

Food Waste Reduction Technology Market Forecasts to 2032 – Global Analysis By Technology Type (Food Tracking Platforms, Waste Management Software, AI Food Optimization Tools, Smart Refrigeration Systems, Waste Collection & Recycling Systems and Food Waste Valorization Technologies), Application and By Geography

<https://marketpublishers.com/r/F72E29D7650EEN.html>

Date: December 2025

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: F72E29D7650EEN

Abstracts

According to Statistics MRC, the Global Food Waste Reduction Technology Market is accounted for \$3.80 billion in 2025 and is expected to reach \$5.71 billion by 2032 growing at a CAGR of 6.0% during the forecast period. Food Waste Reduction Technology aims to curb food loss across the supply chain, from farms to households. Intelligent systems like IoT sensors and monitoring devices enable real-time tracking of food quality and expiration, minimizing spoilage. Predictive AI models assist in accurately forecasting demand, supporting efficient inventory control for businesses. Cutting-edge preservation solutions, such as improved cold storage, vacuum sealing, and eco-friendly coatings, prolong product shelf life. Moreover, digital platforms link excess food with consumers or non-profit organizations, ensuring edible food is utilized rather than discarded. Collectively, these innovations promote environmental sustainability, enhance food security, and significantly reduce the global burden of food waste.

According to the UN Environment Programme (UNEP), data shows that 1.05 billion tonnes of food went to waste in 2022, representing 19% of food available to consumers at retail, food service, and household levels.

Market Dynamics:

Driver:

Increasing awareness of food waste issues

Growing recognition of the consequences of food waste is fueling the expansion of food waste reduction technologies. Awareness campaigns led by governments, NGOs, and environmental groups emphasize minimizing losses in production, distribution, and consumption. Consumers are increasingly motivated by sustainability concerns and the environmental effects of food disposal, driving interest in innovative solutions. Initiatives highlighting economic losses and ecological damage have prompted organizations and individuals to adopt smart technologies like AI-based inventory monitoring, advanced packaging, and waste tracking systems. This rising consciousness regarding food wastage is playing a crucial role in boosting market demand and adoption of solutions aimed at efficient and responsible food management.

Restraint:

High initial investment costs

A significant limitation for the food waste reduction technology market is the substantial upfront cost. Implementing AI-driven inventory systems, IoT sensors, and advanced packaging solutions requires considerable financial resources, which can discourage smaller businesses. Beyond the initial purchase, expenses for installation, staff training, and ongoing maintenance further increase the burden. In many developing countries, the benefits of these technologies may take years to offset costs, reducing their short-term attractiveness. As a result, despite the long-term potential for decreasing food waste and enhancing supply chain efficiency, high capital requirements remain a key factor restricting rapid and widespread adoption of food waste reduction solutions globally.

Opportunity:

Growing investment in R&D and innovation

Increased investment in research and development offers strong opportunities for the food waste reduction technology market. Businesses are developing innovative tools, such as biodegradable packaging, predictive AI-based inventory systems, and advanced food recycling or composting technologies. Partnerships among technology

companies, food manufacturers, and research institutions encourage innovation and speed up the launch of new solutions. Funding from governments, venture capital, and sustainability-oriented investors supports experimentation and scaling of these cutting-edge technologies. By addressing storage, distribution, and spoilage challenges, these R&D efforts enhance food waste management. Sustained investment in innovation provides market growth prospects, enabling providers to deliver advanced, sustainable, and commercially viable solutions to a rapidly expanding global audience.

Threat:

High market competition and price pressure

The food waste reduction technology sector is characterized by strong competition among both established companies and new entrants, creating significant pressure on pricing and profitability. Providers of AI-driven inventory management, smart packaging, and monitoring systems often engage in aggressive strategies to expand market share, resulting in margin reductions. Smaller startups may find it difficult to compete against larger firms with greater resources, marketing strength, and distribution capabilities. Rapid technological developments demand constant innovation, increasing research and development costs. Such competitive intensity and price sensitivity can restrain market growth and discourage newcomers. Companies must focus on differentiation through innovation, superior quality, and enhanced services to sustain their market presence effectively.

Covid-19 Impact:

COVID-19 had a profound impact on the food waste reduction technology market by disrupting supply chains and changing consumer behavior, emphasizing the need for efficient waste management solutions. Lockdowns, workforce shortages, and transportation constraints created logistical difficulties, resulting in increased food spoilage and losses. In response, businesses and households turned to AI-powered inventory systems, predictive analytics, and smart monitoring technologies to better manage food quality, storage, and waste reduction. The pandemic exposed weaknesses in traditional food distribution systems, accelerating the adoption of digital and automated solutions. Consequently, COVID-19 served as both an obstacle and a driver, boosting awareness of food waste and promoting the growth of innovative reduction technologies.

