

Recycling Market Development Center Advisory Board Meeting

Design for Recyclability, Reuse & Repair Presentations

October 8th, 2025, 9am – 11:30am PST



DEPARTMENT OF
ECOLOGY
State of Washington

Our Team



Agenda

9:00 Welcome

9:05 Commerce and Ecology updates

9:25 Board roundtable

10:00 Bio Break

10:10 Design for Recyclability, Reuse, and Repair
Presentations

- Ruben Nance – Association of Plastic Recyclers
- Lucy Pierce – Blue Green
- John Kreckel – The REMADE Institute

11:30 Wrap up & Thank You



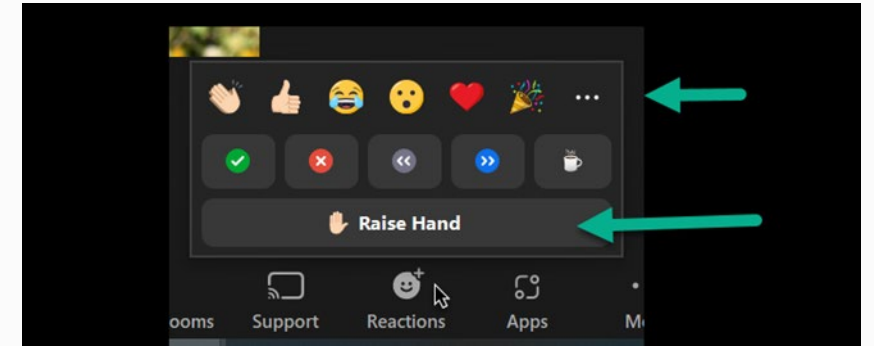
Participation in this meeting:

Roles

- Host-Caleb
- Facilitator-Mya
- Note taker/chat monitor-Tina

Rules

- Board members cameras on
- Board members and presenters may unmute themselves
- Questions? Please raise your hand or type them in the chat
- I will call on you or I can read your question
- Use reaction to keep it interactive
- Closed caption is available if you click on the cc



Note: we are not recording this meeting, meeting notes will be posted on the Advisory Board website.

Agency updates

Kara Steward



Kyle Gitchell



Washington State Circular Economy

RECYCLING MARKET DEVELOPMENT CENTER, ADVISORY BOARD

— COMMERCE UPDATES —

OCTOBER 2025

Kyle Gitchell | Circular Economy Development Director

Leslie Perkins | Circular Economy Development Manager

Office of Economic Development & Competitiveness | Washington State
Department of Commerce



Washington State
Department of
Commerce

UPDATES FROM COMMERCE & OEDC

- Agency strategic planning
- Circular bioeconomy and industry sector shifts
- Clean Energy program grants open
- Anaerobic Dairy Digester Program pre-application open
- Industrial Waste Coordination Program –
 - Legislative direction for development of Industrial Symbiosis Parks across WA
 - Upcoming “Request for Applications” will be posted for Industrial Symbiosis Grant Program funding





CIRCULAR ECONOMY PROJECTS

- Port of Pasco
 - Pasco Agricultural Symbiosis Industrial Park
- Cowlitz Economic Development Council
 - Longview Industrial Symbiosis Park
- Gathering stakeholders and providing assessment and analysis of infrastructure

HIGHLIGHTS FROM INTERNATIONAL LEARNINGS

Industrial Symbiosis Study Tour - Denmark

- Delegation of 24 legislators, port commissioners, municipal leaders, state employees, and business representatives
- Presentations and workshops across seven cities
- Take aways
 - IS works at scale
 - Relationships are key
- [More details available here](#)





Washington State
Department of
Commerce

www.commerce.wa.gov



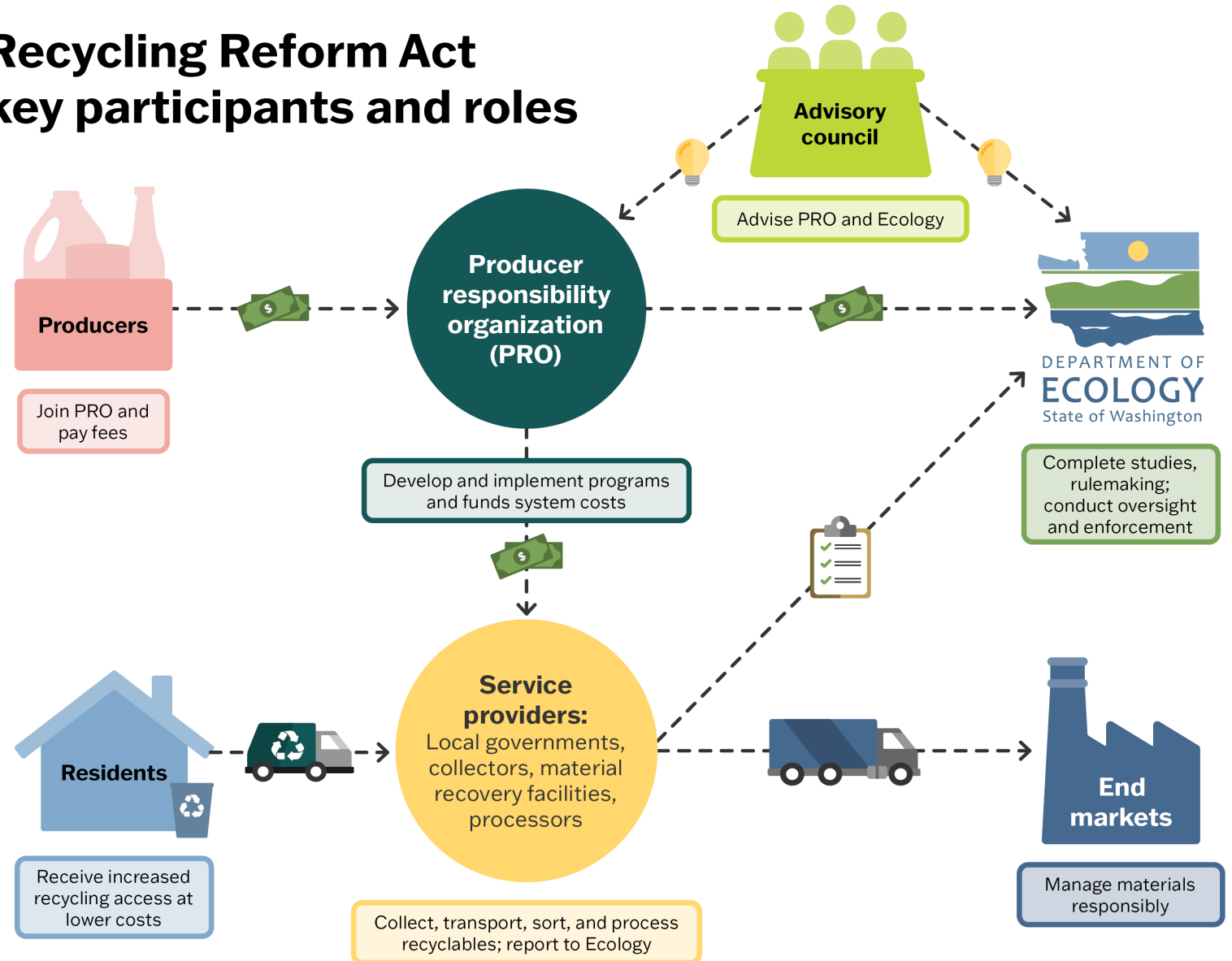
Thank you!

