

The Economic Side to Sustainability with a Reusable Packaging System

Presented by:

Tim Debus

President & CEO

Reusable Packaging Association

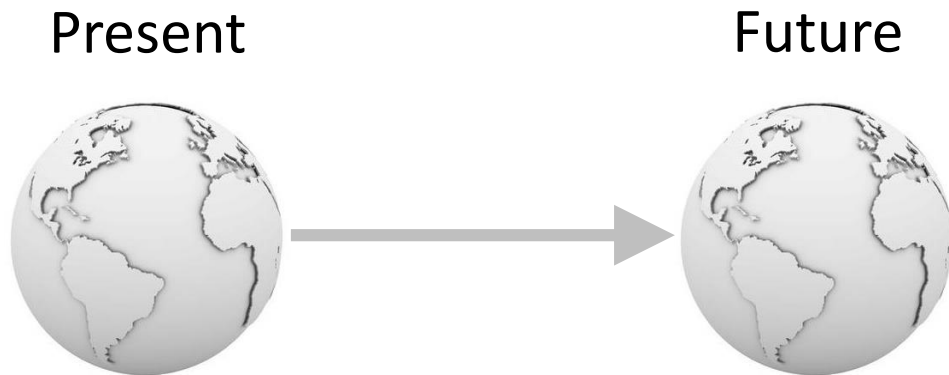


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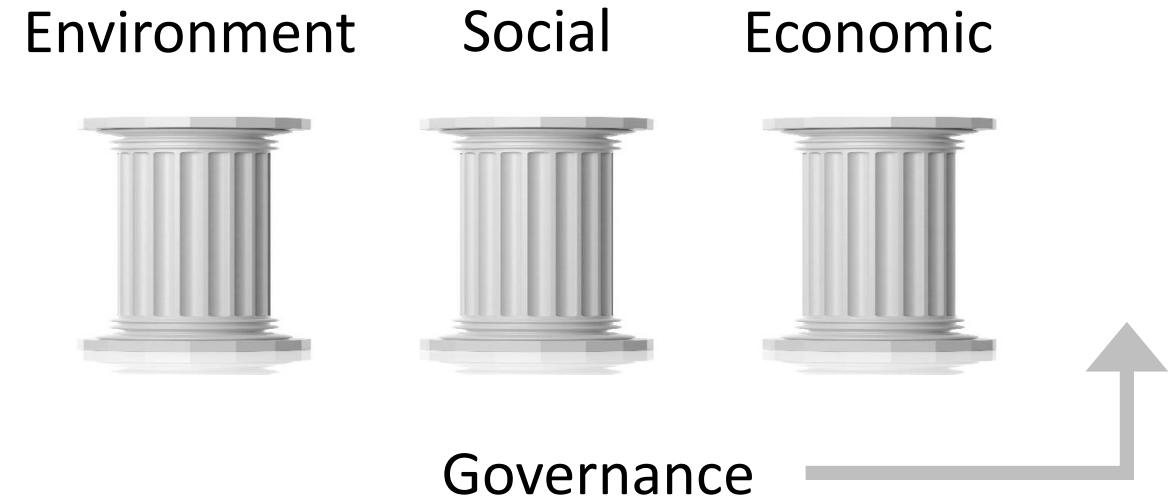


