ESG UNWRAPPED

Using the power of AI to drive your sustainability strategy

Making AI work for your ESG strategy – what to use, what to question and where to start

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Introduction

Finding the balance between AI and ESG

Richard Eglon, CMO, Nebula

Despite being uncomfortable bedfellows, Artificial Intelligence (AI) and Environmental Social Governance (ESG), have more in common than you might think. Both were concepts that were born decades ago but are believed by most people to be a recent phenomenon. Both are irregularly and nervously regulated by governments across the world, and both are having a huge impact on our planet – albeit in very different ways.

Today, AI is being positioned as a solution to just about everything, from productivity problems to healthcare diagnostics to writing your next press release. ESG meanwhile has become the benchmark by which businesses are now expected to measure their responsibility to people and the planet. Regardless of greenwashing and green-hushing, ESG is still at the forefront of many RFPs and expectations continue to rise.

But what happens when these two forces collide? That's the question at the heart of our latest ESG Unwrapped report.

On the one hand, AI is being used to achieve some major breakthroughs when it comes to sustainability – helping farmers tend crops better, bringing education to students in remote areas, and empowering organisations to make smarter decisions about everything from energy use to diversity goals. AI can help companies turn their ESG ambitions into tangible actions, faster and at scale.

But there's also the other side to this story. Training and running large AI models takes huge amounts of energy and water. Datacentres don't just hum away quietly in the background, they consume electricity, generate emissions, and often rely on infrastructure that isn't as green as the marketing suggests. Add in the mining of rare earth minerals for the hardware, and the impact of AI can no longer be ignored.

So, is AI a sustainability superhero or an environmental contradiction? Is it helping companies do better or just do things faster, regardless of the impact?

In this report – the third in our ESG Unwrapped series – we're taking a grounded, practical look at how AI is interconnecting with ESG across the tech sector, particularly within the channel. From automation to emissions tracking to ethical sourcing, we'll show how channel players are already using the technology, we'll discuss the dilemma of the environmental costs and how organisations are overcoming this, and we'll look forward and see how AI and ESG are likely to change over the next five years or so.

In our *Net Heroes* section of the report, you'll discover inspiring examples of companies already putting their ideas into action, testing, learning, and evolving as they go. We highlight both their successes and the challenges they've faced along the way, offering valuable insights into what it really takes to drive meaningful change.

Whether you're AI-curious, ESG-committed, or simply trying to find out more about how your business can use AI while being mindful of our planet, this report will give you some fresh thinking and a few answers on how to get started.

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Chapter 1

AI and ESG – the elephant in the (server) room

History shows us that while every breakthrough brings progress, it also brings consequence. Cars brought mobility, but also congestion. Plastic transformed manufacturing and polluted our oceans. Social media connects our world, but has deepened our mental health struggles.

And so it is with Artificial Intelligence (AI). The technology is lauded and credited with so much innovation, from healthcare to education, transportation to entertainment, there's barely an element of our lives today that is untouched by it. But this engine of innovation is having a dramatic impact on the health of our planet.

10x

On average, a ChatGPT query needs nearly 10 times as much electricity to process as a Google search.

Source: Goldman Sachs

Channel businesses that are keen to stay at the top of their game, while also focusing on sustainability and hitting Environmental, Social and Governance (ESG) targets are facing a constant contradiction; the same tools that are capable of helping them reduce emissions, streamline ESG reporting and boost supply chain transparency, are also the very tools that are undermining the sustainability goals they are trying to achieve.

Power problems

At the core of this contradiction lies a simple equation: AI needs power. And lots of it. The environmental footprint of training and running large-scale AI models is significant, with energy-hungry data centres, water-intensive cooling systems, and global infrastructure demands that challenge any sustainability commitments.

The World Economic Forum estimates that the computer power dedicated to AI is doubling roughly every 100 days. The International Energy Agency's latest report states that the electricity needed for data centres worldwide will double in 2030 to reach more than the entire country of Japan consumes today. On average, a ChatGPT query needs nearly 10 times as much electricity to process as a Google search, according to Goldman Sachs' latest report.

Much of the challenge comes from the intense power required to train and maintain Large Language Models (LLM), the technology behind generative AI systems such as ChatGPT, Claude, DeepSeek and Gemini. LLMs impact the environment in two main phases: training and inference. During the training phase, the LLM digests huge amounts of data to learn patterns and behaviours. Once they are trained, they enter the inference phase, where the AI is deployed and responds to real-world problems.

At present, the environmental footprint is split, with training responsible for about 20% of AI's environmental footprint, and inference makes up the remaining 80%. As AI becomes embedded across more industries and use cases, the demand for inference will grow, and so will its environmental impact. Training a single LLM, like GPT-3, can use around 1,287 megawatt-hours of electricity, enough to power the average UK household for over 120 years.

1,287

megawatt-hours of electricity is typically needed to train a single LLM, like GPT-3.

Source: Columbia Climate School

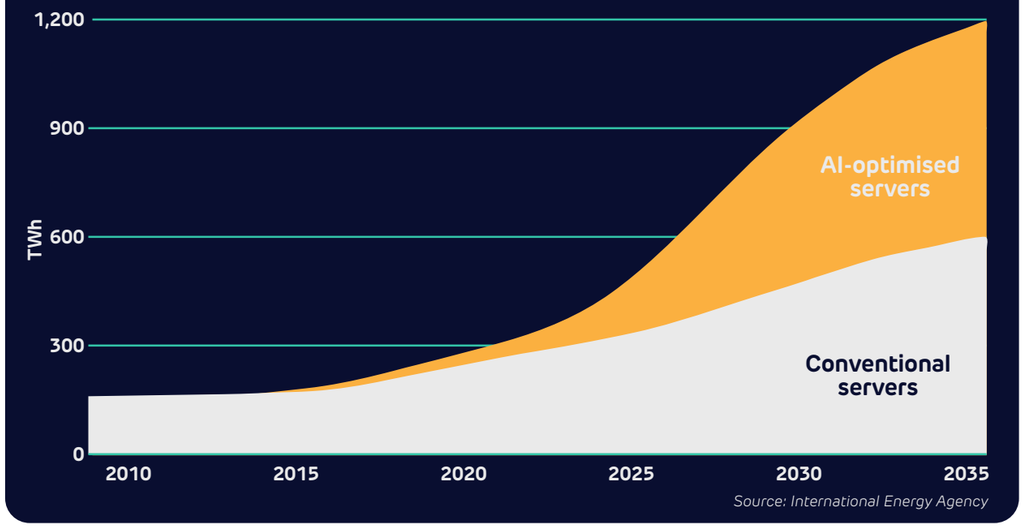
Pressure for power

Richard Kenny, managing director at Interact DC and ESG Unwrapped Net Hero (see page 25), says the electricity demands of data centres are already putting serious pressure on power grids worldwide. "In some US states, data centres are now using up to 25% of the entire state's electricity," he says. "In South Africa power issues are causing rolling brownouts, where residents are unable to use power during certain hours. And as AI data centres consume more and more energy, this isn't going to improve."

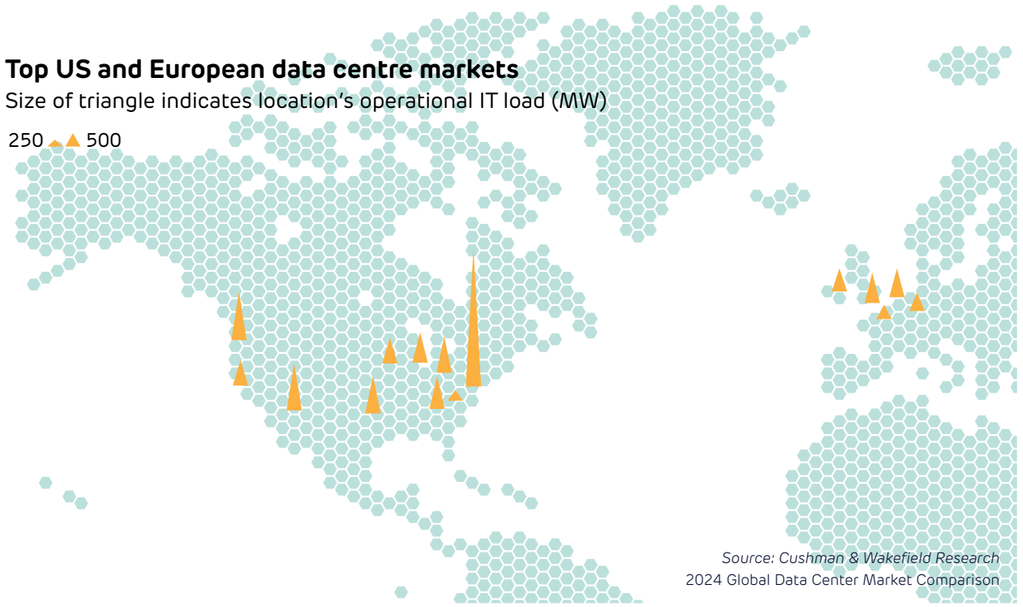
While 15 US states account for 80% of the country's data centre load, three dominate: Virginia (home to Data Centre Alley), Texas and California. According to a recent report from the North American Electric Reliability Corporation, more than 300

Data centre electricity demand is set to surge in the next decade, driven by AI

Data centre electricity demand, historical and projected through to 2035



Source: International Energy Agency



million people across the US and Canada could face electricity shortages between 2024 and 2028.

