How Consumer Nudging Can Solve the Plastic Packaging Waste Crisis

Until there is a major change in consumers' behaviour towards plastic packaging waste, the widespread and tangible shifts the situation calls for are unlikely.

Two overarching shifts need to take place to effectively tackle the plastic packaging waste challenge. The first is connecting consumers with the packaging they use via digital technologies such as blockchain, as discussed in a **prior INSEAD Knowledge article** and a **report for the Blockchain Research Institute (BRI)**. In principle, this would mirror Uber's business model that connects riders to drivers, and Airbnb's that connects travellers to hosts.

The second is nudging consumers to recycle. This requires assigning value to all packaging. This value could be monetary (e.g. 15 cents per package), ecological (e.g. carbon credits) and social (e.g. a system similar to frequent flyer points). Social and ecological meters used by individuals will measure their household's contribution to global plastic pollution compared to that of their neighbours, as well as enable comparison with peers (B2C) and fellow professionals (B2B). "Keeping up with the Joneses" can effectively induce consumers to modulate their energy consumption as shown by a Stanford study (more on that below).

For these two overarching, yet simple mechanisms to work, we must create the right conditions for a shift in consumer mindset.

It all starts with the consumer…

According to **research from the European Union**, consumers across the bloc vary in how regularly they sort plastic waste from 97 percent of citizens in Belgium and Luxembourg to just 60 percent in Romania or 63 percent in Latvia.

Cross-country comparative analyses validate the prevalent view in the industry: Messaging alone is not enough to alter consumer behaviours in ways that would eradicate plastic pollution. Instead, our interviews with plastic producers, NGOs, brand owners, researchers and policymakers clearly indicate that the right mix of nudges need to be implemented, as we see in some of the countries with the highest sorting plastic packaging waste rates.

As Michel Fontaine, President of Conseil National de l'Emballage (French Packaging Association) said, "Consumer is the key: Without consumer buy-in, there is no solution. No system can work if the first move after consumption is not well thought through and performed. In fact, the system (for example, deposit or voluntary contribution) does not matter. The first move is absolutely key."

Gamifying the journey

Gamification, in a nutshell, uses the principles of game design to digitally engage individuals to

achieve specific goals. Many studies have shown that gamification apps **increase engagement and create customer value.** It also drives desirable consumer behaviours, such as positive word-of-mouth. Gamification enables brand owners to directly connect at the individual level and design brand-specific incentives **tailored to each consumer**. This may in turn **increase consumer acquisition, retention and loyalty**.

For instance, start-up **Recyclebank** partners with municipalities and brands to reward residents for making their communities cleaner, greener places. Put simply, recycling bins are fitted with RFID chips to weigh the amount of recyclable waste citizens generate each week. The results are converted into points and rewards from participating retailers in the community. For instance, consumers can use their points for discounts at restaurants, entertainment and recreation venues or even to purchase magazines.

These points, analogous to frequent flyer points or loyalty points from a grocery store, proved effective at durably changing user behaviour. For instance, one community in Bridgeport, Connecticut saw a 67 percent increase in recycling rates over a two-year period after adopting the Recyclebank awards scheme.

Similarly, energy start-up **Opower** applied a gamified approach to encouraging people to use less energy. It followed in the footsteps of a gamification study experiment where people's electricity bills included emoticons that showed them how their **consumption** compared to that of their neighbours. Opower, now part of Oracle, works with utility companies to provide households with data on their energy consumption, compare it with that of their neighbours, and whether they are close to any new milestones.

This has had a tangible impact, with users reporting a 2 percent fall in energy usage on average. Whilst it may not sound much, it would equate to the equivalent of keeping 100,000 cars off the road during the same period, if properly scaled up.

While the British government's former Behavioural Insights Team (now a social purpose company) has helped to bring these approaches to a wider range of disciplines, more is needed. In response, online platforms such as the **Behavioural Evidence Hub** aim to bring behavioural approaches into the mainstream by sharing curated collection of innovative products, designs or projects that have proved their mettle in a real-world setting.

Reinforcements and benefits

To effectively change consumers' behaviour, stakeholders in the industry need to leverage "reward toolboxes" that **nudge** consumers in the desired direction. These rewards include *positive and negative reinforcements* (e.g. points added or subtracted) – the combination of which tends to be most effective in practice. Rewards can also take the form of *financial and non-financial benefits.* Most monetary rewards increase compliance, while social badges are most effective at producing **creative behaviour**.

Litterati is a great example of an innovative app connecting and empowering like-minded people from around the world. Citizens are encouraged to pick up waste, photograph it and upload the photo onto the app. The images are geotagged and displayed on the app's map, potentially alerting companies to the level of waste their brands are associated with.

While Litterati taps into consumers' intrinsic desire to make a positive contribution, extrinsic motivators such as digital currency, external recognition and economic incentives may amplify the impact. For instance, users could earn currency for performing basic tasks, such as collecting litter. It is easy to imagine how contests could be run, with financial and non-financial benefits to users and sponsoring entities.

It is urgent to close the tap of plastic packaging waste leaking into the environment. As David Katz, founder and CEO of social enterprise **Plastic Bank** put it: "If a garbage truck load of plastic is entering the ocean every minute of every day, how much longer are we willing to wait until change occurs? The world doesn't need a perfect solution, it desperately needs anything that is worth embarking on today, in an effort to create what can be and what will be." The industry must plan another route for the truck to avoid cluttering the ocean and drive towards a more sustainable future.

*The full research study, "Towards A World Without Plastic Packaging Waste: How to eradicate plastic pollution with digital technologies" (**available upon request**), outlines nine strategic recommendations, which coalesce into a roadmap with actionable pathways.*

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