



# Reusable packaging in Aotearoa – getting back to the future

The state of play today, barriers to growth, opportunities for innovation, and recommendations for action

## WHO WE ARE

Reuse Aotearoa is an organisation dedicated to building the momentum and capability to scale reusable packaging systems in New Zealand.

We focus on understanding and telling the story of reuse, and fostering collaboration to bring reusable packaging systems to life and grow their strength and presence across the motu.

### The story of this report

In 2021, Reuse Aotearoa received funding from the Resource Wise Community Fund, managed by Tauranga City Council to investigate the current scope and future potential of reusable packaging across key sectors of the Tauranga economy. The result is this report that combines insights from desktop research, a literature review, and one-on-one interviews with New Zealand businesses running reusable packaging systems to:

- Paint a picture of the current situation for reusable packaging in Tauranga and New Zealand.
- Unpack the **viability, barriers and opportunities** for reusable packaging by sector.
- Define a **best-practice, well-designed** reusable packaging system.
- Lay out a **practical pathway forward** for increasing the prevalence and uptake of reusable packaging, including specific recommendations to council, industry sectors, and businesses.

The Resource Wise Community Fund grant was allocated specifically to explore issues of relevance to reusable packaging in the Tauranga economy, and to produce recommendations for local industry and Tauranga City Council to support the growth of reusable packaging in the city. Reuse Aotearoa has included additional chapters to the report for context - namely, the two *Setting the Scene* chapters, and Chapter 3 of *Taking Action* - which have been self-funded.

**Report author: Hannah Blumhardt**

**Date released: June 2022**

The report is arranged into scene setting chapters, sector snapshots, and recommendations for taking action. The report can be read as a whole, but we have written it so it is also possible just to jump straight to the chapters or sections of most relevance to you.

## REPORT CONTENTS

### Setting the scene

Chapter 1: What is reusable packaging and why is it important? 1.1-1

Chapter 2: The current barriers to reusable packaging, and the case for supportive action from Government and industry 1.2-1

### Sector snapshots

Chapter 1: Hospitality, tourism and accommodation 2.1-1

Chapter 2: Beverages 2.2-1

Chapter 3: Construction 2.3-1

Chapter 4: Groceries 2.4-1

Chapter 5: Personal care and cleaning products 2.5-1

Chapter 6: Transit/transport packaging 2.6-1

### Taking action

Chapter 1: Recommendations for council 3.1-1

Chapter 2: Recommendations for industry 3.2-1

Chapter 3: Recommendations for central government 3.3-1

### Disclaimer

Inclusion of images from various businesses does not indicate those businesses endorse the contents of this document.

Cover image: Fill Good in Cambridge, New Zealand, taken by Shoot & Swoon

SETTING THE SCENE

**1.1**  
**What is  
reusable  
packaging  
and why is it  
important?**



# 1.1 What is reusable packaging and why is it important?

Reusable packaging systems can create significant reductions in both waste and greenhouse gas emissions compared to single-use packaging. Reuse is one of the tools in our toolbox to support the broader goals of fighting climate change, plastic pollution and resource depletion. This section explains:

- what reusable packaging is;
- why we need more reusable packaging systems;
- how to identify and avoid false claims of reusability; and
- the key elements of best-practice, well designed, reusable packaging systems.

## PACKAGING, SINGLE-USE AND HOW REUSE CAN HELP

All the goods and products in our lives have been packaged at some point in their journey to get to us—from everyday products like groceries, cleaning products or office stationery, to sector-specific products, like medical items or construction materials. This includes the packaging used to retail products to the final consumer (“primary packaging”), and behind-the-scenes packaging for transportation and storage (“secondary” and “tertiary” packaging). Packaging is also used in the hospitality industry to serve food and drink for takeaways and home delivery (“serviceware”).

In New Zealand, about 735,000 tonnes of packaging is put on the market each year.<sup>1</sup> This packaging performs various functions like: protecting products from damage, contamination, leakage or spoilage; enabling safe transportation; communicating necessary product information; or acting as a canvas for branding.<sup>2</sup>

**Today, most packaging is single-use and disposable,** and may be made of plastic, fibre (such as paper and cardboard), metals, glass, or a combination of materials

(e.g. paper cups lined with plastic). Regardless of the material used, single-use packaging is short-lived and requires resources to be continually extracted from Papatūānuku (the Earth) and manufactured into packaging. For example, packaging is the single biggest market for both plastic (36%<sup>3</sup>) and paper (55%<sup>4</sup>). Roughly 2% of all oil extracted each year becomes plastic packaging,<sup>5</sup> and 20% of all timber logged is made into paper packaging.<sup>6</sup>

The ‘take, make, dispose’ approach of single-use packaging contributes to climate change, resource depletion, waste generation and plastic pollution.<sup>7</sup> Around the world, public concern about these issues is rising.<sup>8</sup> In New Zealand, **over-packaging and the build-up of plastic in the environment both feature in the top ten list of issues that concern New Zealanders.<sup>9</sup>** The public also have strong expectations that government, brands and businesses will take the lead in addressing these social and environmental issues.<sup>10</sup>

## Is the answer more recycling and composting?

Companies and governments are responding to this mounting pressure by searching for more sustainable packaging solutions. So far, most attention has gone to recycling packaging, or developing compostable alternatives. Although recycling and composting can help to reduce single-use packaging waste to landfill, they are ‘end-of-life’ solutions that don’t resolve the upstream problem of constantly needing to make new packaging. This is especially because **(most) recycling and composting generally aren’t closed loop processes that turn packaging back into more packaging**, so they don’t displace the need to keep extracting resources.

Recycling and composting systems for packaging also have environmental impacts. Recycling requires energy and resources, and often packaging must be exported for processing.<sup>11</sup> Compostable packaging basically uses soil as a waste disposal system for novel products, which risks unintended toxicological impacts on both soil and water.<sup>12</sup> Both are also expensive for the community. No collated, publicly-available

## REFUSE • RETHINK • REDESIGN

### REDUCE + REUSE

#### PREPARATION FOR REUSE

#### RECYCLING • COMPOSTING

#### DOWNCYCLING

#### DISPOSAL

figure exists for New Zealand's total public spending on services like collecting, sorting and processing the contents of household kerbside recycling bins (primarily single-use packaging<sup>13</sup>), however, the figure is likely high given recent estimates that councils collectively spend roughly \$55 million a year just to collect glass packaging separately at kerb.<sup>14</sup>

Also, both recycling and composting have limitations that undermine their real-world ability to reduce waste and plastic pollution. These limitations include low collection and/or recovery rates, technical limits to recyclability or compostability, and contamination.<sup>15</sup>

Ultimately, **too much single-use packaging goes to landfill**, where it produces methane if it has any organic component (e.g. paper, cardboard or plant-based plastic). Otherwise, packaging escapes into the natural environment as pollution, risking harm to wildlife, ecosystems and public health. In New Zealand, each year, the packaging industry estimates that roughly 350,000 tonnes of packaging is wasted (i.e. not recycled or composted).<sup>16</sup> The world over, statistics like this are highlighting the need for government, businesses and organisations to look beyond recycling towards upstream strategies like reuse, instead.<sup>17</sup>

### Reusable packaging – a solution that follows the waste hierarchy

"Reuse eliminates waste before it starts."—Miriam Gordon (2020)<sup>18</sup>

The waste hierarchy—a more detailed version of the well-known Reduce, Reuse, Recycle mantra—is an internationally recognised formula for approaching waste and resource efficiency problems. The hierarchy prioritises preventing and reducing waste and reusing products (e.g. "source reduction" approaches), and keeps recycling, composting and disposal as last resorts. If policy, investment, business practice and consumer behaviour followed the waste hierarchy, reusable packaging would be the norm, not single-use.

Reuse is higher up the waste hierarchy because it is a better strategy for reducing waste and greenhouse gas emissions than recycling, composting or landfilling single-use packaging.<sup>19</sup> Reusable packaging systems consume far fewer raw materials and make far less solid waste because they displace the need for multiple single-use packages over the lifespan of each reusable package.<sup>20</sup> As such, they also greatly minimise the cost and harm of trying to 'get rid of' packaging through recycling and composting. Reuse also has potential co-benefits, such as reducing the costs of waste management and litter, and creating new jobs and business opportunities.<sup>21</sup>

Multiple studies have validated the order of the waste hierarchy by showing that when it comes to a range of environmental measures—including greenhouse gas emissions, waste, and resource usage—**reusable packaging systems beat single-use in almost all contexts, provided breakeven points<sup>22</sup> are met**.<sup>23</sup> This is the case even though most of these studies do not consider the impact of littering and leakage into the environment, which are factors that also count against single-use packaging.<sup>24</sup>

### SNAPSHOT

A recent study by Rethink Plastic and #BreakFreeFromPlastic found that if Europe were to achieve a goal of 20% reusable packaging in just three sectors (takeaway food containers and cups; mailing packaging for e-commerce clothing and accessories; and cleaning product containers sold in large retailers), this would equate to **annual savings of 1.3 million tonnes of CO<sub>2</sub> equivalent emissions, 3.5 billion cubic metres of water, and 10 million tonnes of materials**.<sup>25</sup>

## REUSABLE PACKAGING CAN HELP REDUCE PLASTIC PRODUCTION, CONSUMPTION AND POLLUTION

"...replacing plastics with other materials that still require resource extraction and disposal is not the long-term solution. Instead, cities must consider the zero waste hierarchy to prioritise reusable and refillable solutions..."—  
Varshneya, Abbe & Danovitch (2020)<sup>26</sup>

The single-use packaging system consumes plastic upstream, and spits out plastic pollution downstream. Thanks to the "global shift from reusable to single-use containers" in the 20<sup>th</sup> century, packaging is now plastic's biggest market.<sup>27</sup> Thirty-six percent of all plastic produced globally each year becomes packaging.<sup>28</sup> That's about 154 million metric tonnes a year,<sup>29</sup> or 2% of global oil consumption.<sup>30</sup> In New Zealand, 60% of the 278,250 tonnes of raw plastic resin we import annually is turned into packaging on our shores.<sup>31</sup>

Plastic packaging also makes up a disproportionately large 46% of total plastic waste generation, due to "the very short lifetimes of most plastic packaging".<sup>32</sup> The majority of the marine plastic pollution that has come from land is packaging.<sup>33</sup> In New Zealand, citizen science research has found packaging to be responsible for a third of the plastic pollution found on beaches and almost two thirds of the plastic pollution found in freshwater locations, by item count.<sup>34</sup>

There isn't one solution to the plastics crisis,<sup>35</sup> but **prevention is better than cure**. Increasing reusable packaging is a preventative approach because each reusable package replaces multiple single-use packages. This has the twin effect of reducing the

upstream demand for new plastic created by single-use packaging, and mitigating downstream plastic pollution removing a major source of plastic in the environment.

"...reusable packaging... defines the 'how' of plastic reduction."—Weir (2022)<sup>36</sup>

• • • • • • • • • • • • • • • •

The Pew Charitable Trusts and the Ellen MacArthur Foundation estimate that reuse models could replace 20–30% of single-use plastic packaging.<sup>37</sup> Already, reusable packaging initiatives are avoiding single-use plastic. For example, it is estimated that Coca-Cola's use of reusable PET bottles in Latin America prevents roughly 1.8 billion single-use plastic bottles a year.<sup>38</sup>

The flow-on impact of reduced upstream and downstream plastic pollution is clear. Whether it's bottles being refilled multiple times, or bulk dispensers like kegs eliminating the need for bottles in the first place, reusable packaging systems lead to far fewer individual packaging units circulating through the economy. In addition, most reusable packaging systems use a deposit or some other tracking system for each package, so reusables are far less likely to be thrown out or littered after use.

These factors greatly reduce the risk of plastic packaging leaking into the environment. For example, a report by Oceana found that **increasing the market share of refillable beverage bottles by 10% or 20% in all coastal countries in place of single-use PET bottles could reduce PET bottle marine plastic pollution by 22% or 39%, respectively.**<sup>39</sup>

## WHAT IS REUSABLE PACKAGING?

Reusable packaging should be understood as a system, not just a type of package with particular physical qualities. To claim ‘reusability’ a package needs to prove not only that it *can* be reused, but that it is actually reused *in practice*.

Reusable packaging systems can be set up in different ways. Not all reusable packaging models look the same, but they all share two critical elements that set them apart from single-use packaging:

- 1 The use of **containers or units that are physically capable of withstanding multiple refill cycles**, including whatever process is used to prepare the package for reuse (such as washing).
- 2 An accompanying “**system of reuse**” that ensures that reusable containers/units are repeatedly refilled with the same or similar type of product for which the container was originally conceived.<sup>40</sup> A system of reuse is “the established organisational, technical or financial arrangements which ensure the possibility of reuse.”<sup>41</sup> What this system looks like will vary from product to product, but could include a combination of deposit return systems, tracking apps, reverse logistics, and the necessary infrastructure to prepare packaging for reuse (e.g. washing or repair) or to enable consumers to reuse their own containers (e.g. bulk dispensers or vending systems).

### According to others, reusable packaging is packaging which...

“...has been conceived, designed and placed on the market to accomplish within its lifecycle multiple trips or rotations by being refilled or reused for the same purpose for which it was conceived”

—EU Directive 2018/852 amending Directive 94/62/EC on Packaging and Packaging Waste

“...has been designed to accomplish or proves its ability to accomplish a minimum number of trips or rotations in a system for reuse.”

—New Plastics Economy Global Commitment (2020) Commitments, Vision and Definitions (Version: February, 2020), (p.10)

“...proves its capability of accomplishing a minimum number of trips (or reuse cycles) within its lifecycle, in a purposefully designed system of reuse. Importantly, reusable packaging must be used again in the same application for which it was originally designed.”

—Australian Packaging Covenant Organisation (2022) Scaling Up Reusable Packaging, (p.4)

## SINGLE-USE REBRANDED? SETTING STANDARDS TO AVOID MISLEADING REUSABILITY CLAIMS

Policymakers should consider setting standards against which reusable packaging claims can be assessed, authorised or certified. Standards help to avoid greenwashing and false claims about reuse, and to avoid unintended consequences from laws or initiatives aimed at discouraging single-use. For example:

### **1 Claiming “reusable packaging” without a system of reuse**

A package might be *capable* of reuse for a similar purpose, but that doesn’t automatically make it part of a reusable packaging system. There are many packages on the market that are technically capable of reuse (e.g. glass jars, or drink bottles with screw-on caps), but aren’t commercially reused because no system sits behind to ensure empty containers are retrieved, sanitised and returned to the producer for refill, or that connects the original packaging with a refill dispenser managed by the company. If these packages are reused by customers of their own will (e.g. refilling a drinks bottle with water at the kitchen sink or using a glass jar to hold pantry items), this may still be worthwhile. However it is not a reusable packaging system because the company who put the packaging on the market has played no role in facilitating this reuse action.

### **2 Mixing up repurposing and reusing**

Many packaging items can be put to new uses without needing to be recycled. For example, rubber bands from a purchase of leafy greens from the produce market can be used to hold other items together, or a glass jar can be used as a pen-holder or decorated to become a candle. This is not reuse, but repurposing.<sup>42</sup> While repurposing packaging has benefits, it doesn’t achieve the primary goal of reusable packaging, which is to replace the upstream need to create more packaging. This is because repurposing removes



both the package and its constituent materials from the packaging cycle. In other words, repurposing is to reuse what downcycling is to recycling.

### **3 Using flimsy containers in a reusable packaging system or putting slightly more durable products on the market to get around “single-use” definitions**

In Europe, following the single-use plastics directive, some companies began to claim that their single-use plastic cutlery or plates were not single-use because they were capable of being washed and reused more than once.<sup>43</sup> In countries with single-use plastic bag bans, producers sometimes shift to making slightly thicker bags that exceed the maximum threshold to be labelled single-use. A separate but connected issue occurs when legal requirements to use reusable packaging lead some companies to adopt poor quality reusables that can only withstand a small number of cycles before breaking.

### **Two key standards to consider to avoid the above issues are:**

- 1 Evidence of a system of reuse (e.g. the existence of bulk dispensers, washing and/or distribution infrastructure, deposits or other mechanisms for incentivising returns) that achieves a **minimum return rate/number of refill cycles for a reusable package**.<sup>44</sup>
- 2 A **durability design standard** that sets out the minimum number of reuse cycles a reusable packaging container must be able to withstand to be classed as reusable, with a warranty provided by the manufacturer.<sup>45</sup> This could be a numeric standard for each reusable that is roughly 25% higher than the breakeven point.<sup>46</sup>



## THE DIFFERENT TYPES OF REUSABLE PACKAGING

Not all reusable packaging systems look the same. There are different models, both for the packaging passed on to the final consumer (business-to-consumer (B2C) packaging) and for 'behind the scenes' packaging (business-to-business (B2B) packaging). Understanding the basic differences and how they reduce waste is important for effective and efficient system design.

Reusable packaging systems generally fall into one of three categories outlined in Table 1 below.<sup>47</sup> Reusable packaging systems can be further differentiated within the B2C or B2B sub-categories,<sup>48</sup> but for simplicity, this report does not go into this level of detail.

**Table 1: The Different Types of Reusable Packaging**

Reusable Packaging System	How it works	Examples
<b>Returnable packaging</b>	<p>The product is packaged into packaging that the customer returns when empty to be washed, sanitised and refilled with the same product or product type.</p> <p><i>NB: Returnable packaging can be B2B or B2C.</i></p>  	<p>Bottle swap systems, like Swappa Crate for beer or glass bottle milk swap systems like Oaklands Milk (see our <i>Beverages Sector Snapshot</i>).</p> <p>Kegs (B2B), e.g. for beer or milk (see our <i>Hospitality, Tourism &amp; Accommodation Sector Snapshot</i>, or our <i>Beverages Sector Snapshot</i>)</p> <p>Terracycle's Loop model for general grocery items or Solid reusable jars (see our <i>Groceries Sector Snapshot</i>, or our <i>Personal Care &amp; Cleaning Products Sector Snapshot</i>).</p> <p>Reusable takeaway packaging systems, like Again Again or Reusabowl (see our <i>Hospitality, Tourism &amp; Accommodation Sector Snapshot</i>)</p>
<b>Refill by bulk dispenser</b>	<p>Unpackaged 'loose' product is sold from bulk dispensers. Customers fill their own containers (or purchase a new, empty container the first time they use the dispenser that they can bring back for refill for future purchases).</p> <p>Purchasing from a bulk dispenser is usually a B2C model, but the category can include B2B returnable packaging if retailers return the empty bulk dispensers to the original supplier for refill, e.g. kegs.</p> 	<p>Loose produce at the supermarket.</p> <p>Bulk bins for dry goods, as seen at Bin Inn or zero waste grocers (see our <i>Groceries Sector Snapshot</i>).</p> <p>Liquid cleaning product and toiletries refill stations, e.g. ecostore or Will &amp; Able (see our <i>Personal Care &amp; Cleaning Products Sector Snapshot</i>)</p> <p>Milk vending machines, e.g. The Good Farm or Oaklands Milk (see our <i>Beverages Sector Snapshot</i>).</p> <p>Rigger fill stations at breweries, e.g. Mount Brewing Co (see our <i>Beverages Sector Snapshot</i>).</p>
<b>Transit Packaging</b>	Reusable packaging for transporting or shipping perishables or non-perishables, e-commerce deliveries, or moving products from producer to warehouse to retail store etc.	Reusable boxes, containers, soft packages, crates, pallets, wraps, e.g. CHEP and Palletite (see our <i>Transit/Transport Packaging Sector Snapshot</i> ).

## BEST PRACTICE, WELL-DESIGNED REUSABLE PACKAGING SYSTEMS

Reusable packaging systems should aim to maximise environmental benefits and avoid unintended negative environmental consequences, while maintaining accessibility and affordability. Poor design of either the containers/units or the supporting system can erode some of the benefits of reuse, e.g. unnecessarily increasing the system's carbon footprint, or risking public and environmental harm from unsafe/toxic container materials.<sup>49</sup> Poor execution can also create inefficiencies that increase costs, making the reusable packaging system overly expensive and/or impractical for businesses and consumers.

### Key ingredients

This section outlines four key ingredients for a best practice, well-designed reusable packaging system. A reusable packaging system that falls short in some areas doesn't necessarily have a higher impact than single-use (it depends on the nature and extent of the under-performance), but likely isn't realising its full potential positive impact. Therefore, it is important to monitor, evaluate and continually improve reuse systems over time.<sup>50</sup> Central government efforts should support the creation of minimum standards and requirements for reuse systems, based around these best practice ingredients.<sup>51</sup>

#### 1 High reuse rates<sup>52</sup> for reusable containers that meet and surpass, the cost and environmental impact of the container's original production and transportation, and its single-use equivalents.<sup>53</sup>

Design features that enhance high reuse rates:

- Durable reusable containers (because longer lasting containers can complete more trips/refill cycles).<sup>54</sup>
- The availability of relevant infrastructure and/or skills to prepare each packaging unit for reuse and expand its functional lifespan, e.g. testing/inspection, washing/maintenance/repair.

- Some financial incentive to ensure high return rates of packaging (a package can't be reused if it's not returned), e.g. deposit, loss fee, subscription or hire service, or discount/rewards system.<sup>55</sup>

- Marketing, aesthetics, product design and functionality to increase customer engagement, loyalty and repeat purchases/returns of a product in reusable packaging.<sup>56</sup>

#### 2 Efficiency of the logistics and preparation for reuse phase (e.g. returns, transportation, washing/repair, and redistribution).

Unlike the original impact of container production, the costs and environmental footprint of reverse logistics and preparation for reuse recur in every reuse cycle, so minimising their impact is important.<sup>57</sup> Design features that enhance efficiency:

- Short transportation distances of containers within each reuse cycle, achieved by locating preparation for reuse infrastructure close to the place of product manufacture and retail. A reuse system with longer transportation distances can still bring economic and environmental benefits, but requires sensitivity to the trade-offs, e.g. a higher reuse rate to reach breakeven point, and more organised logistics so costs do not blow out.<sup>58</sup>
- Energy and water efficient equipment for inspecting, sorting, washing and drying reusables.<sup>59</sup>
- Streamlined systems for reverse logistics and preparation for reuse to minimise time, labour, administration, and room for error.<sup>60</sup>
- Low-emissions mode of transport, e.g. rail and shipping rather than trucking or air freight. Electric vehicles will lower transport emissions in countries like New Zealand where the electricity grid is primarily powered by renewable energy.<sup>61</sup>

#### 3 Packaging units and materials that are benign to environmental and public health across their lifecycle (including during the use phase).

Important considerations:

- Choosing reusables (including prints and labels on containers) that do not pollute during their use-phase,

- e.g. shedding microplastics or chemicals of concern.
- Avoiding materials containing entire classes of chemicals of concern (e.g. ortho-phthalates and bisphenols) or problematic materials, like melamine.<sup>62</sup>
- Opting for lighter weight, lower volume containers because heavier, bigger containers are more expensive to transport and increase emissions, e.g. choosing light materials and/or design features that reduce volume, like collapsible or stackable containers.<sup>63</sup>
- Using recycled content and/or highly recyclable material will generally reduce the production and end-of-life impacts of the packaging.<sup>64</sup> However, this must be balanced against toxicity/safety analyses.<sup>65</sup>

**4 Reusable packaging systems should be accessible, affordable and readily available for consumers and businesses, at a level at least equivalent to products in single-use packaging.<sup>66</sup>**

Key design features to reduce cost and increase access to products in reusable packaging:

- Ensure the system and reusables adhere to the principles of Universal Design,<sup>67</sup> e.g. lightweight, easily opened returnable containers, spacious and well-lit areas around bulk dispensing vending systems, and systems that are easy to install and/or use.
- Locate reuse services and systems in all communities, prioritising underprivileged communities to ensure equitable access to the environmental, health and economic benefits of reuse programmes,<sup>68</sup> and ensure reusable packaging services are available for both online and in-person shopping.<sup>69</sup>
- Leverage reusable packaging opportunities that enable retailers to provide value for money and accessibility, e.g. refill by bulk dispenser, self-dispense systems and mobile dispensers.<sup>70</sup>
- While customers' willingness to return is critical for the functionality of the system, incentives used (such as deposits or the need for app technology to participate) should maintain accessibility.<sup>71</sup>
- Standardised packaging and/or pooling systems to optimise logistics, shorten transport distances,

and enable multiple producers to take part, thus reducing costs.<sup>72</sup>

- Collaboration amongst different companies within an industry, or support of a third-party reusable packaging company, to reduce costs. The vertically-integrated model where each manufacturer develops their own system for reusable packaging is a feature of the present packaging system where reuse is 'niche', but might not be scalable, in terms of efficiency or affordability.<sup>73</sup>

The next chapter looks at the current barriers to reusable packaging and makes the case for government and industry action. To jump to examples of reusable packaging in practice in New Zealand check out our *Sector Snapshots*. Or to find recommended actions to increase reuse see our *Taking Action* chapters.

## REFERENCE LIST

- 1 <https://www.recycle.co.nz/problemsize.php>
- 2 Elisa F Beitzel-Heineke, Nazmiye Balta-Ozkan, Hendrik Reefke (2017) "The prospects of zero-packaging grocery stores to improve the social and environmental impacts of the food supply chain" Journal of Cleaner Production 140, p.1530.
- 3 Roland Geyer (2020) "Chapter 2 – Product, use, and fate of synthetic polymers" in Trevor M Letcher (ed) Plastic Waste and Recycling: Environmental Impact, Societal Issues, Prevention, and Solutions (Academic Press), p.18.
- 4 The Environmental Paper Network (2018) The State of the Global Paper Industry: Shifting Seas: New challenges and opportunities for forests, people and the climate. Accessible at <https://environmentalpaper.org/stateoftheindustry2018/>, pp.11.
- 5 Based on 6% of current oil consumption being used for global plastic production, of which 36% become packaging. See Centre for International Environmental Law (2019) Plastic & Climate: The hidden costs of a plastic planet. Accessible at <https://www.ciel.org/plasticandclimate/>, p.24; World Economic Forum (2016) The New Plastics Economy: Rethinking the Future of Plastics. Accessible at [https://www3.weforum.org/docs/WEF\\_The\\_New\\_Plastics\\_Economy.pdf](https://www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf), p.13); Geyer (2020), above n 3, p.18.
- 6 The Environmental Paper Network (2018), above n 4, pp.11, 36.
- 7 See, for example, [www.solvingpackaging.org](http://www.solvingpackaging.org)
- 8 City Playbook Working Group (2021) City Playbook: Building a Reuse City (Consumers Beyond Waste – An initiative of the Future of Consumption Platform, World Economic Forum). Accessible at <https://weforum.ent.box.com/s/fx48az4ij1c8gr31g8jm5bppns79fpom>, p.18; Lauren Weir (2022) What the EU can do to support the grocery retail sector in reducing packaging and plastic pollution: policy briefing (Environment Investigation Agency, #breakfreefromplastic, Rethink Plastic, We Choose Reuse). Accessible at <https://rethinkplasticalliance.eu/wp-content/uploads/2022/02/1702-RPA-European-Grocery-Retail-Plastic-Policy-Briefing-V7.pdf>, p.8.
- 9 Kantar and Sustainable Business Council (2022) Better Futures 2022. Accessible at <https://www.kantarnewzealand.com/wp-content/uploads/2019/05/Kantar-Better-Futures-Report-2022.pdf>.
- 10 Kantar and Sustainable Business Council (2022), above n 9, pp.21,30,35.
- 11 Duncan Wilson, Lisa Eve and Andy Grant (2018) National Resource Recovery Project – Situational Analysis Report (Prepared for the Ministry for the Environment by Eunomia Research & Consulting). Accessible at <https://environment.govt.nz/publications/national-resource-recovery-project-situational-analysis-report/>; Sabrina Chakori et al (2021) "Untangling the underlying drivers of the use of single-use food packaging" Ecological Economies 185. <https://doi.org/10.1016/j.ecolecon.2021.107063>, p.2; Jasmin Wiefek, Julia Steinhorst & Katharina Beyerl (2021) "Personal and structural factors that influence individual plastic packaging consumption—Results from focus group discussions with German consumers" Cleaner and Responsible Consumption 3. <https://doi.org/10.1016/j.clrc.2021.100022>, p.2.
- 12 Ministry for the Environment (2022) Compostable products: Ministry for the Environment position statement (Wellington: Ministry for the Environment). Accessible at [composting-position-statement.pdf](https://environment.govt.nz/documents/composting-position-statement.pdf) ([environment.govt.nz](https://environment.govt.nz)); Takeaway Throwaways (2021) "Is compostable serviceware actually safe for people and planet? Part 1: A focus on fibre"
- 13 Sunshine Yates Consulting Ltd (2019) Rethinking Rubbish and Recycling (Prepared for WasteMINZ TAO Forum). Accessible at <https://environment.govt.nz/assets/publications/Rethinking-rubbish-and-recycling.pdf>.
- 14 The New Zealand Container Return Scheme Project Team (2020) The New Zealand Container Return Scheme Design: NZ CRS Final Design (Ministry for the Environment funded project). Accessible at <https://www.marlborough.govt.nz/services/recycling-and-resource-recovery/rubbish-and-recycling-projects/container-return-scheme/design-progress-to-date>, p.399.
- 15 Ministry for the Environment (2022), above n 12; Ministry for the Environment (2022) Te panoni i te hangarua: Transforming recycling: Consultation document (Wellington: Ministry for the Environment). Accessible at <https://environment.govt.nz/news/transforming-recycling/>; Gordon (2020), above n 12, p.28; Chakori et al (2021), above n 11, p.2.
- 16 Packaging New Zealand (2021) Annual Report 2021. Accessible at <http://www.packaging.org.nz/attachments/pacnz-annual-report-sept-2021.pdf>, p.6.
- 17 City Playbook Working Group (2021), above n 8, p.19.
- 18 Gordon (2020), above n 12, p.xvi.
- 19 Miriam Gordon (2021) The Reuse Policy Playbook: A policy roadmap to reuse (Upstream). Accessible at <https://upstreamsolutions.org/reuse-acceleration-policies/>, p.23; Suneel Kunamaneni, Sukky Jassi, Dong Hoang (2019) "Promoting reuse behaviour: Challenges and strategies for repeat purchase, low-involvement products" Sustainable Production and Consumption 20. <https://doi.org/10.1016/j.spc.2019.07.001>, p.256; Beitzel-Heineke, Balta-Ozkan & Reefke (2017), above n 2, p.1530; Wiefek, Steinhorst & Beyerl (2021), above n 11, p.2.
- 20 Reusable Packaging Association (2020) Reusable Transport Packaging: State of the Industry Report 2020. Accessible at <https://reusables.org/wp-content/uploads/2020/06/Reusable-Transport-Packaging-State-of-the-Industry-Report-2020-1.pdf>, pp.19–20.
- 21 City Playbook Working Group (2021), above n 8, p.14.
- 22 A breakeven point is the number of times a reusable item must be reused to have less impact than the combined impact of the single-use items it has replaced.
- 23 See, for example Gordon (2020), above n 12; Patricia Megale Coelho, Blanca Corona and Ernst Worrell (2020) Reusable vs Single-Use Packaging: A review of environmental impacts (Reloop & Zero Waste Europe). Accessible at <https://zerowasteeurope.eu/library/reusable-vs-single-use-packaging-a-review-of-environmental-impact/>; Australian Packaging Covenant Organisation (2022) Scaling Up Reusable Packaging. Accessible at <https://documents.packagingcovenant.org.au/public-documents/Scaling%20Up%20Reusable%20Packaging>, p.10; City Playbook Working Group (2021), above n 8, p.25.
- 24 Coelho, Corona & Worrell (2020), above n 23, p.37, 54–57.
- 25 Larissa Copello, Samy Porteron and Jean-Pierre Schweitzer (2021) Realising Reuse: The Potential for Scaling up Reusable

- Packaging, and Policy Recommendations (Rethink Plastic and #BreakFreeFromPlastic), p.3.
- 26 Aditi Varshneya, Ruth Abbe, and Alex Danovitch (2020) The Zero Waste Masterplan: A guide to building just and resilient zero waste cities (Global Alliance for Incinerator Alternatives: Berkeley, CA). Accessible at <https://zerowasteworld.org/zwmp/>, p.43.
- 27 Roland Geyer, Jenna R. Jambeck, Kara Lavender Law (2017) "Production, use, and fate of all plastics ever made" *Science Advances* 3, p.1.
- 28 Geyer (2020), above n 3, p.18.
- 29 Note, tonnage figure is based on the calculation of plastic packaging constituting 42% of non-fibre plastic production. See Plastics Europe (2021) *Plastics – the Facts 2021: An analysis of European plastics production, demand and waste data* (Belgium: Plastics Europe). Accessible at <https://plasticseurope.org/knowledge-hub/plastics-the-facts-2021/>, p.12 and Geyer, Jambeck, Law (2017), above n 27, p.1.
- 30 Based on 6% of current oil consumption being used for global plastic production (Centre for International Environmental Law (2019), above n 5, p.24; World Economic Forum (2016), above n 5, p.13), of which 36% becomes packaging. See Geyer (2020), above n 3, p.18.
- 31 Office of the Prime Minister's Chief Science Advisor (2019) *Rethinking Plastics in Aotearoa New Zealand* (Auckland). Accessible at <https://www.pmcса.ac.nz/topics/rethinking-plastics/>, pp.205, 211.
- 32 Geyer (2020), above n 3, p.23.
- 33 Chris Sherrington (2016) *Plastics in the Marine Environment* (Bristol: Eunomia Research & Consulting Ltd). Accessible at <https://www.eunomia.co.uk/reports-tools/plastics-in-the-marine-environment/>.
- 34 Sustainable Coastlines (n.d.) *Litter Intelligence Insights*, <https://insights.litterintelligence.org/>. NB: by weight, plastic packaging makes up 23% of plastic pollution on beaches, and 43% of plastic pollution in freshwater locations – still a surprising proportion given that packaging tends to be light.
- 35 Stephanie B Borelle et al (2020) "Predicted growth in plastic waste exceeds efforts to mitigate plastic pollution" *Science* 369 (6510). DOI: 10.1126/science.aba3656; The Pew Charitable Trusts and SystemIQ (2020) *Breaking the Plastic Wave: A Comprehensive Assessment of Pathways Towards Stopping Ocean Plastic Pollution* (Pew Charitable Trusts). Accessible at <https://www.pewtrusts.org/en/research-and-analysis/articles/2020/07/23/breaking-the-plastic-wave-top-findings>, pp.9-10.
- 36 Weir (2022), above n 8, p.4.
- 37 The Pew Charitable Trusts and SystemIQ (2020), above n 35, pp.48–54; Annette Lendal & Sara Lindeblad Wingstrand (2019) *Reuse – Rethinking Packaging* (Ellen MacArthur Foundation). Accessible at <https://ellenmacarthurfoundation.org/reuse-rethinking-packaging>.
- 38 Ellen MacArthur Foundation (2020) *Upstream Innovation: A guide to packaging solutions*. Accessible at <https://ellenmacarthurfoundation.org/upstream-innovation-a-guide-to-packaging-solutions>, p.22.
- 39 Anne Schroeer, Matt Littlejohn and Henning Wilts (2020) Just one word: refillables. How the soft drink industry can – right now – reduce marine plastic pollution by billions of bottles each year (Oceania). Accessible at <https://oceana.org/reports/just-one-word-refillables/>, p.1.
- 40 New Plastics Economy Global Commitment (2020) *Commitments, Vision and Definitions* (Version: February, 2020), p.10.
- 41 Australian Packaging Covenant Organisation (2022), above n 23, p.4.
- 42 Australian Packaging Covenant Organisation (2022), above n 23, p.4; Sarah C. Greenwood et al (2021) "Many Happy Returns: Combining insights from the environmental and behavioural sciences to understand what is required to make reusable packaging mainstream" *Sustainable Production and Consumption* 27. <https://doi.org/10.1016/j.spc.2021.03.022>; New Plastics Economy Global Commitment (2020), above n 40, p.9.
- 43 Nusa Urbancic from Changing Markets Foundation (6 July 2021) "Corporate commitments on reuse: all talk and no action?" (Presentation at the 8th European REUSE Conference hosted by Deutsche Umwelthilfe (Environmental Action Germany)).
- 44 New Plastics Economy Global Commitment (2020), above n 40, p.10; Gordon (2021), above n 19, p.10; Weir (2022), above n 8, p.4.
- 45 Gordon (2020), above n 12, p.81; Gordon (2021), above n 19, pp.24–25; Weir (2022), above n 8, p.4.
- 46 Gordon (2021), above n 19, p.9.
- 47 Adapted from Patricia Megale Coelho et al (2020) "Sustainability of reusable packaging— Current situation and trends" *Resources, Conservation & Recycling*: X, Vol 6. <https://doi.org/10.1016/j.rcrx.2020.100037>.
- 48 For example, the Ellen MacArthur Foundation "four reuse models" for B2C (Refill at home; Refill on the go; Return from home; Return on the go), in Lendal & Wingstrand (2019), above n 37, pp.12–13; and the various B2B models centred around how the packaging is shared/owned/distributed, e.g. vertically-integrated systems or pooling models shared within or across industries, as described in Australian Packaging Covenant Organisation (2022), above n 23, p.5.
- 49 Coelho, Corona & Worrell (2020), above n 23, p.9; Gordon (2021), above n 19.
- 50 City Playbook Working Group (2021), above n 8, p.25.
- 51 Copello, Porteron and Schweitzer (2021), above n 25, p.14; Weir (2022), above n 8, p.4.
- 52 Sometimes called "trippage rate" = the number of times an individual packaging unit goes around the system or is refilled.
- 53 Coelho, Corona & Worrell (2020), above n 23, p.29; Coelho et al. (2020), above n 47, p.5,7 Greenwood et al (2021), above n 42, p.1689.
- 54 Kunamaneni, Jassi & Hoang (2019), above n 19, p.264; Greenwood et al (2021), above n 42, p.1689
- 55 Coelho, Corona & Worrell (2020), above n 23, pp.50, 53; Gordon (2020), above n 12, pp.72–73; Coelho et al. (2020), above n 47, p.8; Kunamaneni, Jassi, Hoang (2019), above n 19, pp.254,265; Copello, Porteron and Schweitzer (2021), above n 25, p.13.
- 56 Kunamaneni, Jassi, Hoang (2019), above n 19, p.253; Waste & Resources Action Programme (2007) *Self-Dispensing Systems—Commercial Feasibility Study* (WRAP Research Report: Oxon, UK), p.29.
- 57 Coelho, Corona & Worrell (2020), above n 23, p.29.
- 58 Coelho, Corona & Worrell (2020), above n 23, pp.24, 63; Coelho et al. (2020), above n 47, pp.5,7.
- 59 Coelho, Corona & Worrell (2020), above n 23, pp.47, 59–60; Gordon (2020), above n 12, p.xii; Coelho et al. (2020), above n 47, pp.5,7.

