

# Plastic

## Fall Guy or Villain



[www.impact-solutions.co.uk](http://www.impact-solutions.co.uk)

# Why me?

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## **Impact Recycling**

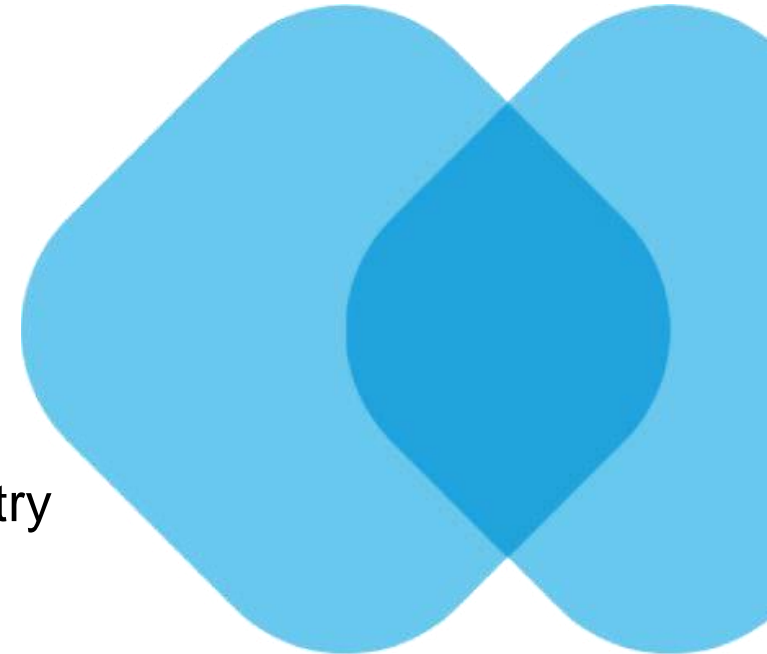
- Developed novel, density separation system - BOSS
- Own and operate a recycling plant in Newcastle
- One of the technologies in Project Beacon

## **Impact Solutions**

- ISO 17025 accredited test lab
- R&D from Reactor to Recycle

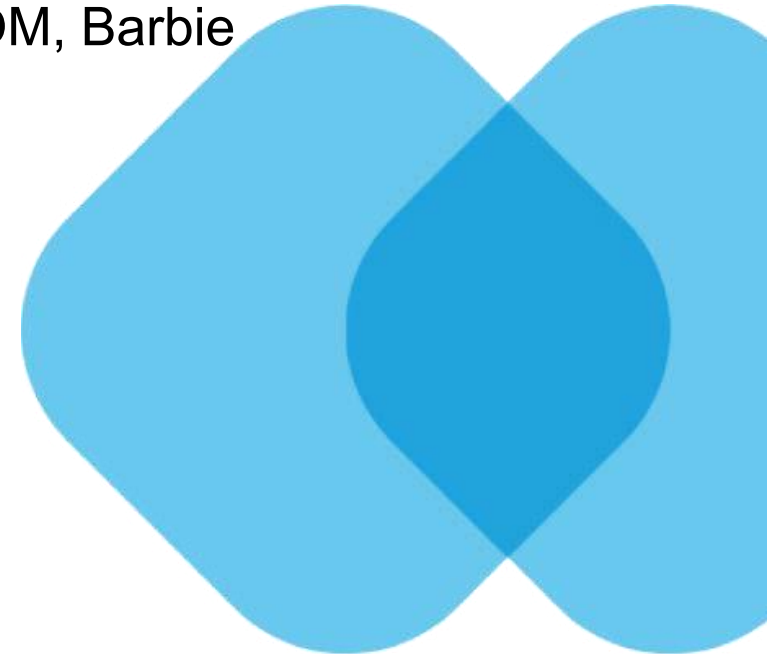
## **SPRCoE**

- Supports Scottish recycling industry
- Work with manufacturers to assess supply chain stability
- Improve quality and testing across plastic recycling industry



# Perspective

- **1923** Cellophane is produced and introduced into US supermarkets
- **1929** Bakelite receives biggest ever order for Siemens telephones
- **1935** Nylon patented
- **1940's** ABS, Velcro, Teflon, Lycra, Tupperware
- **1950's** PE bags, “non-iron” polyester, HDPE, PS, PP, POM, Barbie
- **60's - 70's** Kevlar, blow-up chairs, PVC double glazing  
Mobile phones, PET, Gas pipe, even breast implants



