SUSTAINABILITY IN CIDER PRODUCTION AND PACKAGING

Colin Schilling
CEO & Co-founder
Schilling Cider

Nicole Todd
Co-owner, Cidermaker
Santa Cruz Cider Co.

David Racino
CEO & Co-founder
American Canning

This panel of cider industry sustainability champions will cover **specific actions you can take** to **decrease the environmental impact** in your cidery **through packaging and carbon-reduction.**

Additionally, panelists will discuss **leveraging these actions into strong storytelling to connect with consumers.**

Hear Colin Schilling (Schilling Cider), Nicole Todd (Santa Cruz Cider), and David Racino (American Canning) discuss recent benchmarks such as the cider industry shifting from 100% bottles to over 60% cans, pioneering the world's most sustainable can plant, rolling out bev alc's first all EV fleet, and becoming the first carbon neutral cidery in the US among many other sustainable actions.

Whether you're a big or small producer, younger legal drinking-age consumers put a very high weight on your sustainability practices when choosing what they buy.

This panel will connect the dots between taking real steps towards being more sustainable **with brand storytelling** and **translating doing good into doing well**.

Agenda

Why you should care about sustainability

Our companies' sustainability stories and learnings

Deep dive into **printed cans**

Carbon accounting overview and action steps

Connecting sustainability work **with** marketing/ **story telling**

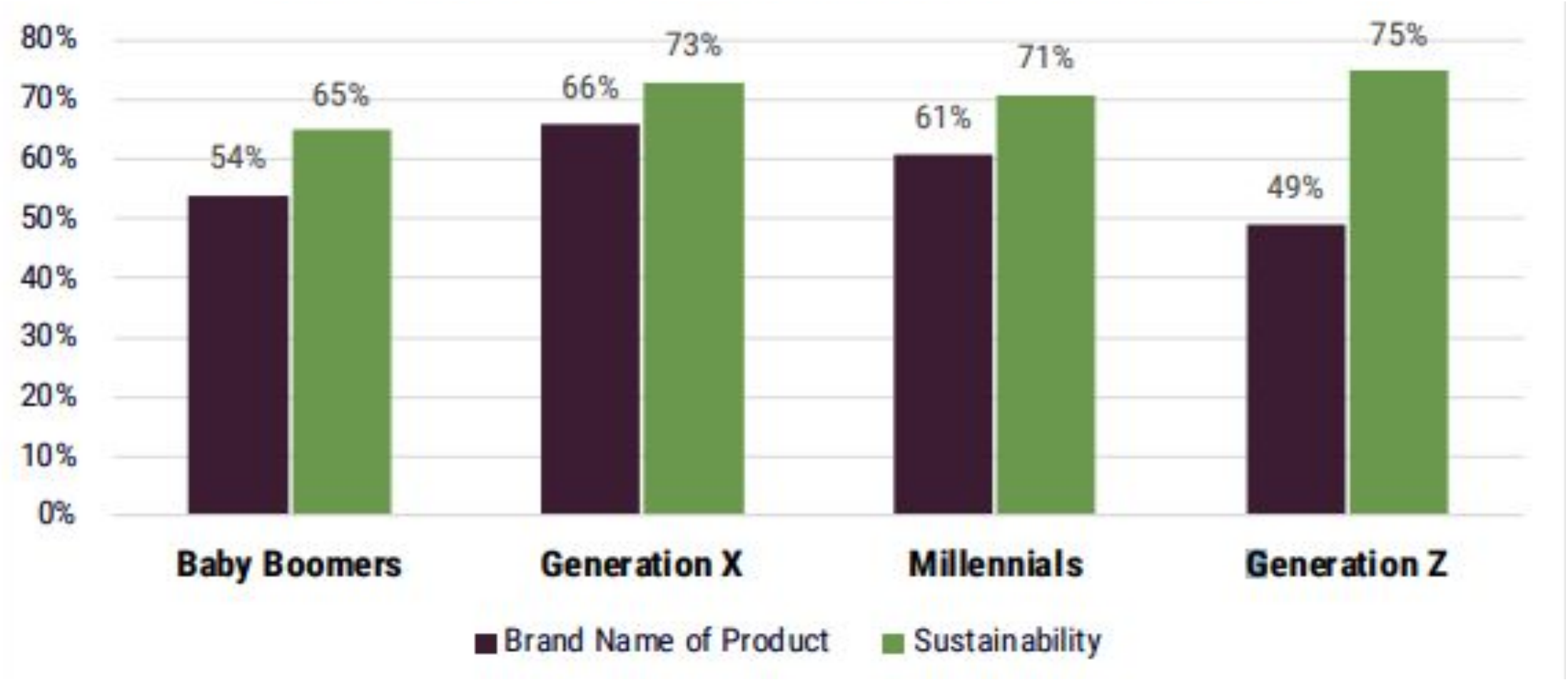
Questions?

