

# Rethinking Plastics

## in Aotearoa New Zealand

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**Humans have created 8.3 billion metric tonnes of plastic**



**that's equivalent to over a billion elephants**



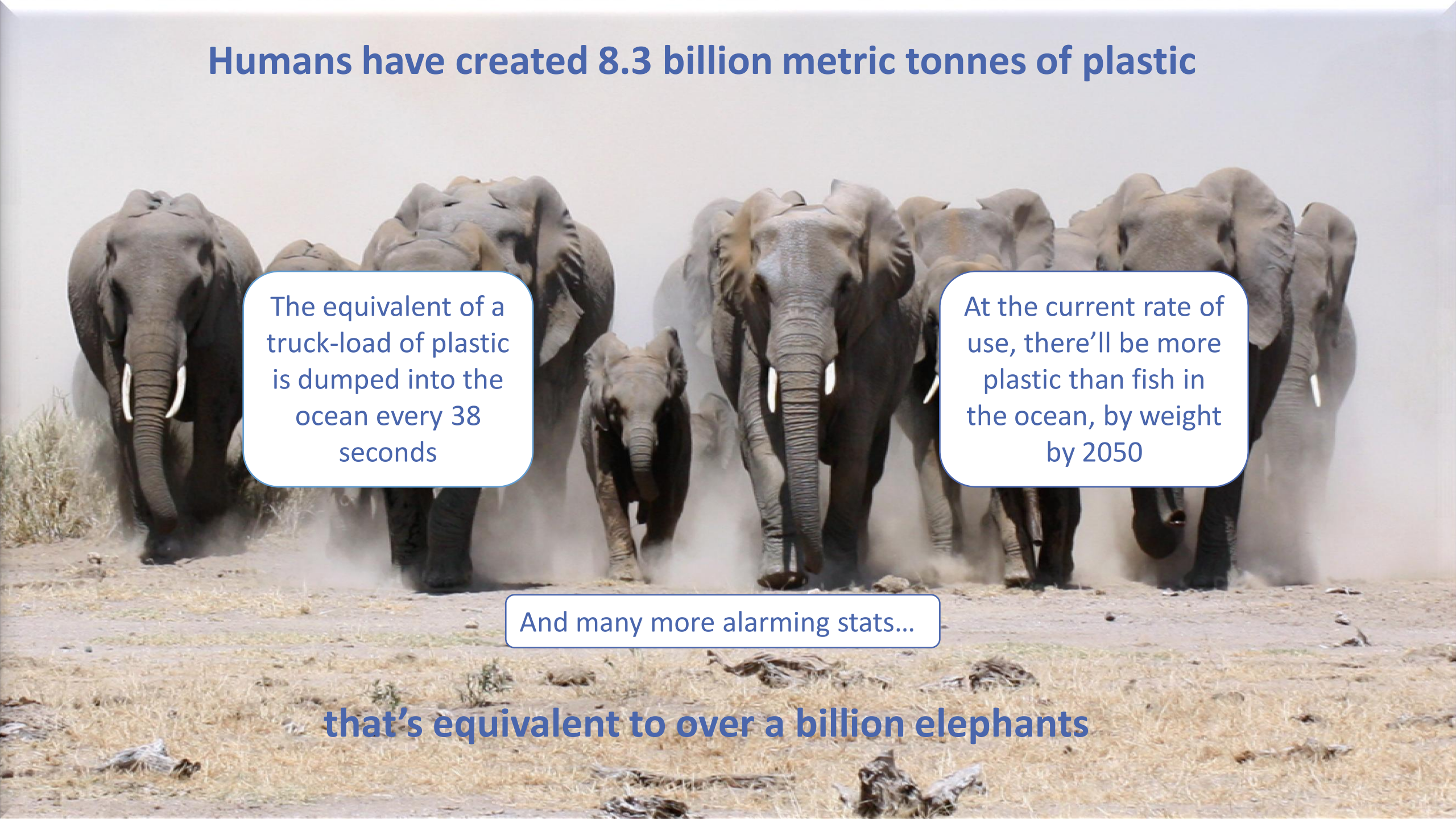
# Humans have created 8.3 billion metric tonnes of plastic

The equivalent of a truck-load of plastic is dumped into the ocean every 38 seconds

