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FOOD WASTE TRACKING: THE PATH TO PRE-CONSUMER FOOD WASTE PREVENTION

**Sustainable Materials Management Program:
Preventing Food Waste via Source Reduction:
Lessons Learned and Best Management
Practices | June 14, 2012**



Andrew Shakman
President | LeanPath, Inc.
(503) 620-6512
ashakman@leanpath.com

Topics

- **Food Waste by the Numbers**
- Why We Should Care
- Source Reduction Methods
 - Culture Change
 - Food Waste Tracking
 - Using Food Waste Data
- Case Studies
 - College & University Foodservice
 - Supermarkets: Luekens Village Foods, Brent Sicard

Food Waste By the Numbers



40%:

The amount of food wasted in total US food production.

4-10%:

The amount of food you purchase that ends up as kitchen waste.

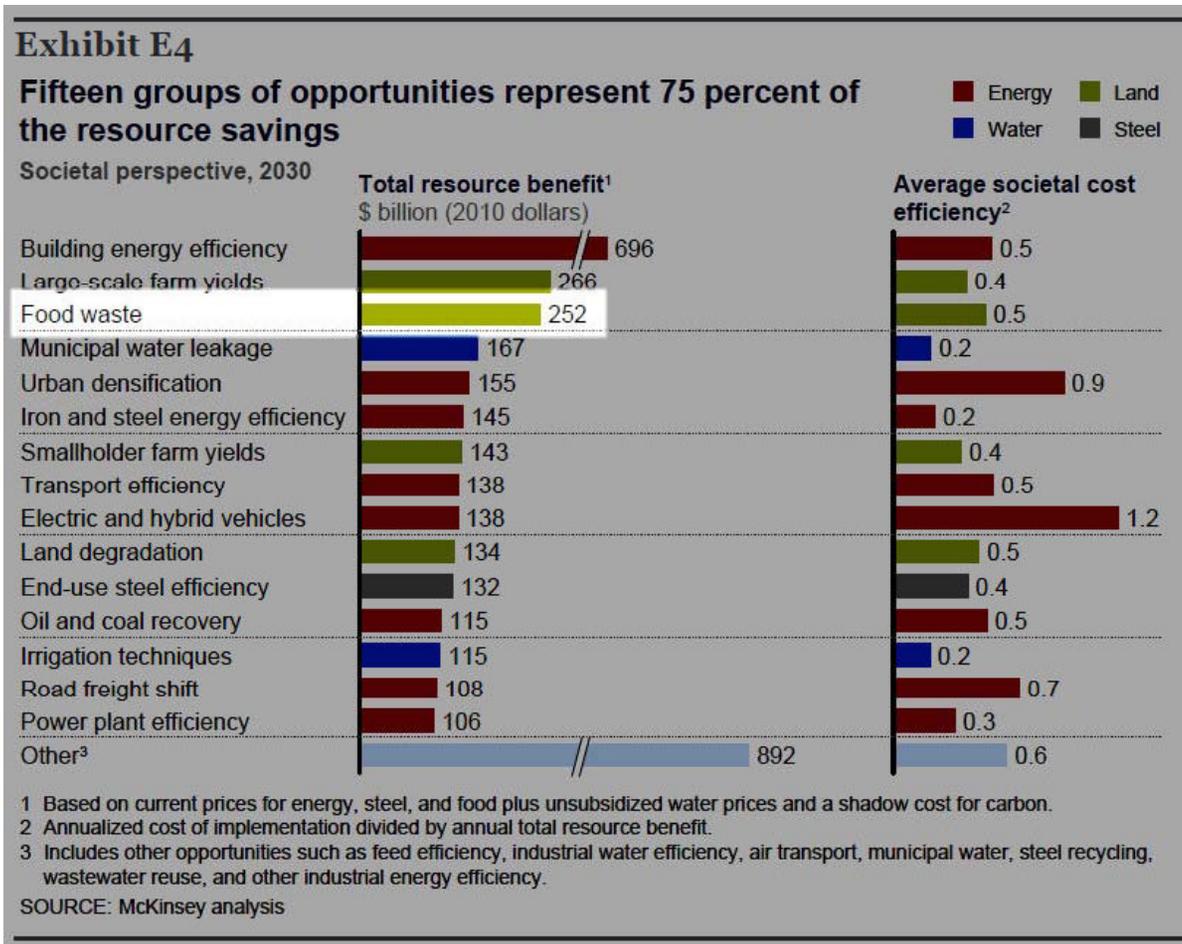
33 Million Tons:

The amount of food waste thrown away in 2010—the largest component of MSW reaching landfills and incinerators.

Bottom Line: Food is money—and we're throwing it away.

Sources: National Institutes of Health; LeanPath analysis; US Environmental Protection Agency

McKinsey & Co: Q4 2011



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The Past:

**WASTE IS AFFORDABLE AND
SOMEONE ELSE'S CONCERN**

The Future:

**WASTE IS A RESOURCE AND WE
EACH HAVE A ROLE TO PLAY**

2 Types of Food Waste

Pre-Consumer

(“Kitchen Waste”)

Due to overproduction, spoilage, expiration, trim waste, etc.

Controlled by kitchen staff



Post-Consumer

(“Plate Waste”)

Due to behaviors, portion sizes, self-service, etc.

Controlled by guests



The Environmental Impact



UPSTREAM
Before Food
Reaches Us

Where we get our
food & supplies.

DOWNSTREAM
After We Throw It
Away

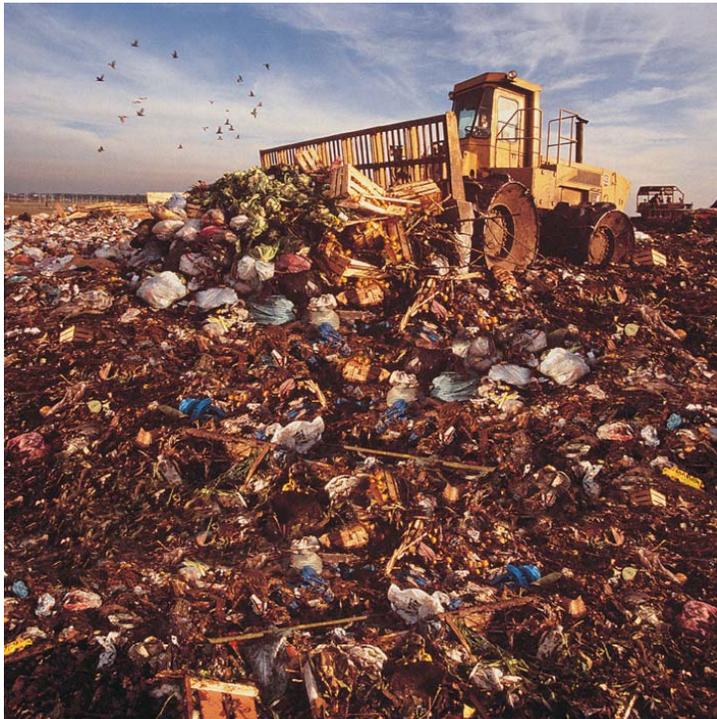
Where we send our
food & supply waste.

Upstream: Invisible Resources



Every item we throw away includes a large amount of **invisible embedded energy and other resources.**

Downstream: A Growing Issue



Food Waste	1995	2008	Change
Food Waste Generated	14.1 M Tons	31.8 M Tons	+ 125%
Food Waste Composted/ Recycled	3.4%	2.5%	-.9 pts

FOOD FOR THOUGHT:

In a recent year, the City of Seattle, WA, shipped 485,910 tons of solid waste in 18,000 railcars to a landfill in Eastern Oregon. 24.9% of Seattle's solid waste is food.

