

9:30 am Pacific Time  
October 2, 2024



## Plenary #2

# Using Zero Waste Solutions and Technology to Divert Reusable Furniture from Landfills

**Speakers:**

**Stacie Johnson**

**Dan Kershaw**

**Joshua Mastromatto**

**Moderator: Mary Lou Van Deventer**

Hosted by:



Day 1 • Zero Waste Businesses & Institutions

**9:30 am Pacific Time  
October 2, 2024**



# **Mary Lou Van Deventer**

**Co-Owner**

**Urban Ore**

**(Moderator)**

**Plenary #2 – Using Zero Waste Solutions  
and Technology to Divert  
Reusable Furniture from Landfills**



**National Zero Waste Conference 2024**

**Day 1 • Zero Waste Businesses & Institutions**

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**Stacie Johnson**  
**Sustainability Manager**  
**Goodwill of the Heartland**

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**Dan Kershaw**

**Executive Director**

**Furniture Bank**

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**Joshua Mastromatto**

**CEO**

**Rego**

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**Goodwill**  
OF THE  
**Heartland**

Zero Waste in Iowa

Stacie Rae Stoffel-Johnson  
Sustainability Manager, TRUE Advisor  
Goodwill of the Heartland, Cedar Rapids, IA



## Sustainability Vision

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Goodwill of the Heartland aims to be a **zero-waste** organization that benefits our people and our planet.



## Goodwill of the Heartland

**Net-Zero**  
Community-Based  
Locally-Led  
Social Enterprise

**Zero-waste depends on all of us keeping this promise, to ourselves & the communities we serve on the daily.**





Zero Waste  
Circular Economy



Triple-Bottom Line Commitment



Education & Training  
650 + Team Members  
Located throughout 19 counties

*Happens Simultaneously*



Implementation



**June 2023 – February 2024**

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**Baseline Data Collection**

**Material Characterization Study**

**Sustainability Plan**

**Lowest Hanging Fruit**

# March 2024 – December 2024

Education

Low Hanging Fruit

can.  
age.

PAPER  
ation.  
birth dates,  
on  
rietary  
al contracts  
and any  
nos, and  
n  
bin.

**goodwill**



## SINGLE STREAM RECYCLING

*Co-Mingled, toss in same bin*

**PIZZA BOXES:** clean cardboard food packaging

**WAX COATED CONTAINERS:** diet drink cartons, juice boxes, ice cream containers, milk cartons

**METAL:** NOT aluminum - most other metal packaging

**PLASTIC CONTAINERS:** #1 - #7 in chasing arrows, packaging with form, includes plastic frozen food trays



1. FLATTEN.
2. TOSS in the Republic bin.
3. GWH is Pays to recycle right!

**goodwill**




## PLAS

SNACK  
CANDY  
USED C  
PLAST  
ZIPLOC



1. FLA
2. TOS
3. GW

**goodwill**




## "DIRTY MIX FIBERS"

*All kinds & sizes of paper products*

**ALL PAPER:** copy paper, index cards, sticky notes, junk mail, envelopes, greeting cards, file folders, fast food paper bags & packaging

**CARDBOARD:** "waffle" liner when torn

**CHIPBOARD:** gray or brown when torn



1. FLATTEN.
2. TOSS in the North Cedar bin.
3. GWH is Paid to recycle right!

**goodwill**



## A

Soft drink

DEP  
ENE  
ALU



1. RIN
2. TOS
3. GW



## **January 2025 & beyond**

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**Plastic Reuse - Recycling**

**Glass Reuse- Recycling**

**Textile Traceability & Transparency**

# **Artificial Intelligence**

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**Federal Regulations**

**Merchandise Analysis**

**Academic Research**



# Federal Regulations : Household Hazardous Materials

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**Hazardous waste**



**Universal waste**

# Furniture Donation Acceptance Policy

Space  
Constraints

Market  
Demand

Condition  
and Quality

Logistics  
and  
Handling

Storage and  
Inventory  
Management

Profit  
Margins

Local  
Competition

Community  
Needs

Operational  
Costs

Customer  
Experience



# **Biogas, Biofuels, and Biochar**

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**Pyrolysis and Depolymerization Studies**

