



Decarbonizing  
Commerce

# Product-Level Climate Footprinting & Labeling 2023



# What is Decarbonizing Commerce?



**Decarbonizing Commerce is a new member-guided research and community firm.** It helps retail, ecommerce, and consumer product companies accelerate decarbonization efforts with original research and analysis on commercially and operationally viable decarbonization technologies, strategies, and tactics.



## Focused on commerce

Unlike generalist consultants and media, Decarbonizing Commerce is deeply focused on the retail, ecommerce, and consumer product industries, where we have decades of experience



## Commercially & operationally-oriented.

Our target audience is composed of decision-makers, budget-holders, and practitioners in disciplines like sales, marketing, product design, packaging, fulfillment and logistics, and more



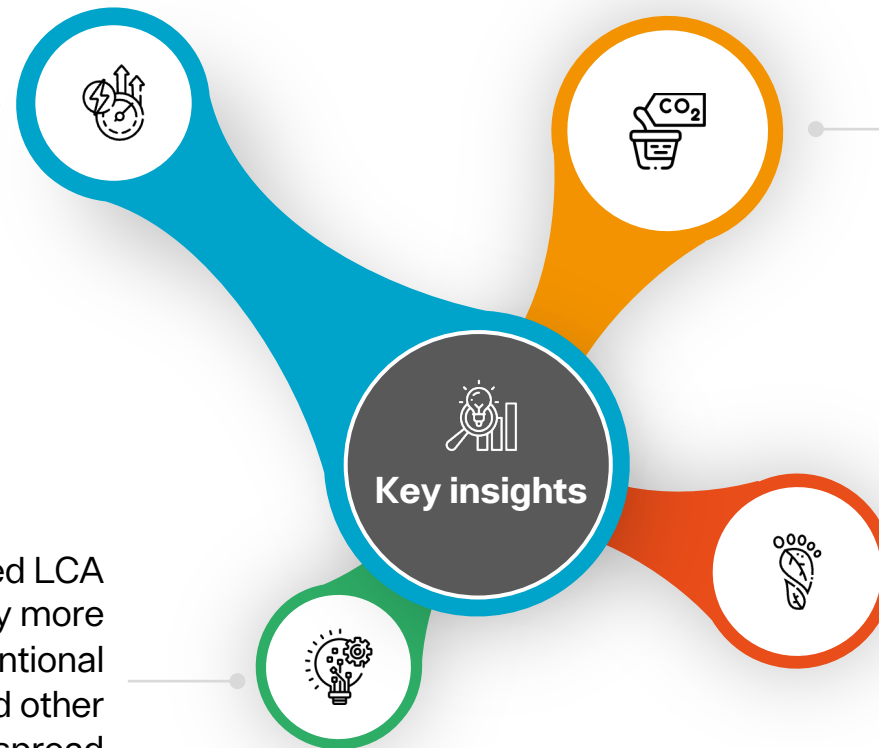
## Deeply researched

While the latest news informs our work, our multi-disciplinary research and analysis goes deep to accelerate decisions and implementation

# Should retailers and brands invest in climate labeling?

Europe-driven legislation is the likeliest accelerator of product-level carbon accounting and labeling, though there is opportunity for retailers and brands to be early adopter

Modern technology-enabled LCA approaches are dramatically more efficient than labor-intensive conventional LCAs, but a lack of standards and other complexities is stalling widespread industry adoption



Though climate labeling isn't a top-tier decarbonization strategy, product-level climate footprinting & labeling are increasingly strategic decarbonization tools for CPG & food-related retailers and brands, helping them respond to consumer demand and prepare for possible carbon taxes and other regulations

Footprinting independent of labeling can yield critical insight into drivers of emissions (and other factors depending on the approach used)

# Product-Level Carbon Footprinting & Labeling 2023



## Background & Context

- ▶ Consumer products are a key source of GHG emissions
- ▶ Shoppers care and want more transparency
- ▶ Product-level calculations are complex
- ▶ Labels could influence outcomes across the value chain



## The Landscape

- ▶ 3 common styles of carbon label
- ▶ Emerging solution providers
- ▶ A lack of standards
- ▶ Retailer-driven initiatives
- ▶ Brand-driven initiatives



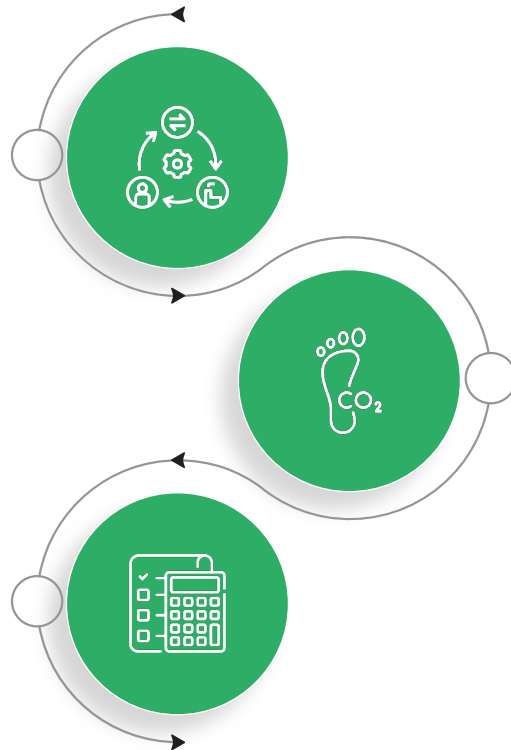
## Paths Forward

- ▶ Drivers & barriers
- ▶ What's next
- ▶ Decision framework and action planning

