



# Plasticity Sydney

Darling Harbour - 31 October 2017

Colin Barker

Director Newtecpoly  
CEO PolyWaste Ltd  
Deputy Chair AIEN

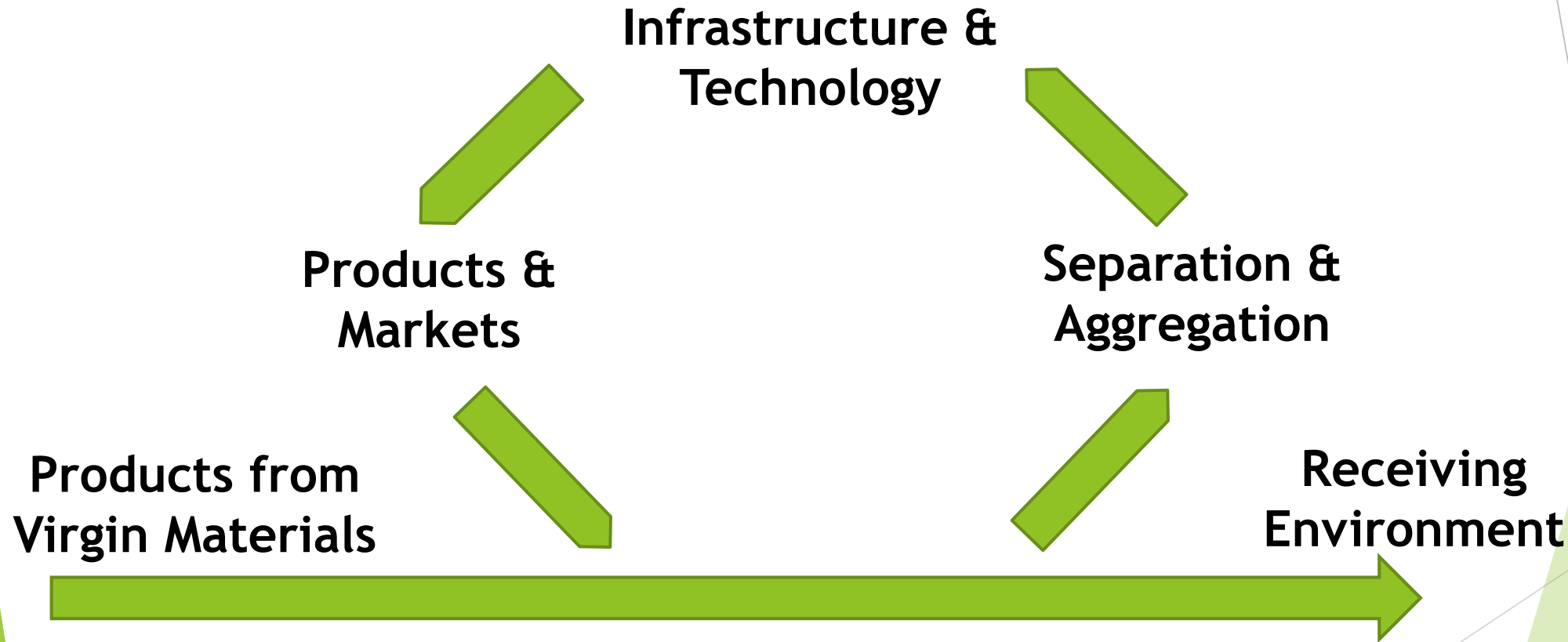
# Overview

- ▶ The Circular Economy  
Where are we headed and what is our aim?
- ▶ Highest Achievable (Net) Resource Value
- ▶ Intro to Newtecpoly
- ▶ The PolyWaste Technology
- ▶ Recent Projects
- ▶ What will (should) the future look like?

# Topical Issues

- ▶ ABC's War on Waste
- ▶ 4 Corners recycling industry expose
- ▶ Chinese government bans on importing waste
- ▶ Increasing community awareness of plastic pollution and environmental impacts