**Catalytic Conversion Research**

**Fuel Quality and Analysis**

**Waste Management Perspectives**





**Goodwill**  
OF THE  
**Heartland**

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# From Pilot to Impact: Scaling Zero-Waste Solutions in Furniture

Speaker:

**Dan Kershaw**



Hosted by:  
Day 1 • Zero Waste Businesses & Institutions

# Truths for your Community

Proud Member of

FURNITURE BANK

**THE PICTURE ISN'T REAL.  
THE REALITY IS.**



A person is sitting on the floor in a dimly lit, empty room. The room has a large window with a view of a city. The person is looking out the window. The floor is wooden and there is a rug on the floor. The overall mood is somber and lonely.

**Millions of  
people are  
housed**

**...but homeless.**

**Furnishings are  
the **third** most  
expensive  
purchase that  
you make  
in your life!**

(preceded by a **house and a car**).  
(excluding children 😊)

FURNITURE  BANK

A photograph of a cluttered room. In the center, a mattress is placed on a dark wood-grain floor. On the mattress, there is a white pillow, a pair of black and yellow sneakers, and a pile of clothes including a white shirt and a brown jacket. To the right of the mattress, more clothes and papers are scattered on the floor. In the background, a window is covered with a blue and white checkered curtain. A white electrical outlet is visible on the wall to the right of the window. On the left wall, there is a power strip with a black cord plugged into it. A small green object, possibly a lighter, lies on the floor near the mattress. The overall scene suggests a cramped and disorganized living space.

**After rent, utilities,  
and food...**

A collage of images related to moving. The top half shows several cardboard boxes, some open, with two brown glass beer bottles in the center. In the background, a grey sofa is visible. The bottom half shows a large pizza in an open cardboard box. The text "Who loves moving furniture?" is overlaid in the center in a bold blue font.

**Who loves moving furniture?**

**WE'LL DO IT FOR YOU!!!**





# Truths for Retailers



# No perfect solution for retail

Disposal Option?	
Destroy	<b>Destroy in Field</b> (Incineration )
	<b>Landfill</b> (Junk It / Dump It)
Liquidate	<b>Secondary Markets</b> (Liquidation, Discounting & Re-commerce)
	<b>Thrift Stores</b> (Private & Nonprofit Secondary Markets)
Gift	<b>Donation</b> (Charities)



**Brand Risk?**  
**CSR/ESG?**  
**Who Pays?**  
**Who Transports?**  
**Costs?**  
**Volumes?**  
**Revenues?**



**12+ million tons  
of furniture waste  
annually**

An aerial photograph of a lush green forest. A light-colored, circular path winds through the trees, forming a large loop. The path is surrounded by dense, vibrant green foliage. The overall scene is bright and natural.