www.choosewashingtonstate.com

ISPgrants@commerce.wa.gov

What is the Recycling Reform Act?

Recycling Reform Act key participants and roles





COMMON THREADS: TEXTILE LISTENING SERIES



Building on the success of [*Unraveling the Textile Industry for a Regenerative Washington*](#), join us as we continue to explore diverse perspectives, share ideas and collaborate on understanding our future of textiles in Washington. **Common Threads** is our call to action!

Next Session: [*Tidal Vision - Your Chitosan Solutions Manufacturer*](#) (Green Chemistry – PFAFs & Microplastics)

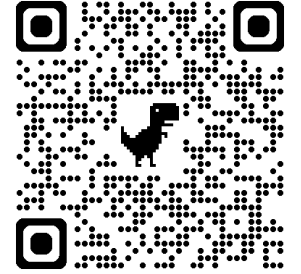




NextCycle Washington

Cohort 4

- Applications open through October 31st
- Virtual application party October 14th 4pm – 5pm PT



Double welcome to new advisory board members!

Susan Long
REI Co-op
Sustainability
Initiative
Manager



Amanda Miller
Executive
Director
South King
County Tool
Library

Thank you for joining!

Board Roundtable



Allen Langdon



Jocelyn Quarrell



Christopher Loid



Karl Englund



Carly Mick



Katie Fleming



Heather Trim



Susan Long



Jay Simmons



Preston Peck



Jeff Zillich



Sara Holzknecht



Amanda Miller



Tim Shestek

What is the latest with your work?

Can you think of something you depend on whose initial design has made it easy to repair, reuse, or recycle?



**Let's take a
10 minute
break**



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Design for Circularity

Ruben Nance – Association of Plastic Recyclers



ASSOCIATION OF PLASTIC
RECYCLERS

Overview of the APR and Market Impact

October 8, 2025

© 2024 *The Association of Plastic Recyclers*

Who is APR?

APR is an international non-profit and the only North American organization focused exclusively on improving recycling for plastics.



What Do We Do?

Our mission is simple:
RECYCLE MORE PLASTICS
to reduce waste.

APR Member Sampling

RECLAIMERS/RECYCLERS



AFFILIATES



[View all APR Members »](#)

Together, APR members span the entire value chain and shape the future of our industry.

- Reclaimers/Recyclers
- Brand Owners
- Retailers
- Converters
- Equipment Manufacturers
- Testing Laboratories
- Certifiers
- Label & Ink Manufacturers
- Resin Manufacturers
- Additives Manufacturers
- Researchers
- Technical Consultants
- And more!

300+



APR Programs Are Circular by Design®

Together, we can reduce plastic waste and move towards a circular economy



Policy Work



Education



Why Design Matters



Recycling Starts with Design

All components need to be designed correctly – not just the primary container resin- to make it through the recycling system.



Unlock PCR Supply

In a circular economy, consumer product companies are their own material suppliers. Good design optimizes quality and improves yield.



