

# Recycling Market Development Center Advisory Board Meeting

## Board Member Presentations on Textiles

April 9<sup>th</sup>, 2025, 9am – 11:30am PST



# Our Team



# Agenda

9:00 Welcome

9:05 Commerce and Ecology updates

9:30 Board roundtable

10:10 Bio Break

10:15 Board Member Textile Presentations

- Dave Huber & Raymond Randall – Waste Management
- Matt Thurston – REI Co-Op
- Carly Mick – University of Oregon, Portland

11:30 Wrap up & Thank You



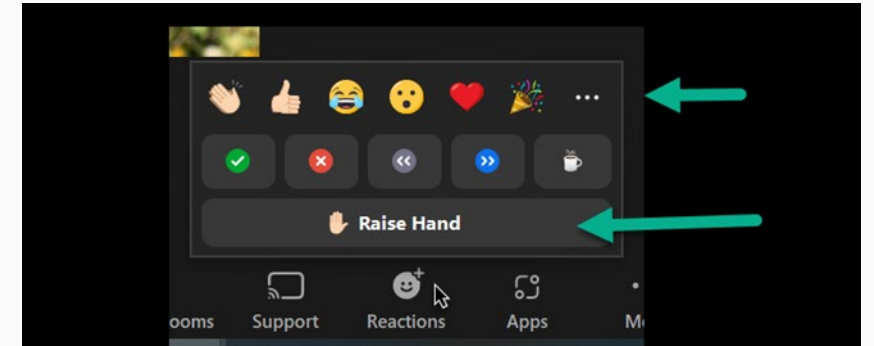
# Participation in this meeting:

## 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

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Kara Steward



Kirk Esmond



# Washington State Circular Economy

RECYCLING MARKET DEVELOPMENT CENTER, ADVISORY  
BOARD

— COMMERCE UPDATES —  
APRIL 2025

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Kirk Esmond | Innovation & Industry Partnerships Director

Leslie Perkins | Circular Economy Development Manager

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



Washington State  
Department of  
**Commerce**

Updates:

# Circular Economy Focus within Commerce

## Legislative Session and Budget Updates

- Statewide spending freeze
- Industrial Waste Coordination Program
- Proposed legislative budgets
- Additional funding (potential)





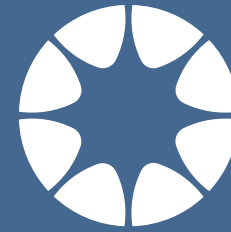
Highlight:

# Industrial Symbiosis Program – FY 2025

## Investments to redefine and repurpose “waste”.

- Thurston County: Maximize processing of 5X diverted disposable diaper waste with biochar pyrolysis and composting
- Clallam County: Divert multiple scrap waste from local industry to blend and manufacture into a construction building block
- King County: Transform hard to recycle large scale advertising plastic waste into marketable circular products
- Grays Harbor, Whatcom, and Pacific Counties: Transform commercial seafood processing biomass waste into clean chemistry and biopolymers





Washington State  
Department of  
**Commerce**

[www.commerce.wa.gov](http://www.commerce.wa.gov)



# Thank you!

**Kirk Esmond**

INNOVATION & INDUSTRY PARTNERSHIPS DIRECTOR

[kirk.esmond@commerce.wa.gov](mailto:kirk.esmond@commerce.wa.gov)

206-837-2622

[www.choosewashingtonstate.com](http://www.choosewashingtonstate.com)

**Leslie Perkins**

CIRCULAR ECONOMY DEVELOPMENT MANAGER

[Leslie.perkins@commerce.wa.gov](mailto:Leslie.perkins@commerce.wa.gov)

206-454-2250

[www.choosewashingtonstate.com](http://www.choosewashingtonstate.com)



# Quick Legislative update



- E2SSB 5175 – Photovoltaic Modules



- 2SHB 1497 – Organics



- ESHB 1293 – Litter/bag ban



- SSB 5215 – Debris escaping vehicles



- E2SSB 5284 – Improving solid waste



- 2SHB 1154 – Solid waste handling



# NextCycle Washington



## Cohort 3 Pitch Showcase

Location: WA State Recycling Association (WSRA) Conference,  
Northern Quest Casino Resort, Airway Heights, WA

Date: Monday, May 19th

Time: 1pm to 6pm



# Sponsorship Opportunity Summary

	AWARD SPONSORSHIPS				SHOWCASE SPONSORSHIPS		
	Organics \$10,000	Innovation \$10,000	Reuse \$10,000	People's Choice \$1,000	Champion \$500	Supporter \$250	Friend \$100
<i>Sponsor Remarks</i>	•	•	•				
<i>Judging Panel Seat</i>	•	•	•				
<i>Award Presentation</i>	•	•	•	•			
<i>Winning Team Photo-op</i>	•	•	•	•			
<i>Event Signage or Banner</i>	•	•	•	•	•		
<i>Recognition in Promotional Materials</i>	•	•	•	•	•	•	•

We also like the idea of co-sponsorships, so grab a friend and let us know how to split the sponsorship!  
Sponsorship inquiries, please email: [mradiwon@recycle.com](mailto:mradiwon@recycle.com)

# RMDC Textile Update

- **Intro to Co-Design Team**
- **Webinar Series: Unraveling the Textile Industry for a Regenerative Washington**
- **ICAP- Textile Innovation Cluster**
- **Additional Projects**



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PRESENTED BY: MEGAN DAVIS

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**Lisa Hilbert**  
Founder, Redesign Collective



**Behnosh Najafi**  
Co-Founder, Circular Spring



**Leslie Perkins**  
Commerce



**Carly Mick**  
Director of Sports Product Design, U of O



**Megan Davis**  
RMDC



**Kathryn Horvath**, Waste is Out of  
Fashion Campaign Associate, PIRG



**Amrit Bhuie**, Sustainability  
Advocate, Ph.D. in Toxicology



**Zakiya Cita**  
The Chayah Movement



**JeLisa Marshall**, Community  
Organizer, PhD Candidate



**Lizzy Paul**  
Circular Economy Leader, RRS



**Mya Keyzers**  
RMDC



**Nina Olivier**  
Circular Economy, King County



# Cut from the Same Cloth: Level Setting

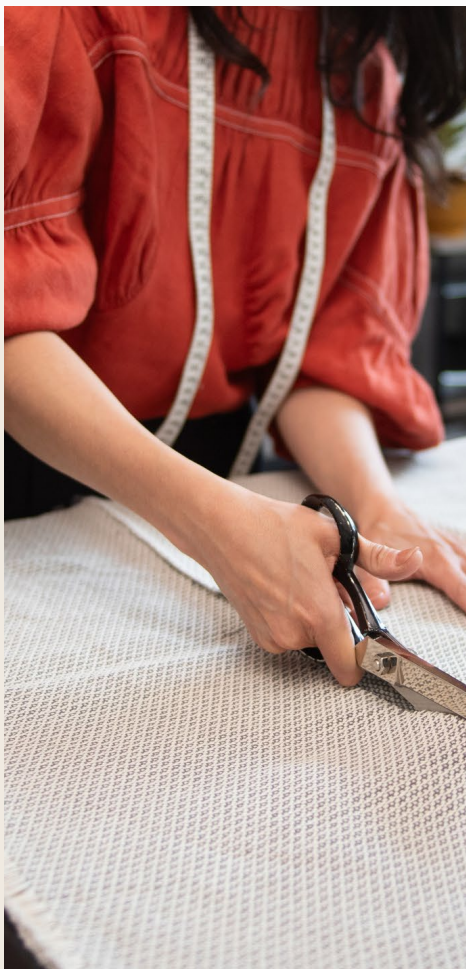
**MAY 6TH 10AM – 12:30PM PST**

*Establish a shared understanding of the current state of textile waste, circularity, and market development.*