# **Retailers want sustainable circular solutions\***

**\*Same convenience,  
costs and complexity  
as the current linear  
solutions**

# IKEA Canada & Furniture Bank's

# Circular Model



# 2018 IKEA'S PIVOT

## Towards a Circular and Inclusive Future

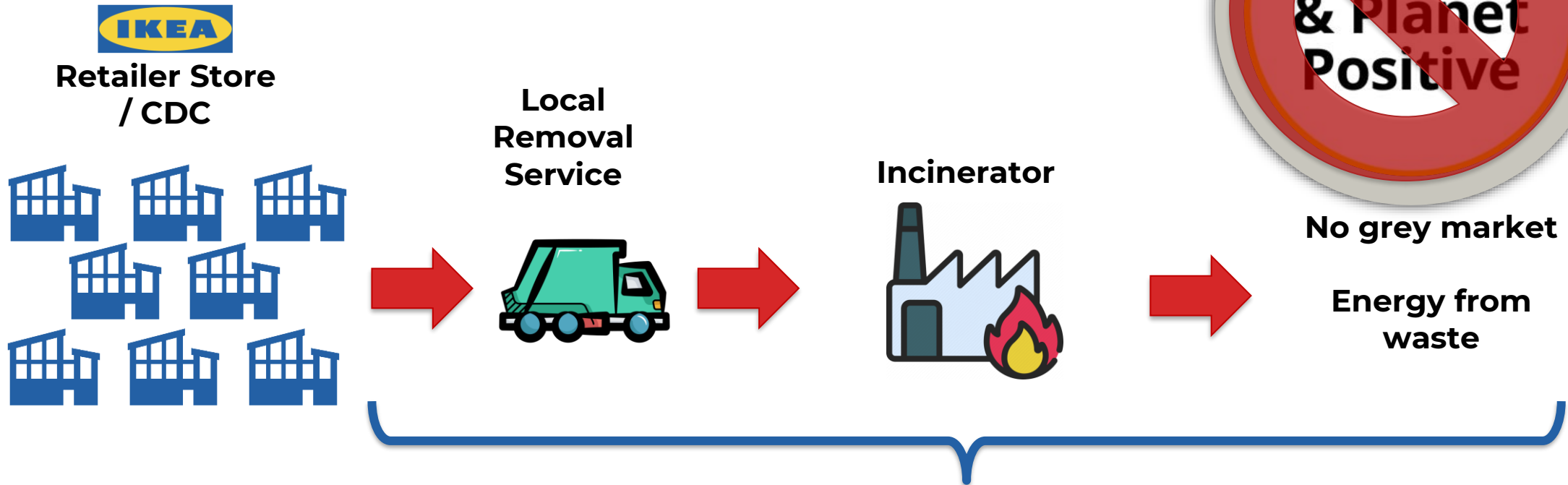
“become climate positive and circular by **2030**, leaving a positive impact on society.”



**People  
& Planet  
Positive**

shed: June 2018. Updated: November 2023

# IKEA's old linear model



**Daily linear operating process**  
 (efficient, cost effective, BUT anti- People Planet 2030)

2019

FURNITURE BANK  
YOUR USED FURNITURE WILL CHANGE A LIFE

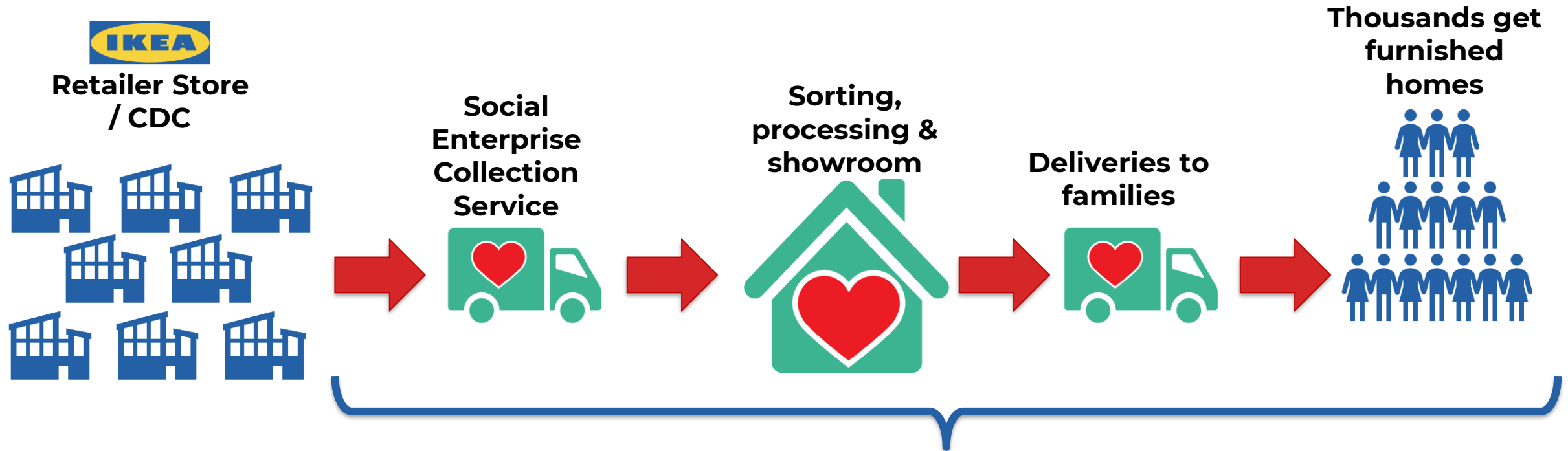


**“There must be a  
WIN WIN WIN  
solution here?”**



# Furniture Bank does the heavy lifting

## Scalable and Sustainable



**From a store to a new home in 72 hours.**  
(no resale, no grey market, no brand risk)

# Paid Transport...

(No resale of items)

