

Robotaxi Market by Application (Goods and Passenger), Level of Autonomy (L4 and L5), Vehicle (Cars and Vans/Shuttles), Service (Rental and Station Based), Propulsion (Electric and Fuel Cell), Component and Region - Global Forecast to 2030

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Abstracts

The global robotaxi market size is projected to grow from USD 0.4 Billion in 2023 to USD 45.7 Billion by 2030, at a CAGR of 91.8%. The robotaxi market is expected to experience growth driven by various factors. High demand for shared transportation, advancements in vehicle technology, rising interest in fuel-efficient public transportation, and improved infrastructure are all predicted to drive market growth. The seamless navigation of self-driving taxis in congested areas and significant innovation costs required by technological advancements, however, could be a barrier to the growth. The widespread use of IoT devices and the data they collect gives fleet managers more power to optimize operations. Increased safety will encourage more passengers to choose autonomous vehicles as level 4 and level 5 autonomous driving systems would reduce traffic incidents. Additionally, to reduce pollution, governments in developing countries would be open to implementing emission-free alternatives. Due to the fact that they are electric vehicles, self-driving cars are an appropriate solution in this case. Additionally, it reduces the amount of private vehicles on the road, thereby lowering traffic and pollution.

“By Application, Passenger transport Segment is projected to be the largest market in the application segment in the forecast.”

Due to global initiatives to employ technology to minimize auto ownership, traffic congestion, and accidents, the passenger segment for robotaxis is increasing. Future revenue streams for different automotive and mobility business models should become

available with the introduction of robotaxis as a form of transportation. The main drivers anticipated to propel the passenger transportation market for robotaxis are the desire for emission-free vehicles, growth in ride-hailing services, and decreased transportation costs. In October 2022, EasyMile provided a commercial fleet of autonomous shuttles for a fully driverless service worth USD 3.9 million at the Belgian tourist site Terhills. The shuttles will run 7 days a week for up to 10 years. In May 2023, Waymo LLC and Uber partnered to bring Waymo's autonomous driving technology to the Uber platform. The significant demand for ridesharing/ride-hailing services is expected to primarily drive the robotaxi market for passenger transport.

“Van/shuttle segment is anticipated to witness significant growth during the forecast period.”

The shuttle/van segment is expected to grow at significant rate, as these are already commercialized in various parts across the world. Companies are investing significantly in robotaxis for the development of autonomous driving, connectivity, electrification, and shared mobility, which is expected to drive the market. Robotic assistance used for the delivery, supply pick-up, and other routine tasks by autonomous cars for small businesses is expected to be one of the key factors for the increasing adoption of robotaxis. Testing and implementation of robotaxis are underway across the globe. In May 2023, Waymo LLC doubled its commercial robotaxi service in the Phoenix metro area (US). In December 2022, Uber is testing robotaxis in several cities to launch a for-profit service in 2023.

The shuttles/vans segment is expected to grow at a significant rate, as they are already commercialized in various parts globally. Navya, EasyMile, and 2getthere (Netherlands) have developed self-driving shuttles. Successful pilot programs for autonomous shuttles worldwide indicate that shuttles could be a practical solution to meet the demands of traditional public transport.

The Asia Pacific region is anticipated to be a technological adopter by quickly accepting new technologies. It is one of the regions with the highest ridesharing usage. Road safety concerns are anticipated to significantly fuel the expansion of the robotaxi market. In China, a few ride-hailing businesses have setup fleets of robotaxis for use in commerce. For instance, the first companies to launch robotaxi fleets in 2021 were Baidu, Inc. and AutoX, Inc. in the Chinese robotaxi market. The Asia Pacific market is anticipated to be driven by rising competition for the testing and deployment of robotaxis. North America is predicted to witness the second-fastest growth in the robotaxis market throughout the forecast period since it is the technological leader in

autonomous driving solutions. Some top technology companies, such as Waymo LLC, Intel Corporation, and Nvidia Corporation, are based in the region. These businesses are putting their attention on the advancement of autonomous technologies. Autonomous car testing has begun in US, which presents prospects for the advancement of robotaxis in the future. Waymo LLC, Optimus Ride, and Lyft, Inc. offer robotaxi services in North America region. The market in Europe is anticipated to expand as a result of rising safety concerns and the presence of technologically cutting-edge automobile and shuttle manufacturers, such as EasyMile, 2getthere, and Navya. These companies are the top suppliers of autonomous shuttles globally.