Sources: US Environmental Protection Agency, 2010; Seattle Public Utilities

The Financial Impact



- Food costs rose 8% in 2011 alone
- Projected to rise another 3.5% in 2012
- Not getting better anytime soon

Pre-consumer food waste equals 4%-10% of food purchases...that's \$40,000-\$100,000 for every \$1 million spent on food.

Sources: United States Department of Agriculture, Food CPI and Expenditures, 2012;
US Environmental Protection Agency; LeanPath analysis

How Much Is Waste Costing You?



How Should You React?

Reduce Quality

Negotiate with Suppliers

Reduce Portions

Reduce Variety

Accept Lower Profitability



**Tackle Food Waste Head On:
REDUCTION / PREVENTION**

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Question:

WHAT CAUSES FOOD WASTE?

Waste-Making Pressures

- We don't want to run out - disappoint a
- We need to serve enjoyable, safe food - at the right temperature
- We need our food to be merchandised attractively, whether in a café or simply on an entrée plate with large portions
- We need to control our labor costs

A Central Challenge

Behavior.

Perfect menus and planning don't lead to zero food waste. Why?

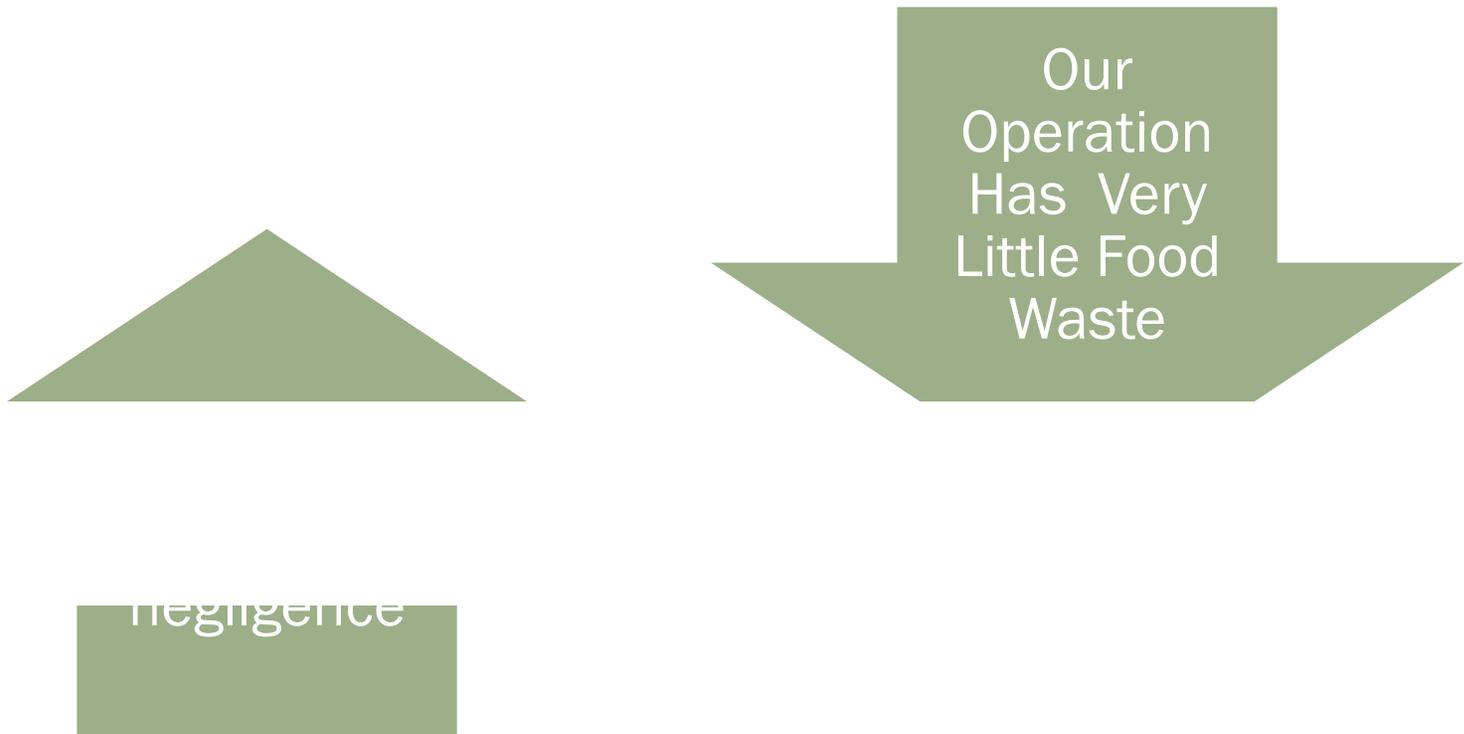
- Food waste is ultimately about behavior
- We need to change culture to change behavior

Food waste is a complex challenge involving many team members.

