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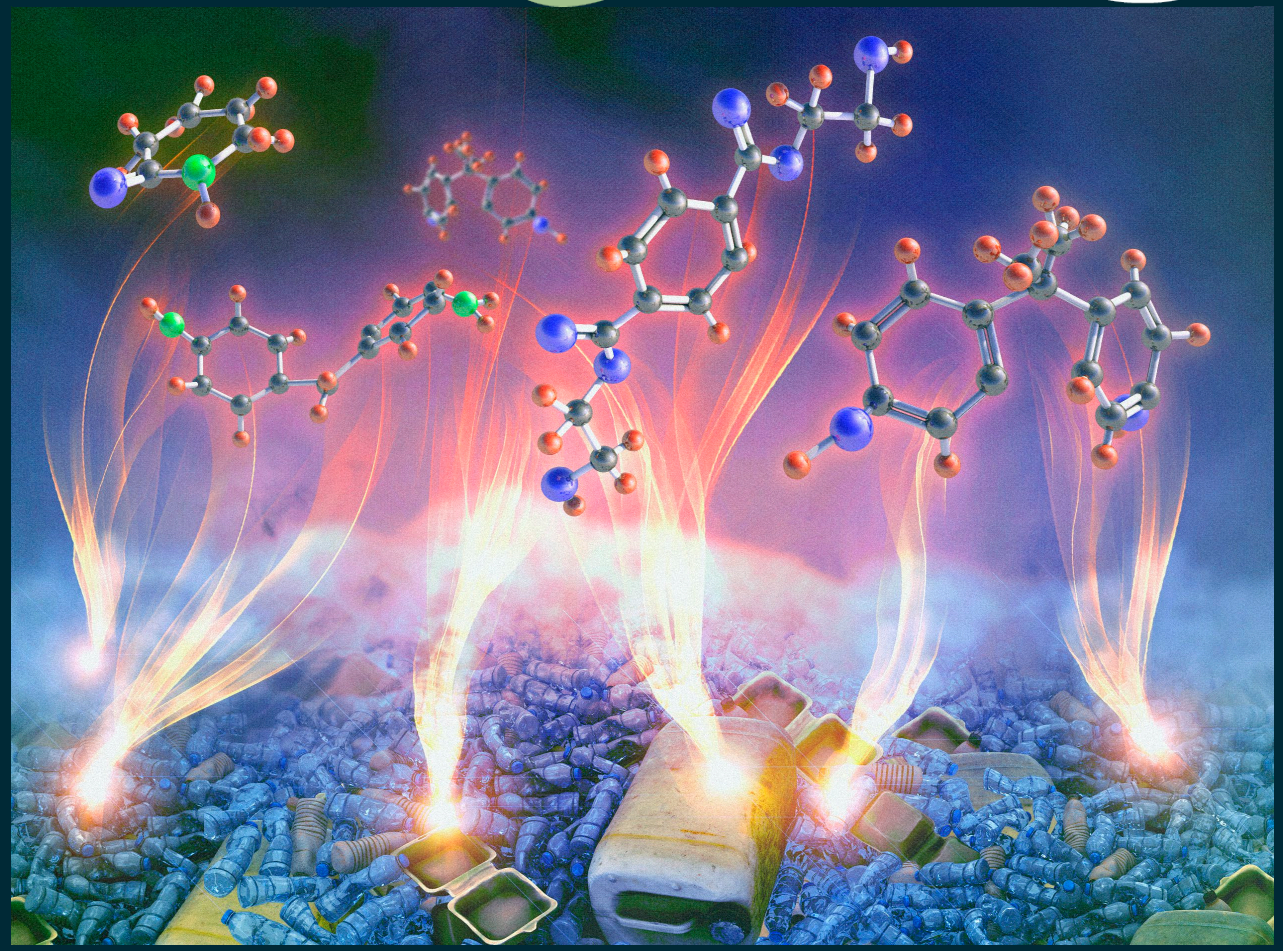


