



## APPENDIX 1: Categorisation of refills

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In the early stages of the project, the team recognised that there are many different types of refillable packaging, but that this was not immediately obvious to the layperson. It was quickly recognised that this might lead to some confusion when trying to engage with customers about their experiences with refills. It was recognised that it was important that participants did not immediately associate one particularly good or bad experience that they had had with *all* refills without being aware of the different types of systems available. We needed to unpick their experiences carefully. Through a market analysis and a literature review, sixteen different types of refillable packaging were identified and classified with respect to their delivery mechanism and the level and nature of their consumer/business interaction. These findings are outlined below along with images and examples to further explain the way in which each type of refill is used. Each of the sixteen different types of refills combines a unique set of features which make them more or less suitable to different types of markets.

	Refill Example	Refill Approach	Description
1		Lightweight self contained refill delivered through dispenser	Customer buys a self contained refill which they take home and put into their durable dispenser. Applications include wipes, face creams, razors, cosmetics, fabric conditioner & air fresheners.
2		Lighter weight refill through part reuse	Customer buys a new bottle of product and reuses the spray pump. Applications include cleaning products.
3		Empty packaging refilled in shop	Customer takes the original packaging back to the store for it to be refilled with the same product. Applications include shampoo, conditioner, shower gel, bath products and fabric conditioner.
4		Self dispense	Customer takes reusable container back to the store where they refill it with the same product. Applications include dry goods, personal care products and cosmetics.
5		Original packaging swapped for new product	Customer returns empty packaging to a unit where they leave it and pick up a new product. The old packaging is refilled for future use by someone else. Applications include toner cartridges and single use cameras.
6		Door to door delivery – packaging replaced	On demand the customer receives full packaging and leaves empty packaging for supplier to collect when they are finished. Returned packaging is refilled for other customers. Applications include milk bottles and vegetable box system.
7		Deposit system	Customer returns empty packaging to supplier for a financial incentive. Applications include soft drinks bottles and beer bottles.

8		Top up card	Customer pays for a service which is delivered on the production of the payment card. Applications include downloadable music and payment systems for services such as mobile phones.
9		Creation	Customer buys the constituent parts to make the product themselves. They buy refills to allow them to repeat the process. Applications include soft drink makers and orange juicers.
10		Door to door delivery – packaging refilled	Customer dispenses quantity required from a delivery van, using special containers and only paying for the quantity taken. Applications include detergent products.
11		Refilled with different product	Once original packaging has been used it is refilled with a different product. Applications include toys filled with sweets or durable packaging used to store other products in.
12		Dispensed concentrate	Customer buys a dispensing unit. They also purchase refills containing concentrated product which are delivered through the dispenser. Applications include coffee machines.
13		Dispensed product	Customer buys a dispensing unit. They also purchase refills which are delivered through the dispenser. Applications include personal care products in showers.
14		Concentrate mixed in original packaging	Customer buys a concentrated refill which they dilute with water and mix using the old packaging. Applications include laundry products.
15		Fill your own packaging	Customers fill their own packaging with product in shop.
16		Bulk purchase	Customer buys in bulk and refills a sampler package at home. Applications include cooking ingredients (such as oil, vinegar, peppercorns) and household cleaning products.