In the UK, London is the primary data centre hub, with the City and Slough leading the charge. Serious outages have not yet occurred, but **Dr Steve Finnegan, managing director at PNZ Advisory** and ESG Unwrapped Net Hero, warns that the country is already at full capacity. "We can only store enough gas for 12 days – the lowest in Europe. We're not seeing power cuts yet, but I think we will in the future."

Steve believes that the growing demand for hardware, technology and processing power – and the resulting need for more data centres – is simply unsustainable, in every sense of the word. "The amount of power we're going to need is staggering," he says. "The question we all have to answer as a community and as a planet is how we can keep going safely."

Feeling chatty?

ChatGPT handles over **1bn** queries every single day. It has **800m** weekly active users. Its website receives **4.5bn** visits per month. To say that it's become mainstream, particularly from a business perspective, is a huge understatement.

- ChatGPT consumes over **half a million kilowatts of electricity each day**, an amount staggering enough to service about two hundred million requests.
- ChatGPT's **daily power usage** is nearly equal to **180,000 U.S. households**, each using about twenty-nine kilowatts.
- AI will account for **3-4% of global electricity demand** by 2030.

Source: Forbes and Goldman Sachs

Water – the ultimate cooler

Electricity consumption of LLMs and data centres is just one aspect of how AI is impacting the planet. Constantly running data centre servers means keeping the hardware cool, which involves water consumption. In 2023, researchers from the University of Texas and the University of California Riverside, estimated that training OpenAI's ChatGPT3 LLM in Microsoft's data centres used around 700,000 litres of fresh drinking water. They also estimate that for every 10-50 responses in a typical chat session, around 500ml of water is consumed.

However, Richard disputes this claim. As co-chair of the Planetary Impact Working Group, he and his team are developing concise and effective reference materials to highlight the planetary impacts of hardware, software, cloud services, and consulting.

"This 500ml statistic was based on training ChatGPT 3.5 for a month; it's not the same for inference or the newer versions of ChatGPT," Richard says. Not only that, he adds, AI data centres don't 'drink water'.

"These types of data centres do not use evaporative cooling because it doesn't work on GPUs at the level that we're at now. Most are using closed-loop liquid cooling, and while it might have taken 700,000 litres of water to train ChatGPT, that didn't evaporate – it's still going through the loop to provide the inference."

Location, location, location

Richard says the challenge with AI data centres is less about them constantly consuming too much water and more about their location. "The biggest issue we have is that we're building data centres in arid regions and taking water from reservoirs that are needed to serve homes and communities," he says. "There are already 25 water-stressed regions in the UK. By 2050, we'll have a deficit of 5bn litres a day, which is 30% of our current national production. And while we keep building more reservoirs, organisations keep putting in for planning permission for data centres next to them."

AI's projected water usage could hit 6.6 billion m³ by 2027, and this is while nearly two-thirds of our world's population experiences severe water shortages for at least one month a year.

Not only that, but AI hardware, GPUs, TPU and chips require materials like lithium, cobalt, and rare earth elements. Mining for these elements is having a major ecological impact, such as deforestation, soil degradation, and toxic runoff that's impacting ecosystems across the world, especially in developing countries.

> "By 2050, [the UK] will have a deficit of 5bn litres of water a day, which is 30% of our current national production."
>
> *Richard Kenny, managing director, Interact DC*

6.6bn m³

AI's projected water usage could hit 6.6 billion m³ by 2027.

Source: Forbes

As companies look to jump on the AI bandwagon to improve their businesses, the need for more, better hardware is exacerbating the amount of e-waste entering the environment, which, despite legislation and work we showcased from our Net Heroes in our previous ESG Unwrapped reports, can still end up in landfill.

Work in progress

However, this is not to say that governments, organisations and people are ignoring these challenges. On the contrary. While greenwashing was a theme for the last decade, it's now morphed into green hushing – where companies are quietly going about their ESG strategies with minimal fuss as they hit their sustainability goals.

Major tech firms are also recognising the environmental implications of AI and are pushing forward ideas to reduce its impact. At the infrastructure level, there's a clear push towards greener data centre design, which includes everything from buildings adhering to certifications like Leadership in Energy and Environmental Design (LEED) through to powering via renewable energy and optimised with AI itself to reduce waste and create efficiency.

For example, Google, which has vowed to reach net-zero emissions across all of its operations and value chain by 2030, has signed a deal to use nuclear reactors to power its AI data centres, which is supported by a goal to run 24/7 on carbon-free energy on every grid where the firm operates.

View from the vendor

Nancy Powell is Sustainability Manager at HP, across the UK, Ireland, and EMEA. She runs a team that bridges specialist sustainability experts and the business across different markets.

She says HP's sustainability strategy has recently been updated to focus on customer solutions, transparency in the value chain, and catalysing the industry to start taking action around noncompetitive issues. "There are several processes where it makes sense for vendors to work together for the good of the planet. The UN Sustainable Development Goals that HP has signed up to are a great framework to help vendors find a common language," she says. But, Nancy also believes that competition fuels progress, and that healthy rivalry will push the tech sector to adapt more quickly to sustainable principles.

Much of this change, she says, is already happening and is being driven by customers. "It's no longer just about us proving the hardware meets certain sustainability criteria. Customers want to understand how they can offset during the use-phase or what analytics exist around their choices at the end-of-life phase. We're seeing the discussions shift beyond sustainability at the point of purchase to a full lifecycle approach."

When it comes to AI and sustainability, Nancy says HP, like most vendors, is exploring where the technology can be integrated to provide efficiency, improve quality and help anticipate where sustainable outcomes will come from. "We're already aggressively and vigorously looking at to see how AI can help drive our sustainability ambitions and objectives," she says.

Microsoft has similarly pledged to be carbon negative by 2030 and is experimenting with AI-optimised cooling systems, submersion-based servers, and real-time monitoring to reduce energy waste across its global operations.

Amazon and its AWS arm has set ambitious sustainability goals, including reaching net-zero carbon emissions by 2040 and using 100% renewable energy by 2025 – five years ahead of the company's original target.

AWS says that its infrastructure is five times more energy efficient than typical European data centres, and 3.6 times more efficient on average than those in the US. Across Amazon, in 2022, 90% of the electricity consumed came from renewables.

While critics may note that big tech has a vested interest in portraying its AI technologies as greener, these improvements, despite not eliminating the core issue of growing demand, at least demonstrate that AI can play a meaningful role in reducing its own environmental footprint.

Cool to be cool

Water-conscious cooling systems are also being used for many AI data centres, such as direct-to-chip liquid cooling and closed-loop systems that reuse water rather than drawing fresh supplies from local sources.

Richard says chip manufacturers are also working hard on the next innovation to cool their technology. "Nano fluids have just been invented, which have fractional pieces of metals in them to take the heat even faster. But these metals might cause network interference, causing latency on the GPU, which means liquid cooling might not be suitable for the next generation anyway."

Action is already being taken to help solve this challenge. The US government has recently announced $40m in funding for 15 projects that are aimed at finding a solution to this cooling challenge (see box, page 9).

And companies are also trying to think differently. Many are building data centres in naturally cold climates, like the Nordics, or in mines or underwater to reduce the need for artificial cooling altogether.

Material world

On the materials side, there is growing scrutiny over how minerals used in AI hardware are sourced. The EU's Critical Raw Materials Act (2023) is pushing for more sustainable and ethical mining practices, while the tech sector is investing in recyclable chip design and urban mining, which is the process of extracting valuable materials from electronic waste.

Staying cool: the 15 US companies receiving $40m to develop cooler data centres

1. **Flexnode** (Bethesda, MD)
2. **HP** (Corvallis, OR)
3. **HRL Laboratories** (Malibu, CA)
4. **Intel Federal** (Austin, TX)
5. **JETCOOL Technologies** (Littleton, MA)
6. **National Renewable Energy Laboratory** (Golden, CO
7. **Nvidia** (Santa Clara, CA)
8. **Purdue University** (West Lafayette, IN)
9. **Raytheon Technologies Research Center** (East Hartford, CT)
10. **University of California, Davis** (Davis, CA)
11. **University of Florida** (Gainesville, FL)
12. **University of Illinois at Urbana-Champaign** (Champaign, IL)
13. **University of Maryland** (College Park, MD)
14. **University of Missouri** (Columbia, MO)
15. **University of Texas at Arlington** (Arlington, TX)

Richard says AI and robotics are already helping in this area. "Hard drives are very material-intensive, and if you want to try and recover them to reuse critical raw materials, it takes an engineer hours, so it's not commercially viable," he says. "But it takes a robot just 45 seconds, which then becomes easier to build a business case for.

"And if you then introduce AI, where it can scan the type, make and model of the hard drive as it comes through to understand which ones have the highest material content, and therefore which ones are worth disassembling, it becomes an even more attractive business case. We're already seeing this starting to happen," he adds.

While most of these efforts are at the early stages, they do mark a shift in direction. AI infrastructure is no longer an afterthought, playing second to performance; sustainability is an integrated part of AI strategy, influencing everything from hardware choices to data centre design.

90%

of the electricity consumed across Amazon in 2022 came from renewables. The company is aiming to reach net-zero carbon emissions by 2040.