Sustainability

Classic Definition



Modern Definition



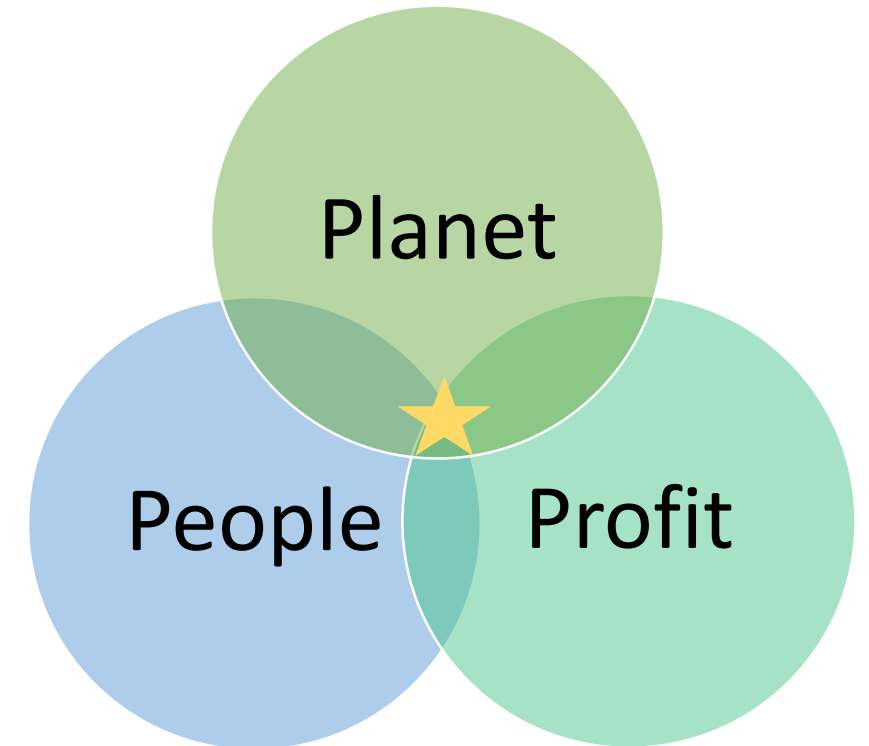
Sustainability



UNITED NATIONS



Corporate “Triple Bottom Line”



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How Are We Doing?

Climate Change
Trash
Pollution
Recycling
Population
Natural Resources
Poverty
Food Security
Social Justice
Politics

Global solid waste
to increase 70% by
2050²

We have 12 years to
limit climate change
catastrophe¹

8 million tonnes of
plastic end up in
the world's oceans
every year¹

World population
to increase 2 billion
in next 30 years¹

Consumption of Earth's
Natural Resources Has
Tripled in 40 Years³

- 1 United Nations
2 World Bank
3 Resource Panel

How Are We Doing?

Harvard
Business
Review

SUSTAINABILITY

25 Years Ago I Coined the Phrase “Triple Bottom Line.” Here’s Why It’s Time to Rethink It.

by John Elkington

June 25, 2018

Summary Save Share ³⁸ Comment Print \$8.95 Buy Copies

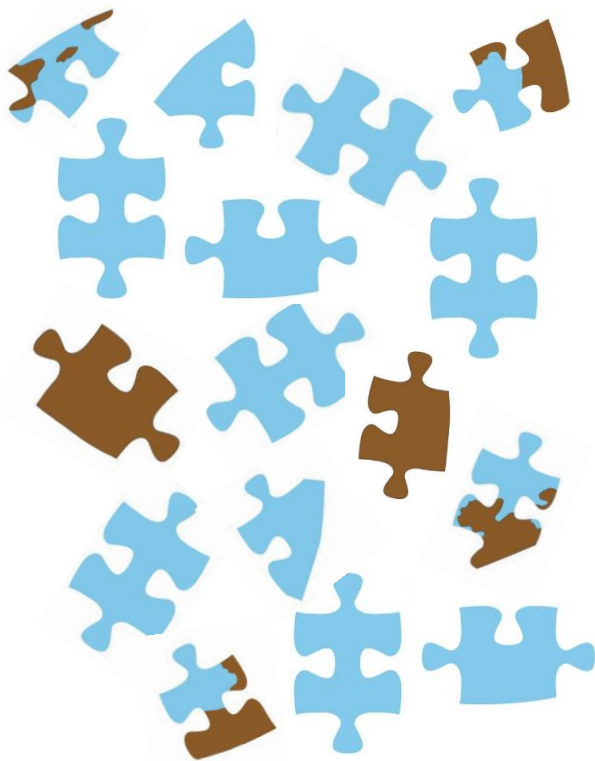


“It was supposed to offer a radical new way forward... but 25 years later, this radical goal has been largely forgotten, and ‘triple bottom line’ thinking has been reduced to a mere accounting tool.”

