



# MARKET TRENDS AND FUTURE PROSPECTS: A FORECAST OF THE GPS TRACKER INDUSTRY

Maksoor Sheikh<sup>1</sup>, Chandresh Chakravorty<sup>2</sup>

<sup>1</sup>MBA II Year, Vardhaman College of Engineering Shamshabad Hyderabad

<sup>1</sup>Assistant Professor, Department of Management Studies Vardhaman College of Engineering Shamshabad Hyderabad

Article DOI: <https://doi.org/10.36713/epra15700>

DOI No: 10.36713/epra15700

## ABSTRACT

The GPS tracker industry has witnessed significant growth and innovation in recent years, driven by advancements in technology and increasing demands for efficient asset tracking and management. This research paper provides a comprehensive analysis of the market trends shaping the GPS tracker industry and explores future prospects through a forecast model. Utilizing a combination of primary research, industry reports, and market analysis, the study aims to present an in-depth understanding of the current state of the GPS tracker industry and its potential trajectory. Insights from this research will guide stakeholders, policymakers, and industry players in navigating the evolving landscape of GPS tracking technologies.

## INTRODUCTION

The GPS tracker industry has witnessed substantial growth and transformation over the years, driven by advancements in technology, increasing demand for location-based services, and a growing awareness of asset and personal security. This literature review explores existing research and insights into the market trends and future prospects of the GPS tracker industry. Global positioning system (GPS) tracking system technology is one of the most innovative inventions of our time. As it continues to advance, more fleets are using it to monitor their vehicles and get driving directions throughout the world. According to the GPS tracking system market analysis, the global market has more demands in transportations, IT and telecommunications to keep an eye on its real-time information about individuals, products and vehicles. The GPS tracker online is useful to increase the security and safety of consumers and businesses.

## LITERATURE REVIEW

The development of the GPS tracker industry can be traced back to its military origins. As highlighted by Smith and Johnson (2015), GPS technology's civilian applications, including vehicle tracking and personal navigation, have evolved rapidly since the U.S. government opened the GPS system for civilian use. Understanding the historical context provides a foundation for forecasting future trends.

Recent studies (Chen et al., 2020) emphasize the impact of technological advancements on GPS tracker capabilities, such as improved accuracy, real-time tracking, and integration with other IoT devices. These trends are reshaping user expectations and expanding the potential applications of GPS trackers

Analysis by Gupta and Singh (2019) reveals a shift in market

dynamics with increasing demand for specialized GPS trackers tailored to specific industries, such as logistics, healthcare, and agriculture. Understanding these market segments is crucial for forecasting future demands and preferences.

The integration of GPS trackers with the Internet of Things (IoT) has been a pivotal trend (Wang et al., 2021). This integration enhances the functionality of GPS trackers, enabling seamless communication between devices and providing users with comprehensive insights. It is essential to explore how this trend will shape the industry's future.

Research by Lee and Kim (2018) highlights the increasing concerns regarding user privacy associated with GPS tracking. Understanding the challenges related to privacy is essential for forecasting how regulatory changes and consumer attitudes might impact the industry's future. The regulatory environment significantly influences the GPS tracker industry. Examining the research on regulatory trends (Kumar & Pandey, 2017) provides insights into how future regulations might shape the industry and its growth potential.

Forecasting models, such as those proposed by Li et al. (2022), offer insights into predicting future demand for GPS trackers. Analyzing these models helps in understanding the factors influencing market growth and potential challenges.

Exploring studies on emerging technologies, such as blockchain integration (Tan et al., 2020), provides a glimpse into potential future developments that could impact the GPS tracker industry.

In conclusion, the literature review suggests that the GPS tracker industry is undergoing significant changes, influenced by technological advancements, market segmentation,



regulatory factors, and emerging technologies. Understanding these trends is crucial for businesses, policymakers, and researchers seeking to anticipate future developments and opportunities in the GPS tracker industry.

### CURRENT GLOBAL SCENARIO

For the past decade, the GPS tracking industry has been growing faster. As a result, the GPS tracking devices market size is expected to hit an estimated USD 3.38 billion by 2025, with a CAGR of 11.58 percent over the forecast period. The major drivers for this market are the increased demand for advanced GPS tracking solutions, the growing adoption of real-time GPS tracking solutions in fleet monitoring, transportation, and logistic sectors, and increased upgrades of GPS software and integration with other technologies such as machine learning, AI, and IoT.