WHY YOU SHOULD CARE

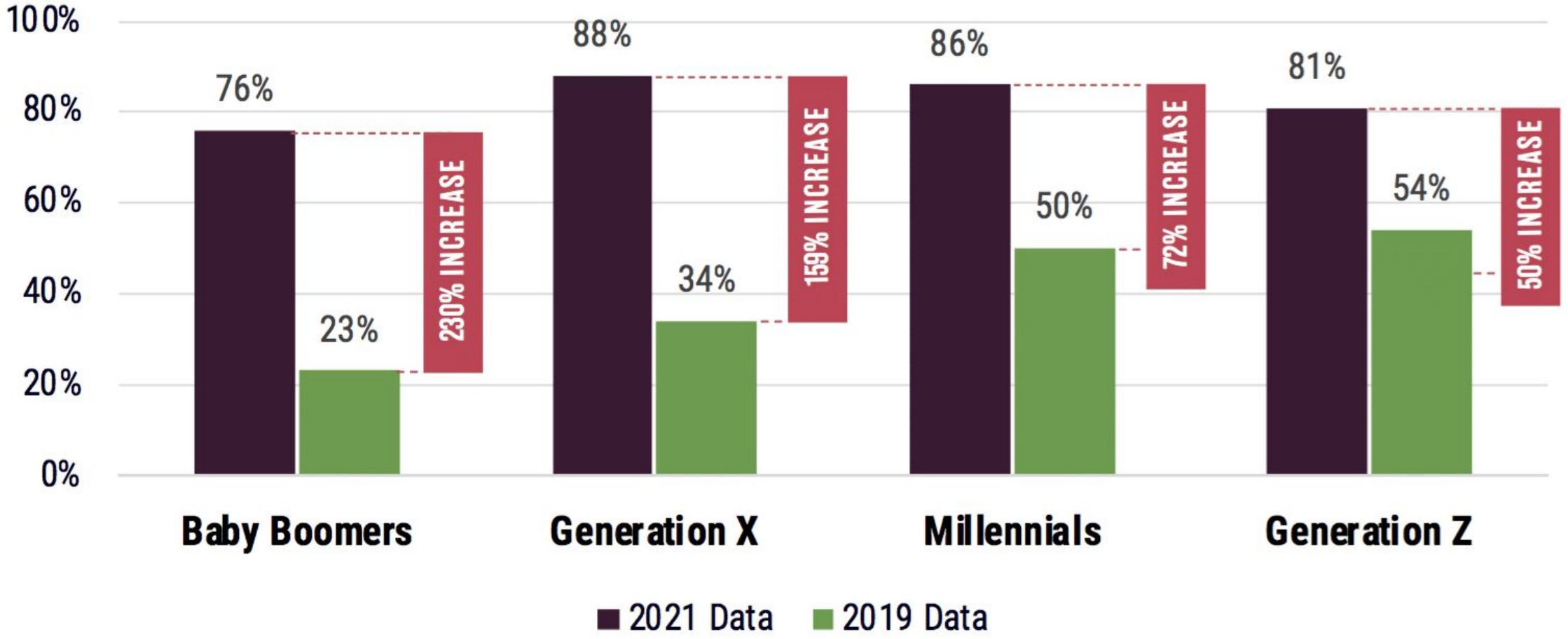
Why you should care about sustainability:

- **84% of customers** say that poor environmental practices will alienate them from your brand.
- Products marketed as sustainable grew **2.7x faster** than those that were not.
- **88% of the majority workforce** say their job is more fulfilling when employers provide opportunities to make a positive impact.

How do you rate the importance of these factors when making a purchasing decision?