- 60 Coelho et al. (2020), above n 47, p.5.
- 61 Coelho, Corona & Worrell (2020), above n 23, pp.25-26, p.61.
- 62 Gordon (2021), above n 19, pp.10,14.
- 63 Coelho, Corona & Worrell (2020), above n 23, p.27; Greenwood et al (2021), above n 42, p.1689.
- 64 Coelho, Corona & Worrell (2020), above n 23, p.32; Gordon (2020), above n 12, p.ix; New Plastics Economy Global Commitment (2020), above n 40, p.10; Greenwood et al (2021), above n 42, p.1689.
- 65 Gordon (2020), above n 12, p.76; See also Damien Gayle (18 March 2022) "Recycling plastic bottles leach more chemicals into drinks, review finds" *The Guardian*. Accessible at <https://www.theguardian.com/environment/2022/mar/18/recycled-plastic-bottles-leach-more-chemicals-into-drinks-review-finds>; O Horodyska, A Cabanes, A Fullana (2020) "Non-intentionally added substances (NIAS) in recycled plastics" *Chemosphere* 251. <https://doi.org/10.1016/j.chemosphere.2020.126373>.
- 66 Coelho, Corona & Worrell (2020), above n 23, p.54; Justine Maillot (2022) "Setting Effective Reuse Targets to serve the Upscale of Reusable Packaging" *We Choose Reuse*. Accessible at [https://rethinkplasticalliance.eu/wp-content/uploads/2022/04/WeChooseReuse\\_EffectiveTargets\\_def.pdf](https://rethinkplasticalliance.eu/wp-content/uploads/2022/04/WeChooseReuse_EffectiveTargets_def.pdf), p.2.
- 67 <https://takeawaythrowaways.nz/inclusivity>; Ellen Macarthur Foundation (2020), above n 38, p.87; Waste & Resources Action Programme (2007), above n 56, pp.6, 29.
- 68 Gordon (2021), above n 19.
- 69 Justine Maillot (2022), above n 66, p.2.
- 70 Ellen Macarthur Foundation (2020), above n 38, p.87; Waste & Resources Action Programme (2007), above n 56, pp.8, 29.
- 71 Kunamaneni, Jassi, Hoang (2019), above n 19, p.264; Justine Maillot (2022), above n 66, p.2.
- 72 Coelho, Corona & Worrell (2020), above n 23, pp.51-52, 64; Coelho et al. (2020), above n 47, p. 4; Copello, Porteran and Schweitzer (2021), above n 25, pp.12-13.
- 73 Copello, Porteran and Schweitzer (2021), above n 25, pp.12-13.

**1.2**

# **Current barriers to reusable packaging, and the case for supportive action from government and industry**



## 1.2 Current barriers to reusable packaging, and the case for supportive action from government and industry

At home and abroad, reusable packaging is appearing on government and corporate agendas, but is the level of action sufficient to overcome present barriers to reuse? This chapter covers:

- What governments and corporates are saying and doing about reusable packaging.
- The stance of the New Zealand Government on reuse.
- The barriers to reusable packaging in New Zealand that government and industry action should be designed to target.

Recommendations for government and industry action are set out in our *Taking Action* chapters.

Around the world, public concern about packaging waste, climate change and plastic pollution is rising,<sup>1</sup> as is societal awareness about the role of reuse in helping to address these issues.<sup>2</sup> In New Zealand, over-packaging and the build-up of plastic in the environment both feature in the top ten list of issues that concern New Zealanders.<sup>3</sup> While most people want to align their lifestyles with their concerns about waste and the climate, the extra cost, effort and knowledge currently required are barriers.<sup>4</sup> The New Zealand public have strong expectations that government, brands and businesses (rather than individuals) will lead in addressing social and environmental issues.<sup>5</sup>

Civil society is increasing its advocacy for government and corporate action to advance reusable packaging,

in recognition that systemic and legislative approaches are needed.<sup>6</sup> In New Zealand, reusable packaging has become an area of interest amongst organisations like WasteMINZ, Zero Waste Network, the Sustainable Business Network, Greenpeace, The Kiwi Bottle Drive, Use Your Own, and Takeaway Throwaways.

In response to this societal pressure, reusable packaging is moving onto the agenda of both corporates and governments.<sup>7</sup> However, the market share for reusable packaging remains stubbornly low and declining.

This chapter outlines the positive rhetoric and commitments of governments and industry and the barriers to progress. We draw on a literature review and one-on-one interviews with businesses operating (or seeking to operate) reusable packaging systems in New Zealand. Our findings in this chapter and in our *Sector Snapshots* directly inform the recommendations we set out in the *Taking Action* chapters of this report. While many of the barriers to reuse are significant because they are structural, none of them are insurmountable. However, they do need to be faced and properly understood, so that government and industry action is best tailored to resolving them.

### WHAT GOVERNMENTS AND CORPORATES ARE SAYING AND DOING ON REUSE

In recent years, governments and businesses have issued a flurry of documents, commitments, targets and statements about reusable packaging. For example:

- The **New Plastics Economy Global Commitment**, launched in 2018 and led by the Ellen MacArthur Foundation, in collaboration with the United Nations Environment Programme.<sup>8</sup> The commitment has been signed by hundreds of businesses, governments and organisations globally, including the New Zealand Government. Some well-known corporate signatories include The Coca-Cola Company, Unilever, Nestle, and PepsiCo. The headline commitment is for all plastic packaging to be 100% reusable, recyclable, or compostable by

2025. Businesses and governments also pledge to apply reuse models “where relevant” to reduce the need for single-use packaging.

- Alongside the New Plastic Economy Global Commitment is the Ellen MacArthur Foundation’s **Plastics Pact Network**—a network of national and regional initiatives to work towards a circular economy for plastics.<sup>9</sup> This includes the Australia, New Zealand and Pacific Islands Plastic Pact (ANZPAC). These pacts have a set of 2025 joint targets, some of which include reuse, e.g. “Eliminate unnecessary and problematic plastic packaging through redesign, innovation and alternative (reuse) delivery models” and “100% of plastic packaging to be reusable, recyclable or compostable packaging by 2025”.<sup>10</sup>
- The EU is currently in the process of reviewing its Directive on Packaging and Packaging Waste, which could strengthen measures to increase reusable packaging, as indicated in the EU’s 2020 Circular Economy Action Plan.<sup>11</sup> For example, the introduction of reusable packaging targets to go alongside the recycling targets already in the Directive.<sup>12</sup> Some individual European member states have already set binding targets for reusable packaging in legislation, including Austria, France, Germany, Portugal, Romania, and Sweden. France has a target for 10% of all packaging to be reusable by 2027, while Romania has a target of 5% of packaging to be reusable by 2020, with a 5% annual increase until 2025.<sup>13</sup>
- Coca-Cola has announced the aspirational goal of “at least 25% of all beverages globally across its portfolio of brands sold in refillable/returnable glass or plastic bottles, or in refillable containers through traditional fountain or Coca-Cola Freestyle dispensers” by 2030.<sup>14</sup> Starbucks has committed that by 2025 all of its stores globally will operate a reusable cup scheme and accept customers’ personal reusable cups.<sup>15</sup> PepsiCo has committed that by the end of 2022 it will set time-bound targets to avoid or reduce single-use plastic in its beverage delivery systems, which could include the use of refillable/reusable bottles.<sup>16</sup>

## Where the New Zealand Government stands on reuse

“In the long term, we would also like to see more reusable or refilling alternatives to single-use plastics. There is opportunity for New Zealand to rethink the use of some plastic packaging altogether, and to design innovative reuse models.”—Ministry for the Environment (2020)<sup>17</sup>

• • • • • • • • •

The New Zealand Government is a signatory to the New Plastics Economy Global Commitment, and has therefore voluntarily committed to take action to increase reusable packaging through “ambitious policies and measurable targets”.<sup>18</sup> In 2018, the Government established the New Zealand Plastic Packaging Declaration for individual businesses to sign up to. The Declaration is an independent initiative aligned with the Global Commitment, with the headline pledge of 100% reusable, recyclable packaging by 2025. Many major New Zealand companies have signed the New Zealand Declaration.<sup>19</sup>

In addition, since 2018, the Government has repeatedly expressed an interest in more reuse and refill packaging in its own publications, including the National Plastics Action Plan (2021),<sup>20</sup> various waste policy consultation documents,<sup>21</sup> a paper on plastic research, innovation and investment priorities (2021),<sup>22</sup> and a position statement on compostable plastics (2022).<sup>23</sup> In particular, the Government has recognised the need for New Zealand to work towards using “less plastic”,<sup>24</sup> and that among other things, this requires a focus on “increasing the uptake of reuse and refillable models”.<sup>25</sup> The Government has also recognised that New Zealand already has some existing reuse models, but that these “need scale, infrastructure and behaviour change”.<sup>26</sup> Accordingly, the Government has highlighted how plastics innovation and investment must focus on research, infrastructure and behaviour change to:<sup>27</sup>

- increase the adoption of “innovative business models” based around “rethink, redesign, reuse, refill, reduce”;



- enable “washing and sanitisation for reusable packaging”; and
- increase “public willingness to move to reusable, refillable options”.

Furthermore, the Government’s consultation documents on a new waste strategy and a beverage container return scheme both propose the possibility of targets for reusable packaging.<sup>28</sup>

### Words not action?

“...reusable packaging is at its lowest level in history.”—Copello, Porteron & Schweitzer (2021)<sup>29</sup>

• • • •

Despite the public positivity and attention, and the pockets of legislative activity in some jurisdictions,<sup>30</sup> in most cases, **practical efforts by governments and corporates to increase reusable packaging remain largely tokenistic**. Reusable packaging constitutes a small proportion of the overall market share of packaging, and sectors that have historically been leaders, such as the beverage industry, continue to see an ongoing downward trajectory in their use of reusable packaging.<sup>31</sup>

The New Plastic Economy Global Commitment tracks the (self-reported) progress of individual signatories against the pledges and Plastic Pacts. Based on this data, the 2021 Progress Report highlighted “alarmingly little investment in efforts to reduce the need for single-use packaging” and observed that “levels of ambition to explore and scale reuse appear very low.”<sup>32</sup> Currently, by weight, just 1.6% of signatories’ plastic packaging is reusable (down 0.2% on the year prior), and more than half of all signatories have no reusable plastic packaging

at all.<sup>33</sup> Furthermore, Government policy measures have been “largely limited to banning a narrow set of items, while only three government signatories have established targets on reuse affecting their whole jurisdiction”.<sup>34</sup>

The rhetoric-action gap on reusable packaging relates to the wider challenge of implementing the waste hierarchy and preferred source reduction approaches to waste. Globally, businesses and governments routinely refer to the waste hierarchy and the benefit of reuse and refill. However, in practice, “this golden principle has been pretty much thrown out of the window”, with focus remaining on activity at the bottom of the waste hierarchy.<sup>35</sup> The Reusable Packaging Association notes that all countries “have fallen short of enacting legislation that meaningfully emphasizes reuse as a more impactful approach over recycling”.<sup>36</sup>

Some commentators have questioned the usefulness of voluntary corporate commitments to reuse.<sup>37</sup> The fact increasing numbers of companies want to be seen with

a reuse goal does demonstrate a growing recognition that consumers understand the importance of reusable packaging. However, organisations like Changing Markets Foundation have argued that voluntary commitments also act as a delay tactic, creating a semblance of activity that diffuses pressure on Government to set binding targets and other regulatory measures that could actually drive reuse.<sup>38</sup> Over the years, major brands have made a slew of waste-related voluntary commitments that remain unrealised, leading to criticism that they actually form part of a “Delay, Distract and Derail” strategy against progressive legislation to reduce plastic use and pollution.<sup>39</sup> As noted by the Changing Markets Foundation:<sup>40</sup>

... Coca-Cola – the biggest plastic polluter of all – has left behind a 30-year trail of broken promises, ranging from missed targets on recycled content to failed commitments on recovery and the introduction of alternative materials. This starkly illustrates that, regardless of how ambitious voluntary commitments sound, most companies regard them as just paper promises, easily warped, reframed or ignored while conveniently generating favourable headlines.

Similarly, the patchwork nature of voluntary commitments and targets leaves gaps and inconsistencies across industries that hampers progress and creates “an unequal and opaque picture of the overall state of play”.<sup>41</sup> For example, in the UK grocery sector, despite some retailers having company-level targets around reduced plastic usage, the total volume of plastic packaging put on the market by the sector as a whole has increased by 1.2% since 2017 and reuse and refill strategies are simply not increasing at the scale and pace required.<sup>42</sup> In addition to voluntary commitments, the practice of “endless piloting” can also decelerate progress while creating a sense of activity; for example, in 2019 just 1.9% of the Global Commitment signatories’ plastic packaging was reusable (by weight), yet 56% of signatory businesses were trialling reuse.<sup>43</sup>

## NEW ZEALAND: THE STATE OF PLAY AND BARRIERS TO PROGRESS

In New Zealand, data gaps frustrate attempts to understand the current baseline level of reusable packaging nationally. However, basic observation shows that the local market reflects international trends and that the reusable packaging market is niche. Our Sector Snapshots highlight that reuse activity exists across the economy, but they also demonstrate how much industry must do to bring this to scale. New Zealand also suffers from the same reuse rhetoric-action gap that other countries face. While our Government has expressed an interest in reuse, its signatory report to the New Plastics Economy outlined very little tangible and direct action to drive an uptake in reusable packaging.<sup>44</sup>

However, the Government is currently developing and implementing a suite of sweeping law, policy and investment reforms in its Waste Work Programme.<sup>45</sup> These create a major opportunity for New Zealand to implement specific and separate legal provisions, policy and investment for reuse. To date, most of the Government’s reforms and investments are still focused near the bottom of the waste hierarchy. The reuse targets proposed for the waste strategy would be a symbolic step forward, but the strategy is not legislation, so the targets would not be binding. The proposed inclusion of refillables targets in the beverage container return scheme legislation would be precedent-setting, though these would only apply to beverage packaging. To lift reusable packaging across the economy, we must all think big, and this requires an understanding of the current systemic barriers to reuse. With that understanding, policy, law and investment can be reshaped to remove these barriers and stimulate industry innovation in the right places.

The remainder of this chapter considers the barriers to setting up, sustaining and growing reusable packaging systems that we uncovered through a literature review and one-on-one interviews with local businesses. The numerous, structural and interconnected nature of these barriers mean they will not be overcome spontaneously.

Moving reusable packaging into the mainstream and cementing its affordability and accessibility is possible, but will require concerted, targeted action from both central and local government, and industry.

## 1 **Single-use is the default setting across supply chains, reuse requires systems change**

“We’re all just a bit stuck in this single-use groove and have been for decades, literally.”—Neil Pollett, Green Bottle (2022)<sup>46</sup>

Single-use packaging and throwaway culture are deeply entrenched in the current linear economy.<sup>47</sup> Globalised supply chains, retail distribution networks, business models and vending systems have been built around the expectation of single-use packaging, while pre-existing reuse infrastructure has largely been dismantled.<sup>48</sup> Returning to reuse requires changes in the systems and infrastructure for production, supply and logistics,<sup>49</sup> as well as new workflows and/or skills in reverse logistics, washing and repair.<sup>50</sup> In the words of one interviewee: “**there is a whole systems rethink that needs to happen**”.

Such a systems shift requires collaboration and coordination up and down supply chains, and the commitment of all parties to participate. This can be hard to achieve when actors are not obligated to change, when just-in-time distribution makes reorganisation or trials difficult to accommodate, and when the culture of the linear economy favours competition over collaboration.<sup>51</sup> Furthermore, even though reusable packaging systems are likely cheaper overall, they imply: a loss of economic value for those who benefit from the single-use system; the potential for stranded assets; and new, possibly unwelcome obligations, all of which create vested interest opposition to change.<sup>52</sup>

“Single-use, disposable is the norm; companies are established in this model. It’s not in their interests to change unless

they’re made to, and as a reusable packaging company, you need to compete with them.”—Reusable packaging business interviewee

New Zealand businesses operating reusable packaging systems highlight their struggle to ‘break into’ markets not set up for their packaging model. Many reusable packaging companies are emergent and/or small, and lack connections or influence to get their product through the door. They may face “an aversion to change from some or all of the supply chain in the industries they are designed to serve—whether consumers, suppliers or retailers—without whom the reusable packaging system cannot function effectively. Even established reusable packaging companies sometimes cannot onboard potential customers because the rest of the supply chain is unwilling to participate. This barrier is especially strong if reusable packaging could cost other supply chain actors. However, it occurs even where reuse could save money.

## 2 **Consumer habits reinforce single-use, and are difficult to change**

“Humans are creatures of habit and we have formed a society of consumerism. We want things to be fast and convenient, and packaging comes into that.”—Business/service provider interviewee

Consumer attitudes, habits, preferences and expectations are shaped by what people know and are used to, so the unfamiliarity of reusable packaging that stems from its relative unavailability can create a consumer hesitation barrier for reuse.<sup>53</sup> The lack of participation of well-known brands and large retailers in scaled reusable packaging systems also reduces the ‘mainstream’ visibility, availability and social acceptability of reuse.<sup>54</sup> The more reuse is marginalised, the more economies of scale diminish and costs increase, reinforcing the perception that single-use is intrinsically cheaper and more convenient.

Single-use packaging has also shaped modern products and shopping experiences, and created customer expectations and lifestyles that reusable packaging systems may be unable to maintain.<sup>55</sup> Shifting consumer behaviour and preferences requires far more than public education campaigns, it requires a whole reorientation of what is normal in the economy, including a reset of financial incentives around packaging so that disposables are no longer the default.<sup>56</sup> Individual reusable packaging companies do not have the power to effect this level of culture change on their own.

"Behaviour change is definitely the hardest part, across the board, from vendors, to end-users, corporates and councils. We are asking people to do stuff that doesn't have a blueprint. There is scepticism and fear at every step."—Reusable packaging business interviewee

..."the lack of washing and return infrastructure for reusables has been identified as a key barrier for getting reusable packaging launched at scale."—Bianchi & Yates (2021)<sup>58</sup>

• • • • • • •

The height of this particular hurdle is elevated because New Zealand lacks shared reusable packaging infrastructure, assets, third-party services and logistics that emergent and established companies alike can use. Unlike for single-use packaging, there is no obvious list of reusable packaging manufacturers for producers to order from, no clear supply chains or collection, distribution, washing or maintenance network to tap into, and virtually no reusable packaging pools to join. Therefore, **companies wanting to run a reusable packaging system must start from scratch**, which is expensive (often, prohibitively so). This situation has led to today's reusable packaging market being dominated by a patchwork of vertically integrated or highly bespoke systems, which increases inefficiency and cost and likely means these systems are not reaching their full potential to reduce cost savings across the supply chain or realise resource efficiency and emissions reductions.<sup>59</sup>

The lack of shared infrastructure and services is not only a barrier to overcome at the establishment phase, but an ongoing factor that increases operational costs for reusable packaging businesses (e.g. transport/freight costs for returning packaging has been cited as "crazy expensive"<sup>60</sup>). The higher operational costs translate to product price, which limits a company's potential market, and the system complexity limits access to retailers who do not want the inconvenience of having to manage the bespoke reusable packaging systems of countless vertically-integrated businesses.

Accordingly, many interviewees emphasised the need for a network or systems approach to reusable packaging, including third-party operators who can protect reusable assets and operate logistics at a scale that creates viability, the participation of some bigger players to push up economies of scale, and a greater degree of system and container standardisation.

### 3 **Setting up reuse systems requires major upfront investment and ongoing operational costs because of a lack of shared infrastructure**

One of the most consistent barriers faced by companies wanting to set up and/or sustain a reusable packaging system is the high initial investments, and ongoing operational costs, required in the absence of collective supporting infrastructure for reuse, e.g. facilities and logistical systems for collections, returns, washing and repairing of reusables).<sup>57</sup> Reusable packaging units are also typically more expensive than their single-use counterparts, so a fleet of reusables is a major upfront investment, as are bulk dispensing units. New Zealand also lacks manufacturers for reusable packaging and bulk dispensers, which significantly reduces the choice available to companies. In addition to high upfront infrastructural costs, reusable packaging companies often lack space to operate a reusable packaging system, and struggle with the prohibitive cost of rent.



"With reusable packaging you are running a system – you obviously need the scale of assets circulating at any one time, but you also need a network of points – service centres servicing products, return points, logistical operators moving things around."—Reusable packaging business interviewee

4 **An uneven playing field due to unhelpful regulatory and policy environment**

"...institutional processes, incentives and cultures are informed by linear economic and waste management models... In some instances, policies and incentives may even hinder reuse models and instead contribute to an inherent support for waste generation and single-use products..."—City Playbook Working Group (2021)<sup>61</sup>

The playing field between single-use and reuse is not level, which undermines operational viability for reusable packaging companies already playing catch-up from high set-up costs. **The regulatory and policy environment economically incentivises single-use, even though reusable packaging is higher up the waste hierarchy.** While reusable packaging systems essentially internalise their own costs (because the producer pays to collect back the packages, wash and refill them, and/or sets up and runs the supporting system infrastructure and logistics), the costs of single-use packaging costs are externalised across the supply chain.<sup>62</sup>

"...my bug bear is that plastic is not carrying the full environmental cost – that's the beef I have with regulators – it just needs to level the playing field."—Julian Raine, Oaklands Milk (2020)<sup>63</sup>

Single-use packaging is cheap and easy for manufacturers and businesses to purchase, and in many instances is dispensed to consumers for free. There is **no levy or other disincentive for knowingly putting a single-use item on the market**,<sup>64</sup> nor any targeted and consistent tax break, subsidy or other incentive for reuse. Furthermore, local and central government waste minimisation policy, practice and resource are funnelled towards recycling, downcycling and landfill, effectively subsidising and legitimising the single-use system.<sup>65</sup> For example, in New Zealand the overwhelming majority of material that enters rates-funded kerbside recycling systems is single-use packaging.<sup>66</sup> Waste and recycling services and their accompanying communication/promotional campaigns also make recycling, rather than reusing, the more convenient and obvious eco-decision for consumers.<sup>67</sup>

5 **Policy and investment strategies to "fix" waste problems presume single-use**

"The main reason reuse has not been adopted here is recycling has been promoted as best practice in New Zealand when in fact it's one of several options and sits below reuse on the waste hierarchy."—Reusable packaging business interviewee

While there is increasing awareness that something must be done about the problems of packaging waste

and pollution, the solutions that are financed and supported reveal a presumption that single-use will remain the dominant paradigm. This presumption leads to the underappreciation and under-resourcing of source reduction approaches, such as reuse. In New Zealand, very little public infrastructure, services, policy or investment cater to the needs of businesses and households operating higher up the waste hierarchy. Instead, the focus of businesses, government and consumer activity continues to be on:

- recycling, downcycling, and composting end-of-life packaging
- light-weighting packaging upstream to reduce volumes, which does not reduce the overall number of packaging units on the market, and often makes packaging less reusable and less recyclable
- regulating plastic, rather than single-use, which incentivises businesses to substitute plastic with other single-use materials, rather than encouraging a shift to reusables.

“Most people seem to get the distinction between reuse/recycle/compost, but they don’t necessarily get that recycle and composting aren’t reasonable pathways at scale. They think putting stuff in the right bin solves the problem.”—Reusable packaging business interviewee

• • • • • • • • • • • • • • •

All these activities chew up the finite pool of resources, time and investment for packaging solutions, leaving reusable packaging with even fewer resources and financing to draw on, when it is already trying to compete for operational viability on a playing field tipped towards the single-use packaging system. For reuse to scale, this logistical, service and infrastructure support would need to shift. Most interviewees discussed being heavily undercapitalised, which undermined their ability to scale or make their operations more efficient.

Even when reuse or source reduction are mentioned in policy, targets and commitments, they often are not given their own specific focus and attention, separate from

recycling and composting.<sup>68</sup> This failure of differentiation in both policy, regulation and business strategies reinforces the **continued neglect of reuse, which requires distinct infrastructure and approaches that often directly compete with recycling.**<sup>69</sup> For example, high-profile targets that bundle these strategies together, like “100% reusable, recyclable or compostable packaging by 2025”, often do not advance a shift towards reuse because Governments and businesses can fully achieve the target via the path of least resistance (e.g. 100% recyclable) without any reuse gains made.

## 6 **Reuse needs a louder voice and more champions**

Reusable packaging lacks an independent voice or profile and is poorly understood across the economy. The reusable packaging sector in New Zealand is fragmented and lacks independent representation of its interests within the wider packaging industry, the industry sectors it serves, or with local and central government policymakers, or politicians. We know of no industry bodies that have a resourced work programme specifically for reuse. The world over, local and central governments have largely left the promotion of reuse to NGOs and reuse businesses, who are time and resource poor.<sup>70</sup> In addition, methodologies for collecting data on reusable packaging and calculating its waste prevention impact are underdeveloped and not applied by central or local government, who tend to measure waste diversion rather than waste avoidance. As a result, **the story of reuse is simply not being told.**

Many interviewees lamented the lack of awareness amongst the public, policymakers and industry groups about the necessity and benefits of reuse, as well as the reusable packaging systems and opportunities that exist already. They cited a lack of resources and funding to promote themselves or reach wider audiences and retailers beyond niche stores and groups of people, and felt drowned out by the continual promotion of recycling. They also noted the difficulty of measuring and proving their own impact without clear and standard methodologies for doing so, which further problematises telling the reuse story.

## 7 Over-policing of reusable packaging on the grounds of safety and hygiene

"There's no understanding of bulk and reuse in food safety – everything's set up for linear. It's not that we are asking to do really dangerous food safety stuff, it's just that no one wants to make decisions on certain things because there is no legislation on things other than linear – it goes in a package and it leaves the factory."—Business operating reusable packaging system

• • • • • • •

**The drafting and the implementation of food safety, hygiene, health and safety legislation can be unclear or overly restrictive for reusable packaging.<sup>71</sup>** Reusable packaging is largely not foreseen by wider legislation, which creates an uncertainty that can lead to over-policing by inspectors.<sup>72</sup> In some cases, the stringent requirements might be justified, but there is a low level of support for businesses to adapt, with one interviewee noting that "it's a nightmare to get MPI approval to be able to clean this stuff".

## 8 Covid-19

"Covid has impacted reusables because all trials and pilots have been put on hold, and also because of increased germaphobia."—Business operating reusable packaging system

• • • •

The covid-19 global pandemic has created an additional hurdle to establishing reusable packaging, largely because it has exacerbated the existing barriers discussed in this chapter above. The use of single-use packaging has increased dramatically during the pandemic,<sup>73</sup> largely because of a greater reliance on online delivery, as well as some heightened fear about the safety of reusables (even where this is not scientifically justified). Most businesses are

more time- and resource-constrained and, coupled with supply-chain disruptions causing delays and increasing costs, there is greater unwillingness to try new things or change systems. As a result, many trials and pilots of reusable packaging have been delayed or cancelled.<sup>74</sup> Furthermore, because many reusable packaging operators service hospitality, smaller grocery retailers or markets, lockdowns that saw these outlets closed eliminated a large share of the market. While Government recovery funding presents an opportunity to 'build back better' and increase investment in reuse, most funding has been used to shore up resource recovery for recycling.

## It's time to act – find out how

The barriers to reusable packaging are significant, but not insurmountable. Through coordinated action from local and central government, as well as industry groups and individual businesses, these barriers can be overcome and New Zealand can move beyond the current state, and build a pathway towards the brightest future for reuse.

The good news is that reuse solutions exist already in most key sectors, they just need support and the right enabling conditions to scale. To read more about these existing reuse solutions, take a deep dive into our *Sector Snapshots*. Otherwise, jump straight to our *Taking Action* chapters to find a range of recommendations for local and central government and industry, to increase reuse.

## REFERENCE LIST

- 1 City Playbook Working Group (2021) City Playbook: Building a Reuse City (Consumers Beyond Waste – An initiative of the Future of Consumption Platform, World Economic Forum). Accessible at <https://weforum.ent.box.com/s/fx48az4ij1c8gr31g8jm5bppls79fpom>, p.18; Lauren Weir (2022) What the EU can do to support the grocery retail sector in reducing packaging and plastic pollution: policy briefing (Environment Investigation Agency, #breakfreefromplastic, Rethink Plastic, We Choose Reuse). Accessible at <https://rethinkplasticalliance.eu/wp-content/uploads/2022/02/1702-RPA-European-Grocery-Retail-Plastic-Policy-Briefing-V7.pdf>, p.8.
- 2 City Playbook Working Group (2021), above n 1, p.7.
- 3 Kantar and Sustainable Business Council (2022) Better Futures 2022. Accessible at <https://www.kantarnewzealand.com/wp-content/uploads/2019/05/Kantar-Better-Futures-Report-2022.pdf>, p.14.
- 4 Kantar and Sustainable Business Council (2022), above n 3, p.4.
- 5 Kantar and Sustainable Business Council (2022), above n 3, pp.21,30,35.
- 6 City Playbook Working Group (2021), above n 1, p.7. For example, Greenpeace, Zero Waste Europe, Global Alliance for Incinerator Alternatives, #BreakFreeFromPlastic, UPSTREAM Solutions, and Oceana.
- 7 City Playbook Working Group (2021), above n 1, p.19.
- 8 Ellen MacArthur Foundation (n.d.) The New Plastics Economy Global Commitment. Accessible at <https://ellenmacarthurfoundation.org/global-commitment/overview>.
- 9 Ellen MacArthur Foundation (n.d.) The Plastics Pact Network. Accessible at <https://ellenmacarthurfoundation.org/the-plastics-pact-network>.
- 10 Ellen MacArthur Foundation (n.d.) ANZPAC Plastics Pact. Accessible at <https://ellenmacarthurfoundation.org/anzpac>.
- 11 European Commission (2020) Circular Economy Action Plan: For a cleaner and more competitive Europe. Accessible at [https://ec.europa.eu/environment/pdf/circular-economy/new\\_circular\\_economy\\_action\\_plan.pdf](https://ec.europa.eu/environment/pdf/circular-economy/new_circular_economy_action_plan.pdf).
- 12 Justine Maillot (2022) "Setting Effective Reuse Targets to serve the Upscale of Reusable Packaging" We Choose Reuse. Accessible at [https://rethinkplasticalliance.eu/wp-content/uploads/2022/04/WeChooseReuse\\_EffectiveTargets\\_def.pdf](https://rethinkplasticalliance.eu/wp-content/uploads/2022/04/WeChooseReuse_EffectiveTargets_def.pdf), p.1.
- 13 Maillot (2022), above n 12, p.4.
- 14 The Coca-Cola Company (2 February 2022) "The Coca-Cola Company Announces Industry-Leading Target for Reusable Packaging" The Coca-Cola Company. Accessible at <https://www.coca-colacompany.com/news/coca-cola-announces-industry-leading-target-for-reusable-packaging>.
- 15 Starbucks (15 March 2022) "Starbucks Innovates, Tests and Learns from Store Partners to Achieve Waste Goals" Starbucks Stories & News. Accessible at <https://stories.starbucks.com/stories/2022/starbucks-innovates-tests-and-learns-from-store-partners-to-achieve-waste-goals/>.
- 16 As You Sow (16 March 2022) "PepsiCo Pledges to Reduce Single-Use Packaging as Requested by As You Sow Proposal" As You Sow. Accessible at <https://www.asyousow.org/press-releases/2022/3/16/pepsi-reduce-single-use-packaging>.
- 17 Ministry for the Environment (2020) Reducing the impact of plastic on our environment – moving away from hard-to-recycle and single-use items (Wellington: Ministry for the Environment).
- 18 Accessible at <https://environment.govt.nz/publications/reducing-the-impact-of-plastic-on-our-environment-moving-away-from-hard-to-recycle-and-single-use-items/>, p.39.
- 19 New Plastics Economy Global Commitment (2020) Commitments, Vision and Definitions (Version: February, 2020), p.4.
- 20 For more details about the New Zealand Plastic Packaging Declaration see Ministry for the Environment (2021) New Zealand Plastic Packaging Declaration. Accessible at <https://environment.govt.nz/what-you-can-do/campaigns/new-zealand-plastic-packaging-declaration/>.
- 21 Ministry for the Environment (2021) National Plastics Action Plan for Aotearoa New Zealand (Wellington: Ministry for the Environment). Accessible at <https://environment.govt.nz/publications/national-plastics-action-plan/>.
- 22 Ministry for the Environment (2021) He ara hou mō te kirihou | A new path for plastic: Plastics research, innovation, and investment priorities (Wellington: Ministry for the Environment). Accessible at <https://environment.govt.nz/publications/a-new-path-for-plastic/>.
- 23 Ministry for the Environment (2022) Compostable products: Ministry for the Environment position statement (Wellington: Ministry for the Environment). Accessible at <https://environment.govt.nz/publications/compostable-products-ministry-for-the-environment-position-statement/>.
- 24 Ministry for the Environment (2021), above n 20, p.6.
- 25 Ministry for the Environment (2021), above n 22, p.14.
- 26 Ministry for the Environment (2021), above n 20, p.5.
- 27 Ministry for the Environment (2021), above n 22, pp.8, 9, 11.
- 28 Ministry for the Environment (2021) Te kawe i te haepapa para | Taking responsibility for our waste: Proposals for a new waste strategy: Issues and options for new waste legislation (Wellington: Ministry for the Environment). Accessible at <https://consult.environment.govt.nz/waste/taking-responsibility-for-our-waste/>; Ministry for the Environment (2022) Transforming recycling | Te panoni i te hangarua: Consultation document (Wellington: Ministry for the Environment). Accessible at <https://environment.govt.nz/news/transforming-recycling/>.
- 29 Larissa Copello, Samy Porteron and Jean-Pierre Schweitzer (2021) Realising Reuse: The Potential for Scaling up Reusable Packaging, and Policy Recommendations (Rethink Plastic and #BreakFreeFromPlastic), p.4.
- 30 See an overview of the key national policies and regulations on reuse in Europe, the Americas, and Asia-Pacific here: Consumers Beyond Waste (2021) National Reuse Policy Briefing Paper (World Economic Forum's Platform for Sharing the Future of Consumption). Accessible at <https://www.weforum.org/agenda/2022/01/how-national-policies-can-accelerate-the-transition-to-a-reuse-economy/>.
- 31 Jason Wilcox and James Mackenzie (2021) What We Waste: Tracking 20 years of growth in international drinks container wastage, and how refillables and deposit return systems can reverse this trend (Reloop). Accessible at <https://www.reloopplatform.org/what-we-waste/>; Copello, Porteron and Schweitzer (2021), above n 29, p.4.
- 32 Ellen MacArthur Foundation (2021) The Global Commitment 2021 Progress Report. Accessible at <https://emf.thirdlight.com/link/n1pti7a089d-ekf9l1/@/preview/1?o>, p.5.
- 33 Ellen MacArthur Foundation (2021), above n 32, p.5.