Source: Amazon

From tension to transformation

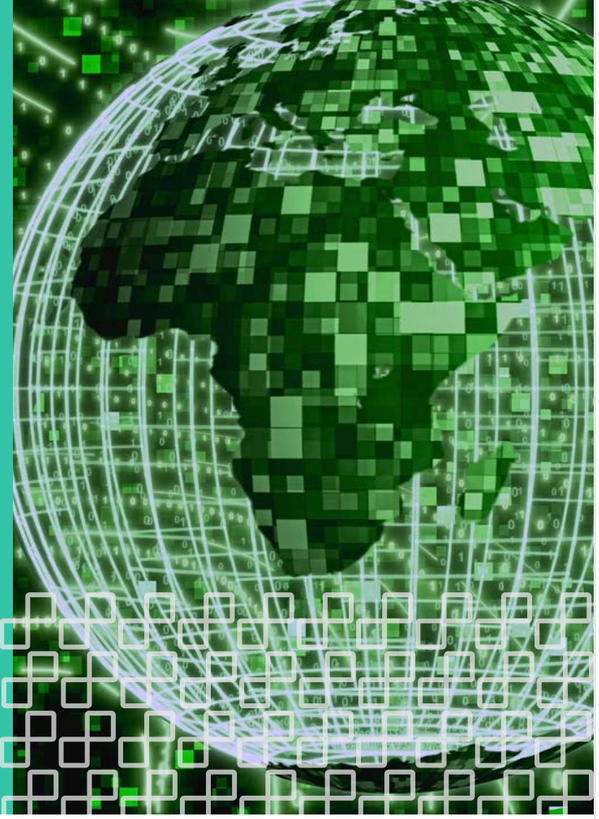
AI's environmental impact is becoming impossible to ignore. As demand for processing power grows, so too does the pressure on our energy grids, water supplies, and material resources. These are real, tangible challenges, and they're happening now.

But the industry isn't standing still. From rethinking how we power and cool data centres to exploring new ways to recover and reuse critical materials, companies are already working to reduce AI's environmental footprint. It's early days, but progress is being made.

Crucially, AI isn't just a source of strain – it's also a powerful force for good. As we'll explore in Chapter 2, organisations and channel players are already using AI to advance every element of ESG, from cutting emissions and improving supply chain transparency, to widening access to education and enhancing social impact. The opportunity is enormous – we just have to match it with action that puts people and planet first.

Chapter 2

AI: The power for good



AI's environmental footprint has made headlines, and for good reason. But away from the hype, the greenwashing, -bashing and -hushing, many ecosystem organisations are starting to explore how it can also be part of an ESG solution.

IBM's State of Sustainability Readiness Report 2024 says 44% of businesses are using AI to support their sustainability goals. While UK channel players are taking a cautious approach, anecdotal evidence gained through this report suggests many VARs and ecosystem partners are at the very least using GenAI to help with ESG strategy or business planning. Others are exploring machine learning and AI-powered platforms for data analysis and compliance, and testing use cases, and everyone is trying to work out where the real value lies.

44%

of businesses are using AI to support their sustainability goals.

Source: IBM

What's clear is that every Net Hero interviewed for this report shared a sense of optimism. AI, they say, has real potential to support sustainability, particularly across the social dimension of ESG, where it's already starting to make an impact.

For example, according to McKinsey, AI is being used to accelerate all 17 UN Sustainable Development Goals, from eliminating poverty to establishing sustainable, affordable and renewable energy to providing quality education for everyone.

Supporting learning through AI

Chelsea Chamberlin, CTO at Roc Technologies, said the firm is using GenAI to support the Lord Mayor's Appeal, a London-based charity, helping students from less advantaged backgrounds, where university education and corporate careers are not readily accessible.

"Many people don't have access to help when it comes to writing personal statements for higher education or tailoring job applications," she says. "We have been able to offer mentoring and advice to focused groups on how they can leverage AI tools to support these activities. Ultimately, AI can be a great way to help students who struggle to articulate their thoughts and create something that is compelling while still genuine. AI tools are here to stay, and it is imperative we are teaching the next generation how to use them effectively."

She believes AI gives organisations the chance to share knowledge more widely than ever before. "We have a large customer in a remote part of Scotland, and it is interesting to consider how AI could support the local economy. Schools in more rural parts of the UK don't necessarily have the funding or access to things like careers fairs or guest speakers, AI can help create new opportunities by making content more affordable and accessible regardless of location, to drive digital progress, which ultimately supports economic growth."

Bridging the digital divide is also a key focus for HP's social value strategy, says **Nancy Powell, sustainability manager** at the vendor.

"Our HP Life programme is about enabling people who have historically been marginalised because they don't have access to education, healthcare and economic opportunity, all of which sit increasingly behind a digital gateway."

In the UK alone, 7 million households have no internet access, according to the House of Lords' Communications and Digital Committee's Digital Exclusion Report.

To help close this gap, HP is using AI to scale its education programmes and bring teaching tools to more people worldwide. "There are huge numbers of people who only have basic digital skills, and we're trying to change that," says Powell.

She adds that it's not just older generations or those without internet access who are affected. "Through our Digital Schools programme, we talk to students about digital elements of the curriculum, but we also use that opportunity to speak with kitchen staff, caretakers, parents, even grandparents, helping them build basic digital literacy too."

AI in action: Expanding access to education globally

Rori (Ghana)

A WhatsApp-based AI tutor helping primary school children improve their maths skills, even in low-connectivity environments.

Kwame for Science (West Africa)

A bilingual AI tool designed to support secondary school students with science exam prep and explanation.

Ulangizi (Malawi)

An AI-powered chatbot from Opportunity International that supports teachers and farmers with tailored advice and lesson planning.

Khanmigo (Global)

Khan Academy's AI tutor encourages critical thinking by guiding students through problems rather than giving answers.

Squirrel AI Learning (Global)

An adaptive platform delivering personalised lessons to millions of students based on real-time performance data.

Solve Education! (Southeast Asia and Africa)

A game-based learning platform using chatbots to improve digital and literacy skills among marginalised learners.

To further support teachers, HP has also launched its AI Teacher Academy, designed to help educators understand, use and evaluate GenAI tools in the classroom.

Putting AI to work for people

Across the channel ecosystem, AI is also proving valuable in supporting career development. Platforms like Coursera for Business are helping individuals access tailored learning pathways, making upskilling more accessible and aligned to business needs.

When it comes to AI in recruitment, many

organisations are still cautious, particularly given past high-profile cases of AI bias, such as the Amazon recruitment tool shown to discriminate against women. But there's growing interest in using AI to support more inclusive and equitable people strategies.

Tools like Pymetrics and Applied are being adopted to analyse sentiment and track inclusion across internal platforms, helping organisations shape stronger DE&I policies based on real employee feedback.

Healing with intelligence

In healthcare, AI is already making a tangible impact, especially in areas where access to traditional services is limited. AI models are being used to diagnose diseases such as malaria and tuberculosis more quickly and accurately in rural clinics, and tools like Google's AI-assisted ultrasound are helping to improve maternal care.

According to the latest National Library of Medicine (NLM) report, AI-powered remote monitoring systems can now track patients' vital signs outside of hospitals, enabling earlier detection of health issues and faster intervention, a vital development for communities with limited access to care.

Closer to home, AI-driven radiology software, Pi AI, is being deployed across the NHS to detect prostate cancer, and has the same success rates as an expert radiologist. Microsoft is also focusing on medical diagnosis with its AI-MAI-DxO technology, which has successfully investigated and solved some of medicine's most complex cases. Using real-world case records published in the New England Journal of Medicine, MAI-DxO correctly diagnosed up to 85% of case proceedings – a rate that is four times higher than a group of experienced physicians.

AI is also supporting preventative healthcare and personal wellbeing. Net Hero Tiffany St James, Chief Commercial Officer (CCO) at Vitalis Capital and Sustainable Wellness Group, and UK Country Director for the Global AI Council, says AI is already being used to help personalise fitness and health planning. "We already have wearable tech that helps us track our steps, sleep, heart rates or blood sugar," she explains. "But if we go further, looking at biochemical data, DNA, even emotions, it can help us make more proactive choices about our health and improve people's lives."

This is already starting to happen. Last year, Kencor Health partnered with Samsung to monitor hyperkalaemia in kidney disease patients using Galaxy watches. Wearable technology brand Whoop, used by athletes like LeBron James and Michael Phelps, has integrated ChatGPT into its devices to give wearers a personalised training plan. And Alter's interactive mirror uses motion tracking and genetic data to provide in-home fitness coaching with real-time feedback on form and technique.

These applications are still evolving, but their potential is significant from an ESG perspective. By helping people track fatigue, manage stress and support mental health, AI could help organisations play a more active role when it comes to improving employee wellbeing.

Growing with AI

For organisations working with developing nations as part of their social impact strategy – something we highlighted in our previous report, ESG Unwrapped: Driving profitability through social impact – agriculture has seen a huge uptick in the innovative use of AI.

In regions such as sub-Saharan Africa and South Asia, AI-powered precision tools are helping farmers to better manage crops, predict droughts, and reduce waste. PlantVillage, for example, is combining satellite imagery and machine learning to improve planting strategies and tackle food insecurity.

ClimateAi, supported by IBM's Sustainability Accelerator, is providing farmers with ultra-localised weather predictions months in advance. The firm has teamed up with a major food and beverage company in India to roll out 'adaptation playbooks' in 300 villages, helping around 100,000 smallholder farmers. The playbooks offer tips on the best seeds to use, how to manage water, and the best times to plant and harvest, resulting in productivity that has gone up by as much as 40%.

