

Achieving your sustainability goals

26 March 2024

Today's presenters



James Skidmore
Head of Consulting



Peter Mitchell
Practice Manager



Sam Dove
New Business Manager

Sustainability

SUSTAINABLE DEVELOPMENT GOALS



“Meeting the needs of the present without compromising the ability of future generations to meet their own needs” - UN Brundtland Commission (1987)

Recognition of 3 pillars of sustainability

Planet



People



Profits



Business context

Conducting all activities in an ethical, socially responsible and environmentally sustainable manner ensuring the preservation and regeneration of eco-systems for future generations

Purpose of today's webinar

To understand how our services will help your business reduce its impacts on the environment and achieve your sustainability goals

Life Cycle Assessments and Environmental Product Declarations



LCA & EPDs

What is LCA?

A tool to quantify the environmental impacts of a product over its whole life from production, through its use phase, and to end-of-life when it is recycled, reused or disposed. Transport impacts in supply chains are included. LCA can be “cradle to grave”, “cradle to gate” or even “cradle to cradle”. Full picture of environmental performance - broader than just a Carbon Footprint.

What is an EPD?

Abridged reporting of LCA results in a standardised format following pre-determined rules and methodologies for different product categories. Published product declarations may be compared with those for other products in the same category group.



Benefits of LCA?

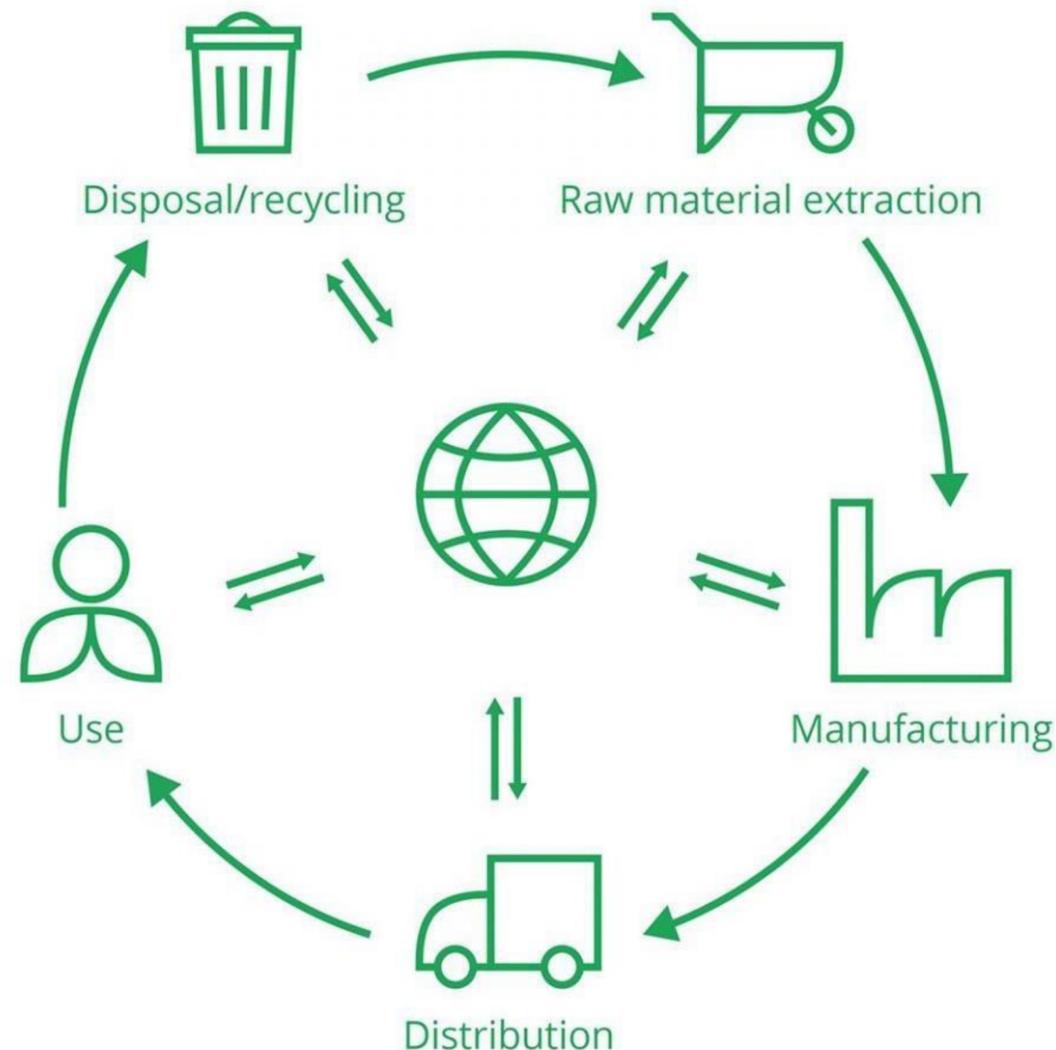


- ✓ LCA is the most credible way to establish and communicate all of the environmental impacts of your products
- ✓ Enables robust evidence-based decisions and informed environmental choices
- ✓ Identify hotspots and target reductions in environmental impacts in your value chain
- ✓ Fresh insight and understanding of your products a new perspective on efficiency
- ✓ Identify opportunities, such as re-design to reduce packaging, switching materials, increasing recycling content
- ✓ Provides information to end customers and supply chain partners
- ✓ Pre-cursor to publishing Environmental Product Declarations

Better to start small than to not start all

Product Life cycle

'Cradle to Cradle'



A1 Raw materials supply

- impacts caused by the extraction and processing of raw materials used in the product/packaging

A2 Transport

- Impacts caused by the transport of raw materials, consumables and packaging

A3 Manufacturing

- Impacts caused by usage of energy, fuels, consumables, water and generation of wastes

A4 Transport

- Impacts caused by the transport of final packaged products

A5 Construction/installation

- Impacts caused by the installation/construction of the product

B Use stage

- Impacts caused by the use of products, maintenance, replacement, repair/refurb. Energy and water usage.

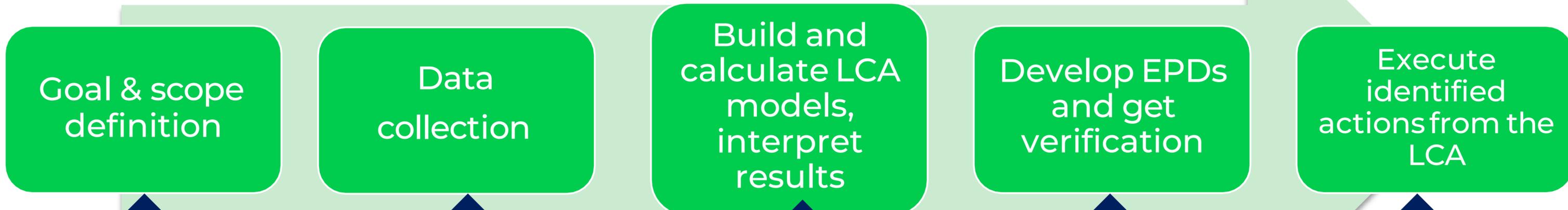
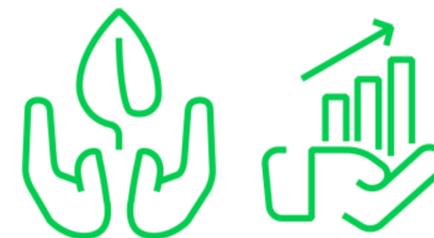
C End of Life

- Impacts caused by the de-construction/demolition, transport and waste management routes at EoL

