Climate Action in Practice: Actionable Insights for Retailers & Manufacturers

April 2025

With the support of

BOSTON CONSULTING GROUP

Welcome to the *Climate Action in Practice* Guide

The Consumer Goods Forum's Towards Net Zero Coalition has developed a new resource to help retailers and manufacturers turn climate ambition into action

Divided into six sections, the publication addresses key challenges identified by our members, offering practical guidance, real-world examples, and actionable insights to accelerate progress toward a more sustainable future

Designed for companies at any stage of their climate journey, this guide provides the knowledge and support needed to drive meaningful change

Where to start | Six key challenges, one common framework

Six key challenges identified by our members:

REDUCE DEFORESTATION

Example activities

- Agroforestry; Re/Afforestation
- Deforestation-free sourcing

ENHANCE SUSTAINABLE AGRICULTURE

Example activities

- Cropland management
- Livestock management

MERCHANDISE SUSTAINABLE PRODUCTS

Example activities

- Increased availability of sust. goods and ingredients
- Promotion of sustainable products to drive adoption

REDUCE FOOD LOSS & WASTE

Example activities

- Shelf-life monitoring
- Responsible promotion tactics

INCREASE LOW-CARBON ENERGY & LOW-CARBON TRANSPORT

Example activities

- Low-emissions refrigeration
- Fuel switch to BEV
- Renewable heat & power

ADOPT CIRCULAR OR SUSTAINABLE PACKAGING

Example activities

- Reduction of unnecessary packaging
- Improved package-recyclability

For each key challenge, this publication provides the following resources:

- ***Shared vision of the future***
- ***Overview and key insights***
- ***Regional considerations***
- ***Actions retailers should consider***
- ***Relative impact & feasibility***
- ***Case studies & additional resources***

Click on each tile to explore all resources related to that challenge

Note: Key action areas identified based on relative emissions reduction potential and broader environmental benefits

Where to start | High-level impact and feasibility estimates can guide prioritization[1]

	Impact		Scope for action			
Action area	Emissions reduction	Co-benefits (business, social, environmental)	Affordability	Ease of implementation	Public sector support	Degree of control
Reduce deforestation	High	High	Medium	Low	High	Medium
Enhance sustainable agriculture	High	High	Low	Medium	Medium	Medium
Merchandise sustainable products	High	High	Medium	Medium	Low	High
Reduce food loss…	High	High	Low	Medium	Low	Medium
…and food waste	Medium	Medium	High	High	High	Medium
Increase low-carbon energy…	Low	Medium	Medium	High	Medium	High
…and low-carbon transportation	Medium	Low	Low	Medium	High	High
Adopt circular or sustainable packaging	Low	Medium	Medium	Medium	High	Medium

1. The impact and feasibility estimates provided are relative assessments that evaluate each action area in comparison to the other areas in these materials. The ratings are based on high-level assessments of each action area as a whole and are not necessarily representative of each individual activity within a given area

Reduce deforestation

Shared Vision of The Future:

Suppliers successfully adopt deforestation-free sourcing strategies to ensure sustainable production and forest protection

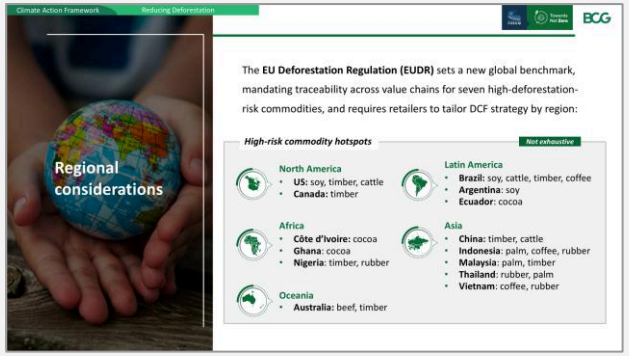
Return to key challenges

Climate Action in Practice Guide | Preview of reducing deforestation insights, resources, and activities to consider

Topic resources to follow …

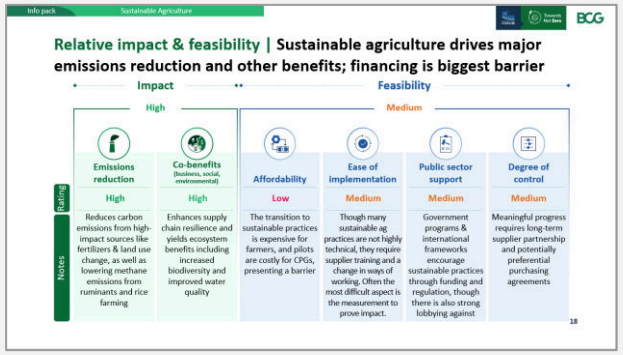
Reducing Deforestation Overview

Regional Considerations



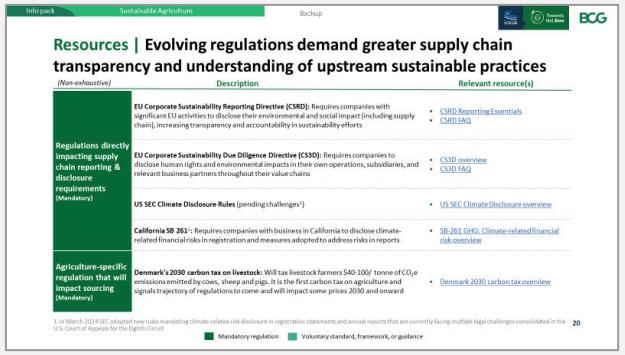
Activities Retailers Should Consider

Relative Impact & Feasibility



Retailer Case Studies

"Best Source of Truth" Resources



Overview | What to know about reducing deforestation

Strategic Context

Land use change, primarily from deforestation, accounts for **up to 20% of global GHG emissions**[1]

EU regulation requires retailers to address supply chain exposure to high-deforestation-risk commodities[2] or face potential import bans

Key Challenges

Secure deforestation-free supply early to hedge against future price spikes amid limited availability

Establish traceability for high-risk commodities, recognizing the complexity and need for transparent, collaborative supplier relationships

Expand deforestation commitments beyond private labels, working with national brand suppliers despite limited sourcing control

Opportunity & Solutions

Identify high-risk commodity and region combinations in your portfolio and develop a purchasing framework to guide buyers

1. "Climate Finance Thematic Briefing: REDD+ Finance", Climate Funds Update (2020). 2. As defined by EUDR (wood, Cattle, Cocoa, Coffee, Oil palm, Rubber, Soy)

Regional considerations

The **EU Deforestation Regulation (EUDR)** sets a new global benchmark, mandating traceability across value chains for seven high-deforestation-risk commodities, and requires retailers to tailor DCF strategy by region:

High-risk commodity origins[1]

Not exhaustive

North America

- **US:** soy, timber, cattle
- **Canada:** timber

Africa

- **Côte d'Ivoire:** cocoa
- **Ghana**: cocoa
- **Nigeria**: timber, rubber

Oceania

- **Australia:** beef, timber

Latin America

- **Brazil:** soy, cattle, timber, coffee
- **Argentina**: soy
- **Ecuador**: cocoa

Asia

- **China:** timber, cattle
- **Indonesia**: palm, coffee, rubber
- **Malaysia**: palm, timber
- **Thailand**: rubber, palm
- **Vietnam**: coffee, rubber

1. Major producing countries by share of global output for EUDR high-deforestation-risk commodity
Source: FAO, USDA Foreign Agriculture Service

Actions | Early-stage retailers should prioritize own-brand strategy; advanced retailers can implement full-store purchasing frameworks

Early action should establish a robust DCF sourcing strategy for own-brand products

Example activities include

- **Develop an own brand deforestation-free policy,** including clear commitments and timelines
- **Identify high deforestation-risk commodities** within your product portfolio
  - Leverage EUDR, AFi, and CGF Forest Positive recommendations to prioritize commodities
  - Further refine priority commodities by relative purchasing volume
- **Initiate traceability improvement programs** for high-risk commodities, including deepening supplier relationships and leveraging monitoring tools to identify risk

Advanced actions should focus on scaling DCF practices across all store brands and categories

Example activities include

- **Develop a full-store purchasing framework** that embeds sustainability criteria and includes guidance on supplier expectations, verification standards, and compliance monitoring
- **Engage third-party suppliers** to adopt DCF practices, and incentivize their efforts
- **Upskill buyers** on high-risk commodities, region-specific risks, and integration of DCF practices into everyday purchasing decisions
- **Map branded product supply chains** to identify risks and opportunities and begin the DCF journey
- **Review certification availability and coverage** to determine where additional data validation may be needed

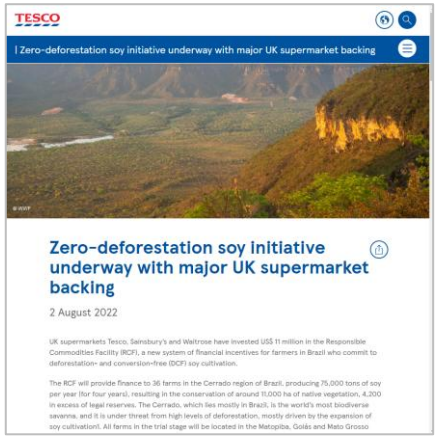
Relative impact & feasibility| Reducing deforestation is a major emissions lever, though retailers' upstream influence is limited

	Impact		Feasibility			
	High		Medium			
						
	Emissions reduction	**Co-benefits** (business, social, environmental)	**Affordability**	**Ease of implementation**	**Public sector support**	**Degree of control**
Rating	High	High	Medium	Low	High	Medium
Notes	Deforestation-free supply chains can significantly reduce emissions from land use change, which contribute up to 20% of global GHG emissions	Myriad environmental and social benefits (e.g., biodiversity, air and water quality); Plus, enhanced brand reputation and supply chain risk mitigation	Certified deforestation- and conversion-free (DCF) products can come at a premium due to costly third-party verification mechanisms	Often difficult to influence upstream practices, like animal feed production, that many retailers do not have visibility into	Strong regulatory frameworks (e.g., EUDR, CSRD) drive action through mandatory compliance	Meaningful progress requires long-term partnership — with more control over own brands, and less over national brands, making collaboration essential

Case studies | Retailers identify high-risk commodities, set sourcing standards, and join multistakeholder groups to address deforestation

Levers in action: Retail case studies

Tesco, Sainsbury's and Waitrose invest in Responsible Commodities Facility for deforestation-free soy cultivation in Brazil



Tesco, Sainsbury's and Waitrose invested $11M in Brazil's **Responsible Commodities Facility** (RCF), which **provides financial incentives** for farmers committed to **DCF soy cultivation.** The 12-month pilot phase alone conserved ~8.5k hectares of vegetation and produced ~42 tonnes of DCF soy

See Tesco Press Release for more info

ALDI commits to zero deforestation in high-risk supply chains by 2025

ALDI aims to eliminate deforestation and **natural ecosystem conversion** in its **high-risk supply chains** by 2025. Key commodities include **soy**, **palm oil**, **timber, cocoa, coffee, and bananas**. ALDI participates in industry groups such as **Palm Oil Transparency Coalition** and the **Retail Soy Group** to support this initiative

See ALDI website for more info

Resources | Understanding EUDR is crucial due to its supply chain impact; other frameworks further help inform policy setting (I/II)

(Non-exhaustive)	Description	Relevant resource(s)
Regulations directly impacting what can be sold **(Mandatory)**	**EU deforestation-free regulation:** EU regulation preventing import and export of deforestation-linked products in the EU market, requiring companies to verify traceability to the farm/plot level	• EUDR regulation • EUDR implementation FAQ • EU Deforestation Regulation: What companies need to know + how they'll be impacted (Quantis publication) • The time to act on deforestation is running out: Are you ready to comply with EUDR and SBTi FLAG? (Quantis webinar)
	France's National Strategy to Combat Imported Deforestation (SNDI): French government initiative targeting the import of raw materials or products linked to deforestation, forest degradation, or the conversion of natural ecosystems outside national border	• SNDI overview
Frameworks and target-setting guidance **(Voluntary)**	**Accountability Framework initiative (AFi):** Leading framework providing practical roadmap for addressing deforestation and conversion in supply chains (e.g., guidance for target setting, implementation, monitoring)	• AFi Accountability Framework • AFi Core Principles
	SBTi (FLAG): Framework for companies in land-intensive sectors (forest, land, agriculture) to set science-based targets that include land-based emissions reductions and removals. Complements traditional SBTi corporate guidance. Includes a commitment to no deforestation by 2025 for primary deforestation-linked commodities	• SBTi FLAG Guidance • SBTi FLAG target-setting in practice – lessons learned (Quantis webinar)

Mandatory regulation Voluntary standard, framework, or guidance

Resources | Understanding EUDR is crucial due to its supply chain impact; other frameworks further help inform policy setting (II/II)

(Non-exhaustive)	Description	Relevant resource(s)
Certification standards - Products (Voluntary)	**Roundtable on Sustainable Palm Oil (RSPO) certification:** Ensures certified sustainable palm oil production/handling meet standards	• RSPO Certification overview
	Rainforest Alliance Sustainable Agriculture Standard: Prohibits destruction/conversion of natural ecosystems after 2014, focusing on cocoa sector	• Overview of Rainforest Alliance 2020 Certification program
Certification standards - Packaging (Voluntary)	**Forest Stewardship Council (FSC) & Sustainable Forestry Initiative (SFI) Certified Souring Standard:** Set voluntary standards for responsible forest management and sustainable use of forest resources for paper and packaging	• FSC Certification overview • SFI 2022 Certified Sourcing Standard
Sector-specific sourcing agreements (Voluntary)	**Brazil's Soy Moratorium and Cattle Agreements:** Sectoral agreements in Brazil that limit the purchase of soybeans from areas deforested after 2008 and cattle grazed on deforested land	• Brazil's Amazon Soy Moratorium report • Monitoring the Beef TAC agreement report
Business guidance (Voluntary)	Several resources exist that provide actionable guidance and recommendations for reducing deforestation at the corporate level	• CGF Forest Positive Coalition • Collective Action to Fight Deforestation (BCG publication) • Deforestation- and Conversion-Free Supply Chains: Guide for Action (WWF & BCG report)

Mandatory regulation | Voluntary standard, framework, or guidance

Return to key challenges

Enhance sustainable agriculture

Shared Vision of The Future:

Suppliers effectively apply a range of sustainable agriculture techniques with quantifiable emissions benefits

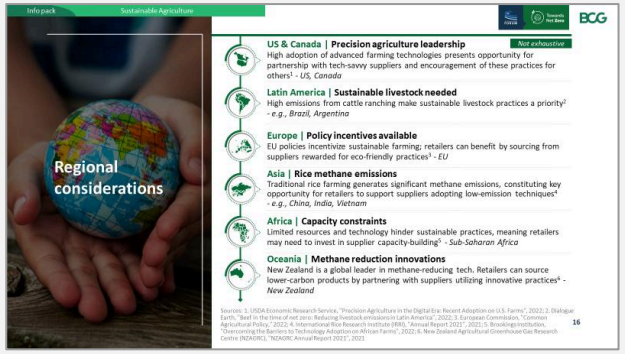
Return to key challenges

Climate Action in Practice Guide | Preview of enhancing sustainable agriculture insights, resources, and activities to consider