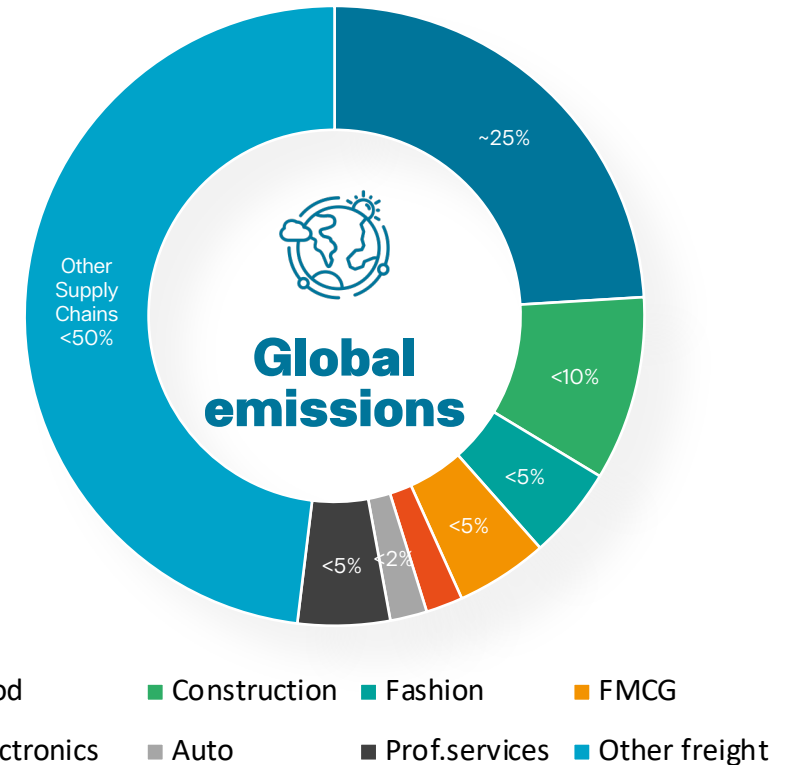


# Consumer products are a key source of emissions

Per BCG, consumer supply chains account for > 35% of global emissions: Food (25%), fashion (5%), fast-moving consumer goods (5%), electronics (2%)



Lack of calculation & labeling make these variances opaque



**Note:** Only selected value chain steps are shown here; value chain steps not shown at scale; FMCG = fast-moving consumer goods

**Source:** BCG

# Shoppers care about carbon



**57%**

of European shoppers  
want sustainability information to  
be compulsory of food labels

Source: BEUC



**68%**

of American shoppers  
believe carbon labeling should be  
mandatory on all product labels

Source: ipsos via sustainable brands



**73%**

of American shoppers  
would switch brands if a competitor  
offered a more sustainable version  
of a product (if all else is equal).