D Benefits beyond the system boundary

- Recycling/reuse/recovery potential of materials/energy available at EoL

The LCA/EPD Service



Determine goal and scope of the LCA – **What does the client want to achieve?**
Establish system boundaries, functional unit (FU)/declared unit (DU) requirements etc

Get full details of product and packaging materials used (polymer types, recycled content). Origin and destination of inbound transport journeys, transport modes and vehicle types. Usage of energy, fuels, consumables, water. Wastes generated in manufacturing and management routes. Details of distribution journeys, transport modes and vehicle types. Details of End-of-life waste management routes

Convert process-specific input datasets to a per FU/DU basis. Select LCIA impact methods. Select generic processes providing the environmental impacts e.g. from Ecoinvent 3.9. Get results and interpret environmental impact metrics. **Reporting and communication of findings to client.**

Produce EPDs as per standards in PCRs, and EPD programme operator GPI. Get **approved third party verification** of the LCA modelling and the content of the EPDs. Publish and communicate EPDs

LCA **identifies where the biggest opportunities for environmental improvements are.** Actions focussing on these hotspots deliver enhanced environmental performance



Case Study



LCA Example

Continuous improvement of the packaging format for SEGA's Football Manager game



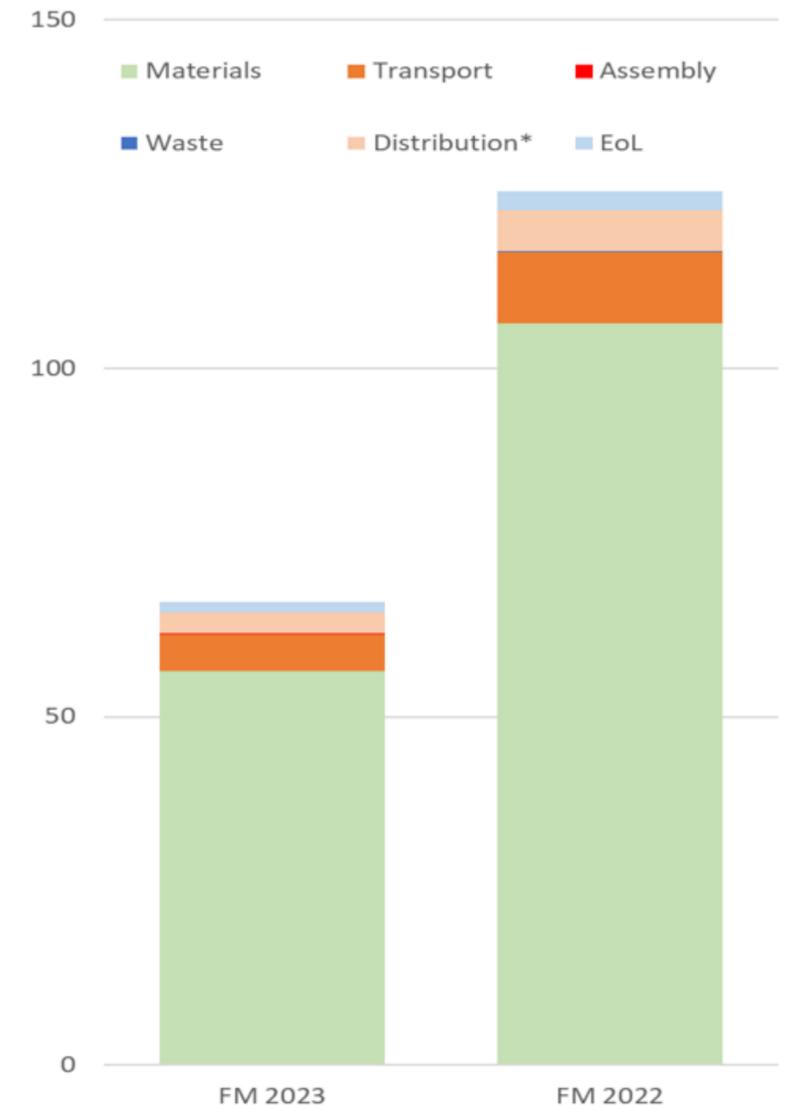
Benefits to SEGA

From the LCA SEGA fully understands

- The environmental footprint of its product
- The realised impacts of changes to the product when implemented

“Valpak provided a high level LCA to compare the environmental impacts of the new and the old packaging for Football Manager on PC for SEGA. They helped facilitate the data collection from our suppliers to carry this out, and provided a concise report back to the business so we could fully understand the carbon and water impacts of both packaging options. They were a very professional and personable company to deal with, on hand on email and by phone to support the brief and wider project. The report has since been shared with other various industry bodies and had really positive feedback.”

Natalie Cooke, Operations Director, SEGA Europe Ltd



*Koch Media, UK



Carbon and Energy Management

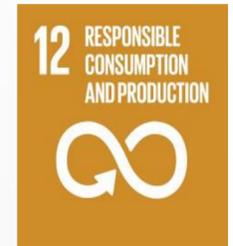
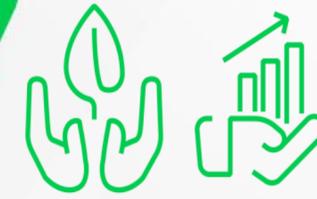


Carbon & Energy Management

What is Carbon Management?

Carbon management focusses on the measurement, management and mitigation of the six greenhouse gases (GHGs) covered by the Kyoto Protocol. Typical activities involved in carbon management for your business include:

- Collating data on activities (upstream and downstream) that cause carbon emissions within your organisation and its supply chain
- Establishing the overall carbon footprint of your business and/or the carbon footprint(s) of your
 - Main products and processes
 - Data inventory analysis to identify the maximum carbon reduction opportunities
 - Setting science-based targets and developing detailed plans to drive reductions in carbon emissions in your business to net zero
 - Raising employee and stakeholder awareness of your commitment to net zero carbon
 - Tracking progress against targets and making continuous improvements



Carbon Footprint Reporting



Phase 1: Define Study Objectives

Phase 2: Scoping

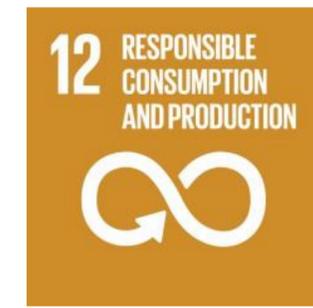
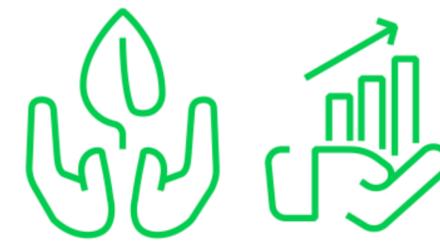
Phase 3: Data Collection

Phase 4: Carbon Conversion

Phase 5: Analysis & Interpretation

Phase 6: Action Planning & Reporting

Mandatory Carbon Reporting



	ESOS	SECR
Qualification date	31 st December 2022	Publication date of Director's report following financial year starting on or after 1 st Apr 2019
Who	<ul style="list-style-type: none"> • 250 or more employees or less than 250 employees with • An annual turnover exceeding £44m and • A balance sheet exceeding £38m 	Two of the following: <ul style="list-style-type: none"> • at least 250 employees • annual turnover of more than £36m • balance sheet of over £18m
Requirements	12 months of energy data, or ISO500001, sign off by lead assessor, Director(s), and notification to the EA	Energy data and associated GHG emissions, an intensity ratio, energy efficiency actions, methodology, reported in Director's report

What is Energy Management?

