



SOURCE REDUCTION FOR THE FOOD SERVICE INDUSTRY:
**TOOLS AND STRATEGIES TO
PREVENT FOOD WASTE**

WasteWise Forum
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Topics

- **Food Waste Prevention – Why it Matters**
- Strategies to Prevent Food Waste
- Tracking Solutions – Past, Present & Future
- Case Studies
 - Foodservice
 - Food retail
- Q&A

Food Waste by the Numbers

FOOD WASTE IS A GLOBAL PROBLEM OF BREATHTAKING SCOPE

1/3 of all **FOOD**
globally is **WASTED**.



1.3 **BILLION** tons of food are **NOT CONSUMED**.



AND IT'S A **PROBLEM**
{THAT'S GROWING IN THE U.S.}

40% of food grown or raised in the U.S. is **NOT EATEN**.



50% **RISE** in U.S. food waste



2003

Food Waste by the Numbers

IT'S COSTING A LOT OF MONEY... AND A LOT OF RESOURCES.



25% OF ALL FRESHWATER
and **300 MILLION BARRELS** of oil
are used to produce food that is wasted.



\$250 **BILLION**
lost globally every year

IT'S
FILLING UP
LANDFILLS AND TAKING A
HUGE
TOLL ON THE ENVIRONMENT.

FOOD WASTE

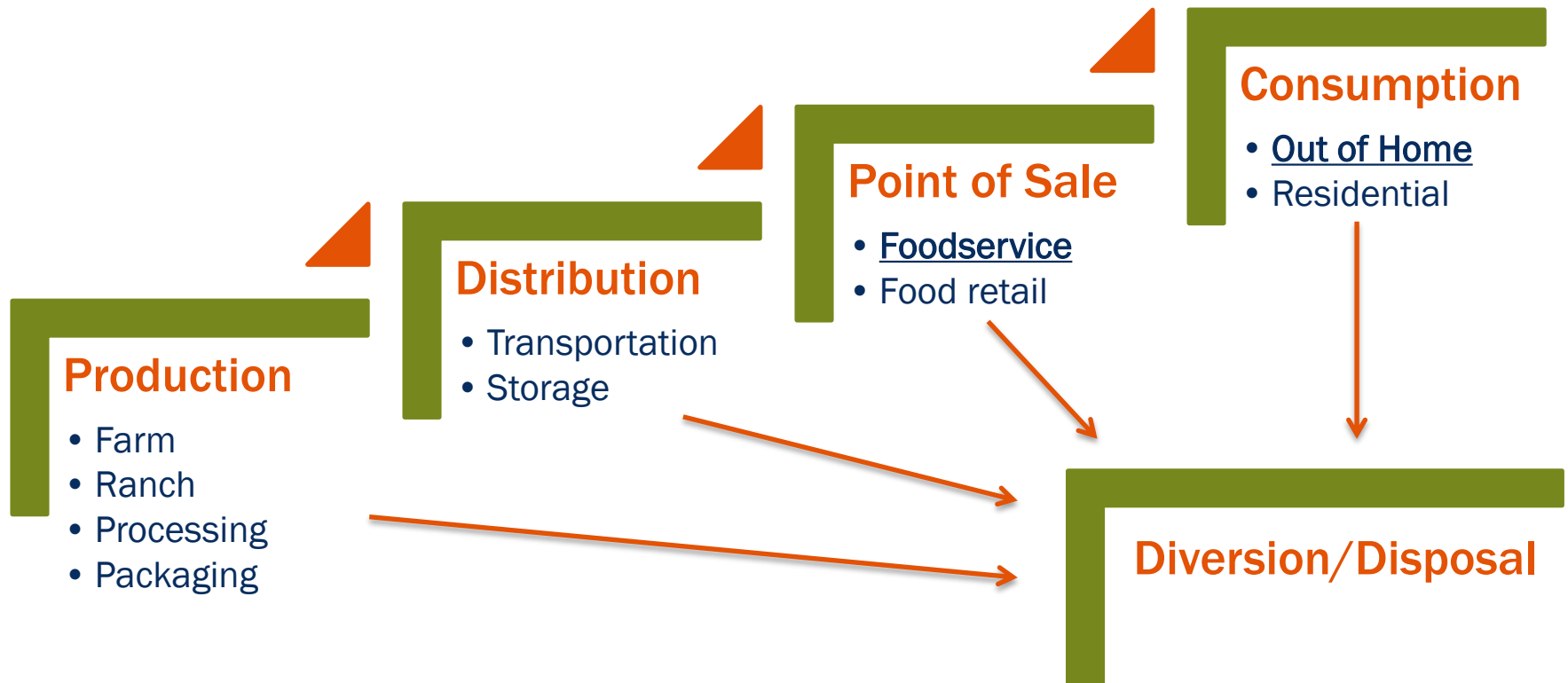
is the single largest
component sent to
American **LANDFILLS**.



It's a significant source of
METHANE — a potent greenhouse gas with
21 TIMES THE
GLOBAL WARMING potential of carbon dioxide.



The Food Waste Chain



2 Types of Food Waste in Foodservice

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 *largely* by guests



Food Waste in Foodservice

HOW MUCH OF THIS PROBLEM STEMS FROM U.S. FOODSERVICE OPERATIONS?

4–10% of food purchased is **THROWN OUT** before reaching a plate.