Topic resources to follow …

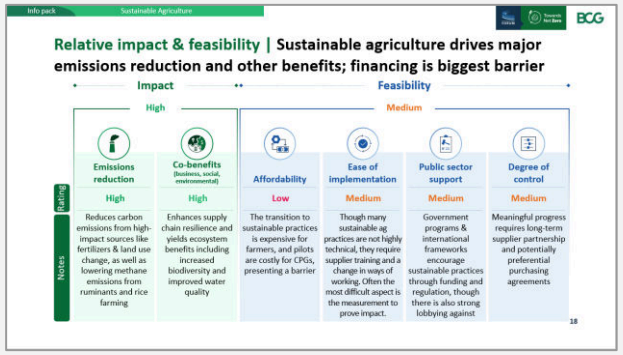
Sustainable Agriculture Overview

Regional Considerations



Activities Retailers Should Consider

Relative Impact & Feasibility



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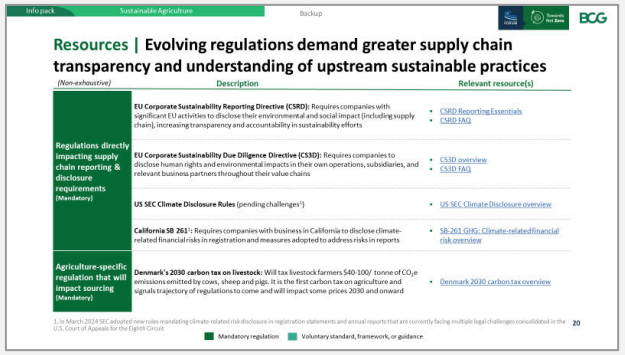


Note: Enhancing sustainable agriculture and improving livestock management action areas grouped together due to similar strategies and implementation approach to working with upstream farmers

Overview | What to know about sustainable agriculture

Strategic Context

Transition suppliers to sustainable farming and livestock practices, one of the most impactful decarbonization levers for retailers

Key Challenges

Balance short-term volatility with long-term regenerative goals, using long-term contracts to enable stable supplier collaboration

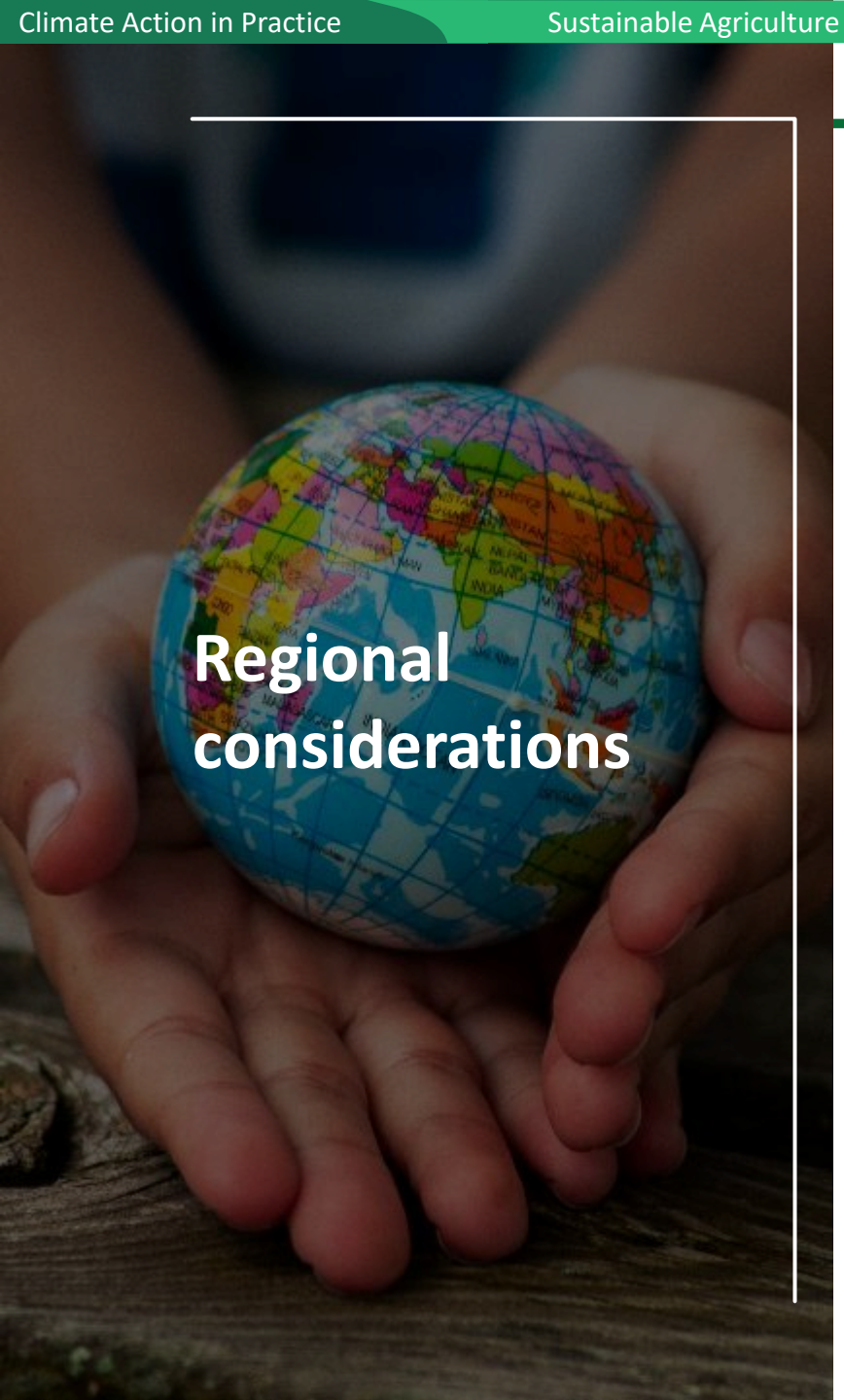
Measure agricultural impact without overburdening suppliers, addressing challenges in modeling, traceability, and long-term permanence

Scale emissions-reduction technologies in livestock, despite current cost and implementation challenges (e.g., Bovaer, methane masks, manure management)

Opportunity & Solutions

Build a sustainable agriculture roadmap to improve crop resilience (e.g., pests, drought, extreme weather) and reduce cost volatility over time

Engage suppliers to co-develop standards, share data, and de-risk investments in climate-smart sourcing strategies



Regional considerations

Not exhaustive

US & Canada | Precision agriculture leadership
High adoption of advanced farming technologies presents opportunity for partnership with tech-savvy suppliers and encouragement of these practices for others[1] - *US, Canada*

Latin America | Sustainable livestock needed
High emissions from cattle ranching make sustainable livestock practices a priority[2] - *e.g., Brazil, Argentina*

Europe | Policy incentives available
EU policies incentivize sustainable farming; retailers can benefit by sourcing from suppliers rewarded for eco-friendly practices[3] - *EU*

Asia | Rice methane emissions
Traditional rice farming generates significant methane emissions, constituting key opportunity for retailers to support suppliers adopting low-emission techniques[4] - *e.g., China, India, Vietnam*

Africa | Capacity constraints
Limited resources and technology hinder sustainable practices, meaning retailers may need to invest in supplier capacity-building[5] - *Sub-Saharan Africa*

Oceania | Methane reduction innovations
New Zealand is a global leader in methane-reducing tech. Retailers can source lower-carbon products by partnering with suppliers utilizing innovative practices[6] - *New Zealand*

Sources: 1. USDA Economic Research Service, "Precision Agriculture in the Digital Era: Recent Adoption on U.S. Farms", 2022; 2. Dialogue Earth, "Beef in the time of net zero: Reducing livestock emissions in Latin America", 2022; 3. European Commission, "Common Agricultural Policy," 2022; 4. International Rice Research Institute (IRRI), "Annual Report 2021", 2021; 5. Brookings Institution, "Overcoming the Barriers to Technology Adoption on African Farms", 2022; 6. New Zealand Agricultural Greenhouse Gas Research Centre (NZAGRC), "NZAGRC Annual Report 2021", 2021

Actions | Early-stage retailers can accelerate learning by leveraging existing programs; advanced retailers can scale through innovation

Early action should prioritize high-impact opportunities and leverage existing programs

Example activities include

- **Inventory own ingredient landscape** by identifying hotspots and ingredients with highest emissions
- **Prioritize regen pilots for ingredients with highest emissions and value chain control,** such as key ingredients for private label products or existing vertically integrated farms
- **Identify and join existing supplier regenerative carbon insetting programs** (e.g., established upstream programs looking to on-board retailer) to avoid steep learning curve and establish partnerships

Advanced action should focus on scaling established initiatives

Example activities include

- **Engage in landscape-level initiatives**[1] to share costs, amplify benefits and accelerate progress through a regional approach
- **Develop advanced incentive/ penalty system** to drive supplier action
- **Build out digital supply chain capabilities** for complex, fragmented systems (e.g., use satellite imagery and AI models to supplement supplier data to map sustainability risks/ opportunities across supply chain and enhance traceability)
- **Consider business model innovation to mitigate risks and identify opportunities** (e.g., backward integration of supply chain can increase control over product value chain and mitigate risks)

1. Landscape-level initiatives: multi-stakeholder collaborative efforts across regions to address key sustainable agriculture and livestock management challenges by engaging diverse stakeholders

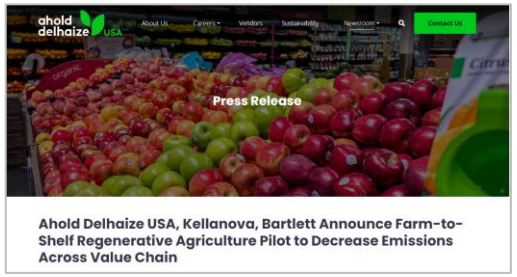
Relative impact & feasibility| Sustainable agriculture drives major emissions reduction and other benefits; financing is biggest barrier

	Impact		Feasibility			
	High		Medium			
	 Emissions reduction	 Co-benefits (business, social, environmental)	 Affordability	 Ease of implementation	 Public sector support	 Degree of control
Rating	High	High	Low	Medium	Medium	Medium
Notes	Reduces carbon emissions from high-impact sources like fertilizers & land use change, as well as lowering methane emissions from ruminants and rice farming	Enhances supply chain resilience and yields ecosystem benefits including increased biodiversity and improved water quality	The transition to sustainable practices is expensive for farmers, and pilots are costly for CPGs, presenting a barrier	Though many sustainable ag practices are not highly technical, they require supplier training and a change in ways of working. Often the most difficult aspect is the measurement to prove impact	Government programs & international frameworks encourage sustainable practices through funding and regulation, though there is also strong lobbying against	Meaningful progress requires long-term supplier partnership and potentially preferential purchasing agreements

Case studies | Retailers leverage partnerships to accelerate adoption of regenerative agriculture across key crop supply chains

Levers in action: Retail case studies

Ahold Delhaize USA partners to launch farm-to-shelf regenerative agriculture pilot across wheat supply chain



Ahold Delhaize USA, Kellanova, and Bartlett launched a regenerative wheat pilot to reduce Scope 3 emissions in the production of Cheez-It® and Club® crackers. The initiative blends regenerative and conventional wheat practices to **enhance soil and water health**, with products hitting 2,000 Ahold Delhaize stores by 2025

See Ahold Delhaize Press Release for more info

Walmart and PepsiCo partner to advance regenerative agriculture across 2 million acres for key crops

Walmart and PepsiCo launched a 7-year, $120 million initiative to support regenerative agriculture on 2 million acres in North America for potato, oat, corn, wheat, soybeans and rice production. The program **provides financial and technical resources** to improve soil health, water quality, and cut greenhouse gas emissions by 4 million metric tons by 2030

See Walmart Press Release for more info

Tesco launches two low carbon trial farms in its UK supply chain

Tesco is launching trial farms to test and scale technologies like **low-carbon fertilizers, alternative fuels, efficient cold storage, and carbon removal.** The aim of the trial farms is to provide a **practical demonstration of a route to net zero**. The farms may also host academic studies and trial innovations from Tesco's Agri T-Jam initiative, which supports sustainable agriculture start-ups

See Tesco's Greenprint for UK farming for more info

Resources | Evolving regulations demand greater supply chain transparency and understanding of upstream sustainable practices

(Non-exhaustive)	Description	Relevant resource(s)
Regulations directly impacting supply chain reporting & disclosure requirements **(Mandatory)**	**EU Corporate Sustainability Reporting Directive (CSRD):** Requires companies with significant EU activities to disclose their environmental and social impact (including supply chain), increasing transparency and accountability in sustainability efforts	• CSRD Reporting Essentials • CSRD FAQ
	EU Corporate Sustainability Due Diligence Directive (CS3D): Requires companies to disclose human rights and environmental impacts in their own operations, subsidiaries, and relevant business partners throughout their value chains	• CS3D overview • CS3D FAQ
	US SEC Climate Disclosure Rules (pending challenges[1])	• US SEC Climate Disclosure overview
	California SB 261[1]: Requires companies with business in California to disclose climate-related financial risks in registration and measures adopted to address risks in reports	• SB-261 GHG: Climate-related financial risk overview
Agriculture-specific regulation that will impact sourcing **(Mandatory)**	**Denmark's 2030 carbon tax on livestock:** Will tax livestock farmers $40-100/ tonne of CO_2e emissions emitted by cows, sheep and pigs. It is the first carbon tax on agriculture and signals trajectory of regulations to come and will impact some prices 2030 and onward	• Denmark 2030 carbon tax overview

Mandatory regulation Voluntary standard, framework, or guidance

1. In March 2024 SEC adopted new rules mandating climate-related risk disclosure in registration statements and annual reports that are currently facing multiple legal challenges consolidated in the U.S. Court of Appeals for the Eighth Circuit

Resources | Variety of frameworks and optional resources to support sustainable agriculture & livestock management (I/II)

(Non-exhaustive)	Description	Relevant resource(s)
Frameworks and target-setting guidance (Voluntary)	**OP2B Regenerative Agriculture framework:** Promotes biodiversity, soil health, and reduced environmental impact through agroecological methods, lower chemical inputs, and integrated crop-livestock systems for long-term sustainability and resilience	• Cultivating Farmer Prosperity: Investing in Regenerative Agriculture (BCG report in conjunction with OP2B)
	SAI Platform: Works with the food & beverage industry to develop solutions for sustainable and regenerative agriculture, providing tools and programs to enable measurable progress	• SAI Platform Programmes & Tools
	Regen10: Global multi-stakeholder initiative to support an inclusive regenerative and equitable food systems transition	• Regen10 Farmer-Centric Outcome-Based Framework
Certification standards (Voluntary)	**Organic certification** is offered by numerous certifying bodies globally and is widely recognized by consumers. Organic agriculture is input-based, avoiding synthetic fertilizers and pesticides, but can require more land and resources, potentially leading to unintended negative environmental impacts	• Rising Consumer Demand Reshapes Landscape for U.S. Organic Farmers
	Regenerative and Biodynamic certifications cover a range of food products and are typically more stringent than Organic certification, which focuses on input restrictions. In contrast, Regenerative certifications are outcome-based, prioritizing soil and ecosystem restoration	• Regenerative Organic Certified labeling guidelines • Demeter (primarily in Europe)
	Commodity-specific standards address the unique context of raising and growing certain animal and plant products	• American Grassfed (beef) • Land to Market (meat, produce) • Sustainable Rice Platform (SRP)
Funding /incentive programs (Voluntary)	**NRCS Environmental Quality Incentives Program:** Provides financial and technical assistance to agricultural producers for implementing conservation practices	• EQIP Fact Sheet

Mandatory regulation Voluntary standard, framework, or guidance

Resources | Variety of frameworks and optional resources to support sustainable agriculture & livestock management (II/II)

(Non-exhaustive)	Description	Relevant resource(s)
Business guidance **(Voluntary)**	Several resources exist that provide actionable guidance and recommendations for enhancing sustainable agriculture & livestock management at the corporate level	• Recipe for Transformation: Embedding sustainability across food+beverage business functions (Quantis report) • Scope 3 Action Agenda for the Agrifood Sector (Quantis publication) • Regenerative Agriculture: Bridging the disconnect between corporates and farmers (Quantis webinar)

Mandatory regulation Voluntary standard, framework, or guidance

Return to key challenges

Merchandise sustainable products

Shared Vision of The Future:

Product portfolios are curated to optimize market positioning and minimize environmental impact

Return to key challenges

Climate Action in Practice Guide | Preview of merchandising sustainable products insights, resources, and activities to consider

Topic resources to follow …

Sustainable Merchandising Overview


Info pack | Merchandising Sustainable Products

Overview | What to know about merchandising sustainable products

Strategic Context

Customers are **increasingly demanding more information on product traceability** amid heightened awareness of complex sustainability issues; however, **interest does not always translate to purchasing habits** and **willingness to pay "green" premium** remains limited.

