Deloitte



ESG intervention in the product operating model

How financial institutions can proactively integrate ESG thinking into their product operating model

May 2024

Table of contents

ESG: Invest in the future3
The ESG view4
Introducing product operating model7
ESG intervention in the product operating model9
What does the future hold for ESG?18
Authors19
Endnotes

ESG: Invest in the future

In an era where businesses are challenged to redefine their roles within the global ecosystem, the financial sector emerges as a pivotal player in driving sustainable change. This paper delves into transforming the product operating model through the lens of environmental, social, and governance (ESG) principles. Beyond being a mere buzzword, ESG represents an imperative for banks to realign their priorities. This paradigm shift encapsulates not only an ethical obligation but also a strategic necessity, as it holds the key to mitigating risks, enhancing resilience, and fostering long-term value creation. This paper underscores how embracing sustainability isn't just a choice, but an existential need for financial institutions aiming to thrive in a rapidly evolving landscape.

The ESG view

Environment, social, and governance (ESG) is a mechanism to transparently communicate how organizations are operationalizing their sustainability agenda. It reflects the broad set of environmental and societal risks, opportunities, and disrupters by which an organization manages, measures, and communicates its performance. ESG has become important to financial services institutions as they experience increasing levels of environmental risk; changing societal norms, and demand from customers, employees, investors, and regulators.



In September 2020, global investor groups representing more than \$103 trillion wrote an open letter asking companies and their auditors to include climate-related risks in financial reporting.

S&P Global¹



ැනු

Customers are increasingly prioritizing sustainability and ethical practices when making purchasing decisions and, in some cases, are willing to pay a premium. ESG considerations enable companies to meet customer expectations and demonstrate their commitment to environmental stewardship, social responsibility, and ethical governance. By aligning with customer values, businesses can enhance brand loyalty, attract new customers, and gain a competitive advantage in the marketplace.



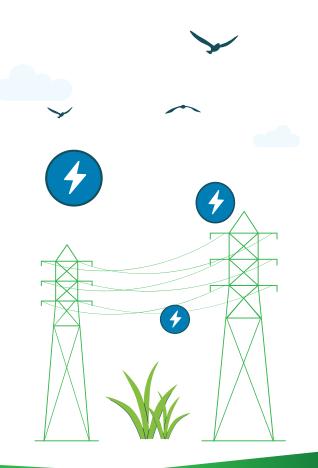
Employees expect their employers to focus on a low-carbon future and actively involve them in actions to address climate change. Employers' sustainability practices will be pivotal to attract and retain millennials and Gen Zers who are increasingly dominating the workforce.² In a survey by Deloitte, 50% of Gen Zers and 46% of millennials said they and their colleagues are pressuring businesses to take action on climate change.³



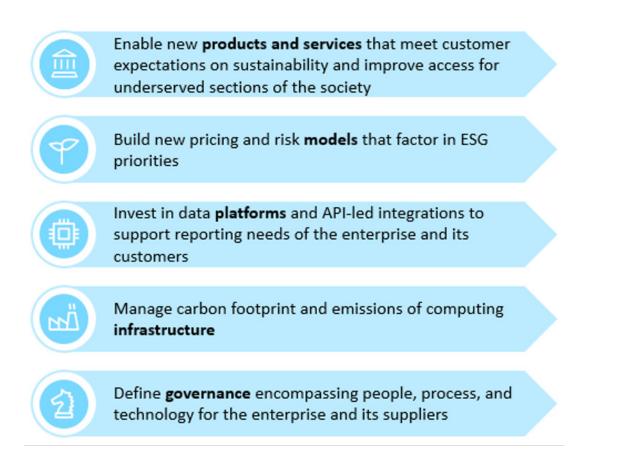
Investors are increasingly viewing climate risk as investment risk. A company's ESG reporting provides valuable insights into a company's long-term sustainability and risk management. Investing in companies with strong ESG practices could lead to better financial performance, reduced risk exposure, and improved reputation.



