

Circular Economy Solution Series for Businesses



Design Innovation

Focus of Design Innovation



Designing for circularity

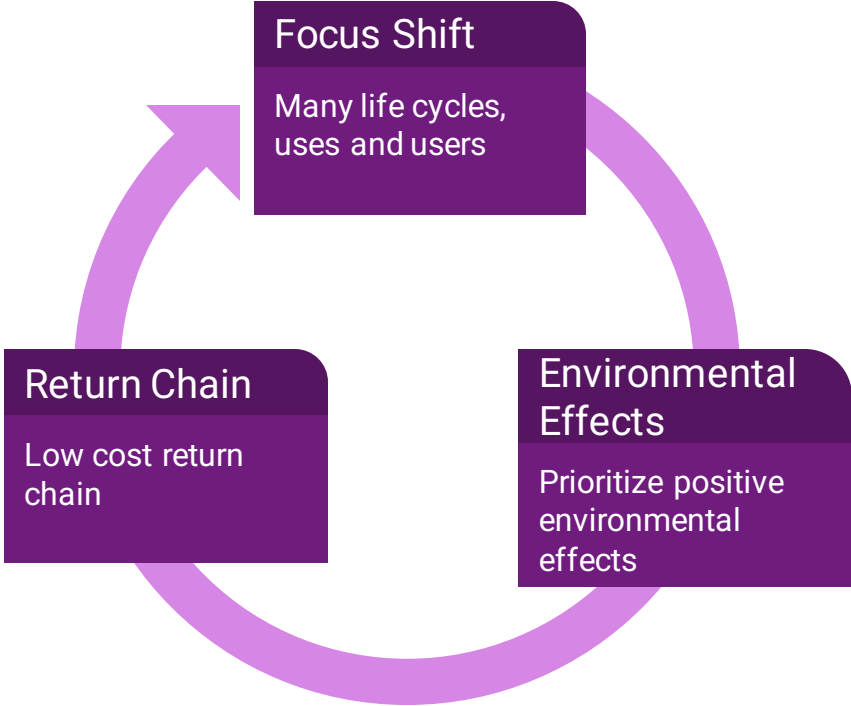


Next generation design

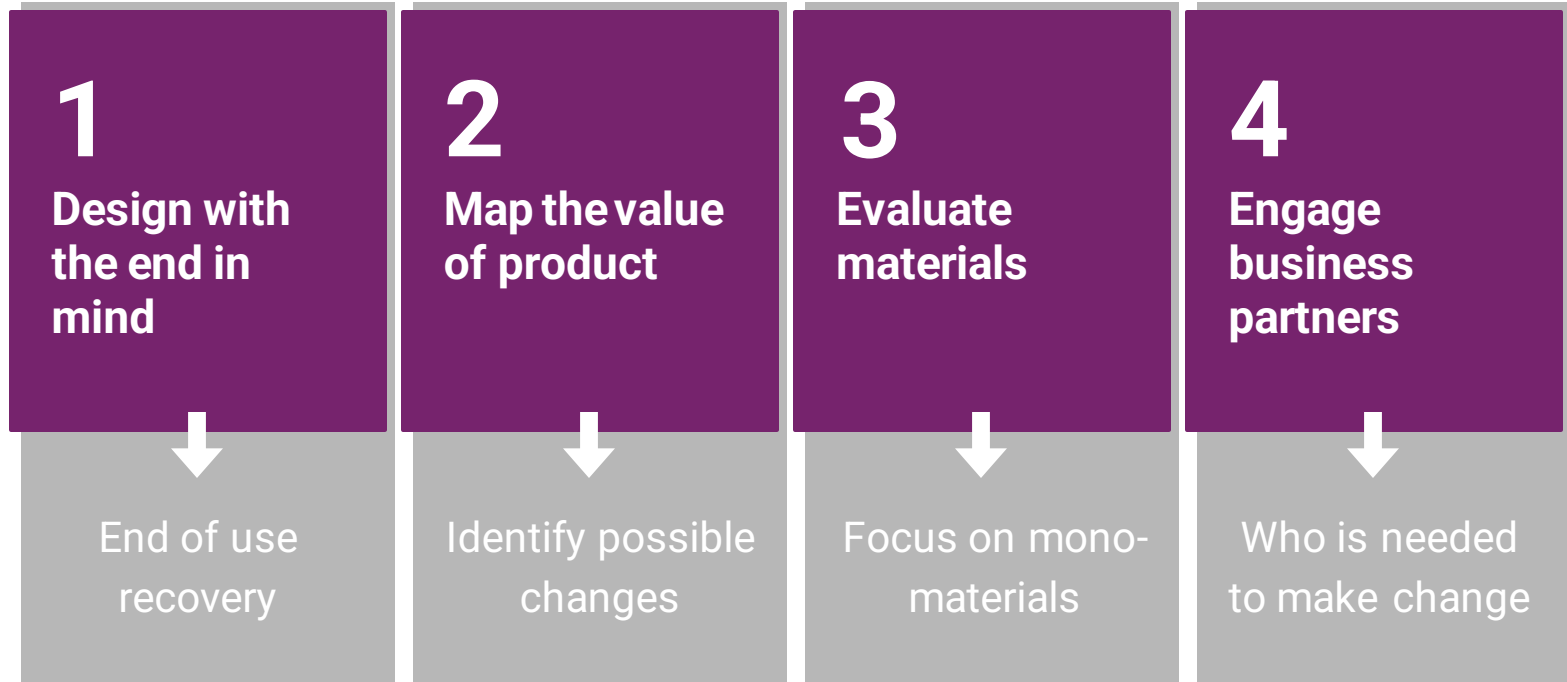


Using reverse logistics

Designing for Circularity



Modifying Product for a Circular Business Model

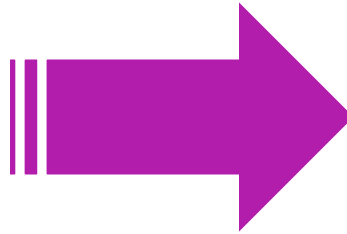


Dr. Kaichang Li | Innovator



How do mussels
keep their grip on
rocks, despite
being hit by waves?

Dr. Kaichang Li | PureBond



- Formaldehyde-free adhesive
- Cost competitive with formaldehyde products
- Exempt from routine emissions testing
- Available at Home Depot

Circular Design Principles

Durability

Standardization and compatibility

Ease of maintenance and repair

Disassembly and reassembly

Reuse, remanufacturing, recyclability

Customer attachment

Product Development

Development Trial

- Demonstration scale
- Commercial scale

Rapid Prototype

- Cost effective demonstration and scaling process
- Rapid feedback
- Room for experimentation

Large Scale
Launch

- Up front investment
- Big launch
- Less room for experimenting

Cisco | Corporate example



Program details:

- Committed to 100% product take back
- Zero cost to customer
- Business differentiation tool

National Zero Waste Council Portfolio

