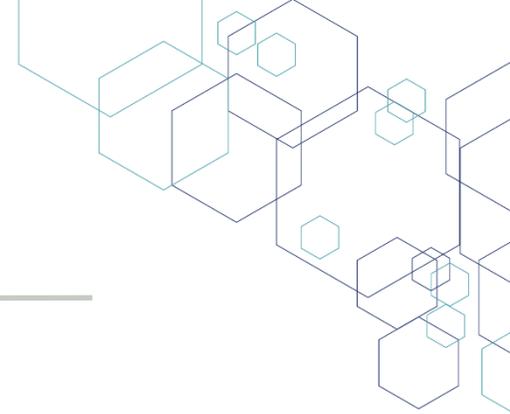




Plastic Sustainability: Industry Action to Reduce Marine Litter and Promote a Circular Economy

Keith Christman
Plastics Division
American Chemistry Council

Overview



ACC Plastics Overview

Benefits and Sustainability

Challenges

Marine Debris Solutions

Circular Economy: Recycling and Recovery

Plastics Division Members



BAYPOL



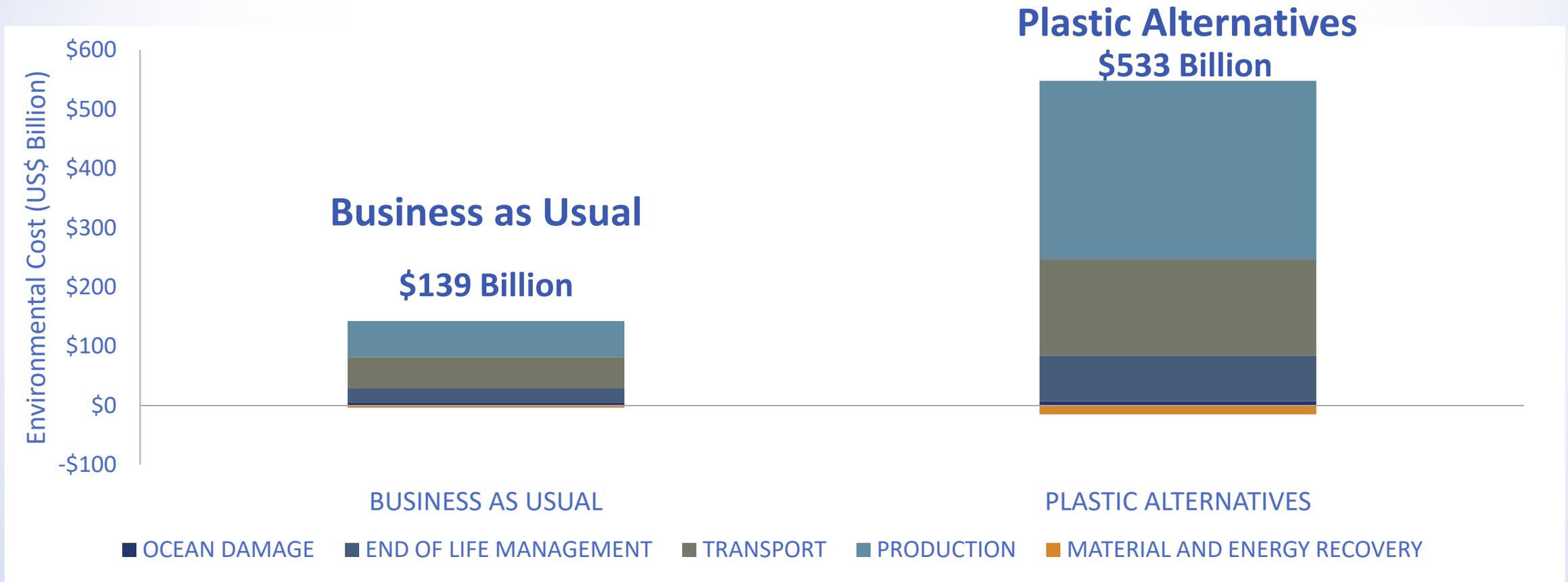
ExxonMobil



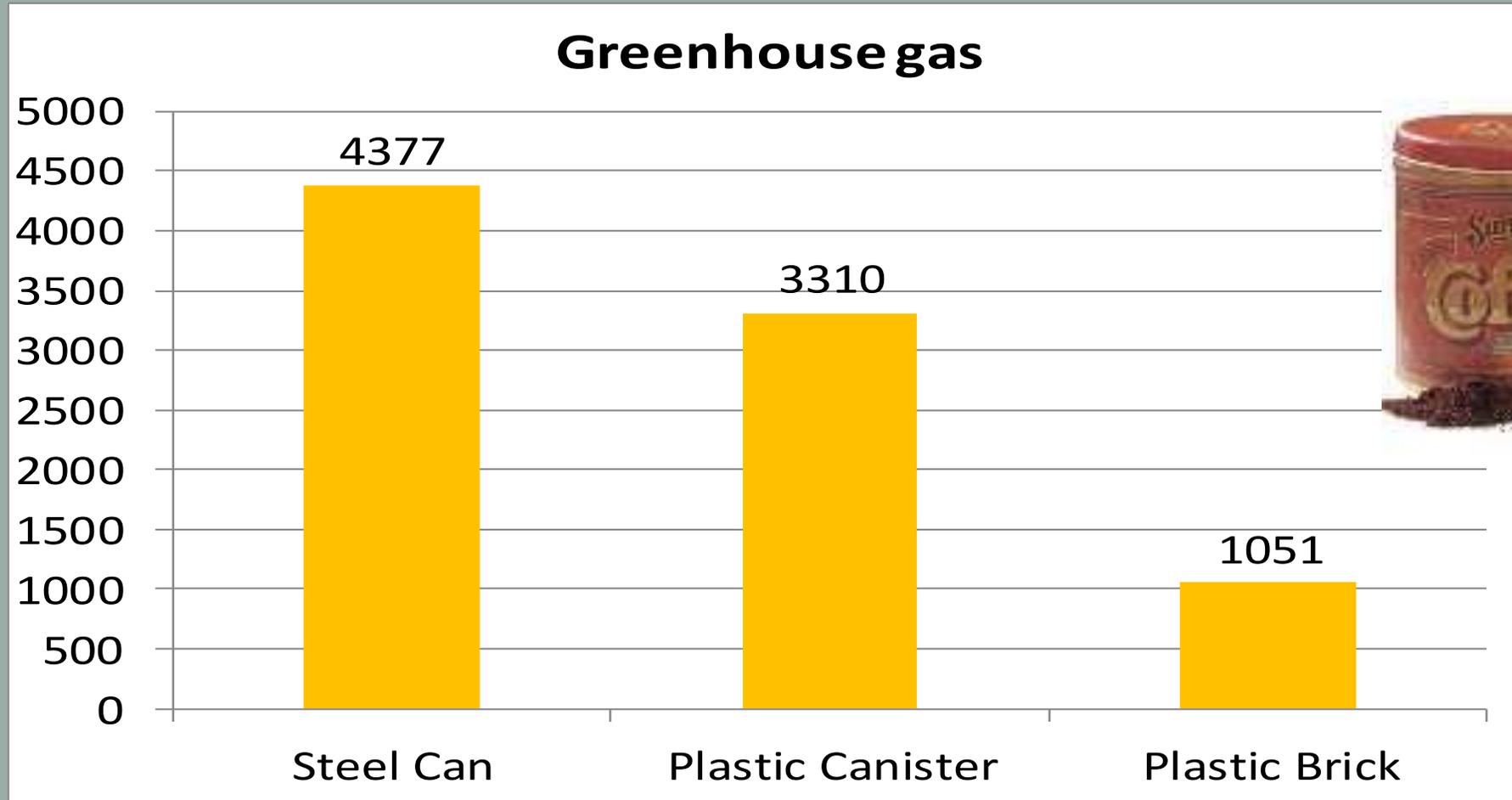
Plastics and Sustainability



Environmental cost of plastic use in consumer goods is 3.8 times less than alternatives