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Transformative Systems Change

Reductionist View



A. Disconnection

B. Linear

C. Silos

D. Parts

E. Analysis

F. Isolation

Systemic View



A. Interconnectedness

B. Circular

C. Emergence

D. Wholes

E. Synthesis

F. Relationships

Source: Leyla Acaroglu, [Disruptive Design](#)

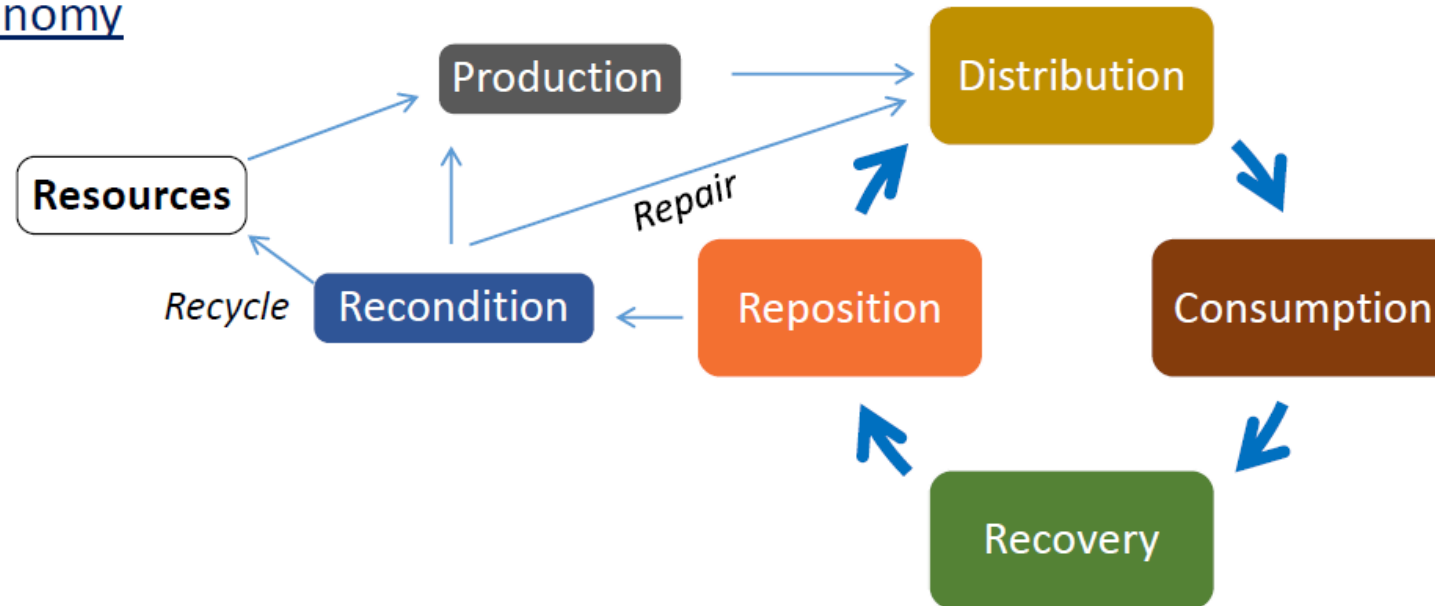
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Transformative Systems Change

Linear Economy



Circular Economy



Transformative Systems Change



We need fundamental change to whole systems if we are to make a genuine difference on the issues that matter for our business and the world. We call this transformational change.

Transformational change

We have set out to make a difference to those big issues that matter most to our business and to the world.

Our goal: transformational change at system level

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Importance of Full System Design

U.S. will have more than 720,000 tons of blade material to dispose of over the next 20 years



Source: [Science Friday](#)

Los Angeles Times

BUSINESS

Wind turbine blades can't be recycled, so they're piling up in landfills
By CHRIS MARTIN | BLOOMBERG FEB. 6, 2020



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Importance of Full System Design