Elsewhere, companies like John Deere and FarmWise are deploying AI-enabled cameras to precisely target weeds and apply herbicides only where needed, significantly reducing chemical use and environmental impact.

More locally, AI is already being used to help the UK become more self-sufficient, from remotely managing livestock and using AI to detect animal disease early, through to those that use drones to check soil and detect crop issues early, improving efficiency (see box, page 12).

Smarter spaces, sharper insights

From a corporate perspective, AI is increasingly being seen as a tool to enable, accelerate, and monitor ESG strategy. In Chapter 3, we'll look more closely at exactly how ecosystem organisations can use AI as part of their ESG strategy from a practical level, but it's worth noting how AI can help in diverse ways.

One key advantage is its ability to process huge volumes of unstructured environmental data, from satellite imagery and supply chain records to sensor logs, and turn it into a tangible action plan. This allows organisations to forecast emissions trends, spot anomalies, and model different scenarios to support carbon reduction planning.

Even within office environments, AI can improve efficiency by identifying patterns in how space is used. It can pinpoint peak occupancy times, help consolidate teams, and optimise heating, lighting, and cleaning schedules. It can monitor water flow and prevent leaks, adjust systems for predictive maintenance and change behaviour via waste management insights.

AI-powered agritech: UK-made and making a difference

Small Robot Company Fleet of AI-driven robots – Tom, Dick and Harry – scan fields, identify weeds, and plant seeds precisely, reducing herbicide use and boosting sustainability.

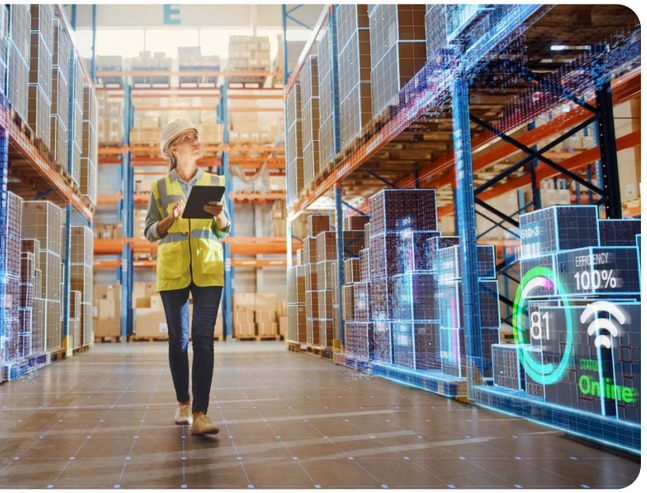
The Watercress Company Uses drones and AI-analysed multispectral imagery to detect crop issues, improve yields, reduce waste, and support farm staff well-being

Aspia Space Satellite-based AI system "ClearSky" measures grass height and predicts growth and drought through radar imagery, helping UK farmers manage resources more efficiently

BeefTwin £1.2 m UKRI project using AI to improve feed efficiency, reduce livestock GHG emissions, and enhance animal welfare in beef farming

Hands Free Hectare Pioneering fully autonomous crop cycles in Shropshire using robotics and AI proved successful in harvesting barley without any manual intervention

LettUs Grow Innovative "Advanced Crop Dynamic Control" project combining AI, imagery, and sensors to optimise energy-efficient indoor farming systems



All of which cut energy use and lowering Scope 2 emissions.

Putting the AI in supply chAIn

As we discovered in our first report, ESG Unwrapped: Building a sustainable technology channel community, Scope 3 remains one of the toughest areas for businesses to address. It involves accounting for emissions across the entire value chain, from suppliers to end users, and it typically makes up more than more than 90% of a company's carbon footprint.

Despite the complexity, progress is being made. According to EY, many organisations are already using GenAI to improve supply chain management and support more sustainable sourcing. By analysing large volumes of data, from supplier location and cost to performance metrics, GenAI tools can help identify partners that meet sustainability standards and monitor their performance over time to ensure targets are met.

For some in the technology ecosystem, GenAI alone may not go far enough. As our Net Heroes confirm, there's a growing ecosystem of AI-powered platforms offering more tailored support. Tools like Rejoose, EcoVadis, and DitchCarbon are already helping organisations assess the environmental impact of their hardware, evaluate supplier risks related to labour practices, and strengthen carbon accounting efforts (see Dr Steve Finnegan, Net Hero, page 32).

In her role as CCO for The Sustainable Wellness Group, Tiffany is exploring how AI can support full supply chain transparency. "We're working with a hotel group to map sustainability all the way down to the cotton manufacturing process for their bedsheets," she says. "By capturing every data point, we can build a digital dashboard that shows exactly where each item comes from and how it performs against sustainability criteria."

Risky business

Governance is often the most underrated aspect of ESG, but it's also where AI is starting to make a quiet but powerful difference, especially in the channel. A growing number of AI tools are being used to automate risk management and compliance processes. Machine learning can flag inconsistencies in ESG disclosures, benchmark performance against industry peers, and track changes in legislation in real time, particularly valuable as new rules around AI ethics and ESG reporting continue to emerge.

For channel businesses working with limited budgets and rising regulatory pressure, this automation is more than a nice-to-have. It offers a way to reduce the time, cost and complexity of staying compliant. By streamlining reporting, identifying inefficiencies and easing the audit process, AI can lower both the administrative burden and the environmental footprint of ESG operations.

Conclusion

As we've seen in this chapter, AI isn't just part of the problem – it's already part of the solution. AI is helping organisations accelerate progress across all areas of ESG, from improving access to digital education and healthcare to protecting vulnerable communities to helping companies make sense of complex supply chains and emissions data.

While it's not a silver bullet – humans still remain firmly front and centre – the potential is clear. Used thoughtfully, AI can support ESG efforts in practical, measurable ways. The challenge now is to scale these efforts with the same ambition that has fuelled AI's meteoric rise.

Chapter 3

A practical guide to using AI for ESG

The idea of your business using AI for sustainability is akin to the thoughts of a teenage boy; you think everyone else is doing it a lot more than they actually are, you're certain everyone knows more about it than you, and you're sure they all know how to do it better. Meanwhile, you're on the sidelines wondering how to get started.

If this sounds familiar, you are not alone.

For many businesses, especially in the channel where competition is rife and day-to-day firefighting is all-consuming, adding yet another facet to the business that requires time, management, and training feels like overwhelm, regardless of how far-reaching the benefits are reported to be.

That's why in this chapter we'll give some practical advice, tips and tricks for the who, what, when, why and how of getting started using AI as part of your ESG strategy.

AI isn't a shortcut to a perfect ESG plan, but it can make the path clearer and faster.

Start with strategy

AI isn't a shortcut to a perfect ESG plan, but it can make the path clearer and faster. For ecosystem organisations trying to identify where to focus first, AI can help pinpoint the ESG issues most relevant to your operations, customers, and suppliers, whether that's the emissions tied to cloud infrastructure, diversity in hiring, or ethical sourcing.

Start by looking at the data you already have. Carbon accounting platforms and sustainability software now often include AI-powered features that can analyse utility bills, travel records, procurement data, and lifecycle assessments to flag hotspots and opportunities.

GenAI tools can also help interpret large or messy datasets, finding correlations that are easy to miss, for example, where a particular supplier's emissions performance is worsening over time or where specific services drive higher energy use than expected.

Once you've got a clearer picture, AI can support scenario modelling to help you understand different strategies. What happens if you switch suppliers? How does remote working impact your carbon footprint? Should you prioritise hardware refurbishment over recycling?

Net Hero, Richard Kenny, said Google Gemini is useful for this type of deeper research. He suggested it can help with more in-depth questions, such as how you can balance your renewables against your current energy consumption, based on being in X region in the UK, operating with X sq ft and X number of staff. Asking these questions will give you answers that will then help you devise a strategy.

USEFUL TOOLS

Workiva | Carbon formerly Sustain.Life · greenly · Normative

Make your office more sustainable

A good place to start is using AI to reduce the environmental impact of your office.

For example, a simple smart building system can use AI to monitor occupancy levels, adjusting lighting and HVAC automatically. For example, if your sales team isn't using a particular floor on Fridays, heating and lighting can be turned down or off entirely, cutting energy bills and reducing Scope 2 emissions.

AI can also help with water and waste monitoring, spotting leaks early or identifying unusual usage patterns. Predictive maintenance analyses performance data on equipment and alerts you when something is likely to fail. This extends the life of the asset and reduces unexpected downtime. There are even AI-powered bins that will sort your recycling and monitor waste.

What's convenient is that many of these systems, which can be as simple as plug-and-play sensors or software, generate data that can feed directly into your ESG reporting.

With the right integration, energy use, occupancy, and water and waste data can be pulled into dashboards to track progress or flag issues, making it easier to stay on top of targets and respond quickly if something's off track.

USEFUL TOOLS

demand logic · OpenSensors · CATAPULT Energy Systems

Top tips and tricks

1 Start with the problem you are trying to solve
Don't just use AI for the sake of it. Work out what you want to do – reduce waste, track emissions source locally etc, and then understand what AI tools work best to achieve that.

2 Start small but don't limit your goals
Don't try and make too many changes at once or introduce too many new tools, but aim high. Don't look to save 5% or 10% on emissions, aim for 25% or even 50%. Otherwise you risk your goals becoming limiters not achievements.

3 Test and measure
Once you've done a project with AI within your ESG strategy, get some facts and figures that you can use to show the impact you've made, this will help get buy-in.