“Reduce” via Plastics Packaging



Source: Franklin Associates, September, 2008

Foam Foodservice

- Foam: lightweight, very little plastic, mostly air
- Significantly less energy, solid waste and water than comparable paper-based alternatives



Source: Franklin Associates, 2011

Reduced Food Waste



Fresh for **14 days**



New potatoes
in-store wastage
DOWN to <1%



Grapes in-store wastage
DOWN by 20%



Bunches of identical bananas stored for 7 days loose and in a modified atmosphere bag

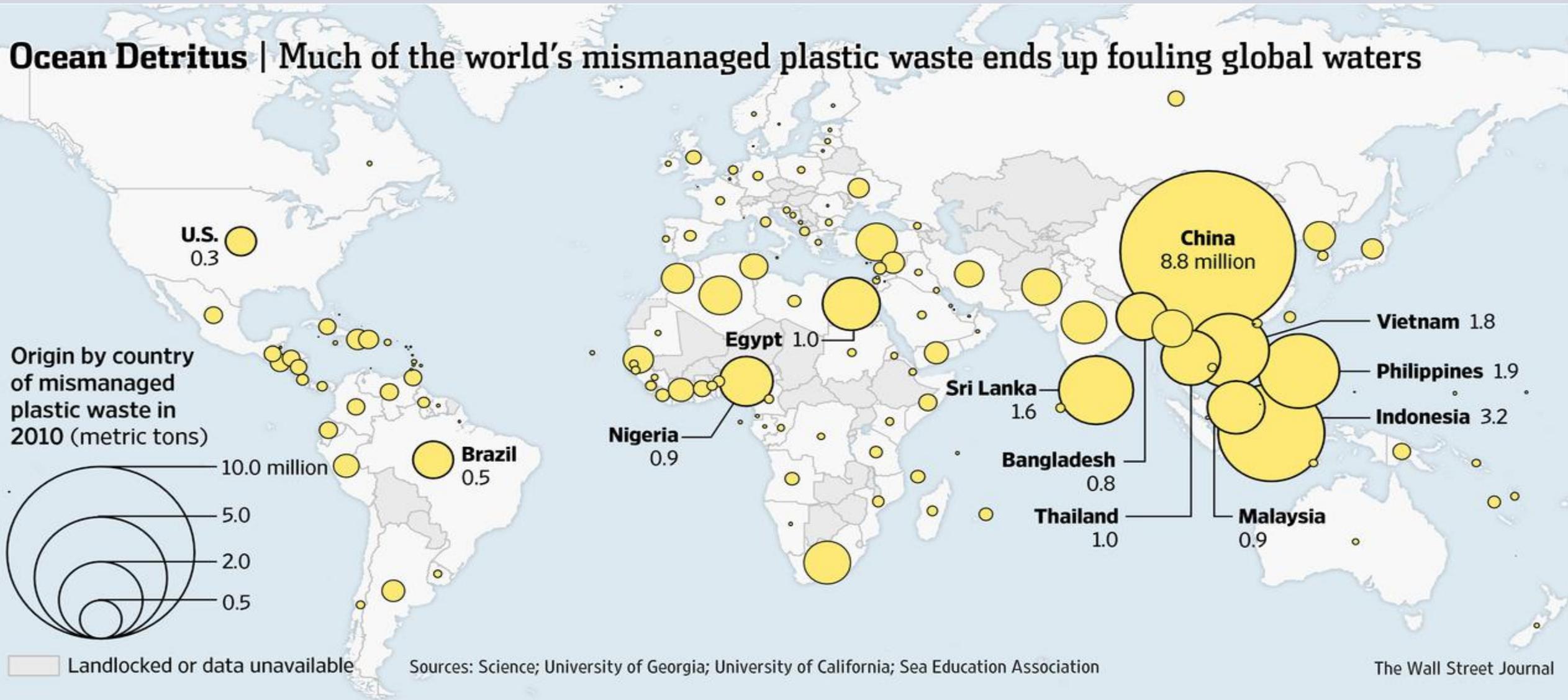
Source: Packaging in Perspective, Advisory Committee on Packaging, Supported by INCPEN

