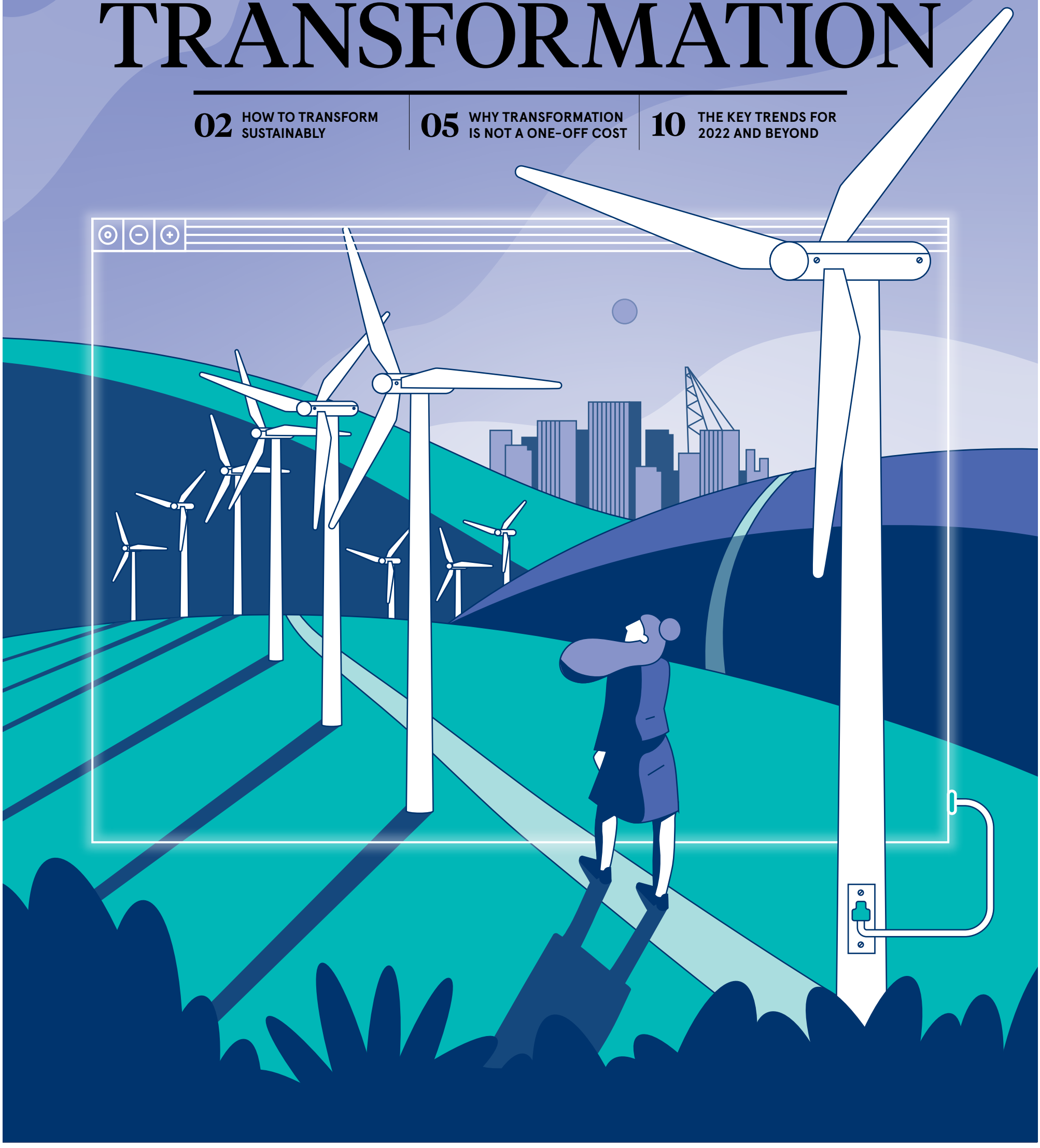
DIGITAL TRANSFORMATION



DIGITAL TRANSFORMATION

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Contributors

MaryLou Costa
A business writer specialising in the future of work, but also covering sustainability, innovation, technology and more. Her work has featured in *The Guardian*, *The Evening Standard*, *Business Insider*, *Marketing Week* and others.

Jonathan Weinberg
Freelance journalist, writer and media consultant/trainer specialising in technology, business, social impact and the future of work and society.

Emma Woollacott
Journalist who has been writing about business, technology and science for more than 20 years. She is a regular contributor to the BBC News website, Forbes and Private Eye.

raconteur reports

Publishing manager
Libby Owen-Jones

Head of business development
Reuben Howard

Managing editor
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Illustration
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Art director
Joanna Bird

Design director
Tim Whitlock

SUSTAINABILITY

How to make your digital transformation sustainable

Transformation could be good for the planet, as well as your business. However, there are challenges, with today's technology also contributing to climate change

Emma Woollacott

With attention focused on the COP26 climate conference in Glasgow in recent weeks, sustainability has never been a more crucial issue, nor captured public attention more.

With the aim of securing global net-zero emissions by the middle of this century and limiting global warming to 1.5C, world leaders have called on industry to limit emissions and act in a more sustainable way.

However, according to the Royal Society, digital technology accounts for between 1.4% and 5.9% of global emissions – much the same as the airline industry – and that figure has been steadily rising.

John Frey is chief technologist for sustainable transformation at Hewlett Packard Enterprise and is a lead contributor to the World Economic Forum's (WEF's) Bridging Digital and Environmental Goals playbook. He estimates that by 2025, 61% of the world's population and 41.6 billion internet of things devices will be connected to the internet.

"The expansion is improving livelihoods and driving productivity but we can't ignore a fundamental issue: the rapid growth of digital technology and its energy consumption is contributing to climate change," he says.

So how can organisations carry out a digital transformation while keeping sustainability in mind?

Frey believes digital transformation and sustainability can be complementary. "Sustainable innovation often results in solutions that save money, have a lower environmental and social impact, improve employee attraction and retention, and generate little to no waste," he says.

This, says Paolo Taticchi, a professor of strategy and sustainability at the UCL School of Management, is what he found when consulting on a digital transformation project for pharmaceutical company Consilient Health.

The company was hoping to secure important partnerships with major manufacturers and customers in the pharma industry, while also wanting to retain its relationship with the NHS – itself implementing new sustainable supply chain and procurement strategies.

34%

of business leaders think technology is as an enabler of sustainable business practices

71%

of business leaders don't believe digital transformation can help their company achieve its long-term sustainability goal

Ricoh Europe, 2021

"It became very clear that digital transformation projects, for example focused on the use of distributed ledger technology in the management of supply chains and the implementation of a new ERP system, would enable the sustainability strategy. This was because it provided real-time information and measurement of processes, and greater transparency to internal and external stakeholders," says Taticchi.

"The sustainability agenda has become a true source of innovation in the context of the digital transformation agenda."

Similarly, the European Farm to Fork strategy is aimed at improving traceability in food supply chains – but also intrinsically works to reduce waste. For example, the SecQuAL (Secure Quality Assured Logistics for Digital Food Ecosystems) project, which is funded by the Industrial Strategy Challenge Fund, involves introducing smart labels to monitor cold chain conditions, predict shelf-life more accurately and identify bottlenecks and inefficiencies in supply chains.