Culture Eats Strategy for Lunch

**HOW DO WE CREATE A *CULTURE*
THAT'S READY TO REDUCE WASTE?**

Common Beliefs



A Waste Reduction Culture

- Positive
- Team Oriented
- Data Driven & Goal Focused

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Food Waste Strategies

Portion
Control

Trayless

Food
Donation

Food Waste
to Agriculture

Energy
Production

Composting

Pulping

Dehydrating

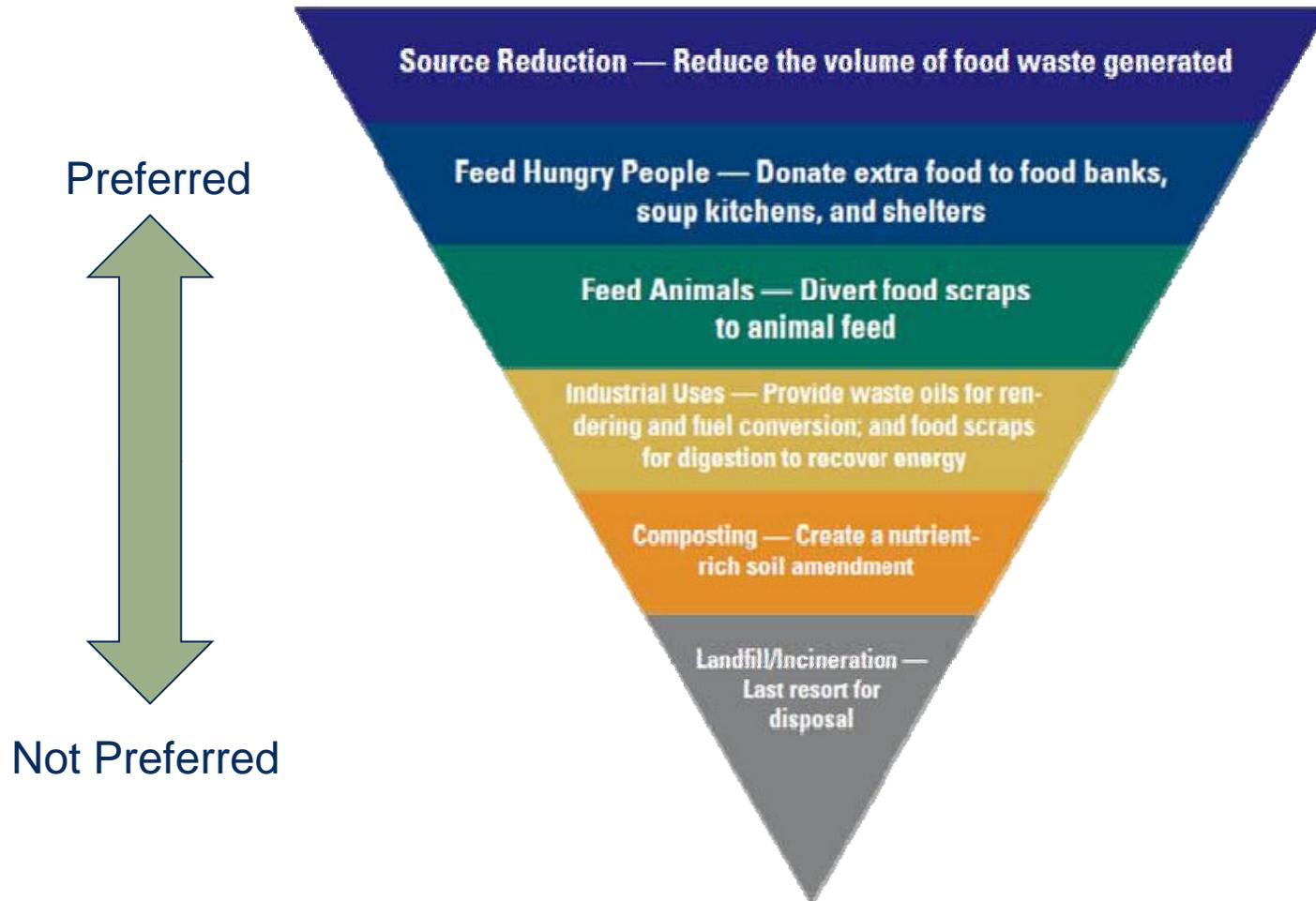
Aerobic
Digestion

Food Waste
Tracking

Guest
Awareness
Programs

Garbage
Disposers

EPA Food Waste Hierarchy



Takeaway

Prevention should
overshadow everything else **you do...**



www.leanpath.com

(877) 620-6512

info@leanpath.com

But...Prevention Is Easy to Overlook

- Not as visible/tangible as composting or
- Perceived lack of tools/methods

WHY TRACK FOOD WASTE?

Prevention Requires Tracking

Tracking Enables You To:

- ✓ Establish baselines and visualize trends
- ✓ Diagnose issues
- ✓ Raise employee awareness



If you're not tracking waste, how can you identify areas to improve? **You manage what you measure.**

What Should You Track?

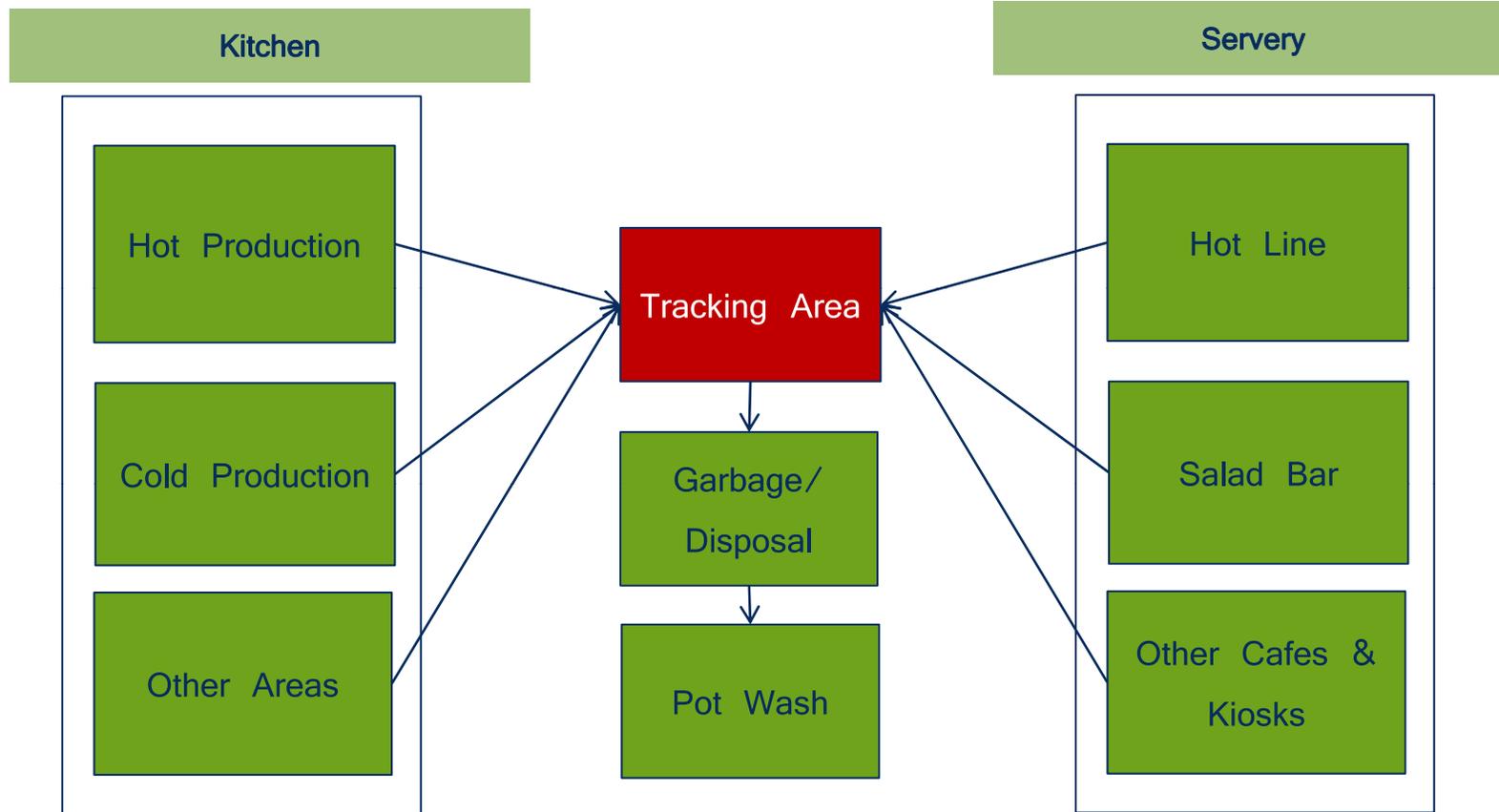
To be useful, track at a **sufficient level of detail** to diagnose food waste issues, measure specific progress and change behavior.



What to Measure?

- Food waste weight/volume
- Characterize the waste stream: Foods; Reasons
- Measure waste by source
- Measure waste by destination
- Food waste value

Material Flow



Waste Reasons

- Overproduction
- Spoilage
- Expired/Dated
- Trim Waste
- Contaminated
- Burned/Dropped



EPA Source Reduction Toolkit

- Excel-based tracking capabilities
- Coming soon!