\$8–20 BILLION of pre-consumer waste generated by the U.S. out-of-home restaurant and foodservice industry every year.

Pre-consumer waste is the kitchen waste that occurs before the food even reaches a guest, from **OVERPRODUCTION, SPOILAGE, EXPIRATION** and **TRIMMINGS**. It's within the control of the foodservice operator and can be prevented!

Question:

WHERE TO START?

Food Waste *Management* Practices

Portion
Control

Trayless

Food
Donation

Food Waste
to Agriculture

Energy
Production

Composting

Pulping

Dehydrating

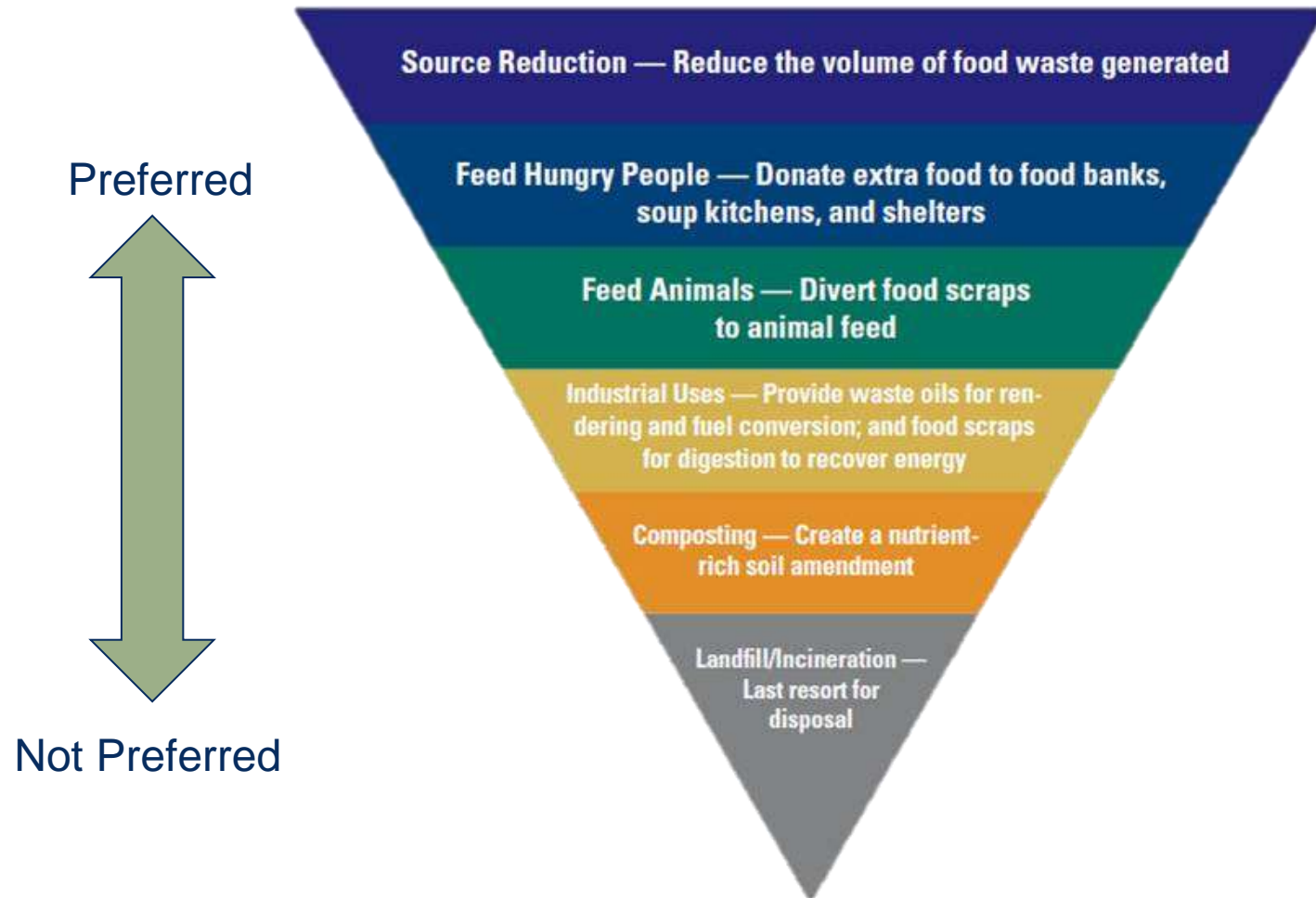
Aerobic
Digestion

Food Waste
Tracking

Guest
Awareness
Programs

Garbage
Disposers

EPA Food Waste Hierarchy



Prevention's Leveraged Impact

1. FINANCIAL

Enables you to cut down not just disposal costs, but also food costs, labor and energy. Food represents one of the top two foodservice operating expenses.

2. ENVIRONMENTAL

Helps you run a greener operation by reducing greenhouse gas emissions not just downstream but upstream where most of the impact occurs (water, energy, carbon, etc.).

3. SOCIAL

Creates a positive team culture. Something we do here that's just right; not in someone else's court.



Takeaway

Prevention should
overshadow everything else [including many other
worthy things] **you do...**

Topics

- Food Waste Prevention – Why it Matters
- **Strategies to Prevent Food Waste**
- Tracking Solutions – Past, Present & Future
- Case Studies
- Q&A







Why do we waste food?

