

# How will the net zero ambition of food companies influence decision making?

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# What does it mean to achieve net zero?

The Science Based Targets initiative (SBTi) has defined net zero targets for corporates as requiring them to:

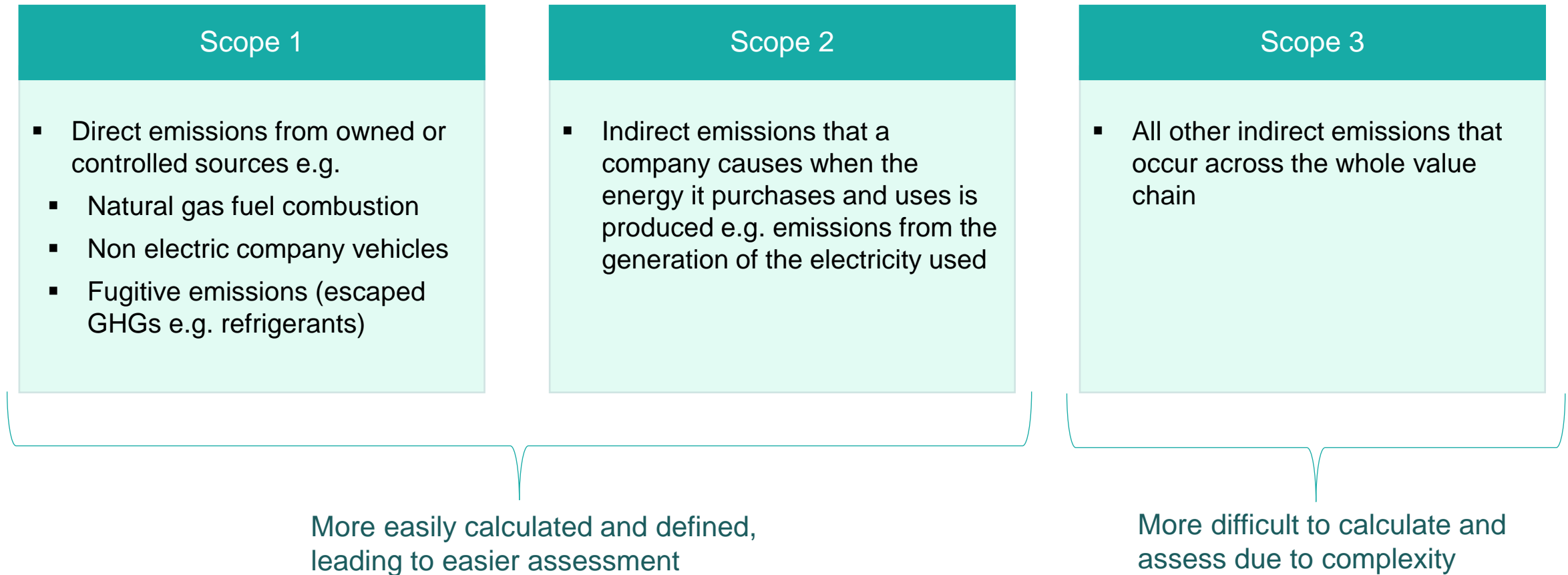
- Achieve a scale of value-chain emission reductions consistent with the depth of abatement achieved in pathways that **limit warming to 1.5°C** with no or limited overshoot
- Neutralise the impact of any source of residual emissions that remains unfeasible to be eliminated by **permanently removing an equivalent amount of atmospheric carbon dioxide**





# How are emissions calculated?

- The Greenhouse Gas (GHG) Protocol (the global standard for companies and organisations to measure and manage their GHG emissions) divides emissions into scopes



# The Greenhouse Gas Protocol details 15 areas for full Scope 3 coverage

## Downstream scope 3 emissions

9. Downstream transportation and distribution
10. Processing of sold products
11. End-of-life treatment of sold products
12. Use of sold products
13. Downstream leased assets
14. Franchises
15. Investments