Clive Stephens, head of R&D at the food producer Cranswick, says the programme will help reduce waste throughout the supply chain. "Our vision is to be the world's most sustainable meat business," he adds.

The EU has found that participants in farm-to-fork smart farming initiatives have reduced water use, pesticide use and NO2 emissions. Meanwhile, the WEF suggests that using AI to design out food waste, keep products and materials in use for longer and regenerate natural systems could represent savings of up to $127bn (£93bn) a year in 2030.

Nevertheless, a sustainable digital transformation creates challenges because digital technology itself is a significant contributor to global climate change. While improvements in energy efficiency have helped to limit the growth of energy demand from data centres and data transmission networks, each accounted for around 1% of global electricity use in 2019, according to the International Energy Agency.

The answer, says Oliver Iltisberger, president of ABB Smart Buildings, is to install renewable energy generation such as photo-voltaic technology, wind turbines, or thermal energy storage – or to buy renewable energy from the grid.

As part of the company's own digital transformation, it created its first carbon-neutral production site at Lüdenscheid, Germany. Solar technology now generates up to 100% of the factory's energy needs, enough to supply 340 households, he says.

"When this is used with the site's co-generation plant, Lüdenscheid can generate 14% more energy than needed. This surplus is sold back to the public grid, meaning the site is energy positive," he adds.

For a solar farm, any increase in efficiency is a positive move in sustainability terms. But when R-evolution, a subsidiary of sensor and software firm Hexagon, recently created a digital twin for its solar farm in Archidona, Spain, physical electronic waste was reduced too.

"We are working to establish a 'smart digital reality' that mirrors our Archidona solar farm to improve efficiency, remotely and autonomously detect solar panel anomalies, reduce maintenance needs, aid inspections and much more," says CEO Erik Josefsson.

"We discovered, for example, that an easterly wind is the most damaging, as well as which panels are most at risk; this means operators can more efficiently take preventative countermeasures."

Physical waste is also a growing issue, with WEEE Forum, a not-for-profit that represents 40 global producer responsibility organisations, estimating that the amount of waste from electrical and electronic equipment will total as much as 57.4 million tonnes in 2021 – heavier than the Great Wall of China.

Frey, though, believes that such waste can be cut through use of product-as-a-service. The goal is to optimise device refresh cycles by using automation and data, such as information on workloads and power consumption, to provide life cycle analysis and work out what a product might need to be replaced.

"This enables companies to fully leverage their IT and to optimise resource planning, thereby minimising waste and positively impacting the environmental footprint," he says.

Other possible downsides to digital transformation include high water usage. The Water Resources Group, part of the World Bank, says water demand is expected to exceed current supply by 40% by the end of this decade.

Digitalisation means more online activity, and the data centres handling this increased activity require vast amounts of water for cooling – a 15MW data centre can use up to 360,000 gallons of water a day. However, the industry is waking up to the issue and starting to tackle it, with Microsoft, Google and several other tech companies recently committing to becoming water-positive by 2030.

Baking sustainability into digital transformation also makes strategic sense. One of the most common pitfalls – staff buy-in – is far less likely to be a problem when the project has a sustainability focus. Research has repeatedly shown that people prefer to work for companies with solid environmental credentials.

In a recent survey in the US, UK, India, Canada, Germany, Mexico, Spain, Brazil and China, the Institute of Environmental Management & Assessment (IEMA) found that almost three-quarters of employees and job-seekers are more attracted to companies that are environmentally sustainable.

Meanwhile, according to recruitment firm Robert Walters, a third of white-collar professionals in the UK say they would turn down a job offer if a company's environmental, sustainability or climate control values didn't align with their own. In countries including France, Chile and Switzerland, more than half of job seekers said they would turn down a job for this reason.

"This makes it all the more important for leaders to embed sustainability in their own strategies, while supporting and empowering team members to use their passion and expertise within communities and initiatives to become a driving force themselves, within and beyond the organisation," says Frey.

According to the WEF, digital transformation offers an "immense opportunity" to aid in the decarbonisation of the global economy. By doing so there is the potential, it says, to avoid an estimated 26 billion metric tons of net CO2 emisions from just three industries – automotive, logistics and electricity – between 2016 and 2025.

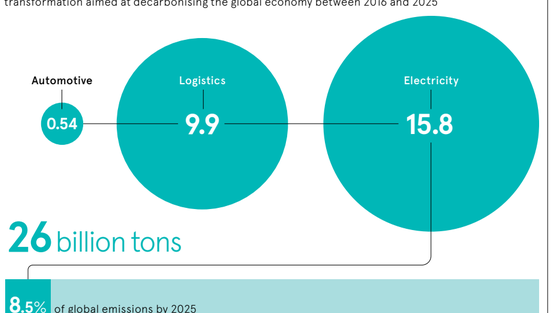
Meanwhile, according to the Global e-Sustainability Initiative, each metric ton of CO2 emitted by the ICT sector can help users save 10 tons, thanks to developments such as teleconferencing, improved logistics and smart buildings.

And this trend needs to continue, says Frey. "The world needs to urgently accelerate sustainable innovation cycles," he says. "Experts estimate that roughly half of the carbon reductions that the world needs to achieve net-zero emissions in the coming decades must come from technologies that have not yet reached the market."

> **We can't ignore a fundamental issue: the rapid growth of the digital universe and its energy consumption is contributing to climate change**

A SHIFT TO DIGITAL COULD HELP REDUCE EMISSIONS

The amount, in billion metric tons, that could be avoided in the following industries through digital transformation aimed at decarbonising the global economy between 2016 and 2025



World Economic Forum, 2021

Sustainable transformation: what to consider first

1 Conduct an impact assessment
The first step in a sustainable digital transformation, advises the World Economic Forum, is to carry out an assessment to calculate which environmental risks and opportunities are of strategic significance. How can improved sustainability lead to other operational benefits and how can greater efficiency improve sustainability?

As with any transformation, it's important to look at the whole picture; it is not simply a case of transforming in-house processes. Businesses must consider the environmental impact of supply chain operations, such as the manufacturing of goods, as well as the downstream impact from the disposal of end-of-life assets.

"It's important to engage with suppliers and do regular audits to ensure high ethical standards are maintained throughout a supply chain," says John Frey. "It is also important to engage with industry bodies, peers and cross-sectoral organisations to share best practices and new challenges, and to advance supply chain programmes and standards beyond one's own business."

2 Set measurable goals
A sustainable transformation will not only mean setting business goals, but environmental ones, too These goals must also be measurable and timebound, and each one should be linked to an explicit profit and loss result. They must also be backed by clear KPIs, incentives and reporting mechanisms, so that it is possible to track progress against business and environmental targets.

"No matter what the goals are, the way to get there is better data. You can't optimise or predict anything without it," says Erik Josefsson. "If you can find ways to measure every aspect of the business that matters and produce data you can trust, you can make operations more autonomous – and that's ultimately the future for efficient and sustainable processes."

