

———— Plastic Pollution Challenge

# PLASTIC LOVE

*“ Do You Love Plastic ? ”*

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## Part 01

Our Own Story / Explanation of Plastic Packaging /  
Circular Economy

## Part 02

Double-Faced Plastic / Problem Statement /  
Analysis

## Part 03

Our Own Vision / What We Learned

## Part 04

Play the Video / Q&A





# Part 01

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Our Own Story

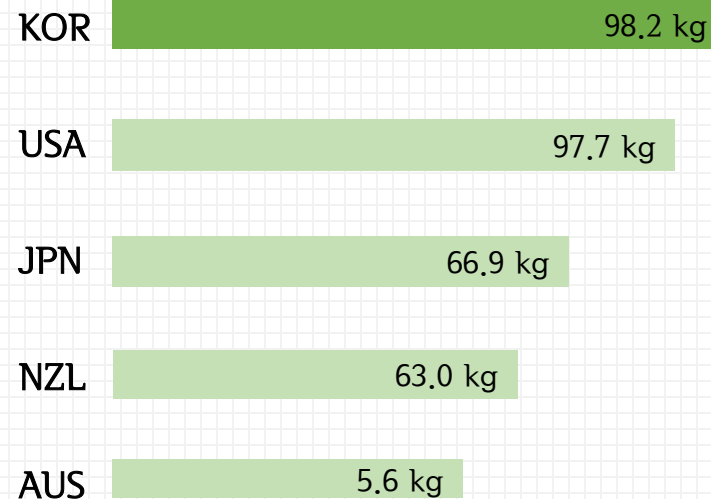
Explanation of Plastic Packaging

Circular Economy



## Annual plastic consumption per person

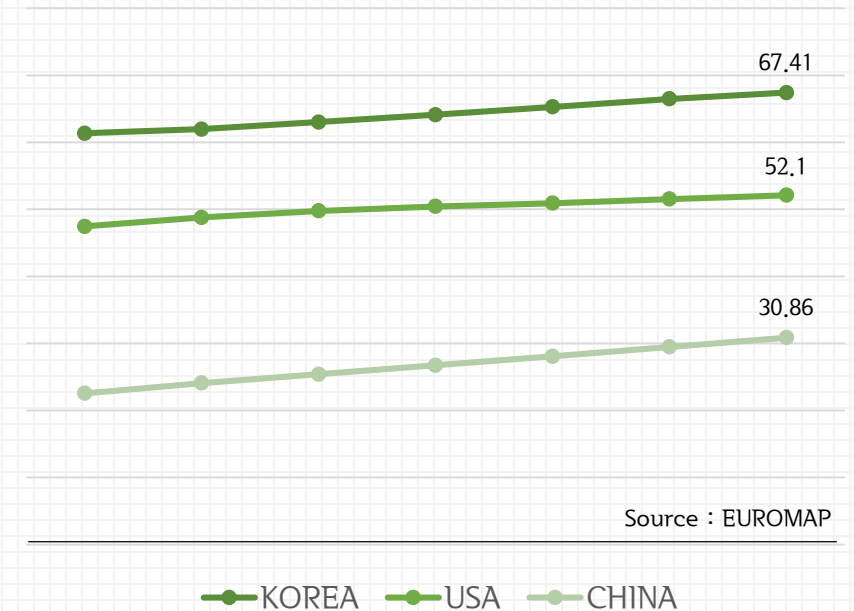
Both consumers and producers should consider the plastic abuse problem seriously and change.



Source : Statics Korea

## Annual Packaged Plastic Usage per Person

The amount of plastic used continues to increase. Efforts should be made to reduce plastic use by improving production and consumption patterns.



Source : EUROMAP



# History of Plastic in Food Packaging

Why Do People Love Plastic ?

## After the WW II

The petrochemical industry grew rapidly.

## Reduction of Cost

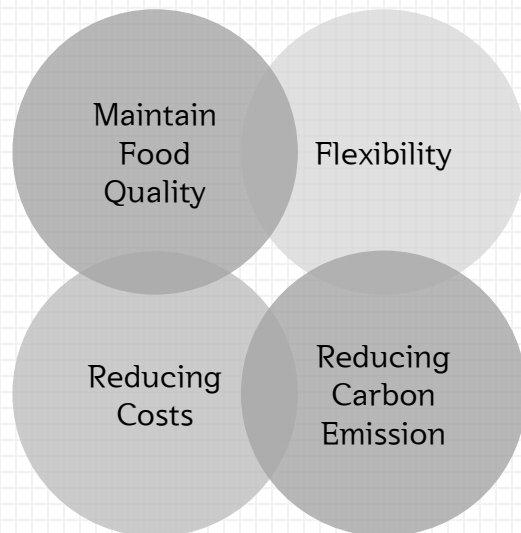
It led to a sharp reduction in the cost of plastics.

