

Internet of Waste & AI-powered Waste Tracking Market Forecasts to 2032 – Global Analysis By Component (Software, Hardware and Services), Waste Type, Deployment, Technology, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Internet of Waste & AI-powered Waste Tracking Market is accounted for \$4.41 billion in 2025 and is expected to reach \$18.5 billion by 2032 growing at a CAGR of 22.7% during the forecast period. The Internet of Waste refers to the integration of digital technologies and smart sensors into waste management systems, enabling real-time monitoring, data collection, and optimization of waste disposal and recycling processes. It transforms traditional waste handling into a connected, intelligent network. AI-powered Waste Tracking uses artificial intelligence to analyze waste generation patterns, predict disposal needs, and automate sorting and routing. By leveraging machine learning and computer vision, it enhances efficiency, reduces environmental impact, and supports circular economy goals. Together, these innovations promote smarter, cleaner cities by turning waste into actionable data and driving sustainable resource management.

Market Dynamics:

Driver:

Rising Global Waste Generation

Rising global waste generation is fueling innovation in the Internet of Waste and AI-powered waste tracking markets. As urbanization and consumption surge, the need for smarter, scalable waste management solutions intensifies. This drives adoption of IoT

sensors, AI analytics, and real-time tracking to optimize collection, reduce landfill overflow, and enhance recycling efficiency. Governments and industries are investing in intelligent infrastructure to meet sustainability goals, creating a robust demand for data-driven waste technologies and accelerating market growth worldwide.

Restraint:

High Initial Investment

High initial investment poses a significant barrier to the Internet of Waste and AI-powered waste tracking market, hindering widespread adoption. The development and deployment of advanced IoT sensors, AI-driven analytics platforms, and supporting infrastructure require substantial upfront capital, deterring smaller enterprises and municipalities with limited budgets. This financial burden slows market penetration, restricts scalability, and delays return on investment, ultimately constraining innovation, stakeholder confidence, and long-term sustainability in waste management transformation.

Opportunity:

Technological Advancements

Technological advancements are revolutionizing the market by enabling real-time monitoring, predictive analytics, and smart sorting systems. These innovations enhance operational efficiency, reduce environmental impact, and support circular economy models. AI-driven insights optimize waste collection routes and recycling processes, while IoT sensors ensure transparency and traceability across the waste lifecycle. Together, they empower governments and industries to make data-informed decisions, fostering sustainability and driving growth in the global waste management ecosystem.

Threat:

Data Privacy & Security Concerns

Data privacy & security concerns can seriously hamper the growth of the Internet of Waste & AI-powered waste tracking market. Users may resist adoption if their location, behavioral or waste disposal data is collected without clear consent. Regulatory risks increase, especially under GDPR-like laws, raising compliance costs. Security breaches or misuse of personal or community-level data erode trust, provoke backlash, reduce

data sharing, and stall innovation. Thus, it hinders growth of the market.

Covid-19 Impact:

The Covid-19 pandemic accelerated digital transformation across waste management, boosting demand for Internet of Waste and AI-powered tracking systems. Lockdowns and health concerns drove automation and remote monitoring, while rising medical and household waste highlighted inefficiencies in traditional systems. Governments and industries adopted smart waste solutions to enhance sustainability, compliance, and operational resilience. This shift catalyzed innovation, investment, and broader acceptance of AI-driven waste analytics and IoT-based tracking technologies.

The industrial waste segment is expected to be the largest during the forecast period

The industrial waste segment is expected to account for the largest market share during the forecast period due to the massive volume of waste generated by manufacturing, construction, and chemical industries. These sectors require advanced tracking and disposal solutions to meet regulatory compliance and sustainability goals. The adoption of smart sensors and AI analytics in industrial settings enables efficient waste segregation, real-time monitoring, and optimized recycling, driving significant market demand.

The software segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the software segment is predicted to witness the highest growth rate due to increasing demand for intelligent platforms that can analyze waste data, automate sorting, and optimize logistics. AI-powered software solutions offer predictive analytics, real-time alerts, and integration with IoT devices, enhancing operational efficiency. As industries and municipalities seek scalable, data-driven waste management systems, software becomes the backbone of innovation, enabling smarter decision-making and supporting the transition to circular economy models.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to rapid urbanization, industrial expansion, and rising environmental awareness across countries like China, India, and Japan are driving adoption. Government initiatives promoting smart cities and sustainable waste management, coupled with increasing investments in digital infrastructure, contribute to regional

growth. The region's vast population and escalating waste generation further necessitate advanced tracking and disposal technologies, making Asia Pacific a key market leader.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR owing to region's strong technological ecosystem, early adoption of AI and IoT, and stringent environmental regulations are key growth drivers. Municipalities and private enterprises are increasingly investing in smart waste solutions to improve efficiency and reduce landfill dependency. Additionally, growing public awareness and corporate sustainability commitments are accelerating the deployment of AI-powered waste tracking systems across the United States and Canada.

