

Packaging designed to leave nothing behind

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With the war on packaging waste, together with 2025 global packaging targets, it's fair to say that the food packaging industry is busy finding new ways for smarter packaging. The strong media focus on "end of life" for packaging means consumer awareness and demand for green solutions is growing, along with the increasing concerns that packaging is ending up in our landfill and oceans.

While efforts to reduce end-of-life impact are certainly critical, the significance packaging plays in protecting food and reducing food waste is often underestimated. So, as we get busy finding new smarter ways for packaging, where exactly should we be focussing?

Designing food packaging for longer product shelf life and product protection is non-negotiable. Resources need to be optimised and end of life taken into account. Well-designed packaging takes the full life cycle of a product into account – end of life cannot be considered in isolation of the primary role of packaging.

Reducing, reusing and recycling are great ways to make a smart difference and certainly have their uses in the greater scheme of things. However, the best way is to embrace the opportunity to re-design, reinvent and change the status quo. For example, fresh proteins packed in a modified atmosphere tray lid configuration require absorbent pads to retain product purge. In fact, across ANZ's fresh meat sector, more than 750 million soiled pads end up in landfill each year. That is a huge number. Rather than re-designing the pad to make it recyclable and therefore address 'end of life' concerns, a total rethink of the solution gave rise to a new sustainable way.

Sealed Air's Cryovac HydroLoQ barrier tray is a new concept where product purge is retained by the purposefully designed cavities in the tray, thereby eliminating the need for a soaker pad. The recyclable tray offers extended product freshness and shelf life and with no soaker pad to dispose of, Cryovac HydroLoQ is designed to leave nothing behind.

Another example of re-design and reinventing is the gradual evolution from modified atmosphere packaging technology to vacuum skin technology, which offers a step change to Sealed Air's food value chain. For example, Cryovac Darfre has been proven to at least double the shelf life of fresh red meat, enhance logistic and retail efficiencies and offer an enhanced



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consumer experience. Extended shelf life of this magnitude means less food waste, less packaging waste and it means better profits for our processors and this means better business sustainability. Not to mention, the best eating experience available.

Smart design means smart for everyone along the value chain, from processors to retailers and consumers. While down gauging (reducing) ticks one box, its benefits cannot be negated by poor operational throughput, down time and lost profits.

Cryovac OptiDure is an example where traditional barrier shrink bags have been re-engineered to use less material, drive improved abuse resistance, and improve operational efficiency and throughput. Its leading clarity and gloss characteristics drives stronger shelf aesthetics and that means greater consumer appeal. And once the product is opened, consumers can place the shrink bag into polyolefin recycling streams.

A holistic approach to packaging design will yield the best outcome, but a design around end of life only is a flawed approach. The noise around end of life alone should not dictate future packaging design and development.

Beyond saving food and delivering operational excellence, smart design must also take into account product and consumer safety. As we commit to including recycled content into "direct food contact" packaging, we cannot simply introduce a new recycled element into a re-design without proper validation. This is not an area of guesswork and must be validated from a regulatory perspective, ensuring it meets all necessary food law requirements.

While all of this logic may resonate across industry professionals, this is a story waiting to be told. In the minds of consumers, plastic waste is still perceived to be worse for the environment than food waste. According to a recent survey, ANZ consumers agree that re-sealable packaging is the best way to reduce household food waste. The findings also show that packaging has a reputational impact on the supermarket. More than 45 per cent of ANZ shoppers state they would react positively to a store promoting their food items as being packaged in a way that optimises food freshness.

Now is the time for education and B2C communication. Consumers need to understand how packaging contributes to a safer and less wasteful food supply chain. They need to know how it impacts food accessibility around the world and how it drives better business sustainability for local producers and processors. Brand owners have a role in telling this story. Without a story, consumers and non-industry stakeholders see packaging as unnecessary, simply adding to our waste piles.

To reduce is priority, but whether we design for reduce, reuse or recycle, the full product lifecycle must be at the front of mind when designing packaging. A smart design that yields a sustainable outcome for all of our value chain is a fail proof way of leaving our environment in a better place that which it was found. And, that's a stronger story we should all own.

Part of the problem is that there are a few misconceptions out in the marketplace when it comes to the sustainability of food packaging.

Sustainable packaging is often met with the perception that it is green and environmentally friendly in that it is made from renewable materials and can be recycled or is compostable. Quite often, the focus on end of life and its disposal dominates. But, there's a missing part of this story about packaging's primary role in keeping food fresh and safe. If you consider the resource intensive nature of our food supply chain, packaging that can double shelf life offers immediate and substantial environmental benefits.

Longer shelf life and freshness allows us to consume products within a greater time period, enabling less waste. But, it also goes a step further. There are also peripheral benefits, such as not wasting the resources that surround the packaging of products, such as the water and energy required to produce an item.

Sometimes, damaged products, or spoiled foods, have a greater environmental impact than the products that protect them. For example, the carbon footprint of 1kg of beef is nearly 400 times that of the plastic packaging used to protect it during distribution and sales.

We need to remind stakeholders that sustainable packaging involves understanding the life cycle analysis of the whole

package including the product, packaging and shipping. This is something some people do not consider when looking at the big picture. Cost sensitivity is a concern, but is often negated when processors and retailers realise the myriad of supply chain benefits. From reduced re-work and down time through to extended shelf life and product appeal, it's easy to see how value sells itself. Again, while the initial outcome seems obvious, if you dig a little deeper, there are other considerations that need to be taken into account.

Sealed Air just doesn't talk the talk, it is dedicated to the 2025 pledge and its packaging targets, and it does so by strongly supporting its research and development team. While efforts are deployed to meet targets, smart design underpins Cryovac innovation. It starts by efficient design and waste avoidance, ensuring packaging design provides efficiency and functionality.

One of the challenges is changing the mindset of the consumer. In the minds of many customers, plastic is still perceived to be worse than food waste for the environment. Let's applaud the past three consecutive years where FMCG brands including Harvey Beef, The Bared Bird and Don KRC have been awarded gold for the Packaging that Save Food category at the Packaging Innovation and Design Awards (PIDA) using Cryovac solutions that extend shelf life and reduce waste across the supply chain. Brand owners have a great opportunity to leverage this and drive a sustainable brand story.

Sealed Air loves exciting the industry and we like to keep some things a secret. What we can say is that as we reinvent Sealed Air, we reinvent the way we make our products and solve our customers solutions. As an industry however, we know that education at store level and across consumer brands will drive better informed consumer buying decisions and thus we should start to see brands tell this story.

As mentioned, research shows more than two in five Australian and New Zealand grocery shoppers stated they would react positively to a store promoting their food items as being packaged in a way that optimises food freshness. But what they also said was that they would react positively to a store promoting that its fresh food items are safer to eat. The reputation and image of food brands and retailers is likely to be positively enhanced by participation in educating the public about food packaging and helping them to make more environmentally friendly choices. A store or retail brand being proactive in communicating about how to reduce food waste is likely to drive favourably among consumers.

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