

CRN ESSENTIAL

Sustainability Report



Welcome to the Sustainability Report

Exclusive to *CRN* Essential subscribers, this report summarises the sustainability efforts of seven major vendors at a time when sustainability is rising up the boardroom agenda.

Drawing primarily on their annual corporate social responsibility (CSR) reports and one-on-one interviews, we have charted the endeavours of Microsoft (*see p6*) Dell Technologies (*p7*), HPE (*p9*), HP (*p11*), Lenovo (*p13*), Cisco (*p14*) and Amazon (*p15*) to make their companies more environmentally sustainable. These efforts range from carbon-reduction goals to recycling plastic and waste materials back into their products.

As well as featuring Q&As with top execs from the vendors in question, this report includes a section examining the end-user appetite for sustainable IT. Sustainability is now a top-three consideration for 55 per cent of UK IT decision makers, according to recent research carried out by *CRN*, and

you can find out more about what they said on page 17.

As tech titans such as Microsoft make ambitious announcements around sustainability and with customers increasingly demanding to work with suppliers that can help them reduce their ecological footprint, MSPs and resellers find themselves in a unique position.

It's no exaggeration to state that the choices these front-line tech providers make over the coming decade – both around vendor selection and how they build their own narratives around sustainability – could have a fundamental impact on the future of the planet.

We hope this report offers some food for thought when it comes to the guidance and advice that resellers, MSPs and other tech providers can offer their clients.

■ *Marian McHugh is a reporter at CRN.*



Glossary of terms in this report

Carbon dioxide (Co2)

Emitted when a fossil fuel, such as coal, natural gas or oil is burned.

emissions with carbon removal or eliminate carbon emissions altogether.

Carbon dioxide equivalent (Co2e)

A measure to estimate how much global warming a quantity and type of greenhouse gas may cause, using the equivalent concentration of carbon dioxide as the reference.

Scope 1 emissions

All direct emissions from an organisation's activities or that are under its control.

Greenhouse gases (GHG)

A greenhouse gas is a gas that absorbs and emits radiant energy within the thermal infrared range. The primary greenhouse gases in Earth's atmosphere include carbon dioxide, chlorofluorocarbons and methane.

Scope 2 emissions

Indirect emissions created by the production of the energy purchased and used by the organisation.

Scope 3 emissions

All other indirect emissions. These usually make up the bulk of an organisation's GHG output and are somewhat out of its control as they are usually produced by a third party.

Net carbon zero/carbon neutrality

To achieve this an organisation or economy must balance carbon dioxide



Scope 3 emissions include emissions created by activities such as business travel and supply chain.

The IT industry and the climate crusade

CRN delves into the CSR reports of seven of the world's top vendors to evaluate their sustainability efforts – and how much further they have to go

Five years ago, it would have seemed impossible that the most famous teenager in the world wouldn't be famous for singing or acting, but for voicing the concerns of her generation about the dangers of climate change.

Fast-forward to 2020 and Greta Thunberg has started a global movement centred on the actions that individuals, corporations and governments can take to help stem the literal tide of climate change that is threatening to jeopardise the future of the human race.

At the heart of this discussion on climate is technology; its origins several centuries ago have led to the erratic weather patterns we are witnessing now and we are yet to see if it is the hero or the villain in establishing a sustainable society.

As the creation of technology heralded a new dawn for human progress and development, it also instigated an upward trend that has resulted in a pressing challenge for the planet's current inhabitants.

The first Industrial Revolution has been promulgated by scientists as the instigator of today's high levels of greenhouse gases (GHG) as industrialists used coal to power factories and newly invented machines.

Although the technology has advanced

significantly in the intervening centuries, not much has changed in how we power and fuel IT operations, particularly datacentres, which are predicted to eat up eight per cent of the world's electricity by 2030 from today's figure of two per cent.

Since the mid-18th century, human activity has emitted two trillion metric tonnes of GHG into the atmosphere. More than 75 per cent of this is carbon dioxide, with most of this carbon produced since the 1950s. It can take thousands of years for this carbon to disappear from the atmosphere, and yet we pump over 50 billion metric tonnes of GHG into the atmosphere annually.

However, the UK might have started the fire with the first Industrial Revolution, but it is also one of the first countries to step up and try to put it out. Last year the UK government became one of the first major economies to pass laws that would see it become net carbon zero by 2050.

The UK has managed to reduce carbon emissions by 42 per cent and said that it has put "clean growth" at the centre of its business-boosting Industrial Strategy.

It claimed that the number of "green-collar jobs" could grow to two million and the value of exports from a low-carbon economy could grow to £170bn in

the next decade. However, since this lofty announcement in the summer of 2019, the government hasn't detailed exactly how it aims to achieve this goal within its 30-year deadline.

Tackling climate change is perhaps the biggest issue facing the channel in the coming decade, which is why we at CRN have launched our sustainability campaign, which will see us rev up our coverage on the eco efforts of the channel.

Sustainability also presents great opportunities to win business for channel partners as customers start to incorporate it into their own operations and seek out suppliers with values aligned to their own.

The UN's Sustainable Development Goals are listed in every vendor report in this evaluation and provide a framework for vendors to design their own eco-friendly efforts. These goals also take into account the well-being of employees and people in an organisation's supply chain. For the purpose of this report, though, we have focused primarily on each vendor's efforts with regards to the environment.

Great expectations

Despite the doom and gloom often associated with climate change in the headlines, there is a lot to be optimistic about in the way the IT industry is grappling with the problem.

This publication parses the sustainability reports of seven of the biggest vendors in tech, spanning infrastructure, cloud and



hardware to form a sense of how far the IT industry has come with regards to negating its impact on the environment – and how much more work needs to be done.

This audit of vendors aims not only to set an evaluator baseline for the world’s top tech titans, but to hopefully inspire others in the channel to establish a green agenda of their own.

Evaluating these reports has been an enlightening pursuit, with some companies coming out looking a lot better than others.

HP, for example is the only vendor on the list with a dedicated section on its attempts to reduce deforestation, while Cisco’s efforts are a little more outside the box with, projects such as its Connected Conservation anti-poaching scheme, which uses sensors and networks to protect the endangered rhino population in South Africa.

However, Lenovo has given itself a fairly lenient deadline of 2100 to attain zero GHG emission status, which is around 50 years after the rest of the companies on this list have set for themselves to achieve the same goal.

David Lear, Dell Technologies’ vice president of sustainability, said that he has seen an “explosive growth” in interest in sustainable matters from the company’s stakeholders in recent years, which he attributed to the company’s confidence of future survival.

“They see it as looking through a different lens, that you’re thoughtful and thinking about

what future conditions could affect your company,” he said.

“We’re seeing a lot more investors now actually using sustainability ratings as a filter for where they put their money or how they evaluate a stock.”

Walking the walk

It’s not just investors that are looking to a green future, in terms of both the environment and profits.

In our survey of over 300 UK IT decision makers, over half replied that sustainability is now in their top three considerations when it comes to their technology procurement strategy, with seven per cent of those ranking it as their top consideration.

Nearly 80 per cent of respondents said that they would “definitely” or “possibly” be receptive to a supplier that led entirely on a sustainability platform.

With this in mind, it has never been easier for an organisation to dip their toes in eco-friendly waters and experiment with providing customers with options that can boost their own green agendas. Some of the largest vendors have launched initiatives of their own that partners can implement into their own CSR compliance.

Microsoft’s ambitious goal to not just reduce its carbon emissions by 50 per cent in the next decade, but to eradicate its entire historical carbon footprint by 2050, has been seen by some in the channel as a game-changer when it comes to

green IT, with Citrix’s Northern Europe director Justin Sutton-Parker comparing it to when Ford shook up the emerging automobile industry when it launched the Model T in the early 20th century.

“A really big company saying, ‘this is the de facto, this is what should be happening’ is exciting. This is the Ford Model T equivalent of the way we should move forward. Everyone needs sustainability,” he told *CRN*. “It’s the most exciting thing happening.”