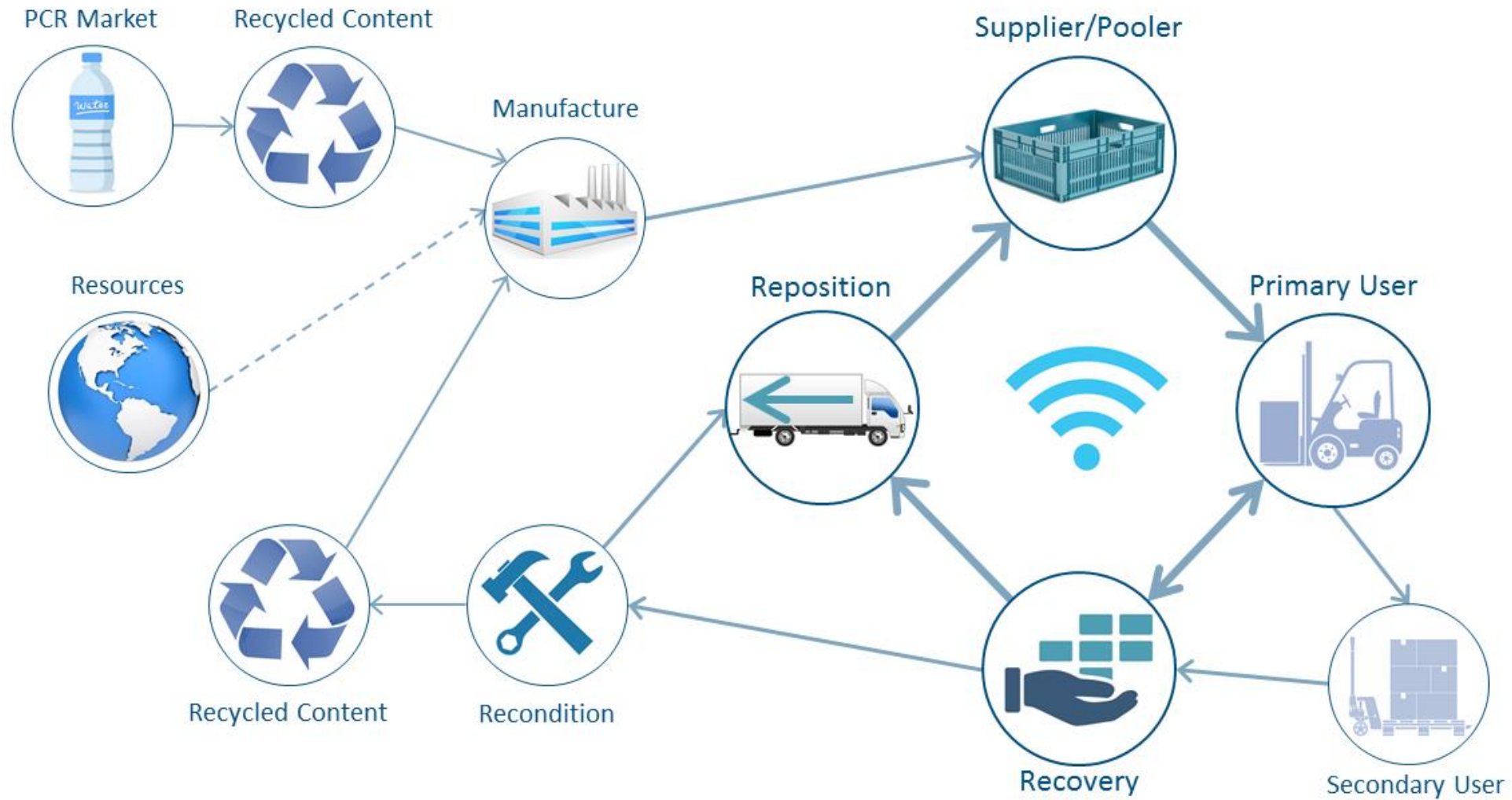
Overall 2017 plastic bottle recycling rate was 29.3% - a slight decrease from 29.7% in 2016.



“...lightweighting...causes more bottles to end up in the post-consumer paper stream, as they don't have the heft for machinery to properly handle them during the sortation process.”

Sources: National Postconsumer Plastic Bottle Recycling Report from the Association of Plastic Recyclers (APR) and the American Chemistry Council (ACC); WasteDive, Plastic bottle recycling rates slipped in 2017, Katie Pyzyk, 12/18/18

