



RAMBOLL

Bright ideas.
Sustainable change.

Levelling Up Life Cycle Assessments

Essential Strategies for the Food and Drink Sector

Presenters



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- LCA Director at Ramboll
- Highly experienced LCA practitioner across various sectors: food & drink, agriculture, chemicals, energy, and transport
- Supported UK's Defra and European Commission's DG Env, CINEA, and EASA in shaping LCA applications and policy recommendations



Emily Dawson

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- Senior LCA Consultant
- Led LCA studies for public and private sector clients across multiple industries, including food and drink
- Recently led LCA of different animal feed protein options for Defra
- Trained practitioner in social LCA

About Ramboll

We are an independent engineering, architecture, and management consultancy company founded in Denmark in 1945 to help Europe rebuild after WWII

We combine insights with power to drive positive change to our clients, in the form of ideas that can be realised and implemented.

Much like the organisations we support, we are a globally connected company that is committed to using our talents to help clients create a cleaner, healthier, and safer world.

What truly sets us apart is the depth and breadth of our technical expertise. With thousands of engineers, scientists and sustainability specialists across key disciplines and sectors, we deliver visionary solutions grounded in real-world feasibility.



Global offices in 35 countries



Experts



Global revenue, in 2024 across all markets

Multidisciplinary services across seven markets:



Buildings



Environment & Health



Water



Management Consulting



Energy



Transport



Architecture & Landscape

Agenda

1. What is Life Cycle Assessment (LCA)?
2. LCA trends
3. Using LCA efficiently
4. Levelling up your LCA
5. Social LCA

In this webinar, you will learn:

- The regulatory and customer drivers for LCA
- What to consider in order to scale your LCA
- How to stay head by levelling up your LCA

What level of experience do you have with LCA?

- ☐ I have no knowledge of LCA at all
- ☐ I have heard of LCA
- ☐ Some experience of LCA
- ☐ Lots of experience of LCA

Why are you interested in LCA?

(Select all that apply)

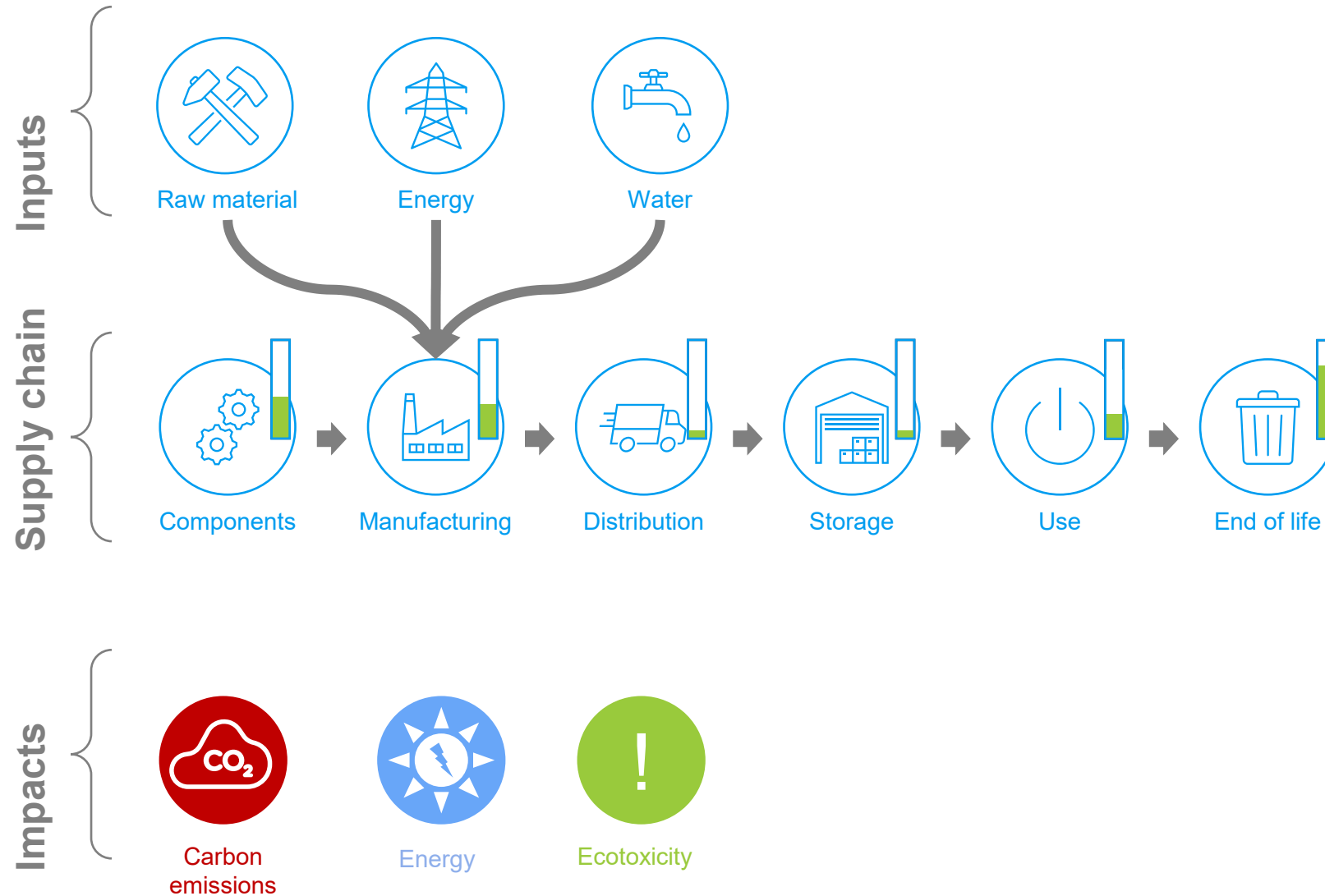
- ☐ I am getting requests from clients for PCF data
- ☐ I am getting requests from clients on wider environmental impacts
- ☐ For marketing materials
- ☐ For internal decision making/insight
- ☐ Other – Please put in comments

What is the biggest challenge/concern for you around LCA?

Please put response in comments.

What is LCA?

What is Life Cycle Assessment (LCA)?



- Method to quantify environmental (or increasingly social) impacts of a good/service across its entire life cycle
- Product focus – different system boundary from corporate reporting
- Does not distinguish 'owned' processes
- Typically excludes commuting and R&D
- Often looks beyond carbon

Common LCA Impact Categories

LCA typically considers a wide range of potential environmental impacts.

European Commission's recommended set of 16 impact categories is increasingly being used in Europe but others do exist.

An LCA that only considers carbon or climate change, also known as Global Warming Potential (GWP) impacts is known as a Product Carbon Footprint (PCF).



GWP



Water



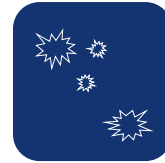
Land



Acidification



Ter Eutro



Particulates



Resources Minerals



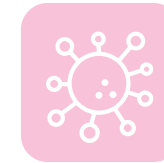
Resources Energy



POFP



FW Eutro



Cancer effects



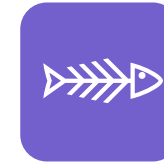
ODP



Hum Tox



Mar Eutro



Ecotox FW



Ionising radiation

What can LCA tell us?

ENVIRONMENTAL POTENTIAL



Quantify the environmental potential across the full product life cycle based on science not assumptions.

