
Closed Loop Partners: Advanced Recycling

Recycling Council of Alberta

November 17, 2020

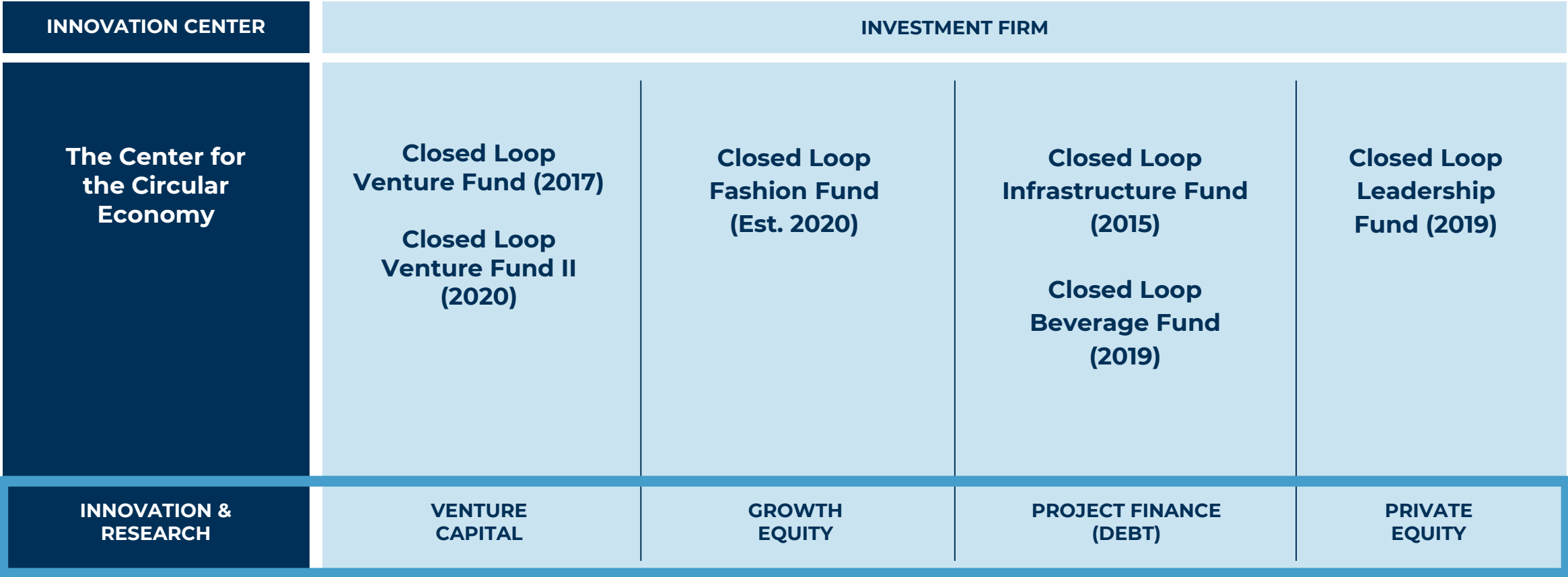


Presentation Highlights

- Introduction to Closed Loop Partners
- Strategies for Creating Circular Systems for Plastics
- Advanced Recycling 101
- What's Needed to Succeed and Scale?

Closed Loop Partners: Our Business Model

We provide an *arc of capital* that accelerates the growth of early stage companies through to established companies. Our platforms build upon one another, bridging gaps and fostering synergies to scale the circular economy.





Advancing Circular Systems for Plastics Initiative

A Closed Loop Partners initiative to research, test, and scale multiple solutions that collectively create a waste-free future where post-use plastics are reused or transformed into valuable building blocks for new materials that stay in the economy for multiple generations.

Beyond Packaging: Building Circular Systems for All Plastics

We must build systems that address the diversity of plastics in our system.

