

**Metro Washington  
Council on  
Governments  
*Recycling Committee***

**Presented by Eva Fowler,  
Associate Director,  
ReFED**



**ReFED**

**Rethink Food Waste**  
*Through Economics & Data*

# What is the ReFED Roadmap?

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ReFED is a nonprofit collaboration formed in 2015 of over 30 business, nonprofit, foundation and government leaders committed to reducing food waste in the United States.

On March 9<sup>th</sup>, ReFED launched *A Roadmap to Reduce U.S. Food Waste by 20 Percent*, the first ever national economic study and action plan driven by a multi-stakeholder group committed to tackling food waste at scale.



## AWARENESS

- Amount of food wasted
- Causes of that waste
- Impacts on the environment & economy



## ACTION

- Reduction/ prevention
- Recovery
- Reuse/ Recycle

# ReFED Steering Committee, Advisory Council, and Roadmap Team



Atticus Trust



New York City



City of Phoenix



Ahearn Family Foundation



WORLD RESOURCES INSTITUTE



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newventurefund



# **THE PROBLEM OF FOOD WASTE**



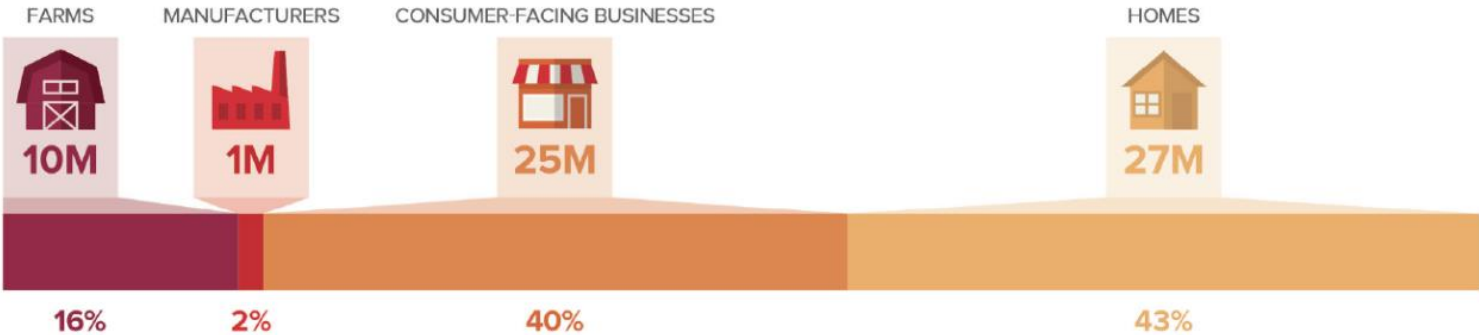
A top-down view of various fresh vegetables scattered on a white surface. The vegetables include several orange carrots of different sizes, a yellow squash, a red bell pepper, a green bell pepper, a red apple, a green apple, a yellow onion, a sweet potato, and a pomegranate. The vegetables are arranged in a somewhat circular pattern around the central text box.

**Every year, American consumers, businesses and farms spend \$218 billion (roughly 1.3% of GDP) on food that is never eaten.**

**This waste represents 18% of Cropland, 19% of Fertilizer, 21% of Freshwater, and 5% of GHG emissions.**

# Nearly 85% of all food waste happens in homes or consumer-facing businesses (restaurants, retail grocers, institutional cafeterias)