In Europe, increasing regulatory requirements (e.g., EUDR, CSRD, CS3D) mandate more **granular visibility into supply chains**, including product attribute details, requiring **improved traceability**, particularly for private-label products.

Closer supplier partnerships are essential for meeting these sustainability and traceability demands.

Key Challenges

Customer preferences, regulatory compliance, and risk management are often in direct conflict, forcing retailers to make strategic tradeoffs in prioritizing where to focus energy.

Retailers need a clear perspective on the credibility of product sustainability claims to help customers make informed decisions amid complex landscape of claims while also **mitigating greenwashing risks.**

Opportunity & Solutions

Opportunity to align sustainable merchandising tactics with category strategy by setting deliberate KPIs that **empower merchants** to make decisions benefitting both sustainability and the P&L.

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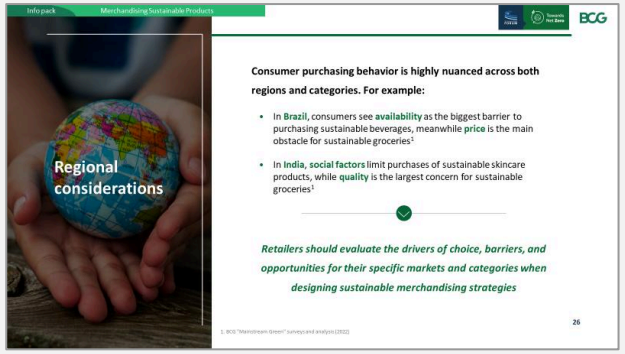
Regional Considerations



Activities Retailers Should Consider


Info pack | Merchandising Sustainable Products

Actions | Early-stage retailers should focus on building processes for efficient sustainable merchandising

Early action should focus on assessing and building processes for sustainable merchandising

Example activities include

- **Assess current product attribution to understand data being tracked for each product category**, including sustainability attributes, to understand gaps and opportunities for improvement
- **Examine the drivers of choice, barriers, opportunities, etc.** that are specific to each market and category
- **Conduct internal assessment of sustainability labeling to refine customer messaging** practices for greater clarity and consistency
- **Establish standardized procedures** to effectively launch and support new sustainable products

Advanced retailers should embed sustainability throughout category strategy and processes

Example activities include

- **Reimagine category strategy** to focus on products that meet business needs/customer demand while also driving sustainability (e.g., shift to more concentrated products to reduce packaging and save shelf space)
- **Incentivize sustainable purchases by embedding sustainability into all commercial processes** (e.g., store and shelf positioning, pricing, promotions, margin considerations, customer loyalty programs)

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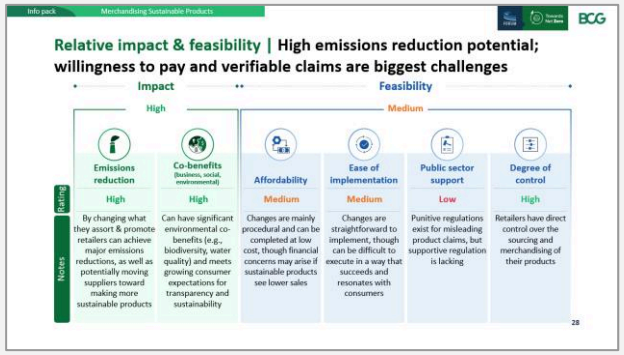
Relative Impact & Feasibility


Info pack | Merchandising Sustainable Products

Relative impact & feasibility | High emissions reduction potential; willingness to pay and verifiable claims are biggest challenges

	Impact			Feasibility		
	High		Medium			
	Emissions reduction	Co-benefits (business, social, environmental)	Affordability	Ease of implementation	Public sector support	Degree of control
Rating	High	High	Medium	Medium	Low	High
Notes	By changing what they assort & promote retailers can achieve major emissions reductions, as well as potentially moving suppliers toward making more sustainable products	Can have significant environmental co-benefits (e.g., biodiversity, water quality) and meets growing consumer expectations for transparency and sustainability	Changes are mainly procedural and can be completed at low cost, though financial concerns may arise if sustainable products see lower sales	Changes are straightforward to implement, though can be difficult to execute in a way that succeeds and resonates with consumers	Punitive regulations exist for misleading product claims, but supportive regulation is lacking	Retailers have direct control over the sourcing and merchandising of their products

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Retailer Case Studies


Info pack | Merchandising Sustainable Products

Case studies | Retailers expand sustainable options and streamline product info to empower customers making sustainable purchases

Levers in action: Retail case studies

Sysco launches "One planet. One table." initiative to drive supply chain changes and enable customers to choose sustainable options

Sysco's *One planet. One table.* helps customers choose more sustainable food by streamlining certifications and improving searchability and labeling. It offers the largest selection of sustainable products among U.S. food distributors, with 3,000+ items across 15 categories meeting 20+ certifications or proprietary standards.

See *Sysco Press Release* for more info

ICA Gruppen launches Klimatknuffen (Climate Nudge) to make it easier for customers to choose lower-carbon products

ICA's Climate Nudge is an AI-powered service that provides personalized product recommendations for low-carbon items based on customers' buying habits. The service ensures substitutes have at least 5% lower CO2 emissions and focuses on products with significant climate impact.

See *ICA Gruppen Press Release* for more info

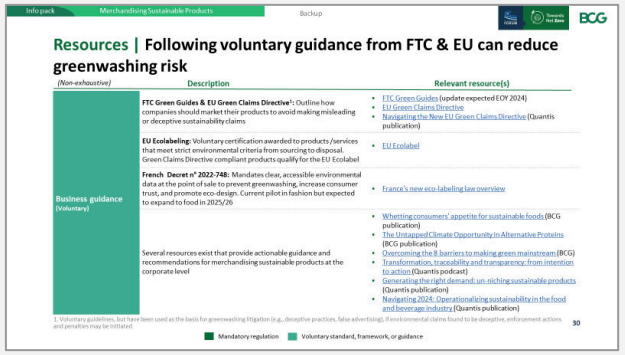
Target launches "Target Zero" label to help customers identify products that reduce waste through sustainable packaging

Target's "Target Zero" label highlights products with reusable, refillable, or compostable packaging to help customers make eco-friendly choices. Displayed both in-store and online, the label supports Target's broader commitment to sustainability and waste reduction across its product lines.

See *Target Press Release* for more info

29

"Best Source of Truth" Resources


Info pack | Merchandising Sustainable Products | Backup

Resources | Following voluntary guidance from FTC & EU can reduce greenwashing risk

(Non-exhaustive)	Description	Relevant resource(s)
Business guidance (Voluntary)	**FTC Green Guides & EU Green Claims Directive**[1]: Outline how companies should market their products to avoid making misleading or deceptive sustainability claims	• FTC Green Guides (update expected EOY 2024) • EU Green Claims Directive • Navigating the New EU Green Claims Directive (Quantis publication)
	EU Ecolabeling: Voluntary certification awarded to products /services that meet strict environmental criteria from sourcing to disposal. Green Claims Directive compliant products qualify for the EU Ecolabel	• EU Ecolabel
	French Decret n° 2022-748: Mandates clear, accessible environmental data at the point of sale to prevent greenwashing, increase consumer trust, and promote eco-design. Current pilot in fashion but expected to expand to food in 2025/26	• France's new eco-labeling law overview
	Several resources exist that provide actionable guidance and recommendations for merchandising sustainable products at the corporate level	• Whetting consumers' appetite for sustainable foods (BCG publication) • The Untapped Climate Opportunity in Alternative Proteins (BCG publication) • Overcoming the 8 barriers to making green mainstream (BCG) • Transformation, traceability and transparency: from intention to action (Quantis podcast) • Generating the right demand: un-niching sustainable products (Quantis publication) • Navigating 2024: Operationalizing sustainability in the food and beverage industry (Quantis publication)

1. Voluntary guidelines, but have been used as the basis for greenwashing litigation (e.g., deceptive practices, false advertising), if environmental claims found to be deceptive, enforcement actions and penalties may be initiated

Mandatory regulation | Voluntary standard, framework, or guidance

30

Overview | What to know about merchandising sustainable products

Strategic Context

Customer demand for traceability is rising, but willingness to pay remains limited and purchasing behavior often lags behind stated intent

European regulations are raising the bar on supply chain transparency, requiring granular product-level data (e.g., EUDR, CSRD, CS3D)

Meeting traceability and compliance demands requires stronger supplier partnerships, upstream visibility, share standards, and reliable data exchange

Key Challenges

Retailers face conflicting pressures from customer expectations, compliance, and reputational risk, forcing tough decisions on focus and investment

Merchants struggle to evaluate sustainability claims amid noise, underscoring the need for clear, consistent guidance and decision-making tools

Opportunity & Solutions

Sustainable merchandising tactics should align with category strategy, using deliberate KPIs that empower merchants to drive both sustainability and P&L performance

Regional considerations

Consumer purchasing behavior is highly nuanced across both regions and categories. For example:

- In **Brazil**, consumers see **availability** as the biggest barrier to purchasing sustainable beverages, meanwhile **price** is the main obstacle for sustainable groceries[1]
- In **India**, **social factors** limit purchases of sustainable skincare products, while **quality** is the largest concern for sustainable groceries[1]

Retailers should evaluate the drivers of choice, barriers, and opportunities for their specific markets and categories when designing sustainable merchandising strategies

1. BCG "Mainstream Green" surveys and analysis (2022)

Actions | Early-stage retailers should focus on building processes for efficient sustainable merchandising

Early action should focus on assessing and building processes for sustainable merchandising

Example activities include

- **Assess current product attribution to evaluate data tracked by category,** including sustainability attributes, and identify improvement opportunities
- **Examine drivers of choice, sourcing barriers, and category-specific opportunities** across each markets
- **Conduct internal assessment of sustainability labeling** to improve customer messaging clarity and consistency
- **Establish standardized procedures** to effectively launch and scale new sustainable products

Advanced retailers should embed sustainability throughout category strategy and processes

Example activities include

- **Set clear category-specific sustainability objectives** (e.g., reduce packaging, increase certified ingredients, grow share of traceable SKUs) as part of annual planning
- **Incorporate sustainability into all commercial levers,** including shelf space, pricing, trade options, and assortment reviews
- **Use merchant scorecards to track sustainability performances** alongside P&L targets (e.g., volume sold under sustainability-linked claims)
- **Prioritize products that deliver both customer value and environmental benefit,** such as concentrates, refills, reusable formats

Relative impact & feasibility| High emissions reduction potential; willingness to pay and verifiable claims are biggest challenges

Impact

High

Emissions reduction

Rating: **High**

Notes: By changing what they assort & promote retailers can achieve major emissions reductions, as well as potentially moving suppliers toward making more sustainable products

Co-benefits (business, social, environmental)

Rating: **High**

Notes: Can have significant environmental co-benefits (e.g., biodiversity, water quality) and meets growing consumer expectations for transparency and sustainability

Feasibility

Medium

Affordability

Rating: **Medium**

Notes: Changes are mainly procedural and can be completed at low cost, though financial concerns may arise if sustainable products see lower sales

Ease of implementation

Rating: **Medium**

Notes: Changes are straightforward to implement, though can be difficult to execute in a way that succeeds and resonates with consumers

Public sector support

Rating: **Low**

Notes: Punitive regulations exist for misleading product claims, but supportive regulation is lacking

Degree of control

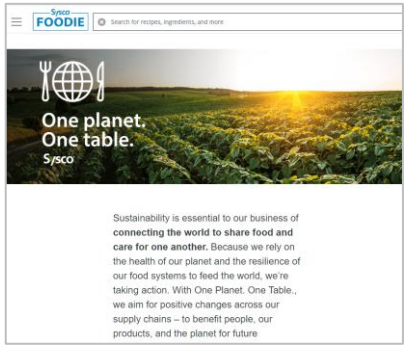
Rating: **High**

Notes: Retailers have direct control over the sourcing and merchandising of their products

Case studies | Retailers expand sustainable options and streamline product info to empower customers making sustainable purchases

Levers in action: Retail case studies

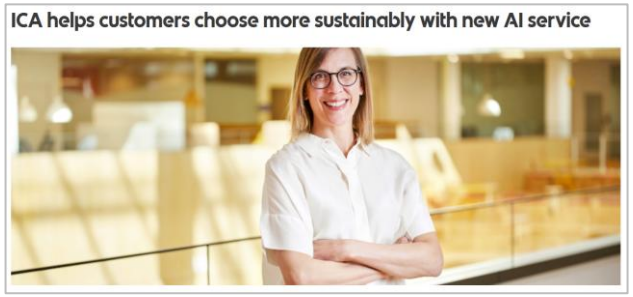
Sysco launches "One planet. One table." initiative to drive supply chain changes and enable customers to choose sustainable options



Sysco's *One planet. One table.* helps customers choose more sustainable food by streamlining certifications and improving searchability and labeling. It offers the largest selection of sustainable products among U.S. food distributors, with 3,000+ items across 15 categories meeting 20+ certifications or proprietary standards