Challenges-Marine Debris



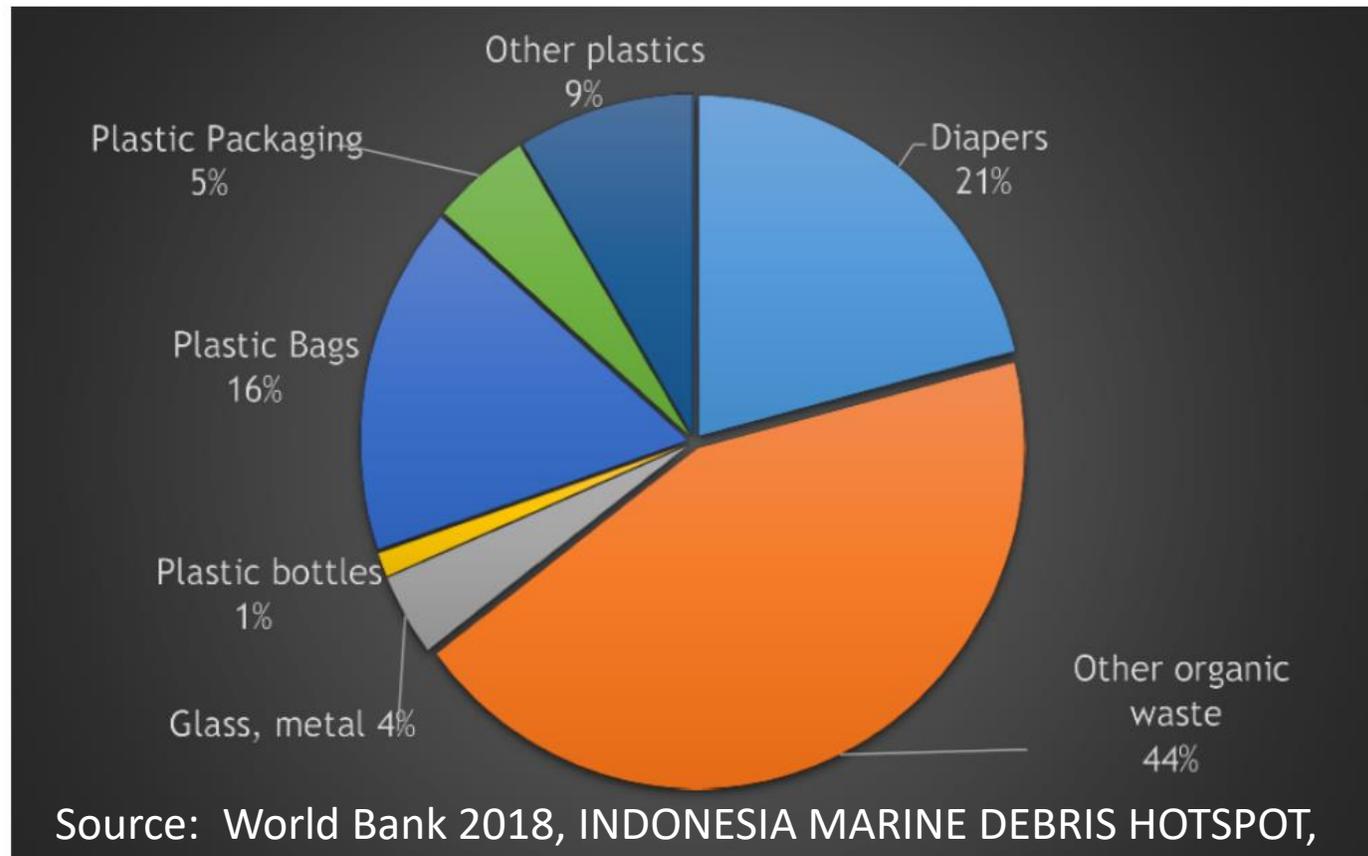
Sources of Plastic Marine Debris

Ocean Detritus | Much of the world's mismanaged plastic waste ends up fouling global waters



Rivers Dump ALL Waste into Oceans

Figure 12: Waterway Waste Composition Average for Hotspots Target Cities Sampled



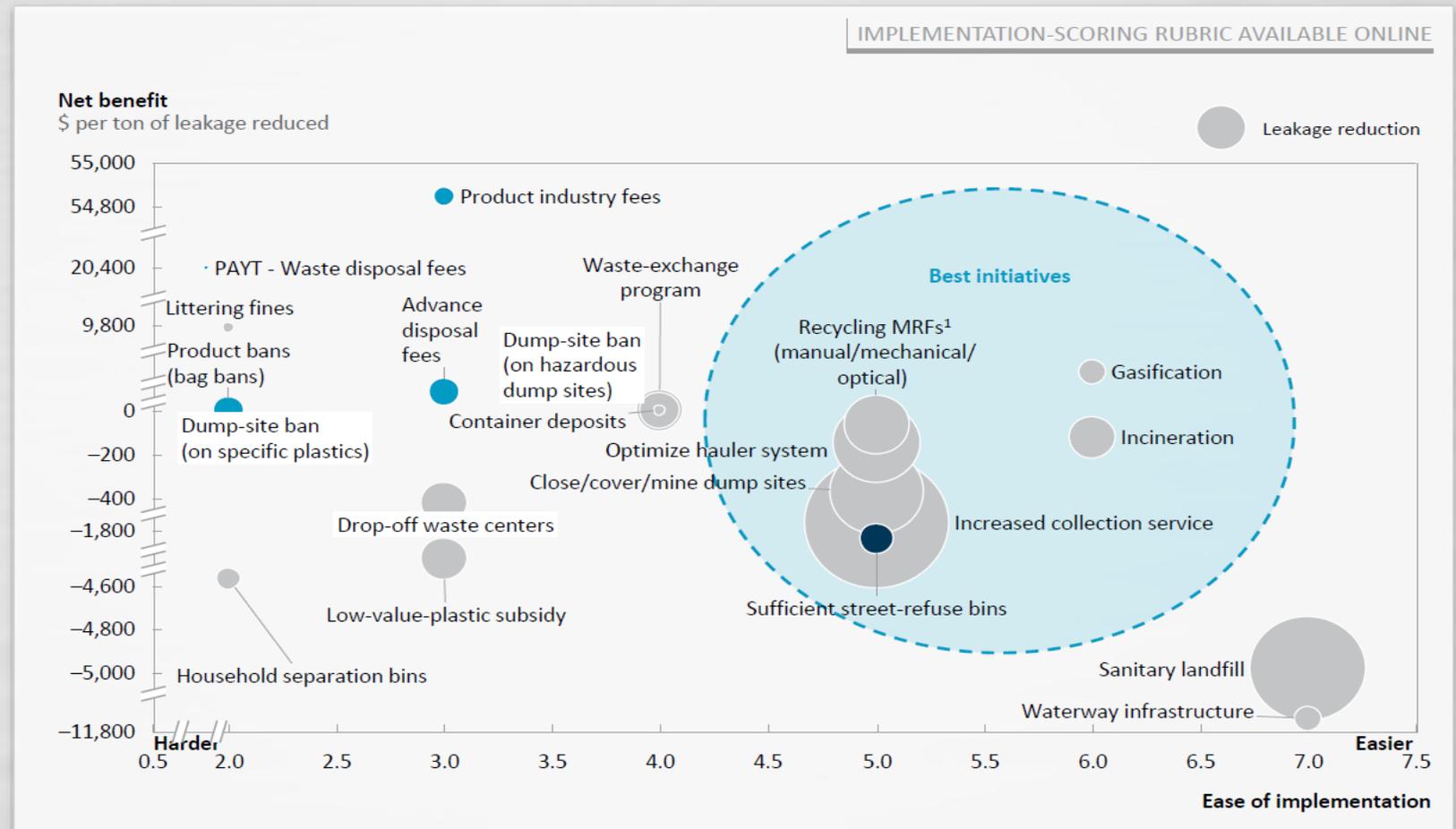
Source: World Bank 2018, INDONESIA MARINE DEBRIS HOTSPOT, Synthesis Report

“The bulk of Indonesia’s challenge to halt marine debris leakage involves addressing its inadequate municipal waste management service provision.”

