

ONE STEP CLOSER[™]

OSC PACKAGING COLLABORATIVE





THE PACKAGING COLLABORATIVE



In 2013, OSC formed the Packaging Collaborative with a goal to remove petroleum-based plastic from landfills, oceans, and our planet by securing compostable and renewable flexible film structures with appropriate barrier qualities.

Today, the Packaging Collaborative is comprised of over 40 leading companies in the natural products industry. We believe that the best way to address packaging is to share our learnings and steer the industry towards leading-edge solutions.



THE PROBLEM WITH PACKAGING

Nearly every piece of plastic begins as a fossil fuel, and greenhouse gases are emitted at each of each stage of the plastic lifecycle. If plastic production stays on its current trajectory, by 2030, GHG emissions from plastic could reach 1.34 billion tons per year, equivalent to the emissions produced by 300 new 500MW coal-fired power plants [i]



[i] Plastic & Climate: The Hidden Costs of a Plastic Planet - CIEL (2019)



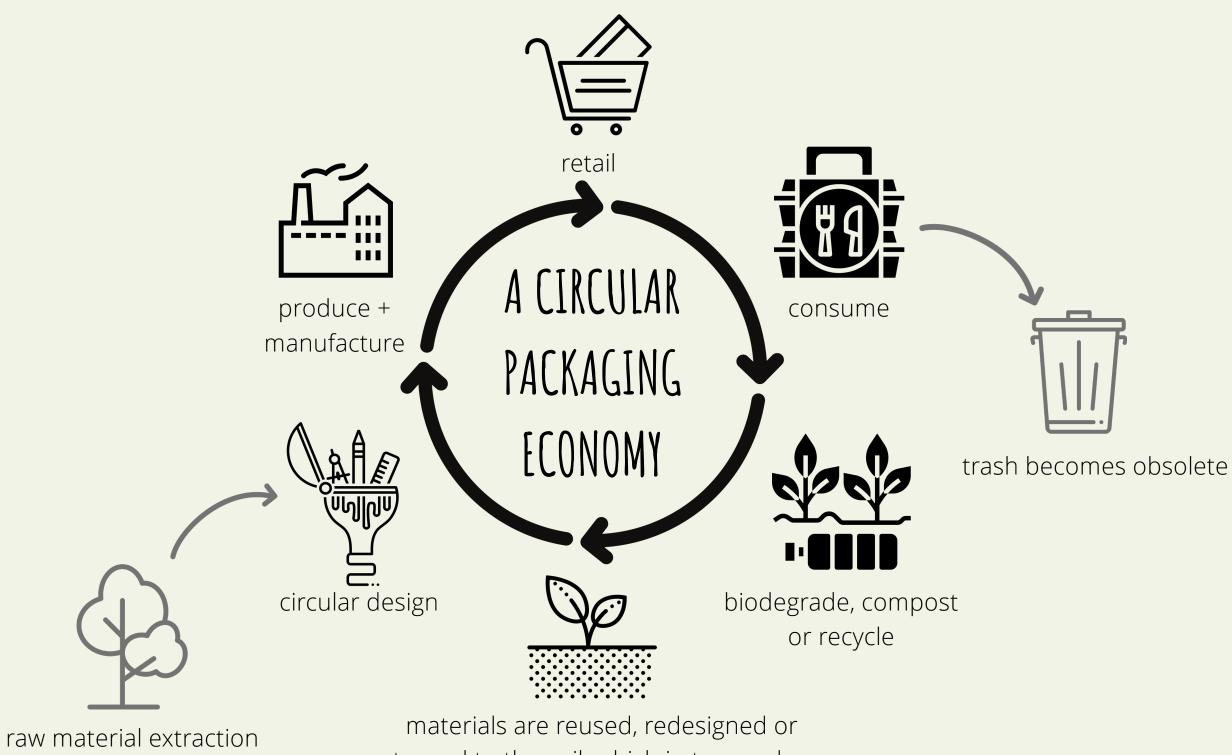


QUANTIFYING THE PLASTIC PROBLEM

- 50% of all municipal waste is packaging (Cradle to Cradle, William McDonough)
- Globally more than 150 billion stand up pouches are used every year, growing 9%
- In the United States, 26 billion pouches are thrown into landfills with no regenerative potential, and only 9% of plastics created has ever been recycled.







returned to the soil, which in turn reduces our need for raw material extraction



WHY COMPOSTABLE?