BENCHMARKING



Benchmarking or comparing performance against sector norms or alternative products

PRODUCT HOTSPOTS



Hotspots in carbon, water, land use, and more — guiding where action matters most

CREDIBILITY



Credibility for green claims

TRADE-OFFS



Assess different options to weight up trade-offs

VALUE CHAIN IMPACTS



Value chain insight provides scope 3 emissions visibility

Benefits of LCA

REDUCE IMPACTS & COSTS



Identify hotspots and turn impact reduction into both product impact reductions and operational savings.

MEET CUSTOMER DEMANDS



End customers and increasingly retailers are requiring impact data for sales and access

AVOID GREENWASHING



Avoid greenwashing by backing claims with defensible evidence

BRAND IMAGE



Build a reputation for transparency in a sector where scrutiny is rising fast.

SUPPORT CORPORATE GOALS



Support corporate Scope 3 and net zero goals.

STAY AHEAD OF REGULATION

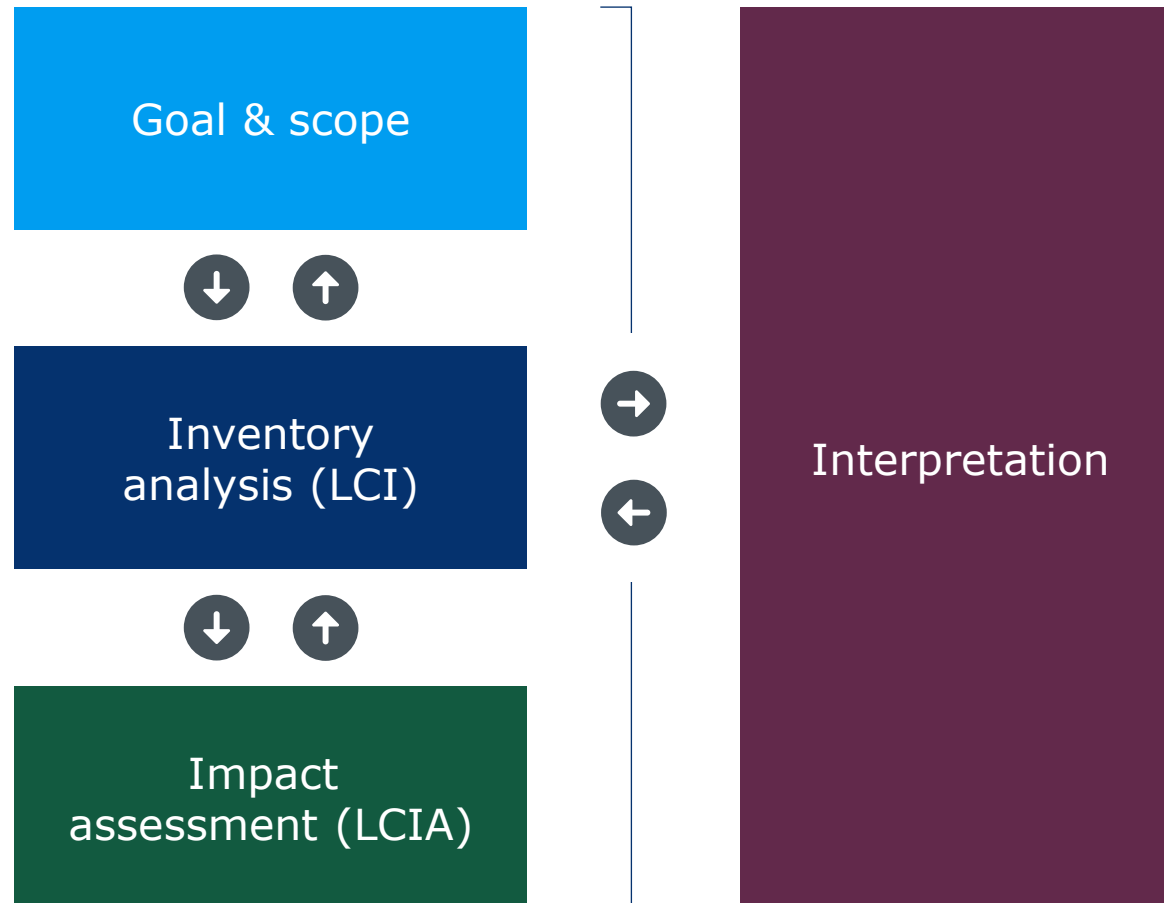


LCA is increasingly being required by legislation – stay ahead by starting now

Trends towards LCA

Core LCA Principals and standards

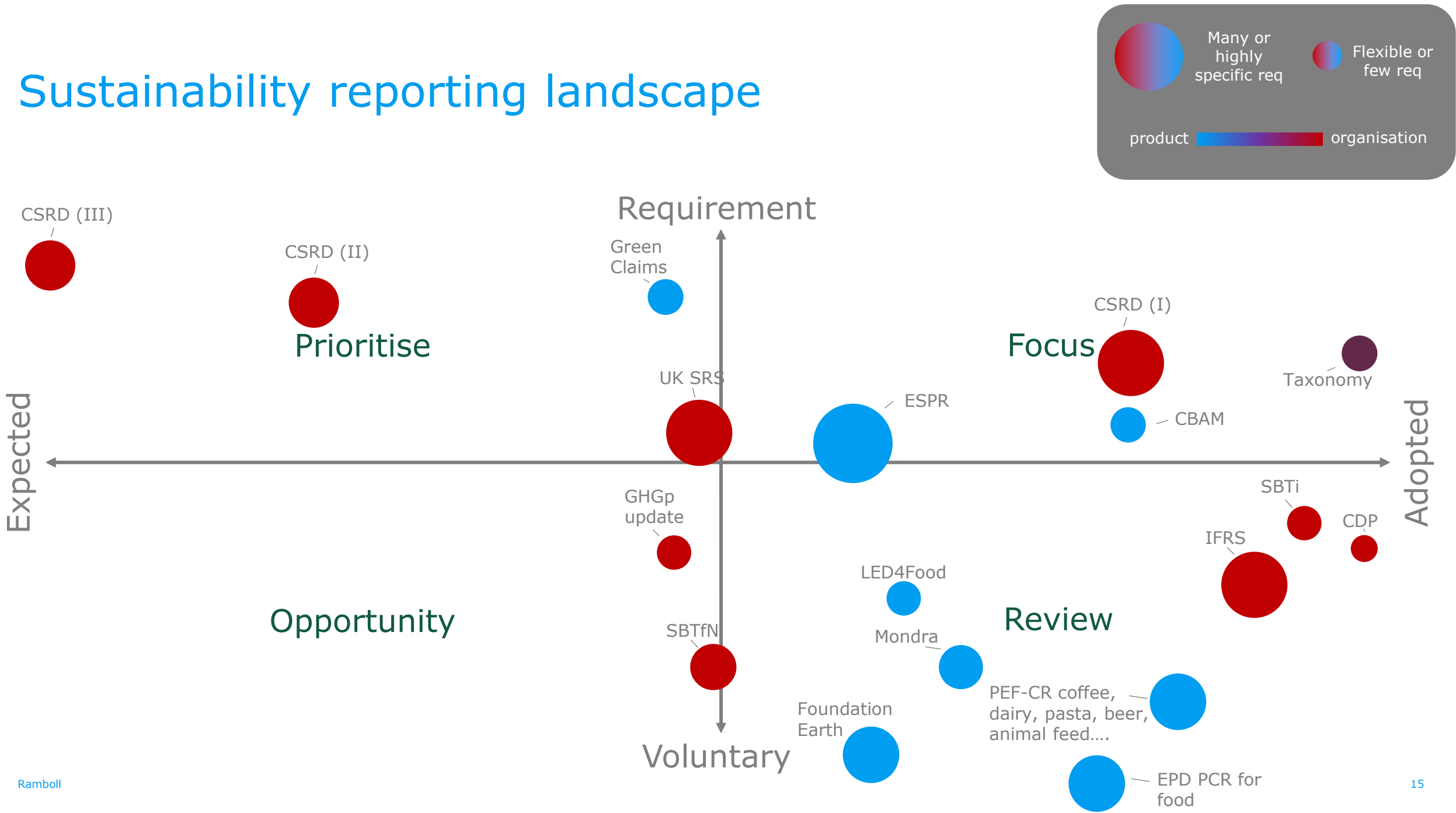
ISO 14040/14044 establishes a standardised approach to LCA:



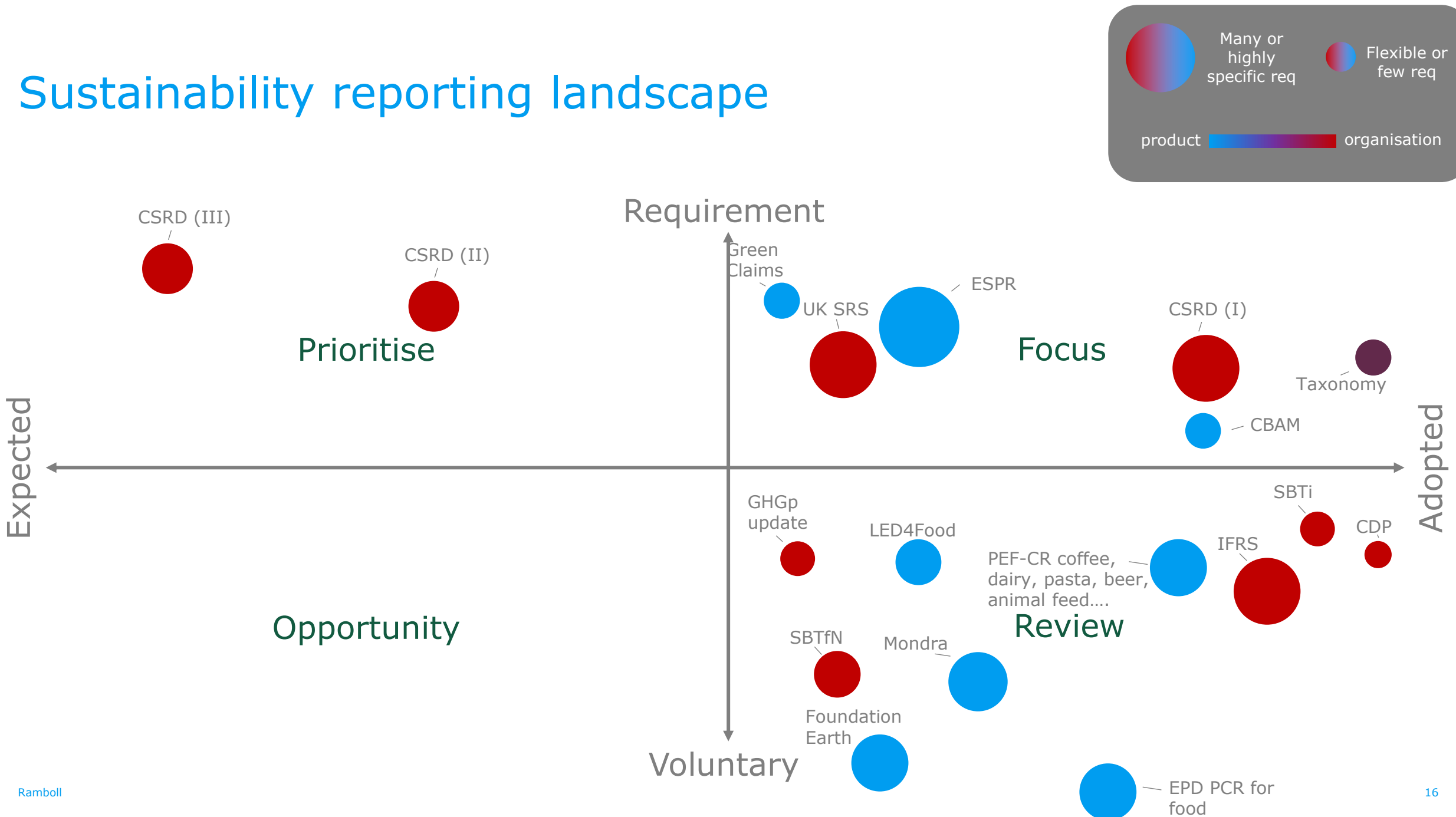
Evolving list of LCA-related programs & standards:



Sustainability reporting landscape



Sustainability reporting landscape



Using LCA efficiently

Current LCA Trends

LCA is constantly evolving and advancing.

HARMONISATION



Push toward methodological convergence across ISO, PEF, and sectoral standards

DATA SHARING



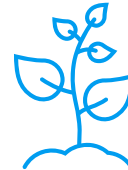
Digital tools and regulation are driving structured, shareable LCA data across supply chains.

BIOGENIC CARBON MODELLING

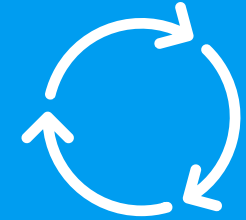


New frameworks are refining how carbon storage and release are accounted for and reported.

