

CLOSING THE LOOP

FOOD WASTE PREVENTION PATHWAYS FOR CHICAGO

INSTITUTE OF DESIGN
DESIGN FOR CLIMATE LEADERSHIP

Spring 2023

IN PARTNERSHIP WITH
City of Chicago &
NRDC Food Matters



Photo by Eric McLean on Pexels



INTRODUCTION

COURSE LEARNINGS

This report presents our learnings from a 14-week course collaboration exploring collaborative pathways for tackling wasted food in Chicago, with a focus on food service. We partnered with three key stakeholders that represented food rescue operations in food service, food waste recycling and food waste policy development in Chicago.

By mapping the practices of these partners, we identified current barriers and future opportunities for food waste reduction, reuse and recycling in Chicago's food service industry.

Our learnings highlight a need to:

- **Incentivize practical options for companies and organizations through policy and clear regulations**
- **Invest in local, decentralized and flexible infrastructures**
- **Demonstrate commitment and enable system-wide leadership**
- **Leverage data tracking and disseminate learnings of partners**
- **Cultivate mindsets that value food and prioritize prevention**
- **Provide resources for community-driven problem-solving**

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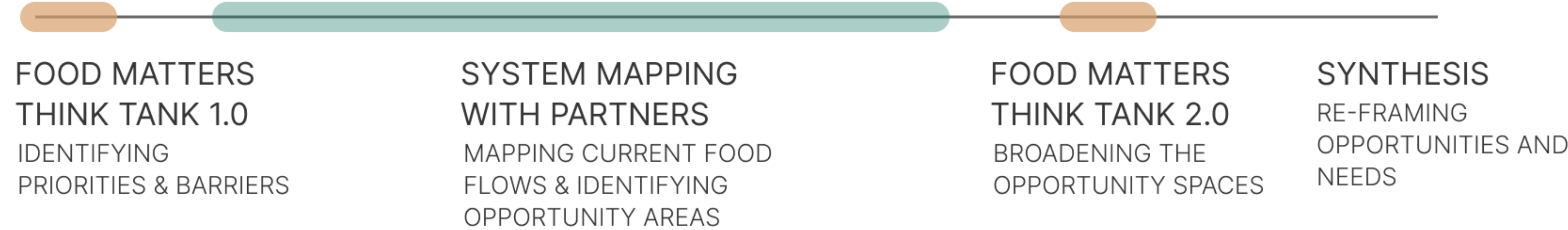
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FOOD WASTE IN CHICAGO

Effectively minimizing and managing wasted food is a critical pathway for addressing multiple issues threatening the future of our planet and the wellbeing of our societies; climate change, biodiversity loss and food insecurity are all issues connected throughout our industrialized food systems. Wasted food prevention is a huge challenge: 40% of all the food produced in the US is estimated to go to waste, with 55 million pounds of food wasted in Chicago every month. In the face of this challenge numerous organizations and communities in Chicago are taking action to prevent food from going to landfills. In order to scale the impact of these ongoing efforts and achieve sustainable transitions, we need systemic, networked and coordinated action that centers the values we share as citizens and neighbors, employers and employees, government officials and legislators.

The Institute of Design’s Food Systems Action Lab collaborated with City of Chicago and its participation in NRDC’s Food Matters Great Lakes cohort to engage key stakeholders in a series of collaborative sense-making activities. Students worked with stakeholder partners to map existing food and waste flows in order to reframe the problems from their perspectives and identify opportunity spaces for action. In this report, we present our learnings from this collective effort.