Md Arifuzzaman

Founder & CEO

07.02.2024

Majority of plastic waste is not currently recycled

10% Plastic

Currently recycled

70% Plastic Waste

Ends up in landfills, oceans

Majority of plastic waste is not currently recycled

Considered Unrecyclable

No effective technology

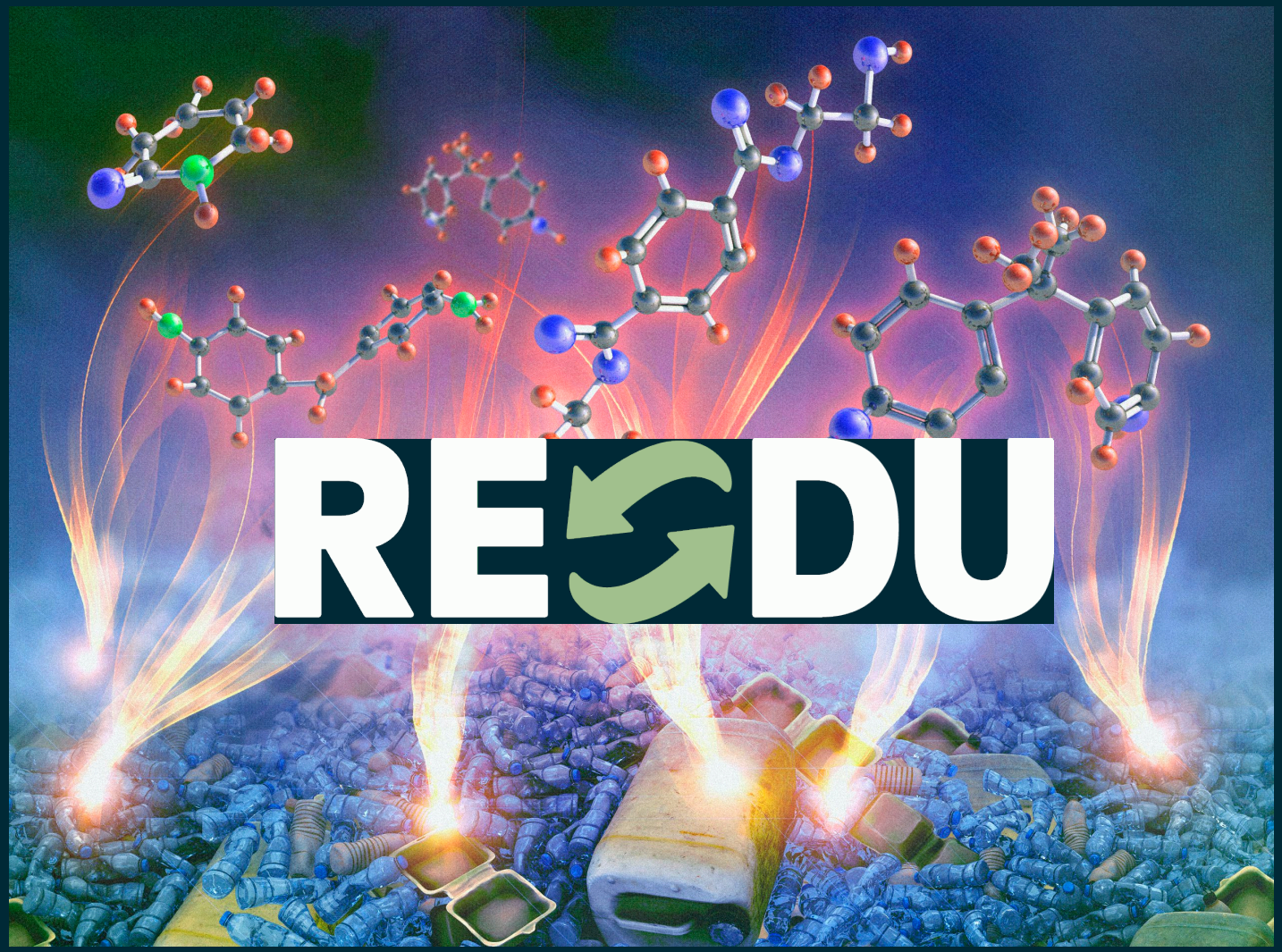
Too Complicated

Mixed stream, multilayered

Not Economical

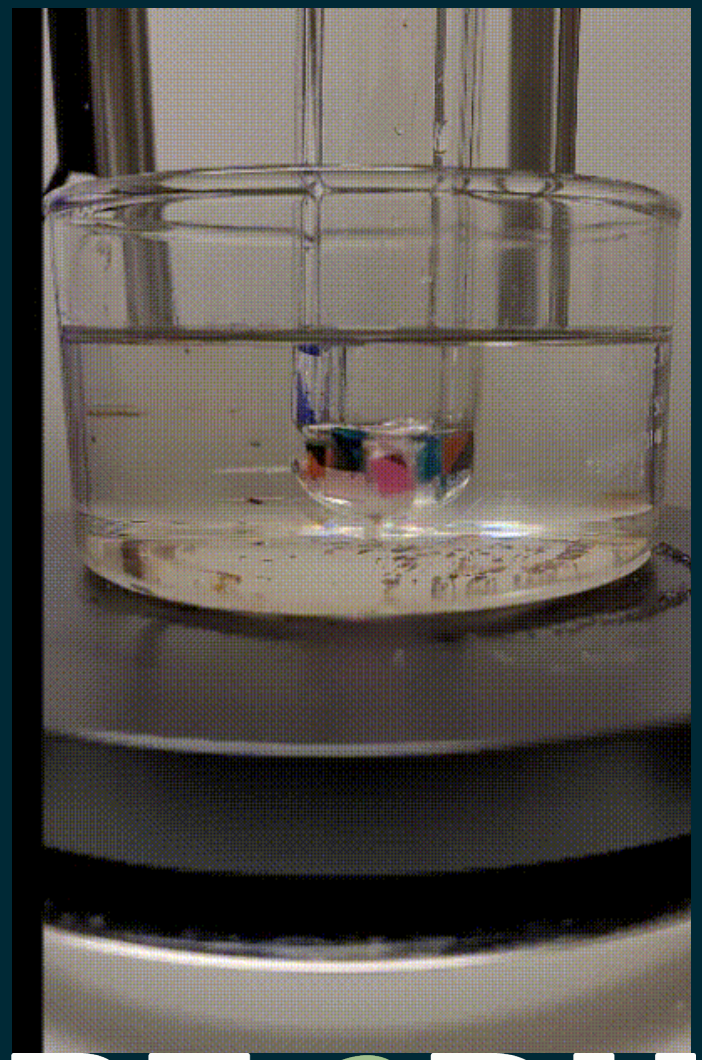
High sorting cost, low value

Rapid deconstruction of mixed plastic waste



- ✓ Mixed Stream
- ✓ Efficient Process
- ✓ Commercial Product
- ✓ R&D License from ORNL

