

Packaging Complexities:

Exploring the Value of Packaging within the Context of SMM Policy

Environmental Council of the States (ECOS)
SMM Workgroup – June 18, 2020

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About AMERIPEN



AMERIPEN is the only trade association focused exclusively on public policy for the entire U.S. packaging industry in order to promote the best use, benefits and functions of packaging.

We develop and advocate positions on issues related to packaging and the environment, using sound science and a philosophy of material neutrality.

Our membership represents the entire packaging supply chain, including materials suppliers, packaging producers, consumer packaged goods companies and end-of-life materials managers.

Our **VISION** is to enable informed decisions about packaging and the environment.

Our **MISSION** is to lead the packaging industry through advocacy based on science and enhance understanding of the role packaging plays in a more sustainable society, economy, and environment.

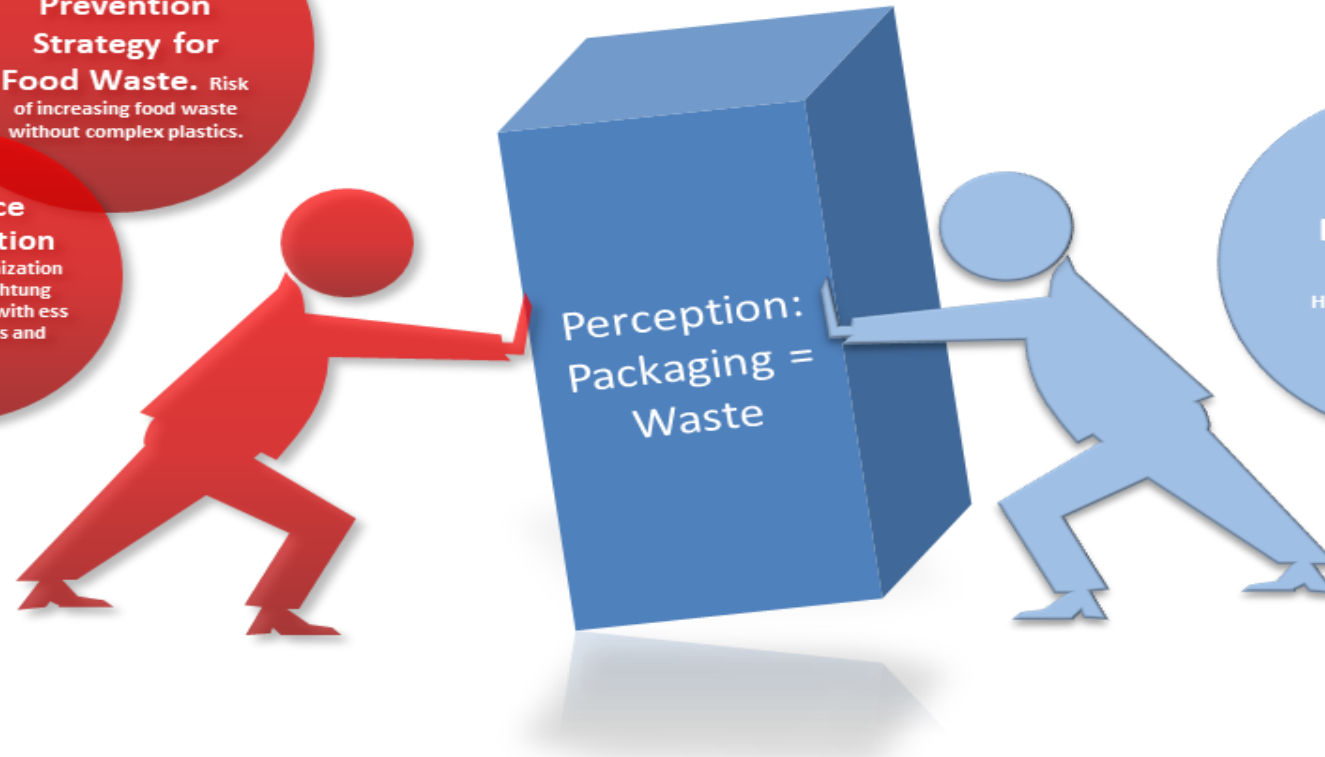
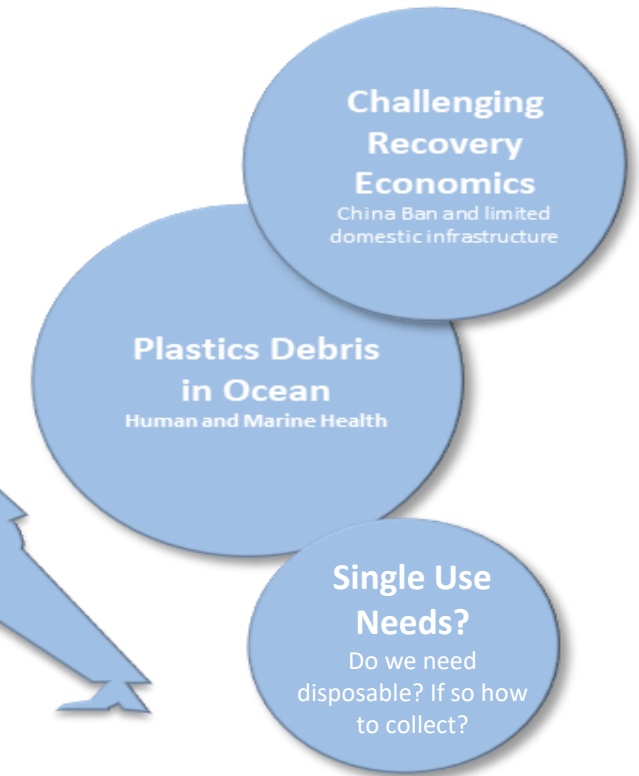
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How We Define Packaging Influences What We See