The AI food optimization tools segment is expected to be the largest during the forecast

period

The AI food optimization tools segment is expected to account for the largest market share during the forecast period because of its capacity to process extensive data and deliver practical solutions to prevent food wastage. These tools enable precise demand forecasting, inventory management, and supply chain optimization for businesses. By identifying potential spoilage and analyzing consumption trends, they help reduce waste across production, distribution, and retail stages. AI-driven decision support improves operational efficiency and integrates effectively with current systems. Their adoption by restaurants, manufacturers, and retailers highlights their significance. The combination of efficiency, adaptability, and scalability positions AI food optimization solutions as the leading segment in the market, driving widespread implementation and market growth.

The restaurants & food service segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the restaurants & food service segment is predicted to witness the highest growth rate. Rising emphasis on sustainability and cost management is motivating restaurants, catering services, and cafes to implement innovative solutions. Tools such as AI-driven inventory management, predictive analytics, and smart storage systems help prevent overproduction, limit spoilage, and improve menu efficiency. Increased attention to sustainability certifications, waste monitoring, and social responsibility programs further promotes adoption. With the rapid expansion of the food service industry and heightened awareness of food waste challenges, this segment is emerging as a key driver, demonstrating the highest growth potential within the market.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, reflecting extensive technology adoption and a strong commitment to sustainability. Restaurants, food retailers, and manufacturers increasingly rely on AI-powered inventory systems, predictive analytics, and advanced packaging to curb food wastage. Growing consumer consciousness about environmental responsibility, along with supportive regulations and government initiatives, further boosts market growth. The region benefits from robust technological infrastructure, high purchasing power, and significant investments in innovative solutions. A combination of proactive food waste management strategies, focus on sustainable operations, and a mature technological landscape positions North America as the leading region, maintaining a substantial market share and setting benchmarks for global adoption of food waste reduction

technologies.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, driven by rapid urbanization, a rising population, and heightened demand for efficient food management solutions. Increased awareness of food wastage, along with government-backed sustainability initiatives, encourages widespread adoption. Businesses across restaurants, retail, and food manufacturing sectors are integrating AI-driven inventory systems, smart refrigeration, and predictive tools to reduce spoilage and enhance operational efficiency. Advances in technology, growing digital infrastructure and investment in innovative solutions further fuel market expansion. Emerging opportunities, modernization of supply chains and a strong emphasis on sustainability make Asia-Pacific the region with the highest growth rate globally.

Key players in the market

Some of the key players in Food Waste Reduction Technology Market include Orbisk, OneThird, KITRO, Winnow, Chanzi, EatCloud, WasteX, Leanpath, Apeel, Full Harvest, GreenPod Labs, TripleW, Replate, Veolia Environment and Waste Management, Inc.

Key Developments:

In November 2025, TripleW and Sulapac has joined forces for a closed-loop pilot, demonstrating that reusable cups made from Sulapac Solid can be chemically recycled on a commercial scale. The upcycling system cycle eliminates the need for fossil-based materials. The pilot shows that the transition from single-use to reusable cups made from a fully bio-based and biodegradable material can be achieved without relying on fossil-based plastics.

In November 2025, Veolia Environment SA entered into a definitive agreement to acquire Clean Earth, Inc. from Enviri Corporation for approximately \$3.0 billion. A cash consideration of \$3.04 billion will be paid by Veolia Environment SA. The financing will be funded through the Groups existing financial resources and debt.

In December 2024, Orbisk has successfully secured €8+ million in an oversubscribed Series A venture capital investment round led by new partner Regeneration.VC and co-led by existing partner PeakBridge. Other investors are new partner Kost Capital, as well as early investors DOEN Participaties and Brabant Development Agency (BOM)

and EIT Food's AgriFoodInvest.

Technology Types Covered:

- Food Tracking Platforms
- Waste Management Software
- AI Food Optimization Tools
- Smart Refrigeration Systems
- Waste Collection & Recycling Systems
- Food Waste Valorization Technologies

Applications Covered:

- Restaurants & Food Service
- Food Retail
- Food Processing & Manufacturing
- Hospitality Sector
- Households
- Institutions & Public Sector

Regions Covered:

- North America
 - US
 - Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

Contents

1 EXECUTIVE SUMMARY

2 PREFACE

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
 - 2.4.1 Data Mining
 - 2.4.2 Data Analysis
 - 2.4.3 Data Validation
 - 2.4.4 Research Approach
- 2.5 Research Sources
 - 2.5.1 Primary Research Sources
 - 2.5.2 Secondary Research Sources
 - 2.5.3 Assumptions

3 MARKET TREND ANALYSIS

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 Technology Analysis
- 3.7 Application Analysis
- 3.8 Emerging Markets
- 3.9 Impact of Covid-19

