



Scaling Food Waste Prevention Globally Through Measurement, Data, and Analytics

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PREPARED FOR

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Food Waste: Scope, Scale, & Rising Awareness...

- FAO estimates that roughly **1/3** of all food produced for human consumption is lost/wasted – about 1.3 billion tonnes annually
- Other studies (IMECHE, SIWI) estimate annual food loss and waste at **up to 50%**(2 billion tonnes)
- FAO cites the dollar cost at **\$1 trillion** U.S. annually (\$680B in developed countries, \$310B in less developed countries)
- In the U.S. we waste **up to 40%** of our food annually
- ReFED: economic value of food waste in the U.S. = **\$218 billion**
- **Rising Global Momentum, Many signals of the need for urgent change in the food system; Food Waste Reduction pivotal**



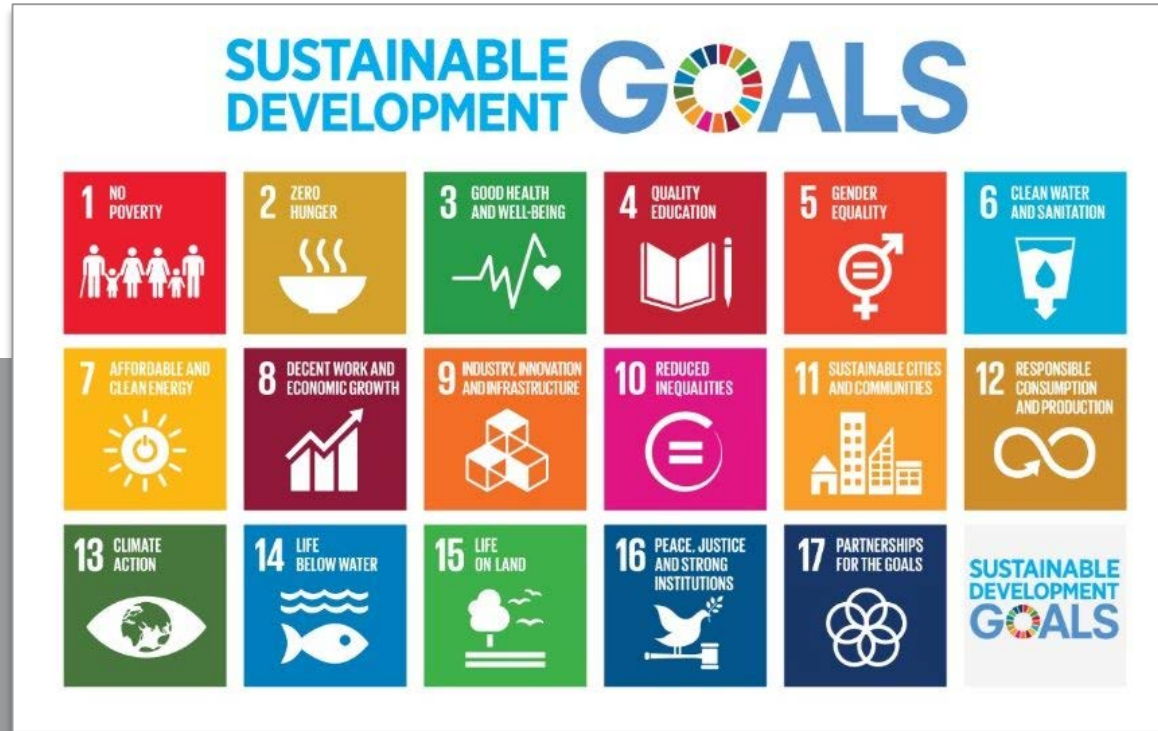
And We Have an Aggressive Global Goal...

By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses (Target 12.3)

Target
Measure
Act



Food Waste is a Critical Nexus Issue...



Reducing Food Waste Really Matters



Food is Precious,
yet we waste it away...

What **system** has more potential for positive global impact?

Pioneers in Food Waste Prevention



Leanpath invented automated food waste prevention technology in 2004

Offices in the U.S.,
U.K., Spain and
Australia

Over 2,000
deployments in
30+ countries
and all
50 U.S. states

Selected Experience – Multiple Sectors

ENTERPRISE



HEALTHCARE



EDUCATION



HOSPITALITY/GAMING



Our Focus ...

