

Everest Group ACES Automotive Engineering Services PEAK Matrix[®] Assessment 2023: Navigating the Future of Automotive Landscape

Focus on Wipro September 2023



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Introduction

The automotive industry is at an inflection point, where global sustainability concerns, increasing consumer demands, and rapid technological advancements have coalesced to propel rapid growth. In this dynamic landscape, the focus is shifting from conventional mobility solutions to a more captivating and immersive automotive experience. Automotive enterprises are now eagerly hopping on to this transformative paradigm, embracing the idea of enhancing customer experience and redefining the future of mobility. Some of the major areas of investment include:

- Autonomy Advancements: Investments in L3 to L5 autonomous technologies, intelligent adaptive cruise controls, safety systems, and sensor fusion tech to transform driving experiences
- Connected Ecosystems: Connectivity and data management are forging powerful collaborations between automotive players and players from diverse verticals such as fintech, insurance, technology, and telecommunication to bring in several after-sales services
- Software-Centricity: With the emergence of software-defined vehicles, there is an increased level of investments in software development and partnerships with technology players
- Electrification Imperative: The need to address environmental concerns and stringent governmental regulations has accelerated the investments in electric, hybrid, and fuel cell technologies

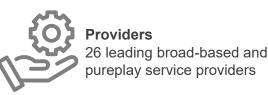
This research, the fourth edition of Everest Group's <u>ACES Automotive Engineering Services PEAK Matrix® Assessment 2023: Navigating the Future of Automotive Landscape</u>, evaluates 26 engineering service providers, features them on the PEAK Matrix®, and shares insights into enterprise sourcing considerations. The study is based on RFI responses from service providers, interactions with their automotive engineering leadership, client reference checks, and ongoing analysis of the engineering services market.

The full report assesses the following 26 leading engineering service providers featured on the ACES Automotive Engineering Services PEAK Matrix:

- Leaders: Alten, Capgemini, HCLTech, KPIT, LTTS, TCS, and Wipro
- Major Contenders: Akkodis, AVL, Bertrandt, Cognizant, Cyient, DXC Technology, FEV, FPT, IAV, Infosys, NTT DATA, Tata Elxsi, Tata Technologies, Tech Mahindra, and T-Systems
- Aspirants: Onward Technologies, Sasken, Semcon, and Sigma Software

Scope of this report





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ACES Automotive Engineering Services PEAK Matrix® characteristics

Leaders:

Alten, Capgemini, HCLTech, KPIT, LTTS, TCS, and Wipro

- The Leaders segment comprises a mix of pure-plays, and well-established IT-heritage firms that have excelled in providing comprehensive automotive engineering services across multiple disciplines
- Leaders differentiate themselves by offering a comprehensive value proposition that spans emerging domains, service elements, and traditional automotive solutions
- They leverage assets and partnerships effectively, particularly in software and embedded systems development, resulting in a diverse portfolio of offerings in autonomous, connected, and electric mobility
- These players make significant investments in Intellectual Property (IP), Centers of Excellence (CoEs), employee certifications, and labs, showcasing their expertise in ADAS, sensor fusion, infotainment, V2X communications, battery management systems and software

Major Contenders:

Akkodis, AVL, Bertrandt, Cognizant, Cyient, DXC Technologies, FEV, FPT, IAV, Infosys, NTT DATA, Tata Elxsi, Tata Technologies, Tech Mahindra, and T-Systems

- The Major Contenders segment comprises a mix of IT-heritage firms, pure-play engineering firms with a broader industry focus, and players that have a dedicated focus on automotive engineering services
- While these players have made significant investments in building automotive engineering expertise, their service portfolio is not as extensive as that of Leaders (in terms of presence across the value chain elements, geographies, or service functions)
- They are also focusing on expanding their delivery presence and leveraging partnerships with hyperscalers, technology firms, and academia to strengthen their presence in automotive engineering services

Aspirants:

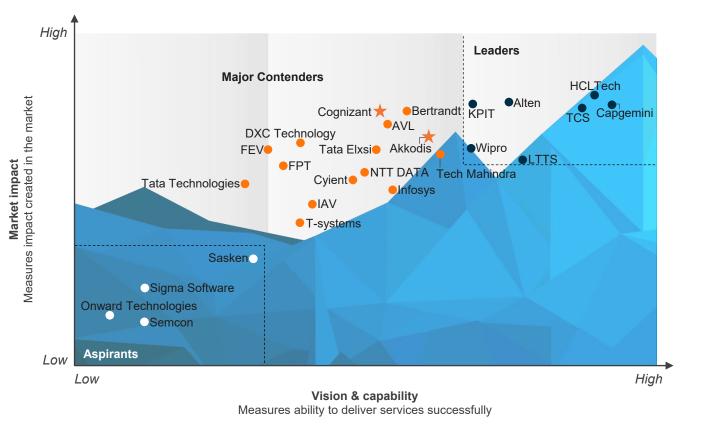
Onward Technologies, Sasken, Semcon, and Sigma Software

- Aspirants possess strong capabilities in specific technology areas and value chain elements; however, their global presence and ability to serve projects with wider scopes is limited
- They are making focused investments for enhancing their solutions portfolio, improving service enablement capabilities, and expanding their footprint and client base

Everest Group PEAK Matrix®

ACES Automotive Engineering Services PEAK Matrix[®] Assessment 2023 | Wipro is positioned as a Leader

Everest Group ACES Automotive Engineering Services PEAK Matrix[®] Assessment 2023¹





Leaders

Aspirants

С

☆

Major Contenders

Star Performers

1 Assessments for Alten, AVL, Bertrandt, DXC Technology, FEV, IAV, Semcon, Sigma Software, and Tata Technologies exclude service provider inputs and are based on Everest Group's proprietary Transaction Intelligence (TI) database, service provider public disclosures, and Everest Group's interaction with buyer Source: Everest Group (2023)

Wipro profile (page 1 of 4) Overview

Vision and strategy

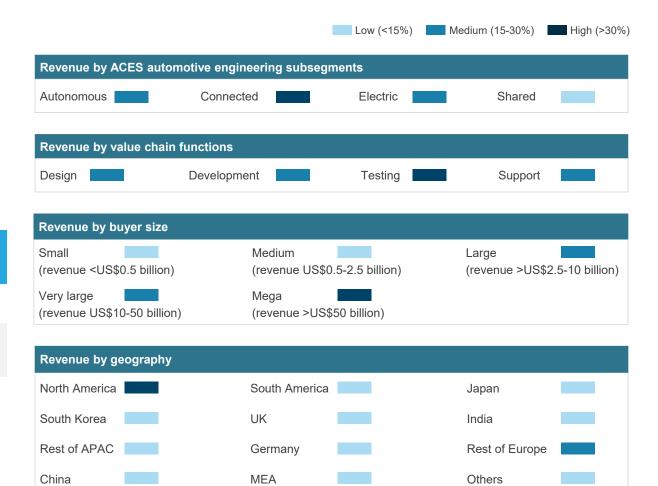
The company aims to be a transformation partner in empowering the automotive industry with cloud-enabled mobility at scale through seamless integrated offerings across in-vehicle hardware, virtualization, hyper-scaler spectrum, connectivity, and security, allowing automakers to engineer vehicles that get better every day.

Wipro adopted the following strategies to achieve its goals:

- Increased footprint in next-generation automotive technologies
- Investments in emerging / new growth avenues
- Leveraged alliances and partnerships to bring end-to-end capabilities
- Improved market recognition via thought leadership and delivery excellence

ACES automotive engineering services revenue (January 2022 – December 2022)

<us\$50 million<="" th=""><th>US\$50-100 million</th><th>US\$100-200 million</th><th>>US\$200 million</th></us\$50>	US\$50-100 million	US\$100-200 million	>US\$200 million		
YoY growth rate in ACES automotive engineering services revenue (January 2022 – December 2022)					
<25%	25-50%	50-75%	>75%		



Wipro profile (page 2 of 4) Case studies and solutions

Case study 1

Development of a next-generation SDV for a global, Tier 1 automotive company

Business challenge

The customer was looking for a partner in its journey to transform into a more agile and technology-centric organization in the increasingly software-centric automotive industry.