FOOD WASTED BY WEIGHT — 63 MILLION TONS



## CONSUMER-FACING BUSINESSES INCLUDE

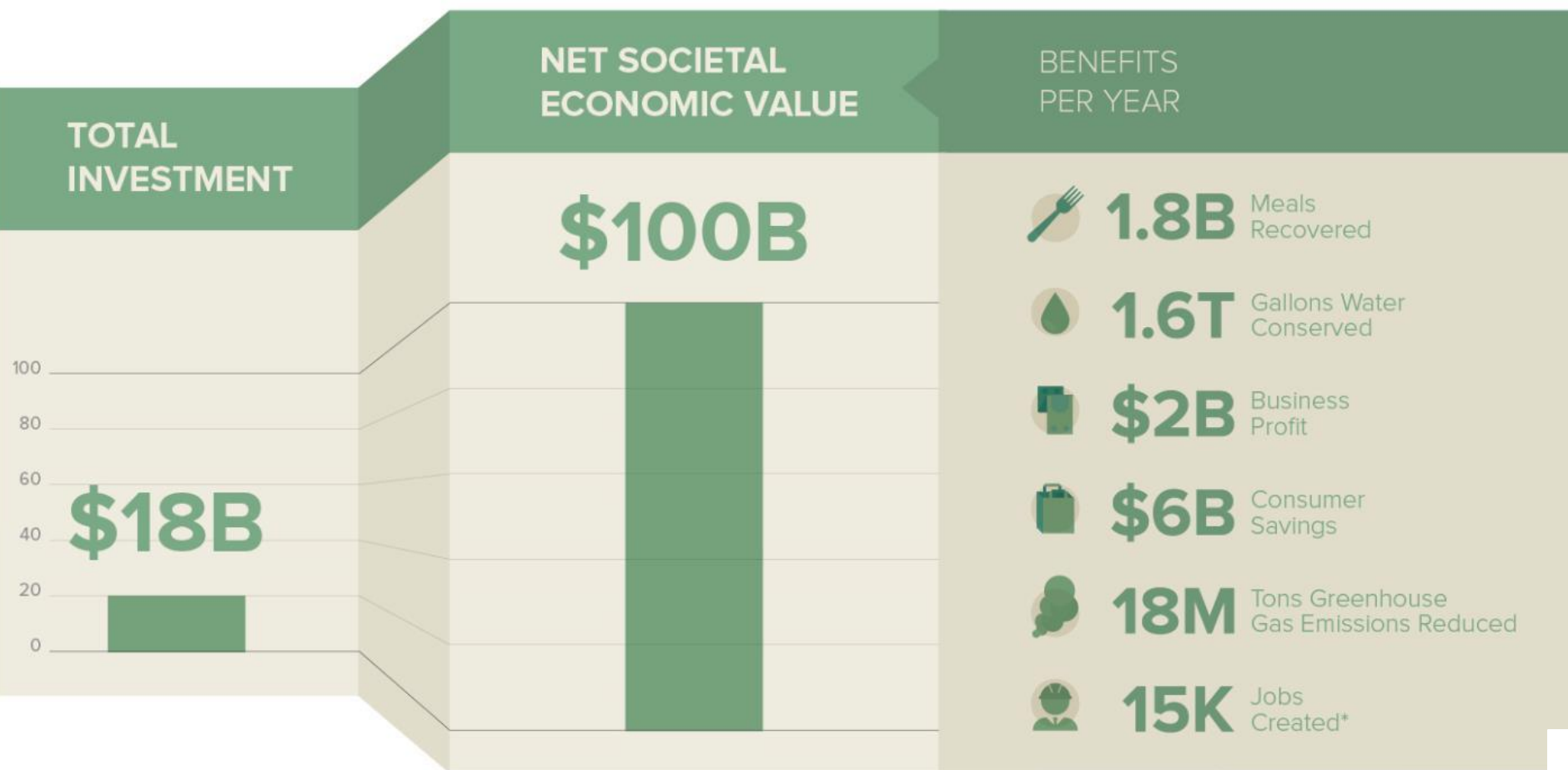


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# **THE SOLUTIONS AND ECONOMIC ANALYSIS**

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# AN \$18 BILLION INVESTMENT IN 27 SOLUTIONS TO REDUCE U.S. FOOD WASTE BY 20% WILL YIELD \$100 BILLION IN SOCIETAL ECONOMIC VALUE OVER A DECADE





# Data Analysis: 13M tons of potential (20%)

## Prevention

- Stopping waste from occurring in the first place
- 12 solutions
- **Annual Economic Value: \$7.7b**
- Most Cost Effective