# The Circular Economy (Our Collective Target?)

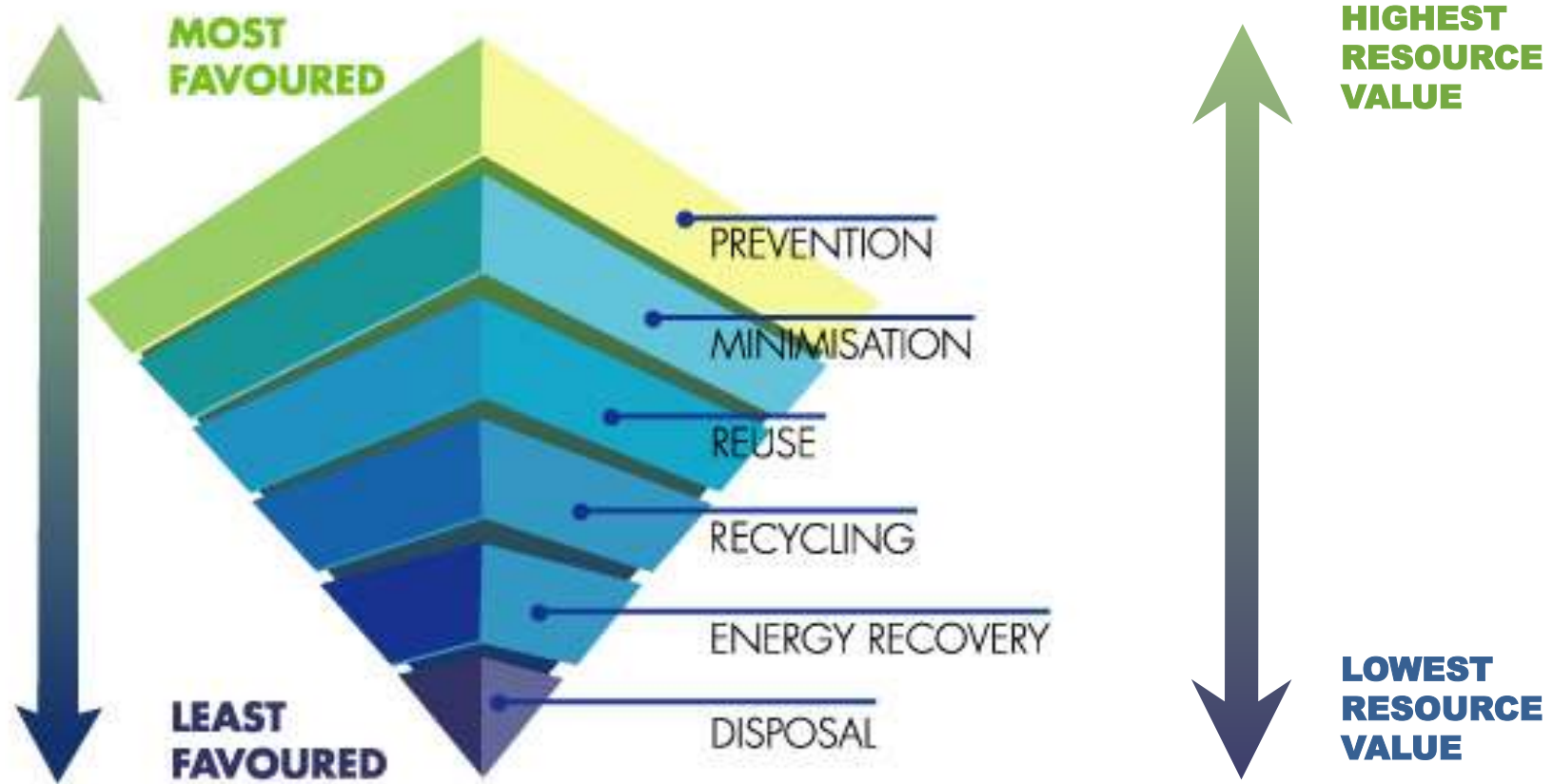


# Our Average Individual Purchasing Contract To Fully Circularise Our Personal Economy

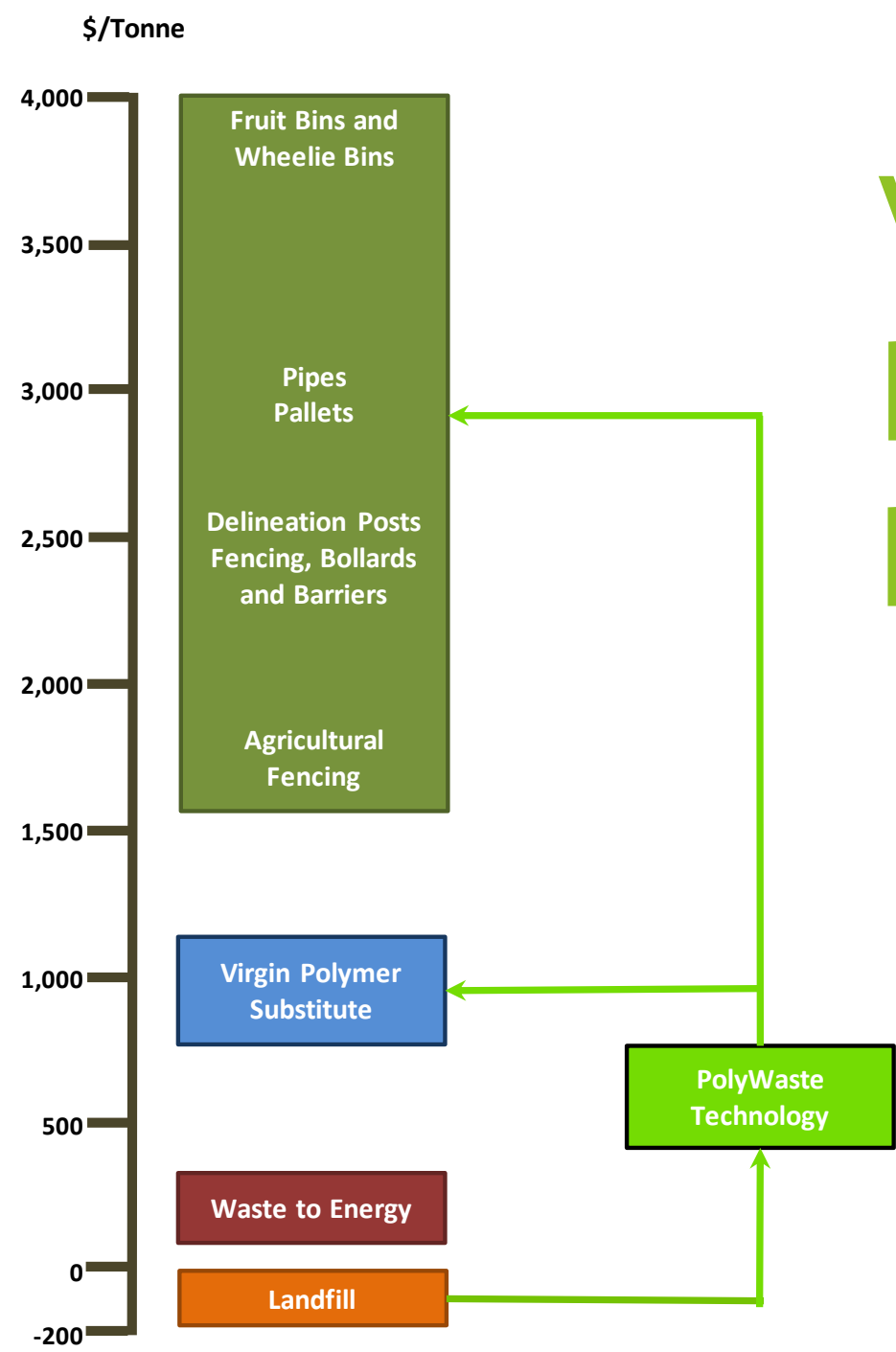
From Waste Generation and Resource Recovery in Australia  
Workbook 2010/2011.

► Masonry	182 kg/annum	?
► Metals	20 kg/annum	✓
► Organics	265 kg/annum	?
► Paper/Card	69 kg/annum	✓
► Plastics	75 kg/annum	X
► Glass	18 kg/annum	X
► Timber & Other	22 kg/annum	?
► Hazardous	90 kg/annum	X
► Fly Ash	307 kg/annum	X

# In a Nutshell!



# Value of Recycled Plastic



# PolyWaste Technology

- ▶ Lower capital cost
- ▶ Reduced operating cost
- ▶ Commercially viable at regional scale
- ▶ Can process co-mingled feedstock
  - ▶ No Sorting Required
  - ▶ Flexible and/or Rigid
  - ▶ Multi Layer Packaging
- ▶ Can process lightly contaminated feedstock
  - ▶ No washing or shredding required
  - ▶ Food waste
  - ▶ Oils / Organics
  - ▶ Sand / Soil