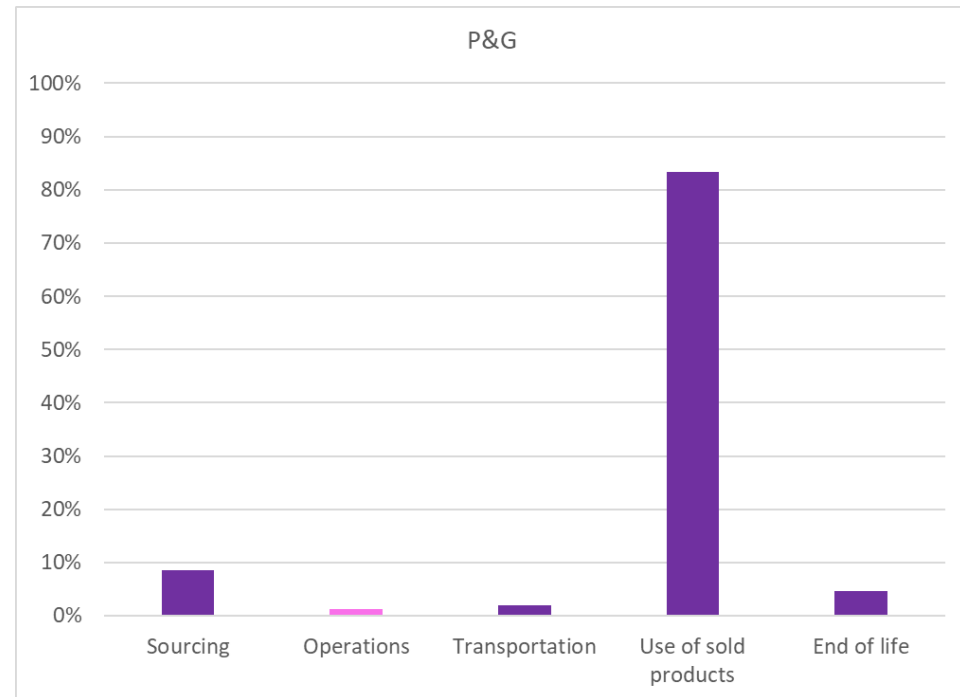
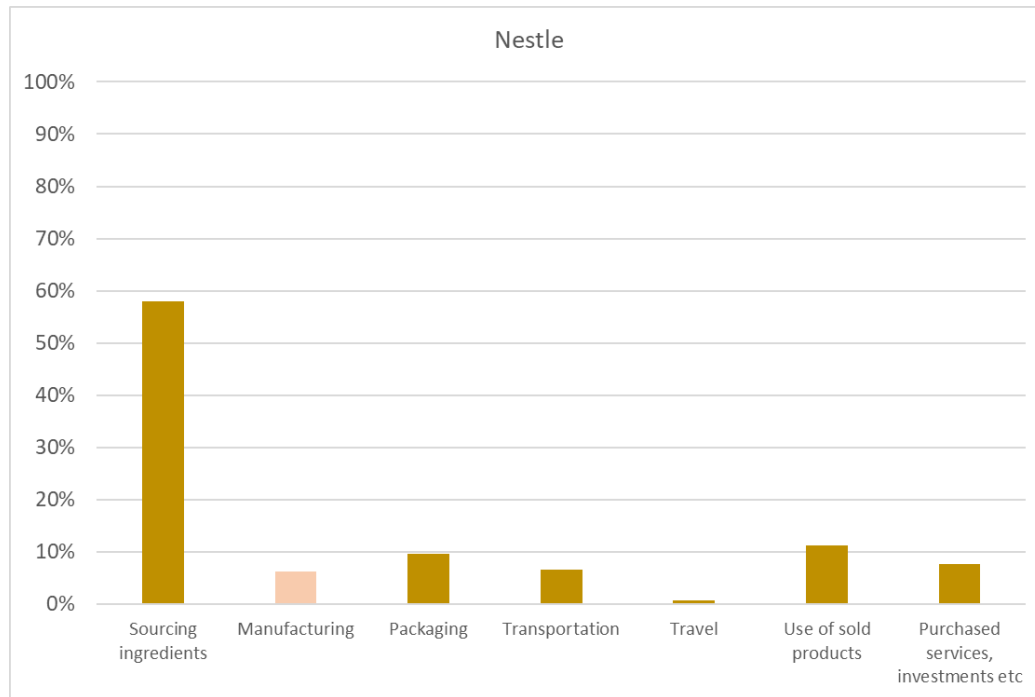


## Upstream scope 3 emissions

1. Purchased goods and services
2. Capital goods
3. Fuel and energy related activities (not included in scope 1 or scope 2)
4. Upstream transportation and distribution
5. Waste generated in operations
6. Business travel
7. Employee commuting
8. Upstream leased assets

# Where are most emissions for the food industry?

- The largest contributor to emissions in the food industry is **upstream scope 3 emissions**
- Comparing the food and beverage industry with home and personal care the difference in the main source of emissions is notable



