



Carpet Stewardship in Oregon





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Institute

Overview

What's the Problem?

- Bulky, heavy, costly to handle + manage (\$5M/yr)
- ***Latent*** collection and recycling infrastructure
- Lack of education about carpet recycling
- Lack of sustainable financing
- Oregon: statutory carpet recycling goal of 25% by 2025
 - Currently 1% is recycled in Oregon
- Oregon: statutory greenhouse gas (GHG) reduction goal of 75% by 2050



What's Needed?

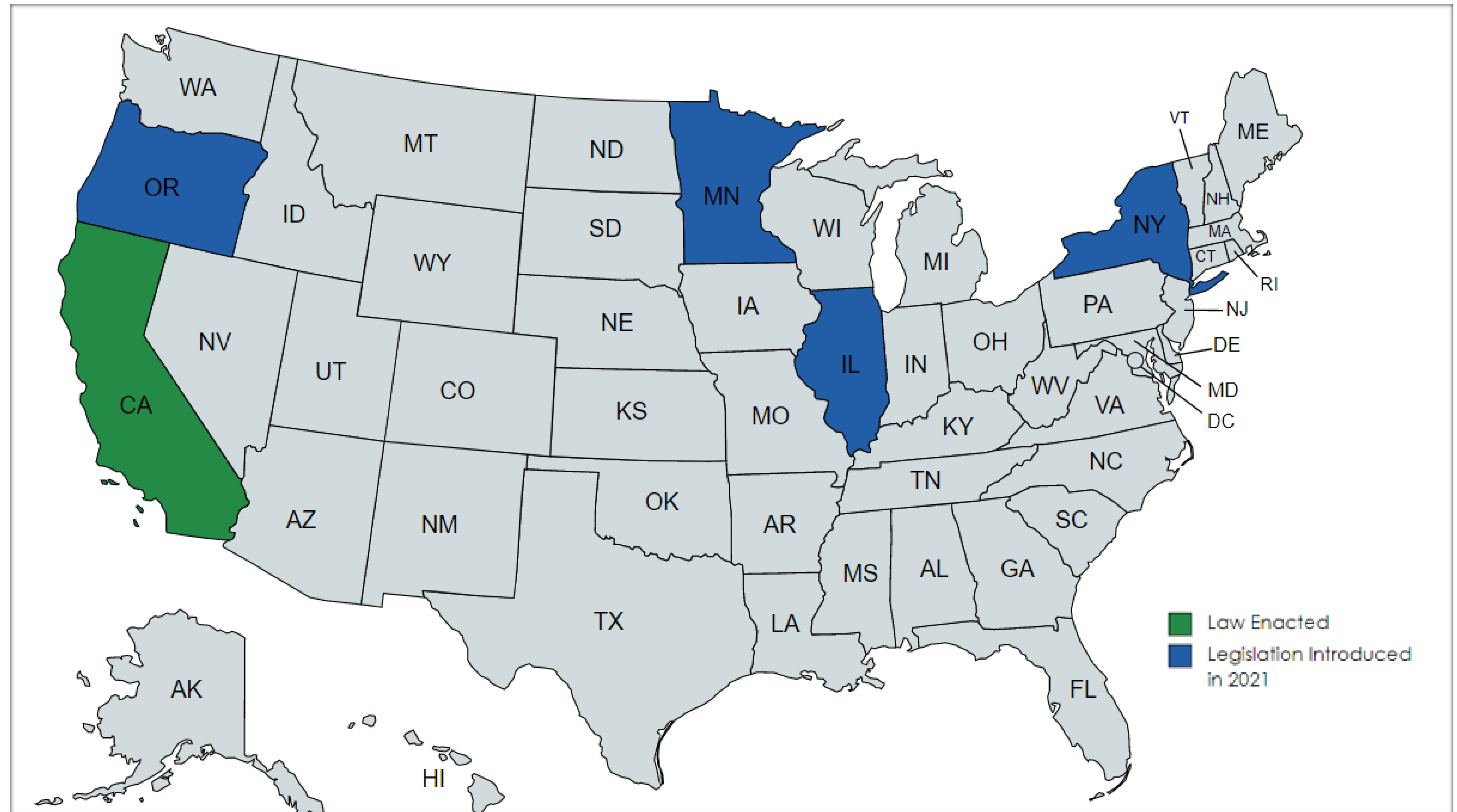


- Active collection and recycling infrastructure (markets exist!)
- Education (installers, waste mgt, residents)
- Sustainable financing (cost internalization)
 - true cost to sustainably manage carpet
- Incentivize manufacturers to design carpet with greater post-consumer value