Source: ipsos via sustainable brands

# Shoppers can and will switch and substitute brands and products



**75%**

of millennials are changing their buying habits with the environment in mind

Source: Nielsen

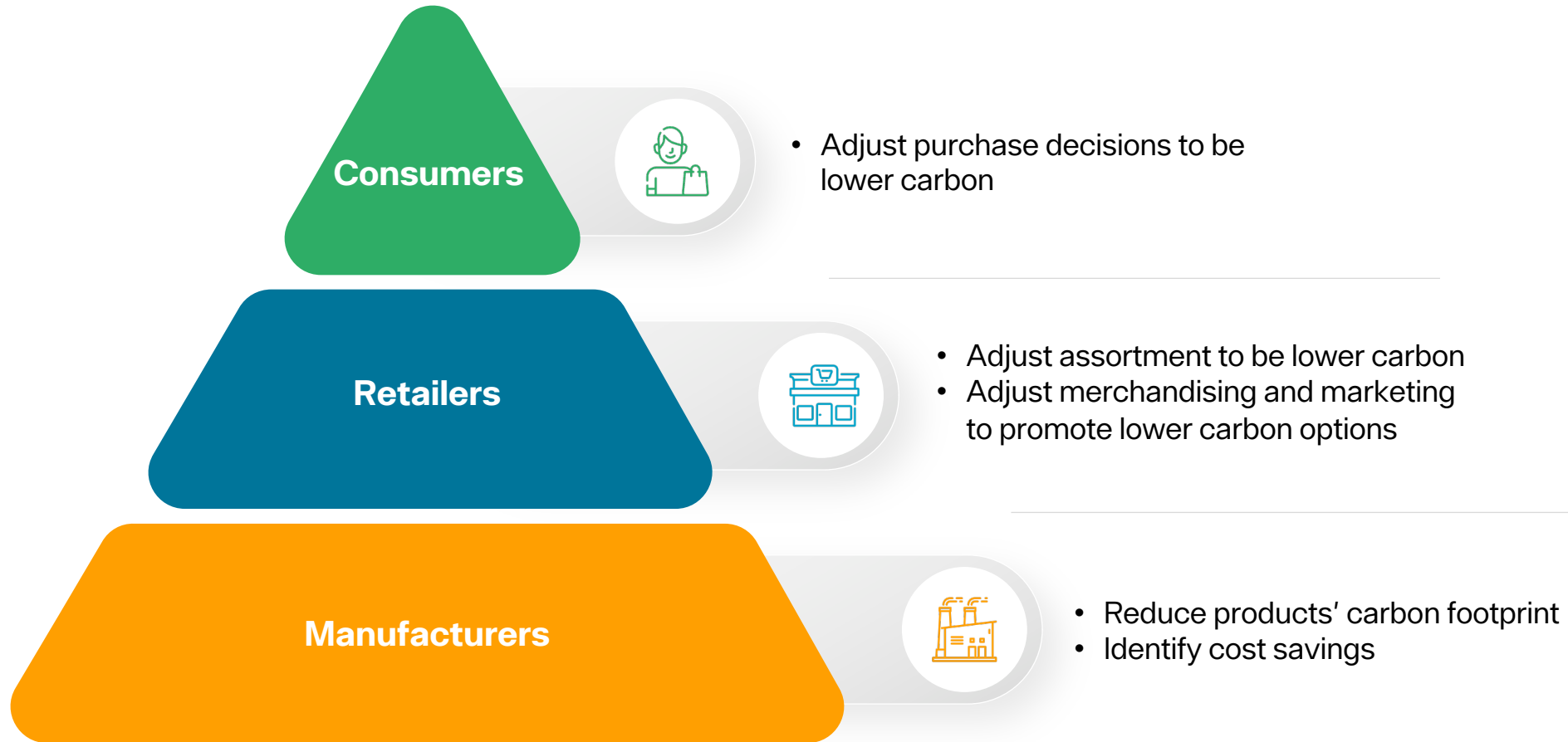


**33%**

of Americans have rewarded companies that are taking steps to reduce global warming by buying their products

Source: Yale

# Labels could influence outcomes across the value chain





# Relevant Legislation and Standards



## Legislation

### EU Green Claims Law (proposal)

Any voluntary environmental claims must be substantiated and this substantiation will be verified ex-ante by the EU. EU-approved PEF methodology to assess products is required

### Advertising, Marketing and Unfair Commercial Practices Laws

Specific to country



## Voluntary

### ISO Standard

ISO 14044, 14046, 14067, 14020 family

### PAS 2050/2060

LCA assessment and carbon neutrality standard

### GHG Protocol Product Standard

### UN Guiding Principles for Credible Sustainability Communication

Guidance on making effective, trustworthy claims on product-related sustainability information, defining five fundamental and five aspirational principles

### International Sustainability & Carbon Certification (ISCC)



# Calculating product-level emissions is complex

Within voluntary standards, there are different approaches to **system boundaries, allocation, and data requirements**

The scope of what is being measured can vary. A standard that includes more sources of emissions, like capital goods (boats/buildings), will show higher emissions. If a standard allows carbon offsets, it may show drastically lower emissions.

