



# Food Waste Tracking: What You Need to Know

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*Presented by:*  
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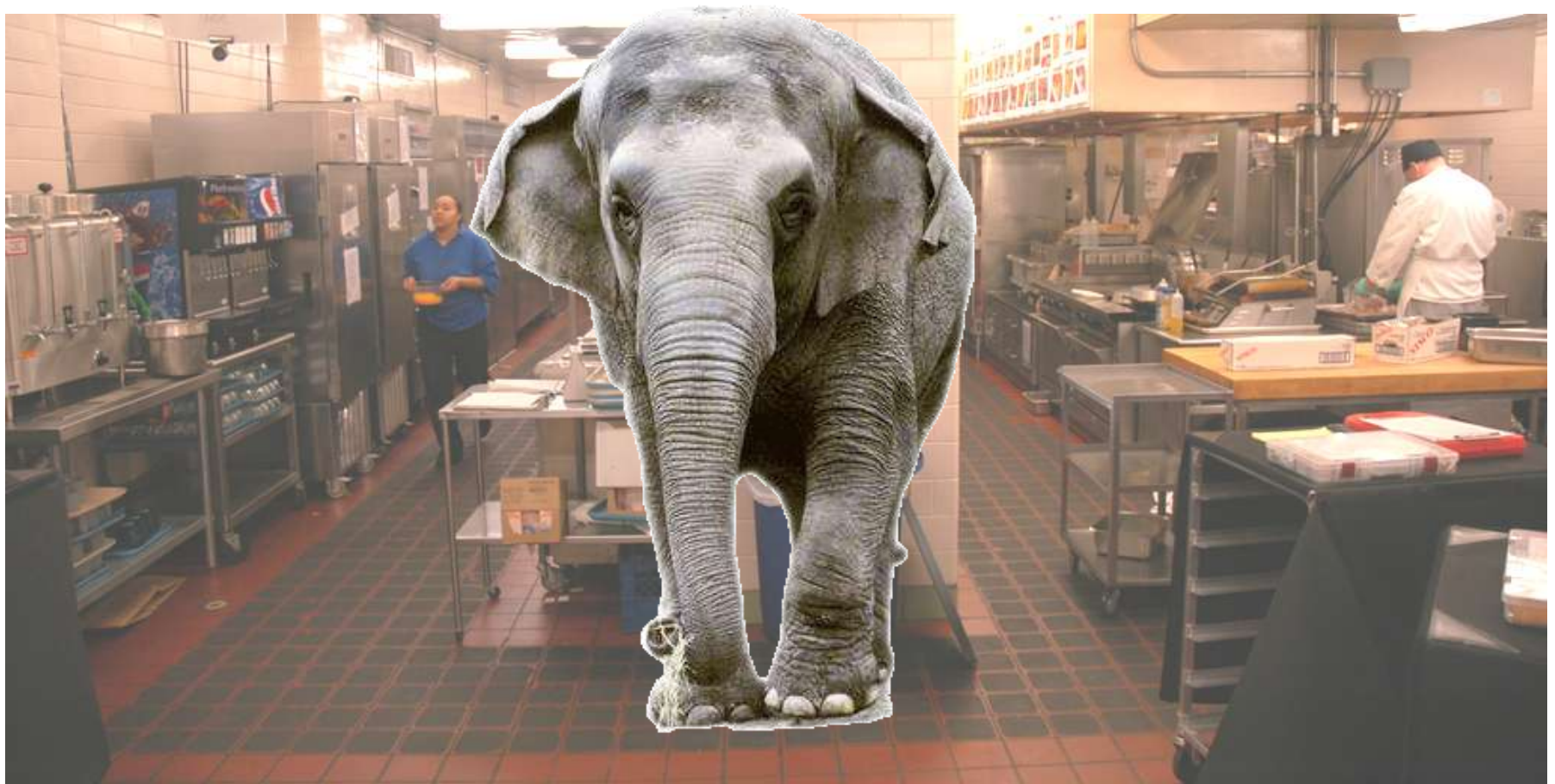
# My perspective

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- Co-founder of LeanPath, a technology company providing food waste tracking systems
- Food waste management consulting and education
- Co-author of Food Waste Focus blog
- Experience with volume foodservice across the US

# Why Track Food Waste?





**Estimate:**

**>.3 lbs per meal served**

# Why focus on food waste?

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## *The Case For Food Waste Reduction*

Reduce  
Environmental  
Impacts

Reclaim  
Financial  
Resources

Engage Staff

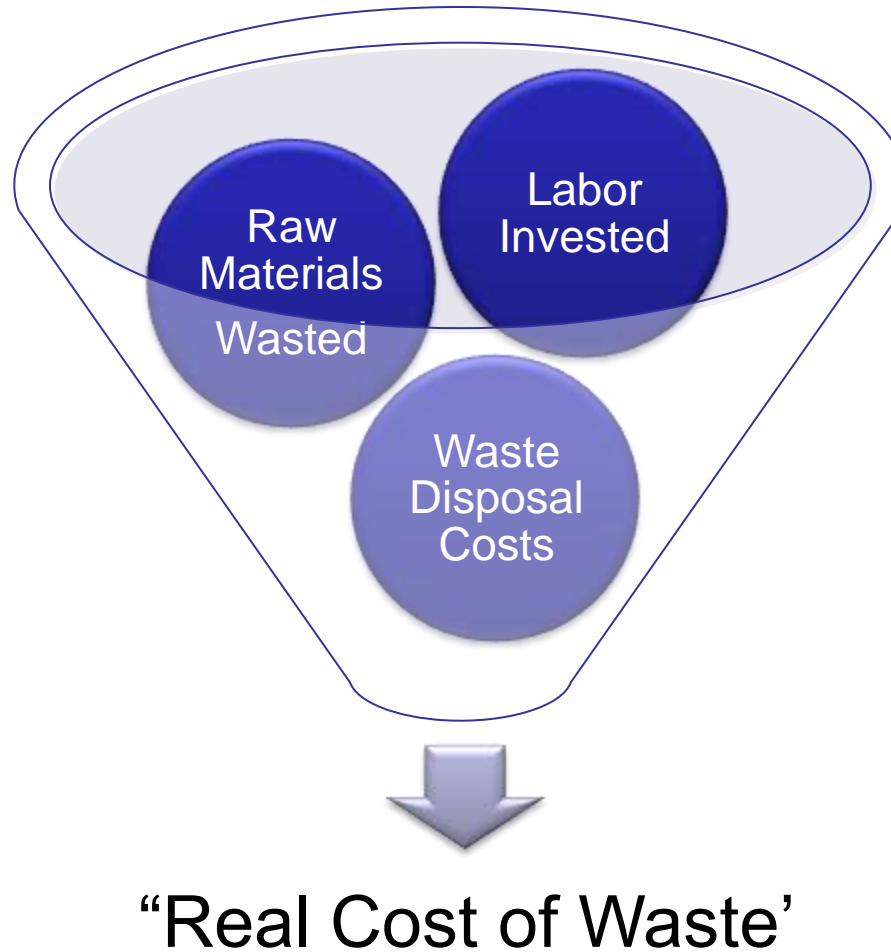
# Environmental Impact

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# The Real Cost of Waste



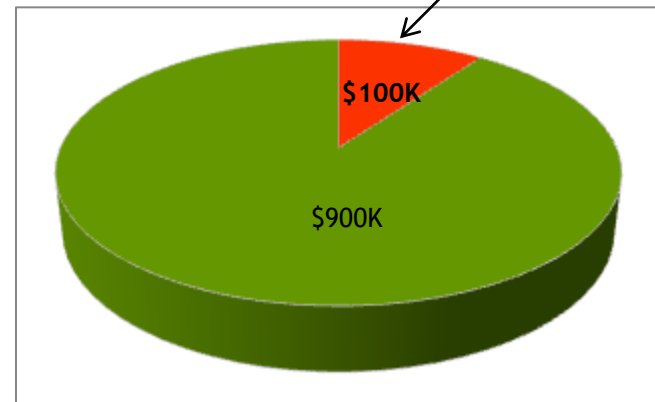
# Scope

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Food waste generated by the operator (“pre-consumer waste”) represents 4-10% of the food purchased in volume foodservice