OUR PROCESS



DISCOVER

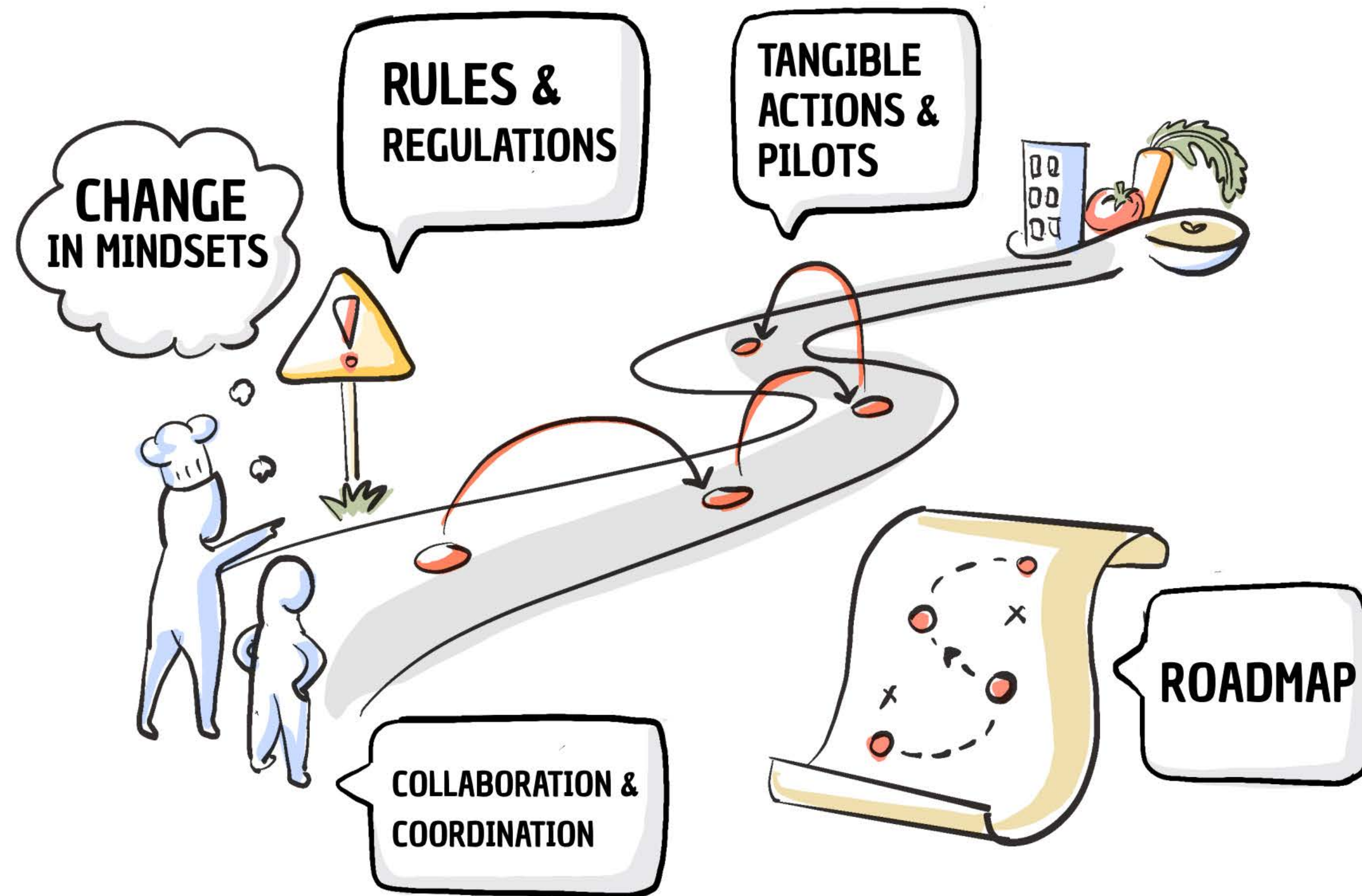
ID FOOD SYSTEMS ACTION LAB

Our projects combine sustainability science, systems design and human-centered design methods to explore ways to transform aspects of our food systems so that they become more accessible, equitable, and sustainable for all life and our planet.

ID ACTION LABS
Food Systems

food.lab.id.iit.edu

PRIORITIES



FOOD MATTERS THINK TANK 1.0

PRIORITIES & BARRIERS

We kick-started our dialogue with diverse stakeholders of wasted food efforts at the Food Matters Chicago Think Tank event, hosted at the Auburn Gresham Healthy Lifestyle Hub. The project team facilitated conversations with groups of stakeholders representing:

- City of Chicago & Policy
- Food Service & Retail
- Food Rescue & Community Organizations
- Food Scrap Recycling

The groups identified priorities and barriers for advancing City-wide food waste reduction from their respective domains.

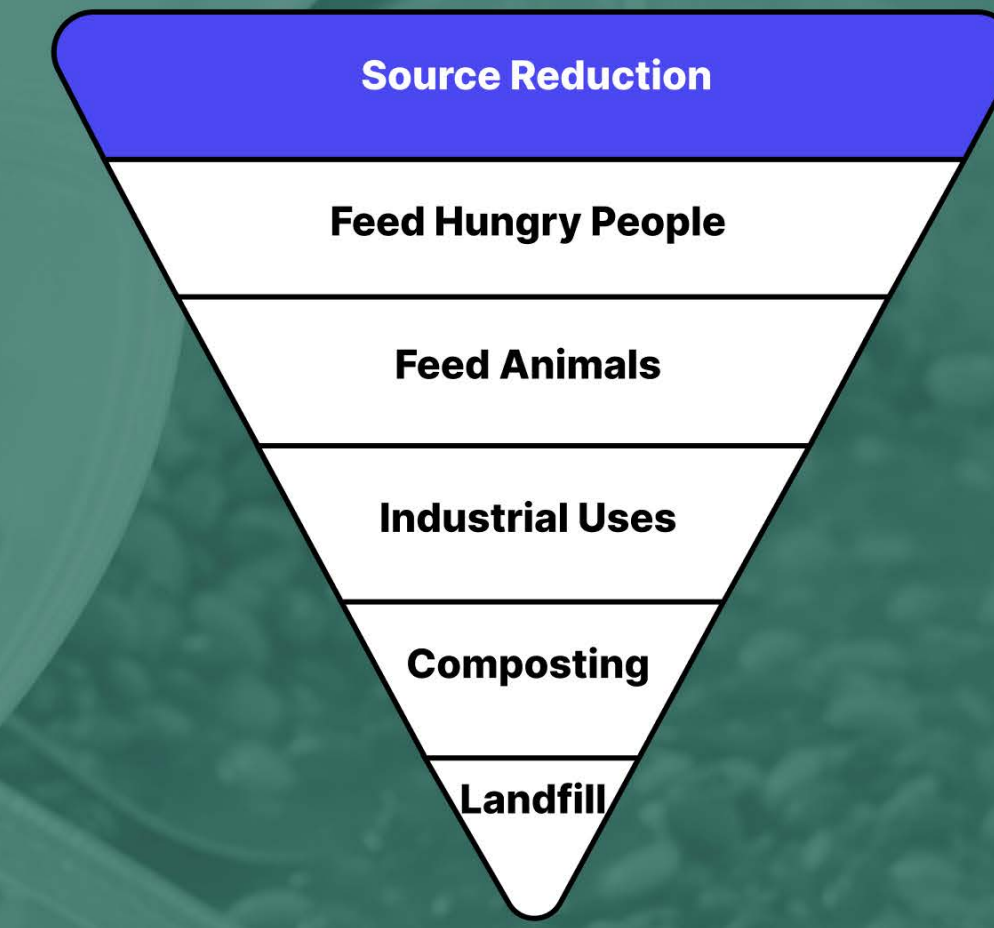
[Access complete list of priorities and barriers here](#)

BARRIERS

- Rigid governance
- Limited resources
- Variability in food flows
- Misalignment of values and incentives
- Information and opportunity gap

Food Waste Reduce

This map focuses on the reduction of food waste, which starts with the growth of food and ends with the consumption of food by individuals in households, institutional and commercial settings. This is shown through three specific stakeholder perspectives: food service & retailers, food rescuers & policymakers.



