Reduce, Reuse, Recycle and the Circular Economy

Achieving UK and global targets for net zero will be the defining challenge of the next three decades and a central driver of innovation and change across all sectors.

With transport and the built environment sectors contributing the majority of UK emissions, we are prioritising innovations that tackle carbon in the ways we construct and manage buildings.

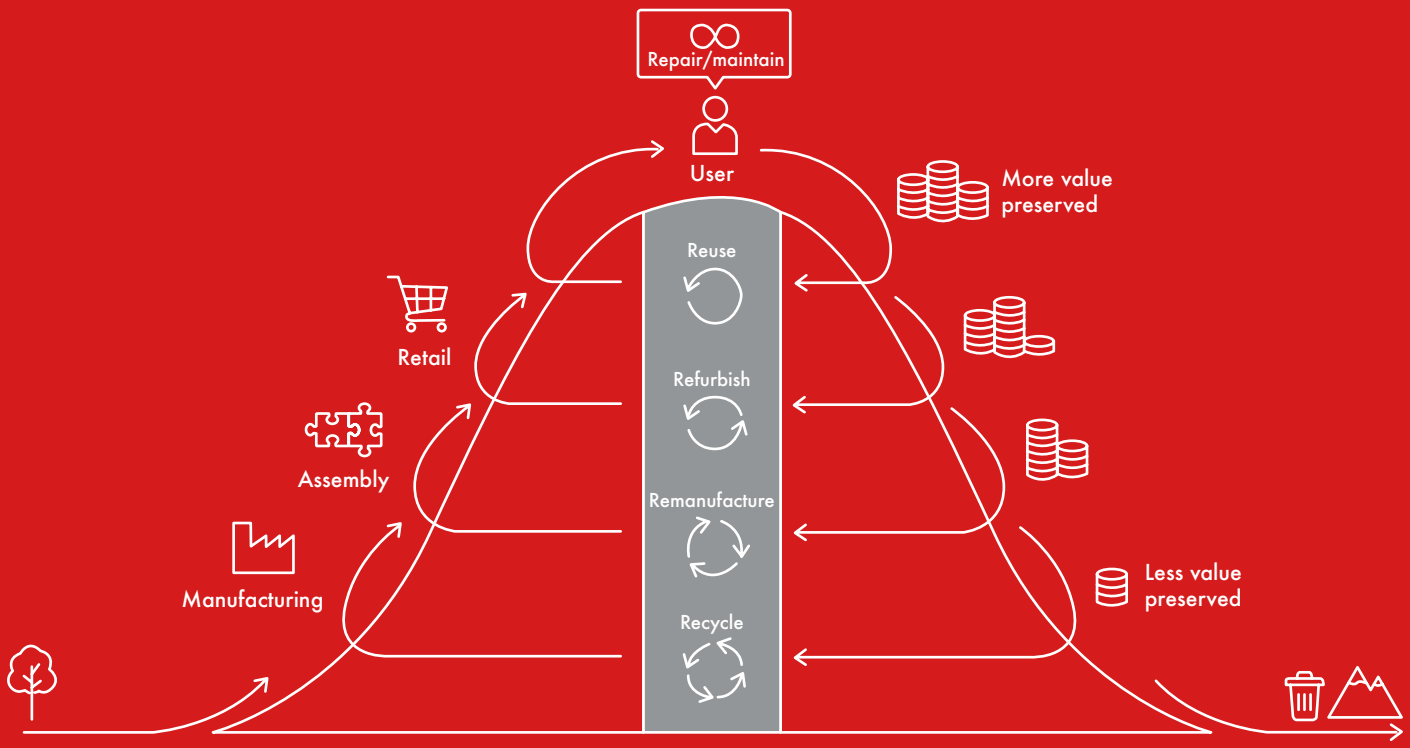
Most companies and neighbourhoods have clear recycling instructions but little-to-no guidance on reusing or reducing. This is because recycling is easy to do, often requiring little effort, thought, or creativity.

Most recycling ends up being "downcycling," meaning the new product is often lower quality than the previous one. This is still generally preferable to landfill, but given that recycling takes additional energy to break down the initial product and build the new product, turning high-quality items into low-quality ones is not an ideal outcome.

This is where "reuse" separates itself from "recycle" by preserving the maximum amount of value that went into creating the item in the first place. Repairing an entire product would preserve the time, effort, and transportation that went into assembling the components. With these benefits, we can then hit that final "R" and reduce the amount of materials and energy – and money – needed to create products.

While recycling can still play a role in a sustainable world, it's clear we need to start shifting the conversation toward reuse as the preferred action. Hadley has already started considering ways reuse can garner the same or more attention than recycling, and we're shifting our attention to ways all 3 R's can co-exist to create a viable, cost-effective zero waste to landfill strategy.

In a circular economy, a product is preserved as close to its finished state as possible, which preserves as much of its value as possible as shown below:



This – the preservation of embodied value – is at the core of a circular economy. Supply chains are long and complex, and there is a lot of effort and potential environmental impact between extraction and retail sale. The closer to the retail side we can preserve a product, the more the complexity of the product is retained, the more embodied value is preserved and the smaller the environmental impact.

Current recycling targets encourage a blanket proportion of all materials to be recycled, for example, 40%. This is a very simple and necessary target, but it is incomplete. The next step is to incorporate more of the nuances about just how much value is conserved, how much virgin material is being displaced, and how much of that environmental impact we are saving.

The question, then, isn't whether upcycling is better than downcycling. Conserving products at their highest level starts with repair, reuse, refurbishment, remanufacturing, and only if we cannot do so: recycling and downcycling.