



Redesigning brand values

Purpose and profit converge in core operations

In association with



How IBM can help

IBM researchers and consultants create innovative solutions that help consumer products companies become more consumer-centric by delivering compelling brand experiences, collaborating more effectively with channel partners, and aligning demand and supply. For more information, please visit: ibm.com/industries/consumer-goods.

With a comprehensive portfolio of retail solutions for merchandising, supply chain management, omnichannel retailing, and advanced analytics, IBM helps deliver rapid time to value. With global capabilities that span 170 countries, we help retailers anticipate change and profit from new opportunities. For more information, please visit: ibm.com/industries/retail.

To put your sustainability goals into action, you need a strategy and solutions that are specific to your needs. Make informed decisions by making the most of your data. Connect your strategy with day-to-day operations to embed sustainability into your business transformation. For more information, please visit: ibm.com/sustainability

Finally. The strategic alignment of sustainability and operations.

Sustainability is no longer a standalone priority. Executives are integrating it into core operations.

Organizations in the consumer industry have made a significant pivot to align their sustainability goals and operational objectives, according to our latest research. As they redesign their supply chain and manufacturing operations following the massive pandemic-driven disruptions, sustainability is no longer a standalone priority. Instead, executives are seizing this moment to integrate it into core operations. This shift is putting organizations on the fast track to the radical reinvention needed to achieve the quadruple bottom line: protecting people, planet, profit, and purpose.

The need for this change? It's immediate. Progress reports on greenhouse gas (GHG) reduction initiatives are alarming, calling for "urgent system-wide transformation" across all industries to avoid a climate disaster.¹ Consumer products executives play an essential role in the fight against rising GHG emissions, with the World Economic Forum estimating that the industry produces more than one-third of global GHG totals.²

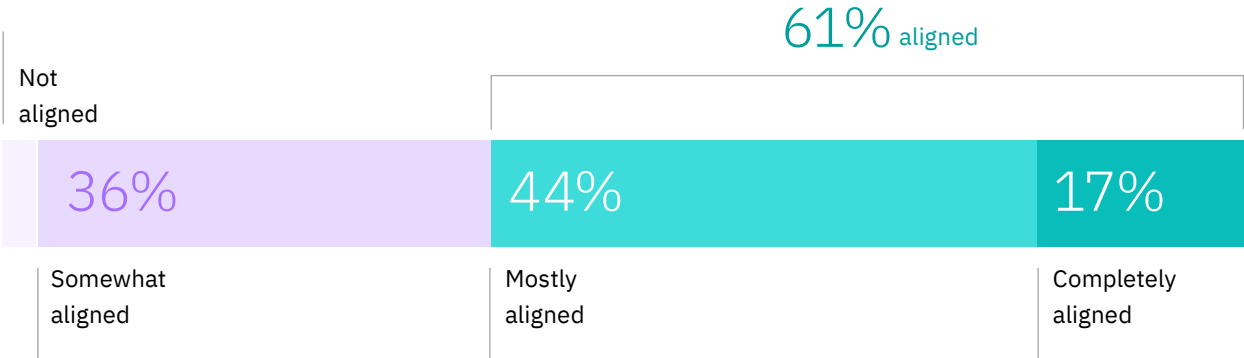
Closer to home, consumer products companies are also being held accountable by their investors and an emerging group of purpose-driven consumers—savvy shoppers who are increasingly aware of the environmental and social impact of their purchases.³ From design to disposal, these activists are pushing the industry to factor in sustainability.

To understand how leaders in the consumer industry balance emerging and urgent sustainability objectives with ongoing operational goals, the IBM Institute for Business Value (IBV) and the Consumer Goods Forum (CGF) surveyed more than 1,800 industry executives across 23 countries (see Study methodology on page 26 for more details). We found:

- **Leaders no longer view sustainability and operations as separate initiatives.**
 Instead, three out of five say they are purposefully aligning sustainability and operations goals to optimize investments and efforts to achieve objectives in both areas (see Figure 1).
- **Almost 75% of leaders agree they need to recalibrate how they measure and report on their sustainability targets,** but they don't have the capabilities to monitor and measure progress in real time.
- **So, they are turning to technology to help them deliver on the promise of operationalizing sustainability.**
 They estimate technology budgets will grow by 34% over the next three years.

FIGURE 1

Most organizations are aligning operations and sustainability objectives.



Q. How aligned are your organization's operations and sustainability objectives?

Accelerating growth with sustainability

Consumer industry executives have always juggled competing priorities as they face pressure from a growing list of regulatory, financial, and consumer demands. A year into the pandemic, IBV research found organizations were focused on reducing operational costs, but today, executives are moving forward with a fresh mindset.⁴ They are committed to improving product quality, customer experiences, productivity, innovation, and growth, while still contending with an evolving set of concerns that includes regulations, supply chain disruptions, new competitors, and inflation. And now on their agenda as a top five priority: advancing sustainability (see Figure 2).

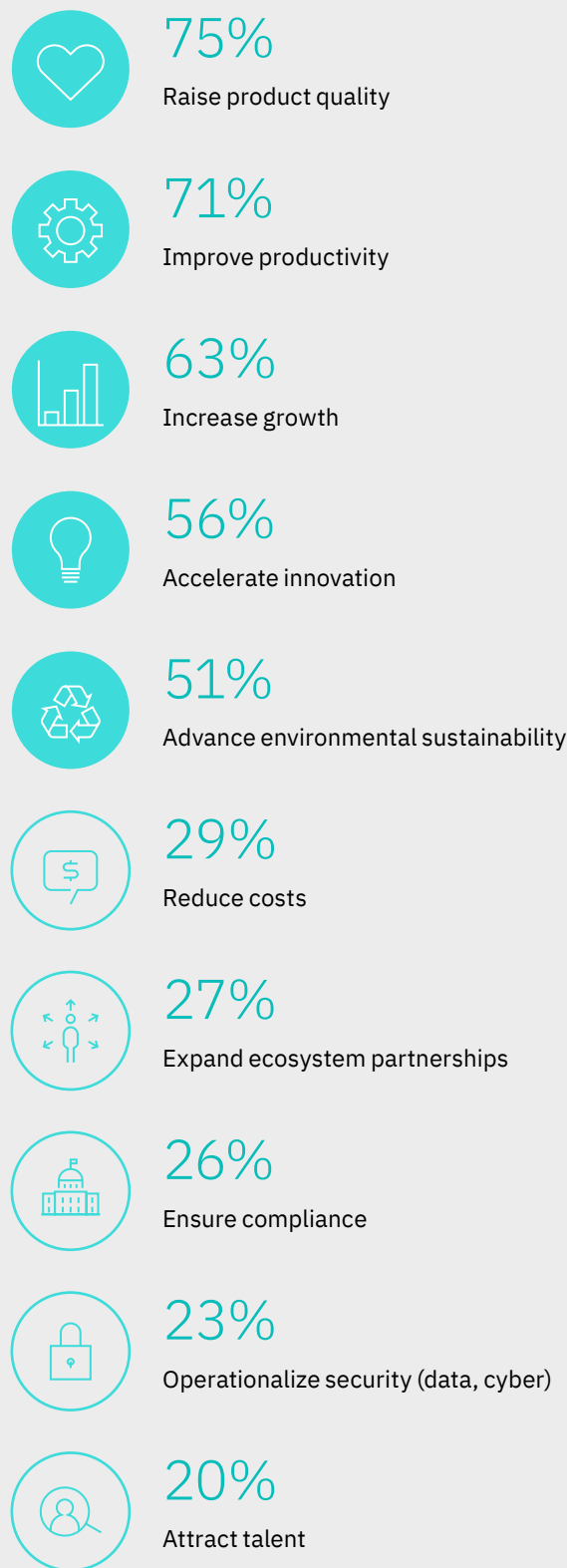
Leaders recognize the value sustainability brings to their brands, with 77% agreeing that sustainability investments will accelerate business growth. How? We believe brands can use sustainability to differentiate products and services in a crowded marketplace.

