text from external sources that go behind traditional company-disclosed ESG information.

Sources include local, national, and international news, NGOs, watchdogs, trade journals, and industry-specific publications. Truvalue then uses machine learning to aggregate, extract, analyse, and generate scores on millions of documents each month.

“The pandemic brought into stark relief the impact of racial, gender, and income inequality as determinants of who loses their job, who is forced to choose between working and risking their health, who has access to healthcare, who can work from home,” says Ms Lundquist. “The pandemic has revealed that social inequalities are unsustainable. Investors are using the power of their assets to leverage change through the capital markets.”

Truvalue Labs created a new set of data and a corresponding dashboard to monitor the global pandemic through an ESG lens. “This is an excellent example of how AI technology can be quickly leveraged to uncover new insights and to highlight material issues that impact company value,” says Ms Lundquist.

“We’re a long way off developing something, but you’ve got to start somewhere,” says Robert Gertner. “Consumers are driving the trend as well as regulators.” As consumers, leaders of organisations, politicians, and regulators rethink business in the light of coronavirus, the focus on the social element of ESG is certain to increase.

ESG AND INVESTING

Silvia Wegmann, Head of Sustainable Investment Solutions, Julius Baer

Interest in ESG factors and value-based impact investing is growing year-on-year, thanks in part to recent research showing that ESG investments actually produce improved returns on a risk-adjusted basis.

In the past, the focus was often on the environmental element of ESG, but in recent years, the social aspect has become more important. Companies are increasingly coming under scrutiny for decisions that affect employees, customers, and society. Sustainable investing never was and never will be about creating shareholder value, but is about maximising value for all stakeholders.

Sustainable companies have proven to have more innovative solutions to meet today’s sustainability challenges and thereby support the transformation of entire sectors. By taking ESG criteria into account while constructing their portfolios, investors are able to manage their money in a more sustainable way and make a positive contribution to society.