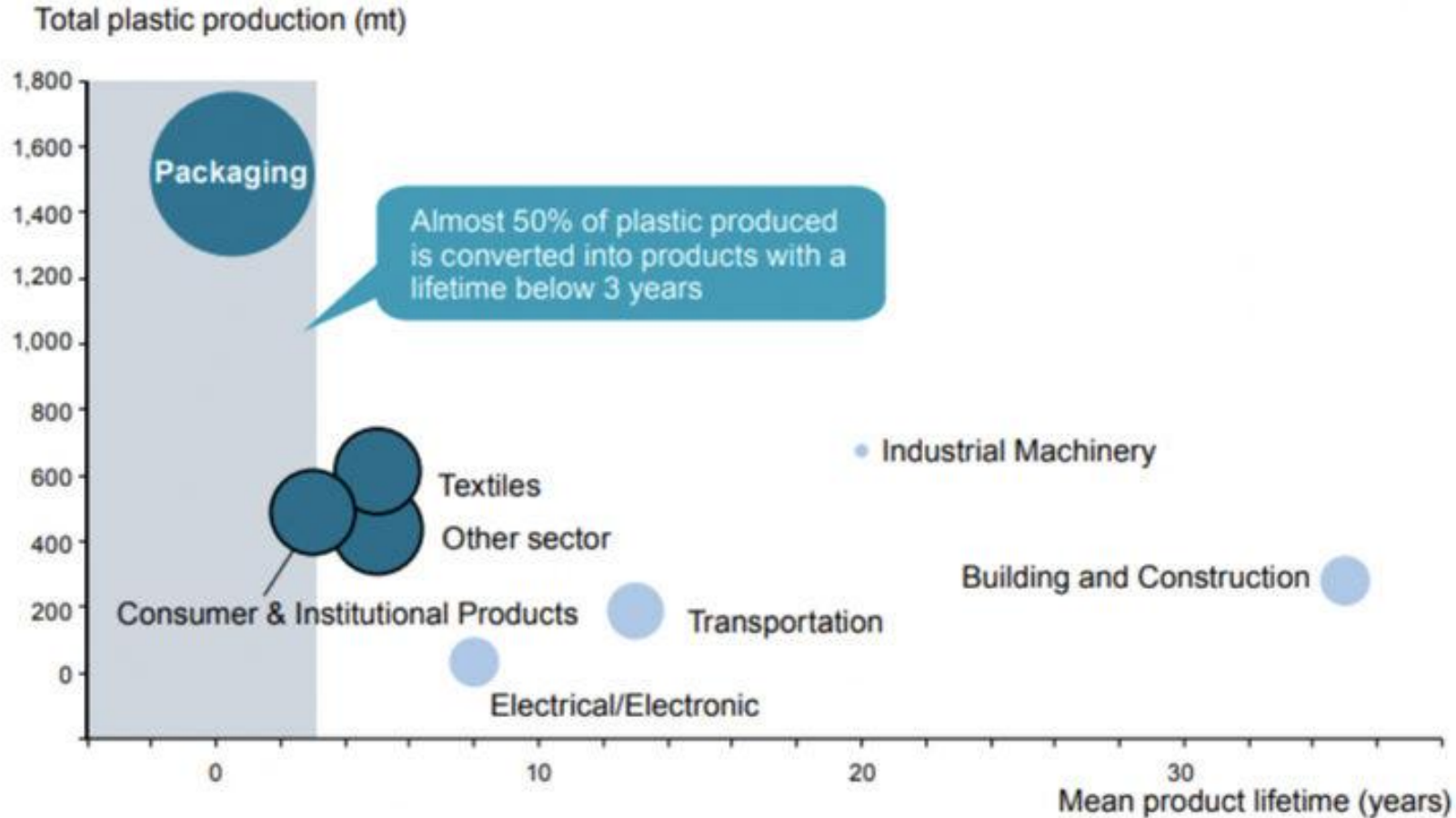
At the current rate of use, there'll be more plastic than fish in the ocean, by weight by 2050

And many more alarming stats...