- 34 Ellen MacArthur Foundation (2021), above n 32, p.5.
- 35 Suneel Kunamaneni, Sukky Jassi, Dong Hoang (2019) "Promoting reuse behaviour: Challenges and strategies for repeat purchase, low-involvement products" Sustainable Production and Consumption 20. <https://doi.org/10.1016/j.spc.2019.07.001>, p.257.
- 36 Reusable Packaging Association (2020) Reusable Transport Packaging: State of the Industry Report 2020. Accessible at <https://reusables.org/wp-content/uploads/2020/06/Reusable-Transport-Packaging-State-of-the-Industry-Report-2020-1.pdf>, p.9.
- 37 Maillot (2022), above n 12, p.1.
- 38 Alice Delemare Tangpuori, George Harding-Rolls, Nusa Urbancic and Ximena Purita Banegas Zallio (2020) Talking Trash: the corporate playbook of false solutions to the plastic crisis (Changing Markets Foundation). <https://talking-trash.com/>.
- 39 Tangpuori et al (2020), above n 38, p.15.
- 40 Tangpuori et al (2020), above n 38, p.14.
- 41 Weir (2022), above n 1, p.3.
- 42 Environmental Investigation Agency and Greenpeace (2021) Checking Out on Plastics III (London: EIA UK). Accessible at <https://checkingoutonplastics.org/>, p.4.
- 43 Nusa Urbancic from Changing Markets Foundation (6 July 2021) "Corporate commitments on reuse: all talk and no action?" (Presentation at the 8th European REUSE Conference hosted by Deutsche Umwelthilfe (Environmental Action Germany)).
- 44 Ministry for the Environment (2021) Global Commitment 2021 Signatory Report. Accessible at <https://ellenmacarthurfoundation.org/global-commitment/signatory-reports/gov/ministry-for-the-environment-new-zealand>.
- 45 Ministry for the Environment (2021) Waste reduction work programme (Wellington: Ministry for the Environment). Accessible at <https://environment.govt.nz/publications/waste-reduction-work-programme/>.
- 46 Neil Pollett (25 February 2022) Representing Green Bottle for the panel session "Aotearoa New Zealand's reusable packaging future—how to transition, benefits, challenges and needs" at the Sustainable Business Network Packaging Masterclass 2022. Accessible at <https://sustainable.org.nz/learn/sbn-event-recordings/aotearoa-s-reusable-packaging-future/>.
- 47 Ferran Rosa (2018) The Story of Recircle: Zero Waste Consumption and Production (Zero Waste Europe). Accessible at [https://zerowasteeurope.eu/wp-content/uploads/2019/11/zero\\_waste\\_europe\\_cs1\\_cp\\_reCircle\\_en.pdf](https://zerowasteeurope.eu/wp-content/uploads/2019/11/zero_waste_europe_cs1_cp_reCircle_en.pdf).
- 48 Patricia Megale Coelho, Blanca Corona and Ernst Worrell (2020) Reusable vs Single-Use Packaging: A review of environmental impacts (Reloop & Zero Waste Europe). Accessible at <https://zerowasteeurope.eu/library/reusable-vs-single-use-packaging-a-review-of-environmental-impact/>, p.6. Nathan Dufour of Zero Waste Europe (6 July 2021) "When reuse becomes the new 'normal' – a system change perspective" (Presentation at the 8th European REUSE Conference hosted by Deutsche Umwelthilfe (Environmental Action Germany)); George Beechener et al (2020) Packaging Free Shops in Europe: An initial report (Bristol: Prepared by Eunomia Research & Consulting Ltd, with contributions from Zero Waste Europe and Reseau Vrac). Accessible at <https://zerowasteeurope.eu/library/packaging-free-shops-in-europe-an-initial-report/>, pp.27,35.
- 49 Kunamaneni, Jassi, Hoang (2019), above n 35, p.254; Patricia Megale Coelho et al (2020) "Sustainability of reusable packaging—Current situation and trends" Resources, Conservation & Recycling: X, Vol 6. <https://doi.org/10.1016/j.rcrx.2020.100037>, pp.2,8; Beechener et al (2020), above n 48, p.35.
- 50 Leonore te Bokkel et al (2021) The Future of Work: Baseline Employment Analysis and Skills Pathways for the Circular Economy in Scotland (Zero Waste Scotland and Circle Economy). Accessible at <https://www.zerowastescotland.org.uk/content/future-work>.
- 51 Laura Stewart (2022) "Business Unusual: Exploring the Role of Vertical and Horizontal Collaboration in the Development of Circular Business Models for Reusable Packaging in Zero-Waste Grocery Stores" (Thesis submitted for Master of Sustainable Business at Department of Management, University of Otago), p.49.
- 52 City Playbook Working Group (2021), above n 1, p.16; Coelho et al. (2020), above n 49, pp.5-7.
- 53 Sarah C. Greenwood et al (2021) "Many Happy Returns: Combining insights from the environmental and behavioural sciences to understand what is required to make reusable packaging mainstream" Sustainable Production and Consumption 27. <https://doi.org/10.1016/j.spc.2021.03.022>; Jasmin Wiefek, Julia Steinhorst & Katharina Beyerl (2021) "Personal and structural factors that influence individual plastic packaging consumption—Results from focus group discussions with German consumers" Cleaner and Responsible Consumption 3. <https://doi.org/10.1016/j.crc.2021.100022>.
- 54 Kunamaneni, Jassi, Hoang (2019), above n 35, p.253.
- 55 Wiefek, Steinhorst & Beyerl (2021), above n 53.
- 56 Miriam Gordon (2020) Reuse wins: the environmental, economic, and business case for transitioning from single-use to reuse in food service (UPSTREAM). Accessible at <https://upstreamsolutions.org/reuse-wins-report>, p.68; Wiefek, Steinhorst & Beyerl (2021), above n 53.
- 57 Valerie Bianchi and Sunshine Yates (2021) The Journey to a Circular Economy in the Waikato Region (Waikato Regional Council Technical Report 2021/34). Accessible at <https://www.waikatoregion.govt.nz/assets/WRC/TR202134.pdf>, p.14; Coelho, Corona and Worrell (2020), above n 48, p.19; Dufour (2021), above n 48; Coelho et al. (2020), above n 49, pp.4-5,8.
- 58 Bianchi and Yates (2021), above n 57, p.14.
- 59 Copello, Porteron and Schweitzer (2021), above n 29, pp.4, 12-13; City Playbook Working Group (2021), above n 1, pp.16-17; Dufour (2021), above n 48; Beechener et al (2020), above n 48, p.35.
- 60 Stewart (2022), above n 51, p.40.
- 61 City Playbook Working Group (2021), above n 1, p.18.
- 62 Dufour (2021), above n 48; Coelho et al. (2020), above n 49, pp.5-7; Beechener et al (2020), above n 48, p.27.
- 63 Julian Raine (4 November 2020) Representing Oaklands Milk for the panel "Reuse Systems" at the Zero Waste Network Aotearoa Digital Summit Our Zero Waste World. Accessible at <https://www.summit.zerowaste.co.nz/watch>.
- 64 Rosa (2018), above n 47, p.4; Beechener et al (2020), above n 48, pp.27.
- 65 Dufour (2021), above n 48; Kunamaneni, Jassi, Hoang (2019), above n 35, p.257; Coelho, Corona and Worrell (2020), above n 48, p.8.
- 66 Sunshine Yates Consulting Ltd (2019) Rethinking Rubbish and Recycling (Prepared for WasteMINZ TAO Forum). Accessible at <https://environment.govt.nz/assets/publications/Rethinking->

rubbish-and-recycling.pdf.

- 67 Kunamaneni, Jassi, Hoang (2019), above n 35, pp.254,264-265.
- 68 Miriam Gordon (2021) The Reuse Policy Playbook: A policy roadmap to reuse (Upstream), p.8.
- 69 Reusable Packaging Association, above n 36, p.9.
- 70 Dufour (2021), above n 48.
- 71 Rosa (2018), above n 47; City Playbook Working Group (2021), above n 1, pp.25-26; Beechener et al (2020), above n 48, p.27.
- 72 Gordon (2020), above n 56, pp.68-69; Beechener et al (2020), above n 48, p.27.
- 73 Jiri Jaromir Klemes et al (2020) "Minimising the present and future plastic waste, energy and environmental footprints related to COVID-19" Renewable and Sustainable Energy Reviews. <https://doi.org/10.1016/j.rser.2020.109883>.
- 74 Rebecca Percasky (25 February 2022) Representing Better Packaging Co for the panel session "Aotearoa New Zealand's reusable packaging future—how to transition, benefits, challenges and needs" at the Sustainable Business Network Packaging Masterclass 2022. Accessible at <https://sustainable.org.nz/learn/sbn-event-recordings/aotearoa-s-reusable-packaging-future/>.

reuse  
aotearoa

RECYCLING SNAPSHOT 2023

# 2.0 Sector snapshots introduction

New Zealand has a wide range of companies operating reusable packaging systems, even though the default option is still single-use.<sup>1</sup> Today, most reusable packaging companies are niche operators, but the number of companies in this sector is growing (although New Zealand lacks data to understand properly how reusables fit in the overall share of the market). Investigating New Zealand's homegrown systems will help us find ways to support their growth and/or duplicate successful models across the country. Supporting reusable packaging systems helps to meet the country's waste, plastic pollution and climate change commitments and avoid New Zealand being left behind global trends. Following best practice standards will ensure reusable packaging becomes more accessible and affordable across the economy, for both businesses and consumers. To read more on these points, see our *Setting the Scene* chapters

This report looks at the viability of reusable packaging systems for some key sectors of the Tauranga economy, drawing on examples from across New Zealand. We presume that the barriers and opportunities these businesses face are broadly applicable across the country. To inform this analysis, we undertook:

- Interviews with 18 businesses using reusable packaging systems for their products, or for whom reusable packaging is their core business. Most of these businesses operate and/or sell products in reusable packaging in Tauranga City. Some businesses have no connection to Tauranga at all, but

their business or product provided an important case study or opportunity for the Tauranga economy.

- A desktop study of reusable packaging systems in New Zealand, including interviews, webinars and printed materials already in the public domain. Therefore, **not every business mentioned or quoted in this report was interviewed.**

We have grouped together our findings to present them as six Sector Snapshots:

- Hospitality, tourism and accommodation
- Beverages
- Construction
- Groceries
- Personal care and cleaning products
- Transit/transport packaging

Each Sector Snapshot provides examples of existing reusable packaging systems, and an overview of key trade-offs and opportunities for businesses wishing to establish, sustain or grow reusable packaging within the relevant sector. The snapshots should be read alongside the *Setting the Scene* chapters of this report, which outline the key design elements for a successful reuse system, as well as the key barriers to reuse that apply across all sectors.

The *Taking Action* chapters of this report offer recommendations for councils, industry and central government to increase the uptake of reusable packaging in Tauranga, and beyond. These recommendations reflect what interviewees told us would be helpful for them, and what we learned from our wider research. We have grouped these together as cross-sector recommendations rather than sector-specific recommendations.

Wherever possible, we seek to share the ideas, insights and reflections of reusable packaging operators in their own words. We thank all the interviewees for their honesty and for sharing their time with us.

1 Hannah Blumhardt (2020) "More to Product Stewardship than Recycling: Reusable and Refillable Packaging Systems" 175 revolve. Accessible at <https://www.wasteminz.org.nz/pubs/revolve-magazine-july-2020-issue-175/>.

SECTOR SNAPSHOT

**2.1**  
**Hospitality,  
tourism &  
accommodation**



## 2.1 Hospitality, tourism & accommodation

Hospitality outlets, tourism and accommodation providers use a lot of packaged household-type goods, e.g. food and beverage products. They also pass on packaging to customers through single-use serviceware or single-serve toiletries or condiment packets/sachets. In the sector, three key activities are helping to replace this packaging with reusables:

1. Reusable serviceware systems.
2. Outlets buying goods from suppliers who operate reusable packaging systems.
3. Outlets opting to phase-out single-use packaged options.

### REUSABLE SERVICEWARE SYSTEMS

Food and beverage packaging makes up eight of the top 10 most commonly found plastic pollution items during International Coastal Cleanup.<sup>1</sup> Single-use plastic takeaway items for food and drink “dominates global litter”.<sup>2</sup> In New Zealand, takeaway packaging makes up about 7.8% of branded litter,<sup>3</sup> and we collectively consume 295 million single use coffee cups per year. The New Zealand Government recognises the problem and has started phasing-out some single-use plastic serviceware items.

In New Zealand, **ten reusable serviceware schemes** have emerged to tackle disposable serviceware at source. These schemes create a system for hospitality outlets to loan out reusable takeaway cups and containers to customers, instead of using disposables (see **Table 1**).<sup>4</sup>

Eight of these schemes focus on reusable cups, one focuses on reusable food containers, and one offers both reusable cups and containers. All operate slightly

different business models and use different types of containers. Some charge outlets a monthly plan to participate, some charge per transaction in a reusable, some charge the outlets upfront for the reusable containers while others retain ownership of the reusables. Some are purely community-driven.

Reusable serviceware systems rely on consumers returning borrowed containers to be cleaned and recirculated, designated places where containers can be dropped-off, and infrastructure for washing. To encourage returns, three of New Zealand’s schemes use an app that facilitates the loaning/swapping of the reusable.<sup>5</sup> Four use a deposit return system,<sup>6</sup> four operate on trust (i.e. containers are free to loan and customers are trusted to return them without an incentive).<sup>7</sup> Two schemes offer a collection, washing and redistribution service for containers, if required. However, most schemes require participating outlets to act as a drop-off and wash point for reusables. In this way, these schemes piggy-back off the washing infrastructure already embedded in the hospitality industry, and seek to onboard enough outlets to create a convenient and wide-reaching drop-off network.



**Table 1: Reusable serviceware systems in New Zealand**

Company	Main location(s)	Serviceware type	Reusable container material	System for reuse	Washing service?
Again Again	Nationwide	Cups & food containers	Mostly double-walled stainless steel. Silicone or plastic lids. One single-walled cup with cardboard sleeve.	App – free to loan with replacement fee charged if not returned within specified time period	No
			System capable of loaning out reusables from other providers	Option of cash-based deposit	
Auraki	Te Herenga Waka—Victoria University of Wellington	Cups	Secondhand mugs donated by local tip shop	Trust	No
Chunky Loan Cup	Queenstown	Cups	Double-walled stainless steel cups, plastic lid	Deposit (\$10)	No
CupCycling/ SwappaNZ	Nationwide	Cups	Plastic cup and lid	App – free to loan with replacement fee charged if not returned within specified time period	No
Good to Go	Waiheke Island	Cups	Upcycled glass jars	Trust	Yes
mikuppi	Tauranga & Christchurch	Cups	Double-walled stainless steel cups, plastic lids	App – customers buy into the system by purchasing the reusable cup in their first order through the app. They are then entitled to swap it for a fresh cup on each successive order.	No
Mugcycle	Wellington	Cups	Secondhand mugs collected by bike from local tip shop	Trust	No
Mugly	Auckland	Cups	Secondhand mugs	Trust	No
Reusabowl	Wellington	Food containers	Bioplastic container, silicone lid	Deposit (\$10)	No
Wanakup	Wanaka	Cups	Double-walled stainless steel cup, silicone lid	Deposit (\$10)	Yes

## Snapshots



MIKUPPI: IMAGE SUPPLIED

**MiKuppi** (launched in Tauranga, 2021) is a mobile ordering app for coffee with an in-built reusable cup library of double-walled stainless steel cups. Customers download the miKuppi app, select any of the participating cafes and order their coffee through the app. The cafe prepares the order into a miKuppi cup. On their first order, the customer pays an initial fee to join the cup lending system, which covers the cup's cost (roughly \$1 because customers get their first drink for free). Cups can be returned to any participating outlet and exchanged for a fresh reusable cup with the customer's next order at no extra charge (provided the previous cup is returned, otherwise customers must buy another cup). Participating outlets wash and sanitise returned cups. The cafes benefit from joining the app, which has lower fees than other mobile ordering apps, and the café doesn't need to purchase the reusable cups. In less than a year, miKuppi diverted over 5000 cups from landfill, and aim to divert 30,000 cups in 2022.

“It’s possible for something to be convenient and eco as well. We set out to make something that is easier than how you would use something disposable while getting rid of the disposable component. It saves people from waiting in line and you don’t need a reusable cup.”



AGAIN AGAIN: IMAGE SUPPLIED

**Again Again** began in 2018 as a deposit-based provider of a reusable, single-walled stainless steel cup (with a cardboard sleeve). They have ~150 participating outlets on their network nationwide, of which 27 have eliminated disposable cups entirely.<sup>8</sup> They estimate they have already prevented the use of ~1,000,000 disposable cups. Since the end of 2021, Again Again have evolved their business to focus on developing and implementing app-based technology that can manage any type of reusable container (not limited to Again Again fleets). They have also expanded their own reusable serviceware range to include double-walled stainless steel cups, sushi containers, and hot and cold food containers. Their app enables hospitality outlets to loan out and track reusable serviceware (without needing a deposit), and to recoup the replacement cost of any unreturned containers. Customers join the Again Again system via a smartphone app that they scan when they purchase their takeaways in a reusable. They have two weeks to return the container before they are charged a late fee. If they do not return the container within three weeks, they are charged the full cost of the container and Again Again dispatches a replacement container to the outlet (or reimburses the outlet if they are using non-Again Again containers). Participating outlets are responsible for washing and sanitising returned cups, and for purchasing reusable fleets.

“For disposable containers, the upfront cost is very low compared to reusables... but you do pay that small cost every single time. With a reusable, you can use it hundreds of times, so eventually it becomes more profitable. It’s just that it’s a bigger risk upfront. So, Again Again takes that upfront risk on, and in return takes a small piece on every order.”

## SNAPSHOT

### SUPPLIERS OPERATING REUSABLE PACKAGING SYSTEMS

Hospitality, tourism and accommodation providers rely on a wide range of supplies to run their core business, e.g. ingredients to prepare meals, toiletries for guest bathrooms, and drinks served at bars. All this product can translate to a lot of packaging. However, some suppliers are finding ways to remove this waste.

Some beverage producers deliver their drinks to hospitality outlets in reusable glass bottles that they take back for sanitisation and refill. **Oaklands Milk** in Nelson delivers milk in this way to over 140 cafes and restaurants in the top of the South Island.<sup>9</sup> Spirit and liqueur manufacturer, **Koakoa**, provides this service for bars and restaurants in the Lower North Island.<sup>10</sup> In Wellington, **Hardie Boys** does the same for the ginger beer, lemonade and other soft drinks that they manufacture and deliver locally.

On the Wellington Waterfront, **Tuatua Cafe** has a mission to be a zero waste cafe. They have switched many of their front-of-house and back-of-house beverage suppliers to ones that use returnable packaging, including soft drinks (**Hardie Boys**), Kombucha (**KB Kombucha**), cow's milk (**Eketahuna Country Meats**), Goat's Milk (**Brooklyn Creamery**), and chai syrup (**Nela's Chai**). Tuatua also makes all their smoothies and juices in-house and sells them 'to go' in reusable glass bottles with a deposit so customers return them.

Kegging drinks so outlets can dispense them 'on tap' is also an efficient reusable packaging system for hospitality settings that churn through much larger volumes of product than individual households. Sending beer kegs to bars is common, but kegs are now being used for a wider range of beverages, including wine, milk and soft drinks.



KAIPAKI DAIRIES MILK TAP: IMAGE SUPPLIED

A relatively recent innovation is milk in returnable kegs. Currently, two companies in New Zealand (**Kaipaki Dairies** in Waikato, and **Spout** in Otago) install milk taps into cafes, deliver kegs of milk, and then collect back empty kegs, sanitise and refill them for redistribution. Both work with local farmers to source the milk. Kaipaki Dairies' delivery range extends to cafes in Waikato, Bay of Plenty and Auckland. They use an 18L reusable HDPE keg from the Australian company The Udder Way that can be washed and refilled up to 800 times, saving up to 7000 single-use bottles over its lifetime.<sup>11</sup> Spout delivers to cafes in Christchurch, Queenstown, Wanaka and Dunedin, and uses stainless steel kegs that can be washed and refilled thousands of times, saving an average café around 3000 single-use bottles a year.<sup>12</sup>

## SNAPSHOT

The **Sherwood hotel** in Queenstown procures 80% of the wine and 90% of the beer it sells in its bar in returnable kegs from local breweries and wineries, thus eliminating glass bottles that would otherwise need to be shipped to Auckland for recycling. The hotel's milk is delivered in reusable glass bottles from a farm in Southland.

## OUTLETS AND TOURISM PROVIDERS PHASING-OUT SINGLE-USE

"The single biggest driver to uptake of reuse is actually to take away the single-use options."—Nada Piatek, Again Again (2022)<sup>13</sup>

• • • •

Many hospitality outlets are making space for reuse systems by phasing-out single-use serviceware. Roughly 70 hospitality outlets nationwide no longer offer disposable coffee cups.<sup>14</sup> Three university campuses (**University of Otago**, **Lincoln University**, and **Te Herenga Waka—Victoria University of Wellington**) are disposable cup free and use one of the existing serviceware schemes described above.<sup>15</sup> In 2019, **Cardrona mountain** phased-out the use of single-use coffee cups, crockery and cutlery, eliminating roughly 25,000 disposable cups a year.<sup>16</sup> **Wanaka** has a goal of being single-use cup free by 2022 and the community has supported many of the town's cafes to phase-out single-use cups.<sup>17</sup>



USE YOUR OWN DIRECTORY GUIDES

The **Use Your Own Cafe Directory (UYO)** has created New Zealand's most comprehensive guides for the hospitality industry to minimise waste through a reduction and reuse approach.<sup>18</sup> These are freely available on the UYO website and can be used by individual outlets, communities or councils alike.



SHERWOOD QUEENSTOWN: IMAGE SUPPLIED

### SNAPSHOT

The Queenstown **Sherwood Hotel** have phased-out disposable coffee cups and replaced them with a mug library of opshop mugs. Their on-site gardens produce roughly 40% of the produce used in the restaurant, eliminating the need to bring in vegetables in packaging. Herbal teas are made from plants on the property. In the guestrooms, all bathroom toiletries are in refillable dispensers rather than small-sized bottles. The hotel has also removed minibars from every room and replaced them with a reusable wine bottle and beer jug that residents can fill from the taps at the hotel bar. Collectively, these actions have eliminated the hotel's use of thousands of single-use and/or single-serve packages of soaps, shampoos, condiments, drinks and snacks per year.

"Our decision to use reusable packaging is definitely having an impact in limiting the number of single-use units we go through in the bar, restaurant and rooms. The idea is to minimise the packaging we go through so that we don't even have to recycle. That is the goal – to reduce the need to landfill or recycle."

• • • •

## TRADE-OFFS, HURDLES AND SILVER LININGS

All the activities currently being undertaken to shift from single-use to reusable packaging in the hospitality, tourism and accommodation sector have a wide range of outcomes and trade-offs that go beyond reducing waste, which are discussed in the table below:

COSTS
<p>"The economic benefits of reusables work the same way as their environmental benefits. The upfront costs are higher, but after just a few uses, the reusable breaks even and then starts to save businesses money."—Miriam Gordon (2020)<sup>19</sup></p> <p>Establishing an adequately sized fleet of reusable serviceware is a capital investment that pays off over time. However, it does require upfront cash that hospitality outlets might not have.<sup>20</sup></p>
<p>Reusable serviceware brings the greatest cost savings when outlets go 'all-in' and phase-out disposables. But, many outlets hesitate about going single-use free for fear of losing customers and try to put a foot in both worlds instead. Unfortunately, operating reuse and single-use serviceware systems in parallel is probably the most expensive option.</p> <p>"If cafes are prepared to commit to getting rid of single-use packaging all together than 100% it's cheaper. If cafes only offer reuse systems as an alternative, then it will cost them more."—Business providing/using reusable packaging</p>
<p>Supplier products in reusable packaging often cost slightly more because they are usually operated by vertically-integrated, local providers who are internalising the costs of their packaging system. However, outlets save money on the other end from reduced waste and recycling.</p>
<p>Phasing-out single-serve products and establishing some reusable packaging systems can avoid product wastage. For example, milk kegs keep milk consistently cool rather than bottles being left on the bench, kegs enable wine serves by the glass without risking the quality of the wine left in the keg, removing minibars means hotels don't carry stock of mini food and beverages, a percentage of which often expires before use.</p>

## TIME AND EFFORT

Single-use is perceived as a welcome convenience for the fast-paced hospitality, tourism and accommodation industries. Washing reusable serviceware or refilling dispensers in hotel guestrooms is a different workflow that can be more time-consuming or can slow down service. For suppliers, a returns system can involve more work to arrange delivery, pick up and washing.

However, reusables can streamline processes. Reduced packaging for cafes, bars and restaurants removes the hassle and admin associated with purchasing and storing packaging and stock, and with arranging waste management. Drinks on tap speeds up service and comfort for staff who do not need to continually reach to get bottles and cans out of fridges, and open and close caps and lids. For suppliers, empty containers can be picked up when fresh ones are delivered. Reusable serviceware should be easily stackable to avoid disrupting storage and workflow efficiencies.

"It's more convenient to have kegs rather than the bottles because you aren't moving stock as much as you would when buying beer and wine in cans or bottles... the storage and stocktake for individually bottled products is intense, moving heavy boxes of beer or wine around. So kegs and barrels are definitely better for staff."—Business/service provider

Reusable serviceware usually requires more upfront effort for customers, even if small, i.e. paying a deposit or needing to download an app. However, as disposable serviceware faces reduced acceptability over time, the existence of reusable serviceware schemes will increase convenience for outlets and consumers as they transition away from single use. These schemes give outlets an alternative to offer their customers, without them having to establish a bespoke reuse system. For consumers, they remove the need to remember to carry personal reusable items.

## LOYALTY, NOVELTY AND VALUE-ADD

**"The cafes want to make a change. They are getting behind us. Giving us positive feedback because we are saving plastic with a good product and good service."—Business providing/using reusable packaging**

Offering products in reusable packaging systems gives suppliers a point of difference that helps them stand out in the market and get through the door of outlets looking to reduce waste. Operating a returns system also increases repeat purchasing and thus customer loyalty. However, because reusable packaging systems are different, outlets may have to adapt their workflows to suit. This can be a risk for suppliers, who must trust outlets to train their staff to operate the systems appropriately, e.g. rinsing bottles before putting them into return crates or cleaning milk taps after use to avoid rotten milk. When outlets fail to do this, this can negatively affect the supplier's brand value, reputation or profit margin.

**"The problem with reuse systems is it requires one-on-one work with the cafes. You put a lot of trust in the system that people are cleaning your stuff and not harming your brand."—Reusable Packaging business**

The use of technology to deliver reusables can also be combined with opportunities for data capture or mobile ordering systems that bring benefits to outlets.

**"An app home screen is like the modern way of walking down a street of shops. You see a bunch of different cafes. So you get eyes to their business that wouldn't otherwise be there. It's prime real estate."—Reusable packaging business**

For outlets, going the extra mile to reduce waste, phase-out single-use and implement novel systems like dispensers, adds value, but can be off-putting for potential customers who aren't interested in environmental initiatives.

**"Some people who have been here for the first time, without us verbalising anything, the feedback that we get is 'hey, you've made me think about what I can do myself in my own life' – that's the biggest feedback we could ever receive"—Outlet using reusable packaging**

Working with suppliers that offer reusable packaging options could increase costs slightly, but usually leads to supporting local economies because reuse is often easier to implement on a local scale. Supporting local producers and telling this story to customers can build a positive reputation for outlets.

## BARRIERS FOR SUPPLIERS AND SERVICEWARE COMPANIES WANTING TO DO REUSE

**"Trying to get into cafes is a big uphill battle."—Business using/providing reusable packaging**



The hospitality, tourism and accommodation sectors would have more reusable packaging options to adopt if reusable serviceware schemes and suppliers offering reusable packaging were more readily available. However, there are barriers to setting-up, sustaining and growing reusable packaging systems for companies wanting to serve this particular sector:

- Single-use is normal, convenience is prioritised and the full cost of disposable packaging is not reflected in the purchase price so appears artificially 'cheap'. Reusable serviceware companies or reusable packaging suppliers are competing against companies offering disposables on an uneven playing field.
- Hospitality, tourism and accommodation are fast-paced, high-stress sectors. Finding ways to adopt reusable packaging systems often takes time and energy to stop, reassess, investigate and implement new systems and/or take risks.<sup>21</sup> In the pandemic environment, the hospitality, tourism and accommodation sectors are even more resource stretched. Finding bandwidth to change systems to accommodate reuse may be harder than usual.
- Outlets don't necessarily want to work with reusable serviceware providers when they don't have to, making it difficult for these providers to break in to the industry and break out of start-up phase. The European reusable food container business, **Recircle**, faced "inertia to keep business as usual" and had to struggle to enter the market as a new initiative that was "not well-known to all restaurants".<sup>22</sup>
- Reusable serviceware companies mostly rely on the nationwide network of cafes and their existing

washing infrastructure. On the one hand, this makes use of resources that already exist and improves the commercial viability of their offering. On the other, it is an incomplete solution for outlets that don't have washing facilities (e.g. coffee carts and events) or who are unwilling to adapt workflows to increase washing. This can become particularly tricky if some outlets feel they are washing a disproportionate amount of serviceware coming from other outlets.

In the restaurant industry “there isn’t a lot of time to think about changes in operations and how to implement them. Packaging isn’t high on most managers’ priority lists. Many do not consider disposable food serviceware to be impacting their bottom line.”—Miriam Gordon (2020)<sup>23</sup>



## OPPORTUNITIES TO DO MORE

- **Takeaway delivery and mobile orderings:** The market for delivery and mobile ordering of prepared food and drink has increased dramatically with covid-19. As virtually all such orders in New Zealand are prepared into single-use cups and containers, a market opportunity exists for a reusable serviceware system in this area, either in combination with an existing online ordering platform, like Uber Eats, or a standalone platform dedicated to reusable containers.<sup>24</sup> In the United States, **Dispatch Goods** is proving the business model for a third-party takeaway delivery platform that uses reusables exclusively.<sup>25</sup>
- **Food containers:** Most of the reusable serviceware schemes in New Zealand focus on cups, but the commercial opportunity is likely greater for food containers because the cost of a single-use food container is much higher than for a single-use cup. Hospitality outlets may find reusable food container schemes a more attractive proposition because they stand to save more money.

- **More potential to work with suppliers to increase returnable packaging systems:** Many of the success stories in the sector have come from owner-operator outlets researching alternative suppliers willing to do reuse, or working with their suppliers to develop a returnable system. The more local the provider, the easier these collaborations are.
- **Alternative Mylk:** Alternative mylks such as soy, oat and nut mylks, are gaining popularity in the hospitality sector. Liquid paperboard is the predominant packaging format for these beverages, which is single-use. Expanding dispensing and returnable bottle systems to alternative mylks would fulfil a present gap in the market for source reduction/reusable packaging solutions to this packaging waste stream.
- **Third party washing and collection service for reusable serviceware:** Filling the ‘collect and wash’ service gap for reusable serviceware would meet a market need.<sup>26</sup> This could involve the development of new infrastructure, or logistical coordination to access hospitality kitchens after hours. Examining the business model of services like **Wanakup** would be useful. In France, **Uzaje** has developed a centralised cleaning system for reusable food and beverage containers, working with 50 restaurants and caterers, and 100 food retail and non-food distributors. Uzaje cleans within a 200km radius and currently has one cleaning centre in the outskirts of Paris, but aims to create a network of cleaning centres across France.<sup>27</sup>

## TAKING ACTION

The *Taking Action* chapters of this report set out recommended actions that local and central government and industry can take to make it easier and more cost-effective to establish, sustain and grow reusable packaging systems across the economy. The recommendations have been designed to address some of the trade-offs and opportunities raised in this *Sector Snapshot*. If you want to know more about what can be done to grow reuse, you can jump straight to the *Taking Action* chapters.

## REFERENCE LIST

- 1 Miriam Gordon (2020) *Reuse wins: the environmental, economic, and business case for transitioning from single-use to reuse in food service* (UPSTREAM). Accessible at <https://upstreamsolutions.org/reuse-wins-report>, p.xiv.
- 2 Caren Morales-Caselles, Joshua Viejo and Andres Cozar (2021) “An inshore-offshore sorting system revealed from global classification of ocean litter” 4 *Nature Sustainability* 4. Accessible at <https://www.nature.com/articles/s41893-021-00720-8>.
- 3 Ministry for the Environment (2022) *Transforming recycling—Te panoni i te hangarua: consultation document* (Wellington, Ministry for the Environment). Accessible at <https://environment.govt.nz/news/transforming-recycling>, p.12.
- 4 Takeaway Throwaways (N.D.) “Reuse Schemes at Home and Abroad”. Accessible at <https://takeawaythrowaways.nz/reuse-schemes-at-home-and-abroad>.
- 5 Again Again (<https://www.againagain.co/>), CupCycling (<https://cupcycling.nz/>) MiKuppi ([https://www.instagram.com/mikuppi\\_app/](https://www.instagram.com/mikuppi_app/)).
- 6 Chunky Loan Cup (<https://chunky.nz/pages/loan-cups>) Reusabowl (<https://www.reusabowl.nz/>), Wanakup (<https://www.wanakup.nz/>), Again Again.
- 7 Good to Go (<https://www.instagram.com/goodtogowaiheke/>).
- 8 <https://www.againagain.co/map>.
- 9 Julian Raine (4 November 2020) Representing Oaklands Milk for the panel “Reuse Systems” at the Zero Waste Network Aotearoa Digital Summit *Our Zero Waste World*. Accessible at <https://www.summit.zerowaste.co.nz/watch>.
- 10 Charlotte Cowan (12 April 2021) “Kapiti spirits producer ramps up sustainable initiatives” *The Shout*. Accessible at <https://www.theshout.co.nz/kiwi-distillery-ramps-up-sustainable-initiatives/>.
- 11 <https://www.kaipakidairies.co.nz/sustainability/>; [www.theudderway.com](http://www.theudderway.com).
- 12 <https://spout.co.nz/what-we-do>
- 13 Nada Piatek (25 February 2022) Representing Again Again for the panel session “Aotearoa New Zealand’s reusable packaging future—how to transition, benefits, challenges and needs” at the Sustainable Business Network Packaging Masterclass 2022. Accessible at <https://sustainable.org.nz/learn/sbn-event-recordings/aotearoa-s-reusable-packaging-future/>.
- 14 Use Your Own Café Directory. Accessible at <https://www.uyo.co.nz/>.
- 15 See, for example, University of Otago (17 December 2019) “Taking away takeaway cups – a disposable cup free campus”. Accessible at <https://www.otago.ac.nz/otagobulletin/news/otago730144.html>.
- 16 <https://www.cardrona.com/content-hub/lifestyle/the-little-things-that-all-add-up/>
- 17 <https://www.facebook.com/sucfreewanaka/>
- 18 Use Your Own Café Directory (N.D.) “‘Unbranded’ Guides”. Accessible at <https://www.uyo.co.nz/advice/category/17/> Unbranded-Guides.
- 19 Gordon (2020), above n 1, p.xiv.
- 20 Piatek (2022), above n 13.
- 21 Gordon (2020), above n 1, p.68.
- 22 Ferran Rosa (2018) *The Story of Recircle: Zero Waste Consumption and Production* (Zero Waste Europe). Accessible at [https://zerowasteeurope.eu/wp-content/uploads/2019/11/zero\\_waste\\_europe\\_cs1\\_cp\\_reCircle\\_en.pdf](https://zerowasteeurope.eu/wp-content/uploads/2019/11/zero_waste_europe_cs1_cp_reCircle_en.pdf), p.4.
- 23 Gordon (2020), above n 1, p.68.
- 24 Aditi Varshneya, Ruth Abbe, and Alex Danovitch (2020) *The Zero Waste Masterplan: A guide to building just and resilient zero waste cities* (Global Alliance for Incinerator Alternatives: Berkeley, CA). Accessible at <https://zerowasteworld.org/zwmp/>, p.50.
- 25 <https://dispatchgoods.com/>
- 26 Larissa Copello, Samy Porteron and Jean-Pierre Schweitzer (2021) *Realising Reuse: The Potential for Scaling up Reusable Packaging, and Policy Recommendations* (Rethink Plastic and #BreakFreeFromPlastic), p.6.
- 27 <https://uzaje.com/index.php/en/>; Copello, Porteron and Schweitzer (2021), above n 26, p.7.

SECTOR SNAPSHOT

2.2  
**Beverages**

## 2.2 Beverages

Every year, New Zealanders consume 2.57 billion beverage containers (e.g. bottles, cans and cartons), of which roughly 55% are stockpiled, littered or landfilled.<sup>1</sup> Beverage containers make up as much as 66% of recognisable branded litter, and 24% of all litter in New Zealand.<sup>2</sup> The Government is considering a beverage container return scheme to lift return and recycling rates, and to open the door to more reusable beverage packaging.<sup>3</sup>

Consumer-facing reusable and refillable beverages have a long history, and are often considered to be one of the more ‘do-able’ areas for reusable packaging. They offer an effective means of reducing beverage packaging waste and the overall carbon footprint of the beverage system. Two reusable packaging models currently operated by beverage companies for business-to-consumer (B2C) purchases in New Zealand are:<sup>4</sup>

1. Reusable bottles that beverage manufacturers take-back from customers for sanitisation and refill (returnable packaging)
2. Refill stations where beverages are available “on tap” and customers bring their own containers to fill (refill by bulk dispenser).

### RETURNABLE BOTTLES

The returnable beverage bottle is one of the most tried and true B2C reusable packaging models. Returnable bottles have a history of implementation spanning more than a century and remain well-established in several markets overseas.<sup>5</sup> While the global market share of beverages in returnable bottles has suffered a precipitous decline since the 1970s, they have managed to retain roughly 18% of the market.<sup>6</sup> Table 1 lists the beverage companies currently operating a returnable bottle scheme in New Zealand.

“Containers intended to be refilled by the producer are a very familiar system... refillable bottles for beer, milk or carbonated beverages are often remembered fondly.”—Wilcox and Mackenzie (2021)<sup>7</sup>



New Zealand’s most established returnable bottle scheme is the Associated Bottler Co (ABC)’s Swappa Crate system for beer. Having operated since 1920, Swappa Crate is New Zealand’s longest running reusable packaging system, for any product.

ABC owns a pool of 18 million standardised reusable glass bottles that it loans to the two major breweries (Lion and DB) to fill. The beer is retailed in wooden crates of 12 bottles in liquor stores across the country. Consumers pay an upfront deposit for the bottles and crate, which is redeemed via a discount off their next crate purchase when they are returned to any participating retailer. ABC recovers and redistributes the returned bottles to the breweries who inspect, wash, and refill them so they can “go another round”. On average, Swappa Crate bottles are reused about 40 times over a 10 year lifespan.<sup>8</sup> In its heyday, ABC operated a pool of 300 million bottles and accounted for nearly 90% of all beer packaged in New Zealand. Today, ABC’s market share sits at about 5% of all beer packaged in New Zealand. Due to customer loyalty and its deposit system, ABC maintains a 90% return rate for its bottles.<sup>9</sup>

### SNAPSHOT | BEER



DREAMVIEW CREAMERY: IMAGE SUPPLIED

**Table 1: Beverage companies using returnable bottles in New Zealand**

Beverage company	Beverage	Returnable material choice	Primary regions of sale	Packaging business model
Associated Bottlers Co	Beer	Glass	Nationwide	Third party packaging company
Aunt Jeans	Milk	Glass	Canterbury; Wellington	Vertically integrated
Aylesbury Creamery	Milk	Glass	Canterbury	Vertically integrated, home delivery model
Bella Vacca	Milk	Glass	Northland	Vertically integrated
Brooklyn Creamery	Goat Milk	Glass	Wellington	Vertically integrated
Brothers Cold Press	Juice	Glass	Wellington	Vertically integrated
Dreamview Creamery	Milk	Glass	Waikato; Bay of Plenty	Vertically integrated
Eketahuna	Milk	Glass	Wellington; Horizons	Vertically integrated
Farm Fresh South	Milk	Glass	Southland	Vertically integrated
Green Bottle	Various	Glass	Coming soon	Third party packaging company
Hardie Boys	Soft drinks	Glass	Wellington	Vertically integrated
Henderson Dairy	Milk	Glass	Southland	Vertically integrated, home delivery model
Holy Cow	Milk	Glass	Otago	Vertically integrated
Kaipaki Dairies	Milk	Glass	Waikato; Bay of Plenty	Vertically integrated
KB Kombucha	Soft drinks	Glass	Wellington	Vertically integrated
Oaklands Milk	Milk	Glass	Nelson-Tasman; Marlborough	Vertically integrated
Ronia and Pippi	Mylk and juice	Glass	Otago	Vertically integrated
Synlait Swappa Bottle	Milk	Stainless steel	Canterbury	?
Volcanic Creamery	Milk	Glass	Rotorua	Vertically integrated
Waikirikau	Fermented Tī	Glass	Waikato	Vertically integrated
Windy Ridge	Milk	Glass	Otago	Vertically integrated

Many New Zealanders have nostalgic memories of the old-school milk run in reusable glass bottles. Today, single-use plastic bottles are the packaging of choice for milk in New Zealand. However, a growing number of independent companies are using reusable glass bottles, from **Bella Vacca** in Northland, through to **Farm Fresh South** in Southland. **Oaklands Milk** in Nelson is a vertically-integrated dairy farm that has operated reusable packaging systems since 2013. At just 1% of the New Zealand milk market, they package 3 million litres of milk into reusable glass bottles a year. They have thousands of bottles in circulation, with each bottle capable of withstanding 200-300 cycles.<sup>10</sup> In Tauranga, the Waikato-based **Dreamview Creamery** and **Kaipaki Dairies** both deliver milk in reusable glass packaging to various local retailers for consumers to buy. The rolling tally on the Dreamview Creamery website shows they have filled enough reusable glass bottles to displace over 150,000 plastic bottles.<sup>11</sup>

Waikato-based milk producer **Jersey Girl Organics**, and **Commonsense** (an organics retailer in Wellington and Auckland) have collaborated to develop a retailer-led returnable glass bottle initiative. In this system, Jersey Girl fills their milk into 10L single-use plastic bladders. These are shipped to Commonsense, who decant the milk into 1L glass bottles for selling to the customer. The retailer then takes responsibility for the returnable bottle scheme, facilitating customer returns of the empty bottles and sanitising them for reuse. The single-use plastic bladders are recycled through the soft plastics recycling scheme. After trialling the system with Commonsense, Jersey Girl now offers this retailer-led returnable bottle programme with 16 stockists around the North Island.<sup>12</sup>

## DRINKS ON TAP/ REFILL STATIONS

Selling drinks ‘on tap’ to consumers who can bring their own containers to fill is an example of the refill by bulk dispenser reusable packaging model. This model may also be accompanied with a business-to-business (B2B) returnable packaging system if the bulk dispenser itself is refillable. **Table 2** lists companies who sell drinks in dispensers and enable customers to refill with their own reusable bottle (or charge customers for an empty bottle to incentivise reuse on future purchases).