Solution and impact

- Turnkey execution: enabled the complete ownership of the software execution
- Strategic consulting: established an overall solution roadmap and design principles to meet the customer's vision for the next 5 to 10 years
- End-to-end design and development: of the a next-generation E/E architecture platform for SDVs
- Established a large-scale offshore software engineering center in India

Case study 2

Truck as a Service (TAAS) for a new-age electric truck OEM

Business challenge

The client was looking at developing an elastic, fault-tolerant, scalable, and extensible solution to revolutionize last-mile logistics with sustainable, full electric trucks.

Solution and impact

- Created a Truck-as-a-Service (TAAS) business model and established a connected cloud platform enabling drivers, fleet managers, and customer employees
- Enabled the design and development of the cloud platform based on a broad range of use cases from vehicle management, driver management, access &and safety, vehicle interface, and fleet ecosystem to predictive maintenance, cargo handling, energy management, infotainment, etc.
- Introduced innovative design-driven delivery approach in agile execution

Proprietary solutions (representative list)			
Solution	Details		
Anomaly Detection Platform solution for EVs	Remote data collection and predictive analytics for EVs		
App Assure	Automation of testing of in-car applications		
Auto Insights	Helps auto OEMs maximize car lifetime value across various touchpoints throughout the value chain, across all life cycle phases: evaluate, buy, insure, service, and resale		
Cloud Car	Cloud transformation of in-vehicle software by bringing together Wipro's FullStride Cloud Services and engineering capabilities with a best-in-class partner ecosystem		
Intelligent Charging Station Management System	Solution to make the charging ecosystem smarter		
Intelligent Energy Storage Management System (iESMS)	Solution to address the best strategy for energy management system		
Lab Car & Mule Car Platform (WISECAR Platform)	A platform that ensures the best out of the realistic product to the market with end-to- end test case verification		
SDV in-a-box Global Simulator	Testing at scale with the road simulation and scenario repository		
SysAssure	Automating testing for in-car system performance and stability; back-end server load tests and telematics data server tests		

Wipro profile (page 3 of 4) Investments and partnerships

Key alliances and partnerships (representative list)		
Company	Details	
AVL	Complete test suite and setup for Model-in-the-Loop (MIL), Software-in-the-Loop (SIL), Hardware-in-the-Loop (HIL), and Vehicle-in-the-Loop (VIL)	
Spartan	Software-defined 4D imaging radar technology to build next-generation Advance Driver Assistance Systems (ADAS) on the Wipro cloud car platform	
LeddarTech	Sensor fusion for perception as part of the ADAS programs	
DynaTrace	Data platforms	
TTTech	Automation of workflows, from cloud to embedded	
FEV	Powertrain domain engineering solutions	

Recent ACES automotive engineering services investments/acquisitions (representative list)		
Investment/target	Description	
Spartan	Series B funding through Wipro Ventures, Wipro's corporate investment arm	
CoE – Cloud Car	Cloud transformation of in-vehicle software to help auto-makers innovate faster at a lower cost and keep Software-defined Vehicles (SDVs) digitally relevant for years	
CoE – ADAS / AV	Develop, optimize, and commercialize computer vision and deep learning algorithms for autonomous vehicle use cases	
CoE – FuSa	Dedicated center for complete Functional Safety (FuSa) compliance, management, and consulting	
CoE – eCockpit	Dedicated center for Android automotive-based IVI and digital cockpit use cases	
CoE – EV	CoEs covering battery management systems, battery design solutions, power distribution designs, electric powertrain/propulsion systems, charging systems, electric components engineering (power converters, microcontrollers, electric motors, etc.), system architecture, functional safety, cybersecurity, system integration techniques, and system validation solutions	