**What can't plastic do?!**

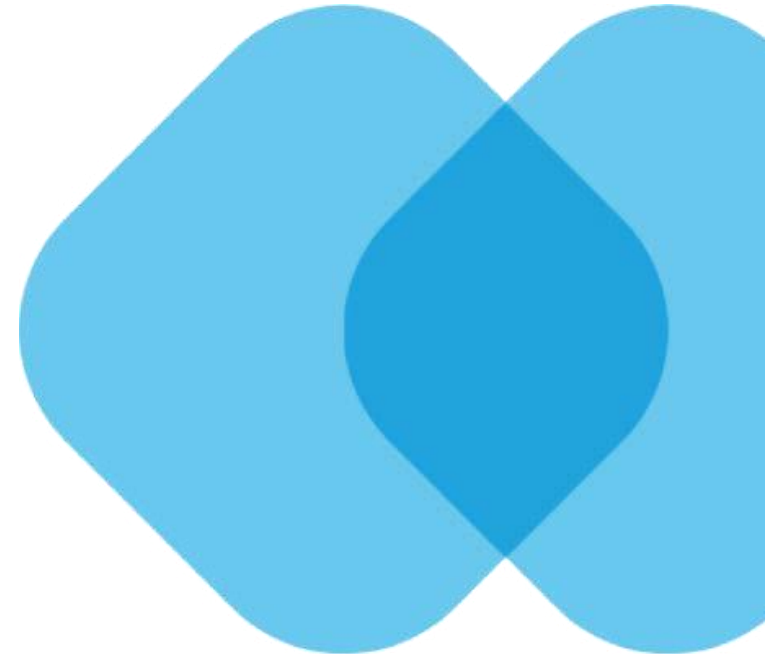


# Perspective



What problem can plastic not solve?!

[Plastic Man Vol 2](#)  
[March, 1976](#)



# 8 Wastes

The 8 Wastes are eight types of process obstacles that get in the way of providing value to the customer.



## Defects

Efforts caused by rework, scrap, and incorrect information.



## Overproduction

Production that is more than needed or before it is needed.



## Waiting

Wasted time waiting for the next step in a process.



## Non-Utilized Talent

Underutilizing people's talents, skills, & knowledge.



## Transportation

Unnecessary movements of products & materials.



## Inventory

Excess products and materials not being processed.



## Motion

Unnecessary movements by people (e.g., walking).



## Extra-Processing

More work or higher quality than is required by the customer.



# This talk

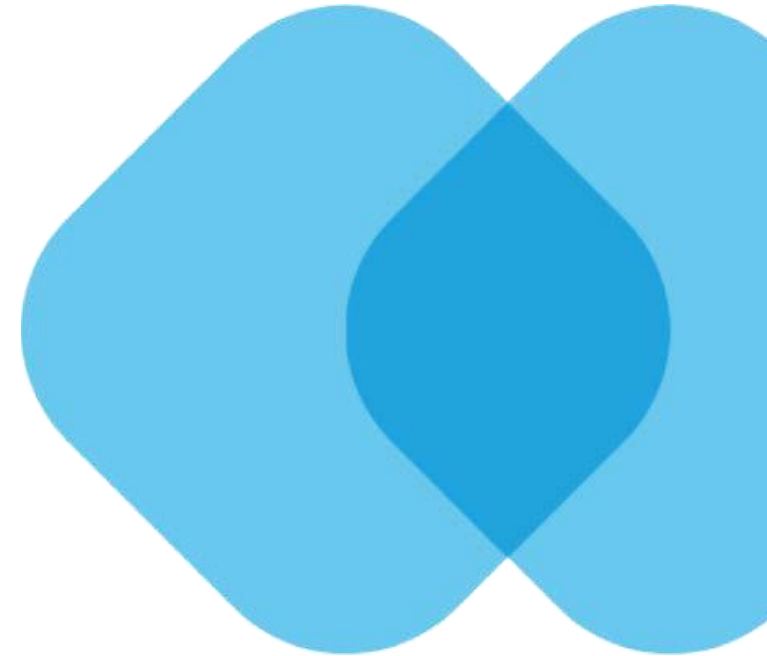
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## Why is plastic ending up the ocean?