See Sysco Press Release for more info

ICA Gruppen launches Klimatknuffen (Climate Nudge) to make it easier for customers to choose lower-carbon products



ICA's Climate Nudge is an AI-powered service that provides personalized product recommendations for low-carbon items based on customers' buying habits. The service ensures substitutes have at least 5% lower CO2 emissions and focuses on products with significant climate impact

See ICA Gruppen Press Release for more info

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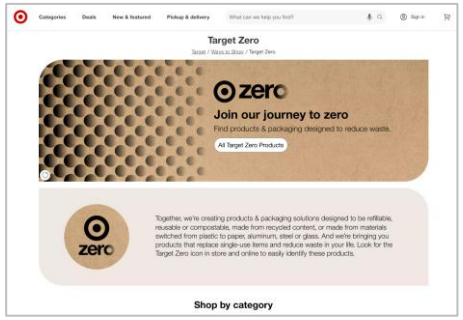

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Resources | Following voluntary guidance from FTC & EU can reduce greenwashing risk

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Return to key challenges

Reduce food loss and waste

Shared Vision of The Future:

Retailers, suppliers, and consumers work collaboratively to reduce waste at every stage of the supply chain, from sourcing to end consumption

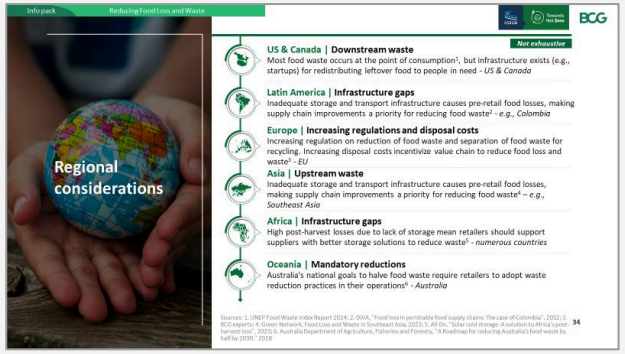
Return to key challenges

Climate Action in Practice Guide | Preview of reducing food loss and waste insights, resources, and activities to consider

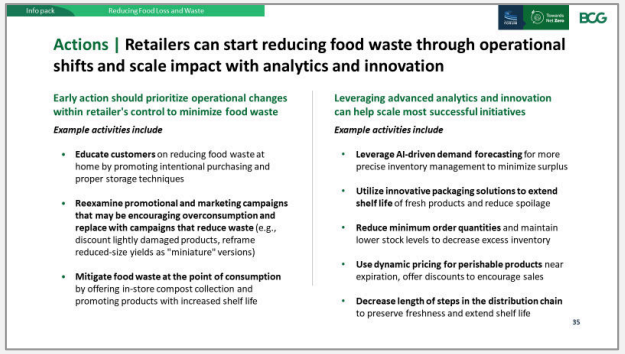
Topic resources to follow …

Food Loss and Waste Overview

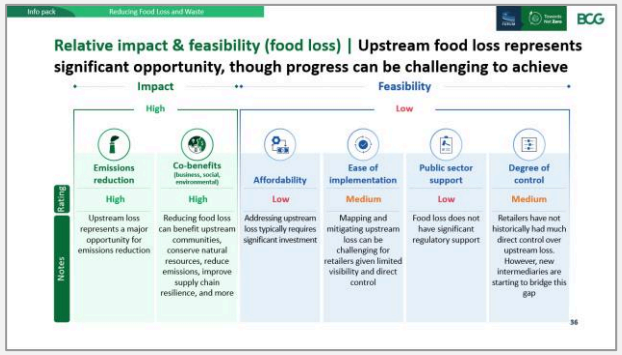
Regional Considerations



Activities Retailers Should Consider

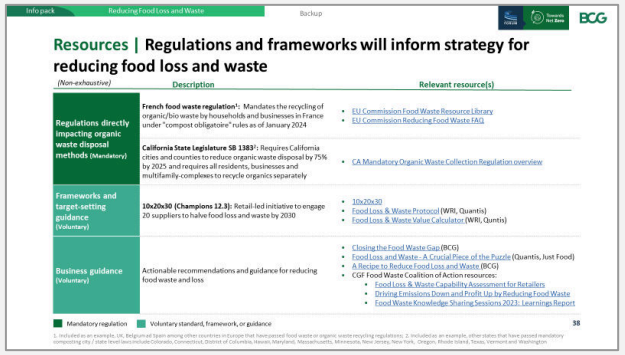


Relative Impact & Feasibility



Retailer Case Studies

"Best Source of Truth" Resources



Overview | What to know about food loss and waste

Strategic Context

Food loss upstream of retail accounts for ~30%, with **~8% lost at retail**, ~20% by food service, and ~42% by consumers[1,2]

Food loss and waste generate 8-10% of annual global GHG emissions and costs the global economy ~$1 trillion annually[3]

Key Challenges

Retailers influence only part of the value chain, with **limited control over consumer behavior** and challenges **managing unsold food**

Forecasting food supply and demand is complex, often leading to overstocking to avoid stockouts

Opportunity & Solutions

Improving store operations and engaging customers can unlock **new revenue streams** and **strengthen brand leadership** on food waste

1. "Over 15% of food is lost before leaving the farm – WWF report" (2021), WWF; 2. UNEP Food Waste Index Report 2024; 3. "World squanders over 1 billion meals a day", United Nations Environment Programme (2024)

Regional considerations

Not exhaustive

US & Canada | Downstream waste
Most food waste occurs at the point of consumption[1], but infrastructure exists (e.g., startups) for redistributing leftover food to people in need - *US, Canada*

Latin America | Infrastructure gaps
Inadequate storage and transport infrastructure causes pre-retail food losses, making supply chain improvements a priority for reducing food waste[2] – *e.g., Colombia*

Europe | Increasing regulations and disposal costs
Increasing regulation on reduction of food waste and separation of food waste for recycling. Increasing disposal costs incentivize value chain to reduce food loss and waste[3] - *EU*

Asia | Upstream waste
Inadequate storage and transport infrastructure causes pre-retail food losses, making supply chain improvements a priority for reducing food waste[4] – *e.g., Southeast Asia*

Africa | Infrastructure gaps
High post-harvest losses due to lack of storage mean retailers should support suppliers with better storage solutions to reduce waste[5] - *numerous countries*

Oceania | Mandatory reductions
Australia's national goals to halve food waste require retailers to adopt waste reduction practices in their operations[6] - *Australia*

Sources: 1. UNEP Food Waste Index Report 2024; 2. DiVA, "Food loss in perishable food supply chains: The case of Colombia", 2022; 3. BCG experts; 4. Green Network, Food Loss and Waste in Southeast Asia, 2023; 5. All On, "Solar cold storage: A solution to Africa's post-harvest loss", 2023; 6. Australia Department of Agriculture, Fisheries and Forestry, "A Roadmap for reducing Australia's food waste by half by 2030," 2018

Actions | Retailers can reduce food waste through operational shifts and start reducing food loss using analytics and innovation

Early action should prioritize operational changes within retailer's control to minimize food waste

Example activities include

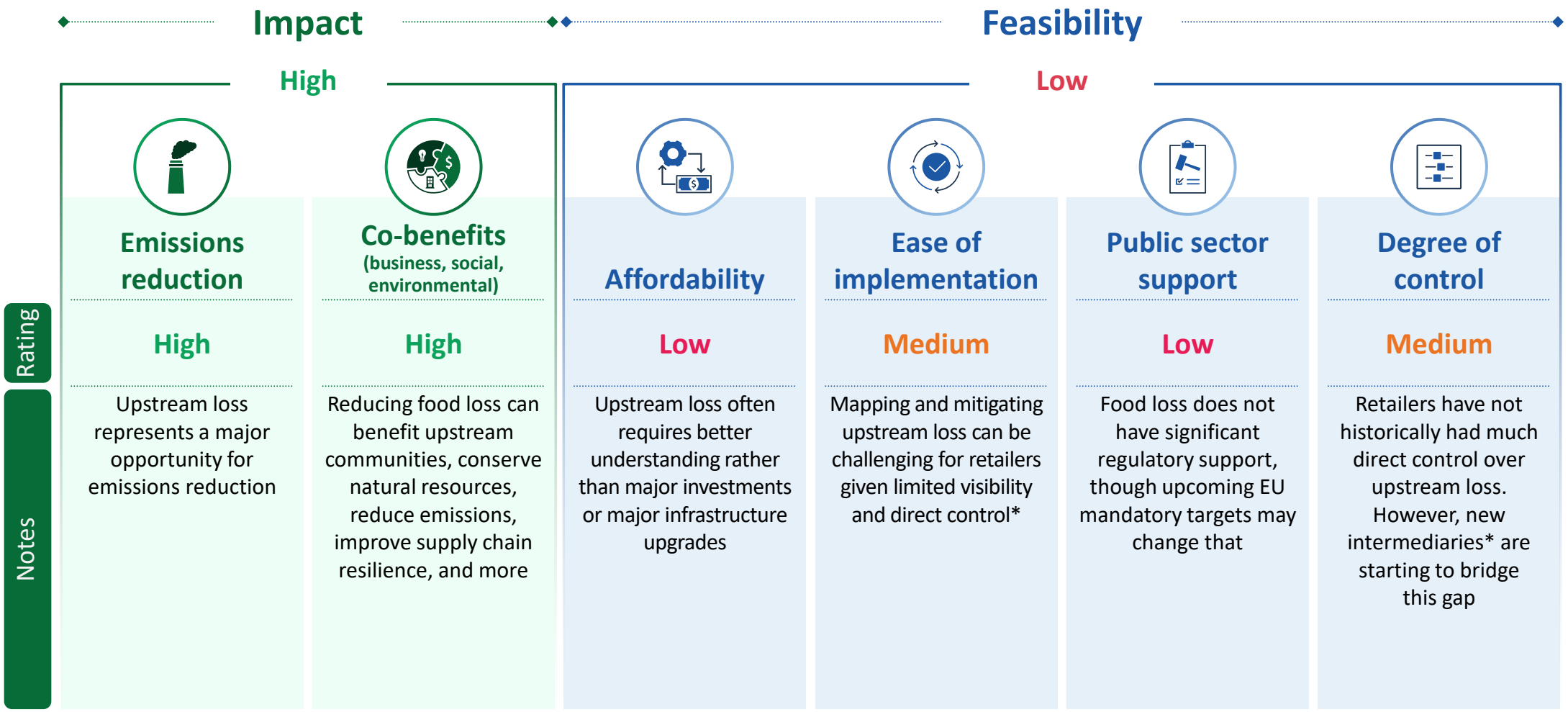
- **Educate customers** on reducing food waste at home by promoting intentional purchasing and proper storage techniques
- **Reexamine promotional and marketing campaigns that may be encouraging overconsumption and replace with campaigns that reduce waste** (e.g., discount lightly damaged products, reframe reduced-size yields as "miniature" versions)
- **Mitigate food waste at the point of consumption** by offering in-store compost collection and promoting products with increased shelf life
- **Use dynamic pricing for perishable products** near expiration, offer discounts to encourage sales

Advanced actions should focus on innovation and partnerships to mitigate food loss upstream

Example activities include

- **Invest in technological solutions to reduce upstream food loss** (e.g., refrigeration, more advanced harvest methodology)
- **Identify where upstream food loss is coming from** through engaging intermediaries (e.g., Global Farm Loss Tool) to map value chain
- **Adjust produce standards** to accommodate more aesthetic variation and reduce unnecessary disposal upstream
- **Leverage AI-driven demand forecasting** for more precise inventory management to minimize surplus

Relative impact & feasibility (food loss) | Upstream food loss represents significant opportunity, though progress can be challenging to achieve



*. The Global Farm Loss Tool offers a methodology to enhance visibility and provides actionable solutions

Relative impact & feasibility (food waste) | Operational changes can be easy to implement, while consumer behavior is difficult to impact

	Impact		Feasibility			
	Medium		High			
						
	Emissions reduction	**Co-benefits** (business, social, environmental)	**Affordability**	**Ease of implementation**	**Public sector support**	**Degree of control**
Rating	Medium	Medium	High	High	High	Medium
Notes	Retailers can moderately reduce emissions by minimizing waste in operations, but consumer waste remains beyond direct control	Potential actions (e.g., discounting products close to sell date, donating excess inventory) can improve brand loyalty and benefit local communities	Consumer education is relatively low-cost. While operational changes may be costly, retailers may save money through selling a larger percent of product (due to less product going bad before being purchased)	Demand forecasting tech is improving rapidly, and consumer education is typically straightforward	US and EU have mandatory composting regulations, and some EU countries (e.g., Italy, France) have enacted regulations mandating food waste reduction	Retailers have high degree of control over waste in operations, though in developed markets the majority of waste occurs at the point of consumption (in the home), which is harder for retailers to influence

Case studies | Retailers repurpose food scraps and misshapen produce to minimize food waste and create value

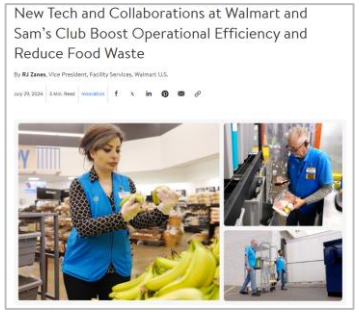
Levers in action: Retail case studies

Tesco works with suppliers to reduce food waste from misshapen or surplus produce through its 'Perfectly Imperfect' initiative

Tesco's 'Perfectly Imperfect' initiative, launched in 2016, has **saved over 68 million packs of misshapen/surplus produce** from going to waste by partnering with farmers to **manage bumper crops, sell surplus at discount,** and **repurpose imperfect produce for suppliers** (e.g., misshapen potatoes for ready meal manufacturers)

See Tesco Press Release for more info

Walmart leverages de-packaging technology to enable more efficient diversion of waste from landfills



In collaboration with Denali, Walmart introduced **de-packaging technology in over 1,400 stores** and Sam's Clubs as of July 2024. This technology **simplifies the process of separating unsalable packaged foods from their packaging**, facilitating recycling into animal feed, compost, or renewable energy, thereby **diverting waste from landfill**

See Walmart Press Release for more info

Aldi Austria launches "Rettenswert" brand to combat food waste

In 2023, Aldi's Austrian division, Hofer, introduced their Rettenswert (meaning "worth saving") brand to address food waste by **repurposing surplus and imperfect produce into new products**. This initiative transforms items like misshapen pumpkins into pumpkin pesto and surplus seasonal tomatoes into Austria's only 100% locally grown and produced ketchup

See Aldi – Rettenswert for more info

Resources | Regulations and frameworks will inform strategy for reducing food loss and waste

(Non-exhaustive)	Description	Relevant resource(s)
Regulations directly impacting organic waste disposal methods (Mandatory)	**French food waste regulation[1]:** Mandates the recycling of organic/bio waste by households and businesses in France under "compost obligatoire" rules as of January 2024	• EU Commission Food Waste Resource Library • EU Commission Reducing Food Waste FAQ
	California State Legislature SB 1383[2]: Requires California cities and counties to reduce organic waste disposal by 75% by 2025 and requires all residents, businesses and multifamily-complexes to recycle organics separately	• CA Mandatory Organic Waste Collection Regulation overview
Frameworks and target-setting guidance (Voluntary)	**10x20x30 (Champions 12.3):** Retail-led initiative to engage 20 suppliers to halve food loss and waste by 2030	• 10x20x30 • Food Loss & Waste Protocol (WRI, Quantis) • Food Loss & Waste Value Calculator (WRI, Quntis)