4 Get senior level buy-in from the outset
Like any strategy, using AI for ESG needs senior level buy-in. This will need budget, people, and resources, so getting senior sponsorship will help demonstrate how important it is and encourage everyone to participate.

5 Don't automate things that shouldn't exist
Reporting is a good place to start with AI as part of your ESG strategy, but don't just produce reports for the sake of it. Understand which ones are read and which are important and automate those. Then consider ditching the rest!

6 Be transparent and ethical
Don't forget to encourage your teams to use critical thinking skills, and ask questions about bias, inclusivity and appropriateness of AI us within an ESG environment.

7 YOU make the decisions
Regardless of the information you get from AI, it must always be a human that makes the final decision, whether that's around data, compliance, recruitment or training.

Bin-e AI is an AI-based smart waste bin, designed for public places, enabling simplified recycling.

Accelerate governance and compliance

As regulatory expectations increase, many larger organisations are already using AI to help them automate and expedite transparency and accuracy to stay compliant. But smaller businesses can lean on the technology too.

As we discussed in our first ESG Unwrapped report, currently, there are few actual laws that govern ESG for smaller businesses. However, it pays to stay up to date, and AI-powered tools can monitor hundreds of regulatory sources at once, flagging updates that relate to ESG, data privacy, or corporate reporting.

ESG reporting is likely to become mandatory for businesses over the coming years, and often involves pulling data from dozens of spreadsheets, systems, and departments. Not only is this laborious and time-consuming, but it also means mistakes can be made. AI tools can help detect duplicates, inconsistencies, or unusual figures. They can also benchmark your data against industry norms or historical trends, helping you catch issues early. AI can also help you spot missing data and help teams prioritise what to gather next.

A note of caution – while AI can assist with governance and compliance, it shouldn't be the final word. Always double-check any suggestions or recommendations and ensure that decisions around risk, compliance, and reporting are finalised through a lawyer or expert.

USEFUL TOOLS

GREENOMY Datamaran arbor

Improve inclusion, ethics and well-being

One of AI's most promising, but also most sensitive areas of application is improving DE&I and people strategies. But it's where the risks are highest if guardrails are not put in place. For ecosystem businesses, AI can help highlight issues, reduce bias and support employees, as long as ethical principles guide the process.

For example, AI-powered sentiment analysis tools are being used by several channel organisations to assess inclusion and well-being. These tools work alongside internal platforms and highlight patterns in feedback or flag potential issues around engagement, allowing HR teams to act early.

Sifting through mountains of CVs is a thankless and often unrewarding task, so AI tools can be used to screen CVs matching applicants to roles based on skills. This can help companies discover candidates they might otherwise overlook; however, it needs constant review to ensure it's not favouring the same types of people repeatedly. One Net Hero in this report told us it is vital that the recruitment tools are transparent, adjustable and auditable, and that hiring managers understand what they can (and can't) trust.

Once someone joins the business, AI can support their development too. Some platforms help build personalised learning paths based on existing skills and goals. Others can predict when someone might be at risk of disengagement or burnout, giving managers time to step in with support. These tools can help small companies offer a more consistent experience, even without a large HR team.

USEFUL TOOLS

Applied EQUALTURE harver

Training and knowledge sharing

One of the most practical ways ecosystem businesses can start using AI to support their ESG strategy is through learning and development. AI-powered platforms are already being used to create personalised training plans and learning paths.

These tools can find gaps in someone's understanding and suggest the right educational courses or skills training to fill them, whether that's brushing up on ESG reporting frameworks or understanding carbon accounting.

They also give employees more flexibility, letting them learn at their own pace and revisit complex topics when they need to.

Some companies are also experimenting with GenAI tools as internal mentors or knowledge assistants. These tools can help explain policies, summarise reports, or answer day-to-day questions about sustainability goals or HR processes.

Our Net Heroes said it's important to start simple and give everyone access so they can play and experiment. This might

Using the power of AI to drive your sustainability strategy

Future gazing: Where will AI and ESG go next?

While none of us has a (working) crystal ball, we asked some of our Net Heroes how they think ESG and AI will be interconnected in the future.

Chelsea Chamberlin, CTO at Roc Technology, says things are moving quickly. "In a year or two, asking whether someone uses AI for their ESG will be like asking someone today if they use Google for search. At the pace we are innovating, everything will be intertwined with AI. Any technology company that isn't using AI in the next six months will start to fall behind and within 12 months to two years, that company may not exist anymore."

John Gladstone, director of sustainability at Softcat, says AI is a huge opportunity for the tech industry to overcome some of the challenges around ESG. "From an ESG perspective AI is already helping companies sort their data for reporting and be more efficient in reducing emissions. Companies are already working hard to figure out a solution to balance AI's benefits with its environmental impact. I think there will be new legislation that then encourages responsible use of AI by businesses when it comes to ESG."

Dr Steve Finnegan, managing director at PNZ Advisory, says the race to net zero will drive higher taxation for heavily emitting organisations, including IT and technology organisations. "Manufacturing, shipping, aviation and other heavy-emitting companies are required to join an Emissions Trading Scheme (ETS) such as the EU ETS and/or UK ETS. They need to monitor and report their carbon output. A "cap and trade" scheme is in place that imposes a carbon tax on businesses if they exceed their carbon budget. All indications are that tech and IT will eventually be required to enter an ETS. For example, ETS2 across the EU will include the built environment and road transport. It's only a matter of time before they also include IT and Tech."

But, Steve says, this is where AI can play a role: "This is where AI for businesses will come in, because they can use AI to optimise what they do. As a result, it will reduce their tax burden and emissions".

be giving staff access to an AI learning platform or creating an internal chatbot that helps answer ESG questions, for example.

USEFUL TOOLS

coursera Mindsmith CYPHER Learning

Get better data, faster

One of the biggest challenges for ecosystem organisations when it comes to ESG is finding and sorting the right data in the right way. For example, emissions data is often buried in spreadsheets, stuck in HR or finance platforms, or held by external suppliers. AI tools can automate the extraction of relevant data from different formats, systems and documents.

Natural language processing (NLP) models, for example, can scan supplier contracts for environmental clauses, pull emissions data from invoices, or flag missing entries in ESG reports.

This is especially useful for channel organisations with complex supplier ecosystems, for an audit, responding to investor requests or putting together RFPs that require ESG credentials.

Once the data is in place, AI can simplify the reporting process by automatically generating visual dashboards and summaries, tailored to different stakeholders, from board level to internal dev teams. This helps ensure ESG reporting is not only compliant but also useful, actionable and easy to understand across the business.

USEFUL TOOLS

Connect Earth Ditch carbon Rejoose

The AI vision for the future

We thought it might be interesting to find out what AI thought about the future of AI and ESG, so we asked ChatGPT for its thoughts – reminding it to think deeply and consider its answer carefully. Here's what it said:

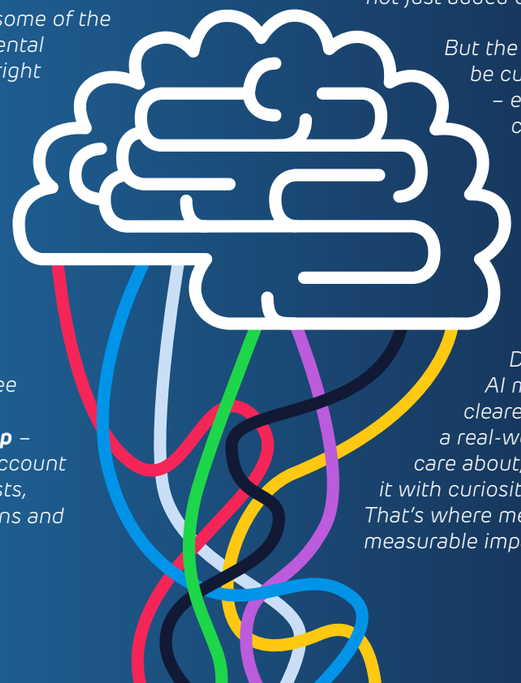
AI and sustainability are on a collision course – but also on a shared path. AI could help solve some of the world's biggest environmental and social problems. But right now, it's also contributing to them – through vast energy use, growing e-waste, and the pressure to scale without pause. As we go forward, the tension between progress and impact will become unavoidable.

In the next few years, three shifts will matter most:

***1. Regulation will catch up** – and force companies to account for AI's environmental costs, especially around emissions and energy consumption.*

***2. Efficiency will become non-negotiable** – both technically and economically. Models will need to do more with less, and organisations will reward smarter, not bigger.*

***3. Sustainability use cases will mature** – AI will be baked into how we model climate risk, optimise supply chains, and drive social impact, not just added on as a side project.*



But the biggest shift will be cultural. Tech leaders – especially in smaller companies – will need to ask not just can we use AI, but should we? And how should we?

My one piece of advice for small tech companies

Don't chase the biggest AI model – chase the clearest outcome. Start with a real-world ESG problem you care about, then use AI to explore it with curiosity, not hype. That's where meaningful, measurable impact starts.

Nebula
PEOPLE&TECHUNIFIED

Conclusion

AI and ESG: Working in harmony?

Whether we like it or not, AI is already shaping how businesses approach sustainability, from tracking emissions to carbon calculations to employee wellbeing and inclusion. Awareness of its impact varies for both organisations and individuals, but most people recognise the dilemma; we're using a tool that is helping and harming our sustainability goals simultaneously.

