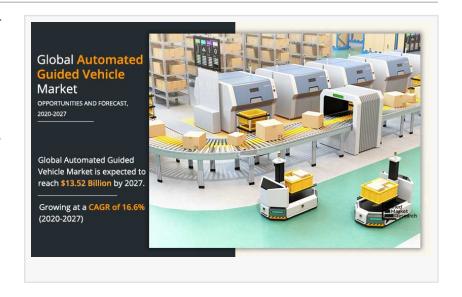


Automated Guided Vehicle Market Growing at CAGR of 16.6% to Reach US\$ 13.52 billion by 2027

global automated guided vehicle market size is projected to reach US\$ 13.52 billion by 2027, registering a CAGR of 16.6% during the forecast period.

PORTLAND, OREGON, UNITED STATES, November 23, 2023 / EINPresswire.com/ -- According to a recent report published by Allied Market Research, titled, "Automated Guided Vehicle Market by Type, Navigation Technology, Application, Industry, and Mode of operation:



Global Opportunity Analysis and Industry Forecast, 2020-2027," the global automated guided vehicle market size was valued at \$5.21 billion in 2019, and is projected to reach \$13.52 billion by 2027, registering a CAGR of 16.6% from 2020 to 2027.

By region, presently, Asia-Pacific dominates the market, followed by Europe, North America, and LAMEA. China dominated the <u>automated guided vehicle market share</u> in 2019 and Africa is anticipated to exhibit a remarkable growth during the forecast period.

These developments are driven by technological innovations, increased demand for automation in various industries, and the ongoing evolution of Industry 4.0 principles.

Integration with Industry 4.0:

GVs are increasingly being integrated into smart manufacturing environments as part of Industry 4.0 initiatives. This involves connecting AGVs to the Internet of Things (IoT) and utilizing data analytics to optimize operations, improve efficiency, and enable predictive maintenance.

Artificial Intelligence (AI) and Machine Learning:

The incorporation of AI and machine learning algorithms allows AGVs to enhance their decision-making capabilities. AGVs can adapt to changing environments, optimize routes, and improve efficiency over time by learning from data and patterns.

Vision Systems and Advanced Sensors:

AGVs are equipped with advanced vision systems, LiDAR, and other sensors to navigate and interact with their surroundings more effectively. These technologies enable AGVs to detect obstacles, avoid collisions, and navigate complex environments with greater precision.

Autonomous Navigation and Path Planning:

AGVs are becoming more autonomous, with improved navigation capabilities. Advanced algorithms for path planning and real-time decision-making allow AGVs to navigate dynamically changing environments and avoid obstacles in real-time.

Collaborative and Swarm Robotics:

Collaborative AGVs and swarm robotics involve multiple AGVs working together in a coordinated manner. This approach enhances efficiency, enables task allocation among multiple AGVs, and allows them to adapt collectively to changes in the environment.

Human-Robot Collaboration:

There is a growing emphasis on safe human-robot collaboration. AGVs are being designed with enhanced safety features, such as sensors that can detect the presence of humans and adjust their behavior accordingly, allowing for safer interactions in shared workspaces.

Energy Efficiency and Sustainability:

Advances in battery technology and energy management systems contribute to improved energy efficiency in AGVs. Additionally, there is a focus on developing sustainable solutions, including the use of alternative energy sources and materials.

Cloud-Based Fleet Management:

Cloud-based platforms are being utilized for centralized fleet management of AGVs. This allows for real-time monitoring, remote diagnostics, and the implementation of software updates across an entire fleet of AGVs.

Moreover, owing to technically advanced manufacturing facilities, high presence of industrial equipment manufacturers, and supportive government free trade agreements in the U.S. and Mexico, North America has witnessed rapid growth in the <u>automated guided vehicle industry</u>. For instance, in June 2018, The-Scott-Group, a service provider in European manufacturing markets, acquired the Transbotics, a U.S. based AGV manufacturer, to expand its geographic presence in the U.S.

In addition, warehouse owners in the region are increasingly adopting automation technologies to optimize warehouse operations and gain maximum efficiency, which, in turn, boosts the

market growth. Moreover, increase in collaborations and mergers between market players to enhance technologies is expected to fuel growth of the automated guided vehicle market. For instance, in August 2019, GreyOrange pte ltd. (a global provider in warehouse automation systems) partnered with eight warehouse solution providers in the U.S., namely, Avik Services, Bricz, Hy-Tek, Info-Sun, McCombs-Wall, S&H Systems, TREW and UST Global. Under this partnership, these supply chain solution providers help GreyOrange pte ltd. to sell, deploy, and service GreyOrange technology.

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Growth in the e-commerce industry across the globe is key driving factor for automated guided vehicle market industry. E-commerce growth directly leads to warehouse automation for optimization of the operations, therefore, positively influences the automotive guided vehicle market. In addition, owing to one of the most leading ecommerce markets globally, the UK has attracted significant investments in warehouse automation including installation of automated guided vehicles. For instance, Amazon, a leading e-commerce company, has installed auto guided mobile robots within several of its warehouse sites across the UK including Dunstable (LTN4), Doncaster (LBA1), and Tilbury (LCY2). Amazon has around 18 million square foot of warehousing and fulfilment capacity in the UK.

AGVs with laser guided navigation are easy and fast to install (no invasive installation, requires only placing of reflectors around the facility), and provide accurate positioning owing to which a higher vehicle speed is achieved. This is the reason behind high penetration of these navigation technology vehicles across all industry verticals. Moreover, no considerable maintenance cost is required as it only requires keeping the reflectors clean, which boosts the market growth further. Moreover, magnetic tape navigation technology are cheaper and easy to install.

Also, they do not require highly skilled professionals to install the same, which drives the growth of the market. In addition, magnetic tapes are easy to modify and user can simply change the

route, by removing the adhesive magnetic tape on the floor, thereby offering more flexibility, which is boosting the market growth. Further, development of magnetic tapes with prolonged life and less wear and tear capabilities creates numerous opportunities for the key players operating in the market.

Factors such as rise in demand for automation and automated guided vehicles in various industries and increase in safety, accuracy, and productivity drive growth of the automated guided vehicle market. In addition, reduction of labor cost in organizations also boost growth of the market. However, high initial investment costs and lack of flexibility hinders growth of the automated guided vehicle market. Further, incorporation of industry 4.0 is anticipated to provide lucrative growth opportunities for players operating in the automated guided vehicle market.

COVID-19 impact analysis:

All original equipment manufacturers operating in the automated guided vehicle market witnessed a sharp drop in wholesales, owing to COVID-19 outbreak related lockdowns. COVID-19 led to a major disruption on supply side as significant number of manufacturers are dependent on China markets for raw components. Unavailability of raw material is experienced by the original equipment manufacturers due to the COVID-19 outbreak as significant number of manufacturers are dependent on China fir raw components. companies with international supply chains may need to analyze critical components that are in short supply and should considering strategies for alternative sourcing.

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Key Findings Of The Study

On the basis of type, the assembly line vehicles segment is anticipated to exhibit a remarkable growth during the forecast period.

On the basis of application, the transportation segment is the highest contributor in the global market in terms of revenue.

On the basis of region, LAMEA is the fastest growing region, followed by North America, Europe, and Asia-Pacific.

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