



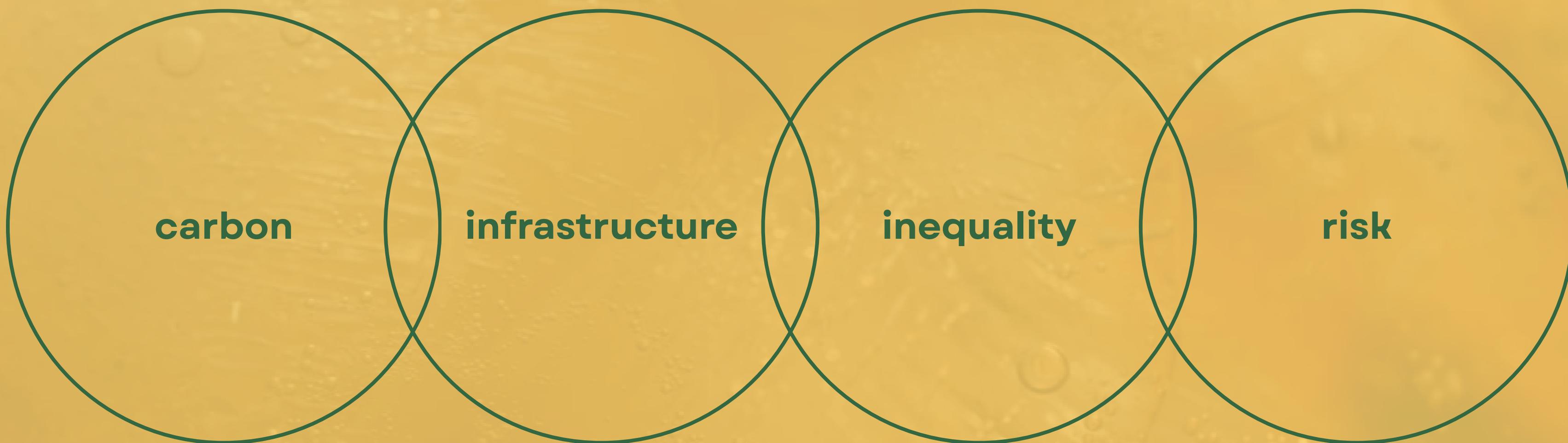
Low-Carbon Food Resilience in NYC

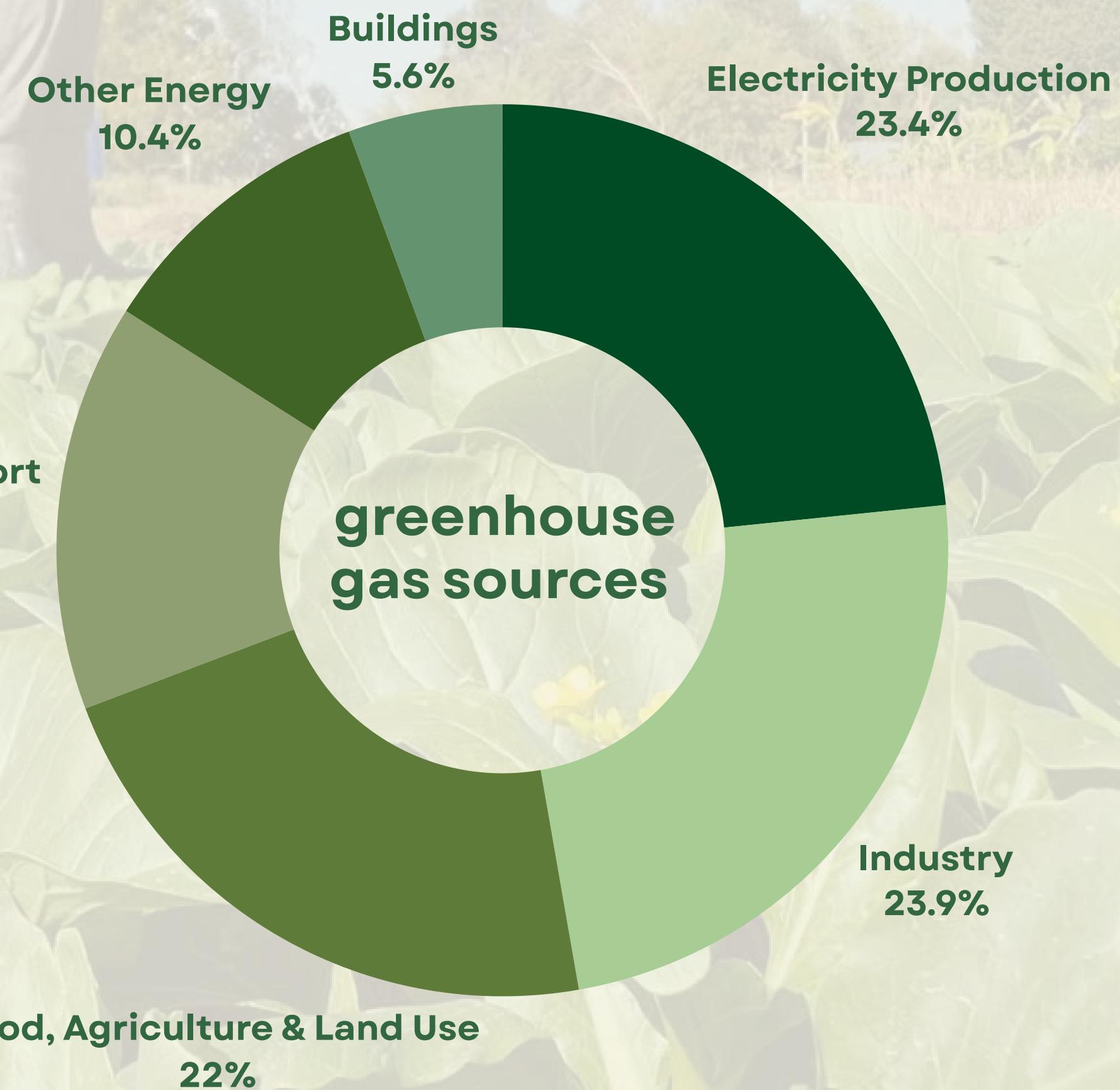
What if everyday eating could become a visible and actionable lever for urban climate resilience?

Sunni Hu

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FOOD AS CLIMATE INFRASTRUCTURE





Data: IPCC AR6 WG3,
Minx et al. (2021)

