

Manufacturing Execution Systems and Software (MES) Market Size Analysis Industry Dynamics with Research Forecastby 2030

UNITED STATES, December 5, 2023
/EINPresswire.com/ -- Market
Overview:

Manufacturing execution systems (MES) help manage and monitor production processes in a manufacturing facility. They interface with ERP systems at the top end and factory floor equipment at the bottom end to automate workflows and optimize production operations and quality.

Market Dynamics:

MES and software play a key role in production management, labor management, process and production optimization, and quality control. The market is driven by the growing emphasis on operational efficiency and optimization of production processes across various industries. MES solutions enable real-time monitoring of production KPIs, automate quality compliance, and maximize asset utilization by 30-40% for manufacturers. They help reduce production cycle time by over 15% and lower operational costs significantly. The easy availability of cloud-based MES further fuel the adoption of these systems by small and medium enterprises globally.

Request a Sample Copy of the Report @

<https://www.coherentmarketinsights.com/insight/request-sample/3103/>

Increased Adoption of Industry 4.0 in the Manufacturing Sector

The adoption of advanced technologies like IoT, cloud computing, analytics, AI etc. under Industry 4.0 initiatives by manufacturing companies worldwide is expected to be a major driver for the growth of the MES market. Industry 4.0 aims to make manufacturing processes smart by connecting physical assets through sensors and controllers embedded in machines. This connected infrastructure allows for real-time data collection from the shop floor which can be



Manufacturing Execution Systems and Software (MES) Market12

analyzed for improving production efficiency, quality, predictive maintenance etc. MES solutions play a crucial role in realizing Industry 4.0 goals by enabling data collection from shop floor assets, integrating it with ERP systems and providing tools for analytics. More manufacturers are recognizing the benefits of Industry 4.0 and investing in digital transformation initiatives which is increasing the demand for MES.

Need for Improving Production Efficiency and Analytics Capabilities

Rising cost pressures and the need to quickly respond to changing market demands is pushing manufacturers to look for ways to optimize production processes and reduce waste. MES solutions address this need by providing production monitoring and tracking capabilities, performance analytics, quality management tools, predictive maintenance alerts etc. This allows manufacturers to identify bottlenecks, optimize asset utilization, reduce downtime and spoilage. The data and analytics capabilities of modern MES also help in supporting lean manufacturing principles. With manufacturing processes becoming increasingly complex, the ability of MES to deliver real-time production intelligence through interfacing with shop floor assets is a major attraction. This is driving more companies to adopt MES for improving operational efficiency and decision making.

Top Key Players:

ABB Ltd., Atos SE, Dassault Systems SA, Emerson Electric Co, General Electric Corporation, HCL Technologies Limited, Honeywell International Inc, SAP SE, Oracle Corporation, and Accenture

Click Here to Request Customization of this Research Report:

<https://www.coherentmarketinsights.com/insight/request-customization/3103>

Lack of Integration with Existing Legacy Systems

One of the major challenges restraining faster adoption of MES is the difficulty in integrating new software with old legacy systems still used by many manufacturers. MES solutions need to interface with various plant floor machines and assets as well as retrieve and share data with upstream ERP and downstream warehouse management, SCM etc. systems. However, legacy systems deployed over many years often use different and outdated communication protocols and data standards compared to modern MES. Integrating such heterogeneous systems requires significant customization which increases costs and complexity of implementation. The presence of multiple legacy Islands of automation also limits the true potential of MES in terms of centralized monitoring and optimization across the entire production process. Overcoming integration challenges requires time and investment which is a hurdle especially for small and medium manufacturers.

Opportunity for Remote Operations and Services

The Covid-19 pandemic accelerated the urgency for manufacturers to implement technologies that support remote working and operations. The social distancing norms during the pandemic highlighted the importance of having flexible work models and digitized processes. This presents a major opportunity area for MES vendors to develop solutions focused on enabling remote monitoring of production from any location. Features like remote asset diagnostics, remote assist using AR/VR, cloud-based analytics dashboards accessible on any device etc. allow manufacturers to shift to distributed operating models. Vendors can also offer managed services based on software-as-a-service (SaaS) models which reduce upfront costs for manufacturers and simplify remote implementation and support. With work from home and flexible work gaining prominence even post pandemic, demand for remote-ready MES solutions is expected to grow significantly.

Emergence of Concepts Like Digital Twins and Analytics

One of the major technology trends impacting the MES industry is the emergence of concepts like digital twins and augmented analytics. Digital twins involve creating virtual replication of physical assets and processes which are continuously updated with real-time operational data from plant floors. This data is then analyzed using AI/ML techniques to gain deep insights not possible earlier. Connected to MES systems, digital twins can optimize processes even before issues arise through predictive maintenance, quality control etc. Advanced analytics is also being integrated into MES to deliver more value from production data through sophisticated techniques like predictive, prescriptive and cognitive analytics. Such tech-driven innovations are helping address manufacturing challenges better by taking advantage of the huge volumes of structured and unstructured data generated on the shop floors daily. They are enhancing the capabilities of MES and improving returns on investment, thereby increasing popularity of these modern solutions.

Buy now @ <https://www.coherentmarketinsights.com/insight/buy-now/3103>

Key Questions Addressed in the Market Report:

What is the expected size, share, and CAGR of the [Manufacturing Execution Systems and Software \(MES\) Market](#) over the forecast period?

What are the key trends expected to influence the Manufacturing Execution Systems and Software (MES) Market between 2023 and 2030?

What is the expected demand for various types of products/services in the Manufacturing Execution Systems and Software (MES) Market?

What long-term impact will strategic advancements have on the Manufacturing Execution Systems and Software (MES) Market?

Who are the key players and stakeholders in the Manufacturing Execution Systems and Software (MES) Market?

What are the different segments and sub-segments considered in the Manufacturing Execution Systems and Software (MES) Market research study?

About Coherent Market Insights

Coherent Market Insights is a global market intelligence and consulting organization that provides syndicated research reports, customized research reports, and consulting services. We are known for our actionable insights and authentic reports in various domains including aerospace and defense, agriculture, food and beverages, automotive, chemicals and materials, and virtually all domains and an exhaustive list of sub-domains under the sun. We create value for clients through our highly reliable and accurate reports. We are also committed in playing a leading role in offering insights in various sectors post-COVID-19 and continue to deliver measurable, sustainable results for our clients.

Mr. Shah

Coherent Market Insights Pvt. Ltd.

+ +1 206-701-6702

sales@coherentmarketinsights.com

Visit us on social media:

[Facebook](#)

[Twitter](#)

[LinkedIn](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/673036888>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2023 Newsmatics Inc. All Right Reserved.