CIRCULAR DESIGN CHALLENGE - USE CASES & PERSONAS
Overview

The three use cases in this document are the reference point for the Circular Design Challenge. We look forward to seeing design solutions that lead with empathy for the cases and their user personas.

Use Cases

Small-format plastic packaging comes in countless shape and forms. Since the number of applications using is vast, we challenge our participants to design solutions around three iconic use cases. Although specific, these use cases represent examples of a broad range of core human needs (such as hygiene, storage, portability etc.) that are satisfied today with the help of small-format packaging. We encourage you to use the ‘user personas’ presented with each use case to create empathy and get inspiration for your ideas.

How might we design solutions that make the users’ lives easier and yet eliminate small-format packaging waste?
CASE 1

Single-use sachet for liquid consumer products

Whether for packaging condiment food, shampoo or spices, sachets are everywhere. And while they are excellent at keeping products fresh and accessible, their size and material composition means they almost never get recycled and are likely to end up in the environment where they stay almost indefinitely.

*How might we ensure affordability and convenience while still avoiding to create non-recyclable waste?*
CASE 1

Single-use sachet for liquid consumer products

Rajata
Working Mother in Kerala, India

“The money we make from my and my husband’s jobs is not enough to afford buying our necessities in bulk. Every day, I buy our groceries at the market and in the local store. I get the shampoo and soap we need for our hygiene in these small sachets. I buy 4 every day, one each for me and my husband and two for our four children to share. With the birds and cows often tearing up garbage bags, the sachets we and our neighbours use spread everywhere. Last monsoon the drainage systems were so clogged by plastics that our part of town was flooded for a week.”
CASE 1

Single-use sachet for liquid consumer products

Mark
Cyclist in Los Angeles, CA, USA

“Since I took up cycling as part of my 40th birthday fitness resolution, I love to spend hours on the bike and see how far I can push myself. I started using energy gels to boost my performance during long rides. The problem is, once you’ve had the gel you have nowhere to put the package. Most cycling friends I know tend to toss the empty packages in the roadside ditch. I resent that, but I recently learned that even if I bring the sticky sachets back home there’s no recycler who can take them back.”
CASE 1

Single-use sachet for liquid consumer products

Saatwika
Waste Collector in Pune, India

“I do door to door collection in a residential area. It’s a good job, I’ve worked in the same area for a long time and the residents recognise and respect me. Now we also have a deal with the municipality that guarantees a steady income. We also earn some money from sorting and selling recyclables in our scrap shop. The problem is that the amount of sachets and small snack packets has increased a lot over the last 10 years. These we cannot do anything with because they’re not worth anything to the recyclers. But if we don’t collect them they get littered and often get stuck in the gutters. I wish the people putting the sachets on the market could arrange a system to take them back again.”
CASE 2

Bottle caps and tear-offs

The way we eat is constantly changing. Today we see a wider variety of food ingredients, meals and snacks provided in convenient packaging. Smart design helps us quickly open packages using tear-off strips and closures. The problem is that these small bits of packaging are so small that they become too demanding to sort for recycling, both manually and automatically, even when they are made of a material that could be recycled. Bottle caps also end up in the environment way too often, or in the stomach of a sea animal even though they are technically recyclable.

How might we provide food and snacks for a modern world without the unmodern side effect of non-recyclable waste?
CASE 2

Bottle caps and tear-offs

Michaela
Millennial/college student in Ghent, Belgium

“I love hummus. It has great nutritional content, tastes good and is environmentally friendly. But every time I want to enjoy some, I have to tear off this film wrapping... and then what? Apparently, it doesn't get recycled despite being a perfectly transparent plastic film. How am I supposed to know which plastics to recycle or not?”
CASE 2

Bottle caps and tear-offs

Trevor & Benjamin
Young parents in Minneapolis, MN, USA

“We love taking the kids out to the park during on weekend. We almost always bring something to eat. What bothers us is all the waste we create during these picnics. With the tear-off food seals, chocolate wrappers, and a soda cap or two, we have a pile of waste we can’t recycle at the end of the day. It’s hard enough to teach your kids not to throw the wrappers on the ground when they see that others have done it all around them. But how do I tell them that our local council does not recycle these packages on account of being too thin to be of any value?”
CASE 2

Bottle caps and tear-offs

Carmen
Hotel owner in Mexico City, Mexico

“I use these small butter tubs in my breakfast buffet. They are very easy to handle and portion out, and has led to my guests using less butter. The guests waste butter anyway, and I’d have to throw more away if I didn’t use the portion-sized tubs. The problem is, the half-empty packages end up everywhere in the restaurant, sometimes guests throw them in the normal waste bin, sometimes the into the compost bin. It’s a mess. I’ve called the local recycler but they told me it doesn’t matter where I put the tubs, they won’t be recycled anyway.”
To-go drinks like coffee or juices are iconic symbols of our time. Offering much-needed refreshments, these drinks are provided with a surprisingly large amount of non-recycled plastics. Straws, coffee cups and their lids lead to an astounding amount of waste which, although both the plastics and cup liner are technically recyclable. In addition, straws often come with additional wrapper packaging or as non-recyclable part of other packaging.

**How might we continue to provide drinks on the go whilst designing out the creation of this waste?**
CASE 3 😊

Straws and take-away coffee lids

Anne
Coffee shop owner in Copenhagen, Denmark

“My business idea is to have net positive impact café. People have called this a hipster pipe dream, but I have shown that it actually works to serve quality snacks and coffee at affordable prices. And I can show I have the lowest footprint in the business. Next year, I’ll be opening my 4th shop and we’re talking about going international with the concept. But the take-away containers give me a headache. I have no viable alternative to the lids and the straws for example, and people keep demanding to-go coffee and smoothies. Even if I provide the best possible recycling bins in store, most people will walk away with their mug. And I’m told nobody will actually process the straws or lids even if they get thrown in the ‘right’ bin.”
CASE 3 😊

Straws and take-away coffee lids

Lucas
Young professional in Buenos Aires, Argentina

“I’ve never been an early riser, and since I started my new job after college I have even less time in the mornings to get breakfast, so I go to the corner café next to the station. They make really good coffee as well as smoothies that keep me going until lunch. Having studied environmental science, I’m painfully aware of all the plastics that go into my take-away breakfast, by the time I’m off the train, I’ve got two empty containers with lids and straws. It really sucks – I feel bad about it. I sometimes bring my own keep-cup. It produces no waste but it’s a hassle to carry around and clean.”
CASE 3 🤗

Straws and take-away coffee lids

Nigel
Park cleaner in London, UK

“I love working in the city park. It’s a beautiful place and many enjoy it every day, but I always find old straws, leftover juices and soft drinks scattered everywhere. I’ve always told citizens to recycle all their plastics but I recently learned, during a team training day, that the recycling system doesn’t take care of things like straws: they’re apparently too small! And don’t even mention the wrapping around some of these straws. Small as they are, they blow around everywhere.”
Thank you for being a leader in your community by contributing to the Circular Design Challenge. Together, we can make a lasting impact on this important topic.

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