

The bigger picture

There are many ways that flexible packaging and retail industries can address sustainability but often companies only tackle one aspect of the problem. Several factors contribute to a product's environmental impact, and as **Steph Carter** from Unilever explains to PCI, taking a more holistic approach to packaging design is the only effective way to make a difference.

The packaging industry's response to calls for more sustainable products has been varied, but a growing number of packaging and product companies have taken the bit between their teeth and made a real commitment to reducing the environmental impact of the goods they produce. Policies of lightweighting and the use of materials from renewable sources are important in this drive, but there is a growing feeling that these efforts must be viewed in a much broader context.

Flexible packaging is a good example of how perceptions can change when companies take a more holistic approach to packaging and its environmental impact. This perspective considers packaging as one element in the overall environmental profile of a product, to which many other factors contribute.

'I suspect that the understanding of sustainability will change in all sectors, including retail, as everyone learns more and understands it better. If there is one issue that is affecting retailer policies at the moment it is lightweighting, which favours flexible packaging. I am not convinced, however, that it is as black and white as using less material,' says Steph Carter, packaging sustainability and functional capability director at Unilever.

'For instance, do you choose a very lightweight packaging plastic that can't be recycled, or a heavier plastic that can be? There is a place for flexible packaging, but we need to change our view on recycling,' he adds.

Unilever have over 400 brands that span the home, personal care and food markets, including Knorr, Lipton, Dove and Omo. As a major market presence, the company feels that it has a responsibility to take the lead on issues such as sustainability, to which it devotes part of its sizeable annual research and development budget.

Its recent innovations include the adaptation of its flexible packaging for its Saga value brand tea sold in Poland, to which

it has added a metallised inner layer, while adding PET to the structure to provide greater strength. Carter sees this as evidence that the company accepts the increasingly important role of flexible packaging, and that such innovations or the use of biodegradable or recyclable materials are defined by what retailers want from their suppliers.

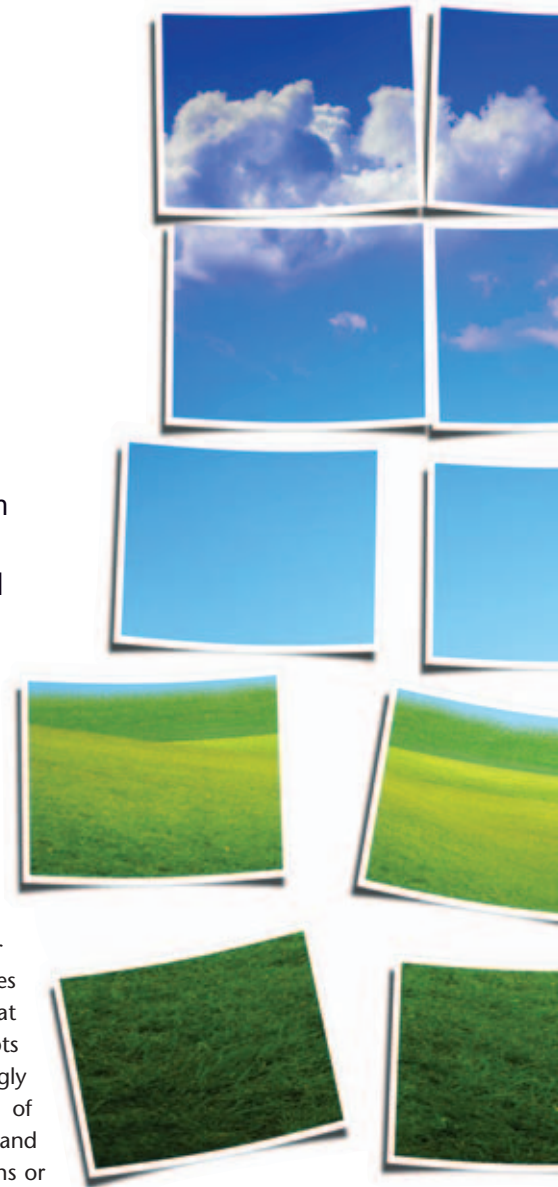
Furthermore, he points out that views on flexible packaging are not universally shared, and he suggests that more effort should be made to understand not only the sustainability of such materials in their initial application, but also how they contribute to the environmental impact of the whole product, including their life as waste.

