Modern Manufacturing Execution System Market Research Report - Global Forecast till 2027

Market Snapshot
The global modern manufacturing execution system market is expected to expand at 15.41% CAGR during the forecast period 2019–2027.

A manufacturing execution system is an information system that monitors, connects, and controls complex data flows and manufacturing equipment on the factory floor. The primary objective of a manufacturing execution system is to ensure the effective implementation of the manufacturing operations and enhancement of the production output. For instance, AVEVA Group PLC offers manufacturing execution systems for hybrid and batch manufacturing processes. It helps in maximizing quality, profitability, and compliance of manufacturing operations. Manufacturing execution systems are being used in manufacturing processes in several ways with the objective to increase productivity, reduce labor cost, and streamline production processes. The US and Japan were the initial leaders in this area and soon it gained popularity in other countries as well. Europe also showed significant pace in terms of the development and adoption of manufacturing execution system solutions.

Presently, low installation cost, increasing industrial automation, adoption factory automation technologies, and stringency of regulatory compliance are driving the growth for this market. Globally, as more and more manufacturing companies adopt the latest automation technologies to improve their operational processes, it will create market opportunities for manufacturing execution system providers. However, high investments and cost involved in the maintenance and upgrades of manufacturing execution systems can act as restraining factors for the market in the forecast period.

The global modern manufacturing execution system market was valued at USD 12,125.4 million in 2017 and is estimated to reach USD 46,376.8 million in 2027 with a compound annual growth rate (CAGR) of 15.41%.

Global Modern Manufacturing Execution System Market, By Component, 2017 VS 2027 (USD Million)

Source:- MRFR analysis
The electronics segment accounted for the largest market share of 25.9% in 2017, with a market value of USD 3,138.8 million; it is expected to register a CAGR of 17.0% during the forecast period. The automotive segment was the second-largest market in 2017, valued at USD 2,551.9 million; it is projected to exhibit a CAGR of 12.4%. However, the medical segment is expected to register the highest CAGR of 17.7%.

The main aim of MES is to combine document, equipment, and material management into electronic work procedures to create optimized manufacturing environment. MES provides real-time visibility into the production process, overall equipment effectiveness (OEE), and saves indirect labor cost through an automated collection of data from various sources. MES also enables just-in-time and made to order operations with smooth material flow throughout supply chain to the end user. Cantier Systems, Inc. provides MES to semiconductor and electronics industries for real-time traceability, reducing cycle time and scrap, improving supply chain, and reducing risk exposure to quality incidents. This company also provides integrated smart manufacturing solutions to various end-
Global Modern Manufacturing Execution System Market, By Region, 2017 (%)

Source: MRFR analysis

The global modern manufacturing execution system market by region has been segmented into North America, Europe, Asia-Pacific, and the rest of the world. North America accounted for the largest market share of 32.45% in 2017, with a market value of USD 3,934.4 million; followed by Europe, Asia-Pacific, and the rest of the world. The major modern manufacturing execution system providers such as Emerson Electric Co., General Electric Company, Honeywell International Inc., and Rockwell Automation, Inc. among others hold the largest market share are expected to contribute to the dominance of this region during the forecast period. The US has witnessed a steady growth in the modern manufacturing execution system market over the last decade owing to the high demand for these systems from water and wastewater treatment, food, and beverage, power industries. Also, the rising need for tracking real-time data, improving data visibility, and regulating production activity off-site largely impact the growth of the North America modern manufacturing execution system market. The market in Asia-Pacific is expected to register the highest CAGR of 18.7% during the forecast period 2019–2027.

Companies Covered

The key players in the global modern manufacturing execution system market are Siemens AG (Germany), ABB Ltd (Switzerland), Emerson Electric Co. (US), General Electric Company (US), Applied Materials, Inc. (US), SAP SE (Germany), Werum IT Solutions GmbH (Germany), Rockwell Automation, Inc. (US), Dassault Systèmes (France), Honeywell International Inc. (US), and Tebis Technische Informationsysteme AG (Germany).

Key Developments

- In February 2019, Werum IT Solutions partnered with Toyo Business Engineering Corporation (B-EN-G) to expand Werum’s PAS-X MES services for the pharma and biotech industries in Japan.
- In May 2018, Emerson released a software application which reduces the time taken to release therapies and medication to patients by minimizing the time required for reviewing product quality. The new application is delivered as a part of Emerson’s Syncade manufacturing execution system (MES) thus, allowing quality and manufacturing personnel to safely release batches and reduce the transit time from the inventory to the market.
- In April 2018, SAP SE launched SAP Digital Manufacturing Cloud, a cloud-based solution for the Industrial Internet of Things (IIoT), predictive analytics and supply networks. This has enabled the manufacturers to deploy Industry 4.0 technologies in the cloud.
- In December 2017, Tebis acquired business operations for the ProLeiS Manufacturing Execution System (MES) from ID GmbH. The division operates as an independent subsidiary with the name of Tebis ProLeiS GmbH.
- In August 2017, GE Digital launched the latest version of production management software which is a part of its manufacturing execution system (MES). The software addresses issues regarding the inconsistency of its existing plant floor IT systems. This upgrade has resulted in increased production output per person, along with a reduction in overall MES costs, paper-based reporting, administration costs.
Market Segmentation
- By Component: Software (Enterprise Resource Planning (ERP), Warehouse Management, and Product Lifecycle Management (PLM)) and Service (Consulting & Development, Training & Support, and Integration Service)
- By Deployment: Cloud, On-Premise, and Hybrid
- By Discrete Industry: Electronics, Automotive, Medical, FMCG, Aerospace & Defense, and Others
- By Region: North America, Europe, Asia-Pacific, and Rest of the World

Key questions addressed by the report
- What was the historic market size (2017)?
- Which segmentation (Component, Deployment, Discrete Industry) is driving market?
- What will be the growth rate by 2027?
- Who are the key players in this market?
- What are the strategies adopted by key players?
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