- Social enterprise model provides cubic feet of space  to fill with excess

- **30-100 families** can be supported with 1 trip\*



# Impacts

2020 to  
2023

• 653  trips


FURNITURE BANK



- 28,000 mattresses & items
- 81% reuse rate
- 1,425,992 Kg of Carbon
- 13,305 families supported

# Paid Transport...

(No resale of items)

- Social enterprise model provides cubic feet of space  to fill with excess
- **30-100 families** can be supported with 1 trip\*





# 2024 and beyond

- **Expanding pilots**
  - More Product Types
  - Give Back Programs
  - On Site Drop Offs
- **Taking the model across Canada!**





regoo

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Digital utility meter for waste





Solving overlooked climate challenges

 **Mission**

Building a greener world by translating data into action



# POV: You just finished finals and realized you need to move out

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# A non-exhaustive list of trash Penn students leave on the streets of Philadelphia

As students move out for the year, it's "Penn Christmas" — or trash apocalypse.



A large pile of trash on 42nd Street near the University of Pennsylvania campus on Tuesday. For graduation, piles of furniture and garbage often appear near off-campus housing as students move out. Photo by Monica Herndon / Staff Photographer

## Conquering the Trash Mountain After College Move-Out

To diminish the size of end-of-year piles, colleges and universities around the country are taking proactive measures to manage extra trash and recyclable materials.

ADVERTISEMENT

Willona Sloan  
July 30, 2018

5 Min Read



**ONE SOURCE. BIG SOLUTIONS.**  
POWERED BY **BTR**  
[LEARN MORE](#)

TCD The Cool Down + Follow

## College student reveals the ludicrous problem left behind after the end-of-year rush to move out: 'This makes me livid'

Story by Jane Donohue • 1mo

### Stories

**Industry Insights**  
Republic Services, Inc. Appoints Tom Linebarger to Board of Directors  
Feb 9, 2024



# The same basic problem hurts universities every year

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Current Problem



Time



Money

Missed Opportunity



Student  
engagement

# Removal needs to be easy

01

Easy solution for students

02

Easy for the apartment buildings

03

Easy for the community

**rego** DASHBOARD

ACTIVE COMPLETED RECENTLY VIEWED SAVED

Tenant	Status	Uni	Item count	Submitted	Scheduled Date
<input type="checkbox"/> Joshua M.	Ready to Sche...	129	5	05/01/2024	Not Scheduled
<input type="checkbox"/> Brandon C.	Ready to Sche...	237	6	05/22/2024	Not Scheduled
<input type="checkbox"/> Aubrey S.	Scheduled	358	2	05/22/2024	05/28/2024
<input type="checkbox"/> Jake J.	Submitted	459	1	05/23/2024	Not Scheduled

Welcome back, **Brandon!**  
Let us know when you'd like to get your chair picked-up!

[Schedule my pick-up](#)

