



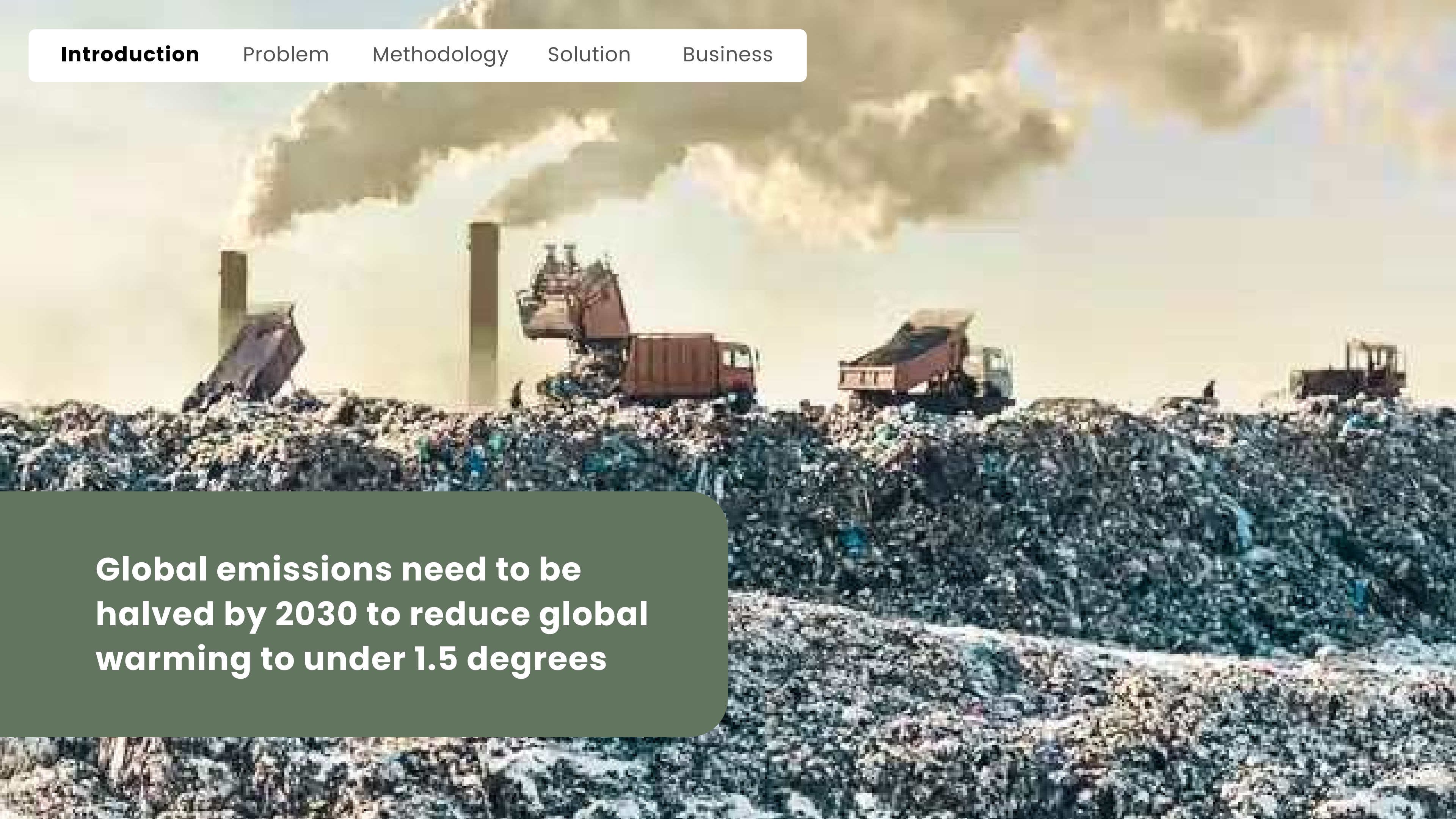
# ZERO CCW

WASTE IS WEALTH. DON'T BURY IT .

Design Strategy Capstone  
MS-SDM'24, Parsons School of Design

**BY SELEN SHOJAEI**



A photograph of a massive industrial waste site, likely a landfill or incinerator. In the background, two tall smokestacks emit thick, dark plumes of smoke that fill the sky. Several large trucks, some with open-top cargo areas, are parked or moving across a vast, uneven landscape covered in a thick layer of dark, charred waste material. The scene is hazy and polluted, illustrating the scale of industrial emissions and waste.

**Global emissions need to be halved by 2030 to reduce global warming to under 1.5 degrees**



**Imagine turning what's seen as waste into valuable resources that benefit our environment.**

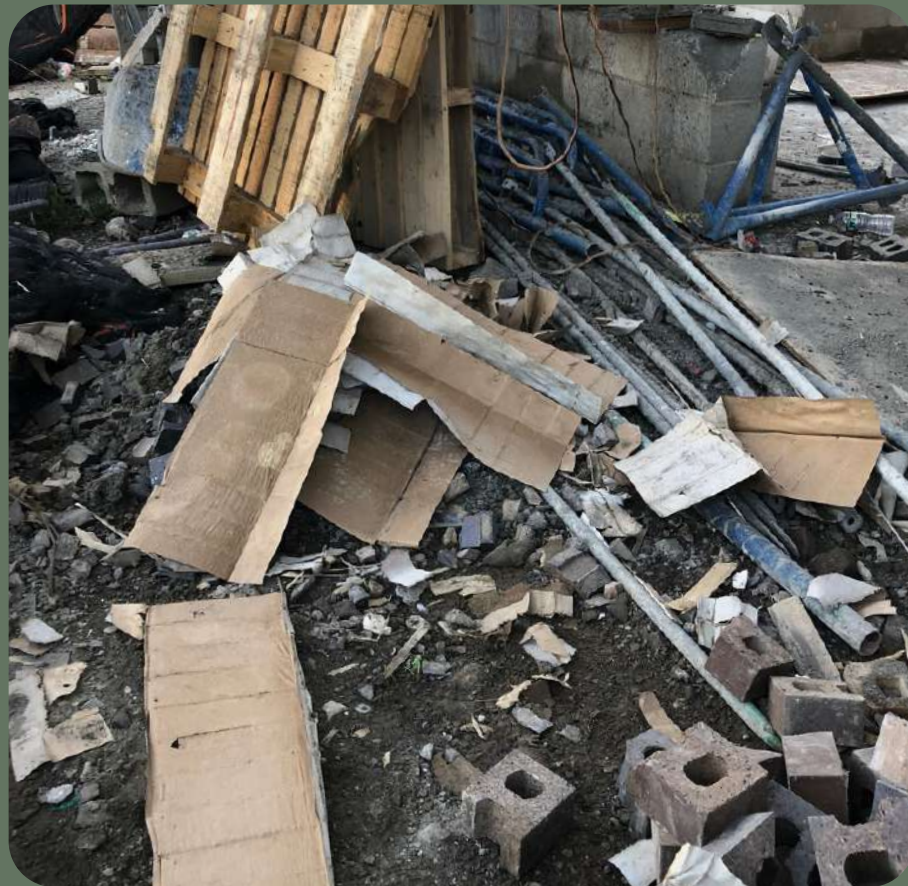
Introduction

**Problem**

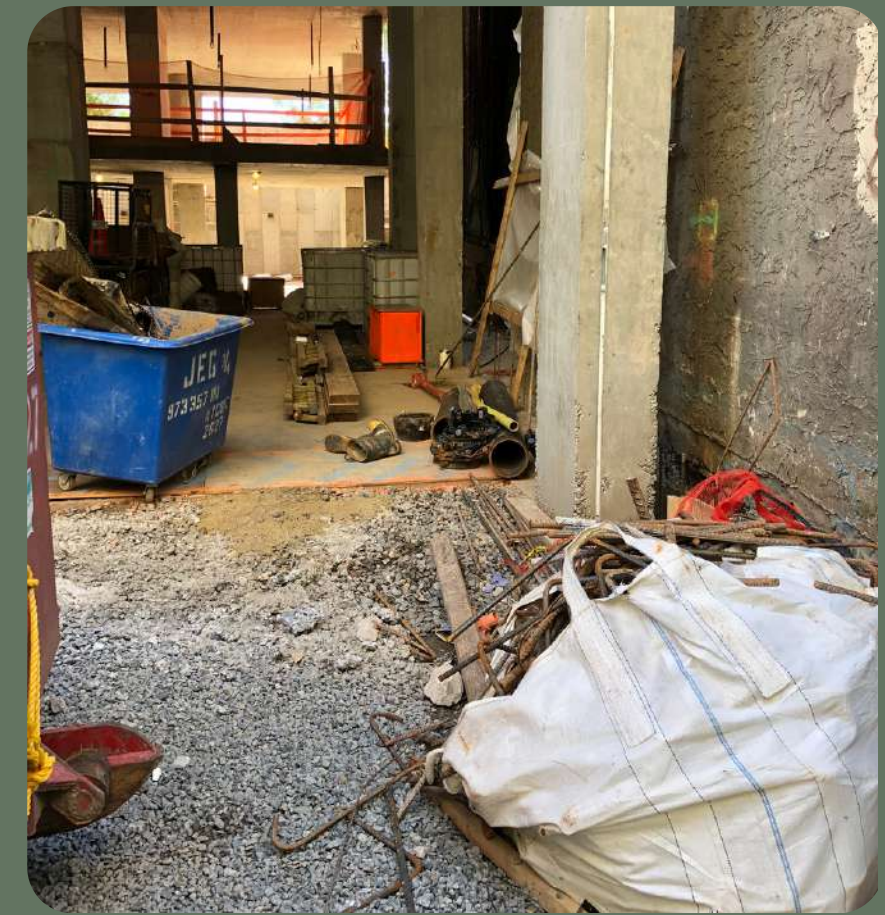
Methodology

Solution

Business



**Material challenges arising on construction Sites regarding the collection, storage, classification, and sorting of materials caused by demolition operations.**