Two things became very clear when creating this report. First, the optimism of our Net Heroes. While each is at a different stage in using AI for ESG, every one of them is hopeful and confident that AI will soon play a bigger role in helping them meet their sustainability targets. Second, there was the quiet irony they all acknowledged: that AI may well end up being the solution to the very sustainability challenges it's helped create.

But the truth is, AI is neither ESG saviour nor villain. It's a powerful tool that can help your business do things better, but only if you're asking the right questions (or prompts for now), setting clear goals, and staying honest about the trade-offs, with yourself and every organisation in your value chain and ecosystem.

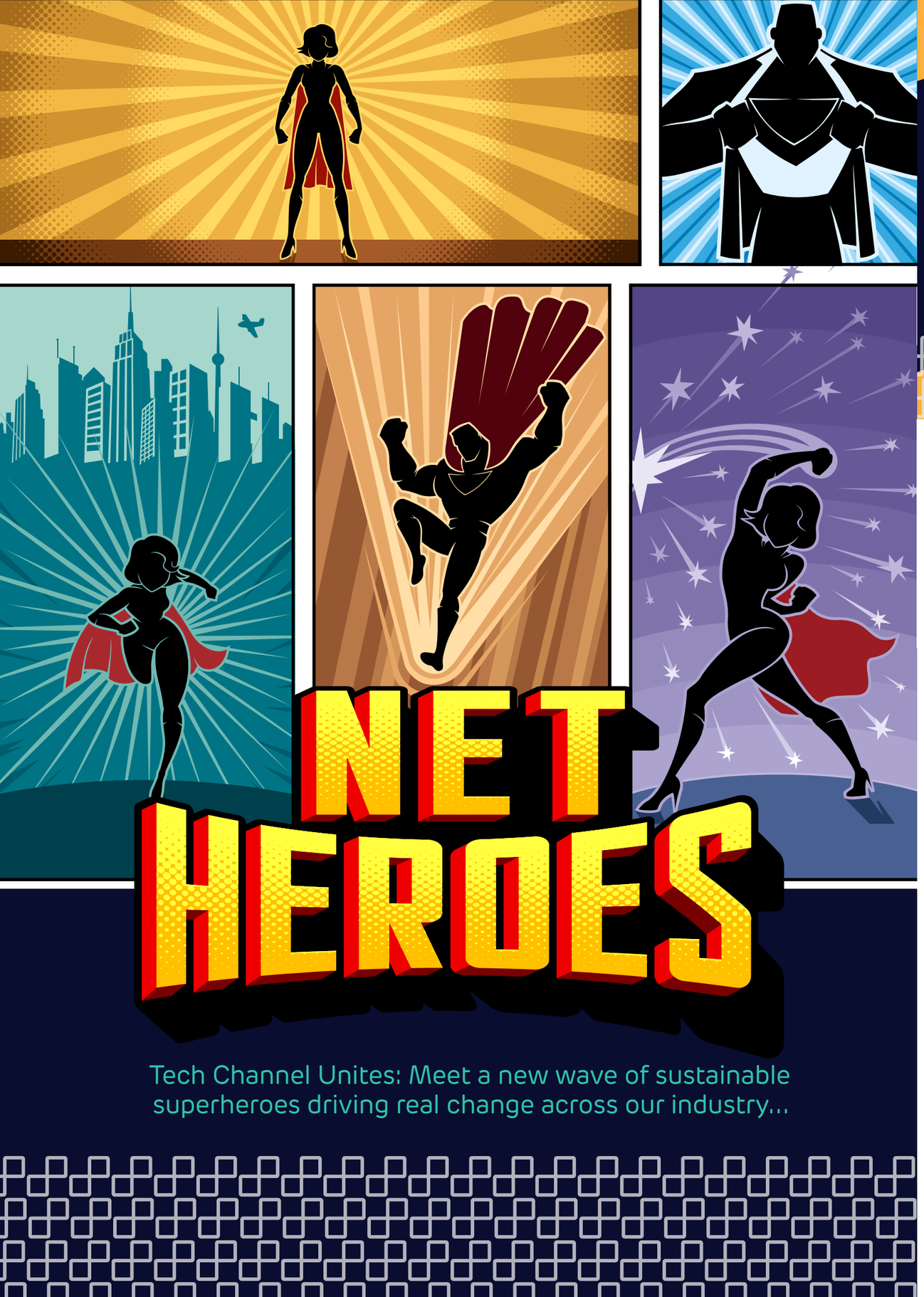
AI won't solve your ESG challenges for you, but it can help you spot what's worth solving. It can speed up the things you already do well. It can uncover patterns and gaps you'd otherwise miss. And, if used properly, it can bring sustainability goals within reach.

The hardest thing about getting started is getting started, according to Silicon Valley entrepreneur Guy Kawasaki. And so it is with AI as part of your ESG strategy. There's no perfect starting point or time. You don't need to overhaul your operations or implement a 10-point AI strategy overnight. The companies we spoke to for this report didn't start there. What they are doing is picking a single use case, such as simplifying energy data or piloting a training tool, and learning as they go.

The important thing is to start. Pick a use case that matters to your business. Give your team time to experiment and get familiar. Keep a critical eye on ethics and be transparent with your stakeholders. With the right intent and a practical mindset, AI can help your ESG ambitions grow stronger, faster and with responsibility in mind.

And as this experimenting grows and the use cases become more familiar across the channel, there will be an understanding that AI can do more than just improve processes or cut costs; it can help us make better, greener business decisions, support people's mental health and make changes that ultimately lead to a happier, healthier society.

The challenge right now is for us all to build on what's working, stay focused on what matters, and make sure the tools we're using to build the future don't end up costing us the very things we're trying to protect.



Tech Channel Unites: Meet a new wave of sustainable superheroes driving real change across our industry...

Richard Kenny

Managing Director, Interact DC

Richard Kenny had no idea when he embarked on a research project into circularity with the University of East London and Innovate UK back in 2018 that it would lead him to start his firm, Interact DC, just a few years later.

The project attempted to prove or disprove that as electronic components continue their usage, they become less performant, and therefore better understand whether performance is a limiter for circular practice in IT. This led to Richard and his research partners benchmarking thousands of servers.

"That's how we ended up building Interact DC, which is a machine learning tool that allows us to input any server configuration and tell you how much work it does, what it's efficiency per watt is and to build simulations of what change looks like to help companies achieve carbon and environmental benefits," Richard says. It was while the firm was benchmarking servers that the team found themselves disproving Moore's Law.

"We realised that transformative generational improvements in CPUs just weren't there any longer, because no one had benchmarked to the level we were working at. So we published our findings in the IEEE Journal of Sustainable Computing in 2021, and we pinpointed exactly where Moore's Law stopped holding true."

All of that research feeds directly into the Interact DC tool, which helps organisations and governments significantly improve their carbon and energy efficiency. Richard has worked with over 500 data centres, including customers such as BT, the NHS, major financial institutions and the Dutch Government.

He says some of the most promising uses of AI in ESG are in the medtech space. He cited a recent study concerning Pneumonia where AI was able to detect cases faster and more accurately than doctors. "Several years ago, I met a company doing a similar project with AI, but they were training it on breast cancer data.

With all the data available in the NHS, the AI could not only detect breast cancer in a patient faster and more accurately than doctors, but it was also able to inform clinicians of which scans would be likely to turn into breast cancer in the future. Using AI in this scenario not only prevents unnecessary biopsies, but it can also be preventative and save lives," he says.

When it comes to how AI can help smaller channel businesses with their ESG strategy, Richard says it's easy to become overwhelmed with the number of tools out there. However, he recommends keeping it simple by using GenAI to help create a strategy.

"People are using ChatGPT to create bland content or write product descriptions, but there are better tools that can do so much more," he says. "Try Google Gemini and do deep research to help with sustainability reporting. The key is prompting it well – think about the outcomes you want to drive and use the tech to help you plan a way of achieving that."

> **One piece of advice:** Take a step back and think about whether AI is the right tool for the task. It's not about transforming your whole business overnight, but about using AI to improve outcomes in practical ways. GenAI can help you understand where you can make meaningful changes – whether that's tracking emissions, improving reporting or identifying opportunities for efficiency. Always start with the outcome you want, then use AI to map out how to get there.

Tiffany St James

Chief Commercial Officer, Vitalis Capital

Tiffany St James has spent her entire career exploring new technologies and helping others make sense of them. Through her consultancy, Transmute, she's worked across everything from social media and blockchain to NFTs and Web 3.0. Now, as Chief Commercial Officer at both Vitalis Capital and Sustainable Wellness Group, and UK Country Director for the Global AI Council, Tiffany is focused on how AI can help organisations achieve their goals, as well as be a force for good.

She sees AI not as a threat, but as an opportunity. "There are, of course, two sides to this coin: Training large AI models can be resource-intensive, particularly in terms of energy and water use. But AI is being used to support climate and sustainability efforts, helping us to use our creative intelligence better, and the tech industry is rapidly evolving toward more sustainable practices."

At Vitalis Capital, Tiffany is involved in using AI to track the markers that identify socio-economic development in Small Island Developing States and Developing Economies. "There are lots of social impact tools out there, but AI allows us to take more than just a snapshot in time. We can analyse how ongoing policy changes affect waste, water, schooling, infrastructure – everything needed to support a population with growth ambitions."