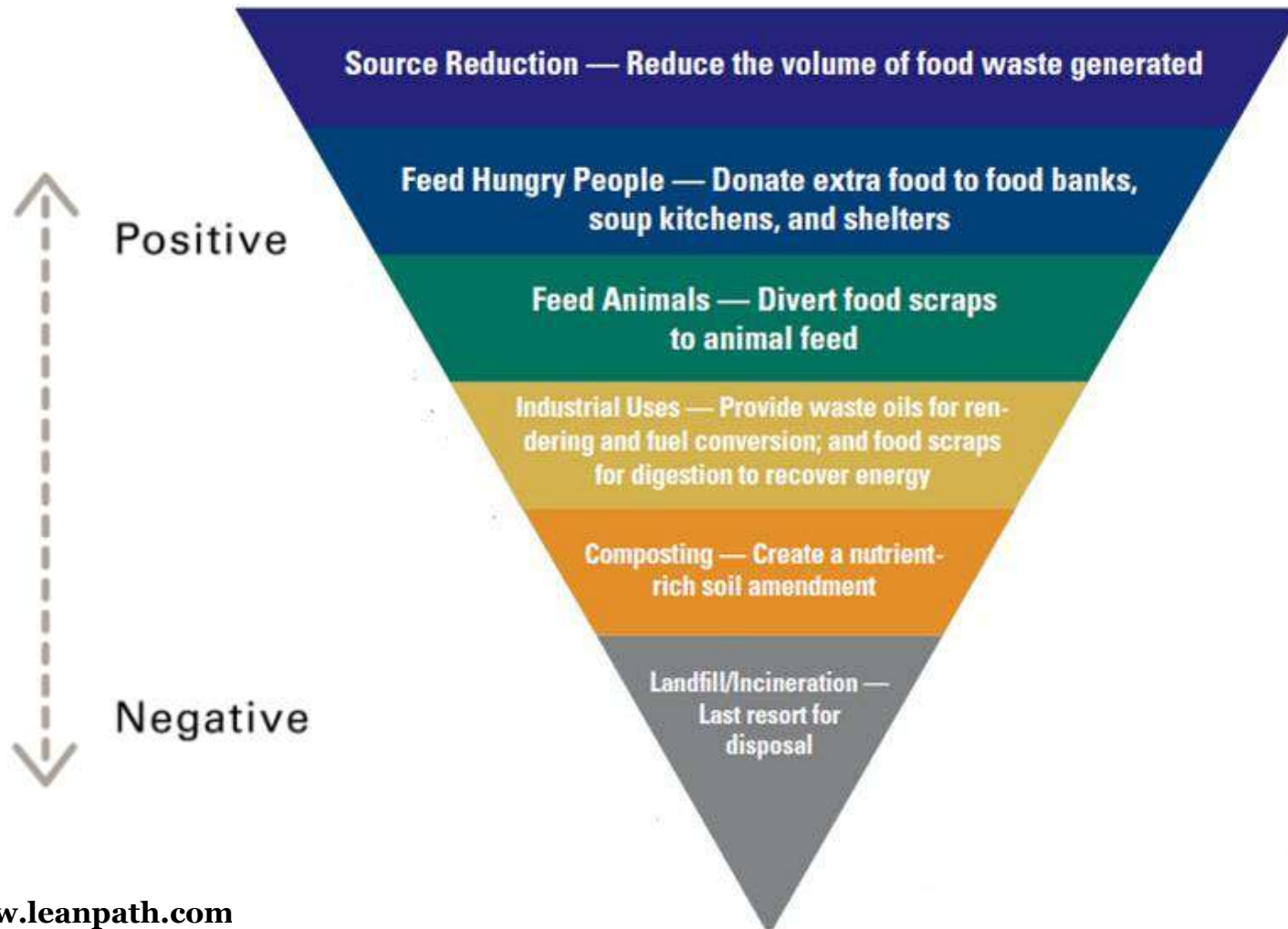
Up to \$100K in Food Waste!



