

How we Design for Recyclability

Where product functionality allows, Charpak design for recyclability and are committed to the 3Rs: Reduce – Reuse – Recycle.

Charpak recommend applying a **3 step process to Design for Recyclability**. This simple framework addresses multiple complexities brands and manufacturers must consider.

Charpak balances clients' functional and technical product packaging needs with beautiful aesthetics and precision designs; with the 3Rs methodology of reducing waste, reusing existing resources and products and recycling materials for re-manufacturing into new products, integrated within their NPD design process.

- Start with assessing the **products' technical and functional requirements**. Considerations include whether critical parts, or fragile contents need to be protected. Do contents have a requirement to prevent oxidation or UV damage? Does food need to be kept fresher for longer from manufacture to consumption, or on-the-go? Is tamper-evident functionality a mandatory need? Temperature controlled environments require different functionality and challenges that packaging must solve. Products have multiple dependencies and technical demands. Ease of use for consumers and packaging labelling must also be considered at the outset. Score each requirement and rank in order of priority.
- **Review the full range of materials**. Questions include: which material is best, can one type of packaging take a product through manufacture through transport to retail and end consumer use? Which materials use the least water resource? How best to minimise CO₂ emissions and prevent rising sea temperatures? Consider packaging weight, durability, and storage space optimisation. How best to reduce the number of trucks on the road? Minimising over-packaging or additional outer cartons is key. Is product visibility paramount, and the packaging experience core to the brand and consumption? Where feasible, consider a single substrate. The packaging materials range is great and varied so why not ask the Charpak experts who live and breathe this.
- Consider **Lifecycle Analysis and End of life Audit** of the packaging from source to end of life, or which can be applied in a circular system. Materials consideration that has the least environmental impact throughout the production, manufacture and consumption lifecycle is key whilst meeting each product's specific demands. The challenge for brands and manufacturers is to optimise for product, budget and deliver the brand experience, whilst also meeting the environmental requirements of packaging reduction, packaging reuse and packaging recyclability.

This 3 step process introduces a sample of complex NPD packaging considerations. As experts in the field with over 30 years' experience of designing and manufacturing plastic packaging Charpak's technical experts and materials specialists design for recyclability (where end use allows).

Offering technical materials and packaging advice to marketing teams, product developers, buyers, brand owners and engineers addressing the complexity of packaging requires packaging experts, where Charpak add this value to each clients' needs.

From short-run production to all year round manufacture Charpak will be happy to discuss and provide a bespoke design and packaging solution.