RESTRAINING FORCE – Opportunities with Packaging



DRIVING FORCE – Challenges Facing Packaging



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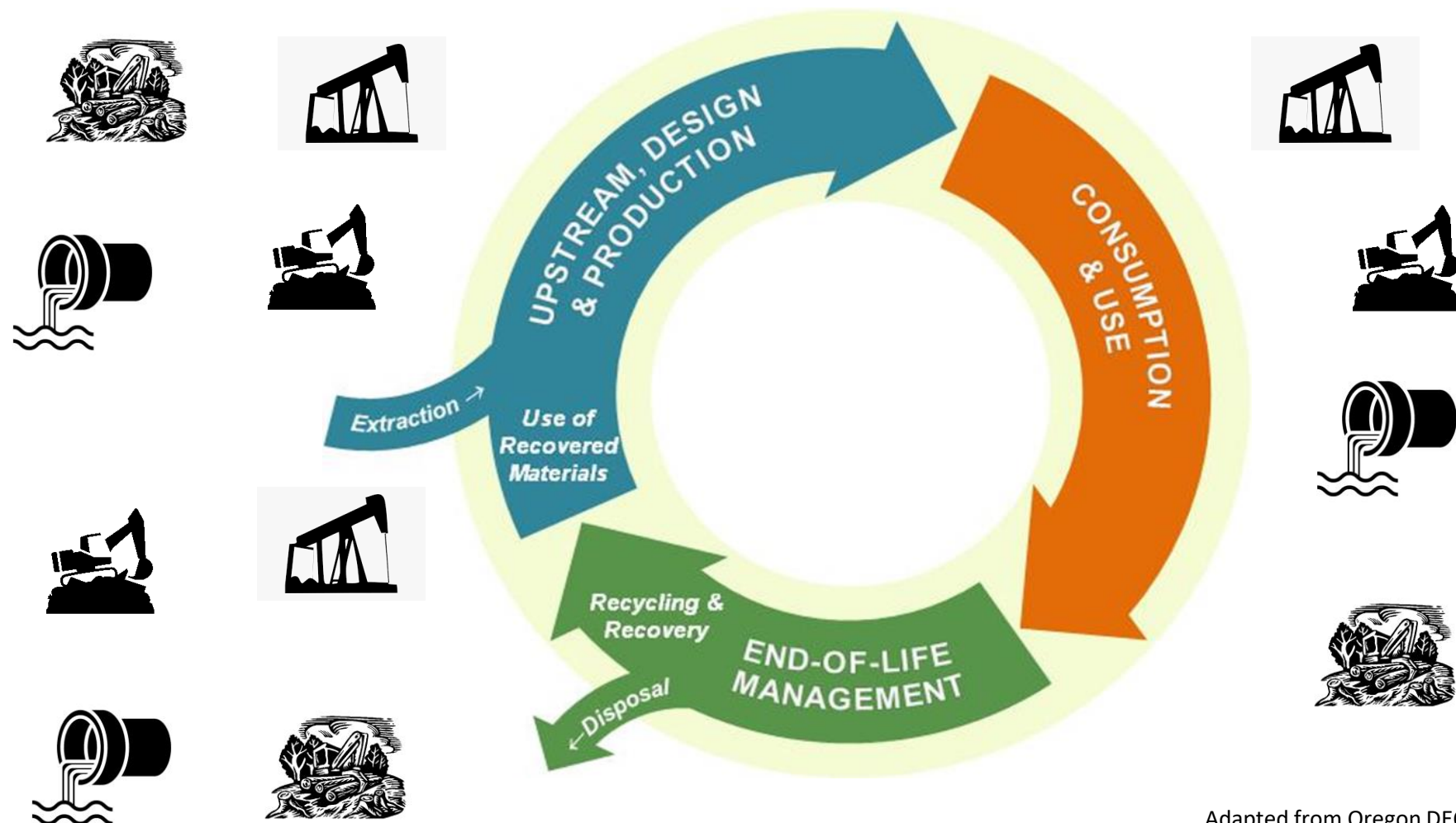
Understanding SMM and Circular Economy: Framework