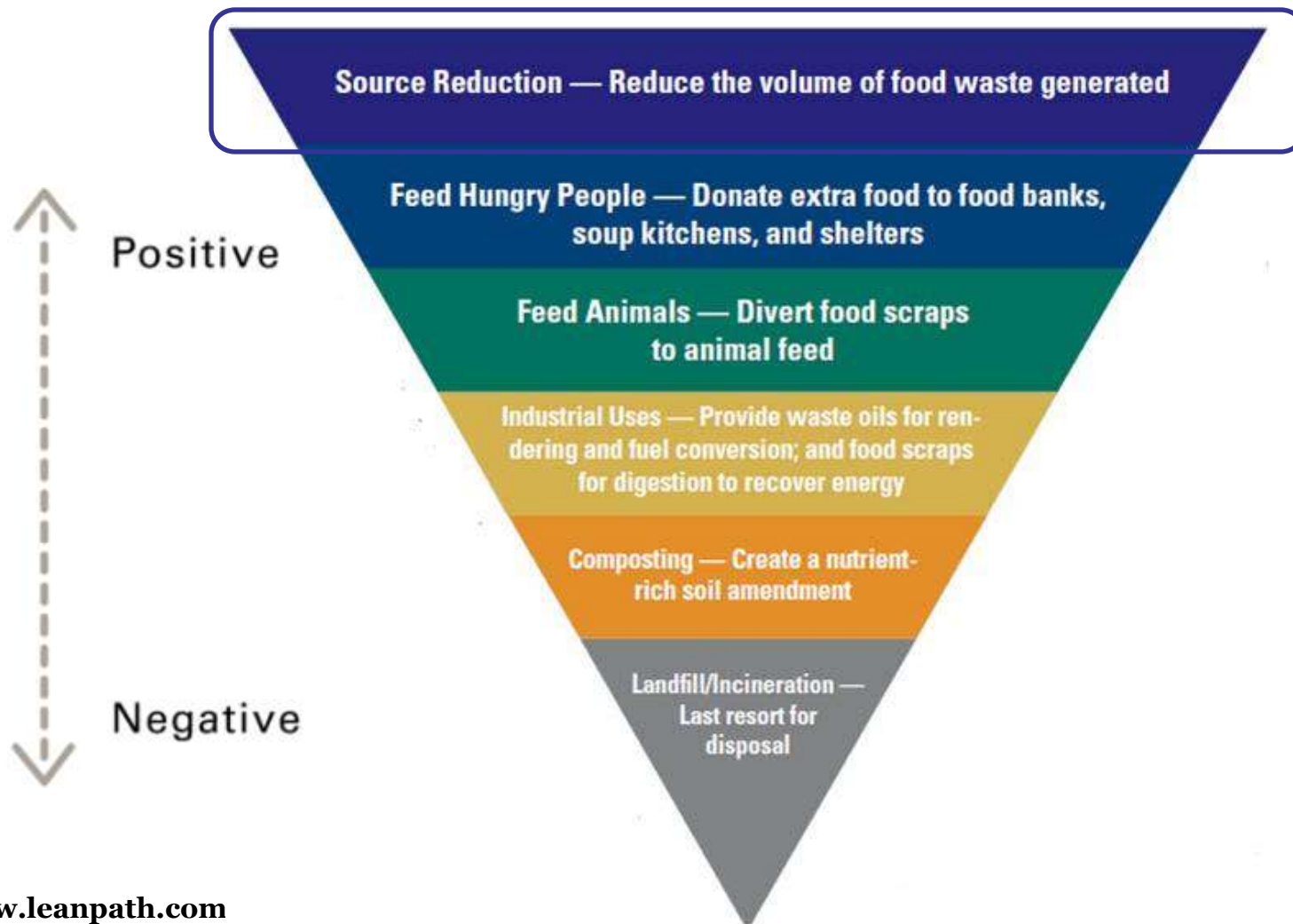
Example: \$1.0M Food Purchases

# So where do we start?

# EPA Food Waste Recovery Hierarchy



# How To Tackle Source Reduction?



# As often practiced...

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# Source Reduction

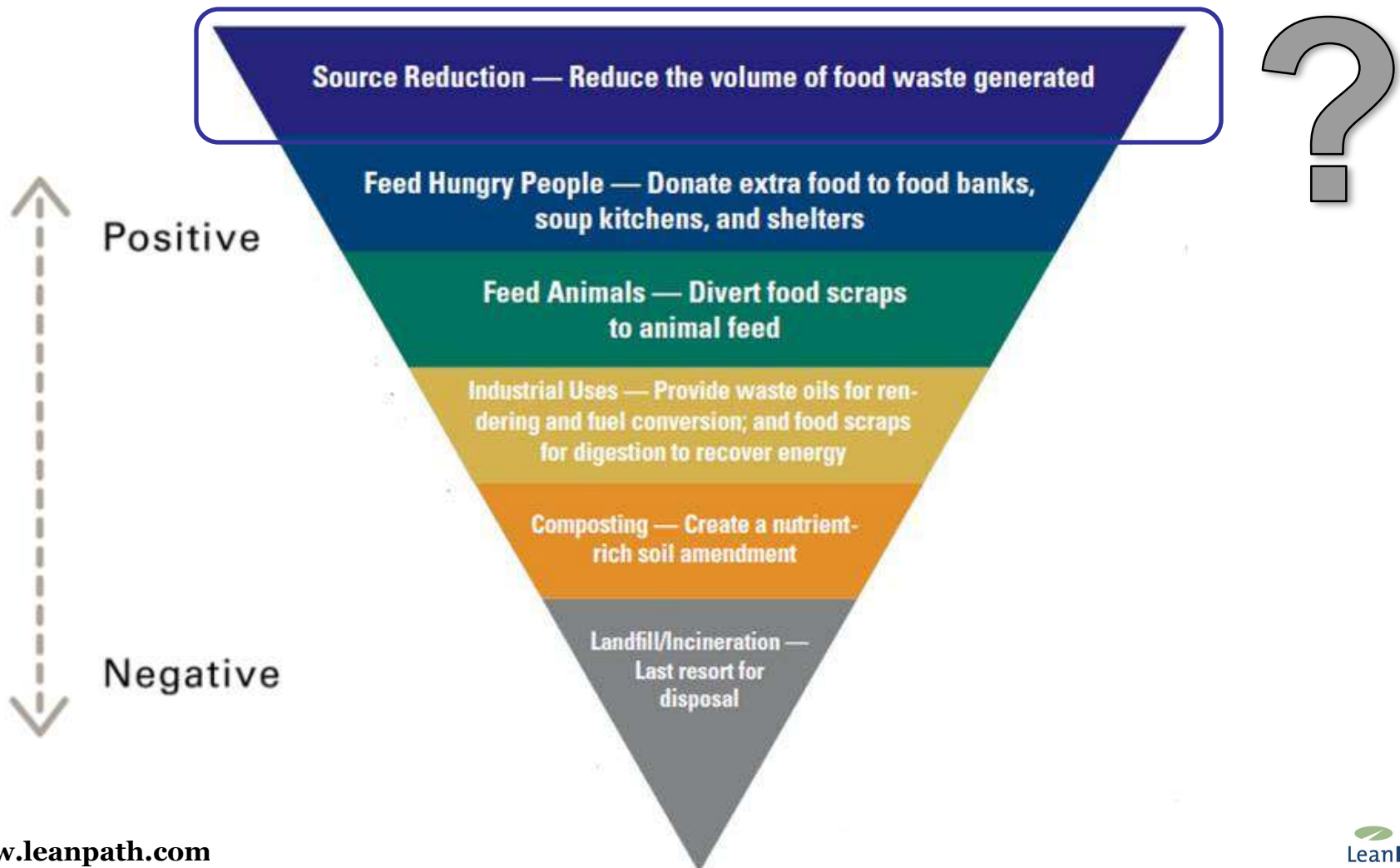
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Often overlooked

- Not as tangible as composting or food recovery
- Operators, consultants and government aren't sure what tools are available to address the problem

# How To Tackle Source Reduction?





# Food Waste Tracking

# Frameworks Point to Measurement

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# **“We manage the things we measure”**

*If we don't track how much we throw away, how do we really know what and how to improve? If we don't measure, we're guessing.*

*Feedback loops  
focus behavior and  
drive change*

# Impact from Tracking

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Tracking enables you to:

- Establish baselines
- Diagnose issues
- Raise employee awareness
- Raise guest awareness
- Create accountability
- Monitor & benchmark progress.