Textile circularity  
framework

Existing systems, data,  
and terminology

Industry challenges  
and opportunities



# Ripping the Stitch: Business Transformation

MAY 8TH 10AM – 12:30PM PST

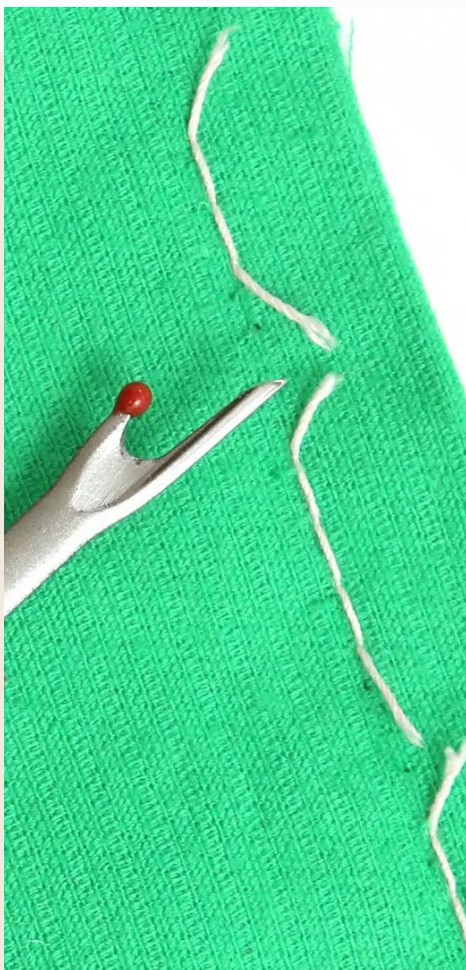
*Equip textile businesses with practical insights to transition into or maintain circular business models through real-world examples and peer learning.*

Elements of circular  
business models

Circular economy business  
types (upcycling, repair, rental)

Peer sharing: motivations,  
logistics, costs, and market  
demand

**REDESIGN  
COLLECTIVE**



# Hemmed in to Cutting Loose:

## Adopting New Innovations

**MAY 13TH 10AM – 12:30PM PST**

*Explore cutting-edge technologies enabling circular textile practices while addressing infrastructure, logistical, and economic barriers to scaling innovation.*

Infrastructure and  
investment needs

Concrete, scalable examples  
relevant to Washington

Tech innovations in textile  
circularity (fiber ID, platforms)





# Fastening the Textile Community; Advocacy, & Coalition Building

**MAY 15TH 10AM – 12:30PM PST**

*Unify and empower stakeholders across levels to advance textile policy and collaboration, driving actionable steps for advocacy and ongoing community engagement in WA and beyond.*

Global to local policy &  
stakeholder landscape

Coalition-building  
frameworks

Route to sustained  
collaboration



Pacific Northwest (PNW) Textile Innovation Cluster that includes broad-based support from textile businesses, state and local agencies, academic research centers, and community driven initiatives. Preventing textile waste is a signature focus of the Textile Innovation Cluster.

1

### ACADEMIC

**Washington State University (WSU) – College of Agricultural, Human and Natural Resource Sciences** contributing cutting-edge research, technical expertise, and leadership in sustainable textile practices.

2

### GOVERNMENT

**Department of Ecology’s Recycling Market Development Center** contributes to advancing environmental policies that align with end markets and circular economy development.

3

### CORPORATE

**Recreational Equipment, Inc (REI), Seattle** – REI’s focuses on extending the life of outdoor gear through reuse, repair, and resale.

4

### ENTREPRENEUR

**Ravel** – uses a proprietary purification process to recycle blended textiles, maximizing material recovery.

**Looptworks** – creates value from textile discards from recycling thread-to-thread and encouraging end markets for domestic re-manufacturing.

5

### CAPITAL

**Infinite Sum Modeling, LLC** – a leading economic firm specializing in macroeconomic analysis, forecasting, economic modeling, infrastructure, climate policy, and business investment strategy



# Additional Textile Projects



**CITY/COUNTY TEXTILE  
RECYCLING SURVEY**

**TOUR: RIDWELL &  
RAGMINE, APRIL 17TH**

**TOUR: LOOPTWORKS  
(JUNE)**

**CIRCULAR PROCUREMENT  
TEXTILE PILOTS**

**SUMMER EVENTS: PNW  
CLIMATE WEEK, & MORE!**

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11:30 Wrap up & Thank You





**Christopher Loid**  
**Benton County Public Works & Solid Waste**

# Board Roundtable



Allen Langdon



Jocelyn Quarrell



Christopher Loid



Karl Englund



Carly Mick



Katie Fleming



Heather Trim



Matthew Thurston



Jay Simmons



Preston Peck



Jon Smieja



Sara Holzknecht



Jeff Zillich



Tim Shestek

Give us an update about what is new with your work, and tell us **what conferences are you excited about attending this year?**



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Let's take a  
10 minute  
break



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# Waste Management

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Dave Huber & Raymond Randall  
Waste Management's Senior  
Manager of Textiles





# Circularity in Textile Recycling

RMDC Board Meeting  
April 9, 2025





# Textiles are the fastest growing waste stream, and most ends up in landfills.

**+80 lbs**

The average American throws away 80 lbs of clothing per year.

**85%**

85% of textiles go directly to landfill and WTE, resulting in 92M tons worldwide

**50%+**

More than 50% of fast fashion produced is disposed in under a year.

**\$500B**

\$500B in lost value from not reusing or recycling.

**60%**

The increase in number of garments purchased annual from 2000-2014.

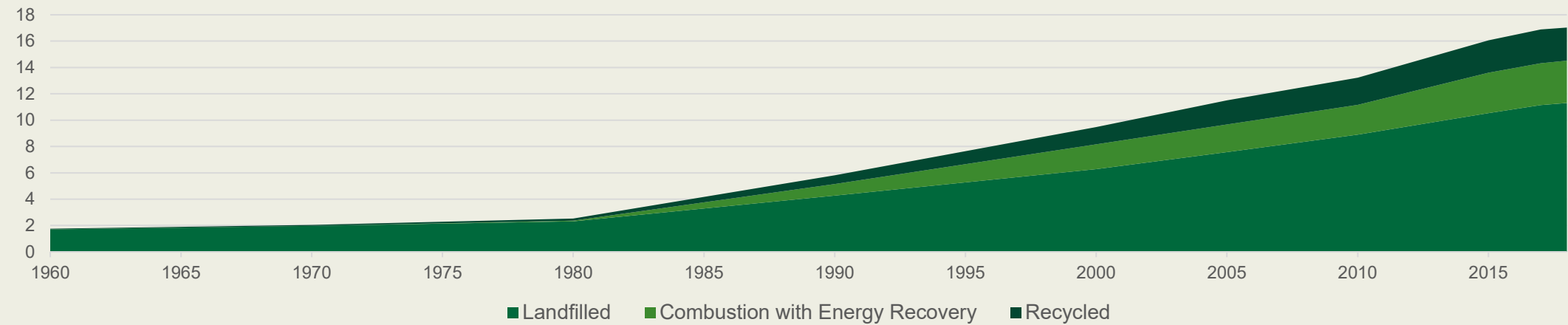
**10**

The number of wearings most fast fashion garments are constructed to typically last.