- How policy can help and hinder us

## Media sensationalism - Good or Bad?

- The circular economy of misinformation
- The cost of letting the media set the agenda



# Why is it in the ocean?

## Options

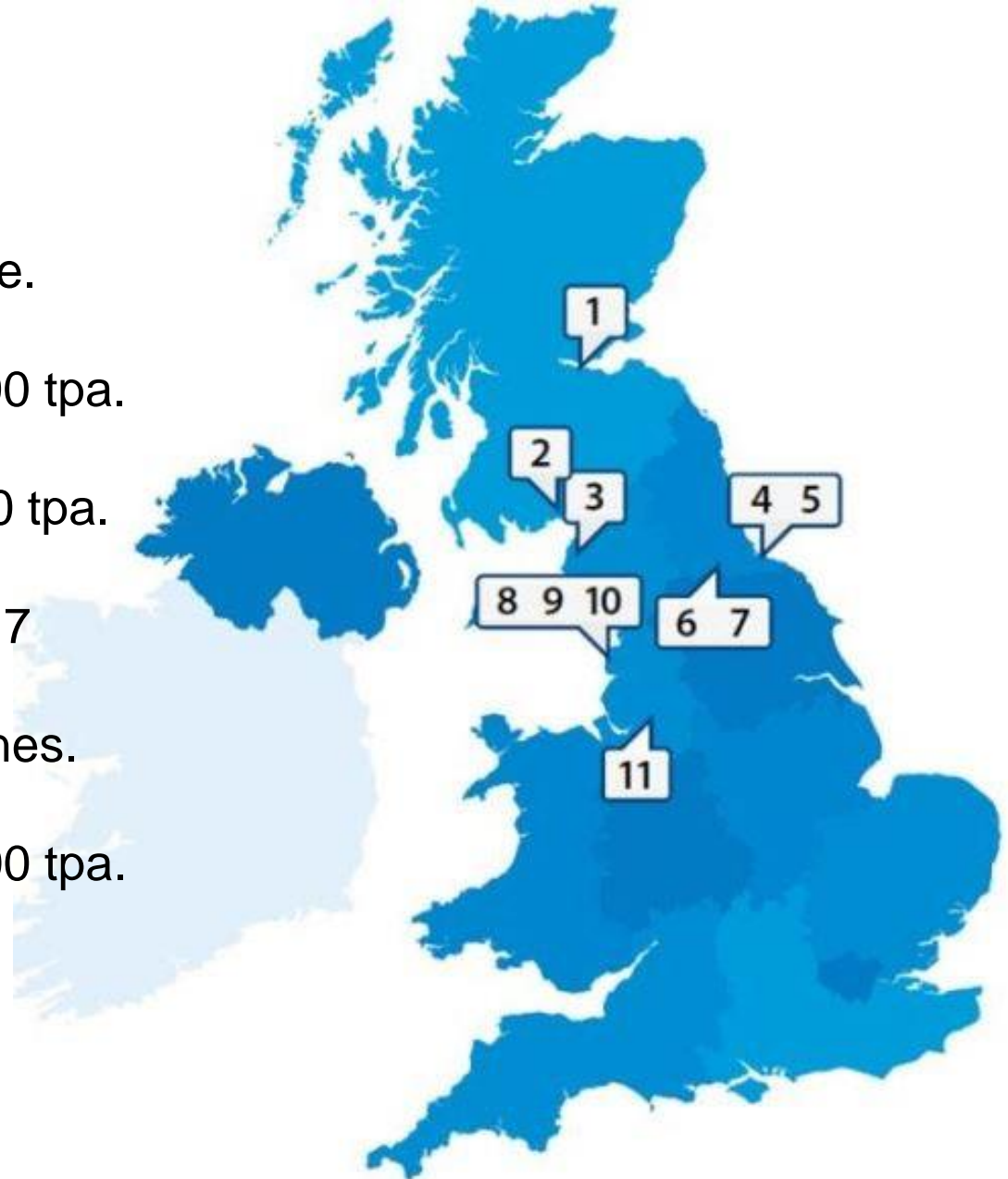
1. Domestic recycling.
2. Incineration.
3. Export the waste



# Why is it in the ocean?

## 1. Domestic Recycling

- Capacity is limited – mismatch in scale.
- Newcastle capacity is 1.5 tpa ca. 6000 tpa.
- Ineos Grangemouth capacity 555,000 tpa.
- UK Produced 1.8million tonnes in 2017
- Imported an additional 1.5 million tonnes.
- Largest recycling site in Europe 55,000 tpa.