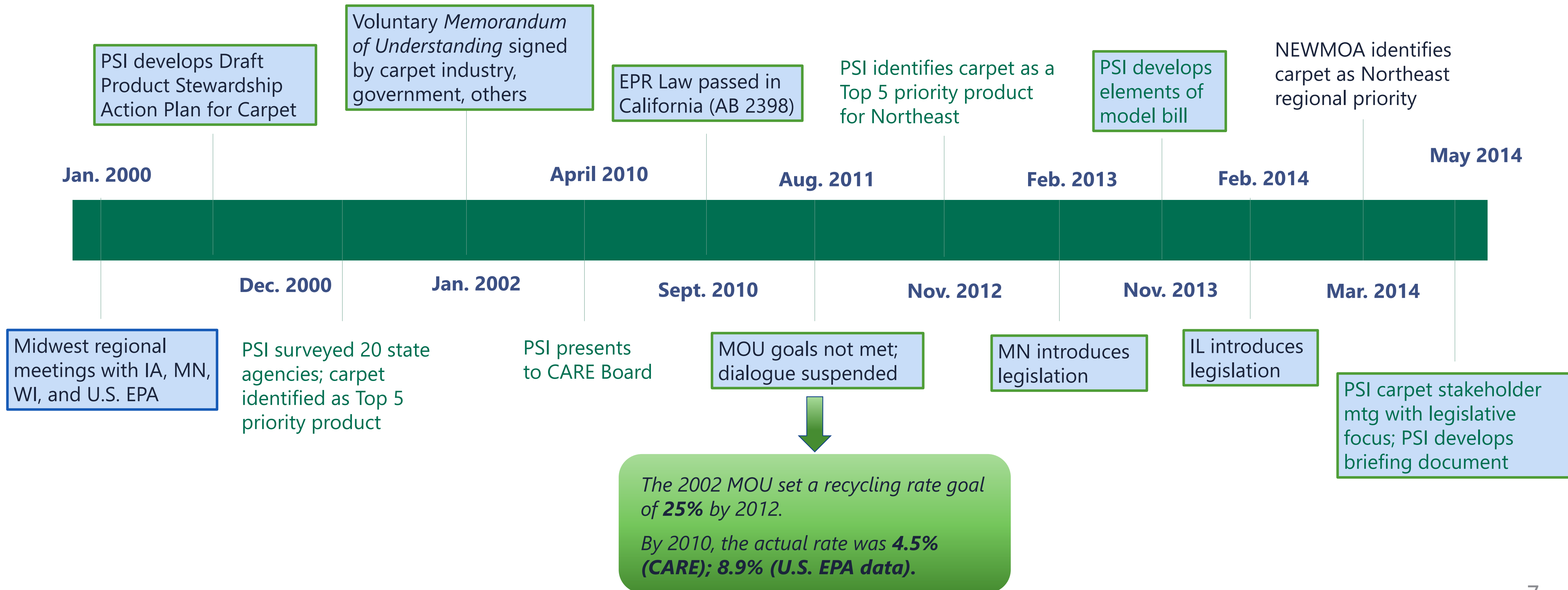
Vital Elements of Carpet EPR

Covered Materials/ Products	Funding Inputs	Enforcement & Penalties for Violation
Covered Entities	Funding Allocation	Stewardship Plan
Collection & Convenience	Design for Environment	Annual Report
Responsible Party (Producer)	Performance Standards	Implementation Timeline
Governance	Outreach & Education Requirements	Additional Components

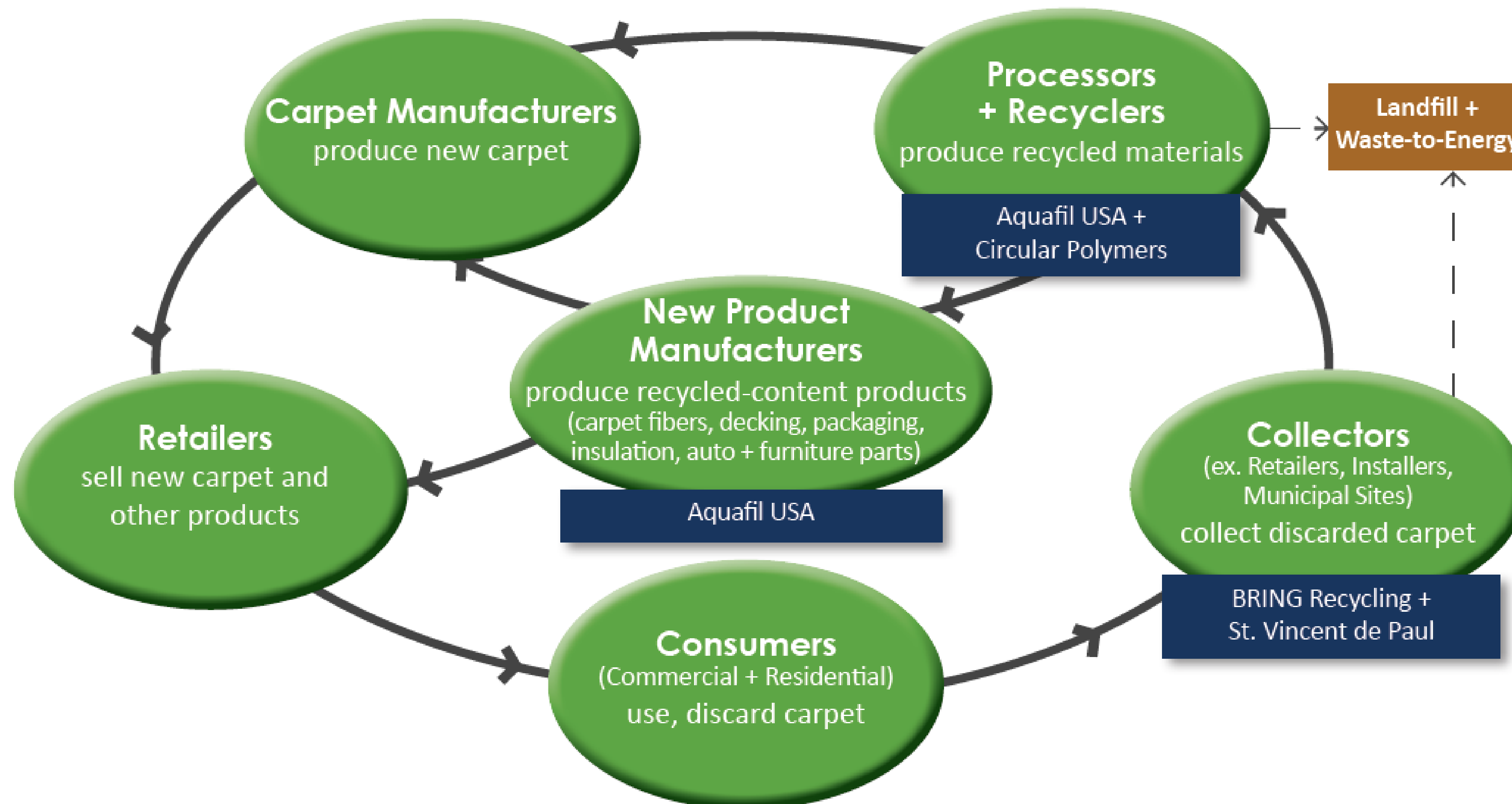
**U.S.
Carpet EPR
Legislation
2021**



Carpet Stewardship: 2000-2014...2021



Carpet Recovery and the Circular Economy



Thank You

Scott Cassel

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David Bender, CEO
Circular Polymers

June 2021

- **50MM lbs. of Annual Capacity in Lincoln, CA**
- **150,000 Square Feet**
- **2 Production Lines**
- **Fiber and Pellet Output**