	Circular Economy	Sustainable Materials Management
Perspective/ Vision	Evaluate and design within a system. Aspirational/Future State.	Evaluate and design across the lifecycle. Current State.
Definition of Waste	Direct material use—preservation of materials used in production.	All externalities associated with material use—preservation of natural capital.
Goals	Waste is “designed” out. Every material can be repurposed towards continue or multiple use.	Waste is multi-attributed. Need to evaluate tradeoffs and hotspots to identify most sustainable choice.

Understanding SMM and Circular Economy: Packaging Systems

	Circular Economy	Sustainable Materials Management
Design Focus	Recover, re-use, refurbishment, products as a service	Source reduction, design for recovery, integrated systems/lifecycle thinking
Source Reduction	Material reuse over efficiency. Renewable energy	Material efficiency is prioritized. Tradeoffs in order to identify the best ways to reduce overall material and resource demand
Quality	Assumes design ensures reuse quality. Seeks to avoid feeding virgin material back into system.	Would calculate the need for virgin material as needed and degradation of quality to ascertain best value.
End Markets	Infers local. Assumes markets will grow with demand.	Evaluates flow of materials between processes and across geographies. Includes evaluation of disruptions to, or lack of, end markets.

Can Two Halves Create A Whole? CE and SMM for Packaging

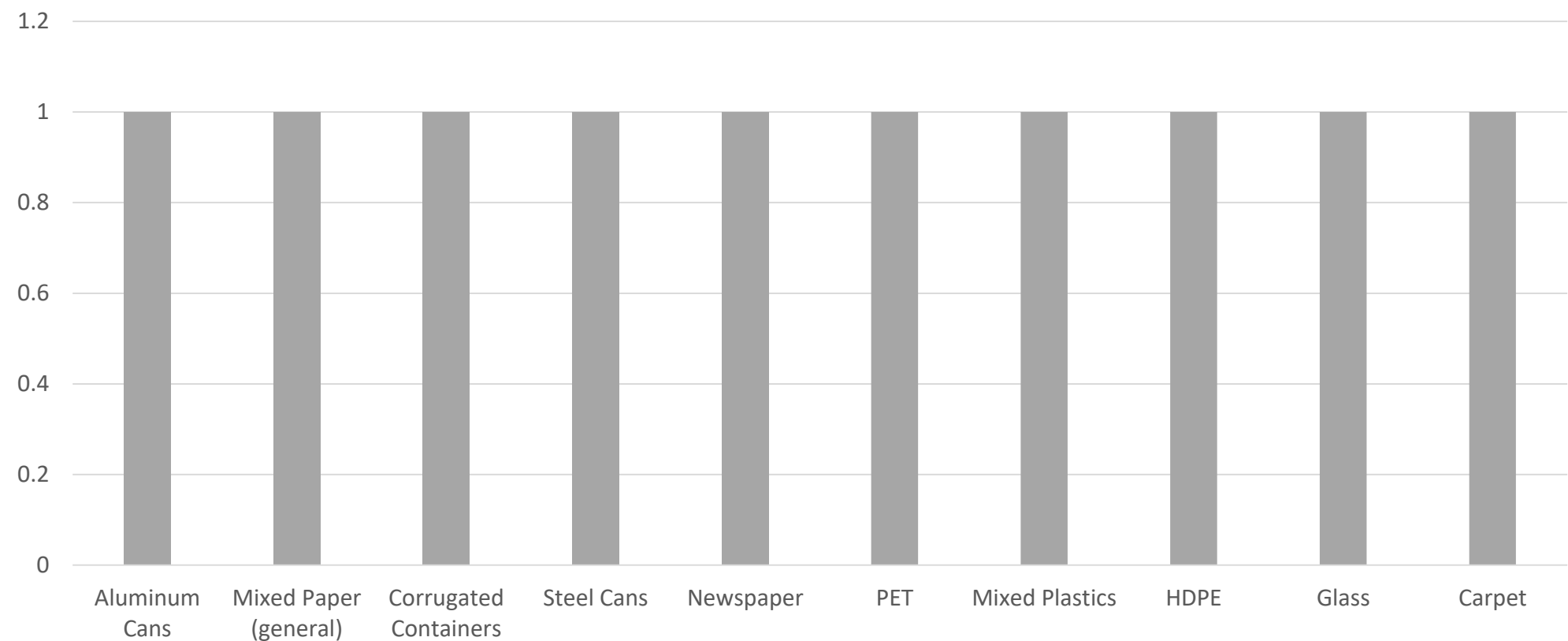


Adapted from Oregon DEQ

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How You Set Goals Informs Action