CUT EMISSIONS

REMOVE CARBON

curb global
demand

protect ecosystems

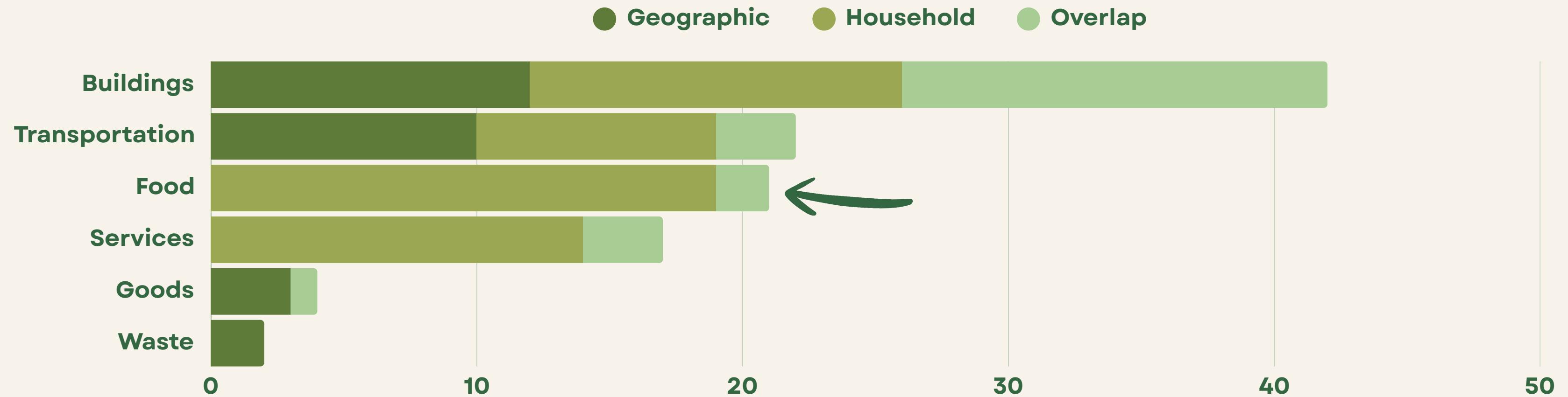
adopt low
emissions
farming

improve
larger
food
systems

restore
ecosystems

adopt
regener
ative
practice