3 Establish governance
The World Economic Forum advises organisations to define a governance structure that helps embed environmental sustainability throughout the transformation strategy. This could include establishing a steering committee involving the chief sustainability officer and other corporate leaders to map out priorities across the business. Areas of responsibility and decision-making powers should also be defined.

It's also important to make clear the potential business benefits to get buy-in from partners both outside and within the business.

"The process was not easy because the transformation and sustainability agenda pushed the organisation to a major change in its way of working," says Paolo Taticchi, referring to his work with Consilient Health.

"A clear business case for all initiatives was defined in order to engage the board and senior leadership team. The CEO then acted as the champion of both the initiatives."

Commercial feature

How to cultivate sustainable food and beverage supply chains

Consumer pressure – dialled up at COP26 – means that organisations must be more sustainable. Smarter procurement and supply chain management, and greater collaboration, will lead to more circular business models

Oliver Pickup

Q How have food and beverage supply chains evolved since the start of the pandemic?

SS It's been fascinating over the past 20 years to see the evolution of compliance around supply chains and procurement. It's no longer a tick-box exercise. The need for digital transformation, and visibility, across the supply chain has undoubtedly been catalysed by the societal changes spurred by the pandemic. Previously, businesses might have considered high-yield suppliers to be high risk, but increasingly the most risk is in the long tail with less transparency. As a result, it's never been more crucial for Avetta's clients to have more data to improve processes and make fundamental changes for the right reasons.

AR The pandemic has made many food and beverage industry companies re-evaluate their social and environmental credentials. At Arla Foods, we have always taken a people-first approach, and the management and safety of our staff – classified as key workers in the lockdowns – was critical during the pandemic. Knowing that digital is the future and wanting to retain colleagues, we have invested a lot in training. Preparing for the digital world is one side of it, but we also want to empower our people regarding sustainability. It's a topic that is at the top of a lot of the employee surveys. We want people to be proud of their employer.

MC The most significant change in the market was the shift from on-trade to off-trade. The shutdowns in pubs and restaurants made people consume more at home, so our packaging and brand mix changed, which means our supply chain had to change. We also saw how the balance on global supply has shifted from new products and ways of consumption, meaning you need to be closer to your local customers and local suppliers. The pandemic also brought new opportunities to adapt to the benefit of our local communities. For example, we distributed alcoholic disinfectant and hand sanitiser for frontline workers in the UK by utilising the alcohol we remove from our zero-alcohol beers.

CS Within the fish sector – particularly in tuna – sustainability is the starting point for all commercial discussions. Princes works on a multi-ocean sourcing approach for tuna that helps us remain competitive while maintaining year-round availability, quality and meeting our sustainability requirements. This approach was beneficial for us at the start of the pandemic. For our branded tuna, we are very close to claiming 100% is responsibly sourced across all territories – this is the result of a decade's work with our suppliers.

TU Coronavirus reminded us that we need to face challenges together, and many organisations realised the link between sustainable practices, good supplier relationships and resilience. We launched the Sustainable Procurement Pledge two years ago with a dream to ensure all the 1 million procurement practitioners on the planet, across different value chains, have access to relevant knowledge and do the right thing. There is an overwhelming challenge, but now we have 142 countries and more than 5,000 ambassadors. The pandemic shows that we can solve challenges with collaboration, not separation.

> **There is a different feeling in the food and beverage industry, and the drive for greater sustainability is clear. It's evident sustainability is no longer a bolt-on to a fluffy corporate social responsibility strategy**

Q How can sustainable transformation be driven in the food and beverage industry through partnerships?

TU There now seems to be a greater acceptance that while there will be competition on technology and value proposition, and so on, supply chain practices are not something on which organisations are willing to compete. This is not something you will read in the textbooks. At COP26, we saw many big players come together to create more circularity in our systems, and if all industries start to map out their value chains, we can be smarter with our resources.

AR Textbooks can't keep up with the pace, frankly. In the past, we've probably thought of sustainability a little bit as an innovation, a competitive advantage. Ultimately, we're all trying to catch up as quickly as possible. It's not about being first to market, though; there needs to be an industry-first approach to solving problems. For instance, we all still use a lot of shrink or stretch wrap. If we put our minds to it and work together, there have to be better, more sustainable solutions.

MC No single company can solve today's sustainability challenges alone; partnerships are essential to mobilise the whole value chain. We launched the 100+ Accelerator global incubator programme to solve supply chain challenges, spanning water stewardship, circular economy, sustainable agriculture and climate action.

CS Partnership-working is crucial for improving seafood sustainability. Princes is actively working in partnership with its customers, non-government organisations, or competitors on seafood sustainability. For the past five years, we have worked with a rival brand on fishery improvement in the Indian Ocean, because it spans almost all of the mutual supply chains for our plants in Mauritius and their plants on the Seychelles.

SS It's incredible to think about the synergies that can be created across verticals if best practices are shared. For example, food and beverage organisations might consider what Amazon is doing to drive sustainability and how they can adopt those processes. Or they could take a look at how cement company Holcim Group's carbon capture technologies collect CO2 from industrial processes.

Q What is the future of supply chain and procurement in the food and beverage industry?

CS There is a different feeling in the food and beverage industry, and the drive for greater sustainability is clear. In a recent meeting, a client's commercial director was comfortably talking about their scope three emissions and science-based targets. It's evident sustainability is no longer a bolt-on to a fluffy corporate social responsibility strategy.

AR The idea that there is value in every drop is a big part of our five-year strategy. What do we do with our biproducts? Look at the abattoirs; nothing of the carcass is wasted. When you put your mind to it, using every bit of the raw material is simple to achieve, and it is a fun challenge for supply chain professionals.

SS I'm seeing my clients lean in more at the worker level. One of my clients, which produces chocolate, had to go all the way to purchasing plantations in Latin America to ensure that child labour wasn't being utilised.

MC One of our recent announcements is to start producing and using green hydrogen at our Magor brewery, which we know is critical to reaching net zero. Technology and diversity will always be key factors in how procurement and supply chain will continue to evolve. Take risks and invest in startups looking to change the game and be mindful of how to diversify the supplier base to adapt better to where the market is moving.

TU Scarcity is the mother of all innovation, someone once said. The world is waking up to the fact that we are moving from abundance to scarcity. Wasteful past practices a decade ago were acceptable, but they don't apply in a world of scarcity. So, if we talk together, we'll be okay.