4 PORTERS FIVE FORCE ANALYSIS

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

5 GLOBAL FOOD WASTE REDUCTION TECHNOLOGY MARKET, BY TECHNOLOGY TYPE

- 5.1 Introduction
- 5.2 Food Tracking Platforms
- 5.3 Waste Management Software
- 5.4 AI Food Optimization Tools
- 5.5 Smart Refrigeration Systems
- 5.6 Waste Collection & Recycling Systems
- 5.7 Food Waste Valorization Technologies

6 GLOBAL FOOD WASTE REDUCTION TECHNOLOGY MARKET, BY APPLICATION

- 6.1 Introduction
- 6.2 Restaurants & Food Service
- 6.3 Food Retail
- 6.4 Food Processing & Manufacturing
- 6.5 Hospitality Sector
- 6.6 Households
- 6.7 Institutions & Public Sector

7 GLOBAL FOOD WASTE REDUCTION TECHNOLOGY MARKET, BY GEOGRAPHY

- 7.1 Introduction
- 7.2 North America
 - 7.2.1 US
 - 7.2.2 Canada
 - 7.2.3 Mexico
- 7.3 Europe
 - 7.3.1 Germany
 - 7.3.2 UK
 - 7.3.3 Italy
 - 7.3.4 France
 - 7.3.5 Spain
 - 7.3.6 Rest of Europe
- 7.4 Asia Pacific
 - 7.4.1 Japan
 - 7.4.2 China

- 7.4.3 India
- 7.4.4 Australia
- 7.4.5 New Zealand
- 7.4.6 South Korea
- 7.4.7 Rest of Asia Pacific
- 7.5 South America
 - 7.5.1 Argentina
 - 7.5.2 Brazil
 - 7.5.3 Chile
 - 7.5.4 Rest of South America
- 7.6 Middle East & Africa
 - 7.6.1 Saudi Arabia
 - 7.6.2 UAE
 - 7.6.3 Qatar
 - 7.6.4 South Africa
 - 7.6.5 Rest of Middle East & Africa

8 KEY DEVELOPMENTS

- 8.1 Agreements, Partnerships, Collaborations and Joint Ventures
- 8.2 Acquisitions & Mergers
- 8.3 New Product Launch
- 8.4 Expansions
- 8.5 Other Key Strategies

9 COMPANY PROFILING

- 9.1 Orbisk
- 9.2 OneThird
- 9.3 KITRO
- 9.4 Winnow
- 9.5 Chanzi
- 9.6 EatCloud
- 9.7 WasteX
- 9.8 Leanpath
- 9.9 Apeel
- 9.10 Full Harvest
- 9.11 GreenPod Labs
- 9.12 TripleW

9.13 Replate

9.14 Veolia Environment

9.15 Waste Management, Inc.

List Of Tables

LIST OF TABLES

Table 1 Global Food Waste Reduction Technology Market Outlook, By Region (2024-2032) (\$MN)

Table 2 Global Food Waste Reduction Technology Market Outlook, By Technology Type (2024-2032) (\$MN)

Table 3 Global Food Waste Reduction Technology Market Outlook, By Food Tracking Platforms (2024-2032) (\$MN)

Table 4 Global Food Waste Reduction Technology Market Outlook, By Waste Management Software (2024-2032) (\$MN)

Table 5 Global Food Waste Reduction Technology Market Outlook, By AI Food Optimization Tools (2024-2032) (\$MN)

Table 6 Global Food Waste Reduction Technology Market Outlook, By Smart Refrigeration Systems (2024-2032) (\$MN)

Table 7 Global Food Waste Reduction Technology Market Outlook, By Waste Collection & Recycling Systems (2024-2032) (\$MN)

Table 8 Global Food Waste Reduction Technology Market Outlook, By Food Waste Valorization Technologies (2024-2032) (\$MN)

Table 9 Global Food Waste Reduction Technology Market Outlook, By Application (2024-2032) (\$MN)

Table 10 Global Food Waste Reduction Technology Market Outlook, By Restaurants & Food Service (2024-2032) (\$MN)

Table 11 Global Food Waste Reduction Technology Market Outlook, By Food Retail (2024-2032) (\$MN)

Table 12 Global Food Waste Reduction Technology Market Outlook, By Food Processing & Manufacturing (2024-2032) (\$MN)

Table 13 Global Food Waste Reduction Technology Market Outlook, By Hospitality Sector (2024-2032) (\$MN)

Table 14 Global Food Waste Reduction Technology Market Outlook, By Households (2024-2032) (\$MN)

Table 15 Global Food Waste Reduction Technology Market Outlook, By Institutions & Public Sector (2024-2032) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

I would like to order

Product name: Food Waste Reduction Technology Market Forecasts to 2032 – Global Analysis By Technology Type (Food Tracking Platforms, Waste Management Software, AI Food Optimization Tools, Smart Refrigeration Systems, Waste Collection & Recycling Systems and Food Waste Valorization Technologies), Application and By Geography

Product link: <https://marketpublishers.com/r/F72E29D7650EEN.html>

Price: US\$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/F72E29D7650EEN.html>