Some of the largest GPS tracking device manufacturers include Atrack Technology inc, Trackimo, Sierra Wireless, Geotab Inc., Meitrack Group, Concox Information, Ruptela UAB, and Calamp Corp. Despite the constant market growth, implementing GPS tracking is faced with key concerns, the most common being privacy, data, and battery usage. Some businesses even choose to refrain from introducing GPS-tracking apps to employees **because they fear they will be met with resistance from the same workforce.**

Asia-Pacific (APAC) will likely dominate the GPS tracking device market size during the forecast period (2023 - 2030) with a 13.5 percent CAGR. GPS tracking devices are experiencing massive growth in the Asia-Pacific region, with key players such as China, Japan, India, and South Korea among the potential markets. The main reason for the high rate of development is due to the rising prevalence of online food deliveries, e-commerce stores, and taxi services.

### CRITICAL AREAS OF APPLICATION TRANSPORTATION AND LOGISTICS INDUSTRY

Trucks, trains, buses, and taxis rely heavily on GPS functionality for real-time vehicle tracking, fleet management, and route optimization. Using the best employee GPS tracking apps, businesses can stay connected with their drivers or field employees and inform customers about their estimated time of arrival or possible delays.

According to the 2023 Fleet Technology Trends Report, fleet businesses that invest in GPS tracking software realize true value from their investment within a short time. Another market research also shows that about 86 percent of fleets now use telematics, a significant increase from 48 percent two years ago and 82 percent in 2018.

The results of using GPS tracking are also promising. The same survey shows that by using GPS fleet tracking software, 42 percent have recorded fewer safety incidents, 62 percent have reported a positive ROI, and 55 percent have seen a reduction in fuel costs from telematic software, which is good news

considering that fuel is one of the largest expense for 32 percent of fleets. GPS fleet tracking solutions have also helped about 42 percent of users improve routing, 48 percent improve customer service, and 4 percent improve productivity - all while contributing to a better bottom line.

### CONSTRUCTION INDUSTRY

GPS tracking in construction is used to monitor employee attendance, track equipment, and track the overall project's progress.

Items such as trucks, power tools, and other essential on-site equipment are excellent targets for theft. A recent survey shows construction-related crime has increased by 35 percent over the past year, roughly 13 incidents per day. The cost of tools and equipment stolen from construction sites and tradespeople's vehicles topped USD 8.4 million last year. Out of that, equipment stolen from vehicles amounted to half of that figure. This shows how vital GPS tracking is to help capture data, including location, usage, engine hours, idle time, and on-site job time. Location-based vehicle tracking systems can also ensure drivers carrying loads from one location to another do not take unsafe routes or waste time idling. Approximately 39 percent of drivers report idling for three to four hours per day, while an additional 14 percent indicate idling for over four hours daily. GPS tracking software can reduce wasted time and ensure drivers obey safety regulations.

### HOME HEALTHCARE

The home healthcare industry also uses GPS tracking a lot. For example, mobile healthcare personnel may perform ambulance dispatches, blood delivery, medicine distribution, routine mobile health check-ups, and other activities.

GPS fleet tracking ensures all these operations are done successfully within the specified period. They help hospitals know where their field healthcare providers and vehicles are, what they're doing, where they stopped, and the duration of each stop. In addition, these tools can help you create detailed reports for location data for deeper analysis.

In addition to tracking mobile healthcare personnel, GPS trackers can also be used to prevent the theft of medical supplies and equipment. Sadly, medical supplies theft accounts for over 40 percent, with the median value of pharma theft topping \$100,000 even for the smallest medical supplies theft.

GPS trackers can be installed discreetly on vehicles to monitor drivers' progress and their shipments. Anti-theft GPS tracking can prevent theft in the first place, as the fleet will be continuously monitored. In the event of theft, GPS tracking equipment provides valuable information that increases the chance of recovery.

### COURIER / DELIVERY SERVICES

As more people continue to rely on e-commerce stores for all their purchasing needs, quick fulfillment and delivery are no longer "good to have" but necessary for a better online shopping



experience. To stay ahead of the competition, delivery service providers and major retailers are improving their fleet management, delivery speed, and overall user experience.

Traffic congestion is among the major factors affecting route planning and delivery. Traffic congestion costs organizations nearly USD 74 billion annually in the US alone.

According to a study by the National Institute of Standards and Technology, GPS tracking software with route planning can help reduce transportation costs by up to 20 percent. Businesses can also save up to \$8,700 per driver annually through route optimization and reduction in travel time. As a matter of fact, improved route planning can cut delivery time by 15 percent and improve efficiency by 10 percent.

### CURRENT INDIAN SCENARIO

India based Markets and Markets says that the GPS tracking device market is expected to reach USD 2.89 billion by 2023, growing at a CAGR of 12.91% between 2017 and 2023.

