

KANTAR



When Sustainability Meets Tech

Building a tech brand in the era of
brand purpose and sustainability

Building a Sustainable Tech Brand

At Kantar, we understand sustainability as a multi-faceted and cross-functional area that goes beyond the environment and climate. Sustainability is also about social issues, gender, diversity, equity as well as product inclusion, economic empowerment, and even culture.

In fact, sustainability is about showing up where it matters to everyday people, everywhere.

In this paper, we primarily focus on the environmental impact and actions that various tech companies take, the influence they have and the perceptions they create in consumers' minds. This is however not to say that issues beyond the environment do not pertain to the tech industry; it is quite the opposite – concerns around the sustainability of business operations, supply chain, fair wages, safe living conditions or even mental health are equally important to address in consumers' eyes.¹

These issues are often so interconnected that the line between the environmental and the social is increasingly blurred. This will be unpacked further in the second installment of this series.

The world is at an inflection point, in which brands and businesses that respond to the sustainable revolution and to the changing values of society and the marketplace will be the ones with the best chance of increasing their equity and value among consumers and be truly future-proofed.

Unlike even only a decade ago, companies' actions can no longer be purely declaratory. Consumers expect much more. In fact, business actions cannot be light-touch at all, just like communicating sustainability cannot feel like greenwashing – a major concern among consumers worldwide.²

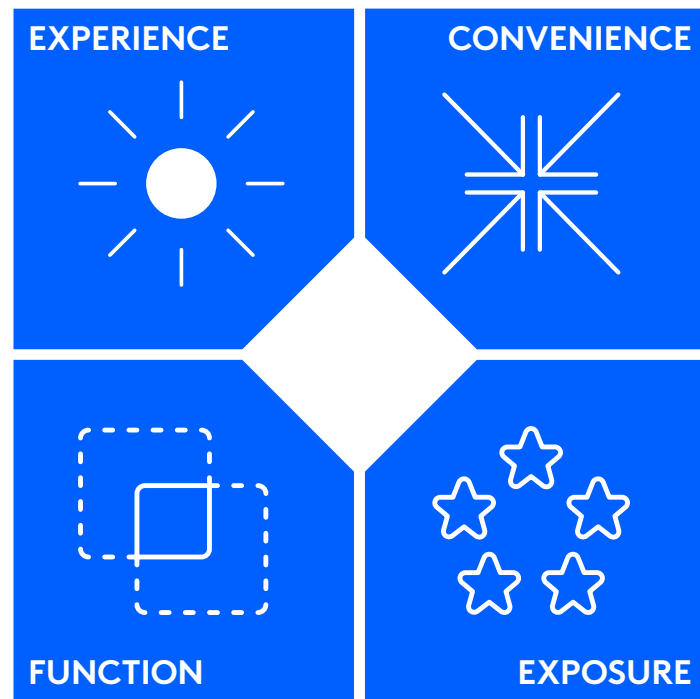
Sustainable business action needs to be truly transformative across the entire organization:

**INNOVATION
SUPPLY CHAIN
OPERATIONS
MARKETING
BRAND COMMUNICATIONS**

Simply put, sustainability needs to be at the very core of the business model.

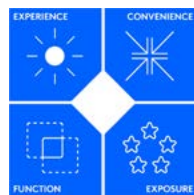
However, brands that focus on sustainability alone are not able to reap all the benefits in favor of their brand-building process. The fundamentals – experience, convenience, function, and exposure – drive 70% of brand equity³ overall and therefore remain key to getting messaging or positioning right. **It is truly a matter of not being able to have one without the other: successful brands cannot be built without the brand-building fundamentals, and also cannot be maintained and future-proofed without sustainable action.**

Figure 1: Sustainability and Brand Building Basics



FORMULA FOR SUCCESS IS:

SUSTAINABILITY + BRAND BUILDING BASICS = HIGHER PRICING POINT



Investment in sustainability pays off. Among Kantar BrandZ's top 100 most valuable brands for 2023, total sustainability contribution to brand value stands at 193 billion USD in 2023. Since 2014, consumers' endorsements of sustainability-related brand perceptions have risen by 84% across categories, and sustainability remains the single most important driver of corporate reputation, contributing 45%.⁴