For more information please visit avetta.com

Avetta

Roundtable attendees

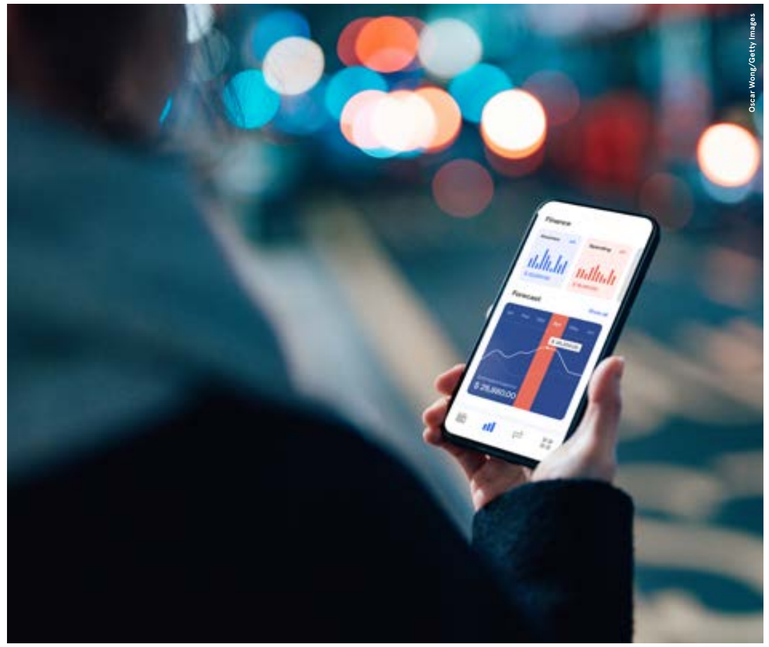
Mauricio Coindreau, head of procurement and sustainability – UK, Ireland, Spain and Canary Islands, Ab InBev

Alison Rance, vice-president, Arla Foods

Chris Shearlock, fish sustainability manager, Princes Group

Scott Spencer, senior vice-president, global strategic accounts, Avetta

Thomas Udesen, chief procurement officer, Bayer, and co-founder, the Sustainable Procurement Pledge



Oscar Wong/Getty Images

STRATEGY

For successful firms, digital transformation never ends

Digital transformation can't be seen as a single effort with a specified end. It should be built into plans across the business

Jonathan Weinberg

For the C-suite, digital transformation is a critical but difficult priority, lacking a clearly defined destination. But for those who embrace the long-term nature of the challenge, the rewards can be great.

In effect, digital transformation never ends. The process continually reinvents, forcing boardrooms to make unexpected pit stops along an infinite business roadmap.

Business leaders must regularly adapt and realign their priorities to keep pace with updated and increasingly stringent regulatory controls across the globe. They must respond to emerging technologies, greater efforts by governments to safeguard digital privacy and a continual need to encourage employees to update their digital skills, which can rapidly go out of date.

However, if done right, digital transformation is a powerful, profitable and productive approach to solving future challenges. So how should it be tackled in the long term, despite those many moving parts?

For Pete Hanlon, group CTO at global outsourced answering service Moneypenny, digital transformation isn't finished when a business hits one goal. Having previously led a successful digital transformation for media brand Auto Trader, he says companies must accept the process as an ongoing cost on the balance sheet.

"One of the big mistakes companies make is thinking there is a one-off project cost for digital transformation rather than thinking of it as a cost of doing business," he says.

To ensure the process continues, it's important that companies allocate funds to digital transformation initiatives every year, Hanlon says. "Having a continuous budget allows companies to prioritise and fund the best initiatives and continue to fund existing initiatives, allowing a culture of transformation to thrive."

Hanlon is now focused on a continual implementation of the latest advances in artificial intelligence to meet the ever-changing demands and needs of Moneypenny's customers. This stems from the need to "listen to your customers", something he learned during Auto Trader's digital transformation.

"We didn't stop once we migrated to the web," Hanlon explains. "Our customers started to expect more. They wanted analytics, new ways to collaborate and communicate, new ways to pay, more data and more functionality, and we had to react."

The company never had a single project to transform, he notes. "It was a continuous process of listening to our customers and adapting. If we had stopped listening to our customers after moving the business to the web, the site would have become irrelevant."

Kelly Hungerford is director of digital transformation strategy and services at international oral healthcare company Sunstar. To keep digital transformation relevant, she says businesses must create a hub-and-spoke approach between their centralised operations and the markets they serve.

"By continuously optimising the transformation strategies together, the business keeps the central technology teams in line with market needs and central teams educated on the best approaches, trends and perspectives that drive in-market innovation," she explains.

The days of forecasting and planning 10 years into the future are over, Hungerford says. She now looks 24 months ahead with "a lot of give and take" built in. To maintain momentum, she ensures digital transformation projects are "big enough and bold enough" to be interesting without letting them become so big they feel unachievable.

"I work in 90-day sprints; if it takes longer than that, the work package loses momentum," she says. "Always show value and return within a reasonable time. If you know your finance team likes to see returns in 12 months, work your project to their terms, at least until you have three to four successful projects under your belt."

According to Ashish Gupta, COO at BT Enterprise, the two biggest obstacles to maintaining momentum on the digital transformation journey are a "resistance to change and insufficient digital skills". The size of the organisation influences whether one issue is more pressing than the other, he says.

"We find the larger the organisation, the greater the resistance to change, all too often because they have complicated technology challenges and the pressure to deliver ROI is intensified," Gupta explains. "On the other hand, smaller businesses are more affected by the skills shortage, lacking the technical skills to implement emerging technologies that will enable their digital transformation."

Gupta thinks the solution to both is to "foster a culture of innovation and tech proficiency". By tackling such organisational issues at the core and investing in people and their skills, the digital transformation journey can work at speed.

"Upskilling the workforce and educating people on the benefits of emerging technologies and new digital systems can help foster a more positive, transformational change in the long-term," he says.

> **One of the big mistakes companies make is thinking there is a one-off project cost for digital transformation**

BT's own digital transformation journey has been about "delivering the products and services our customers need to support their own goals fast and at scale", Gupta says.

That's why, earlier this year, the company established BT Digital, which aims to "embed a digital-led approach" into every element of its operations The goal is to ensure the business invests in "innovative technology internally" to create better solutions for customers.

Gupta fears smaller companies may be falling behind in their own digital transformation efforts, with BT's *The Future in 2021* report showing that only about a fifth (22%) are pursuing such a strategy. He admits that the pandemic has forced many to prioritise survival over long-term thinking about tech adoption.

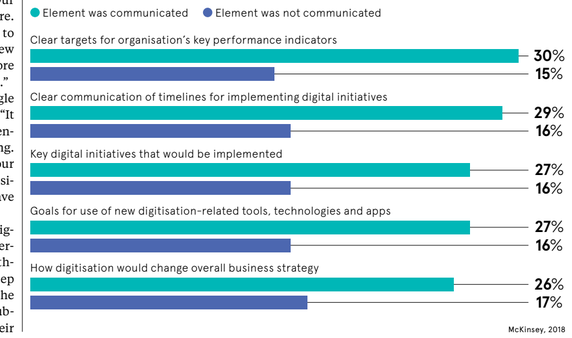
What can be done? Gupta believes that a strong partner and vendor ecosystem is needed. This would help small and medium-sized businesses (SMBs) meet the long-term challenges and continuous cycles embedded in digital transformation, as the ecosystem will build the right solutions and services that make the process easier to adopt.

These will in turn support the SMBs' digital transformation ambitions. Emerging technologies are such a driver for change that they must not be overlooked by these firms, he warns.

"We know small businesses often find tech information too confusing and more needs to be done to educate them on the transformational potential of technology."

