

Eco-design packaging:

From the 3Ps to the 5Rs

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by Bertrand Chovet

The bottled water boycott

Global consumption of bottled water has doubled between 1999 and 2004. Bottled water is reaching frenetic level of consumption with a record of 260 liters per year in the Emirates and 205 liters per year in Italy. Why such a success? Because bottled water answers consumers' universal and immediate access expectations, as it is so central to our lives.

But this growth is not likely to last for years in the future. *The New York Times* estimates that an American drinking eight glasses of bottled water a day pays US\$ 1,400 per year instead of US\$ 0.49 from tap water. With records of these figures growing more public, and given that the modern environment is now delivering pure and nearly free drinking water, an impending boycott of bottled water may be on the rise. In the future, we may very well see water-filtering brands back in style as well as the good old flask!

While bottled water has yet to be affected, we can already see trends that suggest that consumers are growing more conscious of packaging – and that the FMCG business's that have taken this into account are the ones creating long-term value for their brands.

Packaging and eco-design

Eco-design is a method of designing products (goods and services) that takes into account preservation of the environment. It also considers the product's impact on the environment at all stages of its life cycle. For example, because of eco-design, we can now use recyclable or biodegradable material

for packaging. Similarly, Eco-design is responsible for the development of a laundry detergent that's effective in cold water and reduces the energy a washing machine consumes.

Fourteen years ago, the 94/62CE European guideline proposed new restrictions on manufacturers, including reduced packaging weight, diminished tenure in heavy metals, and an increased use of recycled materials. As a result, despite a continuous growth of packaging units in the European market, package waste is now decreasing. Indeed, according to ADEME, the packaging waste quantity in 2006 is slightly inferior to 1994. ADEME also shows that a major part of the manufacturers investment is dedicated to recycling.

So what does the future of eco-design packaging hold? Will it be possible in the future to reduce the weight of a 1.5 liter soda bottle when the lightest weighs around 20 grams today? While eco-design packaging, which mainly results in material quantity reduction, holds enormous promise, we have to keep in mind that it is more difficult to recycle thin or light packaging (thin plastic film) than heavy packaging (glass).

To date, eco-design packaging continues to improve existing packaging, although it tends to rely on material composition and engineering more than on creativity. To make a story short, eco-design packaging has been limited to production and has not

been considered enough in terms of customer behavior and expectations.

Packaging now represents 25 percent of the waste weight and 35 percent of waste volume. So, it seems, the key issue is solving consumer's perceptions of packaging waste. Consumers feel as though they are facing a packaging invasion, having to sort through more and more stuff every day, from metal to paper, to plastics. Nonetheless, it is more ecologically balanced to sell yogurts in clusters -- per x4, x8 or x16 – despite a more negative consumer perception.

While this daily gesture is generating frustrations, it has also generated a huge opportunity for brands. It is time to push eco-design further, looking more deeply and precisely at manufacturing, product design, logistics, retail, and user behavior. It needs to become about improving ergonomics and use, supporting reduction and recycling, developing transformation, and promoting reuse.

From the 3Ps to the 5Rs

At the essence of packaging is what I like to call the 3Ps (to Protect, Preserve, and Promote). However, the first two are no longer brand differentiators. Nowadays, FMCG brands can only count on the last Ps to build brand value: it is all up to communication.

The 3Ps (to Protect, Preserve, and Promote), which was focused on the present, must be reconsidered and extended to an approach that will encompass the past, the present, and the future of product packaging. That is why the new approach must be revised to what I like to refer to as the 5Rs:

Rethink

Analyze user behaviors and expectations (how they think, what they need and want) to deliver options about the cycle of the product and packaging. Use this research as a path for all engineers, marketers, and designers.

Re-engineer

Look at packaging manufacturing, logistics, retail, and user constraints, involving both engineering and marketing disciplines before briefing designers.

Remove

Optimize packaging layers to fulfill manufacturing, logistics, retail, and user expectations without losing the key packaging functions (which often have multiple uses).

Reduce

Act to reduce packaging material without affecting the product performance during its production, transport, distribution, and use phases.

Recycle

Consider the life cycle of the product packaging to improve how used material re-enters the process at the end of the cycle – especially from a user point of view.

A number of brands are beginning to think about packaging in terms of the 5Rs. Some are doing a better job than others. But regardless of what stage they are at in the process, their progress can teach much about how eco-design can work effectively for brands.