Comply with Legislation

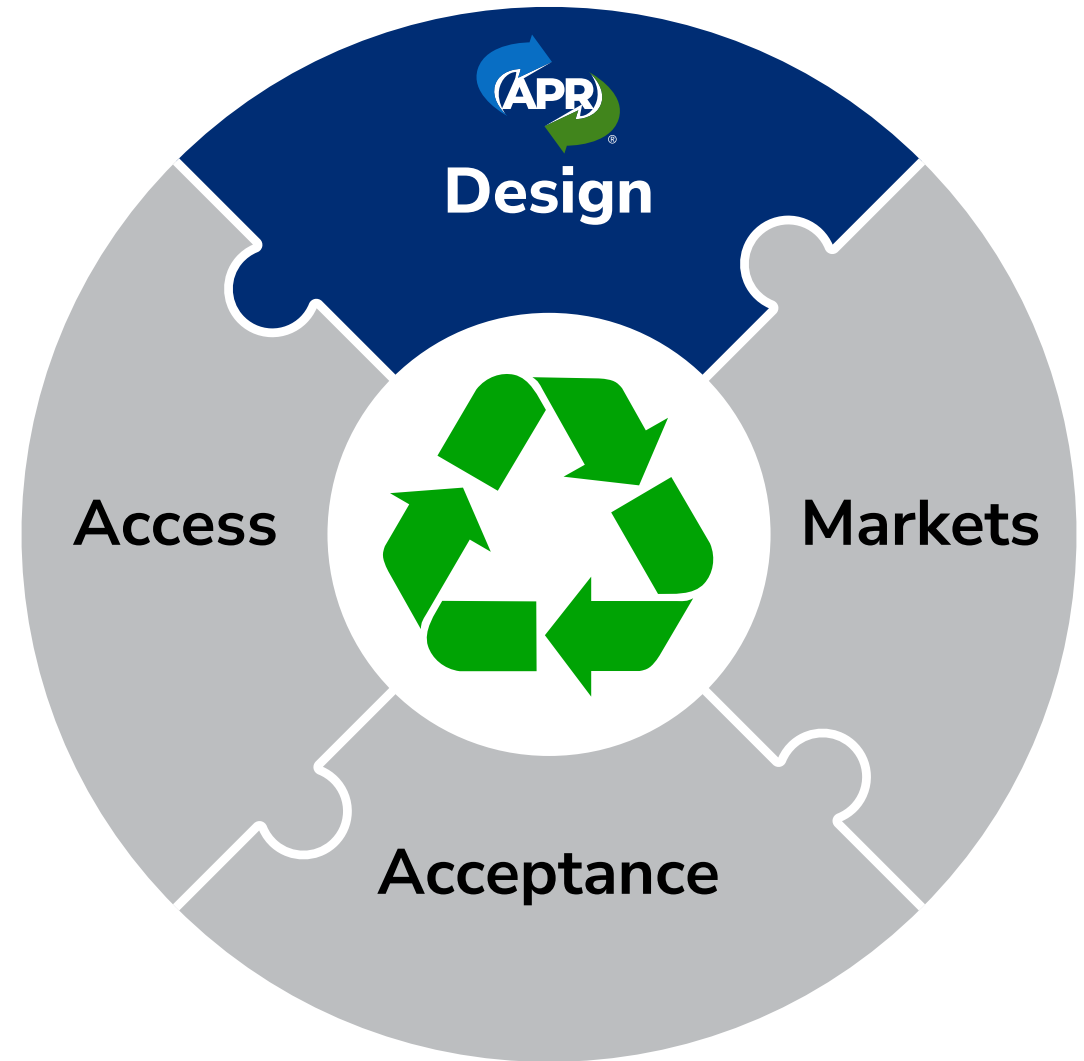
EPR, Content Mandate, Labeling Laws... requirements for accountability and transparency are growing. Companies need to be ready to avoid serious consequences.

Is my packaging recyclable?

The **APR Design® Guide** is your tool to ensure a package design is compatible with the North American recycling system.

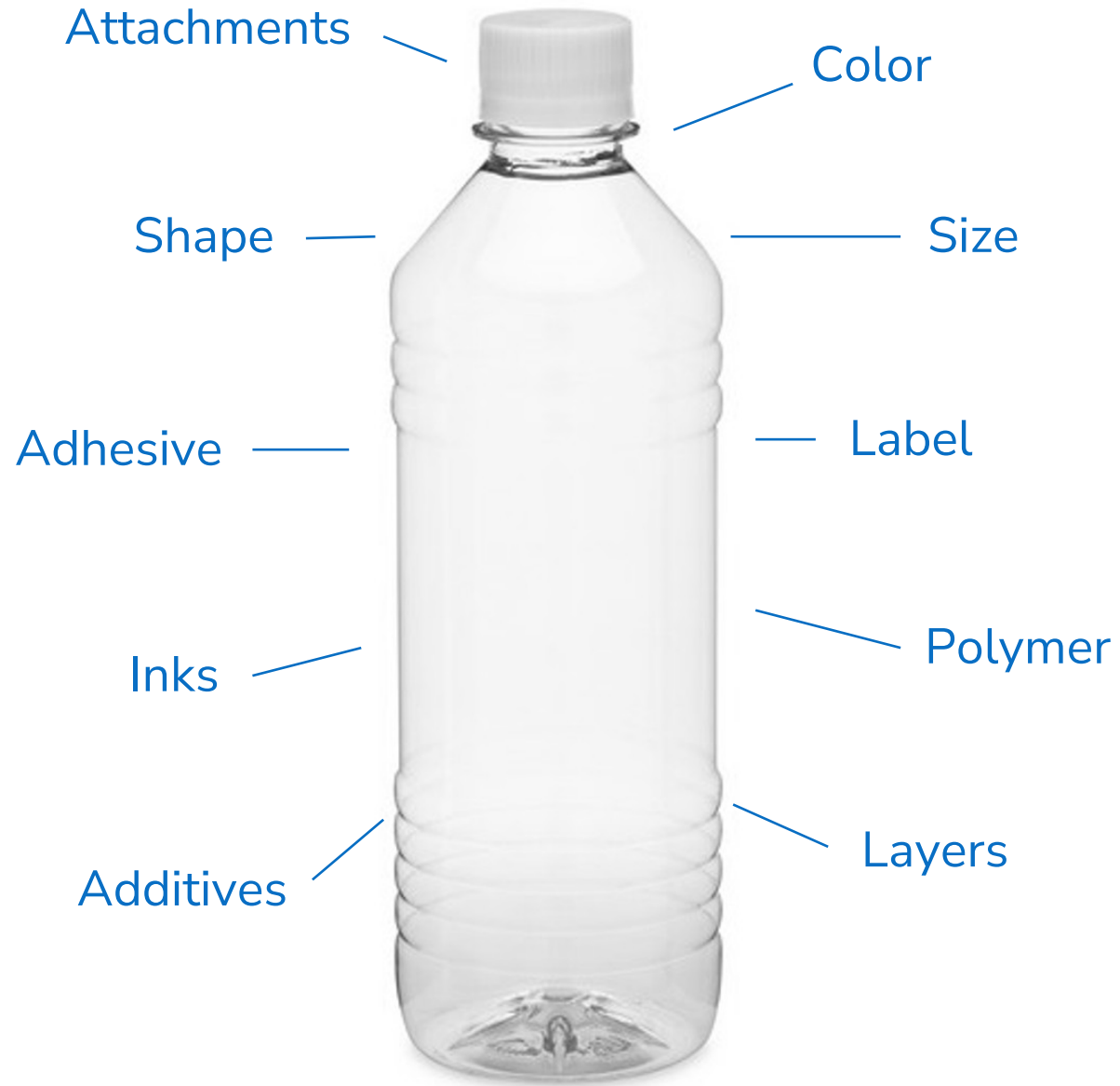
To be considered recyclable*, companies must consider all the following criteria:

- Design for recyclability
- Consumer access to recycling
- Acceptance of a package in the recycling stream
- End markets for products made from the recycled plastic



* For unqualified claims in the U.S., refer to FTC Green Guides





**The APR
Design® Guide
views a
package as
a compilation
of design
features**

Design Features Drive Whole Package Assessment

Design Features

Design features are classified according to the APR Recyclability Categories or test results where testing is required.

Base Resin			
Color			
Dimensions			
Closures			
Labels			
Adhesives			
Inks			
Barriers			
Additives			
Attachments			

Whole Package Assessment



Impact of the Design[®] Guides



De-Selection of PETg

PETg is a contamination within the PET bottle stream and was commonly used in juice containers



Shrink Labels

- De-Selection of PVC and PETg
- Innovations for light-blocking technologies
 - Inks designed to not contaminate clear bottle streams



Tubes

Tubes were previously non-recyclable multi-layers. 95%+ of tubes are now recyclable within the HDPE container stream

Brands Must Be Their Own Material Suppliers

1. Commit to purchasing certified domestic PCR with established contracts

- Overproduction of virgin materials and non-certified foreign supplies are substantial risks to the reclamation industry
- Long term contracts are needed to stabilize market volatility
- The capacity exists to double rPET, rHDPE, and rPP production overnight, we need supply and demand.

2. Design packaging so that it can be reused within the same system it originated

- Detrimental and Non-Recyclable features reduce quality, yield, and other expenses for reclaimers
- High quality PCR (such as food contact grades) is in demand. These streams are limited due to contaminations.





ASSOCIATION OF PLASTIC
RECYCLERS



Thank you!



Ruben Nance

ruben@plasticsrecycling.org

The information provided in this presentation is not a substitute for legal advice. Before taking any actions based upon such information, consult with the appropriate professionals.

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Design for Recyclability & Reuse

Lucy Pierce – GreenBlue

Washington State Department of Ecology
Recycling Market Development Center

Design for Recyclability & Reuse

Lucy Pierce

October 8, 2025



- **Introduction to SPC + H2R**
- **SPC Sustainable Packaging Definition**
- **Design for Recyclability with a H2R Lens**
- **Paper Recyclability Guides**
- **Design for Reuse - SPC Definition**



GreenBlue's mission is to accelerate the transition to a regenerative, just, and sustainable materials economy.





*environmental nonprofit
dedicated to empowering a
diversity of stakeholders to
promote a more sustainable
materials economy.*

Projects of GreenBlue



**SUSTAINABLE PACKAGING
COALITION®**



How2Recycle®

NAVIGATE



How2Compost



CLEANPACKAGE®



CLEANGREDIENTS®

Our Membership



SPC Sustainable Packaging Definition



5 Principles of Design

1. Uses **SMART¹** design
 2. Advances the use of recycled materials and/or sustainably-sourced, renewable feedstocks
 3. Is designed for reusability, recyclability, or compostability and labeled with appropriate end-of-life instructions
-

Companies working on sustainable packaging should also work on ensuring that their product-package system:

4. Engages with reuse and refill models
5. Invests in the growth of recycling and composting infrastructure, collection, and access

Uses **SMART** Design

S
M
A
R
T

Systems Approach

Material Health

Accessibility

Reduction &

Elimination

Life-cycle thinking

Considering the environmental footprint of the product itself, with the aim of protecting the product or packaging contents.