COMMUNICATION OF A TRANSFORMATION'S TIMELINE IS KEY FOR SUCCESS

Success rate of digital transformation by change-story elements communicated, % of respondents



McKinsey, 2018

THE WORLD'S DIGITAL CARBON FOOTPRINT

Digital transformation is often seen as key to slowing global warming. By using new technology such as artificial intelligence and data analytics, the theory is we can increase efficiency and productivity, thereby reducing emissions. But all this computing power needs to be run by something – and up to now this has predominantly been fossil fuels. And while the industry is working towards reducing emissions, with many companies announcing net-zero emissions targets, the pace of growth in usage means emissions globally look set to keep rising

1.7 billion

tonnes of greenhouse gas emissions caused by the production and running of digital technologies each year

3.7%

of total greenhouse gas emissions

The Shift Project, 2021

+9%

annual increase in energy consumption by digital technology

+4%

annual increase in the digital industry's global energy intensity

The Shift Project, 2021

414 kilos

Greenhouse gas emissions caused by each internet user every year

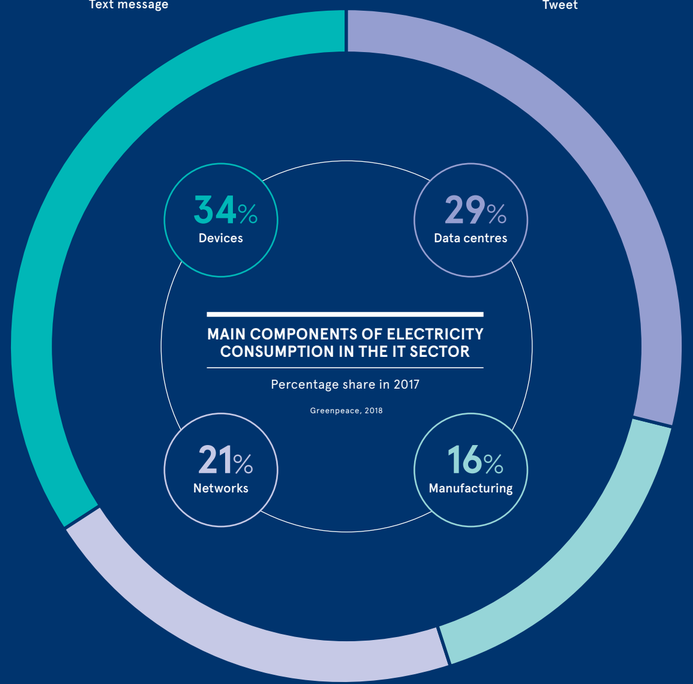
The Shift Project, 2021

THE CARBON FOOTPRINT OF USING THE INTERNET

Lancaster University, 2010; Google, 2010; Websitecarbon.com, 2021; Carbon Trust, 2020; Netflix, 2021

Measured in grammes of CO_2 equivalent emissions

- 0.014 — Text message
- 0.2 — Google search
- 0.2 — Tweet
- 0.3 — Spam email
- 2.7 — Loading raconteur.net
- 4 — Regular email
- 50 — Email with photo
- 55 — European internet user streaming video for an hour
- 100 — One hour of streaming Netflix
- 135 — One day of using business email
- 150 — Videoconferencing for an hour



MAIN COMPONENTS OF ELECTRICITY CONSUMPTION IN THE IT SECTOR

Percentage share in 2017

Greenpeace, 2018

THE PREDICTED GROWTH IN ENERGY CONSUMPTION BY DIGITAL TECHNOLOGY

Energy consumption in terawatt hours under four different scenarios — 2020 — 2025

	2020	2025	Compound annual growth rate 2020-25
Expected	3,834	6,254	10.2%
Higher growth, higher energy efficiency	3,622	5,716	9.5%
Superior growth, peaked energy efficiency	3,622	7,096	14.5%
'Sobriety' (efforts taken to reduce use)	3,622	3,909	1.6%

The Shift Project, 2021

ONLINE VIDEO IS A KEY SOURCE OF GREENHOUSE GAS EMISSIONS FROM DIGITAL TECHNOLOGY

Emissions by different types of online video, in millions of tons of CO_2 per year

305 total

- 102 — Video on demand
- 82 — Pornography
- 65 — User generated content
- 56 — Other

The Shift Project, 2021

96%

reduction in CO_2 emissions if the user turns off their video during a one hour Zoom call

MIT, Purdue University, Yale University, 2021

REPUTATION

Can digital innovation help repair reputation?

Once a company has been tarnished by scandal, it can be difficult to win back customer trust. For some, digital innovation could make a difference

MaryLou Costa

Facebook's focus shift to the 'metaverse' under its new company name Meta has been the subject of much criticism. However, company-wide transformations hold significant potential, particularly those that embrace the power of digital innovation.

Mark Zuckerberg's announcement of a virtual reality ecosystem was derided by many in the media and beyond. Olivia Solon, who is the tech investigations editor at NBC News, tweeted: "I don't get how the pivot to the metaverse will solve any of Facebook's problems."

She was far from alone. Danny Groner, director of growth PR at investment fund Forecast Labs, said the company was "trying to reinvent itself as something else ... as a way to distance itself from damage it has done". That damage includes criticism of its handling of user data, particularly in relation to Cambridge Analytica, the allegations of whistleblower Frances Haugen, and concerns over the spread of content related to violence, terrorism, hate crime and fake news on the site.

But no matter what happens with Facebook and Meta in the long run, experts say we shouldn't dismiss the power of transformation. Graham Staplehurst is thought leadership director for Kantar BrandZ, which produces an annual analysis and ranking of the world's most valuable brands. He argues that "creating a fresh set of brand associations through a new chapter might be an essential step for the business".

So how can companies make the most of a transformation? Digital innovation is key.

Take BP for example. It was the most valuable energy brand in the world in 2009, according to Kantar BrandZ rankings. But it slid to sixth in the energy category following the Deepwater Horizon oil spill in the Gulf of Mexico in 2010, the largest marine oil spill in history.

The disaster "shook the company to its core", then CEO Robert Dudley said in 2018. By that time the company had recognised the need to "modernise through technology" to become "future fit", as outlined in its 2017 strategy.

By 2019, BP had partnered with Microsoft to accelerate its modernisation and overcome its challenge of reducing carbon emissions while meeting increasing global energy demands. This involved a "full-scale reinvention of the way it approaches technology", according to the company, including moving to the cloud, leaning on AI and machine learning, and incubating its own startups.

> **Creating a fresh set of brand associations through a new chapter might be an essential step**

These initiatives are said to have created billions in savings and new revenue streams. At the same time, BP's brand valuation has nearly doubled since 2009 to $10.4bn (£7.7bn), according to BrandZ. It was the seventh most valuable brand in the UK in 2021.

"Its transformation as an energy business has clearly been effective," says Kantar's Staplehurst.

BP executives spoke at length about the positive impact of digital innovation at the recent Women of Silicon Roundabout conference in London, discussing the company's advances in robotics, cloud computing, customer-centric design, smart cities and digital upskilling.

"BP is transitioning from an international oil company to an integrated energy company. Through this transition, we're putting a lot more effort, energy and investment into the renewable space and how we create profitable businesses from wind, solar, and others, but making sure they're digital in a very natural way," said Mariza Fotiou, BP's vice-president of digital product ownership and design.