Rapid deconstruction of mixed plastic waste



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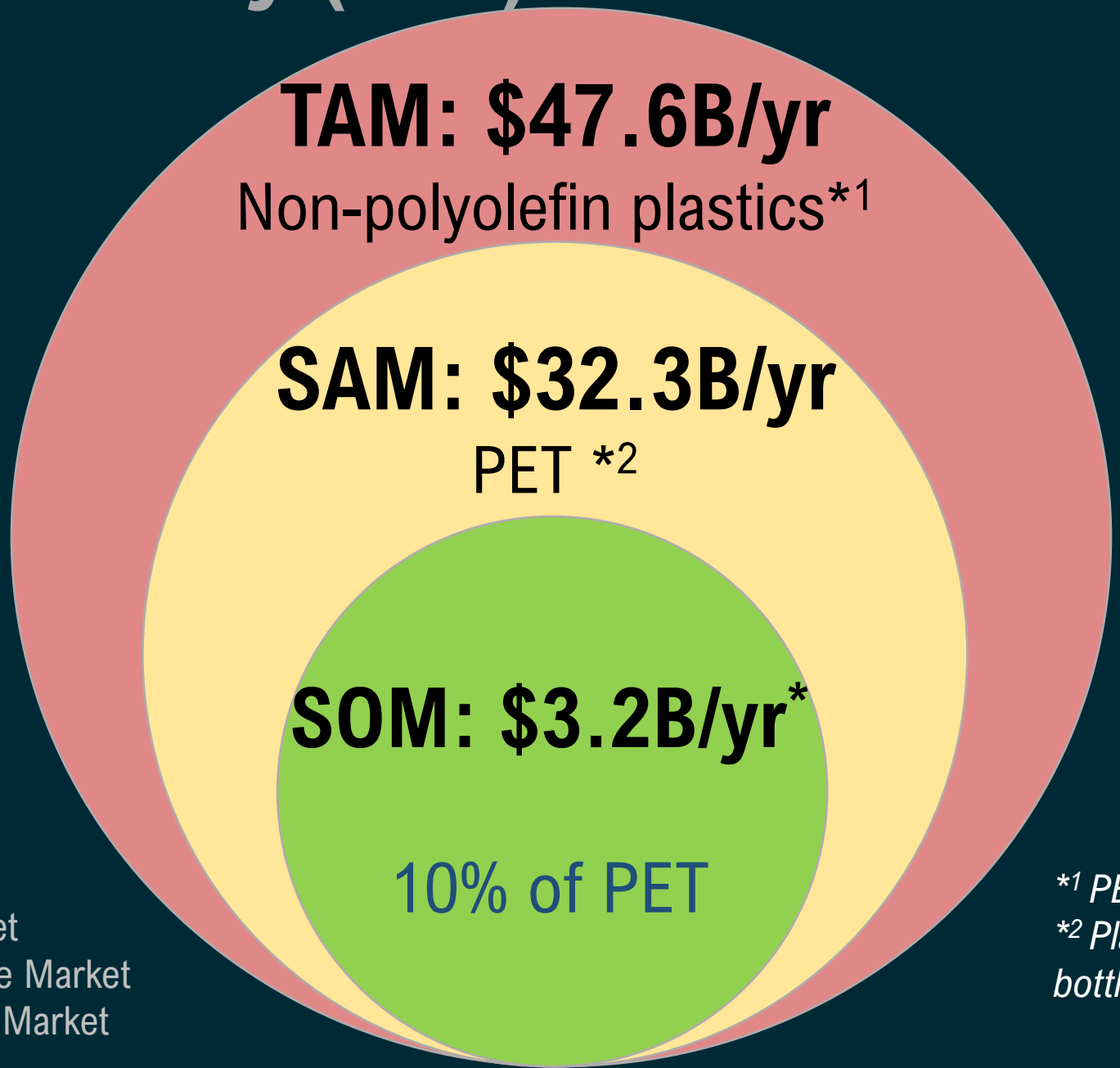
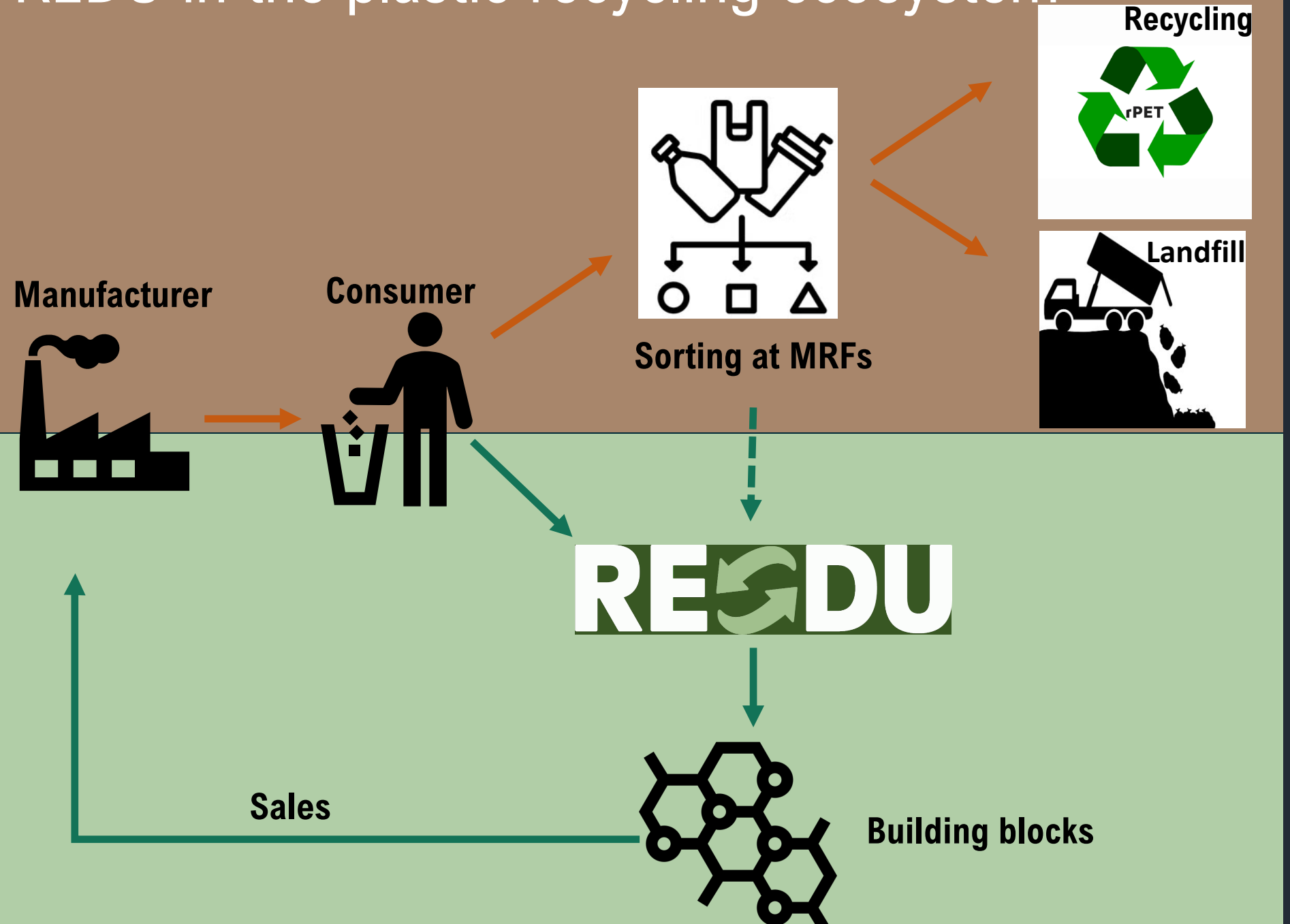
Market Opportunity (PET)