One Ton of Recycled Material

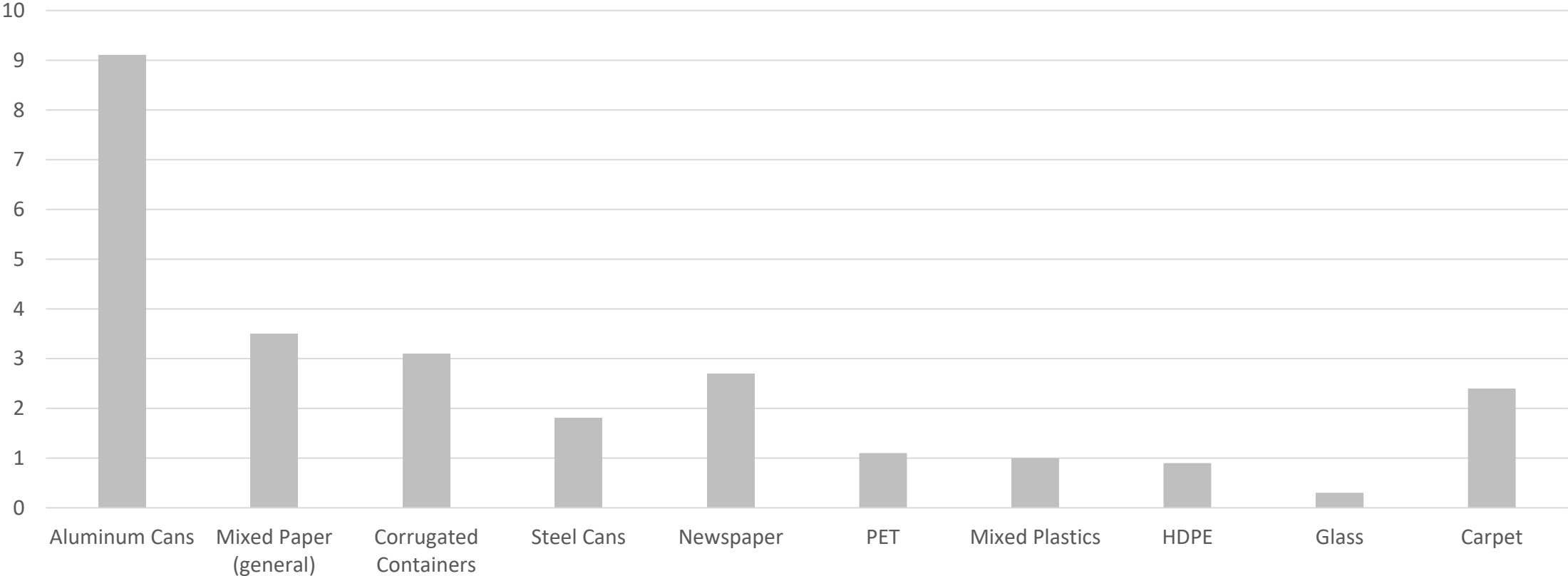


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How You Set Goals Informs Action