However, there are cultural challenges when it comes to innovating within a 112-year-old corporation.

"In a company like BP, you have a lot to lose if something goes wrong," said Lilybeth Go, BP's vice-president for data and analytic platforms, who was speaking at the same conference. "But we need to accept that change is constant, so when we get into new business and new markets, we have to think, 'how can we go fast'?" said Go.

Both Go and Fotiou described the shift as a journey that takes time. "We need to be patient with this change," said Fotiou. "We need to bring people into the journey with us to understand that we can move away from having all the answers ... to a space where failing is accepted, and where we work together across multidisciplinary teams to consider how we create the future."

Volkswagen was similarly positioned at number six in the ranking of the world's most valuable car brands in the BrandZ analysis.

That was until 2016, when the US Department of Justice sued the car manufacturer for effectively rigging its diesel vehicles with software designed to cheat emissions tests. The company settled in court for $14.7bn and embarked on a $10bn buyback programme to compensate affected customers.

Volkswagen dropped out of the BrandZ rankings altogether for two years but has since recovered to become the world's ninth most valuable car brand. It was worth more in the 2021 rankings than in 2006.

It's perhaps no coincidence that Volkswagen also went big on its digital transformation strategy following the scandal. In 2019, the manufacturer committed to investing £3.4bn and creating 2,000 new jobs.

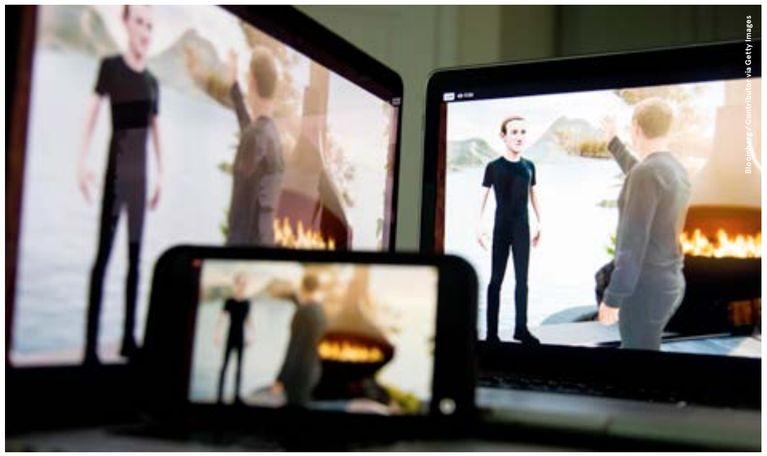
Ralf Brandstätter, who was then the company's chief operating officer, said at the time: "We are laying the sustainable foundation for making the company fit for the digital era. We are accumulating new digital expertise and making all areas of our organisation faster, leaner and more competitive."

That's not to say such companies pursued digital innovation primarily to boost their brands, or that it's a silver bullet. Repairing the damage wrought by a scandal or operating problem is possible, but isn't always achieved, notes Staplehurst.

"Although this is likely to be helped by digital transformation, in our view such transformations are happening anyway due to industry-level pressures, so it would be hard to definitively separate the effects relating specifically to reputation recovery," he says.

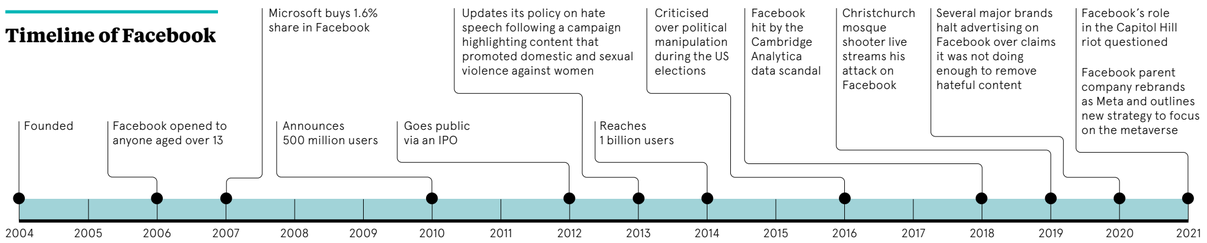
So can Facebook's metamorphosis into Meta follow in the footsteps of BP and Volkswagen? Like BP, perhaps time will be on its side, notes Jonathan Hassall, senior behavioural analyst for insights consultancy Canvas8.

"It could be that Meta is hoping the dust will have settled on its rebrand by the time its metaverse products go to market, effectively getting out in front of the issues around trust and data privacy that come with being in Facebook's orbit."



Bloomberg / Contributor via Getty Images

Timeline of Facebook



Commercial feature

Marketing for impact

Business leaders around the globe are facing a unique moment in time where the role that business can play in society, and the expectation to balance financial return with social impact, is greater than ever

COP26 was a reminder that businesses, governments and many other organisations today are facing a crucial moment for transformation at the leadership level. Shareholder capitalism is coming to an end and although this historic economic model is far from being formally replaced by stakeholder capitalism, it's becoming increasingly clear that one can't exist without the other.

Most businesses now acknowledge that simply offering superior products and services is not enough to secure the loyalty of customers. If they are to build brands underpinned by trust and transparency, they must align with causes their customers care about. They must balance product and purpose without being purely transactional.

Take the environment as an example. In a recent Salesforce State of Commerce report, more than 50% of leaders said that trust, sustainability, equality and employee wellbeing are essential to them. This is a clear indication that great leadership is stretching far beyond delivering growth and profit alone.

"At Salesforce, we consider the environment to be a key stakeholder," says Sally Nowroozi, CX evangelist at Salesforce. "Our environmental programme focuses on the global journey to net-zero emissions, mobilising the global effort to see an additional 1 trillion trees on Earth, and protecting and revitalising our oceans. Last year we also launched the Salesforce Sustainability Cloud to support other organisations with a carbon-accounting product for businesses and governments to help track and manage their greenhouse gas emissions.

"We believe businesses are the greatest platforms for change. However, we have seen across sectors that trusted enterprises are those that not only do the right thing but also tell a story that resonates with customers. They use technology innovations such as customer data platform, personalisation and marketing automation to deliver messages to their communities that are relevant and timely. The urgency for a holistic digital transformation, and the transformation of company culture, has never been more pressing."

To be truly in sync with the communities they serve and able to tell a story that resonates, brands need a sharp focus on data analytics and measurement, but informing smarter decisions in this way is one of the hardest parts. Marketers use an average of 13 different platforms in their tech stack to advertise, engage customers, deliver web and mobile experiences, drive conversations and more. Data is siloed across different systems, formats and reports, often leaving marketers trying to manually collect, connect and analyse it to understand customers.

For this reason, marketing leaders must think carefully about the biases engrained in how data is gathered, analysed and activated. It's clear the nature of how decisions are made and implemented has radically changed, so how brands use technology must change too. The right technology offers marketers the time and bandwidth to capitalise on changing customer demands, socioeconomic circumstances and market opportunities, both in terms of efficiency and growth.