**Brandon C.**  
Premier Apartments  
Unit 777

**rego** Explore certifications

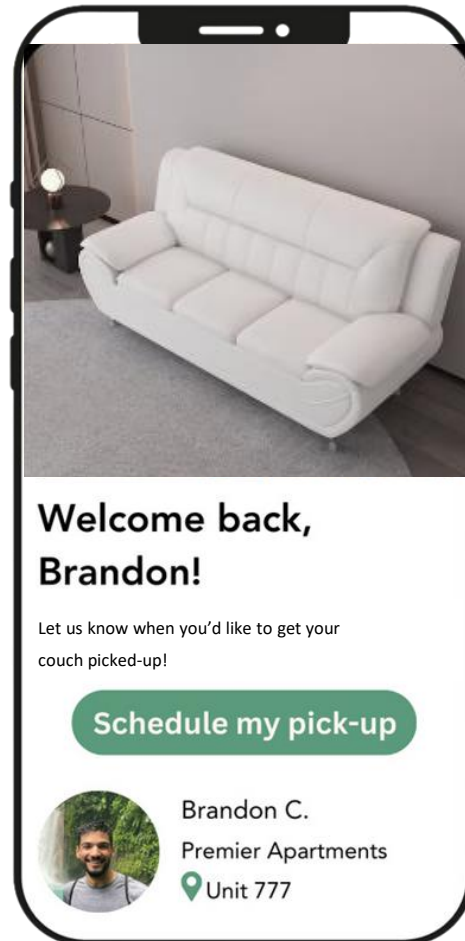
Member since 2024  
57 points to next reward

Weight Diverted: 104 ton(s)  
GHG's Avoided: 300 tonne(s) of CO2e  
Equivalent To: 345 Grizzly Bear(s)  
Diversion Rate: 92% (Goal: 70%, 22.40%)

Home  
Pick-ups  
Reporting  
Dashboard  
Export  
Material type  
Time period  
Location  
Vision tools

Weight (lbs)  
Diversion Rate (%)  
Filter  
Integrations

# Take photos of what you need removed



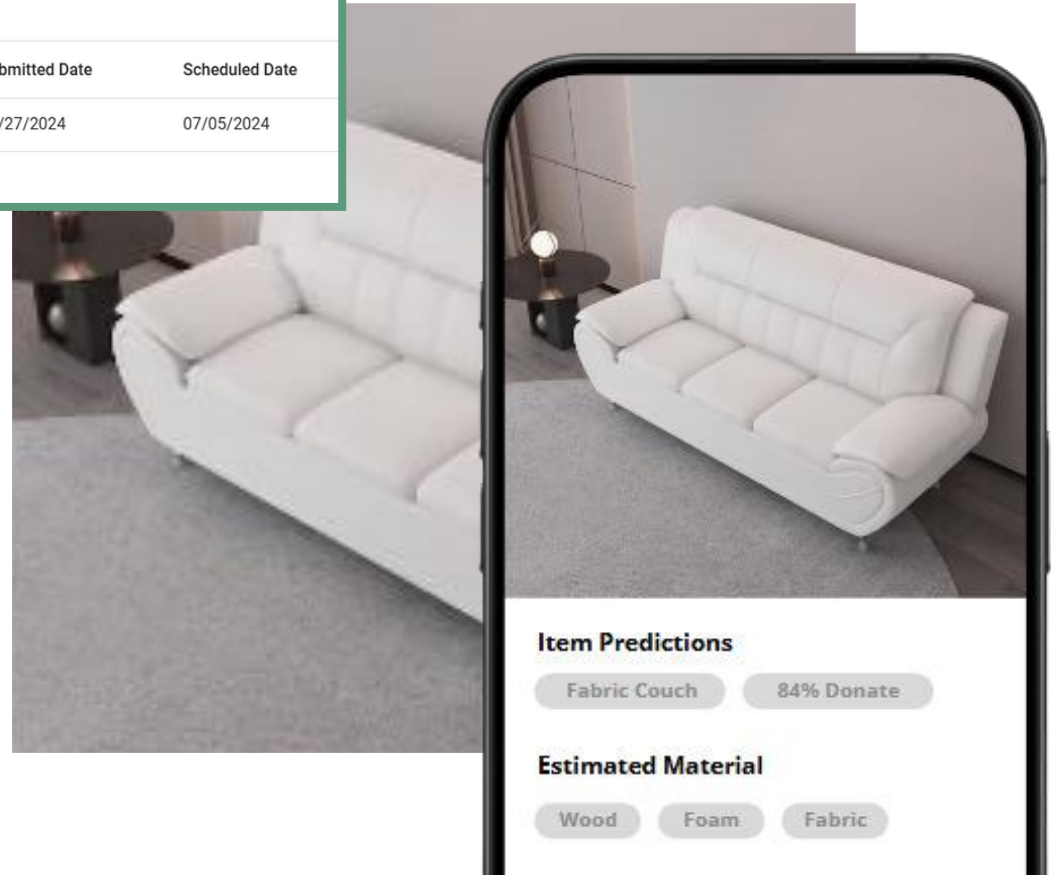
# Automate hauls and waste diversion services from the photo(s)