Regulators across the globe are increasingly implementing stricter ESG guidelines and reporting requirements to promote transparency, mitigate risks, and protect the interests of all stakeholders, not just shareholders. The US Securities and Exchange Commission (SEC) has proposed rules that mandate certain disclosures, so investors receive complete and consistent information to make their investment decisions. European Union's Sustainable Finance Disclosure Regulation (SFDR), Corporate Sustainability Reporting Directive (CSRD), and green taxonomy forms the base of sustainable finance regulation.⁴ A growing number of countries are pushing companies to report their climate-related risk based on the new Task Force on Climate-related Financial Disclosures (TCFD) framework.



With increasing focus from all the major stakeholders, product and technology leaders in financial institutions are now transitioning away from a passive ESG strategy to take a more holistic approach spanning several layers:



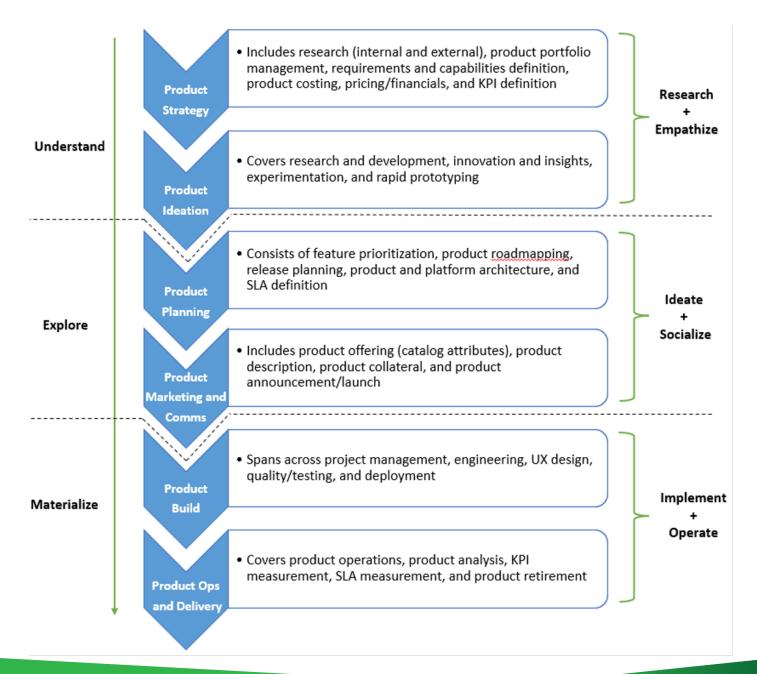
To meet these priorities, product and technology leaders should review their end-to-end product operating model and build in ESG priorities across strategy, plan, build, and deliver.

As regulations and customer expectations continue to evolve, banks should be nimble in their strategy to adopt, experiment, and evolve.

Introducing product operating model

Before diving deep into how we can embed ESG into the product operating model, let's define what we mean by product and product operating model.

A product, in this context, is a vehicle to deliver value; not to be confused with financial products like checking accounts, credit cards, or mortgages. A product has a clear boundary, known stakeholders, and well-defined users or customers. A product could be a service, a physical product, or even something abstract.⁵ A **product operating model** is how business and technology work together—organized into dedicated, cross-functional teams—and deliver measurable outcomes fast and frequently.⁶ Product operating model helps align organizational goals and customer needs by solving complex problems in iterative cycles that adjust to ever-changing market situations. It can help ensure end-to-end accountability, transparency, and security across the product life cycle.



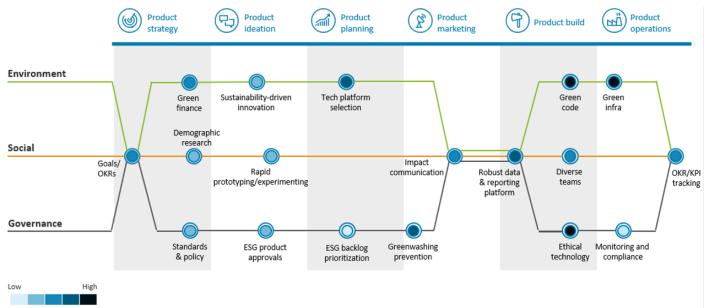
Potential benefits:

- **Customer-centricity:** Focus on external or internal customer needs through frequent interactions and communications, and design products that most cost-effectively deliver business value.
- **Faster time to market:** Deliver value fast and frequently through a minimum viable product (MVP) followed by iterative enhancements and improvements, as opposed to waiting endlessly for perfection.
- **Increased agility:** Recalibrate delivery to prioritize features creating greater business value.
- Increased accountability and transparency: Devise clear ownership of the product with ability to track investments against benefits to drive customer value realization.