Prevention:

[Maximum impact, often overlooked]

The top of the hierarchy yields maximum benefit;
impacting the entire food supply chain



Key Areas of 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 by guests

We Often Waste Food to Manage Risk...



Over-
Production



Food
Safety



Over-
Merchandising



Labor / Waste
Trade-Offs



Customer
Experience & Choice



Cosmetic
Concerns



Date Label
Confusion



Guarantees
& Padding



Actual Consumption
Mystery



Special Meals
& Custom Menus



Remote
Events



High Guest
Expectations

What We Learned Early On

To solve this, we were going to need to roll up our sleeves and get in the kitchen

To reduce food waste you need to change behaviors, **and**

Front line workers are the global change makers.



An elephant is standing in a kitchen, looking at trays of food. The kitchen has stainless steel counters, stacks of plates, and large windows in the background. A person is visible in the background, working at a counter.

15 years ago, we set out to solve a
really big problem...

And We've Never Stopped Innovating...



Making measurement fast, easy, and accurate

A chef in a white uniform is shown in profile, focused on garnishing a dish with fresh green herbs. The background is slightly blurred, showing other kitchen elements. The text is overlaid on the right side of the image.

Our Vision:

Ensure a sustainable future
by eliminating global food waste

We can take control.

It's far beyond tools, tech and software.
It's a **complete food waste strategy.**

Since 2014 Alone...

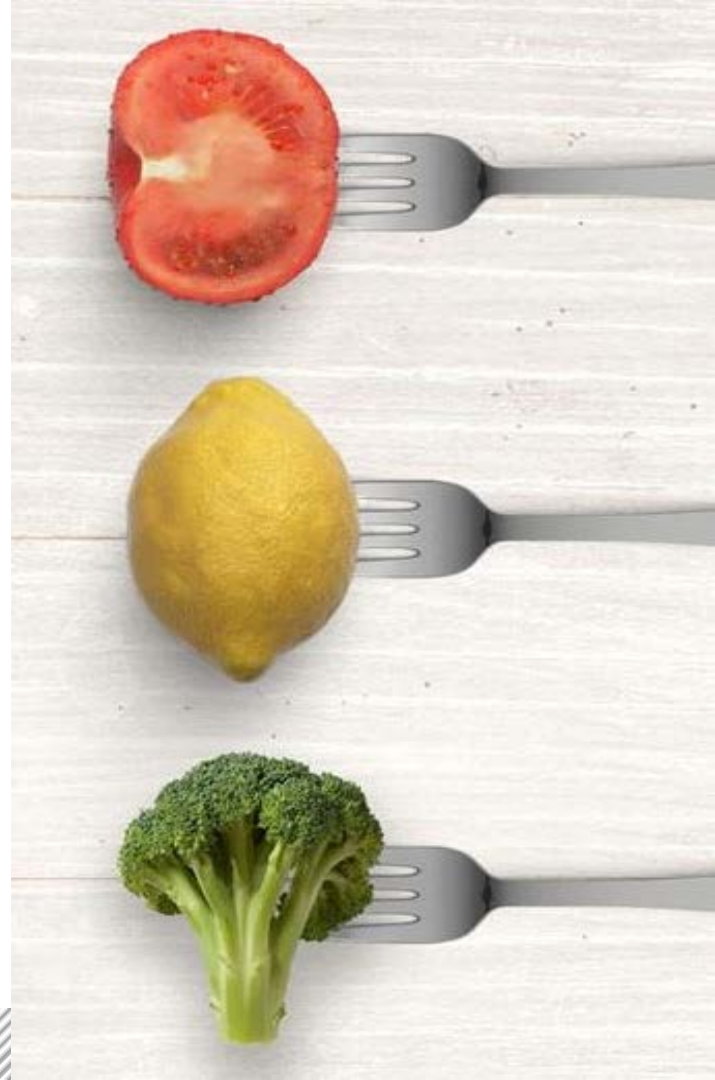
Leanpath has helped its clients
prevent over 40 million pounds
of food waste



