

# **Operational Technology Market with COVID-19 Impact, by Components (Field Devices, Control Systems, & Services), Networking Technology, Industry (Process and Discrete), and Geography (North America, Europe, Asia Pacific, RoW) - Global Forecast to 2027**

<https://marketpublishers.com/r/OD136D37F78EN.html>

Date: March 2022

Pages: 296

Price: US\$ 4,950.00 (Single User License)

ID: OD136D37F78EN

## **Abstracts**

The global operational technology market was valued at USD 149.6 billion in 2021 and is projected to reach USD 216.3 billion by 2027; it is expected to grow at a CAGR of 6.5% from 2022 to 2027. The major drivers of the market include the surging adoption of Industry 4.0, rising emphasis on industrial automation in manufacturing processes, increasing government involvement in supporting industrial automation, growing emphasis on regulatory compliances, increasing complexities in the supply chain, and surging demand for software systems that reduce time and cost. The operational technology market has been segmented by component, networking technology, industry, and geography.

“Market for industrial sensors expected to grow at the highest CAGR during the forecast period”

The industrial sensors segment of the operational technology market for field instruments is expected to grow at the highest CAGR of 9.0% from 2022 to 2027, reaching USD 34,751 million by 2027 from USD 66,386 million in 2021. The growth of the industrial sensors segment is driven by the growing adoption of Industry 4.0 and the expansion of the wireless sensors market. Predictive maintenance is expected to offer lucrative opportunities to the players operating in the industrial sensors market in the coming years. Predictive maintenance is enabled by 3 major solution enhancements over traditional maintenance: capturing sensor data, facilitating data communications, and making predictions. As the sensor is an important part of predictive maintenance

solutions, the demand for industrial sensors is expected to increase significantly in the coming years.

#### “DCS SEGMENT TO HOLD LARGEST SHARE THROUGHOUT FORECAST PERIOD”

The market for DCS is expected to hold the largest share throughout the forecast period among operational technology control systems, reaching USD 24,507 million by 2027 from USD 17,454 million in 2021. However, the market for WMS is expected to grow at the highest CAGR of 16.7% from 2022 to 2027, reaching USD 4,502 million by 2027 from USD 1,815 million in 2021. A significant shift in consumer purchasing behavior has resulted in the increased implementation of real-time WMS software solutions for efficient order processing, picking, packaging, shipment tracking, and route planning. WMS helps companies quickly adapt to the changing customer requirements in the e-commerce and online shopping space. Furthermore, the implementation of WMS helps manage warehouses at an optimum level, with increased productivity and efficiency of warehouse operations and reduced product delivery time.

#### “Market for energy & power industry to grow at highest CAGR between 2022 and 2027”

The process industry segment includes oil & gas, chemicals, energy & power, food & beverages, pharmaceuticals, mining & metals, and others. Among these, the energy & power industry is expected to grow at the highest CAGR of 7.1% during the forecast period. The demand for energy is growing continuously; however, the problems of environmental impact and scarcity associated with conventional sources might lead to a probable energy crisis, which makes optimizing the production processes necessary for the industry. Manufacturers face growing cost pressures and increasing demand for diverse product portfolios, coupled with regulatory and safety guidelines. Technologies such as MES, PAM, and HMI help manufacturers standardize their workflow and minimize lead times by eliminating the time required for the approval of various associations and the FDA. MES also maintains data and processes that need to be followed for regulatory compliance during production. Using MES helps in eliminating the need for maintaining records on paper. PAM and machine condition monitoring enable the proper functioning of systems used in the manufacturing process by providing continuous maintenance activities in these industries.

#### “Operational technology market in APAC to grow at the highest CAGR”

The major factors driving the growth of the operational technology market in APAC are

the rising demand for smart tools due to increasing automation in industries; growing adoption of technologies such as Industry 4.0, smart factory, IoT, and IIoT; and increasing need to optimize productivity and reduce operational and maintenance costs. Government support in various APAC countries to drive industrialization is one of the important factors that will boost the demand for operational technology in the coming years. Various initiatives have been taken by the governments in the region. For instance, China's "Made in China 2025," Japan's "Industrial Value Chain Initiative (IVI)," South Korea's "The Manufacturing Innovation Strategy 3.0 (Strategy 3.0)," and India's "Samarth Udyog Bharat 4.0," are likely to play major roles in industrial advancement and consequently create growth opportunities for the operational technology market.

Breakdown of the profiles of primary participants:

Extensive primary interviews were conducted to determine and verify the market size for several segments and sub segments and information gathered through secondary research.

The break-up of primary interviews is given below:

By Company Type: Tier 1 - 52%, Tier 2 - 31%, and Tier 3 - 17%

By Designation: C-level Executives - 47%, Directors - 31%, and others - 22%

By Region: North America - 36%, Europe - 29%, APAC - 30%, and RoW - 5%

Major players profiled in this report are as follows: Major companies offering operational technology technologies include ABB (Switzerland), Siemens (Germany), Schneider Electric (France), Rockwell Automation (US), Honeywell International Inc. (US), Emerson Electric Co. (US), IBM (US), and General Electric (US).

## Research Coverage

In this report, the operational technology market has been segmented based on components, networking technology, industry, and region. The operational technology market based on components has been segmented into field devices (industrial valves, actuators, transmitters, and industrial sensors), control systems (supervisory control and data acquisition (SCADA), distributed control system (DCS), plant asset management

(PAM), human-machine interface (HMI), warehouse management system (WMS), manufacturing execution system (MES), functional safety systems), and services (predictive maintenance services and others (original equipment manufacturer (OEM) services and remote diagnostics and maintenance services). Based on the networking technology, the market has been segmented into wired and wireless networking technology. Based on the industry, the market has been segregated into process industry: oil & gas, food & beverages, pharmaceuticals, chemicals, energy & power, metals & mining, pulp & paper, and others (cement, aluminum, steel, glass, paper and printing, textile and clothing, alternative energy, rubber, die-cast and foundry, and consumer electronics) and discrete industry: automotive, aerospace & defense, semiconductor & electronics, medical devices, machine manufacturing, and others (packaging, solar panel manufacturing, and consumer packaged goods). The study also forecasts the size of the market in four main regions—North America, Europe, APAC, and RoW.

#### Key Benefits of Buying the Report:

The report would help market leaders/new entrants in this market in the following ways:

This report segments of the operational technology market comprehensively and provides the closest approximation of the overall market size and subsegments that include components, networking technology, industry, and region.

The report would help stakeholders understand the pulse of the market and provide them with information on key drivers, restraints, challenges, and opportunities pertaining to the operational technology market.

This report would help stakeholders understand their competitors better and gain more insights to enhance their position in the business.

The competitive landscape section includes the competitor ecosystem, as well as growth strategies such as product launches, acquisitions, and expansions carried out by major market players.

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#### 7.2.2 MODBUS

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#### 7.2.3 PROFINET

7.2.3.1 PROFINET supplements existing PROFIBUS technologies by providing faster data communication

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\*Details on Business Overview, Products Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats) might not be captured in case of unlisted companies.

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