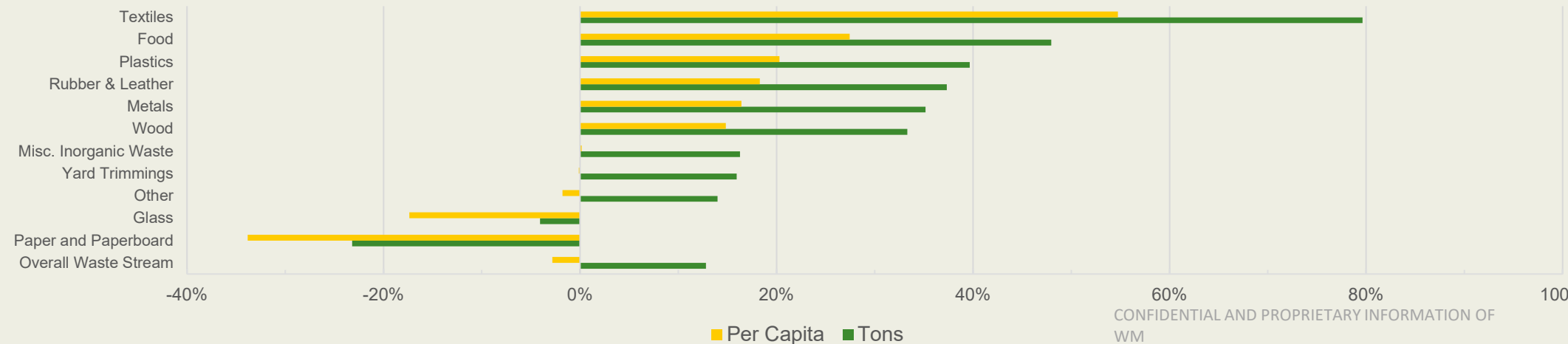


# History of Textile Management

Historical Textile Disposition 1960–2018 (millions of tons)



Percentage Growth 2000-2018



CONFIDENTIAL AND PROPRIETARY INFORMATION OF WM



# The way we've historically managed textiles is not the way they will be managed in the future.

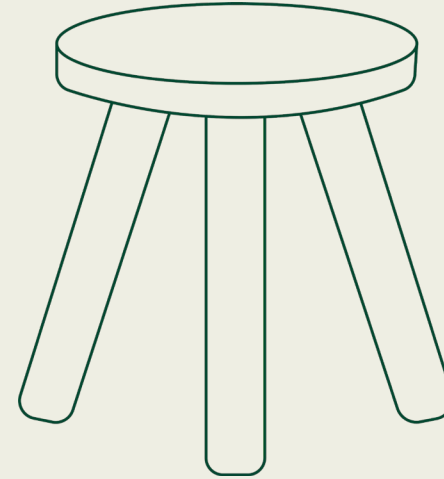
Environmental Impacts, Growing Volumes, Lost Business Value, Increasing Regulations





# 3-Legged Stool of Circular Services

For a successful circular supply chain, all three legs must be equally strong.



**1.**

## Collect

The ability to collect recyclable textile materials

**2.**

## Process

The ability to sort or process the collected materials

**3.**

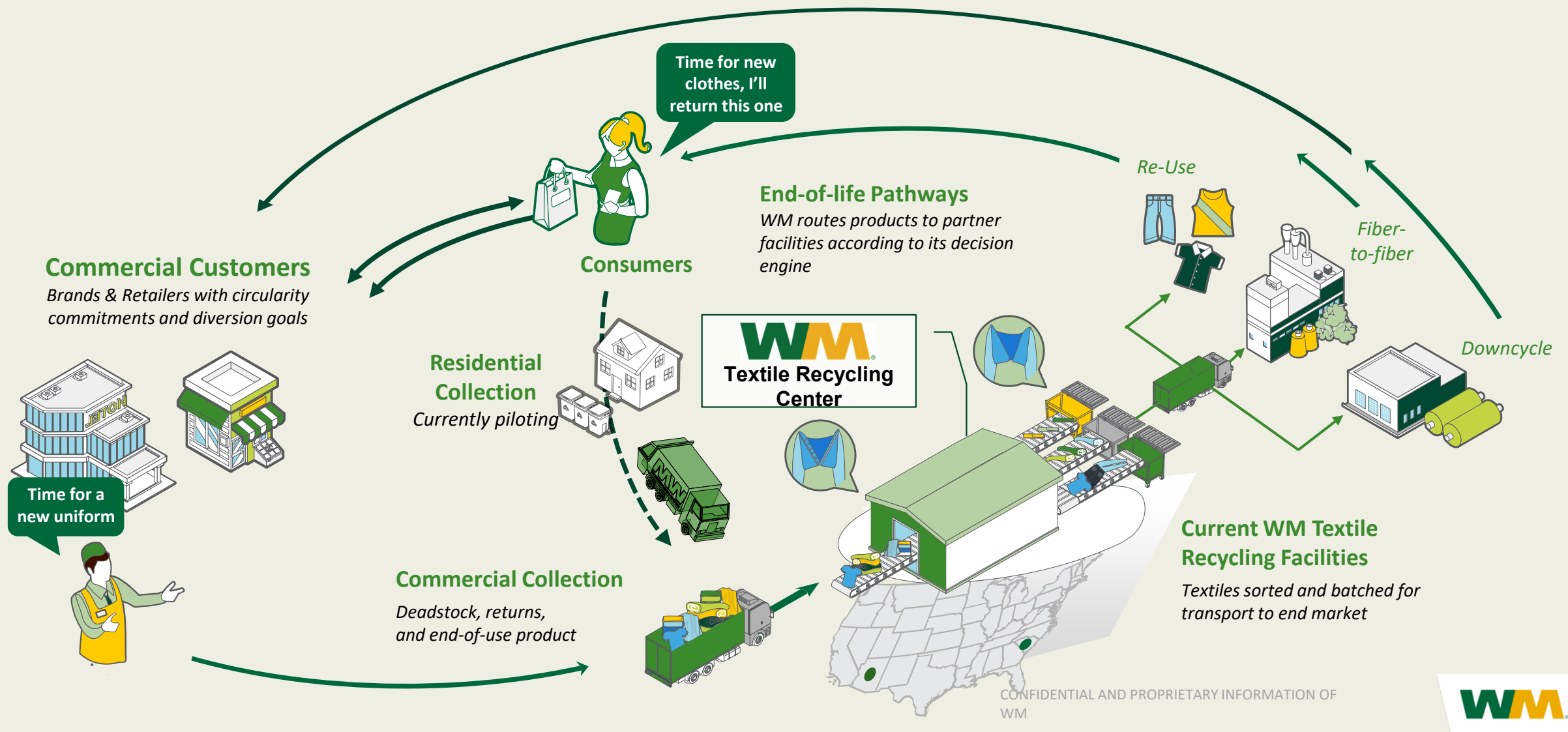
## End-Market

The market demand for the materials.



# Future Supply Chain for Textile Collection and Sorting

WM is leveraging our core competencies in collection & sorting to build a robust and circular supply chain.



# Troutdale Curbside Textile Recycling Pilot - 2025

- Program Overview

- On a quarterly basis, WM will collect textiles curbside for a 12-month pilot program.
- On designated days, place your textiles in plastic bags at the curb for pickup. 35-gallon bags or smaller with a limit of 10 bags per pickup.
- After collecting the bags, WM will deliver to our partners at Goodwill. Textiles that are not usable by Goodwill will go to a WM textile processing facility to be regenerated.

- Key Considerations

- Participation rate and volume of material received.
- Contamination concerns.
- Can this be a viable service economically to our local partners moving forward?