GHG Impact of One Ton Recycled Material (MTCO₂e)

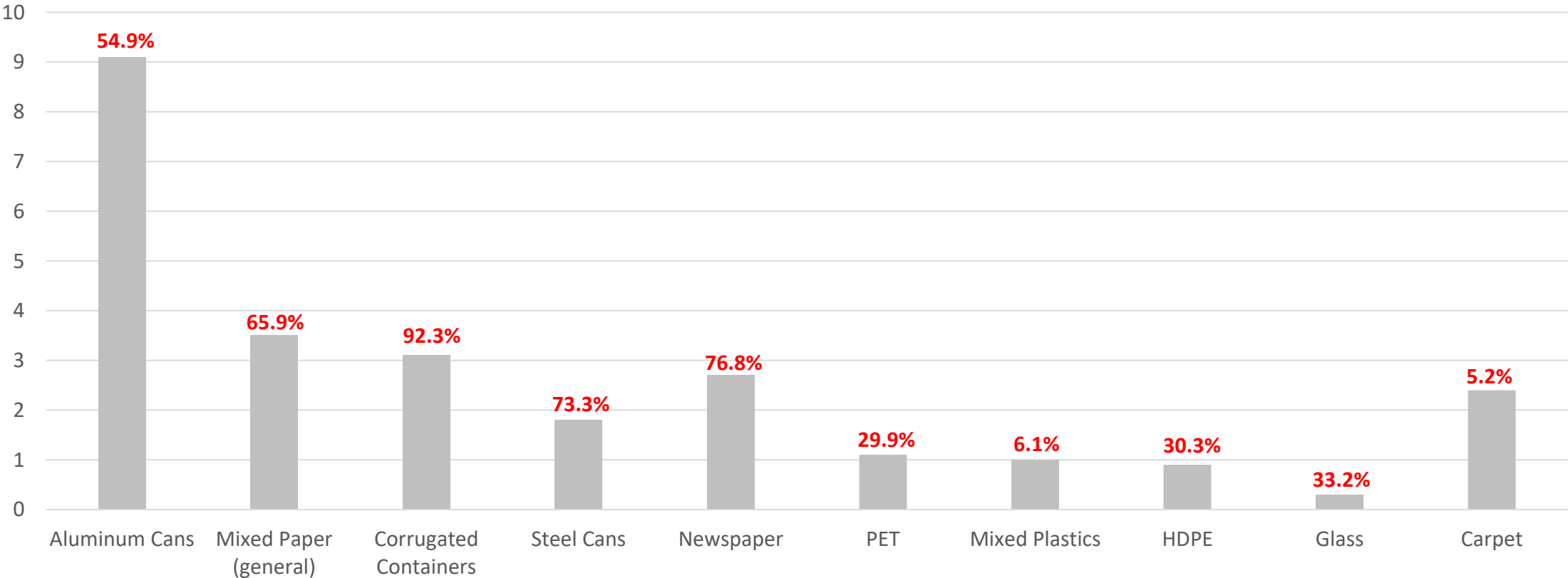


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Adapted from Oregon DEQ. Data from US EPA WARM model