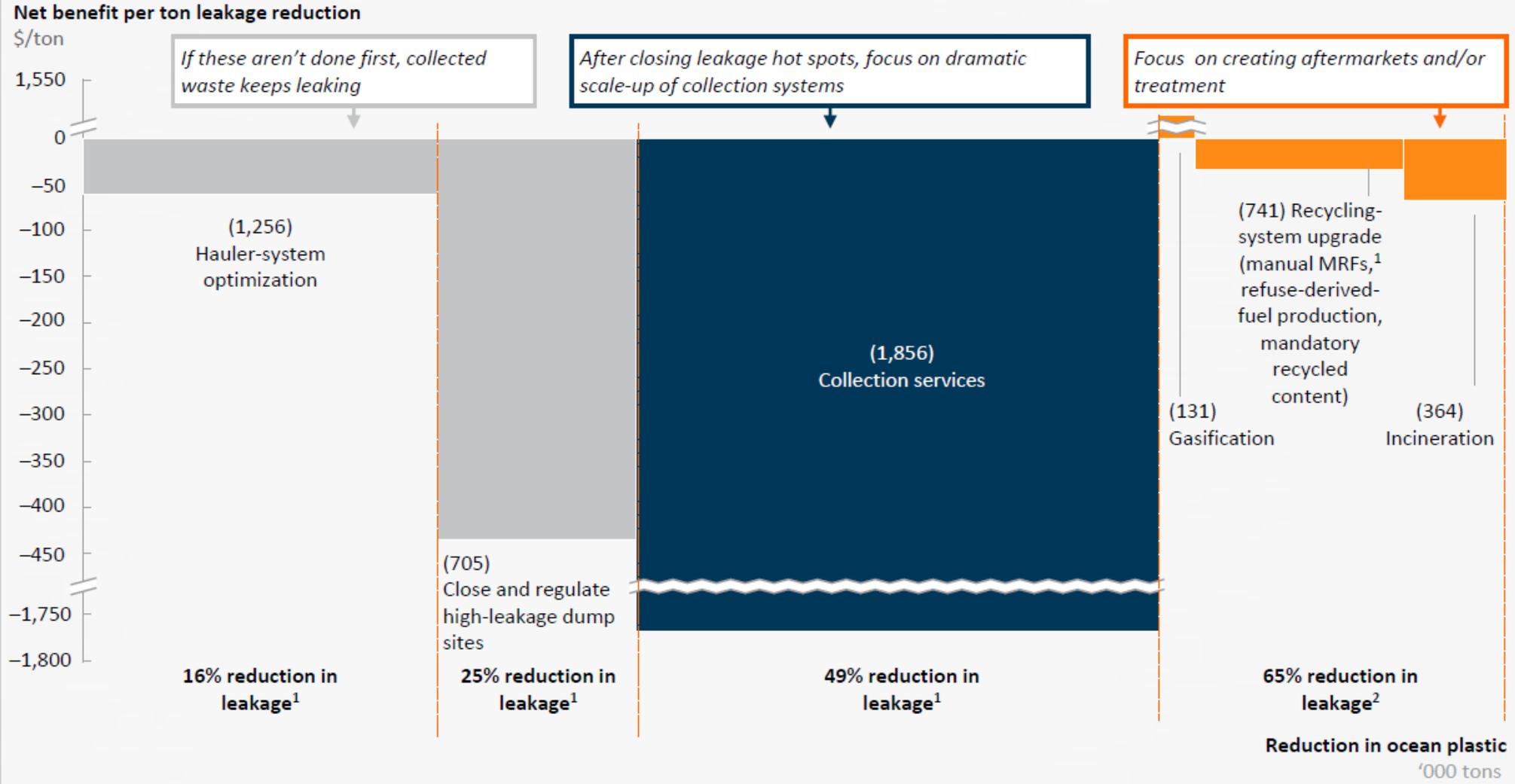
Ocean Conservancy—Waste Management

Exhibit 5

All 21 levers were modeled independently of one another based on ease of implementation and leakage-reduction potential.



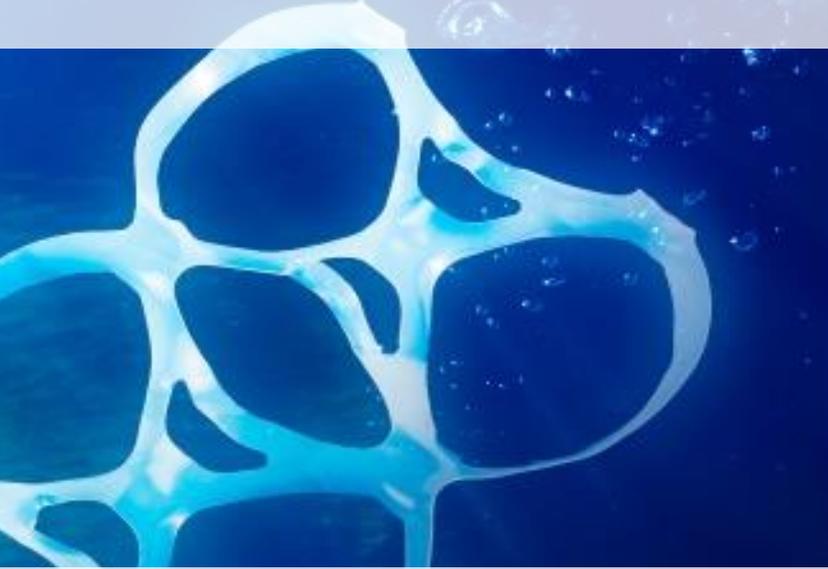
Leakage-reduction levers are interdependent and should be implemented in order.



1 Materials recycling facilities.

2 For group of 5 focus countries: China, Indonesia, Philippines, Vietnam, Thailand.

Marine Debris - Our View



Plastic & other litter
in the environment
is unacceptable



Plastics deliver
significant societal
benefits



Plastic makers
have a role in
providing solutions



A new CEO led, cross-sector, not-for-profit organization with a clear mission to develop, accelerate & deploy solutions, catalyze public & private investment and engage communities to help end plastic waste in the environment

Alliance to End Plastic Waste

Four Part Strategy



INFRASTRUCTURE

Catalyze investment in enhanced waste infrastructure to prevent plastic from reaching the environment



INNOVATION

Innovate new materials, designs, technologies and business models based on science and economics



EDUCATION

Engage and collaborate with governments, businesses and consumers to drive effective solutions



CLEAN UP

Develop solutions to address and clean up areas of existing plastic waste in the environment

Investing \$1.5B USD over 5 years

Not for Profit 501(c)(3) status supports global operations, eligibility for foundation grants and potential tax benefits