Insights

Prevention mindsets need to be adopted system-wide and operationalized

Food reduction practices are currently upheld by individual champions within organizations. This leads to fragmented and unsustainable practices which are at risk when staff turnaround occurs.

Current prevention strategies rely heavily on human capital

Valuable time and labor of staff and volunteers are invested into processing, triaging and transporting foods.

Competition deters food service organizations from sharing internal sustainability practices

This is a barrier for collaboration between like-minded organizations who would benefit from sharing best practices and technical knowledge.

Lack of strong regulatory support on food waste prevention

Food waste prevention efforts need to be supported with clear policies and regulations in order to increase adoption.

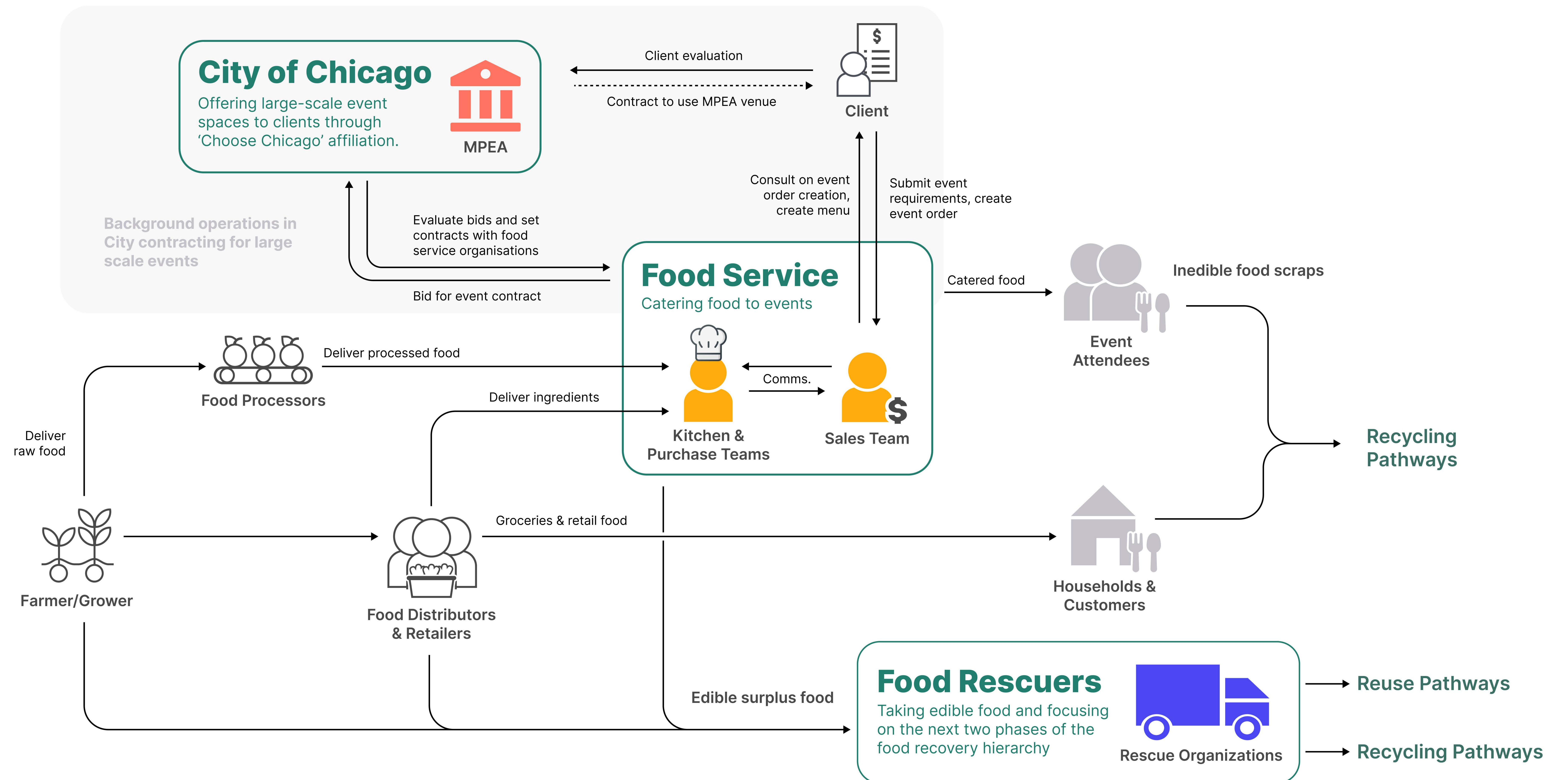
Key

Flows

- current state
- opportunity area
- ☀ Incentive
- Triage

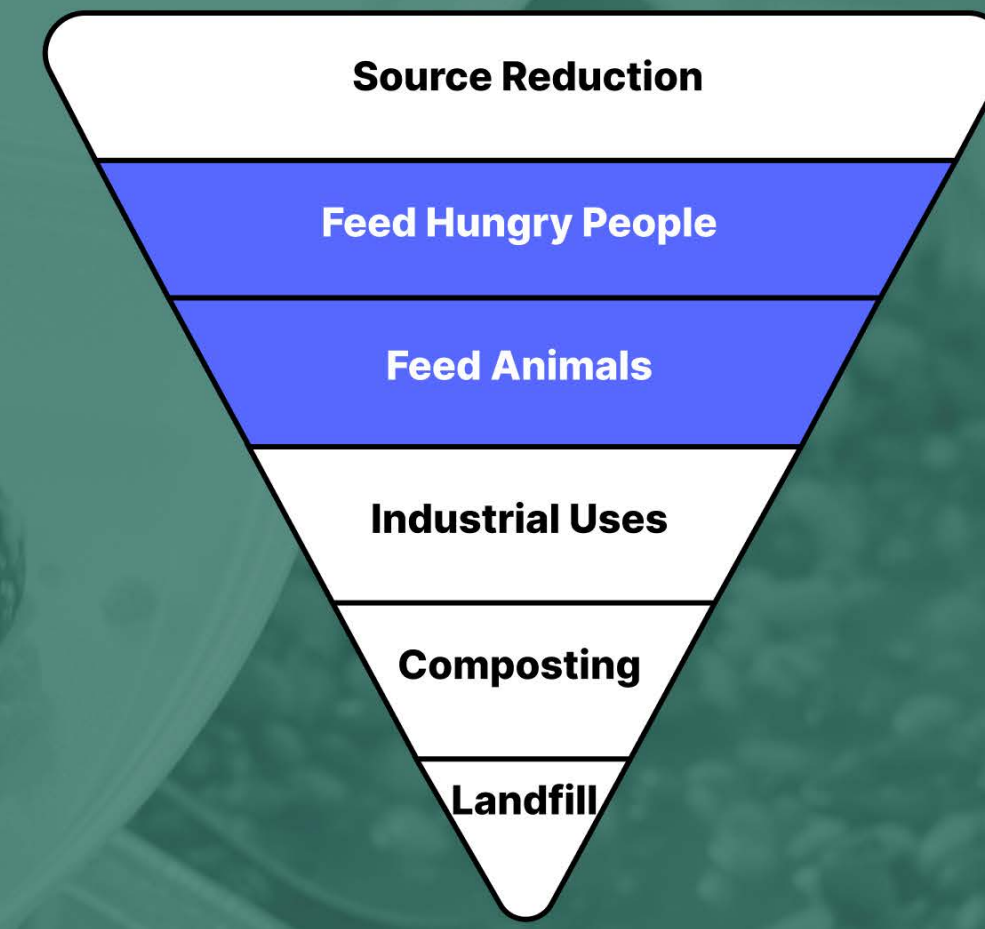
Stakeholders

- 👤 Food Service / Retail
- 🚚 Food Rescue / Recycle
- 🏛 Policy & Public Service
- 👥 Consumer
- 👤 Other



Food Waste Rescue

This map identifies gaps, frictions, and opportunities through an analysis of the current Chicago food rescue landscape. Our perspective on the scope of food rescue is informed by the EPA Food Recovery Hierarchy, focusing on feeding hungry people and feeding animals.



Insights

Sustainability is profitable

Sustainability can be translated into profit by reducing food waste and improving their Corporate Social Responsibility (CSR) reputation, aligning them with their climate action claim and profitability goals.

A need to transform the mindset of excess

Our current food service equates quality and sense of abundance with excess food. While prioritizing food waste prevention into operations is profitable, this is not possible without transforming the consumer mindset and values.

High dependency on volunteer labor

The current food rescue system is highly dependent on volunteer labor. Scaling rescue efforts requires reorganizing the human capital in order to be sustainable in the long term.

A need for incentivizing sustainable food waste practices

When prevention is not incentivized as the preferred route and supported with convenient solutions for food service operators, composting becomes the first option for handling food waste. This leads to edible food going to waste.