STRUCTURE

ACCESSIBILITY

INFRASTRUCTURE

ENVIRONMENTAL HEALTH

Plastic/PET pouches are laminated with different plastic layers that cannot separate, making them impossible to recycle

Though industrial composting is harder for consumers to access; yard waste programs and company take back programs can support home compost

Recycling facilities aren't set up to accept recyclable flexible plastics, and though industrial composting is limited in the US, it is an opportunity for regeneration in packaging



Backyard composting can promote a virtuous cycle replenishing biological nutrients, and if compostable plastics do end up in the environment, they are less of a contaminant



COLLABORATION IS THE KEY TO SUCCESS

"I come from an environmentally conscious background and my contribution to the packaging problem contradicted my beliefs to a point where I was ready to leave the industry. But then I met Jeanne/Alter Eco and it clicked. Developing compostable solutions activated my purpose and calling and is why I'm still in the business today."

Brett Shaffer, Elk Design

Material Manufacturer Partners + Converters	 Futamura, Elk Packaging, Dunn Paper, Plastic Suppliers Inc.
NGO's	 BPI, CMA, USCC, ASBC, Recology
Brands/Owners	 35+ leading natural foods brands
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PACKAGING COLLABORATIVE ACCOMPLISHMENTS



Created Industry movement of 40+ leading brands toward advancing compostable packaging in the food and beverage sectors, launching Innovation Portal in 2022



Fostered key partnerships across the compostable package supply chain: Associated Labels, Elk Design, Futumura, BioBag, Novamont, etc.



Developed & tested 4 compostable pouch versions with 18+ ingredients, with multiple companies launching new materials in the marketplace



Presented certifications guidelines for compostable structures, supported key policy initiatives on the state and federal level around labeling, EPR, and infrastructure expansion



Line-tested overwrap applications and optimized structure for triplex teabags, working with multiple tea companies to scale innovative, plant based materials



Advanced Compostable Packaging Advisory Board, ongoing collaboration with the USCC and CMA on field testing and recovery of compostable packaging



Assisted Launch of Gone4Good (Alter Eco) & Leaf No Trace (Numi Tea) campaigns, launching 'One Step Closer to Zero Waste' industry campaign in 2022



Flexible Packaging Comparative study for climate and end of Life, new partnership with Trayak to provide LCA's and packaging optimization resources to members



HOW THE COLLABORATIVE WORKS

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STAND UP POUCH

OVERWRAP FOR TEAS & BARS





5 versions and 18 ingredients tested

25+ ingredients tested

- Quarterly Meetings: regularly share challenges and opportunities with 40+ companies and crowd source solutions
- Lunch + Learns: quarterly, topical sessions provide deeper dives on key packaging systems topics, including policy, consumer insights, costing and more
 - Programs: programs like shelf-life testing,
 field testing, consumer campaigns and
 discounted LCA's all provide an opportunity
 to take your packaging efforts to the next
 level, ensuring a systems level focus for your
 work



PROGRAM **OVERVIEW**









Program Expansion - New brands & new packaging materials, launch Plastics Innovation Page in Q1 of 2022 to support a holistic approach to packaging. New programs providing discounted LCA's and access to Terracycle's LOOP program also available.



Test & Learn - Explore viability of emergent materials and their end of life impact through shelf life testing with new partners at the University of Florida, and continue field testing partnership with the Composter Manufacturing Alliance (CMA) to encourage recovery of compostable CPG packaging



Launch and Scale - ONE STEP CLOSER TO ZERO WASTE PACKAGING CAMPAIGN that includes consumer facing tips, brand highlights, and policy and advocacy engagement opportunities. Special policy focus and packaging commitment to drive progress in sustainable packaging solutions

2022 INITIATIVES

SHELF-LIFE TESTING

Program Objective: To qualify newly commercialized compostable materials by determining:

- Fitness for Use
- Appropriate Barrier (shelf life under ambient and challenge conditions)
- Co-packing Compatibility
- Package Integrity Post Challenge

How We Are Achieving Our Goal: Partnering with universities like Clemson and the University of Florida to build cost-effective testing parameters, and leverage their expertise and lab capabilities to provide directional guidance on material performance.

Impact to Date: 16 structures tested with Clemson University

What Are Our Next Steps?