The Measurement Gap

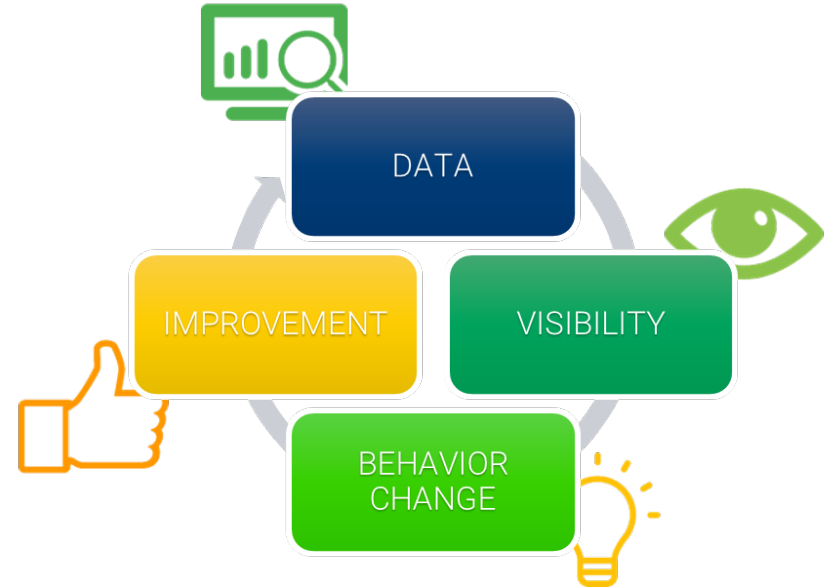
We need data to...

- **Define Baselines & Measure Change Over Time**
Without data we cannot scope the problem or assess improvement
- **Conduct Root Cause Inquiries and Develop Solutions**
Without data we can't diagnose the roots of the problem
- **Engage People in the Food Waste Effort**
Food waste prevention is a team activity, and we need everyone in the kitchen (and the industry) on the team
- We need data to recruit supporters



Closing the Measurement Gap – 3 Key Points

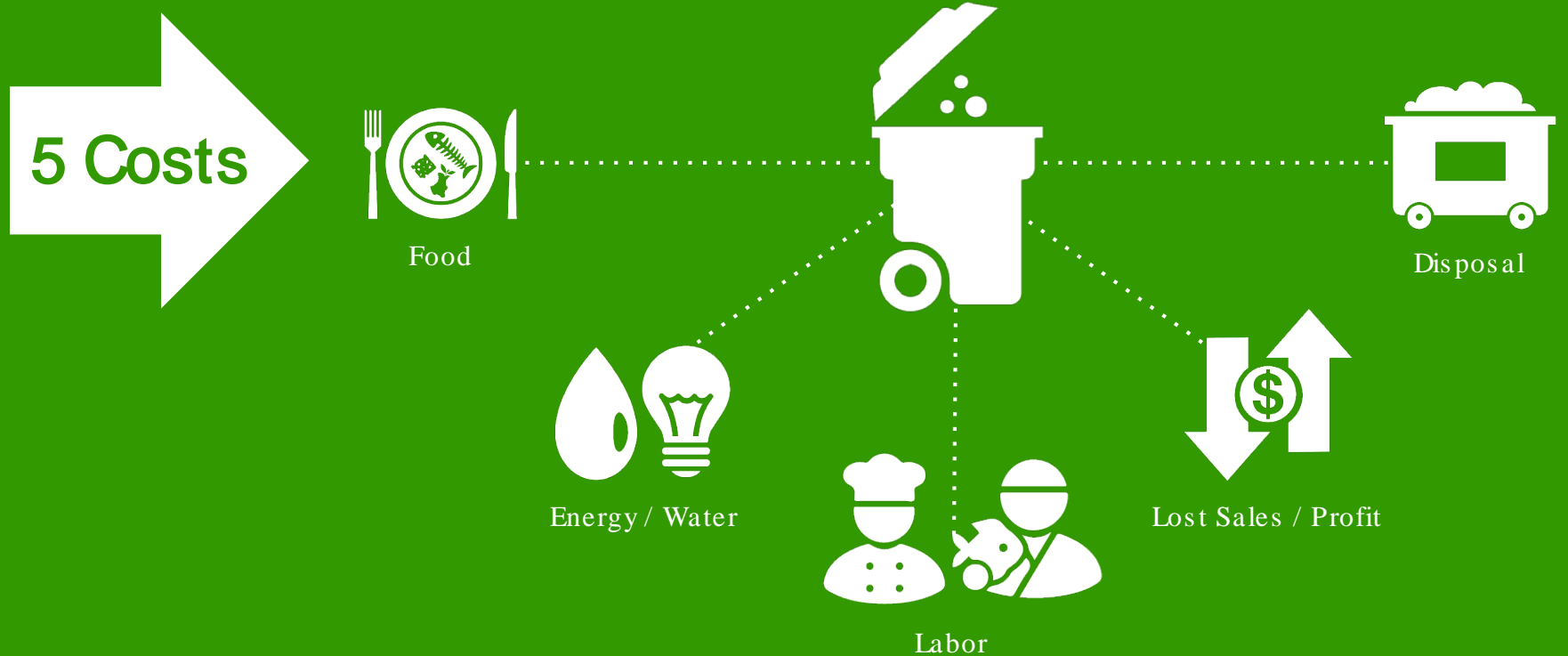
- The path to meaningful food waste **reduction** requires **Prevention**
- **Measurement** is the optimal route to **Prevention**
Because metrics influence behavior
- **Automation** is the optimal approach to **Measurement**