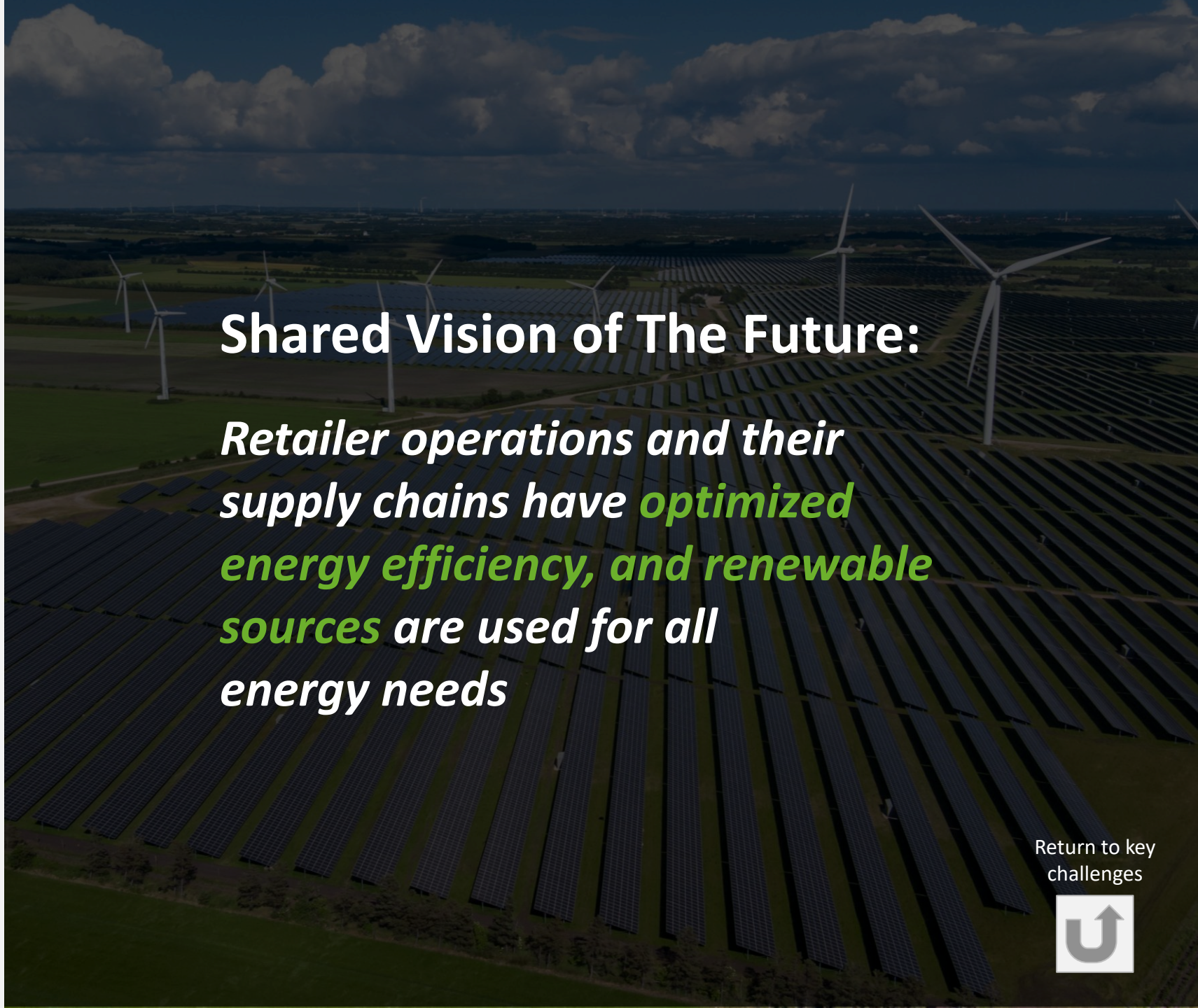
Business guidance (Voluntary)	Actionable recommendations and guidance for reducing food waste and loss	• Closing the Food Waste Gap (BCG)
		• Food Loss and Waste - A Crucial Piece of the Puzzle (Quantis, Just Food)
		• A Recipe to Reduce Food Loss and Waste (BCG)
		• CGF Food Waste Coalition of Action resources:
		  • Food Loss & Waste Capability Assessment for Retailers
		  • Driving Emissions Down and Profit Up by Reducing Food Waste
		  • Food Waste Knowledge Sharing Sessions 2024: Learnings Report

Mandatory regulation Voluntary standard, framework, or guidance

1. Included as an example, UK, Belgium ad Spain among other countries in Europe that have passed food waste or organic waste recycling regulations; 2. Included as an example, other states that have passed mandatory composting city / state level laws include Colorado, Connecticut, District of Columbia, Hawaii, Maryland, Massachusetts, Minnesota, New Jersey, New York, Oregon, Rhode Island, Texas, Vermont and Washington

Return to key challenges

Increase low carbon energy



Shared Vision of The Future:

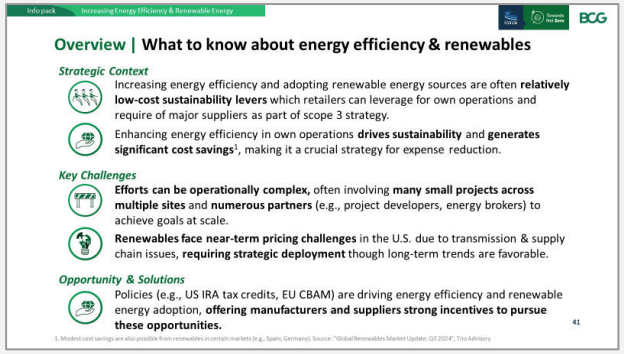
Retailer operations and their supply chains have optimized energy efficiency, and renewable sources are used for all energy needs

Return to key challenges

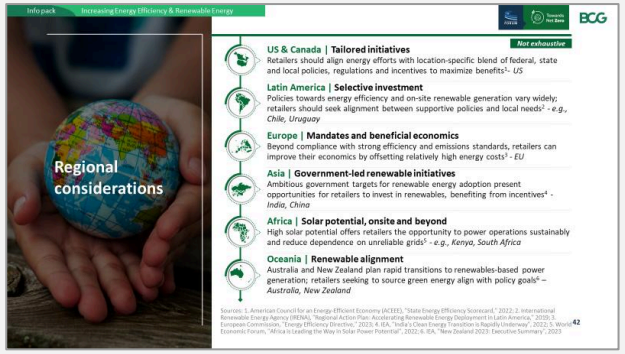
Climate Action in Practice Guide | Preview of increasing low carbon energy insights, resources, and activities to consider

Topic resources to follow …

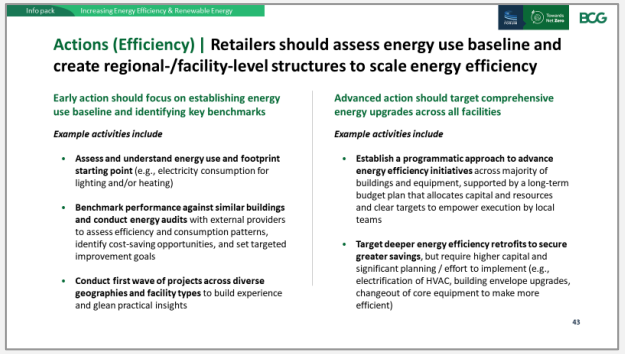
Low Carbon Energy Overview



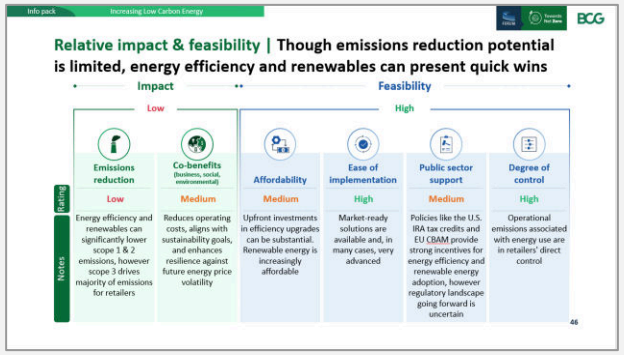
Regional Considerations



Activities Retailers Should Consider

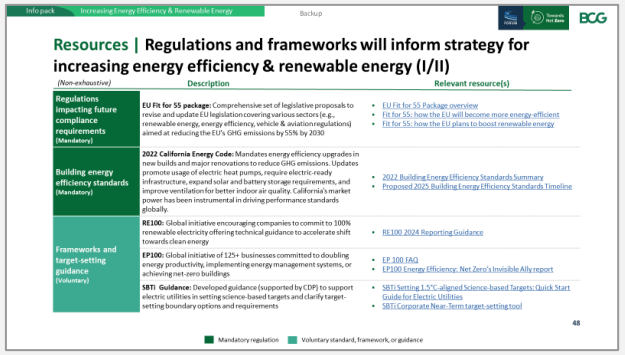


Relative Impact & Feasibility



Retailer Case Studies

"Best Source of Truth" Resources



Overview | What to know about energy efficiency & renewables

Strategic Context

Increasing energy efficiency and adopting renewable energy sources are often **relatively low-cost sustainability levers**, enabling retailers to reduce emissions in their own operations and influence major suppliers as part of scope 3 strategy

Enhancing energy efficiency in own operations **improves sustainability** and **delivers significant cost savings**[1], making it a critical strategy for expense reduction

Key Challenges

Executing renewables projects can be operationally complex, often requiring coordination across multiple sites and involving numerous partners (e.g., project developers, energy brokers)

Deploying renewables faces near-term pricing challenges in the U.S., due to transmission & supply chain issue – **requiring strategic planning despite favorable** long-term trends

Opportunity & Solutions

Leveraging policy incentives (e.g., US IRA tax credits, EU CBAM) is accelerating energy efficiency and renewable adoption, **offering strong incentives to act**

1. Modest cost savings are also possible from renewables in certain markets (e.g., Spain, Germany). Source: "Global Renewables Market Update: Q3 2024", Trio Advisory

Regional considerations

Not exhaustive

US & Canada | Tailored initiatives
Retailers should align energy efforts with location-specific blend of federal, state and local policies, regulations and incentives to maximize benefits[1]- *US*

Latin America | Selective investment
Policies towards energy efficiency and on-site renewable generation vary widely; retailers should seek alignment between supportive policies and local needs[2] - *e.g., Chile, Uruguay*

Europe | Mandates and beneficial economics
Beyond compliance with strong efficiency and emissions standards, retailers can improve their economics by offsetting relatively high energy costs[3] - *EU*

Asia | Government-led renewable initiatives
Ambitious government targets for renewable energy adoption present opportunities for retailers to invest in renewables, benefiting from incentives[4] - *India, China*

Africa | Solar potential, onsite and beyond
High solar potential offers retailers the opportunity to power operations sustainably and reduce dependence on unreliable grids[5] - *e.g., Kenya, South Africa*

Oceania | Renewable alignment
Australia and New Zealand plan rapid transitions to renewables-based power generation; retailers seeking to source green energy align with policy goals[6] – *Australia, New Zealand*

Sources: 1. American Council for an Energy-Efficient Economy (ACEEE), "State Energy Efficiency Scorecard," 2022; 2. International Renewable Energy Agency (IRENA), "Regional Action Plan: Accelerating Renewable Energy Deployment in Latin America," 2019; 3. European Commission, "Energy Efficiency Directive," 2023; 4. IEA, "India's Clean Energy Transition is Rapidly Underway", 2022; 5. World Economic Forum, "Africa is Leading the Way in Solar Power Potential", 2022; 6. IEA, "New Zealand 2023: Executive Summary", 2023

Actions (Efficiency) | Retailers should assess energy use baseline and create regional- or facility-level structures to scale energy efficiency

Early action should focus on establishing energy use baseline and identifying key benchmarks

Example activities include

- **Assess and understand energy use and footprint starting point** (e.g., electricity consumption for lighting and/or heating)
- **Benchmark performance against similar buildings and conduct energy audits** with external providers to assess efficiency and consumption patterns, identify cost-saving opportunities, and set targeted improvement goals
- **Conduct first wave of projects across diverse geographies and facility types** to build experience and glean practical insights

Advanced action should target comprehensive energy upgrades across all facilities

Example activities include

- **Establish a programmatic approach to advance energy efficiency initiatives** across majority of buildings and equipment, supported by a long-term budget plan that allocates capital and resources and clear targets to empower execution by local teams
- **Target deeper energy efficiency retrofits to secure greater savings,** but require higher capital and significant planning / effort to implement (e.g., electrification of HVAC, building envelope upgrades, changeout of core equipment to make more efficient)

Actions (Renewables) | Retailers early in the journey should assess current energy sourcing and apply region-specific strategies to scale

Early action should prioritize identifying opportunities to effectively deploy renewables