• Re-launch shelf-life testing with University of Florida in Q1 2022 - *10 slots available!*









SHELF-LIFE TESTING

Participating Brands



FIELD TESTING

Program Objective: To bridge the gap between material development and the recovery of compostable packaging at industrial compost facilities. Through field testing, we can develop case studies that position packaging as value adds to the composting system, rather than contaminants.

How We Are Achieving Our Goal: Partnering with the Composter Manufacturing Alliance to provide discounted field testing for our members to compliment BPI/TUV compostable certification of their materials.

Impact to Date: Four structures tested at Cedar Grove in 2021 (in vessel composting)

What Are Our Next Steps?

- solving with composters to increase recovery of our materials
- slots available!





• Publish a Case Study on the results of the field testing, with a focus on problem

• Kick off Round 2 of of Field Testing in 2022, focusing on windrow compositing - 5



LIFE CYCLE ASSESSMENTS

Program Objective: To help our members leverage cost-effective, data driven insights to find sustainable packaging solutions that align with organizational goals and material ESG topics.

How We Are Achieving Our Goal: Partnering with LCA experts Trayak, whose software allows companies to evaluate design alternatives quickly and with strategic intent. They can help to streamline the design process, avoid costly mistakes, and proactively address consumer backlash as you consider your material transitions.

Impact to Date: Four companies completed their LCA's in 2021

What Are Our Next Steps?

- Publish a Case Study on the value of LCA's and data driven insights for sustainable packaging transitions, highlighting key insights from participating brands.
- Kick off Round 2 of LCA's in March 2022 5 slots available!

















RFF INNOVATION WORKSHOP

In 2020, our group collaborated, ideated and co-created on a web-based, interactive innovation platform, with the focus to generate new ideas and solutions for zero-waste in Flexible Film packaging.

Our group collectively identified 8 Incubation Project, covering topics like policy, consumer awareness, financing, design, and labeling to break down the barriers to scaling sustainable material solutions.

60

Brilliant M from the N Chair Participa

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Phases of Flow: Def Discover, De & Demons

0 t Minds e Value ain pating	10 Industry Partners Making it Possible	6 Month Ongoing Event for Ideation, Co-Creation, Collaboration, & Development	1 Unified Goal: Break Down Industry Silos and Create Zero-
	600+		Waste Packaging
of Event Define, Develop, nstrate	Years of Shared Industry Experience & Passion	2 Actionable Zero- Waste Concepts Developed in Flexible Film	1 Huge Step for Humanity and Our Planet

Packaging



Redefining Flexible Films

Incubation Projects

CrowdFunding for Research & Development of New Compostable Materials Team Lead: Evan White	Compostin Team Lead: Ka
Driving Change through a Consumer Awareness Campaign Team Lead: Renaud des Rosiers	Developing Team Lead: W
Developing a Packaging Labeling System Team Lead: Myf Bradbury	Soil-Centri Team Lead: La
Cross-Stakeholder Field Test for Compostable Packaging Team Lead: Dan Kurzrock	Reducing (Team Lead: Vi
Policy: Tax & Fee Based Incentives for Compostable Packaging Team Leads: Darcy Shiber-Knowles and Alyssa Harding	Flexible Fil Team Lead: Ar





ting Education in Schools

: Katherine Roop

ing a Compostable Multi-Pack

: Wesley Skjodt

tric Compostable Packaging

: Lauren Tucker

g GHG Emissions with Active Biopackaging

: Viirj Kan

Film Texture & Gradient: "Flexture"

: Anne-Marie Daniels





Let's clean our oceans, let's save our wildlife, let's reduce our waste and let's work together to move one step closer to zero waste packaging!

ONE STEP CLOSER TO ZERO WASTE CAMPAIGN

OSC'S ONE STEP CLOSER TO ZERO WASTE PACKAGING campaign seeks to create a platform for action and generate awareness around the reduction and/or elimination of single use plastics in our products, packaging, and personal lives.