# Many companies have net zero goals

- Most food and beverage companies have set some sort of emissions target with many setting a net zero goal
- The majority are to be achieved by 2050
- However, some have set achieved dates of 2040 or 2039
- Some have also set 2030 targets for Scopes 1 and 2



Image sources:

- [https://www.unilever.com/Images/unilever-climate-transition-action-plan-19032021\\_tcm244-560179\\_en.pdf](https://www.unilever.com/Images/unilever-climate-transition-action-plan-19032021_tcm244-560179_en.pdf)
- <https://twitter.com/nestle/status/1172147958160220165>
- <https://www.about.sainsburys.co.uk/news/>



# Governments also have net zero goals and other sustainability policies

- Governments encourage companies to achieve net zero through regulations or policies or strategies
- Policy is the main driver with implemented legislation starting to appear
  - An example is the German national carbon tax
- There is increasing sustainability policy and legislation not just on net zero.
  - Net zero is one aspect of sustainability and may not be coherent with water or biodiversity or plastic reduction policy or company goals





## How much of scope 3 needs to be considered?

- In the near-term (5 to 10 years), an SBTi scope 3 target
  - Is needed whenever scope 3 represents more than 40% of a company's total emissions.
  - Should cover 2/3 of scope 3 emissions.
- However, in the long-term, targets need to cover a much greater proportion of scope 3 emissions
  - The SBTi scope 3 targets for 2050 cover all material sources of emissions in the value chain
- This latter target is challenging



# Why is acting on net zero important?

- Food & beverage companies have made pledges on net zero that they can be assessed against
- Scrutiny is increasing, and companies are scored on progress on pledges
- Access to finance can depend on the progress that is detailed in ESG reports
- Consumers expect progress and have access to tools that allow comparisons to be made
- However, particularly for consumers, net zero is a topic much less well understood than plastic reduction, and there can be competing pressure to act in different directions

NAME	COUNTRY	SECTOR	ANNUAL REVENUE	TARGET YEAR	TARGET TYPE	END TARGET STATUS	INTERIM TARGET	DETAILED PLAN	REPORTING MECHANISM	SCOPE 3 COVERAGE	CARBON CREDITS
Kroger	USA	Food, beverage & agriculture	\$122.3bn	2030	Emissions reduction target	In corporate strategy					
Nestlé	CHE	Food, beverage & agriculture	\$93.4bn	2050	Net zero	In corporate strategy	2030				
Carrefour	FRA	Food, beverage & agriculture	\$83bn	2040	Climate neutral	Declaration / pledge	2030				
Tesco	GBR	Food, beverage & agriculture	\$82.7bn	2050	Net zero	In corporate strategy	2035				

Screenshot from Net Zero Tracker <https://zerotracker.net/>



Image from:  
<https://newclimate.org/resources/publications/corporate-climate-responsibility-monitor-2022>

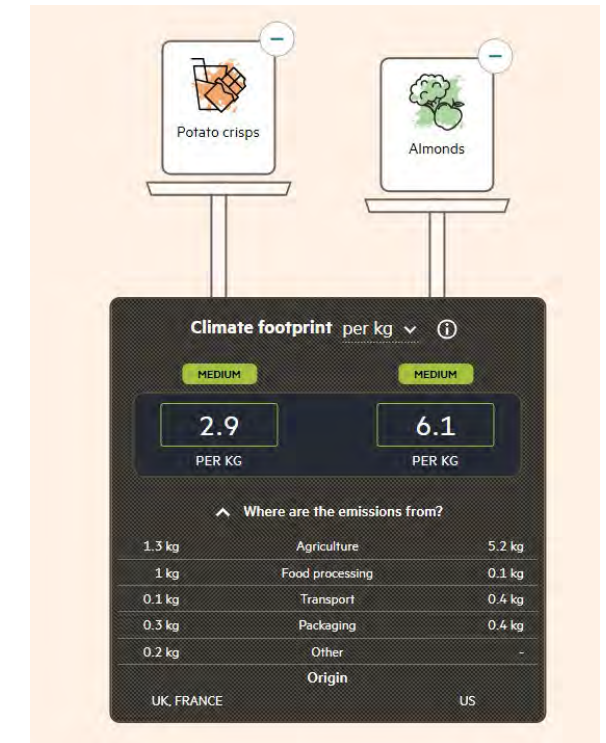


Image from Financial Times Climate Footprint tool  
<https://ig.ft.com/carbon-food-labelling/>

