Everest Group®

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

Focus on HCLTech
September 2023

Everest Group
PEAK MATRIX®

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 ACES Automotive Engineering Services PEAK Matrix® Assessment 2023: Navigating the Future of Automotive Landscape, 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

Geography
Global

Providers
26 leading broad-based and pureplay service providers

Services
Automotive engineering services

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 | HCLTech is positioned as a Leader

Everest Group ACES Automotive Engineering Services PEAK Matrix® Assessment 2023[1]
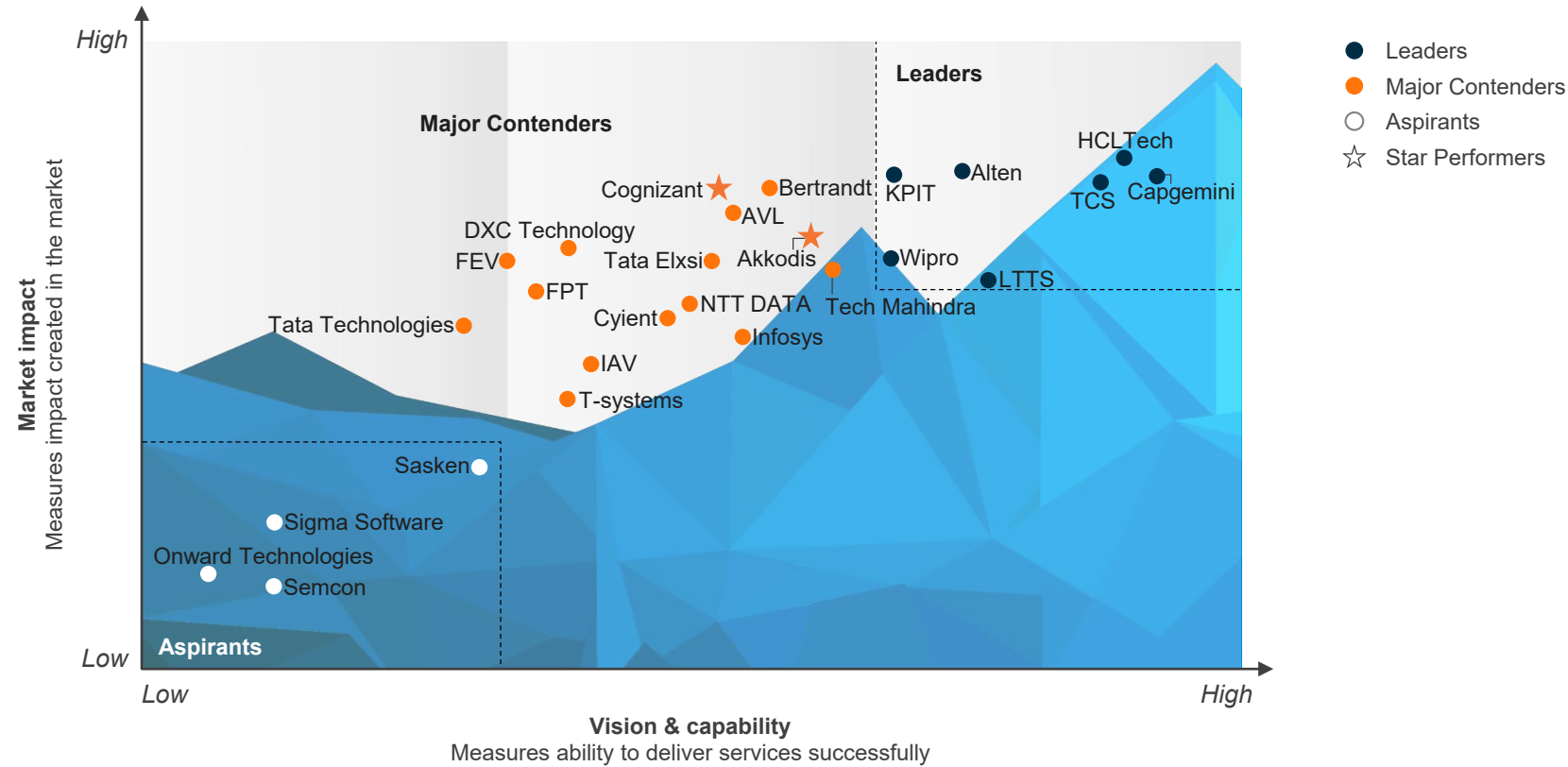
1 Assessments for Alten, AVL, Bertrandt, DXC Technology, FEV, IAV, Semcon, Sigma Software, and Tata Technologies exclude service provider inputs and are based on Everest Group's proprietary Transaction Intelligence (TI) database, service provider public disclosures, and Everest Group's interaction with buyer