“North America to be the fastest-growing region during the forecast period”

The country's enormous customer base and high levels of disposable money have spurred demand for autonomous vehicles, leading companies like Waymo LLC, Cruise, Inc., Lyft, Inc., Optimus Ride, and others to ramp up production and testing efforts. The US has let numerous OEMs to test robotaxis in Boston and California. The North American market would be driven by favorable rules combined with a strong EV infrastructure. OEMs and start-ups are now looking to offer robotaxis and shuttles. The US has been a pioneer in the development of autonomous driving technologies. OEMs have been able to test autonomous vehicles because to a strong infrastructure, an enhanced power grid, and government encouragement and backing. Established ride-hailing businesses like Uber and Lyft have also invested in developing autonomous vehicles. They want to incorporate robotaxi choices in their services by incorporating autonomous vehicles into their current ride-hailing systems. Autonomous car and robotaxi service testing has occurred in several North American cities. In order to eventually offer robotaxi services to the general public, cities like Phoenix, San Francisco, and Pittsburgh have witnessed considerable testing and pilot programs for autonomous vehicles.

In-depth interviews were conducted with CEOs, marketing directors, other innovation and technology directors, and executives from various key organizations operating in this market.

By Company Type: OEMs - 34%, Tier I - 59%, Tier II - 07%

By Designation: CXOs - 26%, Directors - 43%, and Others - 31%

By Region: North America - 23%, Europe - 36%, Asia Pacific- 30% and RoW- 11%

The robotaxi market is dominated by global players such as Waymo LLC (US), Baidu, Inc. (China), Beijing Didi Chuxing Technology Co., Ltd. (China), Cruise LLC (US), and EasyMile (France). These companies adopted new product launches, deals, and other strategies to gain traction in the robotaxi market.

Research Coverage:

The market study covers the Robotaxi Market by Application (Goods and Passenger), Level of Autonomy (L4 and L5), Vehicle (Car and Shuttle/Van), Service (Rental and Station Based), Propulsion (Electric and Fuel Cell), Component, and Region (Asia Pacific, Europe, North America, RoW). It also covers the competitive landscape and company profiles of the major players in the robotaxi market ecosystem.

The study also includes an in-depth competitive analysis of the key players in the market, along with their company profiles, key observations related to product and business offerings, recent developments, and key market strategies.

The report will help the market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall robotaxi market and the subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and to plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

Analysis of key drivers (Robotaxis to reduce overall operating costs and increase profit margins for ridesharing companies, Need for enhanced road safety and traffic control, Ridesharing and Mobility-as-a-Service (MaaS), Rise in urbanization and congestion), restraints (Disruption of traditional jobs, High R&D expenditure and complexity in the adoption of robotaxis, Cybersecurity threats), opportunities (Government support, Robotic assistance in goods delivery, Increasing demand for autonomous vehicles, Increasing investments in LiDAR startups), and challenges (Navigation in crowded spaces, Gaining public and individual trust, Lack of required infrastructure in emerging countries) influencing the growth of the robotaxi market

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the robotaxi market

Market Development: Comprehensive information about lucrative markets – the report analyses the robotaxi market across varied regions

Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the robotaxi market

Competitive Assessment: In-depth assessment of market shares, growth strategies and service offerings of leading players like Waymo LLC (US), Baidu, Inc. (China), Beijing Didi Chuxing Technology Co., Ltd. (China), Cruise LLC (US), and EasyMile (France), among others in the robotaxi market Page 25 of 34 strategies. The report also helps stakeholders understand the pulse of the autonomous vehicle market and provides them information on key market drivers, restraints, challenges, and opportunities.

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