**Reduction & tracking  
=  
Two sides of one coin.**

# How to Track Food Waste?

# Two Types of Food Waste

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Pre-Consumer  
Food Waste  
(aka “Kitchen Waste”)

Post-Consumer  
Food Waste  
(aka “Plate Waste”)

Different Tracking Approach for Each



# Pre/Post Food Waste Dynamics



	Pre-Consumer	Post-Consumer
Drivers	Overproduction, spoilage, expiration, trim waste, communication, adherence to forecasts/recipes	Guest awareness and behavior, portion sizes, self-service
Natural state?	Source-segregated	Commingled
Cost impact	Large, direct	Varies by op; indirect
Driven by:	Kitchen staff	Guests
Conclusion	Track it all, every day	Assess periodically (monthly, quarterly)

# How to Track Pre-Consumer Food Waste (aka Kitchen Waste) Continuously

# What To Track

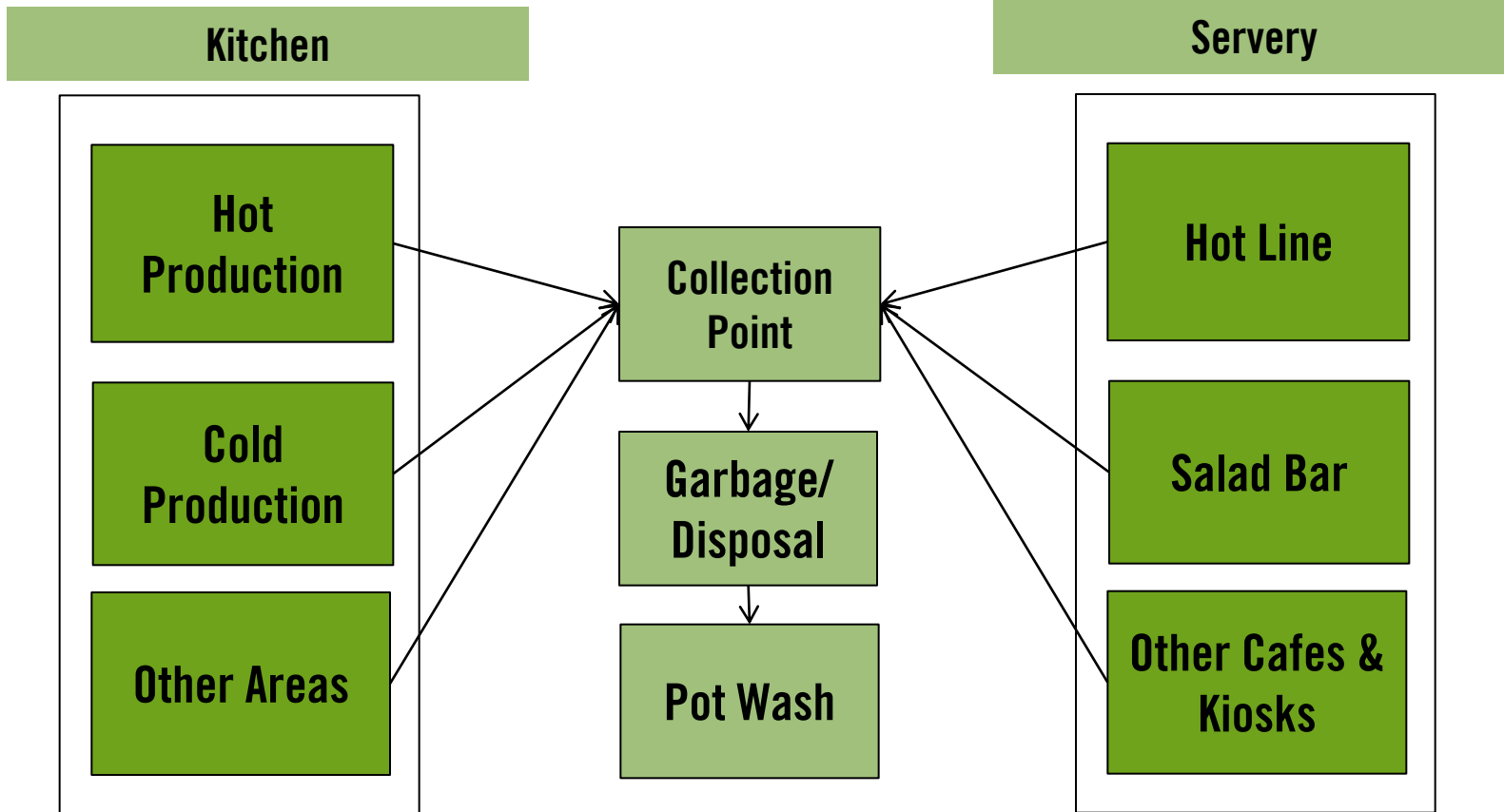
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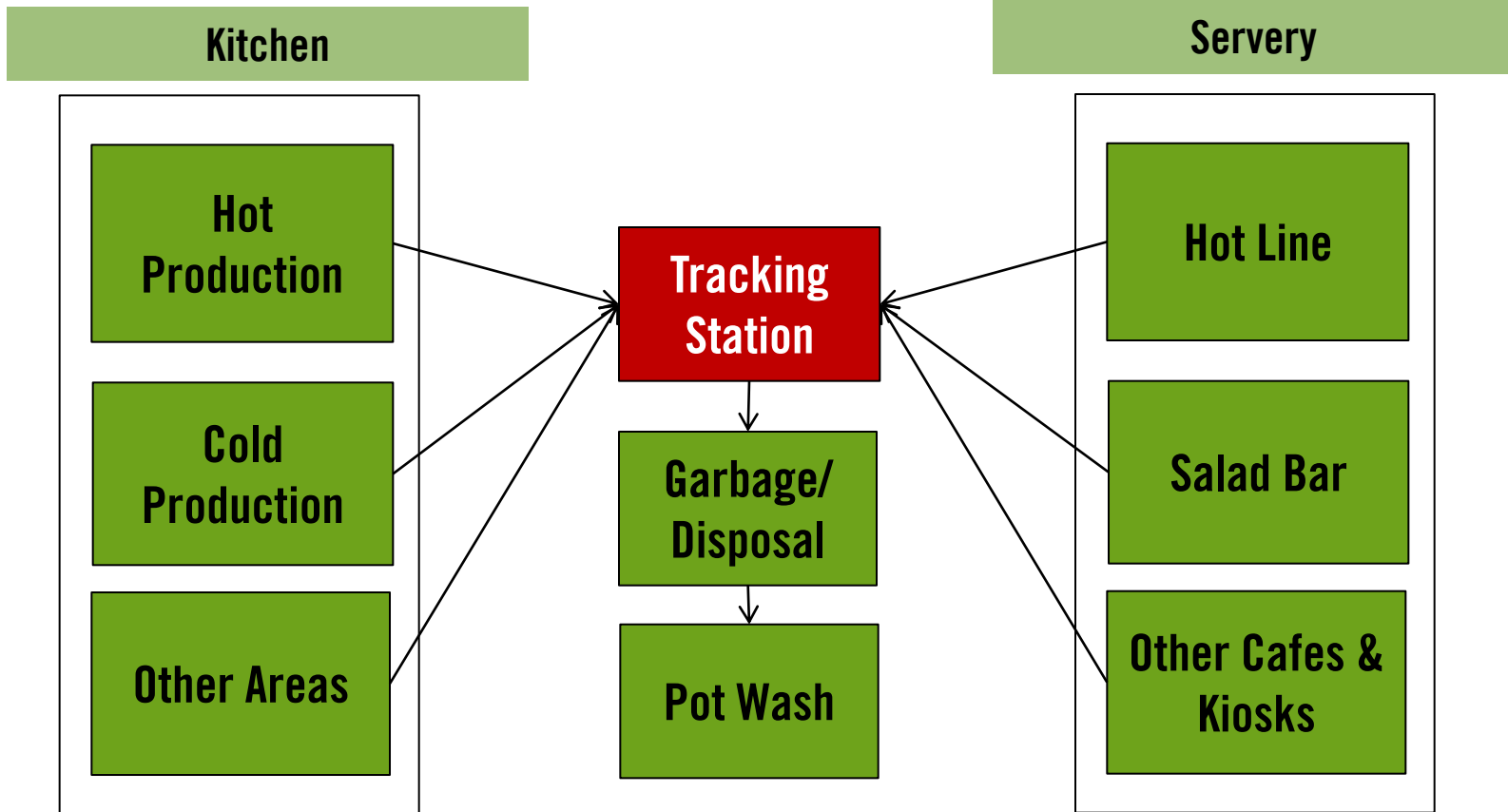
- Overproduction
- Spoilage
- Expired/Dated Items
- Trim Waste
  - (i.e. fresh fruit rinds)
- Contamination
- Burned/Dropped Items