**that's equivalent to over a billion elephants**



# What are we using plastic for?





# Why did we look at plastics?



- **Juliet's listening tour** – need to use science and innovation to address plastics issues
- **Public** – Colmar Brunton 2018 Better Futures report as #1 concern; big pushback on retailers/brands
- **Businesses** – Packaging declarations – need support to meet targets and make decisions around material choice
- **Government** – Programme on waste
- **Global** – response to National Sword, Basel Convention, marine litter
- **The evidence to guide change was lacking...**

# Rethinking plastics – overview

- Assembled a core panel – 11 people
- Talked to many, many more!
- Decided on a very broad scope
- Looking at evidence across the whole system
  - Whole life cycle of plastic
  - Building on local research and reports
  - Successful local initiatives
  - International best practice



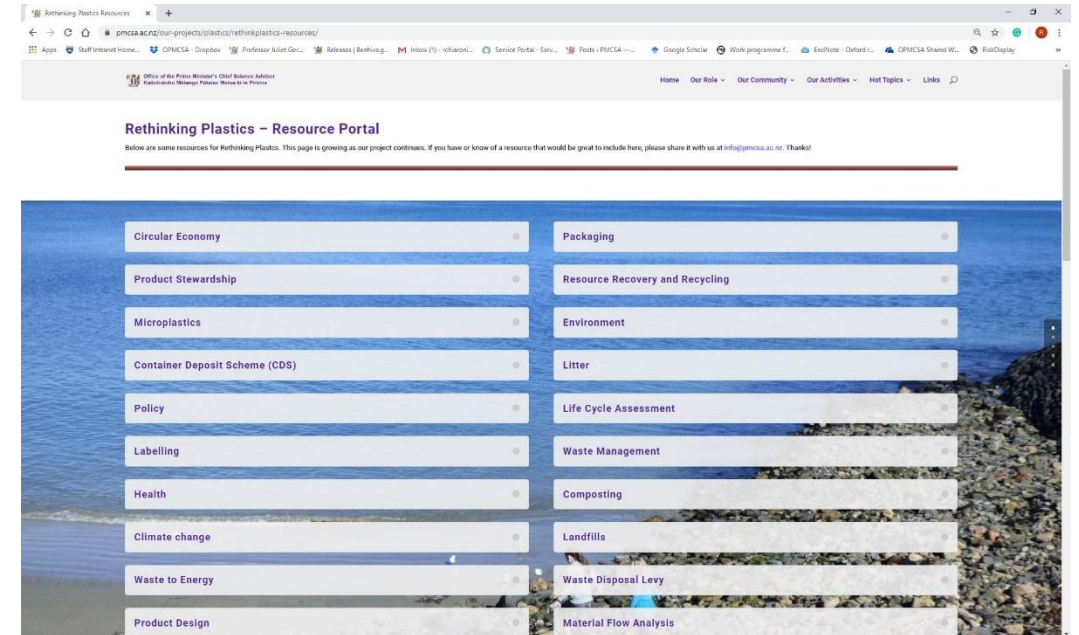
# Rethinking plastics – outputs

## Chapters

1. Motivation for rethinking plastics
2. Changing our relationship with plastics
3. Ideas for a more sustainable future – embracing innovation
4. Plastics and the environment – life-cycle assessment and beyond
5. To what extent can we quantify Aotearoa's plastic? New Zealand's data challenge