In recent IBV research, roughly four in five consumers represent a purpose-driven approach to shopping.⁵ From the food they eat, to the clothes they wear, to the health, beauty, and cleaning products they use, consumers want to know more about where products are made, whether the materials are sustainably sourced, and the environmental effects of production and packaging. As shoppers evaluate purchases, a brand's sustainability could be the deciding factor. The industry is recognizing that sustainability has become not just an imperative for the planet, but also an opportunity for business.

77% of executives agree that sustainability investments will accelerate business growth.

FIGURE 2

Advancing sustainability enters consumer industry executives' list of top 5 priorities.



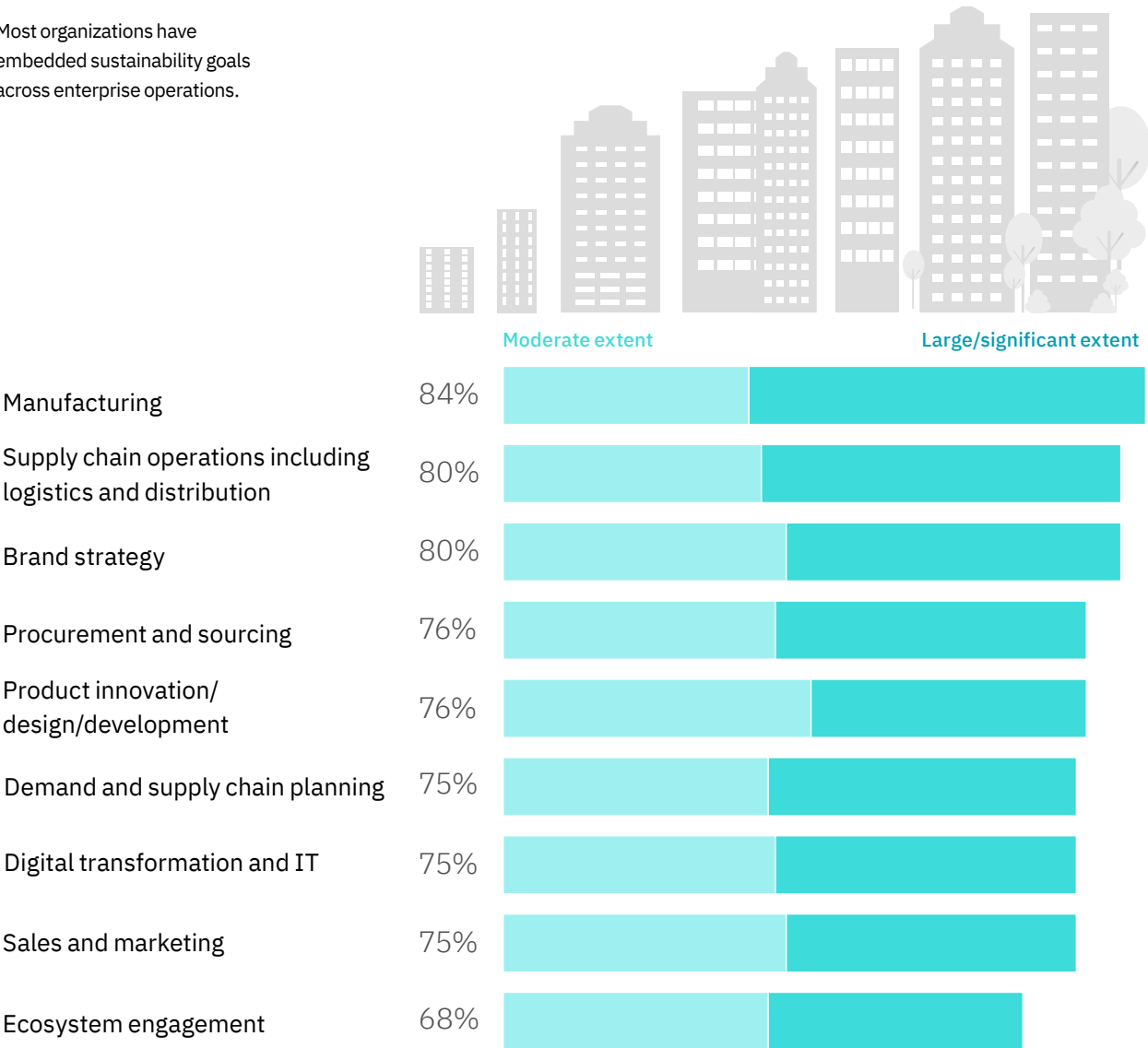
Q. Which of these are most critical to how you define success for your organization over the next three years?

Pursuing these opportunities requires that sustainability become part of a company’s fiber, woven throughout the organization. This is, in fact, the case as most business leaders say they have set sustainability goals across their enterprises (see Figure 3). Manufacturing and supply chain logistics, as well as brand strategy, are more attainable—while engaging ecosystem partners remains a challenge.

Within these business areas, organizations take a more holistic view to aligning sustainability and operational strategies. They position themselves for success as well, extending the integration into their KPIs, with 75% of executives saying their sustainability goals are linked to performance metrics.

FIGURE 3

Most organizations have embedded sustainability goals across enterprise operations.



Q. To what extent has your organization established sustainability goals in these areas?

This newfound alignment is informing their priority initiatives for product design, development, and manufacturing and for supply chain operations. When we asked executives whether they viewed each initiative as exclusively for operations or exclusively for sustainability, they categorized an average of fewer than 10% as “only operational” or “only for sustainability” (see Figure 4). Sustainability and operations are indeed infused—beginning with product design and manufacturing, extending through the supply chain and into their extended ecosystems.

FIGURE 4

Few supply chain and manufacturing executives view their priority initiatives as exclusively for operations or exclusively for sustainability.



Q. How does each of these initiatives achieve your organization’s operational versus sustainability agenda?

Sustainability begins with product design

Consumer industry leaders know that environmental effects occur throughout the design, development, manufacturing, and distribution processes, with an estimated 80% of a product’s environmental impact originating in design decisions (see case study, “UK fashion consortium targets product lifecycle transparency”).⁶

With almost one-third of executives prioritizing the development of environmentally sustainable products, they must consider sustainable product design. This practice aims to avoid the negative impacts that often emerge downstream by considering the social and environmental costs of a product across its entire lifecycle. Beauty brand L’Oreal Group models this behavior with its Sustainable Product Optimization Tool (SPOT), which allows research teams to measure the environmental and social impact of products and packaging.⁷

Similarly, companies are designing for a product’s end of life by implementing a circular-economy model, which promotes a continuous flow of materials through a technical cycle—keeping products and materials in circulation—and a biological cycle—returning nutrients from biodegradable materials to Earth to regenerate nature.⁸ In this approach, brands consider product durability, reparability, modularity, recyclability, and recoverability.