Systems Approach



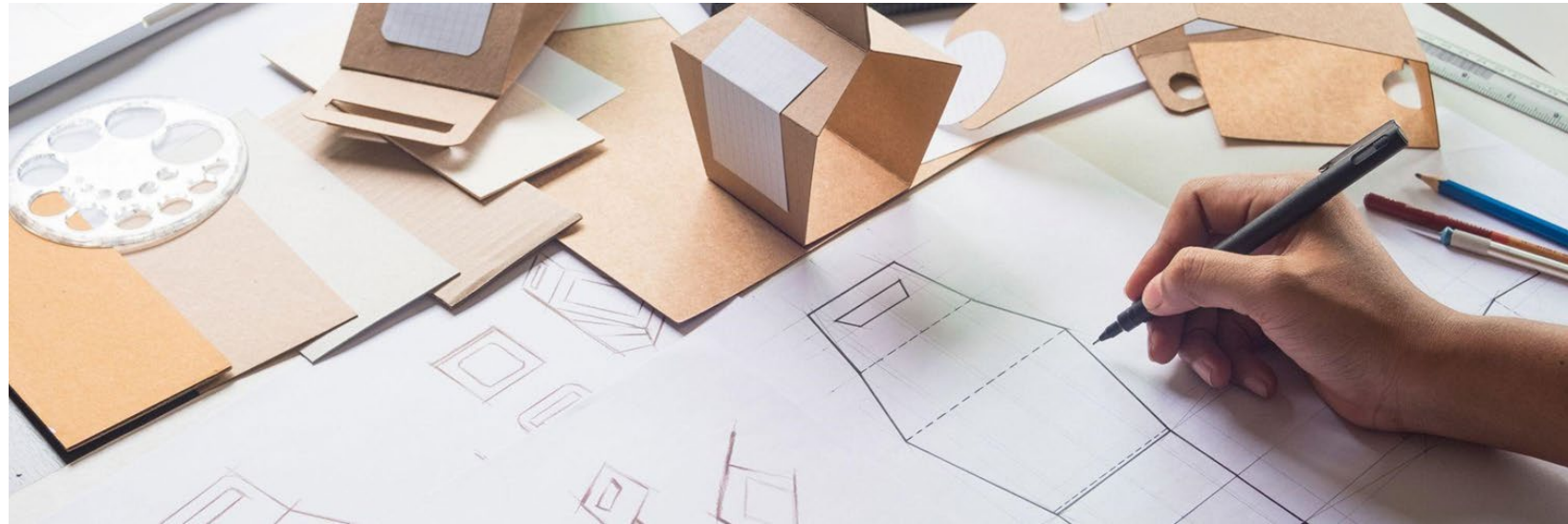
**Hazardous chemicals
should not be used to
manufacture a
package, since this
can have
environmental health
consequences for
workers, communities
near production
facilities, and
consumers.**

Material Health



Sustainable packaging design should strive to ensure that all individuals can independently and safely access product contents.

Accessibility



Over-packaging, or using more packaging than is required to reasonably protect a product, results in the unnecessary use of materials and energy.

Reduction & Elimination



In many cases, the biggest environmental impact from packaging is not during disposal, but rather in the sourcing and manufacturing phases.

Life-Cycle Thinking



Design for Recyclability with a H2R Lens



What does “Recyclable” mean?

**“X” reclaimer can
reprocess my
material!**

**Our mills can
handle poly-two-
sides**

**My community
takes #5 bottles
and jugs**

**“Y” company takes
flexible packaging
for recycling!**

Overall Recyclability Assessment

Applicable Law

**Compliance with
national and state
regulations**

Collection

**National consumer
access to recycling**

Sortation

**Correct sortation at
Material Recovery
Facilities (MRFs)**

Reprocessing

**Reprocessable and
compatible with the
existing recycling stream**

End Markets

**Viable end markets
where reprocessed
material is reused to
make new products**

Consistency, Common Sense, Consumer Experience, Material Health

Paper Packaging Design Guides



Paper Packaging Design Guides

Gallery



Guidance on Improved Collection
and Sorting of Fibre-Based
Packaging for Recycling



Guidance on Improved Collection and
Sorting of Fibre-Based Packaging for
Recycling