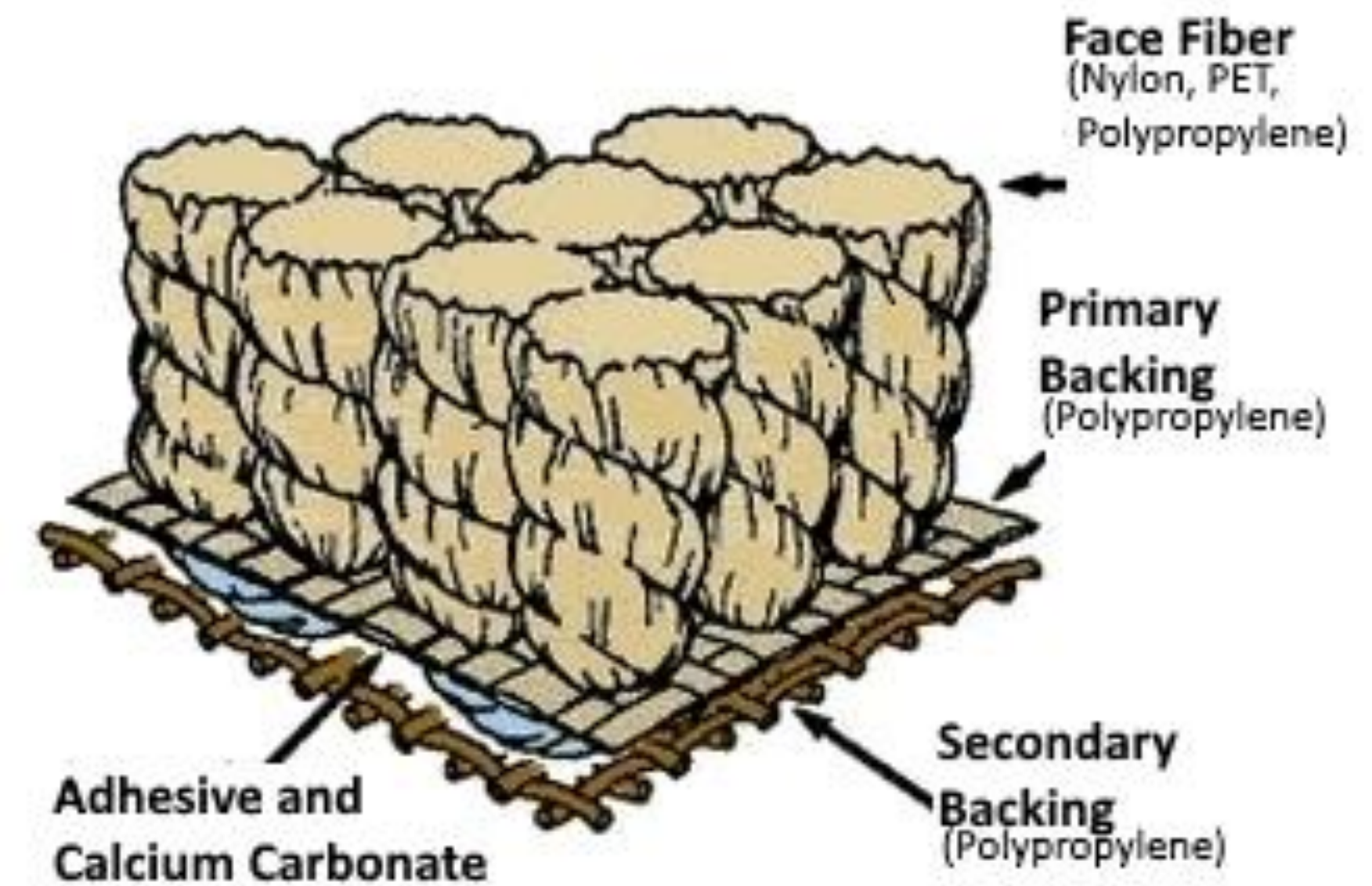
Carpet collected at retailers, collection centers



Carpet collected at landfills and Transfer Stations



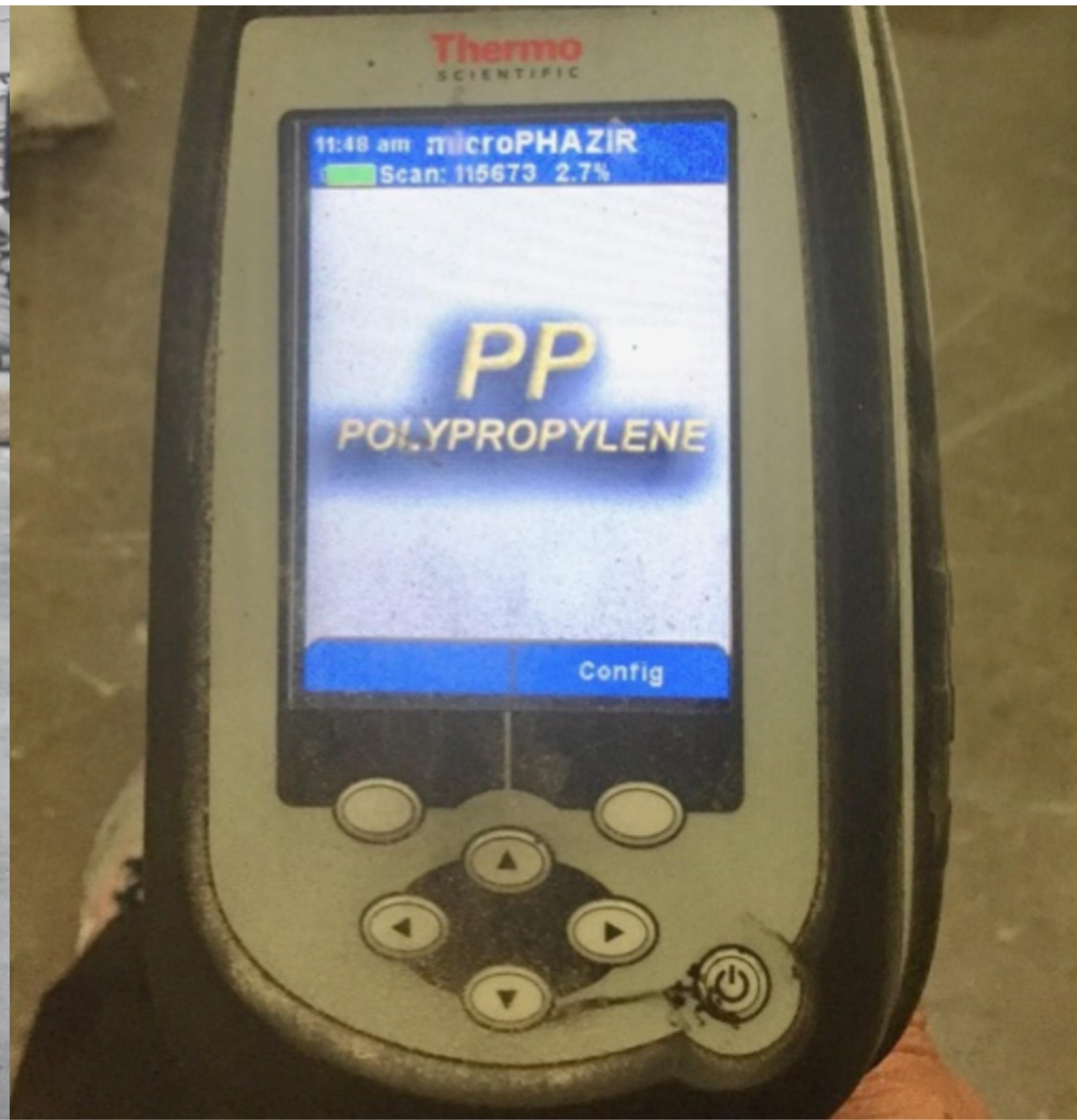
How recycled carpet is processed



- Carpet removed from use is collected and sorted by face fiber type prior to recycling.

- Reclaimed fiber comes from the face fiber and backing fiber of post-consumer carpet.
- Calcium carbonate from the backing is sold separately.