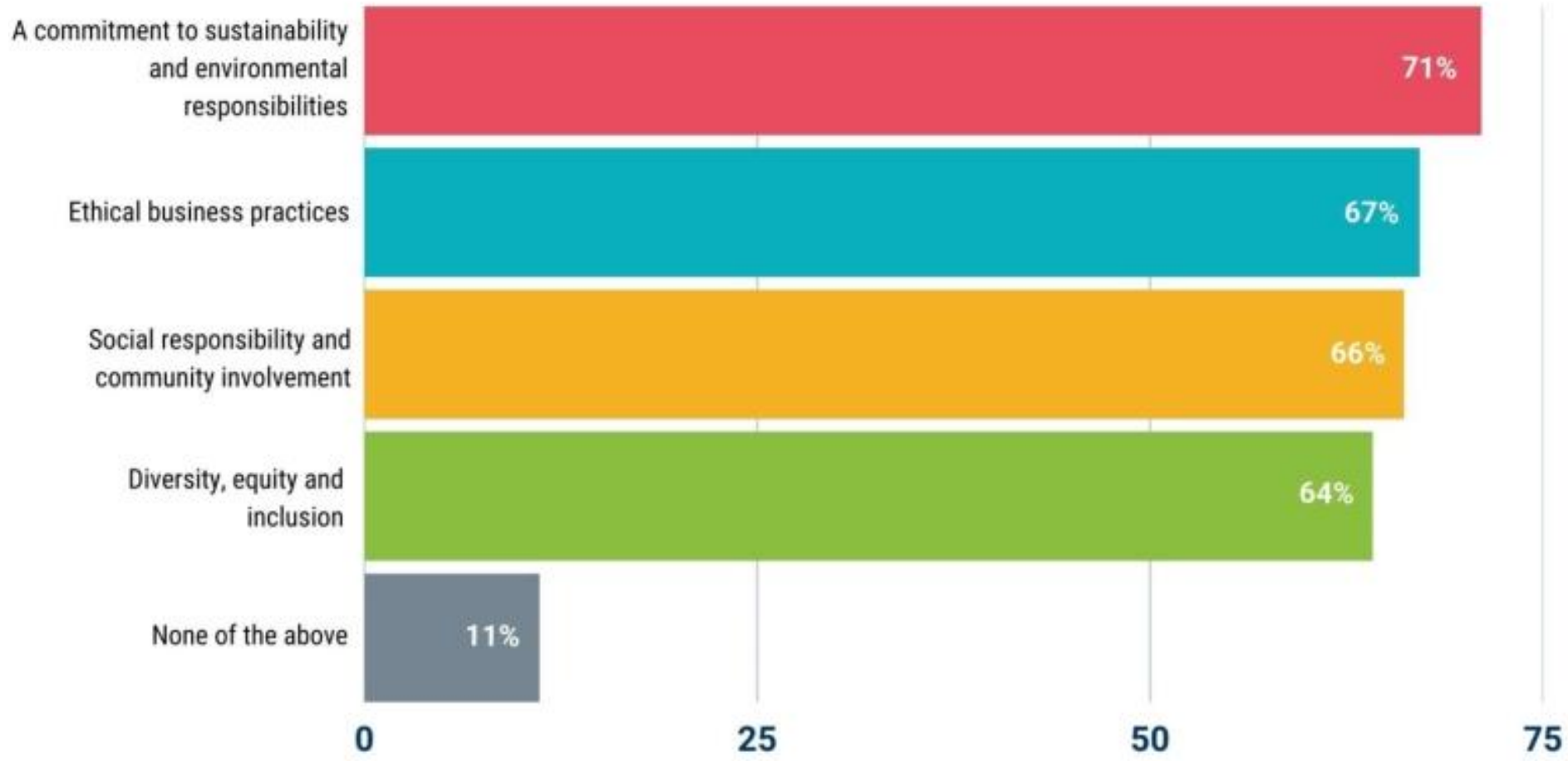


Willing to spend at least 10% more when making a purchase:



What values would you look for in choosing your next employer?

Think about any changes in your priorities since you began working for your current employer.



Multiple responses were permitted for this question

Regulatory Changes

- Trend of **banning single use plastics**
  - European Union, Canada and Korea leading the way
  - At the state level, varying bans within the United States
- Changes in **state bottle bills**
  - Several states adding bottle bills, others expanding or increases rate
  - Bottle bills are shown to 2x the recycling rate of containers
- **Coming Soon?**
  - Beginning to see bills proposed to ban single use plastic bottles in C-stores
- **Increased Cost** of waiting
  - Proactive response to regulation reduces overall costs

OUR SUSTAINABILITY STORIES

Sustainability Journey

- It started with **a truck bed of 'found' apples**
  - using the **harvest that would normally go to waste**
- We use **all local apples** – less carbon footprint
- **Cider building on solar**
- Work with other local cidery to **share costs**
- **Pomace goes to farms**, mostly animal feed
- **Compost** all other ingredients
- **Carbon Neutral** through **Tradewater Offset**
- **Reuse water at apple press**, then water trees
- **Reuse & Repurpose** – barrels to furniture, tap handles
- **Buy used** equipment

Challenges

- **Cost** of green products
- **Waste** – especially on canning lines
- **Transparency** – finding sustainable suppliers
- **Getting people to care** – lead by example
- **Finding the best options** for your business

Remember:
We vote with our dollars.
Support companies that support the environment

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Setting Goals & Measuring

- **Sustainability built into business model**
  - Early adopter of cans now about 70% of off premise volume
- **GHG inventory annual since 2021**
- **Prioritizing *additionality* of reductions first, then looking for offset credits**
- **Our goal is to be a sustainability leader**

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Equipment Selection

- **First all EV fleet in the bev-alc industry**
  + free EV charging for employees
- All custom **equipment designed for max efficiency**
- Grant funded **sustainable hardware fabrication**
- **Wellness of employees** prioritized in culture and equipment selection
- Efficiency focus throughout company for waste elimination
  - KPIs w/ dashboard tracking

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Marketing the Work

- **Making the work visible -** EVs
- **Aligning campaigns with our values**
  Keep It Wild
- **Continuing to learn** and **make real investments**
  Carbon Capture?
- **Doing the research to ensure impact is generated**
  Avoid Greenwashing

All in on Cans

- **Started as a mobile canning service provider in 2012 -> now a can manufacturer**
  - Commitment to sustainable packaging solutions
  - Belief that providing access for all industries to be in aluminum cans was the future of beverage.

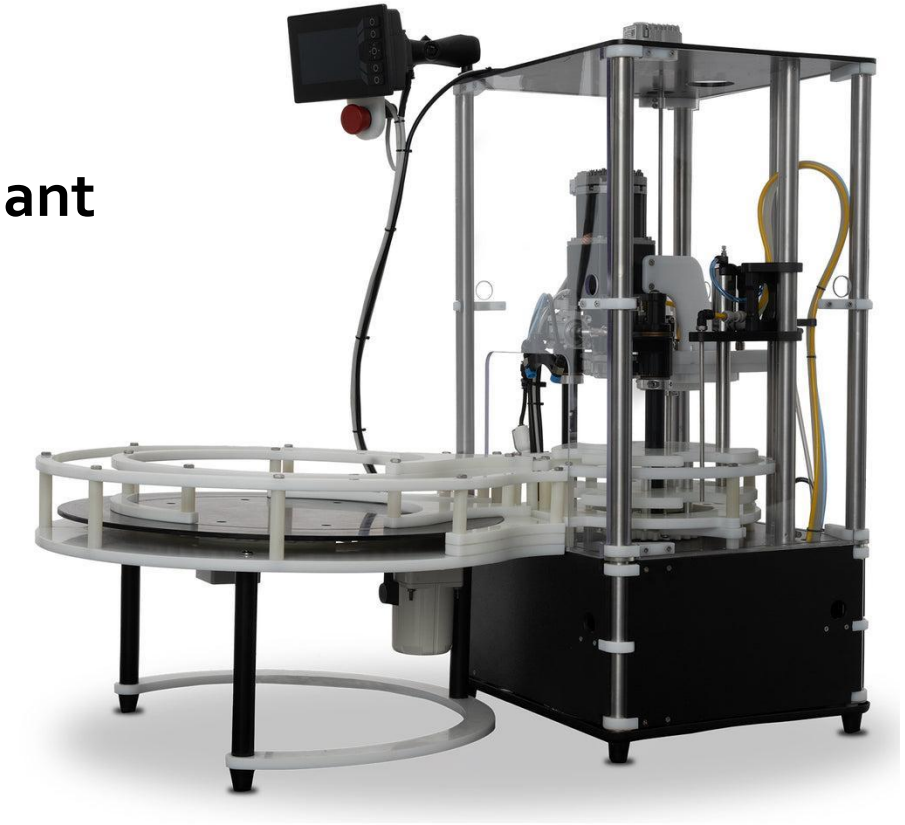
- **Discontinued Sleeving & Invested in aTULC can technology in 2022/2023**
  - High performance can pushing the limits of what's possible in a can
  - Many beverages formerly packaged only in bottles can now be packaged in cans