Key players in the market

Some of the key players in Internet of Waste & AI-powered Waste Tracking Market include Big Belly Solar, Compology, Ecube Labs, SmartBin, Enevo (REEN AS), Bine sp. z o. o., Evreka, Pepperl+Fuchs, Sensoneo, RTS Holding, Rubicon Technologies, GreenQ, Suez SA, IBM and Veolia Environnement.

Key Developments:

In July 2025, Veolia and AFD have inked a three-year strategic partnership to bring Veolia's technical strength together with AFD's local presence, targeting water, waste, energy sectors in developing regions (Latin America, Africa, Balkans, Middle East) to drive ecological transformation.

In January 2025, Telefónica Tech and IBM have forged a collaboration to integrate IBM's quantum-safe cryptographic technology into Telefónica's cybersecurity services, aiming to protect data from future threats posed by quantum computing and to drive the transition to post-quantum security.

Components Covered:

Hardware

Software

Services

Waste Types Covered:

Municipal Solid Waste

Industrial Waste

Hazardous Waste

E-Waste

Biomedical Waste

Deployments Covered:

On-Premises

Cloud-based

Technologies Covered:

Internet of Things (IoT) Solutions

Artificial Intelligence (AI) Solutions

Robotics & Automation in Waste Management

End Users Covered:

Municipal Corporations & Local Governments

Industrial & Manufacturing Units

Healthcare & Pharmaceuticals

E-Waste Management Companies

Commercial & Retail Establishments

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 alliance

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 End User 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 INTERNET OF WASTE & AI-POWERED WASTE TRACKING MARKET, BY COMPONENT

- 5.1 Introduction
- 5.2 Hardware
 - 5.2.1 Sensors
 - 5.2.2 Tracking Devices
 - 5.2.3 IoT Gateways
- 5.3 Software
 - 5.3.1 Waste Tracking Platforms
 - 5.3.2 Analytics Software
 - 5.3.3 Cloud & Edge Solutions
- 5.4 Services
 - 5.4.1 Implementation & Integration
 - 5.4.2 Maintenance & Support
 - 5.4.3 Consulting Services

6 GLOBAL INTERNET OF WASTE & AI-POWERED WASTE TRACKING MARKET, BY WASTE TYPE

- 6.1 Introduction
- 6.2 Municipal Solid Waste
- 6.3 Industrial Waste
- 6.4 Hazardous Waste
- 6.5 E-Waste
- 6.6 Biomedical Waste

7 GLOBAL INTERNET OF WASTE & AI-POWERED WASTE TRACKING MARKET, BY DEPLOYMENT

- 7.1 Introduction
- 7.2 On-Premises
- 7.3 Cloud-based

8 GLOBAL INTERNET OF WASTE & AI-POWERED WASTE TRACKING MARKET, BY TECHNOLOGY

- 8.1 Introduction
- 8.2 Internet of Things (IoT) Solutions

- 8.2.1 Smart Sensors
- 8.2.2 RFID Tags
- 8.2.3 GPS Tracking Devices
- 8.3 Artificial Intelligence (AI) Solutions
 - 8.3.1 Machine Learning Algorithms
 - 8.3.2 Computer Vision & Image Recognition
 - 8.3.3 Predictive Analytics
- 8.4 Robotics & Automation in Waste Management
 - 8.4.1 Automated Sorting Robots
 - 8.4.2 Autonomous Collection Vehicles

9 GLOBAL INTERNET OF WASTE & AI-POWERED WASTE TRACKING MARKET, BY END USER

- 9.1 Introduction
- 9.2 Municipal Corporations & Local Governments
- 9.3 Industrial & Manufacturing Units
- 9.4 Healthcare & Pharmaceuticals
- 9.5 E-Waste Management Companies
- 9.6 Commercial & Retail Establishments

10 GLOBAL INTERNET OF WASTE & AI-POWERED WASTE TRACKING MARKET, BY GEOGRAPHY

- 10.1 Introduction
- 10.2 North America
 - 10.2.1 US
 - 10.2.2 Canada
 - 10.2.3 Mexico
- 10.3 Europe
 - 10.3.1 Germany
 - 10.3.2 UK
 - 10.3.3 Italy
 - 10.3.4 France
 - 10.3.5 Spain
 - 10.3.6 Rest of Europe
- 10.4 Asia Pacific
 - 10.4.1 Japan
 - 10.4.2 China