ESG intervention in the product operating model

As a product operating model-driven delivery approach replaces the traditional project-driven approach across financial institutions, product and technology leaders should look at embedding ESG across the end-to-end product life cycle. This could help strategically prioritize the product stages to maximize impact while following an experiment-driven, iterative approach to ever-evolving goals.



Level of E/S/G Intervention

Product operating model area	Use case	Description	ESG intervention		
			Environment	Social	Governance
Product strategy	Objectives and key results (OKRs)	Defining ESG-specific objectives and outlining key results that help track if product teams are making progress in the right direction (e.g., reduce carbon footprint by 20%, increase representation of minority groups by 25%, achieve 90% compliance with GDPR).	✓	~	✓
	Green finance	Conceptualizing new financial products like funds or credit cards that support sustainable investments or activities and generate additional revenue streams for banks.	~		
	Demographic research	While conducting customer research, ensure coverage for identified minority groups—based on age, sex, race or socioeconomic factors, which could help identify their unmet needs.		V	
	Standards and policy	Define standards and processes upfront to ensure compliance with applicable regulations and corporate governance policies (e.g., team diversity, handling of PII data, code of conduct, risk identification, and reporting mechanism).			✓
Product ideation	Sustainability- driven innovation	Provide channels for sharing and rewarding ideas, no matter how small or large, that have positive sustainability impact (e.g., reducing CPU utilization, promoting component reusability).	✓		
	Rapid prototyping/ experimenting	Pilot new products with target demographic before investing too much, and course correct based on the feedback. Fail fast and fail cheap.		V	
	ESG product approvals	Ensure that long-term ESG priorities do not take a back seat in favor of projects providing more short-term gratification.			V
Product planning	Tech platform selection	Include sustainability criteria while evaluating tech vendors, platforms, and services for both strategic and operational fitness (e.g., infrastructure footprint, regulatory compliance, transparency, policies).	V		
	ESG backlog prioritization	Ensure product backlog items having ESG impact are tagged appropriately and report their prioritization status and progress to ensure they don't get pushed down.			V

Product operating model area	Use case	Description	ESG intervention		
			Environment	Social	Governance
Product marketing	Impact communication	Communicate environment and social impact created by the product and be transparent about governance policies and processes as they could be marketplace differentiators.	~	✓	✓
	Greenwashing prevention � Focus Area	Tendency to just "check the box" with ESG could lead to overstating the impact. Product governance should define specific policies and monitoring to measure and validate product's true ESG impact before it is communicated to stakeholders.			V
Product build	Robust data and reporting platform & Focus Area	Integrated, real-time data exchange and analytics are at the heart of any ESG strategy as they enable a wide range of capabilities like satisfying regulators' or stakeholders' carbon reporting needs, tracking and measuring underlying parameters to shape the organization's ESG strategy, and profitably building new green financial products.	✓	V	V
	Green code 🛠 Focus Area	Green coding refers to environmentally sustainable computing practice that seeks to minimize the energy involved in processing lines of code. It is achieved through choice of programming languages, lines of code, cyclomatic complexity, reusability etc.	✓		
	Diverse teams	Diverse teams improve group think and reduce bias, and the products built by diverse teams can relate better to customers. Diverse teams are smarter teams and they accelerate product delivery. It's not only a profitable thing to do, but the right thing to do.		✓	
	Ethical technology � Focus Area	Technology itself lacks ethics inherently. With increasing pervasiveness of technology in human life, creators and builders bear the responsibility to embed ethics throughout the process. That way, the product doesn't stray from the organization's values.			v

