

AI Sortation (Glacier)

Materials

Seattle, USA

Complete

Quick Overview

This project, led by Glacier in collaboration with Amazon Sustainability Science and Innovation team, aims to train Glacier robots to sort bio-based and biodegradable plastics from traditional plastics using AI, in order to recycle them into new packaging using novel recycling technologies. The project also explores packaging design factors that impact AI detection and improve identification and sortation so that manufacturers can design packaging with a higher chance of being recycled.

Why This Project Matters

- Only 21% of residential recyclables in the U.S. are recycled, in part due to a lack of adequate recycling infrastructure
- Glacier's AI models paired with their cameras and robots improve sorting and recycling rates to help prevent loss of valuable materials like metals and plastics
- One Glacier robot can prevent over 10 million items per year from ending up in landfills
- Companies who design labeling to be recognizable by AI-trained robots may improve the chance that the product or packaging is recycled
- Biobased plastics often end up at waste processing sites, where Glacier's technology can identify and separate them to be composted or sent on to be recycled through novel recycling technologies like EsterCycle.

Results

- We established a joint action project with PepsiCo, conducting sortation trials using Glacier's AI robotic systems.
- These trials proved we can effectively sort biopolyester packaging, including PepsiCo packaging materials. Results will be shared at a future date.
- By demonstrating efficient sorting of bioplastic materials for recycling, we've unlocked a key step in creating a circular economy for these materials.
- The trial also identified critical design factors for packaging to improve robot identification and sortation



Companies Involved

amazon

PEPSICO

Natur-Tec®

GLACIER

NOVAMONT
A Verde company

Goal

Assess the ability to train robots to identify and sort bio-based plastics using AI.



The Big Picture

The Climate Pledge launched a series of collaborative projects to help tackle some of the planet's biggest climate change challenges alongside the best in the business. These joint action projects bring signatories together to enable and scale a solution that aligns with the pillars of the Pledge and leads to measurable results.

Learn more at theclimatepledge.com/jointaction.



The Pledge

The Climate Pledge is a commitment to reach net-zero carbon emissions by 2040. It brings the world's top companies together to accelerate joint action, cross-sector collaboration, and responsible change.

Learn more at theclimatepledge.com.



Glacier

Based in San Francisco, CA, Glacier is on a groundbreaking journey to end waste – starting with recycling robotics, and with even more ambitious plans on the horizon.

Learn more at endwaste.io.