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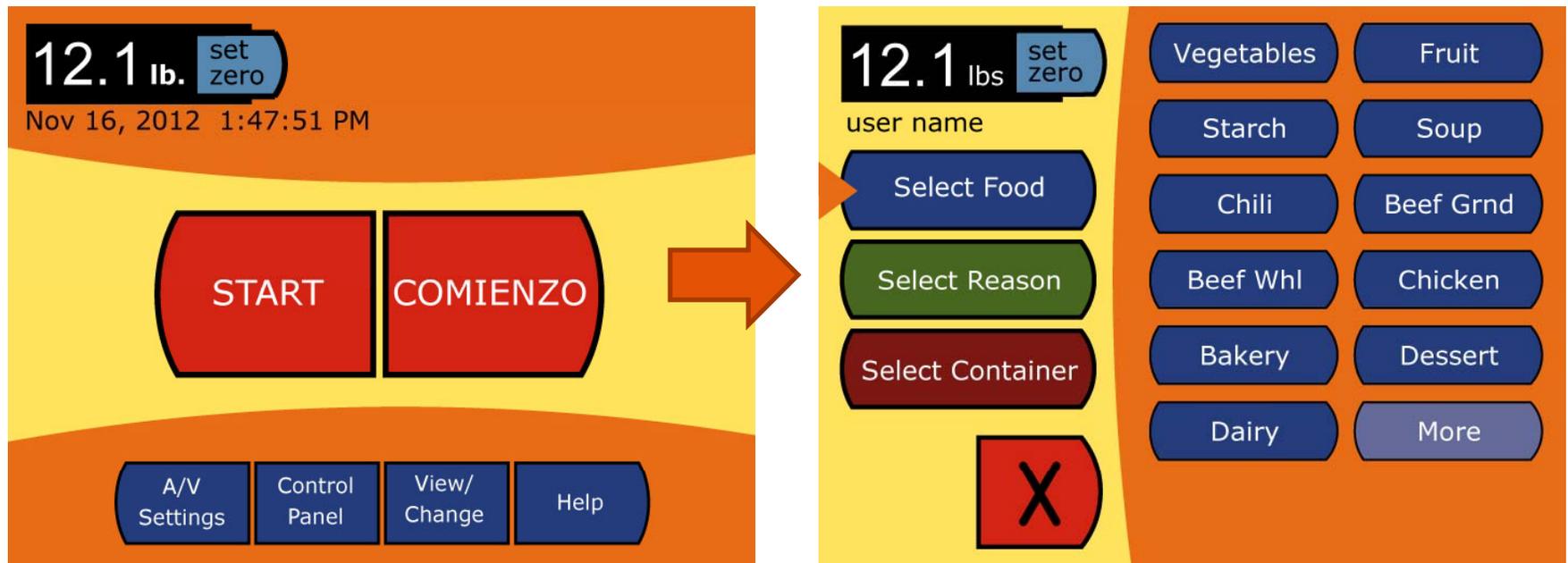
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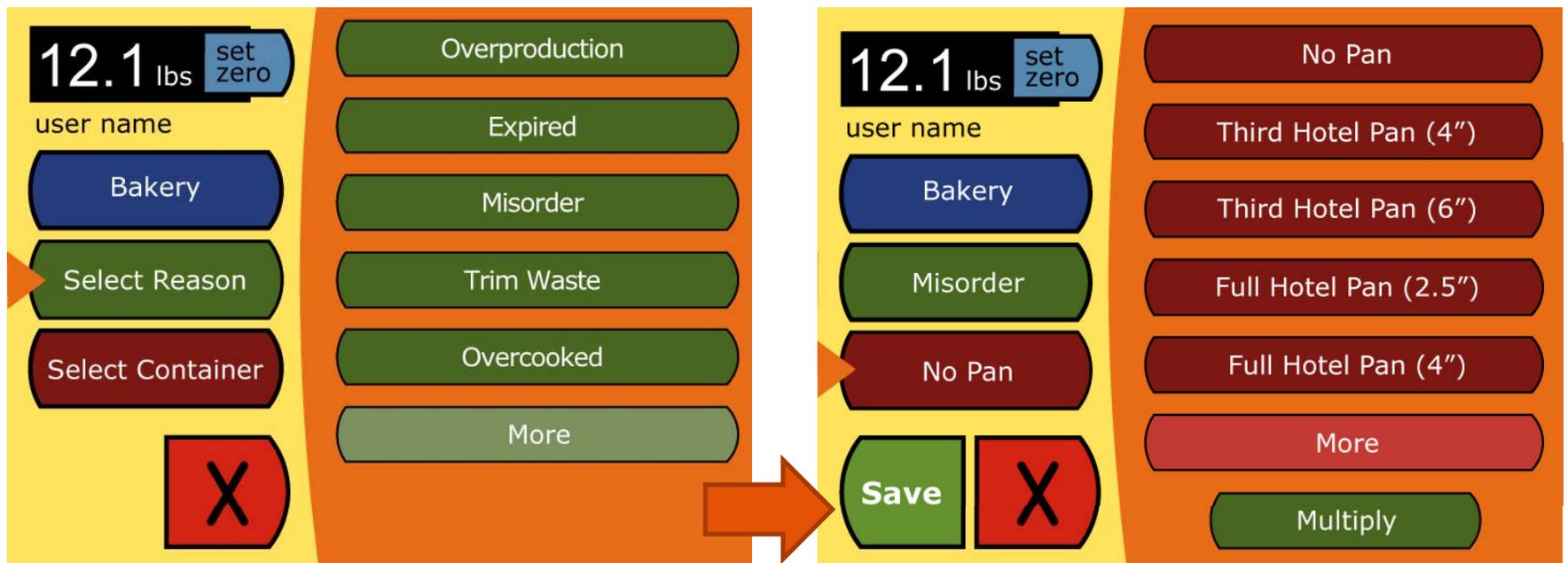
Automated Tracking