2019 INTEGRATED EMISSIONS (MTCO₂E)



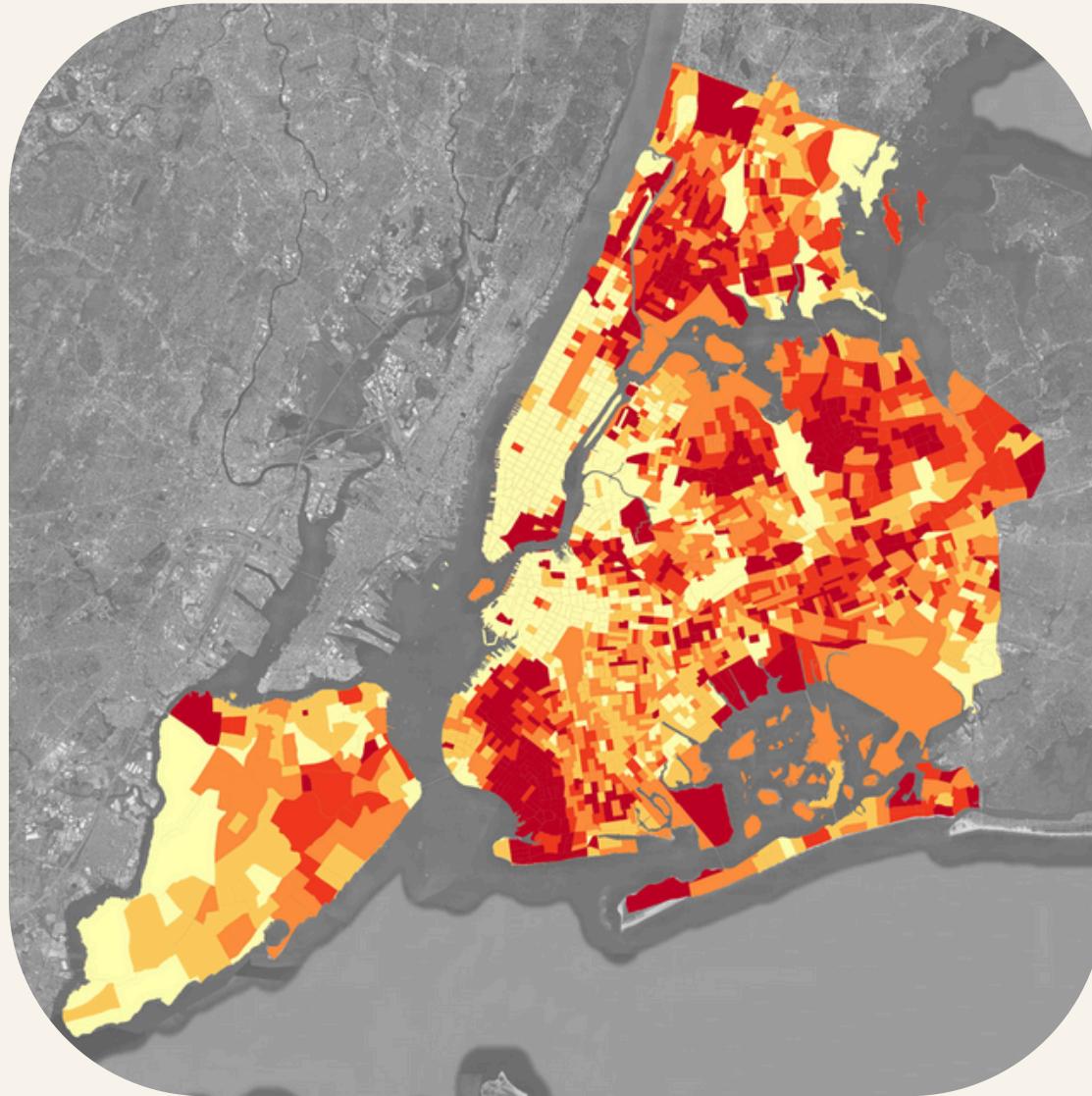
1.
**Reduce food
related emissions**

2.
**Eliminate food
waste from landfills**

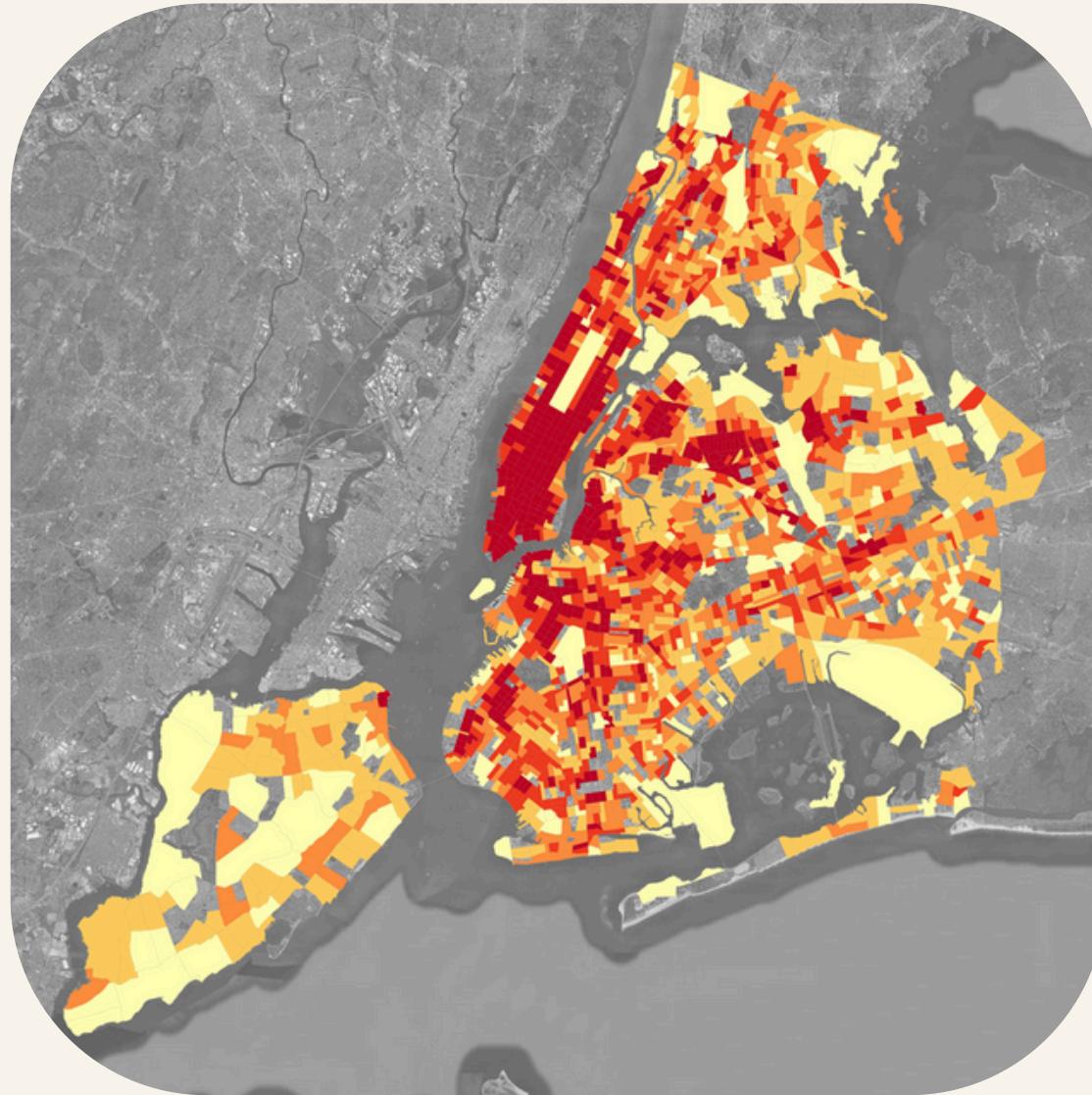
3.
**Build a resilient and
equitable food system**