- **Compact, concept philosophy in all aspects of our business**
  - Can Plant
  - Canning Machines

Compact Concept(s)

- Designed the **world's first compact concept can plant**
  - Maximum energy efficiency
  - Reduced greenhouse emissions

- **Cost & space saving canning machines**
  - Mobile configuration, multi-use spaces
  - Standard power
  - Minimal air



Dry Manufacturing

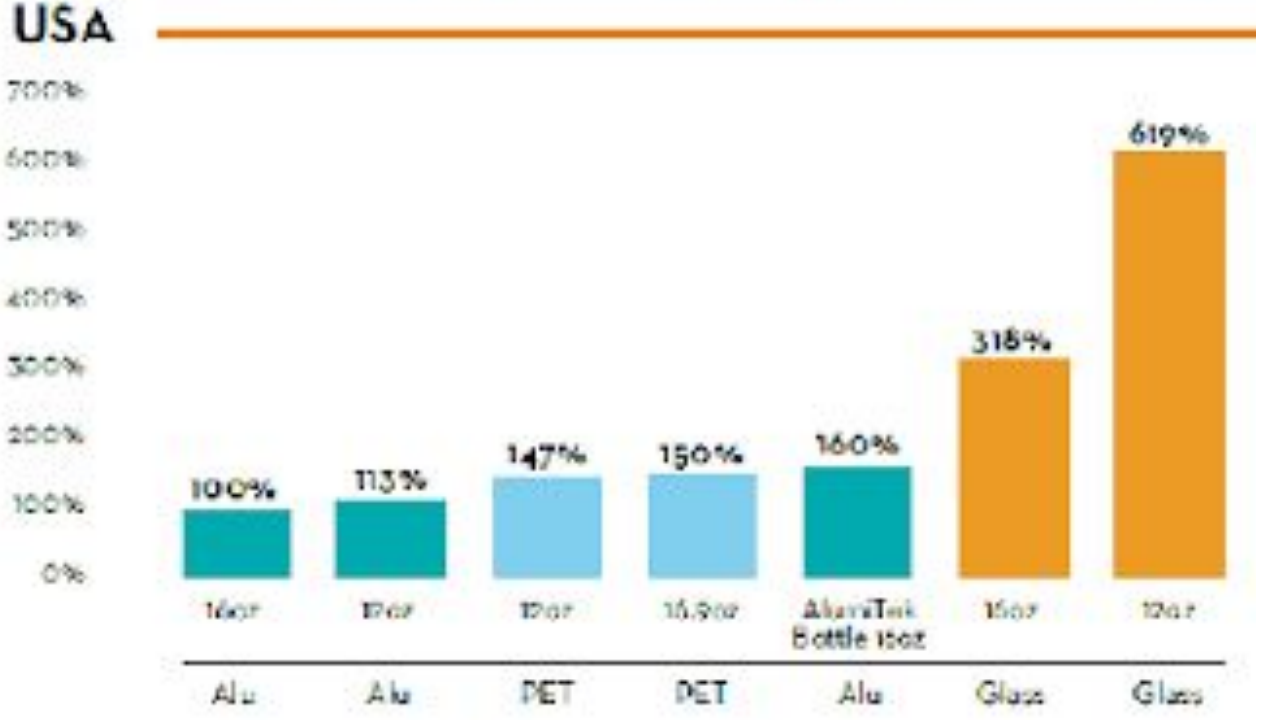
Invested in aTULC technology

- The only aluminum cans to be produced in a waterless plant
- 20,000 gallons of water saved/day
- No coolants, harsh chemicals or waste water treatment
- More than 80 green, urban manufacturing jobs

THE CASE FOR **PRINTED CANS**

CARBONATED DRINKS

For carbonated drinks overall, the carbon footprint of aluminium and PET beverage containers is within the same range, while single-use glass has a significantly higher carbon footprint. The below graphs show the carbon footprint comparison per gallon in the US and per litre elsewhere, and use a baseline at 100% for the lowest carbon footprint. Cartons cannot hold carbonated drinks, hence cartons do not appear in the data for carbonated drinks containers.



6x

The carbon footprint of a 12oz glass bottle is more than six times higher than a 16oz aluminium can.