Energy management is the process of monitoring, controlling and conserving energy. Typical activities involved in energy management include:

- Metering your energy consumption
- Detailed analysis of energy consumption data to identify opportunities to make savings
- Setting targets for energy reduction
- Raising employee awareness
- Reviewing progress against targets and making continuous improvements

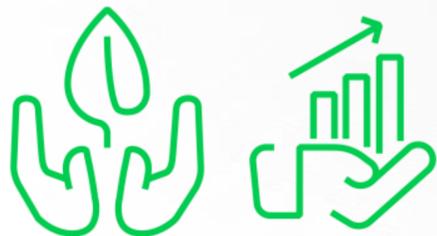
Energy Auditing

- Snapshot of energy use on site at the time of the audit
- Are implemented controls working correctly?
 - Heating, boilers, air conditioning
- Identify areas of high energy intensity
 - Equipment and machinery
- Identify areas of energy waste
 - Equipment left on during breaks
 - Lighting additional to requirements
 - Inefficient heating
- Report to identify areas where improvements could be made



What are the benefits?

- ✓ On-going cost savings
- ✓ Improved environmental sustainability of your business and/or its products and processes
- ✓ Enhanced reputation and positive PR opportunities from leading the drive sustainability
- ✓ Compliance with existing legislation (SECR, ESOS)
- ✓ Certification to carbon standards such as PAS 2060, ISO 14064
- ✓ Futureproofing your business against further legislation



Supply Chain Resilience



Supply Chain Resilience



What is Supply Chain Resilience?

All businesses, no matter what size or what sector they operate in, are now expected to report on operations under their direct control, as well as the actions of businesses within their supply chain.

Stakeholders are increasingly expecting businesses to be transparent about their operations when it comes to ethical and environmental issues.

Do you know:

- ✓ Where your products and components have come from?
- ✓ How they have been produced?
- ✓ Who has been involved in their production?
- ✓ What substances are contained within them?

Key drivers: increase in legislation and voluntary reporting such as conflict minerals, RoHS, REACH, SDG, non-financial reporting, increase in stakeholder expectations

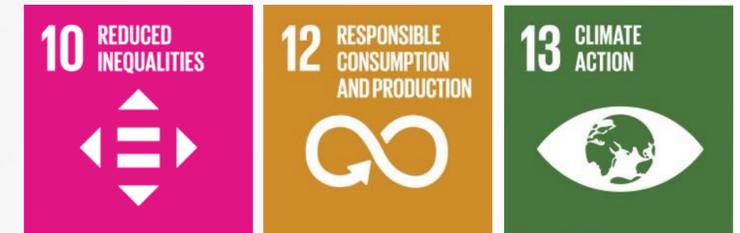


Valpak Data Insights

Supply Chain Sustainability

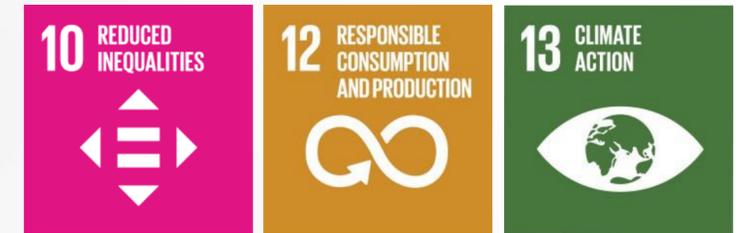
Our support options include:

- ✓ Consultancy support to understand corporate and legal data reporting requirements
- ✓ Development of online questionnaire to capture and build an evidence base of supplier policies, procedures and standards against requirements
- ✓ Administration support to manage data collection from suppliers
- ✓ Development of a secure online Insight Platform to track supplier responses, present responses
- ✓ and review associated risk ratings across suppliers
- ✓ Consultancy support to help interpret the data, identify areas for improvement and help to implement processes to address any gaps or issues



What are the benefits?

- ✓ In order to report on and manage supplier performance, data needs to be meaningful so that it can be used to help drive continuous improvement, manage risk and demonstrate compliance.
- ✓ Benefits of the portal service:
 - ✓ Improves transparency on supplier & product environmental and ethical compliance
 - ✓ Helps to identify opportunities and risks
 - ✓ Aids performance reporting and management
- ✓ Achieved through:
 - ✓ Tailored secure online questionnaire with risk ratings
 - ✓ Online data portal to track, gather and present responses
 - ✓ Supplier contact management
 - ✓ Consultancy support packages



Packaging Design

Optimisation

Sustainable Packaging Principles



“You cannot manage what you don’t measure”



Eco-modulation & Recycling

Labels



EPR fees payable by producers will first be subject to eco-modulation from October 2026.

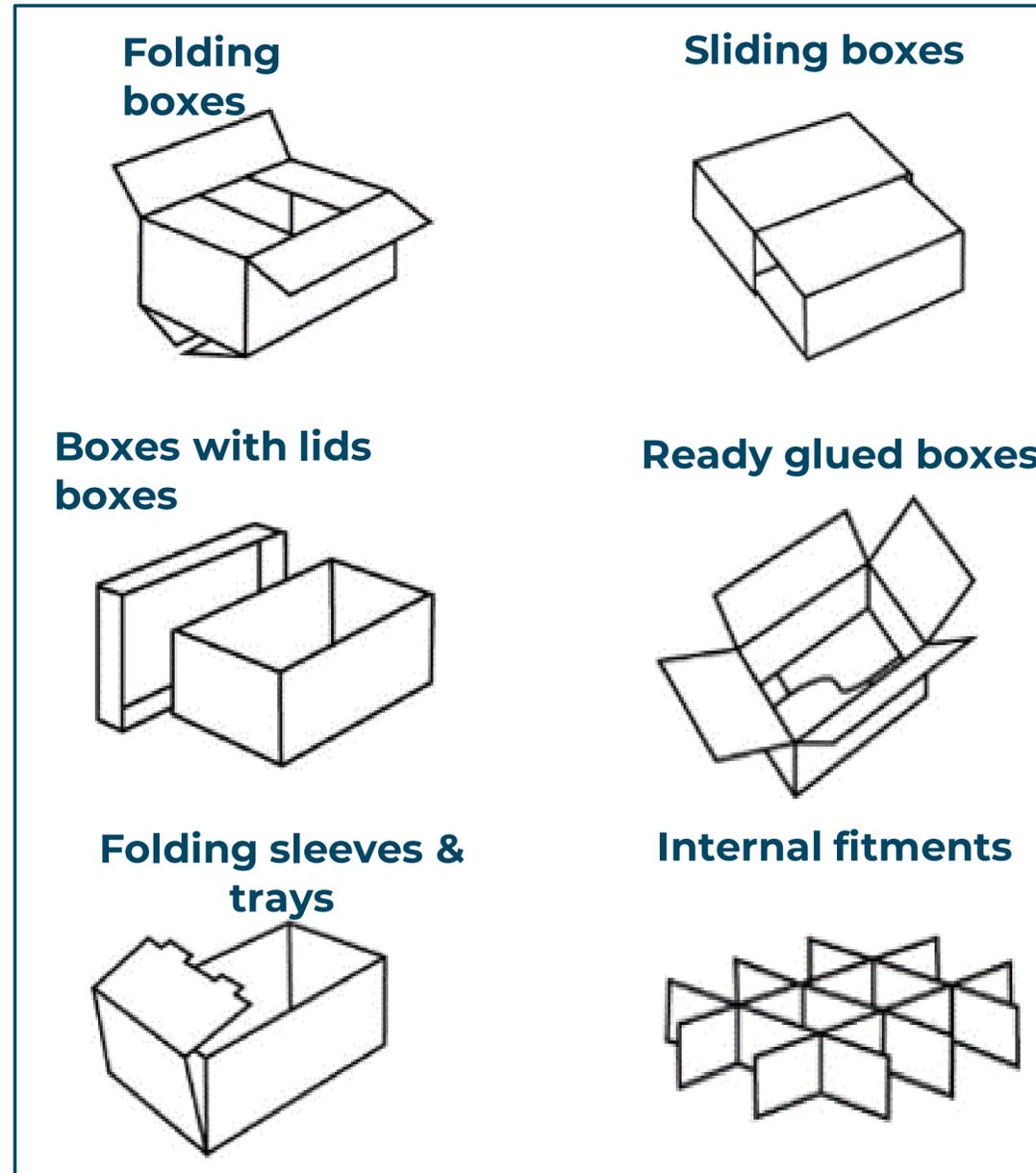
- The characteristics of packaging placed on the UK market in 2025 will dictate the modulated fees for producers' EPR fee invoices in 2026.
- Packaging which is not easy to recycle will be more costly than those that are easy to recycle.