4evergreenforum.eu/about-us/

Walmart
Recycling
Playbook



Walmart Recycling Playbook

corporate.walmart.com/purpose/economy

Food and Beverage
Cartons Design
Guidance for Recyclability



Food and Beverage Cartons Design
Guidance for Recyclability

recyclecartons.com/resources/

Paper and Board
Packaging Recyclability
Guidelines



Paper and Board Packaging Recyclability
Guidelines

paper.org.uk/CPI/news.aspx

Circularity by Design
Guideline for
Fibre-Based Packaging



Circularity by Design Guideline for Fibre-
Based Packaging

4evergreenforum.eu/about-us/

Circular Packaging
Assessment Tool



Circular Packaging Assessment Tool

recyclingpartnership.org/circular-economy/

Fiber Recycling
Readiness Tool



Fiber Recycling Readiness Tool

recycledmaterials.org/education/

Design Guide
for Recyclability



Design Guide for Recyclability

afandpa.org/statement/

TBD



Poly Coated
Paper Alliance

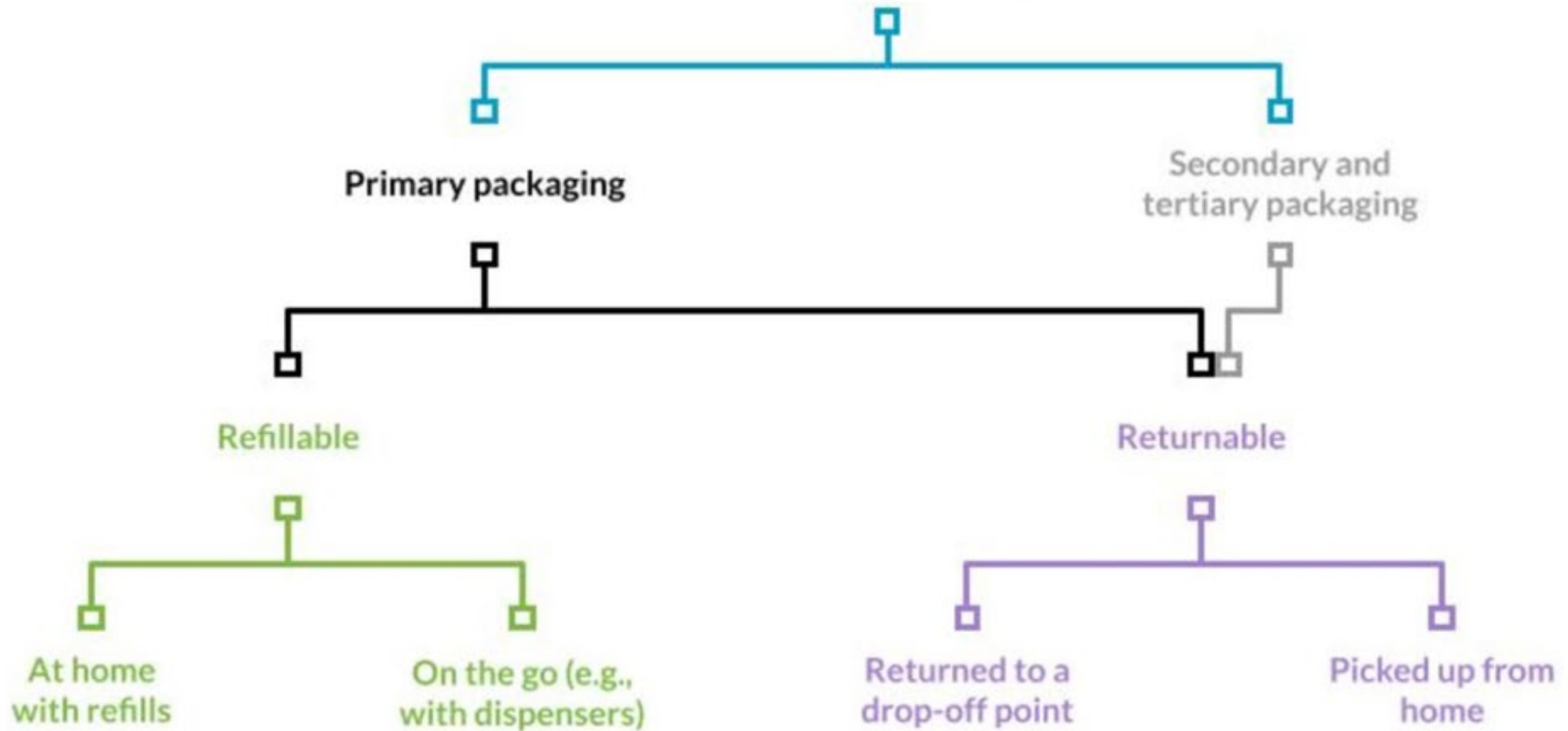
Guided Information for Sustainable Packaging Transformation [GIST]

www.gist.sustainablepackaging.org

Design for Reuse - SPC Definition



REUSABLE PACKAGING



The term "reusable packaging" can apply to both primary and secondary/tertiary packaging, and each will have its own formats and logistics depending on whether the packaging is returnable and/or refillable

- packaging that allows either the business or the consumer to put the same type of purchased product back into the original packaging
- designed to be returnable and/or refillable
- accomplishes a minimum number of reuses by being part of a system that enables reuse.



Thank you!