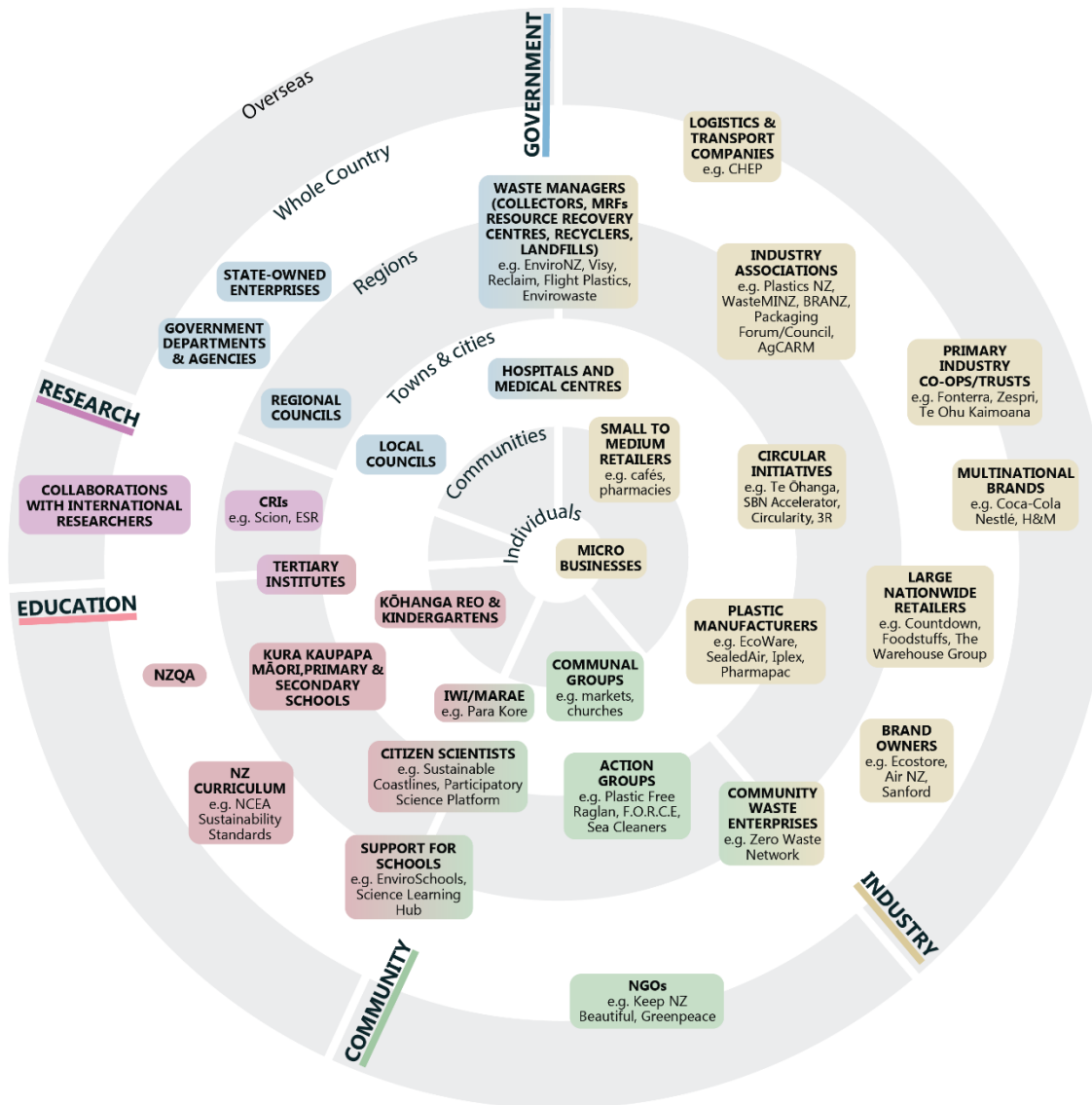
## Outputs

- Long detailed report
- Short summary report
- Website
- Resource portal



Resource portal at [pmcsa.ac.nz](https://pmcsa.ac.nz)

# Changing our relationship with plastics



- Need a systems change
- Many possible actions
- Coordination between groups and clear direction of travel important
- International collaboration and keeping up with international best practice is important



# The cumulative power of individual actions

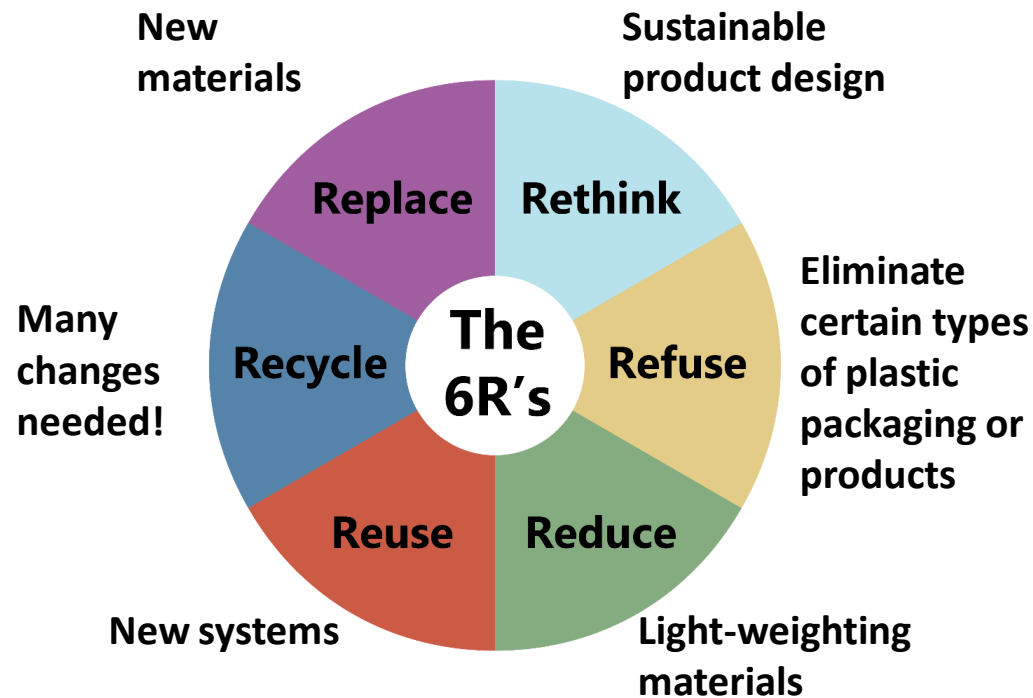
- We need governments and big business to take the big actions for substantial, immediate impacts
- BUT this often starts with individuals and small groups
- Individuals inspire others around them – social contagion e.g. plastic bag ban
- Individuals can make changes in their own daily practices AND influence the big change makers through votes and spending
- We need the system to allow for these changes



