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Background & Expertise

Academic
• Master of Science in Regenerative Studies at California State Polytechnic University, Pomona
• Focused on municipal anaerobic digestion and composting in the US, Canada and Europe as well as a feasibility study for the city of Asheville, NC

Professional
• Started state permitted composting facility near Asheville, NC
• Project Associate for GreenBlue’s Sustainable Packaging Coalition – EPA Region 4 Scaling Up Composting in the Charlotte Region Project
• Worked with the City of Charlottesville, VA to create a residential composting program

Additional
• Contributing writer to BioCycle Magazine
• Member of the U.S. Composting Council and their Membership Committee
Rubicon Overview

Founded in 2008, Rubicon built a scalable technology and big data platform that connects customers with a network of independent haulers to drive down prices and increase diversion.

Our Purpose

• **Innovate** the waste industry through technology
• **Realign incentives** to promote sustainability

Our Stats

• **5,000+** haulers in network
• **Global customers** in retail, grocery, restaurant and food services, distribution, technology, healthcare and government sectors
• **Smart Cities** solution underway in major U.S. cities
Ban/mandate some yard debris: Arkansas*, Delaware, Florida*, Georgia*, Illinois, Indiana, Iowa, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska*, New Hampshire, New Jersey, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, South Dakota, Vermont, West Virginia, Wisconsin

Ban/mandate food scraps: California, Connecticut, Massachusetts, Rhode Island, Vermont (Also of Note: Austin, TX, New York, NY, Seattle, WA, Portland, OR, San Francisco, CA)
In recycling food waste from DCs, Rubicon ensures products go to the highest possible use in the Food Recovery Hierarchy, at the lowest possible cost.
Food Donation

According to the EPA Food Recovery Hierarchy, Food Donation is the **first priority**

In the US, 1 in 8 people struggle with hunger
Processing Types

Rubicon has nationwide coverage for food donation, animal feed, anaerobic digestion, ethanol production, composting solutions, etc.

Animal Feed

- This is the second highest use on the EPA’s Food Recovery Hierarchy
- Sometimes rebates are available

Anaerobic Digestion

- Anaerobic digestion is the process of turning organic material, such as food waste, into energy or fuel
- ADs are generally more restrictive about organic waste streams they can accept

Composting

- Compost is a soil amendment that promotes soil and plant health
- A composting facility is a processing facility that accepts organic waste and produces compost
Organics Recycling in Georgia

• Different types of food waste requires specific solutions:
  • Food Manufacturing
  • Distribution Centers
  • Grocery
  • Convention Centers
  • Sports Arenas
  • Tourist Attractions
  • Retail

• Food waste can be transported via pallets, totes, box trucks, dry vans, open tops, compactors, dumpsters, and carts, etc.
• Recycling food waste presents difficult challenges:
  • Perceived Liability (Donation and Animal Feed)
  • Brand Protection
  • Source Separation (Contamination)
  • Habit (Culture Change)
  • Buy-In from Management
  • Real or Perceived Additional Cost
  • Lack of Service Providers and Infrastructure

• Many times, companies and organizations that would like to recycle their food waste simply do not know how
Rubicon’s Organics Recycling Capabilities

- Training and education
- Waste assessments and waste characterization audits
- Zero waste plans
- Finding champions
- Working with property managers
- Cost avoidance
- Promoting new infrastructure
Depackaging

• Necessity of sending food waste to depackaging
• Infrastructure is growing rapidly
Rubicon provides data analytics and reporting that allows customers insights into waste diversion and carbon emissions activities and metrics.
Customer Success Story

Example 1: Distribution Center

- Food surplus sent to Animal Feed
- Problems with contamination

1. 40% Savings Through Diversion
2. 30% Increase in Diversion Rate
3. $24,850 Total Cost Avoidance
Example 2: Food Distribution Center

- Wasted food sent to Anaerobic Digestion
- Food waste compactors

1. 20% Savings Through Diversion
2. 32.5% Increase in Diversion Rate
3. 600 Tons Annually Diverted from Landfill
Example 3: Grocery Chain

This customer is recognized as best in class for grocery stores in the United States.

- Implementing programs at all distribution centers and stores
- Food waste sent to animal feed and anaerobic digestion

Delivered 12-15% savings on waste and recycling, optimized services and maximized landfill diversion.

Implemented customized solutions for a variety of materials including food waste and textiles.

Created a “one stop shop” for reporting needs, even for parts of the program not managed by Rubicon. We collect data for full sustainability reporting.
Example 4: Beverage Distribution Center
• Soda, beer and other alcoholic beverages sent to ethanol production, which resulted in the creation of clean fuel

Example 5: Food Distribution Center
• Implemented food waste recycling programs at nearly every DC nationwide
Thank you!

Ryan Cooper
Sustainability Specialist – Organics Recycling
Ryan.Cooper@RubiconGlobal.com
434-284-3056