- It's expensive to **run out so we make more**
- We must serve **safe food**
- Attractive merchandising increases **customer satisfaction** and **sales**
- **Labor cost** control encourages large batch production
- We want convenient service, wide choice, and **broad availability**

Question:

HOW DO WE FIX THIS?

Culture eats strategy for lunch.

**CREATE A *CULTURE* THAT'S READY
TO REDUCE WASTE**

Culture Reset: Go Positive; Embrace Data



**Waste is a sign
of negligence**
*(Which means we
can't work openly to
improve)*



**Our Operation
Has Very Little
Food Waste**
*(Really? How do you
know?)*

Inclusive; Focused

Careful planning doesn't lead to zero food waste. Why?
Food waste is ultimately about behavior.

- After managers “plan the work” we need to make sure everyone on the team actually “works the plan.”
- Engage teams with SMART Goals

Anti-Waste Culture

- Open, transparent and **positive**
- **Data**-driven
- Engaged and **inclusive**
- **Goal**-focused

Sorry, no box to check and forget

Food waste is a challenge which **requires ongoing vigilance**, just like quality, safety and sanitation. It is a matter of **regular practice**, not a problem to fix once and forget

We need to **focus our culture** on food waste...**daily**

But how?

Answer: Daily Waste Tracking

Tracking enables operators to:

- Obtain data
- Engage and include
- Set a positive tone
- Set SMART goals

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 “waste” to track?

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



How much detail?

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



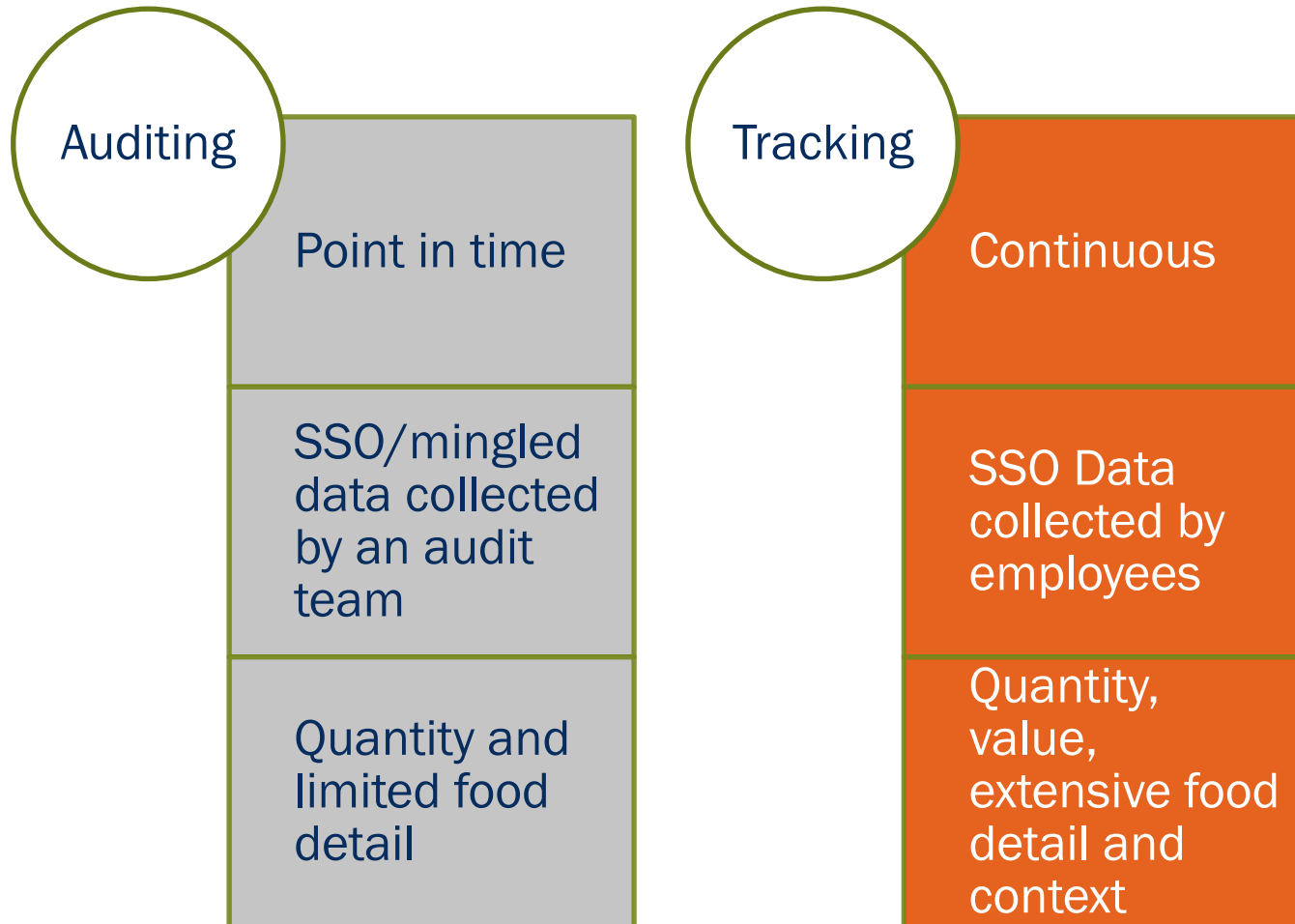
What to Measure?