## REI Co-Op

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Matthew Thurston

REI Co-Op's Divisional Vice  
President of Sustainability





# Recommerce at REI

*Maximizing The Useful Life Of Outdoor Products*

Washington Recycling Development Center Advisory Board





We've been in the used outdoor gear business for a long time...

**WATER DAMAGE SALE**  
 (Our basement warehouse was flooded with 7 feet of water from a broken watermain.)

**LOCATION OF SALE:** 1612 SIXTH AVE. (Old P.-I. Bldg.)  
 Take Elevator to Second Floor

**TIME:** MONDAY TO SATURDAY, May 14 to 19, same hours as our store. One week only. NO DIVIDENDS PAID ON SALE ITEMS. ALL USABLE MERCHANDISE. NO REFUNDS. Mail orders filled in order received if goods are available. We cannot handle any correspondence regarding items. ALL CASH IN ADVANCE.

\$6.95 G.I. NYLON AIR MATTRESSES—less 50 %	\$3.48
\$7.95 5' ENGLISH BACKPACKER—less 25 %	5.97
\$7.95 4' GOOD COMPANION—less 25 %	5.97
\$6.95 4' GOOD COMPANION, Seconds—less 25 %	5.21
\$4.95 6' #874 or similar AIR MATTRESSES—less 25 %	3.71
Coleman 425B, 413E, 200A, 220E STOVES and LANTERNS — less 25 %	
\$1.95 U. S. MOUNTAIN COOK SETS—less 25 %	1.46
59¢ STAINLESS Knife, Fork & Spoon Sets—less 25 %	.44
\$1.50 yd. 38 1/2" dark Navy Oxford Cloth, less 35 %	.97
25¢ Army Pemican Emergency Ration—less 50 %	.13
35¢ Army Ski Goggles, green ground lens—less 35 %	.24
\$1.25 Army Aluminum Carabiners—less 50 %	.62
4¢ Candle Lantern Candles 2c; 8c Plumber Candles	.04
95¢ NYLON MOSQUITO HEAD NETS—less 60 %	.37
98¢ & 79¢ ARMY LEATHER FACED MITTS	.49
49¢ NAVY WOOL GLOVES—less 30 %	.34
\$14.95 CO-OP PARKAS—less 30 %	10.50
\$14.95 CO-OP STORM PARKAS—less 20 %	11.90
\$39.95 TEMPCO DOWN PARKAS—less 40 %	23.97
\$ 9.95 SR. CRUISER, 5 pocket Bags Only—less 30 %	6.95
\$2.19 and \$2.98 AUSTRIAN DUFFLE BAGS—less 25 %	\$1.64 and \$2.17
\$28.95 PALU SHOES—less 20 %	23.16
\$29.95 TODI SHOES—less 20 %	23.97
\$22.85 LE TRAPPEUR M315—less 20 %	18.40
SLEEPING BAGS—less 25 %. All have been dry cleaned. Down and down.	
\$1.95 ARMY SLEEPING BAG CASES—less 50 %	.97
86c WHITE PLASTIC 1-GALLON JUGS—less 30 %	.62
29c ARMY SHOULDER PADS—less 50 %	.14

MANY OTHER ITEMS IN QUANTITIES TOO SMALL TO LIST  
 Some items in regular stock will show slight water damage and will be offered at reduced prices. MAIL ORDERS should specify in all future orders whether this will be acceptable or whether only new goods are desired.

1962

# 60+ years of selling used outdoor gear at REI

**1962**

REI holds first ever 'Garage Sale' to sell used outdoor gear damaged due to flooding in our first warehouse

**2017**

REI launches an e-commerce site to sell used gear. This site is now an 8-figure business.

**2020**

REI opens first used-specific retail prototype store in the Los Angeles market.

**2023**

REI opens second dedicated Re/Supply store in Portland market

**2019**

REI launches trade-in program to a small group of members.

**2022**

REI expands trade-in program to all 180+ stores.

**2026**

REI assessing additional Re/Supply specific retail locations.



# Re/ Re/Supply™ Re/

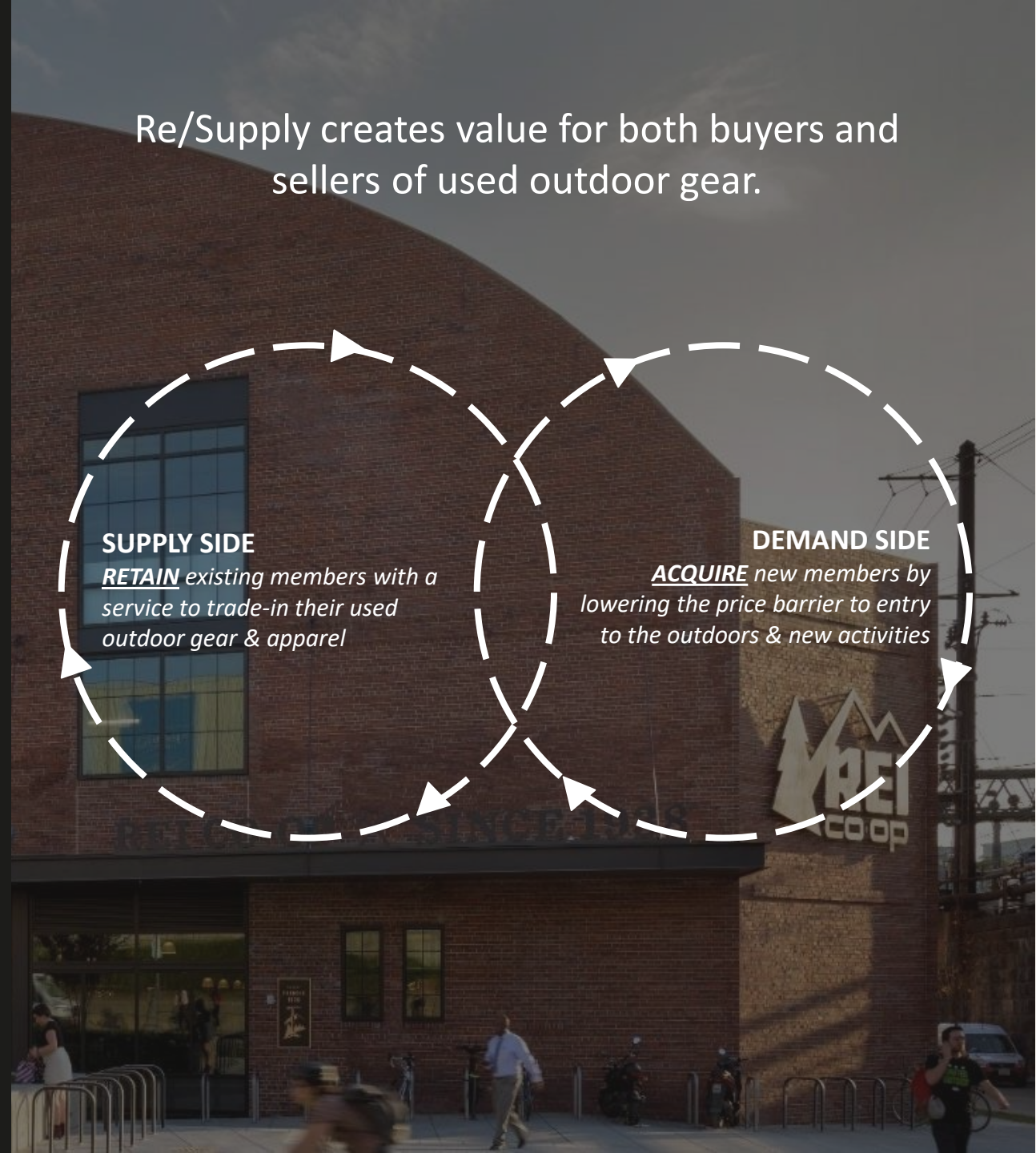
Re/Supply creates value for both buyers and sellers of used outdoor gear.