"Customer data is only as good as the action it informs," says Nowroozi. "Seeing the humans behind numbers can be hard work but when a marketing team is empathetic and adaptable they can take on this challenge. We've already seen many of our customers do this, with businesses rallying and coming together to find solutions and doing it in record time. Having a data-driven and inclusive approach is important here. Understanding data can effectively help support the shifts required in marketing strategies and create compelling content that reaches people's head and heart."

We know that no matter how they interact with a brand, customers ultimately want to be known and understood, not as the buyer of a specific product or service but as a person with a unique and evolving set of needs. Eight out of 10 customers told a Salesforce study that a company's customer experience is just as important as its products and services.

Businesses can offer more contextually aware, personalised services by building a 360-degree view of every customer with data. This can be achieved through the vast number of data points available that chart every engagement they have had with a brand. Access to these customer insights, often powered by AI, allows marketers to create a more connected and enriched customer experience. Personalisation also encourages customers to view brands and their employees as trusted advisors, achieving further trust through brand loyalty and advocacy.

On the day the Covid crisis triggered an extensive ban on all US flights last year, a Salesforce expert taskforce met with KLM Royal Dutch Airlines to help alleviate the immediate pressure on its customer service function. In the months following the restrictions, KLM ran training sessions to upskill colleagues, quickly scaling the customer support capacity from around 350 agents to more than 1,000 across the company. Thanks to its unique customer-centric culture, the airline dealt with the crisis by building more resilience into its systems and people.

"At KLM we value our customers and we value each other, so we pulled together and even had cabin crew and pilots handling cases when they weren't flying," says Wijnand de Groot, vice-president of digital marketing at KLM Royal Dutch Airlines. "Although the amount of enquiries increased tenfold, the data gathered across digital channels also became an important source of truth for the management in the first weeks of the crisis. With a dedicated team pulling reports and dashboards daily we could make smarter business decisions based on the topics that were trending."

The pandemic accelerated the digital transformation of all areas of society and we're not going back. Successful leaders will continue to rely heavily on data in their decision-making, leaning on a company's biggest assets – customer trust and an empowered workforce – to keep building the brands we love.

Sally Nowroozi, CX evangelist, Salesforce

> **The urgency for a holistic digital transformation, and the transformation of company culture, has never been more pressing**

66%

of marketers expect revenue growth over the next 12 to 18 months

7th State of Marketing Report 2021, Salesforce

58%

of marketers describe their focus on growth as a mix of short and long-term

Marketing Intelligence Report

For more information please visit salesforce.com/uk/form/state-of-marketing

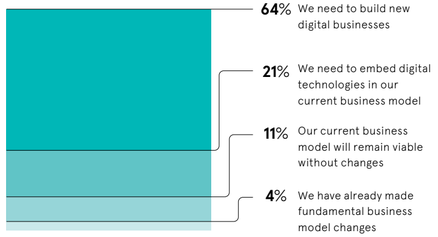
salesforce

Alistair Berg via Getty Images

COMPANIES NEED TO BUILD NEW DIGITAL BUSINESS MODELS TO STAY VIABLE

McKinsey & Company, 2021

% of respondents who say they need to do the following by 2023



TRENDS

Transformation trends in 2022

Whether it's investing in 5G, harnessing automation or supporting the deskless workforce, digital transformation will be a hot boardroom topic in 2022

Jonathan Weinberg

As we head towards next year, business leaders should be considering their digital transformation priorities for 2022, along with the investment necessary to bring them to life.

From cloud-native platforms and hyper automation, to 5G and the rise of smart cities, boardrooms are navigating a complex mix of emerging technologies, supplier and customer demands, and conflicting internal pressures as they look longer term.

According to a study by SnapLogic, automation looks like it will play a key role in this puzzle. The research found that 78% of businesses plan to increase spending on such initiatives in the coming 12 months, while the pandemic has already led to 48% of IT decision-makers accelerating their automation projects.

Sara Rasmussen, chief commercial officer at mobile virtual network operator Telness Tech, thinks organisations across all sectors are approaching their own "digitise or die moment". The pandemic supercharged the creation and implementation of new technologies across a range of industries, she claims, enabling challenger brands and new entrants to thrive.

"This external pressure, alongside soaring customer expectations, will make 2022 the year when organisations accept transformation is no longer optional, but rather a matter of survival," Rasmussen says. "As a result, we'll see businesses transforming their culture and processes in order to increase flexibility and agility across their organisations."

Jessica Nordlander is chief operating officer at Thoughtexchange, an enterprise discussion management platform. She believes the pandemic has intensified the need to reimagine the workplace, using a digitally focused version of the traditional architect and building planner.

"I believe there's going to be an increasing need for a new category of specialists able to architect advanced digital workplaces," she adds.

The views of both Rasmussen and Nordlander chime with a study by digital services firm Ricoh Europe, showing that two-thirds (67%) of business leaders are increasing or maintaining levels of investment in digital transformation.

> **Next year will be the year when organisations accept transformation is no longer optional, but a matter of survival**

Finance will be critical, Nordlander says. "The most significant digital transformation project that leaders will need to undertake in the coming year is building a technology infrastructure that will support and promote a high-functioning remote or hybrid workforce," she says.

This isn't going to demand new technology, she adds, noting that "there's a lot of that already". Rather, it will be about using the tech they have intentionally and in a more considered and holistic way.

"The changes that have been implemented in numerous organisations have so far been far more reactionary and haphazard than intentional or transformational," Nordlander adds.

That haphazardness is demonstrated in research by Dynatrace. An October report from the software company found that 22% of the 1,300 senior-level development and DevOps leaders surveyed admit they're often under so much pressure to meet the demand for faster innovation that they must sacrifice code quality.

C-suites will be keen to ensure this rush doesn't cause issues for one of 2022's biggest potential digital transformation advances: 5G communications technology. This could empower working from home, making it faster and more stable. It could also integrate internal 5G networks into operations and buildings to power a smart city revolution, connecting assets like vehicles, buildings, streetlights and roads.

Maria Lema is co-founder of Weaver Labs, a business spun out of King's College London to democratise access to telecoms infrastructure. It digitises public and private assets like streetlamps, traffic lights and bus shelters to make them connected, working with the likes of Transport for Greater Manchester. The company's projects have been funded by the UK government and European Space Agency.

Lema believes digital transformation in 2022 will have 5G at its heart. Companies must ensure access to digital infrastructure and solutions – including connectivity infrastructure – is "more open, transparent and secure". This would allow more people to use it to positively impact their everyday lives.

Unlike previous wireless technologies, 5G democratises access to high-speed, highly reliable connectivity. "This opens up the possibility for businesses across all verticals to use connectivity to advance in areas that would have otherwise been impossible," Lema argues.

"There is a lot of innovation in new business models for infrastructure investment, something we will see evolving much more throughout 2022 and beyond."

Sustainability is also a hot topic in the boardroom, although the Ricoh Europe research found that 71% of business leaders don't believe digital transformation can help them achieve their company's long-term sustainability goals.

Weaver, however, believes sustainability should no longer be seen as a trend, but as an essential part of digital transformation.