Currently, from 2026, brand owners and importers will be required to label packaging with instructions to consumers to '**recycle**' or '**do not recycle**', with an accompanying logo, like the images shown here.

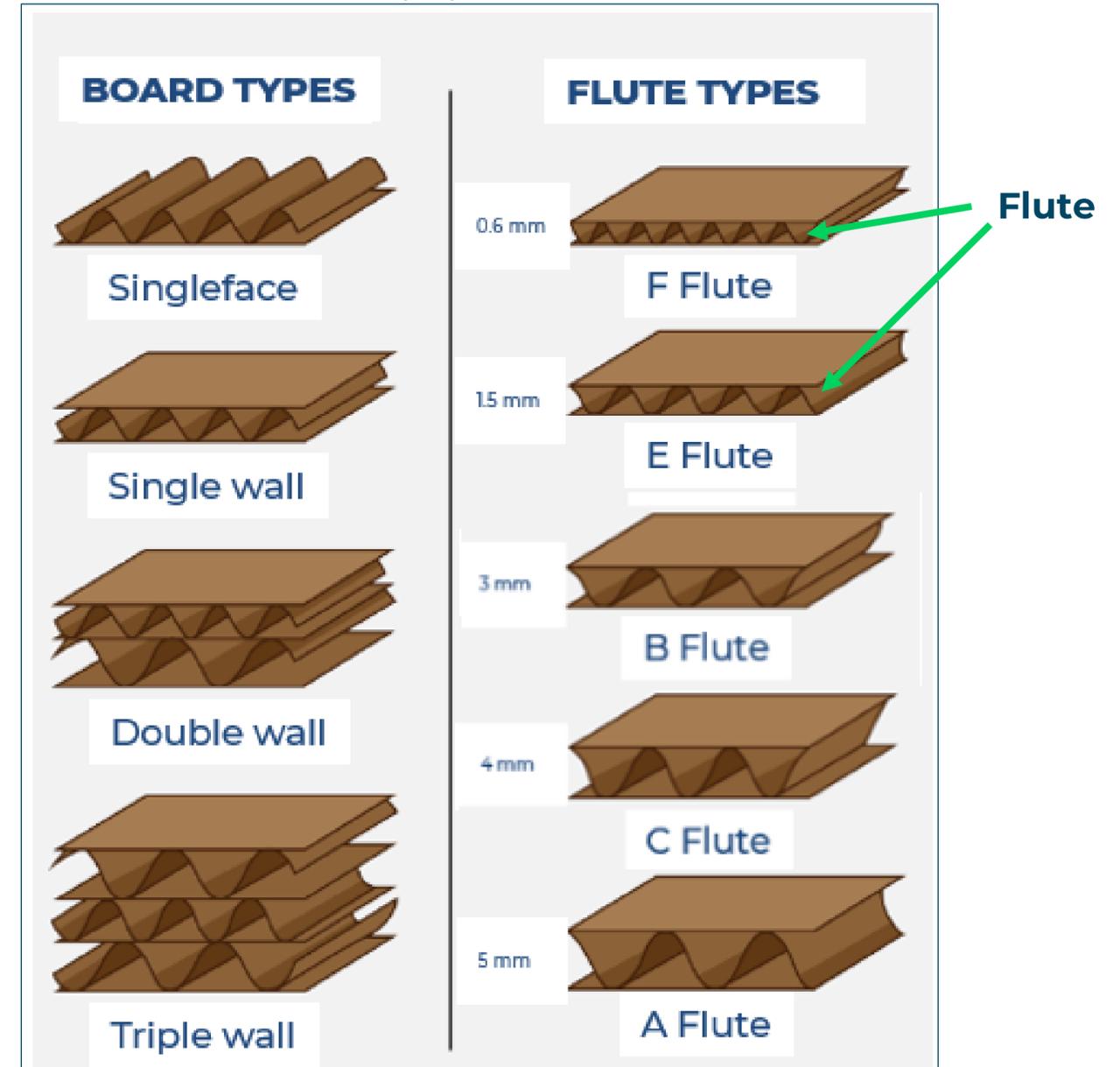
Corrugated Box Designs &

FEFCO codes are the internationally applied system for corrugated packaging design



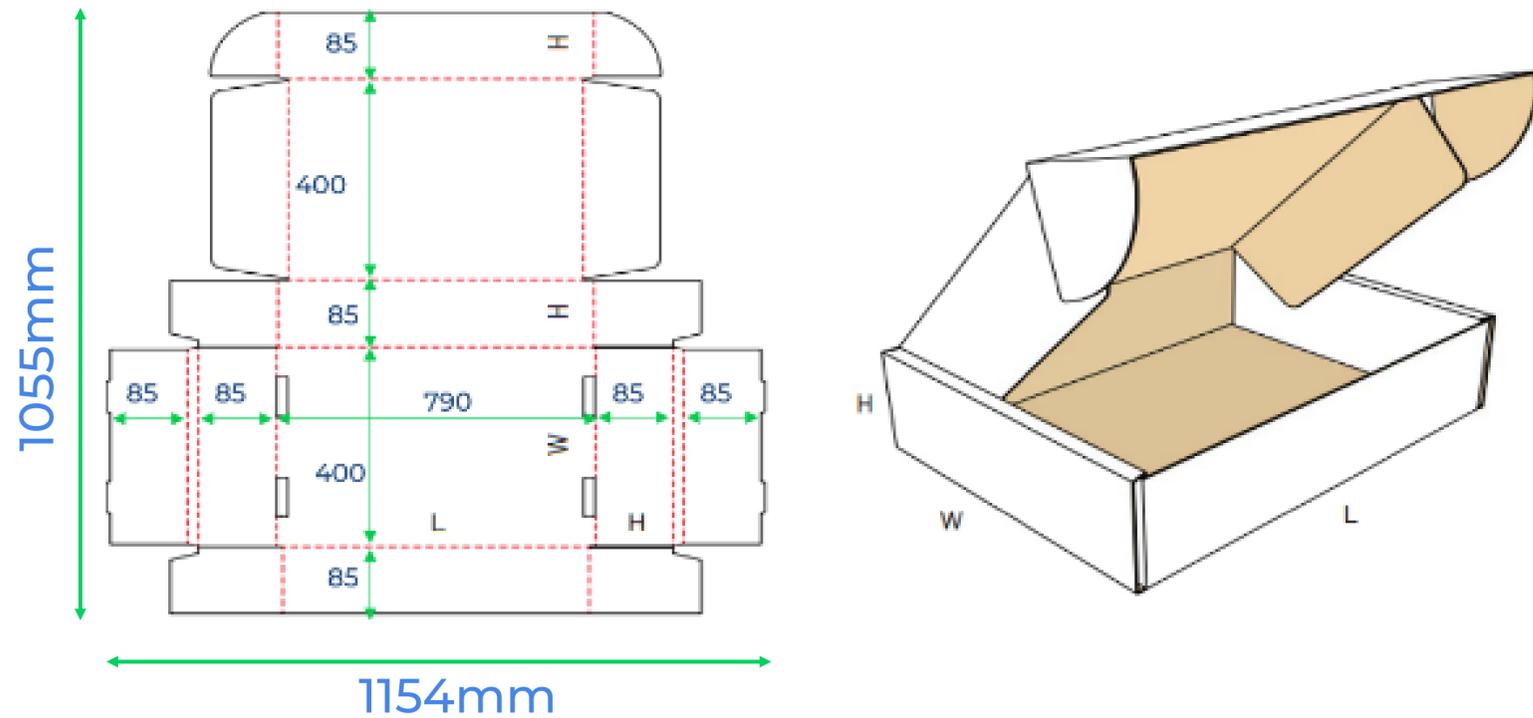
Kraft Paper (virgin fibres): Strongest type of paper / good for printing.

