

Frontier Capital & Strategy

<u>Team Member Name</u>	<u>Year</u>	<u>Major</u>
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Topic Title: Transforming Retail Food Waste into Circular Value

Audience: Costco Executive Team, including Sustainability Strategy Team

Sustainable Development Goal

SDG #12: Ensure sustainable consumption and production patterns

SDG #13: Take urgent action to combat climate change and its impacts

Executive Summary

Food waste represents one of the largest inefficiencies in the global food system. Each year, the US generates approximately 120 billion pounds of food waste, representing 40% of the nation's food supply and over \$161 billion in lost economic value. The retail sector alone contributes roughly 16 billion pounds annually, highlighting the role grocery retailers play in addressing this challenge. As the third-largest grocery retailer in the United States with an estimated 8.5% market share, Costco is uniquely positioned to influence how food waste is managed across the retail supply chain.

Costco has already demonstrated strong leadership in sustainability and waste reduction. The company achieved a commendable 82.8% waste diversion rate from landfills in 2025, supported by initiatives such as food donations, improved inventory management, and operational efficiencies. While these efforts have reduced landfill waste, there remains an opportunity to further improve food waste management. Today, much of the remaining organic waste still exists in the supply chain rather than being reintegrated into it. Creating a more circular system would allow Costco to capture additional environmental and economic value while strengthening its partnerships with agricultural suppliers.

To advance this opportunity, we propose a strategic partnership with **Denali**, a leader in organics recycling and resource recovery. Through this collaboration, unsellable organic waste from Costco locations could be converted into animal feed, nutrient-rich compost, and renewable biofuels. These outputs could then be supplied back to farmers within Costco's supply network, reducing input costs for feed, soil nutrients, and energy while diverting additional waste from landfills. By transforming food waste into productive agricultural inputs, Costco can close the loop in its supply chain—creating circular value while reinforcing its commitments to sustainability, climate action, and long-term supplier resilience.