A photograph of a buffet line with several people in formal attire serving themselves from various food trays. The trays contain a variety of dishes, including fried items, vegetables, and meats. The text "Establishing the Business Case for Preventing Food Waste" is overlaid in white serif font on the center of the image.

Establishing the Business Case for Preventing Food Waste

Food Waste Costs Organizations a Bundle...

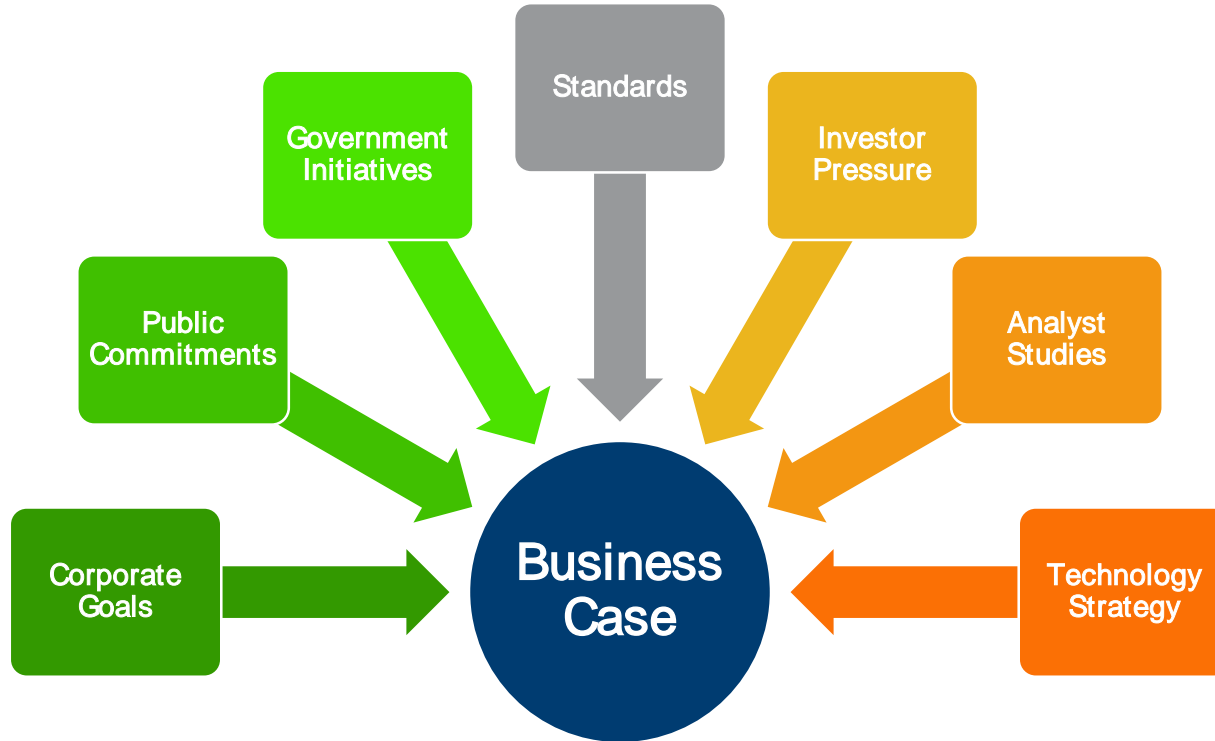




Food waste measurement and reduction has emerged as a standard of excellence

– **AND an expectation** – in Foodservice

Develop Your Business Case; Link to Strategy



Building the Business Case

- **Public Commitments** – IKEA, Sodexo 50%, Aramark (50%, Kroger (Zero Waste/Zero Hunger)
- **Government Initiatives** – SDGs, Target 12.3 (50%), EU Waste Framework Directive, Australia National Food Waste Strategy
- **Standards** – Food Loss and Waste Measurement Protocol (WRI)
- **Investor Pressure** – Organizations pushed to disclose food waste data
- **Analyst Studies** – ReFED Reports, BCG study, NRDC study
- **Partnership Initiatives** – Schneider Electric and Global Footprint Network Whitepaper; WRAP and IGD launch UK Food Waste Reduction Roadmap:
 - All major UK retailers and 50+ large food businesses have committed to achieving 50% reduction in food waste by 2030; consistent measurement, transparent reporting



Tracking,
measuring, and
reporting on food
waste becoming a
basic expectation

A professional kitchen scene with a chef in a white uniform in the background. In the foreground, a metal tray holds a variety of fresh vegetables, including red and yellow bell peppers, a carrot, eggplants, and green herbs. The text "How to Deliver on the Promise of Prevention?" is overlaid in white serif font.

How to Deliver on the Promise of Prevention?

Measurement Matters Most, and Works 2 Ways:

Find out what is being wasted and why, so teams can...

Understand & Improve

- Understand the waste
- Set goals
- Track improvement

Change Team Behavior

- Engage employees
- Raise awareness
- Celebrate progress

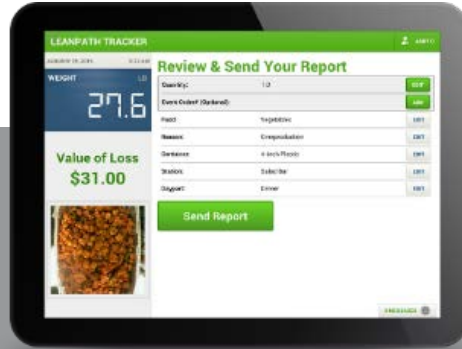


You Can't Manage What You Don't Measure - Drucker

Leanpath Trackers Make Tracking Easy



Bench Scale with
Photography



Tablet
Solutions



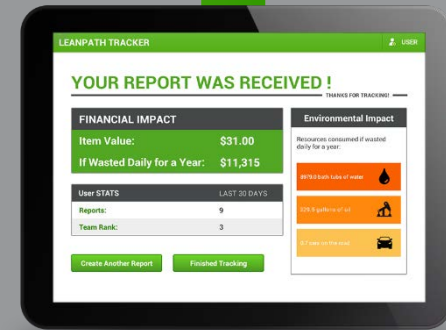
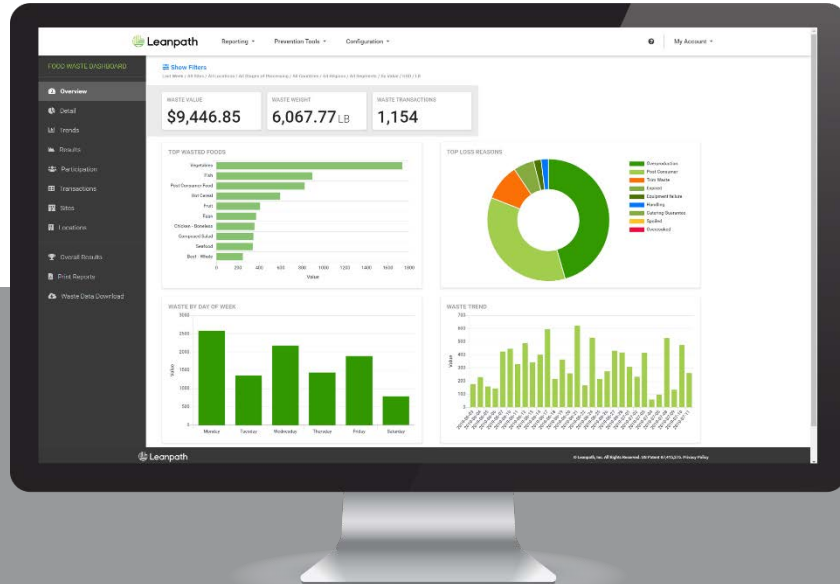
Pre and Post-Consumer
Floor Scale