Sustainable Can Decoration

Off-set printed cans

- Most sustainable decoration option; cans manufactured and printed on the same line
- Fully and infinitely recyclable end product
- High(er) minimum order quantities (½ truck+)
- Ship direct in dedicated loads, little/no single use plastic packaging

Digitally printed cans

- Eliminates plastic on the exterior of the can
- Fully and infinitely recyclable end product
- Low(er) minimum order quantities (½ pallet)
- Cans produced and decorated in different facilities
- Shipping LTL requires protective packaging; some suppliers offer corrugate vs. plastic

Let's talk about digital print & move away from sleeves for small runs!

Let's Shift Away from Stickers and Sleeves

What happens when a wrapped can gets recycled?

1. It gets **sorted into a landfill**

2. Included in a batch of cans and **shipped abroad for recycling**
   - Cans are melted down to become new rolls of aluminum
   - 1 pallet of wrapped cans = 15 lbs of plastic

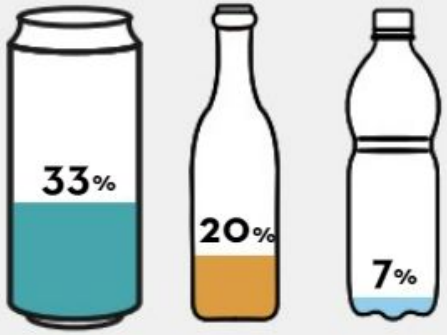
3. Contamination of the mix is too high (>5 to 10%) and all cans wrapped and non-wrapped are **diverted to landfill**

If required, **consider a more sustainable design** -> perforated sleeve

Digital Can Printers

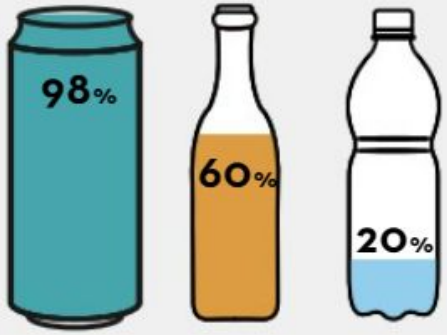
Recycled vs. Recyclable
Cans = Truly Sustainable Packaging

The average used beverage container content of new cans purchased by the consumer is **33%.**



98%

98% of recycled aluminium cans are recycled into products that are recycled again compared with **60% for glass** and **20% for PET**.



7%

of all aluminium used went into aluminium cans in 2019.

Cans **7%**
Other Packaging **5%**
Building and construction **25%**
Transport **25%**
Electrical **13%**
Consumer durables **9%**
Machinery **9%**
Other **7%**

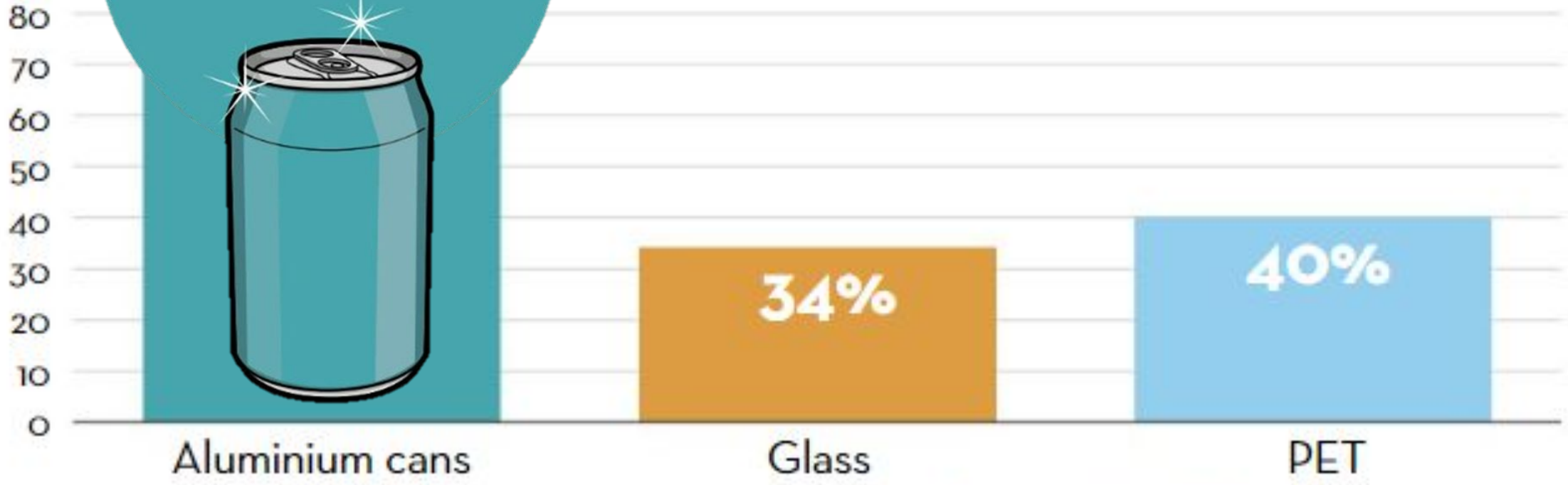
71%

Percentage of all aluminium cans that are recycled – on average, 34 percentage points higher than glass and PET.