### Water

Water is an obvious example of a drink easily dispensed ‘on tap’. Awareness-raising initiatives to expand access to tap water help to normalise reuse, and are ideally accompanied by bottled water phase-outs.<sup>13</sup> The **RefillNZ** initiative has produced a nationwide map/app of hospitality outlets and retailers who allow the public to fill their water bottles for free, and provides these businesses with a window sticker that lets the public know they are welcome to refill their water bottles.<sup>14</sup>

### SNAPSHOT | WATER BOTTLE

Outlets like **Tuatua Cafe** have joined the RefillNZ network, made tap water readily available at their counter, and ceased to sell any bottled water in their drinks fridge. **Cardrona Mountain** phased out single-use water bottles in 2019 after installing water fountains where visitors can refill their own bottles, leading to the elimination of 50,000 PET bottles that would otherwise have been produced, transported and sold on the mountain each year.<sup>15</sup> In Tauranga, the idea of water dispensing has been taken a step further through investment in the mobile water station, **Hydrohub**, which can be used in event contexts. Other councils and organisations are working to increase the availability of water fountains in public places.



**Table 2: Some examples of drinks retailed on tap in New Zealand**

Company	Beverage	Retail format for dispensers	Locations	Dispenser single-use or returnable/reusable?
Arrun Farms	Raw Milk	Milk vending machine	Manawatū	On-farm reusable
Aylesbury Creamery	Raw Milk	Milk vending machine	Canterbury	On-farm reusable
Bakewell Creamery	Raw Milk	Milk vending machine	Auckland	On-farm reusables
Craft Breweries	Beer	Cellar door taps	Multiple nationwide	On-site reusable (stainless steel keg)
Everyday Wine	Wine	In-store retail	Auckland and Wellington	Returnable (stainless steel keg)
Farm Fresh South	Raw and Pasteurised Milk	Milk vending machine	Southland	On-farm reusable/stainless steel keg
Glass Bottle Milk Co	Milk/Mylk	In-store retail	Auckland, Mount Maunganui & Taupō	Single-use LDPE
Henderson Dairy	Raw Milk	Milk vending machine	Southland	On-farm reusable
Jersey Girl Organics	Milk	Markets	Waikato	Single-use LDPE
Kaipaki Dairies	Milk	In-store retail	Waikato, Bay of Plenty	Returnable (HDPE keg)
KB Kombucha	Kombucha	In-store retail/cellar door taps	Wellington	Returnable (stainless steel keg)
Liquor stores (e.g. Liquorland, SuperLiquor etc.)	Beer	In-store retail	Multiple nationwide	Returnable (stainless steel keg)
Oaklands Milk	Milk	Milk vending machine (5)	Nelson	Returnable stainless steel
The Good Farm	Raw Milk	Milk vending machine	Tauranga	On-farm reusable
Waikirikau	Fermented Ti	Brewery taproom	Hamilton	On-site reusable (stainless steel keg)

## Beer and beyond: The wonder of returnable kegs for B2C refills

Purchasing kegged beer from off-liscence premises into a BYO bottle such as a flagon is reasonably common in New Zealand, with ~200 locations nationwide where this is possible.<sup>16</sup> Virtually all of New Zealand's craft brewers sell a proportion of their beers through off-liscence tap rooms and cellar doors. It is also reasonably common for liquor outlets to have an in-store beer tap station.

Kegs are a highly efficient form of reusable packaging—**every kilogram of beer keg avoids 688kg of single-use packaging over the keg's expected lifespan.**<sup>17</sup>

Furthermore, because kegs are familiar and reasonably mainstream, they already have a recognisable waste reduction impact in the packaging market. For example, in Australia, 10% of the 2.9 million tonnes of single-use packaging avoided by reusable packaging systems in 2019–2020 was attributed to kegs (second only to reusable pallets).<sup>18</sup>

In Tauranga, beer is sold on tap at ~nine locations, including five liquor stores and four breweries.<sup>19</sup> **Mount Brewing Co** sells over half of their beer via kegs, and a smaller portion via single-use cans. They have a locally well-known fill-your-own system in their liquor store, **Super Liquor, Mount Maunganui**. Customers can bring their own bottles or purchase a refillable glass bottle at the store. Previously, the company gave out free plastic bottles for filling, but now offer only \$4 glass bottles, to provide a strong incentive to reuse them.

Milk can also be sold 'on tap' via standalone milk vending machines (usually in outdoor locations) or bespoke in-store dispensing systems. **Oaklands Milk** operates five vending machines dotted around the Nelson-Tasman region that hold the milk in stainless steel cans that the company sanitises and refills.<sup>20</sup> In Tauranga, **The Good Farm** operates a milk vending machine in Welcome Bay dispensing raw milk.

"The milk vending machine is a neat little system, nice and circular – we take the stainless steel cans home, we rinse them, refill."—Milk on tap supplier



In terms of in-store dispensers, **Kaipaki Dairies** installs milk taps with refillable HDPE kegs in some grocery stores in Waikato and the Bay of Plenty. Meanwhile, **Glass Bottle Milk Co** sells milk/mylk on tap through in-store dispensers in Auckland, Mount Maunganui (at **The Source** in Bayfair) and Taupō. **Jersey Girl Organics** sell milk on tap at farmers markets in Auckland and Waikato. The dispensers that Glass Bottle Milk Co and Jersey Girl Organics use hold 10L single-use LDPE bladders rather than refillable kegs. However, the on tap method still enables consumers to purchase a reusable glass bottle that they refill at each subsequent trip to the dispenser, which saves many individual bottles; the single-use LDPE bladders are recycled by Future Post.

"For each bladder we save 6.67 bottles. So each month we avoid about 10,000 plastic bottles by using the bladders instead."—Milk on tap supplier

## TRADE-OFFS AND BARRIERS

For businesses considering reusable beverage packaging, there are a number of trade-offs to consider.

### Cost

Reusable packaging should be a cheaper option than single-use packaging. However, an artificially uneven playing field exists that means this is often not the case.

First, the shared infrastructure to make reuse work at scale does not currently exist, and the end-of-life costs of single-use are not currently carried by drinks producers (who do not have to organise or pay for the disposal or recycling of their packaging). Consequently, producers who choose to use reusable packaging must make significant upfront capital investments to purchase necessary reusable container fleets, infrastructure and space to run a reusable packaging system. They must also cover the ongoing operational costs of reverse logistics (i.e. getting their empty packaging back) and washing. This ‘uneven playing field’ **increases the cost and risk of reuse vis-à-vis single-use. However, packaging policy reforms, such as the proposed container return scheme, could begin to change this balance.**<sup>21</sup>

ABC’s Swappa Crate system, which remains “a cheap way to buy beer”<sup>22</sup> shows that reusable packaging systems can be cheaper than single-use if they reach economies of scale and if there is existing infrastructure to tap into. However, the trouble for new entrants is that the Swappa Crate business trajectory is not one that can be easily emulated in the current linear economic environment. Swappa Crate has existed for over 100 years and is able to utilise pre-existing infrastructure and commercial relationships that have carried over from its heyday. Even so, its market share has shrunk significantly since the 1970s. Today, the uneven playing field between single-use and reuse makes it unlikely that a new entrant could reach Swappa Crate’s scale and reach. Indeed, most returnable bottle systems established today are vertically integrated, which pushes up costs.

“...trying to get cash strapped farmers interested in becoming a processor as well as a dairy farmer, it’s pretty difficult. When you look at the money we have spent to be a vertically integrated business, it’s not for the faint hearted – you have to be dedicated and a bit stupid to do it – the playing field is not level.”—Julian Raine, Oaklands Milk (2020)<sup>23</sup>

However, in contrast to B2C returnable bottle systems, **some refill by bulk dispensing systems can be more cost effective for drinks producers than single-use individual beverage packages.** For example, beer kegging is so cost-effective compared to canning that most breweries are unlikely even to view the practice from a sustainability perspective. With a bulk dispenser the volume of product relative to the packaging is higher, which means the overall price of the packaging and the time taken to fill it is less than buying, filling and labelling single-use cans and bottles. Furthermore, bulk dispensers are usually not customer-facing, so they do not require the same level of attention to detail when it comes to individual labels and design, nor do they require so much secondary packaging (e.g. cardboard boxes).

“We prefer kegs – it’s a lot less labour intensive, a lot faster packaging-wise, and it’s cheaper. We can package 1200L in a few hours whereas cans take a whole day of packaging. It’s just one keg and one staff member instead of having a whole canning line, labels and boxes.”—Beverage producer

While bulk dispensers can be more cost effective, some producers find this is only the case if the bulk dispenser is single-use rather than returnable. For example, filling milk into a single-use plastic bladder to then be sold on tap to the consumer is cheap and easy compared to filling into single-use bottles. However, some milk producers find it hard to justify the extra logistical, labour and compliance costs required to fill into a returnable bulk dispenser. This could be because of the comparatively onerous food safety requirements for washing milk, the narrower profit margins for milk, and the lack of a standardised network of milk keg distribution, as exists for beer kegs. However, some interviewees noted that these issues can be minimised if retailers or vending machines are located closer to the manufacturer, to avoid the freight cost involved with retrieving returnable kegs/cans over long distances.



## **Time, effort, space, equipment**

In the absence of a third-party reusable packaging provider that runs the packaging system, beverage companies wanting to do reuse must take on additional tasks, such as cleaning, delivery and reverse logistics. These activities and processes generally sit outside the primary purpose and expertise of most beverage companies, who exist to make drinks, rather than run a packaging system. They can also be very time-consuming and labour intensive, and require specialised (and costly) equipment, separate factory space, specific delivery systems and vehicles, and extra administrative processes. One producer using reusable packaging said cleaning takes up so much time, “we feel like a cleaning business”. Having said this, cleaning reusables can still be more time-efficient than packaging into single-use packaging, depending on the context. Another interviewee in the brewing industry noted, “cleaning is part of being in a brewery. It’s still way faster to fill kegs than fill cans, and it’s not as high-skilled to clean kegs.”

## **Lack of options for retail and returns network**

Using a reusable packaging system can help drinks producers to gain access to retailers who are seeking more sustainable packaging options. However, it can also shut drink producers out of certain retail markets and further decrease the convenience of reusable beverage options. Most big retailers, such as supermarkets, prefer not to stock drinks in returnable bottles because they do not wish to act as a return point for empty bottles. For example, the sale and return of ABC Swappa Crates is mostly limited to liquor stores.<sup>24</sup> In the case of dispensers like milk vending machines or milk taps, these require space that many retail outlets would be unable or unwilling to accommodate. It is not a coincidence that most beer producers who sell their beer on tap do so at the taproom of their cellar door, while product that is dispatched to other off-licence retailers will be packaged into single-use cans or bottles.

## **Brand value/novelty/customer experience**

“We get a lot of comments from customers that they want milk in glass and that it’s better and tastes better.”—Producer using reusable packaging

• • • • • • •

Many customers specifically seek out products because they are sold on tap or in a reusable glass bottle. These customers are generally willing to pay more, including the deposit associated with returnable bottles, and to spend extra effort to return empty bottles when making their next purchase. Producers using reusable glass bottles can also benefit from the halo effect of the positive nostalgia associated with this packaging, especially for milk. In Nelson, Oaklands’ home delivery service of their milk in reusable glass bottles taps into the love of the old-school milk run; it also fits well in the new covid environment where more people are ordering essentials online.<sup>25</sup>

“There are customers who come to us because they can fill their own bottles. In summer there are people queuing to fill their own... so many people bring their friends in and show them. Locals seem to be proud of it.”—Producer using reusable packaging

• • • •

Beverage refill stations are also popular with many customers because they bring a value-add, novelty factor to the shopping experience. However, refilling drinks can be messy or result in product wastage or extra time needed to clean after customers. Vending machine systems can be set to metre out the precise amount to avoid mess, but such machines are expensive and not particularly common. Refills also require customers to remember their own bottle, and shelf life or freshness can be shortened compared to pre-packaged product. For example, in the case of beer, a fill your own bottle has to be consumed within a day once open, whereas a can in the fridge has a year shelf-life (although, up until

the point of dispensing, kegs are highly effective for maintaining product quality).

"If you have a refill thing where people do it themselves, then you might get spillages... there's about one person in every 100 who turns the tap the wrong way and pours it all over the ground and their shoes."— Producer using reusable packaging

## OPPORTUNITY

### Third party reusable packaging providers and standardised systems

"If we had municipal or third party systems collecting reusable bottles, able to pick out defects, wash them, pack them up, get them ready to go - that would be really good. That's the sort of scale we need, to make it worthwhile. If we could get pallets full of glass bottles that were reused at a price that was less than the new bottles and competitive, of course, that'd be great."— Producer using reusable packaging

A growth of third party reusable packaging providers who specialise in the collection, washing and general management of fleets of standardised reusable beverage containers would make it easier for more beverage companies to adopt or transition to reusable packaging.<sup>26</sup> This sentiment was not only echoed throughout our interviews, but has also been raised publicly recently by some New Zealand beverage producers who wish to expand into reusables.<sup>27</sup>

A third-party system could overcome the current problem of vertically-integrated businesses struggling to reach economies of scale, and would instead enable efficiencies created by shared washing infrastructure, logistics and reusable assets. Standardised

containers would also enable more cost-effective and environmentally efficient systems.<sup>28</sup> Currently, the main third party providers of reusable beverage packaging in New Zealand are ABC, or keg providers like Kegstar and Kaipaki Dairies, but a gap in the market remains.

One company looking to fill this gap is Tauranga-based **Green Bottle**, who have co-invested in a bottle washing machine with the **Energy Efficiency and Conservation Authority**. The machine will be located somewhere that situates it well to wash bottles from the golden triangle of Auckland, Hamilton and Tauranga. Green Bottle will be partnering with several beverage companies, and has received support from Auckland Council to operate a trial of returns/collection logistics of used bottles. A system like Green Bottle has the potential to enable reuse while saving beverage producers money vis-à-vis single-use.

The main barriers to establishing third party packaging companies are the aforementioned upfront costs of buying reusable packaging fleets (especially if they need to be imported due to a lack of manufacturing capacity in New Zealand), the investment in washing infrastructure, and the difficulty of covering operational costs and becoming viable when having to compete against single-use packaging providers on an uneven playing field.<sup>29</sup> The government's proposed beverage container return scheme (CRS) presents an opportunity to reduce the size of some of these hurdles;<sup>30</sup> first, by requiring beverage producers to cover the costs of collecting and recycling single-use beverage packaging, and second, by including measures directly aimed at incentivising reusable packaging and supporting the growth of associated infrastructure and third party providers.<sup>31</sup> Some industry commentators believe the Government should do far more to prioritise reuse in the CRS.<sup>32</sup>

"Going forward, to get reusable refillable bottles back around... there will need to be huge investment in infrastructure behind how collections can be done."—Philip Barlow, Associated Bottlers Co (2020)<sup>33</sup>

## **Expand range of beverages sold on tap**

A far wider range of beverages could be packaged into kegs to permit more refill by dispenser vending options. In addition to milk and beer, kegs are also being used for wine and soft drinks, but there is potential to do more, and to expand this model to more retail locations.<sup>34</sup> While not viable in all contexts, selling drinks ‘on tap’ is more economically and environmentally efficient than returnable bottles because there are fewer individual packaging units to manage, wash, fill and transport relative to the volume of product. Furthermore, kegs can create logistical and operational efficiencies for hospitality and retailers. Kegs are a good choice of returnable bulk container as they are already standardised, and appropriate cleaning equipment exists.

## **TAKING ACTION**

For more recommendations about facilitating trials and awareness raising, as well as other measures to increase the uptake of reusable packaging, see our *Taking Action* chapters for industry, councils and central government.

## **REFERENCE LIST**

- 1 Ministry for the Environment (2022) Transforming recycling—Te panoni i te hangarua: consultation document (Wellington, Ministry for the Environment). Accessible at <https://environment.govt.nz/news/transforming-recycling>, p.11.
- 2 Ministry for the Environment (2022), above n 1, p.11.
- 3 Ministry for the Environment (2022), above n 1.
- 4 Hannah Blumhardt (2020) Reusable Beverage Packaging and Refillable Beverage Delivery Systems in New Zealand: Discussion Document (commissioned by Greenpeace New Zealand). Accessible at <https://www.greenpeace.org/aotearoa/publication/reusable-beverage-packaging-and-refillable-beverage-delivery-systems-in-new-zealand-discussion-document/>.
- 5 Jason Wilcox and James Mackenzie (2021) What we waste: Tracking 20 years of growth in international drinks container wastage, and how refillables and deposit return systems can reverse this trend (Reloop and Changing Markets Foundation). Accessible at <https://www.reloopplatform.org/what-we-waste/>.
- 6 Wilcox and Mackenzie (2021), above n 5, p.8.
- 7 Wilcox and Mackenzie (2021), above n 5, p.9.
- 8 The New Zealand Container Return Scheme Project Team (2020) The New Zealand Container Return Scheme Design: NZ CRS Final Design (Ministry for the Environment funded project). Accessible at <https://www.marlborough.govt.nz/services/recycling-and-resource-recovery/rubbish-and-recycling-projects/container-return-scheme/design-progress-to-date>, pp.95–96
- 9 Philip Barlow (4 November 2020) Representing the Associated Bottlers Co. for the panel “Reuse Systems” at the Zero Waste Network Aotearoa Digital Summit Our Zero Waste World. Accessible at <https://www.summit.zerowaste.co.nz/watch>.
- 10 Julian Raine (4 November 2020) Representing Oaklands Milk for the panel “Reuse Systems” at the Zero Waste Network Aotearoa Digital Summit Our Zero Waste World. Accessible at <https://www.summit.zerowaste.co.nz/watch>.
- 11 <https://www.dreamview.co.nz/>
- 12 <https://www.jerseygirlorganics.co.nz/find-a-stockist>
- 13 Aditi Varshneya, Ruth Abbe, and Alex Danovitch (2020) The Zero Waste Masterplan: A guide to building just and resilient zero waste cities (Global Alliance for Incinerator Alternatives: Berkeley, CA). Accessible at <https://zerowasteworld.org/zwmp/>, p.46.
- 14 <https://refillnz.org.nz/>
- 15 <https://www.cardrona.com/content-hub/news/no-more-single-use-plastic-bottles/>
- 16 [www.zerowastespot.nz](http://www.zerowastespot.nz)
- 17 Australian Packaging Covenant Organisation (2021) Australian Packaging Consumption & Recycling Data 2019–20 (Prepared by Envisage Works, IndustryEdge, Randall Environmental Consulting and Sustainable Resource Use on behalf of the Australian Packaging Covenant Organisation). Accessible at <https://documents.packagingcovenant.org.au/public-documents/Australian%20Packaging%20Consumption%20And%20Recycling%20Data%202019-20>, p.109.
- 18 Australian Packaging Covenant Organisation (2021), above n 16, p.109.
- 19 [www.zerowastespot.nz](http://www.zerowastespot.nz)
- 20 Raine (4 November 2020), above n 9.
- 21 Blumhardt (2020), above n 4.
- 22 Barlow (4 November 2020), above n 8.

- 23 Raine (4 November 2020), above n 9.
- 24 Barlow (4 November 2020), above n 8.
- 25 Raine (4 November 2020), above n 9.
- 26 Blumhardt (2020), above n 4, p.9.
- 27 Florence Van Dyke (15 May 2022) “We used to re-use everyday items like milk bottles. What happened?” Sunday Star Times. Accessible at <https://www.stuff.co.nz/business/opinion-analysis/300587631/we-used-to-reuse-every-day-items-like-milk-bottles-what-happened>; Joint submission to the New Zealand Government Transforming Recycling consultation, led by the Chia Sisters (2022) Container Return Scheme: A Missed Opportunity for a Reuse Scheme. Accessible at <https://www.chiasisters.co.nz/blogs/news/container-return-scheme-a-missed-opportunity-for-a-reuse-scheme-1>.
- 28 Blumhardt (2020), above n 4, p.10.
- 29 Blumhardt (2020), above n 4, p.10.
- 30 Ministry for the Environment (2022), above n 1.
- 31 Blumhardt (2020), above n 4, p.6; Zero Waste Network Aotearoa and New Zealand Product Stewardship Council (2021) Container Return: CRS and Refillable Beverages complementary systems to reduce waste and emissions. Accessible at [https://drive.google.com/file/d/1cBeJw4hYIGGMfkfoRiJgoHJlbqXd\\_z-Q/view](https://drive.google.com/file/d/1cBeJw4hYIGGMfkfoRiJgoHJlbqXd_z-Q/view).
- 32 See, for example, the joint submission to the Government consultation, led by the Chia Sisters, Container Return Scheme: A Missed Opportunity for a Reuse Scheme. Accessible at <https://www.chiasisters.co.nz/blogs/news/container-return-scheme-a-missed-opportunity-for-a-reuse-scheme-1>.
- 33 Barlow (4 November 2020), above n 8.
- 34 Blumhardt (2020), above n 4, pp.13-14.

SECTOR SNAPSHOTS

**2.3**  
**Construction**



## 2.3 Construction

"In the construction sector people know that the packaging waste is bad – but no one has a better idea about what to do at this stage."—Construction business interviewee

The construction and demolition (C&D) sector produces roughly half of all New Zealand's waste to landfill.<sup>1</sup> Studies of pollution in New Zealand's freshwater and coastal systems also find large quantities of waste that can be linked back to construction activities.<sup>2</sup> Reducing the waste from C&D activities is on the agenda of Government, industry, and sector sustainability programmes.

The C&D waste footprint is large because the low cost of waste disposal normalises wastefulness rather than incentivising waste minimisation;<sup>3</sup> and because New Zealand has high levels of construction activity, which produce continuous amounts of waste.<sup>4</sup> Furthermore, national waste data is measured in tonnages—C&D waste streams are typically heavy (e.g. wood, concrete and rubble etc.), so this pushes up the sector's waste footprint relative to other sectors.

"There is zero incentive for people to do the right thing with waste in the construction industry, from any perspective."—Construction business interviewee

Packaging is a significant source of waste on construction sites. However, its impact is underrepresented in tonnage-based waste data because packaging is generally voluminous, rather than heavy. For example, a report for the **BRANZ REBRI** initiative states that by weight, packaging makes up about 5 percent of the typical skip on a construction site, but "considerably more by volume".<sup>5</sup> Measuring

construction waste based on what goes to landfill also overlooks the waste that leaks into the environment from construction sites, which is likely to include a lot of packaging given its lightweight increases the chance of escape from sites and skip bins.<sup>6</sup> In our interviews with two construction companies that operate in Tauranga (one in the residential sector and one in the commercial sector), both felt that efforts to reduce packaging waste were absolutely necessary because single-use packaging was a huge problem.

"Everything that comes to site comes in packaging. There's just so much. Every single fitting has got packaging around it. Glues and adhesives are all single-use tubes. Spray cans and aerosols. Then there's shrink wrap, plastic strapping. None of it is reusable. We have bins and bins of foam and plastic. Look at what's in a skip – a massive component of the waste is packaging."—Construction business interviewee

Our research found **virtually no examples of reusable packaging systems in the construction sector**, apart from a few products that might be delivered to sites on reusable pallets.<sup>7</sup> Although C&D waste is under the microscope in New Zealand, most sector initiatives or sustainability certification systems that consider waste minimisation, focus on materials other than packaging, and on efforts to sort and separate waste on-site for recycling, rather than reuse.<sup>8</sup> Very little airtime goes to reusable packaging systems or their potential to support upstream source reduction efforts.

"Some pallets have a return policy, but most pallets are a one-use item. In terms of other stuff, there is very little in the construction industry that is reused, packaging-wise."—Construction business interviewee

The **New Zealand Green Building Council**, which operates the Green Star and Homestar certification systems, has acknowledged the need to look beyond diversion towards reducing waste generation in the first place.<sup>9</sup> Version 5 of the Homestar programme has a new focus on upstream activity, providing specific credits for waste minimisation, as opposed to waste diversion. This includes setting a maximum waste generation target in kg/m<sup>2</sup> and providing evidence of “design product selection, procurement strategies or contractual requirements” that seek to minimise various waste streams, including “Packaging and polystyrene waste from purchased product and materials”.<sup>10</sup> These guidelines are newly released (2021) and voluntary, but could begin creating pressure for suppliers to establish reusable packaging systems.

## BARRIERS TO ESTABLISHING REUSABLE PACKAGING SYSTEMS IN THE CONSTRUCTION INDUSTRY

“When I think about waste – I think back 20 years. All your nails and screws used to come in timber boxes. Now they’re all in plastic. We have made that move but we haven’t come up with a solution for that.”— Construction business interviewee

Interviewees noted that wastefulness is not an inherent characteristic of the construction industry, which used to be more sustainable. They believed an industry appetite for more reusable packaging could exist if external support were provided, and if the challenge was tackled as a sector. However, the interviewees identified a number of barriers to establishing reusable packaging systems, as set out in Table 1.

“The conversations that I have had with people around the issue of non-recyclable items or non-reusable items – when they understand that, they do want to make a

difference, just don’t know how to. People do want to change and it seems like so much work. If we make it easy, and show the benefit... people will be on board.”— Construction business interviewee

**Table 1: Barriers to establishing reusable packaging systems in the construction industry**

### ADDRESSING PACKAGING WASTE IS NOT A PRIORITY OR AREA OF EXPERTISE FOR THE SECTOR OR CLIENTS

The construction industry exists to build things, rather than advancing new packaging systems, or holding particular expertise about the circular economy.<sup>11</sup> While opportunities to reduce waste through reusable packaging systems might exist, they aren’t necessarily being identified by the sector.

“The people that are on our sites are there to build and do their job, not to do a lot of research. There’s not the knowledge there to understand the impact. They might see it every day, they probably haven’t considered it – it’s what they’ve always done and been told to do.”

Waste minimisation also isn’t on the radar of most clients, who mostly just want their building to be constructed in a timely fashion.

“People don’t realise how much of an impact construction has. People think “OK I built a building”, but don’t understand all the packaging associated.”

### BUILDING COMPLEXITY NOT SUITED TO REUSABLE PACKAGING SYSTEMS

Reusable packaging systems thrive with standardisation. The shift in construction towards greater building customisation has led to more bespoke building supplies, products and materials, which could make developing standard packaging sizes harder.

“When I started building, things were more simple, New Zealand built boxes and that was socially acceptable. They were a lot better for waste... but no one wants exactly the same house anymore.”

## SUPPLY CHAINS NOT SUITED TO REUSABLE PACKAGING SYSTEMS

The New Zealand construction industry depends on long, global supply chains for many critical building materials. Most products and fittings are imported and arrive already packaged. This context reduces the practicality of reusable packaging systems, which are easier to implement for local products and materials.

**"That's where the biggest challenge exists for us – we manage waste but can't necessarily influence waste up the supply chain."**

covid-19 has majorly impacted supply chains, making it more difficult and expensive to access critical construction materials. This may increase the construction industry's reluctance to trial something like reusable packaging at this time, for fear it might further delay or complicate material throughput. On the other hand, supply chain issues could create a stronger motivation to explore reuse systems for local products, as plastic and throwaway items become harder and more costly to access.

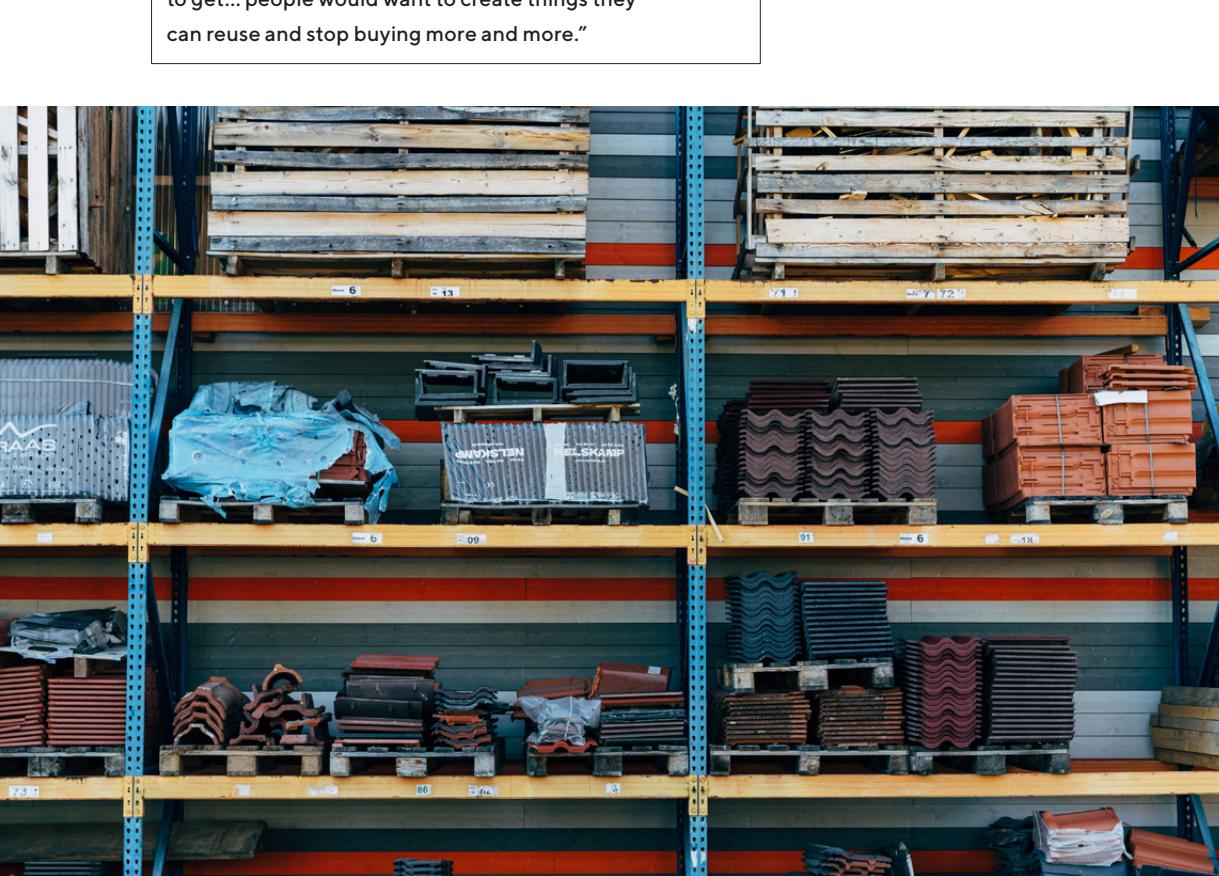
**"covid could have negative or positive impacts. Every material is harder to get because of covid... There may be a push for more NZ-made, local sourced products where reusable packaging is easier to set up... You would hope that as things become harder to get... people would want to create things they can reuse and stop buying more and more."**

## INDUSTRY IS COST AND TIME-SENSITIVE, WHICH FAVOURS THE STATUS QUO

**The biggest selling point in construction – because construction is such a fast growing industry – is that we are always trying to build a building faster than five years ago. It's constantly going quickly. So the industry is resistant to anything that sounds like it might be too much time and effort**

Getting reusable packaging systems going requires a rethink of the status quo and upfront effort to work out how to do things differently. The pace at which buildings are constructed and the backlog of construction work means there isn't a lot of time to stop and rethink processes that might be generating excessive waste. Reusable packaging systems will require trials; getting that off the ground, particularly if they may delay the completion of work or raise costs in the short-term, could be a hard-sell.

**"if it's going to cost more, the industry is not going to do it. Most businesses are just crunching numbers."**



## OPPORTUNITIES TO ESTABLISH REUSABLE PACKAGING SYSTEMS IN THE CONSTRUCTION INDUSTRY

“... it’d be awesome to get some incentives, or just some better systems going that are doing the right thing and making a positive effect. It’d be pretty easy – if you dig real deep, it’d be awesome to go back to the companies that are supplying all these products and find better schemes and ways to do better. I don’t think anyone feels good about putting that many skips into the landfill. But there’s currently no better option. It’d be awesome to work on it.”— Construction business interviewee

The opportunities for reusable packaging systems in the construction sector fall into two categories:

1. Products that might be easiest to target first
2. Collaborating as a sector to test, trial and trouble-shoot some reusable packaging systems,

### Products to target first for reusable packaging systems

“An easy win? Definitely for our timber supplies – having a material wrap – something hardwearing or reusable for our timber. That’s a huge win that I see.”— Construction business interviewee

- **Transit/transport packaging for building supplies** are a good place to start to reduce over-packaging in the first place, or replace single-use packaging with reusables. In 2014, the BRANZ REBRI initiative provided 11 top tips to suppliers for reducing waste from building products, one of which was to “provide packaging that is reusable or recyclable”.<sup>12</sup> For

example, using “sturdy, returnable packaging”,<sup>13</sup> reusable strapping instead of plastic shrink wrap or disposable strapping, reusable pallets rather than single use pallets, or reusable shipping containers to reduce the need to use pallets and shrink wrap at all.<sup>14</sup> Whatever packaging is used needs to be accompanied by “a system to retrieve packaging for reuse”.<sup>15</sup>

- The **wrapping on bulk loads of timber** was an area where both interviewees thought reusable packaging could be explored, as well as hardware packaging, and refillable formats for aerosols and glues.
- The sector could also do more to **support workers and contractors on-site to use reusable serviceware for takeaways**. As one interview noted: “In our industry we should do more promotional stuff like the Wānaka reusable cup initiative. We should be encouraging and using incentives like decreased prices or giving everyone at work their own reusable company mug. So, not making people feeling like they are missing out, but adding something to their life and explaining the benefits of why you should make the change, rather than being told that you have to.”

### Collaborating as a sector

“...it has to be a collaboration... get a facilitator, sort it out with Master Builders and do some test pilot projects, then push it out to all Master Builder members and through all the councils. It needs to be a team effort, really... There are the right channels to go through if we say, “here’s a pilot project – trial this with ten or 20 people on sites.” We have to come together to brainstorm a few changes of what we can actually do.”—Construction business interviewee

The construction industry could achieve more by collaborating to brainstorm and pilot reusable packaging systems. The whole supply chain needs to be involved

## REFERENCE LIST

in trials, so builders should engage with suppliers and manufacturers, and wholesalers and retail outlets. Collaboration also should go as far upstream as possible, to the design phase, to include architects and designers, and as far downstream as possible, to include waste companies. The trials should be co-designed and clearly communicated to all actors so that everyone plays their part to make the system work.<sup>16</sup> Initial collaboration could be facilitated by existing industry groups like Master Builders and NZ Certified Builders, but efforts should also be made to include builders that are not part of these organisations.

The sector could also partner with experts to develop training around the value of minimising waste, especially through reuse systems, including more “educational seminars, meetings, workshops, etc.” on the circular economy for the construction industry and workers.<sup>17</sup> These workshops could include greater guidance on the potential role of reuse in lifting the sector’s circular performance.

## TAKING ACTION

For more recommendations about facilitating trials and awareness raising, as well as other measures to increase the uptake of reusable packaging, see our *Taking Action* chapters for industry, councils and central government.

- 1 Callun Keith Purchase et al (2022) “Circular Economy of Construction and Demolition Waste: A Literature Review on Lessons, Challenges, and Benefits” *Materials* 15. <https://doi.org/10.3390/ma15010076>, p.4.
- 2 See, for example <https://insights.litterintelligence.org/>; and Waste Free Welly (2021) *A Zero Waste Plan for Welly* (Working Draft v 1, 14 October 2021), pp.11-12.
- 3 Purchase et al (2022), above n 1, pp.11, 15-16.
- 4 Purchase et al (2022), above n 1, p.4.
- 5 BRANZ (2014) “Waste Reduction – Building Products” (REBRI Initiative). Accessible at [https://d39d3mj7qio96p.cloudfront.net/media/documents/REBRI\\_Waste\\_Reduction\\_-\\_Building\\_Products.pdf](https://d39d3mj7qio96p.cloudfront.net/media/documents/REBRI_Waste_Reduction_-_Building_Products.pdf), p.4.
- 6 Waste Free Welly (2021) *A Zero Waste Plan for Welly* (Working Draft v 1, 14 October 2021). Accessible at <http://localmaking.org/wp-content/uploads/2022/03/A-Zero-Waste-Plan-for-Wellys.pdf>, pp.11-12.
- 7 BRANZ (2014), above n 5, p.7.
- 8 Purchase et al (2022), above n 1.
- 9 New Zealand Green Building Council (5 October 2021) “Less waste through better design”. Accessible at [https://www.nzgbc.org.nz/GreenStar/Story?Action=View&Story\\_id=724](https://www.nzgbc.org.nz/GreenStar/Story?Action=View&Story_id=724).
- 10 New Zealand Green Building Council (2021) *Homestar v5 Technical Manual*. Accessible at [https://12253-console.memberconnex.com/Attachment?Action=Download&Attachment\\_id=44934](https://12253-console.memberconnex.com/Attachment?Action=Download&Attachment_id=44934), pp.110-111.
- 11 Purchase et al (2022), above n 1, pp. 16, 21.
- 12 BRANZ (2014), above n 5, p.3.
- 13 BRANZ (2014), above n 5, p.7.
- 14 BRANZ (2014), above n 5, p.5.
- 15 BRANZ (2014), above n 5, p.7.
- 16 BRANZ (2014), above n 5, p.6.
- 17 Purchase et al (2022), above n 1, p.16.

reuse  
aotearoa

SECTOR SNAPSHOT

2.4  
**Groceries**

## 2.4 Groceries

Growing the reach and impact of reusable packaging systems requires the participation of the groceries sector. Seventy percent of the world's packaging comes from global food supply chains,<sup>1</sup> making food and beverage the main market for single-use packaging.<sup>2</sup> Groceries are an essential purchase for consumers and the second largest expense for New Zealand households.<sup>3</sup> As such, expanding reuse in the groceries sector presents a key opportunity to normalise everyday engagement with reusable packaging systems, and to reduce the burden of single-use packaging on society. The reliable levels of consumer demand for groceries also offers a stable platform upon which to establish reusable packaging systems.