When changing environmental data, such as extreme weather, is layered with geopolitical changes, the result is a powerful tool for government planning and public resilience. The firm is now working with national leaders in Bhutan and other small developing nations to help them set socio-economic baselines and measure the growth of specific interventions effectively.

When it comes to ESG, however, Tiffany says it's important to distinguish between ESG and social impact. "ESG is a fiscal measurement that incorporates governance and reporting. Social impact is harder to measure because it's about quantifying the real-world outcomes of what you've done."

Most companies, she explains, might report on ESG metrics and even reflect on their social value – the softer benefits of their work. But few are quantifying social impact in financial terms aligned with the UN Sustainable Development Goals. "That's where AI can help," she says. "We use proxy values from the UK Treasury's Green Book and feed those into our models, allowing organisations to calculate, in pounds and pence, the good they're doing."

Tiffany is optimistic about AI's future. "We're seeing high-speed democratisation of big tech and tools into any size company. By leaning into good online education, any organisation can help themselves to build, use, and make tools at scale that can help the business."

But she also recognises growing scepticism, particularly among younger voices. She's noticed that some Gen Z and Gen Alpha individuals, including her own daughter and her peers, are actively pushing back against AI. And not just on creative grounds like copyright or originality, but because of its environmental impact.

"Some of the people I speak to – not all, but a noticeable number – are strongly anti-AI. They see it as harmful to the planet and a threat to human creativity. That really surprised me. It made me realise the conversation is shifting and we need to be listening and understanding key concerns and responding to them."

Even so, Tiffany believes AI has enormous potential, especially in freeing people from repetitive tasks so they can focus on more creative, meaningful work. She also acknowledges concerns around generic outputs from tools like ChatGPT but sees this not as a dead end, but rather as an opportunity for organisations to improve how they communicate, not lose their voice in the noise.

> **One piece of advice:** Organisations must be very clear about the problem they're trying to solve and not use AI for the sake of it. It's not about using AI because it's on trend; it's about using it because there is a business challenge that AI can help you solve. Then, once you're clear on the purpose, invest in building your people's skills and confidence with AI, so they can use it effectively and feel part of the journey.

Using the power of AI to drive your sustainability strategy

Jon Steggles

Sustainability and Social Value Manager, CDW

With over 25 years in commercial roles across the public and private sectors, Jon Steggles brings a knowledgeable and pragmatic eye to his role as Sustainability and Social Value Manager at CDW.

His remit is wide and covers five core areas: setting the strategic direction for sustainability; overseeing tactical delivery, often through others; working directly with customers and partners to shape shared ESG journeys; influencing CDW's global strategy by representing UK needs; and participating in key industry panels and working groups.

Unsurprisingly, his approach is rooted in commercial awareness. "If I'm not recognising where the customer or partner is on their sustainability journey, and ensuring we meet them there, then I'm not going to enact real change," he explains. "I view everything I do at CDW through that lens."

Jon says that it will take a united technology industry to drive real change. "There is a big opportunity for radical collaboration across the industry. It doesn't matter how big our organisations are, in isolation, individual voices won't drive change, real impact requires a consolidated voice," he says.

Jon says the impact of AI is simultaneously helping and harming our sustainability goals. He's cautious about the environmental cost of large language models and GenAI, which demand vast amounts of energy and water. "Without a shadow of doubt, it is more intensive to run a ChatGPT search than it is to do a Google search. And I fear that people will use those kinds of tools for tasks that used to be done on a browser. I think that's problematic."

But he's also hopeful about where AI can make a positive impact, particularly when used to help address specific sustainability challenges and provide ideation. "You can analyse data faster, draw trends and build models that say, 'If I move this lever, what's the impact over here?' That combination of human and technology will produce some innovative, impactful solutions," he says.

That potential, however, is still a way off. "There's this expectation that AI will be the saviour. It'll tell us how to improve the sustainability position of a business, a group or a country, but I don't think it's there yet," he says. "Most companies will achieve more by using AI to help guide their strategy than they will impact the planet. But of course, there will be a tipping point," he says. "And that's when we need to exercise more caution."

Currently, CDW is adopting this cautious approach to using AI within its own sustainability strategy. The carbon accounting platform the firm uses, Normative, is starting to introduce AI in its calculation engine, and Jon says CDW is beginning to explore the use of AI on the social side of ESG.

CDW is working alongside Intel and HP to support the AI for Citizen curriculum. The project provides Help for Heroes staff and veterans with AI-integrated devices and specialist AI training to build valuable skills and knowledge in AI. "We are focused on advancing digital equity as part of our social impact programme," Jon says. "This will help veterans transition to new career paths after their service."

The company's work experience programme also introduces young people to AI, including a session delivered by an avatar of CDW's Head of the Office of the CTO, backed up by the real person in the room.

Looking ahead, Jon is pragmatic. He sees potential in AI-led tools to green the grid, help people use electricity more efficiently at home, or improve logistics planning with better emissions data. But he also worries about the unchecked growth of AI influence and low-value, high-emission use cases. "There is a cost to powering this kind of technology," he says. "And I don't think the people building it are necessarily thinking about the environmental impact."

But he's optimistic about the UK tech channel's ability to lead with purpose. "We've got some brilliant minds working in this space," he says. "If someone could build an AI platform that's specific to our industry, with a discrete, carefully considered set of applications and power it in the least environmentally impactful way, I think we'd all start selling it tomorrow."

> **One piece of advice:** The technology is embryonic right now. So, firms shouldn't move with pace just yet. I would test and trial AI to see if the business applications and the performance outcomes are financially viable and driving the results you want. Take your time, do your due diligence, and start small before you implement anything business critical.

Chelsea Chamberlin

CTO, Roc Technology

As CTO at Roc Technologies, Chelsea Chamberlin leads the technical strategy across the company's four core practices: networking and connectivity, cloud platforms, cybersecurity, and automation and AI. She also shapes Roc's industry approach and vendor partner ecosystem, with a particular focus on the public sector – an area where she brings expertise thanks to her aviation and defence background, including time at Lockheed Martin and NATS.

Roc employs around 270 people and is backed by private equity giant BGF, which conducts regular ESG audits. "BGF monitors all companies within its portfolio using automated tools," she says. "In the past 12 months, Roc has moved from scoring 'Excellent' to being recognised as 'Leaders' in all areas of ESG."

Still, Chelsea is keen for the company to go further. Roc is now working towards EcoVadis certification and exploring how AI could support its ESG ambitions. "At the moment, what we do is quite manual, but we want to get to a place where we can deliver more granular reporting with continuous monitoring and management," she says. "We're looking at some open source tools and also considering building something in-house, through our software business, Coria, where that makes sense."

However, there are some limitations for Roc. "Because of the environments that we work in and customers we serve, we are highly secure and highly governed; we can't just adopt a new system and turn it on," she says. "But our data is in a great place. We know where everything is and who has access to it. That will stand us in good stead once we're ready to adopt AI more generally across our whole business."

Chelsea sees AI as a tool to unlock value in human terms. "We're focused on using AI for customers where it can deliver operational, environmental or social benefit to drive efficiency and value. By doing this, AI will help offset its own carbon impact," she says. "It's not about AI for the sake of it. If we can free people up from repetitive, mundane tasks, that helps morale, but also lets us redirect energy into areas for social good."

One example is a project Roc is supporting that uses AI to help prevent suicide. "We're the networking partner on a project to deploy high-definition CCTV, which can analyse images of people as they walk onto bridges," she explains. "Faces aren't identified, but the AI monitors expressions in real-time and can flag behaviours that might indicate someone is in distress. It means support services can intervene much more quickly."

She is optimistic about how AI can be used to help solve the environmental dilemma around ESG and AI. As a judge for the TechRound AITech35 Awards, Chelsea sees firsthand how many AI start-ups are prioritising ESG. "Over 60% of the companies we reviewed were using AI to solve environmental or social challenges in everything from agriculture to education to protecting vulnerable people. There are amazing ideas out there." See Chapter 2 for more.

But she's clear that inclusion must remain front and centre. "When you're deploying AI internally, you need to make sure it's been trained by people who reflect your workforce and your customer base. It's the same standard you'd apply to your leadership team – are women represented, are minorities, are people from less affluent backgrounds? That matters."

Using the power of AI to drive your sustainability strategy

She's also pragmatic about trust in AI. "People talk about whether they 'trust' AI, but we need to remember, it's a computer," she says "It will help us react quicker in a more informed way, but we don't have to actually do anything it says – humans will continue to be the final decision-makers in critical situations."

For Chelsea, one of the biggest risks is assuming AI will be used fairly just because the tech exists. "People will do nefarious things with AI, regardless of regulation. And there are hundreds of models already out there. It's up to us to check the information we're using is balanced, fair, and accurate, just like we do with newspapers or websites."

> **One piece of advice:** Start by getting your data in order. Protect it, make sure both people and AI only have access to the data you're comfortable sharing and put safeguards in place to prevent data loss. Then, enable your people. Help them understand what AI can and can't be used for in their roles, and give them space to experiment. Using AI well will become a skill, and we've got to give people the chance to build that confidence without compromising our environments.

Dr Steve Finnegan

Managing Director, PNZ Advisory

With a PhD in lifecycle assessment, and a career spanning the European Commission, Arup, KPMG and EY, Dr Steve Finnegan has always been driven by environmental impact. Alongside his role as Associate Professor of Sustainable Design at the University of Liverpool, he now leads PNZ Advisory, a company focused on helping organisations reduce emissions, improve sustainability, and meet net zero.