Test Paper (recycled paper): Not as strong as kraft / not easy to print on / lower cost than kraft paper.

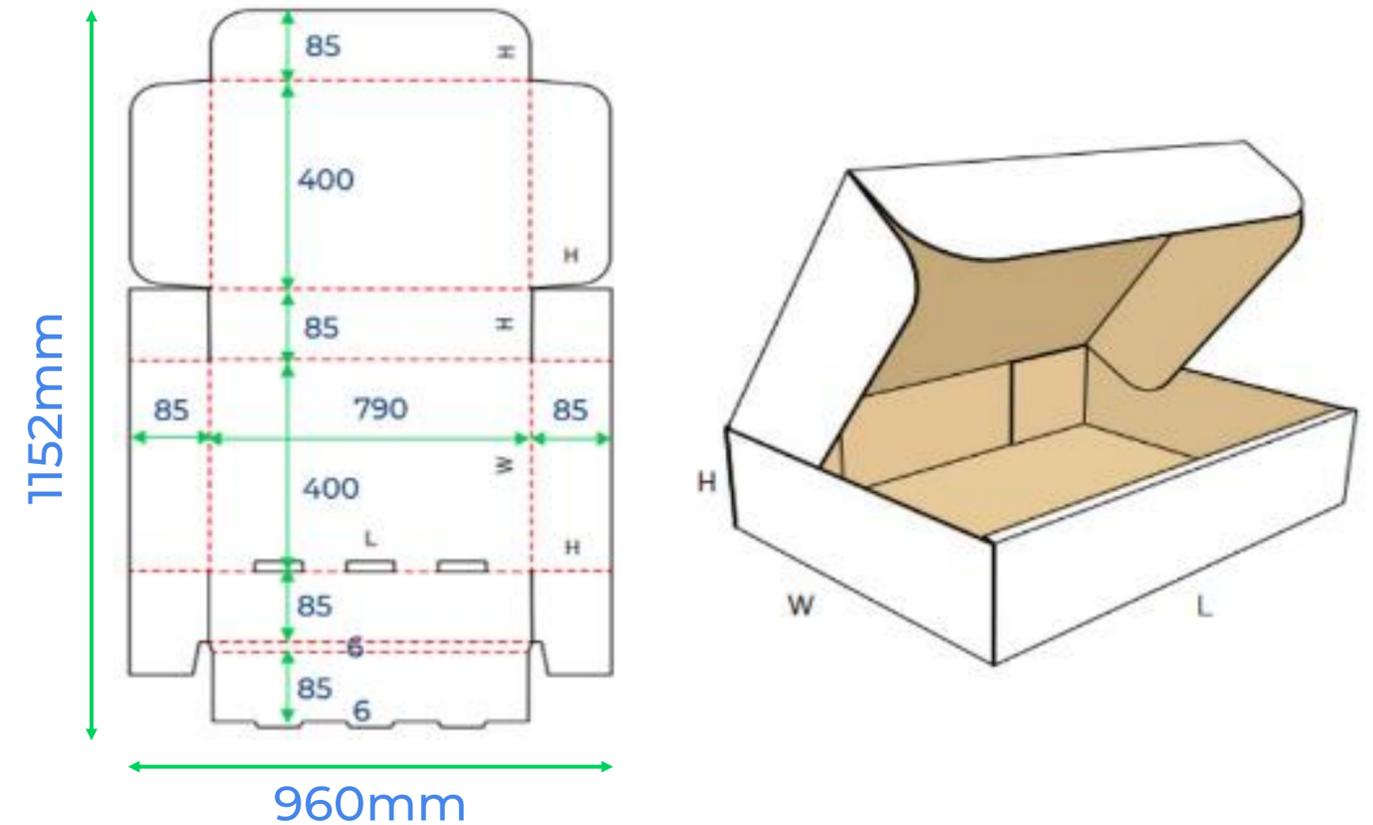


Carton Example

FEFCO 0427



FEFCO 0426



Blank size: 1154 x 1055mm

Surface area: 1.22m²

*Weight: 750 grms

Blank size: 1152 x 960mm

Surface area: 1.11m² (approx 11% saving on surface area)

*Weight: 668 grms

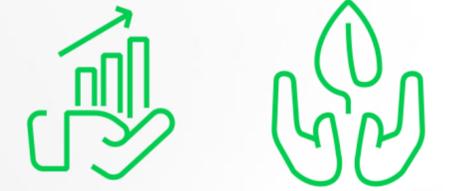
Cutter guide has made no allowance for board type used. This is just for demonstration purposes only

**Weight is hypothetical*

Plastic Packaging & Films



- ✓ Film thicknesses are referred to as 'microns or 'mu'. As an example, this will be shown as 25-micron or 25mu
- ✓ The image shown to the right shows the 7 types of plastics resin codes and some typical usages
- ✓ Support circular economy / closed loop recycling
- ✓ Remember to label all packaging and verify the recyclability to ensure correct labels are applied

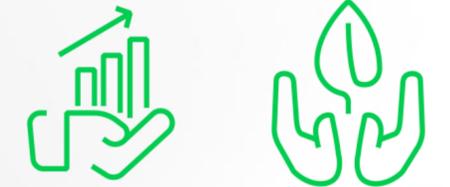


1 PET	02 PE-HD	03 PVC	04 PE-LD	05 PP	06 PS	07 O
Polyethylene terephthalate	Polyethylene (high density)	Polyvinyl chloride	Polyethylene (low density)	Polypropylene	Polystyrene	Bisphenol A and others
PET is commonly used in commercially sold water bottles, soft drink bottles, sports drink bottles, and condiment bottles.	HDPE is commonly used in milk and juice bottles, detergent bottles, shampoo bottles, grocery bags, and cereal box liners.	PVC can be flexible or rigid, and is used for plumbing pipes, clear food packaging, shrink wrap, plastic children's toys, tablecloths, vinyl flooring, children's play mats, and blister packs (such as for medicines).	LDPE is used for dry cleaning bags, bread bags, newspaper bags, produce bags, and garbage bags, as well as "paper" milk cartons and hot/cold beverage cups.	PP is used to make yogurt containers, deli food containers, furniture, luggage and winter clothing insulation.	PS, also popularly known as Styrofoam, is used for cups, plates, take-out containers, supermarket meat trays, and packing peanuts.	Any plastic item not made from the above six plastics is lumped together as a #7 plastic, things like CD's baby bottles and headlight lens