Two supermarket retailers—Woolworths NZ and Foodstuffs—dominate New Zealand's groceries sector, although various independent grocers and small grocer franchises still exist, as well as butchers, bakers, greengrocers, and produce markets.<sup>4</sup> Globally, the supermarket model is frequently identified as a key disabler for reusable packaging (particularly business-to-consumer (B2C)) because supermarket distributional and point-of-sale systems are not set up for reuse logistics.<sup>5</sup> For example, in overseas markets the demise

of reusable beverage packaging is often attributed to the growth of supermarkets that prefer not to accept returns of empty reusable beverage containers.<sup>6</sup>

Nevertheless, grocers are critical to the transition to reusable packaging because they act "as a funnel for the product flow from supplier to consumer".<sup>7</sup> This is demonstrated by reusable packaging models that already exist in the New Zealand groceries sector, including major supermarkets, specifically:

- **Refill by bulk dispenser** arrangements where fresh, dry and liquid products are sold loose or on tap (e.g. bulk bins or deli counters).
- **B2C returnable packaging systems**, where retailers stock products in returnables and act as a drop-off point for returns.
- **B2B returnable packaging systems**, where bulk dispensers are returned to suppliers for washing and refill
- **Reusable transit packaging systems** for tertiary packaging, such as reusable pallets and crates.



## GOING ALL THE WAY: ZERO WASTE GROCERS

Both internationally and locally, some grocers—variously referred to as zero waste grocers, zero packaging stores, packaging-free shops and so on—have built their entire business model around the reusable packaging systems described above.<sup>8</sup> These retailers work to reduce both front-of-house packaging passed on to consumers, and back-of-house packaging waste.<sup>9</sup> Usually, zero waste grocers are small-scale, owner-operated stores (though some are chains with multiple stores). While they are often deemed ‘specialty’ stores, they can be the primary source of groceries for consumers committed to reducing packaging waste.

A 2019–2020 study of packaging-free stores in Europe (based on a sample size of 268 shops across 10 countries) found strong growth in shop numbers, the jobs they create, and their turnover over the past decade. Extrapolating across the continent, the report estimated a potential opening rate of 5–8 shops a month, by January 2023.<sup>10</sup>

In New Zealand, the prevalence of zero waste grocers has followed an upward trajectory since the first such store opened in 2017 (**GoodFor**). For example, nine zero waste stores opened in New Zealand in 2019 (a 110% increase on the previous year),<sup>11</sup> and 13 in 2020 (a 63% increase on the previous year).<sup>12</sup> Today, ~26 zero waste grocers exist nationwide, with one in Tauranga (**The Source Bulk Foods** in Bayfair). Several of these grocers collaborate through an informal association, **Sustain Aotearoa: Independent Zero Waste Grocers**.<sup>13</sup>



## HOW TO BE FREE OF SINGLE-USE PACKAGING

"Retailers are intermediaries between suppliers and consumers. As zero waste business owners we see our duty to do reuse up the supply chain. Looking up and down the supply chain allows us to see how reuse can be implemented practically at each stage."—Bronwyn Green of Be Free Grocer (2020)<sup>14</sup>

• • • • • • •

**Be Free Grocer** in Palmerston North is a zero waste grocer. The store holds over 250 different foods sold via bulk bins or liquid dispensers, about 20 different personal care products and cleaning products in bulk dispensers, and roughly 20 products in returnable packaging, for which the store acts as a drop-off point. The store actively encourages customers to bring their own bags and containers to fill (though as a back-up they provide brown paper bags and sell glass jars that customers can fill). Reducing packaging waste is a guiding principle of the store, so when approached by new suppliers the owner will "ask if they would consider a refill option—if they won't, I probably won't pursue it."

"We wanted to create an accessible place where people could access groceries and personal care products and basically everyday essentials without all the unnecessary packaging. Accessible means physically, culturally, and price point."

• • • • • • •

Be Free Grocer reduces supply chain packaging by seeking suppliers who take back their bulk packaging for refill or who deliver with minimal transit packaging. They also actively work alongside existing suppliers to establish such systems.<sup>15</sup> The store has successfully implemented back-of-house reuse systems with products as varied as pumpkin seeds, pasta, flours and grains, granola, nuts, culinary oils, and personal care products and cleaning products. Back-of-house reuse systems are easiest to implement with local producers whose supply chains are shorter, and with whom the store can deal directly, rather than through a distributor. Most suppliers who take back either their bulk or B2C packaging for sanitisation and reuse will reimburse retailers for the courier costs. These freight costs are high and ultimately come out of profit margins or are translated into the final product price.

"We've only been open three years. When I first started asking suppliers to put things in reusable pails or put non-plastic lids on their products, I felt nervous about it. But the response straight away from most businesses was 'yeah, we can do that, we've been waiting for the opportunity for someone to ask us to do it' and then we work through the logistics of it together. We have a lot of suppliers now."

• • • • • • •

## REFILL BY BULK DISPENSER

“...the bulk bin model of reuse is overlooked as a reuse system – but it’s one of the oldest models of reuse and one of the easiest to implement swiftly and efficiently.”—Green (2020)<sup>16</sup>

• • • •

Through the refill by bulk dispenser model, product is presented ‘loose’ or ‘unpackaged’ so customers can fill their own bags and containers. Ideally, customers are provided with reusable containers that the retailer accepts back for sterilisation and reuse. Some examples of this model in the groceries sector are:

- dry food in bulk bins, including bin and scoop systems or gravity feeders
- liquids on tap (e.g. oils and vinegars)
- unpackaged fresh product in a market or deli setting, e.g. fruit and vegetable produce aisles, bakeries, butchers, fishmongers etc.

In New Zealand, the bulk dispenser refill models have historically had wider uptake in the groceries sector than in other industrialised countries.<sup>17</sup> However, overseas retailers are increasingly exploring this model as a way of meeting single-use plastic reduction targets, such as the **Waitrose Unpacked initiative** described below.

In and around Tauranga City, roughly 37 retailers operate all or some of the refill systems described above for at least several products (see **Table 1**). Reducing waste may not be the primary reason these stores choose to operate these systems. Other rationales might be that bulk bins are a cheap way to sell product and allow larger profit margins, or that they offer a value-added experience to customers who can self-select products.<sup>18</sup> Where waste reduction is not a retailer priority, customers may be provided with single-use bags, BYO containers may be actively discouraged, and/or stores may have no established processes or staff training to accept reusable containers effectively (e.g. food safety protocols or taring).

**Table 1: Some grocers offering retail by bulk dispenser models for their goods in Tauranga**

Store	Reusable packaging offered
Be Organics (Mt Maunganui)	Bulk bins, liquid dispensers
Bethlehem Butchery	Deli
Bin Inn Bethlehem	Bulk bins, liquid dispensers
Bin Inn Papamoa	Bulk bins, liquid dispensers
Blackforest Gourmet Butchery (Cameron Rd)	Deli
Bobby's Fresh Fish Market (Dive Crescent)	Deli
Bobby's Fresh Fish Market (Greerton)	Deli
Cherrywood Butchery	Deli
Choice Food and Spices (Cameron Rd)	Bulk bins
Col's Gourmet Select (Mt Maunganui)	Deli
Countdown Greerton	Bulk bins and deli
Countdown Bayfair	Bulk bins and deli
Countdown Bethlehem	Bulk bins and deli
Countdown Bureta Park	Bulk bins and deli
Countdown Fraser Cove	Bulk bins and deli
Countdown Tauranga	Bulk bins and deli
Doug Jarvis Traditional Butcher (Mt Maunganui)	Deli
Doug Jarvis Traditional Butcher (Papamoa)	Deli
FreshChoice Papamoa	Bulk bins
Good Food Market (Mt Maunganui)	Bulk bins/liquid dispensers
Indo Spice World (Greerton)	Bulk bins
Mag's Fresh Fish (Mt Maunganui)	Deli
Mervale Butchery	Deli
Mount Maunganui Farmers Market	Unpackaged produce
New World Brookfield	Bulk bins and deli
New World Gate Pā	Bulk bins and deli
New World Mt Maunganui	Bulk bins and deli
PAK'nSAVE Cameron Road	Bulk bins and deli
PAK'nSAVE Papamoa	Bulk bins and deli
PAK'nSAVE Tauriko	Bulk bins and deli
Quality Food and Spices (Cameron Rd)	Bulk bins
Quality Food and Spices (Papamoa)	Bulk bins
Sanford Seafood Market (Cross Rd)	Deli
Spice World (Cameron Rd)	Bulk bins
T F&C (Papamoa)	Deli
Tauranga Farmers Market	Unpackaged produce
The Original Aussie Butcher (Cameron Rd)	Deli
The Source Bulk Foods (Bayfair)	Bulk bins/liquid dispensers

Several initiatives in the New Zealand groceries sector demonstrate how refill systems can be designed to encourage reuse and reduce packaging waste, even while delivering other benefits:

- Providing discounts for customers that bring their own containers to refill. For example, the **Bin Inn** chain offers a 5% discount.<sup>19</sup>
- Placing signage around refill/deli areas that expressly welcome BYO containers. **Commonsense** – an organic grocer in the Wellington and Auckland regions – places signage throughout their store, encouraging customers to save waste and money by shopping the refill area with their own containers. Similarly, **New World** North Island stores and **Countdown** supermarkets have signage at their deli counters stipulating that BYO containers are welcome.<sup>20</sup>
- Providing pre-tared reusable containers for filling at the bulk aisle that customers can return and swap between purchases. The Czech company **MIWA** operates this model in Europe for some supermarkets.<sup>21</sup> In Wellington, zero waste grocer **Hopper Refill** sanitises customer-donated glass jars, labels them with their tare weight, and provides them for free at the bulk bins. Customers can reuse any jars previously taken for subsequent purchases, or return them to Hopper Refill to sanitise and return to the shelves.
- Removing single-use bags from the fruit and vegetable produce aisles so customers bring their own, or putting a price on single-use bags/containers. For example, at **Hopper Refill**, single-use paper bags cost 50c each and are less visible in the aisles, whereas jars are free and more accessible.



COUNTDOWN DELI SIGNAGE: IMAGE SUPPLIED

## OVERSEAS CASE STUDY

In 2019, the UK supermarket chain **Waitrose** launched a test of **Unpacked**, a refill initiative in which over 200 products were dispensed in one of their stores via a refill model, including fruit and veg, dried goods, frozen fruit, beer and wine, coffee, and cleaning products. Customers were actively encouraged to BYO containers (with a 10% discount for those who did), or could borrow reusable boxes provided by Waitrose for a deposit. The company conducted an environmental assessment of *Unpacked* over an 11 week trial period and found that the approach eliminated 98% of the single-use plastic packaging (both primary and secondary) otherwise associated with the sale of *Unpacked* products, and garnered high levels of customer engagement and approval. The *Unpacked* trial was considered a success and is now a permanent feature in four Waitrose stores in the UK.<sup>22</sup>

## STOCKING RETURNABLE PACKAGING AND ACTING AS A DROP-OFF POINT

A growing number of companies are exploring B2C returnable packaging options for their products. Without municipal collections or legislated deposit return points for returnable packaging, retailers play a critical role in enabling suppliers to operate these systems—first, by stocking these products, and second, by acting as a drop-off point for the empty containers. For example, franchisees of some convenience store chains around the country sell milk in reusable glass bottles and take back empties, including **Four Square**, and **Night & Day**. In the South Island, a **New World** is trialling the sale and return of **Synlait's** new stainless steel **Swappa milk bottle**. In Tauranga, stores like **Bin Inn** and **Col's Gourmet Selection** sell **Dreamview Creamery** milk in reusable glass bottles and take back customers' empty bottles.

## OVERSEAS CASE STUDY

Zero waste grocers provide a critical informal drop-off network for small producers using returnable packaging. **Be Free Grocer** in Palmerston North stocks roughly 20 products in reusable packaging, and acts as a drop-off point for all of them. In Wellington, **Hopper Refill** similarly stocks a wide range of products in reusable packaging, ranging from soft drinks, cow's and goat's milk, through to salsas and sauces, toothpaste and other toiletries, and acts as a return point for all empty packaging.

"Customer uptake returning suppliers' returnable packaging has been so amazing... People are just pleased to bring it back in... I've also noticed that people value glass jars more than they do plastic containers. I've had so many people say to me that they can't bring themselves to put the glass in recycling. They want their glass jar to have another life."—Retailer operating reusable packaging system

Retailers can be supported to engage in returnable packaging systems when a third-party company manages the system on behalf of retailers and suppliers. Terracycle's **Loop** is one such third-party that operates in five countries, and works with over 200 major brands to develop reusable packaging for their products. These products can be bought in reusables through online ordering platforms or in participating supermarkets. Customers pay a deposit for each product in a reusable, which is redeemed when the customer returns the package for reuse. Loop installs packaging return points at supermarkets, from which it collects, washes and sanitises returned containers before re-dispatching them to brands for refill. Loop is planning to expand its reusable packaging offering to Australia in 2022.<sup>23</sup>

## TRADE OFFS AND BARRIERS FOR REUSABLE PACKAGING IN THE GROCERIES SECTOR

Despite the range of reusable packaging models operating in the groceries sector both locally and internationally, there are a number of barriers to their application and scalability.

### 1 **Supermarkets dominate the sector and aren't set up for reuse**

"Supermarkets play a pivotal role in consumer consumption of plastic, with the influence and buying power to set the pace of change, for example through packaging innovation, improved product design, delivery systems based on reuse models and shorter, more sustainable supply chains." – Environmental Investigation Agency and Greenpeace (2021).<sup>24</sup>

Supermarkets and their major suppliers dominate the groceries sector and have the power to facilitate positive change through the food supply chain—from consumers and suppliers, to food processors and producers.<sup>25</sup> However, reusable packaging systems do not fit well with the supermarket model and its associated distribution networks, which rely on fast-paced flows of goods that are currently built around single-use packaging. Furthermore, some research sheds doubt on the likely uptake of reuse amongst large retailers given the substantial changes this would create for shop floor staff and customer experiences.<sup>26</sup>

Therefore, reusable packaging systems are currently least prevalent in the businesses with the greatest market share and influence, and most prevalent in fringe, independent grocers who compete with supermarkets on multiple fronts (e.g. product pricing, wholesale access, cost of rent, lack of land and parking space<sup>27</sup>). This puts reusable packaging systems in the grocery

sector in a precarious position and compromises their scalability.<sup>28</sup> In New Zealand, all these issues are potentially amplified by the groceries market duopoly, which inhibits the “workable competition” needed to stimulate innovation in the sector,<sup>29</sup> amongst both retailers and their suppliers.<sup>30</sup>

## 2 **B2C returnable packaging requires centralised, standardised approach for efficiencies**

The grocery sector deals mainly in fast-moving consumer goods for which B2C returnable packaging presents logistical problems. These are unlikely to be resolved without organised returns infrastructure that can rival the convenience of kerbside recycling, which in turn will likely require packaging standardisation. For retailers, acting as a returns point for the bespoke containers of numerous businesses might be manageable at a localised, small scale, but likely not for supermarkets.<sup>31</sup>

## 3 **Cost and labour trade-offs for refills**

Refill by bulk dispenser is perhaps the most cost effective, easy to implement reusable packaging model. Nevertheless, the cost of bulk dispensers is a “massive upfront investment” that can present a barrier to entry for many independent operators. Furthermore, purchasing bulk loads of food is a large outlay that can present a cashflow challenge for small businesses. Extra staff time is also required to refill and sanitise bulk dispensers and scooping equipment, and fulfil in-store operations like helping customers, or keeping the self-dispensing area clean.<sup>32</sup> Due to the customer self-serve element, spills are common, which represents product wastage that not all grocers are willing to countenance.<sup>33</sup>

“Keeping the bulk area clean, hygienic, fresh is a lot of work. We decant the food into our bulk bins... Whenever there is a change of batch, I take the bin away and clean it before we fill the next one. It’s quite a regimented process to comply with food safety. We don’t

want stale product sitting there... Our bins go through a commercial dishwasher every time a batch is empty. Scoops go through every day if they’ve been used – we do a lot of cleaning.”—Retailer operating reusable packaging system

## 4 **Lack of space and prime real estate**

Product suppliers, third-party packaging companies or retailers wanting to implement reusable packaging systems often lack space to do so and/or struggle with the prohibitive cost of rent for convenient facilities. Bulk dispensing systems can take up more space in grocery stores, while acting as a drop-off point for returnable packaging also requires separate storage space.<sup>34</sup> The need for adequate parking for brick and mortar retailers offering refill by bulk dispensers for essential products like groceries and cleaning products was also highlighted as connected to the problem of appropriate space for reusable packaging business models. These challenges sit over and above the already recognised lack of suitable sites for new retail grocery stores.<sup>35</sup>

## 5 **Mixed customer experience**

“Offering reusable packaging means big customer loyalty, but some customers won’t even come through the door. But the customers who do come put trust in you.”—Retailer operating reusable packaging system

Bulk dispensers appeal to some customers because they can empower consumers to reduce waste, enable self-selection, portion control and the purchase of higher quality products at lower prices, and they offer a less frenetic, more relaxed form of shopping.<sup>36</sup> For example, **Goodfor**, New Zealand’s first zero waste grocery store, states its core purpose is “to introduce slower living to the world” and “create beautiful, calm shopping experiences that empower, inspire and educate

communities to make the best choices for their own health and that of the natural environment".<sup>37</sup> However, shopping in this way is more time-consuming and requires greater mental load for customers to remember containers and work out appropriate quantities to dispense.<sup>38</sup> Bulk dispensers are also not ideal for selling multiple versions of the same product, so are usually more commonly used for wholefoods rather than branded or pre-prepared products.<sup>39</sup> This can mean less consumer choice, or reduced appeal of this vending format for major suppliers, such as multinationals.<sup>40</sup> B2C returnable packaging also requires customers to remember to return their containers, and sometimes pay extra in the form of a deposit.

"If people are trying to renounce plastic in their lives, zero-packaging stores will indeed simplify the process and provide an alternative and empower people to have a more sustainable and healthy lifestyle." – Beitzendorf-Heineke, Balta-Ozkan, Reefke (2017)<sup>41</sup>

## 6 Managing perceived hygiene and quality concerns

Some members of the public perceive bulk bins to be messy and less hygienic, or feel concern regarding product freshness.<sup>42</sup> Some grocers have sought to 'rebrand' the bulk bin, and to ensure a clean, accessible and aesthetically pleasing set-up.<sup>43</sup> Using gravity feeders rather than bulk bins can reduce some consumers' concerns about both hygiene and freshness.<sup>44</sup> However, gravity feeders are considerably more expensive and also generally less accessible because they are usually located higher up.

## 7 Navigating inadequate food safety laws

Food safety laws often overlook the possibility of reusable packaging systems, leaving a gap in the law that can create uncertainty and inconsistency at the implementation/enforcement stage that ultimately

acts as a barrier for reuse.<sup>45</sup> For example, out of an overabundance of caution, local food safety inspectors may unfairly over-police zero waste grocers or suppliers operating reusable packaging systems, or individual stores may overregulate themselves, e.g. choosing not to accept BYO containers at deli counters. In other cases, businesses that want to implement a reusable packaging model can waste time trying to work out how their model fits into the Food Act. Greater clarity is also needed to support retailers to fulfil labelling obligations via dispensing systems, as single-use packaging currently performs a secondary function of communicating key product information.

"Even though the likes of Bin Inn have been around for decades there is still not a shared understanding nationwide about how food safety relates to zero waste grocers and bulk bins – everyone reinvents the wheel." – Green (2020)<sup>46</sup>

## 8 Globalised food supply chains and retailer-supplier power imbalance

Reusable packaging systems in food supply chains require an "unprecedented level of collaboration".<sup>47</sup> However, the global food production and consumption system and the dominance of a small number of major brands creates a logistical barrier to establishing reusable packaging systems.<sup>48</sup> Many smaller grocers have sought to get around this by sourcing from local or hyper-local suppliers,<sup>49</sup> which has the benefit of building local economies and food resilience, but it reduces consumer choice and stores' ability to offer the same stock nationwide.<sup>50</sup>

"As the distance between the packaging free shops and their suppliers increases, the quantities of goods sourced decreases. Hence the data suggests packaging free shops prefer to source from closer suppliers." – Beechener et al (2020)<sup>51</sup>

Furthermore, while refill by bulk dispenser systems create less supply chain waste than individually packaged products, the waste reduction impact can be further increased when grocers work with their suppliers to establish systems to take back bulk packaging for sanitisation and refill. While smaller retailers are making inroads in this area for their own stores through one-on-one vertical collaboration with local suppliers, they lack the time, resources and power to influence major suppliers and brands in the same way;<sup>52</sup> for this, much greater participation is needed from supermarkets or collectives of retailers to shift power imbalances and influence complex supply chains.<sup>53</sup>

## OPPORTUNITIES TO INCREASE REUSABLE PACKAGING SYSTEMS IN THE GROCERIES SECTOR

### Encouraging changes in the retailer landscape

A major economic and environmental opportunity exists to streamline, normalise and optimise reusable packaging systems across the New Zealand groceries sector. Currently, the grocers and suppliers most committed to reducing packaging at point-of-sale and up supply chains tend to be considered niche. However, they are catering to a growing segment of the market increasingly frustrated at the perceived over-packaging in the supermarket sector. This growing frustration “is not a trend”.<sup>54</sup> The 2022 Kantar *Better Futures* report found that 64% of New Zealand survey respondents “always” or “most of the time” think about over-packaging, non-recyclable packaging and landfill when making purchasing decisions or deciding on products and services.<sup>55</sup>

“One of the things I’d like to be doing but I’m not doing is we have a local shop where you can go and fill your containers,

and that’s a really gratifying thing to do.” – quote from survey response in 2022 Kantar Better Futures report<sup>56</sup>

• • • • • • •

With the current national discussion about reducing the dominance of the supermarket duopoly,<sup>57</sup> **there is scope to push for measures that increase competition and the diversity of grocery retailers to achieve better social and environmental outcomes.**<sup>58</sup> One specific goal could be to increase uptake of reusable packaging by supporting new entrants to the market who may have more openness to alternative dispensing models.

“I see supermarkets changing... If I go to my local New World, you can grind your own coffee – I’m optimistic about this stuff – they are customer-led to a certain extent. It’s not like supermarkets have never done return systems.”—Producer using reusable packaging

• • • •

**Integrating returnable packaging into online delivery of groceries**—where reverse logistics are easier to manage because empty packaging pick-up can occur at the time of dropping off a fresh order—could be another opportunity to increase reusable packaging systems.<sup>59</sup> One example of a local New Zealand company integrating online delivery, reusable packaging, and groceries is the zero waste meal kit service Yum Jar, operating in Wellington. Again, expanding access to these novel models will require greater support for new entrants because current low levels of competition are holding back innovations like the expansion of online models.<sup>60</sup>

Groceries could also be vended through mobile refill by dispenser units that travel to different neighbourhoods like a Mr Whippy ice cream truck. For example,

**Precycle Pantry** in Australia brings refill dispensers to communities in “Pablo the Van”.<sup>61</sup> This model increases consumer convenience and reduces the problem of consumers forgetting to bring their own containers (because the van is parked near their house).



## Supermarkets taking the lead on reuse in own brand products and supply chain/brand advocacy

Given their comparative level of influence in the groceries sector, supermarkets can do more to normalise the uptake of reusables, and to influence suppliers and major brands to improve their reusable packaging offerings. Supermarkets can develop a clear approach to delisting companies that fail to improve their packaging options and more stringent reuse criteria in product sourcing policies.<sup>62</sup> Supermarkets can also lead by example by pushing harder and faster to adopt reuse systems for their own brand products.

In New Zealand, both **Countdown** and **Foodstuffs** have sustainable packaging guidelines that are used internally with suppliers. Currently, the *Countdown Packaging Preferred Materials Lists and Format Guidelines* are focused on material choices for recyclability and compostability,<sup>63</sup> and should be expanded to consider reuse systems. For its own brand products, Countdown has indicated an intention to provide refillable and reusable options,<sup>64</sup> but the commitment is not time-bound or measurable. Meanwhile, Foodstuffs' 10 Sustainable Packaging Principles encourage suppliers to seek "to remove, reduce and reuse packaging before specifying materials towards recycling and composting", with the third principle encouraging suppliers to design packaging for reuse and support "the adoption and

scaling of reusable systems".<sup>65</sup> However, it is unclear how these principles are applied in practice to drive change, particularly with major brands.

Overall, **New Zealand supermarkets could strengthen the impact of their present initiatives through the inclusion of measurable, time-bound targets for the development and implementation of reusable packaging alternatives**, whether for own brand products or from suppliers and brands. Clear and consistent consequences should also apply to suppliers and brands who fail to make progress against retailers' reusable packaging goals.

## Changing the food distribution landscape

There is a gap in the New Zealand groceries market for a wholesale distributor that sits between retailers and suppliers and specialises in operating reusable packaging systems for bulk food orders and B2C returnable packaging. This distributor would organise the logistics, including back hauling and container washing, as well as researching the suppliers interested in using returnable packaging.<sup>66</sup> For imported bulk products, the distributor could explore more standard containers that could be reused in New Zealand for domestic product, and could also put any local 'pack downs' of bulk product into reusable bulk packaging. Such a distributor would relieve the pressure on individual retailers to carry out research and organise reverse logistics on a case-by-

case basis with individual suppliers. Retailers interested in waste reduction could simply procure their bulk orders from this distributor.

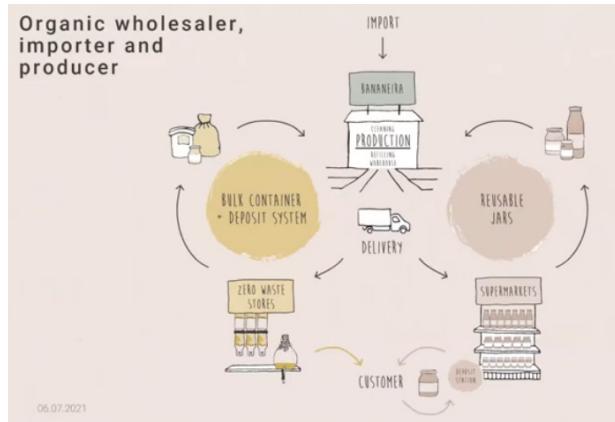
There is also an opportunity for a third party provider of a standardised fleet of B2C returnable packaging options (e.g. glass jars) that food producers could procure in the same way as they currently do for single-use packaging. This third party provider would manage the reusable container fleet, including ensuring high return rates, reverse logistics, sanitisation and dispatch. Terracycle's **Loop** system is an example of such a third party provider for the groceries sector overseas, although the lack of container standardisation could prove to reduce efficiency and increase costs.

**Overseas case study:** In Europe, the organic wholesaler, importer and producer **Bananeira** operates B2B returnable packaging systems for over 250 zero waste grocers across Germany. They have 5 shapes of bulk containers ranging from 2kg capacity to 1 tonne. They deliver many categories of food in these bulk containers to customer stores, and take back empty bulk containers, wash and return them to their container stock inventory for reuse. Bananeira also operate a B2C returnable jar system for customer-facing foods as an alternative to single-use jars, cans or plastic containers. They utilise Germany's standardised MMP glass jars, which carry a deposit and can be returned to retailers through the country's existing beverage container return scheme infrastructure. In relation to their B2C returnable packaging service, Bananeira notes:<sup>67</sup>

“In our opinion, for a successful deposit system it is important to use an already existing system and as many companies as possible should participate in it. You shouldn't create your own bottle shape or brand your secondary packaging because if you do this then just you can use this system and no one else.”



Figure 2 Bananeira Returnable Packaging Logistics<sup>68</sup>



### Reusable pallet wrap for groceries transport

A lot of 'behind-the-scenes' packaging to transport goods in the supermarket system between products, distribution centres and retailers is reusable because of third-party operators like CHEP. For example, in 2013 New World began transitioning to reusable crates for produce, protein and ambient goods and, as a result, has eliminated 15 million cardboard boxes a year.<sup>69</sup> However, most pallet wrap in the groceries supply chain is single-use. Although reusable pallet wrap options exist, these are not effectively integrated across the fast-moving consumer goods supply chain. Exploring this avenue presents a major opportunity to reduce supply chain waste while also improving efficiency, worker safety and product protection. This opportunity is discussed in greater detail in our Sector Snapshot on *Transit/Transport Packaging*.

## TAKING ACTION

The *Taking Action* chapters of this report set out recommended actions that local and central government and industry can take to make it easier and more cost-effective to establish, sustain and grow reusable packaging systems across the economy. The recommendations have been designed to address some of the trade-offs and opportunities raised in this Sector Snapshot. If you want to know more about what can be done to grow reuse, you can jump straight to the *Taking Action* chapters.

## REFERENCE LIST

- 1 Elisa F Beitzel-Heineke, Nazmiye Balta-Ozkan, Hendrik Reefke (2017) "The prospects of zero-packaging grocery stores to improve the social and environmental impacts of the food supply chain" *Journal of Cleaner Production* 140. <http://dx.doi.org/10.1016/j.jclepro.2016.09.227>, p.1530.
- 2 Sabrina Chakori et al (2021) "Untangling the underlying drivers of the use of single-use food packaging" *Ecological Economics* 185. <https://doi.org/10.1016/j.ecolecon.2021.107063>, p.1.
- 3 Commerce Commission (2022) Market study into the retail grocery sector: Final report – Executive summary. Accessible at <https://comcom.govt.nz/about-us/our-role/competition-studies/market-study-into-retail-grocery-sector>, p.3.
- 4 Commerce Commission (2022), above n 3, p.2.
- 5 Suneel Kunamaneni, Sukky Jassi, Dong Hoang (2019) "Promoting reuse behaviour: Challenges and strategies for repeat purchase, low-involvement products" *Sustainable Production and Consumption* 20. <https://doi.org/10.1016/j.spc.2019.07.001>, p.264
- 6 Hannah Blumhardt (2020) Reusable Beverage Packaging and Refillable Beverage Delivery Systems in New Zealand: Discussion Document (commissioned by Greenpeace New Zealand). Accessible at <https://www.greenpeace.org/aotearoa/publication/reusable-beverage-packaging-and-refillable-beverage-delivery-systems-in-new-zealand-discussion-document/>, p.8.
- 7 Patricia Megale Coelho et al (2020) "Sustainability of reusable packaging— Current situation and trends" *Resources, Conservation & Recycling*: X, Vol 6. <https://doi.org/10.1016/j.rcrx.2020.100037>, p.2.
- 8 Daniela Salkova and Olga Regnerova (2020) "Methods of eliminating waste from food packaging as a globalization tool" *SHS Web of Conferences* 74. <https://doi.org/10.1051/shsconf/20207404025>; Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1; George Beechener et al (2020) *Packaging Free Shops in Europe: An initial report* (Bristol: Prepared by Eunomia Research & Consulting Ltd, with contributions from Zero Waste Europe and Reseau Vrac). Accessible at <https://zerowasteeurope.eu/library/packaging-free-shops-in-europe-an-initial-report/>; Chakori et al (2021), above n 2, p.10.
- 9 Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1, p.1534.
- 10 Beechener et al (2020), above n 8, pp.7-8, 35.
- 11 The Rubbish Trip (29 December 2019) "Zero Waste in New Zealand in 2019: A Year in Review" The Rubbish Trip. Accessible at <http://therubbishtrip.co.nz/thoughts-and-musings/zero-waste-in-new-zealand-in-2019-a-year-in-review/>.
- 12 The Rubbish Trip (29 December 2020) "Zero Waste in New Zealand in 2020: A Year in Review" The Rubbish Trip. Accessible at <http://therubbishtrip.co.nz/thoughts-and-musings/zero-waste-in-new-zealand-in-2020-a-year-in-review/>.
- 13 Laura Stewart (2022) "Business Unusual: Exploring the Role of Vertical and Horizontal Collaboration in the Development of Circular Business Models for Reusable Packaging in Zero-Waste Grocery Stores" (Thesis submitted for Master of Sustainable Business at Department of Management, University of Otago).
- 14 Bronwyn Green (4 November 2020) Representing Be Free Grocer/Sustain Aotearoa for the panel "Reuse Systems" at the Zero Waste Network Aotearoa Digital Summit Our Zero Waste World. Accessible at <https://www.summit.zerowaste.co.nz/watch>.
- 15 See, for example, this video: <https://www.befreegrocer.co.nz/be-free-grocer-back-of-house/>
- 16 Green (2020), above n 14.
- 17 Waste & Resources Action Programme (2007) *Self-Dispensing Systems—Commercial Feasibility Study* (WRAP Research Report: Oxon, UK), pp.2,10.
- 18 Waste & Resources Action Programme (2007), above n 17.
- 19 See the promotional video about this initiative on the Bin Inn website here: <https://www.bininn.co.nz/resources/id/5>.
- 20 Countdown (29 July 2019) "Countdown to roll-out BYO containers at deli, meat and seafood service counters nationwide". Accessible at <https://www.countdown.co.nz/news-and-media-releases/2019/july/countdown-to-roll-out-byo-containers-at-deli-meat-and-seafood-service-counters-nationwide>; New World (N.D.) "New World Sustainability Milestones". Accessible at <https://www.newworld.co.nz/who-we-are/environment-and-sustainability/sustainability-milestones>.
- 21 <https://www.miwa.eu/>
- 22 John Lewis Partnership (2021) *Ethics & Sustainability Unpacked Report*. Accessible at <https://www.johnlewispartnership.co.uk/content/dam/cws/pdfs/Juniper/ethics-and-sustainability/John-Lewis-Partnership-Unpacked-Report-January-2021.pdf>.
- 23 Australian Packaging Covenant Organisation (2022) *Scaling Up Reusable Packaging*. Accessible at <https://documents.packagingcovenant.org.au/public-documents/Scaling%20Up%20Reusable%20Packaging>, p.32; Lauren Weir (2022) *What the EU can do to support the grocery retail sector in reducing packaging and plastic pollution: policy briefing* (Environment Investigation Agency, #breakfreefromplastic, Rethink Plastic, We Choose Reuse). Accessible at <https://rethinkplasticsalliance.eu/wp-content/uploads/2022/02/1702-RPA-European-Grocery-Retail-Plastic-Policy-Briefing-V7.pdf>, p.4.
- 24 Environmental Investigation Agency and Greenpeace (2021), above n 25, p.7.
- 25 Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1, p.1528; Chakori et al (2021), above n 2, p.7; Environmental Investigation Agency and Greenpeace (2021) *Checking Out on Plastics III* (London: EIA UK). Accessible at <https://checkingoutonplastics.org/>, p.7.
- 26 Chakori et al (2021), above n 2; Kunamaneni, Jassi, Hoang (2019), above n 5, pp.264,266.
- 27 Commerce Commission (2022), above n 3.
- 28 Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1, p.1535.
- 29 Commerce Commission (2022), above n 3, pp.5,9.
- 30 Commerce Commission (2022), above n 3, p.11.
- 31 Coelho et al. (2020), above n 7, p.2.
- 32 Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1, p.1533; Coelho et al. (2020), above n 7, p.9; Waste & Resources Action Programme (2007), above n 17, p.25.
- 33 Waste & Resources Action Programme (2007), above n 17, p.8.
- 34 Coelho et al. (2020), above n 7, p.2; Kunamaneni, Jassi, Hoang (2019), above n 5, p.266.
- 35 Commerce Commission (2022), above n 3, p.6.
- 36 Salkova & Regnerova (2020), above n 8, pp.6-7; Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1, pp.1533,1537; Waste & Resources Action Programme (2007), above n 17, pp.8,23.
- 37 Goodfor (N.D.) "Celebrating slower living". Accessible at <https://goodfor.co.nz/pages/celebrating-slower-living>.

- 38 Salkova & Regnerova (2020), above n 8, pp.3-4; Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1, p.1533; Waste & Resources Action Programme (2007), above n 17; Coelho et al. (2020), above n 7, p.9.
- 39 Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1, p.1534.
- 40 Salkova & Regnerova (2020), above n 8, p.3; Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1, p.1535.<https://doi.org/10.1051/shsconf/20207404025>
- 41 Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1, p.1537.
- 42 Salkova & Regnerova (2020), above n 8, p.4; Waste & Resources Action Programme (2007), above n 17, pp.23,24.
- 43 James Denton (2017) "Podcast 9: James Denton: Goodfor Wholefoods Refillery" The Rubbish Trip Podcast. Accessible at <http://therubbishtrip.co.nz/podcast/podcast-9-james-denton-goodfor-wholefoods-refillery/>; Be Free Grocer (5 February 2020) "In-store Accessibility". Accessible at <https://www.befreegrocer.co.nz/in-store-accessibility/>.
- 44 Waste & Resources Action Programme (2007), above n 17, p.23.
- 45 Beechener et al (2020), above n 8, p.27.
- 46 Green (2020), above n 14.
- 47 Stewart (2022), above n 13, p.2.
- 48 Chakori et al (2021), above n 2, p.5.
- 49 Stewart (2022), above n 13, pp.31-32.
- 50 Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1, pp.1534-5.
- 51 Beechener et al (2020), above n 8, p.22.
- 52 Stewart (2022), above n 13, pp.37-38, 41-42, 49.
- 53 Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1, p.1534.
- 54 Weir (2022), above n 23, p.8.
- 55 Kantar and Sustainable Business Council (2022) Better Futures 2022. Accessible at <https://www.kantarnewzealand.com/wp-content/uploads/2019/05/Kantar-Better-Futures-Report-2022.pdf>, p.20.
- 56 Kantar and Sustainable Business Council (2022), above n 55, p.9.
- 57 Commerce Commission (2022), above n 3.
- 58 Consumer NZ (6 May 2022) "Open Letter to Minister David Clark about the supermarket sector". Accessible at <https://www.consumer.org.nz/articles/open-letter-to-minister-david-clark-about-the-supermarket-sector>.
- 59 Beitzel-Heineke, Balta-Ozkan, Reefke (2017), above n 1, p.1539; Environmental Investigation Agency and Greenpeace (2021), above n 25, p.5.
- 60 Commerce Commission (2022), above n 3, p.9.
- 61 <https://www.recyclepantry.com.au/pages/community-refills>.
- 62 Environmental Investigation Agency and Greenpeace (2021), above n 25, pp.14-15.
- 63 Countdown New Zealand (2021) Packaging Preferred Materials Lists & Format Guidelines. Accessible at <https://partnerhub.woolworthsgroup.com.au/s/article/Countdown-Packaging-Preferred-Materials-Lists-Format-Guidelines>.
- 64 Countdown New Zealand (2021) Sustainability Plan 2025. Accessible at <https://www.countdown.co.nz/media/1659431/countdown-nz-sustainability-2025-plan.pdf>, p.17.
- 65 Foodstuffs (2021) "Packaging Sustainability". Accessible at <https://www.foodstuffs-exchange.co.nz/processes-and-guides/regulations-and-compliance/packaging-sustainability/>.
- 66 Coelho et al. (2020), above n 7, p.9.
- 67 Jonas Schmidle from Bananeira (6 July 2021) "Standardised reusable food containers for business and retail" (Presentation at the 8th European REUSE Conference hosted by Deutsche Umwelthilfe (Environmental Action Germany)).
- 68 Schmidle (2021), above n 67.
- 69 New World (N.D.), above n 20.

reuse  
aotearoa

# veto.

zero-waste

veto. (Latin for / Forbid) offers zero waste cleaning products that are safe for people's homes, bodies and the environment with the goal of making sustainable living as uncomplicated, economical and practical as possible.