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COLOR OF LOVE

Photography by Brendan Pattengale











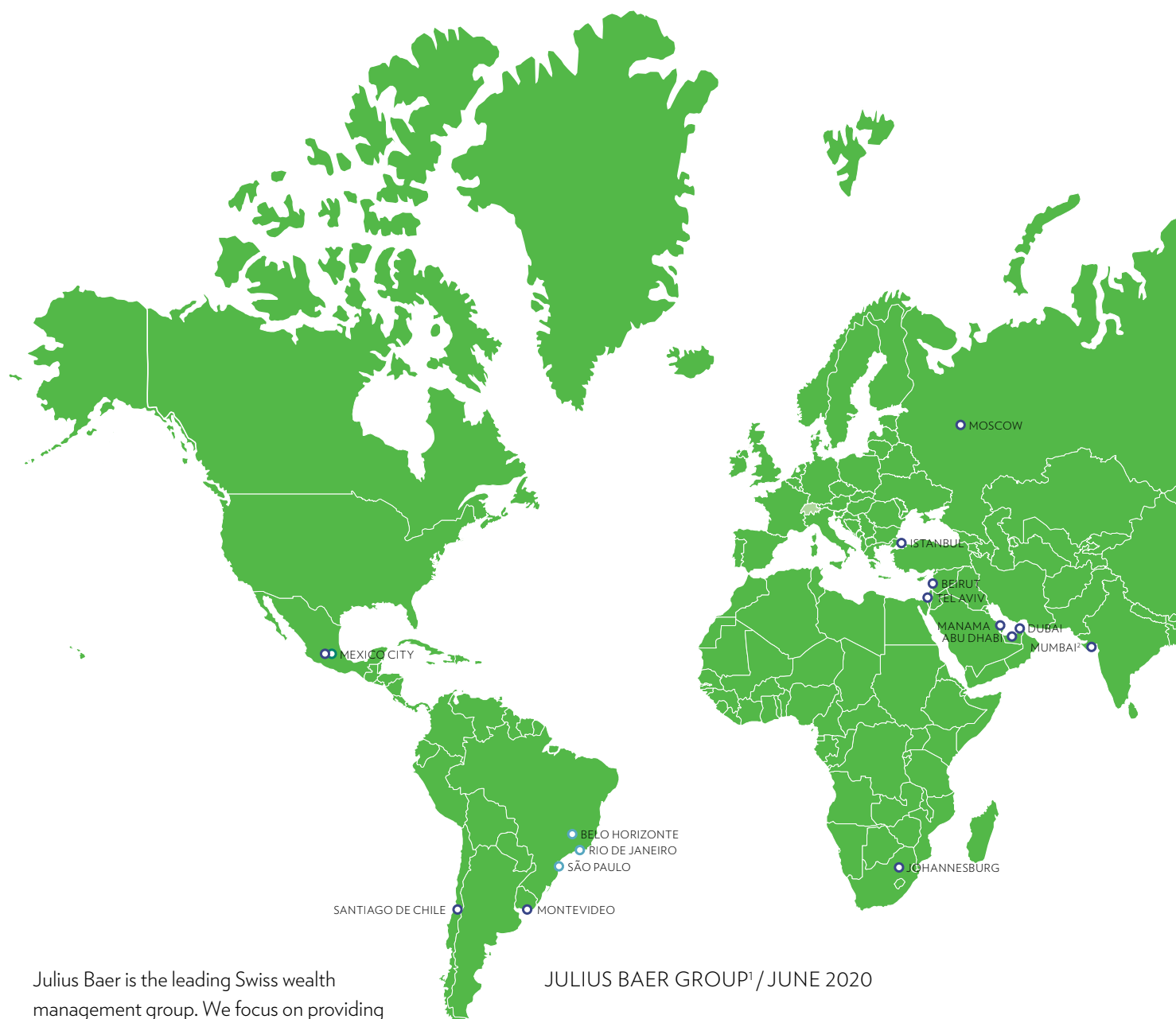






COLOR OF LOVE
BY BRENDAN PATTENGAL

Taking up the tradition of landscape photography to situate his musings, Pattengale probes photographic methods as well as the truth in colour perception. His photographs are strikingly abstract, psychedelic in the way they vividly depict valleys and vistas, yet they maintain a certain realism in the subject matter. Using an unorthodox set of tools to capture his chosen terrain – Pattengale travels to the farthest reaches of the world to find new scenery – he calls into question the role of the camera as vicarious viewer relative to an image-making process that involves other mechanical and non-mechanical agents. As was said by Goethe in his 'Theory of Colours', colours belong to the eye; Pattengale conveys this in his images, which are entirely true in their retelling of light and, therefore, vision, while they are also altered in their process prior to the instant of the photograph.



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PUBLISHER
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EDITOR-IN-CHIEF
Emily Rookwood, Julius Baer

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CONTRIBUTORS
John Arlidge, journalist
Rhymer Rigby, journalist
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Janet Anderson, journalist
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Rebecca Burn-Callander, journalist
Simon Brooke, journalist

**ART DIRECTION AND
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Charles Blunier & Co.,
Creative Direction

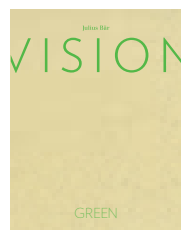
PROOFREADING
Simon Edmond, subeditor

PREPRESS AND PRINT
medienwerkstatt ag, Sulgen

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THE COVER



In keeping with the green theme of this issue of VISION, we have chosen a special paper for the cover made from corrugated grass-board. Produced in Switzerland, the grass used comes from the area around the paper mill, reducing the paper's carbon footprint. The material is 100 percent vegan and biodegradable, and no chemicals are used in its manufacture. In addition, the water and energy consumption are much lower than for the production of conventional pulp.

The Forest Stewardship Council (FSC) is an independent, not-for-profit organisation that promotes responsible forest management throughout the world. Julius Baer cares for the environment and therefore this publication was printed on FSC-certified paper.

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JULIUS BAER GROUP

Head Office
Bahnhofstrasse 36
P.O. Box
8010 Zurich
Switzerland
Telephone +41 (0) 58 888 1111
Fax +41 (0) 58 888 1122
www.juliusbaer.com