Member since 2024  
57 points to next reward


- Dashboard
- Orders
- Reporting








ACTIVE COMPLETED RECENTLY VIEWED SAVED

Name	Status	Building	Service	Total Items	Submitted Date	Scheduled Date
<input type="checkbox"/> Brandon C.	Scheduled	Greystar	Couch haul	1	06/27/2024	07/05/2024



**rego** DASHBOARD 

 Member since 2024  
57 points to next reward

-  Home 5
-  Pick-ups
-  Reporting
-  Material type
-  Time period
-  Location
-  Vision tools

ACTIVE   COMPLETED   RECENTLY VIEWED   SAVED

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<input type="checkbox"/> Jake J.	Submitted	459	1	05/23/2024	Not Scheduled
<input type="checkbox"/> Domenic M.	Scheduled	568	4	05/24/2024	07/20/2024
<input type="checkbox"/> Brianna D.	Scheduled	679	1	05/23/2024	05/28/2024
<input type="checkbox"/> Ryan R.	Scheduled	789	2	05/22/2024	05/31/2024

1-7 of 11 < >







2 Kitchen tables

27 bags of clothes

3 couches

## Current Stop ✕

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### Pickup Instructions

**Pickup Address**  
1055 Brady Ave NW  
Atlanta, GA 30318

---

### Contact Information

**Contact Name**  
Brandon Castagna

**Phone Number**  
(609) 495-5681

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### Items to Pickup

**Kitchen Table** (x2)  
Unknown

**NOT PICKUP UP**

**CONFIRM**

3 couches

45 laptops

# rego

Explore certifications



Member since 2024

57 points to next reward

Home

Pick-ups

Reporting

Dashboard

Export

Material type

Time period

Location

Vision tools



Weight Diverted

104  
ton(s)



