

Automotive Engineering Services Outsourcing Market Report by Service (Designing, Prototyping, System Integration, Testing, and Others), Vehicle Type (Passenger Vehicles, Commercial Vehicles), Location Type (On-shore, Off-shore), Application (Autonomous Driving/ADAS, Body and Chassis, Powertrain and After-treatment, Infotainment and Connectivity, and Others), and Region 2024-2032

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Abstracts

The global automotive engineering services outsourcing market size reached US\$ 113.0 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 436.5 Billion by 2032, exhibiting a growth rate (CAGR) of 15.9% during 2024-2032. The market is growing rapidly driven by its pivotal role in cost reduction, easy access to specialized expertise, increasing emphasis on core competencies, significant growth in the automotive industry, and recent technological advancements.

Automotive Engineering Services Outsourcing Market Analysis:

Market Growth and Size: The market is witnessing stable growth, driven by the increasing complexity and technological advancements in the automotive sector, expanding range of services offered, and the rising demand from both established automotive players and emerging market entrants.

Major Market Drivers: Key drivers influencing the market growth include cost reduction through labor arbitrage, access to specialized engineering expertise, focus on core competencies by automotive companies, the need for compliance with global standards and regulations, and the demand for innovative solutions in vehicle design and technology.

Technological Advancements: Recent innovations in areas, such as electric vehicles (EVs), autonomous driving, connected cars, and advanced driver assistance systems (ADAS) are propelling the market forward. Outsourcing partners are increasingly providing expertise in cutting-edge technologies, necessary for integrating these advanced systems into modern vehicles.

Industry Applications: The market is experiencing high demand for outsourcing across various applications, including autonomous driving/ADAS, body and chassis design, powertrain and after-treatment systems, and infotainment and connectivity.

Key Market Trends: The key market trends involve the increasing adoption of electric and autonomous vehicles, a shift towards digitalization and connected services, and a growing focus on sustainability and environmental compliance. Furthermore, the ongoing shift towards more collaborative partnerships between automotive companies and engineering service providers is supporting the market growth.

Geographical Trends: Asia Pacific leads the market due to cost-effective labor, a vast pool of engineering talent, and growing automotive markets in countries like China and India. Other regions also hold significant market shares, driven by advanced technological capabilities and strong automotive industry presence.

Competitive Landscape: The market is characterized by a mix of global players and specialized regional firms. These companies are focusing on expanding their service offerings, entering strategic partnerships, and investing in new technologies to stay competitive.

Challenges and Opportunities: The market faces various challenges, such as managing the complexities of integrating advanced technologies, navigating diverse regulatory landscapes, and ensuring data security in outsourced projects. However, the introduction of innovative solutions, enhanced cybersecurity measures, and widespread service adoption to meet stringent regulatory requirements, are creating new opportunities for the market growth.

Automotive Engineering Services Outsourcing Market Trends:

The increasing focus on cost reduction

Companies in the automotive industry are constantly seeking ways to minimize expenses while maintaining quality. In line with this, outsourcing engineering services offer significant savings, enabling automotive companies to manage their budgets more efficiently. Furthermore, it reduces capital expenditure, as companies need not invest heavily in infrastructure, technology, and training. Besides this, the flexible nature of outsourcing agreements allows companies to scale their operations up or down based on demand, preventing unnecessary expenditure during low-demand periods. In

In addition, the cost-effective nature of outsourcing also extends to non-core activities, such as testing, validation, and simulation, which are essential but often resource-intensive processes in automotive engineering. Moreover, outsourcing enables companies to maintain a leaner and more financially sustainable operation, focusing their resources on high-value activities like innovation and market expansion.

Easy access to specialized expertise

Automotive engineering services outsourcing provides access to a global talent pool, enabling companies to leverage the expertise of engineers and professionals who specialize in cutting-edge technologies. Furthermore, it also assists companies in staying at the forefront of innovation. In addition, automotive engineering service providers invest heavily in research and development (R&D), keeping their teams updated with the latest technological trends and industry best practices. Partnering with these providers allows automotive companies to integrate advanced technologies into their products more efficiently and effectively. Moreover, outsourced engineering teams bring a fresh perspective to problem-solving, driving innovation and creative solutions. They can also assist in navigating complex technical challenges, ensuring that automotive products meet the highest standards of quality and performance.

