

Middle-East and Africa Hazardous Waste Handling Automation - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Middle-East and Africa Hazardous Waste Handling Automation Market is expected to register a CAGR of 6.8% during the forecast period.

Hazardous waste poses an actual or potential hazard to humans' health and other living organisms or the environment, owing to its toxic, flammable, infectious, and radioactive properties.

The management of hazardous waste is one of the emerging issues in the Middle-East and African region as companies from the developed regions have been dumping their toxic waste in Africa for many years, as regulating measures for hazardous waste management in the region are still not on a par with international legislation. However, the governments in the region are now taking initiatives and are banning this practice as a result of their awareness of growing health concerns.

In the Middle East, a large percentage of hazardous waste is produced from petroleum products and from frequent wars, including shellings, casings, and other types of war remain.

Some of these wastes can be handled manually, while some may require expertise and automation solutions to minimize human contact with the waste. The use of such automation solutions for handling waste also improves process efficiency and reduces the reliance on manual intervention. Thus, concerns about the proper handling of these harmful substances can be eliminated.

Different products used in hazardous waste handling automation include cranes, manipulator arms, and size reduction arms.

As the outbreak of COVID-19 impacted the Middle-East and African region, many types of additional medical and hazardous

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wastes were generated, including infected masks, gloves, and other protective equipment. This has further augmented the demand for effective hazardous waste handling practices in the region.

Moreover, initiatives such as Power Africa, taken by the United States Agency for International Development (U.S.A.I.D.) and various partners, aim to have 25 million to 30 million new solar connections across Africa by 2030. Such initiatives are expected to generate a significant amount of waste, including expired lead-acid batteries and power backup systems. This is expected to drive the demand for automated hazardous waste handling solutions for efficient and safe handling.

Middle-East and Africa Hazardous Waste Handling Automation Market Trends

Demand for Automated Handling Solutions May Increase Safer Handling and Disposable of E-waste

Electronic waste (e-waste) is defined as the remains of electronic gadgets such as mobile phones, computers, fluorescent and incandescent light bulbs, electronic gadgets used in automobiles, and large household appliances such as television sets, refrigerators, washing machines, etc., which are not working or are nearing their end of life.

According to a report by the UN, about 50 million ton of e-waste is generated every year, which will more than double to 110 million ton by 2050, making it the fastest-growing waste stream in the world. However, less than 20% of used electronics are currently recycled. Africa holds the lowest rate of formal e-waste recycling in the world.

An article published by Environmental Health Perspectives shows that 100,000 used personal computers arrive at the Nigerian port of Lagos alone each month. Ghana also faces challenges in managing the e-waste imported. Usually, these e-wastes end up in landfills.

Heavy metals and other hazardous chemicals such as lead, cadmium, mercury, brominated flame-retardants, and polyvinyl chloride (PVC), found in electronics, contaminate groundwater and pose other environmental and public conditions health risks.

To avoid such risks and ensure the safety of people, the governments in the region are taking initiatives both standalone and in collaboration with external agencies for the safe disposal of hazardous waste. For instance, Sustainable City (TSC), the Middle East's first fully-operational sustainable community located in Dubai, has introduced new electronic waste (e-waste) collection and management solutions for the community. The 24-Hour e-Waste drop-off station, created in collaboration with EFATE, will provide a free and efficient e-waste management solution to residents and the general public.

Saudi Arabia is Expected to Hold a Significant Market Share

Saudi Arabia is among the largest countries in the Middle-East and African region and generates a significant amount of hazardous waste due to the presence of several industries. The majority of these industries are from the oil and gas and automotive sectors.

According to OPEC, Saudi Arabia possesses around 17% of the world's proven petroleum reserves. The oil and gas sector accounts for about 50% of gross domestic product and about 70% of export earnings. Apart from petroleum, the Kingdom's other natural resources include natural gas, iron ore, gold, and copper.

Owing to the rising disposable income, the consumption of electronic gadgets in the country is increasing significantly, which is also the primary contributor to the generation of e-waste in the country.