The circular-economy model builds resilience across the supply chain against unexpected shortages by conserving materials while making products with longer lifespans. Outdoor garment companies North Face and Patagonia lead in this area, taking steps to preserve the natural world that its customers enjoy. North Face is revamping its largest product line, ThermoBall, to make the quilted jackets entirely from recycled materials.⁹ Likewise, Patagonia has set a goal of using only recycled or renewable materials in its products by 2025.¹⁰



Case study

UK fashion consortium targets product lifecycle transparency¹¹

To help the UK fashion and textile industry drive sustainability and profitability within its supply chain, a consortium is designing, developing, and piloting a data-sharing technology platform that provides trusted data for its participants to act upon. Joined by retailers such as Next and New Look, the UK Fashion & Textile Association is partnering with IBM, Tech Data, and the Future Fashion Factory to create the platform to enable real-time decision-making and effective track-and-trace capabilities in the UK fashion supply chain.

Partially funded by the UK government, the initiative is leveraging emerging technologies such as blockchain, AI, and sensors to digitize key processes in the supply chain. The goal is for all stakeholders—from microbusinesses to large retailers—to input and access data for better visibility into the entire lifecycle of a fashion garment, starting with the original source of the material through to recycling. Ultimately, these new levels of insight can allow measurable and auditable actions across the supply chain, improving operational efficiency and management of compliance to the UN's Sustainable Development Goals (SDG) criteria.

The puzzle has been getting the data into each participant's system and then enabling interaction among all the systems. Requesting this type of information from suppliers has not historically been part of the standard process, and not all data is in a format that's simple to input. For example, the team has had to use voice, text, and photo ingestion from suppliers, and then AI helps to interpret and input it into the system.

As the team refines the platform, they are looking ahead to how it can scale and how to onboard additional retailers and suppliers, while defining a charging structure that keeps the costs affordable for participants. Because of increasing regulations requiring sustainability transparency across the supply chain, the demand for expansion exists. In fact, for suppliers, such a platform can help them prove to a fresh set of customers that they source responsibly.

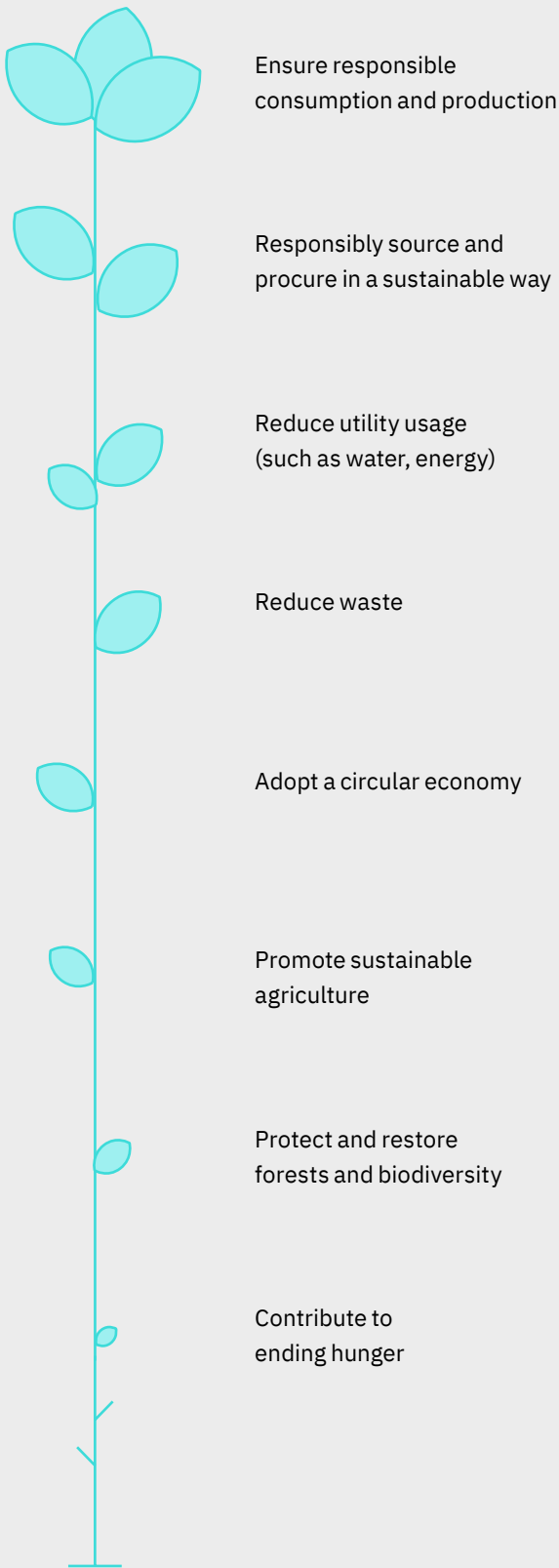
Sustainability continues through manufacturing and the supply chain

The manufacturing process and supply chain operations contribute substantially to a product’s burden on the environment. One estimate suggests that the supply chain accounts for more than 90% of GHG emissions associated with providing a product or service, with many of those originating from upstream or downstream partners.¹² To embed sustainability within these business areas, executives are prioritizing responsible consumption, production, sourcing, and procurement (see Figure 5).

More specifically, within manufacturing, leaders are emphasizing reduced utility usage and waste. One method that helps is micro-segment customization, where products are created and tailored to consumer demands. More targeted product creation and manufacturing processes that match supply to demand help decrease surplus inventory and use less energy and water while also boosting profit margins.

More than 60% of industry leaders agree that sustainability initiatives will fundamentally change their supply chain models.

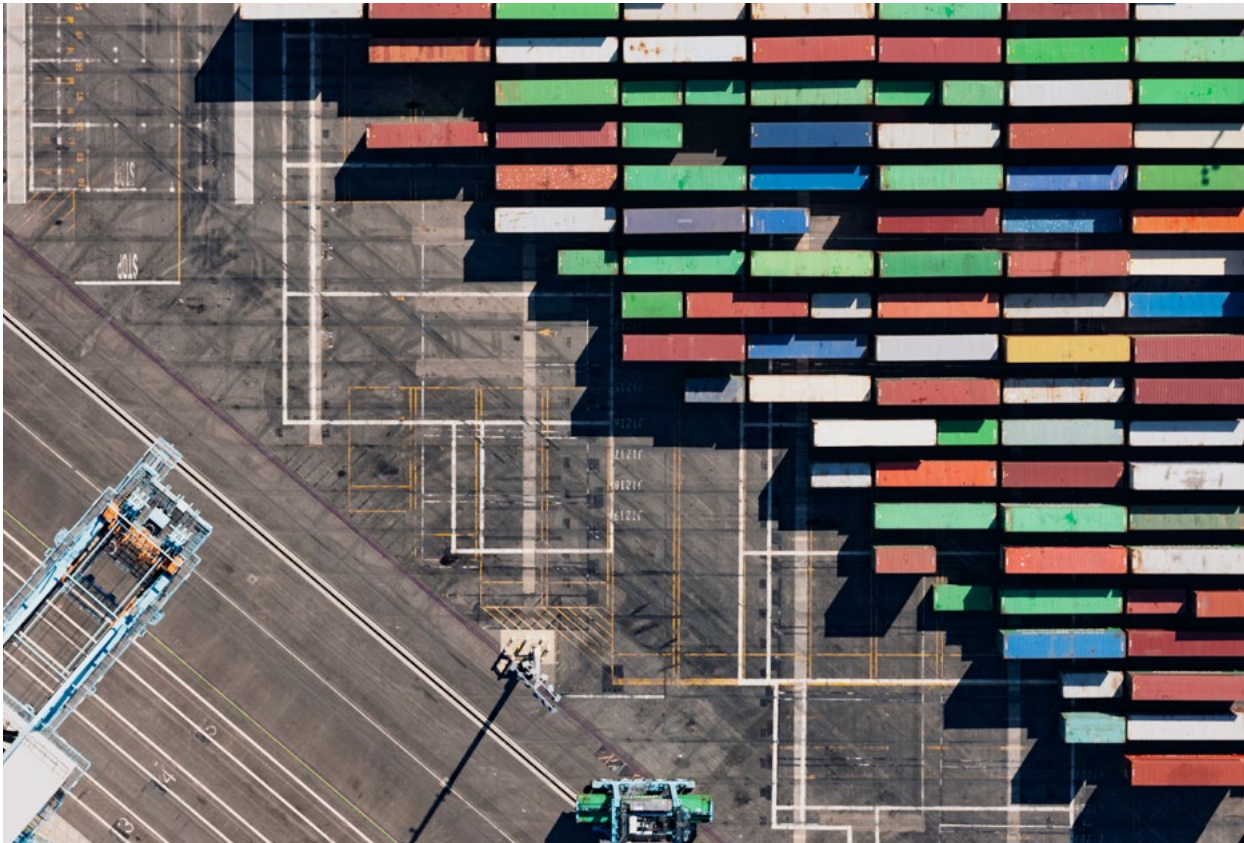
FIGURE 5
Consumer industry organizations are prioritizing responsible consumption, production, sourcing, and procurement.