Product operating model area	Use case	Description	ESG intervention		
			Environment	Social	Governance
Product operations	Green infrastructure 🛠 Focus Area	Green infrastructure refers to the practice of optimizing consumption of compute, network, and storage resources resulting in reduction of energy usage, and thereby reducing the organization's carbon footprint.	✓		
	Monitoring and compliance	Product operations must be continuously evaluated for compliance to various governance standards and policies defined upfront, and a feedback loop should be established to refine such standards and policies.			✓
	OKR tracking	ESG OKRs defined during the strategy phase need to be tracked and refined throughout product operations to ensure alignment of product delivery to the organization's ESG objectives.	V	V	V

Let's look at some select use cases in further detail.

Green finance

Financial products refers to deposit and lending instruments, such as checking accounts, credit cards, and mortgages, which allow customers to manage and use money. Green finance refers to designing financial products that support sustainability-oriented and environment-friendly investments and activities.

Product	Description
Deposits	 Funds held are used to either finance or invest into companies or projects that meet the criteria established by the FI
Bonds	 Green bonds are debt securities designed to raise money for projects with sustainability or climate agenda Blue bonds finance projects that protect the ocean and its ecosystem from pollution and overfishing Climate bonds finance projects that reduce carbon emissions
Loans	 Projects related to renewable energy such as wind, solar, tidal Development of products like smart meters, LED lights that reduce energy consumption Purchase of electric vehicles (EVs) Construction or renovation of buildings that carry certifications such as LEED
Credit cards	 Lower APR or higher reward points for purchases from local shops and restaurants that support the community or for sustainability-focused purchases such as public transportation tickets Donate reward points to organizations advocating ESG agenda

As demand for ESG-focused financial products is ever-evolving, financial services firms need to ensure:

- They are able to launch these products quickly and cheaply failing fast and correcting course.
- These products are appropriately priced to ensure profitability and competitiveness.
- The underlying sustainability parameters are being tracked and reported to customers to justify the impact.

Green computing (code and infrastructure)

Back in the days when computing power was limited, software developers strived to optimize consumption of resources like CPU, memory, and storage. However, with the explosion of computing power through cloud computing, developers are no longer constrained. That's led to an exponential rise in lines of code and volumes of stored data, which, in turn, is spiraling electricity consumption and carbon emissions. Green computing seeks to limit technology's environmental impact, including reducing the carbon footprint in high-intensity operations, such as for manufacturing lines, data centers, and even the day-to-day operations of business teams. Green computing, when incorporated during the "build" stage of the product operating model, could be a vital step for organizations looking to achieve sustainability goals and reduce their carbon footprint. Green computing has three fundamental pillars:

Code/logic

Green coding is an environmentally sustainable computing practice that seeks to minimize the energy involved in processing lines of code and, in turn, help organizations reduce overall energy consumption.¹⁰ Without compromising on the value being delivered by the software product, this involves building software that requires using the following elements:

- Energy-efficient programming languages (C, C++, Java)
- Fewer number of lines of code
- Little-to-no dead code in product builds
- Least complexity
- Fewer number of parameters (for machine learning use cases)
- Utilizing existing lines of code instead of rewriting

As part of the product operating model, focus on training your engineers and incorporating green coding across steps like coding, code reviews, and static analysis. Developing countries currently account for just \$1.6 billion of the estimated \$33 billion in outstanding green loans⁷

> The energy consumption of IT infrastructure is increasing by 9% every year.⁸

By 2040, it is expected to account for 14% of the world's carbon footprint an increase of about 1.5% since 2007.9

Infrastructure

All software, regardless of on-premise or in-cloud status, needs compute, memory, storage, and networking infrastructure in order to run. This infrastructure, even in idle state, needs energy and is increasingly contributing to the carbon footprint of organizations. They need to embed effective and optimal use of underlying infrastructure into their SDLC and infrastructure provisioning processes by:

- Choosing the energy-efficient IT infrastructure for on-prem and cloud data centers.¹¹
- Measuring, tracking, and optimizing server utilization.
- Choosing virtual server rather than physical server usage.
- Developing an auto-scaling practice to provision servers instead of manually tracking and managing.