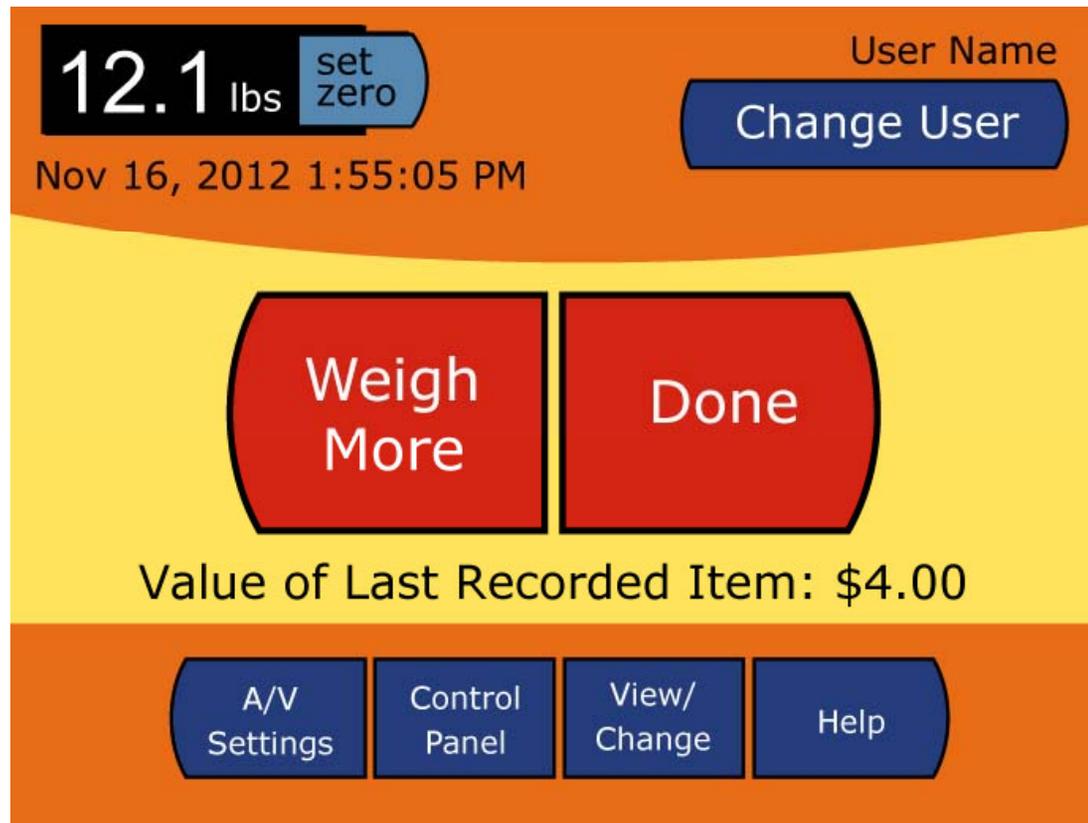
Automated Tracking Example



Automated Tracking Example



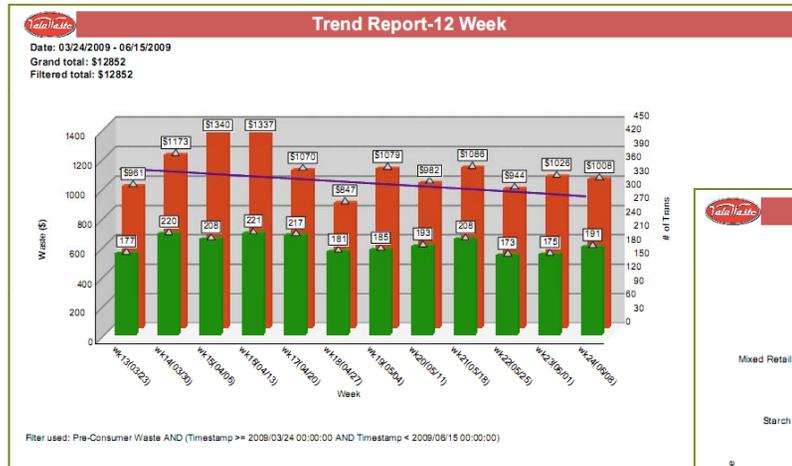
Automated Tracking Example



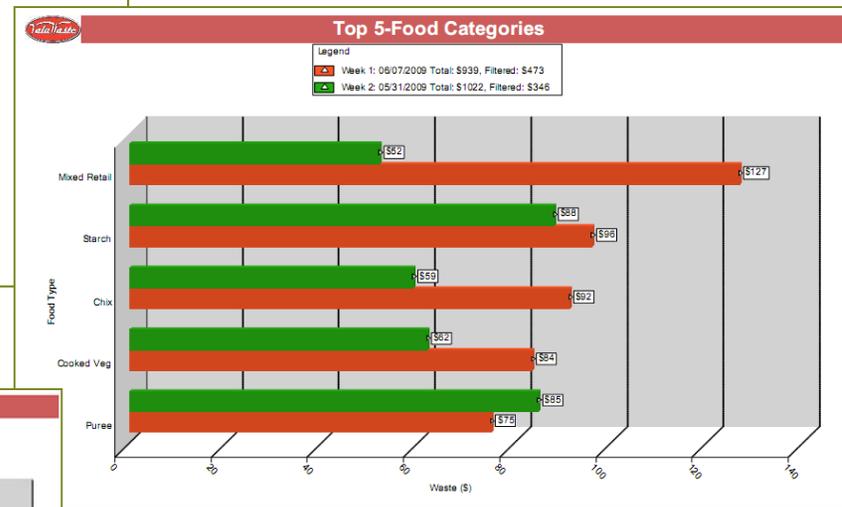
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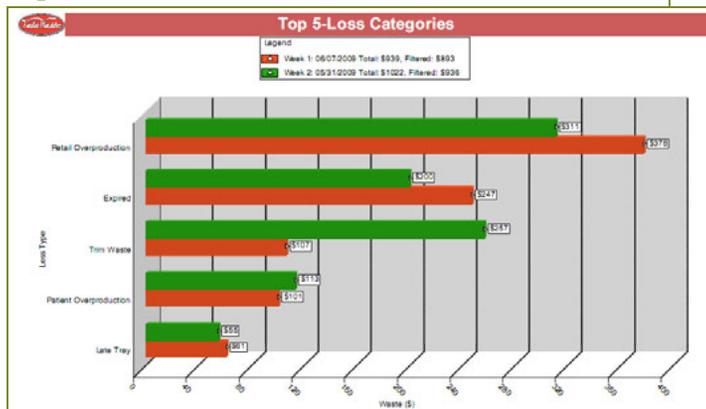
Spot Trends; Drive Change



Review Trends

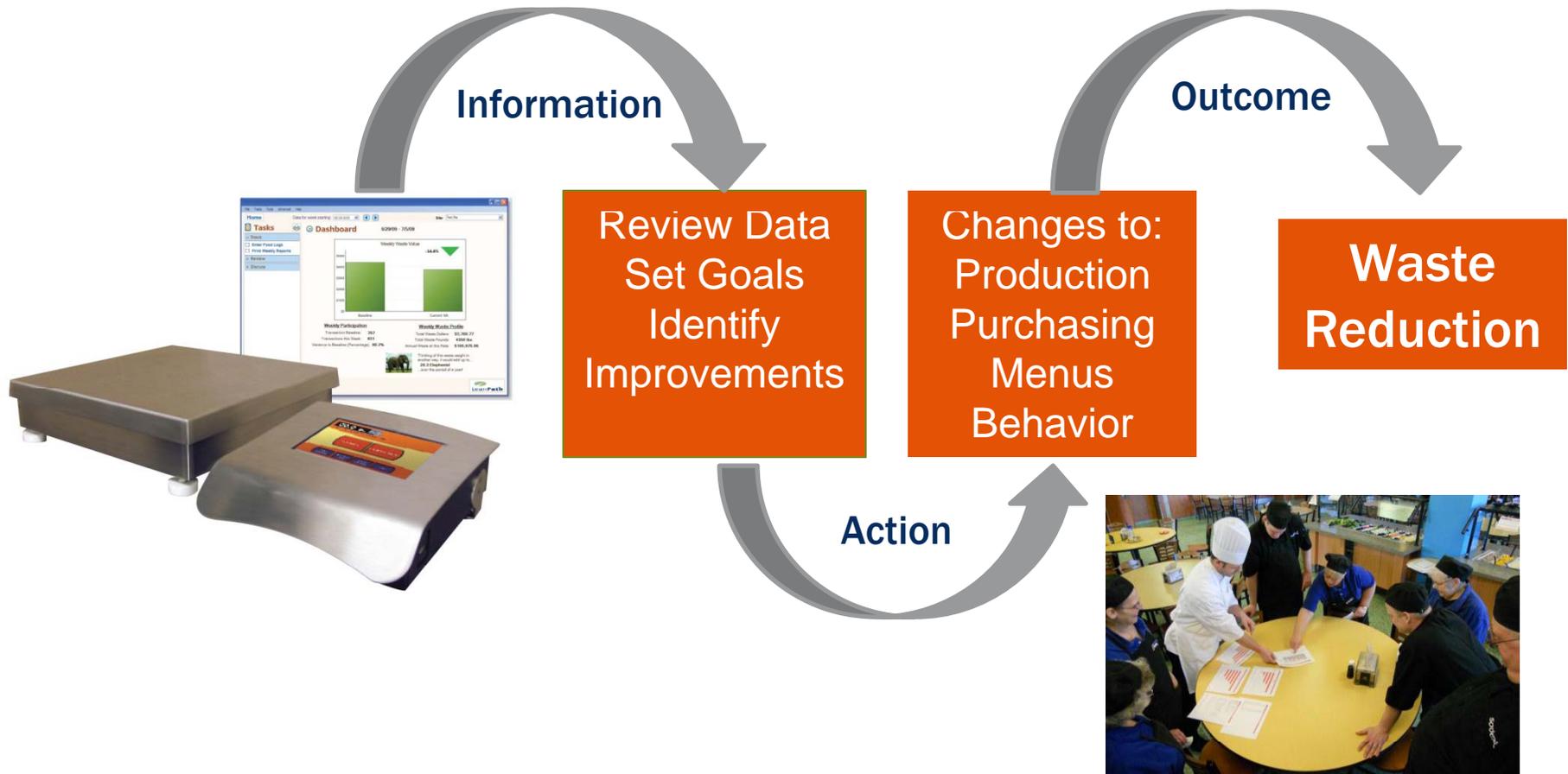


Top Down Food Review



Top Down Loss Reason Review

Continual Process Improvement



Broad Applications in Foodservice & Food Retail

- Retail
- Catering
- Large Events
- On-Site Dining (residential)
- Supermarkets



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Triple Bottom Line Effect

The Positive Impact of Food Waste Reduction

1. FINANCIAL

Enables you to cut down food costs, reduce disposal costs and save on labor.

2. ENVIRONMENTAL

Helps you run a greener operation by reducing greenhouse gas emissions.

3. SOCIAL

Creates a positive team culture with open communication, awareness and empowerment.



College & University Daily Tracking Case Studies

Spotlight: Villanova University

Featured in On-Campus Hospitality, April 2012



Results: 55 percent reduction in pounds and dollars in waste.