"The core objectives and fundamentals of digital transformation are to increase productivity, efficiency and innovation. This should then lead to improved solutions that inherently address sustainability initiatives, such as the UN's Sustainable Development Goals," she says.

Another key factor that must be considered in digital transformation is the "deskless workforce", according to Kit Kyte, CEO at intelligent operations business Checkit.

Kyte thinks roles such as nurses, cleaners, supermarket staff and field engineers are falling behind those in traditional desk jobs, who now enjoy the benefits of digital technology's influence on productivity, collaboration and reporting.

"For all the massive changes technology has brought about, digital transformation has failed to reach 80% of the workforce," he points out. "As a result, the deskless have suffered from tools that are not fit for purpose or manual paper-based processes that exist because of legacy or the lack of a better option. It needs to be addressed."

We depended on such workers at the height of the pandemic, Kyte notes. Businesses must therefore provide them with greater digital capabilities, which will, in turn, unlock value, improve retention, cut waste and inefficiency, raise standards and strengthen customer confidence, he says.

"We need diversity in digital transformation. This can be the age of the augmented enterprise – but only if business leaders stop neglecting the digital poverty of their deskless operations," he says. ●

OPINION

> **'Culture and behaviour are values that sit at the very heart of effective digital transformation'**

Digital transformation strategies have traditionally put customers at the centre of a business's thinking. However, following a period of sustained disruption to organisations, it is now time for companies to make their own people the centre of their digital transformation strategy.

The recent COP26 gathering in Glasgow saw talk of the impacts of climate change and new legislation calling for net-zero businesses and premises. This challenge comes hot on the heels of an 18-month global pandemic and associated economic and social disruption.

As a leader are you ready for this new disrupted future? If you did your MBA more than 10 years ago, is it still fit for purpose? No one back then was teaching about how to lead in the face of persistent external disruptions, or teaching new ways of working, or how to lead teams operating under ever-changing conditions. The addition of digital transformation and data analytics theories is still relatively recent on most MBA courses.

So, as a leader whose academic studies have most likely not included a playbook on the global disruption we now face, what should we be focussed on? I believe, right now, it should be on your most valuable asset, your people. They are facing disruption in the workplace that leaves them navigating a hybrid future that for many is unlikely to return to the pre-pandemic normal.

Before Covid, many organisations were office based by default. If staff did work from home they received a second-class experience compared to those in the office. Homeworking meant missing out on the water cooler moments, no networking or sparking off with colleagues, difficulties with joining team or client meetings online or by phone, and always an air of suspicion about working hours and commitment.

That situation flipped on its head during lockdown. When we were all at home, it was no longer a worse place to be. We got used to online meetings and using project management software or messaging systems to plan, talk and communicate. If you did go into the office during lockdown it was a masked and difficult process where communication with colleagues was discouraged. This meant you were often more productive at home.

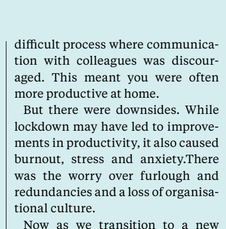
But there were downsides. While lockdown may have led to improvements in productivity, it also caused burnout, stress and anxiety.There was the worry over furlough and redundancies and a loss of organisational culture.

Now as we transition to a new phase in the pandemic, many staff are having to adjust to a hybrid way of working where they are sometimes in the office and sometimes at home. All too often, teams are split beween these two locations, making communication harder.

The first thing to realise is that this arrangement is new again. It is neither back to the pre-Covid normal, nor is it working from home as we experienced it during lockdown.

As a business leader, your current goal needs to focus on maximising staff wellbeing and productivity. This means investing time and effort into understanding how your organisation will work best in this new hybrid format. While more research is needed, these hybrid models do appear set to stay and can be a benefit - offering resilience in the face of likely future disruptions.

This is not about technology; all the equipment, software and tools that are needed to achieve effective hybrid working already exist. It's about people, culture and behaviours. While you might need to reset your view, culture and behaviour are values that sit at the very heart of effective digital transformation. ●



Robin Knowles
CEO, Digital Leaders

Commercial feature

Three mistakes to avoid when mapping your digital journey

Moving to the cloud offers organisations huge advantages, says Infor's **Phil Lewis**, but to benefit from its potential they need to avoid common errors as they set off on this journey

1 Choosing an 'on the cloud', not an 'in the cloud', solution

This might sound like a small distinction, but it represents a big difference in practice. "As a provider, I could, for instance, subscribe to some capacity from your preferred cloud provider and load Windows 95 into it," says Phil Lewis, vice-president of solution consulting EMEA at Infor, a global leader in business cloud software specialised by industry. "Does that make me a genuine cloud provider? No. It simply means I'm hosting a legacy system in another company's data centre."

Cloud customers should look for a true cloud provider, one that has engineered its applications to be able to take advantage of all the power the cloud offers. This means taking them from traditional, on-premise technology and entirely reengineering them to become cloud-ready.

"Organisations come to us because we work closely with Amazon Web Services, the largest cloud provider, so we benefit from being able to use their services to deliver capabilities, future-proof the system and provide a better experience for our clients," says Lewis.

A true in the cloud provider will be able to deliver new capabilities for their clients as they become available in a non-disruptive, seamless way. Similarly, they can implement new technology and SaaS innovations immediately without having to embark on major upgrades, with all the inherent disruption that comes with that.

2 Opting for a generic system

"Organisations are now demanding technology that's built to be relevant to their sector and their activities," says Lewis. "They're fed up with having to heavily modify software to make it capable of running their businesses. It's restrictive, it's expensive and it stops innovation."

> **Organisations are now demanding technology that's built to be relevant to their sector and their activities**

Instead, he argues, cloud customers would be better working with specialist providers. "We design, develop and deploy technology with those last mile features specific to each industry included. This minimises the need for costly modification and integration because it's all there, out of the box, ready for the customer to use."

This approach provides organisations, whatever their sector, with the ability to control their business processes without having to try to adapt generic applications to fit their requirements.

3 Viewing digital as simply a bolt-on

"So often you see digital capabilities simply being bolted on to existing systems," explains Lewis. "This means that those systems become disjointed and expensive to maintain."

Putting the cloud at the heart of operations allows companies to benefit from all the technologies it can offer. It's to exploit these opportunities that Infor, which has been recognised by Gartner as a 'Leader' in the 2021 Magic Quadrant for Cloud ERP for Product-Centric Enterprises, has created Infor OS. The company describes it as "a cloud operating platform for the future."

"Clients tell us that they like the fact that within Infor OS everything they need is available as standard," says Lewis. "All the capabilities are connected and ready to use, whether that's big data, artificial intelligence, machine learning, process automation, the internet of things or user experience."

A growing number of Infor's 65,000 customers across more than 175 countries are taking advantage of these cloud technologies.

"They like the fact that they don't have to embark on any expensive integration project," says Lewis. "They can just use it to transform every element of how they do business, whether it's customer and employee engagement, improving operational efficiency, increasing supply chain visibility or simply connecting everyone and everything.

"They can build a business model that was unimaginable a few years ago and one that is now ready to help organisations make the most of the exciting opportunities the cloud has to offer."

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