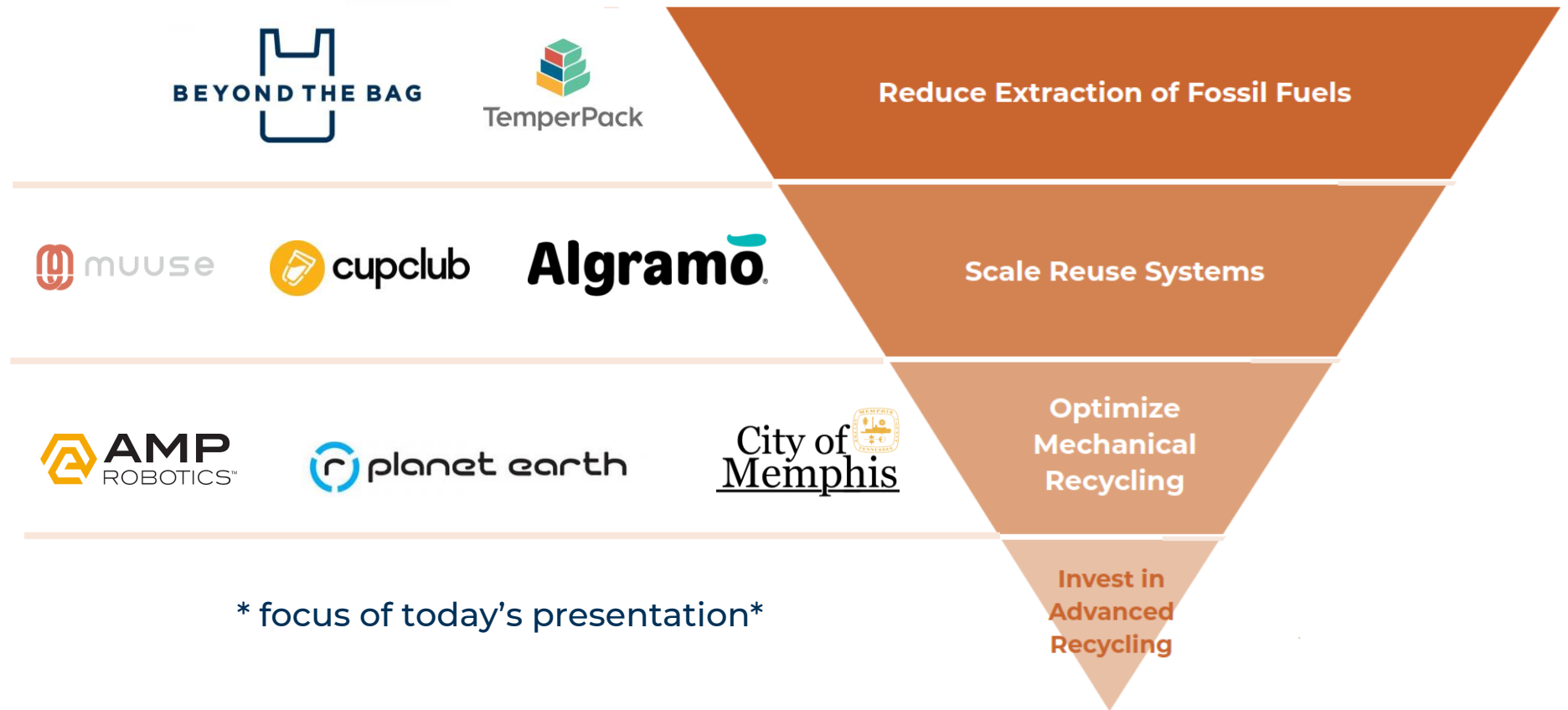
The biggest economic and environmental opportunities ensure that we keep materials at their highest value within our economy for as long as possible.



Multiple Strategies Required to Address the Diversity of Plastics

Strategies to address plastic waste are complementary. Focusing on a single strategy to the plastic waste challenge compounds risks.