“It really causes you to step back and take a look because you are continually taking snapshots of how you run your business.” James Kolumban, RD, LDN, associate director of Dining Services

Spotlight: Cal Dining at UC Berkeley

Featured on StopWaste.org, January 2012



Results: \$1,600/week savings on food costs.

“Since the program started last August, we have reduced kitchen waste by over a third. That means we’re paying a lot less on food purchases that will just end up as discards—43% as of December 2011, to be exact.” Chuck Davies, Associate Director of Residential Dining

Spotlight: Georgia State University

Featured in Foodservice Directors Magazine, May 2011



Results: Saved \$58,185 and 52,977 lbs in food waste since implementing in Nov 2009.

“We have noticed a 5% to 10% reduction on a week-to-week basis.”

Suzanne Paltz, Dining Hall Manager

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info@leanpath.com



College & University Daily Tracking Case Studies

Spotlight: Sodexo Campus Services

Featured in Biocycle, April 2012



Results: 47 percent reduction in pounds waste.

“Students, faculty and administration approached us saying ‘Let’s compost and increase recycling. We said, we can do that, but let’s also talk about source reduction.’” Christy Cook, Senior Manager, Sustainability Deployment

Spotlight: Michigan Tech

Featured in LeanPath Food Waste Prevention, June 2012

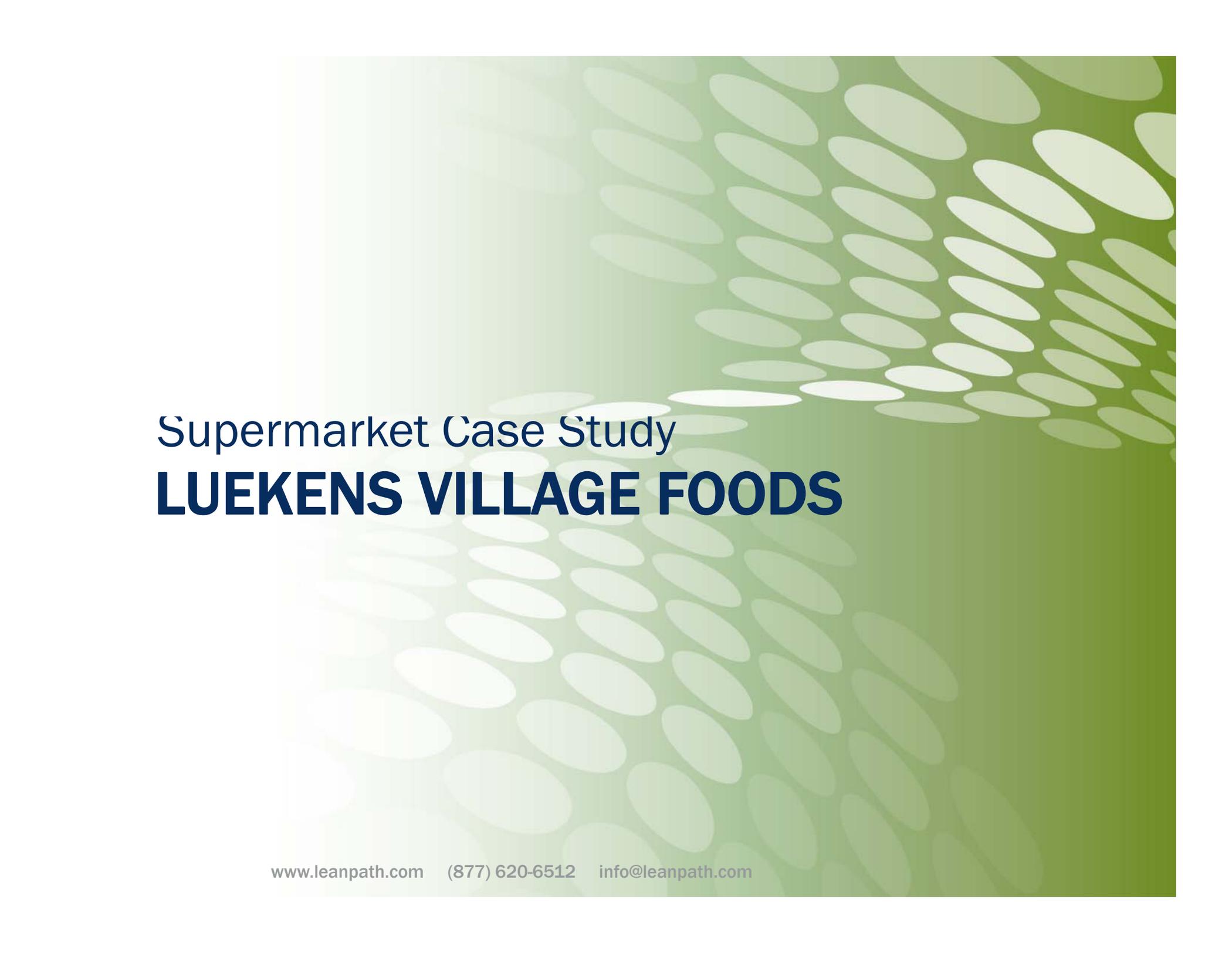


Results: ~\$1,000/week savings on food costs.

“This has been the single biggest thing that involves all of the people in our department—staff, management and students all have a part in this. It’s been a great tool to help us implement culture change.” *Kathy Wardynski, Manager of Purchasing and Process Improvement*

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Supermarket Case Study
LUEKENS VILLAGE FOODS

Luekens Village Foods

- Independent supermarket located in
- Three stores, each with 110,000 sq. ft and higher
- Organization focused on innovation