According to the regional e-waste monitor report for the Arab States 2021, by UNITAR, Saudi Arabia is the largest generator of e-waste among Arab countries, with 595 kilotons (kt) (or 13.2 kg/inh) of e-waste in 2019.

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To regulate the safe disposal of waste, the government is taking several initiatives. For instance, the government published a new Waste Management Law in September 2021, which aims to regulate the transport, segregation, storage, import, export, safe disposal of waste, and all other activities related to it. Such trends are expected to drive the market growth in the region during the forecast period.

Middle-East and Africa Hazardous Waste Handling Automation Industry Overview

The Middle-East and Africa hazardous waste handling automation market has increased competition due to the rising demand for such solutions for safe hazardous waste disposal. Some of the major players operating in the market include PAR Systems, Konecranes, and Pallmann Maschinenfabrik GmbH & Co. KG, among others.

- January 2022 - Ramky Enviro Engineers Middle East and Waste Management Agency (Public Services Department) of the Emirate of Ras Al Khaimah entered a strategic partnership to set up an exclusive Industrial Hazardous Waste Management facility in RAK, UAE.
- January 2022 - Konecranes partnered with Pesmel to supply automated warehouse container handling technology that revolutionizes material handling in logistics hubs and distribution centers. Automated container tracking is part of a management system that can be integrated easily with the facility's overall logistics management system.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

Table of Contents:

1 INTRODUCTION

- 1.1 Study Assumptions and Market Definition
- 1.2 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET INSIGHTS

- 4.1 Market Overview
- 4.2 Industry Attractiveness - Porter's Five Forces Analysis
 - 4.2.1 Threat of New Entrants
 - 4.2.2 Bargaining Power of Buyers
 - 4.2.3 Bargaining Power of Suppliers
 - 4.2.4 Threat of Substitute Products
 - 4.2.5 Intensity of Competitive Rivalry
- 4.3 Assessment of the Impact of COVID-19 on the Market

5 MARKET DYNAMICS

- 5.1 Market Drivers

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- 5.1.1 Government and Industry Regulations
- 5.1.2 Growing Concerns about Waste Management
- 5.2 Market Restraints
 - 5.2.1 High Costs Involved

6 MARKET SEGMENTATION

- 6.1 Automation Product
 - 6.1.1 Manipulator Arms
 - 6.1.2 Telescoping Masts
 - 6.1.3 Cranes
 - 6.1.4 Trusses
 - 6.1.5 Size Reduction Systems
 - 6.1.6 Other Automation Products
- 6.2 Type of Waste
 - 6.2.1 Listed Wastes
 - 6.2.2 Charecteristic Wastes
 - 6.2.3 Universal Waste
 - 6.2.4 Mixed Waste
- 6.3 Industry
 - 6.3.1 Manufacturing
 - 6.3.2 Chemical
 - 6.3.3 Energy
 - 6.3.4 Consumer Care
 - 6.3.5 Government
 - 6.3.6 Other Industries
- 6.4 Geography
 - 6.4.1 Saudi Arabia
 - 6.4.2 United Arab Emirates
 - 6.4.3 Israel
 - 6.4.4 South Africa
 - 6.4.5 Rest of Middle-East and Africa

7 COMPETITIVE LANDSCAPE

- 7.1 Company Profiles
 - 7.1.1 PAR Systems
 - 7.1.2 Konecranes
 - 7.1.3 DX Engineering
 - 7.1.4 Floatograph Technologies
 - 7.1.5 Pallmann Maschinenfabrik GmbH & Co. KG
 - 7.1.6 Hosokawa Micron Powder Systems
 - 7.1.7 PENZ Crane GmbH
 - 7.1.8 ACE Inc.
 - 7.1.9 Terex MHPS GmbH
 - 7.1.10 Hiab
 - 7.1.11 Ramky Enviro Engineers Ltd

8 INVESTMENT ANALYSIS

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