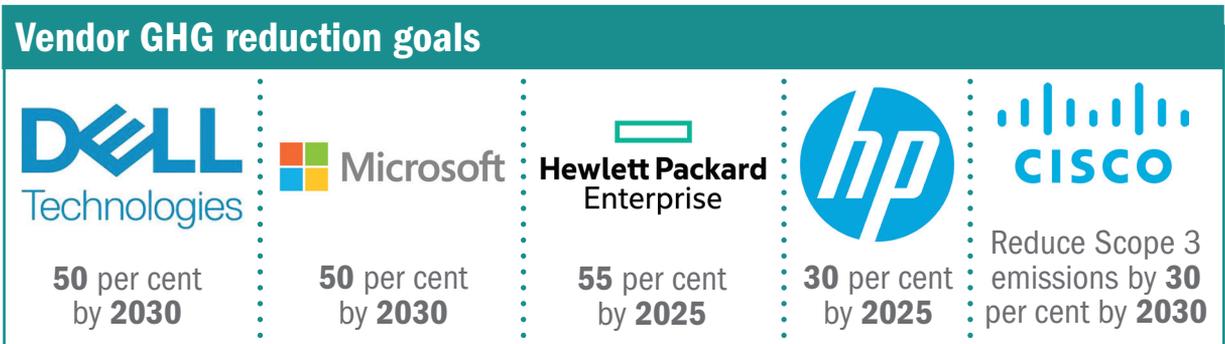
Microsoft’s announcement was followed quickly by the news that Amazon boss and founder Jeff Bezos is setting up a \$10bn fund to assist scientists, activists and organisations battling the impact of climate change.

In his Instagram post announcing the news, Bezos also called on businesses of all sizes to unite and do their part to negate the impact of climate change.

“I want to work alongside others both to amplify known ways and to explore new ways of fighting the devastating impact of climate change on this planet we all share,” he wrote.

“This global initiative will fund scientists, activists, NGOs – any effort that offers a real possibility to help preserve and protect the natural world. We can save Earth. It’s going to take collective action from big companies, small companies, nation states, global organisations and individuals.

“Earth is the one thing we all have in common — let’s protect it, together.”



What the top CEOs are saying



“No one company can solve this macro-challenge alone, but as a global tech company we have a particular responsibility to do our part.

“The scientific consensus is clear: the world today is confronted with an urgent carbon crisis. If we don’t curb emissions and temperatures continue to climb, the science tells us the results will be devastating.”

Satya Nadella, Microsoft CEO, on the vendor’s ambition to become carbon-negative by 2030

“I want to work alongside others to both amplify known ways and to explore new ways of fighting the devastating impact of climate change on this planet we all share.

“We can save Earth. It’s going to take collective action from big companies, small companies, nation states, global organisations and individuals. Earth is the one thing we all have in common – let’s protect it, together.”

Jeff Bezos, Amazon CEO on his new \$10bn Climate Fund initiative



“History shows that there is always a time and a place to make a difference. That time is now and there are many places where the private sector can get more involved and positively change the trajectory of the world.

“Let’s redefine what running a good business means. Let’s use our seats at the table where some of the most important conversations are happening today to think bigger, be bolder and act as advocates for those who need it most. If we get closer to some of these problems, we will understand them better and be more inclined to find ways to solve them.”

Chuck Robbins, Cisco CEO, speaking on CSR at the World Economic Forum

“We’re committed to leaving the world better than we found it. After years of hard work we’re proud to have reached this significant milestone.

“We’re going to keep pushing the boundaries of what is possible with the materials in our products, the way we recycle them, our facilities and our work with suppliers to establish new creative and forward-looking sources of renewable energy because we know the future depends on it.”

Tim Cook, Apple CEO, on the firm’s global operations now being powered by 100 per cent renewable energy





The Redmond-based titan began the 2020s by effectively throwing down the gauntlet to the rest of the tech industry when it announced its ambitions to become a “carbon-negative” organisation within the next three decades.

While making the announcement, CEO Satya Nadella declared that technology must be inclusive, trusted and used to create a sustainable world.

“If the last decade has taught us anything, it’s that technology built without these principles does far more harm than good. No one company can solve this macro-challenge alone, but as a global technology company we have a particular responsibility to do our part,” he declared.

The vendor’s aim is to “aggressively” cut its carbon emissions by 50 per cent by 2030. It has also pledged to remove from the environment all the carbon it has emitted – through direct emissions and energy consumption – since it was founded in 1975.

Microsoft admitted that the technology required for this monumental task doesn’t yet exist, which is why it launched a \$1bn Climate Innovation Fund which will invest in new technologies over the next four years that it hopes will tackle the problem.

These emission reductions will span across Scopes 1 to 3.

Microsoft anticipates emitting 16 million metric tonnes of carbon this year, three quarters of which fall under Scope 3. Scope 1 emissions only amount to 100,000 of that figure, while Scope 2 makes up four million metric tonnes of that carbon footprint.

“While we at Microsoft have worked

hard to be ‘carbon neutral’ since 2012, our recent work has led us to conclude that this is an area where we’re far better served by humility than pride. And we believe this is true not only for ourselves, but for every business and organisation on the planet,” wrote president Brad Smith in a blog, explaining the specifics of the vendor’s ambitious goal.

In 2012 Microsoft introduced an internal carbon tax on all carbon emissions, which it doubled to \$15 per metric ton last year. Smith explained this was a way to “hold our business divisions financially responsible for reducing their carbon emissions...and help us take a tech-first approach that will put sustainability at the core of every part of our business”. It is now being expanded to cover Scope 3 emissions.

Microsoft also claims it is the first firm to certify carbon-neutral gaming consoles, having certified 825,000 of its Xbox consoles as such during its fiscal 2019.

In that same 2019 blog, Smith detailed how the firm had already reached its goal to power its datacentres with 60 per cent renewable energy in 2019 – several years earlier than expected – and now aims to surpass 70 per cent by 2023, working towards its overall goal to powering all its datacentres (as well as buildings and campuses) with 100 per cent renewable energy by 2025.

Prior to the announcement in January, the vendor has been making waves with its other efforts to become more sustainable. These projects include planting a datacentre at the bottom of the sea, off the coast of the Orkney Islands (see picture below), in 2018 to investigate the potential of having self-sufficient datacentres that can process workloads quickly to coastal cities.

Microsoft has also been working on reducing the energy consumption of its devices, and its Surface Pro “has now become so efficient to use that the customer-use phase of each device now accounts for a smaller portion of its overall GHG emissions than the manufacturing phase”, it noted in its Device Sustainability report from last year.

Since its introduction in 2013, the energy consumed by the Surface Pro has more than halved, with the sixth iteration – launched in 2018 – consuming around 16.7 kWh a year.

Like its peers, Microsoft also exalts the progress it has made in terms of extending the life cycle of its products and being a part of the circular economy by refurbishing its devices and putting in place a number of initiatives, such as its Microsoft Authorised Refurbisher programme, and certifications to ensure its products are up to scratch with regards to their eco-friendliness.





“I am very excited about the role that our company can play in driving progress and when we get this right, all of us will be standing at the centre of the period of greatest progress in human history putting data to work to build a better world,” stated Michael Dell at the Dell Tech Summit last year as the vendor unveiled its new Social Impact Plan.

“It’s a generational opportunity that creates long-term value for stakeholders in the process. And it’s the most exciting work that we could be doing.”

In 2013, the organisation laid out its sustainable stall when it released its Legacy of Good plan, setting social and environmental targets to “unlock health, happiness and prosperity”.

Last year, the company said that it completed or exceeded more than 75 per cent of its goals ahead of schedule, including reusing 100 million pounds of recycled content, plastic and other sustainable materials in its new products, reducing wastewater discharge in manufacturing by 4.56m cubic metres and reducing its product portfolio energy intensity footprint by 64 per cent.

2019 also saw the vendor launch an initiative to use recycled material from car windshields to create the protective, waterproof lining of Dell laptop bags and backpacks. This process uses a method of solution dyeing that results in 90 per cent less waste water and 29 per cent less energy, as well as generating 62 per cent fewer CO2 emissions when compared with typical piece-dyeing techniques.