The Hidden Environmental Toll of Tech



Different technology sectors are often criticized, to varying degrees, for their (perceived or not) lack of environmental consciousness or response to social issues. Whether it is Big Tech, emerging technologies such as AI or blockchain, or even more traditional hardware industries, consumers are prone to associate different technology sectors with high energy consumption, lack of energy efficiency, unsustainable sourcing of materials, unsustainable packaging, or relatively high carbon footprint.⁵ Consumers' expectations of tech companies in the space of "showing up where it matters" are often sky high.

This scrutiny is not unfounded. In 2021, the global technology industry⁶ produced between 2-3% of the world's total carbon emissions, which is comparable with the emissions from global aviation according to the United Nations' Environmental Programme.⁷ To illustrate, Amazon and Samsung together are estimated to produce over 36 million metric tons of CO₂e each year, which is roughly equal to the annual electricity use of over seven million homes.⁸ Even a single Google search consumes about 0.0003 kWh⁹ of energy or 0.2g of carbon dioxide to run – an equivalent of turning on a 60W bulb for 17 seconds. It is estimated that Google handles about 8.3 billion searches per day¹⁰, which would translate into having the same lightbulb left on every day for approximately 4,472 years.

The story is similar for emerging tech and perhaps further amplified by the fact that it can be initially difficult for people to grasp how newer, and always evolving, technologies such as AI or blockchain work and what their use cases are. This might make it more difficult for consumers to justify the amount of energy consumption and overall environmental impact that goes with them. For example, the next evolution of the Internet, the blockchain-powered Web3, consumes a lot of energy as its decentralized nature depends on solving complex cryptographic problems that require immense computing power. As a result, Bitcoin, a cryptocurrency run on blockchain and the biggest cryptocurrency by market capitalization, annually consumes more energy than Norway.¹¹

