

Product Stewardship

Resource Sheet





Introduction

Product stewardship aims to reduce a product's environmental impact throughout its lifecycle. That responsibility is shared by the producers, brand owners, importers, retailers, and users.

This means:

- **Avoiding wasteful products.**
- **Eliminating unnecessary waste.**
- **Smarter product design and manufacturing.**
- **Implementing systems that reuse and recycle products and components.**

Currently product stewardship is voluntary in New Zealand. However, the government has signalled it plans to make product stewardship mandatory for some products. The list includes tyres, electrical and electronic equipment, agrichemicals and their containers, refrigerants and other synthetic greenhouse gases, farm plastics, and plastic packaging.

This resource sheet will help you:

- **Learn about the benefits of product stewardship.**
- **Understand the basics of developing a product stewardship plan.**
- **Find resources about product stewardship.**
- **Learn about other businesses that have successfully implemented product stewardship.**

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What are the benefits of product stewardship to my business?

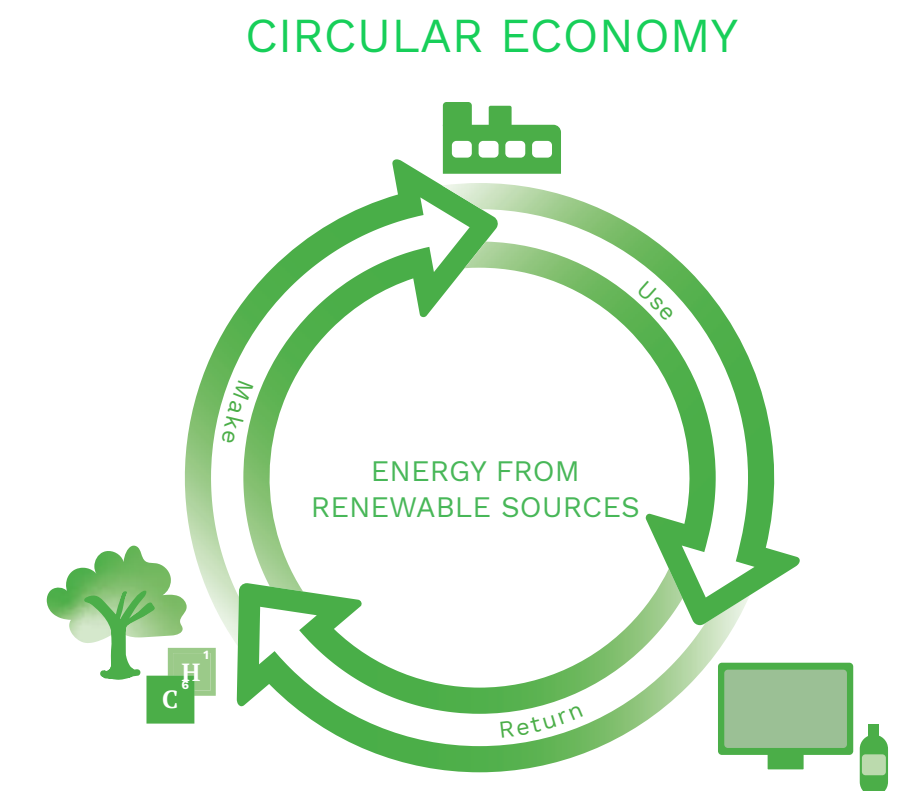
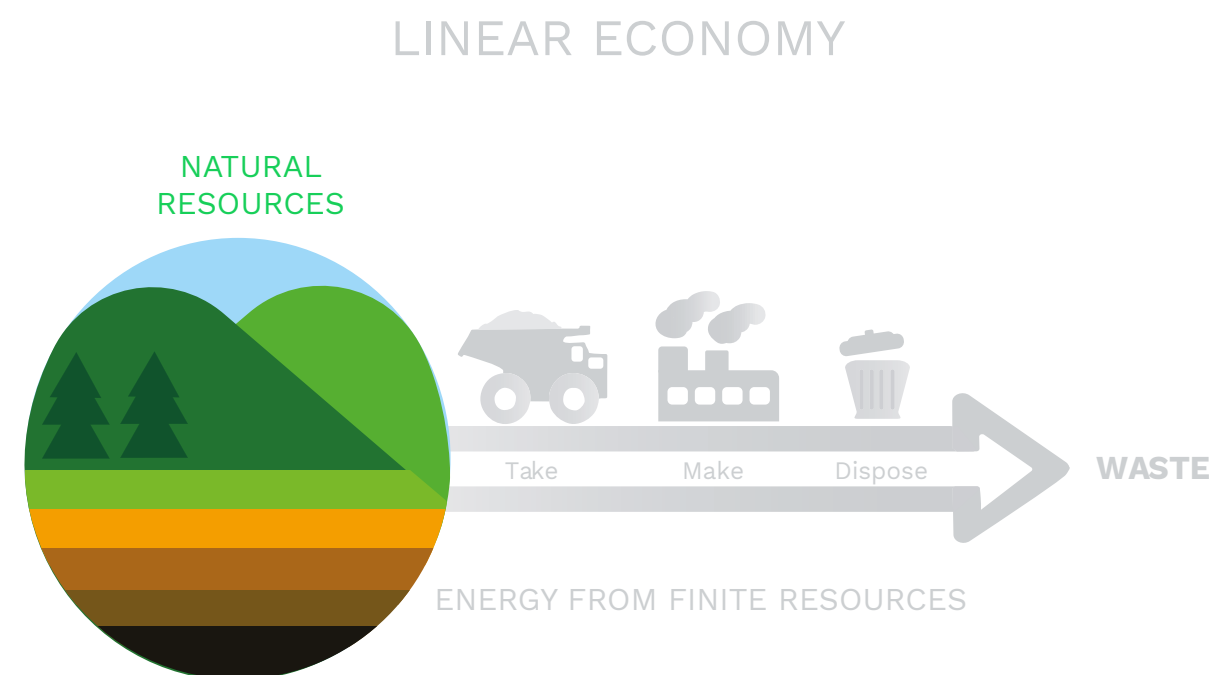
The way we currently use resources is filling up our landfills and polluting our environment. At the same time we are wasting valuable resources that could be recovered and reused.