Introduction

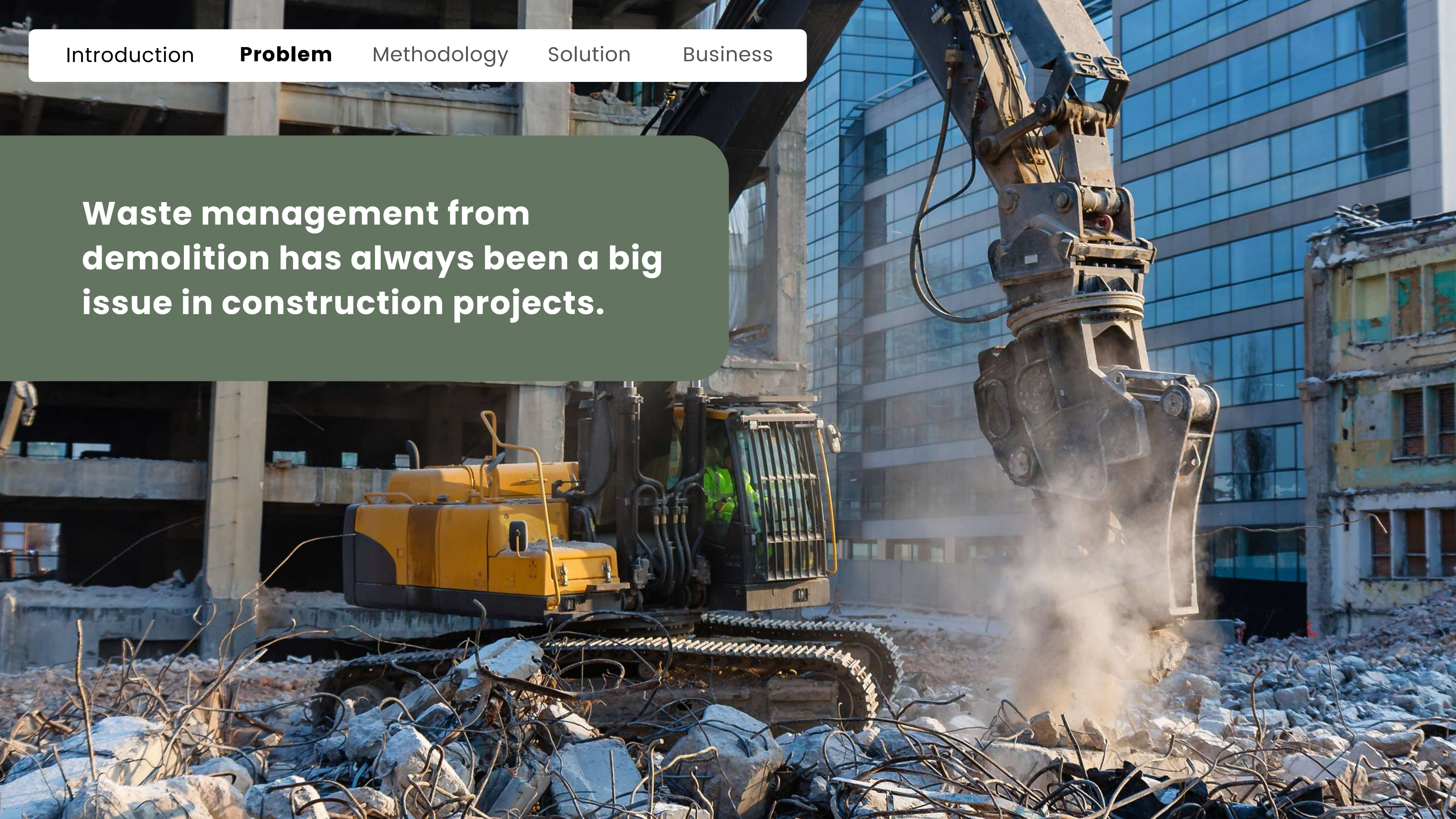
**Problem**

Methodology

Solution

Business

**Waste management from demolition has always been a big issue in construction projects.**



Introduction

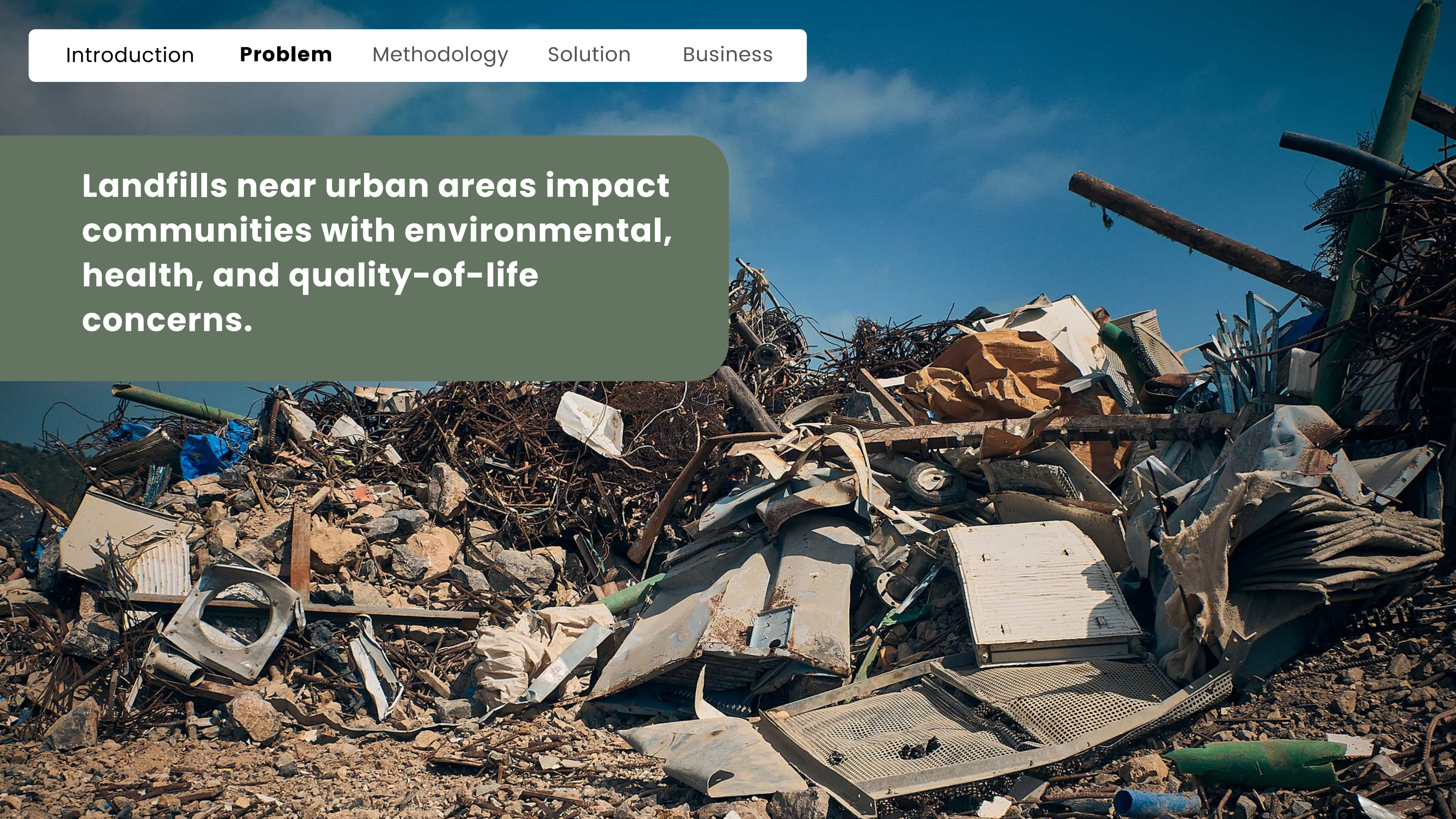
**Problem**

Methodology

Solution

Business

**Landfills near urban areas impact communities with environmental, health, and quality-of-life concerns.**



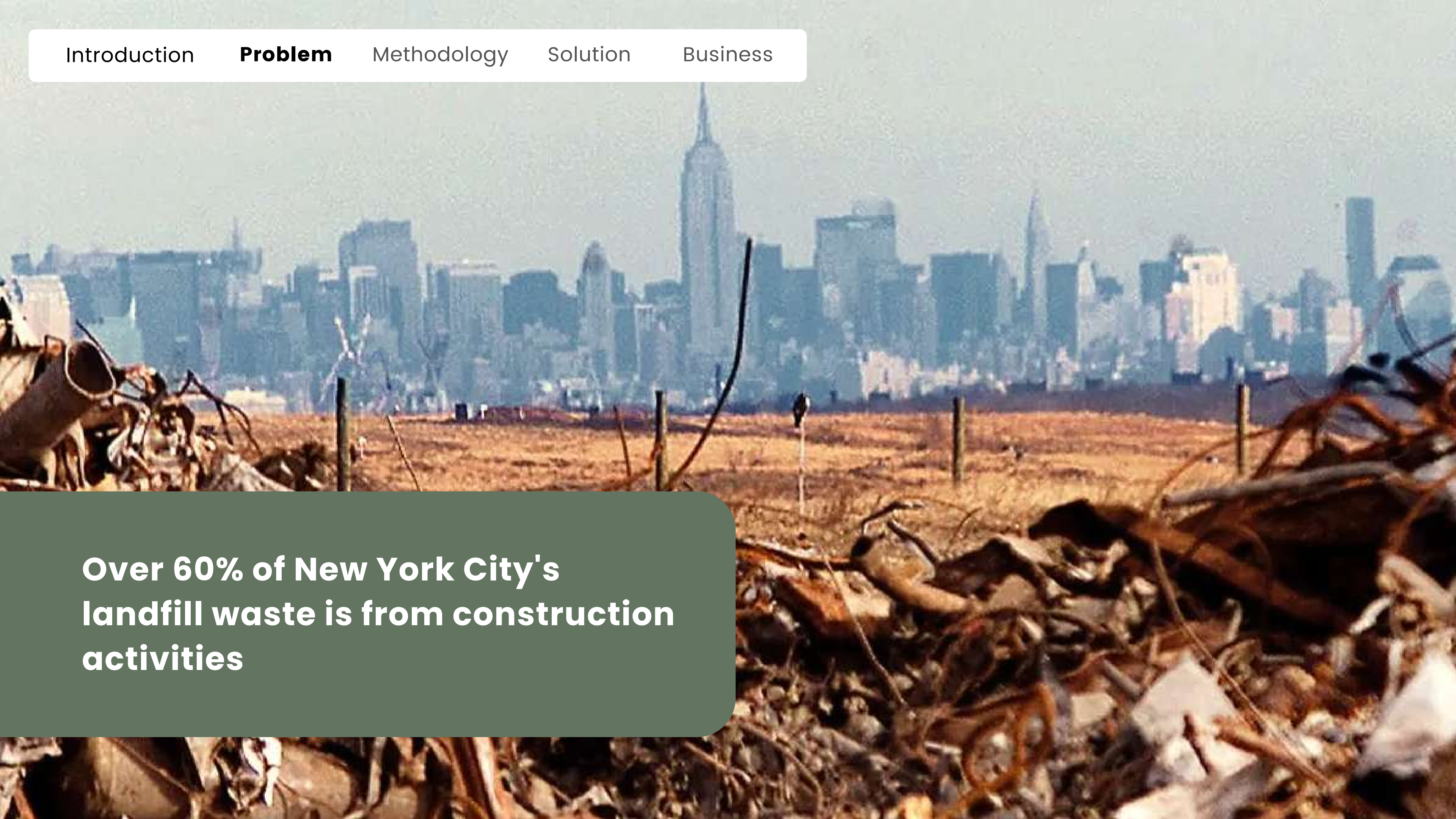
Introduction

**Problem**

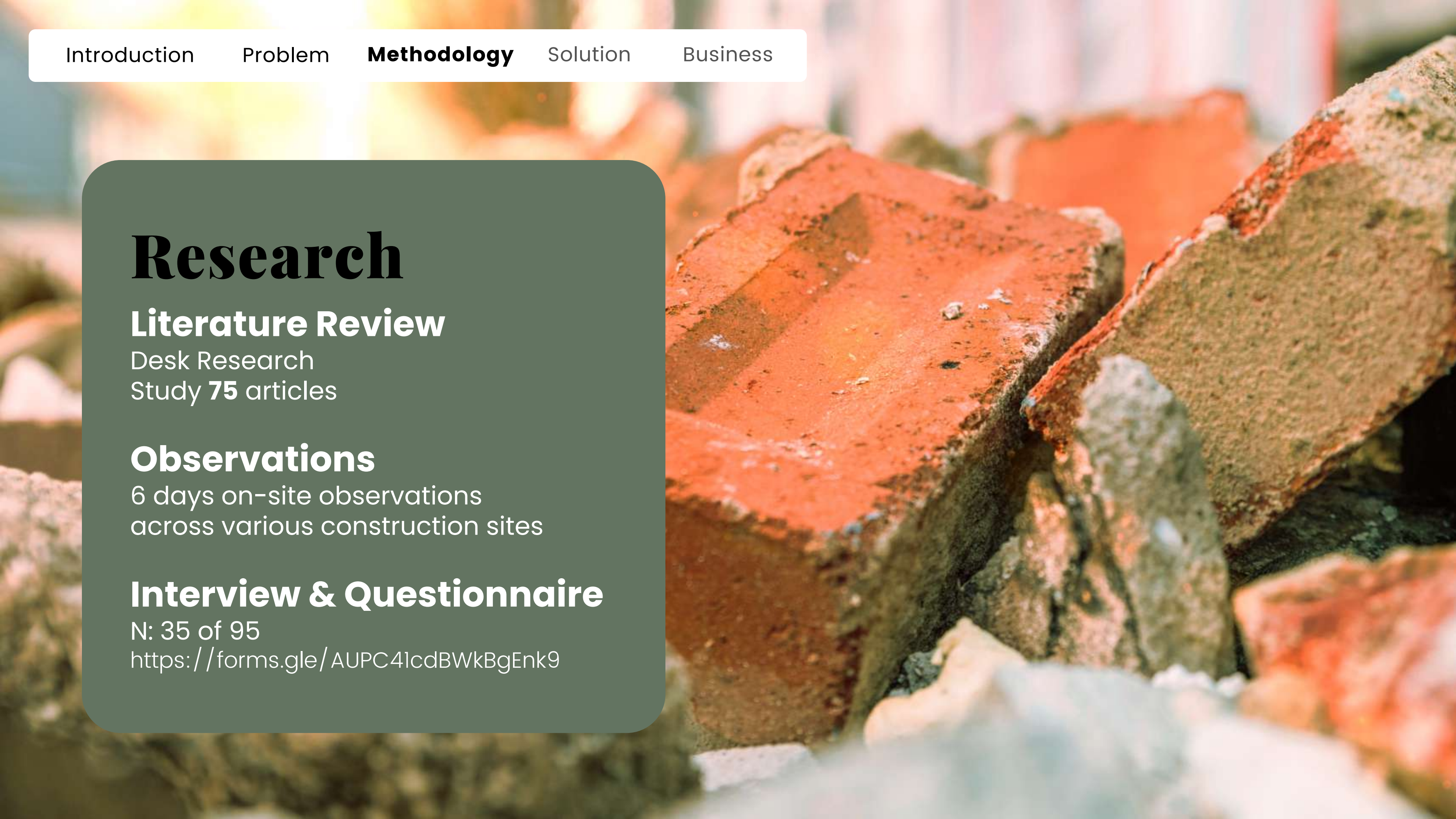
Methodology

Solution

Business

A photograph showing a large pile of construction debris and rubble in the foreground, with a fence line separating it from a flat, brownish field. In the background, the New York City skyline is visible under a hazy sky, with the Empire State Building being the most prominent structure.

**Over 60% of New York City's  
landfill waste is from construction  
activities**



Introduction

Problem

**Methodology**

Solution

Business

# Research

## Literature Review

Desk Research  
Study **75** articles

## Observations

6 days on-site observations  
across various construction sites

## Interview & Questionnaire

N: 35 of 95  
<https://forms.gle/AUPC4lcdBWkBgEnk9>

# Insights

## 1 Logistical and Operational Challenges

- Limited Space
- Limited Time
- Challenging Materials

## 2 Regulatory and Market Challenges

- Lack of incentives and disincentive policies
- Lack of certifications and standards for used materials
- Lack of a centralized market for reuse materials

## 3 Informational and Coordination Challenges

- Lack of information and knowledge
- Lack of middle organization for coordination and facilitation
- Expensive process

# How Might We

**minimize** the amount of construction demolition waste sent to landfills  
**to reduce** greenhouse gas emissions and  
**decrease** the extraction of natural resources



# Introducing

# ZERO CDW

WASTE IS WEALTH. DON'T BURY IT .

Zero CDW (Construction Demolition Waste) is a platform designed to transform construction waste into valuable resources, to reduce landfilling of construction debris. It empowers stakeholders in the construction industry to effectively manage and repurpose demolition waste, fostering sustainability and environmental responsibility.