As its earlier scheme came to a

conclusion, Dell released its Social Impact plan which outlined its “moonshot goals” for 2030.

As part of these shoot-for-the-moon targets, the tech giant commits to a one-for-one recycling scheme where it will recycle or reuse an equivalent product to one that a customer buys. In addition to that, it pledges that 100 per cent of its packaging and 50 per cent of its product content will be made with renewable or recycled materials.

David Lear, VP of sustainability at Dell, told *CRN* that these goals are “doable” but will require partners, Dell employees and others coming together to create solutions that will achieve those 2030 targets.

“We think that we have established all the right innovation partners, not just inside Dell, but even with our supply base and our tech partner base,” he explained of the strategy.

“We also think that by setting the goal now, we’re going to rally together a lot of other entrepreneurs who are going to help us get there. We’ve been working for the last eight years to get where we’re at with not just our inside engineers, but also with our partners’ innovation.

“We see this as a way that our suppliers and our partners – some we might not even know yet – will get a chance to say ‘wow, I see where Dell wants to go and I want to help.’”

Dell’s Progress Made Real plan – the evolution of its Legacy of Good – also sets out a number of other goals for the next decade, including increasing the amount of electricity sourced from renewable means from 33 per cent to 75 per cent across all of its facilities and increasing this to 100 per cent by 2040.

Dell has reduced its annual operational greenhouse gas emissions by 38 per cent since 2010, but now aims to increase that figure to 50 per cent. It has reduced the energy intensity across its portfolio by an average of 64 per cent since 2011, and now aims to raise this average to 80 per cent in the coming decade.

The vendor added that it will work with its direct material suppliers to aid them in their own efforts to reduce their carbon emissions and they will partner together to meet a greenhouse gas emissions reduction goal of

60 per cent per unit revenue by 2030. Dell will also

work to develop and deliver “future-ready” skills to people working in its supply chain.

“We can choose to change the system. By leaving behind the linear economy and embracing a

circular one, we can design to eliminate waste, keep products and materials in use for as long as possible, and find ways to regenerate natural systems, which are all vital to our planet’s survival,” reads the vendor’s Social Impact manifesto.

“At Dell Technologies, we believe technology will play a key role in this shift, and we see the circular economy as a critical business model for our collective future.”

Karen Quintos, chief customer officer at Dell Technologies, stated that time is of the essence to reach these goals as the climate crisis worsens every year: “We know we can’t wait another day to solve problems that will last generations; so we will continue to leverage our technology innovation, team members, scale and customer partnerships to accelerate social impact within our shared world,” she said.

Last year, Dell said it reused 100m pounds of recycled content, reducing wastewater discharge in manufacturing by 4.6m cubic metres

Q&A: Dell Technologies' David Lear

Dell VP of corporate sustainability discusses how he came to head the tech giant's sustainability operations, its one-for-one product recycling goal and the explosion in environmental awareness

How did you land the role of VP of corporate sustainability and how integral is it to Dell's operations?

I got my start in product development and we always got a lot of questions from our customers, including governments and NGOs.

A couple of activist groups ran some campaigns because they didn't like the recyclability of our plastics and I'd meet with them because I knew a lot about energy efficiency and plastics and materials – I've got a background in chemistry. So it was natural that I would talk to them and find out their concerns. Then nine years ago Dell asked me to run sustainability.

When I first came into this role, I did a 360 assessment on who cares about sustainability, why they care and where they want to go. That's when we started assessing customer interest. We were looking through RFPs and what customers were asking for, and we built around that.

In 2013, we launched the Dell 2020 Legacy of Good goals, even though Dell had been doing things around sustainability for a long time. In fact, I would say that some of Michael Dell's first designs in 1984 included aspects of design for upgradability, for serviceability, and these very designs lend themselves to design for recyclability.

Putting these 2020 goals out there gave us a way to signal to all our customers, suppliers and engineers where we wanted to go. So we knew every time we built a new revision of a product or a new revision of a process that we'd always be thinking about how we go a little further, and we actually achieved lots of those goals early.

Dell has set a number of lofty goals as part of its 2030 roadmap, including recycling one product for every one bought by a customer. How achievable is this and how do you plan to reach those targets?

We use waste carbon fibre from the

aerospace industry to put into our own plastics; it makes them thinner, stronger and lighter, and it's completely recyclable. We now see this as a way we can pull from other industry waste streams and that becomes our raw material.

We make a lot of stuff and we want to be a steward of those products and do some very intentional design. When we design a product we want to design it in a way that we know we're going to get it back from our customer. That's why we set the goal, because if we sell you one, we're going to take the equivalent back and recycle or reuse it.

We've already been doing it over the last eight years but we're going to double down on it and try to increase that. So we think it's doable. It's going to require innovation – we're not there today, but we're on the path.

In your decade in charge of sustainability at one of the world's biggest tech companies, how has awareness or attitude in the industry on the issue changed?

We have seen explosive growth from all our stakeholders, from our potential employees, our customers – all types of customers – all over the world.

Investors have significantly increased their interest in sustainability because they see it as looking through a different lens, that you're thoughtful and thinking about what future conditions could affect your company. We're seeing a lot more investors now using sustainability ratings as a filter for where they put their money or how they evaluate a stock.

Customers are also being much more progressive in how they're using sustainability in their own purchase selection. They are looking for a trusted partner who is as thoughtful as they are. They also want to make sure the products are being created, built and shipped in a way that's responsible in the long term and can help the customers meet their own goals.





Hewlett Packard Enterprise

When Hewlett Packard Enterprise (HPE) split from Hewlett-Packard (HP) in 2015, it kept the sustainable mission that had been at the core of HP since its own inception.

In its most recent Living Progress report for 2018, HPE wastes no time in espousing how much of a “strategic differentiator” the circular economy is to its business, claiming that these customer engagements focusing on IT efficiency and sustainability credentials contributed \$312m in net revenue in its FY18.

It also says that implementing UN Sustainability Development Goals (SDGs) could open up around \$12tn in market opportunities.

“Achieving a sustainable future will require disruptive transformation across every industry. In an era of infinite connectivity but finite resources, we must partner with our customers and stakeholders to catalyse sustainable innovation in our industry and beyond. Only together can we solve the world’s most complex challenges,” reads the report.

Efficient products and services generated more than \$7bn of HPE’s turnover in 2018. The vendor has committed to increasing the energy performance of its product portfolio times 30 by 2025, and 2018 saw it increase this performance 1.6 times its 2015 baseline. The vendor claimed its Gen10 family of servers “set IT efficiency records”.

In order to make the energy performance of its products more efficient, HPE pledges to optimise the level of power, storage and connectivity in exchange for the lowest energy input as possible; maximise IT processing

power and storage capabilities while minimising costs and resources and design products to work efficiently in datacentre environments.

The report claims that customers, on average, overprovision IT capacity by 59 per cent for storage and 48 per cent for computing, suggesting that the firm’s GreenLake hybrid cloud solution could help reduce these figures by letting customers only use the resources and IT that they actually require.

As the rapid proliferation of data continues unabated, datacentre innovation technology is required to accommodate this data demand in a sustainable manner.

“The digital universe doubles in size every two years, and is projected to reach 20 billion mobile devices and 1 trillion applications by 2020,” the report says.

“As a result, the physical footprint and environmental impact of datacentres are growing rapidly. Our customers manage more data than ever before, so we develop datacentre innovations that decrease energy consumption, improve performance, and save space.”

HPE launched a number of products in 2018 to combat the energy guzzled by datacentres, including its Memory-Drive Flash which uses AI to optimise energy consumption and which it claims is 50 per cent faster than all-flash arrays and can reduce operating costs by 79 per cent.

Refurbishing kit has been a successful endeavour for the vendor, with 89 per cent of the four million units that were returned to its Technology Renewal Centres being refurbished and reused, and the remaining 11 per cent being recycled.

“Our business model creates products that are rapidly replaced by newer, higher-performing, more energy-efficient products,

and our customers often refresh their infrastructure to take advantage of those new products,” the vendor stated.