These practices will likely result in optimized infrastructure, reduced computing power, and energy and cost savings. Migration to cloud can help financial institutions reduce their carbon emissions by 88%, with public cloud providers like AWS leveraging environmental economies of scale. With cloud, organizations tend to use 77% fewer servers and 84% less power—and tap into a 28% cleaner mix of solar and wind power versus their own data centers.¹²

Equitable lending through robust data and reporting platforms

Many banks are under regulatory scrutiny for not doing enough to equitably lend to small and minority-owned businesses on account of the presence of historic and interrelated systematic errors such as race, color, and class discrimination; social, cultural, and educational marginalization; and lower levels of wealth. Banks are now seeking new ways to grow their businesses by including the historically underserved parts of society, and they are rethinking their credit approach to facilitate financing.

Establishing a new product or service line to extend loans to underserved parts of society is a strategic move that traditional financial services players are making. However, the traditional way of performing due diligence before underwriting loans will not work due to a lack of information and credit rating for representatives to review.

The new approach will require banks to look beyond the typical data (credit score, balance sheet etc.) considered for financing and start factoring unconventional data.¹⁵

 Public cloud infrastructure could be 3.6 times more energy efficient than the median for US enterprise data centers.¹³

> Large banks rejected more than 60% of loan applications they received from business owners of color—applications that, by and large, were evaluated according to traditional underwriting criteria, including credit scores.¹⁴

Traditional parameters (used to assess large corporations)

- Strength of balance sheet
- Interest coverage ratio
- Profit and loss statement
- Consistency in financial performance
- Strong operating history
- Debt capacity
- Outstanding loans

Unconventional parameters (used to assess small businesses)

- Real-time cash flow
- Transaction activity and history across financial platforms
- Information on stakeholders (customers, vendors)
- Direct payment records across stakeholders
- Current inventory level and account receivables
- Order and sales history
- Time and growth in business (in short time span)

As banks continue to find new avenues for growth and readjust their risk appetite and approach, ones moving quickly are likely to have first-mover advantage and gain a larger share of the market. Banks will also need to set up business metrics to continue to evaluate and refine their approach to providing credit access to these underserved small businesses. Banks may also leverage the services of credit bureaus that recently launched new commercial credit scores designed to expand credit access for small businesses.

Diverse product teams

As the focus for organizations shifts toward having an ESG view while building products for communities, it is equally important for internal stakeholders to take an ESG view as well. Like customers, employees should be treated with a social lens providing them equitable opportunities, promoting diversity, and establishing inclusion. This new focus is not just to put a checkmark against the regulatory bodies' guidelines or to maintain any industry standard; rather, it comes with several benefits for the organization: promoting innovation, refreshing culture, and improving employee retention rates.¹⁶

- Diverse teams are smarter than homogenous ones. Several research studies have repeatedly concluded that when diverse teams are set up, group think improves. Individuals question each other's assumptions before drawing conclusions, which can lead to critical thinking. Diverse teams thus make fewer factual errors compared to homogeneous groups.
- Diverse teams are less likely to react to retained biases. When people from different backgrounds form a team, the biases don't hold as strong compared to those in homogeneous groups. This could result in careful examination of available information and improved decision-making.

In a global analysis of 2,400 companies conducted by Credit Suisse, organizations with at least one female board member yielded higher return on equity and higher net income growth than those that did not have any women on the board.¹⁷ • Diverse teams come up with innovative products faster. Because of different backgrounds, experiences, and cultural diversity, the probability of discovering innovative products increases. Studies have shown that a diverse workforce often brings a wider range of perspectives and experiences to the table, which can lead to better decision-making and problem-solving. As diversity promotes critical thinking, bias elimination, and innovating through new approaches, organizations need to make sure that employees from historically underrepresented backgrounds have equal opportunity to put forward ideas.