# I'm Selen Shojacee!

Architect

Sustainability Strategist

Design Researcher



I have an interest in advancing sustainable approaches in construction and architectural design while minimizing environmental impact in the construction industry.

I've dedicated my career to addressing environmental challenges and creating positive change through design.

I'm passionate about Sustainability, Circular Economy, and Design innovation which led me to develop this initiative.

# Value Proposition

**We provide a holistic approach to construction waste management by combining technology, expertise, and government support to drive sustainable outcomes**

# What We Offer

- **Waste Management consulting and support:**

Expert guidance to optimize waste management and minimize environmental impact.

- **Reuse Ideation Hub:**

Unlock creative solutions for repurposing materials, where we turn construction waste into innovative resources.

- **Reusable Material Marketplace:**

Access diverse reclaimed materials, reducing costs and promoting circular economy practices.

- **Courses and Knowledge Center:**

Educational resources to develop skills in sustainable construction.

- **Clean Building Certification:**

Recognition for eco-friendly construction practices, unlocking benefits like tax incentives.

# First Offering

# Waste Management Consulting and Support

The first, and our main one, waste management consulting and support section is the central hub that provides to different audiences. where needed to enter information specific to the project.

Once the details have been submitted our experts will review these details to understand the requirements of the project.

We also visit the project site and gather all the necessary information. All these materials are coded, and a plan is prepared for the demolition mechanism, including separation, transportation, and storage of materials. Recyclable and non-recyclable materials are also assessed.

We help the contractor to know how much of the materials from the old building can be used in the new one for him or others, which helps them in cutting down costs.



# Alex

## Construction contractor

- Has a contract for a new building
- Finding ways to save money on construction

This is Alex, and he is a construction contractor. What is a construction contractor?

A person or company responsible for managing building projects, including hiring workers and sourcing materials to finish building projects.

Alex just got a project to construct. He wants to budget effectively and after researching, discovers Zero CDW.

# Find Your Role

Our platform serves as a hub where contractors, developers, and stakeholders can collaborate to minimize construction demolition waste. Together, we strive to build a future where construction projects not only meet the highest standards of quality and efficiency but also contribute positively to the preservation of our planet.



A professional responsible for overseeing and executing building projects

Construction Contractor



An individual who acts as both the owner and the builder of a construction project, overseeing its planning, management, and execution.

Builder



The individuals or entities responsible for either owning or leasing a property, respectively

Owner/ Tenant



An intermediary or business entity or user that purchases and sells reclaimed construction materials for reuse in new building projects

Material Buyer/ Seller



## Personal/Company Information

First name \*

Last name \*

Company Name \*

Email \*

Street Address \*

Street Address Line 2 \*

City \*

Region/State/Province \*

Postal / Zip code \*

Country \*

Code \*

Phone \*



At Zero CDW, we are passionate about revolutionizing the construction industry by promoting sustainability and reducing waste.

Our platform serves as a hub where contractors, developers, and stakeholders can collaborate to minimize construction and demolition waste. With a focus on innovation and environmental responsibility, we provide expert guidance, facilitate material reuse and recycling, and offer comprehensive solutions to create cleaner, greener, and more efficient construction practices. Together, we strive to build a future where construction projects not only meet the highest standards of quality and efficiency but also contribute positively to the preservation of our planet.





## Project Information

Estimated Start Date \*

Estimated End Date

Project Type \*

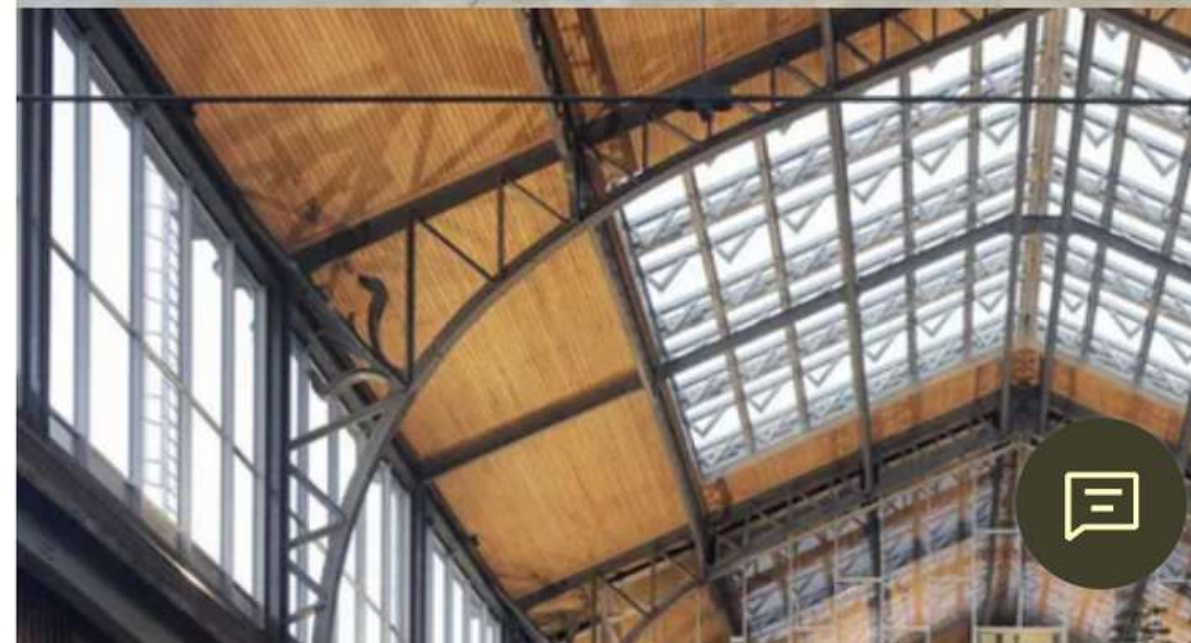
*New Construction/ Renovation/ Demolition/ Other (please speci...*

## Project Size

Square footage \*

Number of floors/stories \*

Additional Info





## Documents

Please upload the requested documents:

\* Architectural



\* Structural



\* Mechanical



\* Electrical



\* Permit 1



\* Permit 2



\* Permit 3



\* Location on Map



\* Exist Building Photos





# Congratulations!

Your Request has been successfully uploaded.  
(The tracking code has been sent to your email)

We will promptly review and assess your project, and notify you of the complete evaluation as soon as possible.

We appreciate the trust you have placed in us!

[Back to Home](#)

## Second Offering

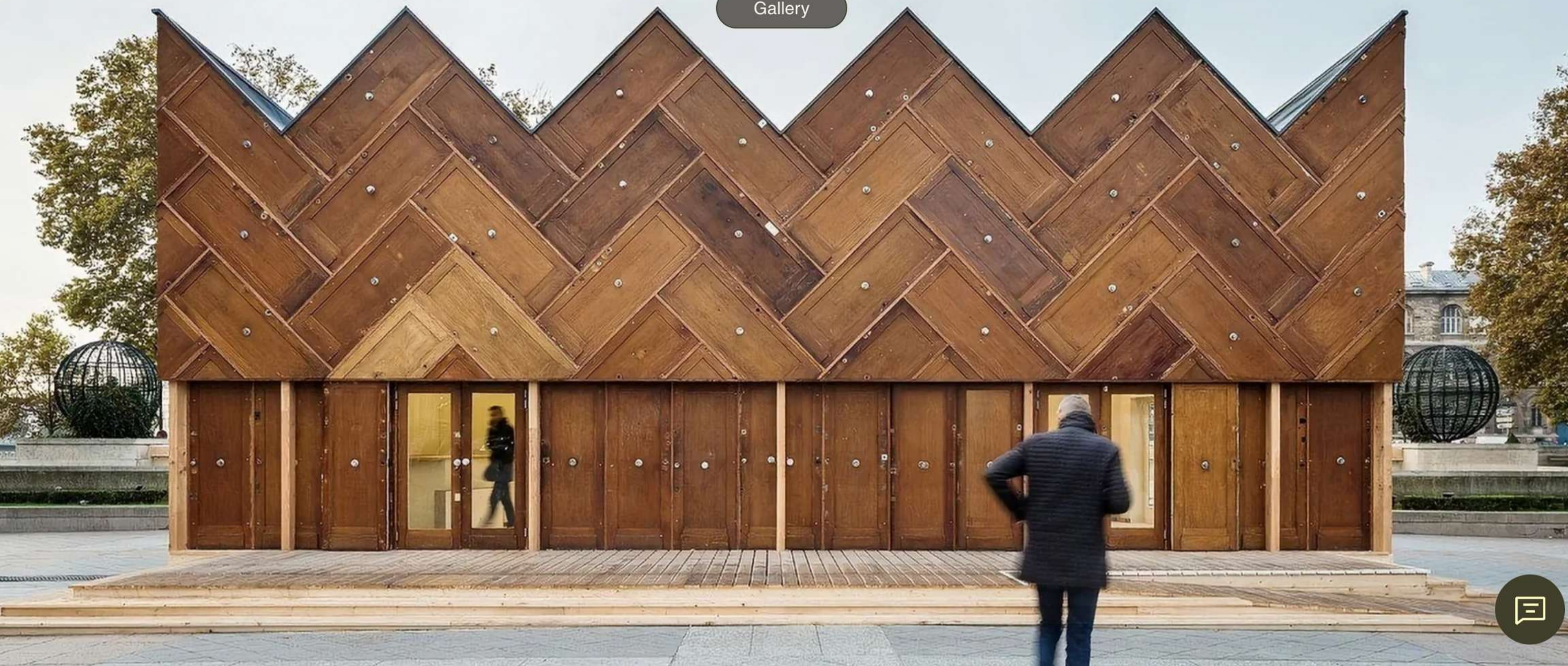
# Reuse Ideation Hub

The reuse ideation hub is a place for Alex to discover creative solutions for repurposing reclaimed materials, where we turn construction waste into innovative resources.

