IS DUO
Food Waste Tracker

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Executive summary

Our startup offers an AI-powered food waste tracking system designed to help restaurants minimize waste, cut costs, and operate more sustainably. By leveraging smart sensors and POS systems, our solution identifies inefficiencies in food usage and provides actionable insights to optimize inventory and purchasing decisions. Our platform is affordable and scalable, making it accessible to small and midsize restaurants. At the same time, we enable foodservice businesses to reduce their ecological impact and enhance financial performance, transforming sustainability into a competitive advantage.

Overview and Background

Mission Statement: Our mission is to help restaurants efficiently and sustainably operate their food waste, such as tracking and optimizing, through AI-driven technology.

Objectives:

1. Start with 10-15 small to medium-sized restaurants for 6 months (short-term)
2. Reduce food waste by 20% per year within partner restaurants (long-term)
3. Installing a POS system and inventory by 2 or 3 year (long-term)

Background:

Restaurants in the U.S. are responsible for over 20 billion pounds of food waste each year, most of which ends up in landfills. It is difficult for all restaurants that don't belong to a big chain to afford a very expensive Food Waste Tracker System, therefore, we created a solution tailored for affordability, ease of use, and intelligent automation. With this cost-efficient tracker, many chains and smaller restaurants can use this system and save on profit. As a team, we value sustainability, and that food should not be wasted as all ingredients have a purpose.

Product/Service:

The Food Waste Tracker is a smart system combining an AI-powered camera and scale setup with a real-time analytics dashboard. It'll be able to identify different types and quantities of food waste and recurring waste patterns. Based on the food waste patterns, it'll recommend smarter purchasing habits (Ex, buy fewer carrots). Integration with inventory and POS systems allows our solution to optimize ingredient ordering and flag inefficiencies. Over time, the system's AI's accuracy and forecasting improve, allowing for less food waste.

Target Market:

We first would want to target smaller independent chains and restaurants as they have a more limited access to food waste systems. In addition, mid-sized hotels, Inns, and hospitality venues are also a target, as food waste from their restaurants is also important.

Strategic Positioning:
Our startup uniquely targets smaller restaurant chains that have none or limited waste management resources, delivering a high-tech yet affordable product. Having an affordable approach with an emphasis on sustainability positions us more than a food tech company, but as a partner in restaurants' long-term environmental and financial success.

Market Analysis

The restaurant industry has shown resilience and adaptability in recent years, driven by rising consumer demand for convenience, delivery services, and experiential dining. Key trends include the expansion of digital online ordering, delivery apps. However, labor shortages, inflation, supply chain disruptions and remaining challenges and tech drive concepts are outpacing traditional full service restaurants. Therefore, in the future there will be an increased demand for AI technology to enhance the industry efficiency.

The food waste management sector includes some established players which focus on large-scale operations with hardware-intensive systems, often at prohibitive costs for small and mid-sized restaurants. In contrast, our startup offers an AI-powered solution that combines affordability with advanced analytics, making waste reduction accessible to underserved smaller businesses. Moreover, we deliver real-time, actionable data without expensive hardware, this gives restaurants a cost-effective way to cut waste and boost profits while meeting sustainability goals.

Our strengths include affordable AI technology that simplifies food waste reduction for underserved small/mid-sized restaurants. Weaknesses are limited brand awareness and changing industry habits. Opportunities arise from sustainability regulations and rising food costs driving demand. Threats include competition from scaled-down enterprise solutions and adoption resistance.

Applying Porter's Five Forces, supplier power is moderate (reliance on AI/cloud providers), while buyer power is high. Threat of substitutes is moderate, but our AI-driven specificity creates barriers. New entrants face challenges scaling cost-effective solutions, giving us first-mover advantage with SMBs. Rivalry intensifies as incumbents like Winnow target mid-market expansion. By dominating the value chain's "data intelligence" layer, we bypass hardware dependencies and integrate with POS systems, creating sticky customer relationships.

Marketing and Sales Strategy

Marketing Strategy:

We first start with direct outreach to local restaurants, offering trials and pilot programs. Similarly, it will launch with a focus on cities with high sustainability initiatives, particularly within restaurants wanting to manage their food waste. In addition, there would be Digital Marketing on platforms like Instagram and LinkedIn. The content will focus on sustainability-focused food communities (e.g., kitchen managers, food industry influencers, chefs, etc). Content marketing will demonstrate how our product saves money and reduces waste (can also be in-person demos). This would help build visibility and partnerships.

Pricing Model:

1. Basic Plan ($49/month): Core tracking features, visual dashboards, basic recommendations, limited integrations
2. Pro Plan ($89/month): Advanced analytics, POS integration, multi-location support
3. Optional hardware purchase or leasing plans for AI camera and smart scale bundles
    a. One-time setup cost under $300, or as a lease option (ensures flexibility for all restaurant sizes, keeping the barrier to entry low while allowing for scalable growth)

Operations Plan

Our product will be developed as a cloud-based software platform that integrates with existing restaurant information systems, such as POS and inventory management tools. The development will follow an agile methodology, with iterative releases to incorporate user feedback and ensure compatibility with industry-standard systems. Key features include AI-driven waste analytics, automated reporting, and order optimization suggestions. The platform will be accessible via web and mobile interfaces, ensuring ease of use for staff at all levels.

The software will be developed in-house, with cloud hosting through a reliable provider like AWS or Azure to ensure scalability and security. Since our solution is digital, production primarily involves software development and maintenance, eliminating the need for physical manufacturing. For hardware components, we will partner with established suppliers to ensure quality and cost efficiency. Logistics will focus on digital distribution, with licenses delivered electronically. Facilities requirements are minimal, we only need office space for our development team and remote collaboration tools to support distributed workforce. This streamlined approach allows us to scale quickly while maintaining low overhead costs.

Financial Plan:

Revenue Model: Our revenue will include monthly software subscriptions, hardware sales or leasing, and data partnerships with sustainability organizations and restaurant analytics platforms. Additional revenue will be generated from enterprise licensing deals and data-sharing partnerships with food service consultants or sustainability platforms.

Financial Projections:

- Year 1: Focus on development and pilot testing (Starting with 10-15 restaurants)
  - 10 restaurants on Base Plan ($49/mo): $5,880, 5 restaurants on Pro Plan ($89/mo): $5,340, Hardware sales (15 units for $300): $4,500
    Total Profit: $15,720
  - Cash Flow: Initial Grant Funding:~ $120,000
  - Net Loss: ~90,000 (Due to Development, marketing, and hardware costs)
- Year 2: Expand marketing efforts, target 100 restaurant clients
  - 65 clients on Base Plan ($49/mo): $38,220; 35 clients on Pro Plan ($89/mo): $37,380; Hardware sales (85 units for $300): $25,500
    Total Revenue: $101,100
  - Cash Flow: Additional Funding: $250,000
  - Net Loss: ~180,000 (Due to upgrades and fixes on AI technology, increase in workforce, marketing and sales, and hardware costs)
- Year 3: Expand target to 250 restaurant clients
  - 50 clients on Base Plan: $88,200; 100 clients on Pro Plan: $106,800; Hardware (150 units for $300): $45,000; Licensing & Data Revenue: $35,000
    Total Revenue: $275,000
  - Cash Flow: Additional Funding: $500,000
- Break-Even Analysis
  - Break-Even Point:
    - ~270–300 active clients (Early to Mid Year 4)

Conclusion

Join us in revolutionizing food waste management in restaurants. We aim to create affordable AI-powered solutions, reducing food waste and boosting sustainability. We are actively seeking advice and investors to collectively drive industry change. Come join us today.