

Automotive Engineering Services PEAK Matrix™ Assessment 2019: Convergence of Mobility and Digital

Engineering Services (ES)

Market Report – September 2019: Complimentary Abstract / Table of Contents

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Custom research capabilities

- Benchmarking | Pricing, delivery model, skill portfolio
- Peer analysis | Scope, sourcing models, locations
- Locations | Cost, skills, sustainability, portfolio – plus a tracking tool
- Tracking services | Service providers, locations, risk
- Other | Market intelligence, service provider capabilities, technologies, contract assessment

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Background and methodology of the research

Background of the research

The automotive industry is undergoing rapid evolution ushered in by innovative and disruptive technologies. Next-generation technological themes have redefined the entire automotive landscape and both the existing giants and new entrants are focusing on enhancing their capabilities and developing pertinent expertise. The industry is witnessing inception of new and varied end-users' expectations which has raised new challenges for the Original Equipment Manufacturers (OEMs) and Tier-1s, and automobiles now are not only expected to be just connected with everything (V2X) but are also expected to be as smart as smartphones. These challenges are accompanied by stricter environmental and safety regulatory stringency, and in the light of these advancements, all OEMs and Tier-1s have geared up to acquire the requisite resources and capabilities to hold onto their current share in the market.

Automobile manufacturers are seeking efficient ecosystems with strategic partners to cater to the evolving landscape. It has created a plethora of opportunities for service providers to be a part of this transformation journey by offering engineering solutions to global automotive players. Service providers are capturing these opportunities by offering advanced and skilled engineering services, both off-the-shelf and customized, which are providing automotive players with significant cost savings and a faster time-to-market.

In this research, we present fact-based trends impacting the automotive engineering services market, along with the assessment and detailed profiles of 22 service providers featured in the automotive engineering services PEAK Matrix™.

Scope of this report

- **Services:** Automotive engineering services
- **Geography:** Global
- **Service providers:** 22 leading automotive engineering service providers

Methodology:

The assessment is based on Everest Group's annual RFI process concluded over Q4 2018 and Q1 2019, interactions with leading automotive engineering service providers, and analysis of the marketplace.

Overview and abbreviated summary of key messages (page 1 of 2)

This report provides a comprehensive assessment of the automotive engineering services market and maps the leading service providers on Everest Group's PEAK Matrix. It also includes detailed profiles of featured service providers.

Some of the findings in this report, among others, are:

Market growth

- Automotive engineering services have witnessed a robust growth of around 17.5% and are among the fastest growing areas in the global engineering services market
- Technology-enabled disruption of products, services, and operations is providing significant impetus to growth in automotive engineering services outsourcing

Market trends

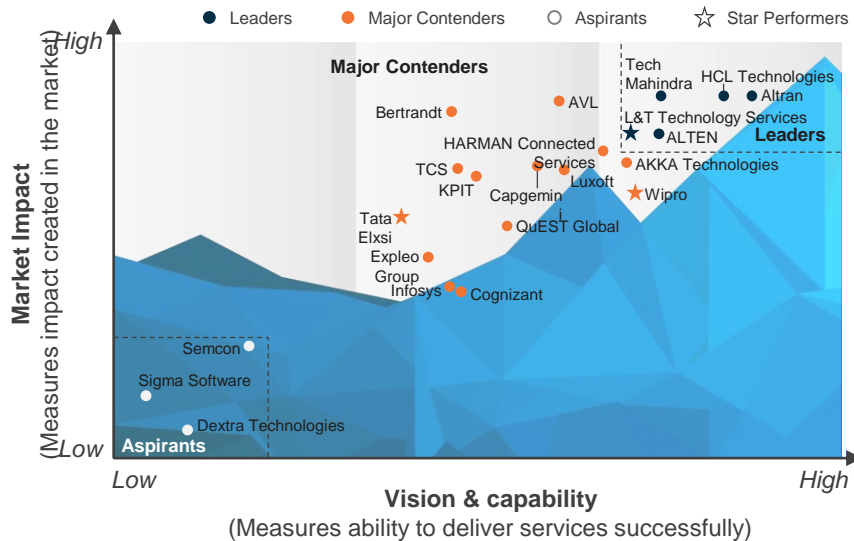
- Evolving customer preferences, shifting demand centers, software-led disruption, and regulatory stringency have impacted the fundamentals of the automotive industry
- Emerging technologies are witnessing significant traction in the automotive industry and acting as key enablers in driving transformation across products, services, and operations
- The automotive industry is witnessing a gradual rise in additional sources of revenue, such as mobility-as-a-service, connected navigation services, and in-house entertainment, to supplement slowing growth in vehicle sales
- OEMs and Tier-1s are proactively seeking partners in this transformation journey; service providers have a plethora of opportunities to assist them in developing the next big breakthroughs and to offer advanced engineering solutions
- Service providers are developing expertise across the entire value chain. The broad categories of key areas in focus are Advanced Driver Assistance Systems (ADAS) & autonomous driving, powertrain & electrification, and infotainment & connectivity