## Even subtle ingredient choices can make a difference to the overall impact

- Researchers from Oxford University assessed the environmental impacts of 57,000 food products sold in the UK
- Including multi-ingredient processed foods
- There were significant variations within the same products
- Within categories ingredient choices, both the actual ingredient and the supplier will make a difference

Data for sausages

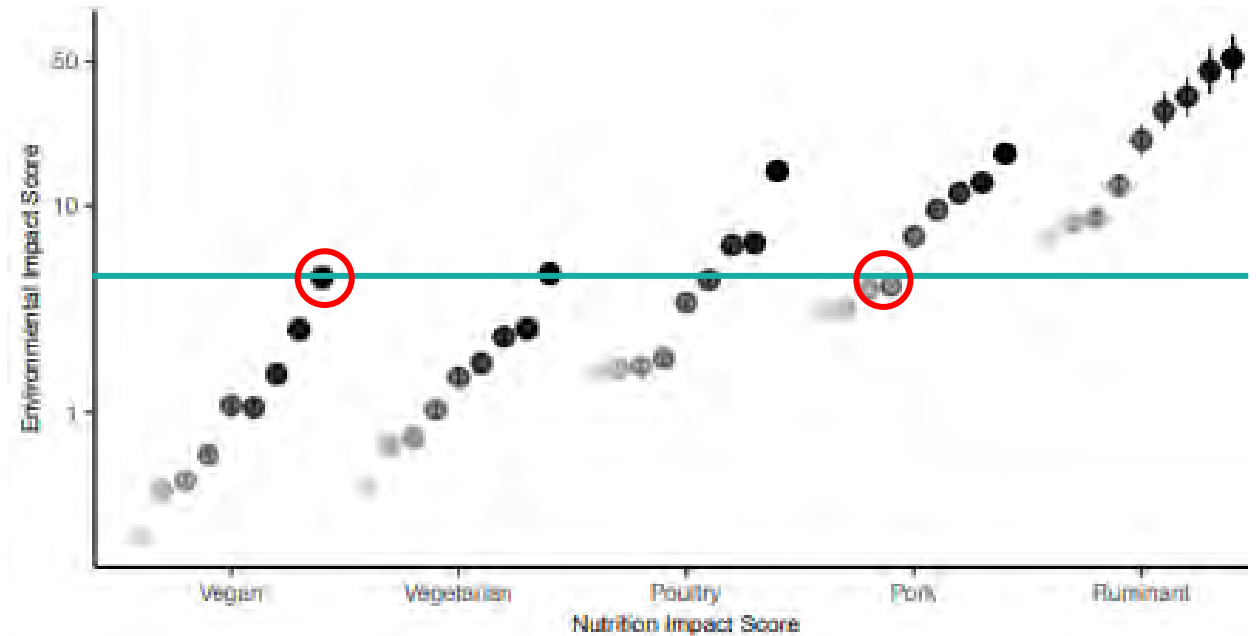


Image from PNAS, 2022, 119, e2120584119

# Consumer expectation and tools

- There is renewed interest in carbon footprint labelling
  - Trialled in the UK in 2007 in the food industry by companies such as PepsiCo (Walker's Crisps) and Tesco, carbon labelling was discontinued due to the expense of calculating these parameters and a lack of interest from consumers
  - However, this is now changing
  - A 2020 survey by the Carbon Trust found that the majority of consumers in the UK, US and various European countries supported the idea of carbon labels on food items
  - Several food companies have stated aims for carbon footprint transparency or carbon neutral targets for brands, and on-pack communication of these