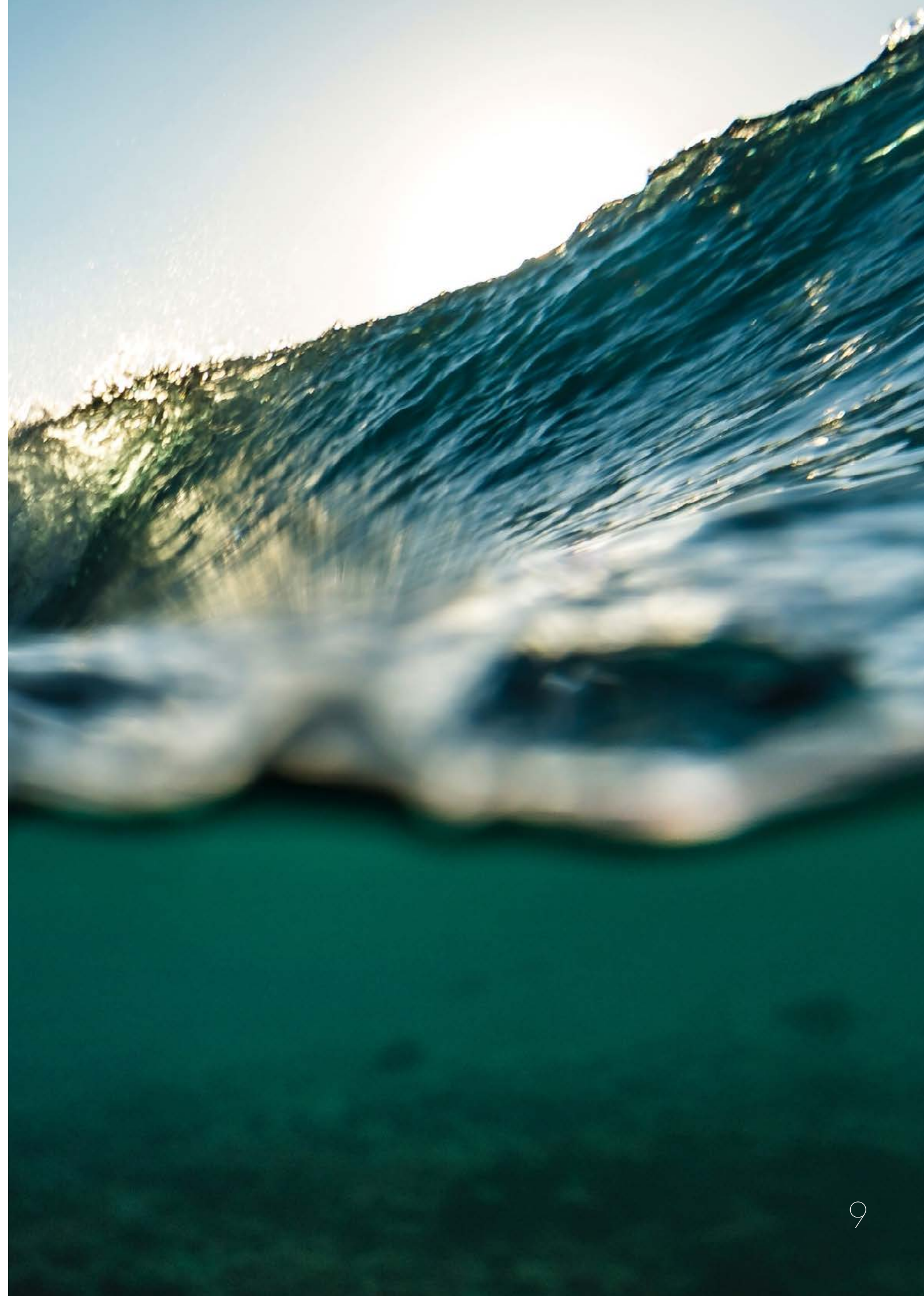
For AI, training a popular large language model (LLM) can produce nearly five times the lifetime emissions of the average car¹² and a single ChatGPT prompt consumes on average about 15% more energy than a single Google search.¹³ Consumption will only continue to grow as AI models continue to expand and new versions of popular technologies like ChatGPT come about. According to OpenAI researchers, the amount of computing power required to train the latest AI models has doubled every 3.4 months – far faster than what is typical for overall processing power for computers.¹⁴

In addition to energy, water consumption of tech companies like Microsoft and Google adapting AI technology continues to grow, as the need to cool data centers (and indirect consumption by power plants supplying these data centers) exponentially increases with the popularity of this technology.¹⁵ Other issues like e-waste disposal also have an indisputable impact on ecosystems.

While consumers need to be continuously educated on the underlying resource usage or environmental impact of emerging tech, as well as that of other everyday technologies that they have at their fingertips, much of the responsibility in finding more sustainable and responsible solutions lies with the companies behind the technology.

And, the clock is ticking. It is expected that total emissions from the Information and Communications Technology (ICT) industry – mostly coming from ICT infrastructure such as data centers and communication networks – will make up 14% of global emissions by 2040.¹⁶

The environmental impact of Big Tech is definitely significant in absolute terms but not necessarily in relation to the scale of their operations. In fact, in relative terms, energy consumption by leading tech companies might seem minor given the massive economic, financial, and social footprint combined with significant cultural and scientific influence.¹⁷ But it is precisely because of that immense multi-faceted footprint that Big Tech tends to be a target of consumer, but also institutional, scrutiny.



A hand is shown from the bottom, cupping several bright, glowing particles that resemble stars or small galaxies. The background is dark with several other glowing starburst light effects scattered across it. The overall color palette is dominated by dark blues, blacks, and bright whites/yellows from the light effects.

Opportunities for Climate Action by Tech Companies Are Ample

Google is a case in point. Google's sustainability strategy is three-fold – empowering individuals to take sustainable action through information, working with partners and customers to reduce their emissions through transformative technology, and operating its own business sustainably.