## Short-lived Things

Plastic quickly became indispensable in daily life.

## Plastic Food Packaging

So the plastic began to be used for food packaging.



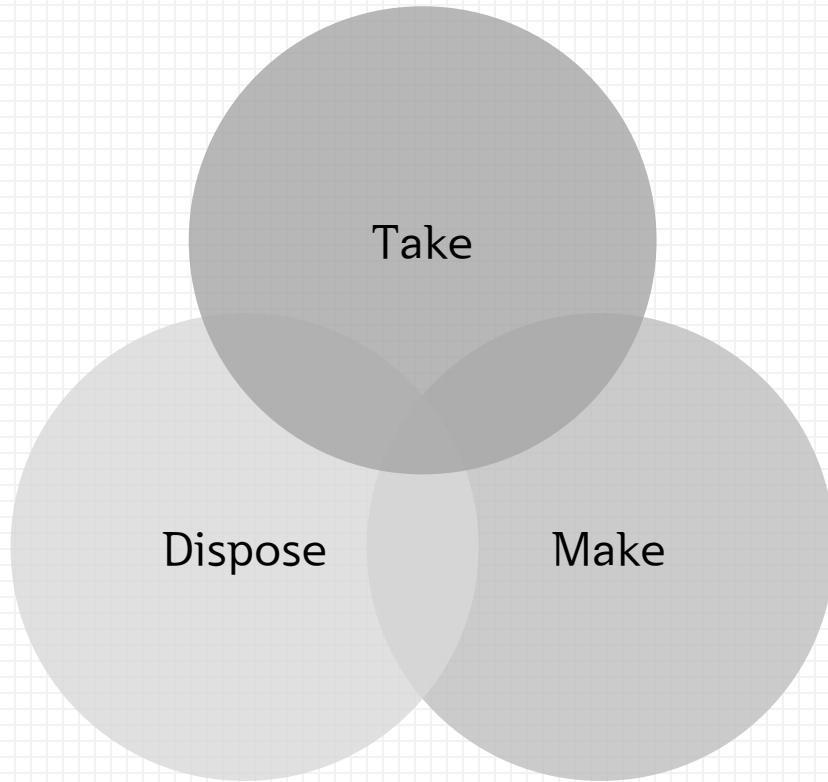
BUT

SUSTAINABLE



New  
Environmental  
Food  
Packaging

[Current Linear Economy]

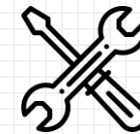


## *NEW PARADIGM FOR FUTURE*

Circular economy is an economic system aimed at **eliminating waste** and **the continual use of resources**.



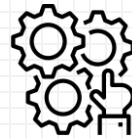
[Reuse]



[Repair]



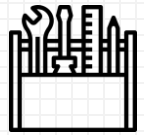
[Recycling]



[Refurbishment]



[Sharing]



[Remanufacturing]

Circular Economy Aims to  
**Redefine Growth, Focusing on Positive Society-Wide Benefits.**

# Principles

The circular design process is informed by approaches such as design thinking and human-centered design (understand, define, make, release)

01	02	03	04	05
Account for the systems perspective during the design process, to use the right materials, to design for appropriate lifetime and to design for extended future use.	While resources are in-use, maintain, repair and upgrade them to maximize their lifetime and give them a second life through take back strategies when applicable.	Ensure renewable, reusable, non-toxic resources are utilized as materials and energy in an efficient way.	Utilize waste streams as a source of secondary resources and recover waste for reuse and recycling.	Consider opportunities to create greater value and align incentives through business models that build on the interaction between products and services.



The background image shows a street scene with a large, dark, semi-transparent overlay. In the foreground, there is a massive pile of discarded plastic waste, including various colored fragments and pieces. In the background, a person is visible on the left side, and a car is parked on the right. The overall scene suggests a problem related to plastic waste management.