“However, the end-of-use of a product for one customer doesn’t mean the product is at end-of-life.”

HPE intends to launch an asset recovery goal in 2020 to publicly report its end-of-use IT management.

HPE hit its goal to reduce global operational emissions by 25 per cent in 2017, and in the 2018 report it sets out to increase this figure to 55 per cent by 2025.

It intends to achieve this target by investing in renewable energy, prioritising building efficiency projects and optimising transport modes. So far, it seems well placed to hit this target as it sourced 37 per cent of its global energy consumption from renewable energy sources in 2018, and intends to raise this to 50 per cent over the next five years.

Marc Waters, MD for the UK&I at the vendor, is optimistic about the company’s ability to fulfil these ambitions, and praised its partners for bringing the sustainability mission into conversations with customers.

“I think there’s a cultural adjustment in moving away from traditional capital models to much more consumption-orientated models, which require mindset and process changes,” he explained.

“But our channel in the UK is incredibly adaptive and some of the channel partners we’re working with are really forward-thinking on this issue. As we build solutions for customers around sustainability, that’s not HPE saying, ‘here’s the answer on sustainability, go implement it’.

“We’ve got a lot of forward-thinking channel partners that are taking that solution, contributing to it, enhancing it, personalising it or picking the components of it that best work for their customers and driving that change.”

Q&A: HPE's Marc Waters

The UK and Ireland boss reveals his own journey to becoming more environmentally conscious and how he is bringing that into conversations with customers and partners

"I find it very interesting and I've got myself in deep in terms of understanding what we're doing, our point of view and some of the external narrative and I then share that in conversations I have with the senior management of our customers," explained Marc Waters, HPE's MD for the UK, Middle East and Africa, on his advocacy for sustainable IT.

Waters found himself becoming more engaged in the issues around environmentalism after attending an event in South Africa last year, which has daily blackouts in order to avoid destabilising its national grid. It opened his eyes to energy consumption as he got used to unplugging his devices when not in use and realised there was no reason not to continue the habit when he returned to the UK.

He has since found himself introducing the idea of green IT in conversations with customers and engaging in public speaking on the topic.

"I'm privileged enough to do a job where I lead a really large organisation of technologists and people want to listen to my opinion on it, and people will then change their behaviours. When you start to see that happen, it becomes a really positive aspect of the culture of a company," he said.

Waters said it is "very rare" now that he doesn't talk about sustainability in conversations with customers, as many organisations become aware of the benefits to be reaped from the circular economy and asset life cycle management.

"We will probably see more happening in the market around transformation of technology environments, building out edge environments or building out AI environments. People increasingly want to look at consuming those types of platforms as a service," he explained.

"A big part of what makes that so compelling is the asset life cycle management that sits underneath it. Not only do you make the overall running of that consumption service more economically viable, you can also produce detailed, auditable reporting for that organisation about where its assets are going and that aligns to their sustainability strategies."



The biggest challenge facing the mainstream adoption of circular IT in the channel is the "cultural adjustment" of moving from traditional capital models to consumption models, according to Waters.

"This requires a mindset and process change, but the UK channel is incredibly adaptive," he said.

"We've got a lot of forward-thinking channel partners who are picking the components of sustainable IT that best work for their customers and are driving that change."

A lot of large organisations that dispose of their old IT kit in a non-environmentally sound fashion do so out of years of habit and lack of awareness about modern IT recycling capabilities, explained Waters.

He cited a conversation with his team last year regarding a large hedge fund customer. He asked his team if they had brought the circular economy into the conversation with the customer. He was told that due to the value and sensitivity of the customer's data, its kit had to be destroyed and buried for security reasons and couldn't be recycled.

Waters met with the CEO of that company and outlined the benefits of circular IT and it transpired that the destruction process was just something the customer had always done but wasn't actually required to do it. The CEO subsequently committed to joining HPE's circular economy.

"We're taking materials out of the ground, using them and then we're destroying them and putting them back in the ground – why is that?" he said.

"A lot of this comes down to security and how we think about technology assets. Organisations need to be aware of those clear concerns around security, but [those destruction processes] have been ingrained over many years and are not necessarily looked at in the light of the capabilities that now exist to be able to reuse some of that technology."

Taking part in the circular economy from a vendor and reseller perspective is a "massive opportunity" as it both appeals to a customer's business sense and their company values, he added.



Of the seven reports examined in this study, HP's Sustainable Impact 2018 report is the most Greta Thunberg-like in both its veracity of data and the sense of urgency that more needs to be done by the IT industry right now.

"While we are seeing unprecedented technological innovation across industries, we're also confronting serious societal challenges – from climate change and other threats to our planet, to persistent inequality that prevents far too many people and communities from reaching their full potential," stated former CEO Dion Weisler in the report's introduction.

"Companies have critically important roles to play in solving these problems – not simply because it's the right thing to do, but because it's a business imperative. A growing number of our customers, consumers and employees are passionate about the environment and social justice, and they expect companies such as ours to lead with purpose."

HP hauled in \$58.5bn in total revenue in its fiscal 2018, \$900m of which was new revenue in which its sustainable impact was a "key differentiator" with customers, representing a 35 per cent rise on the previous year's data.

The vendor's report is stamped with reminders of how pioneering it has been with regards to sustainability, pointing out to readers that it has been reporting annually on its environmental and

societal progress since 2001.

"The understanding we gain through this analysis helps us target opportunities for improvement and drive progress. We were also the first to set bold goals to reduce GHG emissions across our entire value chain," it proudly states.

However, 2018 saw the vendor's carbon footprint increase by nine per cent year on year, which it attributed to the increased emissions in the production and product use phases caused by the growth in PC and printer sales. This increase, it added, offset the reductions it had made from design innovation and its product portfolio shifts.

Emissions from its products and solutions make up 53 per cent of HP's carbon footprint, with 46 per cent coming from its supply chain and the remaining one per cent emitted as a result of its operations.

The company has so far achieved 37 per cent of its overarching goal to reduce its GHG emission intensity by 30 per cent by 2025, as compared with its 2015 figure, citing service-based models and "the fourth Industrial Revolution" as ways that will support its future decarbonisation.

It also aims to reduce the GHG produced in its global operations by 60 per cent by 2025, again compared with 2015's figure, and has so far managed a 41 per cent reduction by the end of 2018.

HP is also one of the few companies to our knowledge that provides a breakdown of the carbon footprint of its products, which includes the greenhouse gases emitted directly and indirectly through the product's

entire lifespan. Unsurprisingly, use of the device is the biggest culprit, making up over 50 per cent of its footprint, with the device's display and solid state drive being the second and third biggest emitters.

In December 2019, new CEO Enrique Lores confirmed that he would be taking sustainability as seriously as his predecessor Weisler did when he joined with 74 other US CEOs in urging the US to remain a signatory to the Paris Agreement.

Its Closed Loop plastic scheme saw HP use 107,000 tonnes of recycled plastic to manufacture more than four billion ink and toner cartridges in 2018. The firm claimed that this kept 830 million HP cartridges, 101 million clothes hangers and over four billion plastic bottles out of landfills. It is a third of the way towards its goal of recycling 1.2 million tonnes of its hardware and supplies by 2025.

"Companies that can grow without also increasing raw materials consumption will thrive in a resource-constrained future – and will be well placed to help customers to do the same," the report states.

HP has been lauded by several environment watchers for its efforts, making the Dow Jones Sustainability Index for eight consecutive years and the FTSE4Good Index for 16 consecutive years.

In February, global sustainable benchmarking organisation CPD granted HP 'Triple A' status across deforestation, water risks and transparency – one of only five companies to achieve this – alongside being listed on CPD's Supplier Engagement Leadership board, the only vendor in this report to attain spots on both lists.

