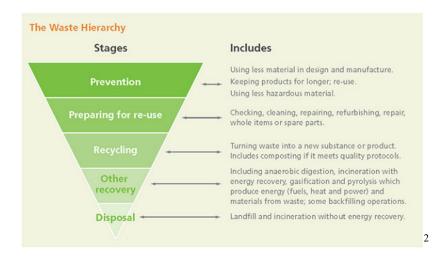


## **LOOP LCA\* THEORY**

**RULES:** To enter Loop a consumer product good manufacturer must redesign their product (and associated supply chain) to move from disposable to durable. In specific this means that the package must be reusable (i.e. that it can be cleaned and reused/refilled many times) and the content must be reused if recoverable and reasonable to reuse (i.e. a fork or plate) or recycled if recoverable and unreasonable to reuse (i.e. a diaper, razor blade or toothbrush head). Loop has no opinion on content if it is not recoverable (i.e. orange juice, cookies or window cleaner).

WHY IS REUSE BETTER FOR THE ENVIRONMENT VS. RECYCLING, OTHER RECYCLING OR DISPOSAL: The widely accepted hierarchy of waste<sup>1</sup> is as follows:



Reusing is generally better than recycling because it has the potential to save the energy that comes with having to dismantle and re-manufacture products. It also reduces waste and pollution because it reduces the need for raw materials, saving both forests and water supplies.<sup>3</sup>

**DETAILED UNDERSTANDING OF REUSE VS. RECYCLE OR DISPOSAL LCA:** Creating a durable (or "reusable") container generally uses more energy and resources than creating a disposable (or "single-use") container. However, over time, the reusable container has a lower environmental and economic cost as it does not need to be remanufactured on every use, instead it is transported and cleaned (at generally a much lower environmental and economic cost).

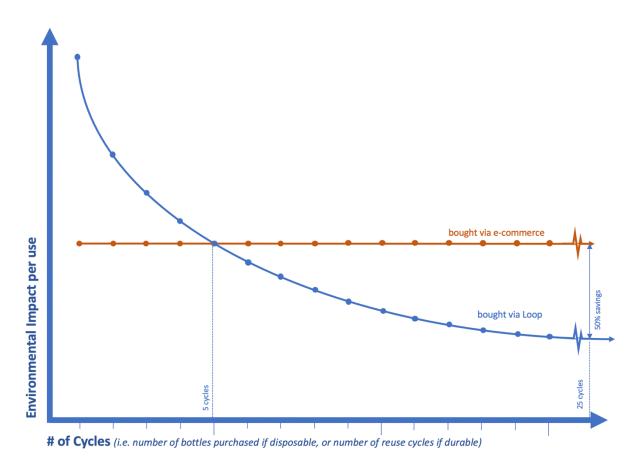
¹ https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/warr-strategy/the-waste-hierarchy

<sup>&</sup>lt;sup>2</sup> https://fortressrecycling.com/support/waste-hierarchy/

³ https://www.clearancesolutionsltd.co.uk/our-reuse-and-recycling-success-as-green-as-it-gets/the-three-rs-the-difference-between-recycling-reusing/



As documented in the chart below, a reusable bottle in the Loop model has potentially the same impact as the same product sold via traditional e-commerce at five cycles (i.e. a reusable bottle being refilled five times vs. five disposable bottles being purchased).



The efficiency of a reusable package in Loop is even more evident as consumers participate repeatedly. After 25 cycles, there is an approximately 50% cost savings with the durable container over the single-use container. It will never reach zero due to the cleaning and transportation costs.

<sup>\*</sup>LCA quantifies the potential environmental impact, such as use of resources and the release of pollutants, throughout a product's life cycle, from raw material acquisition through production, use, end-of-life management, recycling and final disposal.