# What can you do?

- Avoid plastics where possible
- Refuse unnecessary plastics (e.g. straws, lids on coffee cups, plastic wrap)
- Reuse where you can – keep cups and reusable bags
- Repair broken products to save them from landfill
- Recycle right
- Choosing products made from recycled and recyclable content
- Support businesses that use plastic alternatives
- Talk to people about this issue and listen to other people's suggestions!
- Researching and advocating for plastic alternatives in your workplace, school or community organisation
- Joining a local group that is campaigning reform to plastic related legislation or policy
- Looking for opportunities to make submissions on local or national policy and legislation in this area
- **Every positive action matters!**

# Ideas for a more sustainable future – embracing innovation

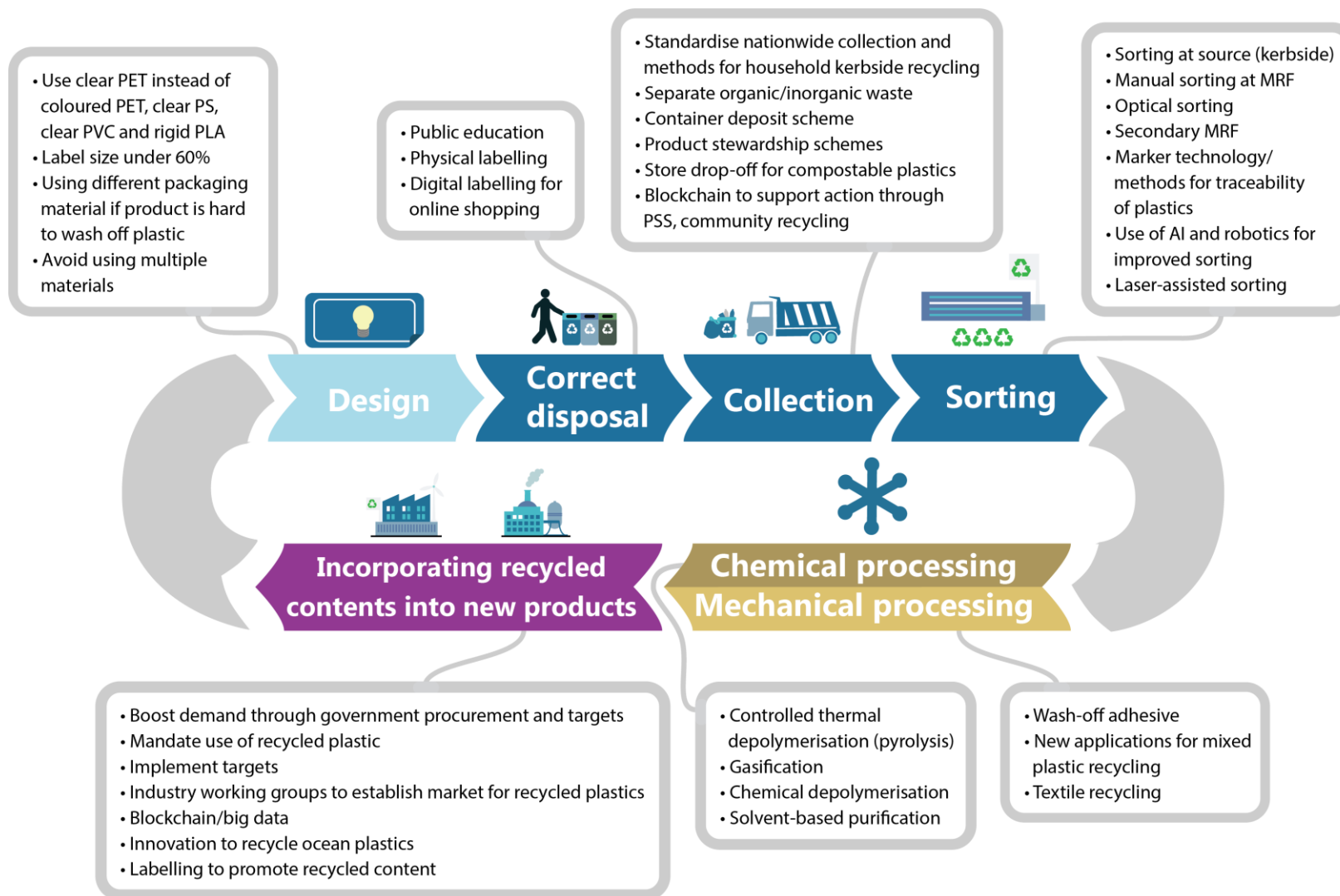


- Many solutions already out there
- Make best practice, standard practice
- Disposal options still needed as we move towards zero plastic waste





# Recycling



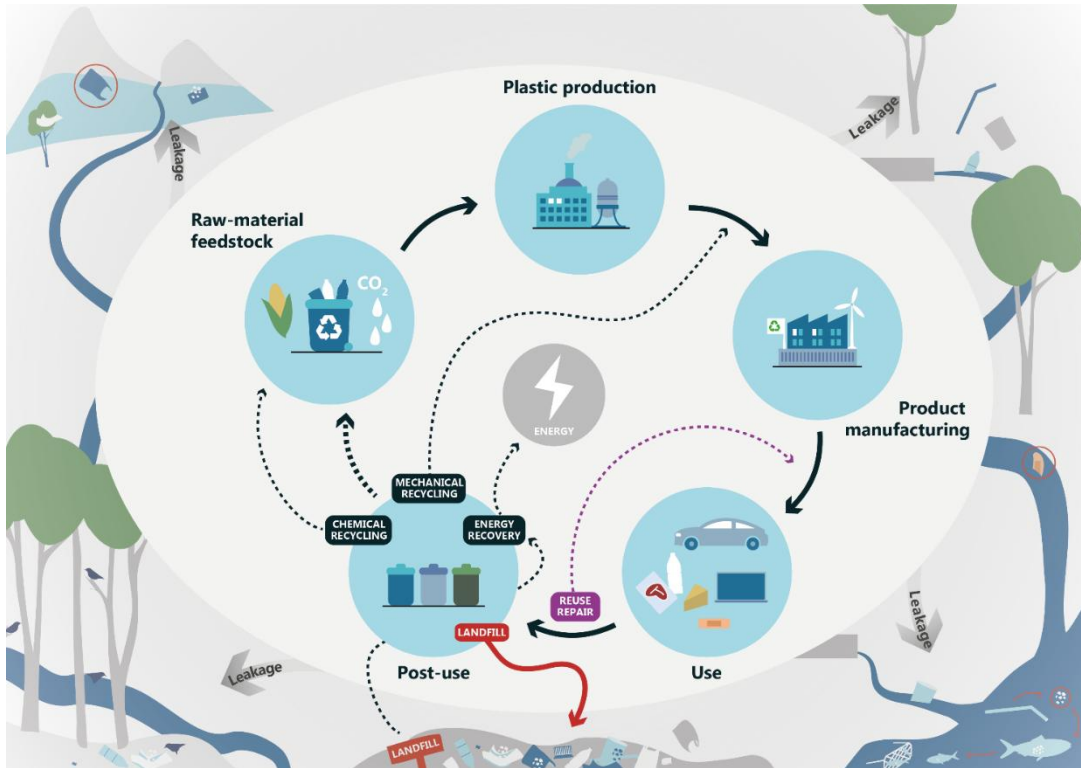


# Replace with new materials

- **Is it safe?** Particularly consider additives and use of recycled content for the application
- **Is this a better alternative for the environment?** Need to think about the full life-cycle not just disposal
- **What might the unintended consequences be?** Could this create new issues or be just as bad as the original?
- **How does it fit into the current and future system of circular materials?** Is it compatible with infrastructure and can it be kept in circulation?