Source: Everest Group (2023)

HCLTech profile (page 1 of 4)
Overview

Vision and strategy

HCLTech aims to become a preferred partner for major stakeholders in the automotive and mobility sector, such as OEMs, Tier 1 suppliers, technology firms, and start-ups. Its goal is to accelerate the evolution of the automotive industry toward Autonomous, Connected, Electric, and Shared (ACES) mobility. This effort is supported by a dedicated business unit known as AutoTech. This unit utilizes advanced laboratory facilities, inventive intellectual properties, accelerator frameworks, and a skilled workforce to foster the growth of ACES initiatives and provide impactful solutions.

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

<US$50 million	US$50-100 million	US$100-200 million	>US$200 million
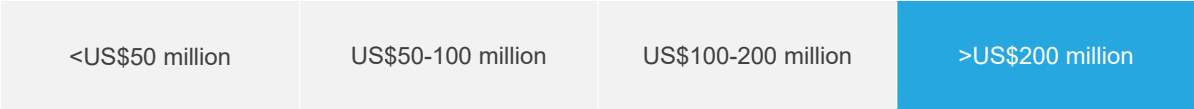
YoY growth rate in ACES automotive engineering services revenue (January 2022 – December 2022)

<25%	25-50%	50-75%	>75%

Legend: Low (<15%) · Medium (15-30%) · High (>30%)
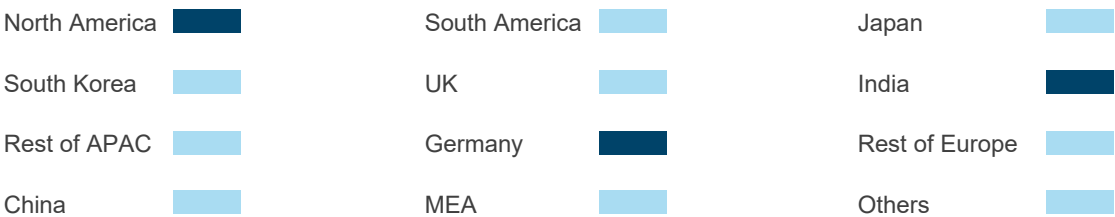
Revenue by ACES automotive engineering subsegments

Autonomous	Connected	Electric	Shared

Revenue by value chain functions

Design	Development	Testing	Support

Revenue by buyer size

Small (revenue <US$0.5 billion)	Medium (revenue US$0.5-2.5 billion)	Large (revenue >US$2.5-10 billion)
Very large (revenue US$10-50 billion)	Mega (revenue >US$50 billion)	

Revenue by geography

North America	South America	Japan
South Korea	UK	India
Rest of APAC	Germany	Rest of Europe
China	MEA	Others
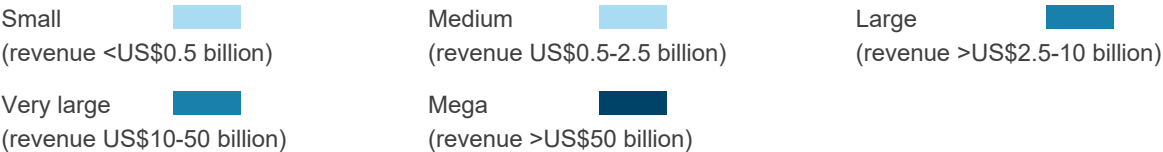
HCLTech profile (page 2 of 4)
Case studies and solutions

Case study 1	Helped a client in developing stereo vision and Electronic Control Unit (ECU)

Business challenge

The customer wanted a partner on Stereo Vision - ECU for multiple vehicle platforms of premium passenger vehicles.

Solution and impact

HCLTech provided solutions for the application and Basic Software (BSW) layers for different features (lane keep assist, traffic sign recognition, free space detection, vehicle configuration, object detection, and egomotion) along with support in various compliances and standards such as AUTOSAR, FuSa, ASPICE, SYS & SW Engg, and V&V. This allowed the client to provide its customers with a smooth and engaging digital experience, thereby contributing to growth through improved operational efficiency.

Case study 2	Helped a client in developing an electric Vehicle Control Unit (VCU)

Business challenge

The customer was looking for a partner to design and build a Vehicle Control Unit (VCU) for the platform development of an electric light-duty vehicle.