Ethical technology

Technology often lacks inherent ethical values. Ethical principles thus need to be instilled in a product during its creation. Trust in pervasive technology often necessitates compromising data privacy and algorithm transparency. Therefore, creators bear the responsibility of embedding ethics into technology during planning, building, and deployment.¹⁸

While teams may focus on technology's achievements during planning, considering potential risks is increasingly important. For example, the dangers of misinformation and manipulation through deepfakes highlight the need for collaboration among technology companies, regulatory agencies, and law enforcement to establish legal frameworks. Implementing an ethicscentric framework from the outset is crucial to deploy trustworthy technology for users. Banks as custodians of individuals' financial assets, entrusted with critical financial transactions, require ethical technology to uphold principles of trust, transparency, and fairness. With the increasing reliance on digital services and automated processes, ensuring the ethical use of technology is paramount to help prevent fraud, data breaches, and discriminatory practices.

With the impetus on omnichannel experience, organizations including financial institutions have presence across digital forums like websites, mobile apps, social media, or any other internet or web-enabled products and services. This warrants a need to institute a digital governance framework that establishes accountability and decision-making authority for ethical product deployment.

Following is an organization structure that can be applied across the product operating model to solidify ethical technology principles.¹⁹

	Responsibilities for ethical product deployment	Example of impact in ethical tech ²⁰
Chief technology ethics officer (accountable)	A single individual accountable for potential impact of the product and risk that needs to be mitigated	Al code of conduct, equitable access to digital resources
Product planning managers (consulted, informed)	Embeds principle of ethics right from the planning stage of the product; also includes specialists from across disciplines to provide foresight on any unintended consequences	Human control by algorithm
Developers (responsible)	A diverse team across gender, race, sexual orientation, and age, which uses human- centric development principles to build the product	Al bias, commoditizing user data

Communication and marketing of products

While organizations continue to refresh their product operating models to come up with products that have environmental and social impacts, it is equally important for these organizations to communicate and market such products. As the products are built for diverse social groups, articulation becomes imperative to ensure adoption. There are multiple messages that can be incorporated into the communication, some of which include:

- The organization's vision to ensure customers are aware of the direction the company is taking to adopt ESG practices.
- Being transparent about the product and its established processes and policies.
- Talking about the environmental and social impacts created over time with the product.

Greenwashing prevention

As pressure mounts to socialize banks' ESG initiatives, at both the entity and product level, they will increasingly be required to prove that their products and services comply with sustainability standards. This may drive leadership to provide the public or investors with misleading or outright false information about the environmental impact of the company's products and operation what is commonly known as greenwashing. "Green sheen" banks are vulnerable to growing enforcements, probes, and penalties over misinterpreted sustainability statements.²¹ These regulatory crackdowns can not only lead to financial impacts via penalties but also have adverse impacts on banks' reputation.

Banks may have an existing risk framework at the product and entity levels, but they should revisit that framework to map new risks arising out of acts of greenwashing on existing taxonomies, such as impact type or risk type, and develop strategies to combat these risks. Having a comprehensive strategy at the firm level by embedding ESG into the operating model can prevent inconsistent and misleading sustainability claims.²² Even a 1% increase in the number of independent directors can reduce ESG greenwashing by 0.85%.²³

In 2021, 93% of ESG leaders were appointed externally, with 80% having prior experience in an ESG-related role.²⁴

What does the future hold for ESG?

Millennials and Gen Z are poised to become the overwhelming majority in the workforce. Gradually there will be a transition of leadership from baby boomers to millennials. The younger generations believe business leaders play a crucial role in addressing the social and environmental issues.

These two generations have already started taking actions in their lifestyle choices for a sustainable future. The spillover of their mindset will be felt in their corporate actions, and the collective influence of these generations will shape the ESG agenda for the next decade.