LAND USE CHANGE

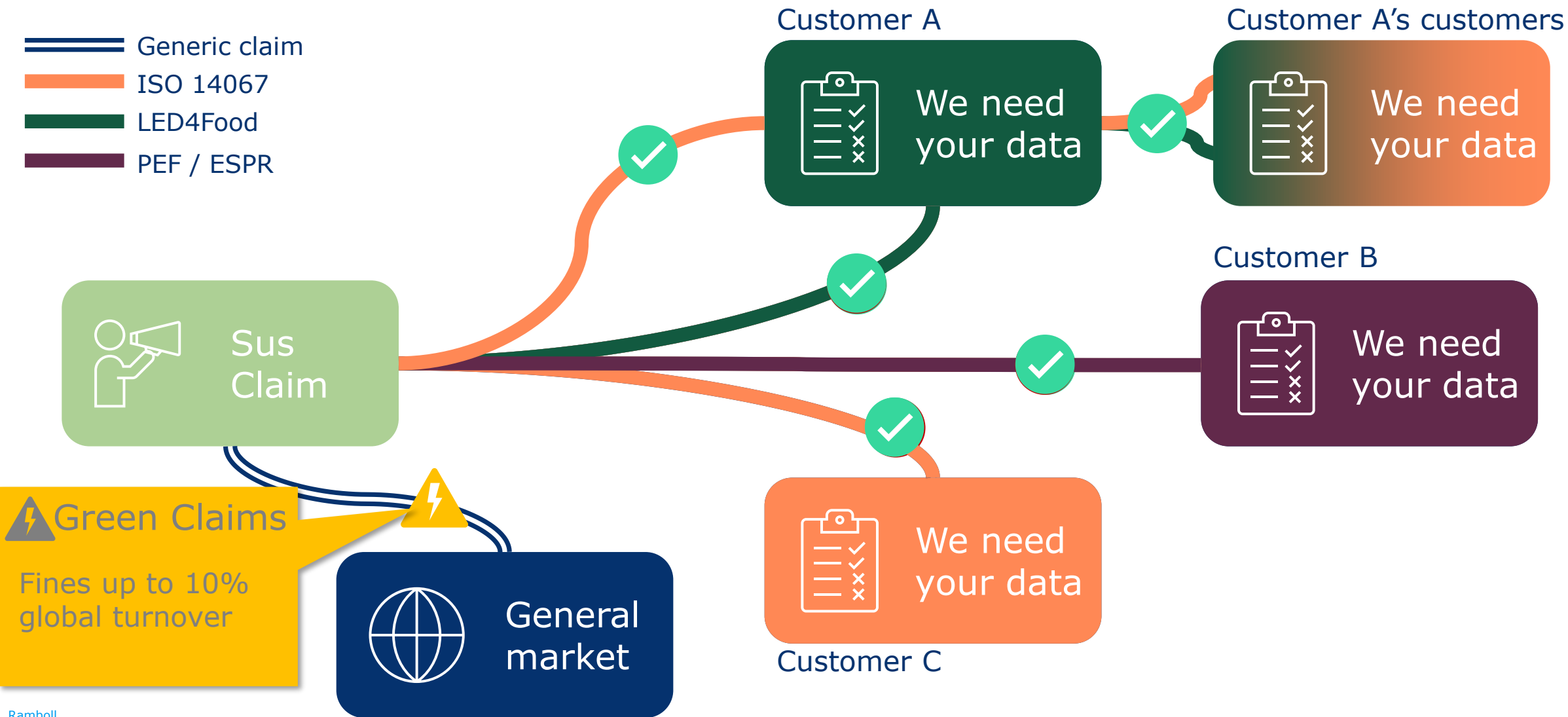


LCA is refining direct and indirect land conversion modelling and increasingly including land Use change in assessments.



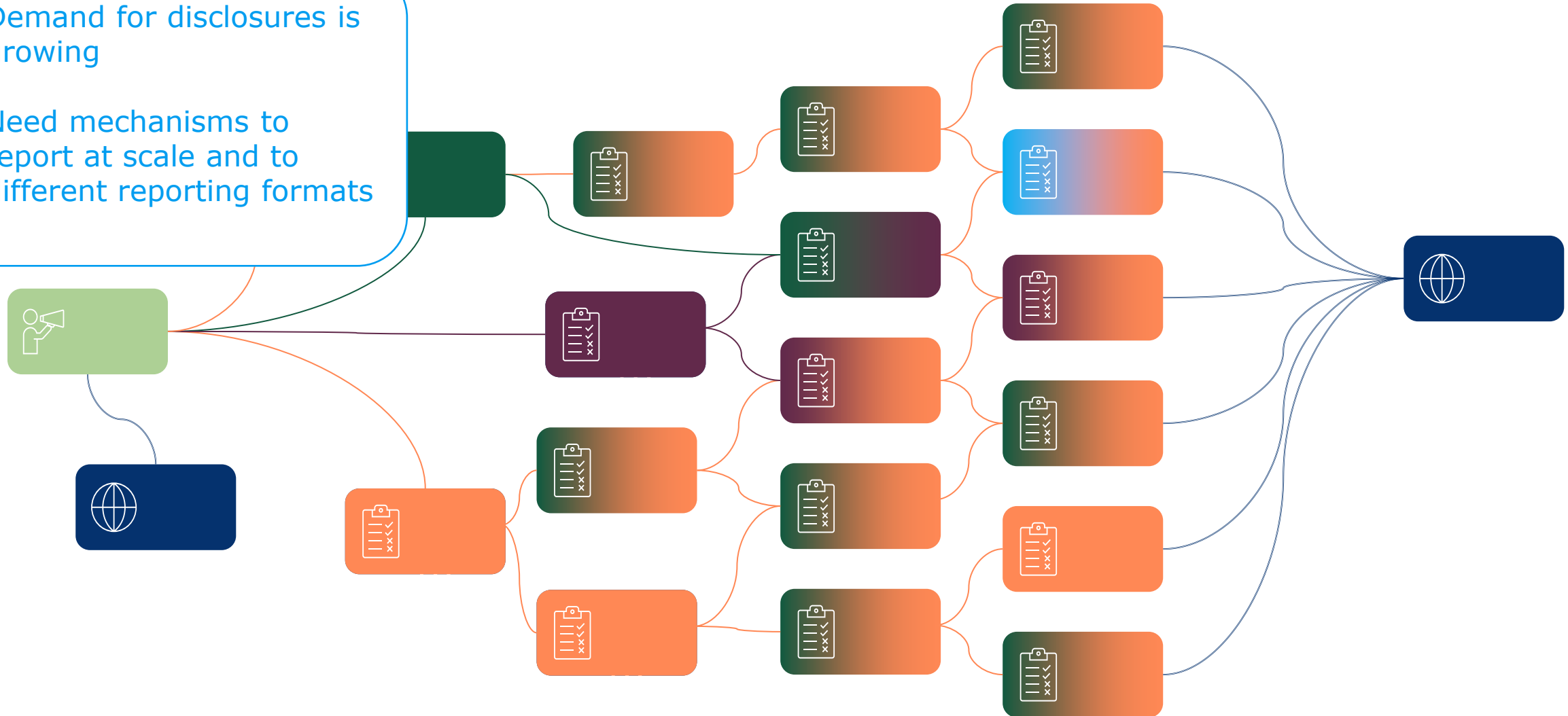
We are already seeing these trends move from things only leaders in the industry are doing to becoming the norm

Sharing LCAs



Product disclosures – why do they matter?

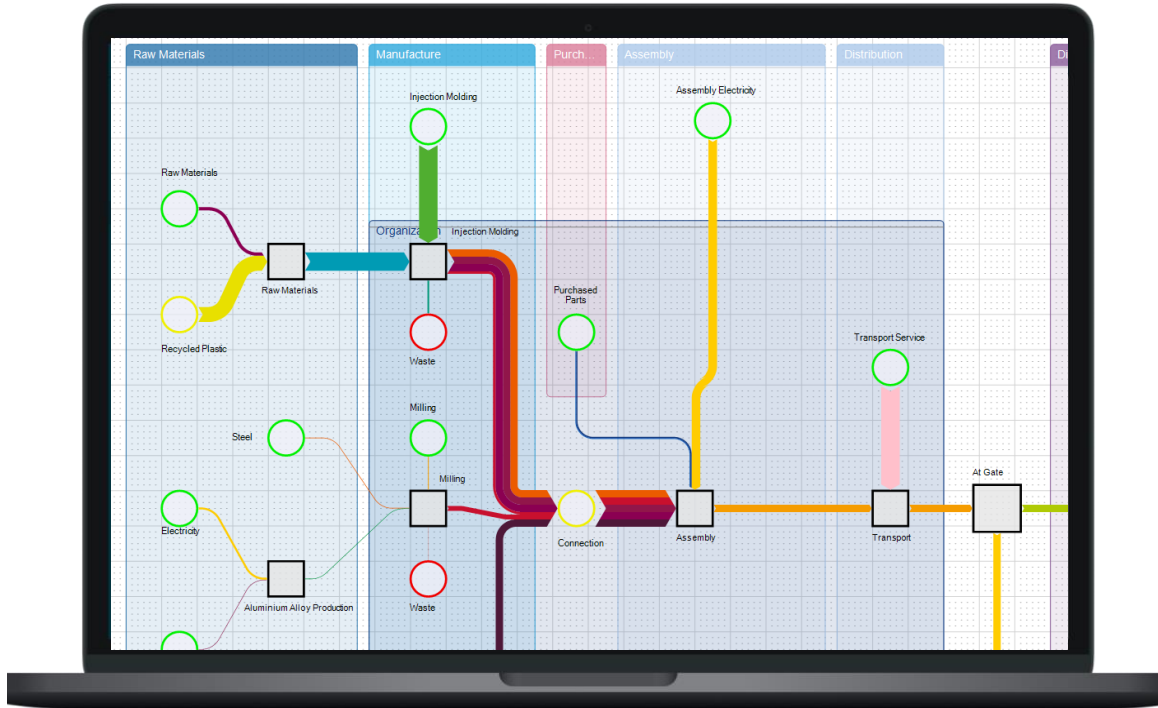
- Demand for disclosures is growing
- Need mechanisms to report at scale and to different reporting formats