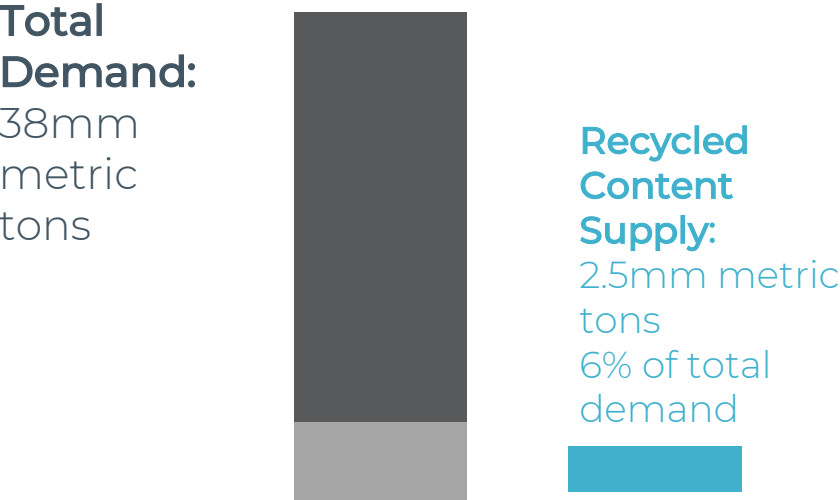
Hierarchy of Strategies to Address Plastic Waste



ADVANCED RECYCLING

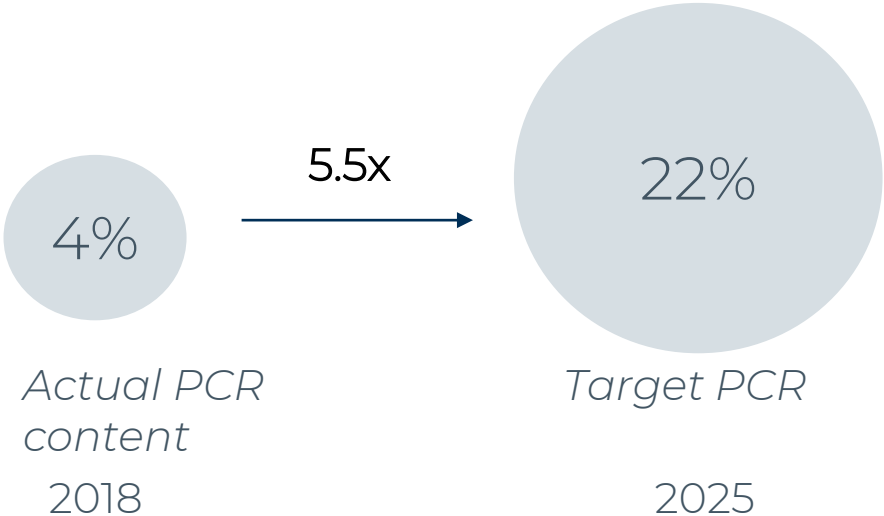
Commitments Require Additional Supply of Recycled Content

Today, the supply of recycled plastics satisfies only 6% of overall US and Canadian plastics demand.



Source: IHS Markit, as cited in Closed Loop Partners, "Accelerating Circular Supply Chains for Plastics," 2019.