The growing emphasis on core competencies

The growing emphasis on core competencies is a significant factor contributing to the market growth. Outsourcing engineering services allows companies to delegate non-core activities, such as certain aspects of research and development (R&D), testing, and validation processes, to external experts. It enables automotive companies to allocate more resources and attention to areas where they excel and can create the most value. Furthermore, companies can enhance their brand differentiation and product uniqueness, which is essential in a market crowded with competitors. Besides this, outsourcing allows for a more strategic allocation of resources, ensuring that the company's efforts and investments are directed toward areas that offer the highest return on investment (ROI) and are aligned with long-term business goals. Moreover, it can lead to higher innovation efficiency, as companies can innovate more effectively and rapidly, responding to market changes and customer demands with agility.

The significant growth in the automotive industry

The rapid expansion of the automotive industry across the globe is acting as another growth-inducing factor. Automotive companies are continually looking to expand their

reach to new markets and regions, which can be challenging due to differences in regulatory environments, cultural nuances, consumer preferences, and local competition. In line with this, outsourcing engineering services can provide automotive companies with crucial local insights and expertise, facilitating smoother entry into new markets. Furthermore, engineering service providers often have a global presence and a deep understanding of regional markets, which is invaluable for companies looking to adapt their products to meet local regulations, safety standards, and consumer expectations. Moreover, outsourcing partners with local knowledge can guide automotive companies through regional differences, ensuring compliance and relevance in the new market.

Recent technological advancements

The automotive industry is at the forefront of technological innovation, with rapid developments in areas like autonomous driving, electric vehicles (EVs), connected car technology, and advanced driver-assistance systems (ADAS). Keeping pace with these technological changes requires specialized knowledge and continuous research and development (R&D), which can be resource-intensive and challenging for many automotive companies. In line with this, outsourcing provides access to specialized skills and state-of-the-art technology, which is necessary to develop advanced automotive solutions. Furthermore, partnering with engineering service providers allows automotive companies to integrate various technologies into their product development processes more efficiently and effectively. It not only speeds up the time-to-market for new innovations but also ensures that the products are on the leading edge of technology.

Automotive Engineering Services Outsourcing Industry Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the market, along with forecasts at the global, regional, and country levels for 2024-2032. Our report has categorized the market based on service, vehicle type, location type, and application.

Breakup by Service:

- Designing
- Prototyping
- System Integration
- Testing
- Others

Prototyping exhibits a clear dominance in the market

The report has provided a detailed breakup and analysis of the market based on the service. This includes designing, prototyping, system integration, testing, and others. According to the report, prototyping accounted for the largest market share.

Prototyping represents the largest segment as it involves the creation of functional models of vehicle components or entire vehicles. It is crucial for validating design concepts, testing functionality, and ensuring that the final product meets all specifications and standards. Prototyping encompasses various techniques, such as traditional clay modeling and advanced three-dimensional (3D) printing, which allow for quick and cost-effective production of parts for testing and evaluation. Outsourced engineering service providers possess specialized skills and equipment, enabling automotive companies to experiment with different materials, designs, and technologies without substantial upfront investment. Furthermore, they aid in bridging the gap between design and production, facilitating innovation while ensuring quality and compliance.

The designing segment focuses on conceptualizing and developing the aesthetics, functionality, and ergonomics of vehicles. It involves a broad spectrum of activities, including styling, interior and exterior design, and the integration of user interface elements. Outsourcing provides specialized expertise, which is adept at translating market trends and consumer preferences into tangible vehicle designs. They use advanced computer-aided design (CAD) tools and virtual reality (VR) simulations to create and visualize concepts before they enter the prototyping stage.

