

## **Response to the ReMade call for Papers for the 2026 REMADE CIRCULAR ECONOMY TECH SUMMIT & CONFERENCE.**

### **Response from:**

Aldous Hicks,  
CEO  
Lasso Loop Recycling LLC  
Dated – Monday September 29, 2025.

### **Title of Paper:**

Recycling of Packaging Material in the Home to Deliver Cost Competitive Manufacturing Inputs  
Empowering Household to Contribute to and Benefit from the Circular Economy.

### **Authors and their Affiliations**

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### **Provide a 300-400 word maximum abstract that succinctly covers what you will discuss in your paper.**

Abstracts should be single-spaced with 1" margins and a minimum font size of 10-point font (Arial, Times New Roman, Calibri)

- NOTE: You may include not more than one relevant graphic, high-resolution photograph, or table in your abstract, and it must include a caption that provides an appropriate context

### **Abstract:**

Post-consumer recycling (PCR) packaging must meet strict manufacturing input specifications and remain price-competitive with virgin materials produced through extraction and mining in the linear economy.

This paper demonstrates how close loop recycling (CLR) of plastics, glass, and metals can be achieved in the home or other decentralized locations. It outlines the engineering solution, including equipment design and the integration of AI, machine vision, machine learning, and spectroscopy to identify materials, capture label information, and ensure product purity across the supply chain.

The proposed in-home appliance scans and validates used items, processes them to precise specifications, and stores six distinct material streams. An on-demand collection service then delivers these high-quality recyclates to manufacturers. This system empowers households to contribute to—and directly benefit from—the circular economy.

CLR generates three revenue streams: (i) sale of recycled materials, (ii) provision of DRS and EPR services, and (iii) first-party data for omnichannel marketing and advertising platforms. Compared to virgin inputs, CLR materials used in remanufacturing can reduce energy consumption by 35–95% and lower CO<sub>2</sub>e emissions significantly, depending on the energy mix.

Recent advances enhance CLR system viability, including AI-driven MV/ML models with GPU-CPU-RAM accelerators for rapid material recognition, and at-home parcel delivery services developed through online shopping. Together, these technologies enable accurate substance identification, efficient logistics, and scalable deployment.

While industry stakeholders are setting ambitious recycled content and emissions reduction targets—often backed by legislation such as California Assembly Bill 793—CLR appliances can meet these requirements without new regulatory mandates.

Beyond single-family homes, CLR units can be adapted for multi-family dwellings, educational institutions, and other sites, though additional mechanisms are needed to address operational complexities.

This paper will detail the enabling technologies, processes, and business model underpinning household CLR, showing how they can accelerate packaging circularity and expand consumer participation in the circular economy.