Reusable Packaging System



Reusable Packaging System



Source: Boston Globe

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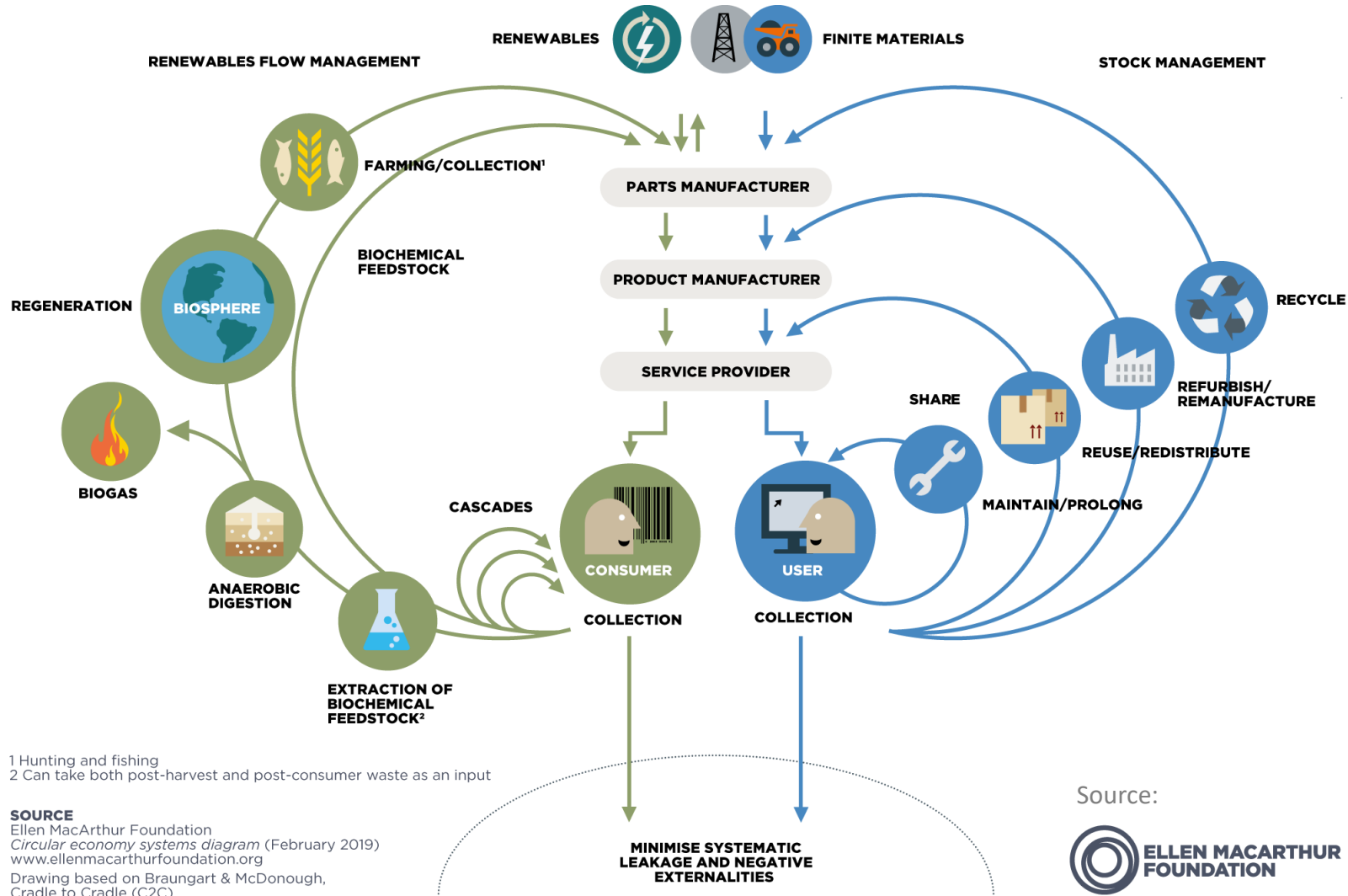
Economic Impacts from Reuse System

Profit-growing areas that can be tapped into with a reusable packaging system for a sustainable supply chain:

1. Regenerative Economics: Reuse Is an Inner Loop Activity in a Circular Economy
2. ESG Investing: Sustainability Is Now a Financial Benchmark
3. Capital Returns: Reuse Pays Back Repeatedly Over Time
4. Resource Stability: Reduce Reliance on Volatile Commodity Markets
5. Durability Over Disposability: Reuse Extends Value; Recycling Diminishes Value
6. Systems Thinking: Solve Interrelated Problems and Discover Better Methods
7. Operational Efficiencies: Improve Processes and Save Money

1. Regenerative Economics

Reuse Is an Inner Loop Activity in a Circular Economy



1 Hunting and fishing
2 Can take both post-harvest and post-consumer waste as an input

SOURCE
Ellen MacArthur Foundation
Circular economy systems diagram (February 2019)
www.ellenmacarthurfoundation.org
Drawing based on Braungart & McDonough,
Cradle to Cradle (C2C)