The Challenge

- Minimize “throw” throughout the operation

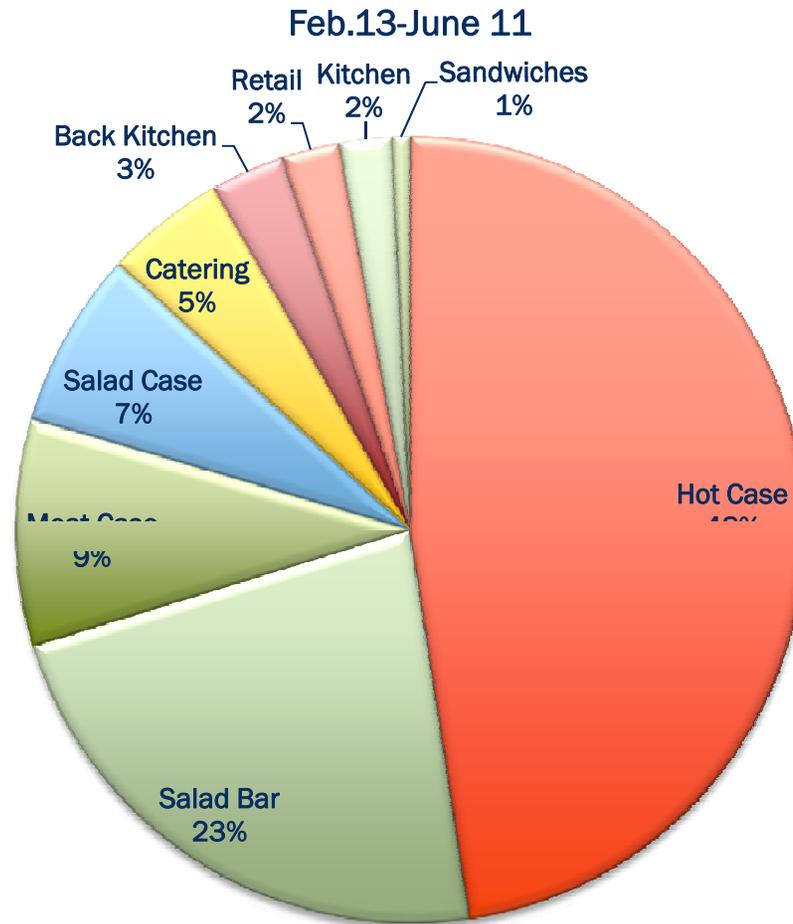
The Solution

- Pilot program to track all deli food waste

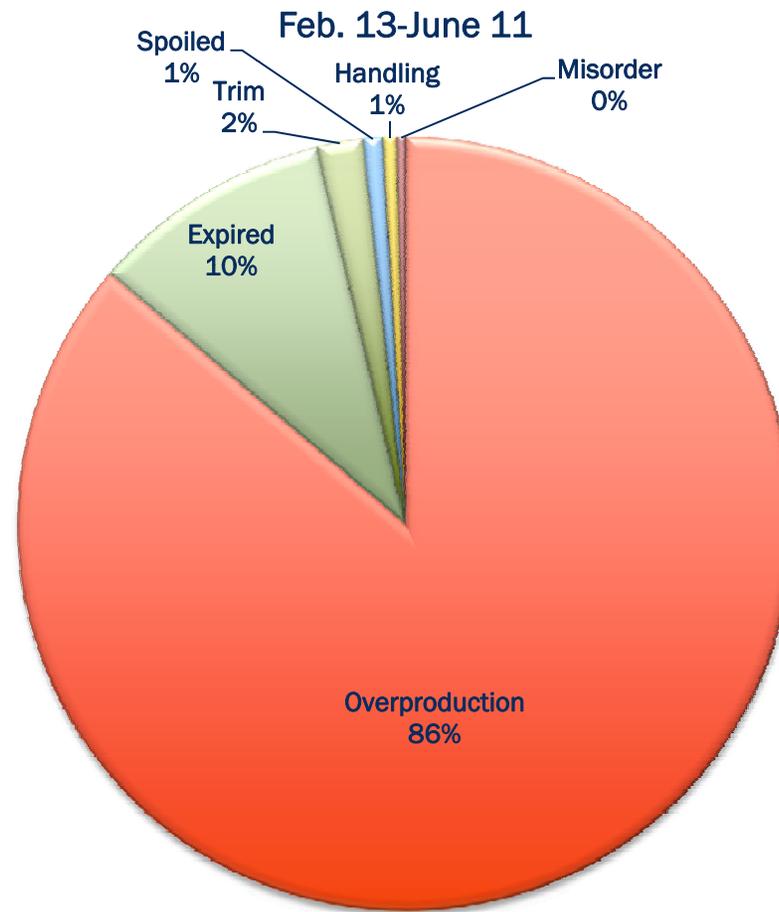
LUCRONS 100,000 sq. ft. flagship store in Bemidji, MN

- Review data regularly and seek opportunities to change production, purchasing and merchandising practices to reduce throw.