Q. Which of these initiatives are most important to your organization’s environmental sustainability agenda over the next three years?

Nearly half (48%) of respondents are focused on redesigning their supply chain network to avoid future disruptions, mitigate risks, and to become more sustainable. While the supply chain of the future is a work in progress, more than 60% of industry leaders agree that sustainability initiatives will fundamentally change their supply chain models. Currently they are placing most of their attention on localization or regionalization. This includes a shift to nearshoring—the practice of partnering with suppliers and other supply chain entities that are located nearer to the company’s customer base. In bringing product transformations closer to consumers, brands can improve delivery performance, meet customer demands better, and reduce their carbon footprint.

To strengthen resilience and build a more sustainable supply chain, organizations are diversifying more broadly across suppliers, transportation, and logistics providers. But managing this expanding, more complex network requires greater visibility and collaboration to have the traceability and transparency required for tracking sustainability targets and minimizing disruptions. Companies need to establish real-time communication and automated information sharing across the ecosystem, helping create an unobstructed sightline across the end-to-end supply chain for nearly instant insights into both operational performance and environmental impacts (see case study, “IBM builds the world’s first cognitive supply chain”).



Case study

IBM builds the world's first cognitive supply chain¹³

With staff in 40 countries responsible for hundreds of thousands of customer deliveries and service calls in more than 170 nations, IBM's supply chain posed a significant transformation challenge. Running on legacy systems spread across organizational silos, information sharing was slow and incomplete. In re-thinking business processes, leaders recognized they should leverage the same modern technologies that IBM was presenting to its clients.

The supply chain management team set a bold vision: becoming the world's first cognitive supply chain. The goal was to leverage data and AI to lower costs, exceed customer expectations, eliminate non-value-add work, and improve the experience of supply chain colleagues.

Following extensive workshops using Design Thinking methods, the team rolled out a solution built around sense-and-respond capabilities. A cognitive control tower democratizes data and automates and augments decisions while enabling real-time visibility and transparency across the supply chain. Natural language queries and responses accelerate decision-making and offer options to correct issues. An integrated stack of edge technology solutions connects data end-to-end across the supply chain. Demand sensing pulses the market for changes in demand and predicts the future.

With this real-time single view of the truth, employees have immediate access to the information they need to mitigate disruptions. Since the cognitive supply chain became operational, IBM has saved \$160 million related to reduced inventory costs, optimized shipping costs, better decision-making, and time savings. For example, resolving parts shortages that used to take hours per part number can now be handled in minutes, even seconds. The solution delivered on agility as well, supporting platform upgrades for new capabilities in weeks, not years.

Driving sustainability across the ecosystem

The consumer industry has built a complex global network to manufacture and distribute goods. Aligning sustainability metrics with these partners is critical to the success of environmental programs, as noted by two-thirds of executives.

They cite several efforts underway to glean a more complete picture of their climate change initiatives. More than 50% of respondents either have or are establishing environmental impact evaluation programs with partners and suppliers. Additionally, 54% are evaluating their environmental impact with their ecosystems, and another 43% plan to do so in the next three years.

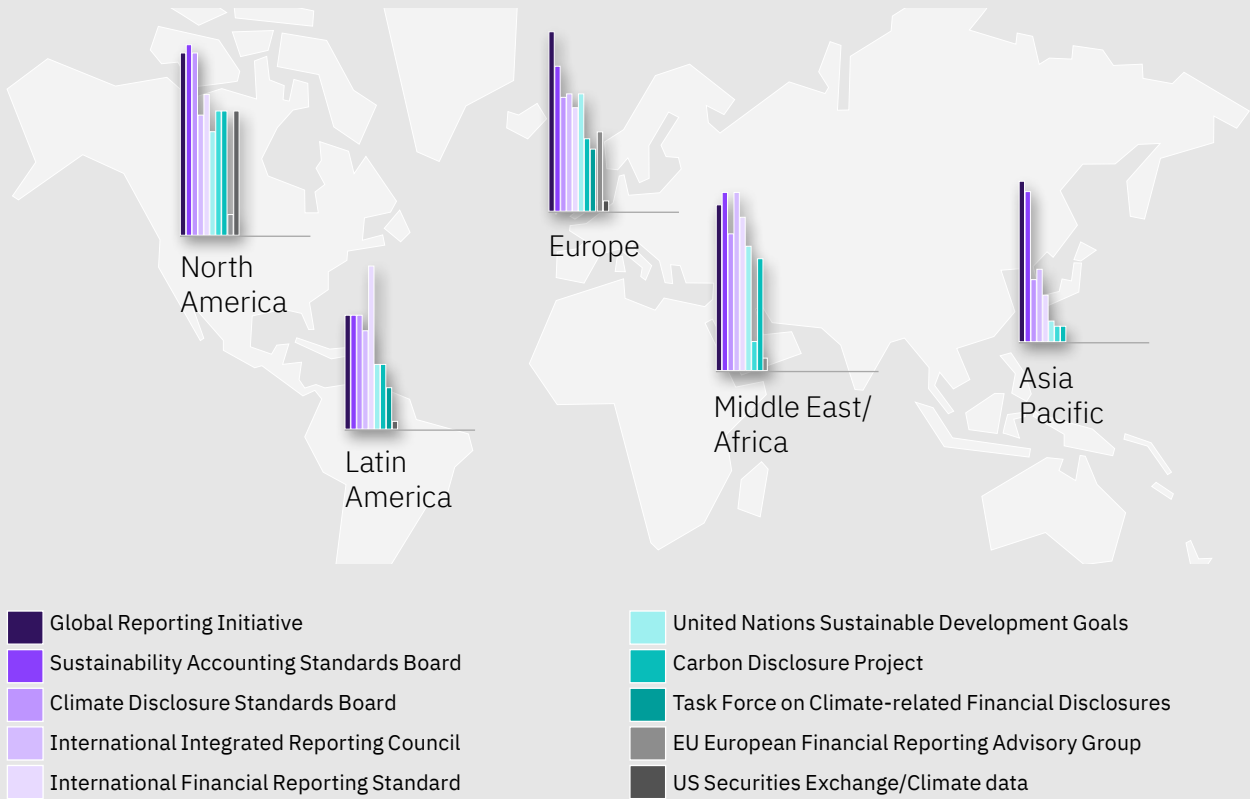
But tracking material flows and carbon intensity across the industry is easier said than done. While almost half of leaders say they are creating joint sustainability metrics and dashboards with their ecosystem partners, a deeper issue complicates these efforts: knowing exactly what and how to measure.

