Good design can reduce the **environmental impact** of packaging

There are numerous ways to limit the environmental impact of packaging. A well thought out design is one of them. ‘Designers need to know the environmental impact of packaging on the entire life cycle of their product,’ observes independent packaging expert Raymond Peutz.

**Thorough preparation is the first step**

**In order to develop the most suitable packaging, the designer first needs to know the product thoroughly.** What is it sensitive to? What are the circumstances in each phase of the life cycle? Based on the answer to these questions, the designer can put together a requirement programme for each packaging function. ‘What type of protection must the packaging offer? How will the packaging and the product be used? How will it be transported? What commercial support must it offer? The requirement programme defines the minimal requirements,’ states Peutz. Peutz notes that the requirement programme must always take into account the environmental impact of the packaging. ‘Product designers must evaluate the environmental impact of a product during its entire life cycle. They know which materials are used as well as the emission volume during the production, transport, use, and processing as waste,’ explains Peutz. Packaging designers also need to carry out this exercise. They need to carefully evaluate the environmental impact of a packaging concept within the entire life cycle of the packaged product. They need to attach a so-called ecological budget to each separate packaging function. The integral approach of the European Ecolabel is already a step in the right direction.’

**Avoid over-packaging**

**Packaging also has an important effect on the environment.** Take into account all the damaged and spoiled goods that would otherwise end up in the garbage bin prematurely if it weren’t for protective packaging. Many companies, however, do not comprehend the exact nature of all of the risks to which their products are exposed. They often take a too conservative approach in their choices, risking over-packaging. Peutz illustrates this point with an example of an air-conditioning manufacturer that was looking for packaging for its new product. Initially, they wanted to use the same packaging material as they had with their older models. ‘An IPS study revealed that the new product was much more robust than its predecessors. Consequently, it requires less packaging without compromising protection,’ cites Peutz. It pays off to look for optimal packaging. Excessive packaging weighs heavily on the cost structure as well as on the environment.
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Product design needs to consider the packaging

The support that packaging provides a product is clearly shown by the four functions of packaging: protection, use, transport, and commercial support of the product.

However, packaging and product design can mutually influence each other. The designer should define the dimensions of the packaging as a function of the various phases in the product's life cycle: production and storage, transport, point of sales presentation, and use by the consumer. Another example: aseptic packaging allows a designer to lower the protection requirements. The product designer needs to take all of these factors into account, right from the product’s initial design phases.

Packaging plays an important part in the commercial support of the product. This sometimes leads to very original shapes that can have an enormous impact on the environment.

Weighing commercial requirements against care for the environment

Packaging must also support a product’s brand identity. This often leads to expensive designs with a high impact on the environment. Peutz again: ‘In the cosmetics sector, for instance, packaging designers are very creative with perfume bottles. This is necessary to differentiate the perfumes from one another. In this market, the packaging often creates more identity than the actual contents.’ These creative shapes, however, demand additional packaging in order to safely transport them. Moreover, in many cases, a wide choice of materials is used, making recycling more difficult.

There are, however, always creative solutions available. Peutz recalls that he once designed packaging for a modem manufacturer that used the shape of the modem as its central motif. ‘All of the wiring was hidden beside the modem under a cardboard cover. This approach even offered additional protection. The product’s characteristic design made it possible to limit the commercial function of the packaging and hence reduce its environmental impact.’

Well thought out design optimizes transport

Packaging also has a major impact on logistics. A well thought out design can drastically reduce the amount of transport necessary. ‘Designers are able to adapt the dimensions of a rectangular package to the dimensions of a standard Euro pallet. They can also create stackable shapes that are strong enough to use the full height of the truck,’ illustrates Peutz. ‘A designer has ample opportunity to limit the environmental impact of the product’s transport.’

Good design avoids waste

Good design can assist in making a product more user-friendly and in avoiding product loss. Consider for instance the upside-down plastic ketchup bottles (see also the Rexona testimonial). Thanks to gravity, the contents flow out of the container more easily. Moreover, less product residue remains inside at the end of use. At first sight, it is a dead simple concept, but one with a brilliant result. In short, a designer has ample opportunity to optimize the various functions of packaging.

For additional information

• Peutz Industrial Design, a specialist in the design and implementation of consumer-oriented and industrial packaging: www.peutz.be
• Packaging People, the Belgian federation of packaging experts: www.packagingpeople.be
• IPS, Industrial Packing Support: www.ips-packaging.nl