In 2022, Google's core products helped more than one billion users make more sustainable choices.¹⁸ Searches for 'solar energy,' 'electric bicycles,' and 'electric cars' reached all-time highs. 99% of the itineraries on Google Flights included carbon emissions estimates, the eco-friendly routing on Google Maps enabled 1.2 million metric tons of estimated carbon emissions reductions as of end 2022, and 113 billion kWh of energy was cumulatively saved by customers using Nest thermostats from 2011 to 2022.

In addition, Google made actionable climate data available to more than 40,000 cities around the world through its Environmental Insights Explorer including data on real-time wildfire boundaries in Search and Maps, supported more than 400 startups in over 60 countries as part of its Sustainable Development Program, and made 100% of its Pixel, Nest, and Chromecast devices launched in 2022 include recycled materials.¹⁹ Yet, the positive impact of these, and many other, efforts does not seem to be fully instilled with the public. Google's sustainability perceptions among global consumers sit at the 20th percentile in its category.²⁰

Apple is another example. The company has set many goals around the environment, the primary one being that they want their company – including their products – to be entirely carbon neutral by 2030.²¹ They have made notable improvements in the name of being more sustainable, both on a smaller and larger scale. For instance, in the fall of 2022, the company rolled out a smart feature in the United States that utilizes local carbon emission forecasts to determine “cleaner” times to charge personal devices.²² Apple also reported achieving carbon neutrality for Apple facilities worldwide in 2020, and has goals set for expanding this to its entire carbon footprint ahead of Intergovernmental Panel on Climate Change (IPCC) targets.²⁴

According to Apple’s latest Environmental Progress Report, the company has been transitioning plastic out of its packaging to use more recycled and renewable materials. In 2022, 20% of the materials they used for

shipping products came from recycled sources, such as paper.²⁵ Plastics account for only about 4% of Apple’s packaging – down from 21% in 2015. Their goal is to eliminate plastics from all their packaging by 2025. This appears to be an appropriate area of focus for Apple and for any company selling electronics, as “waste,” “the amount of things going to landfill,” “plastic and microplastics pollution,” and “overpackaging, single-use, non-recyclable packaging” are among the top 10 most relevant concerns for this sector.²⁶

After recently unveiling their first carbon neutral Apple Watch, Apple also promoted it while providing a status of all their other efforts in a unique campaign involving “Mother Nature” herself.²⁷ Despite the efforts, most of the climate-positive actions do not seem to be getting fully to consumers themselves as Apple, just like Google, is not fully living up to consumers’ expectations in its category either.

Google and Apple are not alone. Many companies across the technology sector do not appear to be fully living up to consumers’ expectations in the sustainability space, including Instagram, Netflix, YouTube but also Dell, IBM, Microsoft, Oracle, Salesforce, eBay, or Amazon.²⁸ This further corroborates that, in consumers’ minds, **tech companies face a high bar for what is expected of them in the space of “showing up where it matters.”**

This leaves a big question mark around how effective even the biggest tech brands are when it comes to communicating their own sustainability efforts. This also further corroborates the high expectations that consumers have of tech brands to do the right thing.