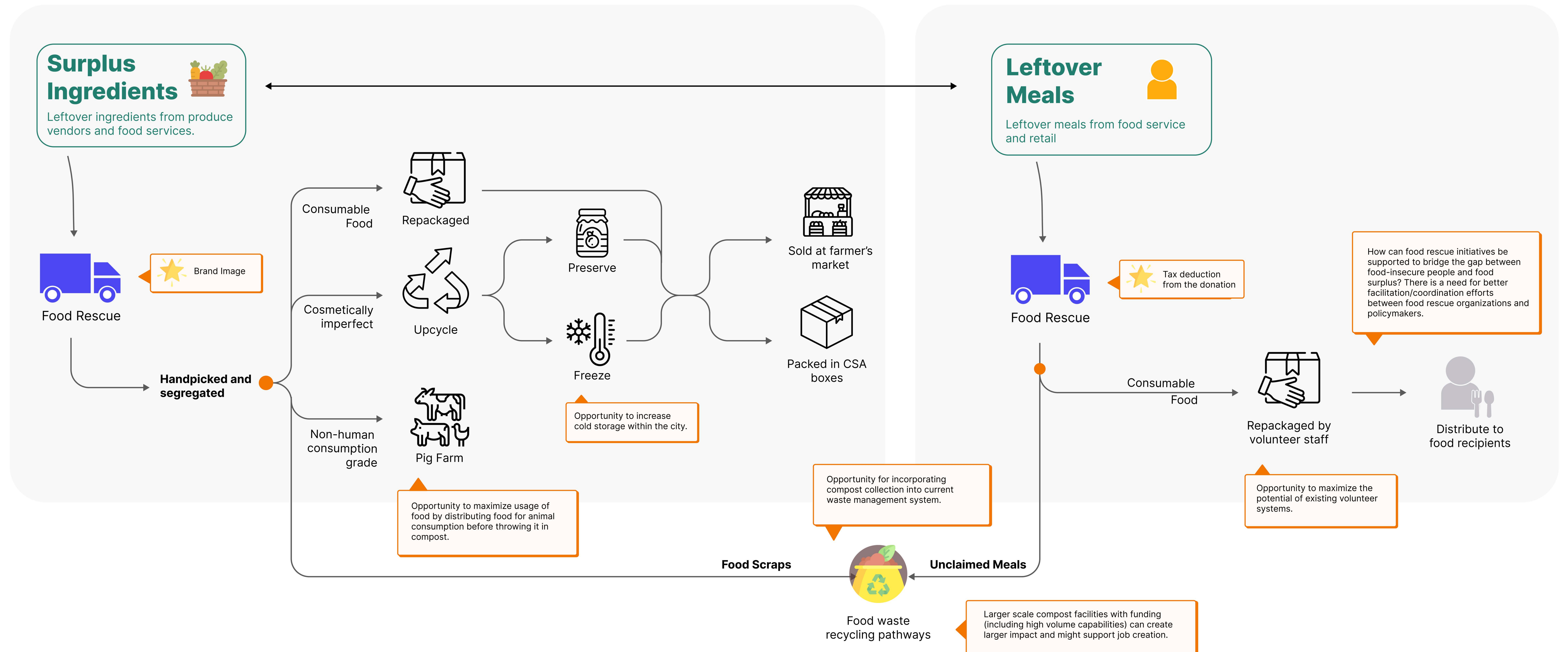
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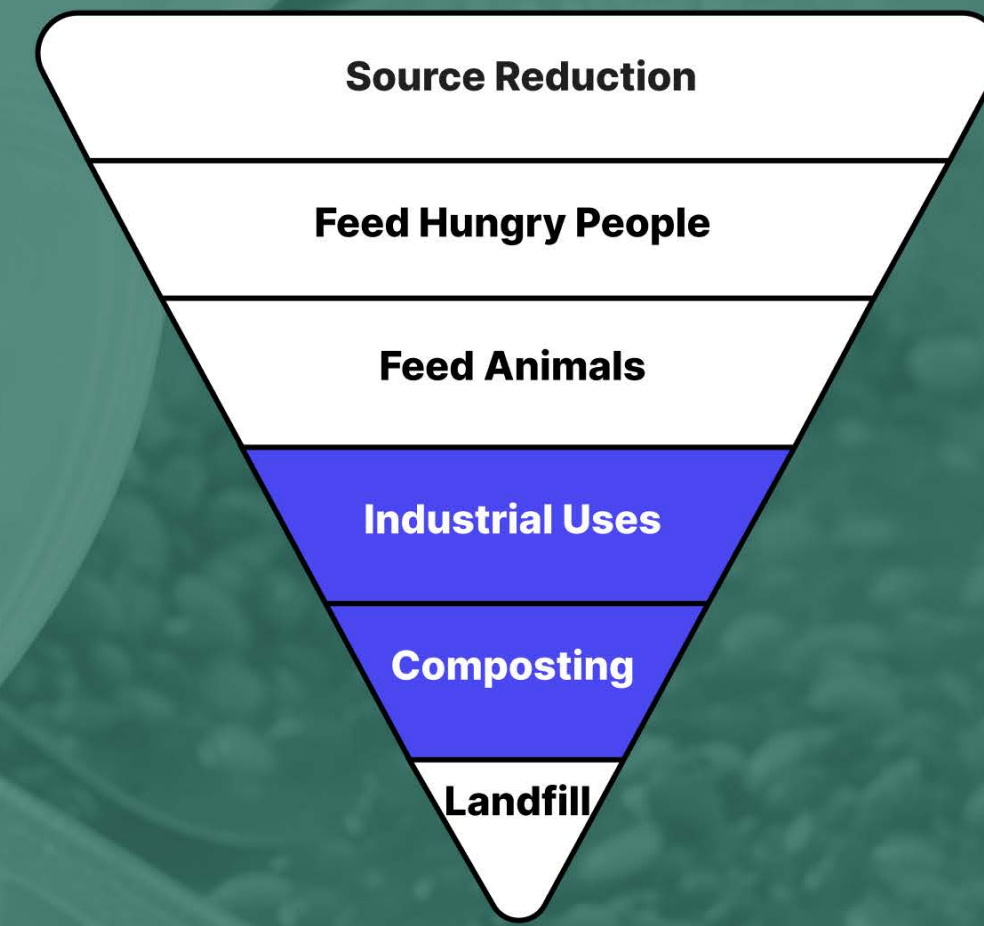
Stakeholders

- 👤 Food Service / Retail
- 🚚 Food Rescue / Recycle
- 🏛 Policy & Public Service
- 🍴 Consumer
- 👤 Other



Food Waste Recycle

This map depicts activities, frictions and opportunities related to food recycling and compost in the Chicago food system, based on three specific stakeholder perspectives: food service & retailers, composters & policymakers.



Insights

Numerous barriers prevent effective organic waste management

- Lack of consumer knowledge and prevention mindset
- Misaligned regulatory expectations and policy blind spots
- Lack of physical and process infrastructure

We need to change composting norms amongst consumers and businesses

People dealing with food waste don't understand how food scrap recycling works. There is a need to build prevention mindsets and implement education campaigns to change false beliefs about waste segregation and composting.