GHG's Avoided

300  
tonne(s) of CO2e



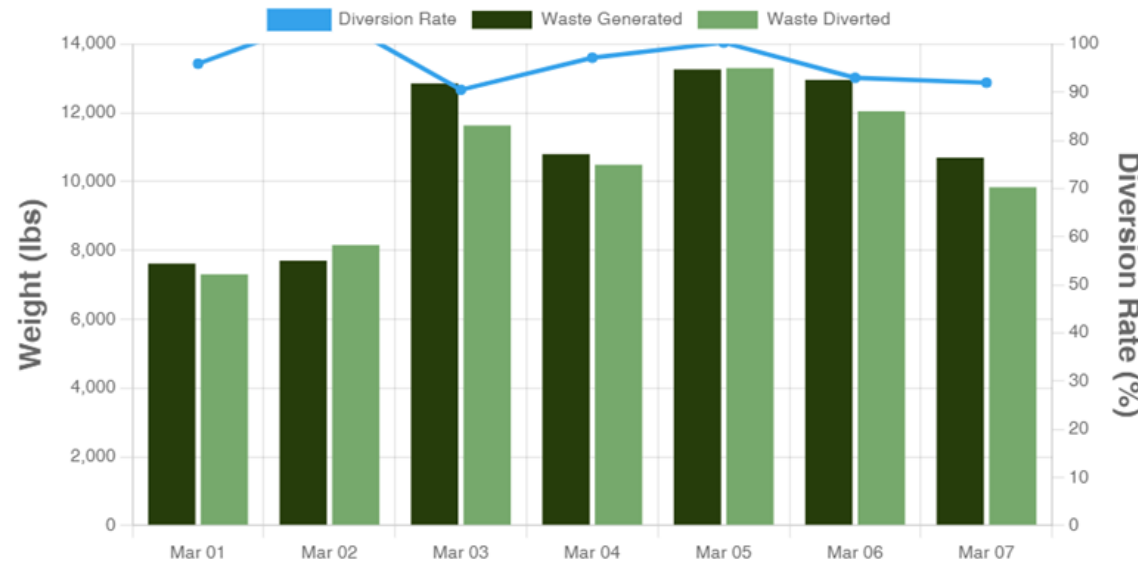
Equivalent To

345  
Grizzly Bear(s)

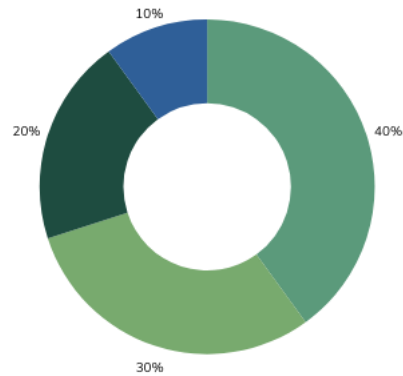


Diversion Rate

92%  
Goal: 70% 22.40%



Diversion Rate (%)



Filter

Integrations

27 bags of  
clothes

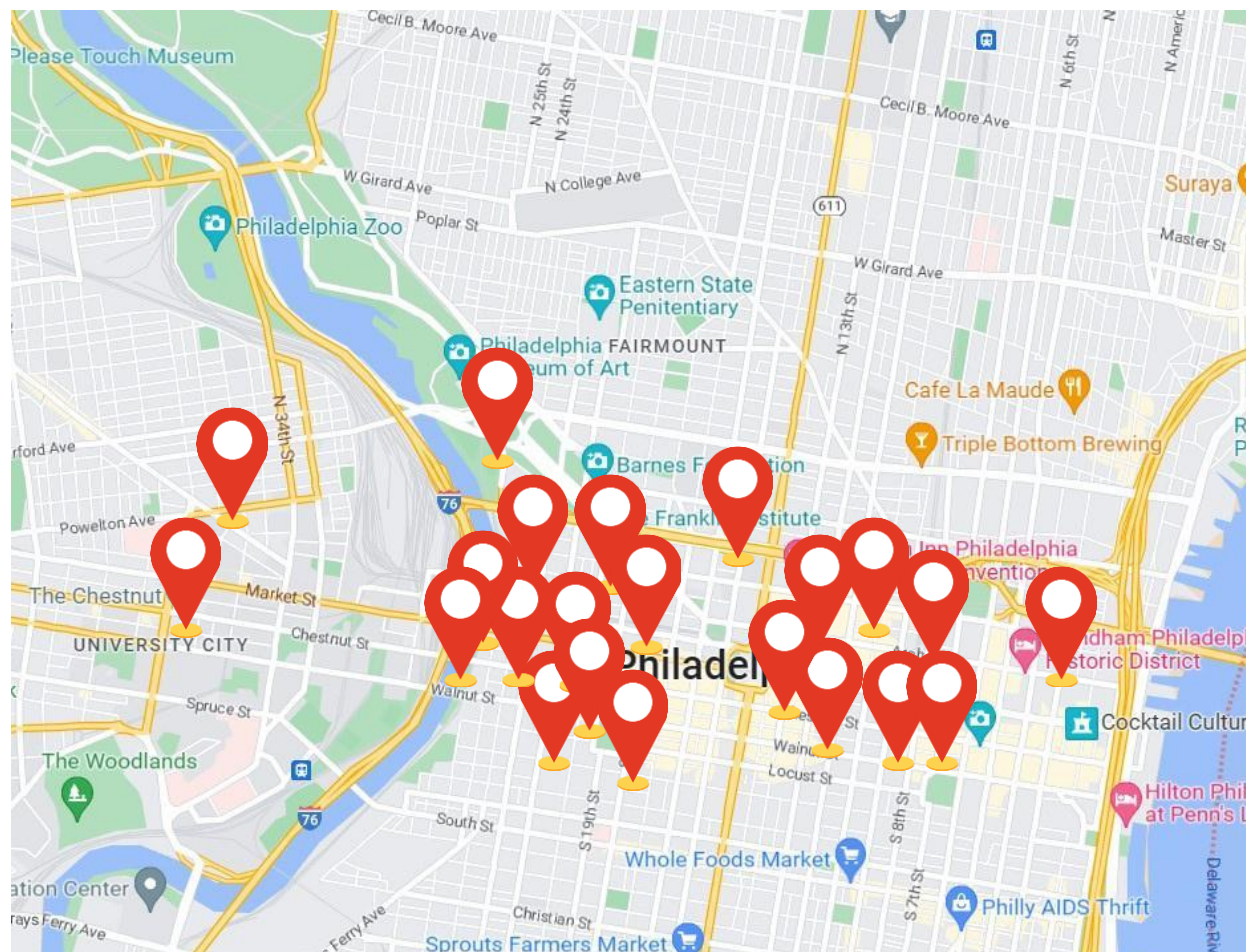
# Case study: 2024 Holiday Donation Drive