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

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Audit ≠ Tracking



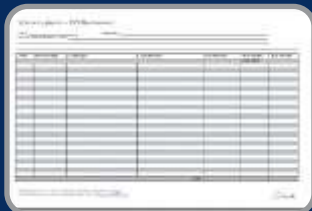
Evolution of Tracking



Future: Cloud-Based Automation



Advanced: Local Automation Tools



Basic: Manual Paper/ Excel

Manual Data Collection

- Paper Log Books & PC Data Entry
- Data collected by weight, volume, count or visual estimate
- Handwritten
- Manual analysis from paper or via PC data entry (e.g. MS Excel)

[illegible]

Manual Data Collection

Pros

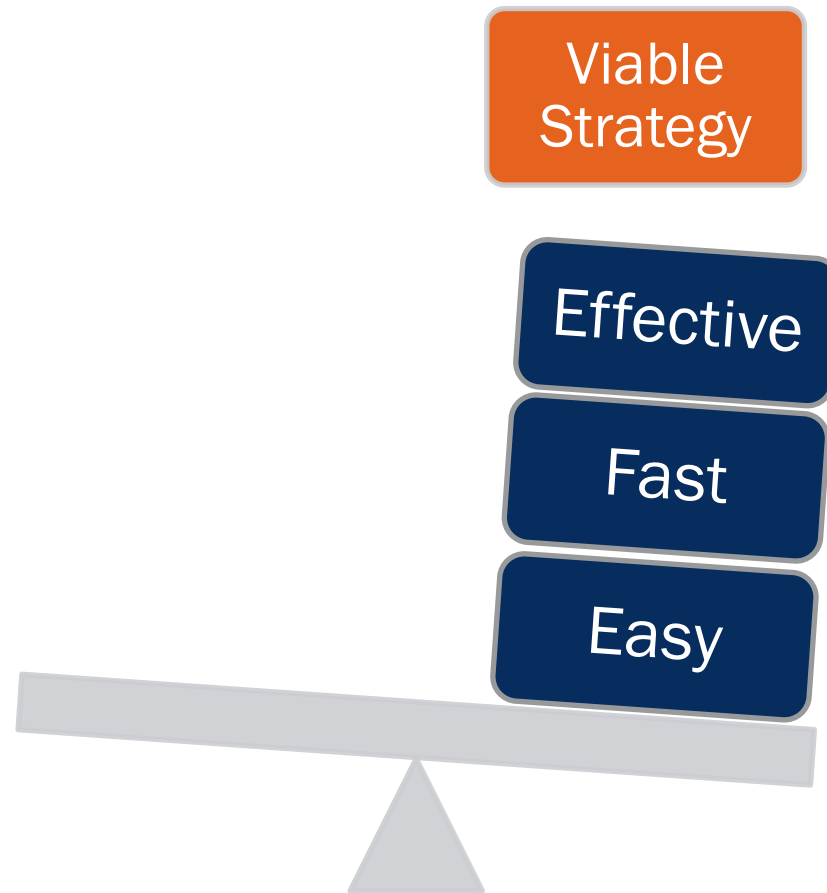
- Low cost of entry; leverages existing PC's and MS Office software
- Free resources available from EPA and others
- Fast to start

~4x Greater Waste Reduction with Automated Methods

Cons

- High cost long-term
 - Ongoing labor costs
- Difficult for staff and managers
 - Slow data recording process for staff
 - Managers must enter data manually
 - Challenging for low-literacy workers
 - Difficult to sustain
- Low data quality
 - Slow access to data due to lag time
 - Disorganized data
 - Lost information; sanitation issues
 - “Guestimated” measurements
- Low Impact
 - No feedback to staff
 - Lack of actionable detail
 - Lost food cost savings