The campaign, which kicked off in January 2022, will include:

- Consumer call to actions
- Advocacy platforms to influence policy and infrastructure expansion
- Brand storytelling to share best practices and stories of progress from CPG brands around the globe
- Events and community cleanups to learn more and drive community engagement





Campaign Audience Estimate

Brand Partners - 20, 143, 140

Industry Partners - 124,709

Total: 20,267,849







CAMPAIGN IMPACT TO DATE

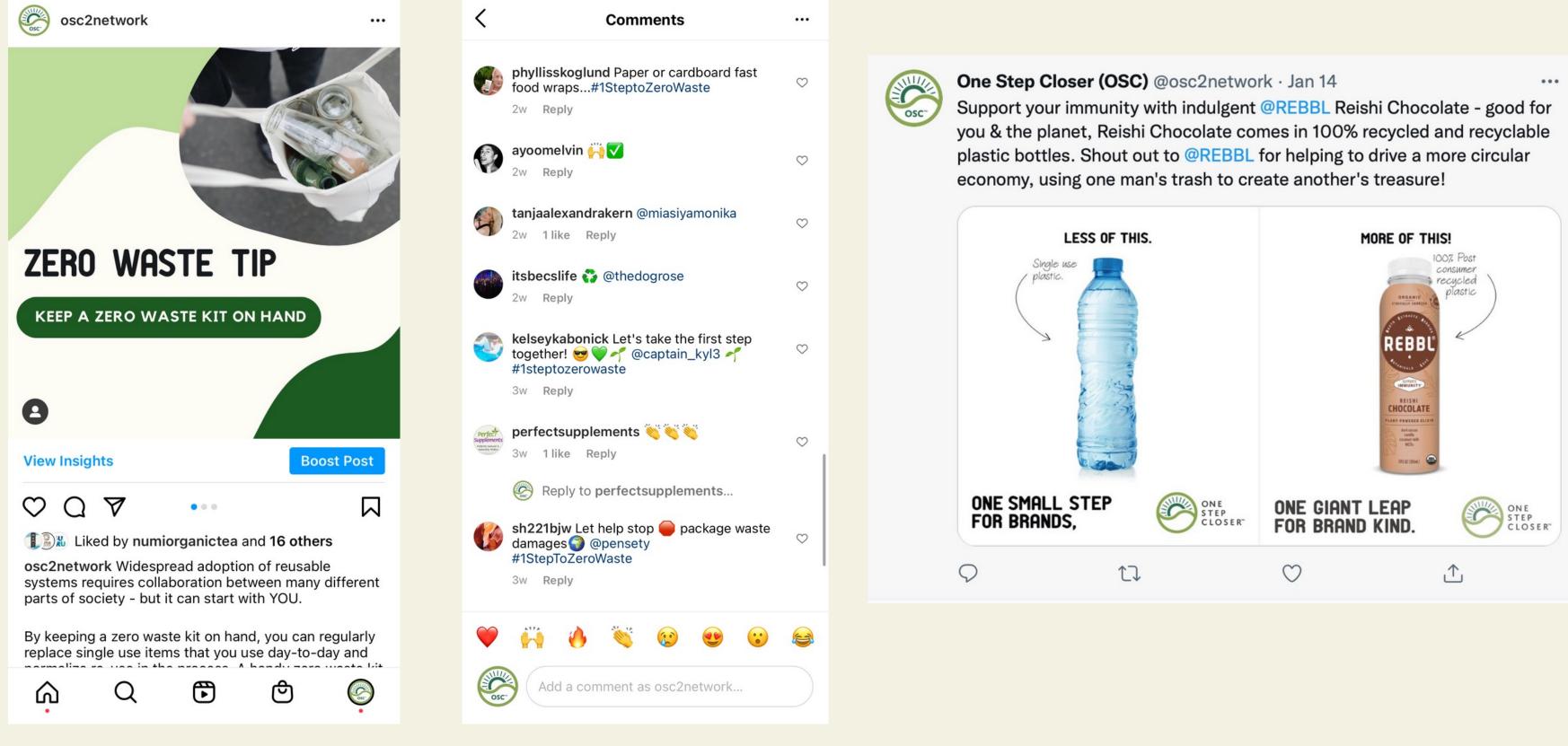
60+ brands engaged

16 brands committed to making a packaging transition in 2022

\$500+ low & zero waste goodies gifted



BRINGING CONSUMERS ALONG ON THE JOURNEY



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"GONE 4 GOOD" CAMPAIGN

GONE4GOOD ALTER ECO

POUCH MADE FROM COMPOSTABLE MATERIALS -AVAILABLE NOW -

because we don't think packaging should live forever. Announcing the first non-GMO, plant-based, compostable stand-up pouch. Mother Nature approved.



LITTLE WRAPPER. BIG IMPACT.

Sustainably Sourced Eucalyptus **Ethically Sourced Sugarcane Resin** Zero Waste!