Software for product disclosures



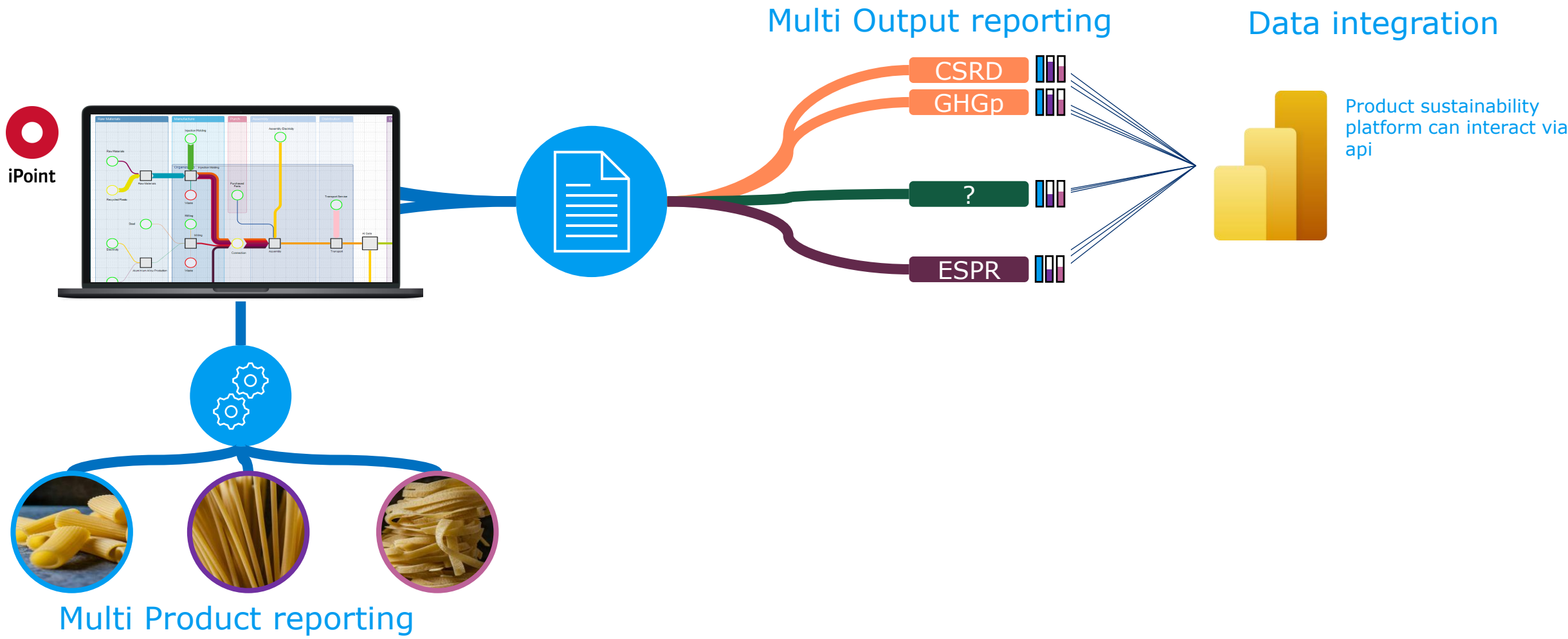
iPoint



- iPoint's Umberto software can be used to model a product's life cycle
- The model can be parameterised to output for different reporting requirements:
 - ISO 14067
 - LED4Food
 - PEF
- Ramboll can setup the model to utilise 'Production Orders' this can enable modelling at scale, processing and updating hundreds of SKUs at the same time

CSRD	?
GHGp	ESPR

Software for product disclosures





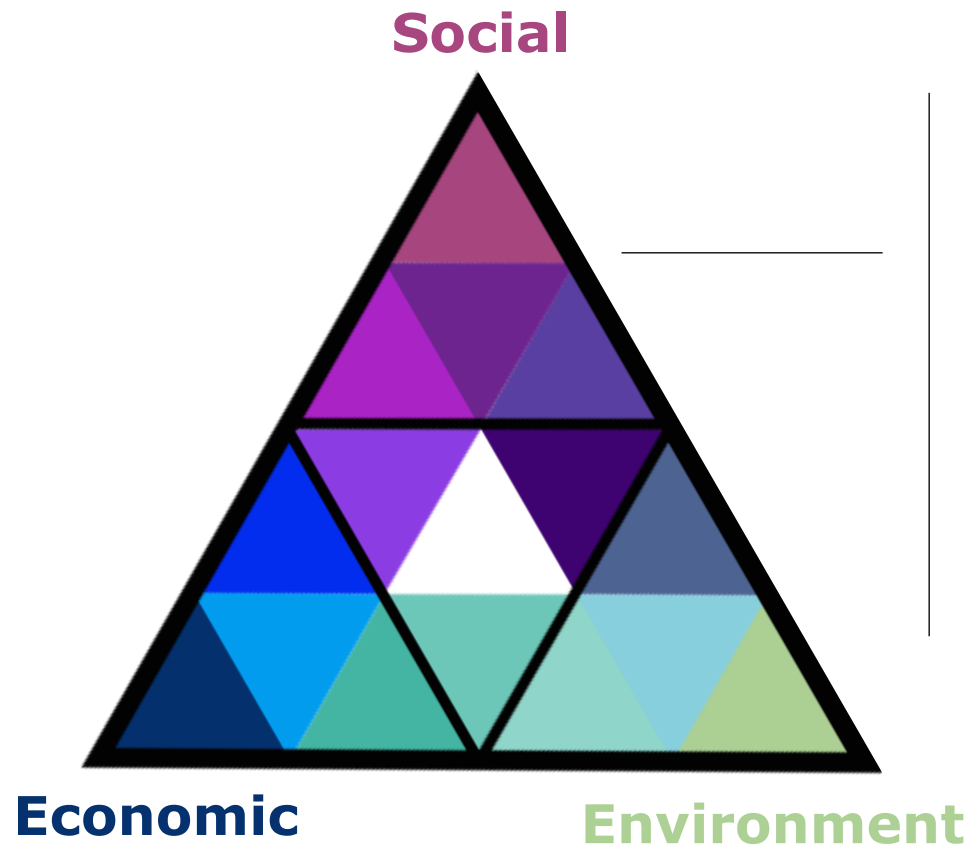
LCA Software Checklist

- ☐ Report to different standards
- ☐ Scalable – calculate multiple products at once
- ☐ Integrated into your systems

Levelling up your LCA

Next level

Next generation LCA approaches are expanding beyond the typical range environmental impacts to include harder to assess topics with the aim of providing a more comprehensive sustainability assessment.