Staff Instantly See Value and Impact

- Waste impact metrics and environmental equivalencies upon completion of every food waste transaction
- Gamification adds to the Tracker experience, “wins” encourage participation



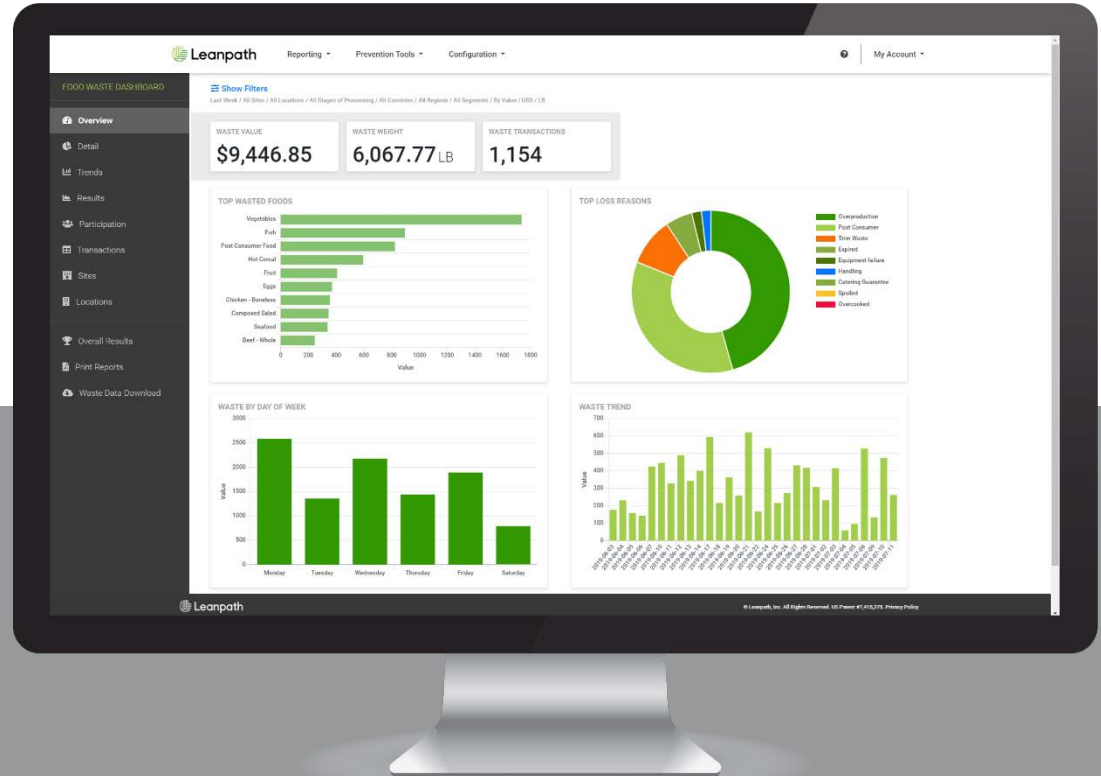
The Leanpath Analytics Platform



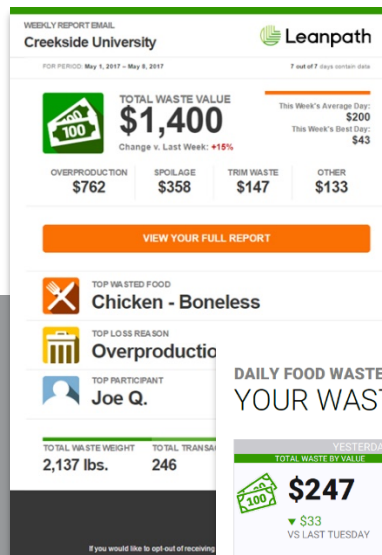
Your data is automatically compiled and uploaded to Leanpath Online.

