An Introduction To The Circular Economy
“A circular economy could increase the efficiency of primary resource consumption in Europe and the world. By conserving materials embodied in high value products, or returning wastes to the economy as high-quality secondary raw materials, a circular economy would reduce the demand for primary raw materials. This would help reduce Europe’s dependence on imports, making the procurement chains for many industrial sectors less subject to the price volatility of international commodity markets and supply uncertainty due to scarcity and/or geopolitical factors.”
What is the Circular economy?

In a traditional linear economy we make, use and dispose.

In a circular economy we keep resources in use for as long as possible by extracting the most value from them at every stage when in use and at the end of their life by recovering and regenerating products and materials.

Moving from “make, use, dispose” to “make/remake, use/reuse”
A step by step guide to the circular economy model

Design/Manufacture
(using raw materials to create a product)

Around 80% of a product's environmental impact is locked in at design stage.

The circular economy is allowing product designers and manufacturers to rethink the way they design and manufacture products. From reducing unnecessary resource usage in products to looking at ways to prolong their lifetime.

Although the circular economy model is straightforward, rebuilding the traditional manufacturing process is not easy. Product design and material selection are both important factors to consider and new legislation and testing procedures need to be brought in to ensure the safety of recycled and innovative new materials used in new product manufacturing.

3 examples of circular economy thinking in product design:

- **Design for recoverability/recyclability**: Thinking about how a product will be collected and recycled after use.

- **Design for the environment (eco-design)**: Using carefully selected materials and processes to reduce the negative environmental impacts of a product across its life cycle.

- **Design for maintainability/reparability**: Prolongs product use, extending its useful lifetime.
Retailer
*(selling a product to a customer)*

Circular economy principles provide an opportunity for retailers to improve customer experience and connect with new customers on a deeper level by establishing shared values concerning the environment.

Consumers are demanding more of retailers with online retailers playing a particularly big role in the delivery of a circular economy.

It also offers an exciting opportunity for retailers. Circular economy thinking means customers can maintain a relationship for months or even years after they made their original purchase, creating opportunities to generate additional income and sales.

**How do retailers play a part?**

- **In use:** Forward thinking retailers are offering new initiatives to keep in touch with customers including repair & maintain programmes and share & rent marketplaces to increase the lifetime of their products.

- **After use:** Making it easier for consumers to recycle, resell and donate is a priority for sustainable retailers.

- **Reducing packaging waste:** Consumers are becoming increasingly annoyed when they receive over packaged products. Companies like Ribble are working with retailers to reduce packaging waste with innovative right size packaging solutions, removing the need for void fillers in packaging.
Used by consumer

This stage is straightforward, the consumer uses the product.

How the consumer uses the product should have been considered in the design process to ensure durability and quality.

Although consumers have a positive attitude towards the environment and want to reduce their impact, they are also reluctant to pay higher prices or receive poor quality products so every care needs to be made to ensure products are both high quality and fairly priced.

Re-use/Repair

*Repurposed product or repaired if possible*

Re-use and recycling are not the same.

Re-use of products and materials is more beneficial as it retains a product’s value by keeping it in use for longer thus minimising waste, creating jobs and reducing consumption and the carbon impact it has.

To reduce the amount of product we send to landfill we need to increase the rate of re-use for products and their components. The supply chain and consumers both play an important role in this stage of the circular economy model.

Whilst education is needed to improve awareness of the importance of re-use and repair, more needs to be done for this stage of the model to be successful by using:

- **Incentivised return:** Offering a financial incentive for the return of ‘used’ products so that products can be refurbished and re-sold.
  
- **Asset management (in business):** Maximising product lifetime and minimising new purchase through tracking assets, planning what can be re-used or repaired.
Recycled into raw material
*(Recycled by consumer and processed back into raw materials)*

The final stage of the circular economy model is the collection, sorting and processing of disposed materials for use in other manufacturing processes.

There are two types of recycling:

- **Mechanical**: The process of breaking down collected materials into smaller pieces

- **Chemical**: The process of breaking down collected materials into chemical elements

Depending on the complexity of the product being recycled the process varies and care needs to be taken to maintain the integrity of materials each time they are recycled. Not only is the final stage valuable to the environment, the recycling industry is also putting £millions into the British economy.
As we touched on earlier, for a long time our economy has been linear.

Following a make, use and dispose model by using raw materials to make products and throwing them away once we've used them. This ‘take, make, dispose’ method of manufacturing means that instead of recycling waste and materials generated in the production process, they are disposed of instead.

The environmental impact of the linear model is becoming a talking point across many industries because of the huge amounts of waste we're sending to landfill and the pressure on resources in the country - meaning we're constantly looking for new raw material.

But in order to ensure we have enough raw materials to survive we need to move to a circular economy by thinking more carefully about products’ design and reuse.

If we continue with a linear economy we will damage the environment even further. By moving to a circular economy we will reduce the impact of production and consumption whilst also reducing waste and thus ensure that we don't deplete our already low natural resources.
Why is the circular economy so great?

We know the circular economy is great for everyone involved from the reduction in usage of raw materials to longer lasting products for consumers and better relationships with customers for forward thinking retailers. So why aren’t more people buying into the circular economy and what’s so great about it?

The world is ‘only 9.1 per cent circular’

More than 90% of the raw materials used globally do not find their way back into the economy.

Over 200,000 jobs could be needed as the circular economy grows

Boost Europe’s resource productivity by 3% by 2030, generating cost savings of €600 billion a year and €1.8 trillion more in other economic benefits.

72% of paper is recycled in Europe

93% of the water used in paper production is returned to its source

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Summary

Eventually the UK will run out of natural resources if we don’t move to a circular economy.

It sounds sensationalist but the evidence is stacking up and the impact of our linear economy is becoming increasingly apparent across many industries.

Hopefully you’ve found this introduction to the circular economy insightful and useful. If you’d like to speak to us about how Ribble is helping companies like yours to reduce their environmental impact by reducing packaging waste, give us a call on 0161 284 9000 or email info@ribble-pack.co.uk.