

Global Terminal Automation Market Outlook to 2027

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Abstracts

Terminal automation is a supervisory software system that can automate manual processes in a terminal. It bridges the gap between Enterprise Resource Planning (ERP) and Supervisory Control and Data Acquisition (SCADA). According to BlueQuark, the market for global terminal automation market is expected to grow by over 5% CAGR during the market forecast period (2021-2025).

The market for global terminal automation is being driven by the cost benefits offered by terminal automation and the increasing regulatory requirements and environmental obligations in the terminal industry. In 2019, it was found that across the globe only 66 container terminals were automated or semi-automated. The presence of automated operations in the terminals is very low. This number is likely to reach 90+ by mid-2021. Terminal operators are moving towards automation as it offers them benefits including lower energy consumption and emissions, a safer working environment, and reduced insurance costs. The labor costs and overall profits can also be optimized with the implementation of terminal automation. In addition to the benefits offered by terminal automation, the market is also being driven by the existing challenges from manual-based terminals. About 90% of the world's throughput is controlled by the top 21 global terminal operators. Some of the major operators include COSCO, PSA International, APM Terminals, Hutchison Ports DP World, Terminal Investment Limited, China Merchants Ports CMA CGM, SSA Marine, and ICTSI among others. The increasing focus on safety coupled with shortage and cost of trained labor is pushing the terminals towards automation. This trend is likely to continue during the forecast period. The focus for optimal space utilization is also driving terminal automation sales. The outbreak of the COVID 19 pandemic has made terminal operators realize the importance of automation and digitalization to increase resilience to any similar future shocks. There is a significant need for the automation of terminals in developing economies. For instance, in India, there are over 20 container terminals but none of these is fully automated. There exists a high potential for the implementation of automation in the

existing terminals. Automation helps in avoiding congestions and decreases storage charges and reduces demurrage & detention at the terminals. Terminal operators are keen on automated systems that improve the productivity and efficiency of the terminal by handling larger vessels with greater holding capacities. Accordingly, the widespread adoption of terminals for blending, storing, and handling biofuels is boosting the market growth. Even though the initial investment to automate terminals is highly expensive, it is suggested that the investment is worth the cost reductions to come in the future. The other benefits such as minimal error, enhanced profits, and a small workforce offered by the automation process are likely to continue to drive the market for terminal automation in the coming years. According to Chen Wuyuan, the president of Shanghai International Port Group, 'The automated terminals not only increases the port's handling efficiency but also reduce carbon emissions by up to 10 percent'. However, the high initial setup costs, the threat of cyber attacks, and opposition by local labor unions in developing economies are likely to restrain the market growth during the forecast period.

There has been a reluctance among the terminal operators towards automation and the allocated CAPEX has been very low. However, with the outbreak of the COVID-19 pandemic, there has been a realization regarding the importance and benefits of semi or full automation. The manufacturers and terminal operators increased their emphasis on the importance of automation and remote operating conditions. Post COVID-19 pandemic, there is a high possibility of the implementation of shortened supply chains to reduce the concentration of dependency. This trend of shortening of supply chains is likely to add in more terminals on small scale to meet the requirements. The terminal operators are also planning to prepare for the automation to tackle any such similar events in the future. Business systems integration, inventory management, supervisory management (HMI/ SCADA), transaction management, and reporting are the most common functionalities, besides terminal management itself, that are integrated within a terminal automation system (TAS), a software, basically.

The global market for terminal automation is led by key players including ABB Ltd., Honeywell International Inc., Siemens AG, Rockwell Automation Inc., and Schneider Electric among others.

In terms of geography, Asia Pacific (APAC) is anticipated to witness the fastest growth rate in the forecasted period, supported by the planned investments in countries including India and China. For instance, in India, the government plans to build 11 terminals over the next seven years. Some of these include Indian Oil Corp's Ennore terminal in Tamil Nadu, JV between Gujarat State Petroleum Corp (GSPC) and Adani

Group at Mundra, Western India, and Jaigarh terminal by H-Energy among others. Currently, China has a presence of 7 world's top 10 ports by container, cargo throughput, and the country's port construction has developed significantly in recent years. China has 2,530 berths in coastal ports capable of docking ships with a displacement of at least 10,000 metric tons, and the port investment during the period 2016-2020 is around USD 56 billion. China owns the technology of constructing intelligent ports as a batch of unmanned ports have come into reality, such as the fourth phase of Shanghai Yangshan Deep Water Port and the Xiamen Ocean Gate Container Terminal. Southeast Asia is also expected to witness a growth in the establishment of oil storage terminals.

In September 2021, Schneider Electric and the Enel Group announced the Net Zero Carbon Cities Toolbox beta version at Sustainable Development Impact Summit. This toolbox comprises a range of decarbonization solutions for urban transformation in buildings, mobility, data centers, and water management.

In August 2021, Hewlett Packard (HPE) collaborated with Patrick Terminals, Australia's largest container terminal operator. With the assist of this collaboration HPE's GreenLake, the edge-to-cloud platform, direct power the IT infrastructure of Patrick Terminal. The partnership will help Patrice Terminals direct information inputs from importers, shipping lines, industry regulators, and exporters without delays and latency.

OurGlobal Terminal Automation Market reportprovides deep insight into the terminal automation market's current and future state across various regions. The study comprehensively analyzes the terminal automation market by segments based on Project Type (Brownfield, Greenfield), Vertical (Chemical, Oil & Gas, and Others), Offering (Software & Services, Hardware), and Geography (Asia-Pacific, North America, Europe, South America, and Middle-East and Africa). The report examines the market trend, market analysis, market dynamics, market opportunity along with the impact of Covid-19 on the market growth in detail. The research report covers & includes emerging market trends, developments, opportunities, and challenges in the industry. This report also covers extensively researched competitive landscape sections with profiles of major companies, including their market share and projects.

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North America

United States

Canada

Mexico

Europe

Germany

United Kingdom

Italy

France

Russia

West of Europe

Asia-Pacific

China

India

Japan

South Korea

West of Asia-Pacific

North America

Brazil

Argentina

West of South America

Middle East & Africa

South Africa

Saudi Arabia

est of Middle East & Africa

Company Profiles

Electric Co.
Technologies Corporation
International Inc.
up.
k Nv
ubro Limited
utomation, Inc
Electric
AG
c PLC
Electric Corporation
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