## Recovery

- Redistributing food to people
- 7 solutions
- **Annual Economic Value: \$2.4b**
- Best at Alleviating Hunger

## Recycling

- Repurposing waste as energy and agricultural products
- 8 solutions
- **Annual Economic Value: \$121M**
- Greatest Diversion Potential/



## REDUCE 13.2 M TONS

■ PREVENTION:	2.6 M TONS
■ RECOVERY:	1.1 M TONS
■ RECYCLE:	9.5 M TONS

# 27 Solutions Evaluated

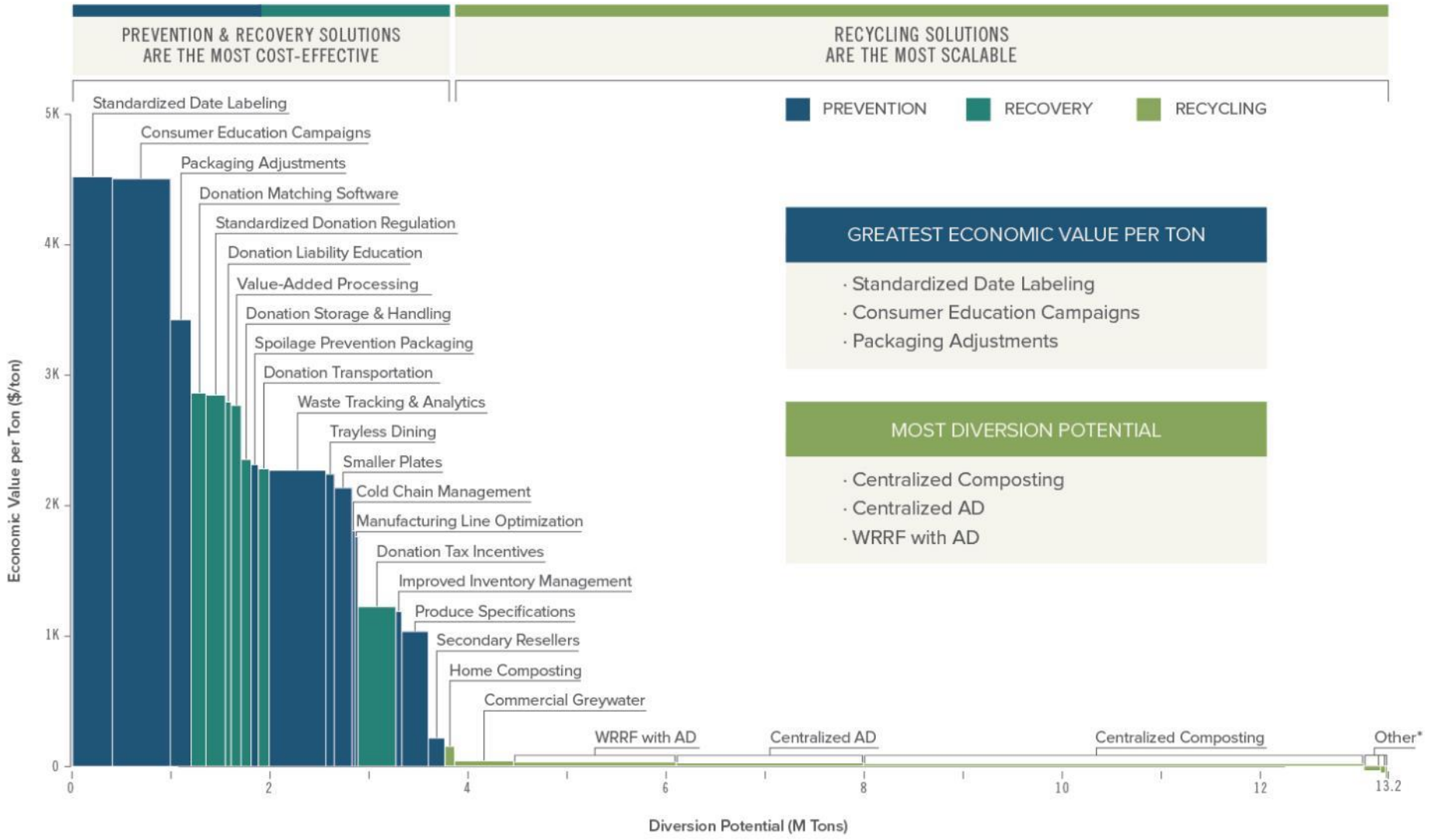
Prevention Solutions	
Packaging, Product & Portions	Standardized Date Labeling
	Packaging Adjustments
	Spoilage Prevention Packaging
	<b>Produce Specifications (Imperfect Produce)</b>
	Smaller Plates
	Trayless Dining
Operational & Supply Chain Efficiency	Waste Tracking & Analytics
	Cold Chain Management
	Improved Inventory Management
	<b>Secondary Resellers</b>
	Manufacturing Line Optimization
Consumer Education	<b>Consumer Education Campaigns</b>