Data: “NYC Food and Climate Strategy”, NYC Mayor’s Office of Food Policy

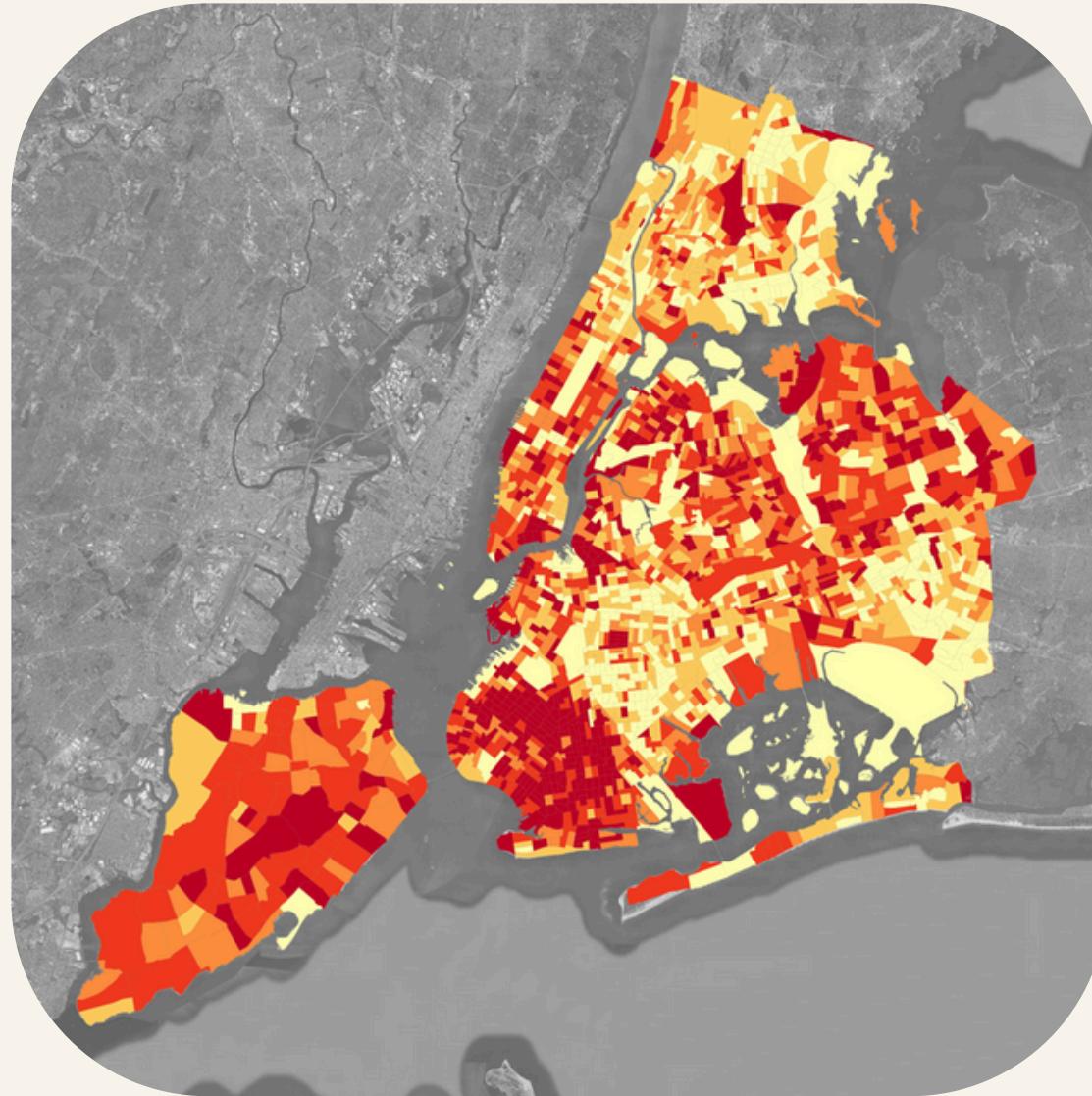
FOOD VULNERABILITY INDEX



high poverty