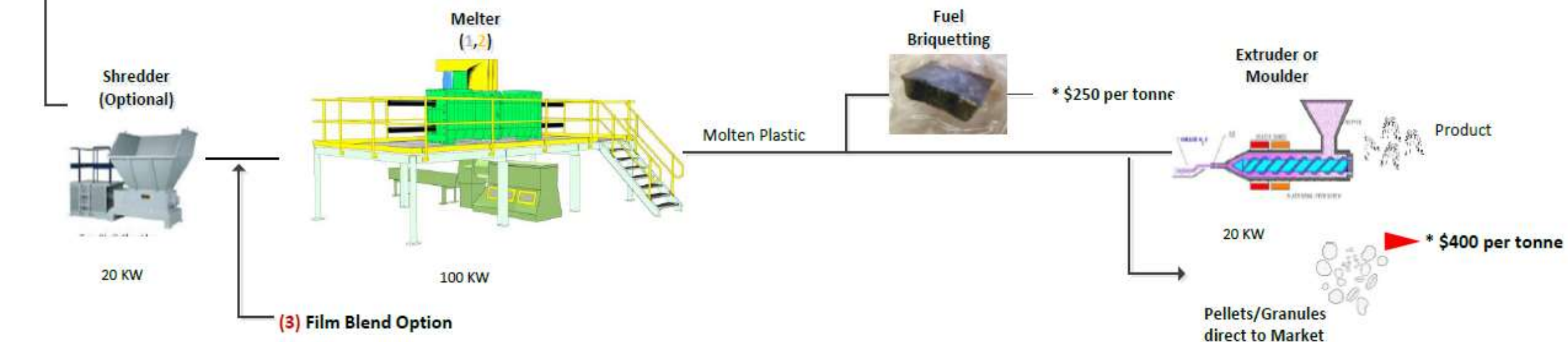
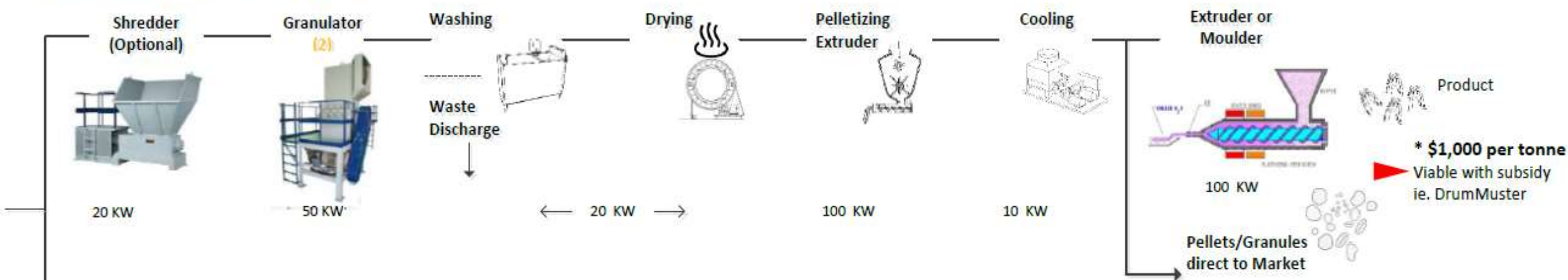


**Converts waste plastic  
to finished goods .....  
in one simple process !!**



# CONVENTIONAL PLASTIC RECYCLING COMPARED TO POLYWASTE PLASTIC RECYCLING

## CONVENTIONAL RIGID PLASTICS – HDPE, HIPS etc.



## POLYWASTE RIGID PLASTICS – HDPE, HIPS etc.

# Plastic Recycling Process Comparison

## Traditional Process

Capital Intensive - Centralised

- ▶ Sort
- ▶ Shred
- ▶ Wash / Clean
- ▶ Dry
- ▶ Bailed
- ▶ Load
- ▶ Melt
- ▶ Extrude ( into beads for later use as Virgin Polymer replacement )
- ▶ Remelted
- ▶ Moulded into finished products

## PolyWaste Process

Low Cost - Regional

- ▶ Bailed ( Optional )
- ▶ Load
- ▶ Melt
- ▶ Mould/extrude into finished products

## PolyWaste Process

**98.8% CO<sub>2</sub> eq saving compared to landfilling plastic waste and making new products using virgin polymer**

# Current Projects

## Campaspe Shire (Vic)

- ▶ Pilot program converting local flexible domestic plastic waste into :
  - ▶ Planks
  - ▶ Bollards
  - ▶ Posts
  - ▶ Furniture

## Plastic Police Partnerships

- ▶ Schools recycling programs

## Surfrider Foundation

- ▶ Converting beach clean-up material into products

## NSW based projects

- ▶ NSW Office of Environment & Heritage (OEH)
- ▶ Sustainability Advantage (SA) program
- ▶ NSW EPA via Waste Less Recycle More program