Recovery Solutions	
<b>Donation Infrastructure</b>	<b>Donation Matching Software</b>
	<b>Donation Storage &amp; Handling</b>
	<b>Donation Transportation</b>
	<b>Value-Added Processing</b>
<b>Donation Policy</b>	<b>Donation Liability Education</b>
	<b>Standardized Donation Regulation</b>
	<b>Donation Tax Incentives</b>

Recycling Solutions	
Energy & Digestate	Centralized Anaerobic Digestion (AD)
	Water Resource Recovery Facility (WRRF) with AD
On-Site Business Processing Solutions	In-Vessel Composting
	Commercial Greywater
Agricultural Products	Community Composting
	Centralized Composting
	Animal Feed
	Home Composting

**Criteria for Selection**  
*Available Data*  
*Cost effective*  
*Feasible*  
*Scalable*

# MARGINAL FOOD WASTE ABATEMENT COST CURVE



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**THE PATH  
AHEAD TO TAKE  
ACTION**

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# Levers to Drive Action Across all Stakeholders

Four crosscutting actions needed to quickly cut 20% of waste and put the U.S. on track to achieve a broader 50% food waste reduction goal by 2030.



## POLICY

Commonsense tweaks leading to standardized national policy



## FINANCING

New catalytic capital and quantified non-financial impacts



## INNOVATION

5 focus areas and innovation incubator networks



## EDUCATION

National Consumer and Employee campaigns



# Policy

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**Commonsense policy adjustments are needed to scale federal food donation tax incentives, standardize safe handling regulations, and boost recycling infrastructure by expanding state and local incentives and reducing permitting barriers.**