PNZ Advisory (acquired Arete Zero Carbon in January 2025) and that company started in 2021 by manually building Scope 1-3 carbon footprints, roadmaps and decarbonisation plans for clients including CDW, TD Synnex, Exertis, Westcoast, KFC and many others. As the software as a service (SaaS) market matured, the team recognised an opportunity to scale through AI. "There was a plethora of software platforms coming out using AI to do this," says Steve. "So, we did our due diligence and partnered with a platform named Greenly. Now, the software handles all the data and the calculations, and we act as the implementation partner."

For Steve, the real power of AI is in democratising sustainability and helping businesses of any size or scale to achieve their carbon, sustainability and ESG goals. "Even micro-SMEs should get involved because although their impact maybe small, collectively, they have a large impact on global supply chains. Having tools that can automate carbon footprint calculations and help with reporting for a predictable cost, means ROI can delivered, and smaller businesses can compete for new business where RPFs require ESG and sustainability credentials," he says.

One example Steve points to, where he's seen real progress with AI in sustainability is Rejoose, a Copenhagen-based company that uses AI to scrape and analyse emissions data weekly for electronics and IT hardware. "Over the past six years, they've built a database of more than 10 million SKUs. When you order a product, the software sits alongside your invoice and gives you a carbon footprint for the goods and services you've just bought."

For this to be effective, vendors must post Environmental Product Declarations (EPD) for all their products online. An EPD is a document that transparently reports the environmental impact of a product throughout its lifecycle. Organisations doing this are also subject to ISO Standard ISO14067. "All the larger vendors are already doing this, they've got tens of thousands of their products mapped throughout the lifecycle," Steve says.

The risk, Steve explains, is that companies start using this data to claim their products are carbon neutral, just as Apple has done recently. The firm is currently undergoing legal action for marketing three of its Apple Watches as carbon neutral. "We need to be careful," he says. "These carbon figures are based on assumptions around usage, geography, and lifespan. No vendor can truly know all of that."

One solution, he suggests, is to add a sensitivity range – a plus or minus percentage to acknowledge uncertainty, something he has done with multiple studies he's conducted. But over time, he believes AI can improve the accuracy of these models.

"With the right rules and parameters, AI could analyse those 10 million SKUs and refine the estimates based on real-world data. That's where I see AI making a huge impact on ESG – helping us be more accurate, more transparent, and ultimately more accountable."

> **One piece of advice:** Invest in research. Invest in knowing more about how it will affect you as a business. Look at your risk profile, where is your business at risk? Any firm doing business with big corporates or within the public sector is going to have to demonstrate sustainability and ESG credentials. You can use AI to get started or use a software platform that includes AI to help with your data, but you need to build a sustainability and carbon reduction plan.

Nancy Powell

Sustainability Manager, HP

As Sustainability Manager for Hewlett-Packard (HP) across the UK, Ireland, and now the wider EMEA region, Nancy Powell leads a team that bridges specialist sustainability experts and the business across different markets.

The team work closely with HP's customers and partners to understand their challenges and help align the company's sustainability priorities with theirs. That means thinking about everything from product lifecycle and supply chain impact to regulatory reporting and Scope 3 emissions.

HP's sustainability strategy is evolving to become more transparent and customer-focused, says Nancy. "We're talking to partners and customers to understand the pressures they're facing, both from regulation and from their own customers. We know that for many of them, HP sits largely within their Scope 3 emissions, so we're looking at how we can support them more effectively with accessible data and tools, especially as new regulations come into play."

Sustainability is not a new focus for HP. "With our printer business and broad product mix, we've been recycling since the 1970s," she says. "So we've had a head start in understanding the value of refurbished and second-life hardware."

She says the company is already exploring where AI can be most useful in an ESG context (see Chapter 1). "We're using AI in manufacturing to improve quality, track metrics, reduce downtime and increase efficiency," she explains. "And when you look at logistics, everything a laptop goes through, from planes to ships to lorries, that feels like an obvious area where AI can help us do better."

One area where Nancy is already seeing AI make a difference is in sustainability reporting. Software platforms that collate carbon data, for instance, are helping to improve data quality, eliminate inconsistencies and give organisations a faster, more accurate view of their emissions, she says.

HP also runs numerous social impact programmes, including HP Life, which uses AI to help people around the world access education (see Chapter 2), and HP Renew, which promotes the use of refurbished products. While many of these initiatives don't yet use AI, Nancy believes it's only a matter of time. "For a customer's end-of-life hardware strategy, we recycle or refurbish the technology free of charge. The customer then has the option to have this technology redeployed by HP to a charity or a social enterprise that they or HP work with," she says.

One such customer is Tottenham Hotspur. The football club aims to redeploy its end-of-life technology to caregivers in Haringey, where it has strong community links and a longstanding relationship with children's services. "It's the perfect loop," says Nancy. "You take hardware from a commercial setting, give it a second life in a community that wouldn't otherwise have access to it, and then wrap around that digital skills training or business mentoring through HP Life. It can really make a difference."

The firm also has a similar relationship with the YMCA in Scotland, where it has set up face-to-face sessions for young people not in employment or education to help improve their digital skills, including an introduction to AI.

Nancy is positive about the long-term relationship between AI and sustainability. "We have to expect the best, not naively, but not cynically either. There are so many creative, intelligent people in tech working hard to tip the scales in our favour. We already have real examples of AI helping to create efficiencies, reduce downtime and extend the life of devices, and that's just the beginning. Over time, I believe the balance will shift towards more sustainable outcomes," she says.

> **One piece of advice:** Get people using AI. Encourage your teams to explore, upskill, and experiment. Maybe that starts with a few Copilot licences, but once people start using AI in their day-to-day work, you'll naturally uncover new use cases. AI is a huge opportunity, and we need to help people get comfortable with it. You can't afford to sit on the sidelines. If you're not engaging with it and encouraging your teams to do the same, you'll miss out on what it can offer.

John Gladstone

Sustainability Lead, Softcat

For John Gladstone, sustainability has been central to his career, from early roles in logistics, the circular economy, and lifecycle services to leading Softcat's growing environmental ESG strategy today.

But when he first moved into the sustainability role, John admits he wasn't entirely sure it was for him. "I cared about the planet, but I wouldn't say I was an environmentalist. But within a few weeks, I started to see the connection between technology, logistics, circularity and sustainability.

"We were already doing a huge amount at Softcat, but we just weren't publicising it." That's when John started focusing on building Softcat's sustainability strategy, setting science-based targets, and understanding what customers and partners want from the firm regarding sustainability and ESG.

When it comes to the environmental footprint of IT, John says the technology sector is headed in the wrong direction. "We're not like other industries where they may have peaked, where efficiency gains are already driving emissions down. With the developments of AI and the change in working styles since COVID the industry is on the ski lift going up – creating more data, using more power, retiring hardware faster than ever."

He cites a Boston Consulting Group report that states the ICT sector is now responsible for 3-4% of global CO2 emissions, about twice the level of the aviation sector and could account for up to 14% by 2040 if data use continues to grow.

This, he says, is why Softcat isn't using AI as part of its environmental strategy – yet. "AI brings speed and agility, but it's resource-heavy. It uses water, it uses power and this shouldn't be ignored.

"AI is only as good as the data it's fed. Bad data in, bad data out. And if you're using AI to generate carbon plans, you need to be sure the outcomes are credible. That still takes human assurance," he adds.

That validation step is often missing, John says, which is why Softcat has recently launched a Trust Centre, where documents like ISO standards, reports, and company polices are all publicly available online to demonstrate independent verification. "We needed to show full assurance – that our emissions, data, and disclosures are all independently verified, not just submitted onto a platform."

Within the channel, he sees potential for agent-based tools that can help gather supplier data at speed or scrape carbon reduction plans published online. But he is also cautious. Using some of these tools and platforms can be a big investment. Companies need to focus on how they use that data in a way that's not going to damage the business, but that can still make it more sustainable. That's the magic question."

One practical area John sees AI working for VARs is to help them understand what's possible and what the impact would be of changing the status quo. For example, he says, firms could use AI to check the impact of changing their car fleet to electric vehicles, put a business case together and do a cost analysis. That, he adds, would help to drive real change.

John believes technology will be part of the answer to the AI-versus-sustainability challenge. "Whenever a problem arises, someone finds a solution. Look at new cooling methods for data centres – there are emerging cooling technologies that could reduce such high dependency of water. Legislation will play a big role in driving efficiency, and I think we'll start measuring things like computing power and data produced per employee as a measurable performance metric."

> **One piece of advice:** Be aware of how you're going to use AI and what you want from it. It's easy to go down a rabbit hole. Ask yourself: Will it genuinely help? Not many companies in the channel are using AI for sustainability yet, and for good reason. There just aren't enough proven use cases. Start simple, be strategic, and don't overcomplicate it if you don't need to.

ESG UNWRAPPED

Nebula Global Services is a privately-owned, award winning, outcome focused technology channel services organisation with a mission to be the world's leading sustainable technology services business through the local unification of people and technology.

Our purpose is simple: an obsession to source-local, source-responsible and source ethical. We want to create a sustainable technology community for the benefit of future generations. We work as a collaborative partner with our customers, enabling them to achieve their sustainability goals and business outcomes.

Our ESG Unwrapped Series aims to demystify the ESG process, by providing useful, practical guidelines and advice to help our partners and customers achieve a common goal of helping our people, our communities and our planet be a better place for us all.

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