Policies sometimes penalize effective food waste management

Current permitting processes and requirements are inconvenient and frustrating for small business owners since they pay the same fees as large commercial businesses to get permits. Adapting and refining permitting processes could incentivize food scrap recycling for both large and small businesses.

Local best practices for full utilization of food nutrient value can be showcased

Food scrap recyclers working on bridging utilization gaps for food nutrient value are few in number and small in scale. We need to study these cases and scale best practices across the ecosystem.

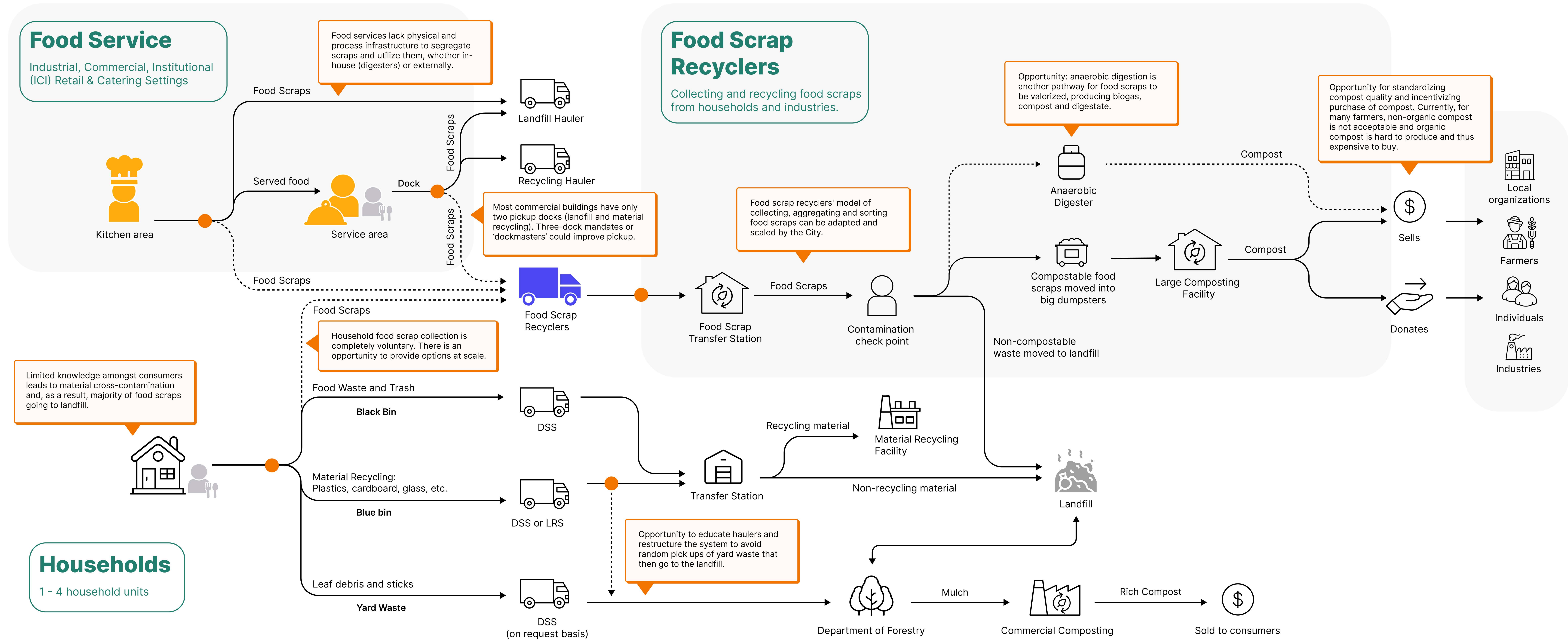
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Stakeholders

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- 🚚 Food Rescue / Recycle
- 🏛 Policy & Public Service
- 👥 Consumer
- 👤 Other



FOOD MATTERS THINK TANK 2.0 SEEDING CHANGE

We invited all stakeholders to the Food Matters Think Tank 2.0 event to share our insights and bring our heads together to explore opportunity areas guided by nine generative prompting questions.

“How might we provide accessible and versatile composting solutions for households across the City?”

“How might we incentivize and lower barriers to food rescue for food businesses?”

We believe that meaningful and inclusive transformations should tackle the deeper shifts in the system that involve our norms, values and mindsets. We created ‘Shifting Systems Cards’, which propose potential shifts across different dimensions of our food system, based on the distinct transition narratives of the partners. These cards invited participants to challenge assumptions in order to broaden our horizon to radical possibilities.

Shifting the Cultural Values

Food as commodity

vs.

Food as a human right and shared resource

Shifting the Built Environment

Spaces designed to dispose of food scraps

vs.

Spaces designed to rescue food scraps



OPPORTUNITY SPACES

Inspired by the collective wisdom of the collective, we propose some opportunity spaces that could support a set of collaborative, decentralized and inclusive pathways for continuing the work to prevent food waste.

These opportunity spaces aim to invite exploration and spark further dialogue, rather than prescribe specific pathways.

NRDC's Food Matters food waste prevention toolkit provides relevant guidance for cities for adopting a diverse array of policies and programs for managing wasted food.

<https://www.nrdc.org/resources/tackling-food-waste-cities-policy-and-program-toolkit>

1. PLATFORMS FOR COLLABORATION & KNOWLEDGE SHARING



What if there was an ongoing space to collect best practices and success stories around food reduction?

It can be difficult for stakeholders to move into a cross-collaboration, systems-thinking mindset without a structure in place to support them (outside of convenings like the Think Tank). Within the Chicago Public Schools district, some schools have successfully implemented “share tables” where students can voluntarily put or take unopened food, while other schools have not. which leads us to think there should be more “formal” spaces to collaborate outside of Food Matters Chicago convenings.