Lack of alignment among multiple, evolving sustainability standards and measurement frameworks causes confusion and even distrust within the industry (see Figure 6). Companies have flexibility to selectively report on ESG measures, some choosing the ones that make them look good (known as greenwashing) while others are more genuine in their reporting. As the frameworks evolve, the Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB) have emerged as the two most used globally by a range of companies. They provide a clear, consistent, and pragmatic approach for analyzing sustainability data, coherently reporting on chosen ESG metrics, and comparing across organizations.

However, there are broader differences among requirements given the region. As an example, EU sustainability regulations are more detailed and prescriptive, and they mandate climate reporting by law, whereas the US regulations governed by the Securities and Exchange Commission are not legislatively mandated. They ask organizations to disclose sustainability risk management to the best extent possible, keeping investors' interests in mind. The scope of regulations also continues to evolve; for instance, the recent German Supply Chain Due Diligence Act requires companies to protect human rights along the supply chain.

FIGURE 6

Multiple standards make it difficult for organizations to align with partners on sustainability reporting.



Q. Which of these standards does your organization use in sustainability reporting?

FIGURE 7

Many organizations cannot measure progress against their sustainability agenda in real time.

Sustainability standards developers are working to harmonize these varying frameworks to a common set, including the creation of the International Sustainability Standards Board (ISSB) by the International Financial Reporting Standards (IFRS). In the meantime, companies can focus on defining, measuring, and reporting key sustainability metrics as well as improving their data collection and tracking capabilities.

Seven in ten respondents agree that to meet environmental targets, they need to recalibrate how they measure and report performance to include sustainability considerations—both internally and with business partners. These metrics need to be built in up front in processes. For example, procurement has historically been rewarded for driving material savings once a product is in market, but not for ensuring efficiency or sustainable sourcing from the start. Incentives need to be put in place to involve procurement in optimizing materials early in the design stage.

Reporting and tracking tools are a challenge as well. While 42% of executives say they have the capability to report on their sustainability targets, only 32% can do so in real time. This hinders their ability to account for their performance and to make faster, better decisions around sustainability (see Figure 7).

Siloed data and a fragmented set of inadequate methods make reporting difficult. Companies are mostly stuck with tedious and error-prone, primarily manual processes, exchanging spreadsheets with multiple stakeholders around the globe. Brands with in-house IT capabilities are building their own custom systems to suit their needs, while specialized software and ESG-as-a-service solutions are emerging. Ideally, companies will be able to access multiple environmental frameworks in one place and will integrate those frameworks with standards such as the US Energy Star program or the National Australian Built Environment Rating System (NABERS) for scores and ratings.

Ability to report on progress of sustainability agenda

No 58% Yes 42%



Ability to measure progress against sustainability agenda in real time

No 68% Yes 32%



Q. Do you have reporting capabilities to measure progress on your organization's sustainability agenda?

Q. Does your organization have real-time monitoring capabilities to measure progress on your sustainability agenda?

To prepare for the transformative tracking tools expected soon, companies should start establishing their data foundation, identifying and extracting internal data from applications and systems, and streamlining it into a central landscape. These steps should also enable easier data sharing across the partner ecosystem (see case study, “Walmart builds traceability, transparency into food supply chain”).

More than half (54%) of leaders are turning to data-sharing cloud-based platforms to reinforce ties with their supply chain partners. By collecting and categorizing supplier data in real time, these platforms synchronize the supply chain network to respond to unanticipated surges in demand or other disruptions while also providing real-time insights into how participants stack up against environmental targets.

Platforms can make it easier to track third-party upstream and downstream emissions—as well as waste, energy usage, and other sustainability metrics. They can offer a view into whether suppliers meet criteria for sustainable sourcing, product quality, and capacity, expediting the sourcing team’s ability to choose suppliers for requests for information (RFIs), purchases, and contracts. And they facilitate closed-loop product design by encouraging ecosystem collaboration to improve raw material use, increase recyclability, and reduce waste from concept to commercialization.

Some organizations are finding success with integrating regulatory reporting within their finance organizations where quantification of performance lies at the core of their mission (see Perspective, “Sustainability reporting and the role of finance”). This approach not only supports their internal reporting requirements, but it can extend into the ecosystem. For example, finance can coordinate and align relevant data and metrics with partners to trace the carbon footprint of an organization’s products from supplier to consumer and account for Scope 3 (indirect) emissions.¹⁴

More than half of leaders are turning to data-sharing cloud-based platforms to reinforce ties with their supply chain partners.

Perspective

Sustainability reporting and the role of finance

For a recent benchmarking report, the IBV collaborated with the American Productivity and Quality Center (APQC) to survey more than 1,000 senior finance personnel on the role of finance with respect to sustainability. The results found that despite facing the complex set of regulations, finance organizations are well positioned to support sustainability reporting, with those classified as “transformational finance leaders” propelling progress toward sustainability goals.¹⁵ Examples of specific companies’ initiatives include:

- Multinational consumer products company Unilever has committed to designing 100% of its plastic packaging to be fully reusable, recyclable, or compostable by 2025. Finance has played a role in creation of a methodology and design of a tool for divisions to analyze the waste footprint of new products, designs, and formulations.¹⁶
- Apparel leader Levi Strauss & Co. established a data substantiation process, where the finance team brought its expertise in processes and controls and worked with the company’s sustainability and legal teams to validate social and environmental claims. This effort provided a common vocabulary that helps the company validate claims and metrics.¹⁷

Case study

Walmart builds traceability, transparency into food supply chain¹⁸

When Walmart needed to address a food safety concern in the past, determining a product’s innocence typically took days. This resulted in wasted food.

The food system is complex, given the many points within it—from the farmers to the processors to the distributors. Each had their own way of tracking products, typically on paper or in systems that don’t speak to other supply chain participants’ systems. Walmart could never have a full view of what was happening across the entire system.

With the pioneering use of blockchain distributed ledger technology, that end-to-end view is more possible and traceability time has been drastically cut to as little as seconds. Each participant can capture information about the product, including what they did to it and where it’s been. Linking this data together in a single food safety system enables faster, more efficient tracking of food.

Even more important, the blockchain solution facilitates greater transparency into whether food was produced safely and grown sustainably. With this system of shared responsibility in place, the retailer is better able to make informed decisions about the quality, safety, and sustainability of its food products to meet its customers’ expectations.

40% of executives say silos prevent action on their manufacturing and supply chain initiatives.



Orchestrating success with technology-driven insight

To keep operations and sustainability in tune with each other, consumer industry leaders need transparency across all operations and into the supporting ecosystems. But less than one-quarter of respondents have established visibility across the full product lifecycle or the end-to-end supply chain throughout their organizations. Siloed operations are blocking their view—nearly 40% of executives say silos prevent action on their manufacturing and supply chain initiatives.

And siloed operations often translate to isolated data, trapped in various internal systems across the enterprise. When merged and fed into advanced technology solutions, this stranded data can become immensely valuable, helping reshape the future of sustainable operations.