Lucy Pierce

Senior Project Manager, SPC

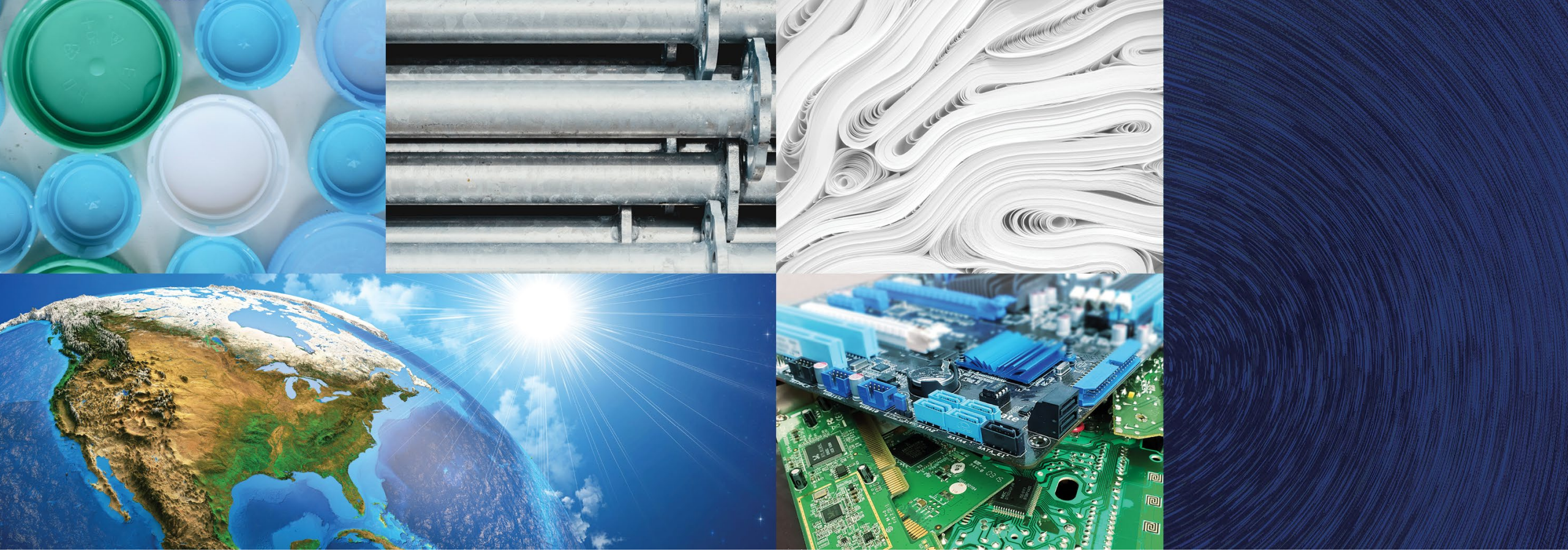
lucy.pierce@greenblue.org





Design for Circularity

John Kreckel – REMADE Institute



Accelerating the U.S.'s Transition to A Circular Economy



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REMADE Consortia

150+ Members Strong

Industry

Academia

Trade orgs & Affiliates

**National
Labs**



Constellation Biomining | Aquapak Polymers | University of Florida | University of Cincinnati | Kent County Department of Public Works | SER North America | Volvo | University of Wisconsin-Madison | Artisan Industries, Inc.