# Look at Workflow



# Centralize Tracking



# Policies

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- Establish a review policy
  - With full attention to food safety
  - Appropriate staff involved
- Record what cannot be used on-site
  - Includes items to be donated, composted, or landfilled

# Decide How Much Detail

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- The more detail, the greater opportunity to pinpoint savings
- Larger operations will usually benefit by savings pennies and nickels across massive footprints
- Smaller operations may choose to focus on less granular detail

# Basic Information

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- Date & Time
- Recording Employee Name
- Food Item
  - by general category e.g “Produce”
  - Very specifically e.g. Apples
- Reason for Loss
- Unit of Measure
  - Weight, Volume or Each/Count



# Advanced Information

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- Container (for Tare Weight)
- Station/Source
- Disposition
- Daypart
- Banquet Event Order #
- Pre v. Post Consumer
- Overs / Not-Yet-Waste (NYW)
- Notes

# Tool Options

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- Paper Sheets
  - Suited for lowest volume ops, no detail; lowest cost
- Software Tracking + Paper
  - Suited for low-medium ops, good detail.
- Full Automation
  - Suited for higher-volume ops, maximum detail
  - Easiest for staff to use, easiest for managers to run
  - Higher cost, but can deliver powerful ROI (~4%+ food cost savings)

# Basic Paper Log Book



## Waste Logbook – XYZ Restaurant

Date: \_\_\_\_\_ Weather: \_\_\_\_\_  
 Notes/Special Events Today: \_\_\_\_\_  
 \_\_\_\_\_

Time	Recorded By	Food Type	Loss Reason	# of Portions	# of Quarts	# of Pounds
					PICK ONE	
TOTAL						

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# Advanced Logbooks + Software



WasteLOGGER Main Street Bistro (Bronze) LeanPath

Main Street Bistro										Date
Name	Qty	Measure	Size	Pan		Food		Loss Reason		
		Pounds	8"	Full	Shotgun	Fruit	Dairy	Overproduction	Misorder	
		Quarts	4"	Half	Sixth Pan	Vegetables	Pork	Expired	Burned	
		Gallons	2.5"	Third	Soup Bell	Starch	Beef	Trim Waste	Dropped	
		Each		Quarter	Lepp	Soup/Sauce	Poultry	Spoilage	HAACP	

Name	Qty	Measure	Size	Pan		Food		Loss Reason	
		Pounds	8"	Full	Shotgun	Fruit	Dairy	Overproduction	Misorder
		Quarts	4"	Half	Sixth Pan	Vegetables	Pork	Expired	Burned
		Gallons	2.5"	Third	Soup Bell	Starch	Beef	Trim Waste	Dropped
		Each		Quarter	Lepp	Soup/Sauce	Poultry	Spoilage	HAACP

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		Each		Quarter	Lepp	Soup/Sauce	Poultry	Spoilage	HAACP

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		Quarts	4"	Half	Sixth Pan	Vegetables	Pork	Expired	Burned
		Gallons	2.5"	Third	Soup Bell	Starch	Beef	Trim Waste	Dropped
		Each		Quarter	Lepp	Soup/Sauce	Poultry	Spoilage	HAACP

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		Gallons	2.5"	Third	Soup Bell	Starch	Beef	Trim Waste	Dropped
		Each		Quarter	Lepp	Soup/Sauce	Poultry	Spoilage	HAACP

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- Grouping by Individual Transaction Frames
- Also designed for ease of input into reporting software package

# Advanced Logbooks + Software



WasteLOGGER Broadway Bistro (Silver) LeanPath

Broadway Bistro		Date			
Qty	Measure	Size	Pan	Food	Loss
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Wheat	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Phacelia	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Apples	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Oranges	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Yog	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Other-Fruit	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Soy Peppars	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Red Peppers	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Lettuce	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Corsets	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Cabbage	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Tomatoes	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Other-Veggie	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Vegetables	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Soup-Onli	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Sauce-Drip	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Oil-Rice	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Beer-Spck	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Beer-Reg	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Chicken	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Queso/Eme	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Turkey	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Pork	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Coffee	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Milk	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Cheese	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Yogurt	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Seaman	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Eggs	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Pasta	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Rice	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Beans	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Potatoes	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0
	lbs-Oz-Gal-Ea	3-4-12	Full-Max-Third-Bal	Pine-Tots	Q=0P=0-E=0-T=0-S=0L=0-W=0U=0-P=0-Sum=0

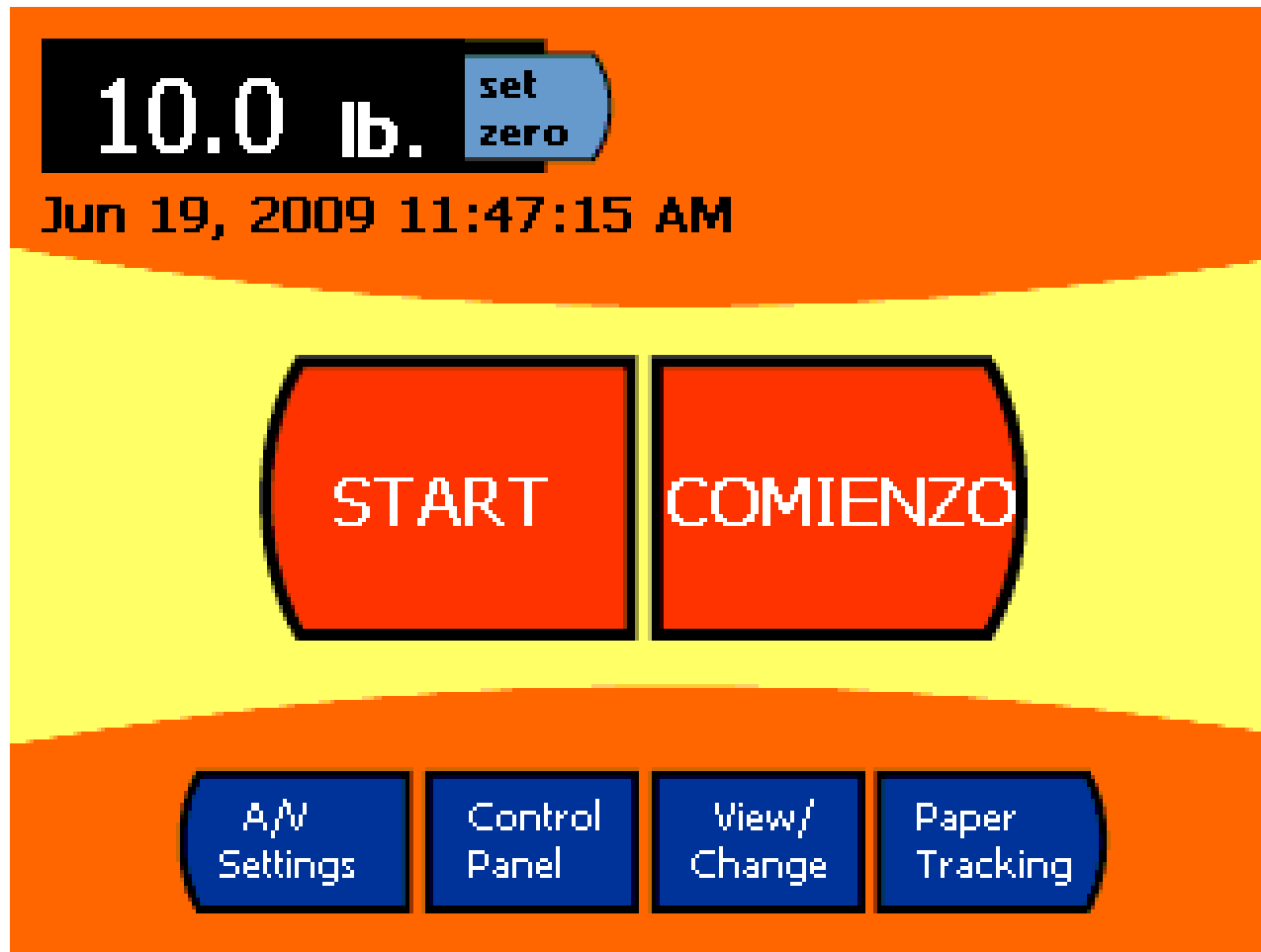
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- Menu manifest approach
- Also designed for ease of input into reporting software package