Solution and impact

HCLTech utilized its team of specialists in embedded software, hardware, and mechanical domains for product design, development, and testing. It also engaged its partner ecosystem to employ the AUTOSAR product stack. This unified approach fulfilled all requirements within the stipulated timeline, consequently lowering execution costs for the customer.

Proprietary solutions (representative list)

Solution	Details
DEMP	HCLTech's hardware and software interface accelerators help in operationalizing a comprehensive energy management platform to collaborate with battery OEMs to deliver superior value to drivers and fleet operators.
DFMpro	An easy-to-use CAD-integrated Design for Manufacturing (DFM) software, it identifies and provides recommendations to resolve potential downstream manufacturing issues and helps reduce expensive and time-consuming design iterations, resulting into the faster development of high-quality products.
ECCO	This is a platform for an enterprise integration solution that enables Teamcenter integration with 3DEXPERIENCE for seamless exchange of design and engineering data across the organization.
EV Charging Station Management Solution	This is a solution for end-to-end charging station lifecycle management and cloud-agnostic architecture.
EVSM	This is a solution for vehicular components (battery and others), vehicle management systems, and charging infrastructure management systems.
HoTE	HCLTech OneTest Embedded is a cross-platform solution for component testing and runtime analysis.
NIO	This is an enterprise-wide energy and GHG emission management solution that helps enterprises become more sustainable, cost, and energy-efficient in their endeavor to reduce their carbon emissions and contribute to their net-zero goals.
NOESIS	This is a platform that accelerates end-to-end cognitive solution development and deployment on Edge and Cloud.
PICASSO™	This is a platform-based framework for intelligent, connected, autonomous, and secure service offerings. It accelerates GTM of platforms for the purpose of offering robust and industrialized pre-built functional and core modules that can be rapidly orchestrated, assembled, and extended to create the platforms.

HCLTech profile (page 3 of 4)
Investments and partnerships

Key alliances and partnerships (representative list)

Company	Details
AVIN	Partnership as an AUTOSAR Stack provider, combining their strengths in a joint go-to-market strategy; the arrangement involved AVIN's product and HCLTech's services working collaboratively.
AWS	A premier consulting partner for Amazon Web services to help accelerate digital transformation initiatives for clients globally
Nvidia	An alliance that helps enterprises to enable the engineering of high-performance and scalable solutions across the globe
Microsoft	A partnership focused on enabling enterprise customers to embrace disruptive innovation by migrating to and building cloud-native services that help clients fulfill their business goals
Cybellum	A partnership focused on providing end-to-end solutions for risk assessment, automated vulnerability management, regulatory compliance, and the ongoing monitoring of vehicle software for emerging vulnerabilities, for the global automotive and transportation industry
GlobalFoundries	A partnership focused on chip implementation services and system-level design solutions to help lower design barriers for customers adopting Global Foundries technology
Samsan-Gnapse	A specialized partnership in the E cockpit area, enabling end-to-end services

Recent ACES automotive engineering services investments/acquisitions (representative list)

Investment/target	Description
Dedicated Business Unit: AUTOTECH	A dedicated business unit that focuses on ACES capabilities, which consists of a team of experts in industry solutions to provide flexible business models and maintain relationships with clients across the globe
Centers of excellence (CoE)	Investments in CoEs for focusing on areas such as ADAS, crash and safety assistance systems, navigation, and GPS systems, Sensing systems (LiDAR & RADAR), active safety, infotainment, telematics, V2X, HMI, network security, battery management, power distribution, electric powertrain, electric components engineering, and user experience
Starschema	Acquired to strengthen capabilities in data engineering and expand its presence in Europe
Quest Informatics	Acquired to enhance cloud-enabled aftermarket ERP, field service management, and digital parts catalog product suites and to expand its presence in the digital aftermarket space
Innovation labs	Invested US$60 million in setting up 100+ engineering labs
Talent development and acquisitions	Invested to build ACES talent at scale to meet the growing market demand
ASAP	Signed a definitive agreement to acquire 100% stakes in ASAP Holding Gmbh to enhance the company's offerings in next-generation technologies (autonomous, electric, and connected) for the global automotive industry; the deal is subject to closing by the end of September 2023

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

Measure of capability: ◔ Low ● High

Market impact				Vision & capability				
Market adoption	Portfolio mix	Value delivered	Overall	Vision and strategy	Scope of services offered	Innovation and investments	Delivery footprint	Overall
●	◕	◕	◕	●	◔	◕	◕	◕