PEAK Matrix for automotive engineering services

- Analysis of the service provider landscape for automotive engineering services, leveraging Everest Group's PEAK Matrix, highlights the following categories of service providers:
 - **Leaders:** ALTEN, Altran, HCL Technologies, L&T Technology Services, and Tech Mahindra
 - **Major Contenders:** AKKA Technologies, AVL, Bertrandt, Capgemini, Cognizant, Expleo Group, HARMAN Connected Services, Infosys, KPIT, Luxoft, QuEST Global, Tata Elxsi, TCS, and Wipro
 - **Aspirants:** Dextra Technologies, Semcon, and Sigma Software
- The Leaders are recognized for their ability to offer large-scale automotive engineering engagements utilizing their widespread delivery footprint and strong project management capabilities
- The Major Contenders have made credible efforts to enhance their domain expertise and delivery capabilities, however, their service portfolio is not as extensive as that of Leaders (in terms of presence across the value chain elements, vehicle body parts, or service functions)
- Aspirants exhibit strong capabilities in delivering automotive engineering services for specific niches or some key thematic areas

This study provides a deep dive into key aspects of automotive engineering services market; below are some charts to illustrate the depth of the report

Assessment of Automotive Engineering Services Providers



- 1 Assessments for AKKA Technologies, ALTEN, AVL, Bertrandt, Cognizant, Expleo Group, HARMAN, Infosys, KPIT, Luxoft, QuEST Global, Sigma Software, Semcon, TCS, and Tata Elxsi are based on Everest Group's estimates that leverage Everest Group's proprietary Transaction Intelligence (TI) database, ongoing coverage of these service providers, and service provider public disclosures
- 2 Analysis for Altran is based on capabilities before its acquisition by Capgemini

Capability assessment

Illustrative example

Measure of capability: ● High ○ Low

Service provider	Market impact				Vision & capability				
	Market adoption	Portfolio mix	Value delivered	Overall	Scope of services offered	Innovation and investments	Delivery footprint	Vision and strategy	Overall
Service provider 1	●	○	●	●	●	○	●	●	○
Service provider 2	○	○	○	○	○	○	●	○	○
Service provider 3	○	●	○	○	○	○	○	○	○
Service provider 4	○	○	○	○	●	○	○	○	○
Service provider 5	●	●	○	○	○	○	○	○	○
Service provider 6	○	○	○	○	○	○	○	○	○
Service provider 7	○	○	○	○	○	○	●	○	○
Service provider 8	○	○	○	○	○	○	○	○	○
Service provider 9	○	○	○	○	○	○	○	○	○

Everest Group's remarks on service providers

Illustrative example

Strengths

- Robust foothold in the market owing to its extensive solutions portfolio, along with strong partnerships with technology leaders
- Dedicated investments in CoEs, labs, acquisitions, and talent enhancement through certifications to strengthen capabilities in next-generation themes

Areas of improvement

- Needs to improve its expertise around supply chain operations to become a single end-to-end partner across the entire value chain like other Leaders
- Needs to increase its revenue potential and gain competitive advantage in comparison to other players in the Leaders' segment

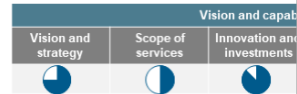
This report has over 22 service provider profiles

Service Provider | Snapshot (page 1 of 3)

Overview

Vision & strategy: Service provider's vision is to be the partner of choice for the mobility industry, looking to accelerate engineering transformation with new-age technologies. It intends to work closely with top OEMs and Tier-1s, helping them navigate through this transformational phase and offering technology solutions to better respond to the market demands in order to enable next...

Summary of PEAK Matrix assessment



Strengths

- Robust foothold in the market owing to its extensive... with strong partnerships with technology leaders
- Dedicated investments in CoEs, labs, acquisitions, through certifications to strengthen capabilities in ne...

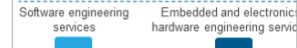
Automotive engineering services revenue



Revenue by value chain element



Revenue by service function



Service Provider | Snapshot (page 2 of 3)

Case studies and solutions

NOT EXHAUSTIVE

Case study 1

Development of an instrument dashboard cluster of an autonomous car for a leading Japanese Tier-1 supplier

Business challenge The client wanted end-to-end development of an instrument dashboard cluster for a leading Japanese Tier-1 supplier. The cluster includes multiple display modules, end-to-end dashboard cluster, and system integration technologies.

Solution and impact Service provider provided the client with end-to-end development, test case design, test environment setup, and result log. The product is currently being used in multiple million cars worldwide.