Walker's Crisps, 2007

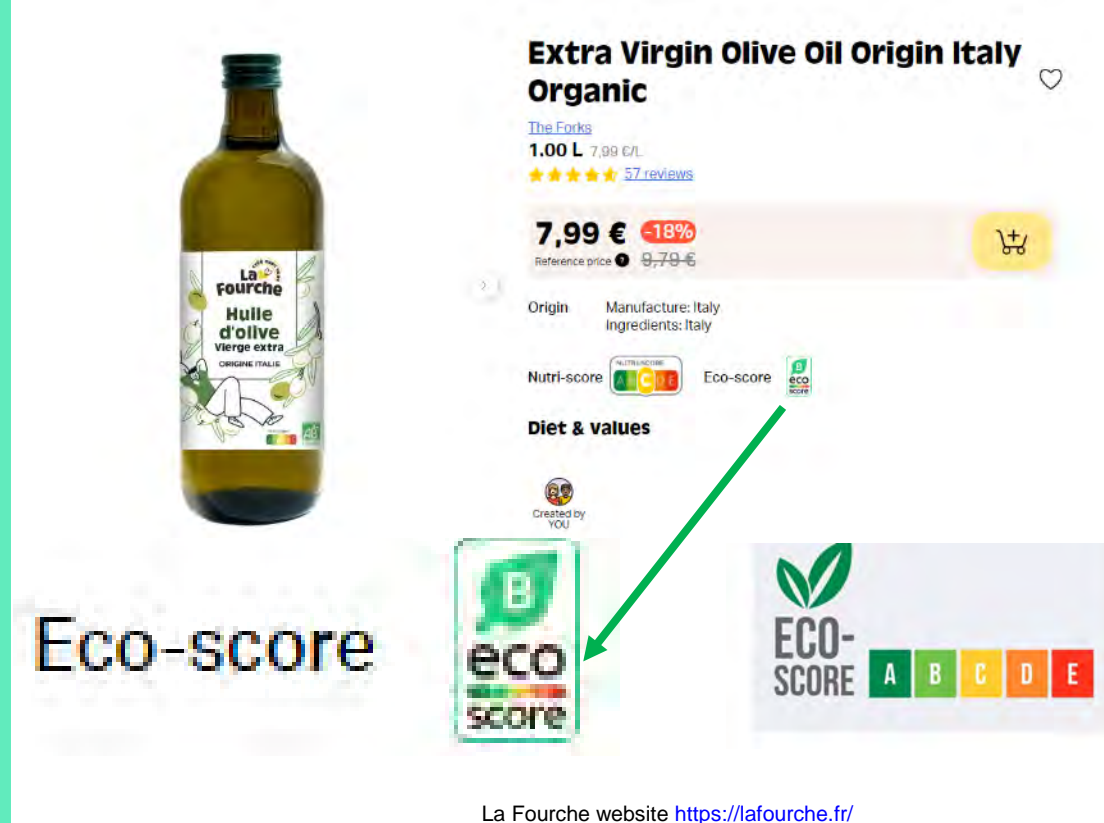


Quorn website 2022



# Regulations for eco-labels

- There is currently no internationally agreed standards for eco-labelling or agreement on what type of data should be measured
- There are over 120 ecolabels used on food
- There is no easy way for consumers to make evidence-based purchasing decisions
- In France, ADEME (Agence de la Transition Ecologique) has been working with organisations on the Eco-score label
- When communicating on pack, it is important to be clear and be able to back up statements
  - If the carbon footprint of the packaging is communicated, but not that of the product, then this can be misleading
  - Similarly, if carbon neutrality is claimed, but there is a heavy reliance on offsets, then this can be open to criticism



**Extra Virgin Olive Oil Origin Italy Organic**

The Forks  
1.00 L 7.99 €/L  
★★★★★ 57 reviews

**7.99 €** -18%  
Reference price 9.79 €

Origin: Manufacture: Italy  
Ingredients: Italy

Nutri-score: C Eco-score: B

**Diet & values**

Created by YOU

**Eco-score**

**ECO-SCORE** A B C D E

La Fourche website <https://lafourche.fr/>

# Regulatory implications of making changes to improve carbon emissions need to be considered

- Through innovation, changes can be made to products and processes to reduce the carbon emissions of a product
- The resulting products will clearly still need to be compliant, and there is a need to prove that a new product or process is safe
  - New ingredients, e.g. using upcycled waste from discarded parts of the plant or waste from operations
  - Changing processes to be more carbon efficient could lead to a novel process which needs approval
    - Some regulations specify the result, but others the process
  - Removing packaging and using alternatives
    - Using coatings on fruit and veg to reduce food waste and use less plastic is no longer packaging but could be a food additive





# Approaches companies need to take need to consider complexity

- Determining an approach is complex – multiple factors need to be taken into account and many are not within a company's control
  - Actions to enable net zero are not always completely consistent with achieving other sustainability goals or other commercial goals
  - There are numerous ways that companies *could* act and it can be difficult to choose the best option
  - Different functions within the business have different responsibilities and focal areas that are not always consistent
  - Liaising with and getting reliable data from all suppliers can be challenging
  - Communicating effectively with consumers is not straightforward





# Science Group Sustainability have developed a Net Zero Playbook

- The Playbook is the product of collaborative effort between Science Group and Chief Technology Officers drawn from 7 major corporations:
  - Amcor Global Flexibles, Bayer Crop Science, Mars Incorporated, PepsiCo Inc., Solvay SA, Stepan Company and The Procter and Gamble Company.
- It presents 10 guiding principles grounded in good business practice applicable to companies in both B2B and B2C markets.