FOUR PART STRATEGY



INFRASTRUCTURE



INNOVATION



EDUCATION



CLEAN UP

2 PATHS TO PROGRESS

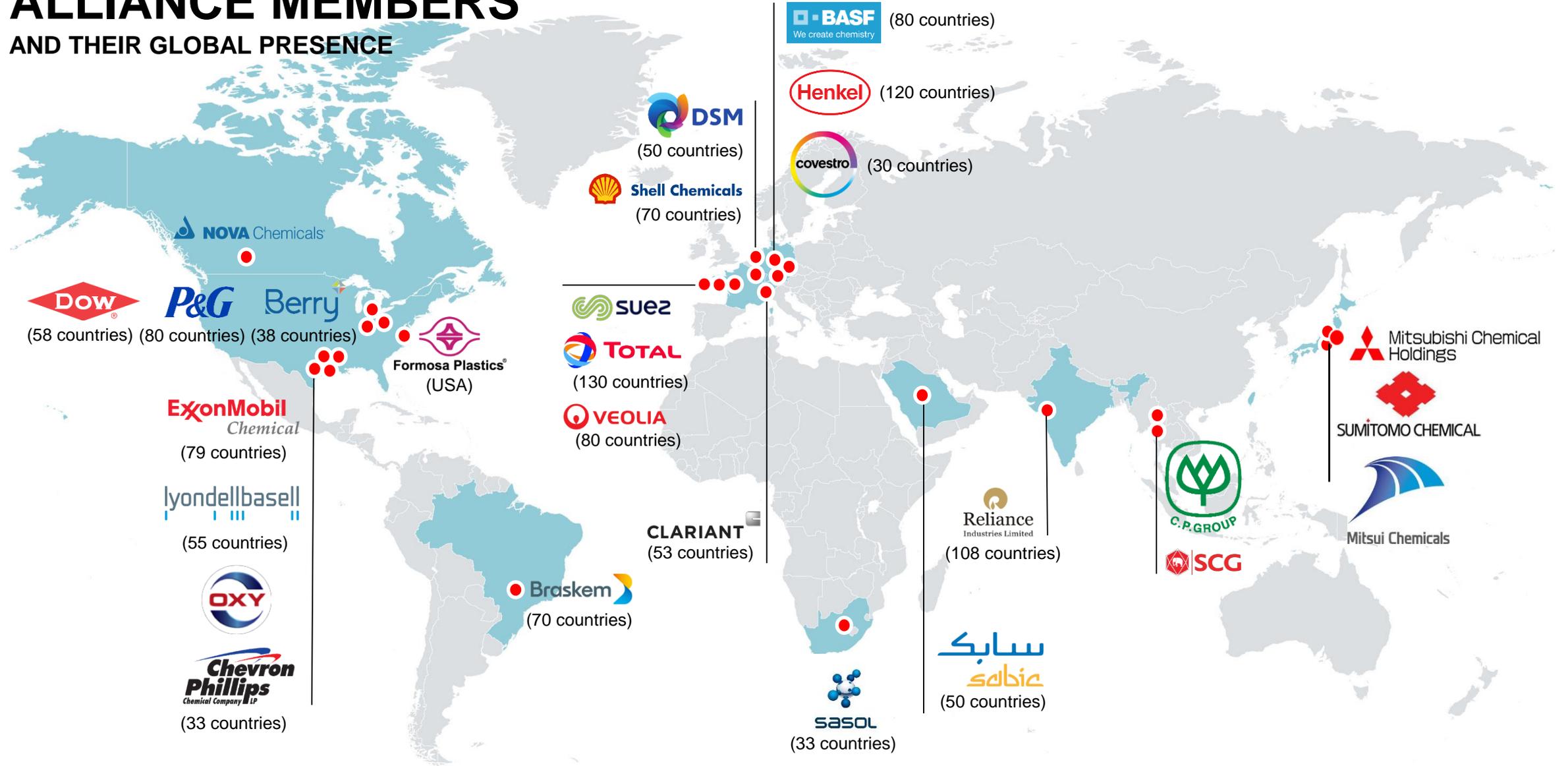
PART A: \$0.5 B USD

Mutually-funded, philanthropic, alliance-branded programs

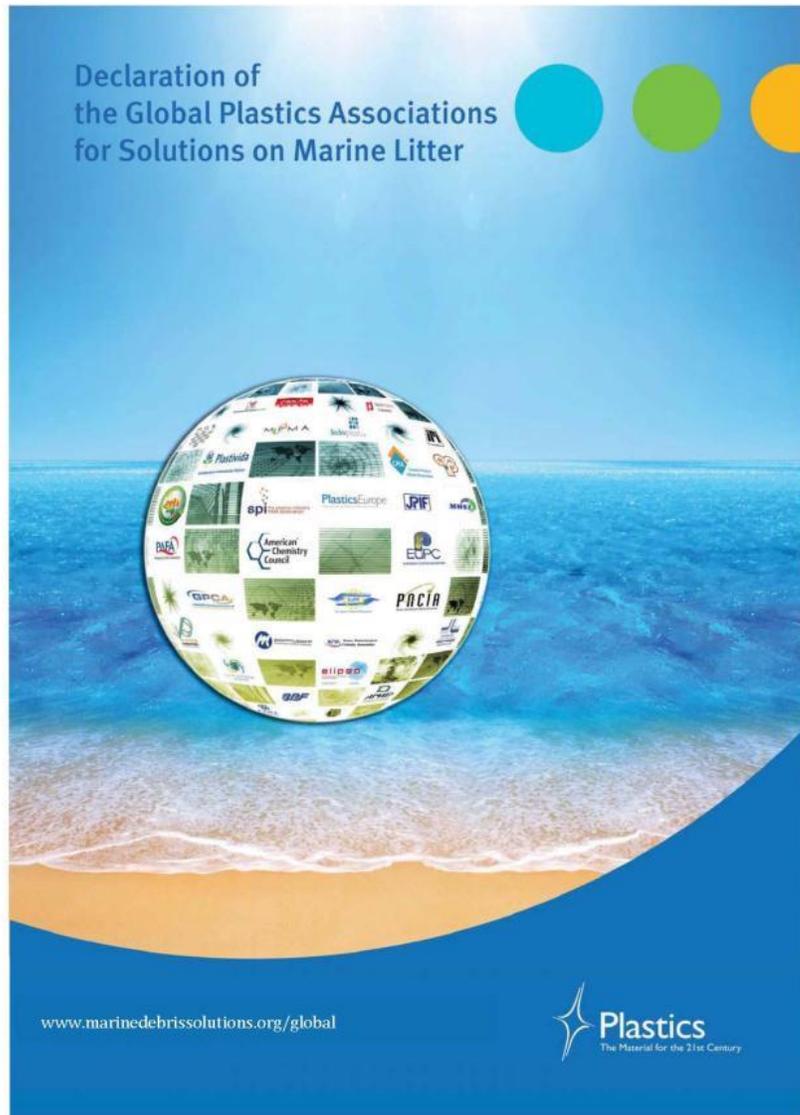
Part B: \$1B USD*

Aggregated company-sponsored & directed investments into waste management infrastructure or technologies supportive of the alliance mission

ALLIANCE MEMBERS AND THEIR GLOBAL PRESENCE



Declaration for Solutions on Marine Debris



- Announced at 2011 UN/NOAA marine debris conference
- Outline for industry action
- Encourages stakeholder cooperation to achieve solutions
- Transparently report progress

Declaration Contents

We will:



Contribute solutions through **partnerships** to prevent marine debris



Research to understand scope, origin, impacts



Promote enforcement of existing laws to prevent marine litter



Spread **knowledge** of efficient waste management systems



Enhance recycling/energy recovery opportunities



Steward plastic pellets from supplier to customer

Making Progress



www.marinelittersolutions.com

2011

2013

2015

2017

Members	47
Countries	27
Projects	100

Members	60
Countries	34
Projects	185

Members	65
Countries	34
Projects	260

Members	75
Countries	40
Projects	355

Rhode Island Litter Survey

Figure 4 – Large Litter on Roadways by Material

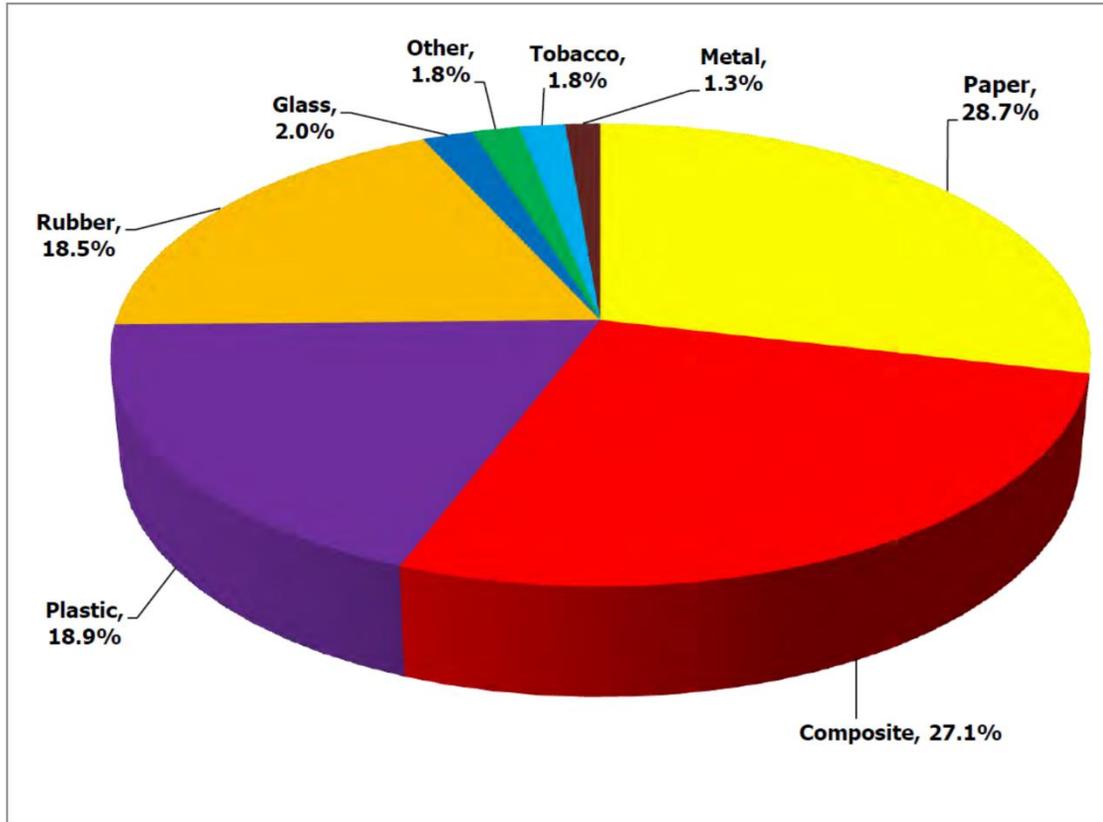
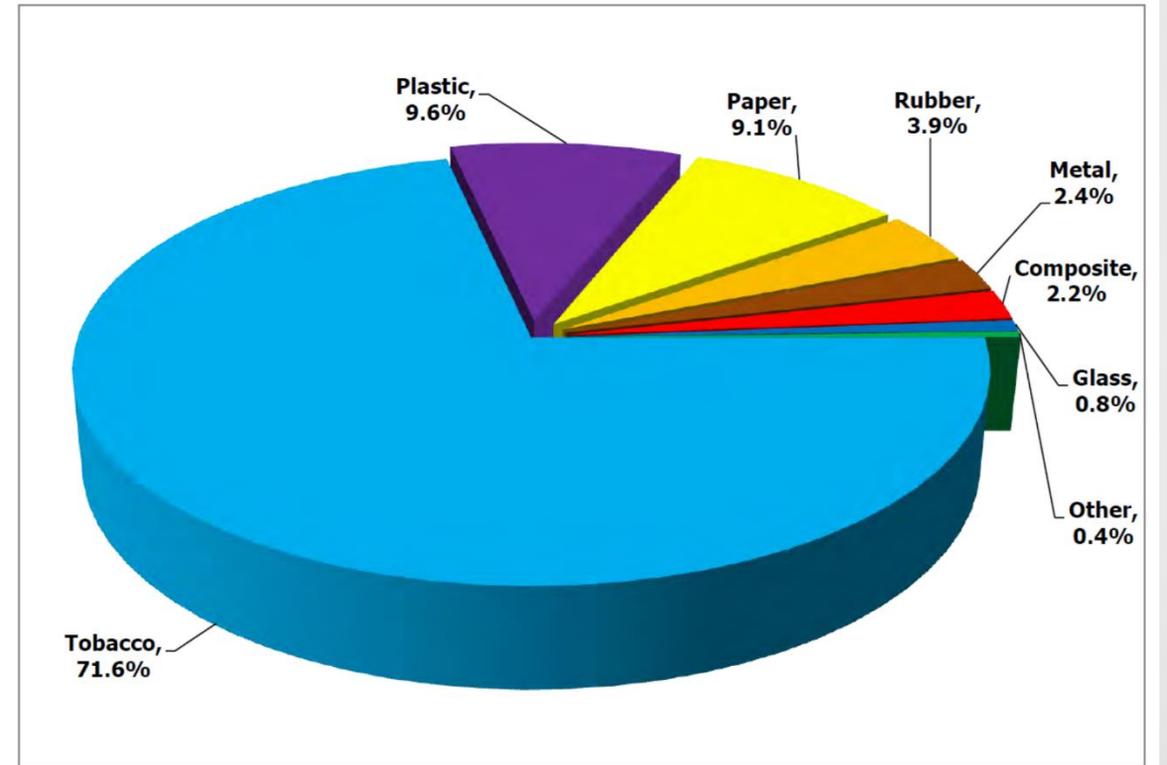
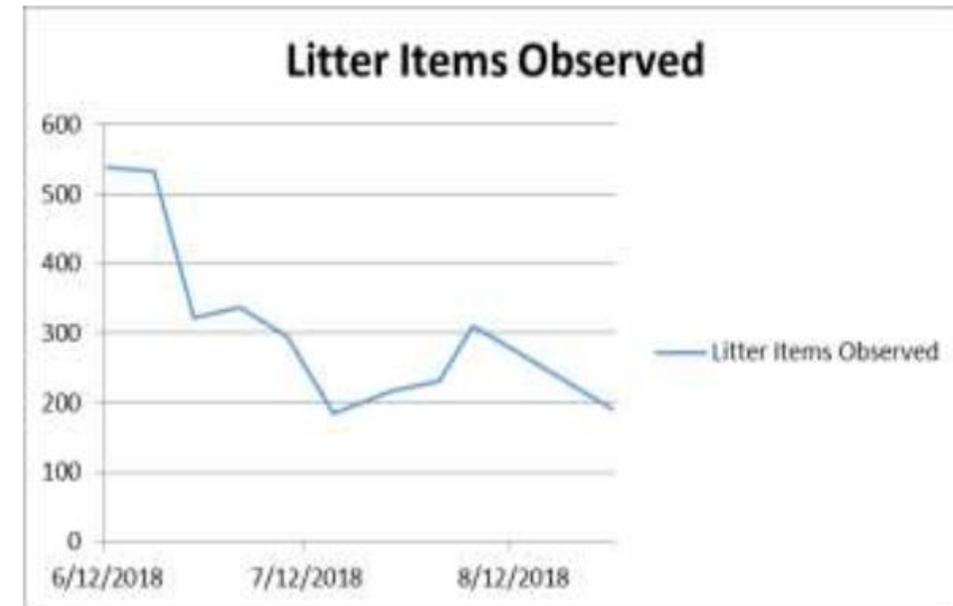