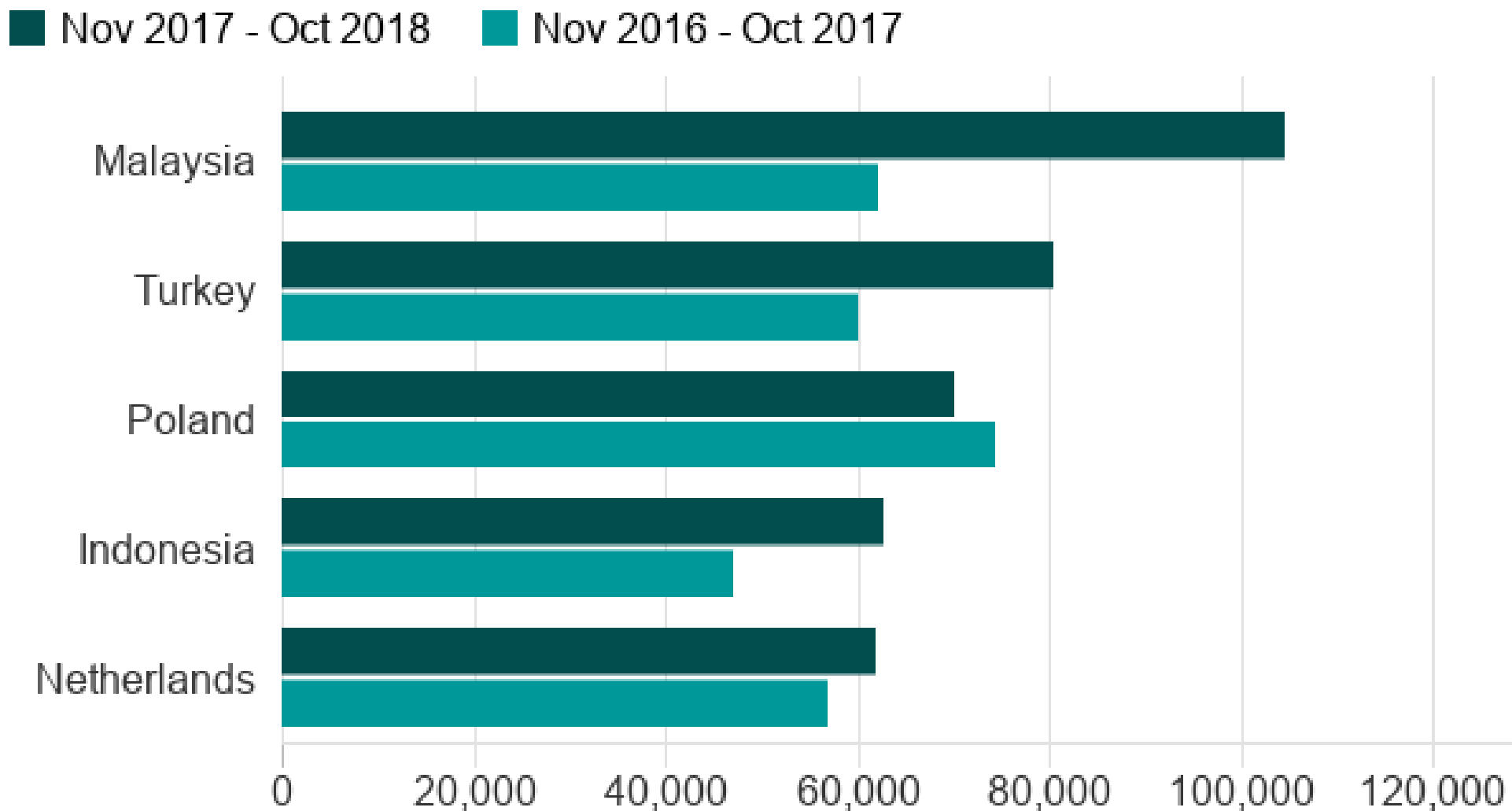
# Why is it in the ocean?

## 2. Incineration

- Plastic burns too efficiently (!)
- CO<sup>2</sup> - 1kg of plastic releases 3 to 4kg of CO<sub>2</sub>
- Will we stop the windmills to burn the plastic?