Once inside, Alex can explore different examples of how the finished products look. Materials are categorized in different sections and they can refer to the desired material page and see ideas related to them.

# Reuse Ideation Hub

Discover creative solutions for repurposing reclaimed materials, where we turn construction waste into innovative resources.

[Gallery](#)



## Reclaimed Wood Furniture

Transform discarded timber from demolition sites into stylish and eco-friendly furniture pieces. From rustic coffee tables to elegant shelving units, reclaimed wood furniture adds character and sustainability to any space.

[Gallery](#)



## Salvaged Brick Garden Pathways

Utilize reclaimed bricks to create charming garden pathways that add rustic charm to outdoor spaces. Salvaged bricks can be arranged in various patterns and designs, providing a sustainable and visually appealing solution for landscaping.

[Gallery](#)

## Upcycled Concrete Planters

Give new life to discarded concrete by repurposing it into stylish planters for indoor and outdoor greenery. Upcycled concrete planters are durable, versatile, and environmentally friendly, offering a unique way to showcase plants while reducing waste.

[Gallery](#)



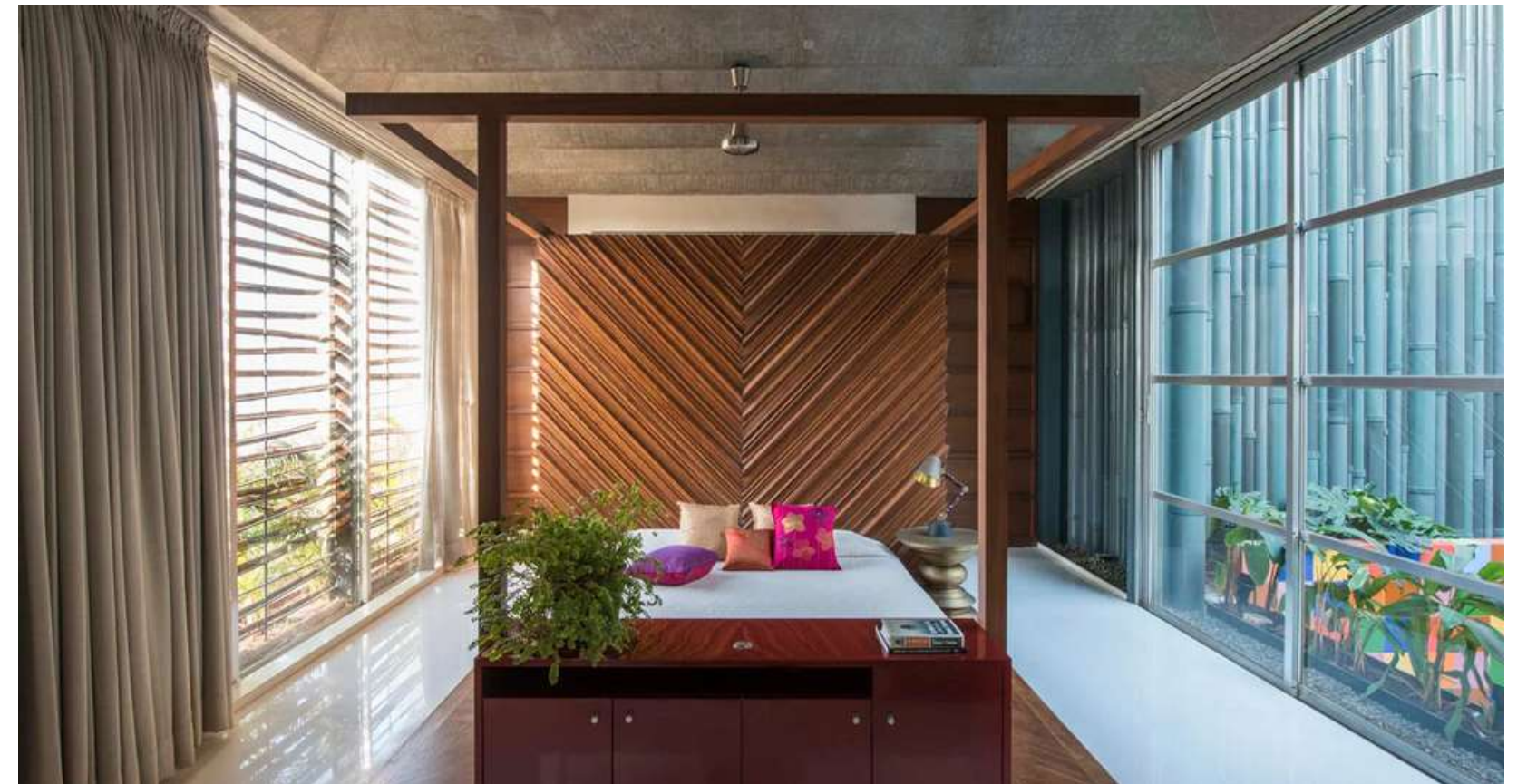
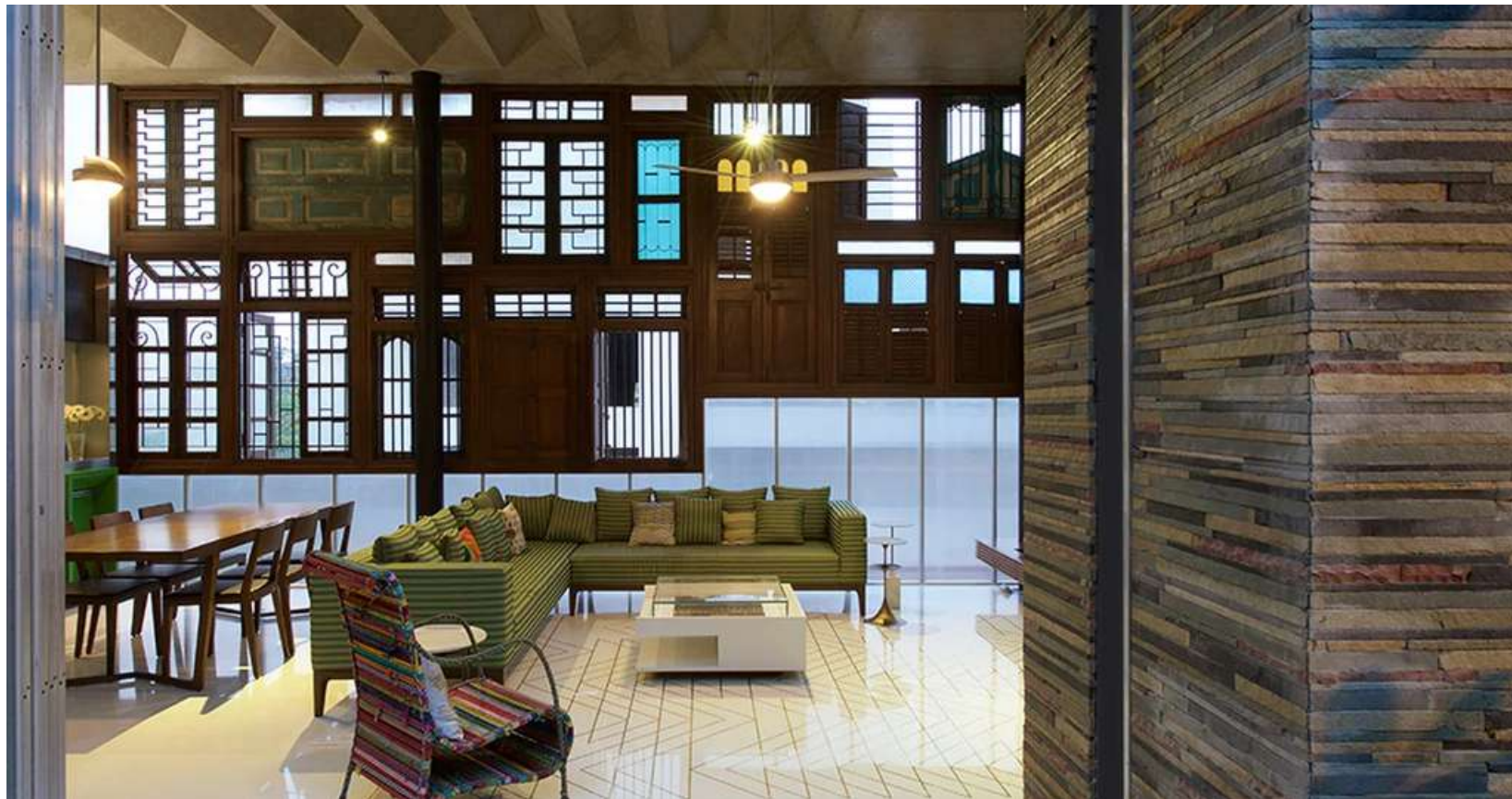
# Sample Projects





# A House Full of Recycled Materials





## Third Offering

# Reusable Material Marketplace

The Marketplace has materials that have been recovered from demolition projects. Any leftover materials from Alex's project also go here. We want to use as many of these materials as possible to save money for our clients, so this is another offering that is very important for us.