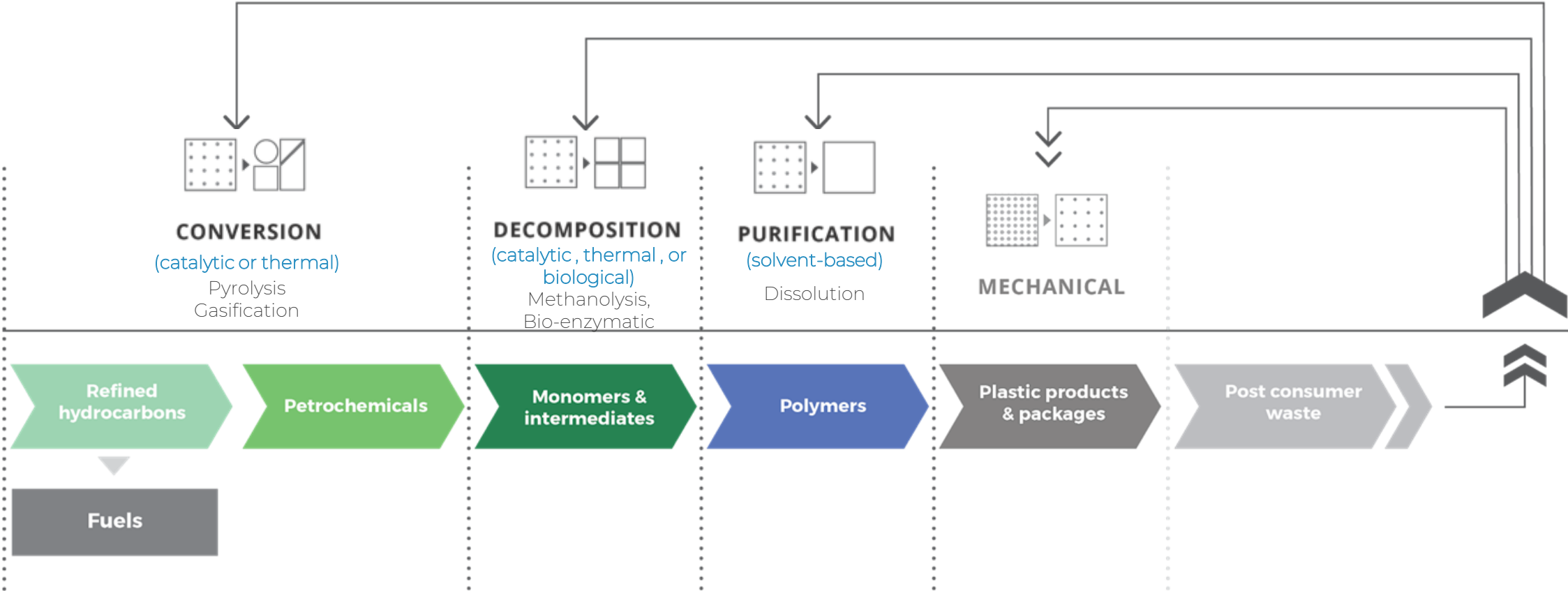
The biggest CPGs and retailers have globally committed to an average of 22% recycled content in packaging by 2025 – an increase of more than 5x.