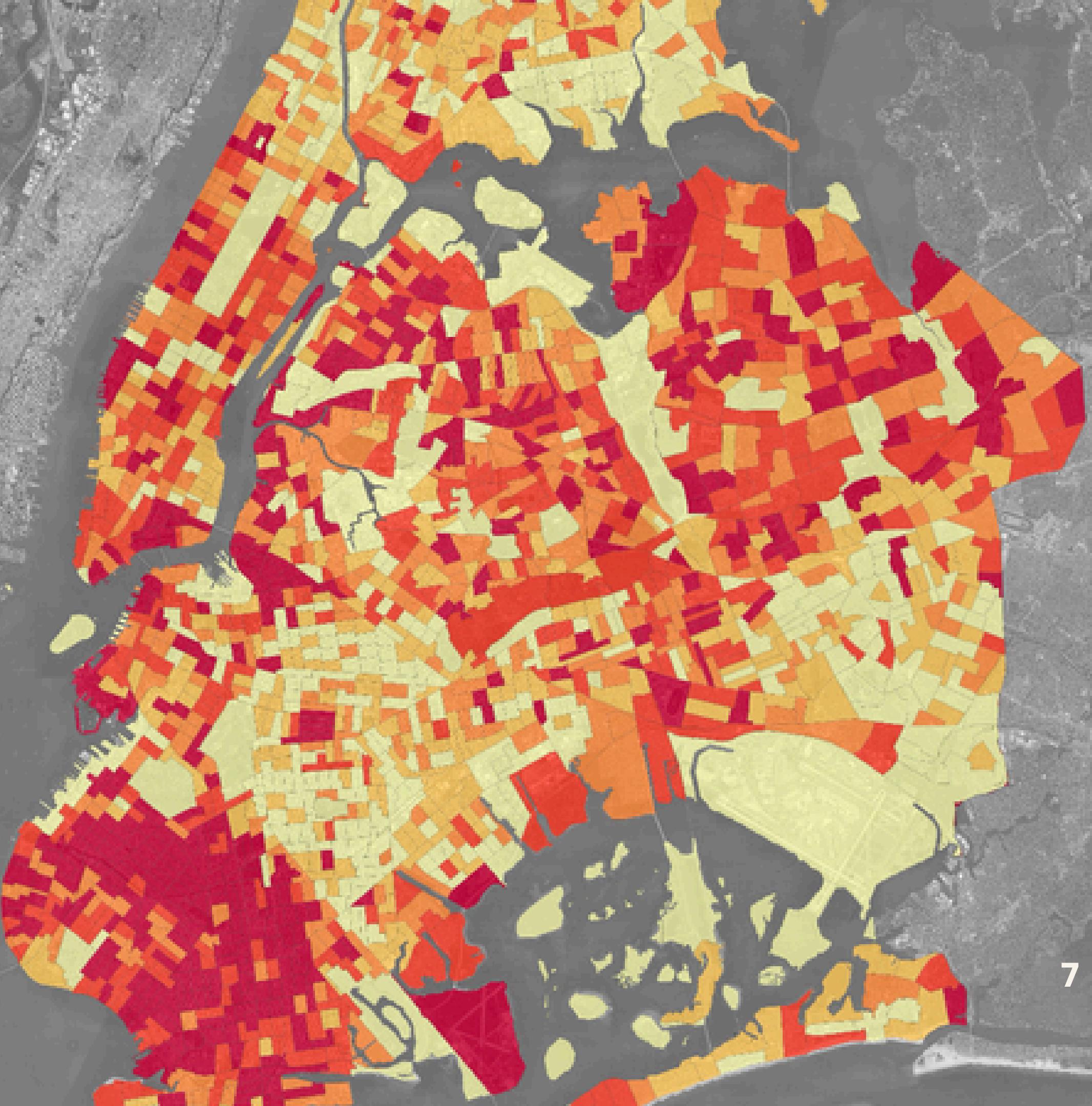
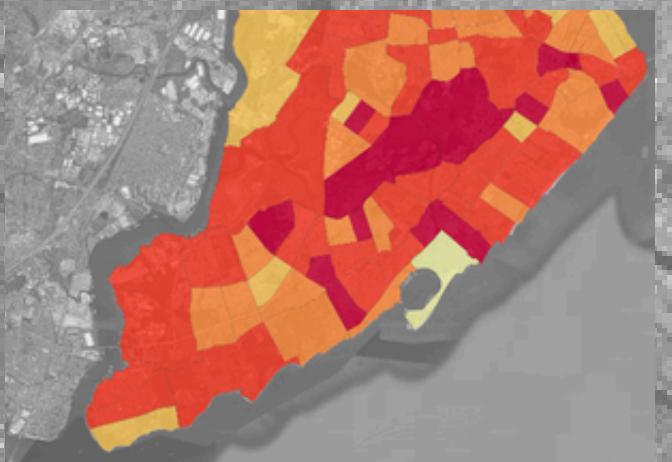
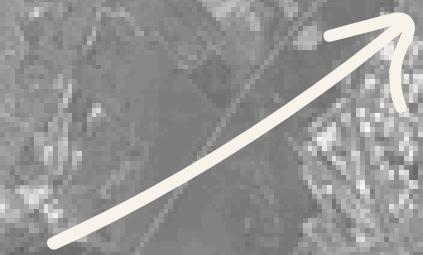
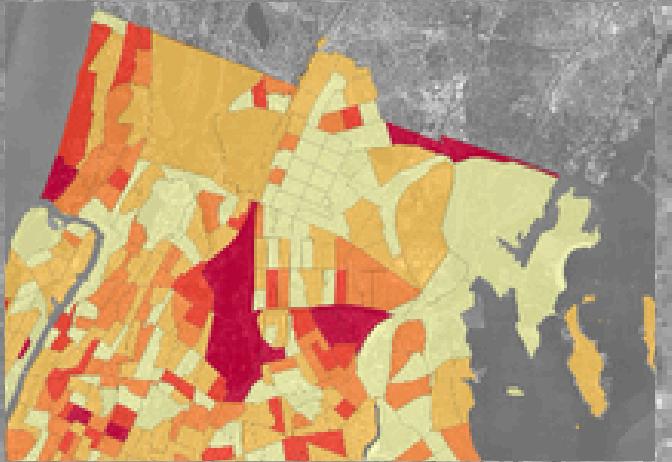