Strengths

- HCLTech has an extensive portfolio of IP around telematics platform, Battery Management System (BMS), and LiDAR supported by a strong and growing ecosystem of partners; this enables it to offer a comprehensive suite of solutions

- Clients appreciate HCLTech's domain knowledge and level of ownership that it brings into their engagements

- The acquisition of ASAP Group is expected to enhance HCLTech's capabilities in automotive engineering, especially in the areas of e-mobility and autonomous driving, and has also helped expand its presence in Germany

- HCLTech has a strong client presence across key geographies such as North America, Europe, and APAC and is also engaged with a diverse clientele spread across small, midsized, and large enterprises

- It has a strong presence in all phases of the automotive engineering value chain, with a balanced focus on software, embedded, and mechanical engineering service functions

Limitations

- Clients have highlighted that HCLTech could focus on investing and understanding new areas for development such as e-drive and power electronics projects

- While HCLTech has a strong presence in autonomous and electric subsegments, it could explore more opportunities in the growing connected subsegment market, which also commands the largest share of portfolio for peers

- HCLTech is still in the early stages of establishing its capabilities in the Software-Defined Vehicles (SDV) domain

- Notwithstanding the recent acquisition of the ASAP Group, HCLTech's spread of FTEs is offshore-skewed and does not have much nearshore and onshore presence, which could affect client interactions

Appendix

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

Everest Group PEAK Matrix
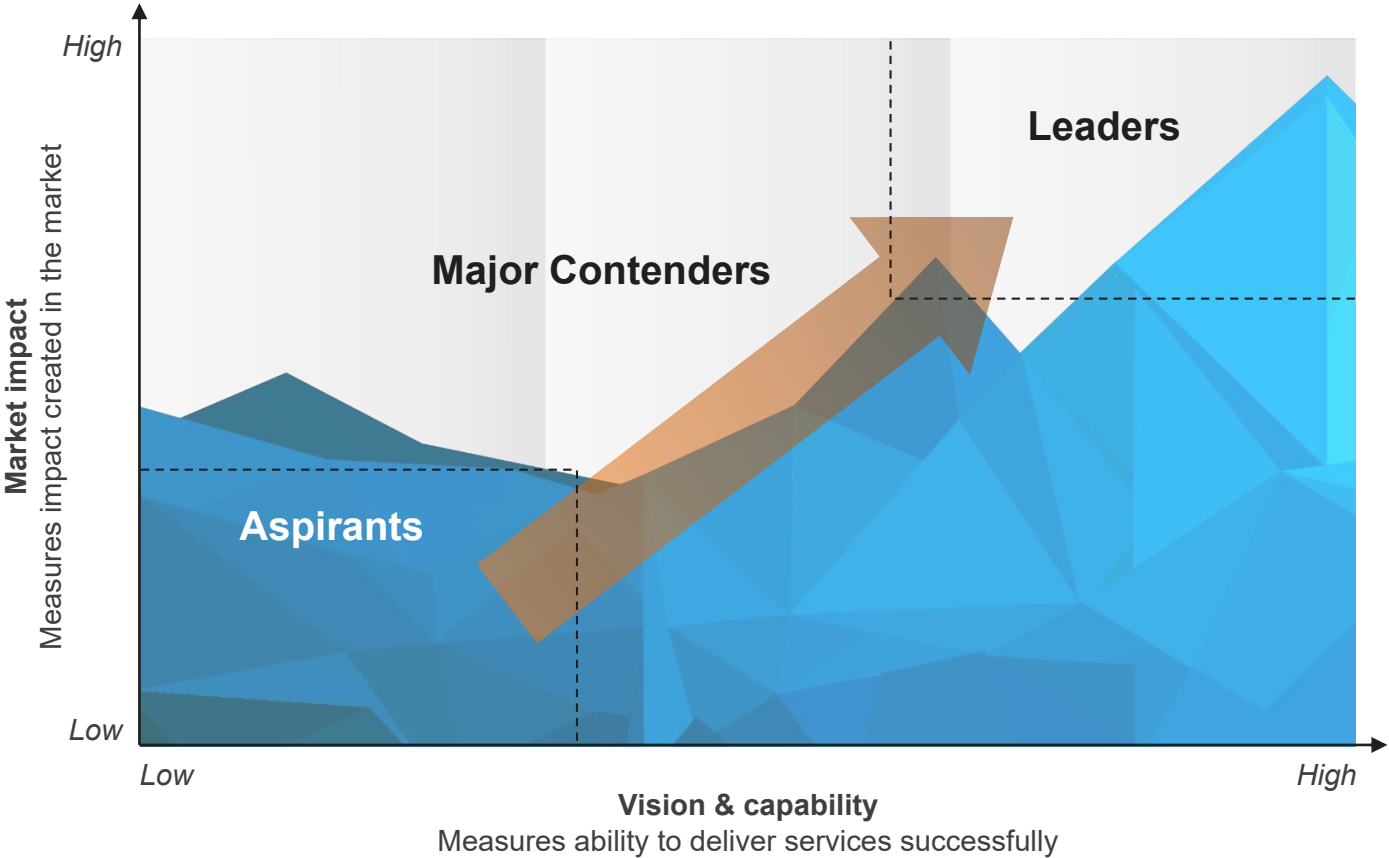
Services PEAK Matrix® evaluation dimensions