<https://sustainability.sciencegroup.com/net-zero-playbook/>

science group | sustainability

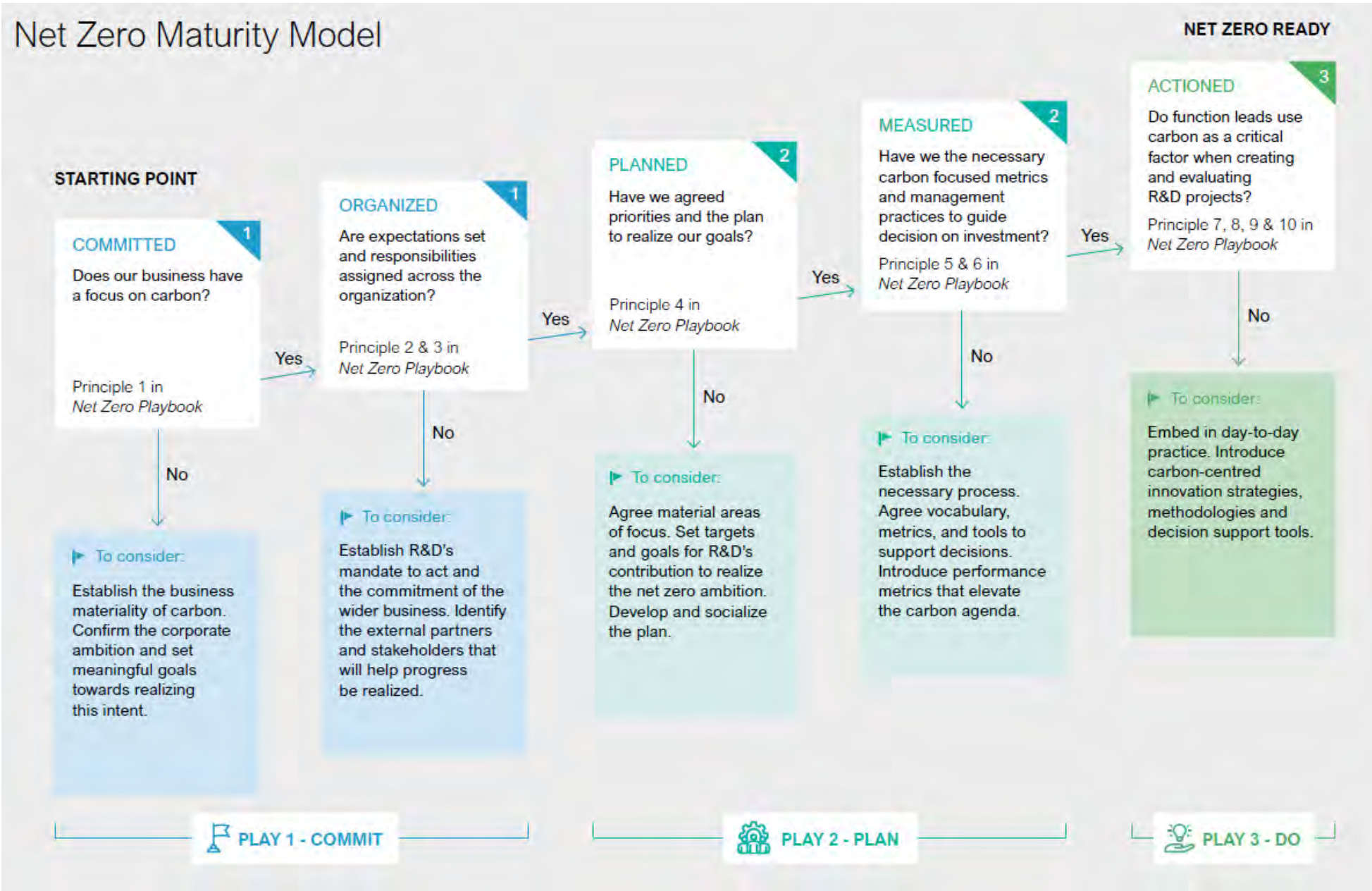
## Net Zero Playbook

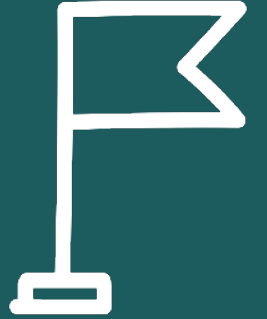


From the Science Group CTO Forum

Amcor Global Flexibles | Bayer Crop Science | Mars Incorporated | PepsiCo Inc. |  
Solvay SA | Stepan Company | The Procter and Gamble Company