HP has been granted Triple A status by the CPD and is listed on the organisation's Supplier Engagement Leadership board

HP has so far achieved 37 per cent of its goal to reduce its GHG emission intensity by 30 per cent by 2025

Q&A: HP's George Brasher

The PC and print vendor's UK boss opens up on the positive effects sustainability is having on the vendor's bottom line and how it is engaging partners to be a part of the climate change solution

According to HP's 2018 Sustainable Impact Report, sustainability was noted as being a key differentiator in winning \$900m of new business that year. How do you expect this figure to change in the coming years?

The world has woken up to the plight of the environment and the need to collectively find solutions. Increasingly customers are choosing which businesses to engage with depending on whether they have a clear and positive sustainability strategy – and avoiding those that don't. This will start to affect the bottom line of firms across most sectors.

HP is doing a lot in relation to water conservation, deforestation, recycling plastics and reducing greenhouse gases. How does it work with partners to drive their own sustainability efforts?

We have a range of initiatives to help our partners and their end customers become more sustainable. The HP Planet Partners programme, for example, provides a closed-loop recycling service for a business's hardware and print supplies. Products collected via Planet Partners are part of the 395,200 tonnes of tech recycled by HP globally from 2016 to 2018. We aim to have recycled 1.2 million tonnes by 2025.

With Microsoft last month announcing its ambitious carbon footprint reduction goals and Jeff Bezos announcing a \$10bn investment to fight climate change, what message does this send to the IT industry? Has it caused HP to re-evaluate its own investments and goals regarding sustainability?

It's always welcome to see a major player in the tech industry use its global influence to help find environmental solutions. From an HP perspective we already have a long-running and expansive Sustainable Impact strategy, covering people (diversity and inclusion), planet (sustainability)

and community (technology-enabled learning).

Earlier this month, HP was listed sixth on Barron's respected 100 Most Sustainable Companies list – our third consecutive year in the top 10. Elsewhere, global environmental non-profit CDP awarded HP 'Triple A' status for taking climate actions, protecting forests and addressing water security – one of only five companies to make this grade. So we are on the right path.

How important will it be for partners to have a green agenda as part of their businesses in the coming years?

As HP's figures show, having a green plan is now a business imperative, as well as a moral one. Deals are being won and lost on issues regarding sustainability – companies with their heads in the sand will soon start to feel the impact on their bottom line.

Have you noticed a shift in attitude from partners as climate change and sustainability has come to the fore in recent years?

The single biggest change I have seen in the last year is that sustainability has moved from being a top 10 criteria – or not being mentioned at all – to being one of the top five in virtually all customer conversations.

With partners being led by customer demands, the channel increasingly wants to know how vendors can help support their customers' sustainability goals.

In your opinion what is the most pressing issue facing the channel with regards to sustainability?

Being able to react quickly enough. Becoming more sustainable isn't easy – it requires new processes and fundamental supply chain innovation.

As a vendor with a lot of these methods in place, HP is in a great position to help the channel become greener in 2020.



Lenovo

China-headquartered Lenovo is the only company on our list with origins outside the US. For decades China took in a lot of the world's waste, particularly scrap from the US. Two years ago it halted this policy, and has banned the import of 52 varieties of solid waste for environmental reasons, as it grapples with the consequences of its relentless industrial development in the past 30 years.

As one of China's leading tech companies, Lenovo could be said to be a leader in its industry as it has been publishing sustainability reports for 13 years and began verifying its energy consumption and GHG emissions a decade ago.

One standout aspect of the vendor's most recent sustainability report for FY 2018/2019 is its invention of a low-temperature solder. It uses tin as an alternative during high-heat manufacturing, which allows for lower heat in the production of its ThinkPad notebooks from 250° to 180°. It announced this in its 2016/2017 report and has subsequently reduced its carbon dioxide emissions by 59 metric tonnes in the first year and harbours a target to increase this figure to 5,000 metric tonnes annually.

"[Lenovo's engineers] wanted to make the industry and world better by sharing their knowledge and solution. When the patents were granted in 2017, Lenovo proactively shared this innovative technology via technical papers and consortiums with other electronic manufacturers – partners and competitors alike," the report stated.

It reported that it was working with the International Electronics Manufacturing Initiative to deploy this technology in the industry in 2019.

"Our unwavering commitment to sustainability is clear, and is vital to delivering smarter technology for all. Through innovative product design and a strong commitment to corporate citizenship, we will not only deliver smarter technology, but will become smarter ourselves in the process," Lenovo's report said.

Reducing energy consumption and associated carbon emissions is the primary focus of Lenovo's climate change programmes and strategy, and it has achieved a 92 per cent reduction in GHG emissions in the past 10 years.

The hardware vendor is much more conservative in its reduction targets compared with other companies in this list. Where Dell is trying to halve its GHG emissions by 2030, Lenovo is aiming to reduce its global emissions by 40 to 70 per cent between 2010 and 2050, and giving itself until 2100 to attain zero-emissions status.

This could perhaps be perceived as more realistic than its peers, as Microsoft admitted that the technology doesn't yet exist for its own ambitious carbon-reduction aims.

However, the vendor is currently in the process of establishing its "next generation" of climate action goals and these figures could be revised.

Lenovo has been pioneering in other respects: it began using

electric delivery trucks in China, which accounts for over 10 per cent of the total trucks used by the company. Half of its forklifts in its Chinese distribution centres are electric and it has been making environmentally friendly transportation a "key decision driver" across its global logistics, for example shipping more than 2,800 containers per quarter in its FY 18/19 by rail from China to Europe.

The vendor uses biodegradable materials made from bamboo and sugar cane in its packaging, which reduces the overall package size for certain notebook products, which in turn leads to a 6.7 per cent efficiency improvement in its transportation carbon emissions.

Its most recent financial year also saw it expand the list of its products made from closed-loop postconsumer recycled content from two to 21. Since 2017 it claims it has used over 2,500 metric tonnes of materials that otherwise would have ended up in landfills.

Throughout 2018, Lenovo financed or managed the processing of 40,300 metric tonnes of computer equipment. Of those returned, 2.8 per cent were reused as products or parts, 3.2 per cent was incinerated with waste-to-energy recovery, 1.2

per cent was disposed of by landfill and an impressive 91.7 per cent was recycled as materials.

Customer returns constituted 19,900 metric tonnes of the recycled IT kit.

These efforts have seen

Lenovo awarded the 2018 CPD China Influence Award on Climate Change Migration, as well as being listed among the top 100 Sustainable Corporations in the World by CSR ranking firm Corporate Knights.

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Like a couple of other companies in this report, Cisco has achieved some of its carbon-reduction goals ahead of its set deadline.

This includes prematurely hitting its goal to avoid one million metric tonnes of GHG emissions in its supply chain between its fiscal 2012 and 2020, a target it achieved in 2019.

The vendor has now set out to reduce its supply chain-related Scope 3 greenhouse gas output by 30 per cent between its FY2019 and 2030.

It is over three quarters of the way to achieving its overarching goal of reducing its global Scope 1 and 2 emissions by 2022.

“The greenhouse gas emissions from our supply chain are five times greater than the footprint of our own operations, so we make it a priority to work with suppliers to help them improve,” it stated in its 2019 CSR report.

“This highly collaborative effort relied on smart supply chain decisions across the organisation, including more ocean shipments, redesigned product packaging and energy-efficiency partnerships at manufacturing sites.”

In order to hit its Scope 3 target in the next decade, Cisco said it will be focusing on targeting supplier engagement and increased expectations for its top components, manufacturing and logistics suppliers and expanding its efforts to reduce its reliance on air transportation.

As for its Scope 1 and Scope 2 emissions – which are a direct result of its operations – the vendor will be investing more than \$45bn between 2018 and 2022 in energy efficiency and renewable energy, as well as

implementing “hundreds” of energy efficient and on-site renewable energy projects across its global properties.

The company added that reducing its property portfolio by 7.3 million square feet in the last five years has enabled it to avoid approximately 67,400 metric tonnes of GHG emissions annually and 166 million kWh of energy use.

“The business case for pursuing ambitious greenhouse gas reduction targets is clear. The work our team did to achieve our 2020 target drove cost savings for the business, as well as increased operational efficiency and resiliency across our value chain,” said John Kern, senior vice president of supply chain operations at Cisco.