New and emerging trends include:

Biodiversity



Marine Plastic



Social Life Cycle



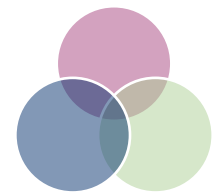
Life Cycle Costing



Sustainable Development Goals

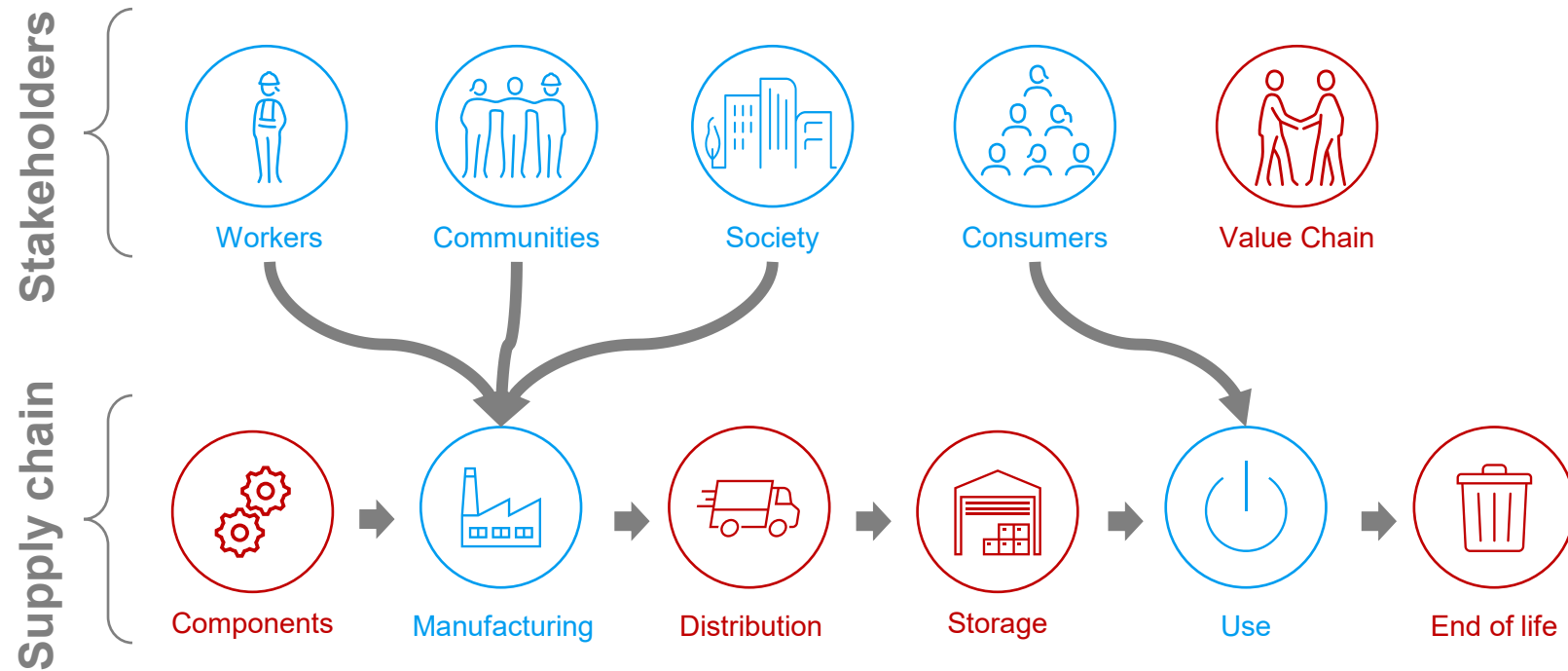


Sustainability Life Cycle Assessment

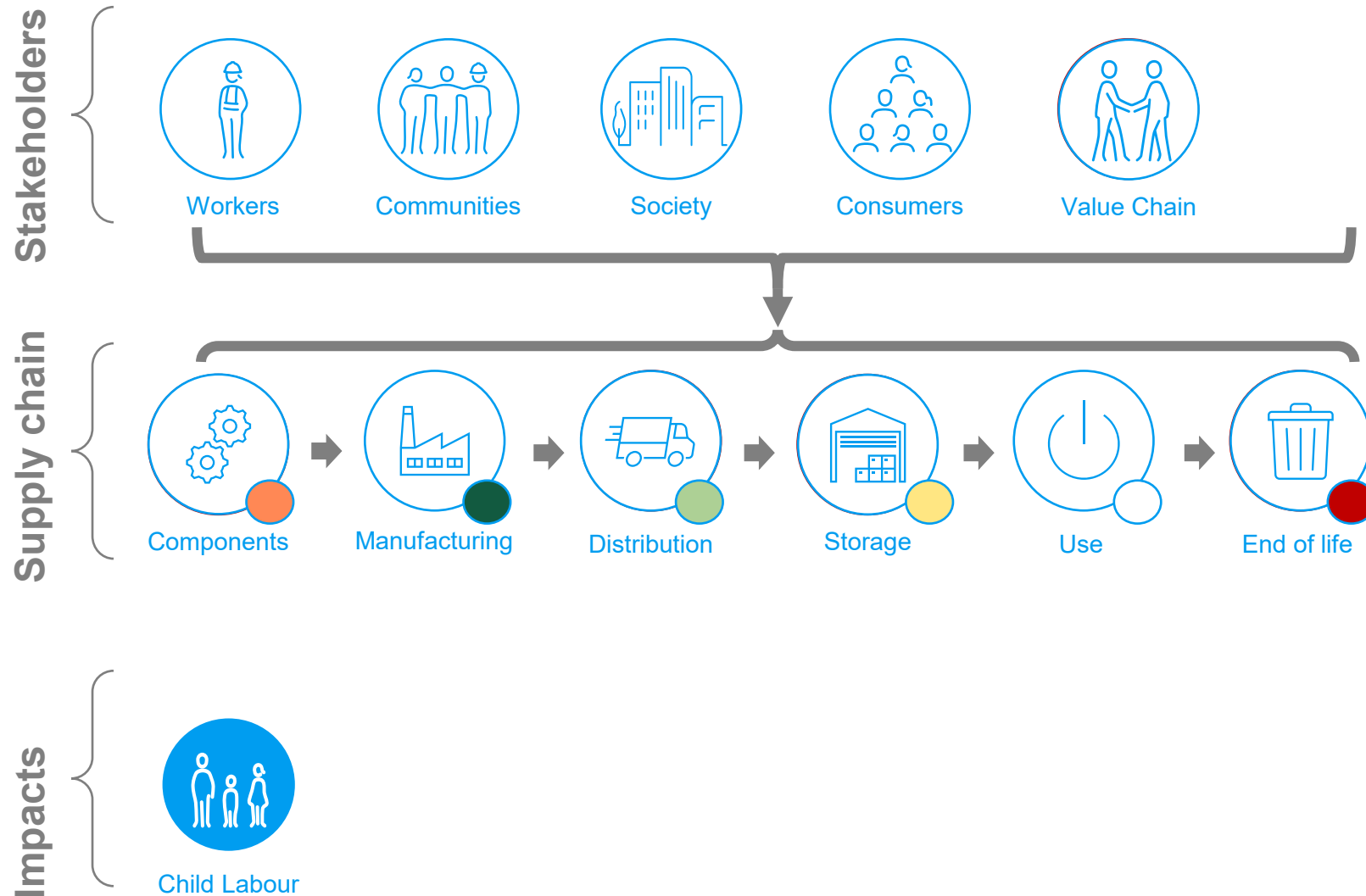


Social LCA

What is Social Life Cycle Assessment (sLCA)?