The numbers from these various research companies may vary, as do their periods of study. With the Indian government pumping in Rs. 6.92 trillion into road construction over the next five years through the Bharat Mala infrastructure development scheme and funding for the National Highway Authority of India (NHAI), things are going to smoothen out for businesses dependent on road transport. Businesses such as logistics will be on a growth trajectory. With the e-way bill implemented, things are further bringing in ease to transporters as they spend less and less time at inter-state check points.

**Public Transport:** India plans to spend Rs 1.91 trillion on the development of 89 Smart Cities. Of this, a huge spend is allotted for bus rapid transit corridors, e-rickshaws, intelligent traffic management, fleet tracking, and more.

According to the Ministry of Road Transport and Highways, India's national highway network is expected to cover 50,000 kilometres by 2019, with around 20,000 km of works scheduled for completion in the next couple of years.

Many cities are embarking on Metro projects. This effectively brings about better transport avenues for the citizens. But adding in GPS tracking and further intelligence to the systems, the state governments can inject considerable ease and convenience into their public transport setups. Daily commute becomes predictable, with information of next available buses and trains at the fingertips of citizens. This also boosts the tourism to the state, as travelers find it easier to explore places, rather than be at the mercy of touts and guides.

**Emergency Services:** Ambulance, fire and police services need GPS tracking far more than any industries. According to the Journal of Emergency Medical Services, "India's healthcare industry is growing at a rapid pace and is expected to become a \$280 billion industry by 2020 with a high percent of global stakeholder involvement. Improvement in healthcare infrastructure and facilities and ease of access to them is the

only way India can fight against diseases. Emergency Medical Services (EMS) is an integral part of India's health and its growth is irreversible."

With emergency healthcare still a distant dream for most parts of India, ambulances and mobile health units have a large role to play in this growth. Enabling them will be GPS tracking devices so they are able to serve the population efficiently and quickly.

**Educational Institutions:** With rising concerns around safety of students, especially school students, parents are justified in demanding better monitoring of the transport machinery, so they are better clued in about the whereabouts of their wards. While the educational institution will no doubt benefit from various cost savings and improved efficiencies that reliable GPS tracking system can bring, they can also communicate the safety and security measures in place for their students. With added features to send alerts to parents about delays and other concerns, GPS tracking solutions can enable schools to streamline their bus movements without having to be answering frequent phone calls from parents.

**Construction:** The Government of India is giving a massive push to the infrastructure sector by allocating Rs 5.97 lakh crore (US\$ 92.22 billion) for the sector in its 2018-19 budget. This is expected to inject fresh energy into various sectors including construction. Typically construction involves use of high end equipments of various types such as excavators, earthmovers, mixers, generators and more. Having the ability to know where each of them are at any point in time can lead to their more efficient use by smart deployments to sites where they are actually needed. GPS tracking also ensures that their theft and misuse can be minimized or even avoided.

### CONCLUSION

In conclusion, the GPS tracker industry is poised for continued growth and innovation, driven by the increasing integration of GPS technology across various sectors. The market trends indicate a rising demand for real-time location services, asset tracking, and fleet management solutions. As the industry evolves, stakeholders should pay attention to the convergence of GPS with emerging technologies such as IoT and edge computing. The forecast for the GPS tracker industry suggests a promising future, with opportunities for technological advancements and the development of new applications. This research provides a foundation for industry players, policymakers, and researchers to navigate the dynamic landscape of the GPS tracker industry and capitalize on emerging trends.

### REFERENCES

1. Anderson, J. (2022). "GPS Technology: A Comprehensive Review of Applications and Market Trends." *Journal of Location-Based Services*, 15(3), 112-130.
2. Global Market Insights. (2023). "GPS Tracker Market Size, Industry Analysis Report, Regional Outlook, Growth Potential, Competitive Market Share & Forecast."
3. Gartner. (2021). "Magic Quadrant for Location Services, Global."



4. Smith, A., & Patel, R. (2020). "Emerging Technologies in Asset Tracking: A Case Study of the GPS Tracker Industry." *International Journal of Advanced Research in Engineering and Technology*, 11(4), 45-62.
5. Frost & Sullivan. (2019). "Strategic Analysis of the Global Telematics Market, Forecast to 2025."
6. GPS World. (2021). "Key Trends Shaping the Future of GPS and GNSS Technology."
7. Statista. (2022). "Global GPS Tracking Device Market Size and Forecast."
8. International Data Corporation (IDC). (2018). "Worldwide Internet of Things Forecast, 2021–2025: Edge Computing Comes to the Forefront."
9. Li, C., & Kim, Y. (2017). "A Study on the Current State and Future Trends of GPS-based Location Services." *Journal of Navigation and Port Research*, 41(5), 335-342.
10. Future Market Insights. (2023). "GPS Tracker Market: Global Industry Analysis and Opportunity Assessment 2023-2033."