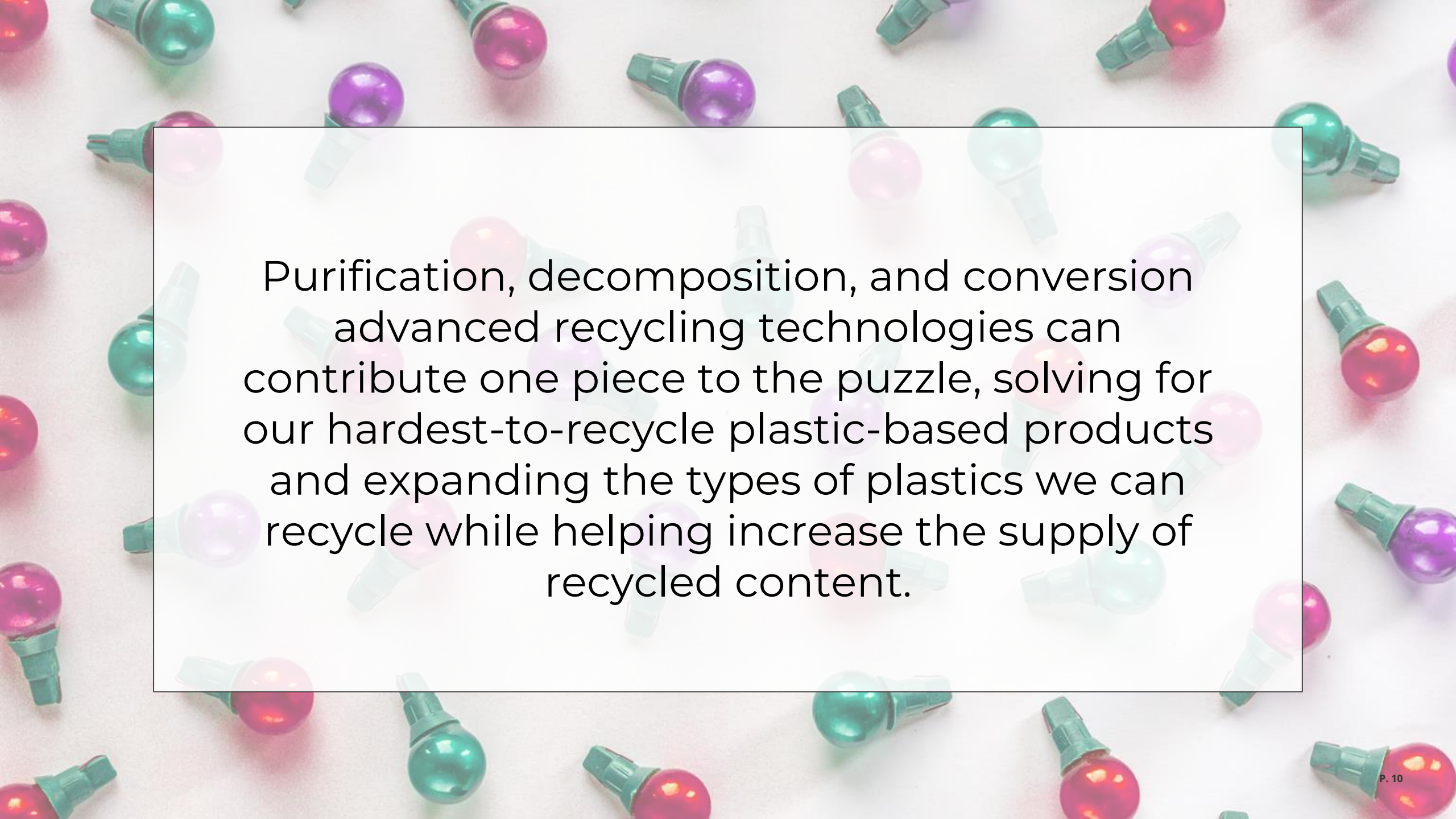


Source: Ellen Macarthur Foundation, "New Plastics Economy: Global Commitment Progress Report – October 2019," 2019