Source:



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2. ESG Investing

Sustainability Is Now a
Financial Benchmark

**FIGURE 1: SNAPSHOT OF GLOBAL SUSTAINABLE
INVESTING ASSETS, 2016–2018**

Region	2016	2018
Europe	\$ 12,040	\$ 14,075
United States	\$ 8,723	\$ 11,995
Japan	\$ 474	\$ 2,180
Canada	\$ 1,086	\$ 1,699
Australia/New Zealand	\$ 516	\$ 734
TOTAL	\$ 22,838	\$ 30,683

Note: Asset values are expressed in billions of US dollars. All 2016 assets are converted to US dollars at the exchange rates as of year-end 2015. All 2018 assets are converted to US dollars at the exchange rates at the time of reporting.

Source:



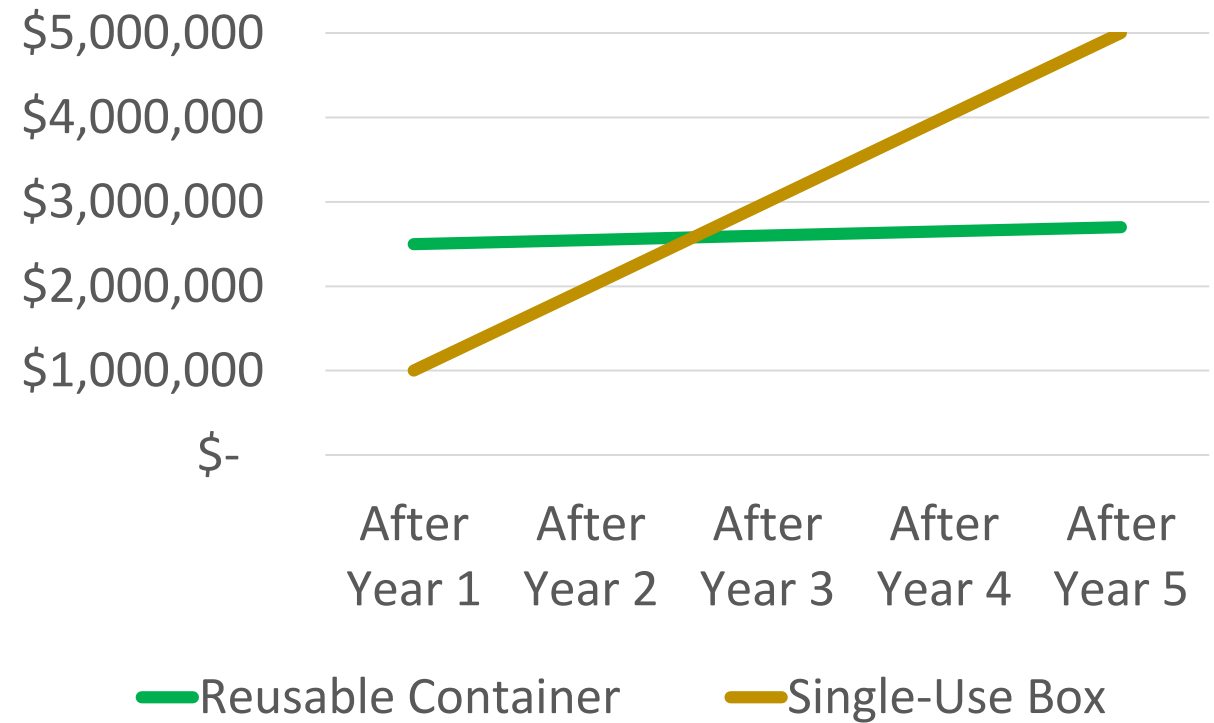
3. Capital Returns

Reuse Pays Back
Repeatedly Over Time

Example Model

	Reusable Container	Single-Use Box
Shipments Per Year	1,000,000	1,000,000
# Uses/Unit/Year	6	1
# Units Needed/Year	166,667	1,000,000
# Replacements/Year (2%)	3,333	0
Cost To Make 1 Unit	\$ 15.00	\$ 1.00
Starting Year 1 Capital	\$2.5M	\$1.0M