This marketplace is not just for contractors, but also the casual customer. For example, if you want to change the tiles of your kitchen, you can head to the marketplace and search for them and save a good amount while also adding some character, based on that some of them have their own story!



# Marketplace

Here, materials old find new life and use.

[Shop Now](#)



Browse by

All Products

Doors

Reclaimed Glass

Tiles

Windows & Stained Glass

Filter by

Price



# Tiles

5 products

Sort by: Recommended ▾



Reclaimed Tan & Brown Spanish Style Tile Set  
\$365.00



Set of Vintage Light Green 6.125 x 1 Ceramic Wall Tiles  
\$20.00



Vintage Light Yellow 4.25 in. Square Tile  
\$6.00



Set of 11 Brown Assorted Tiles  
\$15.00



Set of Four Mint & Light Green Swirly Tiles  
\$15.00

## Fourth Offering

# Courses and Knowledge Center

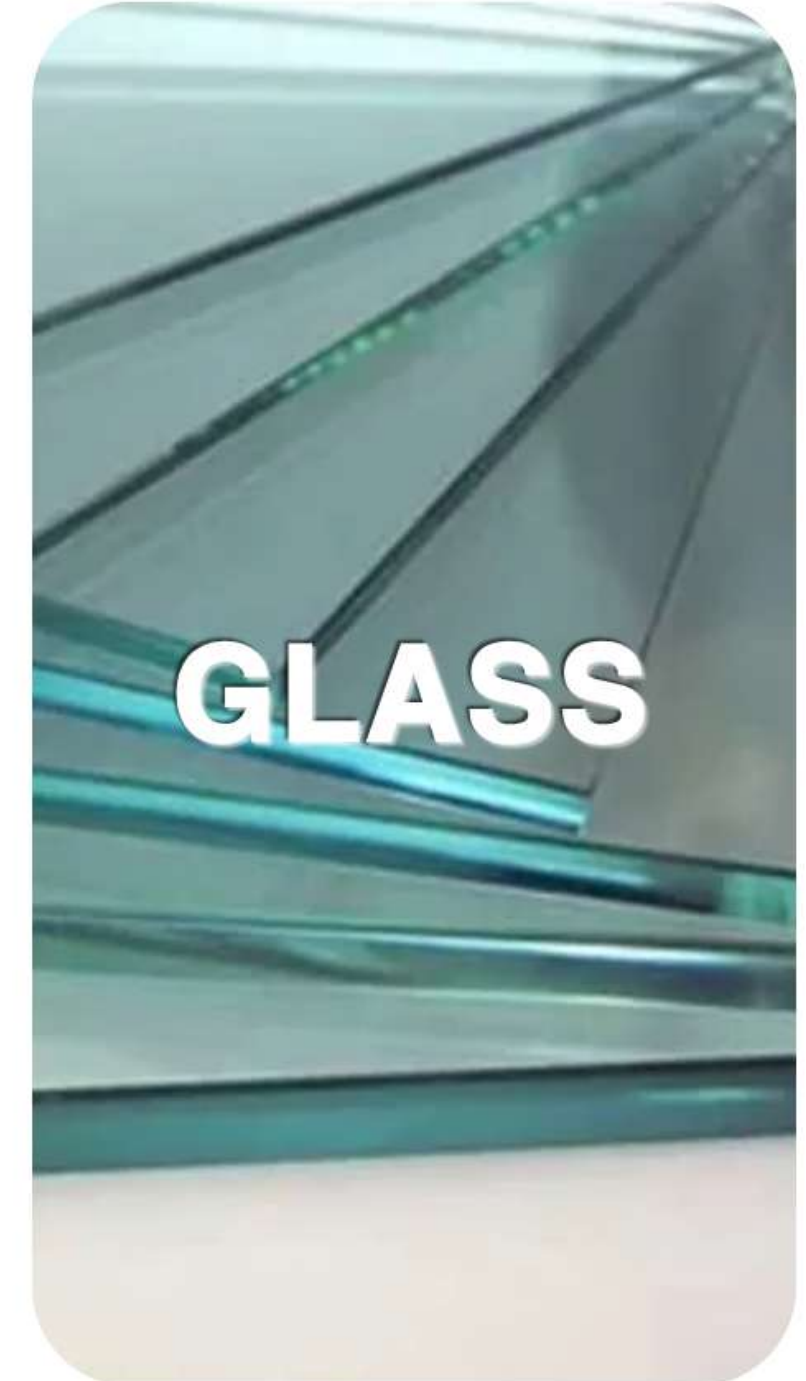
We also see zero CDW as a knowledge center, where we inform people on the impacts of such waste, and also give a space to those who want to be further involved.

We educate users on how to get into construction waste management and topics related to sustainability.

We see this space being used by students, new contractors, and those interested in sustainability.

Future partnerships with universities would help us certify our users.

The largest volume of reusable materials produced in the demolition of buildings:





## Course Offerings

### 1- Introduction to Construction Waste Management:

This foundational course provides an overview of construction waste management principles, including waste reduction, reuse, recycling, and disposal. Participants will learn about the environmental impact of construction activities and explore strategies for minimizing waste generation.

[Apply Now](#)

### 2- Sustainable Building Practices:

Delve into the world of sustainable building practices with this course, which covers topics such as green building certifications, energy efficiency, and sustainable materials. Participants will gain insights into the latest trends and innovations in sustainable construction and learn how to incorporate eco-friendly practices into their projects.

[Apply Now](#)

### 3- CDW Recycling and Reuse Techniques:

Learn about the various techniques and technologies available for recycling and reusing construction and demolition waste. From concrete and asphalt recycling to salvaging and repurposing building materials, this course explores practical solutions for diverting waste from landfills and promoting resource conservation.

[Apply Now](#)

### 4- Environmental Regulations and Compliance:

Stay informed about environmental regulations and compliance standards relevant to the construction industry. This course provides an overview of local, state, and federal regulations governing waste management, pollution prevention, and environmental protection. Participants will learn how to navigate regulatory requirements and ensure compliance in their projects.

[Apply Now](#)

### 5- Community Engagement and Sustainability:

Discover the importance of community engagement in promoting sustainability and environmental stewardship. This course explores strategies for engaging stakeholders, building partnerships, and fostering community involvement in sustainable development initiatives. Participants will learn how to leverage community support to enhance the success and impact of sustainability projects.

[Apply Now](#)

## Why Choose Our Courses?

- **Expert-Led Instruction:** Our courses are developed and delivered by industry experts with extensive experience in sustainability, environmental management, and construction waste reduction.
- **Interactive Learning:** Participants can expect engaging and interactive learning experiences, including case studies, group discussions, and hands-on activities.
- **Flexible Learning Options:** We offer a variety of course formats, including live webinars, on-demand videos, and self-paced modules, to accommodate diverse learning preferences and schedules.
- **Practical Applications:** Our courses emphasize practical, real-world applications, equipping participants with actionable insights and skills that can be immediately applied in their professional and personal endeavors.

## Fifth Offering

# Clean Building Certification

The Clean Building Certificate is a benefit for contractors who follow eco-friendly practices. It shows they care about sustainability and quality construction. Those who get this certificate may qualify for discounts on taxes and fees. Plus, it opens doors to more benefits, like support from policymakers and savings on utilities for the building's residents.

This can be applied once Alex has completed the project with us. This helps him in getting further discounts and tax benefits.