Cisco is also within touching distance of hitting its goal to use renewable sources to generate 85 per cent of its global electricity by 2022. Between 2012 and 2019, Cisco increased its total on-site solar panel systems capacity from 200kW to 2.8MW, which collectively produce an average 3.4 million kWh of electricity, avoiding 1,200 metric tonnes of CO₂e each year over the projected 25-year lifespan of the system.

From FY12 through FY19, Cisco increased its total on-site solar panel capacity from 200kW to 2.8MW. These systems combined produce an average 3.4 million kWh of electricity, avoiding 1,200 metric tonnes of carbon dioxide each year over the projected 25-year life of the systems. Cisco’s UK operations at Bedfont Lake operate in this manner and can avoid up to 850 metric tonnes per year, saving up to \$510,000 in electricity costs annually.

Over 60 per cent of Cisco’s operational electricity is used to power and cool equipment in its labs and datacentres. It stated that its “greatest opportunity” to reduce its GHG emissions and

energy costs lies in making these spaces more energy efficient.

The vendor has implemented a number of procedures to further this goal, including using smart power distribution units to monitor lab equipment and using virtual machines to increase server utilisation.

It has also amped up its energy efficiency by migrating IT workloads to “key” locations, thereby reducing its square footage costs and overall electricity use, Cisco claimed, adding that since 2013 it has reduced its datacentre square footage by 20 per cent.

The vendor is also working on decreasing the amount of packaging involved in shipments through its Make It Green reduction and recycling initiative, which has seen a total of 3,901 metric tonnes of material and 41,840 metric tonnes of carbon dioxide avoided in 2019. These sustainable changes have also saved the company an annualised \$33m in material and freight costs.

Cisco is somewhat incongruous among its peers on this list in the environmental projects it is involved in, which include protecting turtle habitats, its wildlife conservation scheme Open Conservation and anti-poaching Connected Conservation pilot programme aimed at protecting rhinos.

Tae Yoo, Cisco’s SVP of corporate affairs, stated in the report: “We set our first GHG emissions-reduction goal in 2006. We’ve learned and evolved over the years, including in how we communicate.

“There’s more interest in our CSR and social impact work now – from investors, customers, current and prospective employees, and beyond.

“We were proud to reach multiple goals ahead of our schedule, and are already at work on new goals that set our sights even higher.”



Not to be outdone by Microsoft's mammoth carbon targets, Amazon founder and CEO Jeff Bezos recently announced his \$10bn Climate Fund to invest in scientists, activists and organisations committed to battling climate change.

Despite this, Amazon's sustainability report is only 80 pages – roughly half the length of its contemporaries' on this list.

Of all the companies in this report, Amazon is the most light on figures and data. Last September, it was the first signatory to The Climate Pledge, which is a commitment to meet the Paris Agreement's 2050 goals 10 years early. Signatories to the initiative vow to be net-zero carbon across their operations by 2040. To do this they commit to measure and report their GHG emissions regularly, and implement decarbonisation strategies in line with the Paris Agreement. The Pledge also asks signatories to neutralise any remaining emissions with "additional, quantifiable, real, permanent and socially beneficial offsets" in order to become net zero by the 2040 deadline.

"We're done being in the middle of the herd on this issue – we've decided to use our size and scale to make a difference," said Amazon founder and CEO Jeff Bezos at the time of signing.

"If a company with as much physical infrastructure as Amazon – which delivers more than 10

billion items a year – can meet the Paris Agreement 10 years early, any company can. I've been talking with other CEOs of global companies, and I'm finding a lot of interest in joining the pledge."

Other elements of the Pledge will see Amazon endeavour to use 80 per cent renewable energy across all its business operations by 2024 by investing in wind and solar energy, with the ultimate goal of using 100 per cent renewable energy by 2030. It also intends to make half of its shipments net zero in the next 10 years.

Amazon's total CO2 emissions from its direct and indirect operations amount to 44.4 million metric tonnes (mmt). Like its peers, indirect emissions amount for the majority of Amazon's carbon footprint. This includes business travel and Amazon-branded product emissions and third-party emissions.

Around the same time as it signed The Climate Pledge, the tech company launched three renewable energy projects – two in the US and one in Spain – that will cumulatively produce 329MW of additional renewable capacity and nearly 700,000 MWh of energy annually to the company's datacentres and warehouses.

These will join the company's existent 70-plus renewable energy schemes that can generate up to 1,900MW and more than 5.3 million MWh of energy annually.

The vendor claims its AWS cloud arm's infrastructure is "3.6 times more energy efficient than the median of surveyed US enterprise datacentres". It attributed this to its more energy

efficient servers and a much higher server utilisation.

"AWS datacentres are also more energy efficient than enterprise sites due to comprehensive efficiency programmes that touch every facet of the facility," it stated in the report.

"When we factor in the carbon intensity of consumed electricity and renewable energy purchases, which reduce associated carbon emissions, AWS performs the same task with an 88 per cent lower carbon footprint."

The cloud unit is also implementing a number of initiatives to improve its water usage efficiency and reduce the amount of potable water used to cool its datacentres. The company stated that "where possible" it uses direct evaporative technology to cool its datacentres to reduce its energy and water consumption. In the cooler months, exterior air is supplied directly to the datacentre without using any water, while in hotter months, it cools outside air through an evaporation process using water before sending it into the server rooms.

It also implements on-site modular water treatment systems in a number of regions.

Across its retail operations, Amazon's Shipment Zero scheme aims to make 50 per cent of its shipments zero carbon in the next decade. As part of this, and as part of its Pledge, the tech giant ordered 100,000 electric delivery vehicles –

the largest order ever for such vehicles – which will hit the road in 2021.

"We're done being in the middle of the herd on this issue. We've decided to use our size and scale to make a difference. If a company with as much physical infrastructure as Amazon – which delivers more than 10 billion items a year – can meet the Paris Agreement 10 years early, any company can"

Jeff Bezos, Amazon



The end-user appetite for sustainable IT

Our survey of over 300 UK IT decision makers found that the majority now regard sustainability as a top-three consideration when purchasing technology

As exemplified by Microsoft's recent carbon-negative pledge and the profiles in this report, vendors are almost falling over themselves to demonstrate their eco-credentials.

But where does sustainability sit in the pecking order when it comes to how commercial and public sector organisations select their IT suppliers?

We sought to answer that question in our recent annual survey of UK IT decision makers.

In a boost for MSPs and resellers looking to step up their efforts in areas such as tech reuse and datacentre efficiency, some 79 per cent of respondents said they would either "definitely" or "possibly" be receptive to a tech supplier that led solely on a sustainability platform (see figure 1). The top-line findings also reveal that sustainability is at least a top-three consideration for 55 per cent of the 300-plus IT decision makers we questioned (see figure 2, p17).

Relatively few, 6.6 per cent, saw it as the top factor when selecting suppliers, however.

Respondents worked for the full gamut of company sizes and verticals, including banking and finance, public sector, education, IT, non-profits and professional services.

As figure 3 on p17 shows, sustainability is generally considered key across all verticals and organisation sizes, although those working for larger outfits with 250 or more staff are more likely to rank it in their top three.

We asked the IT decision

makers to expand on their views on the importance of sustainable IT, including whether it is gaining traction within their organisation, what their top concerns are, and whether they felt their tech suppliers could be doing more to assist or guide them.

Although many admitted it is still outranked by price or performance, numerous respondents detailed how sustainability is rising up the agenda for their organisation.

"We as a company have a zero-to-waste sustainability project that needs to be delivered by 2022. We have only just begun the project but are actively sourcing suppliers etc to assist us with our journey," said one manufacturing respondent.

One university respondent, meanwhile, said that although sustainability is not their top priority currently, "we want to make it top priority in five years".

What is also clear, however, is that sustainability is being written into an increasing number of tenders, and not just in the public sector.

"Energy efficiency and working with companies that support reducing our carbon footprint is highly significant to our procurement process. Clearer evidence of this activity from prospective partners in RFP/tender responses would assist us and suppliers in this process," said a BI analyst at a large utilities firm.