The Playbook features a maturity model against which you can assess where you are on your journey towards net zero





# Play 1 – COMMIT

Make carbon reduction a core value and an unambiguous point of focus with identified goals and responsibilities



# 1

Learn to articulate carbon and other sustainability themes as distinct but related issues



# 2

Have an explicit mandate for R&D  
(and other science and technology  
functions) on carbon reduction





# 3

Recognise where external partnership is a prerequisite for success on carbon reduction







## Play 2 – PLAN

Make carbon reduction a central tenet of planning and performance measurement

# 4

Don't trust to luck; plan from where and by when effort will yield carbon reduction



# 5

Assess the ‘carbon health’ of the portfolio to make sure it is fit for purpose and aligned to carbon reduction





# 6

Expect 'the carbon impact' to be part of any conversation on innovation





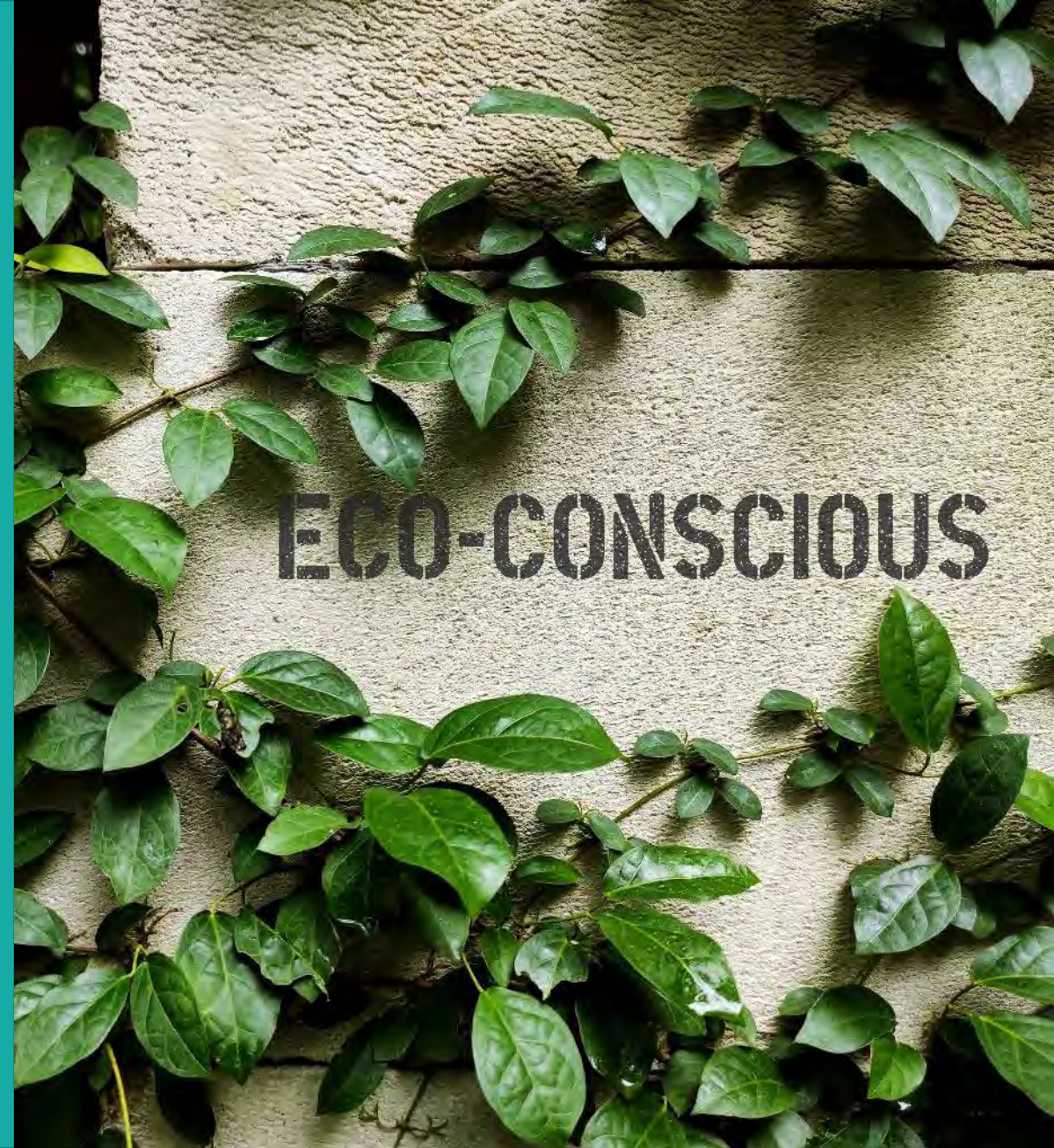
## Play 3 – DO

Make carbon reduction an essential consideration in mainstream innovation practice