## Part 02

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### Double-Faced Plastic Problem Statement Analysis





Plastic Bag



Bottle



Snack

PE  
(poly ethylene)



Food Container





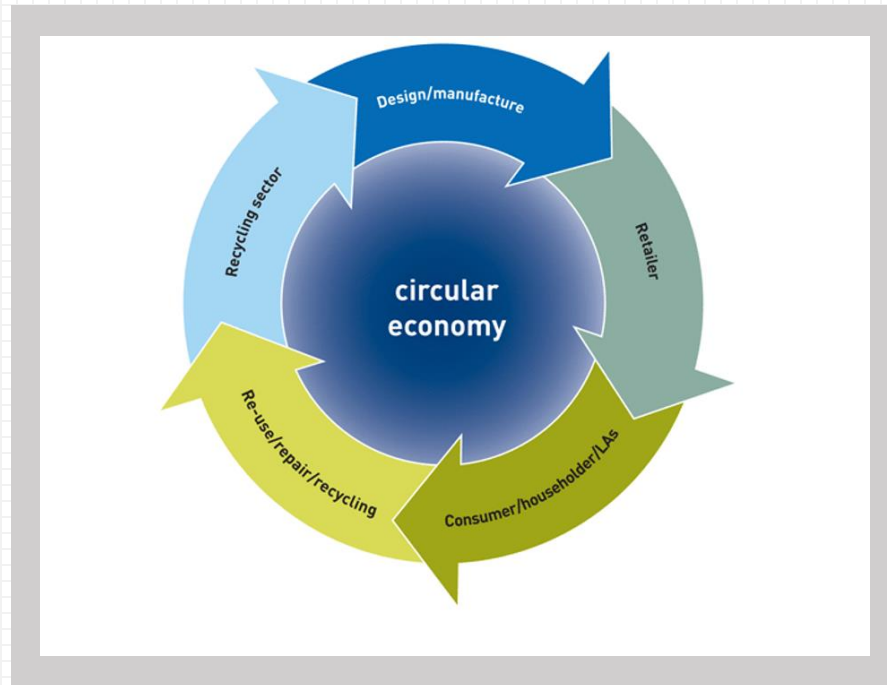
High heat resistance prevents deformation of the form or release of harmful substances.

No chemical emission and environmental hormones detected.

100% recyclable through segregation.

Eco-Friendly Plastic

## *Does polyethylene match with principles of Circular Economy?*



?





# “ Circular Economy & PE ”

01

02

03

## WASTE



PE is the plastic we use the most, and we continue to consume resources.