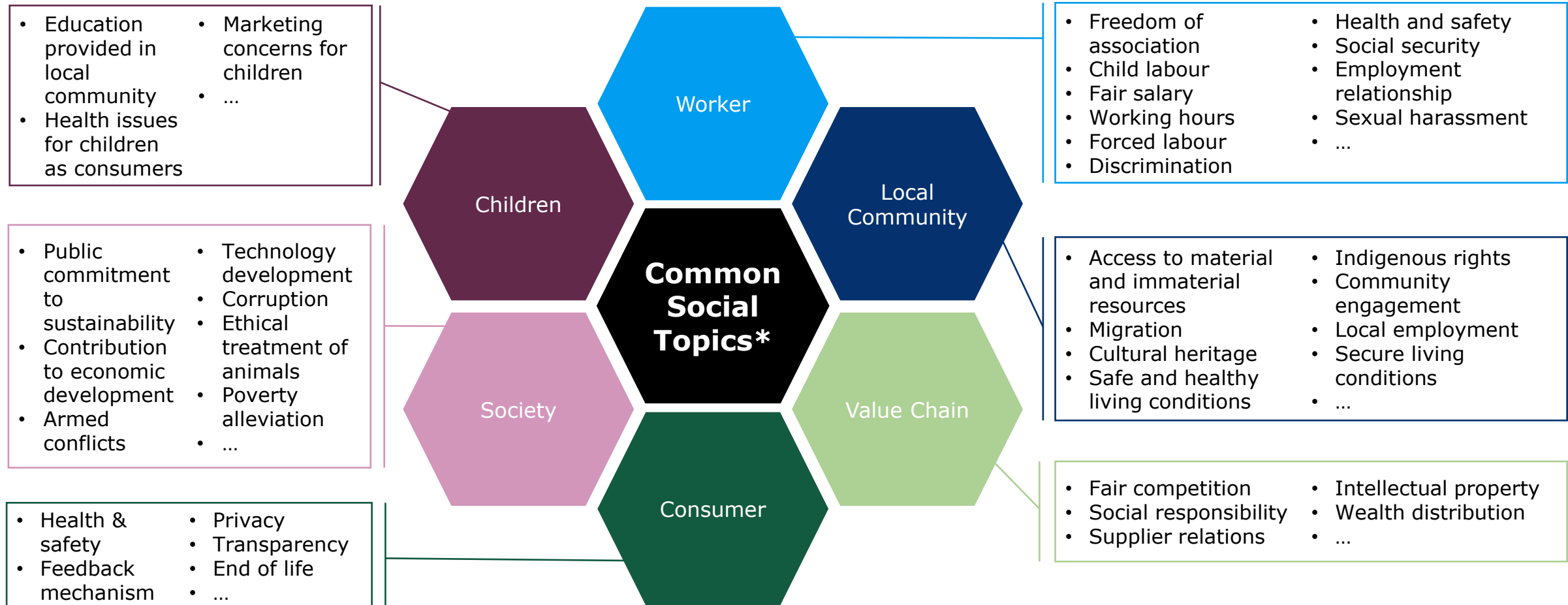


What is Social Life Cycle Assessment (sLCA)?

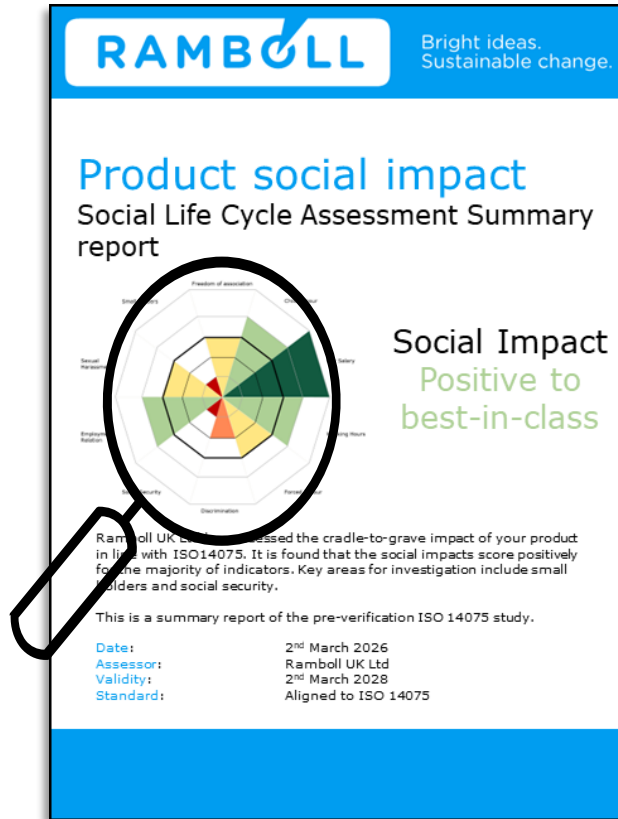


- Method to assess the social impacts of a good/service across its entire life cycle
- Product focused but organisational variations do exist
- Impacts assessed against different stakeholder groups
- Semi-quantitative

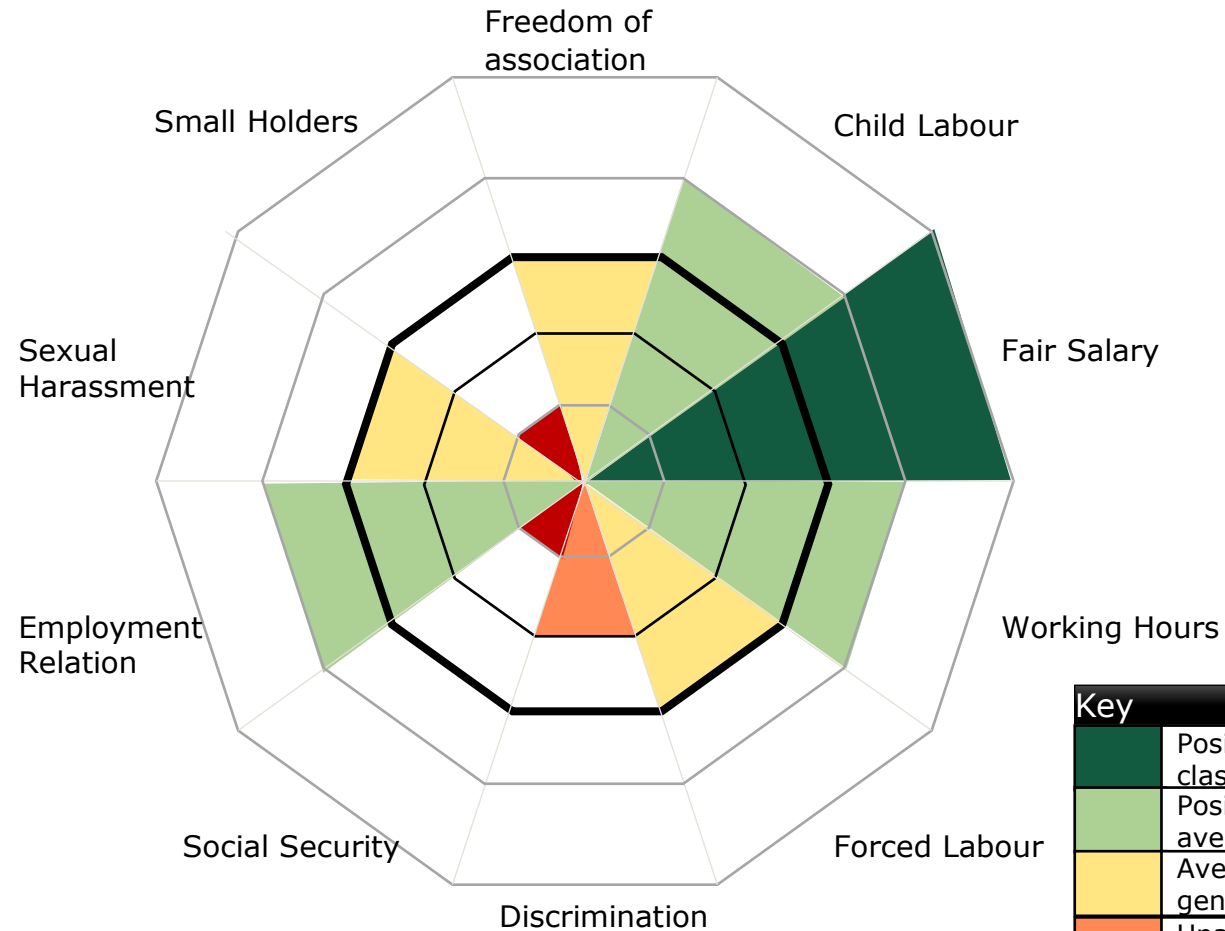
What topics are covered?