Wipro profile (page 4 of 4) Everest Group assessment – Leader

Measure of capability: 🕐 Low 🛑 High



Strengths

- Wipro has significantly invested in developing IP, partnerships, and key employee skillsets across multiple areas within the autonomous and connected subsegments
- Clients have appreciated Wipro's commitment to the engagement, deep talent pool, and its automotive expertise that helps it to understand their needs and to deliver solutions
- Through its strong focus on software and embedded engineering services, Wipro has showcased its ability to provide customers with a comprehensive suite of solutions in the areas of connected mobility, ADAS, and functional safety
- Wipro has a well-balanced portfolio across the ACES subsegments, enabling it to deliver a wide variety of solutions to its customer
- It showcases a good mix of pricing models in both traditional as well as emerging models such as outcome-based pricing

Limitations

- While Wipro has made significant investments on IP and partnerships, it could further focus on building more capabilities in areas such as labs, innovation centers, and employee certification programs to enhance its service expertise across subsegments
- While clients appreciate Wipro's commitment to the engagement, they also suggest that it needs to improve on project management capabilities
- Its client portfolio consists of players from North America and Europe primarily, with no significant presence in APAC
- While Wipro's portfolio is focused on product testing and support functions of the ACES value chain, it has a limited focus on product development and design functions compared to its peers

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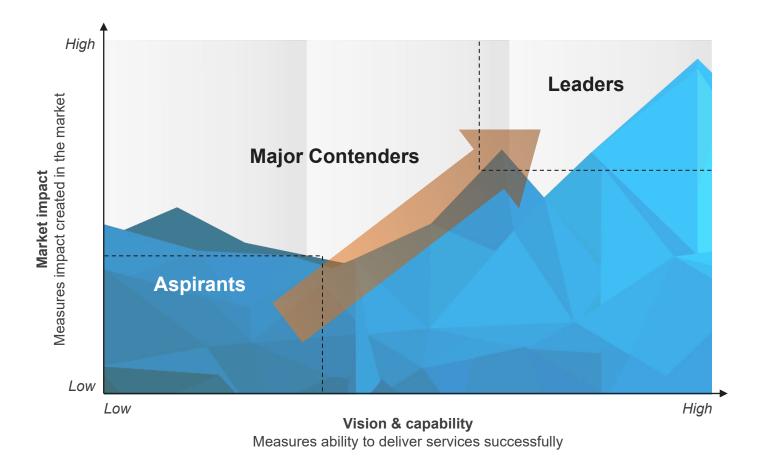
Appendix



Everest Group PEAK Matrix[®] is a proprietary framework for assessment of market impact and vision & capability

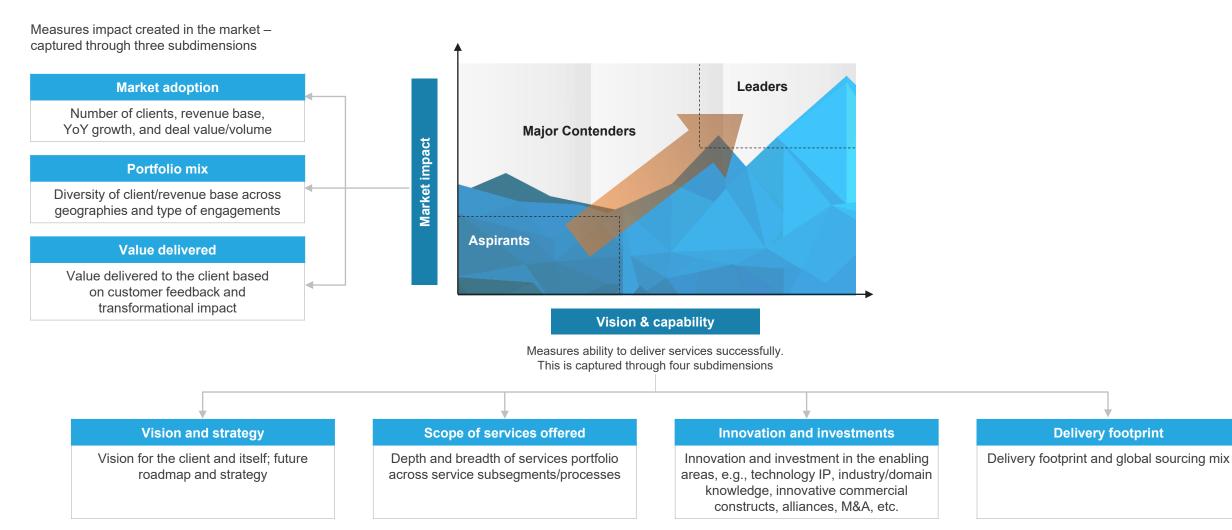


Everest Group PEAK Matrix



Services PEAK Matrix® evaluation dimensions





Everest Group confers the Star Performers title on providers that demonstrate the most improvement over time on the PEAK Matrix®