Measures impact created in the market –
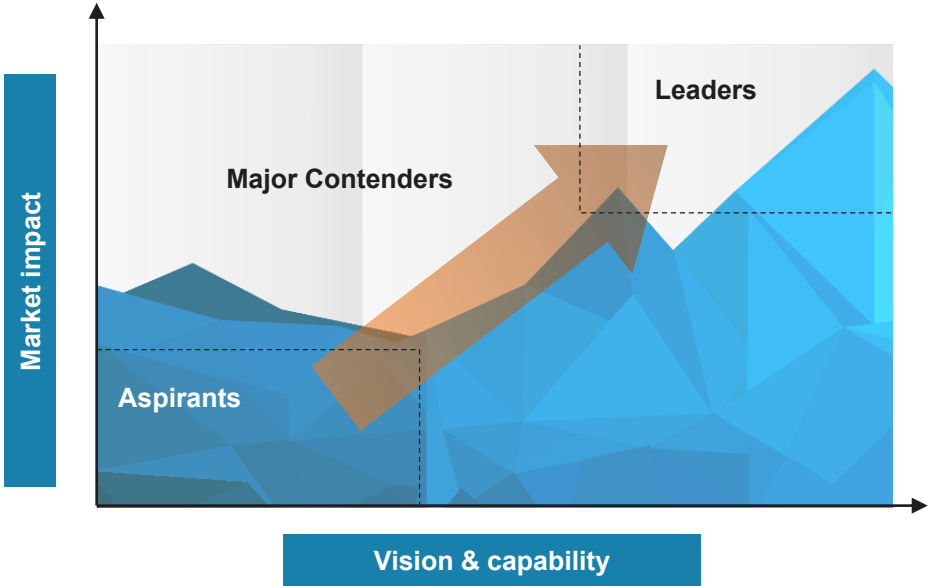captured through three subdimensions

Market adoption

Number of clients, revenue base,
YoY growth, and deal value/volume

Portfolio mix

Diversity of client/revenue base across
geographies and type of engagements

Value delivered

Value delivered to the client based
on customer feedback and
transformational impact

Market impact

Leaders

Major Contenders

Aspirants

Vision & capability

Measures ability to deliver services successfully.
This is captured through four subdimensions

Vision and strategy

Vision for the client and itself; future
roadmap and strategy

Scope of services offered

Depth and breadth of services portfolio
across service subsegments/processes

Innovation and investments

Innovation and investment in the enabling
areas, e.g., technology IP, industry/domain
knowledge, innovative commercial
constructs, alliances, M&A, etc.

Delivery footprint

Delivery footprint and global sourcing mix

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

Methodology

Everest Group selects Star Performers based on the relative YoY improvement on the PEAK Matrix

In order to assess advances on **market impact**, we evaluate each provider's performance across a number of parameters including:
- Yearly ACV/YoY revenue growth
- # of new contract signings and extensions
- Value of new contract signings
- Improvement in portfolio mix
- Improvement in value delivered

In order to assess advances on **vision and capability**, we evaluate each provider's performance across a number of parameters including:
- Innovation
- Increase in scope of services offered
- Expansion of delivery footprint
- Technology/domain specific investments

We identify the providers whose improvement ranks in the top quartile and award the Star Performer rating to those providers with:
- The maximum number of top-quartile performance improvements across all of the above parameters AND
- 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.

FAQs

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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With you on the journey

Everest Group is a leading research firm helping business leaders make confident decisions. We guide clients through today's market challenges and strengthen their strategies by applying contextualized problem-solving to their unique situations. This drives maximized operational and financial performance and transformative experiences. Our deep expertise and tenacious research focused on technology, business processes, and engineering through the lenses of talent, sustainability, and sourcing delivers precise and action-oriented guidance. Find further details and in-depth content at **www.everestgrp.com**.

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