Executives are moving in this direction by starting to implement data-driven technology in their organizations. From building open platforms that promote collaboration, to automating logistics to improve responsiveness, to microsegment customization of products, their digital transformation initiatives are essential to executing on and measuring progress against integrated sustainability and operations strategies.

Confidence in digital technologies is reflected in executives' projected spending, as they plan to increase their technology budget allocation by 34% in the next three years. They see a role for multiple advanced technologies—including automation (71%), analytics (69%), IoT (62%), AI (55%), and intelligent workflows (44%)—to help them deliver differentiating business results.

Executives also recognize that when used as standalone tools, these technologies don't yield as much power or value. According to our analysis, 90% are more likely to leverage medleys of technologies to pursue their transformation goals, with analytics as a shared refrain throughout (see Figure 8). For example, executives selected analytics, IoT, and robotic process automation (RPA) as one popular combination. Another included intelligent workflows, analytics, and automation. They can mix and match to build innovative, performance-enhancing solutions, with a hybrid cloud architecture as the necessary foundation.

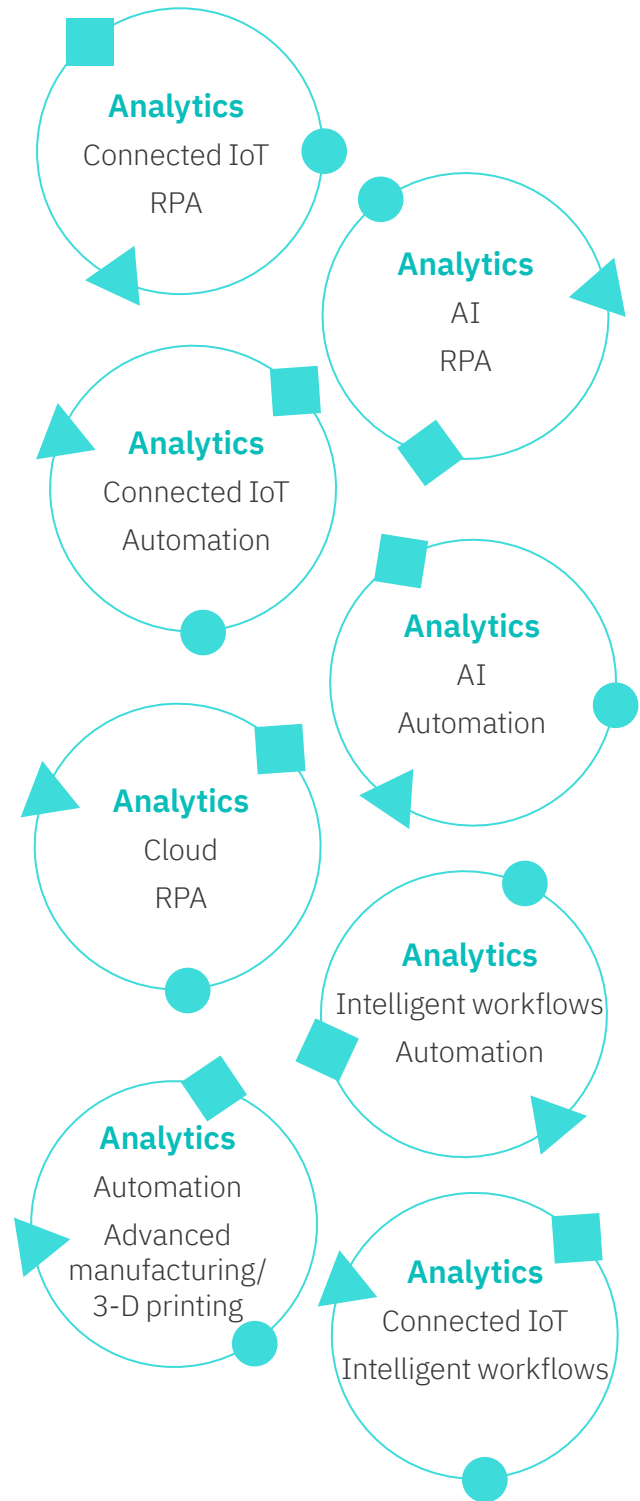
We see organizations leveraging these technologies together in their initiatives. Across design, development, and manufacturing, 71% report they are accelerating their use of AI-enabled automation and intelligent workflows, where routine decisions are automated, giving them a new level of operational agility and efficiency. Jewelry brand Pandora serves as an example, leveraging automation across its omnichannel fulfillment workflows for more efficient order delivery.¹⁹

Another 65% say they are implementing predictive and preventive maintenance programs. These leverage data analytics and AI to identify potential machine malfunctions or compliance issues and automatically schedule the specific services needed, notify operational personnel, or even autonomously execute corrective actions. This raises the reliability of the manufacturing process and enables organizations to deliver high-quality products under ever-shorter time-to-market deadlines (see case study, “Reckitt builds factory of the future today”).

As they revamp their supply chain operations, 67% of respondents cite the use of predictive and prescriptive analytics and AI-powered demand sensing (69%) to improve inventory management and eliminate excess stock. They are also applying AI-enabled workflows (70%) and are beginning to adopt the emerging technology of digital twins (26%) to drive efficiencies. For instance, digital twins model supply chain operations for insight into workflow improvements and simulate the environmental impacts of decisions. The Port of Rotterdam is taking advantage of this technology to optimize its shipping lanes. The European seaport is using a digital twin of the port to determine the exact time a ship should berth, cutting the port-call time and helping companies throughout the chain reduce costs and emissions.²⁰

FIGURE 8

Leaders expect to use combinations of technologies to achieve success in the next 3 years, with analytics as an essential common element.



Q. Technologies that will help your organization deliver desired business results over the next three years.

Case study

Reckitt builds factory of the future today²¹

Reckitt is the company behind some of the world's most recognizable and trusted consumer brands in hygiene, health, and nutrition, including Air Wick, Calgon, Dettol, Durex, Lysol, Mucinex, Nurofen, and many more. With 20 million products sold daily across more than 200 markets, Reckitt is a truly global manufacturing firm. The company has grown through mergers and acquisitions since its beginnings as a single mill in the UK in 1819, leading to disparity in the firm's manufacturing IT technology and maturity.

To unify its operations and move toward a wide-scale digitization of its factories, Reckitt set out to build the "Factory of the Future," implementing scalable solutions that bring contemporary digital technology to fruition. The company is leveraging technology to get the right data to the people who need it, with the expectation of improving overall equipment effectiveness (OEE), factory maintenance, and energy efficiency. For example, dashboards let site managers track energy use, spot trends or anomalies, and track progress toward the company's ambitious sustainability targets.

The solution leverages a scalable cloud foundation plus IoT and edge technology to serve as the data backbone. A platform-based approach, with data and connectivity as the baseline for transformation and innovation, can be extended and replicated from Reckitt's Nottingham, England, factory to its other manufacturing facilities around the world.



The payoff

In the 2022 IBV CEO study, consumer industry executives ranked better customer experiences as their highest priority for the near-term.²² Their initiatives to expedite design and delivery of high-quality, sustainable products, combined with work to build a resilient, reliable, and sustainable supply chain all focus on the customer. And as purpose-driven consumers aim to align their purchases with their values, brands that embed sustainability throughout their operations can earn a greater share of consumer spend.