Product stewardship is good for your business and your customers. By taking on the responsibility for the environmental impacts of your products throughout their lifecycle, you will discover ways to reduce waste and create value for everyone from staff to customers.

Product stewardship provides the foundation for shifting from a linear economy to a circular economy. Resources in today's products are kept in use for as long as possible. They are then recaptured to provide materials for new products tomorrow. Our activities don't need to damage natural ecosystems. With some thought and attention they can be regenerated or, in other words, made even healthier.

A well-managed product stewardship scheme may help you generate brand loyalty. Instead of leaving customers with a problem to solve when a product reaches the end of its life, you can provide them with a solution. Opportunities to build ongoing relationships can also be created by providing services like repairs and maintenance.

Why take responsibility for your products?





How can I introduce product stewardship into my business?

The main aim is to minimise waste, reduce environmental harm and provide a complete service to your customers. In doing so, you will be contributing to the circular economy. To do that you need to develop and start implementing a product stewardship approach that works for you as an organisation, your supply chain and your customers.

Step 1

Start by selecting a product and reviewing the environmental impacts across the key stages of its life – from manufacture right through to what happens when it is no longer able to fulfil its original purpose e.g. waste created, greenhouse gases emitted. Are they measurable? In the absence of data, assumptions can be made based on information you do have like sales volumes.

Use the template below as a guide to log the environmental impacts of the product:

The key questions to ask are;

- **What resources are used to make this product?**
- **How long will this product last?**
- **Is waste or pollution created during the product’s lifecycle,including at end of life? Don’t forget about excessive packaging.**

PRODUCT NAME: _____

Raw Materials	Transport	Manufacture	Distribution	Sales & Retail	Use	End of life



Step 2

Develop ways to manage or mitigate those impacts.
This can take many forms including:

- **Arranging a system to takeback products for reprocessing.**
- **Offering repair and maintenance options.**
- **Swapping out a problematic raw material where viable alternatives exist.**
- **Designing a product to last longer or run more efficiently to avoid waste and minimise energy use.**
- **Redesigning the whole product.**

You can use the 9R hierarchical model for inspiration

Note down ideas for reducing the environmental impact of the product:

Circular economy		Strategies	
<div>Linear economy</div> <div>↑</div> <div>Circular economy</div>	Smarter product use and manufacture	R0 Refuse	Make product redundant by abandoning its function or by offering the same function with a radically different product
		R1 Rethink	Make product use more intensive (e.g. by sharing product)
		R2 Reduce	Increase efficiency in product manufacture or use by consuming fewer natural resources and materials
	Extend lifespan of product and its parts	R3 Reuse	Reuse by another consumer of discarded product which is still in good condition and fulfills its original function
		R4 Repair	Repair and maintenance of defective product so it can be used with its original function
		R5 Refurbish	Restore an old product and bring it up to date
		R6 Remanufacture	Use parts of discarded product in a new product with the same function
		R7 Repurpose	Use discarded product or its parts in a new product with a different function
	Useful application of materials	R8 Recycle	Process materials to obtain the same (high grade) or lower (lower grade) quality
		R9 Recover	Incineration of material with energy recovery