Everest Group selects Star Performers based on the relative YoY improvement on the PEAK Matrix Year 1 In order to assess advances on market impact, Market impact we evaluate each provider's performance across a number of parameters including: Year 0 • Yearly ACV/YoY revenue growth • # of new contract signings and extensions • Value of new contract signings • Improvement in portfolio mix Improvement in value delivered Vision & capability In order to assess advances on vision and capability, We identify the providers whose improvement ranks in the we evaluate each provider's performance across top quartile and award the Star Performer rating to those a number of parameters including: providers with: Innovation • The maximum number of top-quartile performance • Increase in scope of services offered improvements across all of the above parameters • Expansion of delivery footprint AND Technology/domain specific investments • At least one area of top-quartile improvement performance in both market success and capability advancement

The Star Performers title relates to YoY performance for a given vendor and does not reflect the overall market leadership position, which is identified as Leader, Major Contender, or Aspirant.

Methodology

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Does the PEAK Matrix® assessment incorporate any subjective criteria?

Everest Group's PEAK Matrix assessment takes an unbiased and fact-based approach that leverages provider / technology vendor RFIs and Everest Group's proprietary databases containing providers' deals and operational capability information. In addition, we validate/fine-tune these results based on our market experience, buyer interaction, and provider/vendor briefings.

Is being a Major Contender or Aspirant on the PEAK Matrix, an unfavorable outcome?

No. The PEAK Matrix highlights and positions only the best-in-class providers / technology vendors in a particular space. There are a number of providers from the broader universe that are assessed and do not make it to the PEAK Matrix at all. Therefore, being represented on the PEAK Matrix is itself a favorable recognition.

What other aspects of the PEAK Matrix assessment are relevant to buyers and providers other than the PEAK Matrix positioning?

A PEAK Matrix positioning is only one aspect of Everest Group's overall assessment. In addition to assigning a Leader, Major Contender, or Aspirant label, Everest Group highlights the distinctive capabilities and unique attributes of all the providers assessed on the PEAK Matrix. The detailed metric-level assessment and associated commentary are helpful for buyers in selecting providers/vendors for their specific requirements. They also help providers/vendors demonstrate their strengths in specific areas.

What are the incentives for buyers and providers to participate/provide input to PEAK Matrix research?

- Enterprise participants receive summary of key findings from the PEAK Matrix assessment
- For providers
- The RFI process is a vital way to help us keep current on capabilities; it forms the basis for our database without participation, it is difficult to effectively match capabilities to buyer inquiries
- In addition, it helps the provider/vendor organization gain brand visibility through being in included in our research reports

What is the process for a provider / technology vendor to leverage its PEAK Matrix positioning?

- Providers/vendors can use their PEAK Matrix positioning or Star Performer rating in multiple ways including:
- Issue a press release declaring positioning; see our citation policies
- Purchase a customized PEAK Matrix profile for circulation with clients, prospects, etc. The package includes the profile as well as quotes from Everest Group analysts, which can be used in PR
- Use PEAK Matrix badges for branding across communications (e-mail signatures, marketing brochures, credential packs, client presentations, etc.)
- The provider must obtain the requisite licensing and distribution rights for the above activities through an agreement with Everest Group; please contact your CD or contact us

Does the PEAK Matrix evaluation criteria change over a period of time?

PEAK Matrix assessments are designed to serve enterprises' current and future needs. Given the dynamic nature of the global services market and rampant disruption, the assessment criteria are realigned as and when needed to reflect the current market reality and to serve enterprises' future expectations.

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