## SUPPLY SIDE

RETAIN existing members with a service to trade-in their used outdoor gear & apparel

## DEMAND SIDE


ACQUIRE new members by lowering the price barrier to entry to the outdoors & new activities







# Trade-in programs drive supply...


[Shop REI](#) [REI Outlet](#) [Used Gear](#) [REI Adventures](#) [Classes & Events](#) [Expert Advice](#) [Uncommon Path](#) [Membership](#)

 **REI**  
co-op

**Re/Supply**  
Re/

  [Cart](#)

[Men's](#) [Women's](#) [Kids'](#) [Gear](#) [Activity](#) [Brands](#) [How It Works](#) [Trade In](#) New!



## Members, trade in your gently used gear

Give your gear a new life outdoors and get something back – an REI gift card!

Trade-ins accepted in store or by mail.

### How it works

1


**Gather your gear**  
Round up the pre-loved gear you want to trade in. Check its trade-in eligibility and credit value [online](#).


2

**Mail in or drop off**  
Ship it for \$6 (we supply the label) or bring it to your [local REI store](#).

3

**Get your gift card**  
Once your trade-in is complete, we'll e-mail you an REI e-gift card!

 [Trade in at your local REI](#)

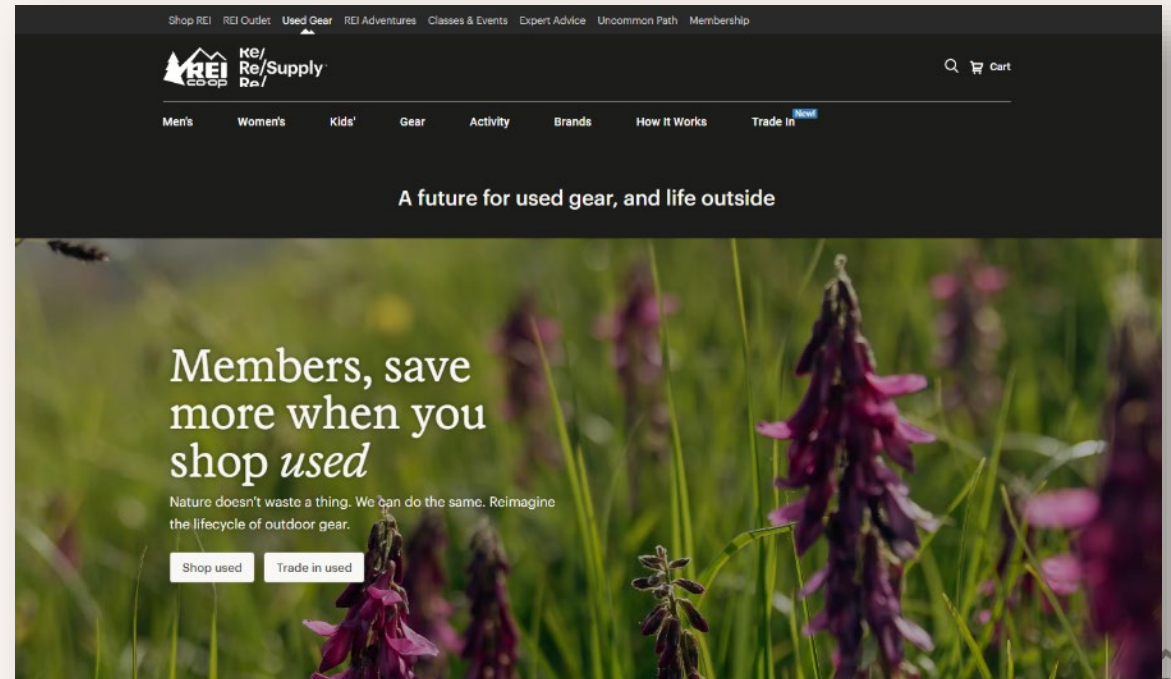
 [Trade in by mail](#)

Trade-in values are not guaranteed. Make sure your items match our trade-in catalog, and are in good, working condition, otherwise we may not accept or return them. See [terms & conditions](#) and [FAQs](#).





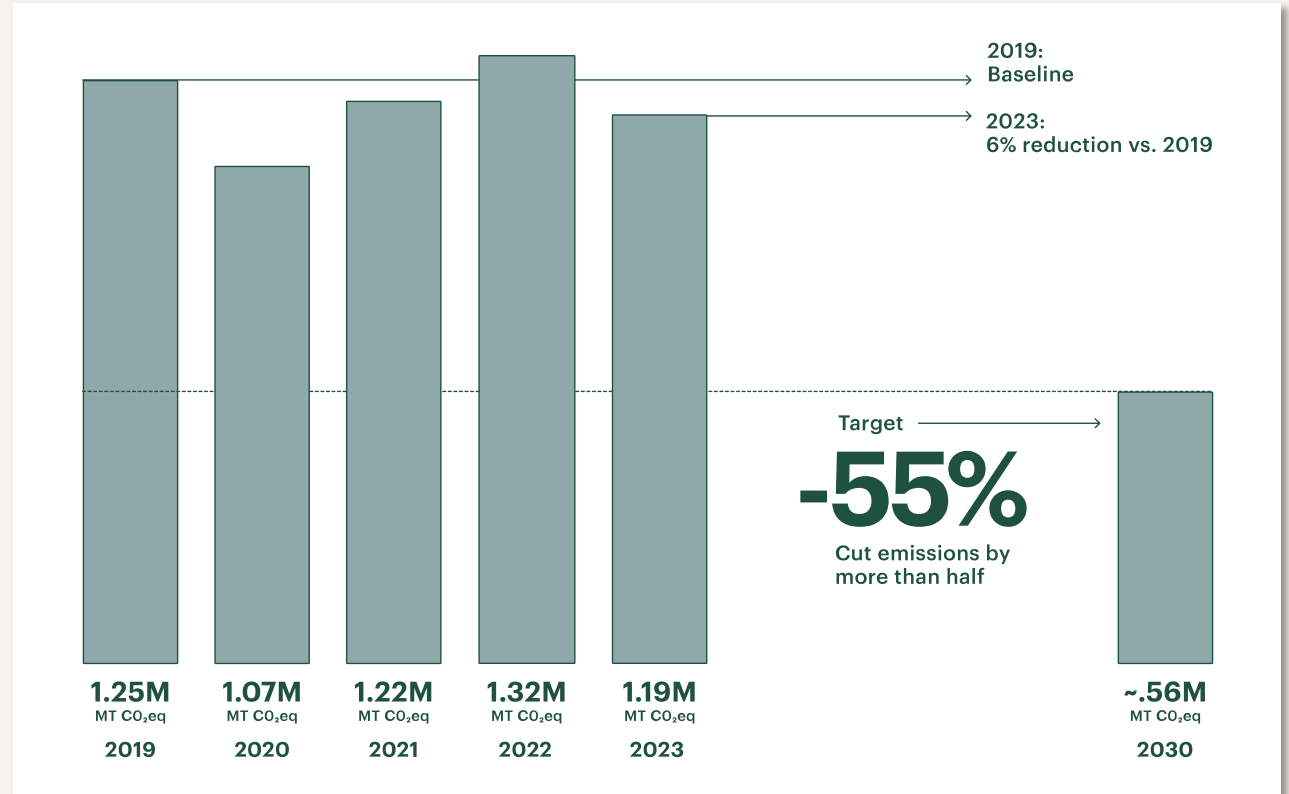
...and Re/Supply specific stores & .com drive demand.