How You Set Goals Informs Action

Applying SMM Perspective to Recycling Rates



Adapted from Oregon DEQ. Data from US EPA WARM model

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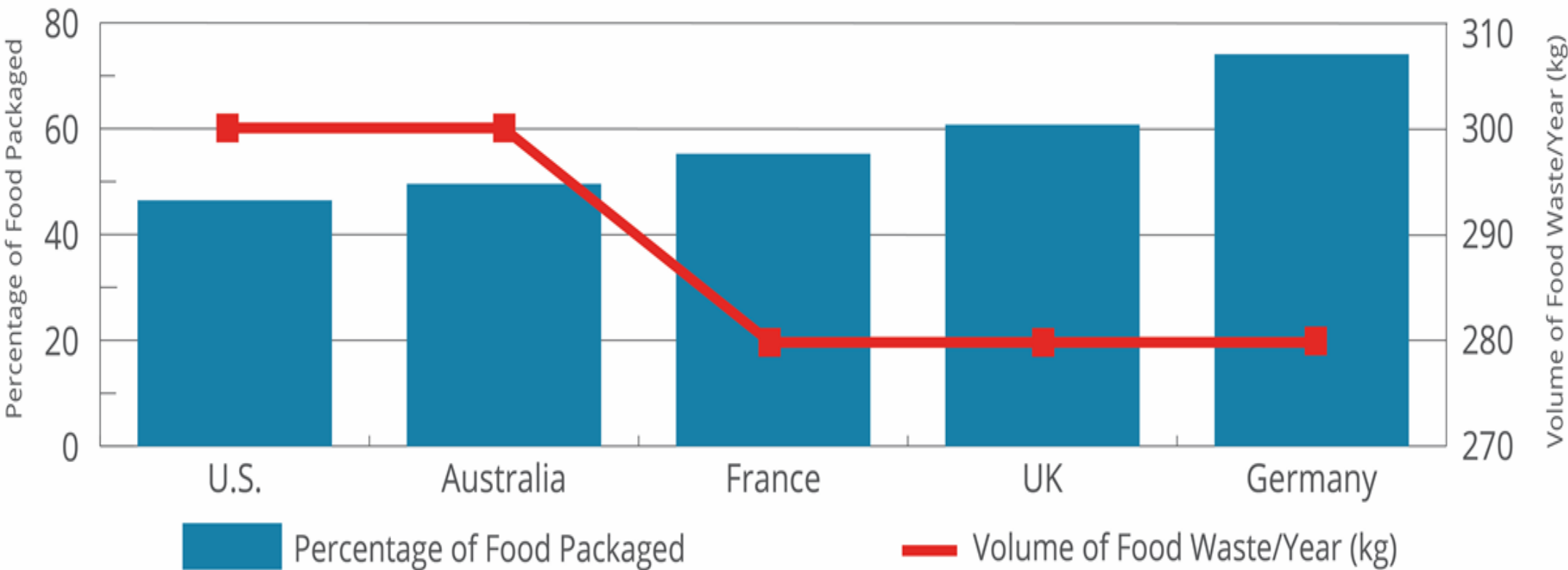
Systems Thinking: Packaging and Food Waste



- Biggest contributor to U.S. landfills
- 3rd best strategy to reduce greenhouse gas emissions.
- Food production results in 80% of all U.S. freshwater use, 10% of total energy demand and 50% of land use.
- Prevention > 6x more effective than composting.
- Packaging has been identified within the top 3 most effective strategies to reduce food waste.
- Approximately 60% of household food waste arises from product not used due to perishability and or short shelf life.

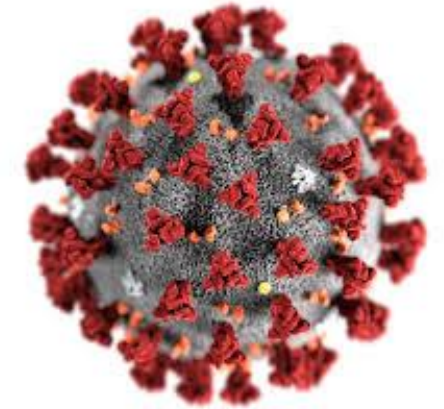
Systems Thinking: Packaging and Food Waste