What if there was an ongoing space to collect best practices and success stories around food reduction?

There is a recognized need for a stronger culture and community of collaboration with decentralized information, as well as good examples that others can follow. Similarly, many of the missing infrastructures need to be established across different types of organizations. For instance, a food service company providing dedicated space in its facility for a food rescue partner to rescue food from their kitchen could be an entry point for a more collaborative culture.

OPPORTUNITY SPACES

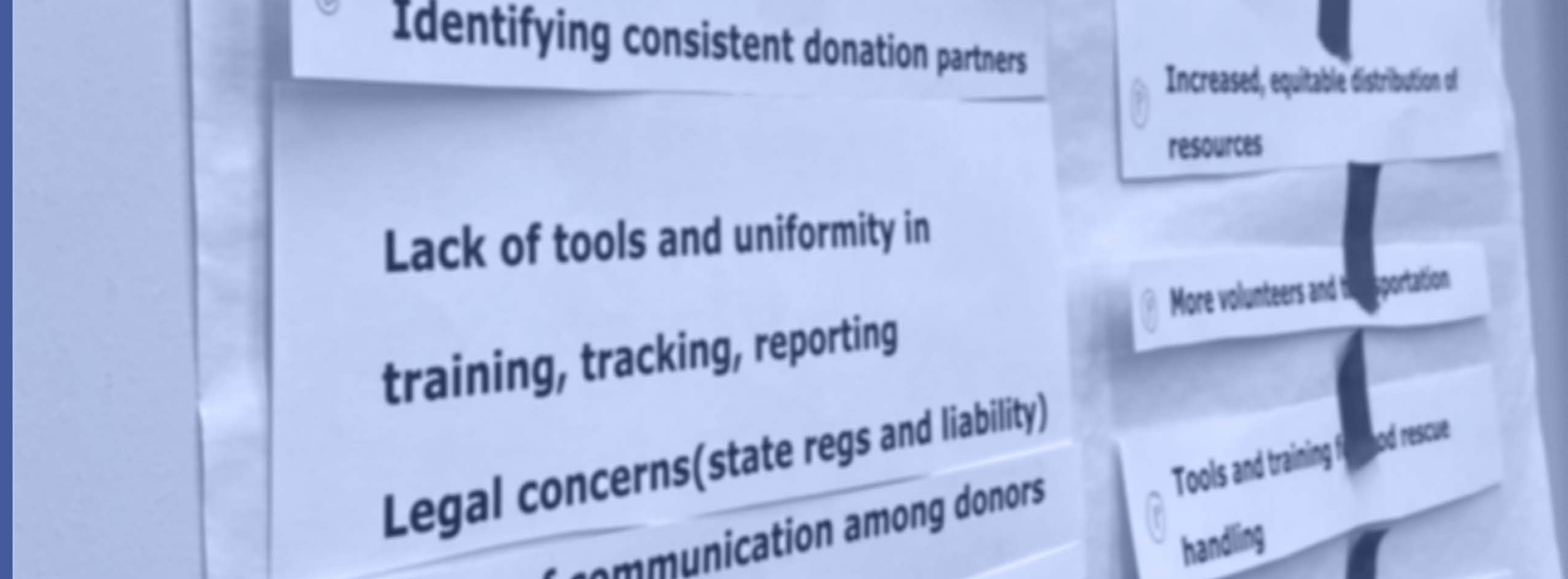
2. DATA AS ENABLER

*While tracking and data are essential to operationalize organic waste diversion at scale, it is not the solution itself.

Even when access to tracking technology is expanded, lack of supportive behaviors, processes, data literacy and labor can be limiting. Moreover, over-reliance on data can result in too rigid processes, at the expense of community-led solutions that are adaptive and quick in responding to food rescue needs.

ReFed is the country's leader in data tracking, reporting and sharing for food waste prevention.

<https://refed.org/our-work/data-and-insights>



What if data around food reduction could be shared on one single platform?

Given the varied quality of data around food waste, stakeholders would benefit from shared data metrics and reports. Perhaps, the City of Chicago could own and manage this platform to ensure that there is alignment across organizations in the City. Once there is alignment in data measurement, the City could better understand its impact as a whole, and which stakeholders could be exemplars in reducing food waste.

What if food data could be more comprehensive but also flexible?

As we address the data gaps to have a better understanding of the resource flows in our food system, the systems we build for measuring and tracking should be flexible enough to accommodate the needs of different types of stakeholders, namely community-led food rescue efforts. This requires a mindset shift towards prioritizing efficient food rescue and minimizing unpredictable variability over accuracy of data streams when needed.