## System boundaries



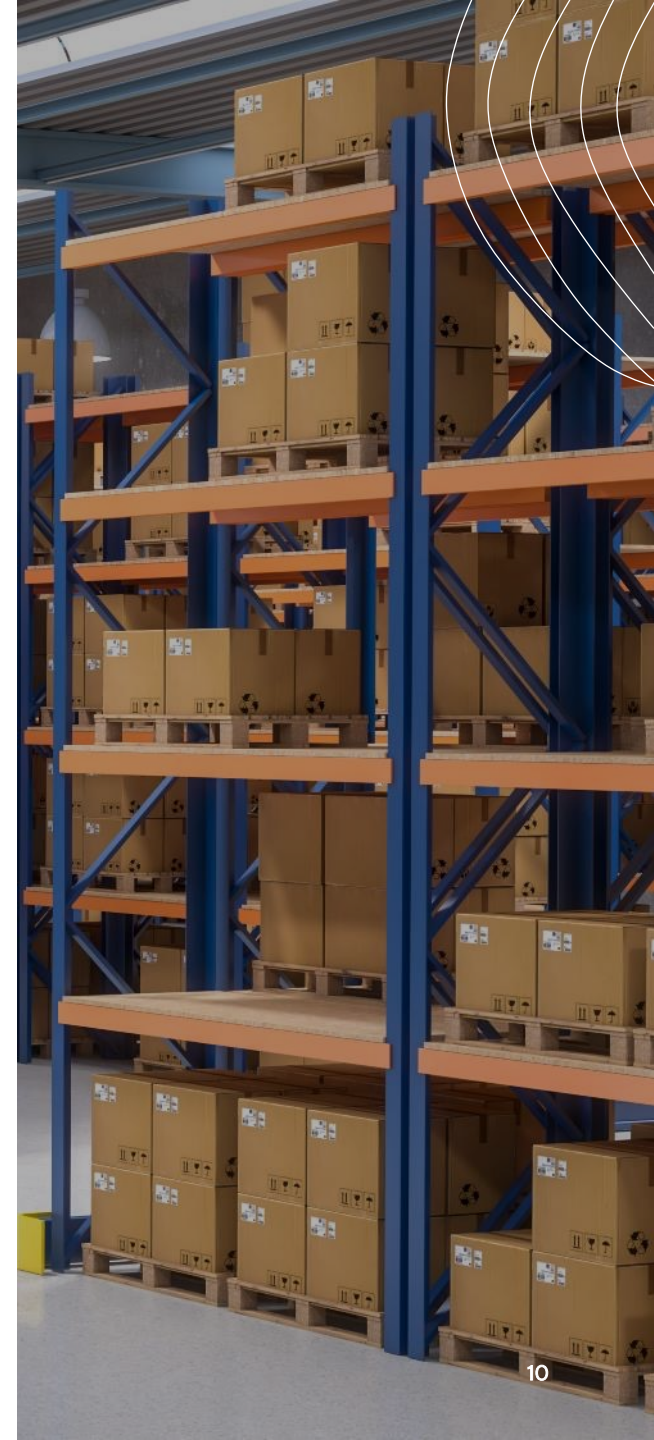
## Allocation

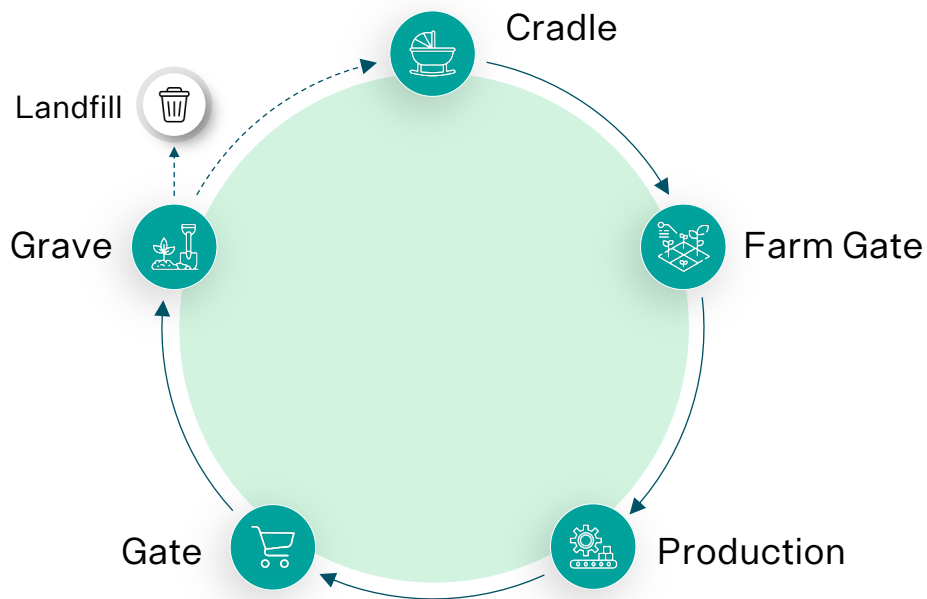
Isolating emissions associated with each product produced by one process can be challenging; for instance, dividing cattle emissions between milk, meat, and leather can be done by mass, volume, energy, or economic allocation, yielding different CO<sub>2</sub>.

There are two main types of data: **primary** and **secondary**.

Primary data is unique to operations, such as sourcing data or electricity consumption. Secondary data include average or default data.

## Data requirements





## Cradle-to-Farm Gate

- Emissions caused by growing a specific ingredient before any factory, processing, transportation, or distribution emission
- Includes fertilizer, pesticide and herbicide inputs, on-farm fuel needs, tillage, mechanized harvest, electricity needs for storage as well as any on-farm processing, cooling, or fermentation



## Cradle-to-Grave

- Emissions from the point of raw material to the product's use and eventual disposal after production
- Includes energy and fuel use, raw materials extraction, manufacturing, packaging, storing, shipping to the retailer, product consumption, consumer waste



## Cradle-to-Gate

- Emissions from the point of raw material production until the product reaches the retail stage
- Includes energy and fuel use, raw materials extraction, manufacturing, packaging, storing, and shipping to the retail

**In a circular economy, the loop can be closed by recycling and reusing the waste for a new product, which could be referred to as Cradle-to-Cradle. But in the US, about half of all the products will end up in a landfill**

# 3 dominant styles of climate labeling



## Claim

Indicates that a product meets criteria for claims like carbon neutrality, carbon negative, climate positive



## Quantitative

Presents an exact amount of carbon emissions for a product or its serving






## Traffic Light / Grade

Rates a product on a color-coded or letter grade scale



# Comparing the 3 dominant styles of carbon label

	% of Labels In-Market	3rd Parties	Example Retailers	Example Brands
 <b>Claim</b>	Highest	Climate Neutral, Carbon Trust, Cradle to Cradle	Amazon, Aldi	Evian, Danone, Nestle Waters, P&G, Sephora
 <b>Quantitative</b>	Lowest	CarbonCloud, Planet FWD, Green Story	Farfetch, ThredUp	Oatly, Tenzing, Dole
 <b>Traffic Light / Grade</b>	Middle	Foundation Earth, Eco-Score, Food Steps	Colruyt, Lidl, Carrefour, Spar, Co-op, Auchan	Yoplait, Hipp, Nestle




















 <p><b>Homestead Turkey &amp; Ancient Grains Dry Dog Food</b></p> <p>★★★★★ (691)</p> <p>Humanely Raised Turkey, Oats, Ocean Whitefish Meal, Sorghum</p> <p>From \$19.99</p>				
Claim	Quantitative	Quantitative	Traffic light	Claim
Open Farm; Lower Carbon Option	Oatly; CarbonCloud	Tenzing; CarbonCloud	Colruyt; Eco-Score	Evian; Carbon Trust

# Consortiums' and NGOs' stances















Supports	Consumer Goods Forum	World Business Council For Sustainable Development	The World Economic Forum
Unified standard for carbon labeling	Y	Y	Y
Comparability across product categories	Y	Y	Y
Multi-channel media (e.g., QR code, app, link to a website with further information) coupled with on-pack labels	Y	Y	N/A
Collaboration across industries and stakeholders	Y	Y	Y
Preferred type of label	Traffic light (based on France's experience)	Quantitative	N/A
Solution providers mentioned	Carbon Trust, Foundation Earth, Mondra, Finch, My Emissions, The Underwriters Laboratories	None	N/A
Other considerations	Refill models for consumer products Environmental labelling should include additional criteria to enhance ecodesign	UN Guidelines for Providing Product Sustainability Info are key Separate scores for nutrition and the score for environmental impacts	Refill models for consumer products

# An overview of emerging solution providers







	 Funds Raised	 LCA Methods	 Labeling		 Label Types	 Coverage	 Representative Clients
 HowGood	\$24.7M	Cradle-to-Farm Gate	Online 	Physical 	Quantitative, Claim	Food-only	Danone, General Mills, Barilla, Nestle, Ahold Delhaize, Giant Eagle
	\$15.2M	Cradle-to-Grave			Quantitative, Claim	CPG & food	Blue Apron, Numi, Meati, Clif, Patagonia Provisions
	\$13.9M	All			Quantitative	CPG & food	Oatly, Tenzing, Dole, Naughty Nuts
	\$4.3M	Cradle-to-Gate			Quantitative	Food-only	N/A
	\$4.6M	Cradle-to-Gate			Traffic light, Quantitative	Food-only	Mindful Chef, allplants, Gousto, Better Nature
	\$690K	Cradle-to-Gate			Traffic light	Food-only	AB World Foods