Tipping Point



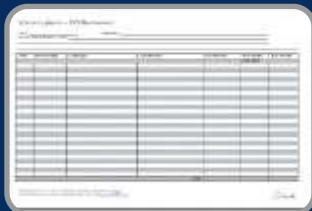
Evolution of Tracking



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Basic: Manual Paper/ Excel

Local Automation Systems



Tracking Process

Kitchen



- Hot production
- Cold production
- Other areas



Tracking Station

Garbage/Disposal



Pot Wash



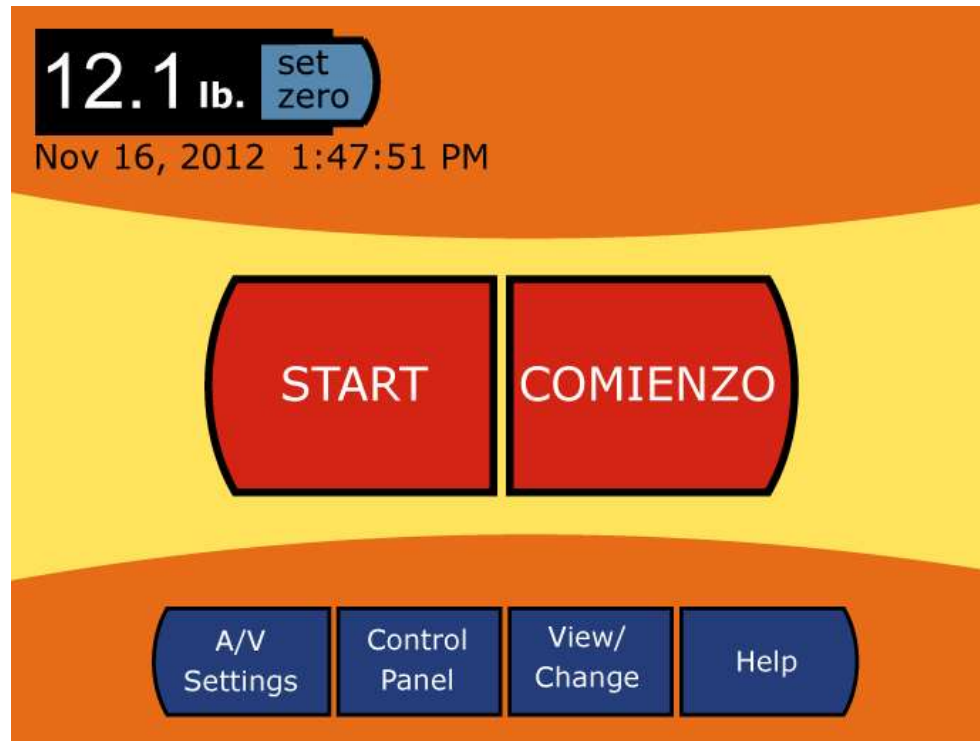
Servery



- Hot line
- Salad bar
- Other cafes and kiosks

**No incremental labor required;
On average, less than 1 min/per employee/day**

Automation Example



Automation Example

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	
Althea J.	Angela L.	Aridia R.				
Barbara L.	Carlos C.	Carmella S.				
Charles B.	Charles B. Jr.	Cynthia M.				
Daniel C.	Denise L.	Donna M.				
Select Your Name	More	X				

Automation Example

The image shows a mobile application interface with a yellow background on the left and an orange background on the right. On the left side, there is a weight display showing '12.1 lbs' with a 'set zero' button next to it. Below the weight display is a 'user name' label. There are three large buttons: 'Select Food' (blue), 'Select Reason' (green), and 'Select Container' (red). At the bottom left is a red button with a black 'X'. On the right side, there is a grid of food category buttons: 'Vegetables', 'Fruit', 'Starch', 'Soup', 'Chili', 'Beef Grnd', 'Beef Whl', 'Chicken', 'Bakery', 'Dessert', 'Dairy', and 'More'.

Left Panel (Yellow)	Right Panel (Orange)
12.1 lbs set zero	Vegetables Fruit
user name	Starch Soup
Select Food	Chili Beef Grnd
Select Reason	Beef Whl Chicken
Select Container	Bakery Dessert
X	Dairy More

Automation Example

The interface is divided into two main sections: a yellow left panel and an orange right panel. The yellow panel contains a weight display showing '12.1 lbs' with a 'set zero' button, a 'user name' field with 'Bakery' selected, a 'Select Reason' button, a 'Select Container' button, and a red 'X' button. The orange panel contains a list of reasons: 'Overproduction', 'Expired', 'Misorder', 'Trim Waste', 'Overcooked', and a 'More' button.

Left Panel (Yellow)	Right Panel (Orange)
12.1 lbs set zero	Overproduction
user name	Expired
Bakery	Misorder
Select Reason	Trim Waste
Select Container	Overcooked
X	More

Automation Example

12.1 lbs set zero

user name

Bakery

Misorder

No Pan

Save X

No Pan

Third Hotel Pan (4")

Third Hotel Pan (6")

Full Hotel Pan (2.5")

Full Hotel Pan (4")

More

Multiply

Automation Example

The screenshot displays a user interface for a scale or weighing system. At the top left, a large black box shows the weight "12.1 lbs" in white. To its right is a blue button labeled "set zero". Below the weight, the date and time "Nov 16, 2012 1:55:05 PM" are displayed. On the top right, the text "User Name" is above a blue button labeled "Change User". In the center, there are two large red buttons with black outlines: "Weigh More" on the left and "Done" on the right. Below these buttons, the text "Value of Last Recorded Item: \$4.00" is shown. At the bottom, there are four blue buttons with white text: "A/V Settings", "Control Panel", "View/Change", and "Help".

12.1 lbs **set zero**

User Name
Change User

Nov 16, 2012 1:55:05 PM

Weigh More **Done**

Value of Last Recorded Item: \$4.00

A/V Settings **Control Panel** **View/Change** **Help**

Convert Data to Information



Weekly Participation

Transaction Baseline: **612**
Transactions this Week: **491**
Variance to Baseline (Percentage): **80.2%**

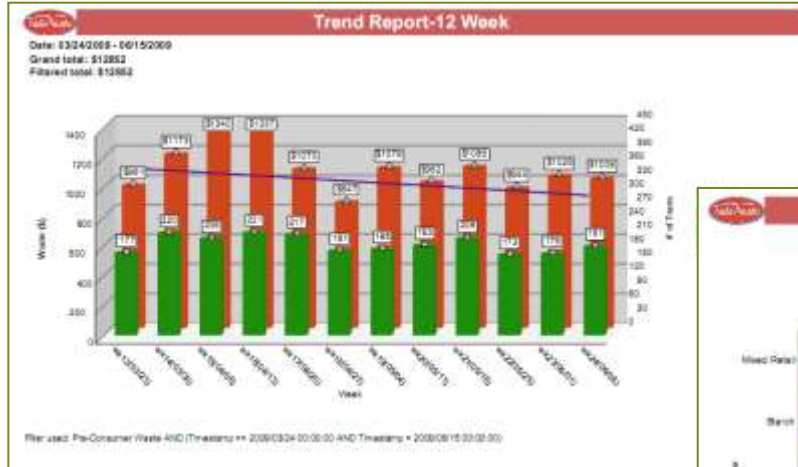
Weekly Waste Profile

Total Waste Dollars: **\$2,630.31**
Total Waste Pounds: **2264 lbs**
Annual Waste at this Rate: **\$136,775.96**