Industry Sectors Impacted by REMADE



**AEROSPACE, AVIATION
& DEFENSE**



APPAREL & FOOTWEAR



**ELECTRONICS
ELECTRICAL EQUIPMENT**



TRANSPORTATION



PACKAGING & PAPER



AGRICULTURE



CONSTRUCTION



FOOD & BEVERAGE



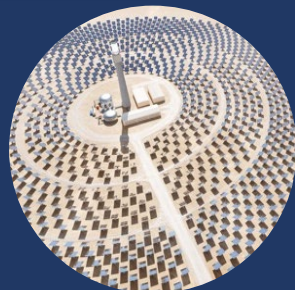
PLASTICS



METALS



**APPLIANCES
CONSUMER PRODUCTS**



CLEAN ENERGY TECH



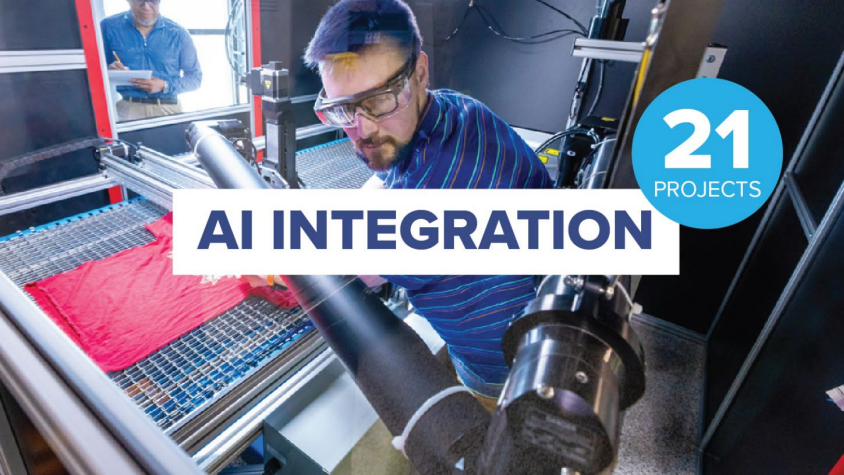
CHEMICALS



HEALTHCARE



**AUTOMOTIVE
RUBBER & TIRES
ELECTRIC VEHICLES**



21
PROJECTS

AI INTEGRATION



13
PROJECTS

MRFNXTGEN®



22
PROJECTS

**DIGITAL
REMANUFACTURING**



MAJOR INITIATIVES

90
COMPLETED &
ONGOING PROJECTS

\$100 MILLION
TOTAL INVESTMENT



30
PROJECTS

**PLASTICS
RECYCLING**



12
PROJECTS

**CIRCULAR
DESIGN**



20
PROJECTS

**ELECTRONICS
RECYCLING**



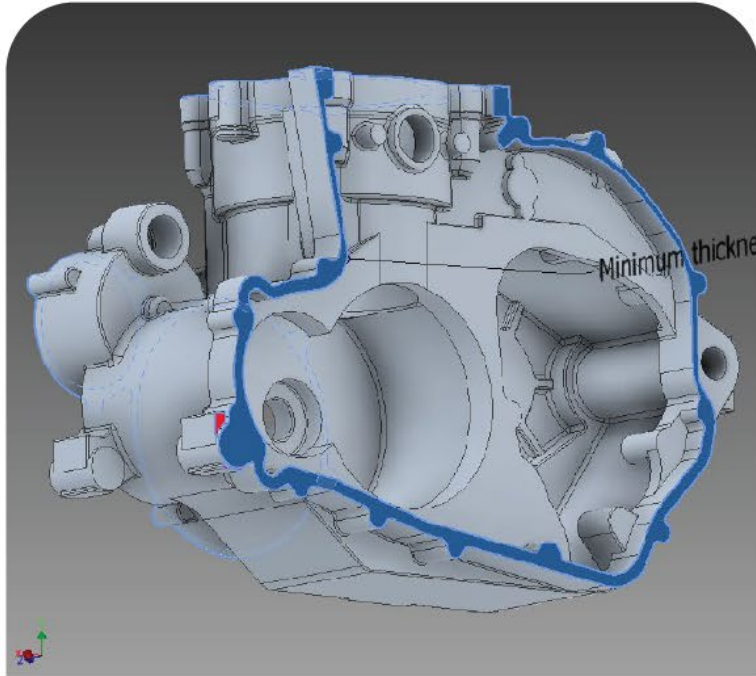
7
PROJECTS

**TEXTILE
RECYCLING**

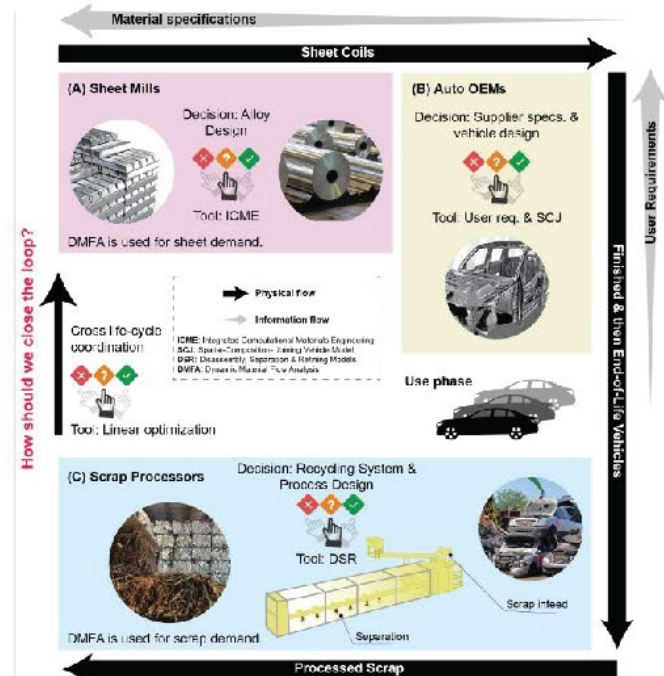
State of Washington REMADE Members



Major Initiatives: Circular Design Project Highlights



Development of a Novel Design for Remanufacturing Software Plug-in for CAD



Material & Vehicle Design for High-Value Recycling of Aluminum & Steel Sheet



Design for RE-SOLAR



NYS Waste Tire Program

- An estimated 18-20 million used tires are generated in New York State every year
 - Around 29 million used tires are stockpiled across the Empire State
- NYS Waste Tire Program - administered by REMADE® - will develop and administer two grant programs representing **\$8 million** in total anticipated investment
 - Technology development grant program; maximum award of \$500,000
 - Technology demonstration grant program; maximum award of \$250,000



Education & Workforce Development

REMADE Academy



130
STUDENTS
ON REMADE PROJECTS



OVER
600
TRAINERS

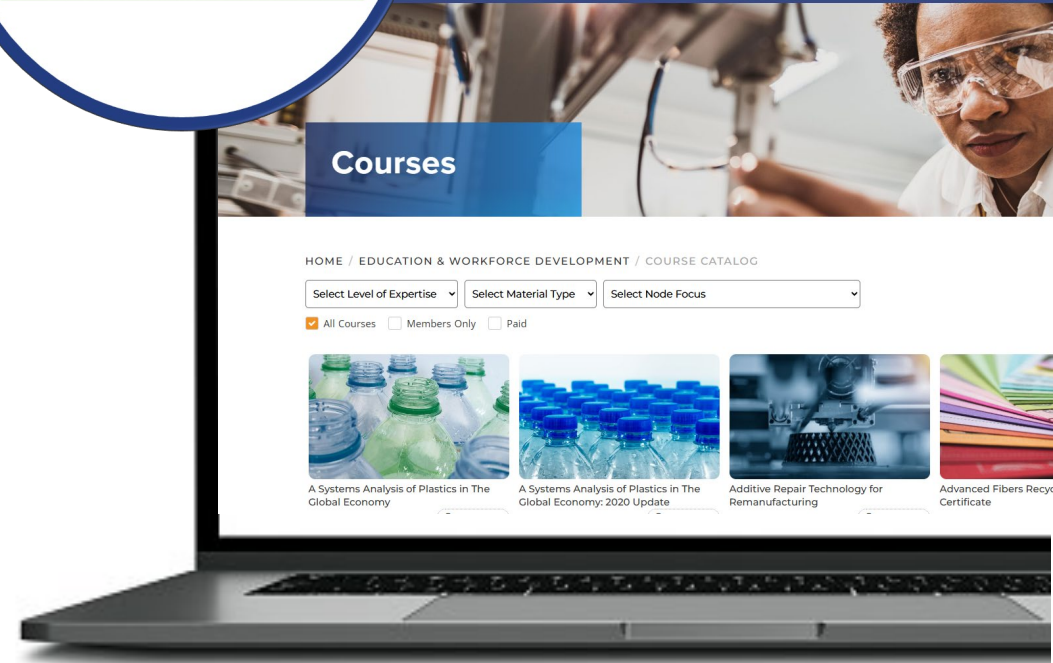


55
ONLINE & IN-PERSON
TRAINING EVENTS



OVER
3,500
PEOPLE TRAINED

- Unique short courses & certificate programs
- Workshops, conferences, and bootcamps
- Online/on-demand learning platform
- Customized for engineers & technicians





2026 REMADE CIRCULAR ECONOMY TECH SUMMIT & CONFERENCE

IN PARTNERSHIP WITH:



Venue:
**NATIONAL
ACADEMY
OF SCIENCES
BUILDING**

2101 Constitution Ave. NW
Washington, D.C.



When:

**MARCH
11-12,
2026**

BREAKTHROUGH
INNOVATIONS
FOR SUSTAINABLE
MANUFACTURING.



Wrap Up



Tasks from today:

- Notes and slides from today will be posted to the Advisory Board website soon.
-



Next meeting:

- Wednesday January 14th, 2025



ADA Accessibility

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To request an ADA accommodation, contact Ecology by phone at 360-407-6831 or email at ecyadacoordinator@ecy.wa.gov. For Washington Relay Service or TTY call 711 or 877-833-6341. Visit [Ecology's website](#) for more information.