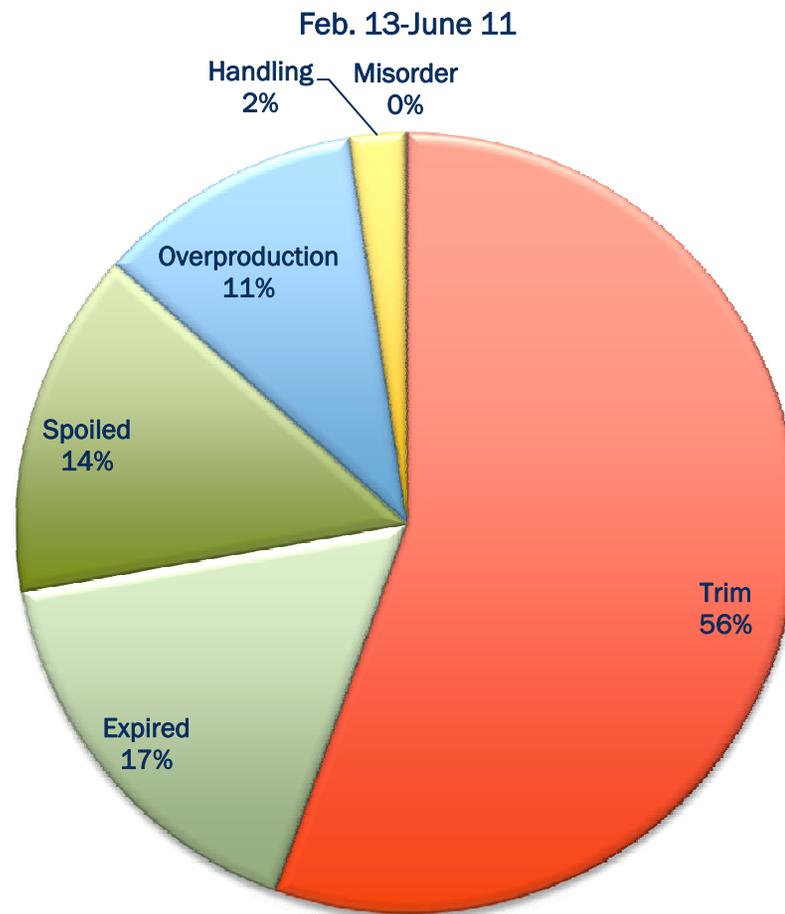
Deli Waste Areas



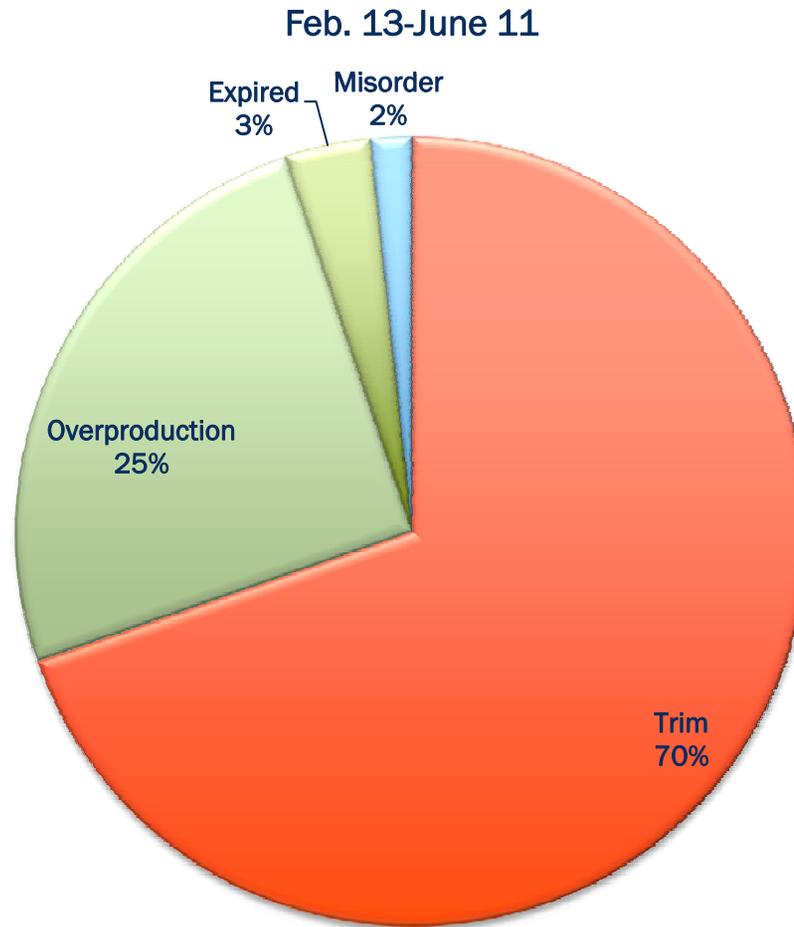
Hot Case Loss Reasons



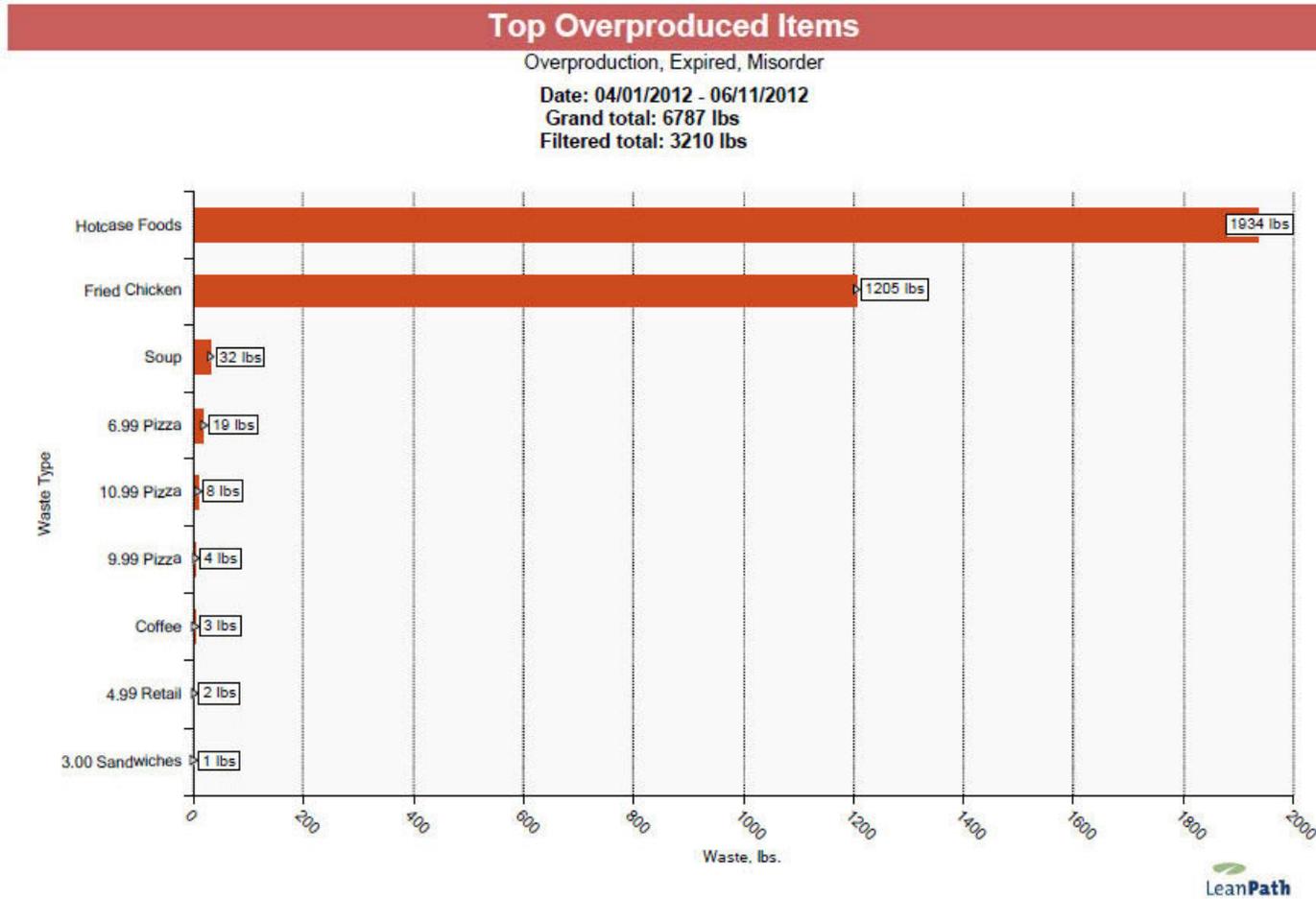
Salad Bar Loss Reasons



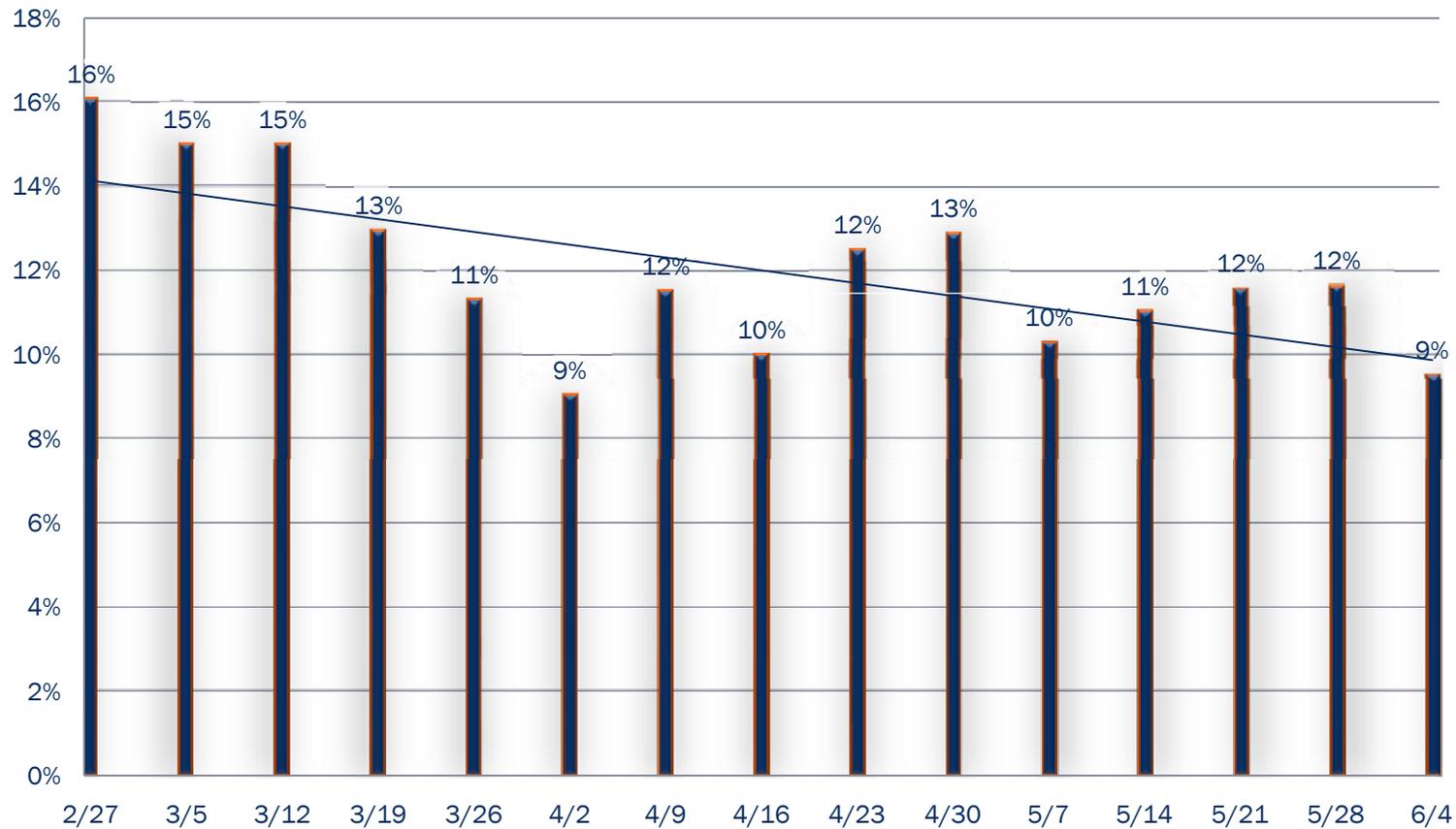
Catering Loss Reasons



Top Overproduced Food Items



Waste as % of Sales by Week



Pre-consumer Food Waste Prevention Checklist

1. Create a positive culture;
2. Track pre-consumer food waste daily
3. Set goals & test changes
4. Thank your team
5. Persist

Remember

- You don't need to be perfect
- Just start moving toward your goal

Q&A

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(503) 620-6512 x100

ashakman@leanpath.com

www.leanpath.com

twitter.com/leanpath