Raw data organized into a dashboard, reports, and ad hoc query tool

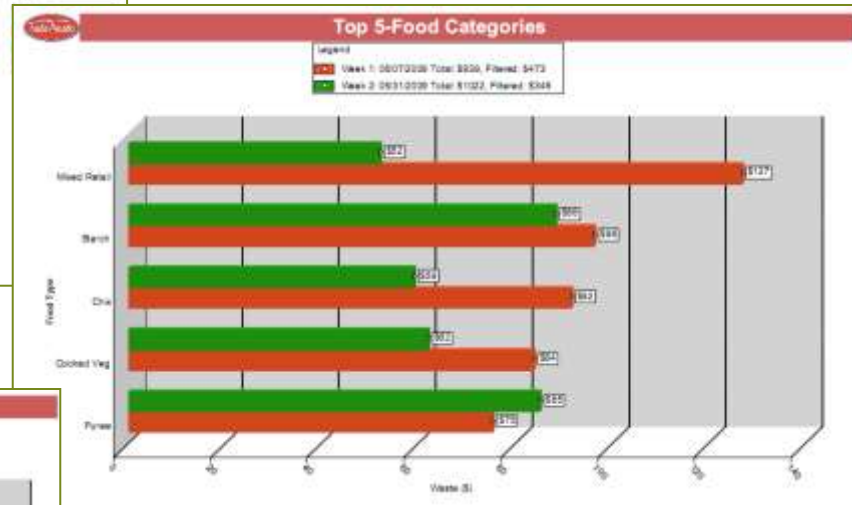
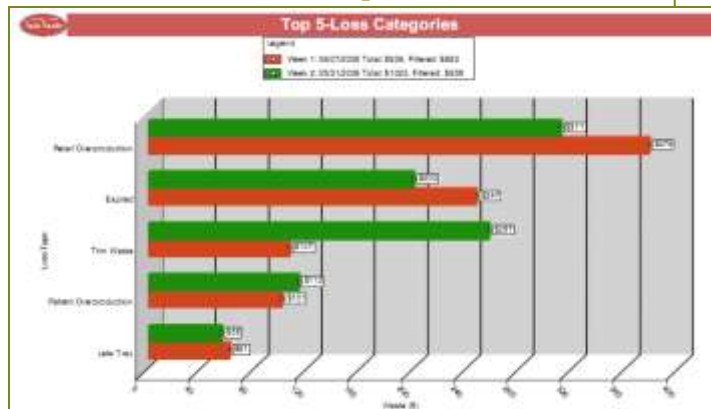