Carpet is sorted using FTIR infrared technology



Proprietary Technology Developed by the Broadview Group Produces High Quality Fiber



Variety of pellets and fiber



Nylon 6,6
Melt Filtered Pellets



Nylon 6,6
Melt Filtered Pellets



Nylon 6
Melt Filtered Pellets



PET
Melt Filtered Pellets



Polypropylene
Melt Filtered Pellets



Polypropylene
Densified Pellets



Nylon 6,6
Standard Fiber (12% PP)



Nylon 6,6
Homogeneous Fiber (2% PP)



Nylon 6
Standard Fiber (12% PP)



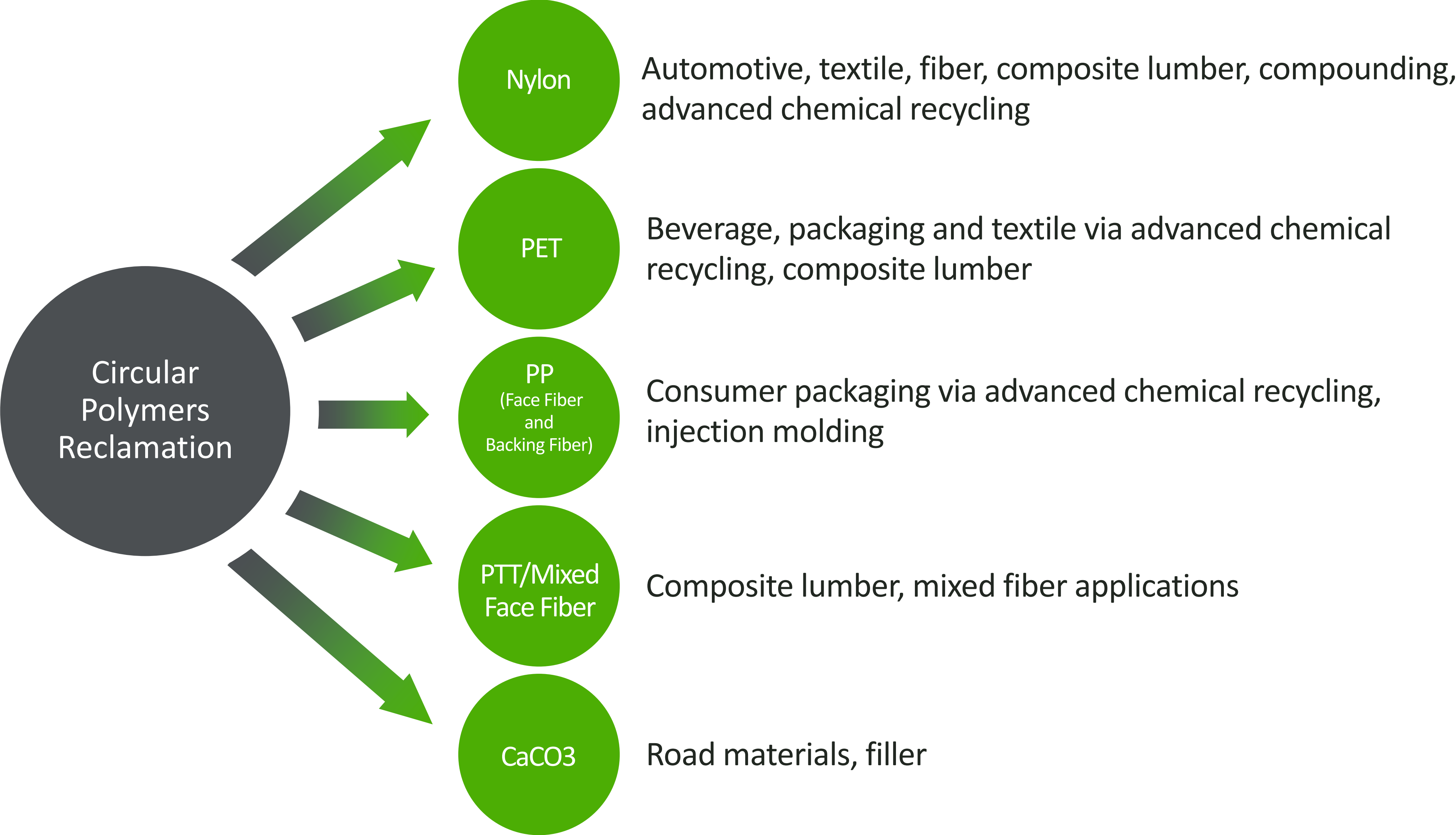
Nylon 6
Homogeneous Fiber (2% PP)



PET
Standard Fiber (12% PP)



Polypropylene
Homogeneous Fiber (100% PP)



Thank you!