What does a social LCA look like?

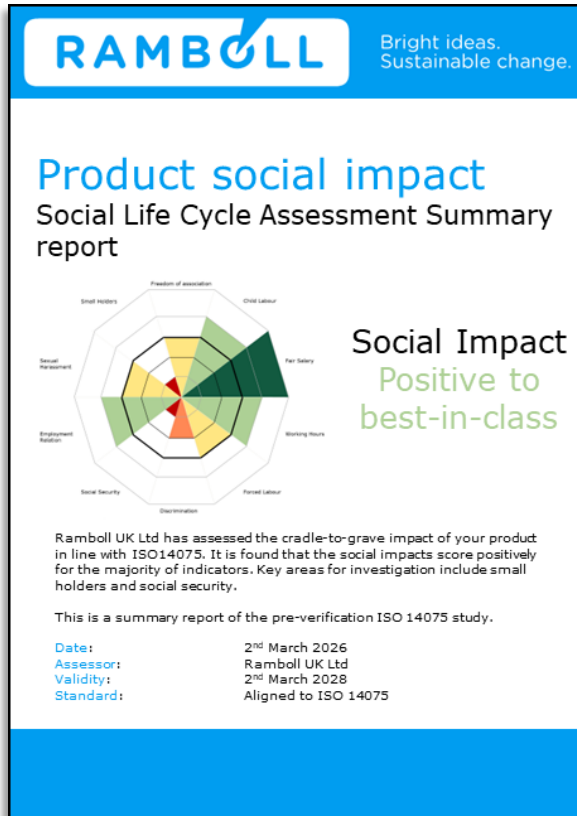


Illustrative



Key	
Dark Green	Positive performance/ best in class
Light Green	Positive performance beyond average
Yellow	Average performance/ generally acceptable
Orange	Unacceptable performance but improving
Red	Unacceptable situation

Why do social LCA?



Illustrative

Why



Mitigate risk



Comply with regulations & voluntary standards



Promote Social Value



Retain or attract customers



Product Differentiation



Social LCA helps companies move beyond box-ticking to build meaningful, market-facing impact.

Access exclusive sustainability guides

Download useful materials on a host of sustainability topics including LCA and Social LCA for the food and drink sector.

Scan QR code or visit:

<https://c.ramboll.com/sustainability-for-the-food-drink-sector>



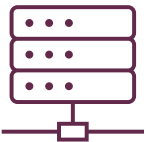
Summary



Food is exempt from ESPR, but various PEF Category Rules exist



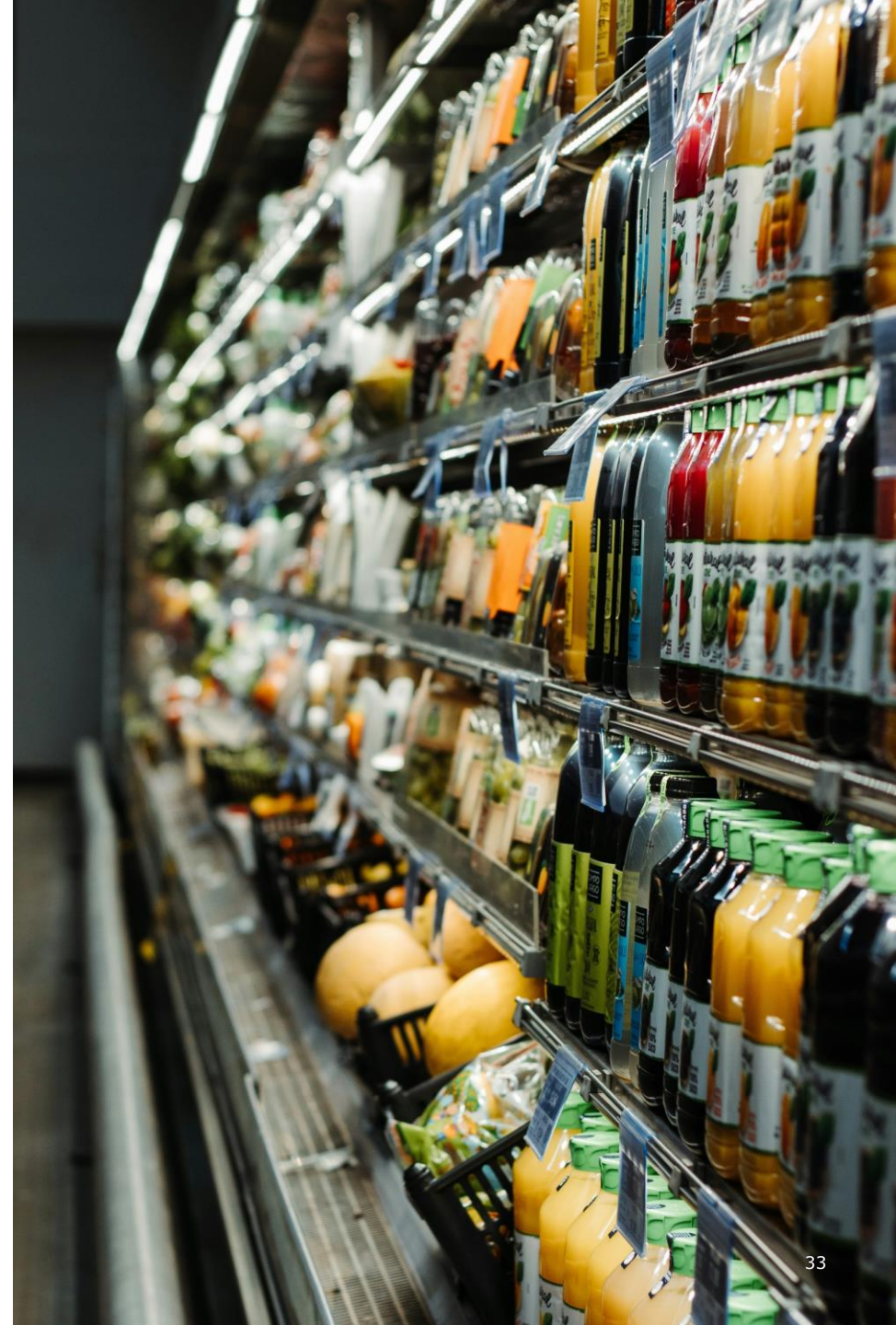
Key stakeholders have corporate targets that need supplier PCFs



Software solutions can make LCA scalable



Differentiate your product, demonstrate social and biodiversity leadership



Thank You!



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