# Fully Automated Tracking



# Waste Recording: Step 1





# Waste Recording: Step 2



A-B	C-D	E-F	G-H	I-J	K-L	M-N
O-P	Q-R	S-T	U-V	W-X	Y-Z	
Anthony P	Catharine I	Cheryl G				
Chris B	Christine M	Dieudonnat C				
Eileen S	Frances S	Fred L				
Jack L	Jake F	Joanne L				
Select Your Name	More	X				



# Waste Recording: Step 3



**4.8 lb.** set zero

Vangie C

Select Food

Select Reason

Select Container

X

Bakery

Beef - Grnd

Beef - Whl

Casserole

Chix

Chix-w/Bone

Compound Salad

Weekly Soup

Daily Soup

Dairy

Deli Meat

More



# Waste Recording: Step 4



**4.8 lb.** set zero

Vangie C

Chix

Select Reason

Select Container

X

Burned/Overcook

Cater Overproduction

Contaminated

Dropped/spilled

Expired

More



# Waste Recording: Step 5



**4.8 lb.** set zero

Vangie C

Chix

Dropped/spilled

Select Container

X

Coffee Shuttle

Full Hotel Pan (1")

Full Hotel Pan (2.5")

Full Hotel Pan (4")

Full Hotel Pan (6")

More



# Waste Recording: Step 6



**4.8 lb.** set zero

Vangie C

Chix

Dropped/spilled

Full Hotel Pan (1")

Save X

Coffee Shuttle

Full Hotel Pan (1")

Full Hotel Pan (2.5")

Full Hotel Pan (4")

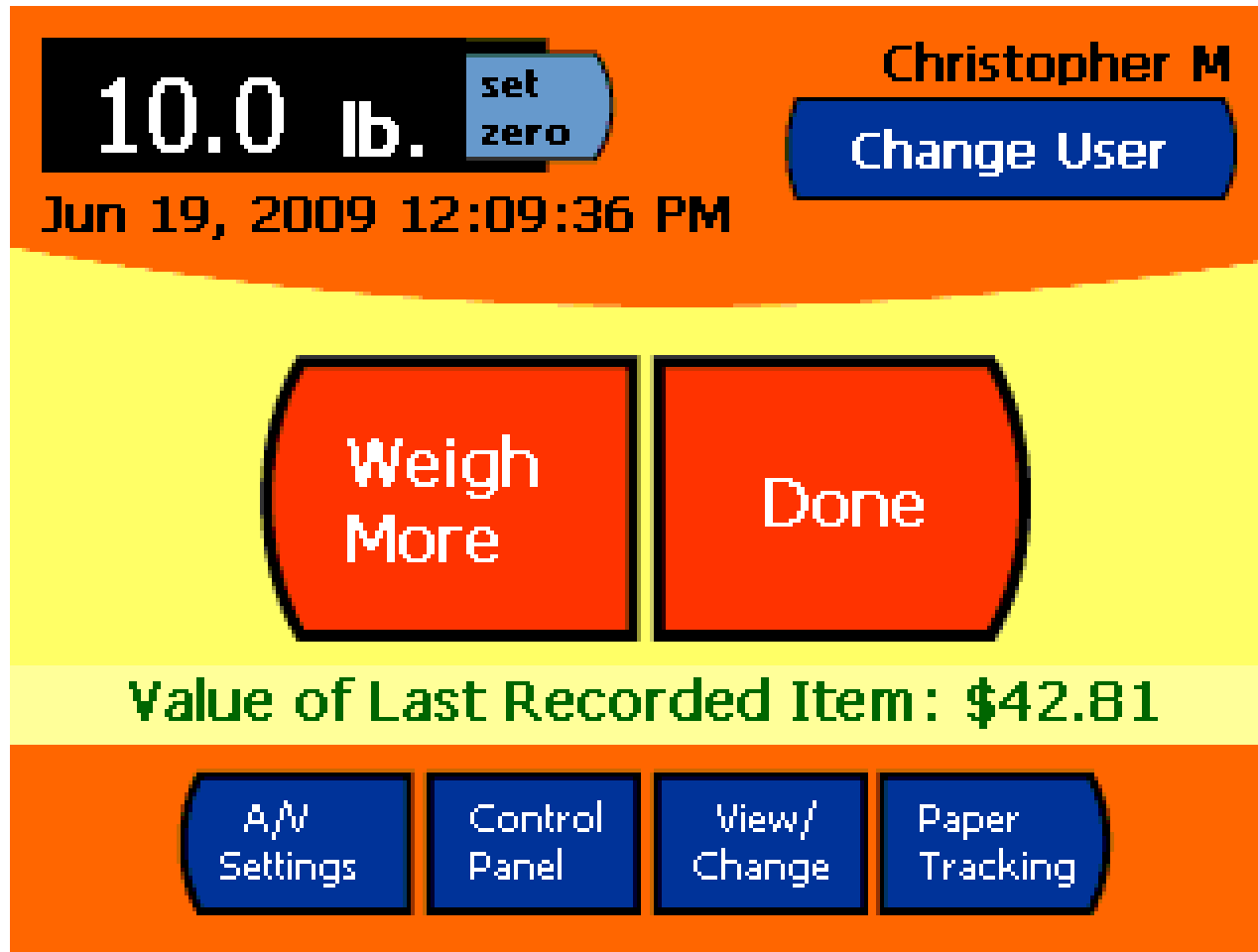
Full Hotel Pan (6")

More

Multiply



# Waste Recording: Step 7



The screenshot shows a digital interface for waste recording. At the top left, a large black box displays '10.0 lb.' in white. To its right is a blue button labeled 'set zero'. Further right, the name 'Christopher M' is shown above a blue button labeled 'Change User'. Below the weight, the date and time 'Jun 19, 2009 12:09:36 PM' are displayed. In the center, two large red buttons are labeled 'Weigh More' and 'Done'. Below these, the text 'Value of Last Recorded Item: \$42.81' is shown in green. At the bottom, four blue buttons are arranged horizontally: 'A/V Settings', 'Control Panel', 'View/Change', and 'Paper Tracking'. A small inset photo on the right shows a person in a kitchen setting.