## POLLUTION



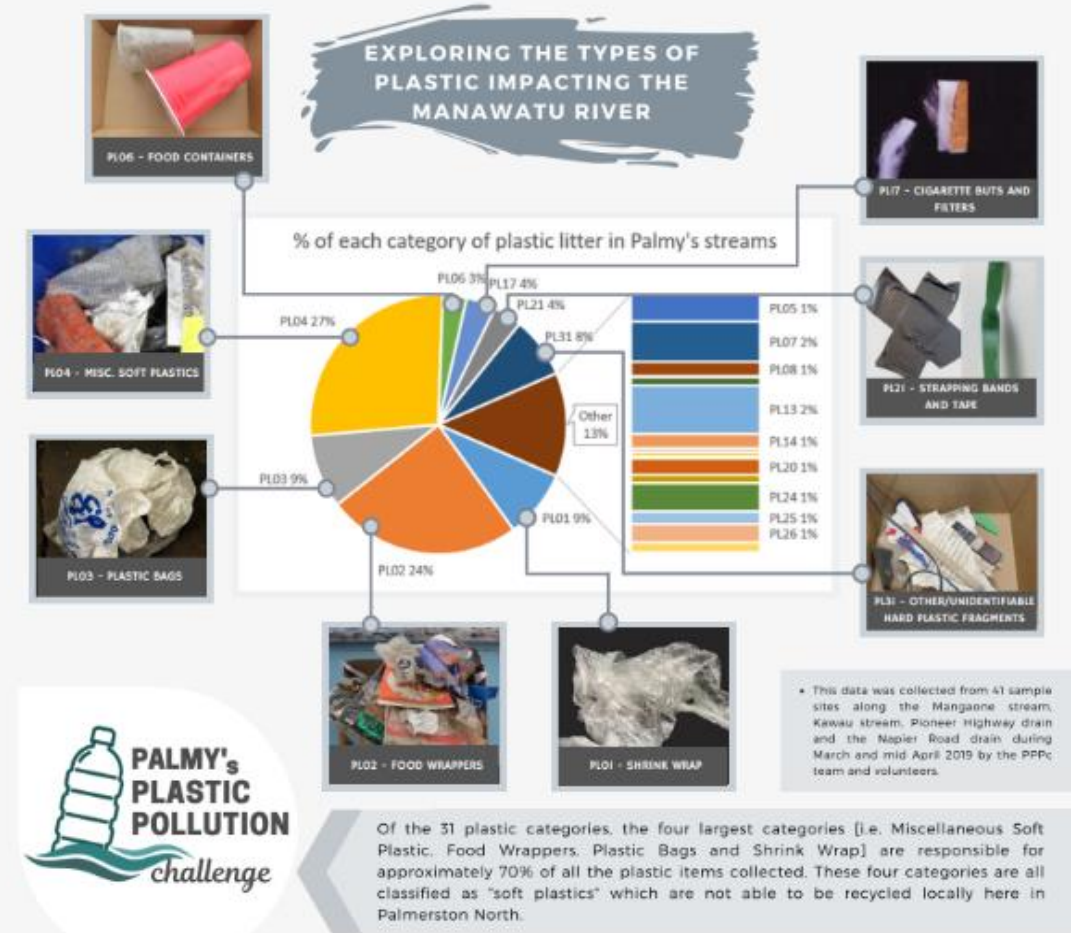
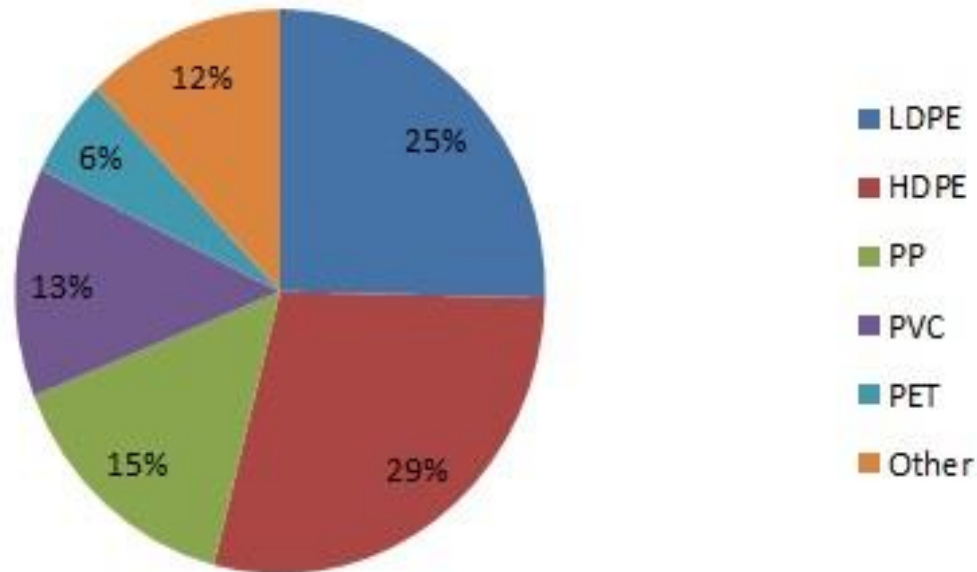
PE causes environmental pollution when not recycled but reclaimed or incinerated.

## NON-BIODEGRADABLE



As plastics decompose in nature, it does not disintegrate completely and remains a small piece of plastic. It is harmful the marine ecosystem.

Imported Plastic Raw Material by type 2014



More than 50 percent of New Zealand's imports are polyethylene.





[ Kimchi Packaging ]

Difficult to recycle because it is a pile of plastic film

Kimjang culture has disappeared and the number of single house holds has increased.

Cannot reuse or repair as the plastic is dirty and is discolored by kimchi.

The background image shows a dark, grainy photograph of a street scene. In the foreground, there is a large, messy pile of trash, including plastic bottles, paper, and other debris. In the background, a person is visible walking on a path or bridge, and there are some buildings and trees in the distance. The overall tone is somber and highlights environmental issues.

## Part 03

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Our Own Vision

Solution Ideas

What We Learned



01

02

03

Zero - Waste  
Is it Possible?

Alternative  
Solutions ?

Eco-Friendly  
Food  
Packaging

What Can We Do for Our Sustainable Future ?

## “ PLA Container ”



Polylactide is referred to as a ‘**bioplastic**’ because of its environmentally friendly nature.

Polylactide is **biodegradable**.  
It decomposes forming carbon dioxide and water, which present no danger to the environment.

Usually people buying Kimchi in large amount, it will be easier to create PLA containers with **different sizes**.

## “ Aluminum Food Container ”



Aluminum is one of the most **recycled** and most **recyclable** materials on the market today.

Aluminum can be recycled **directly back into itself** again in a true closed loop.

Aluminum can be quite profitable.  
Thus it can be **sustainable material**.