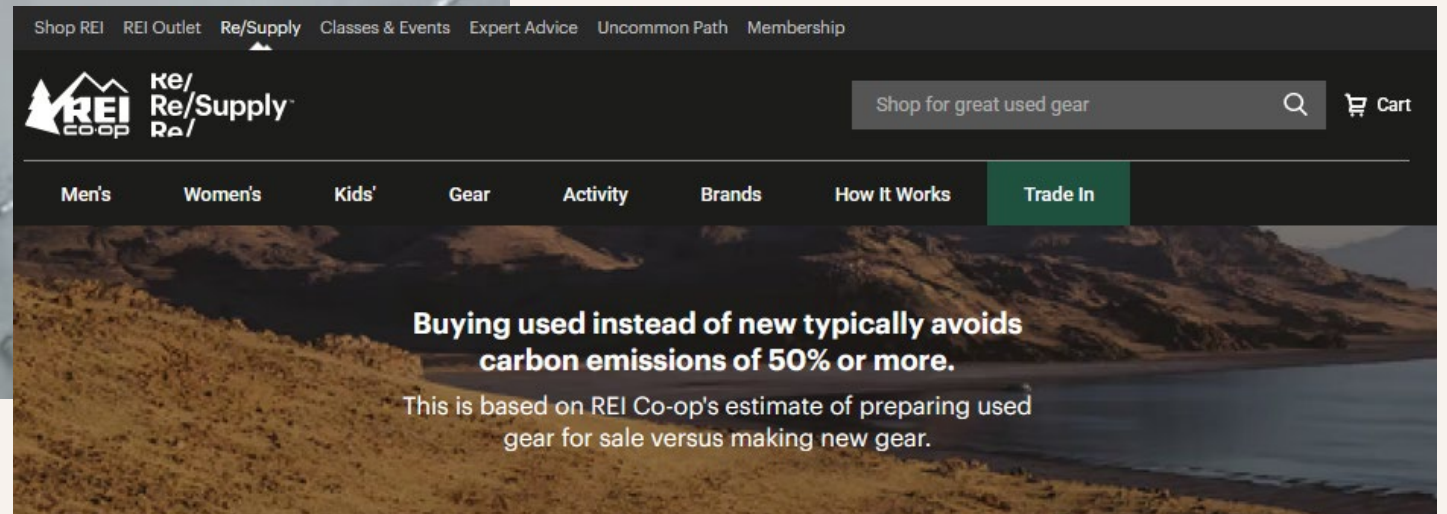
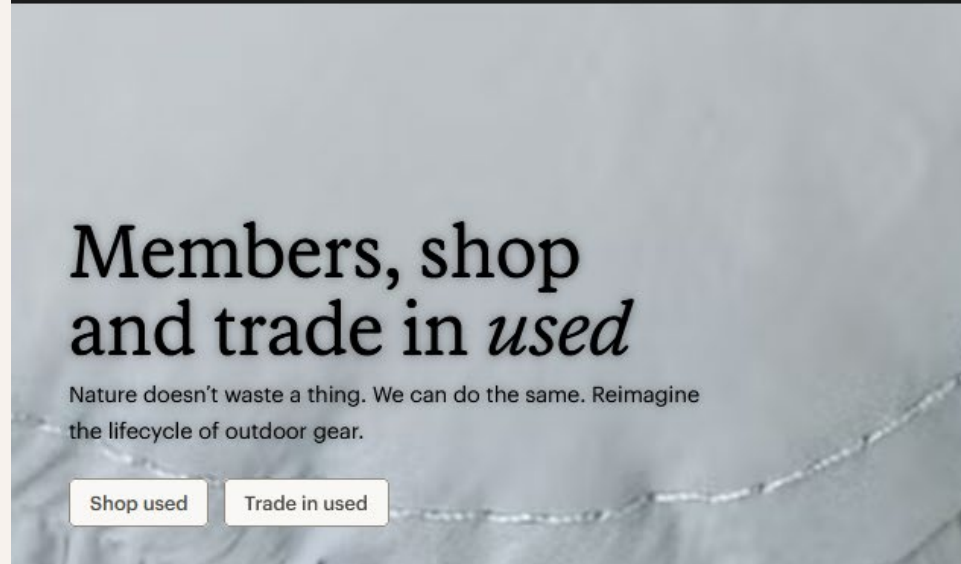
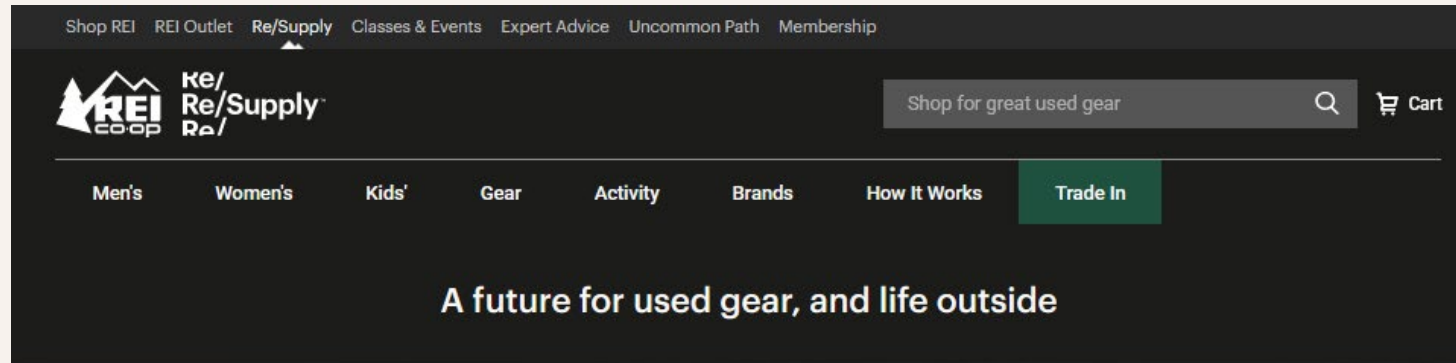
# Recommerce is critical to our climate objectives

By 2030, our goal is to more than halve our greenhouse gas emissions from 2019 while continuing to introduce new customers to the co-op.

Based on our calculations, selling a used item saves at least **50%** of the carbon associated with selling a comparable new item.



# Recommerce is critical to our climate objectives





Thank you







# University of Oregon

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Carly Mick

U of O, Portland Campus

Director of sports Product Design



**CARLY MICK** *Director of Sports Product Design*

**RMDC BOARD  
PRESENTATION**

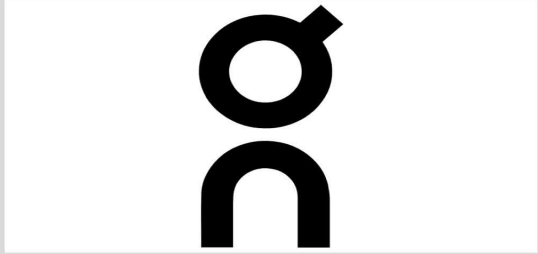
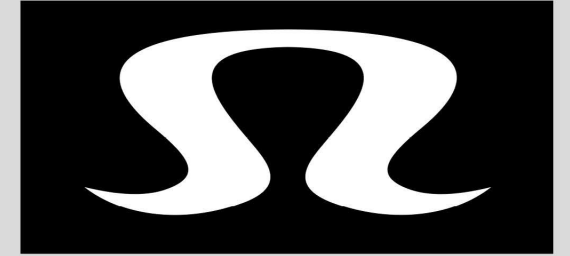
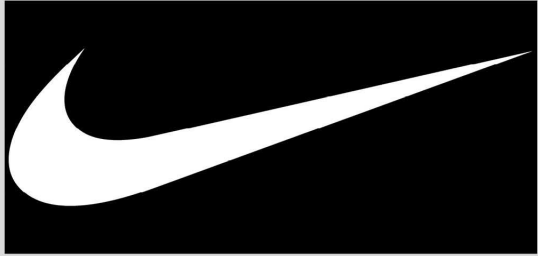
**4/9/25**