CIRCULARITY IN REAL FIGURES

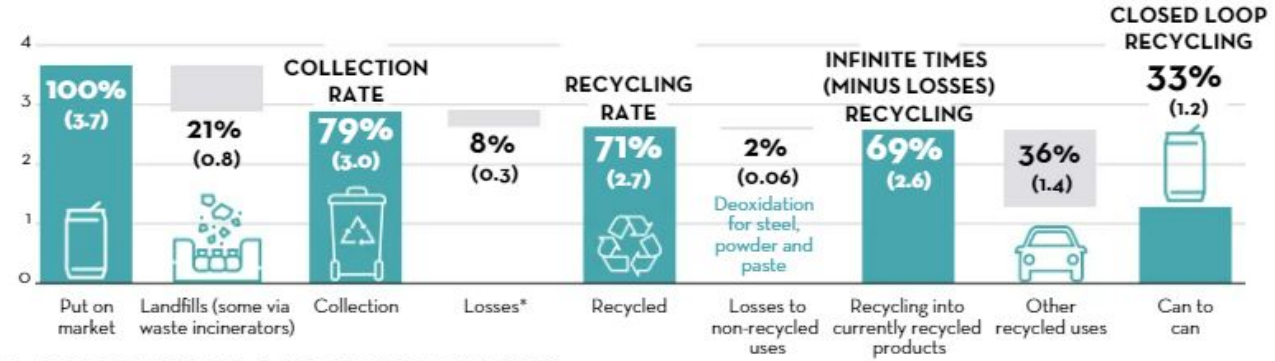
Aluminium cans are the most recycled beverage containers globally, with a 71% recycling rate. They also have the highest closed-loop recycling rate, which is when the product is recycled for use as the same product, at 33%.

RECYCLING RATES (WEIGHTED AVERAGE)

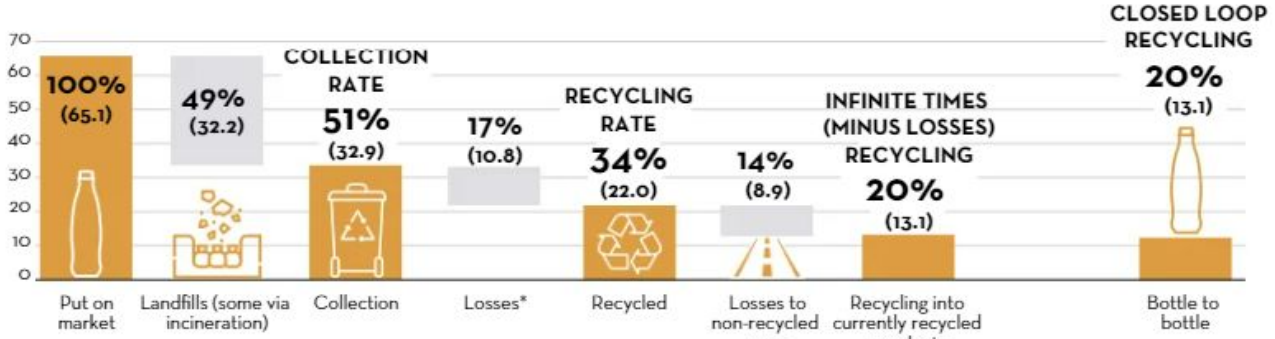


Regional difference can be explored at **alucycle.international-aluminium.org**

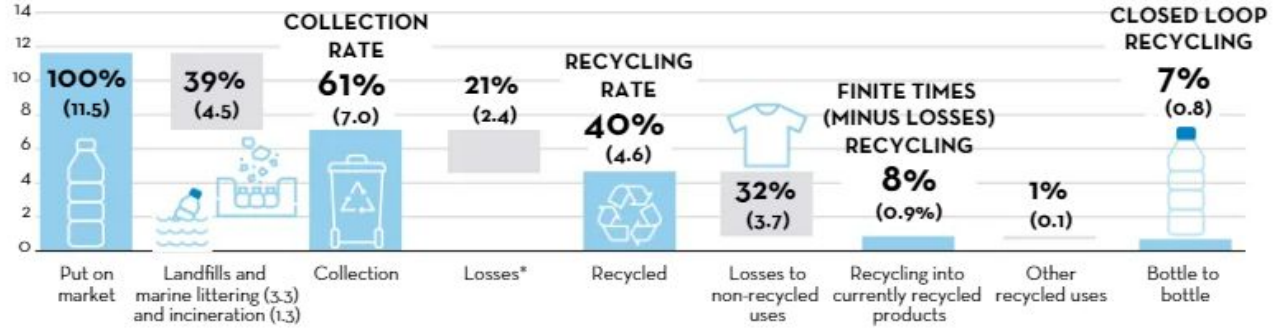
ALUMINIUM CANS (MILLION TONNES)



GLASS BOTTLES (MILLION TONNES)



PET BOTTLES (MILLION TONNES)



2 out of 3 cans recycled

One out of three aluminium cans is back on the shelf in as little as 60 days, and one other gets recycled into other highly recyclable products.