Case Study



Group Objectives



BRAND 1

Ladies clothing & accessories

100% Own brand
(Highstreet stores across the UK + online)

BRAND 2

Stationary & office supplies

Some own brand, but mainly other brands
(Highstreet stores + online)

BRAND 3

Homewares, garden & DIY

Some own brand, but mainly other brands
(Highstreet stores + online)

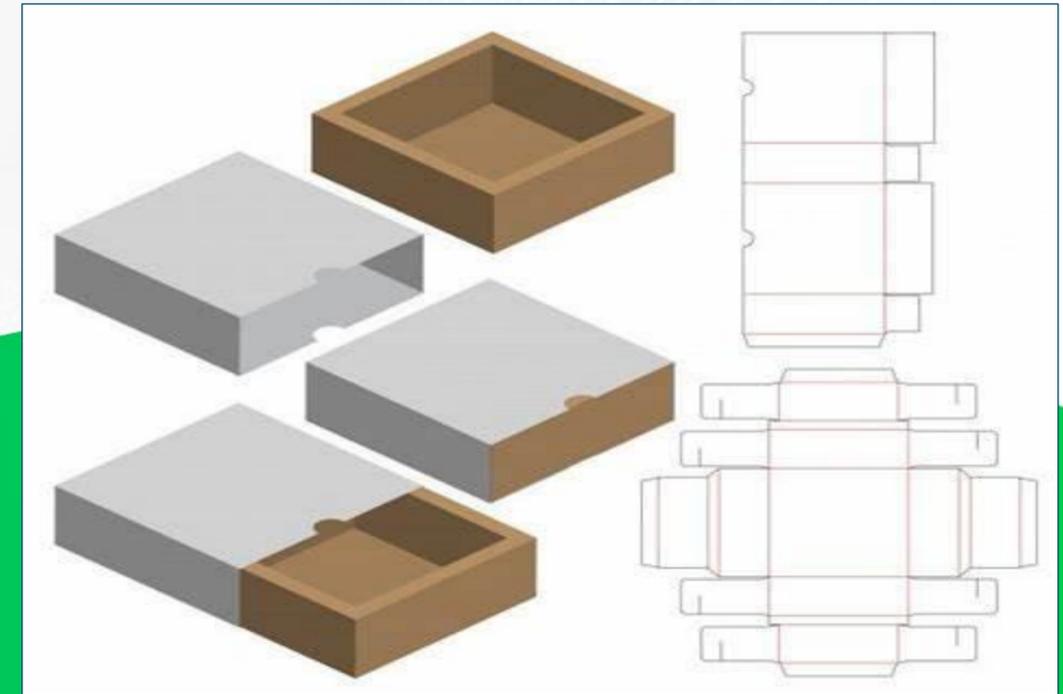
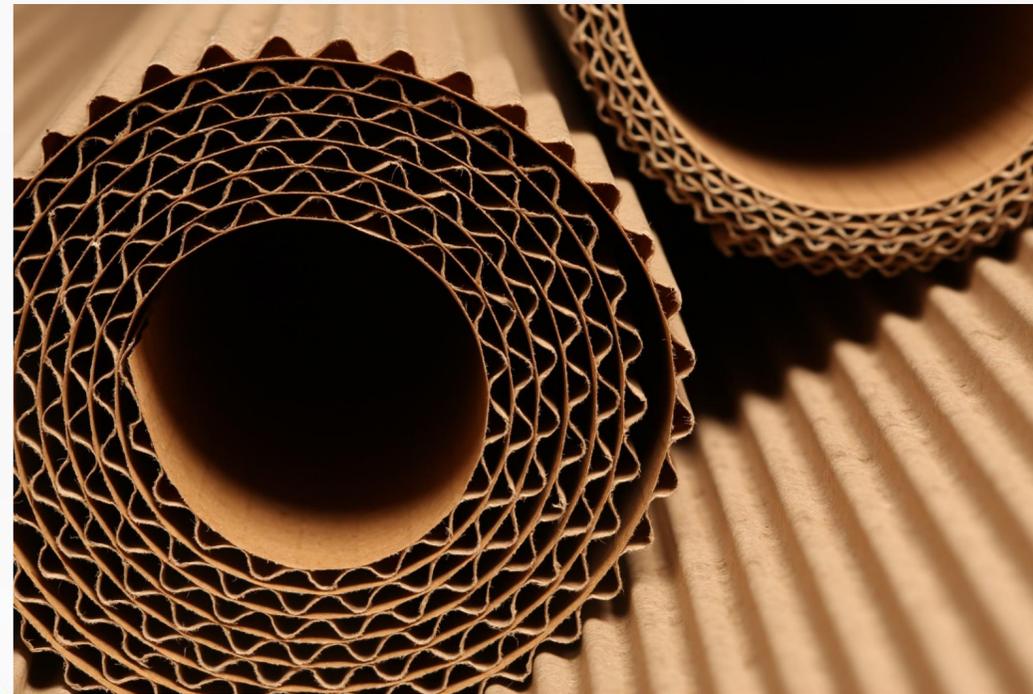
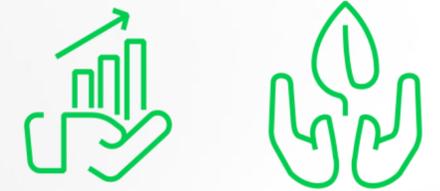
- The Group requested a packaging review of their 3 retail brands.
- The objective of the project was to identify potential savings by packaging optimisation, reduce environmental impact and to mitigate compliance costs where possible.

Packaging Analysis

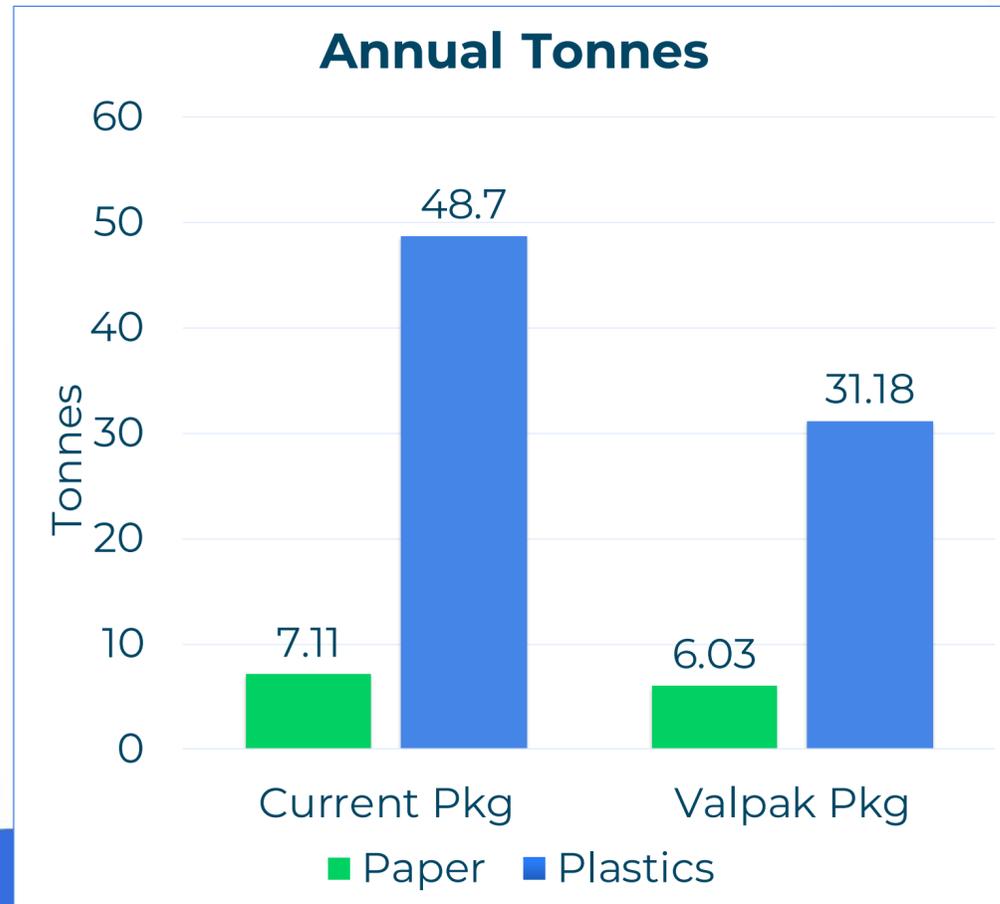


Packaging samples were collected at the site visit or if unavailable packaging specifications were obtained from the brands packaging suppliers. These details were all documented and allowed a full assessment of:

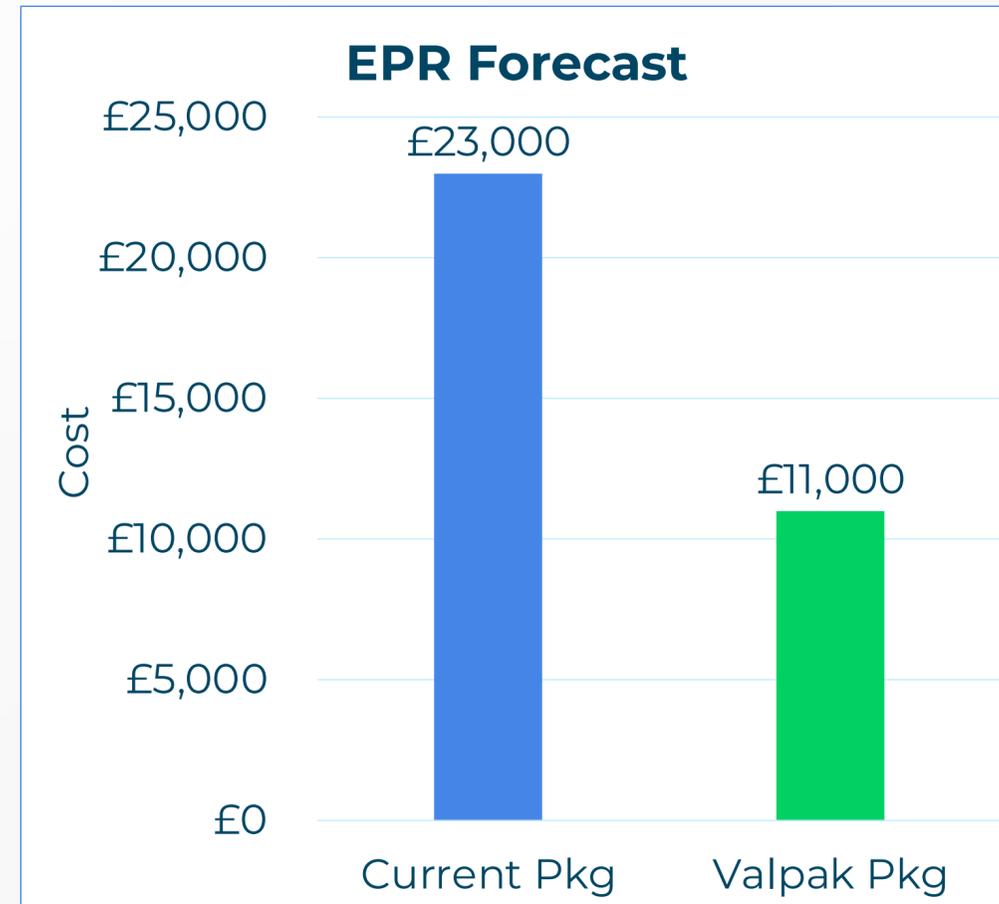
- ✓ Removal of unnecessary packaging
- ✓ Board grades and flutes of cartons / boxes
- ✓ Carton designs (cutter guides, internal protection and print finishes)
- ✓ Polymer types, microns and recycled content of the plastic packaging
- ✓ Recyclability of materials



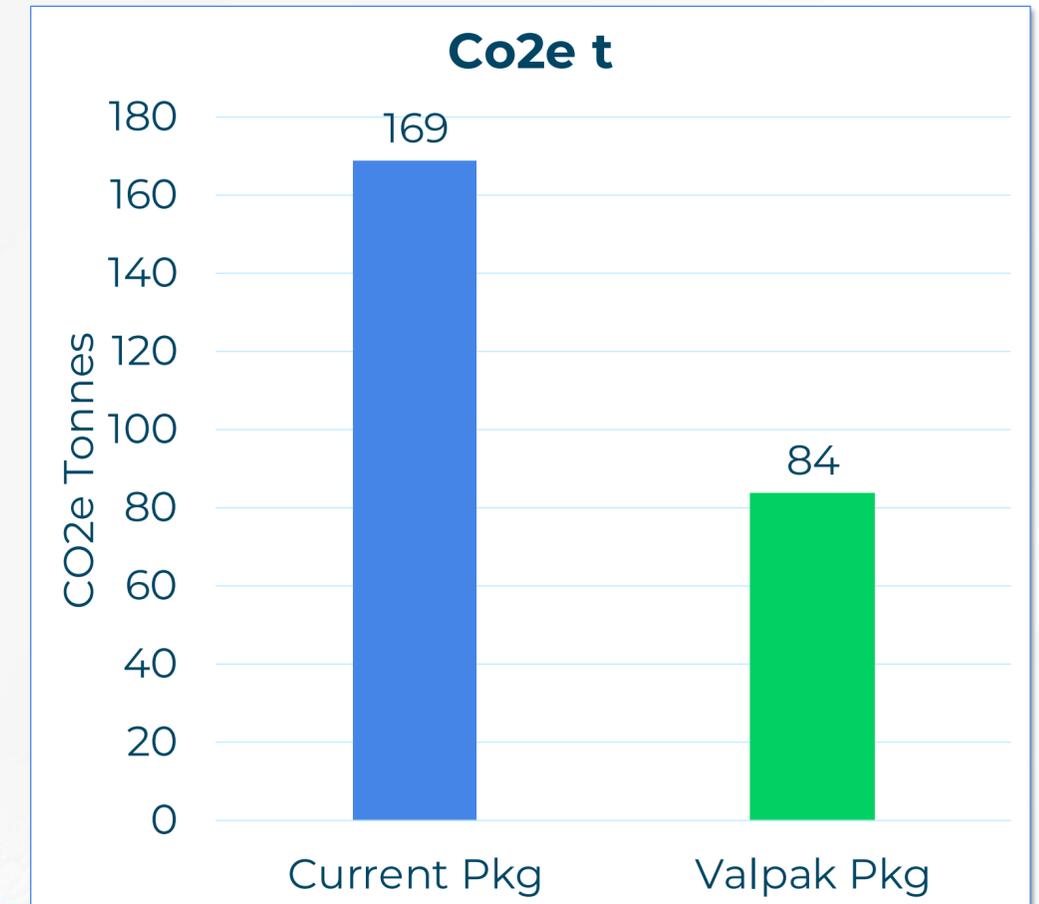
Potential Savings



Approx. **18 tonnes** of packaging could be saved if all best-case proposals were implemented