high consumption



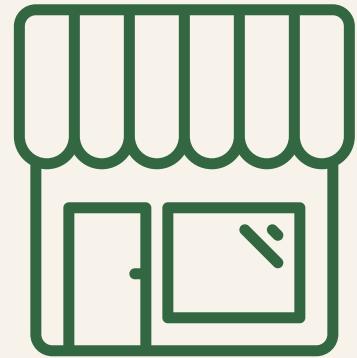
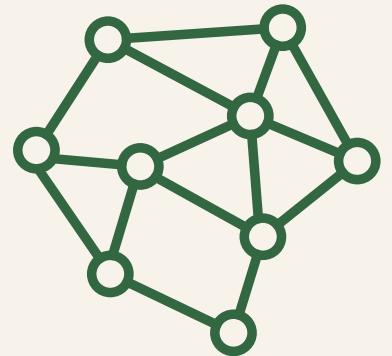
low household storage

FOOD VULNERABILITY INDEX





WHERE BEHAVIOR INTERVENES



Retail Access

distance, price,
availability

Purchase

substitution,
budget, time
pressure

Storage

fridge size,
power stability

Cooking

time,
energy, skill

Waste

spoilage, leftovers,
packaging

BEHAVIORAL CLIMATE INTERFACE SYSTEM

URBAN FOOD SYSTEM

procurement · logistics ·
regulation · infrastructure

BEHAVIORAL CLIMATE INTERFACE

- real-time food signals
- neighborhood vulnerability
- everyday decision feedback