Spot Trends; Drive Change



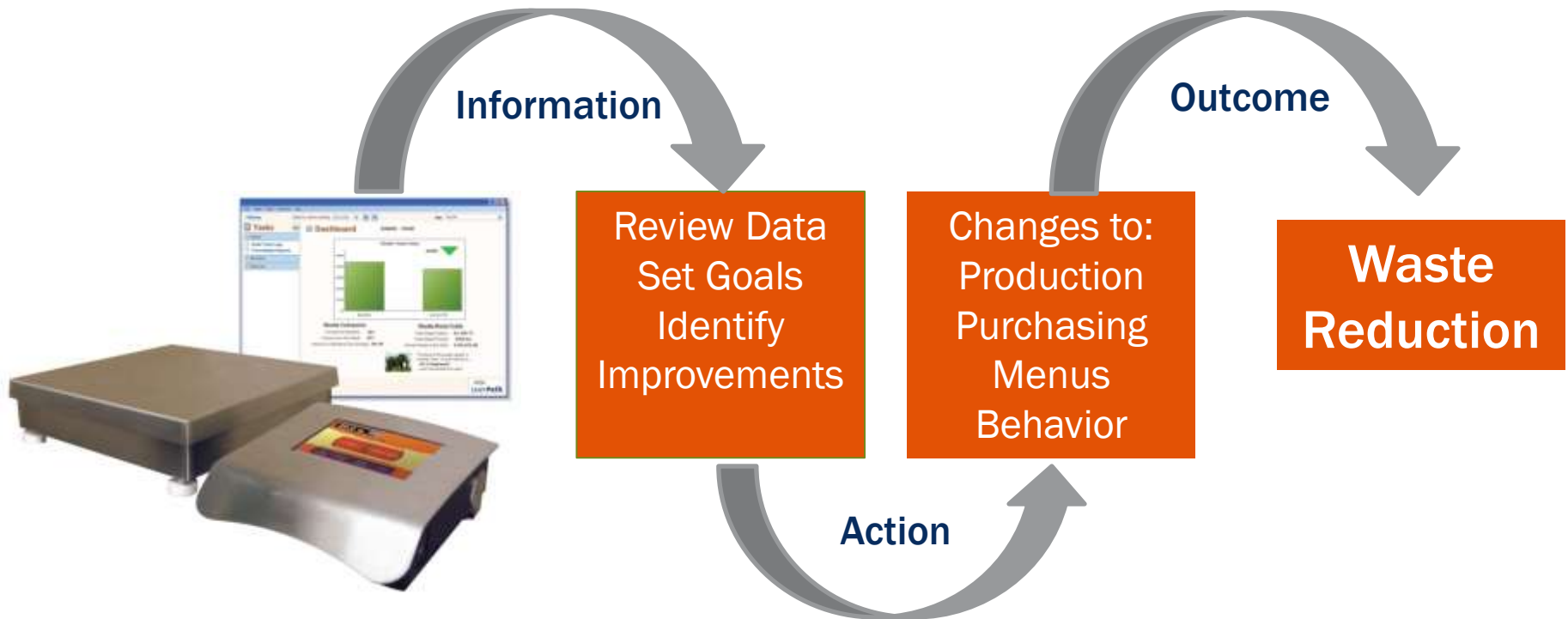
12-Week Trending

Top 5 Foods



Top 5 Loss Categories

Continual Process Improvement



Evolution of Tracking



Future: Cloud-Based Automation



Advanced: Local Automation Tools



Basic: Manual Paper/ Excel

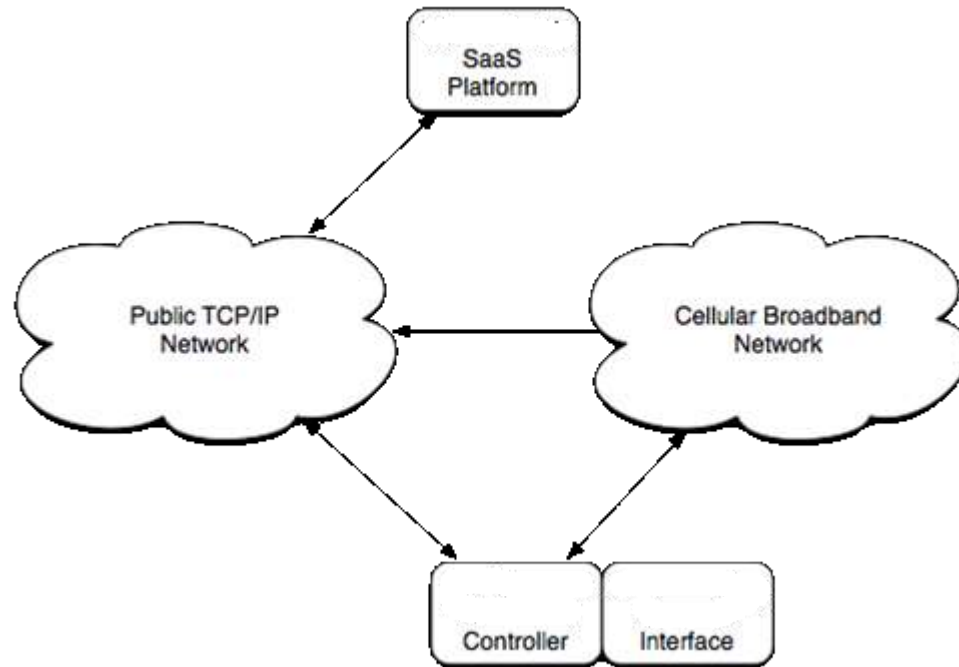
Cloud-Based Automation

- Data available at the front-line in near-real-time
- Personalized experience
- Provides vivid context
- Accelerated management reporting



Architecture

Real time capture
of detailed data,
pushed to cloud,
data propelled
back to the
workplace to drive
change



TUESDAY, APRIL 30, 2013 4:26 PM

WEIGHT LB

45.0

Value of Loss

5.50



Review & Send Your Report

Quantity:	1.0	EDIT
Event Order# (Optional):		ADD
Food:	Veggie - Specialty	EDIT
Loss Reason:	Overproduction	EDIT
Container:	Metal 2"	EDIT
Source:	Deli	EDIT
Sink:	Compost	EDIT
Daypart:	Breakfast	EDIT

Send Report

0 MESSAGES

Front-Line Data = Instant Feedback






Planning = Follow-Through

WEEKLY WASTE GOALS

FOR MAY 12 THROUGH MAY 18



MOST WASTED FOODS IN LAST 7 DAYS

 +12%	 +09%	 +04%
BROCCOLI	MASHED POTATOES	BROWN RICE

Gamification = Engagement

WASTE TRACKER

TUESDAY, JUNE 14, 2013 10:25 AM

WEIGHT

000.0

Help Prevent Food Waste



Track
Record Food Waste

 **Track Express Item**
Select a Tracking Shortcut

TOP WASTE WATCHERS

FOR LAST 14 DAYS

OPERATOR	Weighs	Pounds
★ Janice J.	45	115
★ Todd F.	32	96
★ Kristina Q.	24	66
★ Michael L.	24	72
★ Alexander S.	21	33
★ Lynn W.	20	45
★ Marco T.	19	27
★ Alexis C.	0	0
★ Thomas B.	0	0
★ Cyndy J.	0	0

RECOGNITION
AWARDS



10 WINNERS
IN LAST 90 DAYS

THANK YOU FOR TRACKING!