SunChips: on the right track

SunChips (Frito-Lay) has rooted its brand in health trends and is becoming one of Frito-Lay's fastest growing snack brands, as well as one of the fastest growing brands in the snack industry. In late 2006, consumers viewed SunChips as a small step for eating better. The marketing team was looking at how to maintain growth and found that people were concerned with their health and the planet's health. As such, they decided to connect SunChips more prominently with the environment. The installation of

solar panels at the Modesto plant in Mexico generated energy to create steam to make the chips – the SunChips were now, literally, derived from sun. While PepsiCo has also purchased green energy credits to offset the energy use, SunChips was the first major brand to talk about it in terms of packaging. The "Green-e" on the SunChips line of snacks gives the brand an opportunity to communicate its commitment to support green energy. Ultimately, SunChips can live up to its claim that "We're living up to our name," and that it "lives brightly."

SunChips' success proves that the brands that are the most successful in speaking about green are the ones that make it a core issue. Its efforts have helped grow sales up to 17.6 percent. At a corporate level, Frito-Lay, by recycling and reusing shipping cartons all across America, claims to have reduced paperboard by nearly 120,000 tons a year, saving more than five million trees.

And yet, what about SunChip's packaging? It is still made of laminate plastic OPP film, and this is where there is so much left to do. The packaging doesn't obviously communicate the SunChips' brand engagement (nor Frito Lay's one) to consumers. In a way, a last small step is missing.

Patagonia, 3M, Timberland: Brands getting eco-design packaging right

The Patagonia brand has been a sustainability pioneer. In 1993, the brand adopted fleece made from recycled plastic soda bottles, and was the first outdoor clothing manufacturer to do so. When it comes to packaging, the brand has eliminated excessive packaging from its clothing lines by substituting a paper band in place of plastic film bags, thus significantly reducing packaging waste, as well as packaging costs.

Another example of a brand that has successfully adopted eco-design packaging is 3M. In 2007, 3M developed a green project to re-invent the Post-it® notes business with use of 100 percent recycled paper fibers for the notes. The Post-it® Green range was developed on three key features of sustainable packaging: Recycle, Reuse, and Reduce. On this basis, it used 100 percent post-consumer waste, as well as unbleached and undyed recycled cardboard. It also renounced individual plastic wrappings of pads and use a single ink color to allow for an easier de-inking process. This resulted in a minimalist but powerful branding and packaging design that positioned the Post-it® brand well for a new era. To affirm the company commitment to sustainable



3M Post-it®

development, the work communicated the real facts about the active and responsible citizenship that 3M applied to the development of the Post-it® product. To reduce printing, this communication was mainly developed for electronic media.

Another brand getting eco-design packaging right is Timberland. Timberland shoes are comprised of one-piece corrugated cartons including 100 percent recycled post-consumer waste fiber. They are also printed with soy-based inks. The brand leverages its eco-mindedness with a label on the cartons of its footwear products that feature "nutrition" information. This information reflects the company's small global footprint and its green approach in creating the shoes contained in the package. The labels also include an environmental impact section that defines the energy used to make the shoe; a community impact section detailing the company's stance on child labor hours and community service; and a manufacturer section that identifies the shoe's country of origin and factory name.

Biota Water and Devo Underwear: The next frontier in eco-design packaging

While Patagonia, 3M, and Timberland are doing a great job with eco-design packaging, a few brands are breaking the mold by employing the newest technology in their packaging. These brands are the ones setting the pace for the future of eco-design packaging.

Biota Water has created a bottle with a material derived from corn. Due to its composition, bottles will disintegrate in 80 days after use. Bottles are molded of NatureWorks polylactic acid. Biota receives PLA preforms that are injection-molded by its sister company, Plant Friendly Products. The bottles' pressure-sensitive labels, printed in at least eight colors, are also compostable.

Meanwhile, Devo Underwear has developed a bio-based underwear packaging material that disintegrates in the washing machine. The solution is a 3-mil, corn-starch-based, semi-rigid plastic foam-like packaging material. The bio wrap is also comprised of trace amounts of laundry detergent.

The project was based on the idea that eco-sensitive men could buy the underwear and toss the entire package into the washer. Water would then dissolve the package.

5Rs and brand value

In FMCG, things are moving fast in the area of eco-design packaging. We are observing very encouraging signs that businesses are employing the 5Rs (rethink, reengineer, remove, reduce, recycle) and integrating them into the packaging design approach. Businesses are realizing that this type of thinking not only creates value for consumers, but above all for the brand. ■



Bertrand Chovet

Bertrand Chovet seeks to build brand distinctiveness and consumer loyalty in every single client engagement. As Managing Director of Interbrand Paris, his commitment to high performance has resulted in many award-winning retail and package design programs. For 15 years, Bertrand has worked with Interbrand clients on extensive business issues across a wide range of sectors, from FMCG to luxury brands.