# 7

Start with the customers, products and/or brands with an affinity for net zero messaging to build early momentum





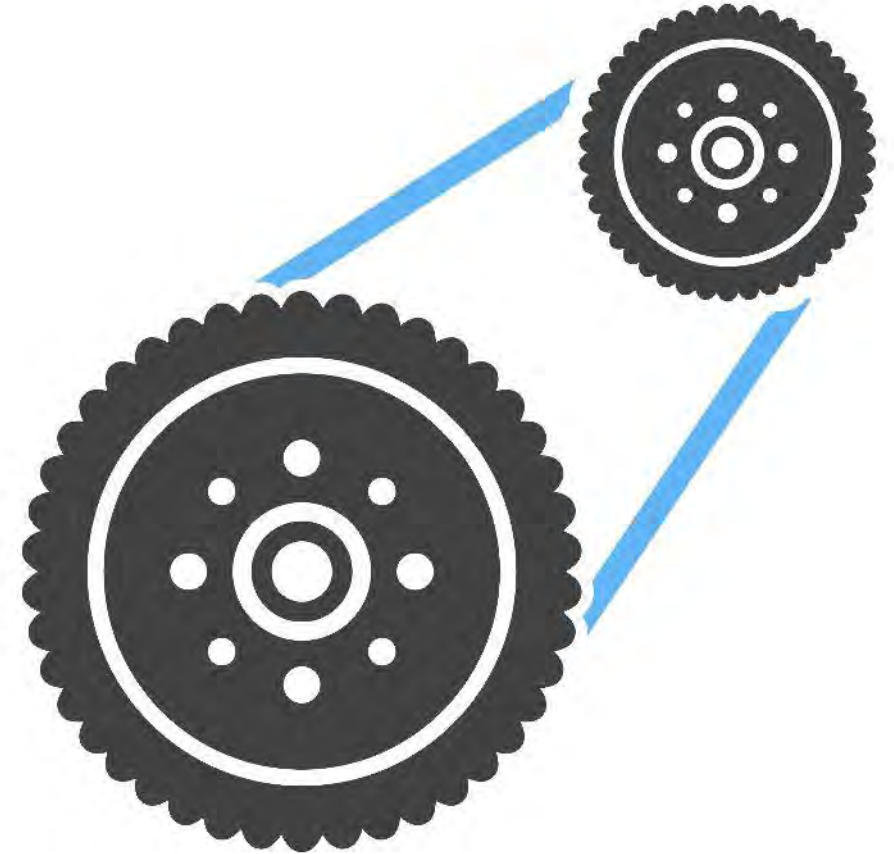
# 8

Realise the market value of a climate-friendly product



# 9

Find the synergies and flywheels;  
where innovating to serve the needs  
of the market creates opportunity to  
reduce carbon



# 10

Consider trading-off on price and/or performance where a reduced carbon product would enable a bigger win for the business





## Acting on net zero is complex but possible with the right thinking and tools

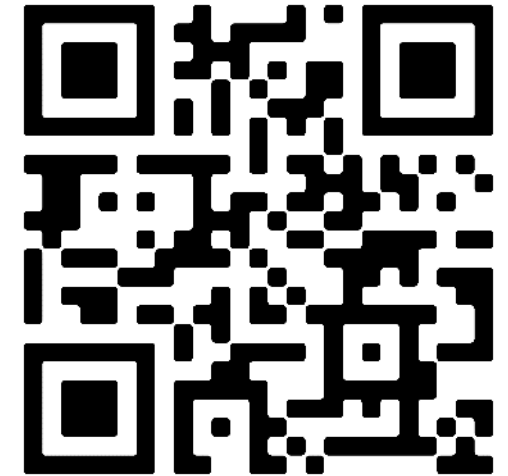
- Make carbon reduction a core value with identified goals and responsibilities
- Make carbon reduction a central part of planning and performance measurement
- Understand the implications of changes made to improve carbon footprint on regulatory compliance
- Communicate to the consumer and understand which labels to use and how to use them
- Cross-sector learning, and multi-disciplinary collaboration are likely to play a fundamental role



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