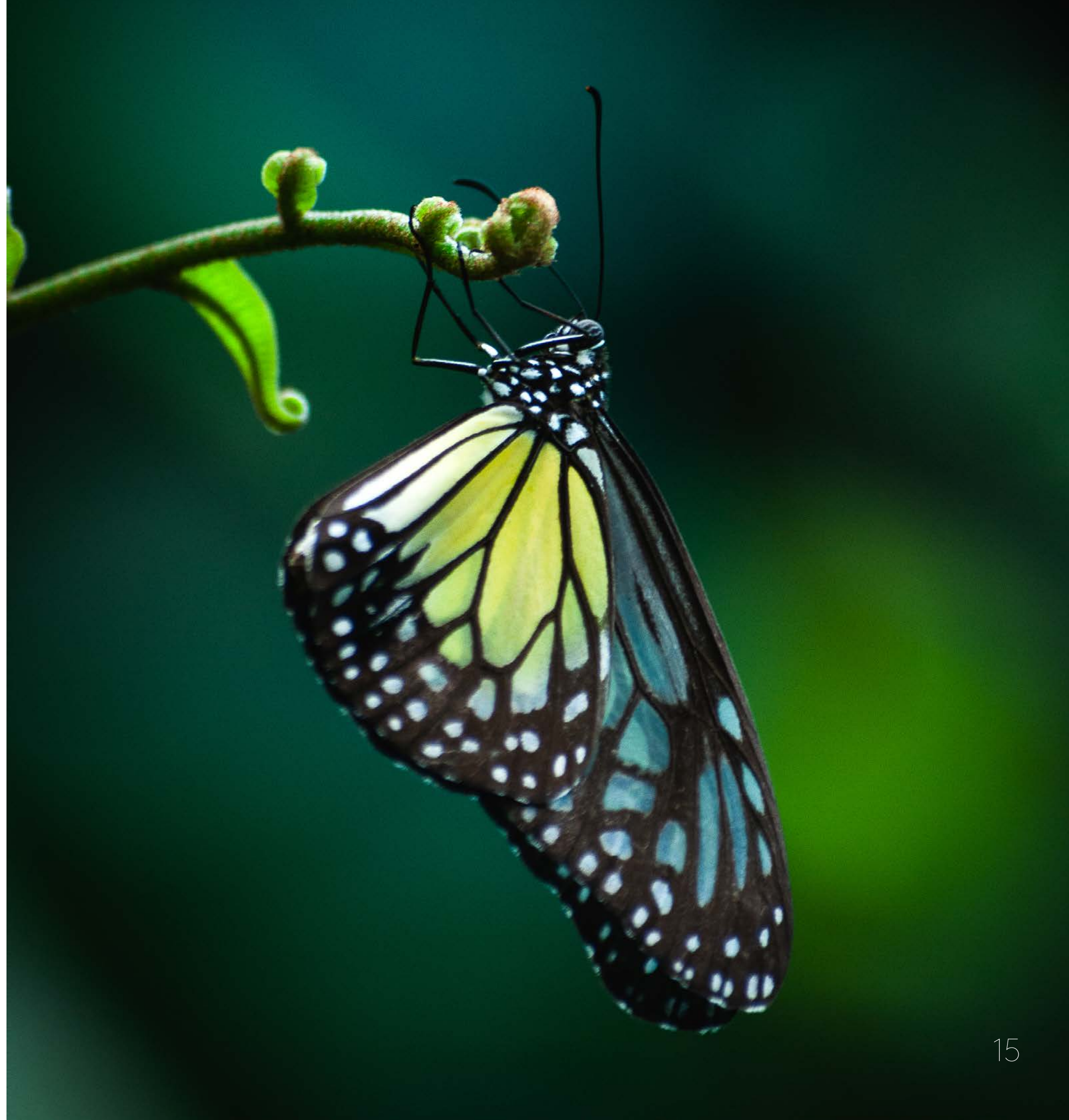
However, doing the right thing is just the first step. **If it is to work in a brand’s favor, communicating sustainable action is as important as taking sustainable action, just like having a great product will not get you far if nobody knows about it.**



HP is an example of a tech company that appears to have been doing a better job of getting its sustainability message across to consumers, thus getting a “fairer share” in terms of the contribution of sustainability to HP’s brand equity.²⁹ HP’s sustainability strategy combines elements of social equity with environmental sustainability, underlining increasing intersectionality of issues that require brands’ attention.

HP focuses on taking urgent and decisive action to achieve net zero carbon emissions across its entire value chain.³⁰ As such, the company strives to engineer the industry’s most sustainable portfolio – more than 50 products have been launched with ocean-bound plastics across the Elite, Pro, Z, Chromebook Enterprise, and Pavilion product lines. More than 1.8 million pounds of ocean-bound plastic have been sourced for use in HP products and 85% of HP’s ink cartridges are manufactured with recycled plastics.