Leanpath Online

- Clear, intuitive graphics
- Drill-down capabilities for detailed investigation
- View data and trends for one or multiple sites



Data Yields Insights to Drive Behavior Change



Weekly waste summaries and detailed daily reports focus the conversation on the greatest opportunities for prevention

Waste Overview Reports

DAILY FOOD WASTE REPORT: EXAMPLE SITE WASTE OVERVIEW

TOTAL DAILY WASTE BY VALUE



TOP ITEMS WASTED

ITEM	YESTERDAY	WEEK-TO-DATE	TRANSACTIONS
Deli Meat	\$45 12.5 LB	\$45 12.5 LB	1
Fruit	\$39 22.8 LB	\$85 49.2 LB	2
Vegetables	\$38 69.3 LB	\$99 169 LB	12
Mixed Protein	\$24 19.1 LB	\$24 19.1 LB	1
Chicken - Boneless	\$24 9.6 LB	\$46 18.9 LB	2

WEDNESDAY | OCTOBER 26, 2016
TODAY'S WEATHER FORECAST:
Light rain starting tomorrow afternoon.

WASTE BY TIME OF DAY



CHARACTERIZATION LEVEL



TOP WASTE BY REASON CODE

REASON CODE	YESTERDAY	WEEK-TO-DATE	8 WEEK TREND
Expired	\$116 63.3 LB	\$141 79.4 LB	
Overproduction	\$85 74 LB	\$175 154.2 LB	
Quality	\$42 26.6 LB	\$63 54.1 LB	

Data Motivates Action

Instant alerts deliver real-time insights, enabling immediate intervention

Identify operational areas where corrective action is needed, and drive behavior change

FOOD WASTE ALERT

 **Leanpath**



IMAGE:


FOOD: Produce
WEIGHT: 116.18 LB
COST: \$85.45
REASON: Pan Waste-Overproduced
LOCATION: [REDACTED]
OPERATOR: [REDACTED]
DAY/TIME: 27 Jan 2019 3:00 PM

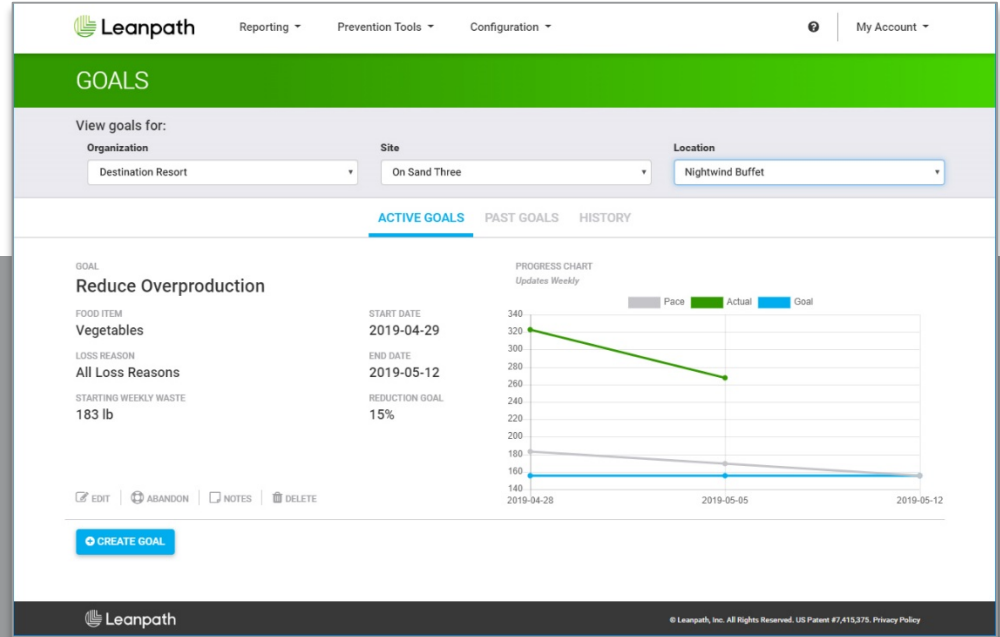
[LOG IN TO LEANPATH ONLINE](#)