# Major CPGs are exploring labeling

	 Currently Labeling	 Target to Label	 Label Type	 100% Label Target Date	 Partners
	3 brands	None	Claim	None	
	None	Talking about it, want standard	None	None	Unknown
	Unclear	None	None	None	Unknown
	4 brands	3 more brands by 2025	Claim	None	
	None	None	None	None	Unknown

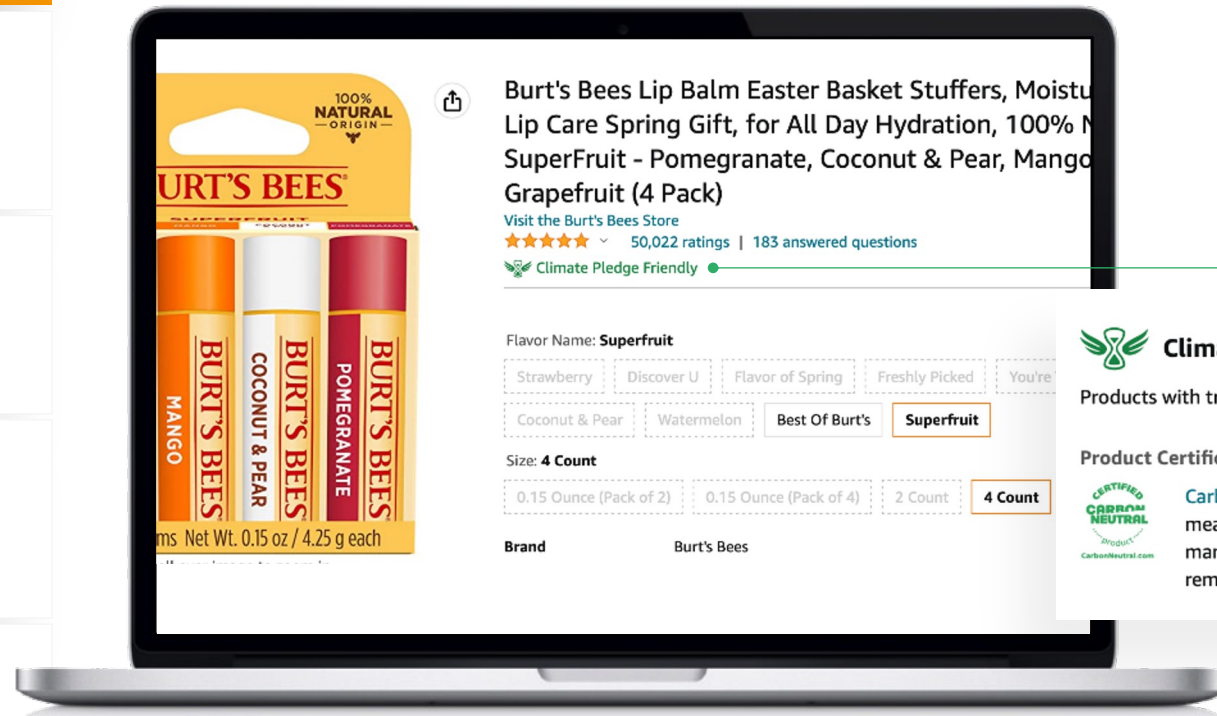
# Major retailers are experimenting also

	Current Labeling	Carbon Label Trial/Pilot	Commitments
	Climate Pledge Friendly	None	Climate Pledge Friendly is a mechanism to discover third-party certified brands that are sold on Amazon
	None	Foundation Earth	In 2007 Tesco planned to carbon label 70,000 of their own-brand products. In 2012 the plan was changed, because the labels took months to calculate and Tesco were disappointed at the take-up by other retailers. Consumers found the labels difficult to understand. Currently committed to carbon neutrality across their group operation by 2035 (no label)
	ClimatePartner	Eco-Score, Foundation Earth	Has a variety of carbon-neutral products, including their own brand Vemondo. Selected non-food items are also being sold at Lidl US stores in carbon-neutral versions
	Eco-Score	None	Eco-Score on private label food products of Boni, Boni Bio, Spar, Graindor and Colruyt. Lowest Prices on the price label at Colruyt and Bio-Planet. In other stores the Eco-score is found in the Xtra app
	ClimatePartner	Foundation Earth	Committed to reducing greenhouse gases by 26% by 2025, a goal created using Science Based Targets. Aldi UK and Ireland stores are carbon neutral through Climate Partner
	CO2 Neutral, HowGood	None	All 763 stores in Belgium are carbon neutral. Giant Food, The GIANT Company and Stop & Shop offered the HowGood three-leaves rating system online but have since discontinued

# Amazon: Climate Pledge Friendly

Launched in 2020, Amazon's Climate Pledge Friendly program partners with third-party external certifications to highlight sustainable products in search results and on product detail pages

As of March 2023, certifications include:



## Climate Pledge Friendly

Products with trusted sustainability certification(s). [Learn more](#)