2 MESSAGES 

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Return on Investment

Typical LeanPath Customer Results

- Reduce pre-consumer food waste by 50% or more
- Save 2-4% or more on annual food purchases
- Save labor, energy and waste disposal costs



Source Reduction Examples

UMass Amherst



Results:

- According to the BLS food prices increased 3.5% overall during the fourth quarter 2012; UMass COGS increased only 1.4%.
- 2.1 point difference = \$304,000 savings
- 57% reduction in pre-consumer waste

*“High-end production and high quality food are not what drives up food cost. It’s waste that drives up food cost. When you see specific wasted menu items that you can quantify, you can have **meaningful dialogue with your staff and begin to solve some of the problems.**”*

- Garrett Distefano, Director of Residential Dining

Tracking Success Stories

Sodexo Campus Services



Results

- 47 percent reduction in food waste across 8 universities during pilot program in 2010
- Expanded to 50 universities in 2012
- Preliminary results show overall cut in food waste by 1/3

“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

Tracking Success Stories

MGM Grand Buffet



Results

- \$7,500/month average savings in food cost
- Reduced pre-consumer food waste by 80%

“When you can zero in on your food waste, you can control your prep, ordering and production. It’s all connected.” Justin Fredrickson, Exec. Chef

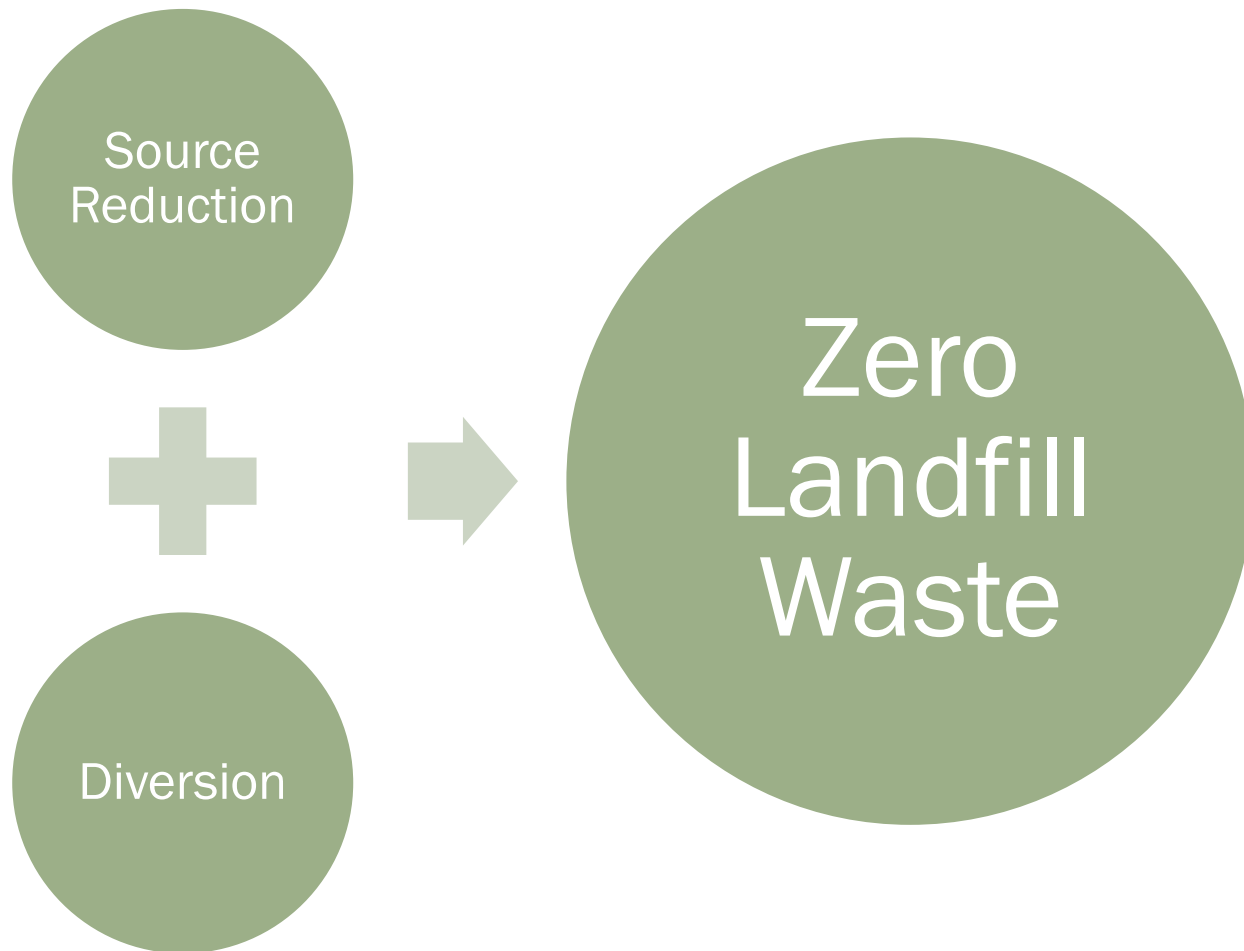
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Remember

- We don't need to be perfect
- Just start moving toward our goals

Zero Landfill Waste: Don't Redefine Zero



Food Waste Stats

New infographic highlights the scope of the food waste challenge and what to do about it.

Check it out, blog about it and share it: www.foodwastestats.com



Prevention Resources

The Path to Food Waste Reduction Starts Here

- Food Waste Prevention e-newsletter
- Food Waste Focus Blog
- Waste Reduction Toolkit

All available at www.leanpath.com.



Questions?

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