TAM: Total Addressable Market
SAM: Serviceable Addressable Market
SOM: Serviceable Obtainable Market

**1 PET, PU & PA*
**2 Plastic drink bottles, shampoo bottles, food containers*

REDU in the plastic recycling ecosystem



Certain type (PET, PE, PP)

Mechanically recycle

Mixed plastic

Industrial & Consumer waste

Indefinite recycle

Milestone

- ✓Lab Prototype (TRL **4-5**)
- ✓ORNL Technology Innovation Program (**TIP**)
- ✓Customer discovery via **DOE Energy I-CORPS**
- ✓Ongoing R&D research with **DOW, FieldTurf & ISustain**

1g/batch	**1~ 5 kg/batch**	**1mt/day**
Completed	July 2025	January 2026

OAK RIDGE National Laboratory

REGDU

INNOVATION CROSSROADS
OAK RIDGE NATIONAL LABORATORY

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WASTE MANAGEMENT

FACILITIES SERVICES

DOW

BASF We create chemistry

FieldTurf A Tarkett Sports Company

EVONIK Leading Beyond Chemistry

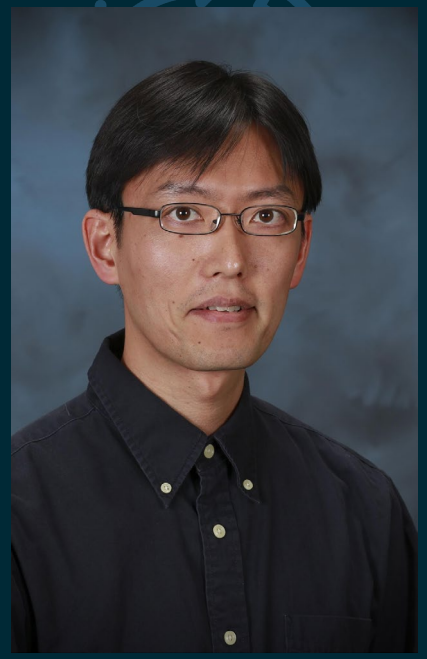
revalyu

SOUTHEASTERN RECYCLING
CARPET & FOAM CARPET PAD RECYCLING

Our Team

Md Arifuzzaman

Founder & CEO



Tomonori Saito

Senior Research Scientist

RESDU

OAK RIDGE National Laboratory

Looking For

- ❑ Build a team
- ❑ Partnership development
- ❑ Process scale up

Photo Credit: Jill Hemman/ORNL

Thank You

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