David Bender, CEO

Circular Polymers of Lincoln, CA

DBender@CircularPolymers.com





2,950
EMPLOYEES



18
PLANTS



8
COUNTRIES
ON 3 CONTINENTS

AQUAFIL

600 ML \$
TURNOVER

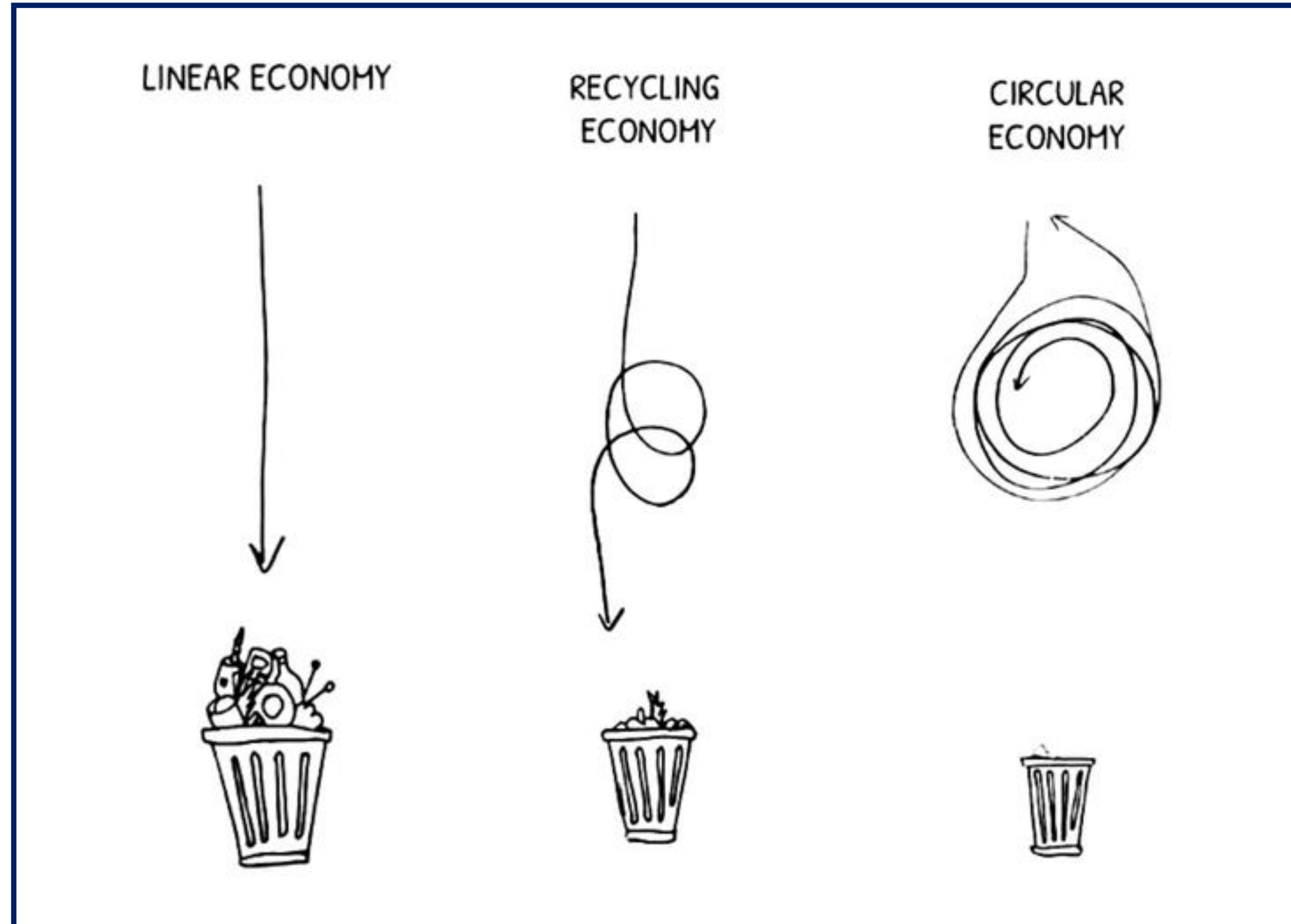
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PRODUCT AREAS:
YARN FOR CARPET
YARN FOR GARMENTS
ENGINEERING PLASTIC

1

MAIN RAW MATERIAL
NYLON 6

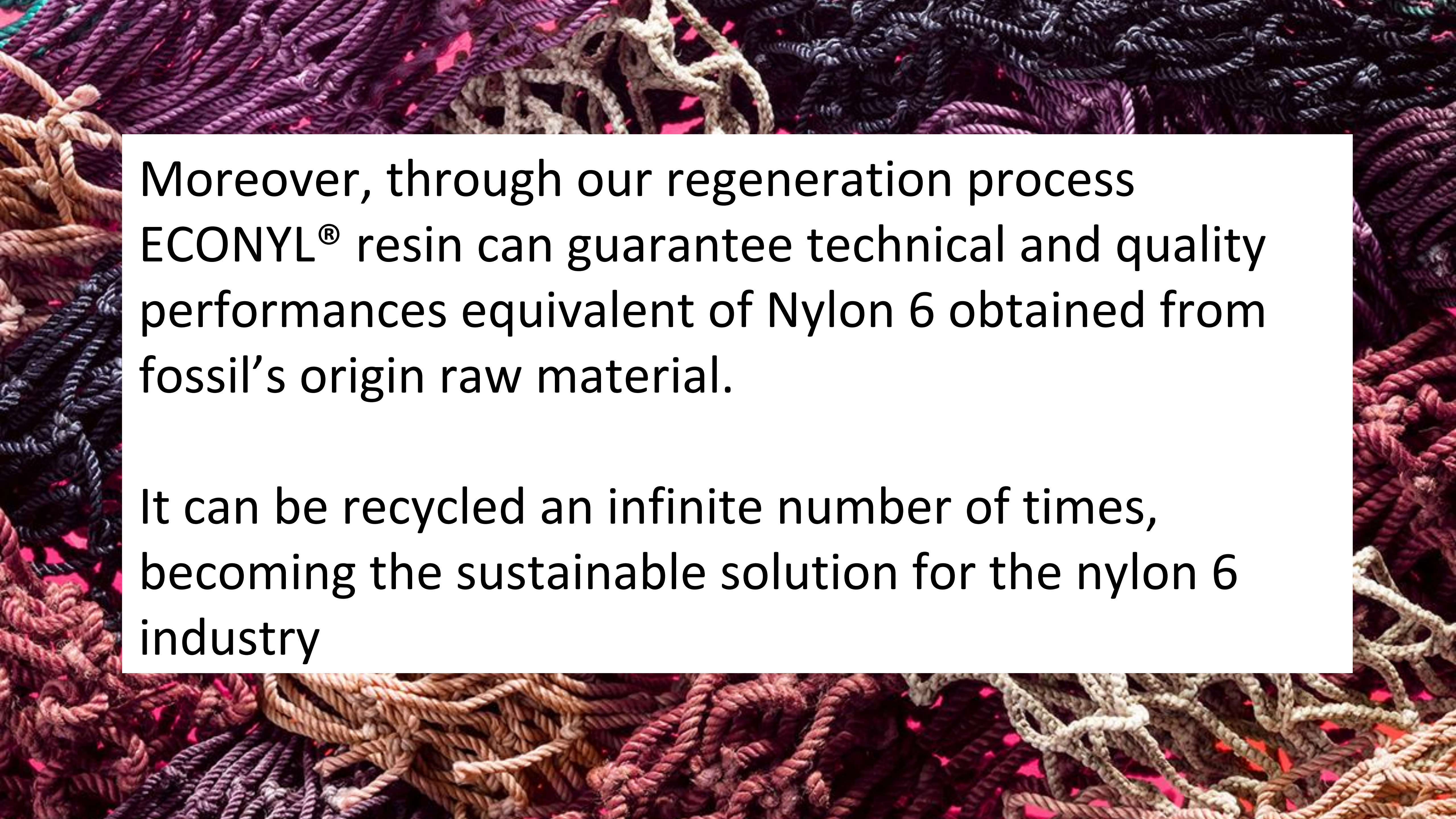
A CIRCULAR ECONOMY PERSPECTIVE





2011

**ECONYL® regenerated nylon is
100% recycled resin made of plastic waste such as
fishing nets, fabric scraps and old carpets**



Moreover, through our regeneration process ECONYL[®] resin can guarantee technical and quality performances equivalent of Nylon 6 obtained from fossil's origin raw material.