"Any tendering exercise does include a carbon footprint element," added the head of IT at a mid-sized non-profit.

1. IT decision makers that would be receptive to a tech supplier leading solely on sustainability



Yes, definitely
15%

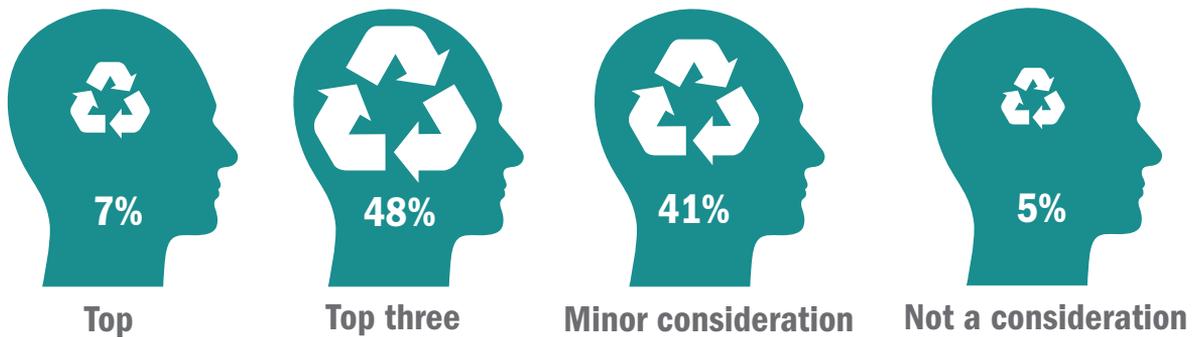


Possibly
64%



Definitely not
11%

2. End users on where sustainability ranks as a consideration in their decision-making process



Several respondents called out vendors for using excessive plastic packaging, and urged suppliers to take more action on this front.

“I’m sure I bought some Compaqs with starch packing materials over 20 years ago. Dump it on the grass and it dissolves in the rain. Now it seems to have disappeared, and we’re still getting lots of Styrofoam,” grumbled the IT manager of a school.

A senior network architect at a large media/telecoms firm slated Cisco for selling wireless access points in individual boxes with plastic foam stuck to the cardboard.

“Tech suppliers are usually rubbish at considering environmental impact,” they said.

At least in some quarters, IT buyers would not only be receptive to a sustainability pitch, but are actively looking for their tech suppliers to step up on sustainability.

“Sustainability is an important issue in boardrooms and is increasing in use as a KPI. Similarly, an organisation’s sustainability credentials will likely become more important when attracting new staff. Tech suppliers are not doing enough to deal with this question,” said one banking/finance respondent.

Sustainability, price and performance need not be mutually exclusive, and indeed many end users pointed out that their efforts to become more energy efficient

are driven by all three factors.

Some respondents, however, saw a contradiction between sustainability and the fast-paced nature of technology, including one respondent at a small IT firm.

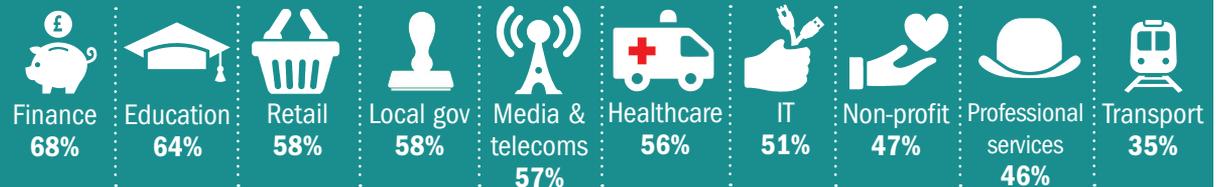
“Sustainable IT” is a very odd concept to introduce into one of the fastest-changing business areas. I doubt it will be popular any time soon, as it has such a low perceived value,” they said.

“As products are not made to last like they used to be, and as technology changes so quickly, the concept of sustainability is a little ironic in this sector,” another added.

Others admitted that they have been forced to pursue cheaper, short-term solutions over

3. Is sustainability a top-three consideration when purchasing IT?

BY VERTICAL



BY SIZE



sustainable alternatives due to a lack of budget or fears of losing ground to peers.

“We have to be competitive and while sustainability is good, it is not an imperative for us,” said one respondent working in the banking/finance vertical.

There is clearly a broad spectrum of views when it comes to sustainability technology, but

the overall mood was probably best summed up by this comment from a local government respondent.

“It is definitely relevant and becoming more so with changes in the stance of government, but the largest influence today is cost. As sustainability becomes a greater influence, if providers can balance these then it would be a

winning offer,” they said.

Tech providers that step up on sustainability can do so in the knowledge that it makes good business sense. Not every end user will be receptive, but VARs and MSPs that don't have a strong sustainability story could find themselves frozen out in the coming decade.

4. Respondent comments by vertical market



AUTOMOTIVE

- “The manufacturer should lead the way and drive this down to the reseller. Most companies are now conscious of the changes that need to be made in sustainability and look to their suppliers to set an example.”
- “Sustainability needs to be a significant factor in today's world, both morally and commercially – to fall foul of public opinion can be very damaging to the brand.”
- “It's not a current concern.”



BANKING/FINANCE

- “Sustainable platforms usually bring a higher cost. If you are using wind energy to power your DC or sea-water to cool your systems then at least pass some of your savings on.”
- “We have to be competitive and while sustainability is good, it is not an imperative for us.”
- “I don't think anyone is trying hard enough. It will need legislation.”
- “Sustainability is a major company goal.”



EDUCATION

- “This is a hugely important issue and one that will be an order-winner going forward.”
- “We're still developing our policies on this – we have green initiatives in place within our department and across the institution and they do have a bearing on how we purchase equipment and dispose of it. In this era of squeezed budgets though, there's only so much we can do. Most of the suppliers could perhaps do a bit more when it comes to guidance, though they have improved in recent years across the board.”
- “As a university, sustainability is high on our list of considerations and IT has an important role to play in achieving our sustainability goals.”
- “It will become an increasingly important factor in procurement decisions.”



HEALTHCARE

- “The impact on patient care and the service provided is always likely to be number one but [sustainability] is a rising consideration.”
- “It's increasingly seen as an important part of supplier accreditation. However, as organisations move to cloud, it's more important that cloud providers are seen in this light.”
- “[There has been] a lot of noise but not clear on the real impact yet.”



IT

- “[Sustainability] is an increasing differentiator in a congested market.”
- “Being a cost-conscious organisation, we strive to ensure value for money, so recycling and power-efficient buildings have been part of our culture for years. But less waste and plastic packaging, which is often unnecessary, should be targeted.”
- “This is bandwagon-jumping of the highest order. I’m not sure I’d trust an organisation that led on [sustainability] because it is a really low consideration.”
- “Sustainability has often come at a price. This price is often hard to justify.”



LOCAL GOVERNMENT

- “I think the recycling market could be expanded by the resellers. Currently they pay low amounts for redundant items, which doesn’t encourage a strong recycling ethic.”
- “Financial constraints still trump all in local government.”
- “It’s seen as a nice-to-have but price always trumps nice-to-haves.”



MEDIA & TELECOMS

- “We all need to think this way. Unfortunately budgets don’t always allow this kind of thinking to become reality. If a vendor could do this as a USP and not charge premiums, we’d consider it.”
- “Sustainability is increasingly being considered in all areas of our organisation. There is a responsibility for IT to become more sustainable too and suppliers that have better green credentials will secure more business from us.”
- “As we are an SME, budgetary restrictions require us to sometimes not choose the most sustainable option in terms of power consumption when purchasing hardware.”



NON-PROFIT

- “Reducing energy costs and waste packaging is a high priority. Vendors should continually improve energy efficiency of their hardware and look at sustainable manufacturing processes.”
- “It is being discussed more frequently.”
- “As a charity based on the preservation of wildlife, sustainability is a main consideration. However, cost is also a large driving force and the compromise has to be met.”