Handmade, Plastic-Free, Vegan  
[www.vetozero-waste.online](http://www.vetozero-waste.online)

SECONDHANDSHOT

2.5  
Personal care  
& cleaning  
products

## 2.5 Personal care & cleaning products

The packaging of personal care products (e.g. toiletries) and cleaning products is an enormous environmental concern.<sup>1</sup> These products typically come in single-use plastic bottles (mostly HDPE) that although technically recyclable, are often contaminated by residues from the products themselves that persist when the packaging is recycled.<sup>2</sup> Furthermore, many personal care and cleaning products come in hard-to-recycle packaging, like tubes and composite (multilayer) materials. For example, roughly 16 million toothpaste tubes are sent to landfill each year in New Zealand.<sup>3</sup> While voluntary recycling schemes for these hard-to-recycle packages exist, they have low capture rates and the packages are exported for downcycling.<sup>4</sup>

Reusable packaging systems exist for personal care and cleaning products. Apart from product innovation to eliminate the need for packaging,<sup>5</sup> many companies have made strides to combine the refill by bulk dispenser model for retail, with Business-to-business (B2B) returnable systems. Others have delved into the world of Business-to-consumer (B2C) returnable packaging. The personal care and cleaning product sector offers a good opportunity for reusable packaging innovation because customers are generally more open to non-food products being dispensed in unfamiliar formats.<sup>6</sup>

### REFILL STATIONS

The most common reusable packaging system for personal care and cleaning products is the “refill station”, where customers fill their own containers from a bulk dispenser. In New Zealand, **ecostore** has helped to normalise this type of vending system, with over 100 refill stations nationwide (and growing), of which roughly 25% are in supermarkets.<sup>7</sup> Consumer and retailer acceptance of ecostore refill stations has paved the way for other businesses in this sector to enjoy positive retailer uptake of this packaging format for their products too

(see **Table 1**). There are also some retailers who do not manufacture personal care products or cleaning products, but act as dedicated refill centres for other companies’ cleaning products, including **EcoKiosk** in Hawke’s Bay, **The Refillery** in Russell, and **Good Housekeeping** in Wellington.

**Table 1: Companies selling cleaning products and toiletries “on tap” in New Zealand**

Company	Number of refill stations	Takes back bulk dispensers for refill?
Conscious	24	Y
Ecostore	102	N
Figgy and Co	<20	Y
Kahuku Natural	<20	Y
Littlefoot	52	Y
Pure Blend	<20	Y
Will&Able	<20	Y

The refill model saves both waste and money. In their 2018 Sustainability Report, ecostore reported having sold 30,000 litres of product through refill stations in one year, saving the equivalent of 276,466 500ml bottles.<sup>8</sup> One study into self-dispensing systems by Waste & Resources Action Programme (WRAP) in the UK found that:<sup>9</sup>

A typical 1kg liquid detergent bottle weighs about 96 g, thus if consumers re-use one million detergent bottles by self-dispensing from a bulk container in store this will remove approximately 96 t from the domestic waste stream... In financial terms, re-using one million detergent bottles will save approximately 8000 – 12,000 pounds in packaging costs.

The same study also found that bulk dispensing systems reduce the need for secondary and tertiary packaging up the supply chain.<sup>10</sup> In fact, most of the companies listed in **Table 1** also operate a B2B returnable packaging system for their bulk containers, i.e. they accept these dispensers back from retailers when they are empty, to wash and refill them.

## B2C RETURNABLE PACKAGING

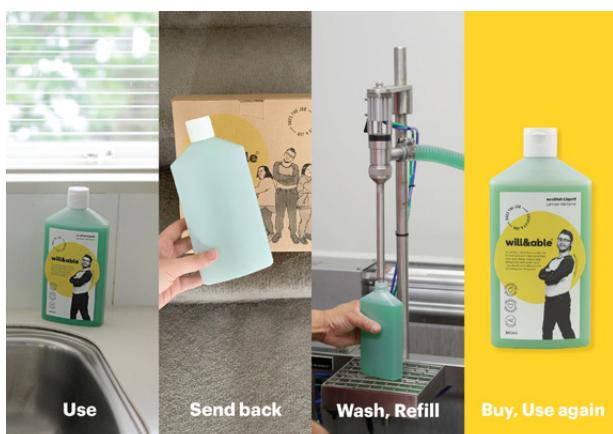
Several personal care and cleaning product companies are exploring B2C returnable packaging systems. These systems work best with convenient, cost-effective ways of retrieving empty containers from customers. In New Zealand, there is no equivalent to the household kerbside recycling service for reusable packaging, so return systems are usually bespoke and vertically integrated and/or rely on postal or courier services, making them expensive. Accordingly, B2C returnable packaging in the personal care and cleaning product sector is often progressed by luxury beauty brands (e.g. **Emma Lewisham** and **Aleph Beauty**), perhaps because these products are consumed more slowly (meaning smaller, more manageable volumes of returned packaging), and because the target customers are able to absorb the increased costs of a reusable packaging service.

As a model of getting used containers back from consumers, ecostore is trialling their **Plastics Return Programme** (supported by the Waste Minimisation Fund). Through this programme, ecostore has set up bins for their household sized packaging in participating retailers around the country. Returned containers are shipped back to ecostore in Auckland to be recycled back into new bottles. Although the programme has been designed to secure returns for recycling (not reuse), the programme has exposed the difficult economics of individual producer takeback schemes, which would also impact returnable packaging for reuse. On the other hand, the Plastics Return Programme also shows that producer takeback schemes create the opportunity to move towards reuse. For example, through the trial, ecostore has discovered that some of the returned containers are easily sanitised and refilled. Consequently, the company has decided to wash, refill and return these containers to market, rather than sending them for recycling, and has recognised that “there are more opportunities for us to do that kind of work”.

### SNAPSHOT

#### Where there's a will, there's a way: establishing a returns network for B2C containers

**Will&Able** is a Christchurch-based social enterprise that manufactures cleaning products and employs people with mental and physical disabilities. They are “championing a clean and reuse model” for B2C packaging,<sup>11</sup> and encourage consumers to return empty Will&Able containers for washing and refill. They have both a North Island and South Island postal address, and have linked up with nationwide retailers Aon’s (70+ stores nationwide) and Pricewise (which, in the Tauranga area, has stores in Fraser Cove and Bayfair), who act as public drop-off points.<sup>12</sup> For their bulk containers, Will&Able are creating a return ticket for Christchurch customers,<sup>13</sup> and collaborate with a network of collection depots to act as drop-off points for customers further afield.<sup>14</sup>



WILL&ABLE: IMAGE SUPPLIED

## A SOLID EFFORT AT REUSABLE PACKAGING: INNOVATIVE DISPENSERS, RETURNABLE GLASS JARS

"We want to create beautiful products that people want to use that are sustainable, effective and good for you as well."

**Solid** is an oral health company based in the Wellington Region and selling nationwide. The company seeks to produce quality, dentist-approved oral hygiene products, sustainably, and manufactures toothpaste, tooth tablets, tooth powder, whitener, and mouthwash. A big part of the company's sustainability story relates to their reusable packaging models and their approach to product innovation that reduces the need for packaging.

All of Solid's products are packaged into returnable glass jars that can be sanitised and refilled up to 30 times.<sup>15</sup> Solid chose to use glass packaging to avoid plastic, but recognised that they would have to operate a glass return system because "the energy it takes to make glass means you have to reuse it to make it worthwhile." Solid received a grant from the **Glass Packaging Forum** to purchase a commercial steriliser for their packaging, which has enabled them to sustain and upscale their reusable packaging offering.<sup>16</sup>

For container returns, Solid accepts returns direct from customers at their Titahi Bay factory, or via courier (customers must pay for postage). A large number of their stockists across the country act as container return points too, and Solid covers the cost of courier return fees for the stockists.<sup>17</sup> Recently, the company



has introduced a rewards programme where a customer receives a free toothpaste once they have returned 12 containers.<sup>18</sup>

Solid have also developed systems of selling product in bulk dispensers. For example, retailers can choose to sell toothpaste tablets loose in large glass jars, which customers decant into their own containers. Solid has also created the world's first in-store toothpaste dispenser – a retrofitted sausage-making machine with the modifications designed by Solid and turned into reality with the support of Malcolm, a retired engineer. Aside from innovating the dispensing technology, Solid also altered their toothpaste formulation to be better suited for dispensing. Both innovations required in-store trials to get off the ground. The company partnered with a retail store in Wellington to trial the dispenser, and after successful trouble-shooting, can now make these dispensers available to retailers around the country.

Solid's story of reusable packaging innovation demonstrates the importance of supportive partnerships with others in the supply chain to set up a container returns network, and to trial and develop new in-store dispensing technologies.

"We are indebted to those wholesalers that buy into our returns system and want to do that – we try to make it as painless as possible."

• • • • •

## TRADE-OFFS – HURDLES AND SILVER LININGS

COSTS	APPROPRIATE RETAIL SPACE AND LOCATION
<p>Refill stations can be cheaper than packaging into individual containers, which can translate into lower prices for the consumer.<sup>19</sup> It also offers a simple, cost-effective way for producers to implement a reusable packaging system. However, refill stations are vulnerable to spillage, which can create product wastage costs for retailers.</p> <p><b>"We talk about refill in the context of saving bottles and reducing plastic and all of that... but you can also present a value proposition to the consumer as well – 'you save a dollar or two when you refill'."—Business/product manufacturer interviewee</b></p>	<p>"There are stores that want to provide a refill offering to their customers and show that they care about these things."—Business/product manufacturer interviewee</p> <p>Partnerships with retailers is critical, for the success of dispensing systems and returnable packaging drop-off points.<sup>22</sup> Generally, smaller retailers are more willing (and sometimes very keen) to engage with alternative vending systems and retail formats than supermarkets.<sup>23</sup> However, for many producers, breaking into the supermarket is critical for economic viability and impact. This may put them in the position of having to choose between their environmental sustainability (e.g. maintaining their reusable packaging system) and their financial sustainability.</p> <p><b>"For us, it's about impact – you can't create change without selling in the supermarket."—Business/product manufacturer interviewee</b></p>
<p>Transport/freight for returnable packaging of either B2B bulk containers or B2C individual containers is expensive and either reduces profit margins for product manufacturers or increases the product price.<sup>20</sup> These costs can be reduced if the place of retail is close to the manufacturer, but often companies sell nationwide and have only one factory.</p>	<p>"The refill stations require an amount of space and attention in a store – it can be both an appealing selling point and also something that retailers are cautious about..."—Business/product manufacturer</p> <p>Refill stations require extra retail space.<sup>24</sup> Some retailers are unable to provide this space, or else have to sacrifice stocking other products or multiple brands to accommodate the reuse system, which reduces consumer choice. However, for producers, refill stations are visible reuse systems that can increase their brand recognition.</p> <p><b>"...the value of refills is more than we have presence in store, which is a different value and we have engagement with the consumer..."—Business/product manufacturer</b></p>
<p>Purchasing reusable container fleets and washing equipment for returnable packaging is an upfront investment that doesn't necessarily pay off over time because of freight costs and labour for washing.<sup>21</sup> The economics might stack up better if companies choosing to use single-use packaging had to cover the costs of collection and recycling/disposal.</p>	<p>The refill station model requires brick and mortar stores, and is negatively impacted by the rise of online shopping/delivery and covid-19 lockdowns. Returnable packaging systems can be adapted to online delivery models if an efficient reverse logistics system can be implemented.</p>

Producers can host their own physical store to run a refill station. This is logically simplest when the store is located at the producer factory. Some manufacturers have space at their factory for a retail refill space (e.g. Pure Blend in Hawke's Bay), but factories are often on city outskirts as inner city rents are high. The lack of available retail space in Tauranga led one local manufacturer of personal care and cleaning products to discontinue the refill station they had previously provided.

**"I want to do a brick and mortar thing again – somewhere where I can make the products on the site and have the refilling aspect."**—Business/product manufacturer

#### TIME, EFFORT, SPACE

For the consumer, reusable packaging systems for personal care and cleaning products involve more effort: refill stations require consumers to remember to BYO containers,<sup>25</sup> while returnable packaging requires consumers to return containers via the postal service or visiting a return point.

**"There are two things that make it hard to refill – you have to remember that there is something you can do as a consumer, and remember to bring your bottles to the store – forming a new habit is always going to be a step. Some people can do that and some people won't and are not interested at all."**—Business/product manufacturer

For manufacturers, running a returnable packaging system (B2B or B2C) involves washing containers. The washing process is time-consuming and requires extra space for storage and specialised washing and drying equipment.<sup>26</sup>

For retailers, acting as a return and dispatch point for empty containers requires more work, storage and admin.<sup>27</sup> Refill stations also typically involve more staff time to help consumers to use the stations or clean up spills.<sup>28</sup>

**"there is a knack to refilling – all the products have different viscosity. You can turn a tap on the drum and some products pour through beautifully, and others are globby... It's not always straightforward and sometimes you make a mess."**—Business/product manufacturer

Some manufacturers will seek to reduce freight costs for returnable containers by picking up containers from retailers themselves, which is more work.

#### VALUE-ADD USER EXPERIENCE

Refill stations are popular and create intrigue and interaction, which some customers really enjoy. They also enable portion control, allowing consumers to select only the quantity they need.<sup>29</sup> However, they can also be messy and some customers find that off-putting. One interviewee also noted that not every product is suited to refilling. For example, dry powders may be less amenable to sale in dispensing formats as this can present a respiratory health issue. However, these could be suited to a B2C returnable system instead.

**"refilling gives the consumer more autonomy and agency to create their own sustainable options. They can come in and get the quantity that they know already works in their house. Refills also means I can give people the option to trial things first. Then they know if they like the product and also how much they will need next time."**—Business/product manufacturer

#### LOYALTY AND BRAND VALUE

Reusable packaging systems appeal to a certain segment of the consumer market who are actively looking for more sustainable packaging solutions, and can build a brand's status as more sustainable.<sup>30</sup> A number of interviewees noted that reuse systems are a practical way for eco-conscious customers to fulfil their desire to "play their part" for the environment. Returnable packaging systems can also build consumer and retailer loyalty and repeat purchasing of a product.<sup>31</sup>

**"Our packaging is part of our USP and our brand... it's a selling point in that it makes people feel they are tangibly making a difference. It's hard when you read the stats and know what's going on in the world. Being able to do tangible things and make a difference is really important to people."**—Business/product manufacturer

Retailers benefit from participating in a company's reusable packaging system (either hosting a refill station or acting as a drop-off point for returnable containers) because it builds loyalty from producers towards the retailer,<sup>32</sup> and brings consumers into the store who might not otherwise have entered.

**"Being part of our reuse system is a labour of love for some stores, but it is also a reason for customers to return to the stores... we want people to go back to these shops."**—Business/product manufacturer

## OPPORTUNITIES

### **Collaboration to streamline reverse logistics:**

The clearest opportunities to increase reuse in the personal care and cleaning product sector relate to measures to streamline the “preparation for reuse” phase of the process – i.e. the reverse logistics, cleaning and redistribution. Currently, systems are operating in a highly bespoke fashion that hinders scalability and pushes up costs. In the absence of Government regulation or subsidies to drive change, more could be achieved if individual companies within the sector are able to collaborate to share some assets and infrastructure, and create a collective and thus more influential voice when engaging with other supply chain actors whose cooperation is essential. Specifically:

- Coordination across the sector to consider more container pooling and standardisation.
- Collectively outsourcing washing to a third-party or co-investing in shared washing infrastructure. Internationally, Terracycle’s Loop programme works with major brands and retailers to operate the reverse logistics and washing of B2C returnable packaging, including for personal care and cleaning products.<sup>33</sup> In New Zealand, the business model of companies like Recycled Plastic Containers is based on washing bulk containers for reuse on behalf of other companies.<sup>34</sup>
- Collaborative efforts to negotiate with retailers and freight companies to enable more cost-effective returns systems.

### **Innovative retail formats to address problems of access to retail space**

Increasing access to personal care and cleaning products ‘on tap’ in ways that reduces reliance on retailer participation or the need to pay rent could be achieved through mobile refill station formats. For example, Algramo in Chile adopts a ‘Mr Whippy’ style model of taking refill stations to neighbourhoods using mobile electric tricycles.<sup>35</sup>

### **Including personal care and cleaning product packaging in a deposit return scheme**

The Government is currently proposing a container return scheme for beverage containers. In the final proposed design of the government-funded Scheme Design Working Group, the project team signalled that future expansion of the scheme to include ‘janitorials’ was a possibility worth considering.<sup>36</sup> A deposit return scheme would support the development of a cost-effective and efficient nationwide returns/reverse logistics system.<sup>37</sup> The sector could consider developing a collective position in support of this type of policy proposal.

## TAKING ACTION

The *Taking Action* chapters of this report set out recommended actions that local and central government and industry can take to make it easier and more cost-effective to establish, sustain and grow reusable packaging systems across the economy. The recommendations have been designed to address some of the trade-offs and opportunities raised in this *Sector Snapshot*. If you want to know more about what can be done to grow reuse, you can jump straight to the *Taking Action* chapters.

## REFERENCE LIST

- 1 Alejandra Borunda (18 April 2019) "The beauty industry generates a lot of plastic waste. Can it change?" National Geographic. Accessible at <https://www.nationalgeographic.com/environment/article/beauty-personal-care-industry-plastic>.
- 2 O Horodytska, A Cabanes, A Fullana (2020) "Non-intentionally added substances (NIAS) in recycled plastics" *Chemosphere* 251. <https://doi.org/10.1016/j.chemosphere.2020.126373>.
- 3 Laura Nixon (28 April 2021) "Can you recycle a toothpaste tube?" Solid. Accessible at <https://solidoralcare.co.nz/2021/04/28/can-you-recycle-a-toothpaste-tube/>.
- 4 Nixon (2021), above n 3.
- 5 For example, developing solid toiletries and cleaning bars instead of liquids to eliminate the need for plastic bottles, such as Ethique.
- 6 Waste & Resources Action Programme (2007) Self-Dispensing Systems—Commercial Feasibility Study (WRAP Research Report: Oxon, UK), pp.22-23.
- 7 <https://ecostore.com/nz/storelocator/refill/>
- 8 Ecostore (2018) Sustainability Report 2018. Accessible at [https://ecostore.com/media/cms\\_blogs/ecostore\\_SustainabilityReport2018\\_.pdf](https://ecostore.com/media/cms_blogs/ecostore_SustainabilityReport2018_.pdf), pp.68, 74.
- 9 Waste & Resources Action Programme (2007), above n 6, p.20.
- 10 Waste & Resources Action Programme (2007), above n 6, p.31.
- 11 <https://willandable.co.nz>
- 12 <https://willandable.co.nz/pages/upcycle>
- 13 <https://willandable-bulk.co.nz/pages/upcycling>
- 14 <https://willandable-bulk.co.nz/pages/collection-depots>
- 15 <https://solidoralcare.co.nz/glass-container-return/>
- 16 <https://www.glassforum.org.nz/nz-oral-health-company-forging-a-sustainable-future/>
- 17 <https://solidoralcare.co.nz/return-your-solid-glass-containers-here/>; These drop-off points span across nine regions in both the North and South Island, but currently there is no stockist acting as a return point in Bay of Plenty. This could be related to the low number of zero waste grocer/retailers in the region.
- 18 <https://solidoralcare.co.nz/glass-container-return/>
- 19 V A Lofthouse, T A Bhamra and R L Trimingham (2009) "Investigating Customer Perceptions of Refillable Packaging and Assessing Business Drivers and Barriers to Their Use" *Packaging Technology and Science* 22. DOI:10.1002/pts.857, pp.345-346.
- 20 This has been noted in the New Zealand context as a challenge for SME retailers stocking products by suppliers (including personal care products and cleaning products) that might be in returnable packaging, e.g. Laura Stewart (2022) "Business Unusual: Exploring the Role of Vertical and Horizontal Collaboration in the Development of Circular Business Models for Reusable Packaging in Zero-Waste Grocery Stores" (Thesis submitted for Master of Sustainable Business at Department of Management, University of Otago), pp.40-41. Lofthouse, Bhamra & Trimingham (2009), above n 19, p.346.
- 21 Lofthouse, Bhamra & Trimingham (2009), above n 19, p.346.
- 22 Lofthouse, Bhamra & Trimingham (2009), above n 19, p.347.
- 23 Suneel Kunamaneni, Sukky Jassi, Dong Hoang (2019) "Promoting reuse behaviour: Challenges and strategies for repeat purchase, low-involvement products" *Sustainable Production and Consumption* 20. <https://doi.org/10.1016/j.spc.2019.07.001>, pp.264,266.
- 24 Lofthouse, Bhamra & Trimingham (2009), above n 19, p.346.
- 25 Lofthouse, Bhamra & Trimingham (2009), above n 19, p.342.
- 26 Lofthouse, Bhamra & Trimingham (2009), above n 19, p.345.
- 27 Lofthouse, Bhamra & Trimingham (2009), above n 19, p.346.
- 28 Lofthouse, Bhamra & Trimingham (2009), above n 19, p.346.
- 29 Waste & Resources Action Programme (2007), above n 6, p.2; Lofthouse, Bhamra & Trimingham (2009), above n 19, p.346.
- 30 Lofthouse, Bhamra & Trimingham (2009), above n 19, pp.345-346.
- 31 Patricia Megale Coelho et al (2020) "Sustainability of reusable packaging— Current situation and trends" *Resources, Conservation & Recycling*: X, Vol 6. <https://doi.org/10.1016/j.rcrx.2020.100037>, p.8; Lofthouse, Bhamra & Trimingham (2009), above n 19, p.346.
- 32 Coelho et al. (2020), above n 31, p.8.
- 33 Larissa Copello, Samy Porteron and Jean-Pierre Schweitzer (2021) Realising Reuse: The Potential for Scaling up Reusable Packaging, and Policy Recommendations (Rethink Plastic and #BreakFreeFromPlastic), p.11.
- 34 <http://www.recycledplasticcontainers.co.nz/>.
- 35 Natalie Marchant (21 April 2021) "The Chilean start-up is revolutionizing reusable packaging" World Economic Forum. Accessible at <https://www.weforum.org/agenda/2021/04/algramo-reusable-smart-packaging/>; Copello, Porteron and Schweitzer (2021), above n 33, p.11.
- 36 The New Zealand Container Return Scheme Project Team (2020) The New Zealand Container Return Scheme Final Design. Accessible at [https://www.marlborough.govt.nz/repository/libraries/id:1w1mps0ir17q9sgxanf9/hierarchy/Documents/Services/Recycling%20and%20Resource%20Recovery/Container%20Return%20Scheme%20-%20Design%20Progress%20to%20Date/Design%20Document%20and%20Appendices/NZ\\_Container\\_Return\\_Scheme\\_CRS\\_Final\\_Design\\_27\\_October\\_2020.PDF](https://www.marlborough.govt.nz/repository/libraries/id:1w1mps0ir17q9sgxanf9/hierarchy/Documents/Services/Recycling%20and%20Resource%20Recovery/Container%20Return%20Scheme%20-%20Design%20Progress%20to%20Date/Design%20Document%20and%20Appendices/NZ_Container_Return_Scheme_CRS_Final_Design_27_October_2020.PDF), pp.3-4.
- 37 Copello, Porteron and Schweitzer (2021), above n 33, p.10.

# SECTOR SNAPSHOT

## 2.6 Transit / transport packaging



## 3.8 Transit / transport packaging

"35 percent of all transport packaging globally is already reusable, driven mainly by the cost-savings and handling efficiencies offered by reusable transport packaging systems".—Australian Packaging Covenant Organisation (2022)<sup>1</sup>

As a major city with a port, Tauranga is the location of many national and international distribution, dispatch, warehousing and storage companies and operations. Many goods pass through the city, along with the packaging used to transport them. Therefore, transit packaging is an area where important reuse gains could be made for the city.

Transit or transport packaging can be understood as business-to-business (B2B) or business-to-consumer (B2C). The two systems tend to display differences in the size and scale of the packages required, but also the logistical pathways through which the packaging moves. B2B transit packaging includes pallets, crates, drums, intermediate bulk containers, and boxes, as well as dunnage (the components used to protect or contain bulk loads of goods, e.g. wraps, strapping and cushioning fillers).<sup>2</sup> B2B transport packaging usually stays within distribution supply chains.

B2C transit packaging includes cardboard boxes, parcels and courier satchels, and other materials associated with posting goods, such as bubble wrap.<sup>3</sup> The practice of transporting products directly to consumers has increased significantly with the growth of online ordering and e-commerce, particularly since the global pandemic. While smaller than B2B transport packaging, B2C transport packages present particular challenges as they are diffused across individual households and workplaces.

### B2B TRANSIT PACKAGING – A GOOD NEWS STORY FOR REUSE

B2B transit packaging is a global good news story for reusable packaging systems. Relative to other sectors of the economy, **the transport and distribution sectors are major users of reusable packaging**, with most of the reusable packaging systems in existence globally operating in this sector.<sup>4</sup> Specifically, 35% of all transport packaging globally is reusable,<sup>5</sup> constituting 50% of the overall market worth of all transport packaging (i.e. US\$100 billion of US\$200 billion).<sup>6</sup> In Europe, reusable packaging accounts for 40% of the packaging used for distributing fruit and vegetable products.<sup>7</sup> In Australia, 81% of the 2.9 million tonnes of single-use packaging avoided by reusable packaging systems in 2019–2020 was attributed to reusable pallets alone.<sup>8</sup>

With its strong foothold in the market, **reusable packaging has been able to prove its value, generating significant long-term cost savings in key supply chains, and simplifying global logistics by creating handling efficiencies**.<sup>9</sup> Consequently, while policy is desperately needed to open up reusable packaging systems in B2C markets, within B2B transit packaging systems "there seems to be an autonomous driver for the increasing interest and introduction of more sustainable reusable packaging systems."<sup>10</sup> This autonomous drive may also be propelled by the fact that:

- Systems for the distribution of goods are organised by companies that specialise in logistics—a necessary skill for operating reusable packaging systems generally.
- Well-established third party reusable packaging providers exist in the transport packaging sector who relieve other members of the supply chain (e.g. producers and retailers) from the responsibility and effort of making reuse systems work.<sup>11</sup>
- Reusable transport packaging has its own industry associations with the capacity to undertake research and advocacy to advance members' interests.<sup>12</sup>
- The volume of goods being moved creates

economies of scale and functionality can be prioritised over individualised aesthetics given the packaging is not consumer-facing. Both factors favour standardisation that increases efficiency and drives down costs.<sup>13</sup>

"Standardization allows for automatization and cost reduction, reaching larger markets. Indeed, the globalized world of trade would be impossible without standardized containers."—Coelho et al (2020)<sup>14</sup>

### How does reusable B2B transit packaging work?

Reusable B2B transit packaging systems rely on pools of fleets of packages that are more durable than their one-way counterparts (e.g. sturdy pallets, cloth wraps rather than shrink wrap, plastic crates rather than cardboard boxes). These pools are typically owned by third-party companies that charge supply chain actors to use the packaging. The packaging moves across the supply chain, so usually the system includes software to track the inventory (which can be particularly complex given the volume of goods, the pace at which they move, and the number of times they change hands).

"There's a network piece here - you are running a system - you obviously need the scale of assets circulating at any one time, but you also need a network of points - service centres servicing products, return points, logistical operators moving things around."—Reusable packaging provider interviewee

In addition, the system will usually be geographically connected with a national network of centres through which the packaging passes after each cycle, to be prepared for reuse. For example, inspection, repair and maintenance (e.g. to fix broken or damaged fabrics

such as reusable pallet wraps, or broken pallets) and/or washing (if food has been involved, e.g. produce crates). This enables the reusable product to be kept in service for longer via refurbishment for recirculation, rather than simply discarded when damage occurs.<sup>15</sup>

"repair is a must! There's no point going reusable if you don't repair, otherwise your reusable packaging goes to landfill"—Reusable packaging provider interviewee



CHEP PALLET AND CRATE: IMAGES SUPPLIED

## CASE STUDY: CHEP

**CHEP** is a global company that specialises in reusable B2B transit packaging, especially reusable pallets and crates. It operates in 60 countries (including New Zealand) and manages the largest reusable packaging pool in the world, with roughly 500 million pallets in circulation globally.<sup>16</sup>

CHEP's business model is based on pooling; the company owns and manages pools of standardised packaging that are shared by multiple businesses and industries across supply chains. The business model is based on charging either a daily use rate or a trip fee to supply chain users. The system relies on the participation of actors across the supply chain of the sector being serviced—from producers, growers and retailers. CHEP has secured high levels of participation because the pooling system relieves companies from having to continually purchase or arrange waste management or recycling for single-use pallets and crates. Outsourcing to CHEP also allows supply chain actors to focus on their core work of producing and retailing products, rather than purchasing and managing packaging.

"Share and reuse has been in our DNA since day one. We explain it by saying, your expertise is in manufacturing products, it's not in packaging and tracking where your packaging is going and disposing it. Therefore, don't put a whole lot of money and resource into doing that. We have a reusable packaging system. All you need to worry about is ordering from us."

• • • • • • • • • • •

In New Zealand, CHEP is an integral part of New Zealand's fast-moving consumer goods distribution. CHEP's pallets and crates are predominantly used in the food and produce sectors. They have 8 main service centres spread across the country where pallets and containers are stored and reconditioned (e.g. minor repairs, plastic crates washed, and cracked boards on pallets replaced), which extends the lifespan of each packaging unit, bringing both environmental and economic benefits. CHEP's service centres operate almost 24/7, with reconditioning and dispatching occurring on a daily basis. All of CHEP's pallets and containers are standard shapes and sizes, to ensure supply chain efficiencies. CHEP manufactures its pallets in New Zealand using FSC certified timber, and manages the end-of-life of their products.

## B2C REUSABLE TRANSPORT PACKAGING: MORE WORK TO DO

In comparison to B2B transit packaging, there are very few international or national examples of reusable packaging systems for B2C transport packaging, and those that do exist often cost considerably more than single-use packaging systems. In New Zealand, **Better Packaging Co** has created a durable courier satchel that is designed to be reused,<sup>17</sup> but currently no accompanying system or network exists to retrieve, service, maintain, and recirculate the package. However, companies wishing to use these satchels could choose to purchase a fleet or pool of these reusable packages, and then develop a bespoke returns system with their customers in order to retrieve the satchels for reuse. This type of system could work best for products consumers buy on subscription. **Rerepack**, which operates in Europe and North America, has developed a reusable courier satchel whereby brands who choose to use it can either operate an in-house retrieval system (as with Better Packaging Co), or can pay a fee per cycle that covers the cost of the packaging's return (using the traditional postal system infrastructure) to Repack's central cleaning and redistribution facility in Estonia.<sup>18</sup>



REUSABLE SATCHEL BY BETTER PACKAGING CO: IMAGE SUPPLIED

## TRADE-OFFS AND OPPORTUNITIES FOR TRANSIT PACKAGING

B2B transport packaging is seen as a 'low-hanging' fruit for upscaling reusable packaging systems; demand is already strong and continuing to grow because established third party operators are able to offer businesses considerable cost savings compared to single-use alternatives.<sup>19</sup> Some zero waste advocacy organisations believe very ambitious binding reusable targets for the sector are realistic, e.g. 100% reusable by 2030.<sup>20</sup> Furthermore, while B2C reusable transport packaging is very nascent, some of the sectors this packaging serves are potentially well-suited to reusable packaging systems because they include features that enable streamlined reverse logistics (e.g. home delivery by courier or postal companies and/or repeat deliveries through subscription models).

Upscaling reusable transport packaging in New Zealand would require existing reusable packaging companies to expand into new supply chains or new products, or for new, emergent players to be able to establish to tackle these single-use packaging waste streams. Achieving these outcomes is likely to require a degree of collaboration, coordination and potentially regulation or economic incentives to move through some key roadblocks:

### Breaking into fast-paced supply chains is difficult

The tightly-controlled, fast-paced, 'just-in-time' model of global and national high volume distribution systems can lend itself to the optimised reverse logistics that make reusable packaging systems fly. This has been greatly leveraged by established organisations like CHEP. However, these qualities can also make it more difficult for disrupters to break into the sector. The 'well-oiled' machine of distribution systems may struggle to adapt to novel ideas that require a change of workflow (even if it seems more efficient), such as reusable pallet wrap. Getting these ideas from conception to crossing the finish

line may require regulatory support from Government, or efforts by industry sectors to facilitate trials.

### **Securing supply chain participation is hard for new entrants**

The success of B2B reusable packaging partly lies in its ability to bring cost and efficiency savings. However, this requires economies of scale and an organised network to function, and therefore works best with pooling systems operated by a third-party. Establishing a pooling system, especially for packaging lines that lack a strong history of reuse, requires big upfront investments that third-parties are unlikely to make without certainty that the investment will pay off. Given the success of a reusable transit packaging model relies on supply chain participation, certainty will tend to require confidence that this participation will be forthcoming. For emergent players, brokering supply chain participation in trials, let alone eliciting long-term commitment to participate, is a formidable task.

### **covid-19 and associated supply chain disruptions has created aversion to innovation**

The covid-19 pandemic has greatly tested global and national supply chains, and strained or constricted available resources amongst producers, importers and distributors, and retailers. It has also greatly increased pressure on postal and courier services due to increased online ordering. Introducing both B2C and B2B reusable transit packaging has the potential to reduce costs and increase efficiency and supply chain resilience in the medium- to long-term, but in the short-term requires trials and investments that have the potential to cause unwelcome disruption. Ultimately, covid-19 has created heightened reluctance to try new things, and led to pre-planned pilots for reusable transit packaging being put on pause.<sup>21</sup>

### **B2C supply chain participation**

As a starting point, B2C reusable transit packaging may be most easily trialled in ‘closed-loop’ situations that involve repeat deliveries, i.e. subscription models. For example, home meal box kits, vegetable boxes,



PALLETTITE REUSABLE PALLET WRAPS: IMAGE SUPPLIED

magazines and newspapers. Achieving this would require the voluntary participation of businesses who currently home deliver products, as well as cooperative relationships with courier/postal service participants.

### **OPPORTUNITY: REUSABLE PALLET WRAP**

In New Zealand, reusable pallet wrap offers a high-impact opportunity for reusable transit packaging given the use of single-use shrink wrap/stretch film remains substantial. In the food distribution sector, a typical pallet uses about 50 metres of single-use stretch film, and roughly 8000 pallets move through the system daily, generating roughly 400km of stretch film a day.<sup>22</sup> And yet, many of the pallets themselves are part of a reuse system, which could potentially be leveraged to enable reuse of the wraps as well. Furthermore, a handful of reusable pallet wrap companies exist in New Zealand already, including Green Spider,<sup>23</sup> Gaprie’s P.C. Nets,<sup>24</sup> and Palletite.<sup>25</sup>

Aside from reducing waste, reusable pallet wraps bring other co-benefits in terms of operational efficiencies and worker health and safety. For example, the Palletite reusable sleeve is designed to be transparent (like shrink wrap), but is faster to apply, easily adjustable to any

## REFERENCE LIST

size pallet load, can hold very heavy loads, and is more resistant to puncture and damage than shrink wrap. It also reduces the need to make trips with pallets on forklifts. The wraps are easy to fold and space efficient for bulk dispatch to manufacturers and packhouses, and are barcoded to enable tracking through the supply chain. Each Palletite usage replaces 300g of stretch film.

To date, reusable wraps in New Zealand have mostly been used to replace stretch film in internal warehouse and distribution centre storage, rather than to replace the wrap used to contain pallet loads of product as they move through the supply chain between warehouses, distribution centres and retailers. The latter would require trials with major suppliers, and a degree of certainty of participation to justify investing in a network. For example, although Palletite received a Waste Minimisation Fund grant to develop their reusable pallet wrap prototype, the business model is not in the wrap itself, but in the reusable packaging service, which Palletite has been unable to pilot. Palletite has estimated that to run their system effectively, they would need a pool of roughly 250,000 units, with about three manufacturing and repair centres around the country that would employ a total of 70–80 machinists, which could be financed by charging out the use of the wrap at the same rate as single-use film. However, this level of service cannot be supplied without the participation of supply chain actors.

## TAKING ACTION

The *Taking Action* chapters of this report set out recommended actions that local and central government and industry can take to make it easier and more cost-effective to establish, sustain and grow reusable packaging systems across the economy. The recommendations have been designed to address some of the trade-offs and opportunities raised in this Sector Snapshot. If you want to know more about what can be done to grow reuse, you can jump straight to the *Taking Action* chapters.

