

Manufacturing Execution Systems Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 120 pages | Mordor Intelligence

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Report description:

The Manufacturing Execution Systems market is expected to grow at a CAGR of 10.1% over the forecast period. With the growing adoption of Industry 4.0 and the Industrial Internet of Things (IIoT) in plants, the agility and interoperability of the Manufacturing Execution System (MES) have become even more strategic for managing additional complexity and future-proof businesses.

Key Highlights

The increasing shift towards production orders, process steps, and instructions and documentation, with information being pulled directly from ERP and other enterprise business systems, is driving the adoption of manufacturing execution systems.

Furthermore, in recent years, driven by labour shortages and enabled by more automated machining systems, MESs have been picked up by multiple end-use manufacturers to compensate them, which has benefitted market growth and is expected to increase over the forecast period.

Increasing development by major players in order to raise awareness and knowledge regarding MES solutions is expected to contribute to market growth. For instance, in July 2022, Insequence announced a novel user certification training program for SPD Pro and its Manufacturing Management System. This new curriculum from Insequence University Software gives power-user level information to Insequence clients to help develop an in-house understanding of Insequence products. This might lead to increased efficiency, competence, and cost savings.

The market growth is being constrained by reasons including SMEs' lack of understanding of the advantages of MES. Additionally, it is predicted that slow development would occur throughout the projection period due to high operating and investment expenses associated with deploying and updating industrial execution technologies for small-scale production.

Multiple end industry activities, including those in the power generation, oil and gas, and automotive sectors, saw significant transformation during the post-pandemic period. The substantial labor and distribution network issues that led to the development of manufacturing operational system solutions have begun to be resolved in the manufacturing sectors. The growth of the process

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and discrete sectors is likely to increase demand for MES technologies. The need for manufacturing execution solutions will expand during the projected period due to several COVID-19 operations and recommendations that have been established for easier operations.

Manufacturing Execution Systems Market Trends

Pharmaceutical and Life Sciences Industry to Hold Significant Share

With the continuously evolving trends in the pharmaceutical industry, manufacturers are experiencing increased pressure to keep pace and modify their operations to meet changing needs. MES enables the pharmaceutical industry to reduce production costs and improve compliance with regulatory requirements significantly.

The benefits of automating have been effectively used by pharmaceutical businesses to sustain or grow output without sacrificing safety or efficiency. Pharmaceutical businesses can now securely increase production and construct manufacturing lines more quickly and flexibly owing to automation and deployment of solutions such as manufacturing execution systems. Pre-existing trends like adaptable automation, digitization, batch manufacturing, and personalization have been amplified by the COVID-19 pandemic.

Increasing development by the companies operating in the sector is expected to contribute to market growth. Honeywell purchased Performix Inc. in September 2021 for an unknown sum. Honeywell is a US-based provider of modular technologies for life science operational productivity, safety, and technological innovations. With this acquisition, Honeywell is pursuing a strategy to build the best-integrated application framework globally for clients in the life sciences business sector, with the possibility to increase manufacturing throughout, improve dependability, and accelerate adherence while preserving the maximum standards of performance. Manufacturing execution system (MES) technology is provided by Performix Inc., a Houston-based business, to the biotechnology and pharmaceutical sectors.

Moreover, the growing concern about counterfeit drugs entering the supply chain has resulted in the adoption of global track and trace regulations to protect patient safety and ensure product integrity. The EU Falsified Medicine Directive (EUFMD), the US Drug Supply Chain Security Act (DSCSA), and other global regulations mean that manufacturers are now trying to ensure compliance, add innovative technologies, and increase the resources to manage the additional administrative burden. The use of barcodes, serialization numbers, and the incorporation of RFID tags inside the packaging equipment are all measures being taken to improve the quality of traceability and tracking.

North America to Hold Major Share

North America is expected to continue to hold a significant share of the MES market over the forecast period, majorly due to the presence of several significant MES vendors, such as Honeywell (United States), Oracle Corporation (United States), Emerson (United States), and Rockwell Automation (United States) among others which drive innovation.

North America's market leadership is also linked to increased industrial development in these regions. In advanced nations, factory execution systems' most prevalent application segments include automotive, oil and gas, and food and beverages. For instance, according to U.S. Energy Information Administration, U.S. crude oil extraction will average 11.7 million barrels per day in 2022 and 12.4 million barrels per day in 2023, exceeding the record high achieved in 2019.

Furthermore, North American nations embrace cloud manufacturing solutions because of the rapid implementation of cloud-based networking and enterprises employing cutting-edge digital technology. The industry for cloud manufacturing implementation systems in North America is anticipated to be fuelled by efforts of government organizations, among which some are shifting online to improve information operations and by increased internet adoption.

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One of the market's potential prospects is the region's ongoing industry-wide expansions and expenditures in digitalization. The expansion of the IoT market in the regional manufacturing sector is aided by SMEs' growth and the increased digitalization of manufacturing operations by big companies like IBM and General Electric. Small and medium-sized businesses (SMEs) are becoming more adaptable in integrating new technologies with their current systems, whereas major manufacturers have considerable funds for digitization. This makes EMS adoption possible.

Manufacturing Execution Systems Market Competitor Analysis

The MES market is significantly fragmented. Leading MES vendors continue to enhance and extend core capabilities and expand the breadth of their application footprints, adding MOM capability and hosting and licensing options. Enterprise vendors leverage their application breadth and platform expertise to make MES part of a digital thread. Some of the key players operating in the market include Siemens AG, Rockwell Automation, SAP SE, ABB Ltd., and Honeywell International Inc.

In October 2022, Pico MES, a manufacturing execution system (MES) technology business focusing on the automation of essential production activities for small to medium-sized enterprises, announced the addition of a novel alert function to its next-generation MES technology. The innovative new tool enables operators to deliver rapid notifications via autonomous emails, text, and/or messaging, as well as Microsoft Teams and Slack. To handle difficulties that arise during a production shift, alarm signals are delivered to the supervisor, manufacturing engineers, and/or quality management.

Also in October 2022, Vayo Technology held the online unveiling of their innovative DFX Execution System. DFX Execution System is an advanced DFX analysis software application developed for major OEM/EMS firms to do DFX analysis in order to assure high-quality PCB/PCBA layout.

Additional Benefits:

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

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