'In the UK, for instance, there is an issue with plastic bags, which are seen as terrible by some people as they are not disposed of properly, and there is a similar issue for flexible packaging in Asia, where it is not gathered effectively so becomes a litter problem. There is

additional complexity in that some countries favour incineration as a means of producing energy, while others are less so. There are many different views on what is good and what is bad,' Carter says.

Denmark, for example, has a more favourable view of flexible packaging because it can be burnt to produce energy, but in the UK and Germany this is not the case.

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As an example of the need to consider more factors in assessing sustainability, Carter points to a study in 2006 by Boots and the Carbon Trust, which looked at the carbon footprint of shampoo products. Carter points out that 93% of the emissions across the whole product lifecycle arise from heating the water to wash hair, 3% from

manufacturing the packaging, 2% from making the product and 2% from transportation.

'When we look at the broader scenario we find that packaging is often a minor contributor to the environmental impact of a product. The perception and the hard data simply don't match up,' he explains.

If the industry truly wants to make a difference, it must not only look at the demands on packaging of today's low-carbon economy, but how packaging is just one of many levers that can be pulled to define the optimum environmental solution for any product. The approach he advocates may often lead to

'Across the industry there is ignorance about packaging when it becomes waste. The whole sector is guilty of looking at things in terms that are too simple,' Carter remarks.

THE HOLISTIC PERSPECTIVE

It is Carter's belief that sustainability is a far more complex issue than many retailers think. There are many ways to measure the environmental credentials of a product and its packaging, but each one falls short if it is viewed in isolation [see box].

He cites the example of Innocent, which chose to put its smoothies in bottles made from cornstarch. Although the company had the best motives, looking at only one element of sustainability disguised the overall consequences of such a strategy.

'Cornstarch production for plastics is in direct competition with food production, and the bottles screwed up the recycling system. It was an error made with the best of intentions. One common measure is carbon footprint, but that is like a doctor assessing your health simply by taking your temperature. You need to look at other factors, so we need to learn a lot more,' says Carter.

'Aids to calculate the environmental impact will come, but we can still look at more variables than just carbon. We talk a lot about transport which is a significant factor, but there are many

WHOLE PRODUCT THINKING

	Microwave French Fries	Oven-cooked French Fries
Packaging (per 100g of product)	19g (18g board + 1g film)	1.2g (PE/PE laminate)
Cooking time	3 minutes	30 minutes
Net packaging increase	18g per portion	-
Net CO ₂ saving	411g per portion	

While the microwave product has significantly more packaging, the board is an aid to the heating process, which affects energy consumption in the cooking process. For the entire product lifecycle a net increase in packaging for microwave French fries delivers a significant decrease in carbon emissions.

conclusions that are counterintuitive, but Unilever does not want to make empty gestures or greenwash its products by giving people simply what they expect. Its goal is real, meaningful change.

In the same way that focusing on packaging alone will not optimise sustainability, one company, no matter how large its presence in the FMCG market, cannot bring about change in isolation. Alongside the joined-up thinking on sustainability there must be collaboration between companies along the entire supply chain.

'We need co-operation in the industry at a different level to anything that we have seen before,' Carter says. 'Society is slowly moving away from traditional customer/supplier relationships. Our company cooperates up the extended supply chain, and this is very important because of the diversity of the packaged goods industry. No one organisation can make change on its own.'