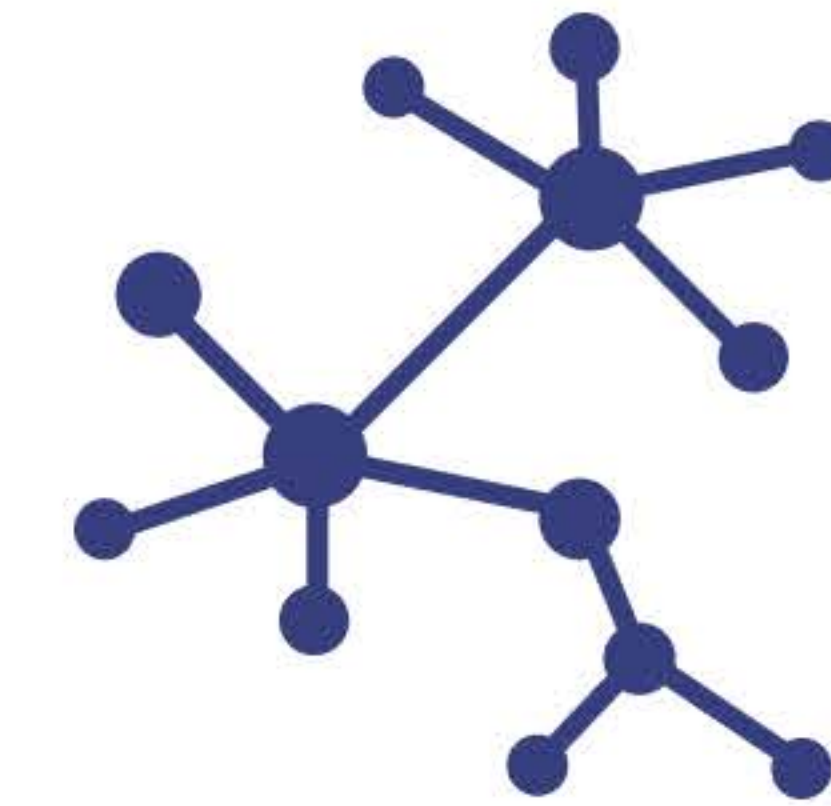
OUR LEARNINGS

We synthesized the discussions from Food Matters Think Tank 2.0 into a list of insights and recommendations to inform the development of a strategic pathway for food waste prevention, reuse and recycling across Chicago.



Develop policies for further adoption of existing good practices and clear, transparent regulations

- Require large events to have a zero food waste plan.
- Increase support for food rescue pilots with existing initiatives to demonstrate the viability of these efforts and encourage broader adoption
- Develop policies that promote clarity and simplicity in waste reduction regulations to encourage compliance
- Avoid over-regulating waste reduction practices to prevent negative consequences for the ongoing grassroots efforts that provide adaptive and local solutions



Invest in decentralized, local and flexible infrastructures

- Develop a comprehensive and streamlined system for distributing surplus food from farms
- Implement decentralized cold storage and transportation solutions to prevent spoilage and increase access to fresh food
- Create local wasted food triage and compost hubs throughout the city to facilitate the distribution and processing of wasted but edible food and to promote community engagement
- Foster a collaborative approach that combines centralized resources (information, money) and infrastructure with support for decentralized solutions (e.g. mutual aid) that can be tailored to specific neighborhoods and communities



Incentivize sustainable choices and expand access to resources

- Provide ongoing initiatives (i.e. CPS schools) with resources (e.g., funding, staffing) to enhance their current waste reduction efforts
- Encourage food rescue and composting in food service and retail, and discourage organic waste disposal in landfills through a fee system and reward program, respectively
- Develop sustainable revenue streams to support the ongoing operation and maintenance of waste reduction systems and job creation
- Ensure transparency in the allocation of resources to promote accountability and equitable access to waste reduction programs



Demonstrate commitment & enable system-wide leadership

- The City of Chicago should use public rhetoric that shows a strong commitment to preventing food waste and encourages more organizations to get involved;
- Established body of staff in public organizations (i.e. CPS) that are dedicated to this mission to prevent loss of momentum due to staff turnover,
- Centering community leadership and empowering community members to build the change from within in ways that respect cultural diversity and recognize lack of trust in institutions due to historic inequities.
- Streamline food waste reduction efforts to reduce the burden on food production workers and volunteers



Leverage data tracking for coordinated action and learning - while maintaining flexibility

- Invest in accessible and transparent data sharing for efficiently coordinating food waste reduction efforts
- Require waste haulers to share data
- Leveraging data to identify and disseminate best practices, and to advocate for ongoing initiatives



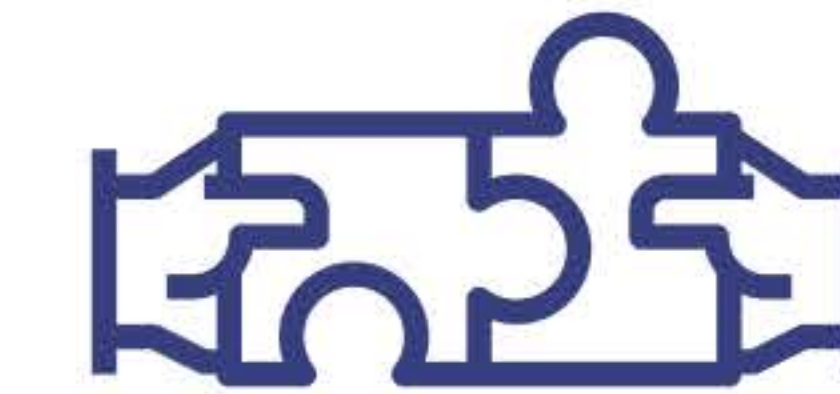
Enhance knowledge and appreciation of food waste prevention strategies

- Cultivate a food waste prevention mindset in food service and consumption by involving citizens and food systems workers in building awareness
- Establish clear regulations and information on food rescue to encourage donation of surplus food, while prioritizing prevention of uneaten food
- Educate residents and businesses to break the stigma around composting and spread awareness of various composting options



Cultivate mindsets that value food and prevent waste

- Transition from a culture of excess to one that prioritizes food as a human right
- Support a cultural shift in food service organizations with an understanding of profitability of food waste prevention



Support collaboration by providing resources and opportunities for community-driven problem-solving

- Establish platforms for network-wide input and feedback
- Expand events and spaces that support collaborative efforts and create tailwinds for change
- Empower individuals to take on stewarding positions and play multiple roles within the network



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