Additionally, HP operates a comprehensive recycling program, HP Planet Partners, that helps consumers recycle end-of-life equipment and printing supplies, thus making it easier for consumers to take sustainable action. More than 875 million original HP ink and toner cartridges have been recycled by consumers themselves through the HP Planet Partners program. Depending on the region, the program also allows HP customers to repurpose, recycle, and replace their products. Options range from trading in personal devices, returning them for cash, recycling or shopping for replacement thus empowering consumers on their sustainable purchase journeys. Not only does the program infuse sustainability into HP’s business operations, it also empowers consumers to take sustainable action and ultimately serves as a communication tool for HP’s sustainability efforts as well.



Strategies for a Sustainable Tomorrow

Consumers have become increasingly demanding of brands and businesses to push for sustainable action. Their expectations are high, and, on the surface, it appears as if there has not been a better time to launch a sustainable product portfolio. Yet, while consumers are increasingly purpose-driven and demanding, a frustrating paradox remains at the heart of sustainability marketing: the value-action gap, or the phenomenon in which consumers' actual purchase behavior does not reflect their stated values.

Narrowing the value-action gap is key not just for scaling climate action but also for brands to capitalize on the business opportunity of sustainability. To achieve both, brands need to, first, let consumers know about more sustainable choices, and second, make those choices easy choices.

Tech brands in particular have the power to leverage their cultural, social, and economic influence to remove barriers to sustainable consumption, accelerate climate action, and strengthen and future-proof their own brands in the process. **What strategies can tech brands follow for a sustainable tomorrow?**

Know Your Sustainable Consumer

Learn about what sustainability means for consumers in your tech category, which issues they care about, and how sustainability enters consumers' purchase journeys.

Understand the size of the value-action gap in your tech category. The bigger the gap, the bigger the opportunity.

Consider leveraging your first-party consumer data powered by AI tools to help consumers understand opportunities for a positive environmental impact of their purchase decisions.

Always lead with authenticity, be true to your brand and understand its limitations in the sustainability space. Understand greenwashing and prevent it.

Product & Innovation

Ensure that your products are durable and easy to repair to avoid frequent updates that might make your sustainability efforts seem inauthentic.

Establish partnerships to facilitate sustainable action such as trade-in schemes, recycling programs, or re-sale of pre-loved products.

Provide information about a sustainable disposal of end-of-life products

Continue innovation on material recovery and sustainability overall.

Consider open sourcing your innovation for sustainability to help others become more sustainable.

Brand & Product Communications

Communicate sustainable action to consumers both at the corporate level and the product level.

At the product level, consider communicating products made with more recycled content, suppliers eliminating landfill waste, or less plastic used overall.

Shape the culture of sustainability by showing diverse people engaging in sustainable behaviors and taking climate action as a normal and fun part of their everyday lives in brand advertising and marketing communications while leading with genuine consumer needs.

Change behaviors by crafting stories about the sustainable way your products are made and how they contribute to carbon-neutrality.

About Kantar's Sustainable Transformation Practice



At Kantar, we believe in helping organizations succeed through a deeper understanding of people. We work across industries, offering our expertise in the areas of Brand, Creative, Media, Innovation, and Customer Experience all around the globe. Our strength lies in the unrivaled diversity of our people, methodologies, specialisms, and points of view that seamlessly fuse to give us a unique and complete understanding of people, across the world.

Kantar launched its Sustainable Transformation Practice in 2020 with the goal of helping brands develop sustainability- and purpose-driven business strategies and set an example for their consumers. Beyond the environmental and social implications, the practice highlights the economic opportunity of sustainability through strategic framing of sustainability, sustainable innovation, engaging activation, and measuring impact.

FOCUSED

Develop your 'Sword & Shield' strategy focusing on concerns that fit your category and brand purpose. Understand and prioritise different audiences, including under-represented populations. And define how your brand can deliver it in an authentic, unique and consistent way.

LEADING

Put sustainability and underserved highgrowth populations at the heart of your innovation development to anticipate disruptive change and develop a relevant portfolio that will enable behaviour change, closing the value-action gap.



