# COLLEGE OF ENGINEERING

## Chemical, Biological, and Environmental Engineering

## **BALI SORTING FACILITY**

#### **Background Information:**

Operates 6 days a week with 48 employees
Households separate their waste into organic (red) and inorganic (green) bags
Both bags are collected bi-weekly by motorized tricvcles

•The collection service is voluntary, and costs money



## RECOMMENDATIONS

#### Quantity:

- Community collection drives
- Referral and loyalty rewards programs

Quality:

#### • Apps for independent collectors

#### ffordability:

- Market/store plastic bags & glass refund programs
- Increased household separation





# **CLOSING THE GAPS IN PLASTIC RECYCLING**

AIChE Student Design Project: Enable a circular economy of plastics by closing critical gaps in the plastic waste management process.

Deliverables:

- PyOil purification unit to meet specifications for steam cracking, which will upgrade pyrolysis oil derived from plastic waste.
- "Cold eyes review" of a community-based manual sorting facility in Bali, Indonesia, to improve its operation in three aspects: quantity, quality, and throughput.



Sorting

**BALI WASTE** 

# GLOBAL PLASTICS WASTE

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environment: 14.2 ton/day (28

Retained in the wate

# **PURIFICATION UNIT COSTS**



## **PROCESS FLOW DIAGRAM**



### **ENVIRONMENTAL FACTOR**



References

Landfilled in

Low Priority (6

Solving Waste Management Issues together - bali partnership https://www.balipartnership.org/en\_gb/ (accessed May 16, 2023).