

# Personalized Recycling Education to Reduce Contamination

Custom mailers continued to drive contamination downward for 6 months after intervention.

East Lansing, Michigan

## AI on Trucks + Education + Participation

This pilot project involved installing cameras on recycling trucks to identify contamination from carts. The cameras were programmed to send images, with a geo-tag of the street address, for AI analysis of contamination. If contamination was identified, a personalized response mailer was sent to the resident.

Households were divided into three groups, each receiving the same postcard at the start informing them of acceptable and non-acceptable materials. The control group did not receive response mailers, another group received response mailers with the **educational mailing panel**, and the last group received response mailers with the **emotional mailing panel**. A second phase of the project focused on increasing participation in low-set-out households, mailing empathetic mailers three times over six months.

Each piece of this pilot project in East Lansing yielded valuable insights into resident behavior. Based on this project, we learned response mailers with real-time images of contamination, taken from cameras in trucks, can be an effective method to reduce contamination and increase participation.



response mailer



emotional mailer

educational mailer



empathetic mailer

### Key Takeaways

- Recycling contamination decreased by 22.5%.
- Both educational and emotional response mailers decreased contamination and increased set-out rate. Emotional messaging recipients contaminated 23% less and set-out 45% more.
- After three empathetic mailers, those that had not set out previously were 28% more likely to set out their cart.