LACKING

Ensure your brands' initiatives are making an impact and driving ROI. Benchmarking and brand value metrics provide a strategic feedback loop needed to drive progress across stakeholder audiences.

FAIR SHARE

Create engaging communications and executions that will grab people's attention, resonate with people through the right 'human story', convey the right emotions and empower people to act.

Kantar's Sustainable Transformation Practice fills a unique position in the marketplace, weaving in sustainability and social responsibility into the brand building process. We blend this expertise with our deep knowledge of the technology sector, working with tech clients big and small, all around the world.

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References

- ¹ Kantar. [Sustainable Sector Index](#) (2023)
- ² On average, across sectors, 52% of people say they have seen, or heard, false or misleading information about sustainable actions taken by brands. [Kantar. Sustainable Sector Index \(2023\)](#).
- ³ Kantar's Meaningful Difference Salience brand equity framework is the only brand equity framework to be externally validated. The Marketing Accountability Standards Board's (MASB) rigorous, methodological process links survey-based metrics to real-world consumer behaviors, including purchases. Read more here: <https://www.kantar.com/north-america/campaigns/why-choose-kantar>
- ⁴ Kantar. Global BrandZ database (2014 - 2022)
- ⁵ Kantar (2022, 2023). [2022 and 2023 Sustainable Sector Index](#)
- ⁶ Defined as top 100 tech companies ranked by market capitalization using <https://companiesmarketcap.com/>
- ⁷ ElectronicsHub (2023). [The Carbon Emissions of Big Tech](#)
- ⁸ EPA (2023). [Greenhouse Gas Equivalencies Calculator](#)
- ⁹ Time (2011). [6 Things You'd Never Guess About Google's Energy Use](#). (The energy consumption of a single Google search may have decreased since 2011 if Google's [data centers](#) increased in efficiencies in that time, and may vary slightly search-by-search.)
- ¹⁰ The exact number will depend on the day, time, and location.
- ¹¹ Rocky Mountain Institute (RMI, 2023). [Cryptocurrency's Energy Consumption Problem](#)
- ¹² Earth.org (2023). [The Green Dilemma: Can AI Fulfill Its Potential Without Harming the Environment?](#)
- ¹³ The University of Washington (2023). [Q&A: UW researcher discusses just how much energy ChatGPT uses](#).
- ¹⁴ Scientific Computing World. [The true cost of AI innovation](#)
- ¹⁵ WARC (2023). [The environmental cost of AI keeps growing](#)
- ¹⁶ Earth.org (2023). [The Green Dilemma: Can AI Fulfill Its Potential Without Harming the Environment?](#)
- ¹⁷ IEA (2021). [5 Ways Big Tech Could Have Big Impacts on Clean Energy Transitions](#)
- ¹⁸ Google Blog (2022). [Accelerating climate action at Google and beyond](#).
- ¹⁹ Google (2023). [2023 Environmental Report](#)
- ²⁰ Kantar (2023). Global BrandZ database.
- ²¹ Apple (2023), [Environment Landing Page](#).
- ²² Digital Trends (2023). [Your iPhone has a secret feature that helps the environment – here's how it works](#)
- ²³ Through a mix of sourcing renewable energy and purchasing carbon offsets for remaining emissions, according to 2023 Environmental Progress Report. Apple (2022). [Apple commits to be 100 percent carbon neutral for its supply chain and products by 2030](#)
- ²⁴ IPCC targets are targets for emissions reduction set by the Intergovernmental [Panel on Climate Change \(IPCC\)](#).
- ²⁵ Apple (2023), [2023 Environmental Progress Report](#)
- ²⁶ Kantar (2023). [2023 Sustainable Sector Index](#)
- ²⁷ Apple, 2023 Status | Mother Nature ([YouTube](#))
- ²⁸ Globally, around a quarter of all brands lack strong sustainability credentials among consumers in their category. Kantar. Global BrandZ database (2023)
- ²⁹ Kantar. 2023 BrandZ Database. Sustainability Contribution to Value (SCV).
- ³⁰ HP (2023). [Sustainable Impact](#).