**OREGON**

# GLOBAL APPAREL

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OVER A 100 FOOTWEAR AND  
APPAREL BRANDS HAVE  
OFFICES IN PORTLAND



# OREGON BOTTLE RECYCLING

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**2.05B**

Containers returned  
and recycled in 2022

**1M**

BottleDrop Account  
Holders

**\$5.1M**

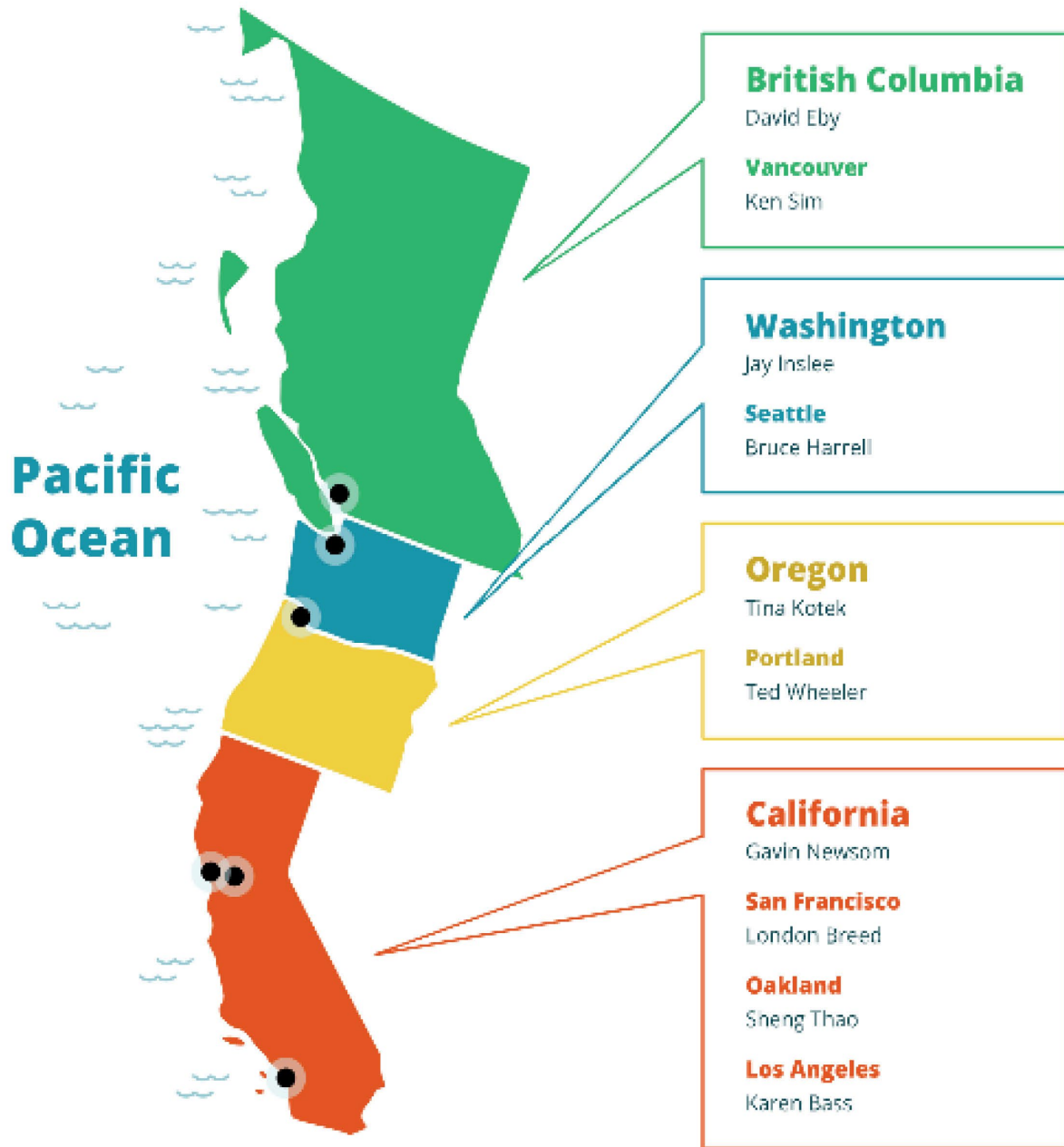
Raised by BottleDrop  
Give nonprofits in 2022

**500**

People employed  
across Oregon

IN 1971 OREGON BECOMES THE FIRST PLACE IN  
THE US TO IMPLEMENT A BOTTLE BILL





# PACIFIC NORTH AMERICA CLIMATE LEADERSHIP

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Since 2016 “partners up and down the coast—working vertically among city, state, and provincial governments to support and strengthen our collective efforts”



“THE COLLEGE OF DESIGN  
COMMUNITY WILL RESPONSIBLY  
AND SUSTAINABLY STEWARD  
AND EXPAND OUR COLLECTIVE  
RESOURCES” COD strategic plan

# UNIVERSITY'S ROLE

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- A bridge for public private partnerships
- A neutral ground for cross competitive collaborations
- Multidisciplinary research hub with opportunities for students and faculty



# TEXTILE WASTE

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## NEXT PROJECT

Create a formal collaboration between local industry brands, retailers, policy makers, recyclers, and waste collection services to develop a system wide approach to textile waste reduction that could serve as a template for larger scale collaborations.

**EVERY SECOND, ONE  
GARBAGE TRUCK FULL OF  
TEXTILES IS LANDFILLED  
OR INCINERATED**



# TERRAZING







## NCSU + WALMART

In 2013 Walmart made a commitment to buy 250 billion dollars worth of 'Made In America' goods. Much of that was converted into innovation grants to develop American Manufacturing.

A large advertisement for Walmart's "America at Work" campaign. The background is a dark, industrial scene with sparks flying. The Walmart logo is in the top left. The title "AMERICA AT WORK" is in large, white, distressed font, with a star between the words. Below it is the subtitle "A Spirit of Independence". A block of text describes the \$250 billion commitment to domestic manufacturing. A small footnote is at the bottom right.