ESG 2.0

ESG has gone from being a functional requirement to a commercial imperative. Best-in-class organizations are embracing ESG because they believe in the benefits of incorporating sustainability into their corporate strategies. This shift from a minimalist approach (satisfying basic reporting criteria, mid-level management hirings etc.) to a more sophisticated approach (reporting sustainability metrics to regulators as needed, specialized skill-based hiring at the executive level, and so forth) involving actual material impact is the new ESG phase: ESG 2.0.²⁵

According to a Deloitte survey, 50% of Gen Zers and 46% of millennials say they and their colleagues are pressuring businesses to act on climate change.²⁶

Authors



Tushar Daru Principal Deloitte Consulting LLP tdaru@deloitte.com



Vaibhav Sathe

Senior Manager Deloitte Consulting LLP vasathe@deloitte.com



Saurabh Dewangan Senior Consultant Deloitte Consulting India Pvt. Ltd. sadewangan@deloitte.com



Aditya Kumar Jha Senior Consultant Deloitte Consulting India Pvt. Ltd. adkumarjha@deloitte.com



Akanksha Singh Consultant Deloitte Consulting India Pvt. Ltd. akankshasingh2@deloitte.com

Endnotes

- 1 Jennifer Laidlaw, "New global sustainability board aims to cut through disclosure confusion," S&P Global, October 15, 2021.
- 2 Michael Timms, "Millennials and Gen Z: Now is the time to reshape businesses to harness their power," Forbes, June 27, 2022.
- 3 Deloitte, 2023 Gen Z and Millennial Survey, 2023.
- 4 Laidlaw, "New global sustainability board aims to cut through disclosure confusion."
- 5 Tushar Daru, Vaibhav Sathe, and Geetika Aggarwal, Fast and frequent value delivery, Deloitte, 2020.
- 6 Ibid.
- 7 The World Bank, "What you need to know about green loans," October 4, 2021.
- 8 Hugues Ferreboeuf, Maxime Efoui-Hess, and Zeynep Kahraman, Lean ICT: Towards digital sobriety, The Shift Project, March 2019.
- 9 Salesforce, "Technologists want to develop software sustainably, but nearly half don't know how," May 4, 2023.
- 10 IBM, "Why green coding is a powerful catalyst for sustainability initiatives," January 9, 2023.
- 11 Ibid.
- 12 Ibid.
- 13 Ponnu Kailasam et al., Using cloud to help combat climate change and become responsible producers and consumers (UN SDGs), Deloitte + AWS, June 2023.
- 14 Jason Malo et al., Predicts 2023: Ability to quantify ESG initiatives will make or break banks' success with them, Gartner, January 31, 2023.
- 15 Ibid.
- 16 David Rock and Heidi Grant, "Why diverse teams are smarter," Harvard Business Review, November 4, 2016.
- 17 Ibid.
- 18 Kwasi Mitchell and Beena Ammanath, State of ethics and trust in technology: Annual report, Deloitte, 2022.
- 19 Beena Ammanath, "Thinking through the ethics of new tech... before there's a problem," Harvard Business Review, November 9, 2021.
- 20 Forbes Expert Panel, "14 tech-related ethical concerns and how they can be addressed," Forbes, August 1, 2022.
- 21 Adam Hayes, "What is greenwashing? How it works, examples, and statistics," Investopedia, updated January 22, 2024.
- 22 James Staight, "Green-banking or greenwashing? The FCA's anti-greenwashing rules and the implications for firms," Deloitte's Net Zero blog, January 16, 2023.
- 23 Benjamin Laker, "The troubling evolution of large scale corporate greenwashing," Forbes, November 18, 2021.
- 24 Kurt B. Harrison, Emily Meneer, and Beijing Zhu, "ESG 2.0—The next generation of leadership," Harvard Law School Forum on Corporate Governance, September 2, 2021.
- 25 Deloitte, 2023 Gen Z and Millennial Survey.
- 26 Harrison et al., "ESG 2.0—The next generation of leadership."



About Deloitte

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. In the United States, Deloitte refers to one or more of the US member firms of DTTL, their related entities that operate using the "Deloitte" name in the United States and their respective affiliates. Certain services may not be available to attest clients under the rules and regulations of public accounting. Please see www.deloitte.com/about to learn more about our global network of member firms.

Copyright © 2024 Deloitte Development LLC. All rights reserved.

©2024 Deloitte Access Economics. Deloitte Touche Tohmatsu.

Designed by CoRe Creative Services. RITM1755435