It is a known fact that the more disposable income a person has, the more often they buy products they want, not need. So, many of these products are designed to be relatively cheap and disposable, and when no longer needed, become waste.

When I read Alvin Toffler's book, Future Shock, in the early 1980's as a young adult, the one idea that I found shocking even in those days was that we would move into a disposable age – rather than having a watch or a washing machine repaired, we would just buy a new one! It was actually unthinkable! Alvin Toffler was a writer, thinker and futurist and with globalisation and liberalisation of goods and services worldwide, one of his many predictions of a throwaway society became real.

Some of these throwaway products can be circulated by being maintained, shared, reused, repaired, refurbished, remanufactured, and, as a last resort, recycled. The textile industry is a large source of pollution due to the production of raw materials (natural and synthetic fibres), preparation and finishing processes, as well as due to textile waste, especially the post-consumer waste. Since 95% of all clothes that are disposed of can still be worn, reused or recycled, some retailers are now encouraging customers (for a discount!) to bring all their old garments to their stores for recycling!

E-waste, where new technologies replace old technologies at record rates, also presents one of many opportunities. For example, there is 100 times more gold in one ton of mobile phones than in a ton of ore from which gold is extracted. Collection of resources from electronic equipment produces substantially fewer carbon dioxide emissions than mining.

A circular economy will make a difference, where one of the first principles for any product design is that the materials used re-enter the economy at the end of their use. By doing this, the linear take-make-waste or throwaway system is minimised or even, if successfully designed, eliminated.

The second principle of the circular economy is to circulate products and materials at their highest value. This means keeping materials in use, either as a product or, when that can no longer be used, as components or raw materials. This way, nothing becomes waste and the intrinsic value of products and materials are retained.

Apeel is a company that has come up with an innovative way to eliminate single-use shrink wrap plastic packaging on fresh fruit and vegetables, while at the same time tackling food waste. Apeel is a layer of edible, plant-based coating applied to fresh products that mimics and enhances the natural defences of fruit and vegetables. This slows down the two main things that cause spoilage – water loss and oxidation, hence treated with Apeel stay fresh

two to three times longer, without the need for plastic packaging.

Ecovative's environmentally friendly packaging, MycoComposite™, made from mushroom roots or 'mycelium' has the protective properties of polystyrene packaging (EPS) but doesn't contribute to the 8 million tonnes of plastic that enter our oceans every year. Mycelium is a fungal network of threadlike cells, that acts like a natural, self-assembling glue. It grows in 5-7 days without needing any light or water, digesting agricultural by-products and binding into any shape needed. It is a new method of producing materials that can replace various products, including petroleum-based expanded plastics and particle board made using carcinogenic formaldehyde. It can be safely disposed of at home.

The cosmetics industry, circular beauty refers to a green business model that keeps materials in use through reuse and repair, purposely minimises waste, and expands the life-cycles of products through quality. Two of our suppliers have recently launched ingredients from what would normally be classified as waste (upcycled): Aqia proudly presents two ingredients, Rice Silk SN and Rice Exfoliator SN, where the rice hull (waste product) is used to produce a mattifying agent and exfoliator for the beauty industry. Seiwa Kasei has launched Sesaqua, hydrolysed sesame protein, which is produced from the pomace of sesame oil said to boost collagen and brighten skin. For more information, please contact our office.

References:

Reference 1

Reference 2

Reference 3

Reference 4