Figure 6 – Small Litter on Roadways by Material



Warwick Litter & Marine Debris Reduction

- Partnership with Save The Bay® Narragansett Bay
- Focus on areas with chronic shoreline trash & marine debris issues
- Combining weekly clean-ups & anti-littering messaging reduced littering



2018 Visual Litter Surveys Data from Conimicut Point)

Policy

Save Our Seas Act

- Signed into law

Supported Microbeads Free Waters Act of 2015

Straw on request California



New: Plastics Division Sustainability Goals

A photograph of three children participating in a recycling activity. A boy in the center is holding a clear plastic bottle, a girl on the right is holding a pink bottle, and a boy on the left is holding a blue bottle. They are all looking towards a large blue recycling bin in the foreground. The bin has the text 'WE RECYCLE' and a recycling symbol on it. The background is a bright, outdoor setting with green foliage.

✓ 2040 Goal

- 100% of plastics packaging is reused, recycled or recovered

✓ Interim Goal (2030)

- 100% of plastics packaging is recyclable/recoverable

✓ Best practice goal

- 100% of Division's U.S. manufacturing sites participate in Operation Clean Sweep Blue by 2020, with all North American sites by 2022

Circular Economy Vision for Plastics

3%
of Energy



Achieving the 2040 Goal

100% of plastic packaging is recycled or recovered by 2040



Design & Invent new circular business models



Expand access



Educate consumers and change behavior



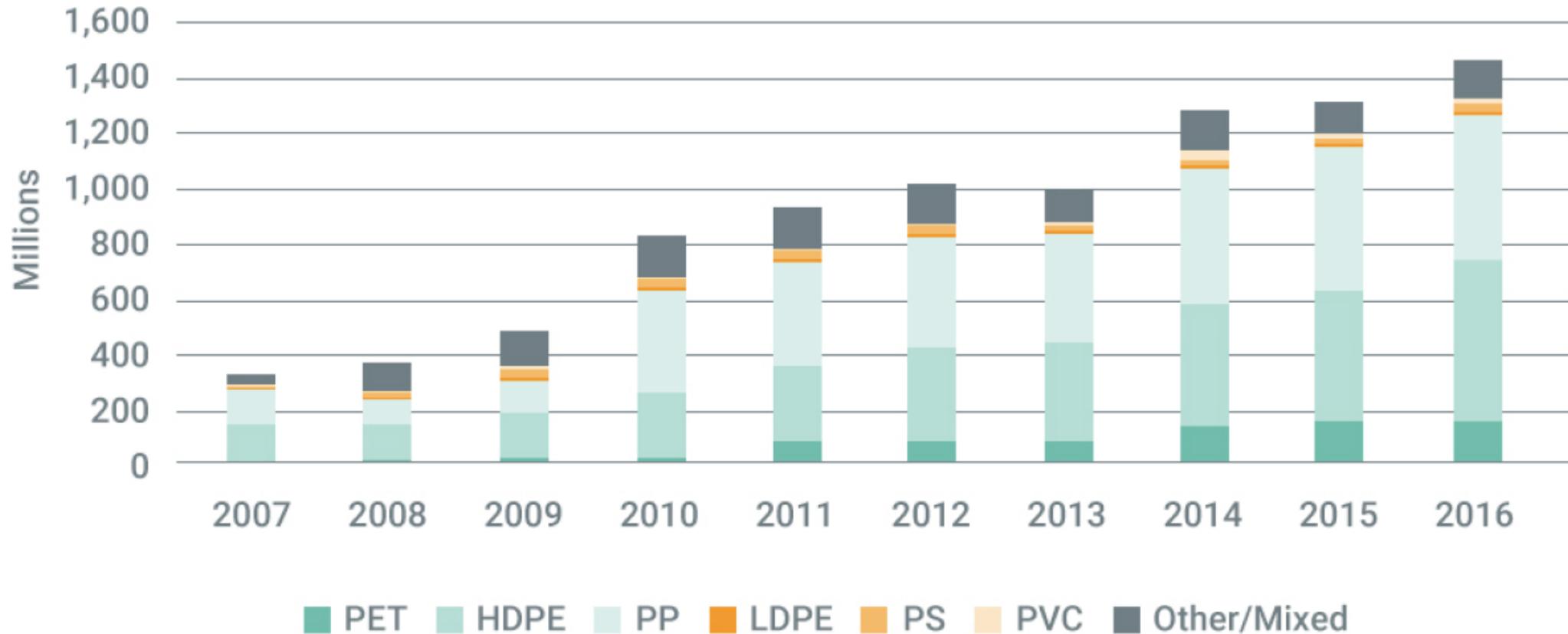
Invest in new infrastructure and transformational technology