## “ Changes in Buying Behavior ”



New Zealand Plastic Bag Example (Own Bag)

Only Paying for the Product (Not for Packaging)

No Plastic & Always Fresh  
Convenience in Amount

## “ Palmy’s Plastic Pollution Challenge”



[ SHOCK ]

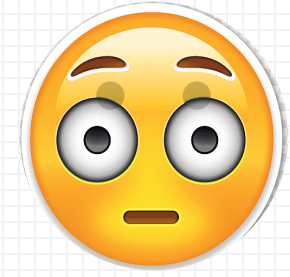
Program Theme

Business vs Sustainability



[ ANGER ]

Already Zero Waste Concept



[ SURPRISED ]

CLEAN THE STREAM

Faced with Reality-Optical Illusion



[ SATISFACTION ]

Be best version of yourself

Knowledge - Think out of Box



[ MOTIVATION ]

Use knowledge in Practice

Implementation in our home countries



# Rival for Uber as ride-share firm says 'Ola'

**Transport**  
**Paul Mitchell**  
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A new ride-share company is pulling up next to Uber in Palmerston North to go head-to-head for the city's passengers.

The India-based Ola is one of Uber's larger global competitors, and the Palmerston North launch on Tuesday was part of a nationwide summer expansion into 11 new towns and cities, including Hamilton, Tauranga and Queenstown.

Donise Gannon is one of the first Palmerston North drivers to sign on with Ola, and one of the relatively few registered female drivers in the New Zealand ride-share industry.

She had been looking forward to the freedom of setting her own hours and meeting new people, and was surprised more women weren't signing up as ride-share drivers.

Gannon only realised she was a rarity during the publicity push for the Palmerston North launch.

"I've never really considered my gender when I'm choosing what job to go for, and people shouldn't have to."

She decided to become a ride-share driver because she thought she would be good at it and being on the move appealed to her.

"I like being out among the community, especially since I've spent most of my working life in offices."

"I'm good with people. I've got a first aid certificate. I'm an experienced traveller. And women can do pretty much anything men can do, obviously."

Gannon believed the ratio of male and female drivers would eventually even out, since it was still early days for the ride-share industry in New Zealand and there were plenty of women driving taxis.

Ola country manager Brian Dewit said the company didn't have exact statistics on how many of its 9000 New Zealand drivers were women. But the majority were men and that appeared to hold true for most ride-share companies.

Ola was founded in India in 2011 and the company claims its 150 million users, in 125 countries, take more than 1 billion rides a year. It launched in Auckland, Wellington and Christchurch in 2016.

Uber arrived in New Zealand four years earlier and launched in Palmerston North in October.



**Students help protect waterways**

**George Heagney**

A group of international students visiting Manawatu is looking for ways to stop plastic waste damaging the environment.

Twelve students from Kyung Hee University in Seoul, South Korea, are in New Zealand for a month as part of an international short course where they will research a proposal for new green food packaging.

The business and administration students are visiting all three Massey University campuses and while in Palmerston North this week they took part in the Palmy Plastic Pollution Challenge, organised by Environmental Network Manawatu.

The group helped clean up a section of drainage reserve off Napier Rd on Wednesday.

Giselle Lam, 23, from Hong Kong, was one of the students and she said cleaning up a stream was new to her.

"We knew what we were going to do, but not specifically picking up garbage from the stream."

She said it was critical the environment was protected.

"It is really important for people to have the awareness of how our behaviour will affect the environment. We have been learning from this programme that the world goes in a circle."

"It's a circle economy, where the things we do to the environment will come back to us."

HeyJoung Choi, the programme co-ordinator at professional and continuing education at Massey University, said the students involved in this course wanted to do something different from studying English.

She said they had never thought about studying environmental problems, but now they were finding problems with plastic all over the world or discovering problems in their area.

The students will present their findings and suggestions at the Palmerston North Library on February 13. Choi said the students could suggest new methods for food packaging, whether it was biodegradable packaging or less packaging.





The background image shows a dark, grainy scene of a street. In the foreground, there is a large, messy pile of trash, including cardboard boxes, plastic, and other debris. In the background, a person is visible on the left side, possibly working or walking. The overall atmosphere is one of poverty and environmental neglect.

## Part 04

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[Play the Video](#)

[Q&A](#)







The background image is a dark, semi-transparent photograph of an urban environment. In the foreground, there is a large, messy pile of discarded waste, including cardboard boxes, plastic fragments, and other debris. In the middle ground, a person is visible, seemingly engaged in some activity near a wall or structure. The background shows more of the urban setting, with buildings and possibly a vehicle. The overall tone is somber and gritty, likely intended to convey a message about environmental issues or social conditions.

Thank  
You