Walmart 

PRINTED FABRIC INVENTORY

# AMERICA — ★ — AT WORK

## A Spirit of Independence

Our country was built on a legacy of hard work. Through our \$250 billion commitment to domestic manufacturing, we're making America stronger – and creating over 1 million jobs.\*

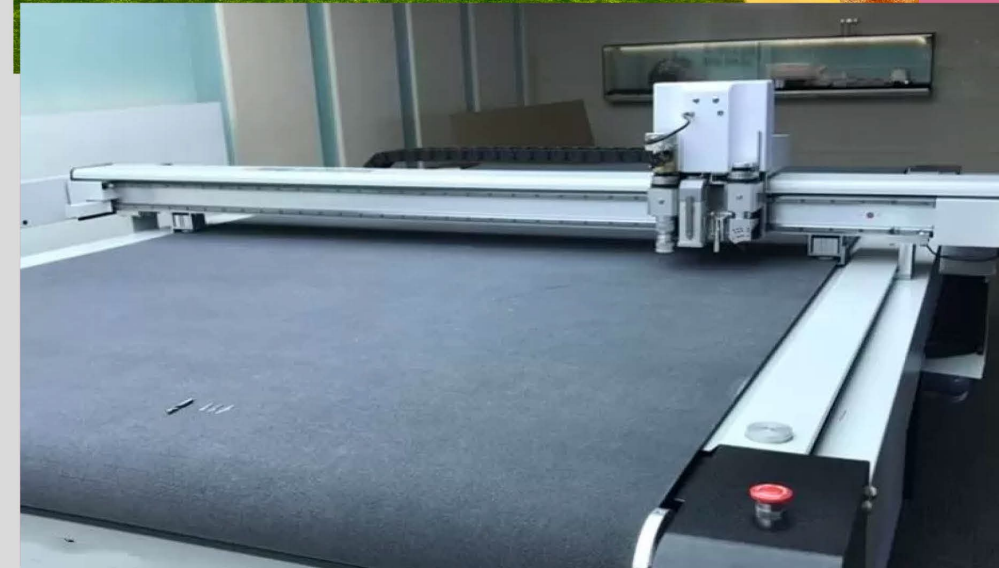
\*Based on estimates by Boston Consulting Group





# HIGH AUTOMATION, LOW INVENTORY MANUFACTURING CENTER

VF's GLOBAL  
INNOVATION  
CENTER -  
Alameda, Ca





skyscraper









# 3 TRACKS

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**1. Sustainable design**

**2. Textile education for  
diversion initiatives**

**3. Process engineering  
for a TRF**



# SUSTAINABLE DESIGN

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1. Design for durability, repairability and disassembly
2. Design for sustainable behavior
3. Design to minimize



# TEXTILE EDUCATION



## SYNTHETICS

PET- POLYESTER

PA - POLYAMIDE -  
NYLON



## SEMI- SYNTHETICS

REGENERATED  
CELLULOSE

RAYON/VISCOSE  
LYOCELL  
TENCELL  
MODAL  
ACETATE



## NATURAL FIBERS

CELLULOSE

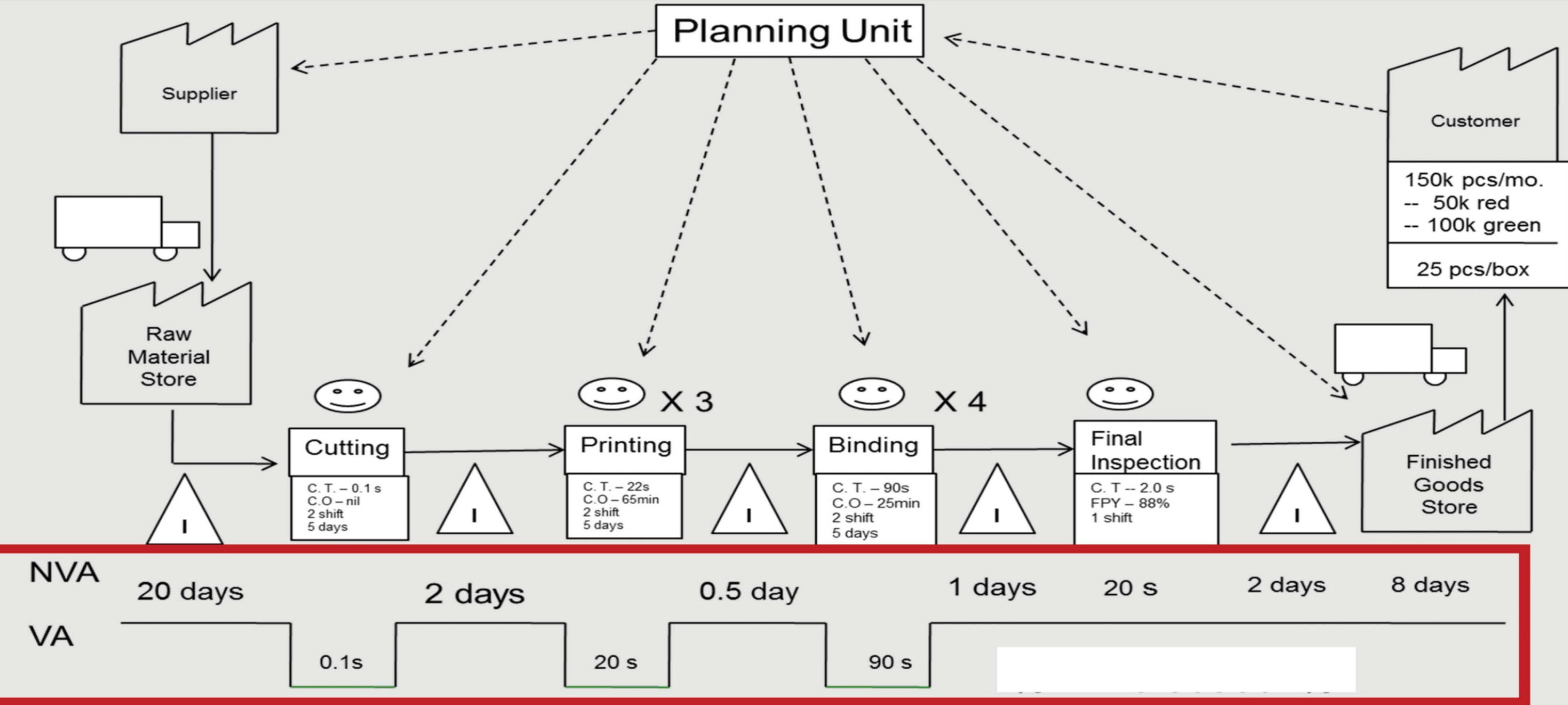
COTTON  
LINEN  
JUTE

PROTEIN

WOOL  
SILK



# TEXTILE RECOVERY FACILITY (TRF)

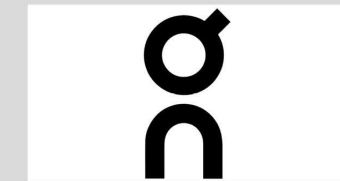
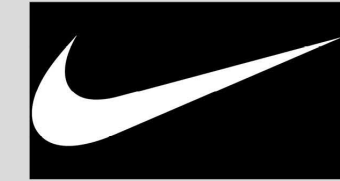


# TEXTILE RECOVERY FACILITY (TRF)

- What scale of materials is reasonable to expect to be able to flow through a TRF?
- What kind of end markets are currently available for the processed textiles?
- What end markets could be reasonably expected to be developed with the addition of a TRF?
- What community benefits would a TRF provide as a regional hub for textile repair, repurposing, and processing?
- What technology investment would be necessary to make the TRF viable?
- What scale of footprint would be required to operate a TRF?
- What kinds of zoning and permitting would be required to locate and operate a TRF?

# COMBINE RESOURCES

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CURRENT SUSTAINABILITY  
EFFORTS COULD  
GO FARTHER WITH  
COLLABORATION





THANK YOU

# Agenda

9:00 Welcome

9:05 Commerce and Ecology updates

9:30 Board roundtable

10:10 Bio Break

10:15 Board Member Textile Presentations

- Dave Huber & Raymond Randall – Waste Management
- Matt Thurston – REI Co-Op
- Carly Mick – University of Oregon, Portland

11:30 Wrap up & Thank You



# Wrap Up

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## Tasks from today:

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

- Wednesday July 9th, 2025
  - Zoom: 9 am to 11:30 am (PT)
- 



**Tours:** Ridwell & Ragmine, April 17TH

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**NextCycle Washington:** May 19 – Pitch Showcase at the WSRA Conference in Airway Heights





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