The system integration segment involves the seamless combination of various vehicle systems and components to ensure they function cohesively. It is crucial, especially given the increasing complexity of modern vehicles, which encompass advanced electronics, software, and mechanical systems. Outsourcing partners specializing in this segment offer expertise in integrating diverse technologies and platforms, addressing compatibility issues, and ensuring system reliability.

The testing segment is dedicated to verifying and validating the safety, performance, and reliability of vehicles and their components. It ensures that automotive products meet regulatory standards, industry benchmarks, and consumer expectations. Outsourced engineering service providers in this segment possess specialized facilities, equipment, and expertise to conduct comprehensive tests. They use advanced

simulation tools, test rigs, and real-world testing environments to assess various aspects of a vehicle.

Breakup by Vehicle Type:

Passenger Vehicles

Commercial Vehicles

A detailed breakup and analysis of the market based on the vehicle type have also been provided in the report. This includes passenger vehicles and commercial vehicles.

Passenger vehicles refer to cars and sports utility vehicles (SUVs) primarily used for personal transportation. They are characterized by a strong focus on consumer preferences, safety, comfort, and aesthetic appeal. Outsourced engineering services in this segment are crucial in integrating various advanced technologies while ensuring cost-effectiveness and market competitiveness. They specialize in areas like lightweight materials for improved fuel efficiency, ergonomic design for enhanced comfort, and sophisticated safety features to meet stringent regulations.

Commercial vehicles refer to vehicles used for the transportation of goods and passengers, including trucks, buses, and vans. They are characterized by their durability, reliability, and operational efficiency. Outsourcing services in this area are focused on optimizing vehicle performance under heavy-duty conditions, enhancing fuel efficiency, and ensuring compliance with emissions regulations. Furthermore, they offer solutions for robust chassis designs, efficient cargo space utilization, and enhanced vehicle ergonomics for driver comfort during long hauls.

Breakup by Location Type:

On-shore

Off-shore

The report has provided a detailed breakup and analysis of the market based on the location type. This includes on-shore and off-shore.

The on-shore segment refers to services provided within the same country as the client company. It is characterized by the advantage of shared cultural and business practices, similar legal and regulatory frameworks, and minimal time zone differences, which facilitate smoother communication and project management. On-shore

outsourcing services are particularly preferred when projects require close collaboration, high levels of customization, or when dealing with sensitive intellectual property and data security concerns.

The off-shore segment involves outsourcing services to a country different from where the client company is based. It is primarily driven by the potential for cost savings, as off-shore locations often offer lower labor costs and operational expenses. Off-shore outsourcing services are particularly attractive for standardized, large-scale engineering tasks where the cost advantage outweighs the challenges of working across different time zones and cultural contexts.

Breakup by Application:

Autonomous Driving/ADAS

Body and Chassis

Powertrain and After-treatment

Infotainment and Connectivity

Others

Powertrain and after-treatment exhibit a clear dominance in the market

A detailed breakup and analysis of the market based on the application have also been provided in the report. This includes autonomous driving/ADAS, body and chassis, powertrain and after-treatment, infotainment and connectivity, and others. According to the report, powertrain and after-treatment accounted for the largest market share.

The powertrain and after-treatment segment is dominating the market as it encompasses the development and optimization of vehicle propulsion systems, including engines, transmissions, and associated exhaust after-treatment systems. It is central to addressing environmental concerns and meeting stringent global emission standards. Outsourced engineering services in this area focus on improving fuel efficiency, reducing emissions, and developing alternative powertrain technologies, such as hybrid and electric vehicle systems. Furthermore, they assist in optimizing traditional internal combustion engines and developing sophisticated after-treatment systems to minimize environmental impact.

Autonomous driving/advanced driver assistance systems (ADAS) enhance vehicle safety and enable various levels of driving automation. Outsourcing applications in this segment include the design, development, and testing of systems like adaptive cruise

control, lane-keeping assistance, automated braking, and fully autonomous driving capabilities. Furthermore, it involves the development of sophisticated software, sensor fusion, machine learning algorithms, and system integration.