Fresh Food Sales: Percentage Sold Packaged vs Wasted for Various Countries



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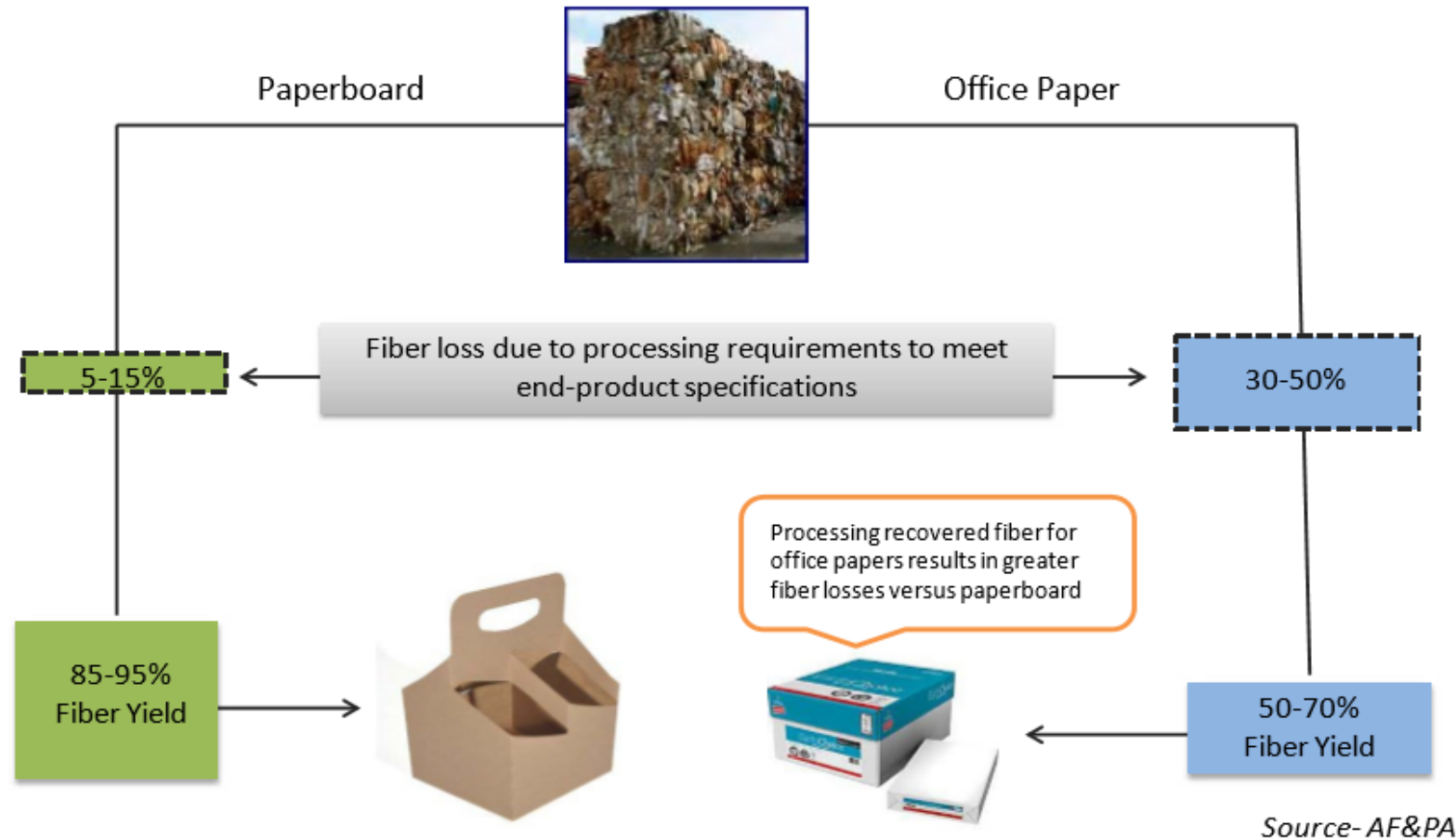
Systems Thinking: Packaging Design



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Systems Thinking for Policy: Recycled Content Mandates

