

STOPP ECO-DESIGN DECISION TREE FOR PLASTIC FOOD PACKAGING



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LEVEL 1: DESIGN FOR USE

Food Protection & Safety Prime Directive

Does the chosen design (from Level 1 or 2) adequately protect the food product to prevent spoilage and ensure safety?

Criteria: Barrier Properties – Food Safety – Portion Design. Branding elements must not compromise food safety nor introduce unnecessary secondary packaging.

LEVEL 2: DESIGN FOR REDUCTION

1.0 Necessity assessment

Is packaging absolutely necessary to protect the food product and ensure safety?

NO: Pursue packaging-free delivery (e.g., bulk dispensers, reusable containers)

YES: proceed to 1.1

1.1 Branding-Introduced Complexity Check

Does the packaging include shape, size, decoration, colour, or structural features introduced primarily for branding that increase weight, hinder recyclability, reduce reuse compatibility, or add unnecessary material?

NO: Proceed to 1.2

YES: Simplify branding elements (standardise shape, minimise decoration) and reassess necessity.

1.2 Right-weighting & material efficiency

Can the current packaging design be optimized to use less material while maintaining its protective function?

→ Conduct a material efficiency review (e.g., downgauging, structural optimization).
→ Check whether geometry or decorative elements driven by branding prevent material reduction or structural simplification..

NO: Assess potential opportunities through mutualization to have leverage on weight efficiency

YES: Proceed to 1.3

1.3 Design compatibility check

Are design elements—shape, decoration, sleeves, inks, colours—compatible with reuse or recycling pathways?

NO: Modify branding (use removable labels, lighten decoration, adopt standardised shapes).

YES: Proceed to level 2

Proceed to
LEVEL 3


LEVEL 3: DESIGN FOR REUSE, RECYCLING, FROM RECYCLING

BRANCH A: DESIGN FOR REUSE

2A.1 Systems logistics

Is a robust system for collection, washing, sanitization, and redistribution technically and economically feasible?

 NO: Focus on branch B

 YES: Proceed to 2A.2

2A.2 Material & Product Design for Reuse

Criteria:

Durability: Select mechanically robust, scratch-resistant polymers (e.g., HDPE, PP, PC).

Cleanability: Design for easy cleaning (smooth surfaces, no crevices). Ensure material withstands washing chemicals and heat.

Standardization: Design for standard pallet and transport sizes to optimize reverse logistics.

Output: A reusable packaging system.


Proceed to
BRANCH B

BRANCH B: DESIGN FOR RECYCLING

2B.1. Is it designed for collection?

Criteria: (1) Acceptable size/shape (2) Use common curbside collected materials (3) Clear disposal labels (4) Branding elements must not impede consumer recognition or sorting (e.g., avoid confusing multi-material decorations).


 NO: Improve Design for collection

 YES: Proceed to 2B.2

2B.2. Is it designed for sorting?

Criteria: (1) Single dominant material with established sorting stream (2) Avoid NIR-disrupting components (3) Sort-friendly geometry (4) Avoid full-body sleeves, metallisation/metallic inks, dense decoration, or colours that obstruct optical sorting.

 NO: Improve Design for sorting

 YES: Proceed to 2B.3

2B.3. Is it designed for recycling system?

Criteria: (1) Mono-material design (2) Compatible with recycling additives/barriers/components (3) Releasable labels/sleeves (4) Reduce colour and printing – Decorations must not degrade recyclate quality (5) Preserve recycled material high quality

 NO: Improve Design for recycling

 YES: Proceed to Branch C

Proceed to
BRANCH C

BRANCH C: DESIGN FROM RECYCLING

2C.1 Recycled Content & Regulatory Compliance

Can recycled plastics be integrated into new food-contact packaging, does it comply with in alignment with Food Contact Regulation?

Action: Check Regulation (EU) 2022/1616.

Path: For food contact, use recycled plastics from EFSA-approved processes (e.g., super-clean rPET).

Output: A specification for integrating safe, recycled plastics into new food packaging