Feature - Keilhauer Furniture



- Materials are compostable
- Low energy cost
- Easy assembly
- 100% recyclable



Next Generation Design

Collaborative innovation lab

Business strategists



- Obstacles in selling product

Engineers and scientists



- Designing and sourcing material

Product recovery team

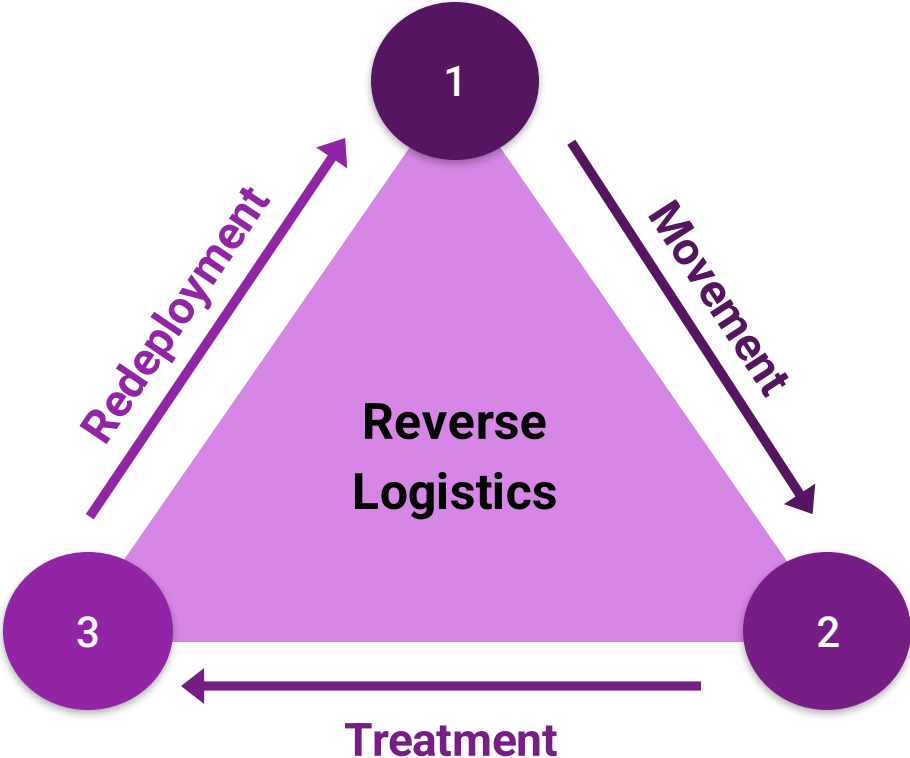


- Ideas for new designs
- End of life treatment



Reverse Logistics

What is Reverse Logistics?



Collection and take-back services



Collection systems should be

- User friendly
- Accessible
- Maintain material quality



End of life processing

- Take back services
- Access to materials
- Web link



Clothing donation boxes in retail shopping centres

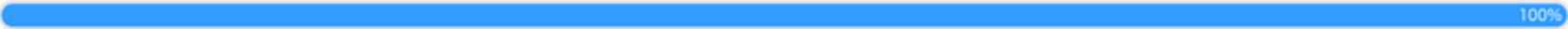
Example | Enviro Image Solutions

Life extension by 400%

By what margin you can slash your annual blanket costs?



How much of your printing blanket waste is eliminated from landfills?



Expected productivity improvement by applying our custom recommendations:



Incorrect handling of a blanket accounts what percentage loss in savings?



Example | Patagonia



The 2022
line used
94%
recycled
fibers

- Patagonia takes back worn out items at no cost to customer
- Recycled fibers
- Worn Wear store of used items



Questions?

RCA RECYCLING COUNCIL
OF ALBERTA

Thank You!