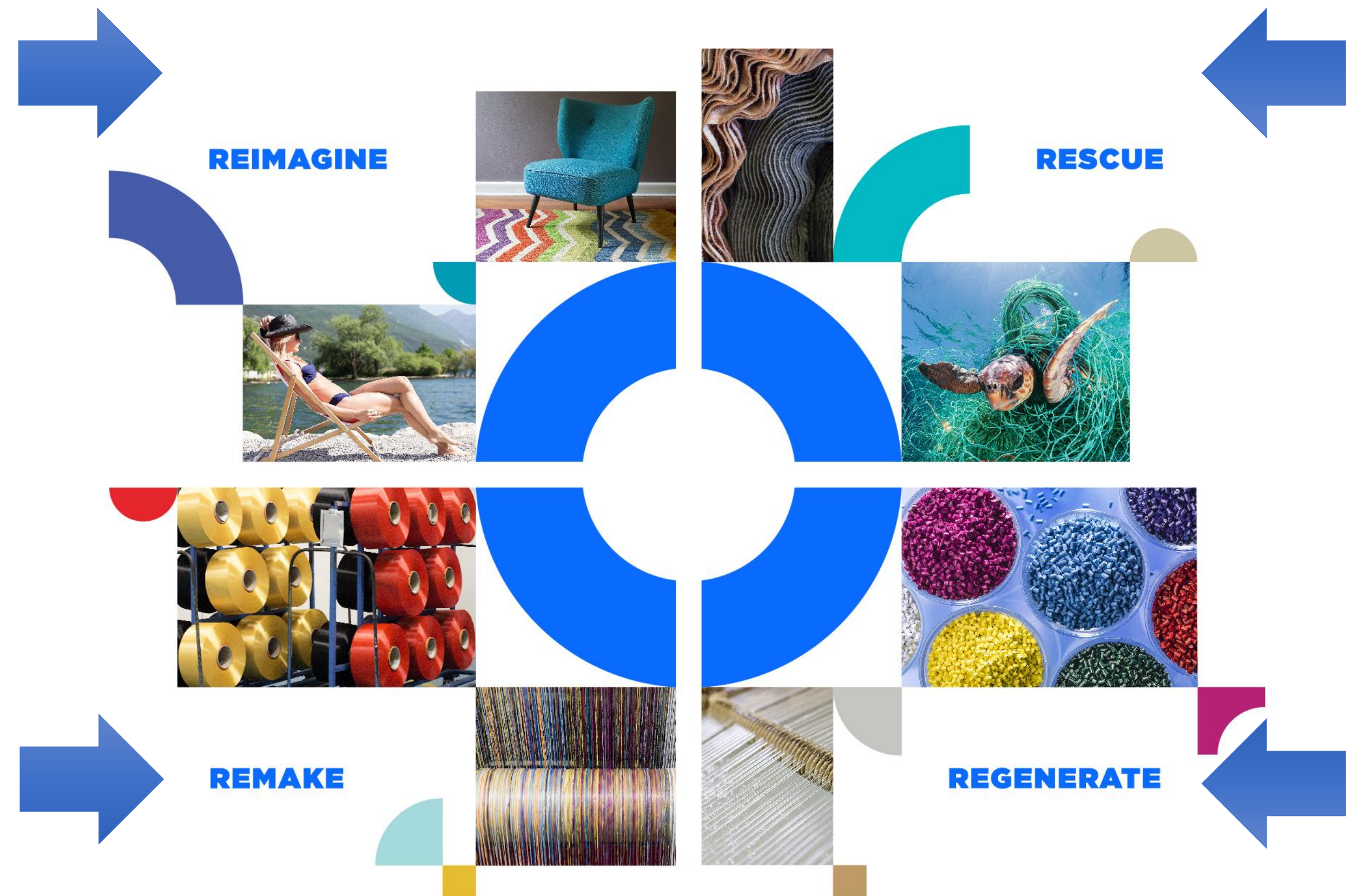
It can be recycled an infinite number of times, becoming the sustainable solution for the nylon 6 industry



- 100% regenerated & regenerable nylon
- Unique proprietary technology
- Chemical recycling



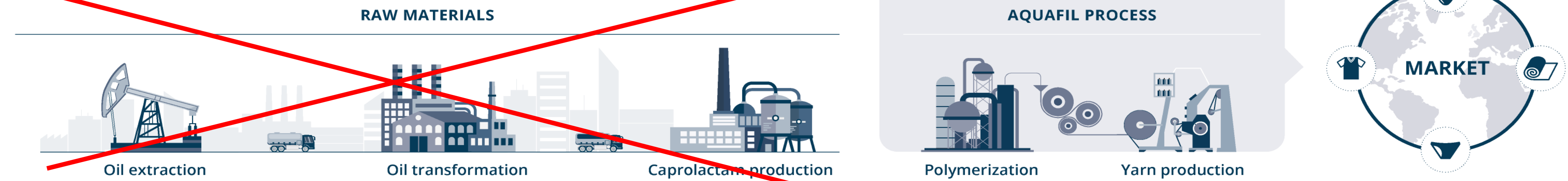
THE ECONYL® REGENERATION SYSTEM



CLOSING THE LOOP IN THE NYLON 6 VALUE CHAIN

The “life cycle thinking” approach

STANDARD NYLON



GLOBAL WARMING POTENTIAL REDUCED UP TO **90%**
IF COMPARED WITH TRADITIONAL OIL-BASED AQUAFIL RAW MATERIAL

PRODUCTION PHASE SAME AS
THE TRADITIONAL ONE

ECONYL® NYLON



Old Carpets

A wide-angle photograph of a large industrial warehouse filled with stacks of old, worn-out carpets and rugs. The stacks are piled high on both sides of a central aisle, creating a sense of depth. The carpets are in various states of disrepair, with frayed edges, missing pile, and some showing underlying materials. The warehouse has a high ceiling with exposed metal trusses and several bright overhead lights. The floor is a smooth, light-colored concrete. In the background, a bright light source, possibly an open bay door, is visible at the end of the aisle.

2018/2020 Our two carpet recycling facilities



Each plant has the ability to treat
36 Million Pounds
of carpet per year to be almost
entirely repurposed