Source: Adapted from Potting et al. (2017)



Step 3

Select at least one mitigation option to implement.
The following considerations can help guide your decision:

- **What will make the biggest difference?**
- **How complex will the concept be to implement?**
- **What resources will it require and how willing is your organisation to provide those?**
- **Is there a pre-existing industry wide scheme that you could join?**

Note your options here:

Step 4

Set some goals including:

- **What would success look like for your product stewardship initiative?**
- **What will it achieve and what are the benefits for your organisation, your customers and the environment?**
- **What are the time frames?**

Note the goals of your product stewardship initiative:



Step 5

Plan how the initiative will work.

Example questions:

- Who else from the supply chain needs to be involved?
- What are the logistics required?
- Do you need to use a 3rd party for logistics and processing and, if so, who will that be?
- What external resources or help could you use or need?
- What is the governance structure?
- How will the scheme be communicated?
- What investment is required?
- Who pays? You, the customer, or a combination of both?

Add your own questions here;

Answers:

Step 6

Implementation. Run a trial to check the concept works. Resolve any issues or inefficiencies before rolling out in full. Remember to monitor progress against your targets and celebrate your successes.

Step 7

Consider having your product stewardship scheme accredited by the Ministry for the Environment. Following the steps above will make it easier for your scheme to be aligned with the requirements of accreditation.

Case studies

Check out these case studies on product stewardship in action.

Interface ReEntry Programme

Interface carpet tiles, distributed by INZIDE Commercial, integrate a number of product stewardship elements into the product.

To maximise their useful life, the patterns of the carpet tiles are designed to mimic the random aspects of nature (e.g. how leaves fall in a forest) with each tile varying in pattern and colour meaning individual tiles can be blended together no matter when they are purchased and can be installed in any order or variation. This means less installation time and less waste compared to traditional broadloom carpets. If an individual tile becomes worn or damaged it can be replaced or swapped rather than replacing the whole floor. Furthermore, the tiles are designed to be easily moved by using TacTiles, glue-free adhesive square connectors.

At the end of life, via the ReEntry programme, tiles are collected and sent back to the original manufacturer where they are stripped and remanufactured into new carpet tiles.

The scheme has diverted over 44,000 cubic metres of carpet tiles from landfill (220 tonnes) and is accredited by the Ministry for the Environment.

Fuji Xerox Zero Landfill Scheme

Fuji Xerox equipment includes several product stewardship aspects. The photocopying and printing machines are designed for disassembly and remanufacturing. At the end of a use cycle, the machines are returned to Fuji Xerox for assessment. Some are refurbished and sent out to customers to be used again, some are dismantled for parts to be used in other machines and other parts are recycled.

The refurbishing of machines with reusable spare parts results in annual savings of over \$700k, 700 tonnes of equipment being diverted from landfill and a 99.5% recycling rate.

The Fuji Xerox Zero Landfill scheme is accredited by the Ministry for the Environment.

Government-accredited Schemes

Learn about product stewardship schemes that have been accredited by the Ministry for the Environment.

Top tips

Here are some top tips from organisations that have implemented product stewardship initiatives:

- Design new products for reuse, disassembly and harvesting of key component parts/materials.
- Choose materials with durability and reuse in mind.
- Involve stakeholders from the start and be transparent.
- Partner with other businesses that share similar sustainability values.
- Think through logistics carefully as this can make a huge difference to how smoothly things operate.
- Audit your suppliers and make sure they are auditing their downstream partners.
- Consider the Ministry for the Environment's guidelines for a regulated scheme – you don't have to follow them when designing your scheme but it will show you what best practice looks like. Adopting these, or at least considering them, will help you if you later decide to consider accreditation or if your product is declared a priority product in the future. There are companies, like 3R, which can help you do this.
- Just get started!

"Our recommendation is to just get started! Find a partner to help you run a small take back trial which allows you to review whether the product or its materials can be reused, repurposed or recycled. Like a first-time marathon runner, get some good advice, make a plan and start with small steps."

-3R



Useful resources

The Fuji Xerox Product Stewardship Roadmap is a free 6-step guide to help businesses establish product stewardship schemes.

3R Reimagineers design and develop product stewardship programmes for industry and business.

Connect with the Ministry for the Environment about accrediting your product stewardship scheme.



In partnership with:



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Get in touch with us to get support and links to SBN members who can help with end of product life solutions.

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