Example activities include

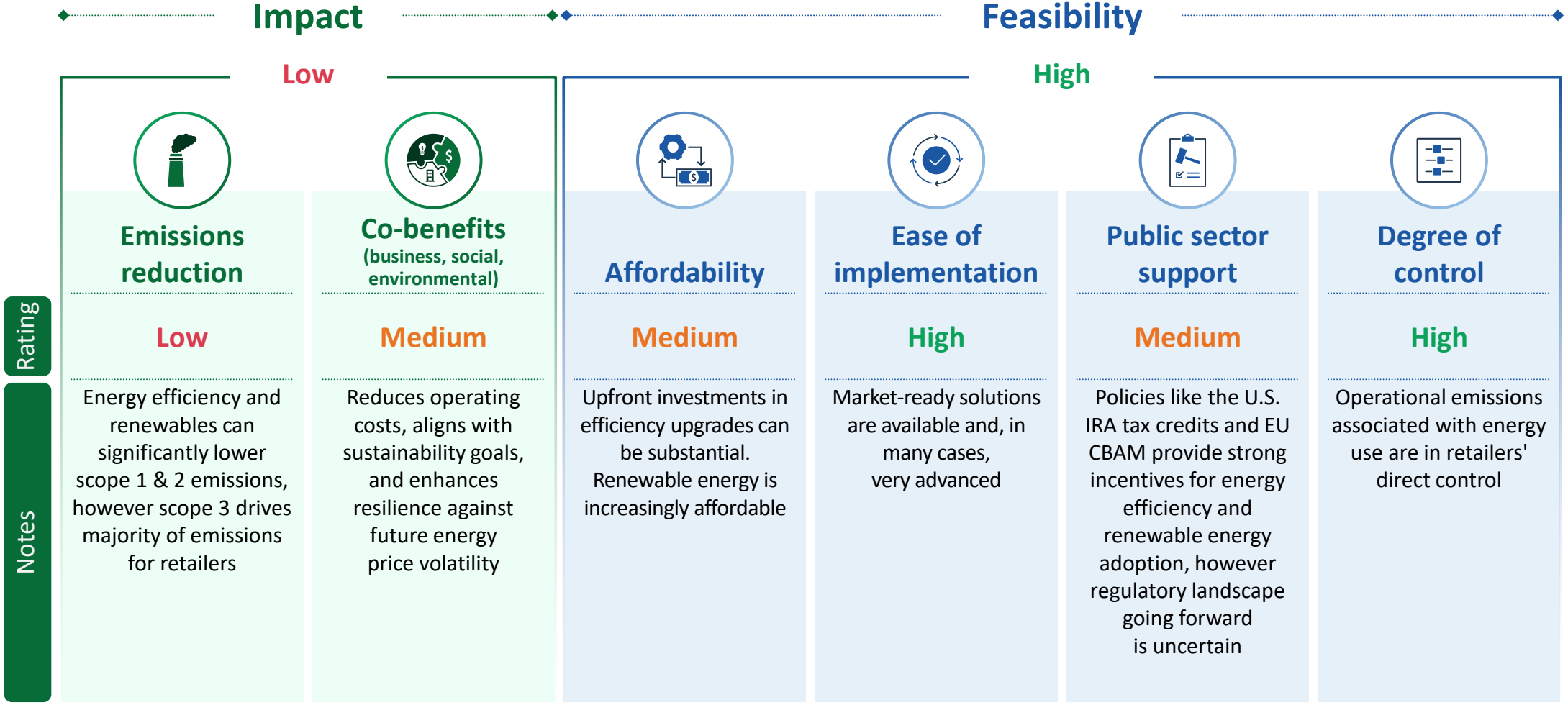
- **Assess current renewable energy usage and forecast broader energy needs to support renewable planning and procurement** (e.g., estimate future demand, identify renewable energy needed to meet sustainability goals)
- **Identify the most suitable renewable energy pathways** (e.g., on-site solar installations, PPAs, vPPAs, unbundled certificates / RECs) and **determine initiatives to prioritize** and **optimize adoption** (e.g., develop region specific strategies, obtain financial approvals, establish clear objectives, facilitate effective implementation)

Advanced actions should prioritize defining a clear path to 100% renewable energy

Example activities include

- **Target achieving 100% renewables in the immediate term using unbundled RECs**
- **Develop plan to meet 100% renewable energy beyond 2027 without unbundled RECs,** focusing on sourcing PPAs, vPPAs, and building onsite capacity
- Once above is achieved, **implement a plan to meet renewable energy commitments to meet power usage on a 24/7 matching basis**

Relative impact & feasibility | Though emissions reduction potential is limited, energy efficiency and renewables can present quick wins



Case studies (Efficiency) | Retailers launch regional initiatives to increase energy efficiency for own operations and/or major supplier networks

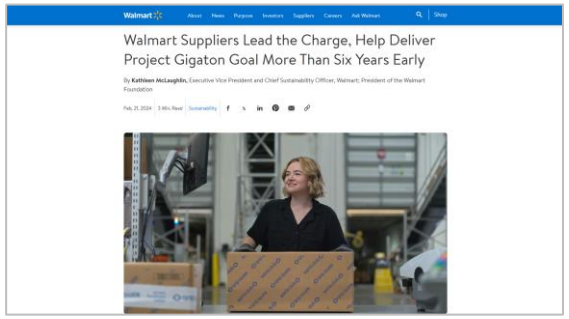
Levers in action: Retail case studies

IKEA launched initiative to boost HVAC energy efficiency and reduce carbon footprint

IKEA increased HVAC energy efficiency by 25% in two large Spanish stores by installing ABB's **high-efficiency HVAC systems** with advanced drives. This initiative is part of IKEA's broader sustainability goal to reduce carbon emissions by 80% by 2030, supporting its vision of becoming a fully circular and low-impact business

See IKEA Case Study for more info

Walmart boosts energy efficiency in supply chain through Project Gigaton



Through **Project Gigaton**, Walmart worked with **5,900 suppliers** to improve supply chain **energy efficiency** using tools like the Factory Energy Efficiency tool and hosting summits. These efforts helped Walmart exceed its emissions reduction goal **six years early**, highlighting energy efficiency's role in cutting emissions

See Walmart Press Release for more info

Woolworths invests in comprehensive energy efficiency upgrades to bring down emissions

Woolworths has allocated **over $77M to energy efficiency upgrades** throughout their operations, including replacing older lighting with LED solutions and upgrading refrigeration and air conditioning systems, contributing to their achievement of a **42% reduction in scope 1 & 2 emissions** relative to 2015 base year

See Woolworths Sustainability Report for more info

Case studies (Renewables) | Retailers leverage multiple strategies to accelerate adoption of renewables across portfolio

Levers in action: Retail case studies

Woolworths progresses toward 100% renewable energy by 2025

Woolworths aims to achieve **100% renewable electricity** by **2025**, with **23.5%** reached in F24, supported by CleanCo and other partnerships. In F24, **278 solar systems** were installed, powering over **12,600 homes** annually. Efforts include bi-facial solar panels to maximize production and align with the **RE100 commitment**

See Woolworths press release for more info

Walmart accelerates clean energy investments across the US to reduce emissions

Walmart is advancing its energy transformation by **enabling nearly 1 gigawatt of new clean energy projects across the U.S**. These initiatives include **community solar programs** benefiting low-income households, **long-term renewable energy purchase agreements**, and **collaborations** with utilities to **expand grid capacity**

See Walmart Press Release for more info

IKEA invests €200 million to support renewable energy transition

IKEA launched a program to help suppliers in key countries like **Poland**, **China**, and **India** transition to **renewable electricity**. By **2023**, the program expanded to **ten additional markets**. The program provides both off-site solutions like **Power Purchase Agreements** and on-site options such as **solar panel installations**

See IKEA Press Release for more info

Ahold Delhaize signs VPPA covering 30% of EU operations with solar

Ahold Delhaize signed a **Virtual Power Purchase Agreement** (VPPA) with Spanish energy company BRUC to support the construction of five solar plants in Seville. Once **operational in 2026, the project will supply approximately 460,000 MWh of renewable electricity** annually—covering around 30% of the retailer's European energy consumption

See Ahold Delhaize press release for more info

Resources | Regulations and frameworks will inform strategy for increasing low carbon energy (I/II)

(Non-exhaustive)	Description	Relevant resource(s)
Regulations impacting future compliance requirements (Mandatory)	**EU Fit for 55 package:** Comprehensive set of legislative proposals to revise and update EU legislation covering various sectors (e.g., renewable energy, energy efficiency, vehicle & aviation regulations) aimed at reducing the EU's GHG emissions by 55% by 2030	• EU Fit for 55 Package overview • Fit for 55: how the EU will become more energy-efficient • Fit for 55: how the EU plans to boost renewable energy
Building energy efficiency standards (Mandatory)	**2022 California Energy Code:** Mandates energy efficiency upgrades in new builds and major renovations to reduce GHG emissions. Updates promote usage of electric heat pumps, require electric-ready infrastructure, expand solar and battery storage requirements, and improve ventilation for better indoor air quality. California's market power has been instrumental in driving performance standards globally	• 2022 Building Energy Efficiency Standards Summary • Proposed 2025 Building Energy Efficiency Standards Timeline
	RE100: Global initiative encouraging companies to commit to 100% renewable electricity offering technical guidance to accelerate shift towards clean energy	• RE100 2024 Reporting Guidance
Frameworks and target-setting guidance (Voluntary)	**EP100:** Global initiative of 125+ businesses committed to doubling energy productivity, implementing energy management systems, or achieving net-zero buildings	• EP 100 FAQ • EP100 Energy Efficiency: Net Zero's Invisible Ally report
	SBTi Guidance: Developed guidance (supported by CDP) to support electric utilities in setting science-based targets and clarify target-setting boundary options and requirements	• SBTi Setting 1.5°C-aligned Science-based Targets: Quick Start Guide for Electric Utilities • SBTi Corporate Near-Term target-setting tool

Mandatory regulation Voluntary standard, framework, or guidance

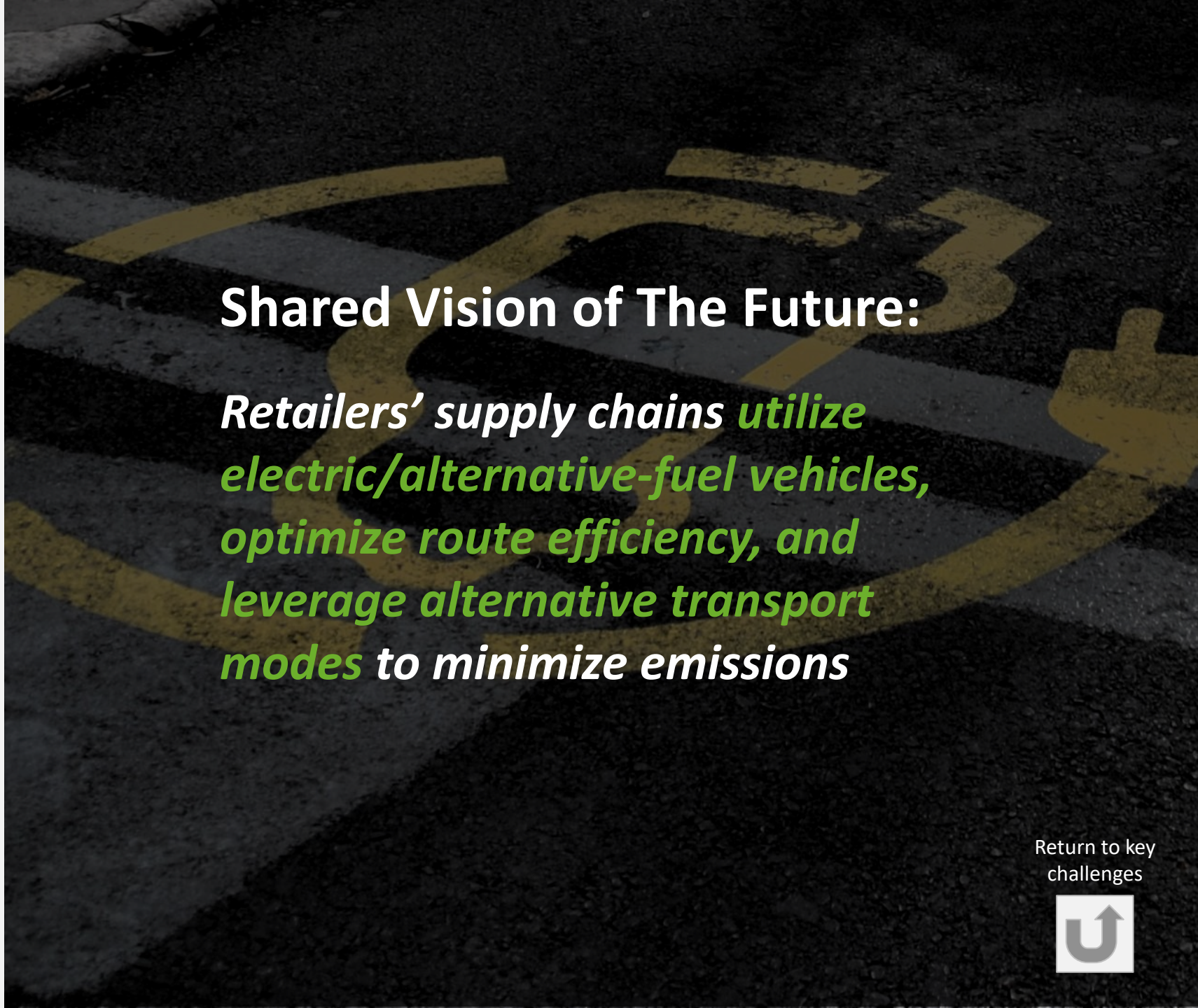
Resources | Regulations and frameworks will inform strategy for increasing low carbon energy (II/II)

(Non-exhaustive)	Description	Relevant resource(s)
Funding and incentive mechanisms (Voluntary)	**Funding opportunities under Inflation Reduction Act (IRA):** Directs ~$400B in US federal funding to reduce carbon emissions by 2030 through tax incentives, grants, and loan guarantees for clean electricity, transmission, clean transportation, and EV incentives	• Inflation Reduction Act Guidebook
Business guidance (Voluntary)	Several resources exist that provide actionable guidance and recommendations for increasing energy efficiency and renewable energy at the corporate level	• Turbocharging the Energy Transition by Boosting Customer Demand (BCG publication) • A Rapid Energy Transformation Is Good for Nature and the Climate (BCG publication) • Accounting for Change: Policies and Technical Approaches for Reducing Greenhouse Gas Emissions through Energy Efficiency Programs (American Council for Energy-Efficient Council publication) • RILA Corporate Clean Energy Procurement Index report

Mandatory regulation Voluntary standard, framework, or guidance

Return to key challenges

Increase low carbon transportation



Shared Vision of The Future:

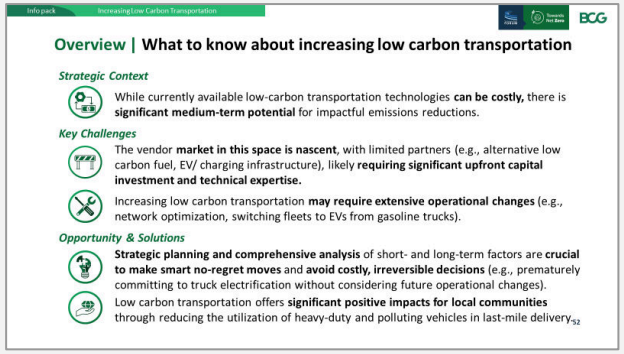
Retailers' supply chains utilize electric/alternative-fuel vehicles, optimize route efficiency, and leverage alternative transport modes to minimize emissions

Return to key challenges

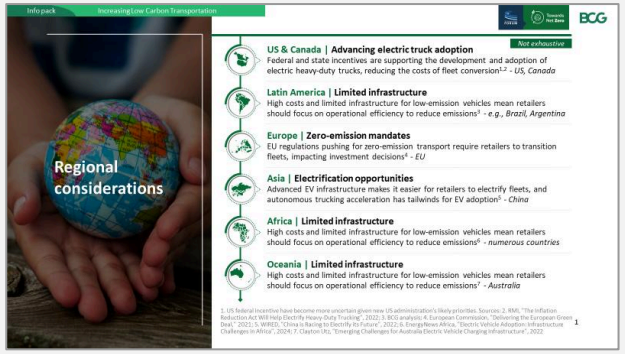
Climate Action in Practice Guide | Preview of increasing low carbon transportation insights, resources and activities to consider