- 1 Australian Packaging Covenant Organisation (2022) Scaling Up Reusable Packaging. Accessible at <https://documents.packagingcovenant.org.au/public-documents/Scaling%20Up%20Reusable%20Packaging>, p.7.
- 2 Patricia Megale Coelho et al (2020) "Sustainability of reusable packaging—Current situation and trends" Resources, Conservation & Recycling: X, Vol 6. <https://doi.org/10.1016/j.rcrx.2020.100037>, p. 4; Reusable Packaging Association (2020) Reusable Transport Packaging: State of the Industry Report 2020. Accessible at <https://reusables.org/wp-content/uploads/2020/06/Reusable-Transport-Packaging-State-of-the-Industry-Report-2020-1.pdf>, p.7.
- 3 Larissa Copello, Samy Porteron and Jean-Pierre Schweitzer (2021) Realising Reuse: The Potential for Scaling up Reusable Packaging, and Policy Recommendations (Rethink Plastic and #BreakFreeFromPlastic), pp.8-9.
- 4 Coelho et al. (2020), above n 2, p. 4.
- 5 Australian Packaging Covenant Organisation (2022), above n 1, p.7.
- 6 Australian Packaging Covenant Organisation (2022), above n 1, p.7.
- 7 Australian Packaging Covenant Organisation (2022), above n 1, p.7.
- 8 Australian Packaging Covenant Organisation (2021) Australian Packaging Consumption & Recycling Data 2019–20 (Prepared by Envisage Works, IndustryEdge, Randall Environmental Consulting and Sustainable Resource Use on behalf of the Australian Packaging Covenant Organisation). Accessible at <https://documents.packagingcovenant.org.au/public-documents/Australian%20Packaging%20Consumption%20And%20Recycling%20Data%202019–20>, p.109.
- 9 Coelho et al. (2020), above n 2, p. 4; Australian Packaging Covenant Organisation (2022), above n 1, p.7.
- 10 Coelho et al. (2020), above n 2, p.9
- 11 Coelho et al. (2020), above n 2, p.2.
- 12 See, for example, the Reusable Packaging Association.
- 13 Coelho et al. (2020), above n 2, p. 4.
- 14 Coelho et al. (2020), above n 2, p. 4.
- 15 Coelho et al. (2020), above n 2, p.4.
- 16 Katrin Zeiler, CHEP (6 July 2021) "Share and Reuse Meets Zero Waste—Supply chain solutions: pooling of reusable pallets and containers" (Presentation at the 8th European REUSE Conference hosted by Deutsche Umwelthilfe (Environmental Action Germany)).
- 17 <https://www.nz.betterpackaging.com/collections/mailers/products/swop>
- 18 Copello, Porteron and Schweitzer (2021), above n 3, pp.8-9.
- 19 Reusable Packaging Association (2020), above n 2.
- 20 Copello, Porteron and Schweitzer (2021), above n 3, p.15.
- 21 Rebecca Percasky (25 February 2022) Representing Better Packaging Co for the panel session "Aotearoa New Zealand's reusable packaging future—how to transition, benefits, challenges and needs" at the Sustainable Business Network Packaging Masterclass 2022. Accessible at <https://sustainable.org.nz/learn/sbn-event-recordings/aotearoa-s-reusable-packaging-future/>.
- 22 <https://sustainable.org.nz/circular-economy-directory/solutions/palletite/>.
- 23 <https://www.nicholdd.co.nz/product/green spider-pallet-wraps-nz>
- 24 <https://www.gaprie.com/pallet-wrap>
- 25 <https://sustainable.org.nz/circular-economy-directory/solutions/palletite/>

TAKING ACTION

**3.1**

**Recommended  
actions for  
councils to  
support the  
growth of  
reusable  
packaging**

# 3.1 Recommended actions for councils to support the growth of reusable packaging

Councils, industry sector groups, and individual businesses can all take action to support the uptake and growth of reusable packaging systems, and to put pressure on central government to take regulatory action. **The following recommendations are based on suggestions made by businesses and other stakeholders we have interviewed, and from the wider research on reusable packaging.**

For more information about the appropriateness and necessity of council and industry action to support reusable packaging and create the enabling conditions for it to scale, see our *Setting the Scene* chapter on the current barriers to reusable packaging and the case for supportive action from government and industry.

For recommendations for industry groups or central government, see the other Taking Action chapters of this report.

## THE ROLE OF COUNCILS IN SUPPORTING THE GROWTH OF REUSABLE PACKAGING

In the New Zealand context, councils hold responsibility for managing and minimising waste. However, they often end up doing more managing than minimising. Partly, this is because the regulatory powers to shift economic activity towards practices that reduce waste generation, like reusable packaging, largely sit with central government. Nevertheless, local government is not powerless to effect change. **Councils can do more to reduce the barriers to reusable packaging systems and be a louder and more supportive voice for reuse.**

Councils are “anchor institutions” who can leverage their significant purchasing power and mana in the community, their property and land assets, and their bylaw-making power to promote certain practices that build up local circular economies and community wealth.<sup>1</sup> For reusable packaging, Tauranga City Council could expand the accessibility and availability of reusable packaging by:

- leading by example at council-run events and venues, and through staff behaviour and communications
- procuring businesses offering reusable packaging options and reuse services to fulfil council contracts and in-house requirements; and
- using its significant property and land assets to support reusable packaging initiatives.

“Municipal governments can support the structural transition to a reuse model, for example by creating enabling environments for reuse-focused businesses to thrive, driving policy change, leveraging public procurement, and building out the necessary physical infrastructure.”—City Playbook Working Group (2021)<sup>2</sup>

1 **Prioritise reuse in Waste Management and Minimisation Plan and through a Reusable Packaging Programme**

“People’s mindsets already are changing, from waste to recyclable, now to reusable. Reuse is the most important one, that’s what we should invest most of our time and focus on.”—Business/service provider interviewee

Councils are required by law to consider the waste hierarchy when developing their Waste Management and Minimisation Plans (WMMP).<sup>3</sup> This gives councils

both a responsibility and a mandate to reprioritise their waste-related activities and focus more on prevention, reduction and reuse. Most interviewees expressed gratitude that Tauranga City Council (TCC) had funded a research project into reusable packaging. The Tauranga-based interviewees also acknowledged TCC's successful implementation of a new, best-practice kerbside waste and recycling collection service. These interviewees felt that it was now time for Council to do more in the area of reuse.

Cities need to give themselves a strategic mandate to focus on waste prevention, source reduction and reuse and refill in their relevant waste and climate plans.<sup>4</sup> **We recommend council develops a programme of policies for increasing the uptake of reusable packaging in Tauranga City, reinforced by some specific, timebound reuse targets and initiatives in its next WMMP.** These plans, targets and initiatives should be developed specifically for reuse, i.e. separate from any recycling and composting goals/targets.<sup>5</sup> For example:

- Commit to a preliminary study to inform any reuse targets and initiatives in the WMMP, e.g. a baseline measurement of single-use packaging generation, combined with a city-wide stocktake and gap analysis of reuse/reuse services, including reusable packaging.<sup>6</sup> This could be commissioned as part of the city's Waste Assessment.
- Set reuse-specific targets for the availability and impact of reusable packaging systems, e.g.:
  - A target reduction in packaging waste generation (e.g. reduction in packaging waste sent to both landfill and recycling), based on reduction of overall packaging units (not just weight).
  - All hospitality outlets to offer reusable takeaway serviceware by 2030.
  - A percentage increase in businesses vending a significant proportion of groceries via reusable packaging (e.g. at least 50 different products in-store or at least 50% of products). Assuming a current baseline of ~37 outlets offering some form of reusable packaging system.

- An increase in drinking water fountains across the city.<sup>7</sup>
- Include specific reporting requirements on reuse and use of reusable packaging in any waste minimisation reporting requirements that council sets for contractors or council-procured services.
- Establish a programme to enable transfer stations, resource recovery centres and other existing infrastructure for waste and recycling to better service businesses that operate higher up the waste hierarchy, e.g. collection/drop-off services for reusable packaging, and infrastructure to support 'preparation for reuse' (such as packaging return points throughout the city, and washing facilities).<sup>8</sup>

2 **Ring-fence a proportion of waste minimisation funding for reuse or offer benefits in kind (e.g. space/rates rebate)**

"In order to upscale what we are doing, there is so much money needed – for things like marketing, being able to pay influencers, dispensing and cleaning equipment. It's all a lot of money required. So, we need more money."—Business interviewee operating reusable packaging system

• • • •

Substantial investment is already being made, nationally and locally, in systems waste disposal and recycling that directly compete with reuse systems. **Council can support reuse by using grant funding, rates rebates, and benefits in kind**, to start to rebalance the current market distortions that favour single-use packaging (some of which are created by its own services).<sup>9</sup> When assessing which initiatives to fund, and where reuse services or spaces could be located, **consideration should be given to ensuring that low-income or marginalised communities are prioritised**.<sup>10</sup>

Council can ring-fence a proportion of available waste minimisation grant funding for reuse to help cover upfront capital costs of critical reuse infrastructure (e.g.

washing facilities), reusable packaging fleets/pools, or bulk dispensing set-ups.<sup>11</sup> All applicants could be encouraged to apply, including individual businesses focused on vertically integrated systems for their own product. However, **clear weighting criteria could help steer funding towards shared infrastructure or pooled assets, given the current network gaps**, particularly for returnable and transit packaging systems. For example, the council could give greater weighting to applicants seeking to establish third party reusable packaging businesses or to unlock sector-wide collaboration for a shared solution.

"Offer some sort of assistance for entrepreneurs to get into a glass bottle reuse system that we could then use – so we could get cheaper glass bottles and provide the stores with our product in reusable glass."—Business/product manufacturer interviewee

Council could also explore benefits in kind, particularly addressing the need for factory and storage space for small, vertically integrated companies with reusable packaging, as well as infrastructure or retail space for businesses operating reuse systems.<sup>12</sup> For example, suitable (and affordable) space is needed to expand the community's access to refill by bulk dispenser retailers of essentials like groceries. Accessibility can be further aided by securing locations that have adequate parking space and/or are situated on public transport routes. Lack of parking is frequently cited as a barrier for small grocery retailers operating refill systems.

"Accessibility to refill is what makes it easy and possible to form a habit – e.g. if your local store has a refill solution, if you see it everywhere and it's easier to do, it you don't need to drive across town to refill. There could be opportunities for council to promote refill spaces... They could come to businesses and suppliers and say "people want a refillery in the centre of town where

you can refill different brands and we want you to be part of that along with other brands."—Business/product manufacturer interviewee

• • • • •  
Such space-related benefit-in-kind support could include **rent subsidies or targeted rates rebates, opening access to Council-controlled areas for reuse businesses, actively establishing a well-located hub for businesses operating refill by bulk dispenser systems, or supporting transfer stations and other public areas to host more reusable packaging infrastructure**.<sup>13</sup> One Tauranga-based interviewee noted that having access to a rent subsidy for a retail location in town had made it possible to establish, operate and pilot a refill by bulk dispenser system for their products, which they were forced to discontinue with the closure of the space and the prohibitive cost of commercial rent elsewhere.

"Having subsidised, cheap rent made a difference for me – it meant I could trial the brick and mortar business without significant financial risk and make key decisions, do market research. Not something small business often have, especially a year into operating."—Business/producer manufacturer interviewee

• • • • • • • • • • •  
**3 Take an active role in raising awareness about existing reusable packaging systems and reuse behaviour change**

"ABC have just celebrated 100 years of reusing glass beer bottles, so it's clear the system works and is viable. The story just needs to be told and more products and councils brought on board to support..."—Reusable packaging provider interviewee

Councils could **develop more messaging to explain and raise awareness about the benefits and availability of reusable packaging systems** amongst the wider community and industry groups.<sup>14</sup> Interviewees emphasised the need for more education, training and behaviour change around reuse. This is also supported in the literature, but with a clear caveat: more awareness and education is not enough to significantly lift reuse behaviour and should be seen as a supporting mechanism to accompany investment and policy targeted at reuse, and to reinforce the success of reusable packaging pilots and trials.<sup>15</sup>

“...it’d be good to see some PR of the reuse concept... There needs to be a huge push from government and local government about what reuse actually means. That doesn’t have to mean councils saying “go and spend money at these stores” – people will join the dots.”—Business interviewee operating reusable packaging system

Reuse should be built into council's existing waste education and training programmes. TCC already produces, delivers or procures waste minimisation communications and education programmes for schools, households, businesses and organisations. These are good avenues to talk more about reuse as a waste minimisation strategy and explain "why reuse is a better option than recycling alone".<sup>16</sup> Through these programmes, councils could also provide more practical support and guidance for businesses and households about 'how to do' reusable packaging.<sup>17</sup>

"Education is not there at the moment. What about schools? If we are looking in terms of the future, we need to dive deeper in terms of those areas... Until we do education on why we need to use more reusable packaging, people will be hesitant. We should be providing that knowledge."—business/service provider interviewee

Industry-facing waste programmes could also focus on key sectors and might involve upskilling sector leaders in circular practices. For example, in relation to the construction industry, Purchase et al (2022) note that local government could offer the construction industry and workers “educational seminars, meetings, workshops, etc.”<sup>18</sup> on the circular economy, which could include greater guidance on the potential role of reuse in lifting the sector’s circular performance.

"Finding and investigating better options is time consuming for households and for businesses. If council could do it once for everyone and put it somewhere accessible that would be helpful."—Business/service provider interviewee

Most interviewees felt that getting more people into using reusable packaging systems requires behaviour change campaigns. Interviewees thought it was better if council leads these types of campaigns rather than businesses because it comes across as more neutral and evidence-based. Having an external and independent organisation like council promoting reuse as a legitimate waste minimisation strategy also removes the current burden on reusable packaging businesses and workplace sustainability advisors to have to make this case to their customers or colleagues. A lot of reusable packaging businesses are start-ups, and so “receiving the support of municipalities is key, as it gives consistency and credibility to the project.”<sup>19</sup>

"If you can make the community want that change to reuse then the commerce sorts itself out."—Reusable packaging provider interviewee

Council could also do more to compile and share information about existing reusable packaging systems, particularly locally-operated ones.<sup>20</sup> As one reusable packaging provider interviewee noted, lots of businesses are already doing reusable packaging all across New

Zealand, why not “give us a little bit of a shout out”? One example would be to add reuse and refill packaging options to the waste and recycling directory currently hosted on the council website.<sup>21</sup> The directory’s current focus on waste and recycling services steers the community towards the bottom of the waste hierarchy.

“Communicate opportunities for waste reduction alternatives... council could have a directory of businesses and say ‘if you feel like you don’t want your bins chocka, these are the businesses in the city that actually help you to reduce waste’.”—Business/producer manufacturer interviewee

#### 4 Walk the talk in council operations and procurement

Councils leading by example in their own practices will help to normalise reuse in the community, and create a significant customer for businesses operating reusable packaging systems.<sup>22</sup>

“It’s imperative that councils lead by example and start actually in-house rolling out some tangible reuse schemes, whether it’s for events or day-to-day. I’m thinking about an office environment—the amount of dishwash liquid that people go through in the office. All that kind of stuff, corporate and councils can play a huge role by leading by example there.”—Business interviewee operating reusable packaging system

Councils can work to transition all council events, venues, buildings and facilities towards reuse models for food, drink and other items. This could involve setting a timeline for phasing-out disposables—from serviceware to single-use beverage bottles and cans—, procuring products in reusable packaging (particularly from local businesses, where possible),<sup>23</sup> and expanding access to public drinking water at all council venues and facilities.<sup>24</sup>

Bylaws could also be passed that **require all events on council land to operate reusable serviceware systems by a set date**,<sup>25</sup> as has occurred in Copenhagen.<sup>26</sup>

“Mandate reusables in council venues – say all our swimming pools are going to be single-use free. All events are going to be single-use free.”—Reusable packaging provider interviewee

For council offices, **in-house procurement policies for office and kitchenette supplies could prioritise products that are unpackaged/in reusable packaging**—from milk to coffee beans and cleaning products—especially if these are locally-produced,<sup>27</sup> and investigate using reusable courier satchels for internal and external mail.

Active steps could be taken to **ensure all council offices have fleets of reusable serviceware that staff are expected to use** when getting coffee and lunch. Council could subsidise local outlets near council buildings to participate in a reusable serviceware scheme and/or to provide council staff discounts when using reusables.<sup>28</sup> Aside from creating a major purchaser for reuse operators, these actions increase the visibility of reuse in the community by supporting staff to be social modellers. Preliminary research suggests that a powerful factor influencing customers to use reusables for takeaways is observing others in the cafe doing so.<sup>29</sup>

“...the waste team at TCC is pretty amazing... We’re improving systems across the city, but my concern is that the service providers are driving more than the council. It’s not the council saying “this is what we require”, it’s the service providers saying “this is what we can give you”.”—Industry/service provider interviewee

Council already procures waste and recycling services in line with its statutory requirement to manage and

minimise waste within its boundaries. In line with its responsibility to consider the waste hierarchy, **council should begin to tender for waste minimisation services that cater to businesses and households who are acting higher up the waste hierarchy.**<sup>30</sup> This could include evolving existing services to better accommodate reuse, including hosting collection services for reusable packaging, establishing infrastructure for drop-off/returns and preparation for reuse at council resource recovery facilities, and other support with the logistics for reusable packaging systems.<sup>31</sup> These expectations could be built into waste minimisation and resource recovery contracts from the outset, and bids could be evaluated based on their potential to reduce waste generation.<sup>32</sup>

“We would welcome the chance to work closer with Tauranga City and Western Bay of Plenty district councils on collection opportunities for reusable packaging.”—Reusable packaging provider interviewee

• • • • • • • • • • • • • • • • • •

## 5 **Council to lead in brokering collaboration or partner with businesses to deliver reuse systems**

“Most people in the hospitality and tourism sector don’t have time or resources at the moment to work together. So council’s brokerage role could help.”—Business/service provider interviewee

• • • • • • • • • • • •

Making reusables “go mainstream” requires coordination between public authorities, businesses and consumers.<sup>33</sup> A strongly recurring request from most interviewees was that **council take on a brokerage or “middleman” role to enable the collaboration needed to establish reuse systems**. As an anchor institution, council is uniquely positioned to dialogue with multiple stakeholders and broker collaboration between different actors in the supply

chain to work to enable reusable packaging systems to ‘breakthrough’ and flourish.<sup>34</sup>

This brokerage role could involve bringing multiple parties to the table alongside reusable packaging companies to work through solutions. It could look like **council taking on the time, administration and mana associated with facilitating, so that businesses in time-pressured sectors have the space to work together**. Alternatively, it could look like council partnering with businesses to co-create and co-deliver solutions.

“...there’s a lot that councils can do to harness all those people and bring them together. Like bring together an entrepreneur group. Councils have a great convening power because they know all the people.”—Business/product manufacturer interviewee

• • • • •

When bringing parties together, council should identify the different knowledge held by different sectors, institutions or parts of the supply chain and ensure all voices are included, especially any businesses who are already operating reusable packaging systems or trying to.<sup>35</sup> It is also important “to actively engage diverse communities and neighbourhoods in the design, implementation and iterative evaluation of reuse programmes in order to enable inclusive and locally relevant choices.”<sup>36</sup> While interviewees wanted council to help bring parties together, most felt it was important that council enabled businesses and sectors to come up with their own solutions rather than telling them ‘how’ to do it.

“I’d like the opportunity to talk about the wider picture of what business looks like in Tauranga for sustainable package-free businesses, to offer a solution and have that conversation with council... council should set aside time to work with the businesses to co-create solutions together because the solution needs to come

from the people you want to make the change. Sit down with the businesses and create a solution-based model moving forward.”—Business/product manufacturer interviewee

• • • • •

Council’s brokerage role can also include **more active attempts to influence key businesses, sectors or institutions to trial and support reuse where they have clear opportunities or responsibilities to do so.** For example, public institutions within the council’s jurisdictional boundaries—such as tertiary institutions, hospitals, or district courts—or major influential businesses or industry associations, such as supermarkets.<sup>37</sup> This could be achieved through setting a public expectation, combined with support or direct funding to organisations capable of supporting this transition.

“Partnership is key—work with large employers, like hospitals, and do work around prioritising sustainable practice and climate change. Talk to us and find out what the challenges are. Look at the big employers who bring a bunch of people to the same place each day. See if those workplaces can make change because all those employees will go home and make change there too.”—Industry/service provider interviewee

• • • • • • •

## 6 **Subsidise groups of businesses to trial reusable packaging systems**

“Municipal authorities in many cases have the leeway, political will and citizen proximity to experiment with innovative models and provide pragmatic support to reuse stakeholders... This makes cities natural champions and partners for activating concrete reuse pilots on the

ground and engaging in a learning-by-doing approach that is hard to realize at the national or global levels.”—City Playbook Working Group (2021)<sup>38</sup>

• • • • • • •

One way in which council can partner with businesses is to identify particular examples of single-use packaging that could be replaced with reusables, identify a reusable packaging company that is willing and able to deliver an alternative system, and **subsidise businesses to participate in a trial.**<sup>39</sup> This could include covering some of the costs of the local businesses to participate, e.g. subsidising investment in the initial reusables fleet, if required by the packaging provider, and/or any subscription costs associated with the system.

For example, with reusable serviceware, some local authorities overseas have decided to operate reusable serviceware programmes themselves, to subsidise outlets’ participation in a scheme, or to partner with a local reusable serviceware operator to undertake outreach and promotion.<sup>40</sup> Creating incentives for customers to choose reusable serviceware not only creates an initial customer base for reuse, but has the potential to trigger wider shifts in practice because of the impact of social modelling on others.<sup>41</sup>

Some of the initiatives recommended by interviewees as possible trials were:

- hospitality outlets in a part of the city or in closed environment settings such as hospitals transitioning to reusable serviceware
- reusable wrap for timber
- reusable pallet wrap for fast moving consumer goods
- establishing a refill hub in central locations where many suppliers and brands can be invited to retail their product in a reusable packaging format.

Councils can help unlock further funding for reusable packaging pilots if they partner with local businesses and community groups to apply for existing central government funding grants, such as the Waste Minimisation Fund or the Plastics Innovation Fund. Councils can help these businesses and organisations by

providing the co-funding needed to make a successful application to these funds.

“...someone from council, get a facilitator, sort it out with master builders and do some test pilot projects, then put that out to all Master Builders members, push it through all the councils... Council needs to help create the facilities, and then builders act under guidelines. That could all be promoted through Master Builders... There are the right channels to go through if we say, “here’s a pilot project – trial this with ten or 20 people on sites.””–Business/service provider interviewee

• • • • • • • • • • • •

## 7 **Work with other councils regionally and nationally to take a consistent approach to reusable packaging**

“There’s no use a manufacturer trying to do something in Tauranga, if Hamilton is doing something different. Think about driving more uniformity at local council level so as we get national there are some reasonable points of connection and consistency.”– Reusable packaging provider interviewee

• • • • • • • • • • • •

Many interviewees stressed the need for councils to take a uniform approach to reuse that avoids the issues and confusion created by the fragmented approach to recycling. Research has also emphasised the benefit of having unified and standardised requirements for reusable packaging to achieve greater cost and emissions reductions.<sup>42</sup>

**We recommend councils collaborate through platforms such as Local Government New Zealand Taituarā and WasteMINZ to coordinate a shared programme of action around reusable packaging.**

This will help to ensure consistency amongst New

Zealand’s territorial authorities and regional councils and enable national messaging and education materials that all councils can use. Cross-council coordination of programmes and investment would also enable reusable packaging infrastructure to be built strategically, to reflect that most companies operate across territorial boundaries.<sup>43</sup>

## 8 **Bring greater clarity and reassurance around the intersection between reusable packaging, food safety, infection control, and covid**

“Local activists and municipal partners should ensure that state health codes enable rather than hinder reusables.”– Miriam Gordon (2020)<sup>44</sup>

• • • • • • • • • • • •

Councils can work to bring greater clarity and consistency to the enforcement of other areas of law that impact on the acceptability and uptake of reusable packaging, such as food safety and infection prevention control. In particular, **councils could lead in coordinating relevant expert guidance about the safety and appropriateness of reuse in these other contexts**. Councils and DHBs could work with central government agencies such as the Ministry of Primary Industries and the Ministry of Health to ensure any protocols and guidelines that relate to packaging specifically accommodate reusable packaging systems. Time could then be invested in **training food safety inspectors, infection prevention control officers, and others in how reuse systems can be managed safely**.<sup>45</sup>

Communications should also be provided to reassure the public that reusable packaging is safe, if properly managed, and to dispel misinformation about reusables being ‘unhygienic’.<sup>46</sup> One interviewee noted that this research and reassurance is largely being driven by the non-profit or community sector, and that greater support from local and central government to push this message out (while also developing food safety and

infection prevention guidelines specifically for reusable packaging) would help.

Having official guidance makes a real difference to businesses trying to operate reusable packaging systems on the ground. For example, the official government covid-19 guidelines that expressly specified that personal reusable cups and containers were permissible at all alert levels/traffic light settings have been actively relied upon by businesses and industry sectors when deciding to continue reusable packaging systems.<sup>47</sup> These statements do not need to be excessively complex. As with the covid-19 guidance, sometimes all that is needed is a simple statement of reassurance from an agency with the requisite training and authority to make such statements.

Additionally, **councils could also consider how other areas of its jurisdiction could support the uptake of reusable packaging.** For example, council could average its power to issue food licenses to boost reuse by setting a sinking lid<sup>48</sup> on active food licenses for operators without access to washing facilities (whether their own or contracted to a third party).<sup>49</sup>

## 9 **Invest in methodologies for capturing data about waste avoidance through reuse strategies**

“It would be useful for someone, somewhere, to keep track of the waste avoidance of zero waste stores like ours. It would be interesting to have some proper analytics done on that.”—Business interviewee operating reusable packaging system

The story of waste avoidance and reuse is not being told to its fullest potential because the data and the methods for gathering this data, are lacking. We recommend that **councils start to measure and communicate the impact of waste avoidance and reuse activities in their jurisdictions**, as well as overall packaging flows (as distinct from the waste or material streams currently

measured by Waste Assessments).<sup>50</sup> This will require the development of an appropriate methodology for capturing and interpreting relevant data that goes beyond waste diversion. Not only will this assist councils in tracking their own progress with moving up the waste hierarchy towards circularity, it will also enable businesses operating reusable packaging systems to better track and communicate their impact in this way.

“We are wanting to get better data back so we can tell the story better. We have a lot more work to do on telling the story of our impact. Creating impact is great, but unless you are explaining it and bringing people with you, it doesn’t mean anything... I want to be able to better talk about the amount of jars that come back and what that is achieving... We’ve got to get better at the stats to tell that story.”—Business/product manufacturer interviewee

## 10 **Advocate for central government policy action to level the playing field between reusable and single-use packaging**

“We have an adverse economic environment – incentives are all going in the wrong direction. So people act as they act, it’s as simple as that.”—Boris Palmer, Mayor of Tübingen, Germany (2021)<sup>51</sup>

Lifting the uptake, availability and accessibility of reusable packaging across major sectors of the economy will require **central government action, policy and regulation to ‘demarket’ single-use, emphasise and promote reuse over recycling, and direct private innovation and investment towards products and business models based around reuse.**<sup>52</sup> As Kunamaneni et al (2019) note “A successful transition into reusable/refillable products is highly unlikely without government intervention.”<sup>53</sup>

## REFERENCE LIST

Interviewees see a role for council in more strongly advocating for central government to implement the policy and regulatory measures that will help to grow the market share of reusable packaging vis-à-vis single-use.

**See our *Taking Action* chapter of recommendations for central government for a full list of such policy and regulatory measures that council could call for.**

Many councils already publicly advocate for a number of waste-related policies, like product stewardship, mandatory phase-outs, and a beverage container return scheme, while councillors and mayors have frequently supported Local Government New Zealand remits to that effect. **Councils could strengthen their advocacy to Government to design these proposals in a way that prioritises a shift towards reusables over recycling**, and to also develop targeted measures to benefit reusables and help the reusable packaging industry to catch-up after decades of neglect.

Council can also advocate for **central government to follow the waste hierarchy when allocating funding and investment towards packaging waste minimisation**, and increase financing for reuse initiatives.<sup>54</sup> Available funds will increase with the expansion and increase of the waste disposal levy, as Government develops clearer strategies for investment through proposed Action and Investment Plans, and as Government progresses with its intention to fill waste and resource recovery infrastructure gaps. However, advocacy is needed to direct waste minimisation funding towards reuse.

## MORE RECOMMENDED ACTIONS TO INCREASE REUSE.

Other groups have a role to play in increasing the uptake of reusable packaging too. Find recommendations for industry groups and central government in the other *Taking Action* chapters of this report.

- 1 "Anchor institutions are organisations which are rooted in local places and hold significant wealth as employers, purchasers of goods and services, and holders of land, property and investment assets. Universities, local authorities and hospitals are all examples of anchor institutions. If it can be harnessed, the wealth of these anchor institutions has potential for the greater benefit of local businesses and people." From Centre for Local Economic Strategies (2019) Community Business and Anchor Institutions (February 2019, London: Power to Change). Accessible at <https://cles.org.uk/publications/community-business-and-anchor-institutions/>, p.9.
- 2 City Playbook Working Group (2021) City Playbook: Building a Reuse City (Consumers Beyond Waste – An initiative of the Future of Consumption Platform, World Economic Forum). Accessible at <https://weforum.ent.box.com/s/fx48az4ijlc8gr31g8jm5bppns79fpom>, p.7.
- 3 Waste Minimisation Act 2008, s 44.
- 4 City Playbook Working Group (2021), above n 2, pp.29-30.
- 5 Miriam Gordon (2021) The Reuse Policy Playbook: A policy roadmap to reuse (Upstream). Accessible at <https://upstreamsolutions.org/reuse-acceleration-policies/>, p.8.
- 6 Aditi Varshneya, Ruth Abbe, and Alex Danovitch (2020) The Zero Waste Masterplan: A guide to building just and resilient zero waste cities (Global Alliance for Incinerator Alternatives: Berkeley, CA). Accessible at <https://zerowasteworld.org/zwmp/>, p.47; City Playbook Working Group (2021), above n 2, pp.30,35,50; Valerie Bianchi and Sunshine Yates (2021) The Journey to a Circular Economy in the Waikato Region (Waikato Regional Council Technical Report 2021/34). Accessible at <https://www.waikatoregion.govt.nz/assets/WRC/TR202134.pdf>, p.9.
- 7 Varshneya, Abbe, and Danovitch (2020), above n 6, p.46.
- 8 Bianchi and Yates (2021), above n 6, p.14; City Playbook Working Group (2021), above n 2, pp.21,23.
- 9 Gordon (2021), above n 5, p.13; Varshneya, Abbe, and Danovitch (2020), above n 6, p.47; City Playbook Working Group (2021), above n 2, pp.21,23, 30-31.
- 10 Gordon (2021), above n 5; City Playbook Working Group (2021), above n 2, p.24.
- 11 City Playbook Working Group (2021), above n 2, p.38.
- 12 City Playbook Working Group (2021), above n 2, pp.23, 41.
- 13 Varshneya, Abbe, and Danovitch (2020), above n 6, p.47; City Playbook Working Group (2021), above n 2, p.40.
- 14 City Playbook Working Group (2021), above n 2, pp.41-42.
- 15 Suneel Kunamaneni, Sukky Jassi, Dong Hoang (2019) "Promoting reuse behaviour: Challenges and strategies for repeat purchase, low-involvement products" Sustainable Production and Consumption 20. <https://doi.org/10.1016/j.spc.2019.07.001>, p.264.
- 16 Quote from reusable packaging provider interviewee.
- 17 Gordon (2021), above n 5, p.57.
- 18 Callum Keith Purchase et al (2022) "Circular Economy of Construction and Demolition Waste: A Literature Review on Lessons, Challenges, and Benefits" Materials 15. <https://doi.org/10.3390/ma15010076>, p.16.
- 19 Ferran Rosa (2018) The Story of Recircle: Zero Waste Consumption and Production (Zero Waste Europe). Accessible at [https://zerowasteeurope.eu/wp-content/uploads/2019/11/zero\\_waste\\_europe\\_cs1\\_cp\\_reCircle\\_en.pdf](https://zerowasteeurope.eu/wp-content/uploads/2019/11/zero_waste_europe_cs1_cp_reCircle_en.pdf).
- 20 Varshneya, Abbe, and Danovitch (2020), above n 6, p.47; City

- Playbook Working Group (2021), above n 2, pp.32,42.
- 21 <https://www.boprc.govt.nz/living-in-the-bay/waste-and-recycling-directory>.
- 22 Varshneya, Abbe, and Danovitch (2020), above n 6, pp.51-53; Leonore Gewessler, Austrian Federal Minister for Climate Action, Environment, Energy, Mobility, Innovation and Technology (6 July 2021) "Austria's commitment to support a large-scale comeback of refillables" (Keynote speech at the 8<sup>th</sup> European REUSE Conference hosted by Deutsche Umwelthilfe (Environmental Action Germany)). Accessible at [https://www.youtube.com/watch?v=pQPE5G\\_W\\_jl](https://www.youtube.com/watch?v=pQPE5G_W_jl); City Playbook Working Group (2021), above n 2, pp.21,31; George Beechener et al (2020) Packaging Free Shops in Europe: An initial report (Bristol: Prepared by Eunomia Research & Consulting Ltd, with contributions from Zero Waste Europe and Reseau Vrac). Accessible at <https://zerowasteeurope.eu/library/packaging-free-shops-in-europe-an-initial-report/>, p.33.
- 23 Gordon (2021), above n 5, p.35; City Playbook Working Group (2021), above n 2, pp.31,44.
- 24 Varshneya, Abbe, and Danovitch (2020), above n 6, p.46.
- 25 Gordon (2021), above n 5, p.12.
- 26 City Playbook Working Group (2021), above n 2, p.46.
- 27 Beechener et al (2020), above n 22, p.33.
- 28 See recommendations in Gordon (2021), above n 5, p.12.
- 29 Michael Dorn and Sabrina Stöckli (2018) "Social influence fosters the use of a reusable takeaway box" Waste Management 79. <https://doi.org/10.1016/j.wasman.2018.07.027>.
- 30 City Playbook Working Group (2021), above n 2, p.45.
- 31 Bianchi and Yates (2021), above n 6, p.14; City Playbook Working Group (2021), above n 2, pp.40-41.
- 32 City Playbook Working Group (2021), above n 2, pp.21,45.
- 33 Rosa (2018), above n 19, p.7.
- 34 Bianchi and Yates (2021), above n 6, p.10; City Playbook Working Group (2021), above n 2, pp.7,15-16.
- 35 City Playbook Working Group (2021), above n 2, p.27.
- 36 City Playbook Working Group (2021), above n 2, p.24.
- 37 City Playbook Working Group (2021), above n 2, p.39.
- 38 City Playbook Working Group (2021), above n 2, p.16.
- 39 City Playbook Working Group (2021), above n 2, pp.51-52.
- 40 Gordon (2021), above n 5, p.42; Rosa (2018), above n 19; City Playbook Working Group (2021), above n 2, p.32; and the town of Tubingen - see: Boris Palmer, Mayor of Tubingen, Germany (6 July 2021) on "No time to waste - How can policies, incentives and investments enable a quick shift to more reuse?" (Panel Discussion 1 at the 8<sup>th</sup> European REUSE Conference hosted by Deutsche Umwelthilfe (Environmental Action Germany)).
- 41 Dorn and Stöckli (2018), above n 29; Kunamaneni, Jassi, Hoang (2019), above n 15, p.254.
- 42 Patricia Megale Coelho, Blanca Corona and Ernst Worrell (2020) Reusable vs Single-Use Packaging: A review of environmental impacts (Reloop & Zero Waste Europe). Accessible at <https://zerowasteeurope.eu/library/reusable-vs-single-use-packaging-a-review-of-environmental-impact/>, p.61; Larissa Copello, Samy Porteron and Jean-Pierre Schweitzer (2021) Realising Reuse: The Potential for Scaling up Reusable Packaging, and Policy Recommendations (Rethink Plastic and #BreakFreeFromPlastic), pp.12-13.
- 43 City Playbook Working Group (2021), above n 2, p.52.
- 44 Miriam Gordon (2020) Reuse wins: the environmental, economic, and business case for transitioning from single-use to reuse in food service (UPSTREAM). Accessible at <https://upstreamsolutions.org/reuse-wins-report>, p.69.
- 45 City Playbook Working Group (2021), above n 2, p.26.
- 46 City Playbook Working Group (2021), above n 2, p.17.
- 47 See, for example, Countdown (N.D.) "Can I still bring my personal, reusable containers in to be filled?" on covid-19 Frequently Asked Questions. Accessible at <https://www.countdown.co.nz/community-environment/covid-19/frequently-asked-questions>; Takeaway Throwaways (4 May 2020) NZ's Guide to Contactless Reusables - for people and hospo. Accessible at <https://takeawaythrowaways.nz/blog/nzs-guide-to-contactless-reusable-serviceware-under-alert-level-3>; Reusabowl (N.D.) covid Guidelines. Accessible at <https://www.reusabowl.nz/covid19>; Again Again (N.D.) covid-19: Safe and waste free coffee. Accessible at <https://www.againagain.co/covid19>; Restaurant Association (2021) Operating your business at RED: Guidelines for hospitality businesses operating under covid-19 Protection Framework requirements. Accessible at [https://www.restaurantnz.co.nz/wp-content/uploads/2021/12/RED-operating-guidelines\\_web9Dec.pdf](https://www.restaurantnz.co.nz/wp-content/uploads/2021/12/RED-operating-guidelines_web9Dec.pdf), p.7.
- 48 i.e. a cap that reduces over time as existing licenses are not renewed.
- 49 Gordon (2021), above n 5, p.43.
- 50 City Playbook Working Group (2021), above n 2, pp.35,52.
- 51 Palmer, Mayor of Tubingen, Germany (2021), above n 40.
- 52 Copello, Porteron and Schweitzer (2021), above n 42; Kunamaneni, Jassi, Hoang (2019), above n 15, pp.253,268; Patricia Megale Coelho et al (2020) "Sustainability of reusable packaging— Current situation and trends" Resources, Conservation & Recycling: X, Vol 6. <https://doi.org/10.1016/j.rcrx.2020.100037>, p.9.
- 53 Kunamaneni, Jassi, Hoang (2019), above n 15, p.265. See also pp.253 and 268.
- 54 City Playbook Working Group (2021), above n 2, p.36; Beechener et al (2020), above n 22, p.28.

TAKING ACTION

**3.2 Recommended actions for industry groups to boost reusable packaging**

## 3.2 Recommended actions for industry groups to boost reusable packaging

Industry sector groups, individual businesses and councils can all take action to support the uptake and growth of reusable packaging systems, and to put pressure on central government to take regulatory action as well.

The nine recommended industry group actions to support reusable packaging are based on suggestions made by businesses and other stakeholders we have interviewed, and from the wider research on reusable packaging.

For more information about the appropriateness and necessity of industry action to support reusable packaging and create the enabling conditions for it to scale, see our *Setting the Scene* chapter on the current barriers to reusable packaging and the case for supportive action from government and industry.

For recommendations for Councils and central government, see the other Taking Action chapters of this report.

### THE ROLE OF INDUSTRY GROUPS IN BOOSTING REUSABLE PACKAGING

To gain the economies of scale for a meaningful increase in reusable packaging's total market share, the collaboration and participation of all supply chain actors, big industry groups and smaller operators is needed. Industry associations or sector groups have a major role to play in:

- Encouraging and supporting their members to adopt reusable packaging.

- Funding trials or research into reusable packaging systems for key products.
- Sharing knowledge about successful examples of reuse already taking place within the sector.