# After Data Collection

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- Collecting data is the first step
- Reviewing and using the data is absolutely critical to drive results
  - Compile the data to see opportunities
    - Many are hidden
  - Review trends
  - Set focus areas and follow progress
- Filing sheets after a quick scan= “no-no”
  - Like revving your car’s engine in neutral

# How to Compile Data

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- If using **paper**:
  - Use MS Excel or Access
  - Key in data
  - Calculate weekly and monthly totals
  - Break down by either food or loss reason
    - Difficult to do both unless you have database skills



# How to Compile Data

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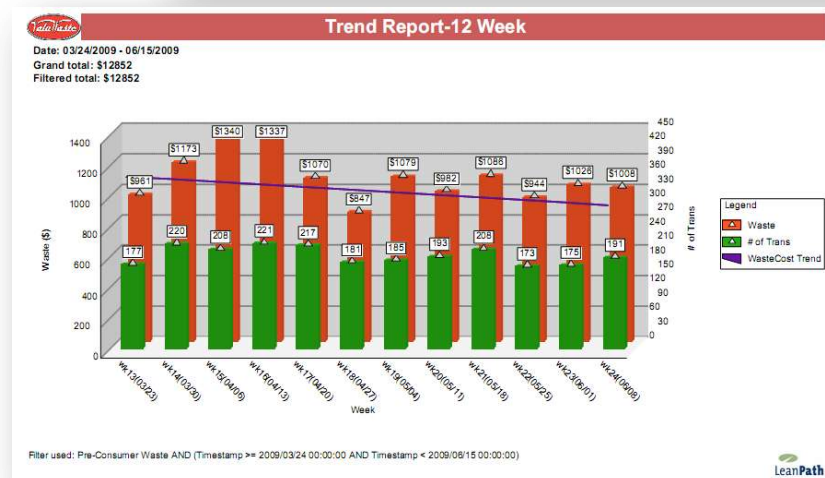
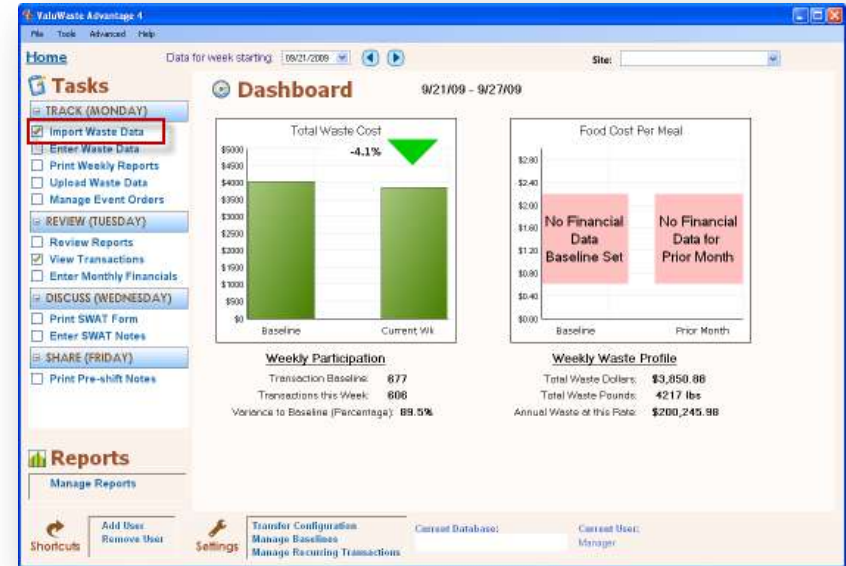
- If using **software**:
  - Use specialized waste tracking application with a custom interface designed to make the data entry process easy
  - Print memorized reports and review outcomes
  - Much easier than paper + Excel!

# How to Compile Data



If using **full automation**:

- Import data automatically; no secondary data-entry/compiling step because it happens automatically
- Print reports & review outcomes
- Easiest approach



# Engage Staff

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- Post reports
- Discuss in line-ups/pre-shifts
- Recognize engaged staff
- Set specific focus areas for improvement



# Training

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- All successful tracking programs require
  - Staff training
  - Expectations/standards for participation





# Post-Consumer Waste Tracking

# Post-Consumer

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- Same methods as pre-consumer:
  - Paper
  - Software+ Paper
  - Full automation
- Conducted only periodically
- Goal is not production & purchasing
  - Focused on menu analysis
  - Focused on guest education & engagement

# Mechanics are Different

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- Staff Tracks Post-Consumer
  - Dish room staff scrapes into totes for weighing
- Guests Self-Track
  - Scrape & weigh station
  - Best for non-commercial (e.g. schools, colleges)

# Education & Review

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- Post results publicly
- Communicate actions guests can take to reduce waste
- Assess menus to avoid high-waste items