Approx. **£12,000** in EPR fees could be saved if all best-case proposals were implemented



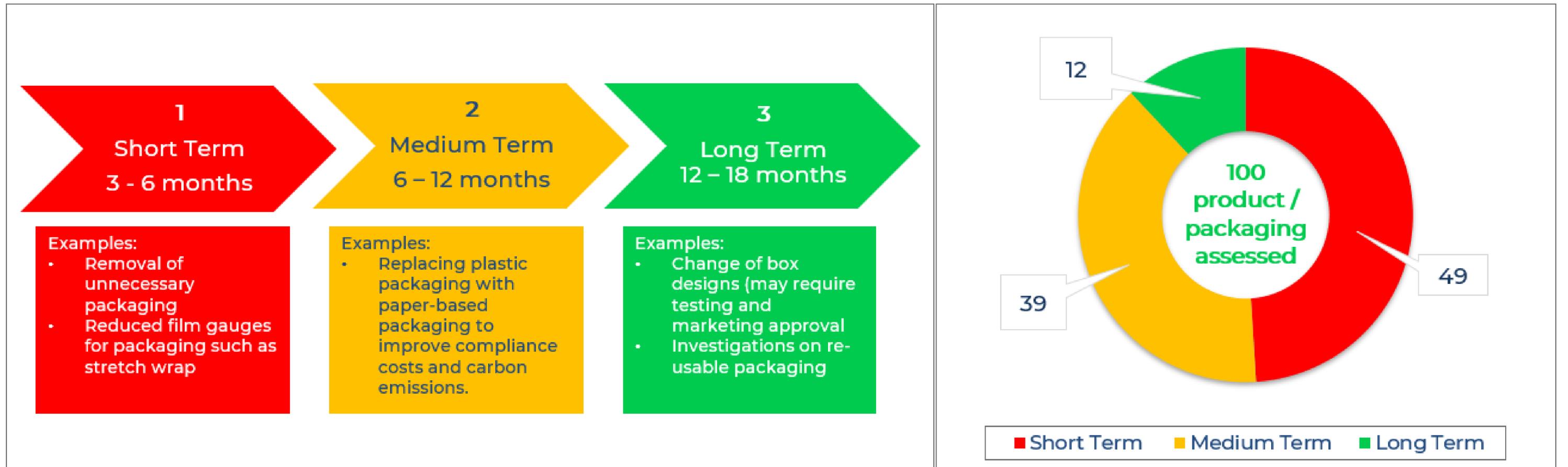
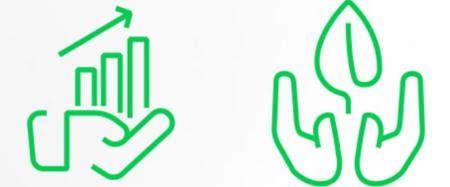
Approx. **85 tonnes** of CO2e could be saved if all best-case proposals were implemented

Implementation Plan

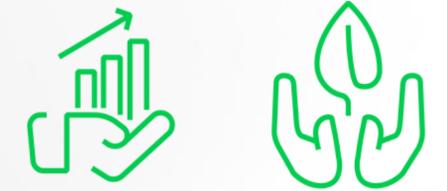


Each suggestion was categorised in order of implementation to identify the quick wins, through to longer term solutions.

- 100 pieces of packaging assessed
- Over 1100 products affected from similarities in product packaging



Overview of Packaging Technology Service



Map Current Process

Current Packaging Specifications

Re-engineer Packaging

Quick Wins

Plan For The Future

Cradle to grave approach to process map the products journey. This includes all handling, shipping types, container fills and product protection requirements.

Detail packaging materials used (board grades, microns, polymer types etc).

Review samples and cutter guides for opportunities to reduce waste, be compliant with packaging regulations, improve product protection and improve operational efficiencies.

Seek opportunities to reduce, reuse, standardise and improve recyclability without too much disruption to current processes.

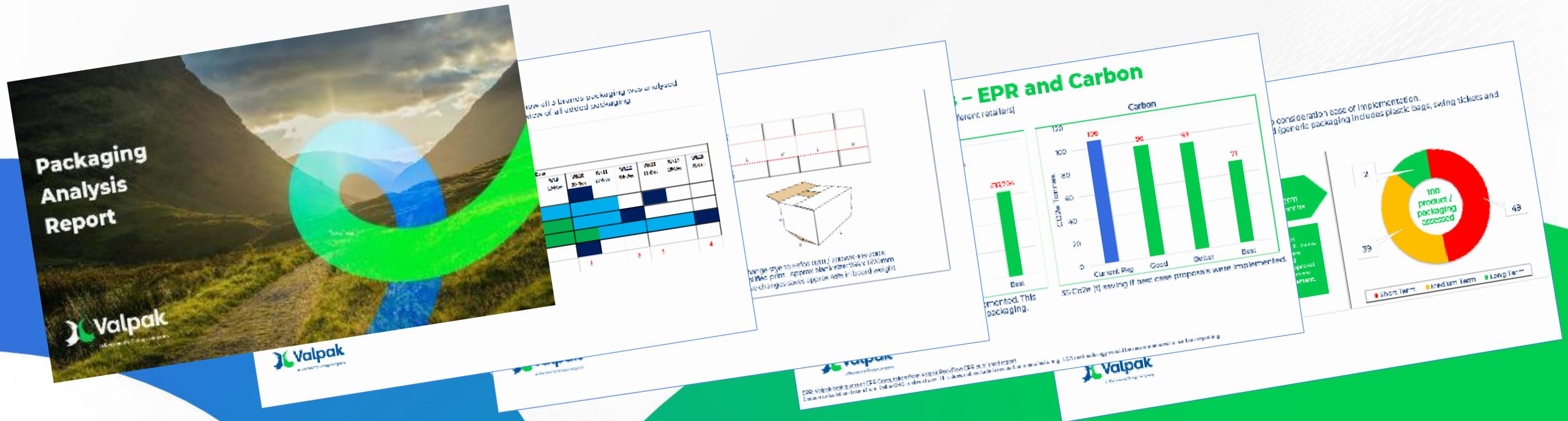
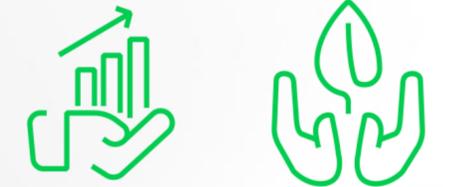
Keep up to date and plan for regulation changes and ESG reporting by creating packaging manuals, supplier guidance and customer communications.

Reports



Final reports will be tailored to your requirements, but typically includes:

- ✓ Current packaging specifications of the target products
- ✓ Report will include detailed analysis of target packaging with suggested changes, plus:
 - Total tonnes of packaging for current v recommendations
 - Total forecast of EPR on your current packaging v recommendations
 - Total carbon calculations (on materials only) on your current packaging v recommendations
- ✓ Suggested implementation plan – to assist you in quick wins.



Why use Valpak?



EXPERT ADVICE

Team of well-versed experts with a variety of skills and experience

INDUSTRY KNOWLEDGE

Connections to other organisations who may be implementing similar strategies

LIGHTEN THE LOAD

Removes the burden of recruiting or training internally

FRESH IDEAS

New approaches rather than legacy ways of working

INTERACTIVE SYSTEMS

Online portals, Data Insights, PPT Services, plus sustainability projects such as waste, carbon and energy management

COST SAVINGS

Packaging costs, operational efficiencies and mitigating compliance charges



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION





**Please get in
touch!**

Sam Dove

01789 713 250

Sam.dove@valpak.co.uk