We are a small company taking important steps to *Leaf No Trace*. Join the movement at #LEAFNOTRACE



"LEAF NO TRACE" CAMPAIGN

LEAF NO TRACE

Compostable Tea Bag Wrappers'

Consciously crafted from Non-GMO plants, this wrapper reduces waste while preserving taste.

UNWRAP THE PLANET

On average, Americans throw away their own body weight in trash every ____

Month B Year G Week

Unwrap label for answer.



Numi is a proud founding member of OSC2, a coalition of forwardthinking brands working together to change the face of packaging.

Product not labeled for sale.

*Will compost safely in a municipal or commercial facility. Not suitable for backyard composting.



Our new innovation would not have been possible without the work of our partners at ELK Packaging. For more information:

WWW.ELKPACKAGING.COM

INFO@ELKPACKAGING.COM

OSC'S INNOVATION PORTAL

Utilize OSC's Newest Resource

OSC is launching a Packaging Innovation Portal in February 2022 to compliment the industry-facing portion of the One Step Closer to Zero Waste Packaging Campaign

The Portal will provide industry stakeholders with the resources they need to make strategic, informed packaging decisions, and help them move more quickly and with intention on their packaging journeys.

OSC encourages the industry to post their Innovations to the portal, and to use the platform to support their packaging momentum!



In Pursuit of Sustainable Packaging

Inspiring Systems Level Innovations with Triple Bottom Line Value

CONSUMER INSIGHTS

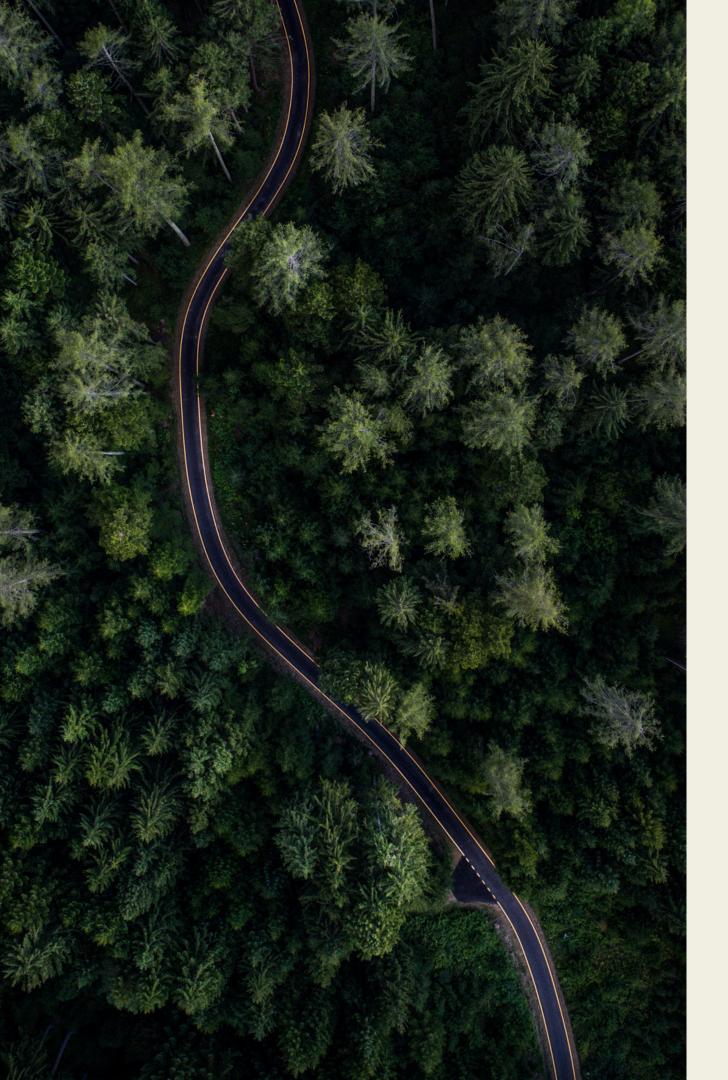
A CRITICAL Market Driver Consumer den So when it con customers? To

Home

OSC works di







\$4500 IF > \$300MM REV

\$3500 IF > \$50MM REV

\$2800 IF < \$50MM REV



\$2250 IF < \$5MM REV

WWW.OSC2.ORG/PACKAGINGCOLLABORATIVE

Thank You to Our Partners!