# Evaluating Tracking Data

# Trends

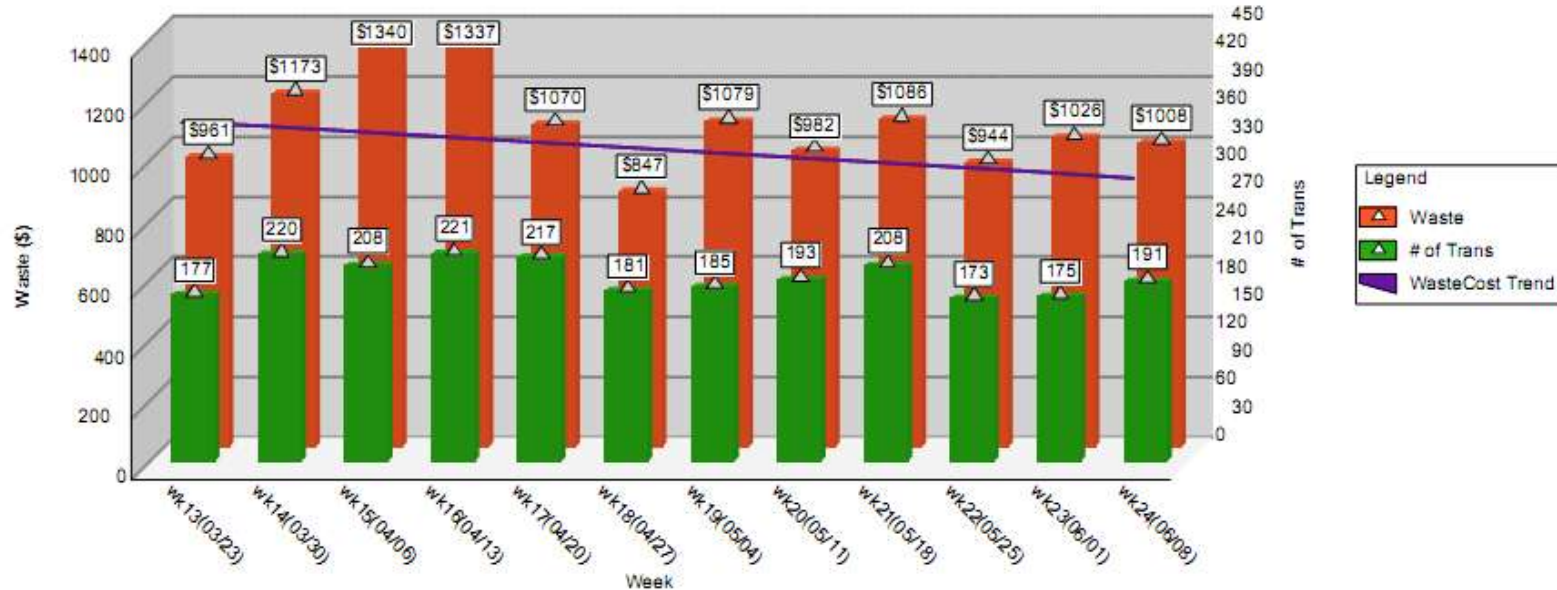


## Trend Report-12 Week

Date: 03/24/2009 - 06/15/2009

Grand total: \$12852

Filtered total: \$12852



Filter used: Pre-Consumer Waste AND (Timestamp >= 2009/03/24 00:00:00 AND Timestamp < 2009/06/15 00:00:00)



# Top 5's and Comparisons

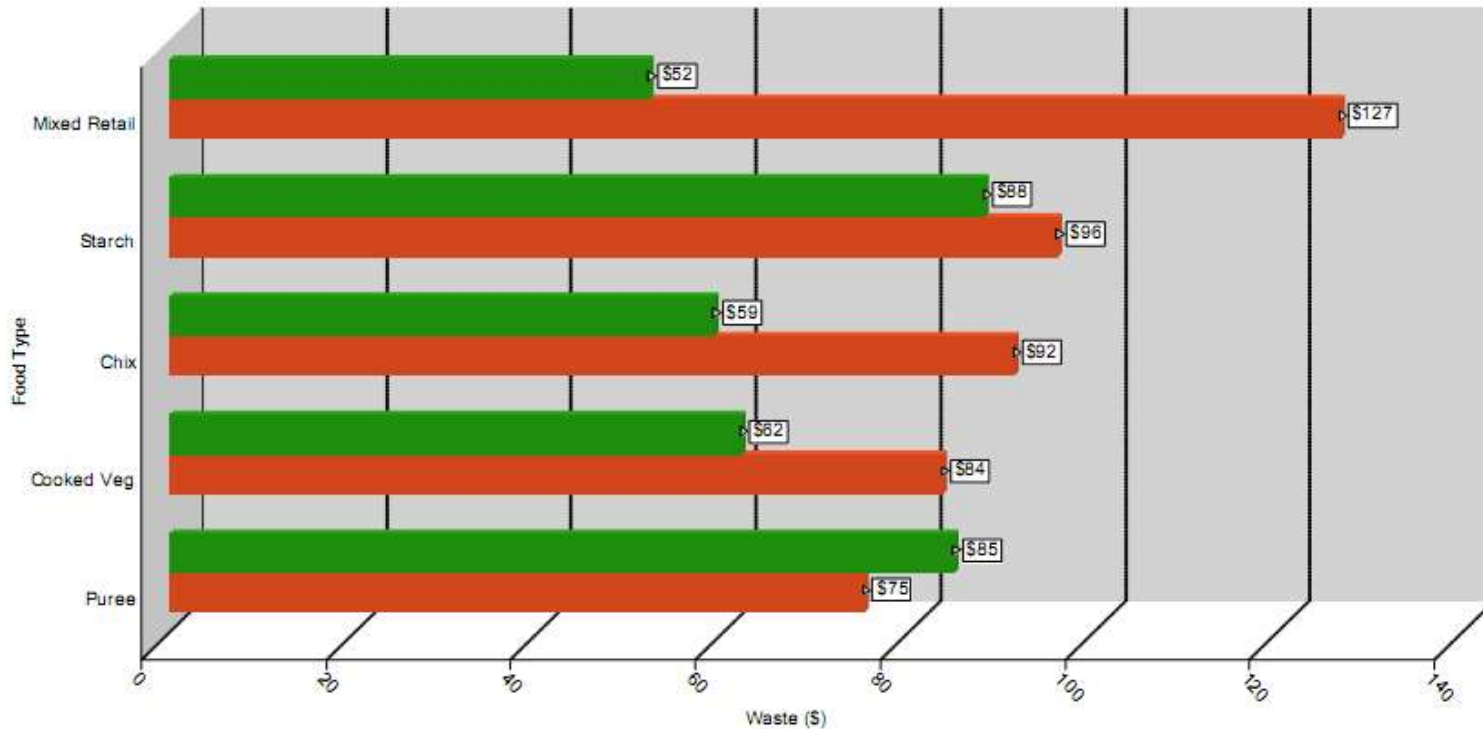


## Top 5-Food Categories

### Legend

Week 1: 06/07/2009 Total: \$939, Filtered: \$473

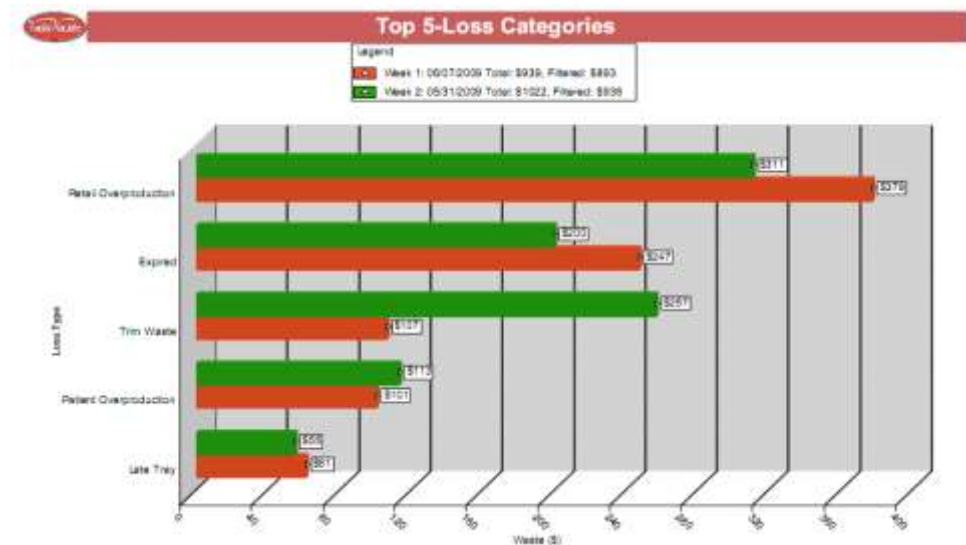
Week 2: 05/31/2009 Total: \$1022, Filtered: \$346



# Others



- High Items
  - Big \$\$'s
- Focus Items
  - Areas you select
- Data quality
  - Missing items
- Close-ups
  - Stations
  - Most Overproduced Items





# **Food Waste Focus**

**[blog.leanpath.com](http://blog.leanpath.com)**

# Notes

[leanpath.com/notes](http://leanpath.com/notes)

# Q&A

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