Topic resources to follow …

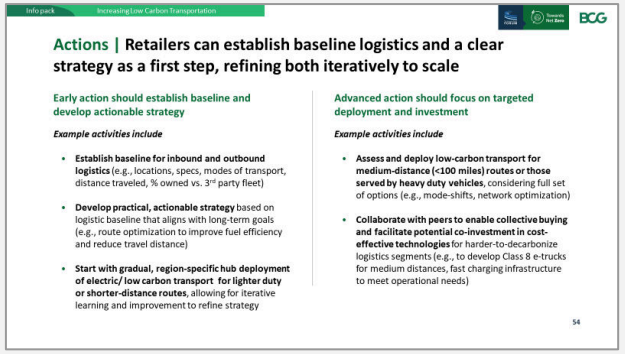
Low Carbon Transportation Overview



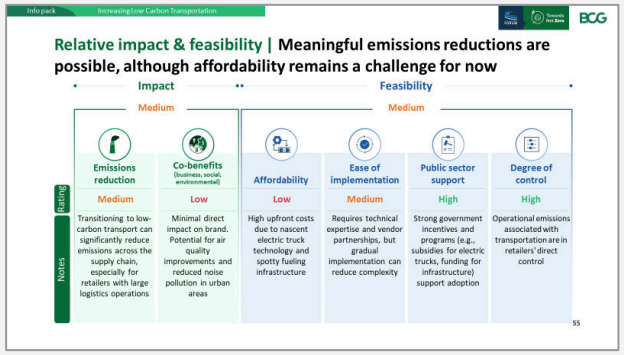
Regional Considerations



Activities Retailers Should Consider



Relative Impact & Feasibility



Retailer Case Studies

"Best Source of Truth" Resources

Overview | What to know about increasing low carbon transportation

Strategic Context

Currently available low-carbon transportation technologies remain costly, but offer **significant medium-term potential** for impactful emissions reductions

Key Challenges

The **vendor landscape is nascent**, with limited partners in areas like alternative fuel and EV charging infrastructure – likely requiring significant upfront capital and technical expertise

Scaling low carbon transportation **may require extensive operational shifts**, such as network optimization and transitioning fleets from gasoline to electric vehicles

Opportunity & Solutions

Strategic planning and comprehensive analysis of short- and long-term factors are crucial, helping **avoid costly, irreversible decisions** (e.g., committing to truck electrification without accounting for future operational needs)

Low carbon transportation can deliver **meaningful benefits for local communities**, reducing the use of heavy-duty, high-emission vehicles in last-mile delivery

Regional considerations

Not exhaustive

US & Canada | Advancing electric truck adoption
Federal and state incentives support the development and adoption of electric heavy-duty trucks, reducing the costs of fleet conversion[1,2] – US, Canada

Latin America | Limited infrastructure
High costs and limited infrastructure for low-emission vehicles mean retailers should prioritize operational efficiency to reduce emissions[3] - *e.g., Brazil, Argentina*

Europe | Zero-emission mandates
EU regulations pushing for zero-emission transport require retailers to transition fleets, impacting investment decisions[4] - *EU*

Asia | Electrification opportunities
Advanced EV infrastructure makes it easier for retailers to electrify fleets, and autonomous trucking acceleration has tailwinds for EV adoption[5] - *China*

Africa | Limited infrastructure
High costs and limited infrastructure for low-emission vehicles mean retailers should focus on operational efficiency to reduce emissions[6] - *numerous countries*

Oceania | Limited infrastructure
High costs and limited infrastructure for low-emission vehicles mean retailers should focus on operational efficiency to reduce emissions[7] - *Australia*

1. US federal incentive have become more uncertain given new US administration's likely priorities. Sources: 2. RMI, "The Inflation Reduction Act Will Help Electrify Heavy-Duty Trucking", 2022; 3. BCG analysis; 4. European Commission, "Delivering the European Green Deal," 2021; 5. WIRED, "China is Racing to Electrify its Future", 2022; 6. EnergyNews Africa, "Electric Vehicle Adoption: Infrastructure Challenges in Africa", 2024; 7. Clayton Utz, "Emerging Challenges for Australia Electric Vehicle Charging Infrastructure", 2022

Actions | Retailers can establish baseline logistics and a clear strategy as a first step, refining both iteratively to scale

Early action should establish a baseline and develop an actionable strategy

Example activities include

- **Establish baseline for inbound and outbound logistics** (e.g., locations, specs, modes of transport, distance traveled, % owned vs. 3rd party fleet)
- **Develop practical, actionable strategy** based on logistic baseline that aligns with long-term goals (e.g., route optimization to improve fuel efficiency and reduce travel distance)
- **Start with gradual, region-specific hub deployment of electric/ low carbon transport for lighter duty or shorter-distance routes,** allowing for iterative learning and improvement to refine strategy

Advanced action should focus on targeted deployment and investment

Example activities include

- **Assess and deploy low-carbon transport for medium-distance (<100 miles) routes or those served by heavy duty vehicles,** considering full set of options (e.g., mode-shifts, network optimization)
- **Collaborate with peers to enable collective buying and facilitate potential co-investment in cost-effective technologies** for harder-to-decarbonize logistics segments (e.g., to develop Class 8 e-trucks for medium distances, fast charging infrastructure to meet operational needs)

Relative impact & feasibility | Meaningful emissions reductions are possible, although affordability remains a challenge for now

	Impact			Feasibility			
	Medium			Medium			
							
	Emissions reduction	**Co-benefits** (business, social, environmental)	**Affordability**	**Ease of implementation**	**Public sector support**	**Degree of control**	
Rating	Medium	Low	Low	Medium	High	High	
Notes	Transitioning to low-carbon transport can significantly reduce emissions across the supply chain, especially for retailers with large logistics operations	Minimal direct impact on brand. Potential for air quality improvements and reduced noise pollution in urban areas	High upfront costs due to nascent electric truck technology and spotty fueling infrastructure	Requires technical expertise and vendor partnerships, but gradual implementation can reduce complexity	Strong government incentives and programs (e.g., subsidies for electric trucks, funding for infrastructure) support adoption	Operational emissions associated with transportation are in retailers' direct control	

Case studies | Retailers employ variety of innovative solutions and strategic partnerships to reduce emissions across their fleets

Levers in action: Retail case studies

DFI launches electric trucks to cut logistics emissions

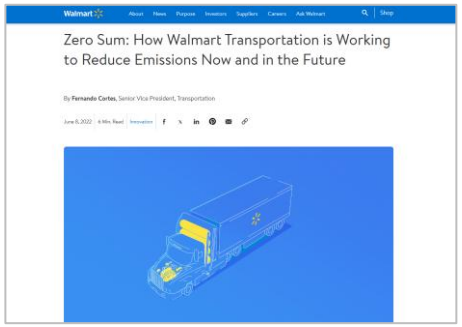

Introducing Electric Trucks in Hong Kong and Taiwan

Taiwan's first 26-tonne electric delivery truck

In 2023, DFI launched **electric trucks** in Taiwan and Hong Kong, cutting logistics **emissions significantly**. In Taiwan, a **26-tonne truck** reduced emissions by **18%**, while Hong Kong's **24-tonne truck**, funded by the government, will cut **24,000 tonnes of CO_2** over its lifetime

*See **DFI Sustainability Report** for more info*

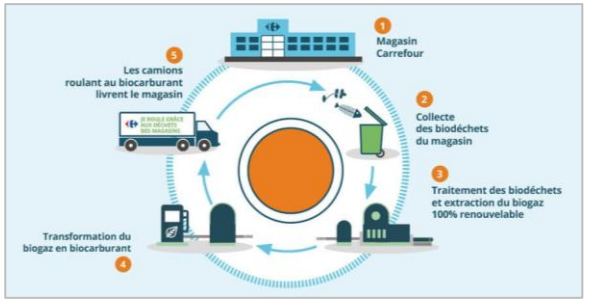
Walmart advances alternative fuels and innovative technology to reduce transport emissions


Zero Sum: How Walmart Transportation is Working to Reduce Emissions Now and in the Future

Walmart is piloting alternative fuel solutions, including renewable natural gas, hydrogen, and electric vehicles to reduce emissions from its transportation fleet. Additionally, they are collaborating with partners (e.g., Chevron) **to drive innovation and test new technologies** in Class 8 trucks, refrigerated trailers, and yard trucks.

*See **Walmart Press Release** for more info*

Carrefour converts waste from stores into biofuel



Carrefour sorts and recovers bio-waste in stores, then converts the waste to fuel for biomethane trucks. By the end of 2024 Carrefour planned to have **1,000 biomethane trucks** in circulation, which produce **80% less GHG emissions** than traditional transportation methods

*See **Carrefour Website** for more info*

Resources | Monitoring emerging regulations is crucial to guide low carbon transportation strategy and avoid costly missteps

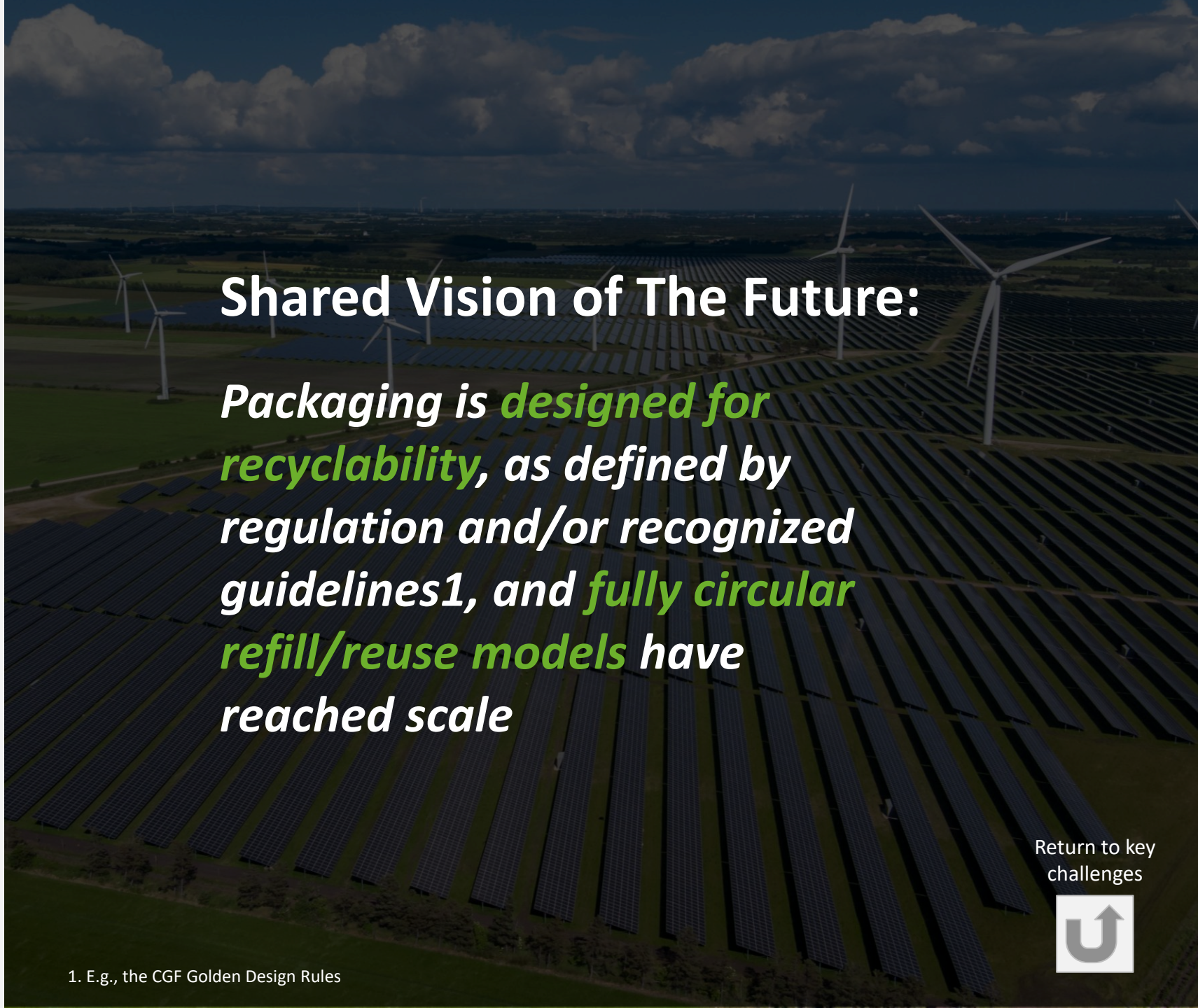
(Non-exhaustive)	Description	Relevant resource(s)
Regulation (Mandatory)	**CA Executive Order N-79-20**: Requires CA Air Resources Board (CARB) to develop and propose strategies to achieve 100% zero-emissions from medium- and heavy-duty on-road vehicles by 2045 and from drayage (container shipping) vehicles by 2035. Several existing incentive programs can help fleet owners comply **CA Advanced Clean Fleet Regulation:** Supports EO N-79-20 by specifying transition timeline for government-owned and "high-priority" fleets[1]. In 2035, only ZEVs[2] will qualify for new purchase **New York, New Jersey, Oregon, and Washington** passed similar laws	• CARB advanced clean fleets • CARB zero-emission on-road medium- and heavy-duty strategies
Multi-state agreements (Voluntary)	**Multi-State ZEV Taskforce:** Launched in 2020, coalition of 15 states and DC committed to 30% ZEV sales for new medium- and heavy-duty trucks by 2030 and 100% by 2050 in their respective states	• Multi-state ZEV taskforce memo
Frameworks and target-setting guidance (Voluntary)	**EV100:** Coalition of 120+ companies across 100 markets committing to electrify their passenger and light duty fleet (~5.75 million vehicles) and install charging infrastructure by 2030 **EV100+:** Building off the success of EV100, new initiative focused on medium- and heavy-duty vehicles	• EV100 • EV100+
Business guidance (Voluntary)	Several resources exist that provide actionable guidance and recommendations for increasing low carbon transport at the corporate level	• Accelerating ZEV adoption in fleets to decarbonize road transportation (ICCT publication) • Accelerating the Shift to Sustainable Transport (BCG publication) • The Road Ahead for Low-Carbon Fuels (BCG publication)

Mandatory regulation Voluntary standard, framework, or guidance

1. "High priority" defined as entities with $50m+ gross annual revenue that own, operate, or direct 1+ vehicle in California, or entities that operate 50+ vehicles in the state. 2. ZEV = zero-emissions vehicle

Return to key challenges

Adopt circular or sustainable packaging



Shared Vision of The Future:

Packaging is designed for recyclability, as defined by regulation and/or recognized guidelines1, and fully circular refill/reuse models have reached scale

Return to key challenges

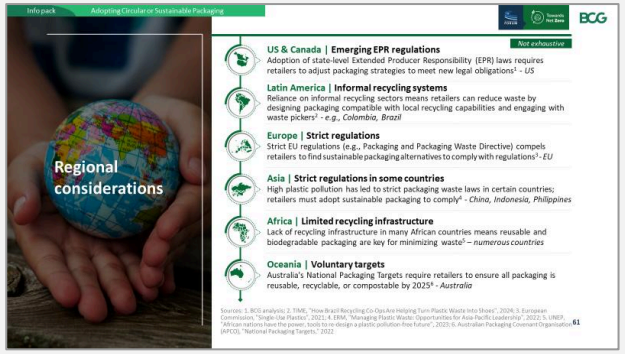
1. E.g., the CGF Golden Design Rules

Climate Action in Practice Guide | Preview of adopting circular or sustainable packaging insights, resources and activities to consider