Create Partnerships with Prominent Orgs and Other Leaders

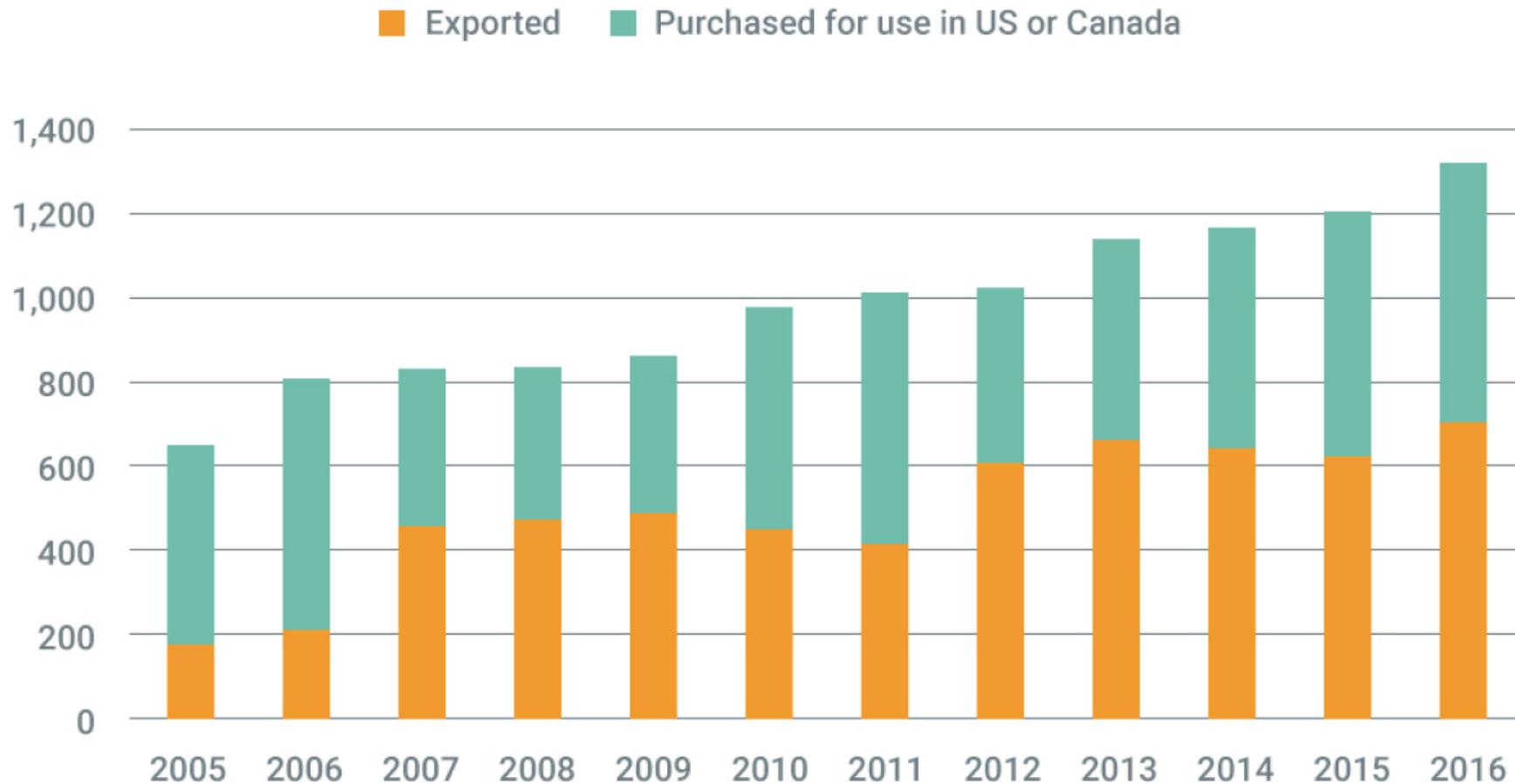
Increasing Non-Bottle Rigid Plastic Recycling

Figure 2: U.S. Non-Bottle Rigid Plastic Recovered Year to Year by Resin (million of pounds)



Growing Wrap & Bag Recycling

Table 1: U.S. Post-consumer Film Recovered (Millions of pounds)



WRAP Education & Outreach



Flexible Film Recycling Group

GOAL: Double film recycling by 2020 to 2 billion pounds



Provide resources and best practices
Expanding network of stakeholders



MATERIALS RECOVERY FOR THE FUTURE

Research Collaboration

OUR VISION

“ Flexible packaging is recycled, and the recovery community captures value from it. ”



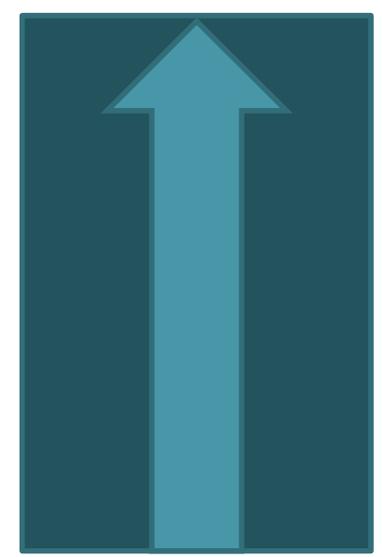
GROWING RECYCLING ACCESS TO INCREASE MATERIAL RECOVERY

**SINCE
2014**

**THE
RECYCLING
PARTNERSHIP
HAS IMPACTED**

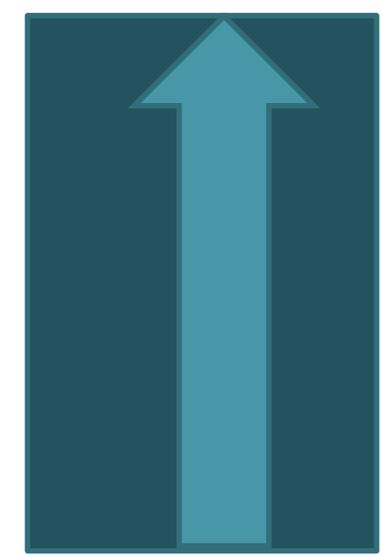
COMMUNITIES

588



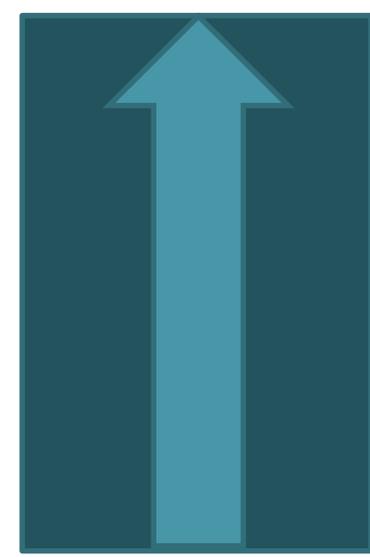
**RECYCLABLES
DIVERTED**

183 Million LBs



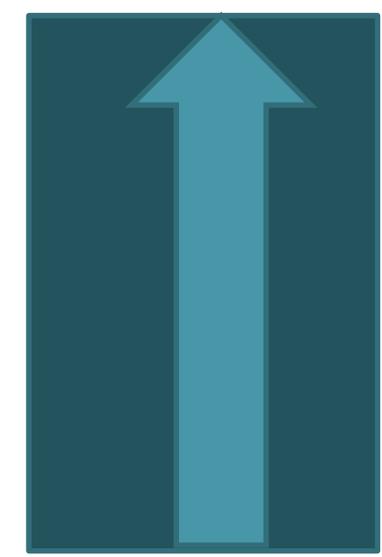
CARTS

496,000



HOUSEHOLDS

29 Million



18.9 Million new pounds of plastics have been recovered since The Partnership's launch.

Stewarding Plastic Pellets

- Best practices to contain pellets, flakes and powder from loss
- Covers manufacturing through transportation and end use
- An international model





Thank you!

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