# Apply for a Clean Building Certificate



Clean Building Certificate

Name \*

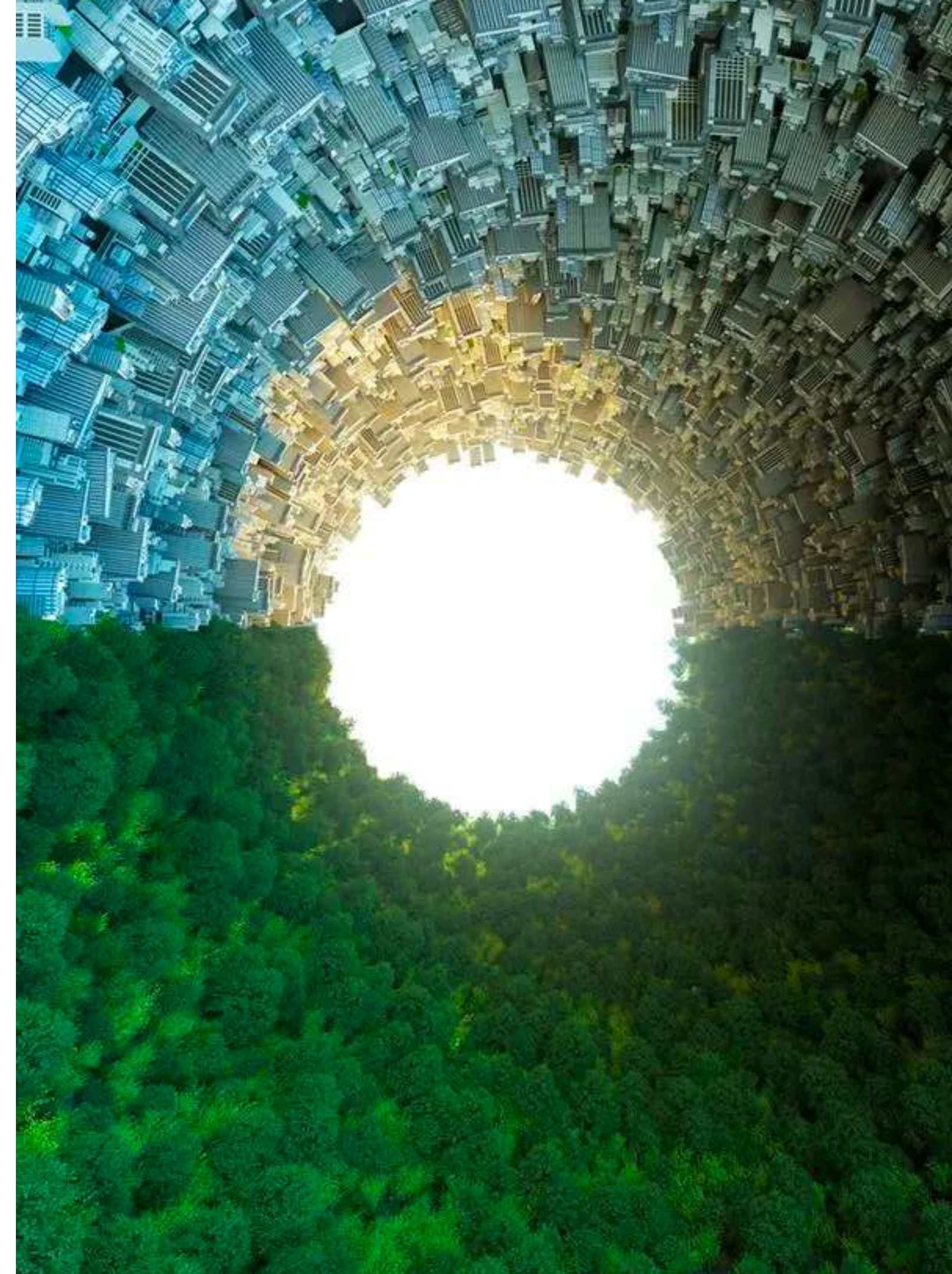
Last Name \*

Phone \*

Email \*

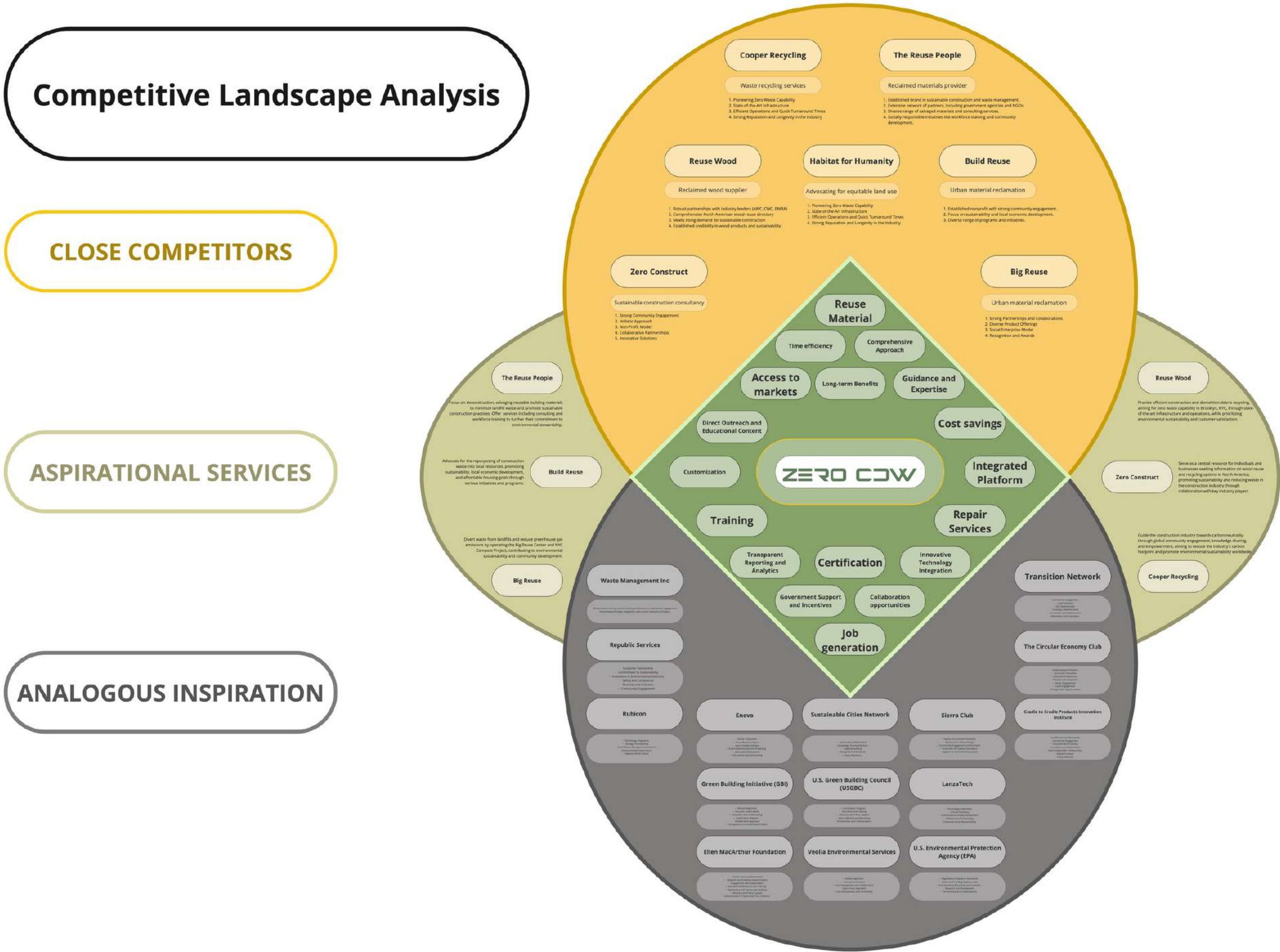
# Why Zero CDW

- **Comprehensive solutions to optimize construction waste management**
- **Environmental Impact**
- **Advocacy for Sustainability**
- **Reduction of demolition waste going to landfills**
- **Lowering Carbon Footprint**
- **Cost Savings due to the reuse of materials**
- **Construction circularity**
- **Knowledge sharing**
- **Aligned with UN-SDGs**



# What impact would we have

- **Reduction of demolition waste going to landfills**
- **Lowering Carbon Footprint**
- **Cost Savings due to the reuse of materials**
- **Construction circularity**
- **Knowledge sharing**



Big Reuse

Urban material reclamation

1. Strong Partnerships and Collaborations

2. Diverse Product Offerings

3. Social Enterprise Model

4. Recognition and Awards

Reuse Material

Time efficiency

Comprehensive Approach

Access to markets

Long-term Benefits

Guidance and Expertise

Cost savings

Integrated Platform

Repair Services

Innovative Technology Integration

Collaboration opportunities

Job generation

Certification

Government Support and Incentives

Transparent Reporting and Analytics

Customization

Direct Outreach and Educational Content

The Reuse People

Focus on deconstruction, salvaging reusable building materials to minimize landfill waste and promote sustainable construction practices. Offer services including consulting and workforce training to further their commitment to environmental stewardship.

Build Reuse

Advocate for the repurposing of construction materials, repurpose local resources, promoting sustainability, local economic development, and affordable housing goals through various initiatives and programs.

Big Reuse

Divert waste from landfills and reduce greenhouse gas emissions by operating the Big Reuse Center and BNC Compost Project, contributing to environmental sustainability and community development.

Reuse Wood

Provide efficient construction and demolition debris recycling, achieving the zero waste capacity in Brooklyn, NYC, through reuse of the art infrastructure and operations, while prioritizing environmental sustainability and customer satisfaction.

Zero Construct

Serve as a central resource for individuals and businesses seeking information on waste reuse and recycling options in North America, promoting sustainability and reducing waste in the construction industry through collaboration with key industry players.

Cooper Recycling

Guide the construction industry towards carbon neutrality through global community engagement, knowledge sharing, and empowerment, aiming to reduce the industry's carbon footprint and promote environmental sustainability worldwide.