UTILITIES

- “Energy efficiency and working with companies that support reducing our carbon footprint is highly significant to our procurement process. Clearer evidence of this activity from prospective partners in RFP/tender responses would assist us and suppliers in this process.”
- “Price is the single most important factor.”
- “It’s important but not mandatory because it all depends on the cost.”



TRANSPORT

- “In our industry we have to be as reactive as possible to other sectors. Cost and reliability have to be the focus of our IT infrastructure to allow us to compete.”
- “I’d like this to be more of a priority but the business does not see this as a current benefit to operations.”

Q&A: TCO Development's Soren Enholm

Head of tech certification organisation rates the eco efforts of the tech industry and urges channel firms to pursue new business models

TCO Development is the company responsible for the globally recognised TCO Certified brand, which provides sustainability accreditations to IT products in offices and datacentres, as well as providing environmental criteria for companies to adhere to in the manufacturing of IT, as well as independent verification of compliance to these criteria.

Soren Enholm, chief executive of TCO Development, explains the function of TCO Certified and the balancing act that multinational organisations face in implementing circular business models against their profits.

What is TCO Certified?

Our mission is to make IT hardware more sustainable than it is today. The certification is called TCO Certified and it's a global certification. We released the first version in 1992, so we have been around for quite a while.

The focus so far has been on office IT products such as PCs, displays, tablets, and projectors. We are also starting to focus on the IT hardware that is put in datacentres and we plan to launch a certification for that this year.

How does the IT sector compare with other industries when it comes to sustainability?

This market has been evolving so quickly for many years, with new technologies, new functions, new performance and new product categories. The focus has been very much on this evolution and not very much on sustainability.

The functions haven't changed that much in the last few years, but maybe have become more defined; it has become almost partly a fashion market, which is really bad for sustainability. You don't need a new PC or a new coffee machine just because you're tired of the colour of it!

You've been with TCO Development for a little over a decade now. Have you noticed a change in attitude in that time in the IT industry regarding environmentalism and sustainability?

I have seen a change in attitude. Sustainability is a big concern, especially in Europe, which is an important market for these global companies.

One big challenge is that the structure of these huge companies with thousands of employees is to design new products and sell them, and they want to sell as many as possible. So from a circularity point of view – and what we try to do from a circularity perspective – is to push for a longer life length of the product.

Then the industry has to do its part – there are lots of different actors involved in making circularity happen – but what we can do with the certification is push for longer-life products, meaning that it should be possible to repair the product if it breaks or to upgrade it if you need new functions or better performance.

A lot of vendors are quite loud and proud of their circular economy input. In your view, are they right to be so proud of these efforts?

I think all of us have a big mountain to climb – it's not just them. The whole of society is still mainly in a linear economy. I wouldn't say that the big IT companies are in the front regarding circularity, they are where the rest of society is. Should they be proud? I wouldn't be!

What is the biggest challenge facing IT vendors and their partners when it comes to sustainability?

The supply chains of the large vendors are huge.

There are maybe 20 leads from retraction of materials to the finished product, and there are hundreds of different companies – thousands, even – involved in these supply chains.

When we change from a linear economy to a circular economy, this will affect the market structure of not only the brand, but the whole supply chain.

As buyers of these products, we also have to change our behaviour [to promote the circular economy].



In numbers

Some of the most eye-catching facts and figures from the Sustainability Reports of the firms profiled



We will need the equivalent of **three** planet Earths to provide us with the natural resources required to sustain current lifestyles should the global population reach **9.6 billion** by 2050
 (UN Dept of Economic and Social Affairs, June 2019; cited in Microsoft's Devices Sustainability report FY19)



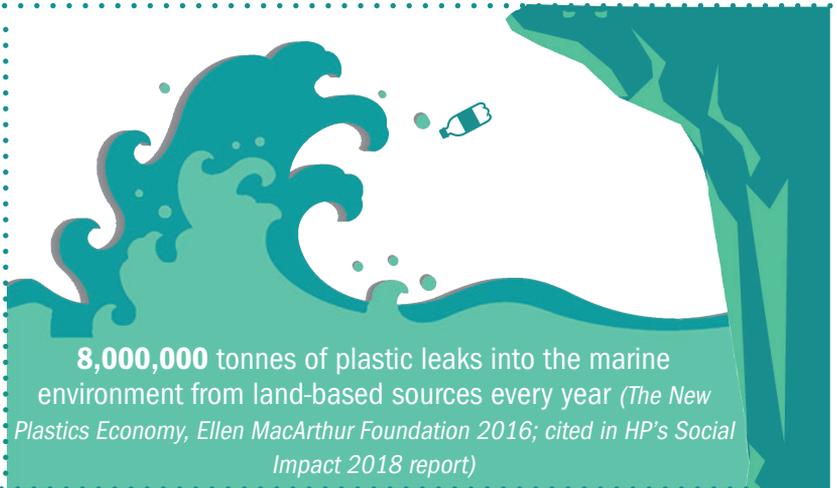
By **2050** there will be more plastic, by weight, than fish in the ocean
 (The New Plastics Economy, Ellen MacArthur Foundation 2016; cited in HP's Social Impact 2018 report)



Cisco has avoided **1,200** metric tonnes of CO₂e annually through its on-site solar panel systems
 (Cisco's 2019 CSR report)



HP has diverted over 25 million ocean-bound plastic bottles since 2016 for use in its Original HP ink cartridges
 (HP's Social Impact 2018 report)



8,000,000 tonnes of plastic leaks into the marine environment from land-based sources every year
 (The New Plastics Economy, Ellen MacArthur Foundation 2016; cited in HP's Social Impact 2018 report)



Lenovo wants to reduce its annual CO₂ emissions by more than:
 (Lenovo's 2018/19 sustainability report)

= 14,274,481 miles
 driven by an average car

Three key takeaways

■ Resellers and MSPs must pick their vendors wisely



This report aims to give a snapshot of how some of the major vendors are approaching sustainability.

Clearly, not all vendors are moving at the same pace when it comes to reducing carbon emissions, reuse and recycling, datacentre efficiency, supply chain transparency or minimising the use of single-use plastics in their products and packaging.

Some have announced ambitious targets just this year, not least Microsoft, which threw down the gauntlet to the rest of the tech industry in January by pledging to become “carbon-negative” by 2050. Dell’s initiative to use recycled material from car windshields in its laptop bags and Lenovo’s invention of a low-temperature solder are among the other more eye-catching innovations.

With customers increasingly demanding to work with sustainable suppliers, resellers and MSPs must pick vendors that have a demonstrably strong story on sustainability.

■ Sustainability is now a deal winner



As we enter the 2020s, the customer demand for sustainable technology is undeniable. Some 55 per cent of the more than 300 UK IT decision makers we questioned ranked sustainability among their top three considerations when procuring tech solutions, while 79 per cent would now be open to working with a tech supplier that led solely on a sustainability platform.

That’s true of every vertical, and every customer size, although larger organisations with 250 or more staff appear to be leading the charge.

That picture is backed up by comments from the vendors we spoke to for this report, with HP’s UK boss George Brasher saying that just in the last year, sustainability has moved from a top 10 criteria to “being one of the top five in virtually all customer conversations”.

“Increasingly customers are choosing which businesses to engage with depending on whether they have a clear and positive sustainability strategy – and avoiding those that don’t. This will start to affect the bottom line of firms across most sectors,” Brasher said.

■ Resellers and MSPs can create their own sustainability stories



The scope for resellers and MSPs to embrace sustainable technology extends well beyond vendor selection.

With the demand clearly there – in some quarters at least – for tech providers that lead on sustainability, channel partners who create their own narrative around the issue look well placed to win in the 2020s.

That sentiment was best expressed by HPE’s UK MD Marc Waters, who stressed it is vital for partners to build on HPE’s story around sustainability.

“As we build solutions for customers around sustainability, that’s not HPE saying, ‘here’s the answer on sustainability, go and implement it’,” he said.

“We’ve got a lot of forward-thinking channel partners that are taking that solution, contributing to it, enhancing it, personalising it or picking the components of it that best work for their customers and driving that change.”