27

AIRBUS A380

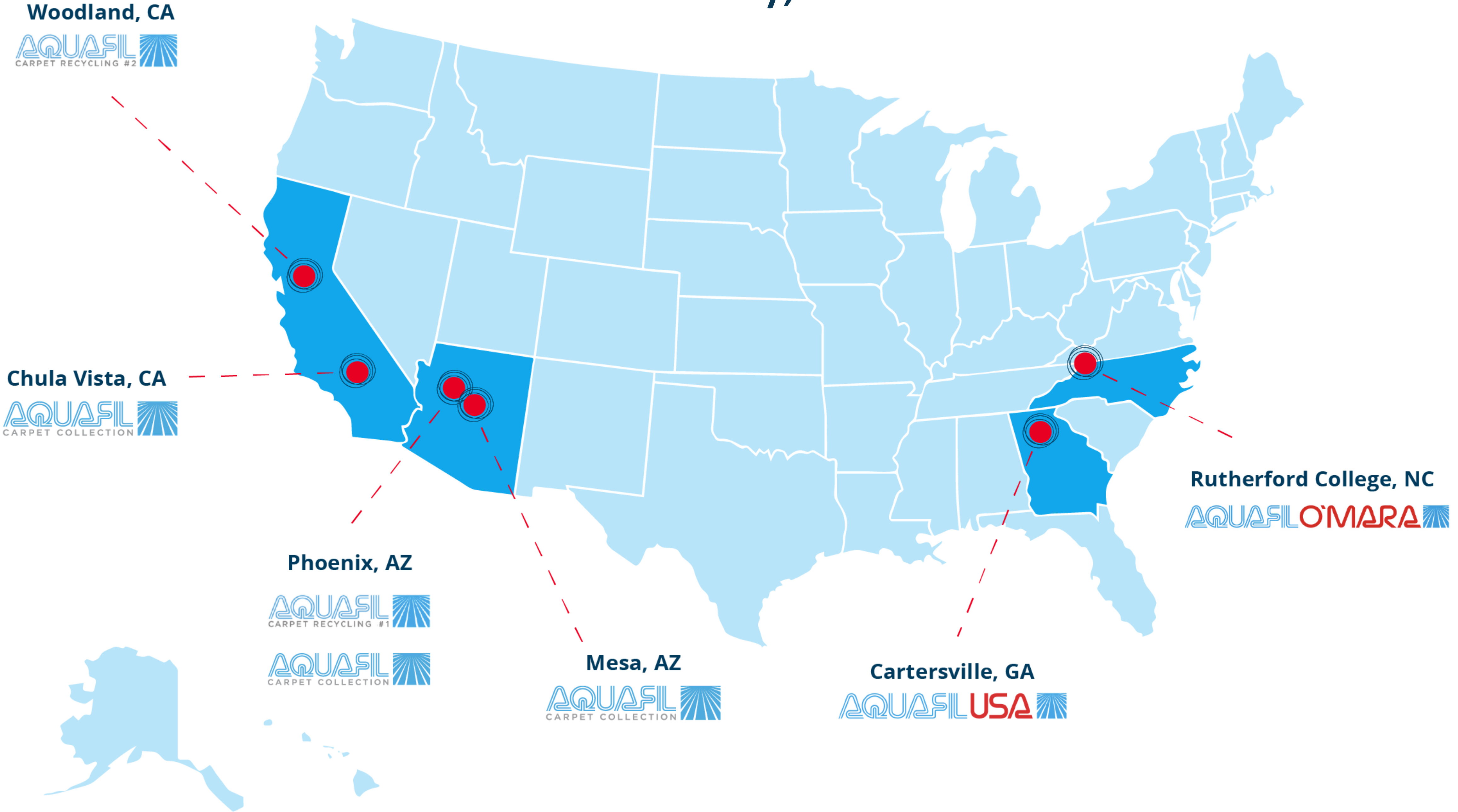
Weight: 1,267,658 pounds each



2021 Three carpet collection facilities (California/Arizona)



Today, all facilities across the US



TODAY more than 1000 brands using ECONYL®

STELLA McCARTNEY

GUCCI


 **VOLCOM**



*Galleries
Lafayette*



girlfriend
collective

ALEXANDER MQUEEN



BURBERRY

KUNERT



MARA HOFFMAN

OUTERKNOWN



fp

RAPANUI

H&M



Reformation

FASHION

OUTERKNOWN



adidas®