Continued digitalization of processes is critical to the industry's efforts, with nearly three-quarters of leaders agreeing that it significantly improves their resiliency, efficiency, and growth. Recent IBV research reinforces their view. CEOs who purposefully integrate sustainability and digital transformation through a clearly defined strategy were unlocking higher revenue growth—up to 41% more than their peers.²³

Action guide

Organizations face a daunting endeavor. They need to stitch together data across the value chain and extrapolate environmental impacts. Then they must embed that information into a sustainability strategy aligned to business outcomes and operationalize that strategy. Technology choices and ecosystem partnerships will determine their success. The following actions are intended to help advance the integration of sustainability and operations and require the C-suite to work together.

01

Supply chain and operations leaders should team with C-suite peers to build a new strategy that operationalizes sustainability.

- Infuse sustainability into the core of your organization's operational strategy instead of considering it as a separate set of initiatives. Set goals and develop a multiyear roadmap, defining what sustainability specifically means to your company and how to operationalize sustainability enterprise-wide.
- Review your existing supply chain network and assets to assess if you have the right capabilities to meet consumer demands while creating a zero-waste, efficient supply chain that can flex to meet rapidly changing demand.
- Build cognitive control tower capabilities that leverage AI to constantly assess, predict, and, most importantly, drive actions to ensure disruptions don't cause significant business and sustainability losses.
- Create digital twins to simulate scenarios designed to future-proof your supply chain and minimize environmental impacts.

Action guide

02

Sustainability leaders should work across the organization to integrate sustainability strategies across the enterprise and ecosystem partners.

- Identify both short- and long-term sustainability goals. For example, start with steps to reduce energy consumption, such as leveraging programmable thermostats, or reducing waste through reusable plastic containers or a recycling program that takes back and reuses products. Longer term, work with your ecosystem to build Scope 3 emissions solutions.
- Rethink the consortium model by bringing in selected value chain partners to assess, curate, and measure gross emissions.
- Build a core team across lines of business to ideate, identify, and develop clear, succinct ESG goals. Then define the right metrics to track and underpin the organization's ESG vision and mission.
- Identify the correct data flows, supporting platforms, and data architecture to capture the data needed for monitoring progress against sustainability goals.

03

Technology executives should collaborate with manufacturing, supply chain, and sustainability leaders to create smarter operations across the value chain.

- Build and leverage a data-sharing platform to trace inventory and raw material status across all business partners to enable better decisions for resilient and sustainable operations.
- Implement AI and automation solutions to optimize production, processes, and supply chains, and, in turn, reduce carbon emissions, waste, and energy and water consumption.
- Evaluate and streamline your data collection processes to prepare for new ESG tracking solutions that will help monitor carbon emissions, waste, and energy and water consumption.
- Automate relentlessly with AI-enabled workflows to streamline production, re-focus employees on higher-value analytical decisions and actions, and gain the necessary level of insight to drive actions that reduce waste and address other ethical requirements.

About the authors



Jon Chambers

Partner and Supply Chain Transformation Leader,
IBM Consulting
Jon.Chambers@ibm.com
linkedin.com/in/jon-chambers-9055581

Jon leads the IBM Supply Chain Transformation Practice. With over 25 years of experience built across food, beauty, and healthcare businesses, Jon works with senior leaders to create value for companies across the consumer industry through visionary and strategic transformation programs.

Sachin Gupta

Global Sustainability Industry Lead,
Consumer Industry, IBM Consulting
guptas@sg.ibm.com
linkedin.com/in/sachin-gupta-a9ab853

Sachin leads IBM's strategy and consulting practice around sustainability solutions for the consumer industry. Being a thought leader, he works with CXOs to inform sustainability trends, co-create viable solutions, and build business plans to transform client journeys on sustainability and ESG commitments.

Ursula Heng

Associate Partner,
UKI Sustainability & Supply Chain, IBM Consulting
Ursula.Heng@ibm.com
uk.linkedin.com/in/ursula-heng

Ursula has more than 20 years in the fast-moving consumer goods sector leading delivery transformation of high value, complex, end-to-end programs in manufacturing, supply chain, and sustainability. She is the sustainability lead for the CPG, retail, travel and transportation, and professional services sectors, bringing her industry perspective through collaborative innovation and responsible technology to drive transformative change and to uncover what has yet to be realized.

Dr. Mahesh Dodani

Industry Chief Engineer,
Consumer, Travel & Transformation Industries,
IBM Technology
dodani@us.ibm.com
linkedin.com/in/maheshdodani

Dr. Dodani leads in defining use cases, architecture, design, and implementation of technologies and innovative solutions to meet clients' needs for digital transformation, application modernization, and multicloud, hybrid cloud deployments. These solutions are designed to improve customer engagement, increase revenues, and drive operational efficiencies.

Jane Cheung

Global Research Leader, Consumer Industry,
IBM Institute for Business Value
jane.cheung@us.ibm.com
linkedin.com/in/JaneSCheung

Jane has more than 20 years of working experience across the retail and consumer products industries. Jane has worked at Macy's, Disney, Nike, and Hallmark Cards and as a trusted advisor for clients in a consulting capacity.

Acknowledgements

The authors would like to thank David Meek, Partner and Global Leader, Manufacturing and Industry 4.0 for IBM Consulting; Rob Cushman, Senior Partner and Worldwide Leader, Supply Chain Transformation for IBM Consulting; and Mark Meister, Partner, Supply Chain Transformation for IBM Consulting, for their contributions to this report.

IBM Institute for Business Value

For two decades, the IBM Institute for Business Value has served as the thought leadership think tank for IBM. What inspires us is producing research-backed, technology-informed strategic insights that help leaders make smarter business decisions.

From our unique position at the intersection of business, technology, and society, we survey, interview, and engage with thousands of executives, consumers, and experts each year, synthesizing their perspectives into credible, inspiring, and actionable insights.

To stay connected and informed, sign up to receive IBV's email newsletter at ibm.com/ibv. You can also follow @IBMIBV on Twitter or find us on LinkedIn at <https://ibm.co/ibv-linkedin>.

The Consumer Goods Forum

The Consumer Goods Forum (CGF) is a global, parity-based industry network that is driven by its members to encourage global adoption of practices and standards that serve the consumer goods industry worldwide. The CGF brings together the CEOs and senior management of approximately 400 retailers, manufacturers, service providers, and other stakeholders across 70 countries, and it reflects the diversity of the industry in geography, size, product category, and format. Its member companies have combined sales of EUR 4.6 trillion and directly employ nearly 10 million people, with 90 million related jobs along the value chain. The CGF is governed by its Board of Directors, which comprises more than 55 manufacturer and retailer CEOs. For more information, please visit: theconsumergoodsforum.com

Study methodology

In October and November 2022, the IBM Institute for Business Value and the Consumer Goods Forum (CGF), in collaboration with Oxford Economics, conducted a global survey of 1,800 industry business leaders from consumer products companies and vertical retailers with their own product design, development, and manufacturing capabilities. Our goal was to understand how their initiatives within their manufacturing and supply chain operations are supporting their financial, operational, and sustainability goals in the next year and beyond. Respondents included executives from supply chain operations, sustainability, manufacturing, innovation/technology, and sales and marketing. They spanned all regions of the world—North America (22%), Latin America (6%), Europe (37%), Middle East and Africa (5%), and Asia Pacific (31%). Multiple statistical analyses were applied to the data to better understand underlying attitudes and behavior.

The right partner for a changing world

At IBM, we collaborate with our clients, bringing together business insight, advanced research, and technology to give them a distinct advantage in today's rapidly changing environment.