Efficient Utilization of Recovered Fiber Varies by End Product



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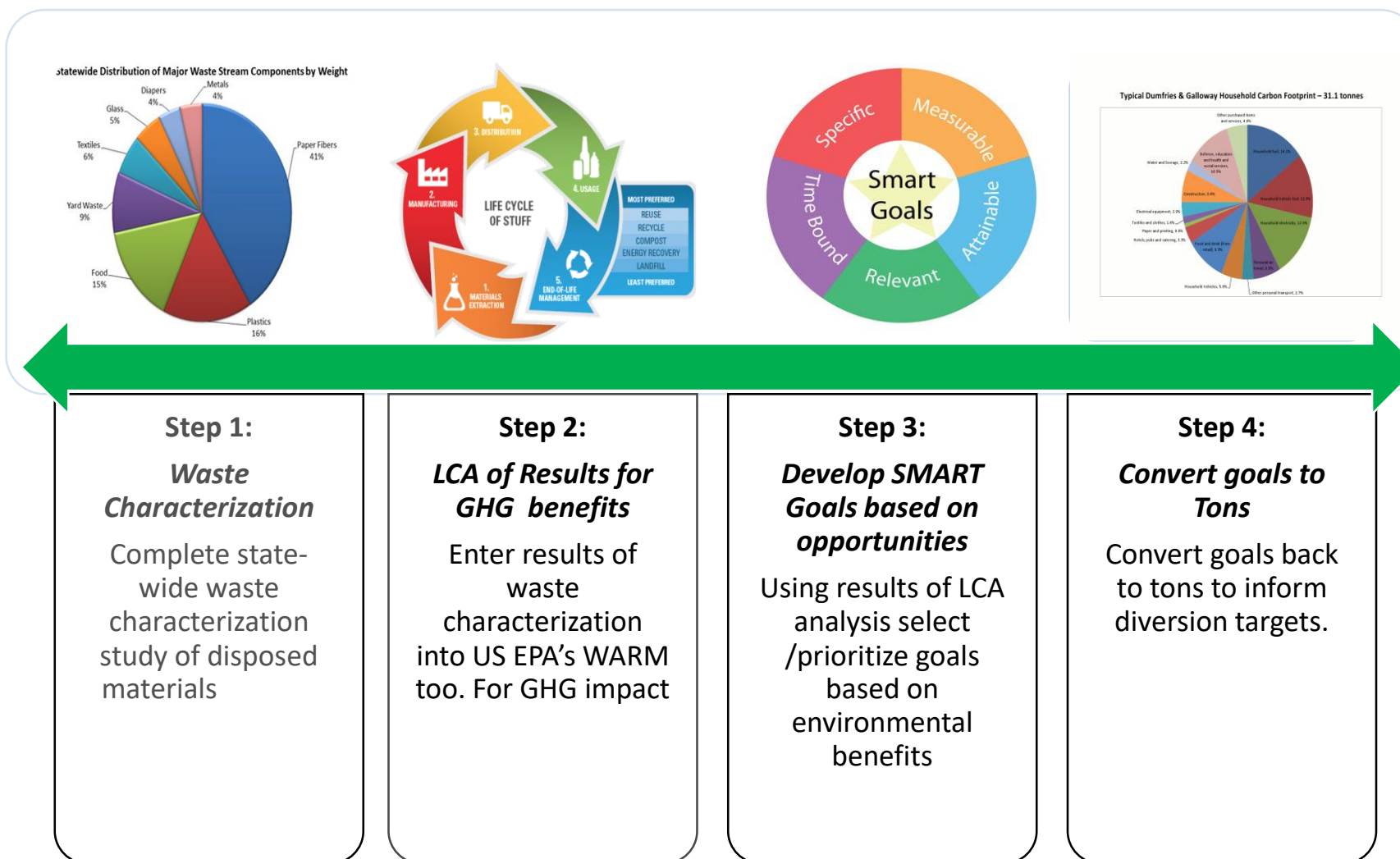
Applying SMM to State Based Recovery Strategies

AMERIPEN asked Dr. Tim Townsend to test an SMM waste model in three states (CA, MN and MD)

Data identified that SMM framework can help identify:

1. Best target materials for recycling
2. Best disposal management
3. Prioritizing policy and technology approach
4. Prioritizing stakeholders

Applying SMM to State Based Recovery Strategies



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Systems Approach is Needed



- **Integrated policy**—where can we leverage the value of packaging and design to address environmental challenges?
- How are we **supporting innovation** (design and infrastructure?)
- How do we improve **access for packaging recovery**?
- How can we support the **development of new and more end markets** for packaging recovery
- What **goals** do we need to reframe to focus on **impact**?
- What types of policies and programs would be needed for **reuse or other potential system changes**?
- How do we **finance** system improvements to support sustainable materials management

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QUESTIONS?

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