

Ride the wave of innovation

The packaging industry thrives on improving products to address challenges. Advances in inks, labelling, printing and packaging open up many opportunities for the industry, and the IOP: The Packaging Society feels that companies must respond quickly to these.

Changes in the balance of the global economy, tougher demands from retailers, and a constant stream of innovative technologies and materials are causing many packaging companies to constantly readjust their operations to meet new, tougher challenges. At a time of great change, the packaging industry is being asked to step up to the plate and turn challenges into opportunities.

This is not always an easy task, and industry associations are keen to encourage companies to pull together to face these challenges, and to provide the arena for debate and discussion. At present, those discussions often centre on how to juggle responses to the many pressures exerted on the industry.

'Like every market, the packaging sector is getting more demanding,' says Heather Kendle, chair of the Packaging Board at the IOP: The Packaging Society, who also works for Inca Digital Printers. 'The needs of retailers and consumers, and environmental issues are putting pressure on packaging companies, as is the potential for global economic recession. It is tough to balance all these elements.'

The IOP, formerly known as the Institute of Packaging until its merger in 2005 with the Institute of Materials, Minerals and Mining (IOM3), of which it is now a division, closely observes the rapid changes happening in the packaging market through listening closely to its members' concerns. Cost pressures are central to this, particularly when they must be balanced with powerful new forces in the market, the emphasis on sustainability.

'The packaging supply chain is changing and people all see it differently,' adds Kendle. 'Consumers see packaging as a necessary evil, and often don't understand the benefits. For retailers like Wal-Mart the goal is to drive cost down on all parts of their business, including packaging.'

GREEN AGENDA

As in many industries, the packaging sector has to confront the demand to improve sustainability, while ensuring that its response is supported by a profitable business case. Added cost is a serious issue, particularly when the industry is expected to improve its environmental performance quickly. So far, however, the packaging sector has largely risen to the challenge, and significant steps are being taken to improve its green credentials.

According to Kendle, there is much that needs to be done to make more people outside the industry aware of just how much has already been done to reduce waste and use more recycled material. She also feels that there is a need to publicise

the capabilities of new materials more widely, and to show consumers and retailers that companies in the packaging sector take their commitment to sustainability seriously.

'The IOP is at the stage of feeling that the industry should put its head above the parapet,' she remarks. 'For instance, food

waste would be much higher if it were not for the efforts of the industry. This is an industry that would not survive if it were not able to adapt.'

At the heart of the industry's efforts to adapt to a world in which sustainability is a core consideration is its capacity

to innovate. 'The value of innovation is seen at all levels,' adds Kendle. 'New technology continues to develop for materials, recycling, printing and packaging manufacture.'

INNOVATION BLOSSOMS

In an industry as diverse as packaging there are many opportunities to apply creative thinking. This may be why some of the industry's efforts so far have not received the wider recognition they deserve. All changes, large and small, contribute to shaping environmental performance.

Non-petroleum plastic shows promise

In 2005, giant global retailer Wal-Mart began the switch from petroleum-based to corn-based plastic packaging, the first step being the transition of 114m clear-plastic clamshell containers for fruit and vegetables.

At the time, the company noted that the switch would save the equivalent of 800,000 gallons of petroleum and would significantly contribute to its efforts to cut greenhouse gas emissions. Though the cost advantage

of corn-based plastic is not easy to clarify, the volatility of the oil price could well mean that substitute materials at least offer more predictable price forecasts, as well as improving the retailer's environmental performance.

Corn-based plastics are an exciting opportunity for the likes of agricultural commodity trader Cargill,

which has made early moves into this space. The essential component is polyactic acid or polyactide (PLA), which derives from corn and is compostable.



Cezar S.A. - the expert in printing

In-Mould Labels

on white, transparent single- and multilayered CPP and OPP films for food

- Ice Creams
 - Salads
 - Margarine and Butter
 - Yoghurt / Milk Desserts
 - Cheeses
- and non-food**
- Paints
 - Chemical Products
 - Household Products
 - Personal Care Products



INKS, PRINTING & LABELLING

The development of new materials, such as biodegradable plastics, may ultimately bring major changes to the industry, but innovative thinking is equally important, particularly when environmental concerns must be weighed against profitability.

'Assessing innovation in the industry depends on how you cut up the cake,' Kendle says. 'There are many changes taking place, and the emphasis on reuse and recycling may condemn some materials that are not considered to be sufficiently green. However, process changes mean that some materials can be used more cost effectively.'

There are a number of goals that define the ongoing work to develop new materials. Lightweighting is an important target, intended principally to reduce the amount of material in the packaging chain. Research into active packaging is also intensifying and is bringing to light opportunities such as the inclusion inhibitors in film packaging that can improve food preservation. Serious attention is also being given to developing the potential of non-petroleum products [see box, overleaf], though this work remains at an early stage.

'WE NEED TO IMPROVE THE PERCEPTION OF THE INDUSTRY.'

'The industry is researching new materials for barrier plastics,' adds Kendle. 'There are, for instance, some early-stage papers on the use of inhibitors in packaging material.'

In her role at Inca Digital Printers, Kendle can see opportunities for innovation in printing at first hand, and is encouraged by speed of return on investment in new technology. 'The speed of technology development in this market is as fast as in the semiconductor market, though from a low base,' she says. 'Printing technology is at the Model T Ford stage.'

The IOP hopes to play a role in pushing such research forward and one of its chief aims is to improve information sharing to support the development and use of innovative systems. It is currently working on a project to set up knowledge transfer partnerships to promote new materials development and examine the many new technologies that are emerging.

'We need to improve the perception of the industry and look at how we can share technology better,' says Kendle. 'To ensure we have the right goals we must involve everyone in the supply chain, from consumers and retailers to manufacturers.' **pci**



MAD FOR MATERIALS?

Find suppliers and industry case studies
www.packaging-gateway.com

Water

Solvent

U.V.

Come under our wing.

Complimenting existing Cationic U.V. technology we have:-

- DIAMOND STANDARD - General Purpose Free Radical
- DIAMOND SHRINK - Free Radical for Shrink Sleeves
- QUARTZ ULTRA FP - Fast Curing Cationic for Flexible Packaging

**MIRAGE INKS**
MANUFACTURERS OF FLEXOGRAPHIC & GRAVURE PRINTING INKS

Tel: +44(0) 1761 436 498 | www.mirageinks.com