As noted throughout this report, well-designed reusable packaging systems have the potential to bring both environmental and economic benefits. Thoughtful and collaborative action to build economies of scale for reuse, and to establish pooling/sharing of reusable assets and services, will accelerate the resource efficiencies inherent in reusable packaging that generate cost savings for business (including reducing ongoing costs of single-use packaging). Well-designed systems can also optimise workflow and purchasing experiences that improve staff wellbeing and build brand value and customer loyalty. Ultimately, heightening public and political attention on the waste and climate crises makes the transition to reuse increasingly likely in the short- to medium-term; industries that plan ahead will be best positioned to ensure this transition reflects best-practice and delivers the most benefits for their sector.

#### 1 **Take an active position of investigating and championing reuse**

"Industry bodies or forums, like associations of fruit growers, or the food and grocery council, can play the role of saying "this is important and why", investigating how to move down this path and then supporting their members to go along."—Reusable packaging provider interviewee

Industry associations for sectors such as construction, healthcare, hospitality, tourism, packaging, and fast moving consumer goods, as well as local business associations, such as Chambers of Commerce, could do more to shine a light on the packaging waste issues within their sectors or areas, and to investigate and promote reusable packaging options. One means to ensure this happens would be to **establish a dedicated work programme for reuse within industry associations**.

Industry associations and Chambers of Commerce are also ideal platforms to raise awareness with their members about the reusable packaging options already out there. Industry groups could highlight their members who are already using reusables and support them to “mentor and encourage others in the industry.”<sup>1</sup> Ultimately, investigating and then sharing information about reusable packaging options is one way associations can fulfil their purpose of supporting their members, particularly those members with sustainability goals.

“Industry has a training and awareness raising role to play: upskilling people on the impact packaging waste has, but also how they can reduce their impact. The people working in our industry are there to do their job, not to do a lot of research. There’s not the knowledge there to understand the impact. They might see it every day, they probably haven’t considered it – it’s what they’ve always done and been told to do. Training and awareness can change that.”—Business/service provider interviewee

For example, the **Glass Packaging Forum** has recently published a paper on the opportunities and challenges for refillable glass containers in New Zealand, in which it highlights the range of existing refill schemes in New Zealand, and notes the relevance of the Forum being a “refill champion”.<sup>2</sup>

In 2021, **Restaurant Association** began issuing information to its members that reusable cups and containers were permitted during contactless transactions under Alert Level 3 (including generating signage members could easily print out and display<sup>3</sup>), and has since reiterated that reusables are permitted in their red light traffic setting guidelines.<sup>4</sup> While these are small actions, they show the Association is willing and able to provide support to members who seek guidance or reassurance about implementing or maintaining reusable systems.

## 2 **Foster collaboration and knowledge-sharing about reuse within the sector**

“...what would be good is more collaboration across the system, more people willing to learn from other people being there before and that would improve the uptake and decrease the complexity for more institutions to come on board. Then we could invest more in more packaging systems.”—Reusable packaging provider interviewee

• • • • •

Industry and sector groups can create forums and incubators for collaboration and information sharing on reusable packaging systems and best practice, so that good ideas happening in one part of the country can cross-pollinate to other areas too. Overtime, this can also support the development of best-practice approaches to reuse within each sector, and enable troubleshooting and peer-to-peer learning. One product manufacturer operating a reusable packaging system noted that they felt “really lucky” to have been supported by the local “entrepreneurship ecosystem in New Zealand” and suggested that Chambers of Commerce could encourage more incubators and accelerator programmes for businesses seeking to innovate and normalise reusable packaging systems.

In addition, **there is a role for industry groups in knowledge generation about reusable packaging systems**, which can then be shared more widely. For example, undertaking research into the user experience of reusable packaging systems (for workers and consumers), to extend knowledge about how reuse can be made as easy and accessible as possible.

Another important area of research are lifecycle analyses that look at how best to manage and design a broader sector shift to reusables (i.e. looking beyond single products to take a sector approach, and looking beyond the current dominant use of lifecycle analyses that only compare single-use packaging types).

"Cooperating with others would make a difference. We are happy to share even though our USP is sustainability... it's something we need to be doing - sharing ideas and discussing these things, on a national scale."—Business/service provider interviewee

• • • • •

### 3 Identify the low-hanging fruit in the sector and begin trials and pilots

"...start with a trial for a fixed period and make this clear to everyone from the outset."—BRANZ (2014)<sup>5</sup>

• • • • • • • • •

Industry or sector associations are uniquely positioned to **bring different parts of the industry together to commit to progress reusable packaging systems, and identify and initiate pilot opportunities.** Even interviewees in sectors with few reusable packaging options and many barriers (e.g. construction and healthcare) were able to identify products or practices in their sector for which reusable packaging systems would be viable and could be trialled. By taking leadership to work together, **industry associations can identify and reach a consensus around particular products that are realistic to transition to a reusable model, and then trial them.** One example from the healthcare sector was serviceware for patients and staff in hospitals, and in the construction sector, reusable wrapping for timber.

### 4 Bring actors across the supply chain to the table to brainstorm and/or work towards shared reusable packaging solutions

"So, industry associations deciding to do this and going to talk to a reusable packaging provider is a quicker road to follow because you already have a critical

mass. You need scale to do this, but if you're only dealing with a few it doesn't go far. Critical mass at the production or consumption end helps move things quicker."—Reusable packaging provider interviewee

• • • • •

Reusable packaging solutions can scale most quickly and efficiently if industry or sector associations can bring different parts of the industry together to collaborate. This can include coordinating actors across the full supply chain to leverage opportunities for reverse logistics, standardised or pooled packaging that most businesses within a sector agree to use, and shared infrastructure to prepare packaging for reuse.<sup>6</sup> This would be of benefit to members because a shared approach to reusable packaging can also reduce overall packaging costs for all members.

"It would be cool to share bottle and washing infrastructure with other beverage companies. We could have cleaning and factory and processing. Other companies could send their packaging to us and we would process and dispatch it."—Business/product manufacturer interviewee

• • • • • • • • •

Coordinating activity and establishing shared infrastructure and pooled assets can also be met by dedicated reusable packaging businesses. This requires enough members of the sector supply chain to agree to participate, which industry associations are in the best position to broker. Industry associations can work to identify possible reusable packaging providers and start-ups to trial and grow their offering in a mutually beneficial manner.

In the absence of a third party reusable packaging company, industry collaboration may still unlock the potential of existing infrastructure, logistics or technology to advance reuse, e.g. existing washing infrastructure in the hospitality sector, distribution vehicles already on the roads making deliveries

that could support with reverse logistics, or the comprehensive barcode/tracking system in fast moving consumer goods supply chains to support reusable transport packaging

"In the fast-moving consumer goods sector there is a need to collaborate to improve reuse in the supply chain, e.g. opportunities to make use of empty trucks to move things back and forth. If you can get pallet loads of full product to all ends of the country, then you should be able to get empty reusables back."—Reusable packaging provider interviewee

## 5 Advocate for reusable packaging with key stakeholders

Industry association and sector groups can work externally with other groups and stakeholders on behalf of their members to call for reusable packaging or to address or clarify current blockages to reusable packaging systems. For example, packaging, hospitality and fast moving consumer goods associations could work with central government agencies to develop industry-specific guidelines for reusable packaging and food safety law.

"Talk to product manufacturers about reducing their packaging waste... work with manufacturers on a packaging return system. These systems require coordination from everyone in the supply chain"—BRANZ (2014)<sup>7</sup>

Many interviewees also felt there was a need to **put pressure on suppliers and retailers to offer reusable packaging or to participate in reuse systems**. Interviewees in the grocery sector thought that groupings of stores focused on bulk dispensing could also work together to push suppliers to reduce packaging and the cost on bulk food orders, while others

acknowledged the influence major supermarkets already have on influencing uptake of reusable transit packaging in the fast moving consumer goods sector.

Businesses that wield particular influence in supply chains could go further to advocate for reuse, on behalf of their sector. For example, overseas, NGOs have recommended that supermarkets give brands an ultimatum to increase their use of consumer-facing reusable packaging or face the possibility of being delisted.<sup>8</sup> When suppliers, retailers or other parts of the supply chain sit outside of individual business' immediate influence, industry associations can act as a powerful collective voice to call on these actors to increase reuse or be more supportive of sector efforts to reduce packaging waste.

"Our sector can work with companies to change the way that they do things, and work with the people who supply us with the products to change the way they do things."—Business/service provider interviewee

Industry associations and sectors could also come together to **put pressure on central government to develop policy that levels the playing field between reusable and single-use packaging**, and prioritise applications to the Waste Minimisation Fund and Plastic Innovation Fund that focus on getting reusable packaging systems off the ground for your sector.<sup>9</sup> See our *Taking Action* chapter of recommendations for central government, which lists key policies and regulations that can help to level the playing field between reusable and single-use packaging.

## 6 Improve sector waste minimisation policies, as well as the systems for tracking and rewarding business uptake of reusable packaging

"It would help if certifications and standards would put a spotlight on

packaging. If packaging was one of those items that were assessed, it would really benefit us and everyone else. You could then start to talk with those companies and find out how they reuse..."—Business/service provider interviewee

• • • • • • • • •

Most industry sectors have waste minimisation policies, or sustainability certification systems or programmes. These programmes and policies should be updated to give greater attention to packaging waste, and to look beyond promoting only waste diversion activities like recycling (or compostables) for packaging. Policies and programmes should encourage or detail the benefits of reusable packaging systems and provide businesses with greater support in this area. Certification programmes should specifically recognise reusables in order to better acknowledge the companies that go the extra mile to develop a reusable packaging system over merely participating in a recycling programme.

Furthermore, **industry groups should begin to measure and report the use of single-use and reusable packaging within their sector and the waste avoidance impact of reusable packaging**, and communicate this to members, policymakers and the public. This is relevant for all sectors, but especially the packaging industry. In Australia, the Australian Packaging Covenant Organisation is beginning to measure the scope and impact of the reusable packaging sector in their annual reporting.<sup>10</sup> The practice should also be adopted in New Zealand by groups like the Packaging Council and The Packaging Forum. In tandem with establishing baseline data, **industries should also set time-bound targets for increasing reusable packaging, and encourage the setting of such targets at a company-level as well**.

## 7 **The Waste and Resource Recovery Sector has a role to play too**

The Waste and Resource Recovery sector has a role to play in providing the logistical support for reusable packaging systems (as they currently do for single-

use packaging systems). For example, membership associations such as **WasteMINZ** and **Zero Waste Network Aotearoa** could actively support their members to understand the place of reuse in resource recovery and how they can develop and improve current collection, drop-off and logistical systems to achieve/facilitate reuse outcomes for packaging. Advocacy by the waste minimisation sector on issues such as single-use plastics, deposit return schemes, plastic pollution, packaging recycling and kerbside recycling collections could be expanded to include greater and specific focus on policy and investment to increase reusable packaging, as an important component of addressing issues that the sector is interested in the waste hierarchy. As with industry associations, it would be of benefit for waste and resource recovery sector organisations to develop a specific work programme for reuse.

## 8 **The reusable packaging sector should seek support to organise and create an independent voice for itself**

"The reuse world needs to make its voice heard louder."—Dufour (2021)<sup>11</sup>

• • • • • • • •

Interviewees were generally highly supportive of a body to represent the reusable packaging sector. Reusable packaging is quite distinct from single-use packaging and representing the sector requires specific expertise and knowledge that would be best advanced by an association dedicated to reusable packaging businesses. Currently, the reusable packaging sector has no such voice in New Zealand and is not well represented by existing packaging associations.

Overseas, the **Reusable Packaging Association** is developing a voice for reusable transport packaging, telling the story of reusable packaging and representing the interests of their members who are pursuing reusable transport packaging solutions.<sup>12</sup>

An association for reusable packaging companies in New Zealand would help to support better Government policy in the area of reuse, could protect the integrity of

the existing reusables industry against false or inaccurate claims of reusability by setting basic definitions and standards, and support general awareness raising about the possibilities, potential and current realities of reusable packaging in Aotearoa. While some businesses operating reusable packaging systems in New Zealand have established loose organisations, such as **Sustain Aotearoa – Independent Zero Waste Grocers**,<sup>13</sup> a properly funded organisation would be able to dedicate more time to advocacy and building collaboration across the wider sector.

“You want standards to ensure reusables are actually good quality and the reusables stay in use – to avoid risk of people bringing marginally better containers that they call reusable, but that only last three washes.”—Reusable packaging provider interviewee

However, some interviewees thought the New Zealand market was too small to justify an entire association dedicated to reusable packaging and thought a specific sector group within the **Packaging Council, The Packaging Forum** or sector associations like the **Food and Grocery Council** would be more appropriate, and could still be led by individuals with direct knowledge of reusable packaging.

In any case, the initial burden of establishing this group or organisation could be led by some of the more established reusable packaging companies in the market, as smaller, emergent businesses may lack capacity. However, the organisation should exist for the benefit and fair representation of all members.

“I worry that the big guys will infiltrate the space and dilute it to the point that it doesn’t mean anything on the waste side of things, but it takes customers away from the little guys like us that are really trying to have an impact. That’s something I do worry about long term – what’s the longevity in this when brands start to pick this up?”—

Business interviewee operating reusable packaging system

9 **Increase sector resourcing for sustainability and reusable packaging**

“Chambers of Commerce could give those businesses who have thought about reduced packaging options in their supply chains... seed capital, investment, give them a grant to upscale, source better manufacturing opportunities.”—Business/product manufacturer interviewee

Undercapitalisation and under-resourcing was a frequent barrier cited by interviewees and one that many thought could be alleviated by industry associations and sector groups making more funding and resourcing available to progress reusable packaging or support those already doing it to expand. The **Glass Packaging Forum** is an example of an industry association that makes grants available for reusable packaging, and has enabled personal care product companies **Aleph Beauty** and **Solid** to establish washing systems for their returnable packaging. The Forum has noted its willingness to seek out more partners to offer funding support, or to partner with other funders for larger scale projects.<sup>14</sup> Industry groups should prioritise investment in shared infrastructure and assets to facilitate, as much as possible, the development of a harmonised, efficient reusable packaging system that can reach economies of scale and reduce cost and complexity.

“As much as the grant, it was the vote of confidence that we’re doing the right thing, and doing it the right way, which meant a lot. This has helped us communicate the scheme better, led to more people taking part, and meant that we have made more of an impact”—Laura Nixon (N.D.), Solid<sup>15</sup>

## REFERENCE LIST

Other interviewees who were sustainability managers within their organisations noted that a sector-wide approach to normalising the hiring of more sustainability managers or to creating bigger sustainability teams would enable more action in the area of reusable packaging (rather than one FTE being spread across every sustainability issue their sector or organisation faced):

"It would help to have more of me... At the moment, I have to research everything, find all the things we might do, plan to put it into place, then put it into place. Even for circumstances where there is a potential solution, it's hard. Things like this where there is no potential solution, we are so under-resourced across the board, it makes it really challenging to do innovation."— Business/service provider interviewee

## MORE RECOMMENDED ACTIONS TO INCREASE REUSE.

Other groups have a role to play in increasing the uptake of reusable packaging too. Find recommendations for local and central government in the other *Taking Action* chapters of this report.

- 1 Miriam Gordon (2020) Reuse wins: the environmental, economic, and business case for transitioning from single-use to reuse in food service (UPSTREAM). Accessible at <https://upstreamsolutions.org/reuse-wins-report>, p.68.
- 2 Glass Packaging Forum (2022) Refillable glass containers in Aotearoa New Zealand: Current context, challenges and opportunities. Accessible at <http://ovbshwospg3y3lle2ft6zyha-wpengine.netdna-ssl.com/wp-content/uploads/2022/05/Refillable-Glass-Containers-Aotearoa-New-Zealand-Final.pdf>, p.12.
- 3 <https://www.restaurantnz.co.nz/wp-content/uploads/2021/09/coffee-cup.pdf>
- 4 Restaurant Association (2021) Operating your business at RED: Guidelines for hospitality businesses operating under covid-19 Protection Framework requirements. Accessible at [https://www.restaurantnz.co.nz/wp-content/uploads/2021/12/RED-operating-guidelines\\_web9Dec.pdf](https://www.restaurantnz.co.nz/wp-content/uploads/2021/12/RED-operating-guidelines_web9Dec.pdf), p.7.
- 5 BRANZ (2014) "Waste Reduction - Building Products" (REBRI Initiative). Accessible at [https://d39d3mj7qio96p.cloudfront.net/media/documents/REBRI\\_Waste\\_Reduction\\_-\\_Building\\_Products.pdf](https://d39d3mj7qio96p.cloudfront.net/media/documents/REBRI_Waste_Reduction_-_Building_Products.pdf), p.6.
- 6 Patricia Megale Coelho, Blanca Corona and Ernst Worrell (2020) Reusable vs Single-Use Packaging: A review of environmental impacts (Reloop & Zero Waste Europe). Accessible at <https://zerowasteeurope.eu/library/reusable-vs-single-use-packaging-a-review-of-environmental-impact/>, p.60.
- 7 BRANZ (2014), above n 5, p.6.
- 8 Environmental Investigation Agency and Greenpeace (2021) Checking Out on Plastics III (London: EIA UK). Accessible at <https://checkingoutonplastics.org/>, p.37.
- 9 See, for example, the recommendations to UK supermarkets to engage with government and policymakers on such matters: Environmental Investigation Agency and Greenpeace (2021), above n 8, p.37.
- 10 Australian Packaging Covenant Organisation (2021) Australian Packaging Consumption & Recycling Data 2019-20 (Prepared by Envisage Works, IndustryEdge, Randall Environmental Consulting and Sustainable Resource Use on behalf of the Australian Packaging Covenant Organisation). Accessible at <https://documents.packagingcovenant.org.au/public-documents/Australian%20Packaging%20Consumption%20And%20Recycling%20Data%202019-20>.
- 11 Nathan Dufour from Zero Waste Europe (2021) "When reuse becomes the new 'normal' – a system change perspective" (Presentation at the 8<sup>th</sup> European REUSE Conference hosted by Deutsche Umwelthilfe (Environmental Action Germany)).
- 12 <https://www.reusables.org/>.
- 13 Laura Stewart (2022) "Business Unusual: Exploring the Role of Vertical and Horizontal Collaboration in the Development of Circular Business Models for Reusable Packaging in Zero-Waste Grocery Stores" (Thesis submitted for Master of Sustainable Business at Department of Management, University of Otago).
- 14 Glass Packaging Forum (2022), above n 2, p.13.
- 15 Laura Nixon, owner of Solid Oral Care, cited in <https://www.glassforum.org.nz/nz-oral-health-company-forging-a-sustainable-future/>.

## 3.3 Recommended actions for central government to support the growth of reusable packaging

TAKING ACTION

## 3.3 Recommended actions for central government to support the growth of reusable packaging

This report was partly funded by a Resource Wise Community Grant, managed by Tauranga City Council. The scope of the grant included consideration of the role council and industry can play in supporting the growth of reusable packaging in Tauranga. However, both the literature and the interviews we held with key stakeholders highlighted the absence of key enabling conditions to make reuse viable, affordable and accessible in New Zealand. These enabling conditions rely on economic and infrastructural settings that are established through central government regulation and strategic investment.

Accordingly, to supplement our recommendations to council and industry, we have compiled a preliminary list of recommended central government actions that would increase the uptake of reusable packaging. However, the topic deserves further research and attention. We note that this chapter goes beyond the scope of the original grant, and has therefore been self-funded by Reuse Aotearoa.

For more information about the appropriateness and necessity of central government action to support reusable packaging and create the enabling conditions for it to scale, see our *Setting the Scene* chapter on the current barriers to reusable packaging and the case for supportive action from government and industry.

### CENTRAL GOVERNMENT'S ROLE IN SUPPORTING THE GROWTH OF REUSABLE PACKAGING

"A successful transition into reusable/refillable products is highly unlikely without government intervention."<sup>1</sup>—Kunamaneni et al (2019)

As discussed in our *Setting the Scene* chapters, to date, the primary response to ballooning single-use packaging waste has been to substantially invest in waste disposal and recycling services and infrastructure. These systems now act in competition to fledgling reusable packaging systems. Given the growing recognition that we cannot recycle our way out of the current waste crisis, Government has a leadership role in signalling, implementing and managing the transition to a more circular economy that focuses at the top of the waste hierarchy.

We recommend that central government uses its powers of policy, regulation and investment to 'demarket' single-use, emphasise and promote reuse over recycling, and facilitate innovation around products and business models based on reuse.<sup>2</sup> We acknowledge the Government is currently implementing a range of reforms across waste legislation, investment funds, and its strategic approach to waste. There is far greater political willingness to use regulations to phase-out certain products, and introduce product stewardship schemes to internalise the costs of single-use packaging, including a beverage container return scheme. The Government has established new funds to build New Zealand's capacity to reduce waste, such as the Plastics Innovation Fund, and has proposed waste-related Action and Investment Plans to give greater strategic focus to policy and investment aimed at supporting New Zealand's move towards a circular economy.

Throughout this reform process, more attention must be given to the waste hierarchy to ensure that

all proposals and investment allocations are geared towards producing source reduction outcomes. This necessarily requires a marked shift towards prioritising reusable packaging systems over recycling. Decades of investment in disposal and recycling has helped to entrench the unequal playing field upon which single-use and reusable packaging now compete. Therefore, public prioritisation of reuse has to involve extra, targeted measures to benefit reusables and support the reusable packaging industry to catch-up after historical neglect.

## RECOMMENDED CENTRAL GOVERNMENT POLICY AND REGULATORY ACTIONS

“Reset the regulatory environment... If government pushes up costs on one-way packaging with levies and so on, then you put a spotlight or priority that hasn’t been put on it before. Product stewardship is another one – saying to manufacturers they need to be responsible for the lifecycle of their product. This might lead them to rethink one-way packaging.”—Reusable packaging provider interviewee

This list of targeted central government policy and regulatory actions reflect the recommendations and observations of interviewees, as well as the growing international literature on reusable packaging policy.

### 1 **Implement legally binding consumption reduction and reuse targets**

Ensure new waste legislation sets binding target reductions for packaging waste generation and overpackaging (based on units, not only weight), combined with binding reusable packaging targets, and penalties for failure to meet the targets.<sup>3</sup> Reuse targets should be applied to different sectors, with separate targets for product manufacturers, retailers

and hospitality.<sup>4</sup> This would help to accelerate alignment, collaboration and shared responsibility across supply chains, and also enable more ambition for sectors that are in a better position to implement reuse (e.g. transit packaging).<sup>5</sup> Reuse targets should be combined with a sinking cap on single-use packaging put on the market.<sup>6</sup>

### 2 **Mandatory reporting requirements, data and metrics**

Introduce mandatory reporting requirements for all sectors to report publicly on the packaging, including reusable packaging, which they put on the market, by unit as well as by tonnage.<sup>7</sup> These requirements are essential to measure progress against reduction and reuse targets and to build knowledge and data of New Zealand’s activity at the reuse layer of the waste hierarchy. Government must also lead in developing better data on reuse and tools for measuring the impact of reuse and the circularity of different packaging types, to enable these factors to inform policy-makers when they assess the various options for packaging policy.<sup>8</sup> Note that the absence of data now, must not delay the adoption of ambitious targets to transition to reusable packaging.<sup>9</sup>

### 3 **Deposit return schemes**

Adopt greater use of deposit return schemes for packaging items that include and go beyond beverage containers.<sup>10</sup> Ensure these schemes are designed to stimulate greater uptake of reusables, not only more recycling.<sup>11</sup>

### 4 **Disincentivise single-use and incentivise reuse**

Implement a single-use packaging levy or fee (visible to the consumer) for each single-use packaging unit, and consider reinvesting levy funds in businesses doing reusable packaging.<sup>12</sup> Products in reusables should be more accessible and cheaper than equivalent products in single-use packaging.<sup>13</sup> In addition, offer economic and tax incentives or subsidies for businesses using or

offering reusable packaging options to customers or other businesses (for example, to relieve pressure on freight costs<sup>14</sup>), and support to develop standardised and interoperable reusable packaging formats, infrastructure and logistics to enable faster scalability, cooperation and reduced costs.<sup>15</sup>

“We need to explore tax incentives because reuse is a green way of doing things, plus material recovery facilities would not need to be collecting single-use packaging and trucks wouldn’t need to be carrying things to recycling and landfills.”—Reusable packaging business interviewee

## 5 Phase-out single-use and mandate reuse

Ban single-use serviceware, and any packaging containing toxic chemicals of concern or problematic materials.<sup>16</sup> Set an overall sinking lid on the amount of single-use packaging put on the market.<sup>17</sup> Furthermore, create regulations that require reusable packaging in certain instances, such as: an obligation to sell certain products “loose” via refill by bulk dispensing systems (e.g. fruit and vegetables);<sup>18</sup> a requirement that all hospitality outlets and institutions serving food and drink have a reusable serviceware option that is not more expensive than the disposable option; and a stipulation that reusables become mandatory for on-site dining (e.g. Chile, Germany, Berkeley, California).<sup>19</sup> Furthermore, outlets and institutions dispensing serviceware should be required to takeback used serviceware.<sup>20</sup>

## 6 Product stewardship designed to increase reuse

Implement regulated product stewardship of all single-use packaging that fully internalises the lifecycle cost (in order to level the playing field between single-use and reuse) and that includes specific measures and levers to achieve waste prevention outcomes beyond recycling,

including eco-modulating fees.<sup>21</sup> Schemes could be required to cross-subsidise the development of reusable packaging systems.<sup>22</sup>

“If packaging had to deal with its end-of-life issues, financially, then we’d be in an even playing field.”—Nada Piatek, AgainAgain (2022).<sup>23</sup>

• • • • •

## 7 Material agnostic regulation of single-use packaging

Regulate single-use packaging, not just single-use plastics. Regulating only one material type will likely lead to companies simply switching to disposable packaging of another material,<sup>24</sup> when “all single-use products create waste and cause unnecessary harm to the environment and public health.”<sup>25</sup> Similarly, the ban-only approach to single-use plastics is not sufficiently flexible to create a systemic shift within the packaging system from disposables to reusables – more nuanced and creative policymaking is required.<sup>26</sup>

## 8 Public procurement

Specify reusable packaging/unpackaged goods as an important part of public procurement, e.g. all-of-government contracts.<sup>27</sup> Require public agencies, associations and institutions, including hospitals and universities, to increase the proportion of reusable packaging/unpackaged goods versus single-use packaging, and to report against this.

## 9 Invest up the waste hierarchy

Follow the waste hierarchy when allocating funding and investment towards packaging waste minimisation, and ring-fence increased financing for source reduction and reuse initiatives and associated infrastructural needs.<sup>28</sup> This approach should be built into any reform of the Waste Minimisation Fund and Plastics Innovation Fund, and as the waste disposal levy increases. Prioritising investment and infrastructure for source reduction

should also be central to any proposed Action and Investment Plans, and in any activity to fill waste and resource recovery infrastructure gaps.<sup>29</sup>

## 10 **Act as a broker to pilot and develop reuse capacity**

Bring different supply chain actors and industry leaders to the table to collaborate to increase reusable packaging in supply chains. Facilitate the development of standardised containers, harmonised systems and shared infrastructure to enable environmental and cost efficiencies. Where needed, offer public investment in reusable packaging systems and trials, and accompanying research to develop best practice approaches,<sup>30</sup> and ensure resource recovery networks (such as the container return scheme returns network) cater to reusable packaging as well as single-use.<sup>31</sup>

## 11 **Leadership in ensuring the transition to reusables is best-practice**

Provide guidance, as well as setting minimum standard requirements, for reusable packaging systems. This should include official definitions of reusable packaging in law, as well as basic design features of both containers and the system (as discussed in our *Setting the Scene* chapter report *What is Reusable Packaging and Why is it Important?*)

These minimum standards will help to harmonise reusable packaging systems around best practice and maximise potential environmental and economic benefits from the outset.<sup>32</sup>

## 12 **Widen enabling conditions and connect the dots across Government**

Ensure that policy, regulation and investment across government agencies takes into account the need to increase uptake of reusable packaging, and support with this transition. For example, the Ministry for Business, Innovation and Employment should work to understand the jobs in reuse and support business model innovation

up the waste hierarchy, and Ministry for Primary Industries should also support industries to transition to adopting reusable packaging for their products. Cross-agency work would also include efforts to remove unjustified regulatory barriers to reusable packaging in areas beyond waste policy, such as food safety law and infection prevention control, where appropriate.<sup>33</sup>

## 13 **Increase the costs of disposal**

Increase the landfill levy to much higher levels to incentivise waste minimisation in large waste producers, such as the construction sector. Note that landfill levy increases alone are likely to have minimal impact on incentivising a shift to reuse for household packaging.<sup>34</sup>

## MORE RECOMMENDED ACTIONS TO INCREASE REUSE.

Other groups have a role to play in increasing the uptake of reusable packaging too. Find recommendations for local government and industry groups in the other *Taking Action* chapters of this report.

## REFERENCE LIST

- 1 Suneel Kunamaneni, Sukky Jassi, Dong Hoang (2019) "Promoting reuse behaviour: Challenges and strategies for repeat purchase, low-involvement products" Sustainable Production and Consumption 20. <https://doi.org/10.1016/j.spc.2019.07.001>, p.265. See also pp.253 and 268.
- 2 Larissa Copello, Samy Porteron and Jean-Pierre Schweitzer (2021) Realising Reuse: The Potential for Scaling up Reusable Packaging, and Policy Recommendations (Rethink Plastic and #BreakFreeFromPlastic); Kunamaneni, Jassi, Hoang (2019), above n 1, pp.253, 268; Patricia Megale Coelho et al (2020) "Sustainability of reusable packaging— Current situation and trends" Resources, Conservation & Recycling: X, Vol 6. <https://doi.org/10.1016/j.rcrx.2020.100037>, p.9.
- 3 Justine Maillot (2022) "Setting Effective Reuse Targets to serve the Upscale of Reusable Packaging" We Choose Reuse. Accessible at [https://rethinkplasticalliance.eu/wp-content/uploads/2022/04/WeChooseReuse\\_EffectiveTargets\\_def.pdf](https://rethinkplasticalliance.eu/wp-content/uploads/2022/04/WeChooseReuse_EffectiveTargets_def.pdf); Hannah Blumhardt (2020) "More to Product Stewardship than Recycling: Reusable and Refillable Packaging Systems" 175 revolve <https://www.wasteminz.org.nz/pubs/revolve-magazine-july-2020-issue-175/>, p.34; Miriam Gordon (2021) The Reuse Policy Playbook: A policy roadmap to reuse (Upstream). Accessible at <https://upstreamsolutions.org/reuse-acceleration-policies/>, p.10; Patricia Megale Coelho, Blanca Corona and Ernst Worrell (2020) Reusable vs Single-Use Packaging: A review of environmental impacts (Reloop & Zero Waste Europe). Accessible at <https://zerowasteeurope.eu/library/reusable-vs-single-use-packaging-a-review-of-environmental-impact/>, p.61; Copello, Porteron and Schweitzer (2021), above n 2, p.14; Larissa Copello (2020) Reducing Packaging Waste: Choose Prevention and Reuse: Policy Briefing (Zero Waste Europe & Reloop). Accessible at <https://zerowasteeurope.eu/library/reducing-packaging-waste-choose-prevention-and-reuse/>, pp.4-5; Lauren Weir (2022) What the EU can do to support the grocery retail sector in reducing packaging and plastic pollution: policy briefing (Environment Investigation Agency, #breakfreefromplastic, Rethink Plastic, We Choose Reuse). Accessible at <https://rethinkplasticalliance.eu/wp-content/uploads/2022/02/1702-RPA-European-Grocery-Retail-Plastic-Policy-Briefing-V7.pdf>, pp.3-4.
- 4 Maillot (2022), above n 3; Gordon (2021), above n 3, pp.41-42; Nathan Dufour of Zero Waste Europe (6 July 2021) "When reuse becomes the new 'normal' – a system change perspective" (Presentation at the 8<sup>th</sup> European REUSE Conference hosted by Deutsche Umwelthilfe (Environmental Action Germany)); Copello, Porteron and Schweitzer (2021), above n 2, p.14.
- 5 Maillot (2022), above n 3, p.1.
- 6 Maillot (2022), above n 3, p.2.
- 7 Gordon (2021), above n 3, pp.32-33; Maillot (2022), above n 3, p.2; Copello, Porteron and Schweitzer (2021), above n 2, p.15; Copello (2020), above n 3, p.4; Weir (2022), above n 3, p.3.
- 8 Coelho, Corona and Worrell (2020), above n 3, p.62; City Playbook Working Group (2021) City Playbook: Building a Reuse City (Consumers Beyond Waste – An initiative of the Future of Consumption Platform, World Economic Forum). Accessible at <https://weforum.ent.box.com/s/fx48az4ij1c8g31g8jm5bppns79fpom>, p.17.
- 9 Maillot (2022), above n 3, p.3.
- 10 Coelho, Corona and Worrell (2020), above n 3, p.51; Gordon (2021), above n 3, p.10; Coelho et al (2020), above n 2, p.9; City Playbook Working Group (2021), above n 8, p.33; Copello (2020), above n 3, p.5; Weir (2022), above n 3, p.5.
- 11 Copello (2020), above n 3, p.5; Weir (2022), above n 3, p.5; Blumhardt (2020), above n 3, p.34; Hannah Blumhardt (2020) Reusable Beverage Packaging and Refillable Beverage Delivery Systems in New Zealand: Discussion Document (commissioned by Greenpeace New Zealand). Accessible at <https://www.greenpeace.org/aotearoa/publication/reusable-beverage-packaging-and-refillable-beverage-delivery-systems-in-new-zealand-discussion-document/>, p.6.
- 12 Blumhardt (2020), above n 3, p.34; Gordon (2021), above n 3, p.10; Coelho et al (2020), above n 2, p.9; Dufour (2021), above n 4; Maillot (2022), above n 3, pp.2-3; City Playbook Working Group (2021), above n 8, p.31; Copello (2020), above n 3, p.5.
- 13 Maillot (2022), above n 3, p.2.
- 14 Laura Stewart (2022) "Business Unusual: Exploring the Role of Vertical and Horizontal Collaboration in the Development of Circular Business Models for Reusable Packaging in Zero-Waste Grocery Stores" (Thesis submitted for Master of Sustainable Business at Department of Management, University of Otago), pp.53-54.
- 15 Gordon (2021), above n 3, p.10; Dufour (2021), above n 4; Maillot (2022), above n 3, pp.2-3; Copello, Porteron and Schweitzer (2021), above n 2, p.15; Copello (2020), above n 3, p.5; George Beechener et al (2020) Packaging Free Shops in Europe: An initial report (Bristol: Prepared by Eunomia Research & Consulting Ltd, with contributions from Zero Waste Europe and Reseau Vrac). Accessible at <https://zerowasteeurope.eu/library/packaging-free-shops-in-europe-an-initial-report/>, p.28.
- 16 Gordon (2021), above n 3, p.10; Coelho et al (2020), above n 2, p.9; Maillot (2022), above n 3, p.2; City Playbook Working Group (2021), above n 8, p.31; Blumhardt (2020), above n 3, p.34.
- 17 Copello, Porteron and Schweitzer (2021), above n 2, p.15; Copello (2020), above n 3, p.4.
- 18 Maillot (2022), above n 3, p.2; Copello, Porteron and Schweitzer (2021), above n 2, p.15; Weir (2022), above n 3, p.3.
- 19 Gordon (2021), above n 3, p.27; Copello, Porteron and Schweitzer (2021), above n 2, pp.14-15; Weir (2022), above n 3, p.4; Consumers Beyond Waste (2021) National Reuse Policy Briefing Paper (World Economic Forum's Platform for Sharing the Future of Consumption). Accessible at <https://www.weforum.org/agenda/2022/01/how-national-policies-can-accelerate-the-transition-to-a-reuse-economy/>, p.3.
- 20 Gordon (2021), above n 3, p.27.
- 21 Blumhardt (2020), above n 3; Gordon (2021), above n 3, p.10; City Playbook Working Group (2021), above n 8, pp.33-34; Copello (2020), above n 3, p.5; Nada Piatek (25 February 2022) Representing Again Again for the panel session "Aotearoa New Zealand's reusable packaging future—how to transition, benefits, challenges and needs" at the Sustainable Business Network Packaging Masterclass 2022. Accessible at <https://sustainable.org.nz/learn/sbn-event-recordings/aotearoa-s-reusable-packaging-future/>; Beechener et al (2020), above n 15, p.28; Weir (2022), above n 3, p.6.
- 22 Maillot (2022), above n 3, p.3; Copello (2020), above n 3, p.5; Weir (2022), above n 3, p.6.
- 23 Piatek (2022), above n 21.
- 24 City Playbook Working Group (2021), above n 8, p.36; Weir (2022), above n 3, p.3.

- 25 Miriam Gordon (2020) Reuse wins: the environmental, economic, and business case for transitioning from single-use to reuse in food service (UPSTREAM). Accessible at <https://upstreamsolutions.org/reuse-wins-report>, p.viii; See also Gordon (2021), above n 3.
- 26 Takeaway Throwaways (2021) Full Submission on this Government Proposal: 'Reducing the impact of plastic on our environment – moving away from hard-to-recycle and single-use items'. Accessible at <https://static1.squarespace.com/static/5de59a84f9af5e6088910f14/t/5f7525a905a7793966ba3698/1601512875606/TATA+Full+submission.pdf>, pp.3-6; Zero Waste Network et al (2021) Joint Submission of the zero waste community on: Te kawe i te haepapa para | Taking responsibility for our waste: Proposals for a new waste strategy; Issues and options for new waste legislation. Accessible at <https://docs.google.com/document/d/1Oyj8fiVIDmddBUfpmlJtxOiz9HGaeV6IN7HfpYrBLCc>, pp.122-123.
- 27 Maillot (2022), above n 3, p.3; Copello, Porteron and Schweitzer (2021), above n 2, p.15; Copello (2020), above n 3, p.5; Beechener et al (2020), above n 15, p.33.
- 28 City Playbook Working Group (2021), above n 8, p.36; Beechener et al (2020), above n 15, p.28.
- 29 Blumhardt (2020), above n 11, p.10.
- 30 Maillot (2022), above n 3, p.3; Copello, Porteron and Schweitzer (2021), above n 2, p.15.
- 31 Blumhardt (2020), above n 11, p.9.
- 32 Copello, Porteron and Schweitzer (2021), above n 2, pp.12-13, 15; Gordon (2021), above n 3; City Playbook Working Group (2021), above n 8, p.17; Weir (2022), above n 3, p.4.
- 33 Gordon (2021), above n 3, p.10; City Playbook Working Group (2021), above n 8, pp.17,26; Beechener et al (2020), above n 15, p.30.
- 34 City Playbook Working Group (2021), above n 8, pp.28-29.