01 25 Apartment Buildings

02 75 furniture items and  
> 20 bags of clothing

03 \$9,000 saved

04 \$8,000 revenue generated



# Impact

Over  
200,000 lbs

>80%

50%

Customers  
and partners:

techstars



Nasdaq

60 YEARS

campus apartments®

Leading Cities



Entrepreneurial Center

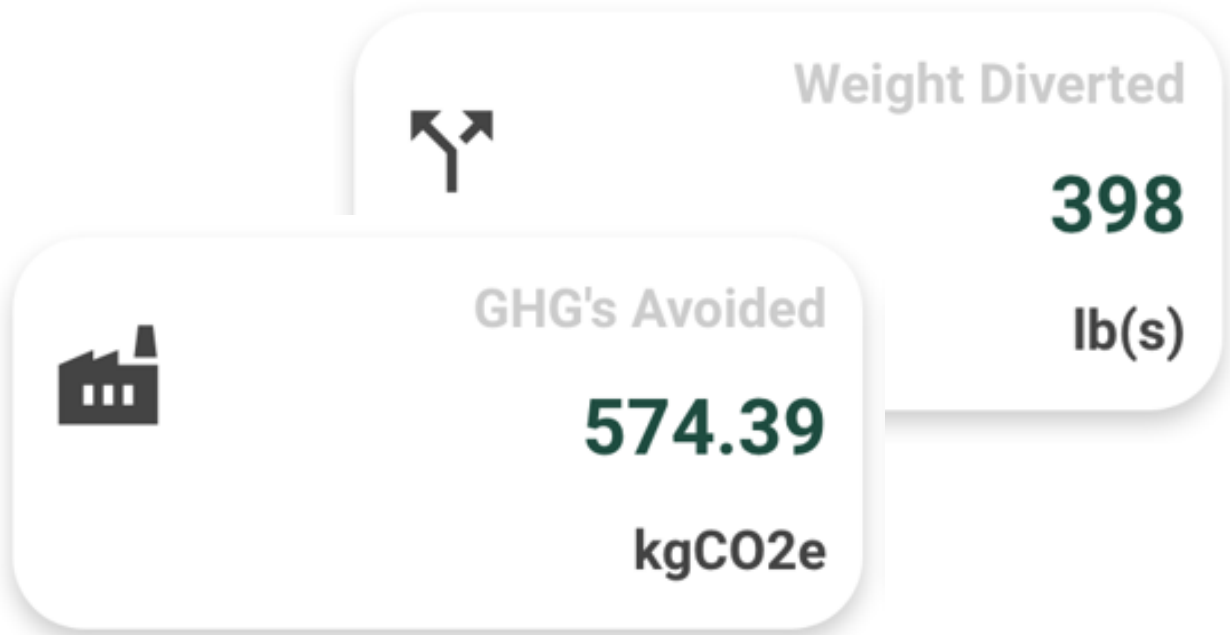


gener8tor



Habitat for Humanity®

ReStore®



**Cardboard Recycling**

It looks like you have cardboard present in your landfill waste stream. Cardboard can take up a considerable amount of space and lead to...



**Reduce Waste from Move Out**

Implement a move-in/move-out recycling and donation program to minimize waste generated from discarded furniture, electronics, and...



# Thank You

Josh Mastromatto: Co-founder, CEO

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<https://liverego.com>