# Current Projects (cont'd)

## Undisclosed Client

- ▶ Initiative to recycle cigarette butts with agricultural films into useful products

## International Bank and Humanitarian Organisations

- ▶ Environmental plastic clean up and establishment of low capital plastics recycling facilities

## PolyWaste technology

- ▶ Speed to Market initiatives
  - ▶ Domestic
  - ▶ International

## Ongoing Product Development

- ▶ Testing
- ▶ Downstream Processing Options

# Newtecpoly in the Community



Plastic Police Partnerships Buddy Bench



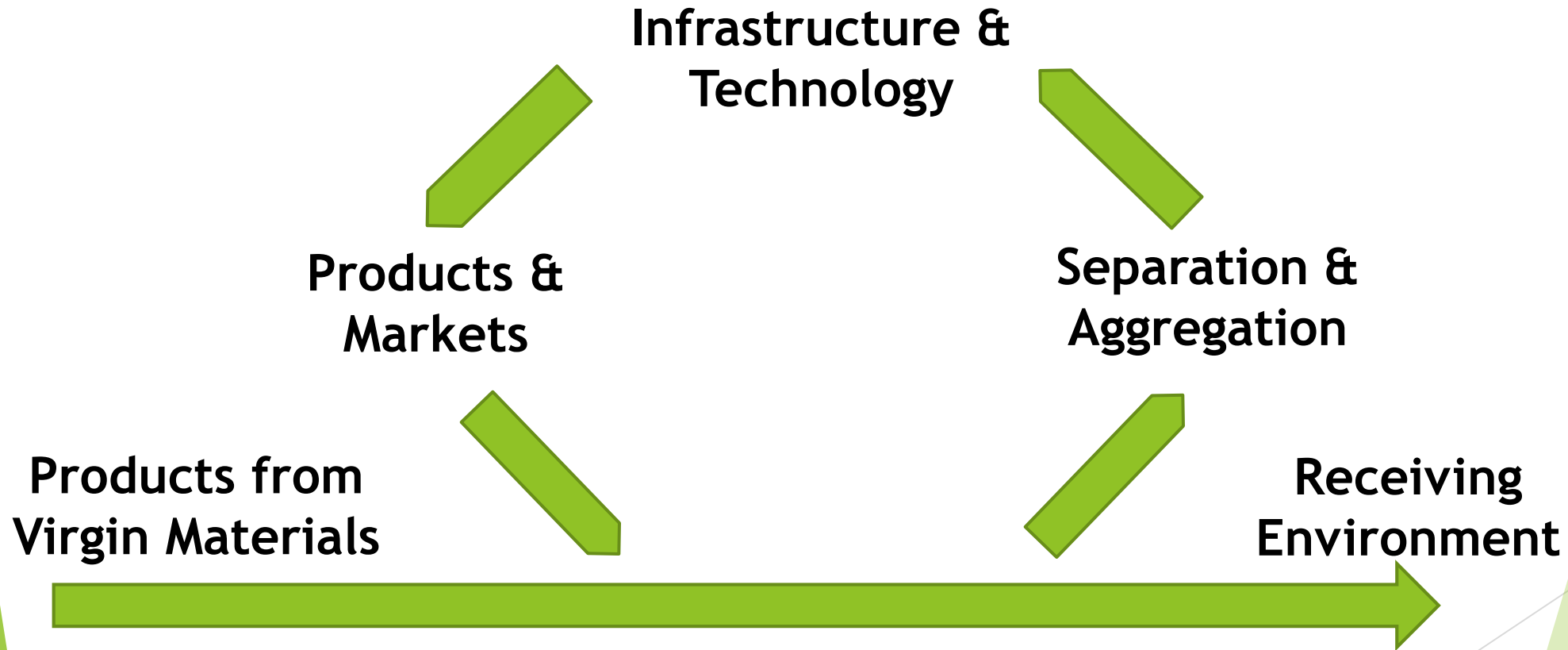
Surfrider Foundation Beach Clean-up Furniture



Furniture Items From:  
Agricultural Films (90%) and  
Cigarette Butts (10%)



# The Circular Economy (Our Future?)



# Thankyou for Listening

Check Us Out At:  
[www.newtecpoly.com.au](http://www.newtecpoly.com.au)

**Colin Barker**

Technical and Administrative Director

0412 043 439

[cbarker@newtecpoly.com.au](mailto:cbarker@newtecpoly.com.au)

PO Box 400, Moama NSW 2731