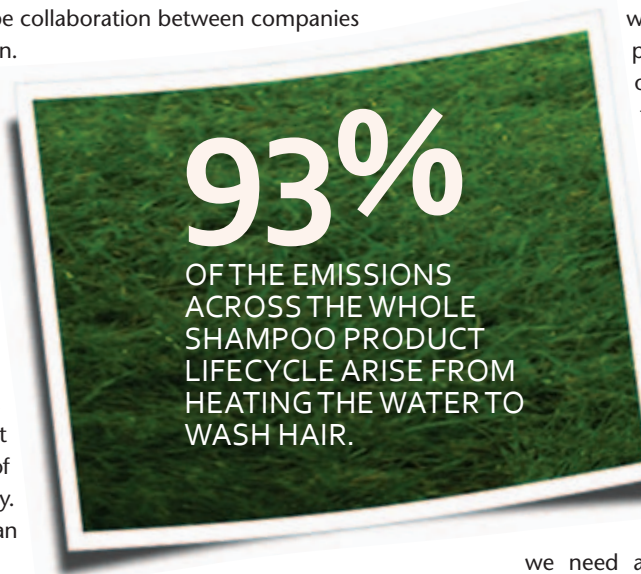
'Flexible polymer films, for instance, are pervasive across the industry, so we need the whole industry to work together in looking at how to handle flexible materials. The idea has been met with enthusiasm, but it is not necessarily easy to achieve.'

He believes that there is an urgent need for companies to understand the constraints on their partners upstream and downstream in the supply chain. By doing so, companies can ensure that they make decisions that help these partners to contribute to more environmentally sound products. He urges companies to work together to find out where the barriers are and to set the standard for collaboration.

There is also a need to focus on the individual characteristics of each product and bring packaging into the initial design phase. 'With fresh food, packaging is often an afterthought, but for other products it

is a big part of the capital resource because they need elaborate designs and closure systems. In some cases, packaging is seriously considered in the product design and may lead the thought process,' says Carter.

'Nevertheless, whatever the product is you can't view packaging in isolation. It can't be the first or the last thought in the process. True sustainability is about the whole product. Unilever doesn't sell empty packaging so we need to look at it as part of the complete product and think of it together with everything else that goes into making it.'



A BRIGHTER FUTURE?

There is certainly much to do before the industry's response to sustainability is coordinated and consistent.

'Some companies look at sustainability as a doctrine, others do it because they have to. There is a tendency to greenwash, and companies often make claims based on relatively insignificant factors, which only generates cynicism. One area where

we need agreement, or possibly legislation, is in making claims about environmental performance. Any claim should be significant and substantiated,' says Carter.

Unilever is without doubt making considerable efforts to practice what it preaches.

'We are not claiming to be better than anyone else, but we do have an internal measurement system for all our brands, which looks at water, greenhouse gas emissions and the proportion of raw materials that are sustainably sourced. We're taking the baseline data to see where we are, then we can look at how to improve those metrics for each product,' Carter adds.

'Different issues arise in each business area, so we must educate our employees, consumers and supply chain partners on the true impact of packaging,' he stresses.

The coordination of efforts between partners along the supply chain, and the drive among leading companies such as Unilever may lead many people to reassess how they view the sustainability of flexible packaging and other materials.

What is certain is that it will fuel the process of improving understanding of packaging and the role it plays in the overall environmental profile of a product.

To change for the better the industry must know more about where it stands and put flexible packaging materials in a holistic context. **pci**



HOW SINGLE MEASURES CAN MISLEAD

- **Recyclability:** glass has a high recycling weight, but is heavy and requires more energy to transport.
- **Carbon footprint:** virgin paper has a low carbon footprint, but there is insufficient land to use virgin paper alone, and when buried it generates methane.
- **Weight:** aluminium is light compared to steel but emits more greenhouse gases over its life unless recycling rates are very high, and the smelting of primary aluminium is a hugely energy-intensive process; also, laminates are very light, but they cannot be recycled.
- **Renewably sourced:** renewable plastics from biomass are biodegradable but compete with food production and encourage deforestation.
- **Compostable:** biodegradable plastic can be composted

but has almost no plant nutrients and can contaminate the waste stream; in contrast, traditional plastic is a by-product of the manufacture of fuel from oil, which will continue for many decades.