CARBON ACCOUNTING

Greenhouse Gas Inventory

A **comprehensive account of GHG Emissions**

Carbon Dioxide, Methane, and Nitrous Oxide, Refrigerants

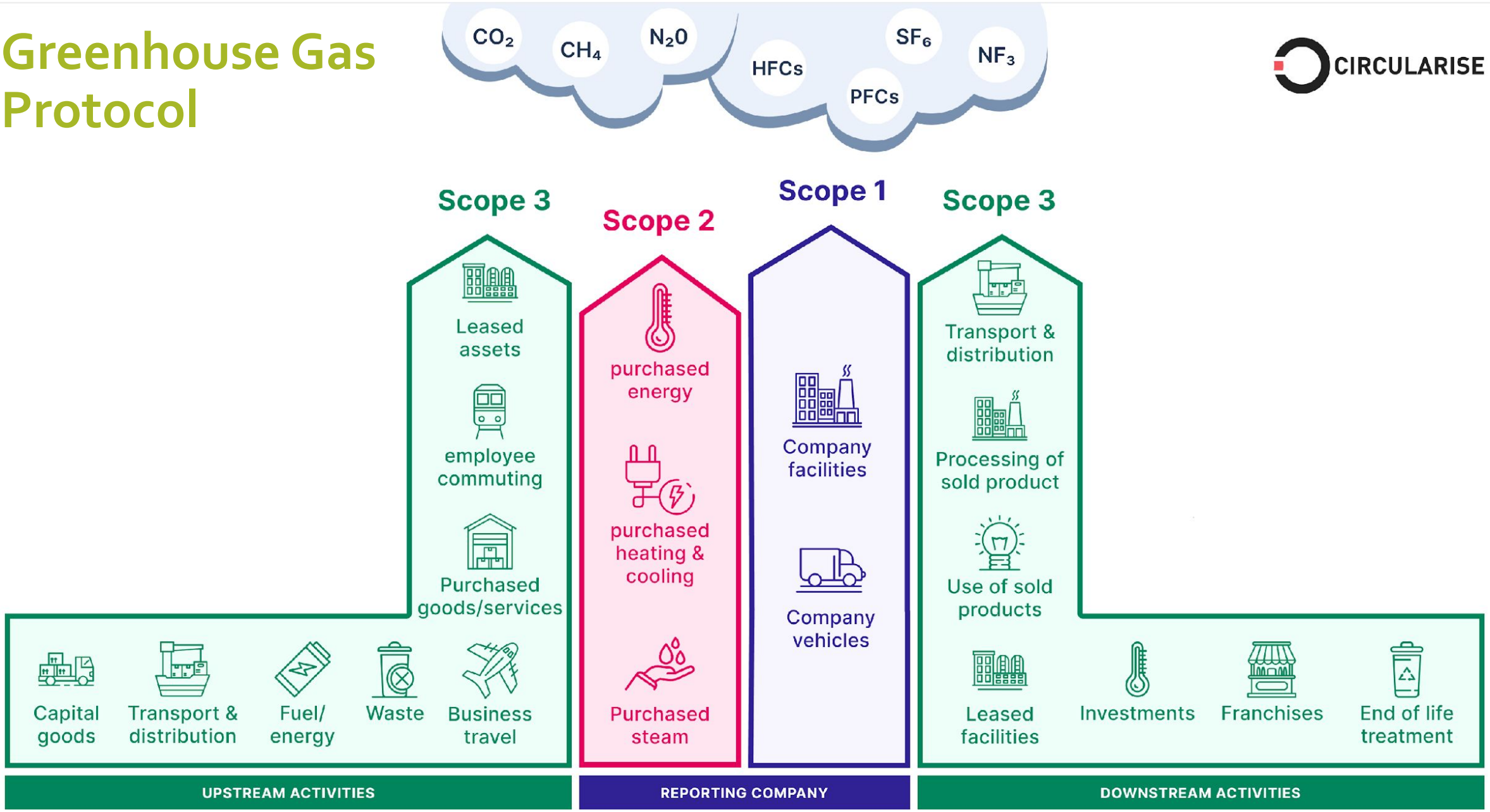
CO_2e = Carbon dioxide equivalent

Measures **direct & indirect emissions from business activities**

Essential for **tracking environmental impact & progress**

Organized into Scopes

Greenhouse Gas Protocol



Scope 1 – Direct Emissions

- Natural Gas Usage
- Propane for Forklifts
- Refrigerants in Cooling Systems

Company facilities

Company vehicles

Scope 2 – Indirect Emissions

- **Purchased Energy**
  - **Utility Bills**

Scope 3 – Downstream Activities

Key Categories

- **Purchased goods & services**: apple cultivation, juice production
- **Upstream transportation & distribution**: ingredients and packaging
- **Waste generated in operations**: wastewater treatment
- **Downstream transportation & distribution**: product delivery to retail
- **Use of sold product:** consumer refrigeration electricity
- **End-of-Life treatment:** recycling of packaging