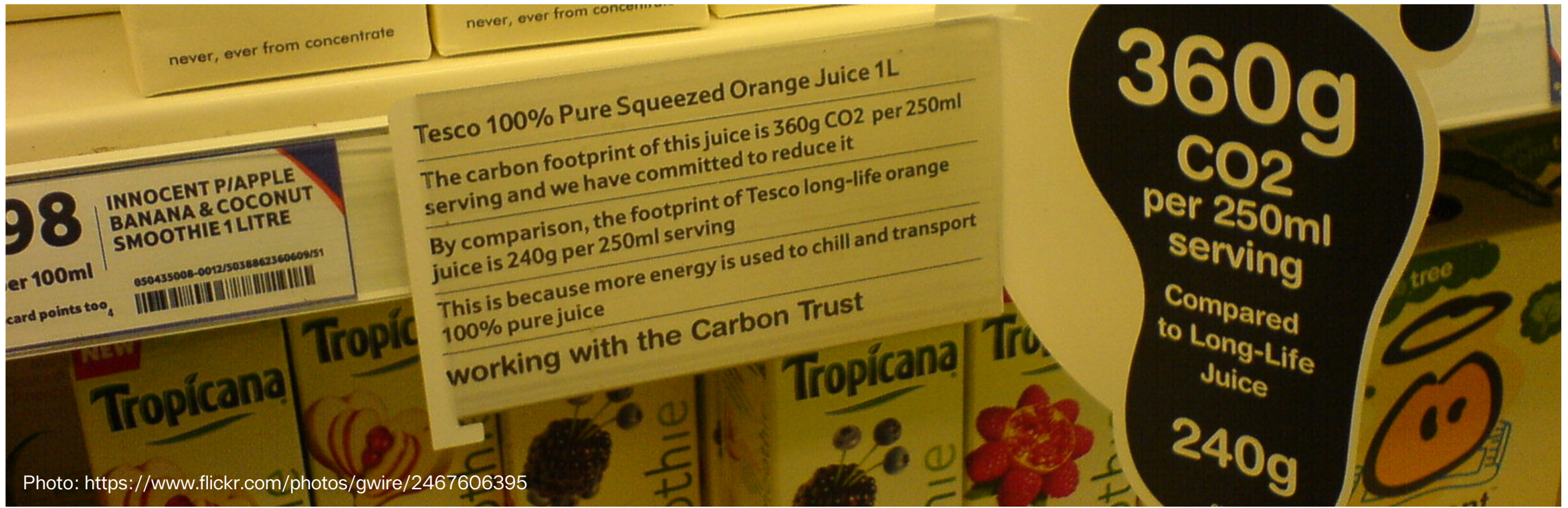
### Product Certification (1)



CarbonNeutral product by Climate Impact Partners measures all the emissions created in the product's manufacture, makes internal reductions and offsets the remainder.