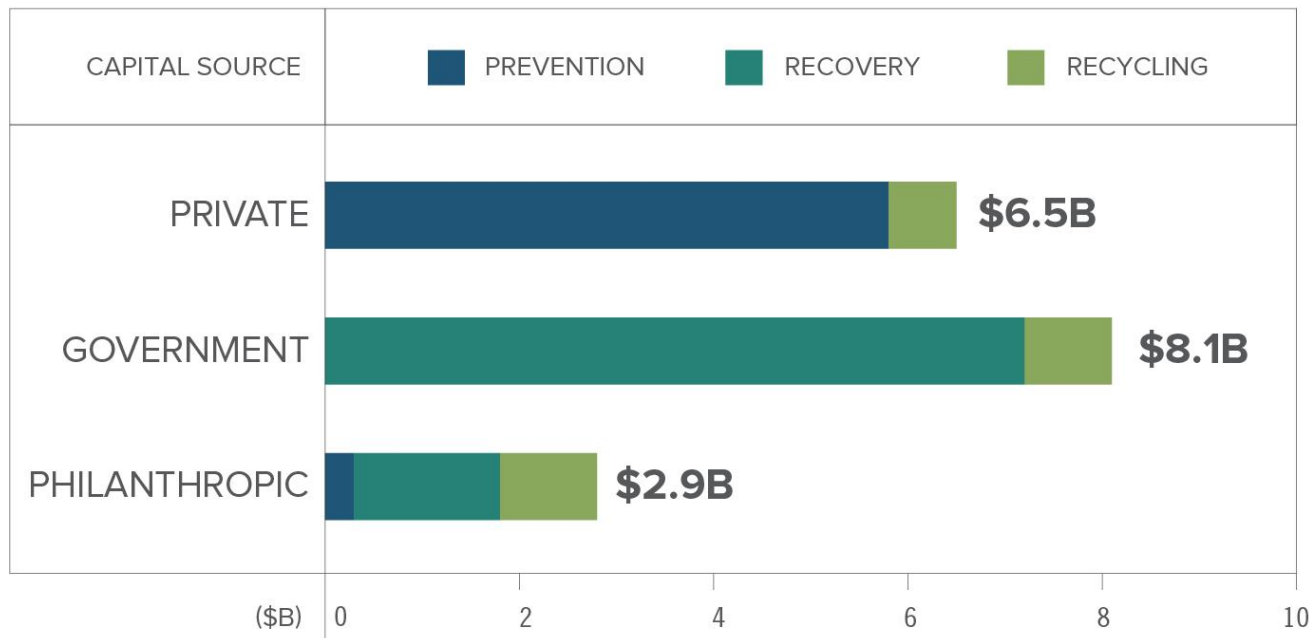
## **Recent activity:**

- ReFED co-authored a food waste resolution with the City of Phoenix, approved unanimously by the Conference of Mayors outlining priority actions to reduce city waste by 50%
- The first-ever Congressional Hearing on food waste by the House Agricultural Committee
- Food Date Labeling Act (introduced by Connecticut Sen. Richard Blumenthal and Maine Rep. Chellie Pingree)
- Chef Day of Action promoting:
  - Increased food donations to alleviate hunger
  - Simplified date labeling
  - The donation or sale of imperfect produce from farms.

# Financing

The Roadmap will require an \$18 billion investment, less than a tenth of a penny of investment per pound of food waste reduced, which will yield an expected \$100 billion in societal Economic Value over a decade.

*FINANCING NEEDS FOR 20% REDUCTION IN FOOD WASTE OVER A DECADE*



# Innovation

PREVENTION		RECOVERY		RECYCLING		HUNGER RELIEF		
For Profit	NGO	For Profit	NGO	IT Platform	Compost/Product	Waste-to-Energy		

**Big Opportunity:** Incubator network focused on 5 Big Ideas: Packaging & Labeling, IT-enabled Transportation & Storage, Logistics Software, Valued-add Compost Products, Distributed Recycling

# Education

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## Consumer Education

- One of the most cost effective of the 27 solutions
- Spurs consumer demand for smarter retail offerings, such as Standardized Date Labeling, Spoilage Prevention Packaging, Imperfect Produce, and Trayless Dining.
- Consumer attitudes **currently drive food waste** at farm/retail level
- Launch of the first widespread public service campaign promoting food waste awareness by NRDC and the Ad Council.
  - Target: Moms & Millennials

## Employee Education

- Food service employees play a central role in food waste reduction (avoid unnecessary removal of products, ID donated, and properly source-separate scraps)
- Quickest path to widespread employee training: Food Waste Certification as part of existing Food Safety Training

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# How to get involved? Visit [refed.com](https://refed.com)

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*Interactive Cost Curve ranks solutions by economic value, scalability, and environmental/social benefits*

*Download and share the Roadmap full report (96pg), Key insights (5pg), and Technical Appendix*

*Additional Detail on the 27 solutions and priorities for each stakeholder*

*Future Research Priorities*

***We are actively exploring how to better support municipalities and their leadership on waste reduction. For ideas or additional questions, contact us at [info@refed.com](mailto:info@refed.com)***



# The Extraordinary Life and Times of Strawberry



<https://youtu.be/WREXBUZBrS8>