Key proprietary solutions (representative list)

Solution	Details
Solution 1	A modular automation solution
Solution 2	A set of software tools
Solution 3	An autonomous driving solution
Solution 4	An extended range solution
Solution 5	An advanced driver assistance solution
Solution 6	An analytics solution
Solution 7	A test automation solution



Service Provider | Snapshot (page 3 of 3)

Investments and partnerships

NOT EXHAUSTIVE

Key alliances and partnerships (representative list)

Partner name	Details
Partner 1	Service provider is a premium partner and provides solutions for various layers of AUTOSAR stack for its customers to develop and establish an open industry standard
Partner 2	Partnership in the areas of model-based development, AUTOSAR, and cybersecurity. It also uses partner's hardware and software to create Hardware In Loop (HiL) models and automated testing
Partner 3	Longstanding partnership providing end-to-end services across products and solutions
Partner 4	Partnership to provide type approval and homologation, from Indian regulators, as-a-service to global customers
Partner 5	Strong relations with leading ISVs to offer services on top of their platforms and help customers make the best out of their investments
Partner 6	Partnership to help clients advance UI creation, including design, development, systems integration, deployment, and support
Partner 7	Partnership to build product components and solution accelerators with a major focus on imaging, wireless communication, and analog system application

Recent automotive engineering investments (representative list)

Development	Details
Acquisition 1	Acquisitions have helped to create a portfolio of end-to-end engineering and R&D capabilities across the full product life cycle, hardware, software, mechanical, manufacturing, and PLM services as well as augment nearshore delivery capabilities
Investment 1	Service provider built capabilities and capacity for integration of autonomous vehicle subsystems, for both on-road and off-road vehicles, and developed reusable components to accelerate development of autonomous vehicles
Investment 2	Service provider has invested in industrial design, VAVE, CAE, reliability, MES, MBD, ADAS, autonomous driving, In-Vehicle Infotainment (IVI), AUTOSAR, telematics, imaging, and data analytics CoEs
Investment 3	Service provider has invested in test labs and infrastructure such as value engineering labs, environmental labs, ENC and durability lab, network test lab, and design assurance lab
Investment 4	Service provider has developed a common global platform to enable V2X connectivity features in vehicles that integrates with regional platforms working on different protocols



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Research calendar – Engineering Services (ES)

Published
 Planned
 Current release

Flagship Engineering Services reports

Release date

Software Product Engineering Services PEAK Matrix™ Assessment 2019: Engineering for the Digital World	August 2019
Automotive Engineering Services PEAK Matrix™ Assessment 2019: Convergence of Mobility and Digital	September 2019
Internet of Things Technology Services PEAK Matrix™ Assessment 2019	Q4 2019
Verification and Validation Services PEAK Matrix™ Assessment 2019	Q4 2019

Thematic Engineering Services reports

The Imminent Wave of Consolidation in Industrial Internet of Things (IIoT) Platforms	March 2019
Engineering Services - Top 50	July 2019
Global Technology Centers (GTCs) in India: Software Products Enterprises' Solution to DIY	July 2019
Leading the Pack: Trends for the Top 200 Engineering Research & Development (ER&D) Enterprises	Q4 2019
SDX – The Only Singularity in the World of Digital	Q4 2019
Hybrid Sourcing Models For Engineering Services	Q4 2019
Roadblocks to Realizing the Potential of Industry 4.0	Q4 2019
Leveraging Indian GICs for Delivering the Global Innovation Charter	Q4 2019

Note: For a list of all of our published ES reports, please refer to our [website page](#)

Additional Engineering Services research references

The following documents are recommended for additional insight on the topic covered in this report. The recommended documents either provide additional details on the topic or complementary content that may be of interest

1. **Global Technology Centers (GTCs) in India: Software Products Enterprises' Solution to DIY** ([EGR-2019-34-R-3276](#)); 2019. This report explores the landscape of services delivered by the software products GTCs in India. It provides an overview of the key trends in this market, the various challenges that they face and the nature of work that they deliver. It also provides different points of view on how these GTCs can play an even greater role with respect to innovation and increase their strategic presence in global delivery. Lastly, it describes the outlook for the future
2. **The Imminent Wave of Consolidation in Industrial Internet of Things (IIoT) Platforms** ([EGR-2019-40-V-3078](#)); 2019. This viewpoint assesses how the IIoT platform landscape, comprising over 350 platforms, is heading toward a foreseeable consolidation. It puts a spotlight on these factors that will drive this consolidation while offering a perspective of other industries that have gone through this process. It also analyzes the phases in evolution of the IIOT platforms landscape through a consolidation framework
3. **Software Product Engineering Services PEAK Matrix™ Assessment 2019: Engineering for the Digital World** ([EGR-2019-40-R-3305](#)); 2019. Software is playing an increasingly important role in helping enterprises bring about innovation across products and services and deliver a superior user experience. As enterprises embrace this software-led innovation, they are also looking to drive modularity, scalability, and mass customization in their software products in order to meet the evolving end-user expectations. In this research, we present fact-based trends impacting the software product engineering services market, along with the assessment and detailed profiles of 25 service providers featured on the software product engineering services PEAK Matrix.

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