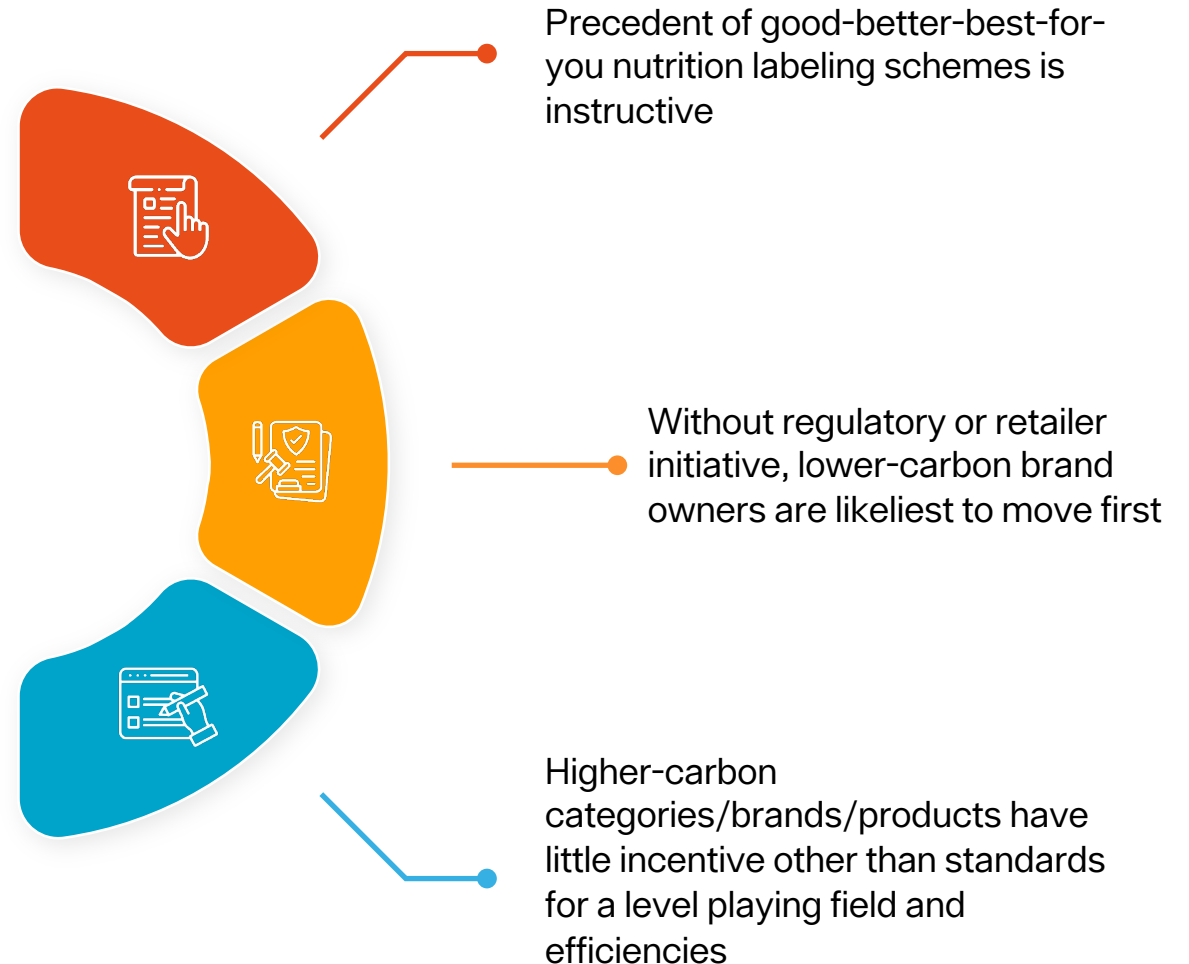
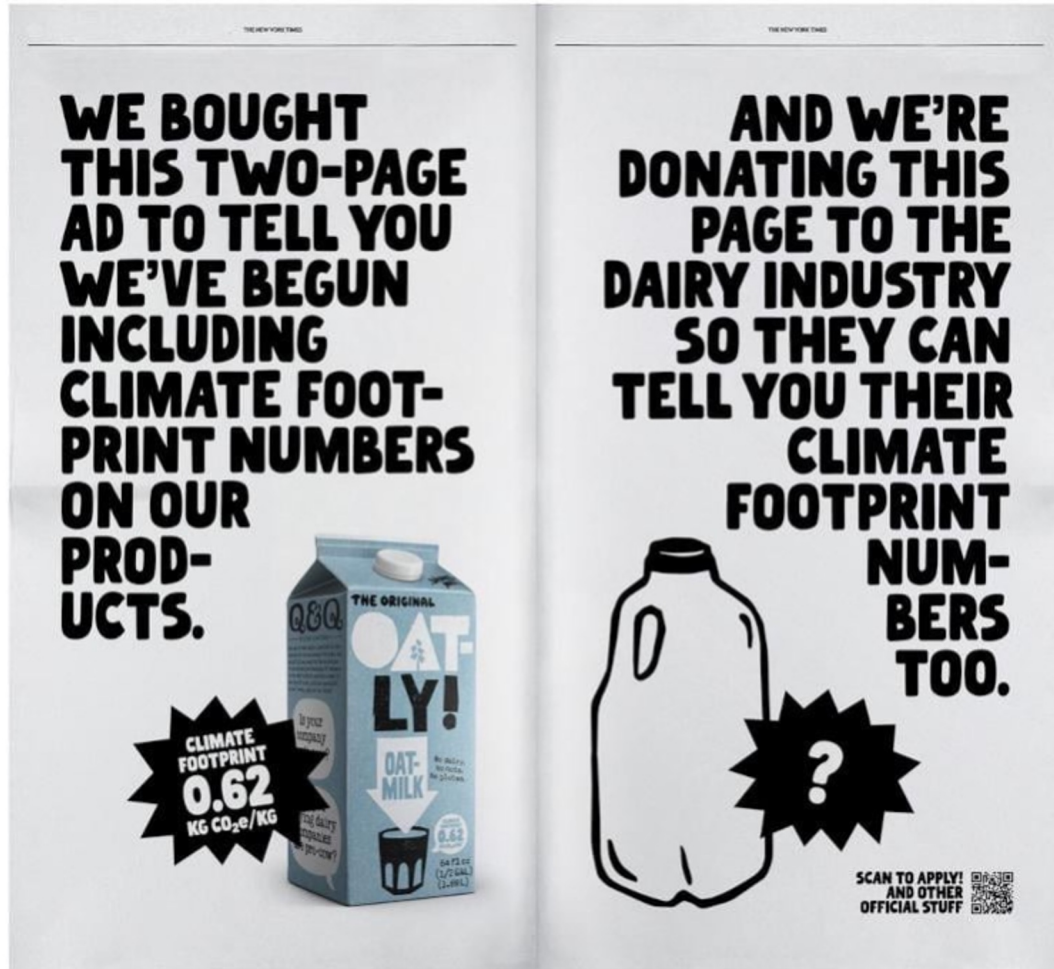
# In 2007 Tesco planned to carbon label 70,000 of their own-brand products by 2012

Despite reducing per-product auditing costs from £20-25k to £2-3k, in 2012 the plan was abandoned because the labels took months to calculate. Tesco were disappointed at the take-up by other retailers, and consumers found the labels difficult to understand.