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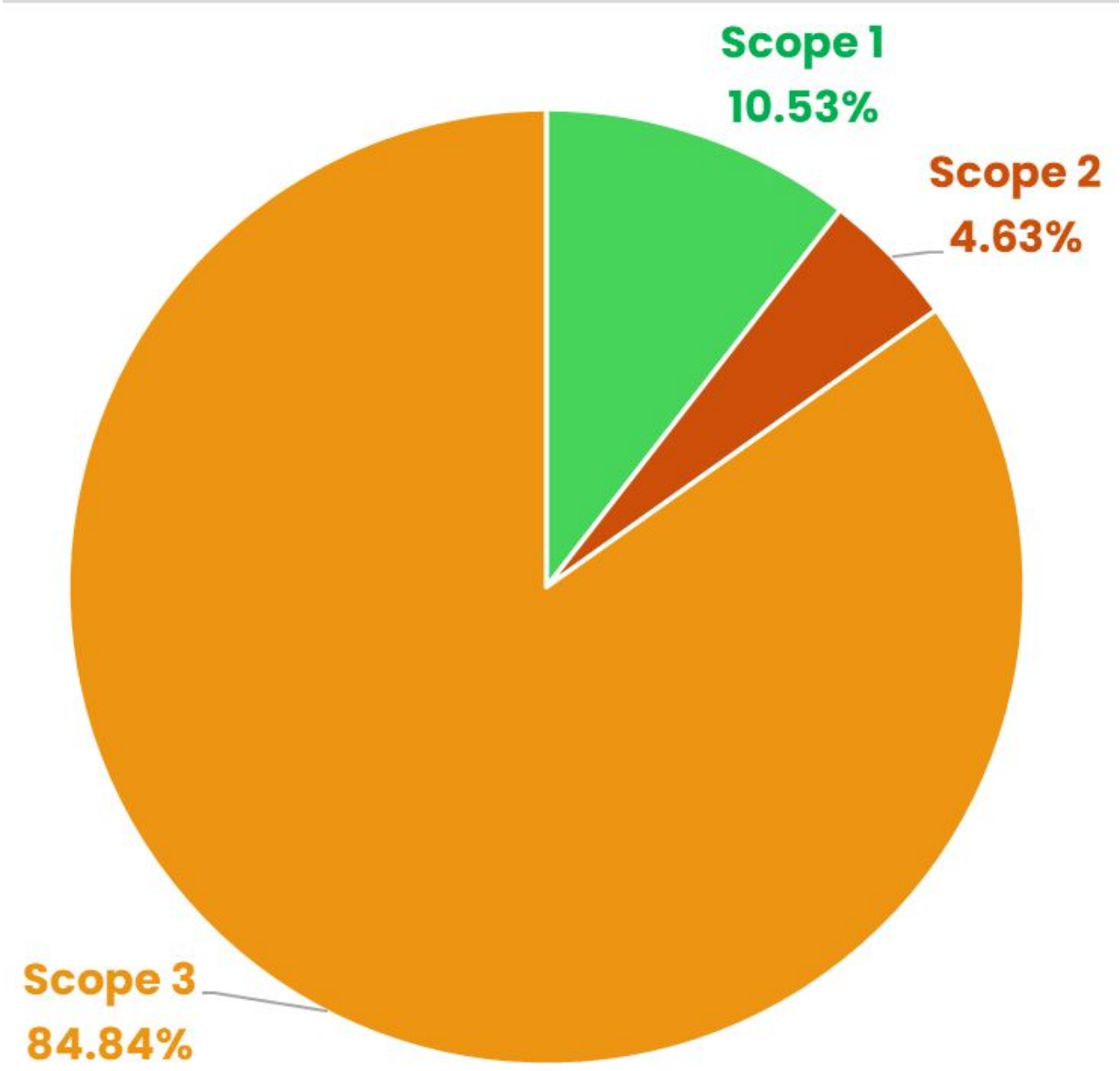
Emissions Profile 2022



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CO2e / Can

Carbon dioxide equivalent

Life Cycle Emissions of a 12oz Can of Schilling Cider				
			g CO2e	% of total
Scope 1	*Direct Emissions*	Natural Gas	13.49	4.16%
		Propane	0.10	0.03%
		Refrigerants	7.02	2.17%
Scope 2	*Indirect Emissions*	Purchased Electricity	9.07	2.80%
Scope 3	*Category 1 - Purchased Gods*	Apple Cultivation	56.16	17.31%
		Juice Production	35.10	10.82%
		Aluminum	81.97	25.27%
		CO2	2.15	0.66%
		Paperboard Packaging	1.23	0.38%
		Pallets	5.96	1.84%
		Purchased Water	0.00	0.00%
	Category 3 - Fuel and energy related activities	Natural Gas T&D	0.00	0.00%
	Category 4 - Upstream T&D	Juice Transportation	12.79	3.94%
		Apple Transportation	14.71	4.54%
		Paperboard Transportation	2.58	0.80%
		Aluminum Can Transportation	0.16	0.05%
		CO2 Transportation	0.04	0.01%
	Category 5 - Waste	Wastewater	0.03	0.01%
	Category 6 - Business Travel	Sales Vehicles	1.91	0.59%
	Category 9 - Downstream T&D	Downstream Transportation	33.63	10.37%
		Retail	45.11	13.90%
	Category 11 - Use of sold product	Home refrigeration electricity	0.58	0.18%
	Category 12 - End of life treatment of sold products	Paperboard packaging	0.60	0.18%
		Emissions per Can	**324.42 g CO2e**	
		Emissions per Six Pack	**1.95 kg CO2e**	

Biogenic Emissions per can	**30.35 g CO2e**
Biogenic Emissios per Six Pack	**182.07 g CO2e**

Options for Carbon Accounting

- **Different options and detail level**
  - Tradewater ACA webinar
  - GHG Consultant
  - Tool from ACA possible down the road?
- **Offset credits vary greatly** -> do your research
  - Importance and challenge of additionality
- **Take action** asap -> the most important!

MARKETING SUSTAINABLE ACTION

Story Telling, Not Greenwashing

- **Do the work first**!
  - Actions speak louder than words
- **Offer full transparency**
  - Best in class example NBB
- Use **third party verification & certification**
- It's a bit of a wild west right now -> **do your own research**
- Create **marketing campaigns that align** w/ values, brand

Where to Start?

- **Focus** on one or two issues
- **Be specific, don't exaggerate**
- **Feature sustainability info** on website with transparency
- **Get certified and brand** with green logos and insignia
- **Support environmental initiatives**
- **Personalize** your content, **share** your journey
- **Promote local vendors/suppliers with green practices**
- **Offer environmental incentives** to employees

Can cider become the most sustainable alcohol choice?

- Cider naturally has a **lower carbon footprint verse competitors** due to its inputs and selling model
- A **small industry that can move faster** than larger beverage categories
- **Early adaptors** are building a road map
- **Telling our story** to the consumer will need to be a **group effort**!