Advanced Recycling, Like Plastics, is Not a Monolith

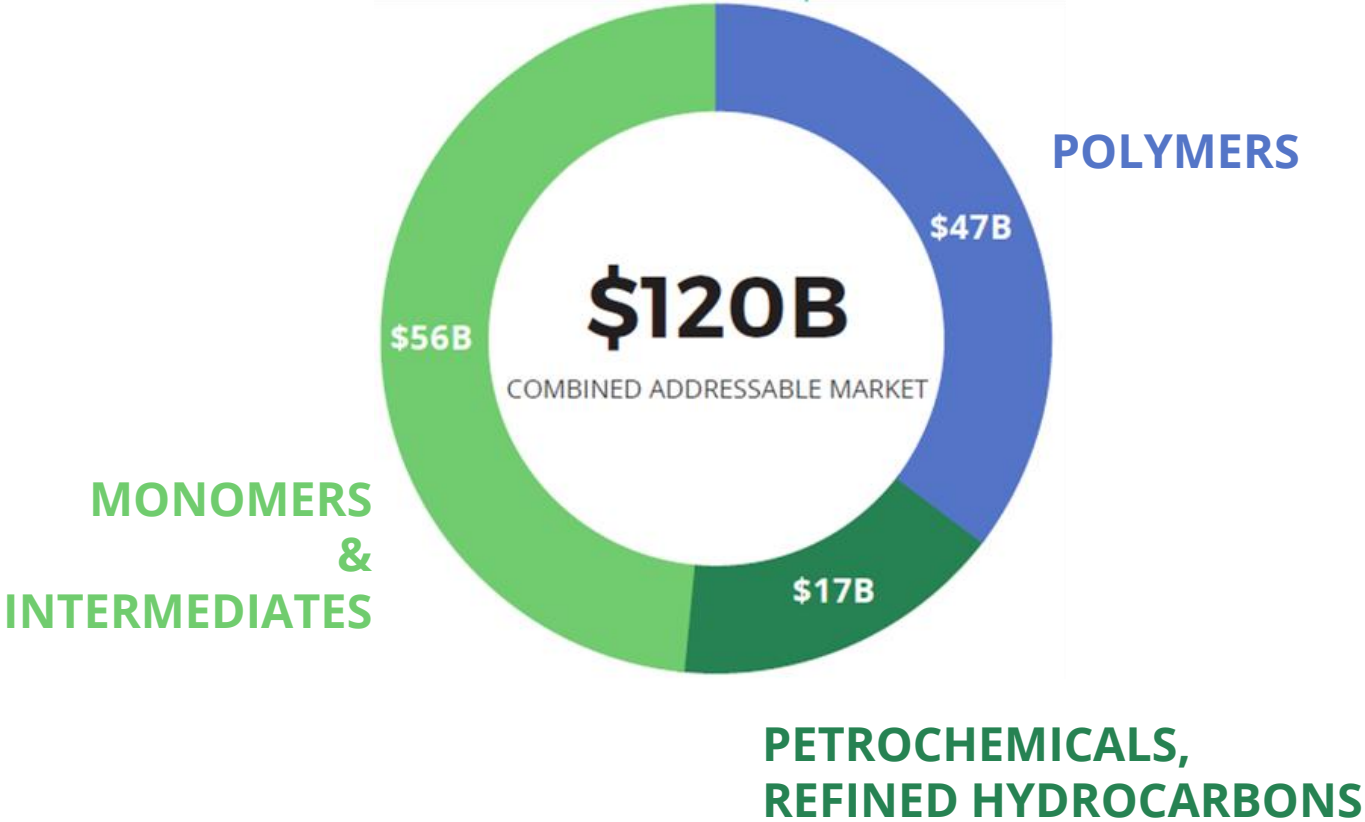
Advanced recycling includes chemical recycling – that is **catalytic, thermal processes** – as well as **biological processes** which all purify or break down plastic to create virgin-quality outputs that can be reused in the system.



The background of the slide is a top-down view of numerous small, colorful Christmas lights scattered across a white surface. The lights are in various colors including red, green, purple, and pink. Each light has a small green plastic base with a clear lens. The lights are arranged in a somewhat random pattern, with some overlapping.

Purification, decomposition, and conversion advanced recycling technologies can contribute one piece to the puzzle, solving for our hardest-to-recycle plastic-based products and expanding the types of plastics we can recycle while helping increase the supply of recycled content.

Viabile Market and Technologies for Advanced Recycling to Scale



22% CAGR

Estimated Year-over-Year Capacity Growth of the Sector from 2011-2025

11-33% IRRs

Estimated returns on an advanced recycling project, based on plastic feedstock type

Source: IHS Markit, as cited in Closed Loop Partners, "Accelerating Circular Supply Chains for Plastics," 2019.

Source: Bloomberg New Energy Finance, "Chemical Recycling: Technologies, Costs and Capacity," Dec 2019

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What Needs to be True to Ensure a Circular Future for Plastics?



Clarity on the impacts of different processes, along with an understanding of benefits and trade offs of commercializing these technology processes



Data-backed analysis that defines the role for these technologies as they related to other strategies like reduction, reuse, and mechanical



Policy framework and market incentives to that support circular outcomes and help incentive investment towards sustainable solutions



Collaboration and investment across sectors and along the value chain to create new supply chains that integrate these technologies into them in ways that benefit the whole system

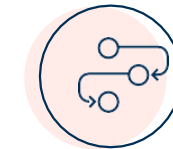
Advanced Recycling: Not a Silver Bullet, Not a Red Herring

The technology processes themselves do not determine whether a company or a process is "circular." The stakeholders invested in creating circular systems do. We must understand how to align these technologies to circular principles to **scale only** what is safe and sustainable and maximize the environmental and economic opportunities they afford.

Closed Loop Partners' Investor Roadmap Research (publishing Q1 2021)



Technical-Economic Analysis



Supply Chain Analysis Feasibility



Environmental and Human Health Impact Assessment



Policy and Market Incentive Analysis

Thank you!

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