Topic resources to follow …

Sustainable Packaging Overview

Regional Considerations

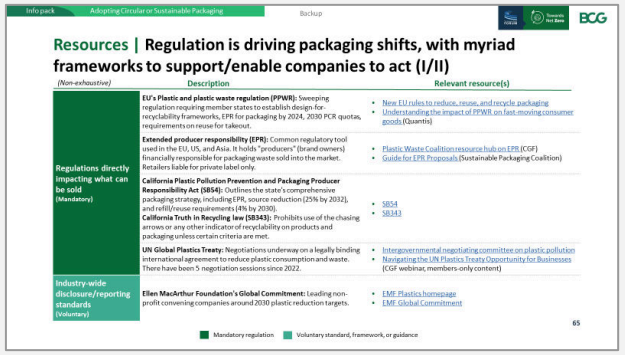


Activities Retailers Should Consider

Relative Impact & Feasibility

Retailer Case Studies

"Best Source of Truth" Resources



1. E.g., the Association of Plastic Recyclers' definitions of recyclability

Overview | What to know about circular or sustainable packaging

Strategic Context

Packaging presents a highly visible waste challenge and is often a top priority for customers; while typically a small share of total GHG emissions, it can simultaneously address sustainability, cost, performance, and customer preferences

Key Challenges

Global regulation is accelerating rapidly (e.g., extended producer responsibility (EPR)) directly impacts retailers' private labels

Systemic barriers persist, including insufficient recycling infrastructure, limited availability of recycled content, inconsistent definitions of "recyclable", and a high premium on alternative materials/formats

Opportunity & Solutions

Private label offers the biggest opportunity, enabling retailers to differentiate and capture value through sustainable packaging innovation – especially in categories where private brands performs well (e.g., canned and frozen veg)

Existing packaging formats and materials present near-term decarbonization opportunities, requiring limited incremental R&D

Regional considerations

Not exhaustive

US & Canada | Emerging EPR regulations
Adoption of state-level Extended Producer Responsibility (EPR) laws requires retailers to adjust packaging strategies to meet new legal obligations[1] - *US*

Latin America | Informal recycling systems
Reliance on informal recycling sectors means retailers can reduce waste by designing packaging compatible with local recycling capabilities and engaging with waste pickers[2] - *e.g., Colombia, Brazil*

Europe | Strict regulations
Strict EU regulations (e.g., Packaging and Packaging Waste Regulation) compels retailers to find sustainable packaging alternatives to comply with regulations[3] - *EU*

Asia | Strict regulations in some countries
High plastic pollution has led to strict packaging waste laws in certain countries; retailers must adopt sustainable packaging to comply[4] - *China, Indonesia, Philippines*

Africa | Limited recycling infrastructure
Lack of recycling infrastructure in many African countries means reusable and alternative-material packaging are key for minimizing waste[5] – *numerous countries*

Oceania | Voluntary targets
Australia's National Packaging Targets require retailers to ensure all packaging is reusable, recyclable, or compostable by 2025[6] - *Australia*

Sources: 1. BCG analysis; 2. TIME, "How Brazil Recycling Co-Ops Are Helping Turn Plastic Waste Into Shoes", 2024; 3. European Commission, "Single-Use Plastics", 2021; 4. ERM, "Managing Plastic Waste: Opportunities for Asia-Pacific Leadership", 2022; 5. UNEP, "African nations have the power, tools to re-design a plastic pollution-free future", 2023; 6. Australian Packaging Covenant Organisation (APCO), "National Packaging Targets," 2022

Actions | Optimizing packaging is an iterative, ongoing process; scalability accelerated via collaboration with packaging suppliers

Target private label products for packaging redesign in early stages

Example activities include

- **Understand regulatory requirements and bolster digital backbone to enable data collection.**
  - All brand owners need to report packaging volume, format, and material in regulated markets
  - Mid-size brand owners could face millions in EPR fees over the next 5 years
- **Identify private label products with excessive or unnecessary packaging** and work with these suppliers **to incorporate eco-design principles**[1] that satisfy cost, performance, and sustainability criteria (e.g., lighter, more compact packaging improves pallet efficiency)
- **Signal demand for recycled content (PCR) and alternative materials** via contract negotiations

Scale solutions by partnering with packaging manufacturers and building internal expertise

Example activities include

- **Work with packaging suppliers to optimize design and offer portfolio of preferred packaging solutions** to private label co-manufacturers
- **Establish pre-competitive R&D partnerships on innovative materials** (e.g., algae-based plastics) with packaging manufacturers, other retailers
- **Build internal capacity/expertise to continuously and more effectively engage suppliers** in each product category (e.g., upskill merch teams to proactively source PCR, data team to update systems to capture pkg. specs)
- **Consider partnerships to scale refill/reuse across retailers**

1. Ecodesign principles include, but are not limited to: mono-material design, prioritizing the most widely recyclable/recycled materials (paperboard, paper, aluminum, glass, #1 PET, #2 HDPE); minimizing product-to-packaging ratio; avoiding glues, laminations, large labels, additives that inhibit recycling; designing for pallet efficiency; eliminating need for secondary and tertiary packaging by fortifying primary package; clearly labeling packs with disposal instructions for end use consumer (e.g., How2Recycle label). For more information, refer to the CGF Golden Design Rules

Relative impact & feasibility | Opportunity for meaningful environmental impact through strategic efforts

	Impact		Feasibility			
	Low		Medium			
	Emissions reduction	Co-benefits (business, social, environmental)	Affordability	Ease of implementation	Public sector support	Degree of control
Rating	Low	Medium	Medium	Medium	High	Medium
Notes	Packaging contributes to scope 3 emissions but is not typically a major driver for retailers	Reduced waste benefits ecosystem health and conserves resources in addition to aligning with consumer priorities and enhancing brand reputation	Costs for sustainable packaging materials and redesigns can be significant but are mitigated through economies of scale and avoided regulatory fees	Requires deep engagement with suppliers and careful redesign to prevent compromising food safety, which can be complex but achievable with planning	Strong regulatory momentum, especially in the US and EU	While retailers don't directly control their private label packaging, they can provide specifications

Case studies | Retailers incorporate eco design principles into private label products and partner on business model innovation

Levers in action: Retail case studies

Loblaw transforms coffee packaging in line with CGF Golden Design Rules (private label)

Loblaw Companies Limited is transitioning all 35 varieties of its President's Choice® and no name® whole bean and ground coffee products to a new, Global Packaging Award-winning **paper-based solution**. The packaging contains at least 80% paper sourced from renewable, recyclable, and Forest Stewardship Council® certified tree fibers. This initiative aligns with Loblaw's **commitment to ensuring all control brand and in-store plastic packaging is reusable or recyclable by 2025**, a standard inspired by the CGF Golden Design Rules, which Loblaw co-developed with global retail and consumer goods leaders

See Loblaw Press Release for more info

Carrefour partners on a bottle return scheme to encourage reuse

In partnership with Coca-Cola, Heineken, and Citeo, Carrefour launched a bottle return program in 150 stores throughout Paris. Customers can purchase 5 soda, water, and beer products in reusable glass bottles and receive €0.10-0.20 per bottle returned. The bottles are sanitized and refilled at the partner's factory and restocked on Carrefour's shelves. A reused bottle can reduce water use by 50%, CO_2 by 75%, and energy use by 80%.[1]

Carrefour plans to expand the program to 500 stores by 2026

See European Supermarket Magazine for more info

1. ADEME

Resources | Regulation is driving packaging shifts, with myriad frameworks to support/enable companies to act (I/II)

(Non-exhaustive)	Description	Relevant resource(s)
Regulations directly impacting what can be sold **(Mandatory)**	**EU's Plastic and plastic waste regulation (PPWR):** Sweeping regulation requiring member states to establish design-for-recyclability frameworks, EPR for packaging by 2024, 2030 PCR quotas, requirements on reuse for takeout	• New EU rules to reduce, reuse, and recycle packaging • Understanding the impact of PPWR on fast-moving consumer goods (Quantis)
	Extended producer responsibility (EPR): Common regulatory tool used in the EU, US, and Asia. It holds "producers" (brand owners) financially responsible for packaging waste sold into the market. Retailers liable for private label only.	• Plastic Waste Coalition resource hub on EPR (CGF) • Guide for EPR Proposals (Sustainable Packaging Coalition)
	California Plastic Pollution Prevention and Packaging Producer Responsibility Act (SB54): Outlines the state's comprehensive packaging strategy, including EPR, source reduction (25% by 2032), and refill/reuse requirements (4% by 2030) **California Truth in Recycling law (SB343):** Prohibits use of the chasing arrows or any other indicator of recyclability on products and packaging unless certain criteria are met	• SB54 • SB343
	UN Global Plastics Treaty: Negotiations underway on a legally binding international agreement to reduce plastic consumption and waste. There have been 5 negotiation sessions since 2022	• Intergovernmental negotiating committee on plastic pollution • Navigating the UN Plastics Treaty Opportunity for Businesses (CGF webinar, members-only content)
Industry-wide disclosure/reporting standards **(Voluntary)**	**Ellen MacArthur Foundation's Global Commitment:** Leading non-profit convening companies around 2030 plastic reduction targets	• EMF Plastics homepage • EMF Global Commitment

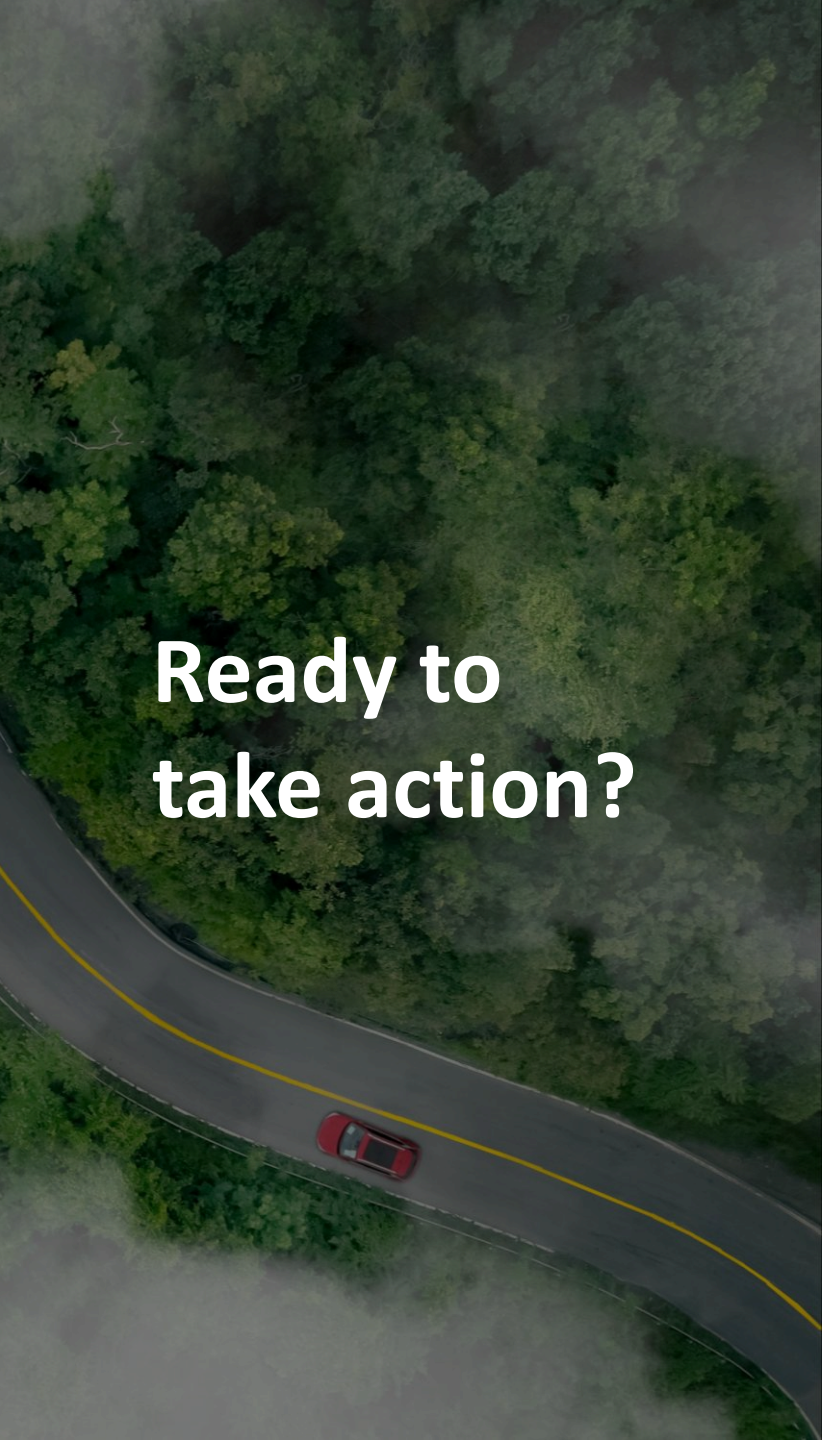
Mandatory regulation Voluntary standard, framework, or guidance

Resources | Regulation is driving packaging shifts, with myriad frameworks to support/enable companies to act (II/II)

(Non-exhaustive)	Description	Relevant resource(s)
Certifications (Voluntary)	**Forest Stewardship Council (FSC) & Sustainable Forestry Initiative (SFI) Certified Sourcing Standard:** Set voluntary standards for responsible forest management and sustainable use of forest resources for paper and packaging	• FSC Certification overview • SFI 2022 Certified Sourcing Standard
	How2Recycle: Standardized label informing consumers about proper disposal based on nationally harmonized recyclability data. Available in US & Canada for a fee	• How2Recycle • How2Compost (for BPI-certified containers)
Frameworks and target-setting guidance (Voluntary)	**SPHERE:** By focusing on six core principles (packaging efficiency, circularity, impact on climate change and biodiversity loss, absence of harmful substances and waste mismanagement), the SPHERE framework enables companies to make science-driven decisions to reducing packaging impacts	• SPHERE: the packaging sustainability framework (Quantis, WBCSD)
	CGF's Golden Design Rules: Outlines nine ways to design packaging that uses less and better plastic. Developed by CGF's Plastic Waste Coalition of Action	• Golden design rules homepage
	Tools, playbooks, industry analysis, and other resources to inform circular packaging design	• eQopack (Quantis tool) • The Plastic Leak Project (Quantis) • Solutions Model Playbooks to Enable Plastics Circularity (Alliance to End Plastic Waste, BCG) • Six strategies for designing sustainable products (BCG)

Mandatory regulation Voluntary standard, framework, or guidance

Return to key challenges



Ready to take action?

How to become the next changemaker:

1. Explore practical resources to tackle key sustinabaility challenges
2. Connect with our experts to accelerate your sustainability journey
3. Join the CGF to collaborate with industry leaders and drive positive change


Thank you