# Who volunteers for carbon labeling? Who resists?



# Cooperation can have benefits



Can standardize strategy and execution, lowering costs



Accelerates and coordinates industry adoption



Can help establish a level playing field



Improved customer experience



Can minimize the need for regulatory intervention



# Drivers and barriers of product-level footprinting and climate label adoption



## Drivers

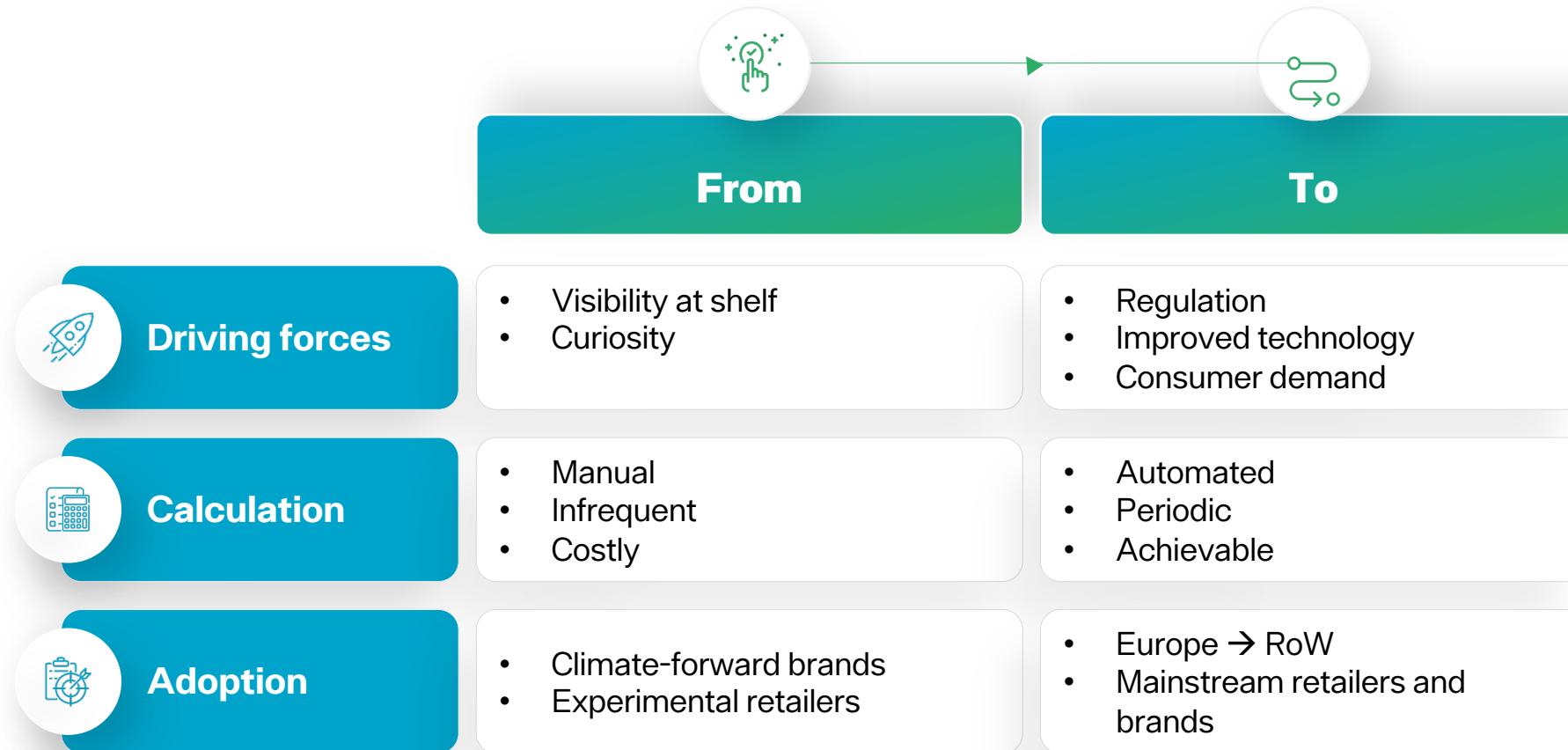
- ▶ Active and pending legislation, especially in the EU
- ▶ Modern technology reducing the cost and complexity of implementation
- ▶ Growing consumer interest in lower-carbon products
- ▶ Retailers' engagement of suppliers for scope 3 emissions



## Barriers

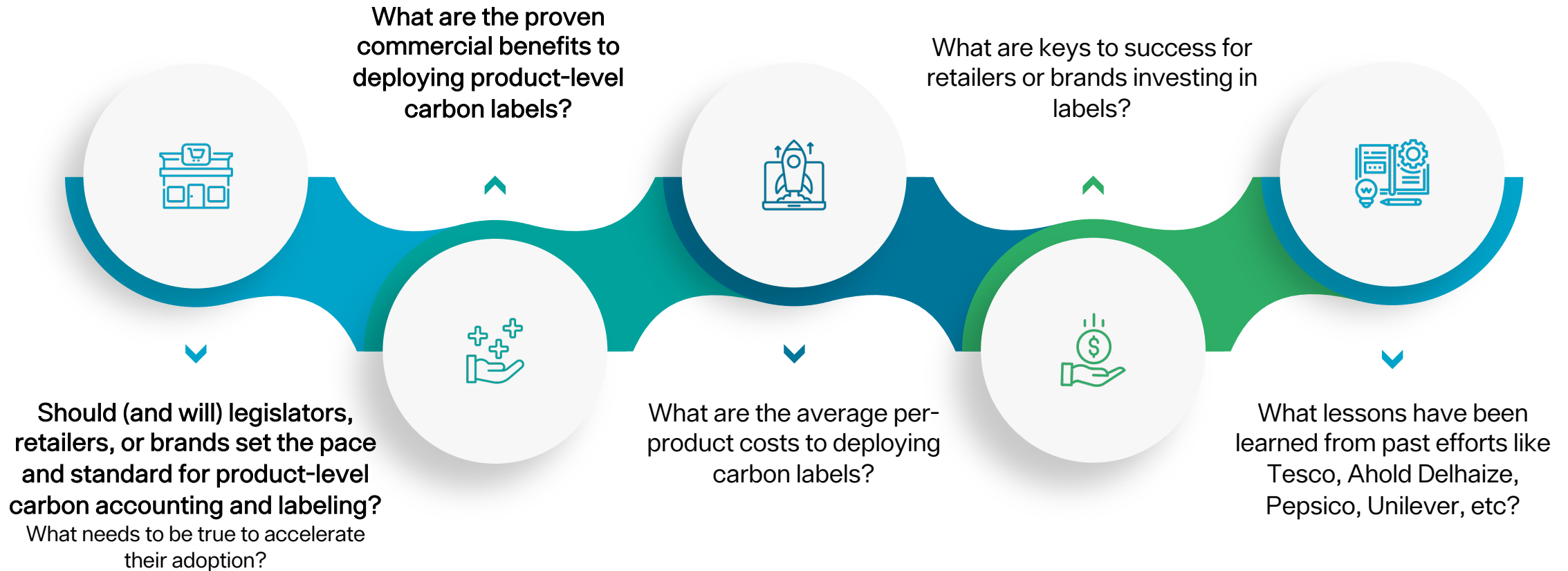
- ▶ Lack of standards for calculating and communicating product-level emissions
- ▶ Cost and complexity of maintaining accurate labels as formulations and ranges are refreshed
- ▶ Resistance from higher-CO<sub>2</sub>e product manufacturers
- ▶ Lack of enduring success stories among retailers or brands

# From → To





# Enduring questions under research and review





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# Questions or Feedback?

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