Waste Management Inc

Republic Services

Rubicon

Enevo

Green Building Initiative (GBI)

Ellen MacArthur Foundation

Sustainable Cities Network

U.S. Green Building Council (USGBC)

Veolia Environmental Services

Sierra Club

LanzaTech

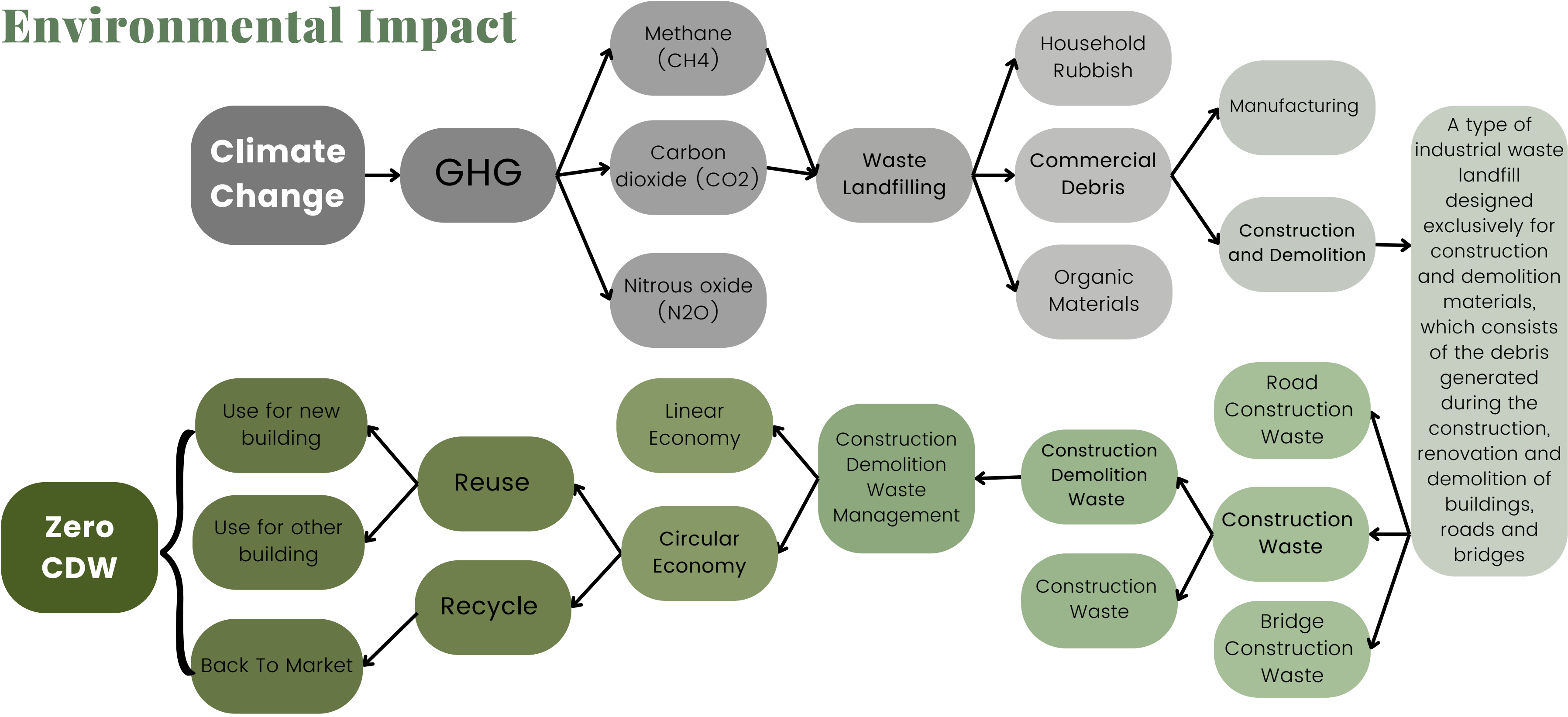
U.S. Environmental Protection Agency (EPA)

Transition Network

The Circular Economy Club

Cradle to Cradle Products Innovation Institute

# Mapping the Environmental Impact



# 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Ensure sustainable consumption and  
production patterns

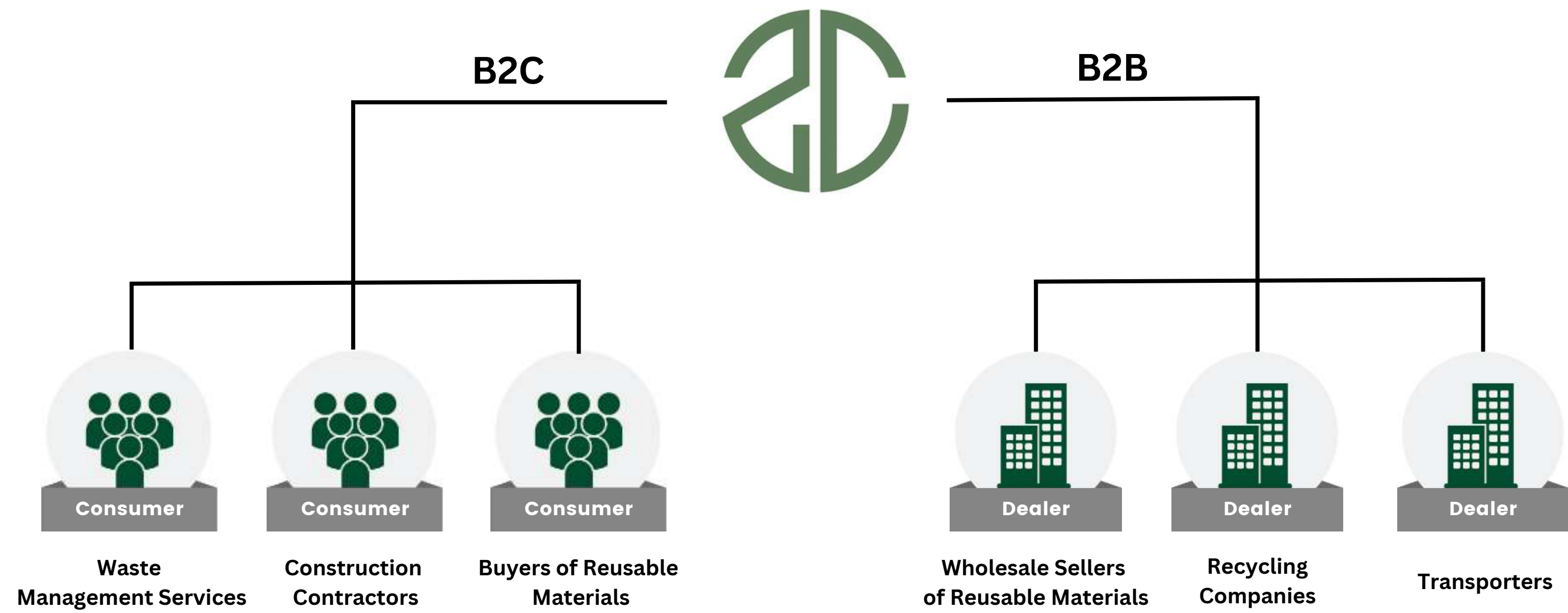
All my goals are in line with the UN-SDGs

# 13 CLIMATE ACTION



Take urgent action to combat climate  
change and its impacts

# Business Model



# Revenue Streams

- **Waste Management Consulting Charges**
  - Tariff based on:
    - Old building area
    - Number of floors
    - Region
    - Complexity of the job
- **Commissions from buying and selling materials in the marketplace**
- **Educational Courses**



A high-angle, top-down view of a group of people sitting around a light-colored table in a meeting. One person is wearing a yellow hard hat, and another is wearing a blue hard hat. There are laptops, papers, and a blue hard hat on the table. The background is a wooden floor.

Introduction

Problem

Methodology

Solution

**Business**

# Team Formation and Collaboration

- **Consultancy:**  
Environmental specialist, sustainability expert.
- **Design and Management:**  
Architects, and structural engineers for demolition and reuse planning.
- **Quality Assessment:**  
Architectural and materials engineers for material quality evaluation and labeling.
- **Marketing and Operation:**  
Warehouse manager, sales specialist.

# Partners



# Next Steps

- **Platform Development**
- **Marketing and Outreach**
- **Partnerships and Collaborations**
- **Identifying Specialist**
- **Financial Sustainability**



We love our customers. Feel free to contact us at any time. We are available via email, live chat, or phone.

## Come & Say Hi

# Contact us

### Customer Service

Email: [shojs004@newschool.edu](mailto:shojs004@newschool.edu)

Monday - Friday 9:00am - 5:00pm EST

66 5th Ave, New York, NY 10011

First Name \*

Last Name \*

Email \*

Write a message

Submit

# Towards a Cleaner, **Greener** Future...



**Zero CDW**

<https://selenshojaee.wixsite.com/zerocdw>



**“ The most beautiful stories  
always start with  
wreckage.”**

Jack London





**ZERO COW**

**WASTE IS WEALTH. DON'T BURY IT .**