# Plastics and the environment – life-cycle assessment and beyond



- Need to take a full life-cycle approach
- LCA can be used as a tool to inform decisions, e.g.
  - Are **reusable** products always better than **single-use** alternatives?
  - Should we switch to **bio-based plastics**?
  - Is **recycled plastic** actually better for the environment?
  - Should we **ban plastic packaging** altogether?
  - Should we use an **alternative** material to plastic?

It's complicated! Sometimes plastic is the best option and sometimes it's the worst – depends on product and context



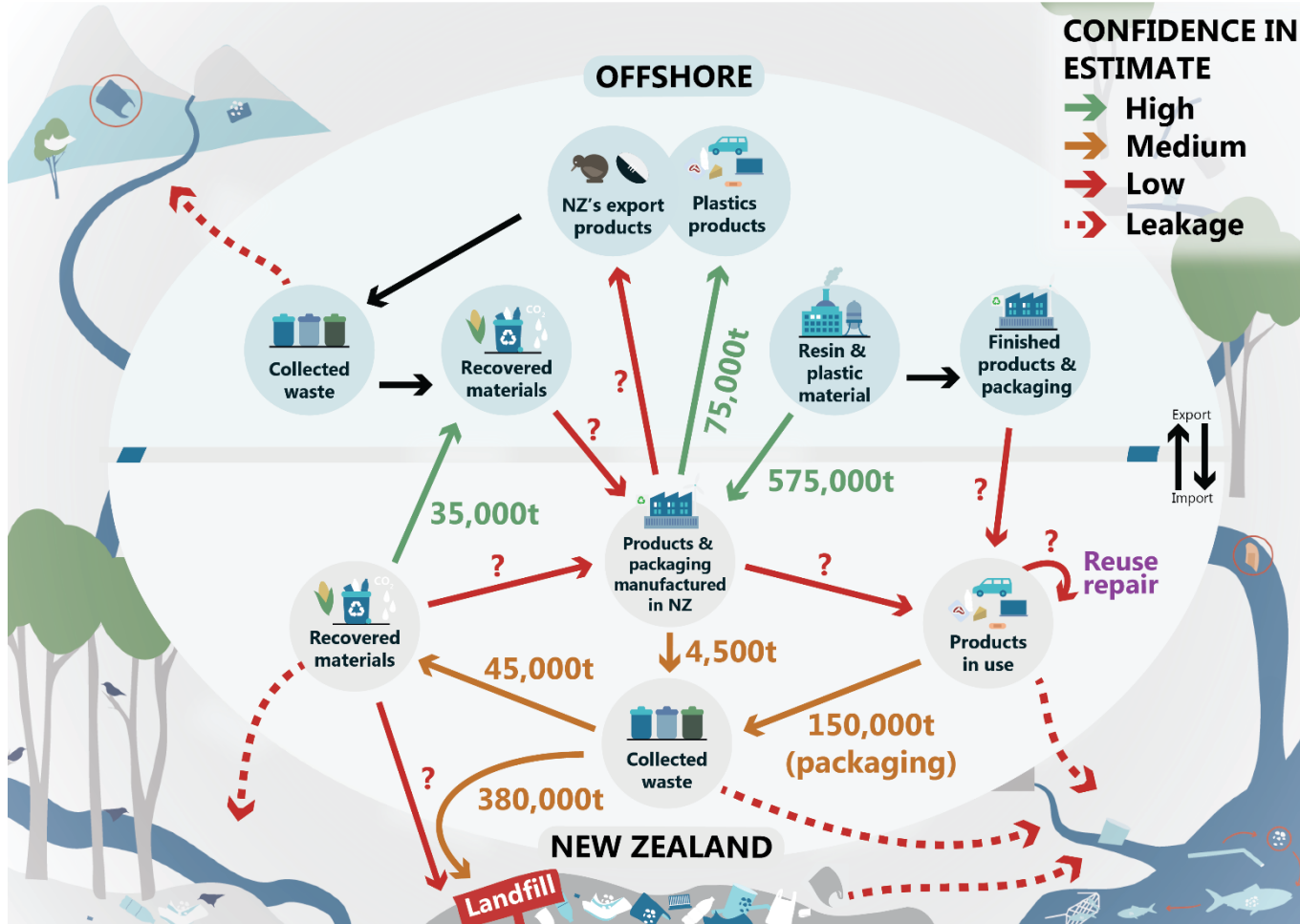
# Other considerations

- Plastic causes **physical harm** to marine life and other species
- Additional risks come from **chemicals** added to plastic
- We don't fully understand the impacts caused by **microplastics**
- We know less about the impact of even smaller plastic particles (**nanoplastics**)
- Plastic pollution poses a **biosecurity** risk