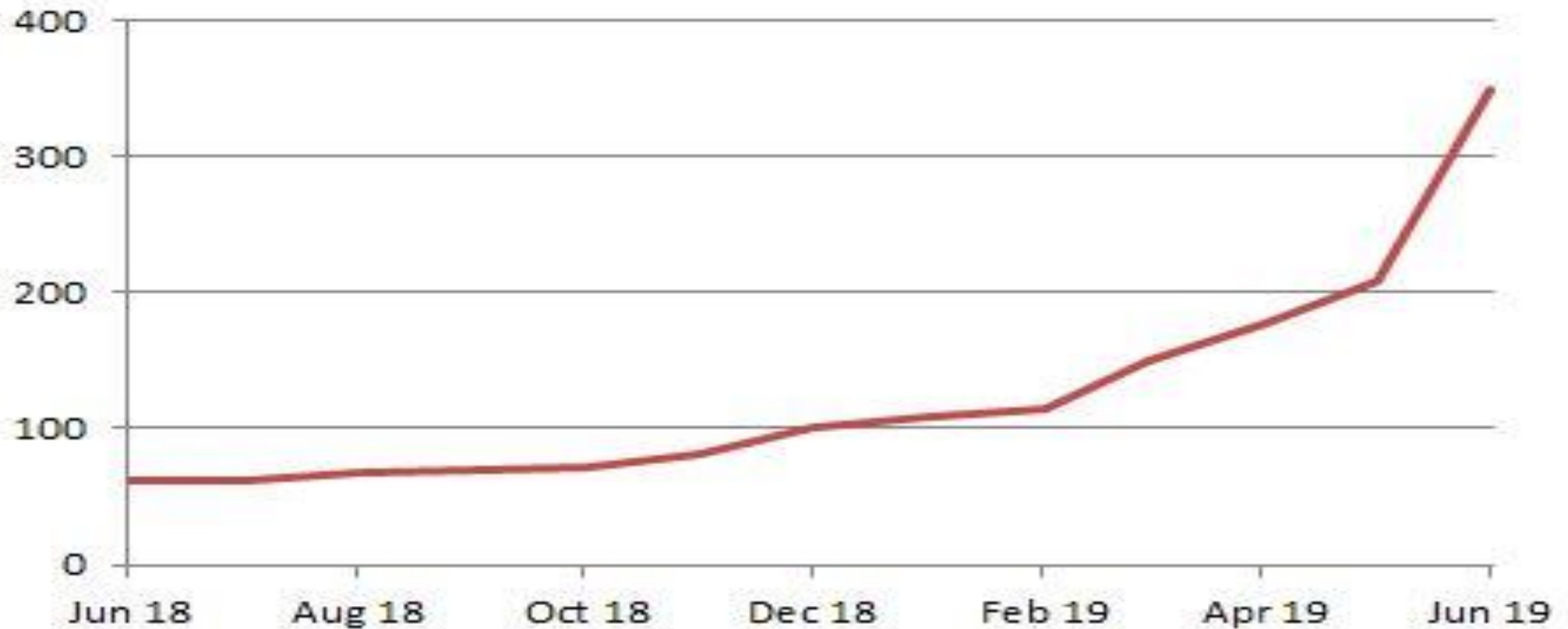


# Why is it in the ocean?



# Why is it in the ocean?

**Plastic PRN prices**  
£ per tonne



Source : Letsrecycle

*Updated August 2019*

# the journey so far...

\*TRL 1

Idea for separating mixed plastics formulated

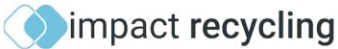
Impact Recycling Ltd

Impact Recycling is



ecc@connect's  
CleantechInnovate  
2015

\*TRL - Technology Readiness Level



# Sensationalism – Good or Bad?

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Fruits and vegetables wrapped in single-use plastic? Now that's bananas 🍌

Tell your local supermarket to #BreakFreeFromPlastic today >> [act.gp/2MBpwZJ](https://act.gp/2MBpwZJ)



COLLECTION

REUSE, REPAIR

# Sensationalism – Good or Bad?

## The cost of letting the media set the agenda

- It is driving brand decisions – Greenwashing is ripe

A TOY STORY

**Lego wants to solve the world's plastics problem with a biomaterial that can survive generations of play**



UNCATEGORIZED

**NESTE & IKEA take leadership in bio-based home furniture**

Novamont

**Nestlé and Danone team up to produce green plastic**

Food and drinks groups commit funding to develop plastic from waste such as sawdust