Reuse vs Single Use 5-Year Costs

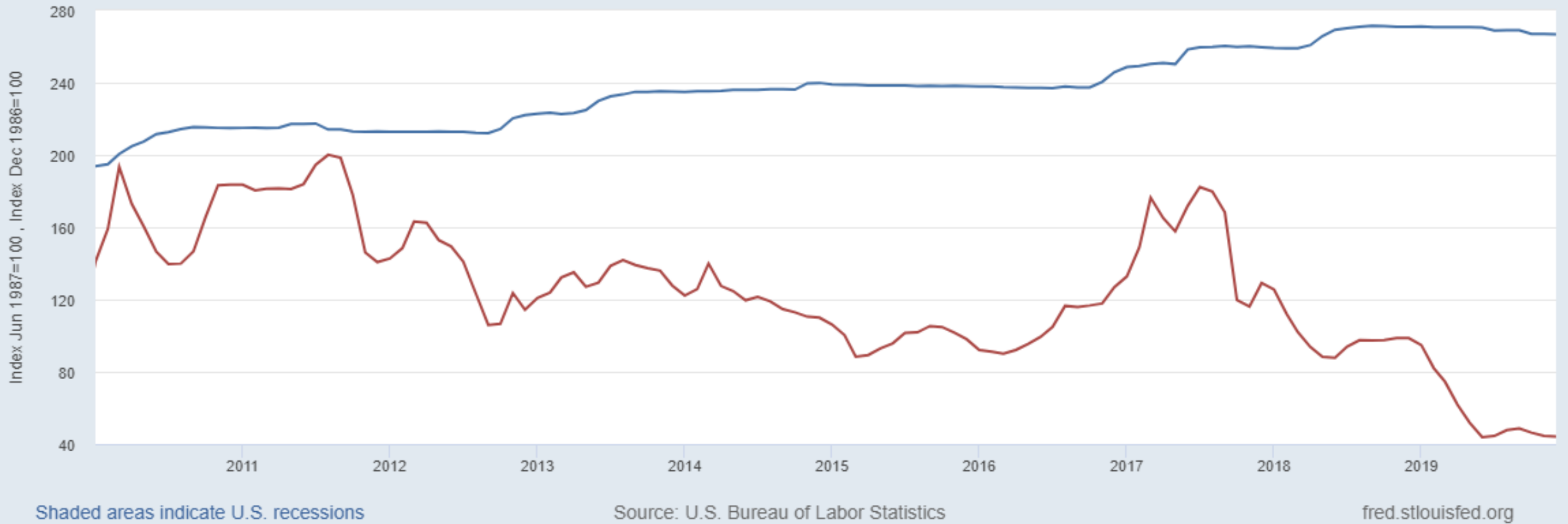


4. Resource Stability

Reduce Reliance on
Volatile Commodity
Markets

FRED

— Producer Price Index by Commodity for Pulp, Paper, and Allied Products: Corrugated and Solid Fiber Boxes
— Producer Price Index by Industry: Material Recyclers: Corrugated Wastepaper



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5. Durability > Disposability

Reuse → Value
Recycling ↓ Value

"Durable packaging outwins disposable containers in pricing."



"Recycling only starts at the throwing-away stage: this is a process that is not made to preserve or increase value nor to enhance materials."

- Tom Szaky

TerraCycle, LOOP

[GDI Gottlieb Duttweiler Institute](#)

- Alexandre Lemille

African Circular Economy Network

[World Economic Forum](#)

6. Systems Thinking

Solve Interrelated Problems and Discover Better Methods



“94% of problems in business are systems driven and only 6% are people driven”

— W. Edwards Deming

7. Operational Efficiencies

Improve Processes
and Save Money



Walmart 

Sustainable Packaging Playbook

2016

A guidebook for suppliers to improve packaging sustainability



When eggs were moved to reusable plastic containers (RPCs) from cardboard containers, damage rates decreased, preventing 37 million eggs from being thrown out in the first year through this easy drop in display solution which folds flat when not in use

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Session Takeaways

1. Sustainable Supply Chains > Environmental Footprint
2. Think Transformative Systems Change
3. Reusable Packaging Offers That Systems Change
4. Economic Growth Opportunities Abound with Reuse



For more information:

Speaker email: tdebus@reusables.org

Website: www.reusables.org

Visit MODEX Booth 6294

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