The body and chassis include the framework (chassis) that supports the vehicle, the body (the outer shell), and related systems like suspension and steering. Outsourced engineering services in this segment focus on optimizing the strength, durability, and weight of these components to improve vehicle performance, safety, and fuel efficiency. Furthermore, they bring expertise in advanced materials, such as high-strength steel, aluminum, and composites, and employ innovative design and manufacturing techniques to meet consumer demands.

Infotainment and connectivity are systems that provide entertainment, information, and connectivity features within vehicles. Outsourcing services in this field focus on creating user-friendly interfaces, integrating advanced communication technologies, and ensuring seamless connectivity with external networks and devices. Furthermore, they contribute to innovations that enhance the overall in-vehicle experience, such as voice-controlled systems, advanced telematics, and personalized user settings.

Breakup by Region:

North America

United States

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others
Latin America
Brazil
Mexico
Others
Middle East and Africa

Asia Pacific leads the market, accounting for the largest automotive engineering services outsourcing market share

The market research report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Europe (Germany, France, the United Kingdom, Italy, Spain, and others); Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa. According to the report, Asia Pacific accounted for the largest market share.

Asia Pacific region offers cost-effective labor, which is a major draw for automotive companies looking to outsource engineering services while controlling operational costs. Additionally, the region boasts a vast pool of skilled engineers and technical professionals with expertise in various aspects of automotive engineering, including advanced technologies like electric vehicles and autonomous driving. Besides this, Asia Pacific hosts some of the fastest-growing automotive markets in the world, which provides ample opportunities for outsourcing companies to expand their client base and operations. Furthermore, the region is rapidly advancing in terms of technology, which has positioned it as a hub for high-tech automotive engineering and research and development (R&D) activities. Moreover, the imposition of supportive government policies promoting outsourcing services through tax incentives and investment in technical education is strengthening the market growth.

Leading Key Players in the Automotive Engineering Services Outsourcing Industry: Key players are strategically focusing on expanding their global footprint, investing in research and development (R&D) to integrate cutting-edge technologies, and forming partnerships and collaborations to enhance their service offerings. Furthermore, they are also actively adapting to emerging trends in the automotive industry, such as electrification, autonomous driving, and connected car technologies, to stay competitive. Moreover, leading companies are optimizing their operations for cost-efficiency, leveraging digital transformation to improve service delivery, and ensuring compliance with international standards and regulations. In addition, they aim to provide

comprehensive, innovative solutions that address the evolving needs of automotive companies globally.

The market research report has provided a comprehensive analysis of the competitive landscape. Detailed profiles of all major companies have also been provided. Some of the key players in the market include:

Altair Engineering Inc.
ALTEN Group
ASAP Holding GmbH
AVL List GmbH
Bertrandt AG
Capgemini SE
EDAG Engineering Group AG
FEV Group GmbH
Horiba Ltd.
IAV GmbH (Volkswagen AG)
P3 group GmbH
RLE INTERNATIONAL Group

(Please note that this is only a partial list of the key players, and the complete list is provided in the report.)

Latest News:

In January 2022, ALTEN Group, a world leader in consulting and engineering technology, acquired Clevertask, to strengthen its position in Spanish market.

In June 2022, FEV Group GmbH signed an MoU with ProLogium technology to cooperate in the development of solid-state battery systems.

In January 2021, Bertrandt introduced a mobile ball impact testing device to allow customers to carry out independent testing of the vehicle's interior component.

Key Questions Answered in This Report

1. What was the size of the global automotive engineering services outsourcing market in 2023?
2. What is the expected growth rate of the global automotive engineering services outsourcing market during 2024-2032?
3. What has been the impact of COVID-19 on the global automotive engineering services outsourcing market?

4. What are the key factors driving the global automotive engineering services outsourcing market?
5. What is the breakup of the global automotive engineering services outsourcing market based on the service?
6. What is the breakup of the global automotive engineering services outsourcing market based on the application?
7. What are the key regions in the global automotive engineering services outsourcing market?
8. Who are the key players/companies in the global automotive engineering services outsourcing market?

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