- Plastic may contribute to **antimicrobial resistance**
- Plastic may impact human **health and wellbeing**
- **Precautionary approach needed**



# To what extent can we quantify Aotearoa's plastic?

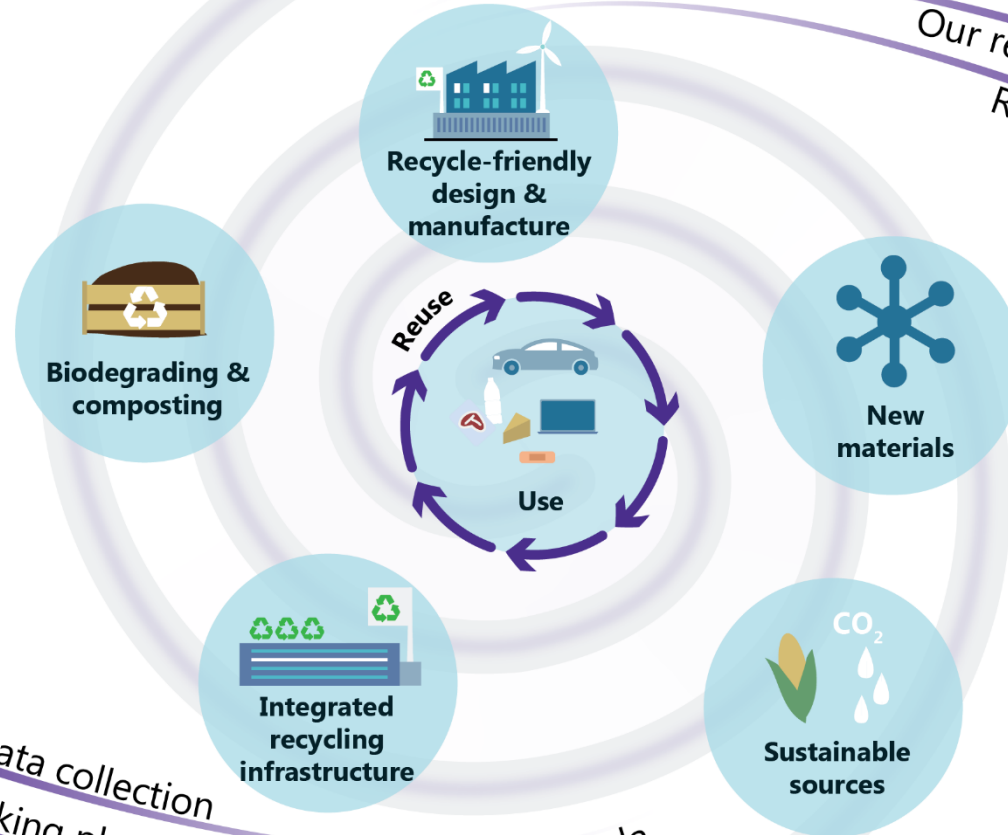
## New Zealand's data challenge



- Many knowledge gaps
- Very high level data
- Need to address imported finished goods and packaged products
- Data important for informing policy decisions
- Baseline measures needed to see if policy is working

# WHAT SUCCESS LOOKS LIKE

Best practice is standard practice  
Decreasing plastics in our environment  
Reuse is the new norm  
Our recycling system works  
Robust data on plastics



Improve plastics data collection  
Embedding rethinking plastics in the government agenda  
Create and enable consistency in design, use and disposal  
Innovate and amplify  
Mitigate environmental and health impacts of plastic

# NATIONAL PLASTICS ACTION PLAN





Ngā mihi!