support@leanpath.com

Data Inspires Measurable Improvement

Goal module allows targeting of specific items for reduction

Keeps teams focused and engaged; enable productive conversations



Leanpath Spark



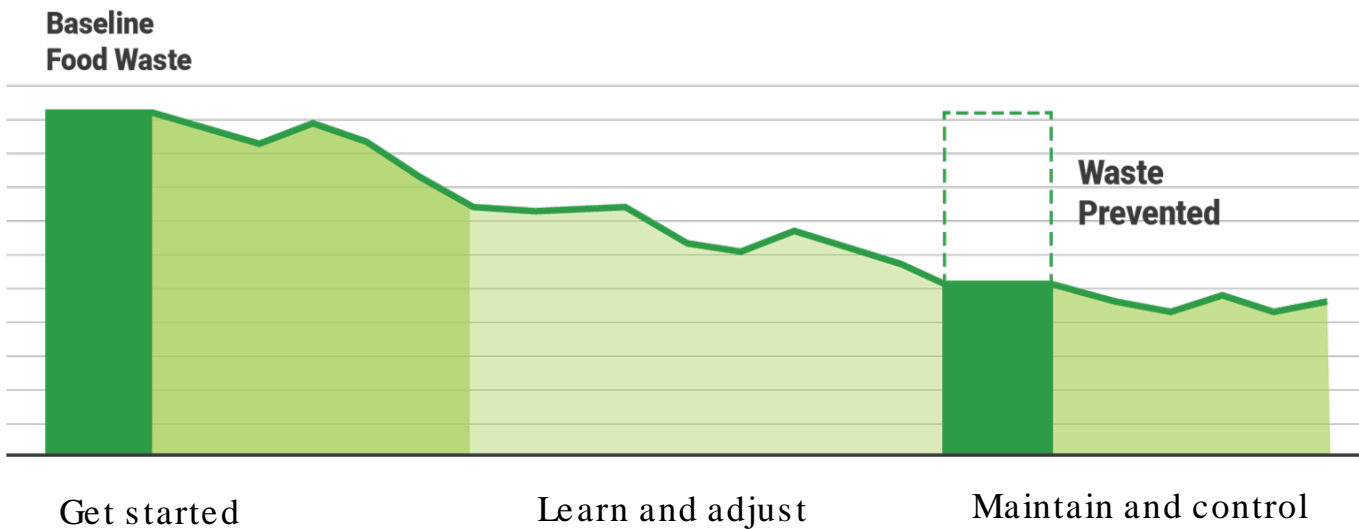
Sparking behavior change among consumers...

The Key Opportunity

- Shift the food waste conversation upstream to prevention
- Engage businesses in responsible production to avoid overproduction



Measurement Makes Food Waste Prevention Visible



Key Benefits

Reduce Waste

Reduce pre-consumer food waste by 50% or more

Increase Savings

Save 2-8% or more on annual food purchases

Additional Benefits



Protect the Environment

Reduce CO2 emissions
and save water.



Save on Labor

Staff spend less time
preparing wasted items.



Save on Disposal

You're throwing
away less.



Increase Employee Engagement

Let staff know they can
have a major impact.

A hand is holding a white plate filled with a variety of food items. The plate includes a golden-brown fried item, possibly a fish or vegetable fritter, a piece of roasted meat with a dark, caramelized crust, a portion of green peas and yellow corn, a slice of red tomato, and some shredded white food, possibly cheese or a salad. The background is blurred, showing other plates and people, suggesting a social gathering or a buffet. The text "Fire up your people to prevent food waste..." is overlaid on the image, with "prevent" highlighted in green.

Fire up your people
to **prevent** food waste...

Leading Change to Focus on Prevention...

The only option
that impacts the
bottom line

- Reduced food purchasing
- Reduced embedded labor
- Reduced disposal fees

FOOD WASTE PREVENTION

FEED HUNGRY PEOPLE

FEED ANIMALS

INDUSTRIAL USES

COMPOSTING

LANDFILL

Environmental
and
Social Benefits

- GHG emissions avoided
- Water consumption avoided
- Soils, Forests, Species benefit
- Free up resources for focus on root cause solutions of hunger and poverty

Game-changing Innovation - Prevention at Scale



Making the Business Case for Food Waste Prevention



- Through tracking, measurement, analytics, and behavior change...
- Unleashing the multiplier effect in food waste to benefit all the SDGs
- Reducing overproduction
- Reducing Earth Overshoot

Sustaining our world.
Food. Climate. Environment.

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION





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Join us
in this journey
to make food waste
prevention and
measurement
everyday practice in the
world's kitchens