speedo®

ECONYL®
ENDLESS POSSIBILITIES

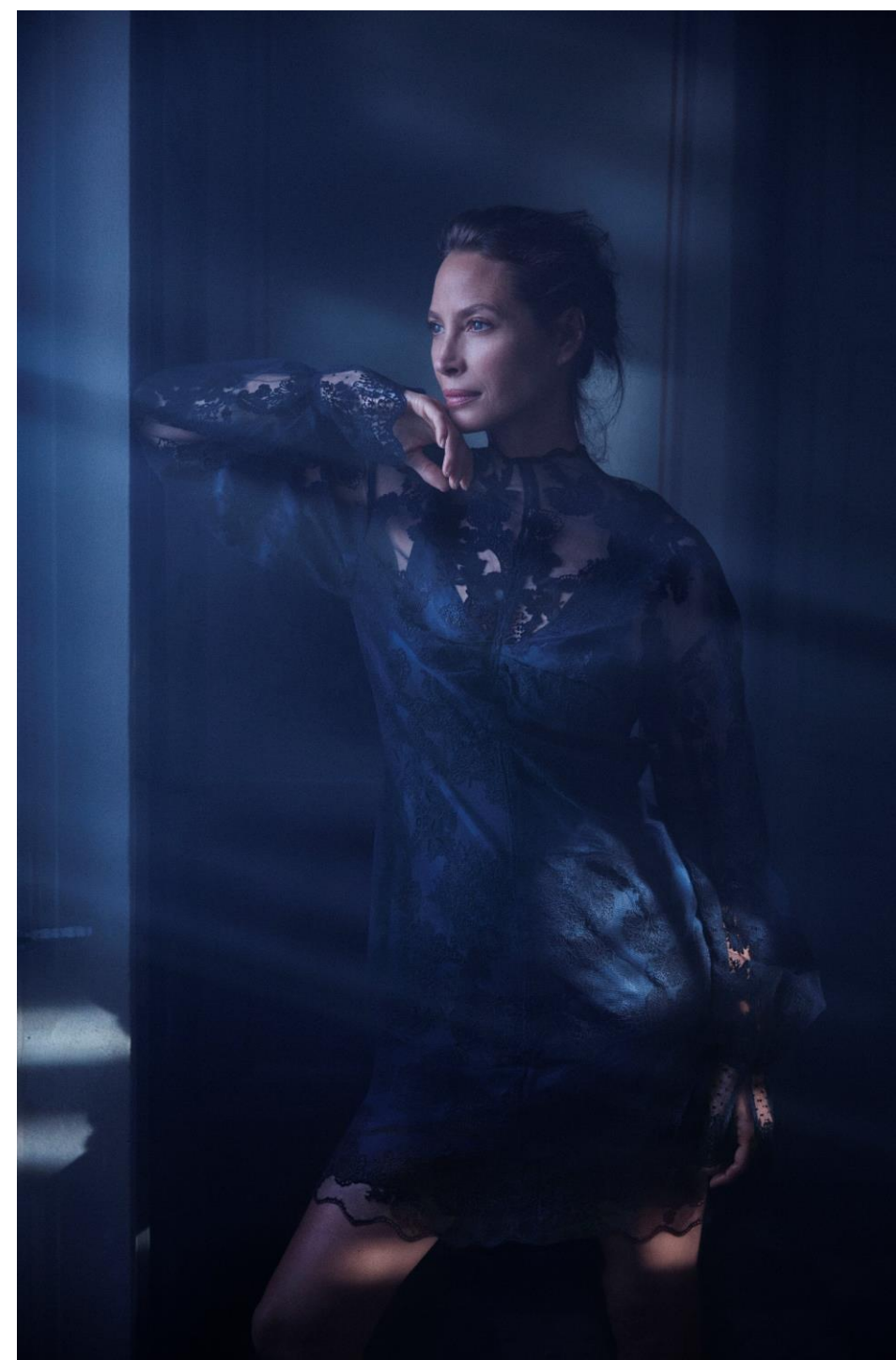


FASHION



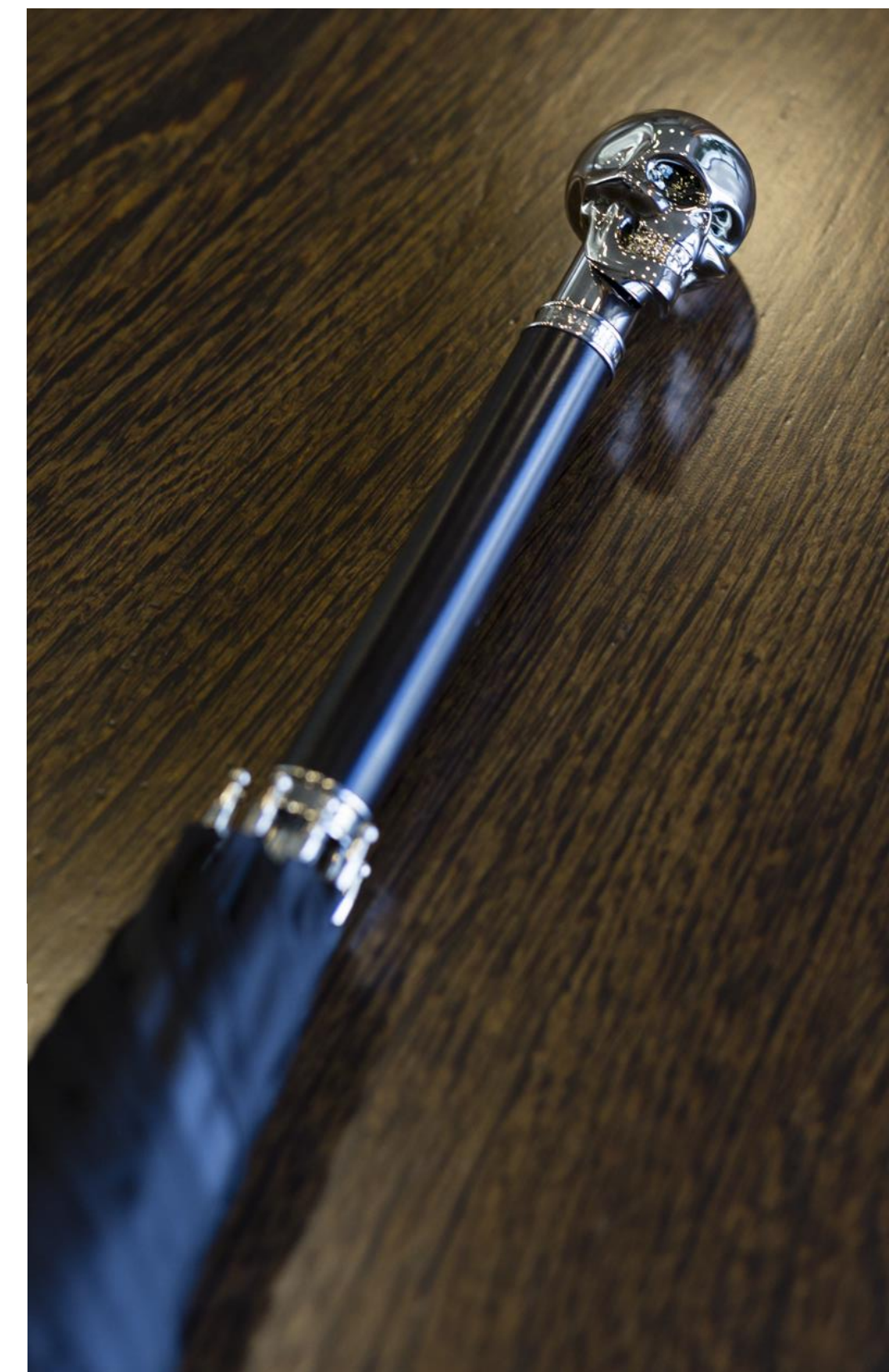
PRADA

STELLA McCARTNEY



ECONYL®
ENDLESS POSSIBILITIES

Alexander
McQUEEN



DESIGN - Carpet

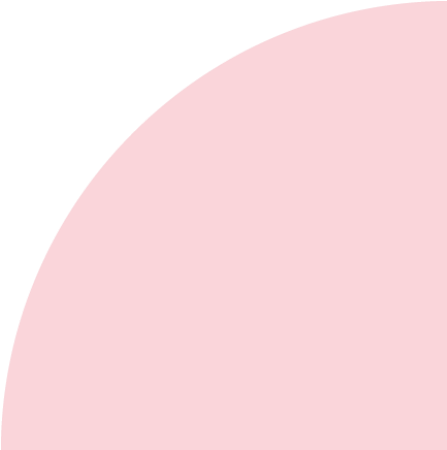
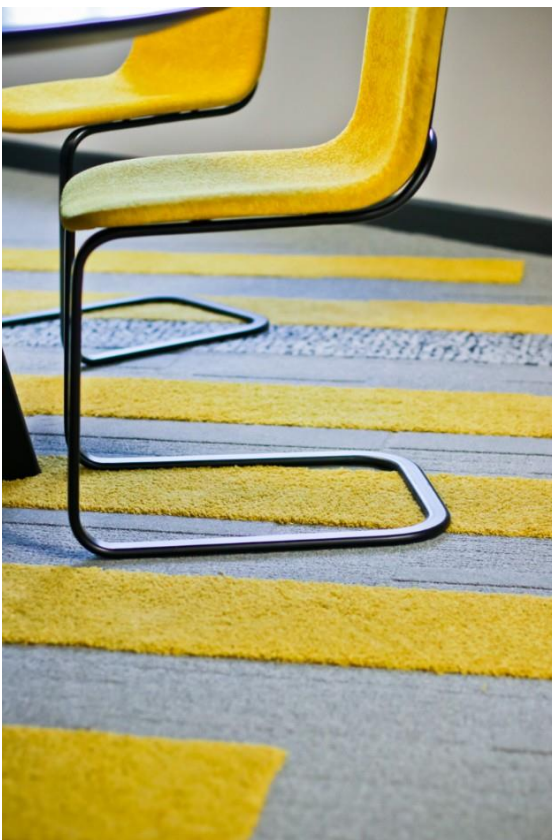
ege®



modu
lyss®

Milliken™

Interface®



DESSO

ECONYL®
ENDLESS POSSIBILITIES



Thank you!

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