EVERYDAY EATING

purchase · storage · cooking · waste

DATA LAYER

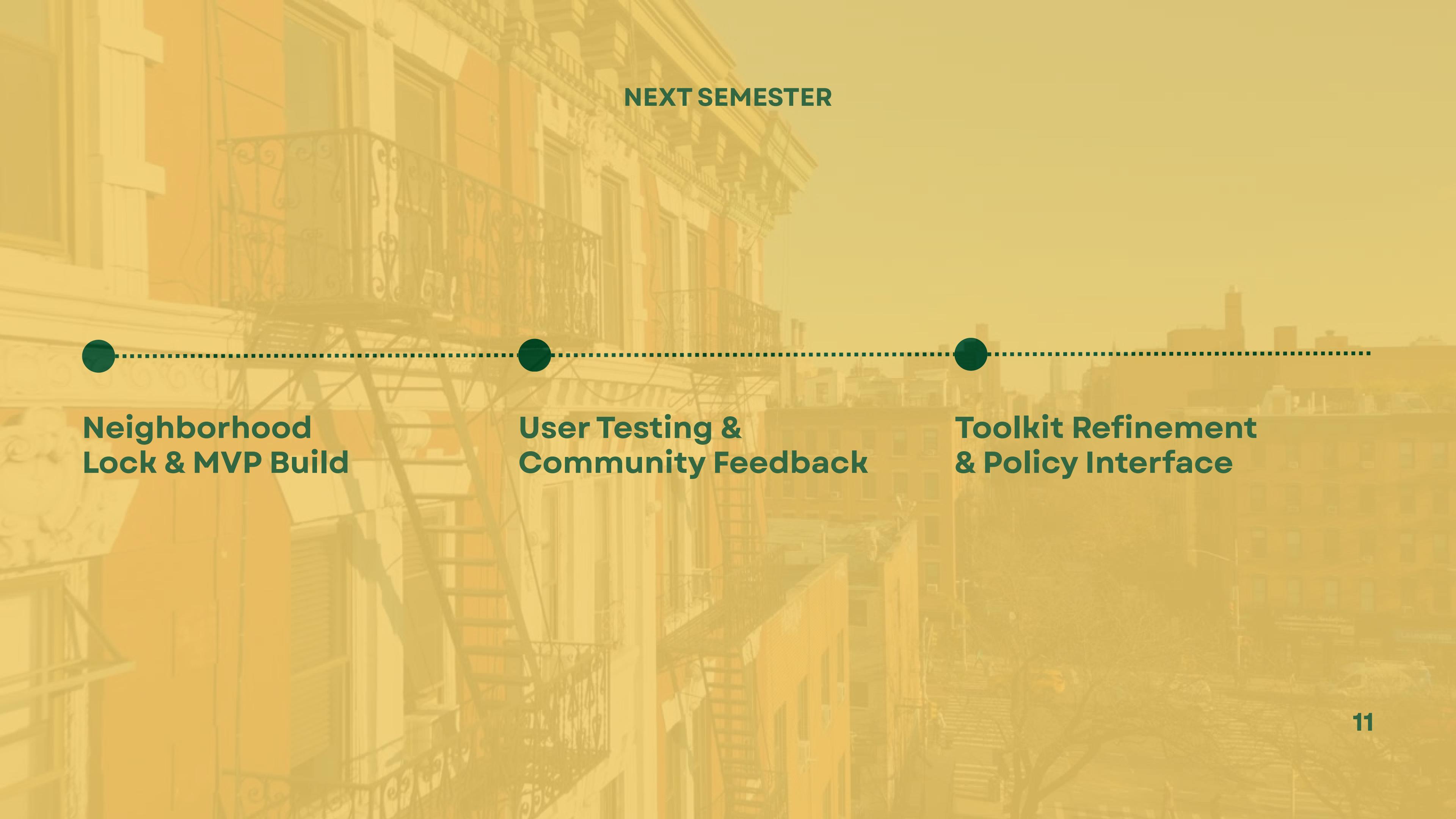
- carbon intensity
- price pressure
- access distance
- household storage

BEHAVIOR LAYER

- shopping frequency
- substitution
- cooking patterns
- waste generation

COMMUNITY LAYER

- neighborhood feedback
- shared storage practices
- food support networks
- local iteration



NEXT SEMESTER



**Neighborhood
Lock & MVP Build**



**User Testing &
Community Feedback**



**Toolkit Refinement
& Policy Interface**

THREE POSSIBLE FINAL OUTCOMES

Community-scale operational prototype

Real neighborhood deployment, real behavior testing, real feedback loop.

Working MVP + Pilot + Policy Testing Atlas

System + spatial impacts + regulatory simulation.

Interactive Atlas + Live System Demonstration

Public exhibition + interactive climate-behavior platform.

A black and white photograph of a food market stall. In the foreground, there are several wooden crates filled with various vegetables, including carrots, onions, and leafy greens. A scale is visible on the left side of the stall. In the background, there are more crates and some buildings, suggesting an urban setting.

Thank You!

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