- 10.4.3 India
- 10.4.4 Australia
- 10.4.5 New Zealand
- 10.4.6 South Korea
- 10.4.7 Rest of Asia Pacific
- 10.5 South America
 - 10.5.1 Argentina
 - 10.5.2 Brazil
 - 10.5.3 Chile
 - 10.5.4 Rest of South America
- 10.6 Middle East & Africa
 - 10.6.1 Saudi Arabia
 - 10.6.2 UAE
 - 10.6.3 Qatar
 - 10.6.4 South Africa
 - 10.6.5 Rest of Middle East & Africa

11 KEY DEVELOPMENTS

- 11.1 Agreements, Partnerships, Collaborations and Joint Ventures
- 11.2 Acquisitions & Mergers
- 11.3 New Product Launch
- 11.4 Expansions
- 11.5 Other Key Strategies

12 COMPANY PROFILING

- 12.1 Big Belly Solar
- 12.2 Compology
- 12.3 Ecube Labs
- 12.4 SmartBin
- 12.5 Enevo (REEN AS)
- 12.6 Bine sp. z o. o.
- 12.7 Evreka
- 12.8 Pepperl+Fuchs
- 12.9 Sensoneo
- 12.10 RTS Holding
- 12.11 Rubicon Technologies
- 12.12 GreenQ

12.13 Suez SA

12.14 IBM

12.15 Veolia Environnement

List Of Tables

LIST OF TABLES

Table 1 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Region (2024-2032) (\$MN)

Table 2 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Component (2024-2032) (\$MN)

Table 3 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Hardware (2024-2032) (\$MN)

Table 4 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Sensors (2024-2032) (\$MN)

Table 5 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Tracking Devices (2024-2032) (\$MN)

Table 6 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By IoT Gateways (2024-2032) (\$MN)

Table 7 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Software (2024-2032) (\$MN)

Table 8 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Waste Tracking Platforms (2024-2032) (\$MN)

Table 9 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Analytics Software (2024-2032) (\$MN)

Table 10 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Cloud & Edge Solutions (2024-2032) (\$MN)

Table 11 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Services (2024-2032) (\$MN)

Table 12 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Implementation & Integration (2024-2032) (\$MN)

Table 13 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Maintenance & Support (2024-2032) (\$MN)

Table 14 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Consulting Services (2024-2032) (\$MN)

Table 15 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Waste Type (2024-2032) (\$MN)

Table 16 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Municipal Solid Waste (2024-2032) (\$MN)

Table 17 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Industrial Waste (2024-2032) (\$MN)

Table 18 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By

Hazardous Waste (2024-2032) (\$MN)

Table 19 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By E-Waste (2024-2032) (\$MN)

Table 20 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Biomedical Waste (2024-2032) (\$MN)

Table 21 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Deployment (2024-2032) (\$MN)

Table 22 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By On-Premises (2024-2032) (\$MN)

Table 23 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Cloud-based (2024-2032) (\$MN)

Table 24 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Technology (2024-2032) (\$MN)

Table 25 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Internet of Things (IoT) Solutions (2024-2032) (\$MN)

Table 26 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Smart Sensors (2024-2032) (\$MN)

Table 27 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By RFID Tags (2024-2032) (\$MN)

Table 28 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By GPS Tracking Devices (2024-2032) (\$MN)

Table 29 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Artificial Intelligence (AI) Solutions (2024-2032) (\$MN)

Table 30 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Machine Learning Algorithms (2024-2032) (\$MN)

Table 31 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Computer Vision & Image Recognition (2024-2032) (\$MN)

Table 32 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Predictive Analytics (2024-2032) (\$MN)

Table 33 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Robotics & Automation in Waste Management (2024-2032) (\$MN)

Table 34 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Automated Sorting Robots (2024-2032) (\$MN)

Table 35 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Autonomous Collection Vehicles (2024-2032) (\$MN)

Table 36 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By End User (2024-2032) (\$MN)

Table 37 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Municipal Corporations & Local Governments (2024-2032) (\$MN)

Table 38 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Industrial & Manufacturing Units (2024-2032) (\$MN)

Table 39 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Healthcare & Pharmaceuticals (2024-2032) (\$MN)

Table 40 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By E-Waste Management Companies (2024-2032) (\$MN)

Table 41 Global Internet of Waste & AI-powered Waste Tracking Market Outlook, By Commercial & Retail Establishments (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.

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