Related reports

The 2022 CSCO study

“Own your transformation: Data-led innovation for the modern supply chain.” IBM Institute for Business Value. September 2022.
ibm.co/c-suite-study-csco

Sustainability as a transformation catalyst

“Sustainability as a transformation catalyst: Trailblazers turn aspiration into action.” IBM Institute for Business Value. January 2022.
ibm.co/sustainability-transformation

The last call for sustainability

“The last call for sustainability: An urgent growth agenda for consumer products and retail.” IBM Institute for Business Value. August 2021.
ibm.co/sustainability-consumer-products-retail

About Research Insights

Research Insights are fact-based strategic insights for business executives on critical public- and private-sector issues. They are based on findings from analysis of our own primary research studies. For more information, contact the IBM Institute for Business Value at iibv@us.ibm.com.

Notes and sources

- 1 “Emissions Gap Report 2022.” UN Environment Programme. October 27, 2022. <https://www.unep.org/resources/emissions-gap-report-2022>
- 2 “Net-Zero Challenge: The supply chain opportunity.” World Economic Forum in collaboration with Boston Consulting Group. January 2021. https://www3.weforum.org/docs/WEF_Net_Zero_Challenge_The_Supply_Chain_Opportunity_2021.pdf
- 3 “The CEO Study. Own your impact: Practical pathways to transformational sustainability.” IBM Institute for Business Value C-suite Series. May 2022. Unpublished data; Haller, Karl, Mary Wallace, Jane Cheung, and Sachin Gupta. “Consumers want it all: Hybrid shopping, sustainability, and purpose-driven brands.” IBM Institute for Business Value. January 2022. <https://ibm.co/2022-consumer-study>
- 4 Haller, Karl, Jim Lee, and Jane Cheung. “Resetting the rules for consumer companies: The race for post-COVID competitive advantage.” IBM Institute for Business Value. June 15, 2021. Unpublished data.
- 5 Haller, Karl, Mary Wallace, Jane Cheung, and Sachin Gupta. “Consumers want it all: Hybrid shopping, sustainability, and purpose-driven brands.” IBM Institute for Business Value. January 2022. <https://ibm.co/2022-consumer-study>
- 6 “Rethink: Why sustainable product design is the need of the hour.” Sogeti. Accessed January 19, 2023. <https://www.sogeti.com/explore/reports/rethink-why-sustainable-product-design-is-the-need-of-the-hour/>
- 7 “SPOT: Putting eco-friendly design at the heart of our business model.” L’Oreal Groupe. Accessed January 19, 2023. <https://www.loreal.com/en/commitments-and-responsibilities/for-our-products/our-product-eco-design-tool/>
- 8 “The butterfly diagram: visualizing the circular economy.” Ellen Macarthur Foundation. Accessed February 22, 2023. <https://ellenmacarthurfoundation.org/circular-economy-diagram>
- 9 Overfelt, Maggie. “As the North Face battles Patagonia in outdoors market, it bets tackling climate change will pay off.” CNBC. August 14, 2020. <https://www.cnbc.com/2020/08/14/as-north-face-battles-patagonia-it-bets-climate-change-will-pay-off.html>
- 10 Bianchi, Michele. “Recycling Is Broken. Now What?” Patagonia. Accessed February 23, 2023. <https://www.patagonia.com/stories/recycling-is-broken-now-what/story-73479.html>
- 11 “Sustainable Supply Chain Optimisation.” UK Fashion & Textile Association website. Accessed January 19, 2023. <https://www.ukft.org/innovation/ssco/>; “A transparent UK-led supply chain: British Textile Week 2022.” UK Fashion & Textile Association. July 2, 2022. <https://www.ukft.org/ssco-keric-morris-btw22/>; “Sustainable Supply Chain Optimisation: Proof of Concept.” UK Fashion & Textile Association. May 12, 2021. <https://www.ukft.org/ssco-proof-of-concept/>; “New supply chain platform to drive sustainability, transparency, and profitability in UK fashion and textiles.” UK Fashion & Textile Association. April 8, 2021. <https://www.ukft.org/supply-chain-platform/>
- 12 “Supply Chain Guidance: Information for organizations interested in reducing their supply chain emissions.” US Environmental Protection Agency. Accessed February 23, 2023. <https://www.epa.gov/climateleadership/supply-chain-guidance>
- 13 “IBM builds the world’s first cognitive supply chain.” IBM case study. Accessed February 23, 2023. <https://www.ibm.com/case-studies/ibm-supply-chain>
- 14 Proothi, Monica, Adam Thompson, Annette LaPrade, and Spencer Lin. “The sustainability imperative: The integral role of finance—quantified.” IBM Institute for Business Value. February 2023. <https://ibm.co/sustainability-initiatives-finance>
- 15 Ibid.
- 16 “Unilever: Responding to the challenge of plastics.” Accounting for Sustainability. November 28, 2020. <https://www.accountingforsustainability.org/en/knowledge-hub/case-studies/unilever-plastics-case-study.html>
- 17 “Levi Strauss & Co: Reporting Case Study.” Accounting for Sustainability. June 17, 2022. <https://www.accountingforsustainability.org/en/knowledge-hub/case-studies/levi-strauss-co-reporting-case-study.html>

- 18 “Walmart’s food safety solution using IBM Food Trust build on the IBM Blockchain Platform.” IBM case study video. Accessed February 23, 2023. <https://www.ibm.com/products/supply-chain-intelligence-suite/food-trust>; Sristy, Archana. “Blockchain in the food supply chain – What does the future look like?” Walmart. November 25, 2021. https://one.walmart.com/content/globaltechindia/en_in/Tech-insights/blog/Blockchain-in-the-food-supply-chain.html
- 19 Farre, Tom. “Jewelry customers gain a personalized digital experience: Optimizing e-commerce fulfillment with cloud-based order management.” IBM case study. Accessed February 23, 2023. <https://www.ibm.com/case-studies/pandora-jewellery/>
- 20 Boyles, Ryan. “How the Port of Rotterdam is using IBM digital twin technology to transform itself from the biggest to the smartest.” IBM blog. August 29, 2019. <https://www.ibm.com/blogs/internet-of-things/iot-digital-twin-rotterdam/>; Trauthwein, Greg. “CEO in Focus: Allard Castelein, Port of Rotterdam.” Maritime Professional. September 14, 2022. <https://www.maritimeprofessional.com/news/focus-allard-castelein-port-rotterdam-379397>
- 21 “Building the factory of the future today.” IBM case study. Accessed February 23, 2023. <https://www.ibm.com/case-studies/reckitt-group>
- 22 “The CEO Study. Own your impact: Practical pathways to transformational sustainability.” IBM Institute for Business Value C-suite Series. May 2022. Unpublished data.
- 23 “The CEO Study. Own your impact: Practical pathways to transformational sustainability.” IBM Institute for Business Value C-suite Series. May 2022. <https://ibm.co/c-suite-study-ceo>

© Copyright IBM Corporation 2023

IBM Corporation
New Orchard Road
Armonk, NY 10504

Produced in the United States of America | April 2023

IBM, the IBM logo, and [ibm.com](https://www.ibm.com) are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at “Copyright and trademark information” at: [ibm.com/legal/copytrade.shtml](https://www.ibm.com/legal/copytrade.shtml).

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED “AS IS” WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.

This report is intended for general guidance only. It is not intended to be a substitute for detailed research or the exercise of professional judgment. IBM shall not be responsible for any loss whatsoever sustained by any organization or person who relies on this publication.

The data used in this report may be derived from third-party sources and IBM does not independently verify, validate or audit such data. The results from the use of such data are provided on an “as is” basis and IBM makes no representations or warranties, express or implied.