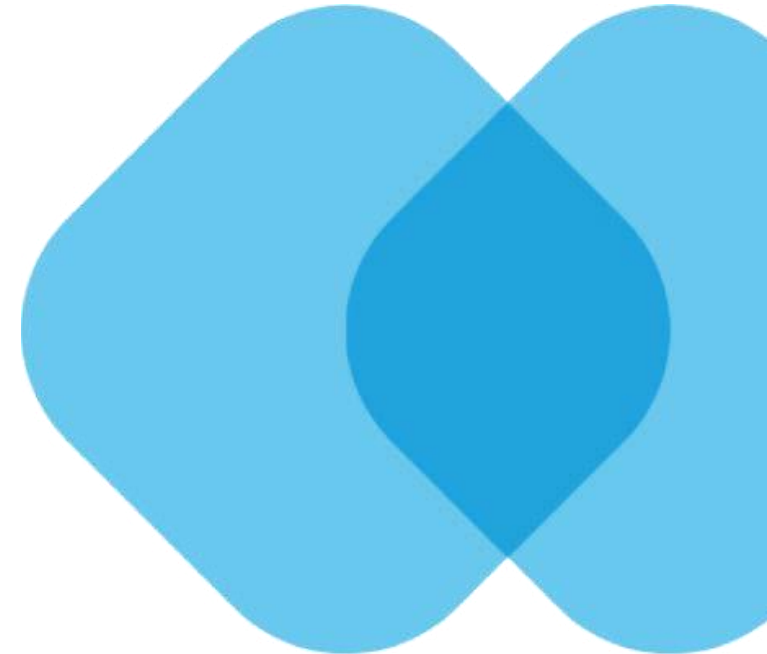
**Your Big Mac will have greener packaging by 2025**

McDonald's Corp., fresh off news that the company is discontinuing use of expanded polystyrene packaging in 2018, is now vowing to...

# Sensationalism – Good or Bad?

## The cost of letting the media set the agenda

- \* Offer **eco-friendly**, **ATEX-Certified** hand-protection options:
  - **100% Recyclable**
  - **Oxo-Biodegradable**
  - **Compostable**

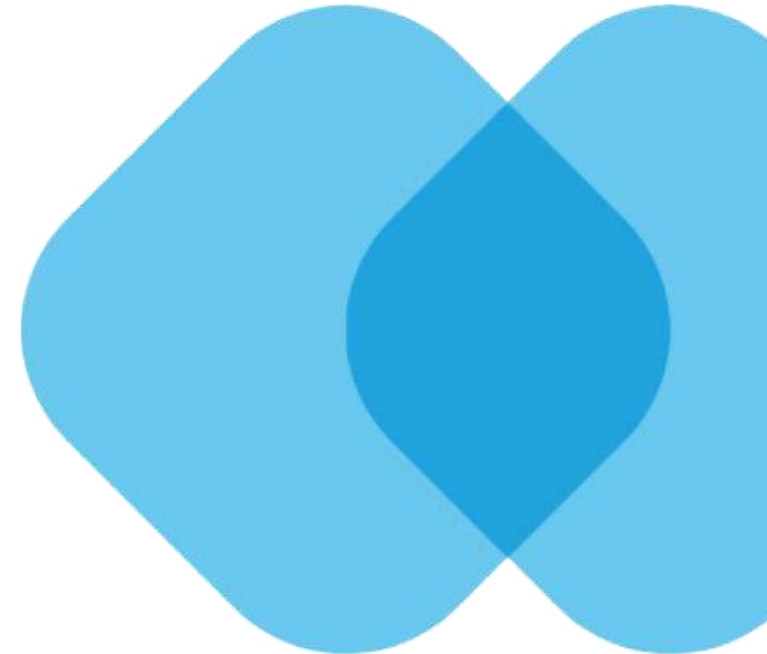


# Moving Forward



**The future is actually quite rosy – provided the following comes to pass**

- Deposit Return Scheme
- Pull from manufacturers and consumers for recycled content
- Carbon tax on virgin resins will push recycled content
- Government revising PRN system
- Addressing the scale discrepancy through vertical integration – skin in the game
- Technology landscape improving
- Countering misinformation





# Moving Forward

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