

Everest Group Connected Product Engineering Services PEAK Matrix[®] Assessment 2024

Focus on Capgemini June 2024



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Introduction

The recent advances in technology have led to a massive digital wave in the engineering world, wherein physical products are being enhanced by making them smarter, connected, autonomous, and intelligent. To cater to the evolving customer needs and provide a rich customer experience, enterprises are making significant investments in next-generation technologies such as AI/ML, AR/VR, 5G, blockchain, IoT, and cybersecurity, which serve as the backbone of digital products. However, the rapid pace of innovation and the need to stay ahead of market trends in this current space necessitates the need to establish a compelling partnership ecosystem that can help enterprises accelerate time-to-market. To cater to this growing demand from enterprises, engineering service providers are actively enhancing their capabilities and offerings to unlock the potential of data from connected products, integrate multiple technologies for better user experience, and ultimately engineer technologically sound digital products.

This research is the first edition of Everest Group's <u>Connected Product Engineering Services PEAK Matrix®</u> <u>Assessment 2024</u>, wherein we have presented an assessment of 21 engineering service providers featured on the PEAK Matrix, along with the sourcing considerations for enterprises. This assessment is based on the RFI responses from providers, interactions with their digital product engineering leadership, client reference checks, and ongoing analysis of the engineering services market.

The full report includes the profiles of the following 21 leading engineering services providers featured on the Connected Product Engineering Services PEAK Matrix:

- Leaders: Accenture, Akkodis, Capgemini, Cognizant, HCLTech, LTTS, and TCS
- Major Contenders: Apexon, Cyient, eInfochips, Infosys, Randstad Digital, Softdel, Tata Elxsi, Tech Mahindra, UST, VVDN Technologies, and Wipro
- Aspirants: GS Lab | GAVS, N-iX, and Onward Technologies

Scope of this report

Geography: Global

Industry: 21 leading engineering service providers

Services: Connected product engineering services

Connected product engineering services PEAK Matrix[®] characteristics

Leaders

Accenture, Akkodis, Capgemini, Cognizant, HCLTech, LTTS, and TCS

- The Leaders segment comprises both pure play as well as broad-based IT-heritage firms that have developed dominant capabilities in offering multi-disciplinary connected product engineering services across engineering and design, embedded and network engineering, and connected platform engineering
- Leaders have been able to successfully grow organically by forming partnerships with hardware, embedded, and software vendors and making investments in developing labs, CoEs, and innovation centers in next-generation technologies such as AR/VR, IoT, analytics, AI/ML, 5G, semiconductor engineering, and ASIC design
- Their global delivery presence has helped them achieve the right balance of client proximity and cost advantages in servicing large-scale engagements
- These providers are extensively focusing on putting their skin in the game and shifting beyond traditional pricing models toward emerging commercial constructs such as outcome-based, revenue sharing, and risk-reward models

Major Contenders

Apexon, Cyient, eInfochips, Infosys, Tata Elxsi, Tech Mahindra, Randstad Digital, Softdel, UST, VVDN Technologies, and Wipro

- Major Contenders also comprise both IT-heritage firms as well as pure-play engineering service providers
- These providers are actively making investments in establishing labs and CoEs and developing IP and solutions in areas such as AI/ML, testing, analytics, IoT, cybersecurity, and embedded systems
- Although they have strong partnerships across connected product engineering, some of their strategic partnerships/alliances in the areas of embedded and hardware engineering are yet to mature at par with the Leaders

Aspirants

GS Lab | GAVS, N-iX, and Onward Technologies

- Aspirants offer capabilities mostly across the software engineering part of the value chain and have a limited portfolio of services required to develop hardware and embedded products
- Although Aspirants are actively training and upskilling their engineering talent, their investments in labs, CoEs, partnerships, and IP are limited

Everest Group PEAK Matrix®

Connected Product Engineering Services PEAK Matrix® Assessment 2024 | Capgemini is positioned as a Leader

Everest Group Connected Product Engineering Services PEAK Matrix® Assessment 2024^{1,2}

- LeadersMajor Contenders
- O Aspirants



1 Assessments for GS Lab I GAVS, Infosys, Onward Technologies, and Wipro exclude provider inputs and are based on Everest Group's proprietary Transaction Intelligence (TI) database, provider public disclosures, and Everest Group's interactions with buyers 2 Assessment of GS Lab I GAVS covers the capabilities of the combined entity formed by merging GS Lab and GAVS Source: Everest Group (2024)

Medium (15-30%)

• High (>30%)

Capgemini profile (page 1 of 6)

Overview

Vision and strategy

Capgemini aspires to build capabilities toward intelligent products and services by transforming and innovating across strategy, design, technology, engineering, data science, and operational excellence. Capgemini aspires to help enterprises capture market share by modernizing and accelerating their businesses.

Capgemini's strategy is to form strategic partnerships with enterprises, to enable their clients to transition toward intelligent connected products, supported by labs, facilities, and Centers of Excellence (CoEs). By building competency in next-generation software solutions and customer experience offerings, Capgemini aims to help its clients and partners to accelerate their digital roadmap and innovate at scale.

Connected product engineering services revenue (CY2022)

<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 connected product engineering services revenue (CY2022)				

<25% 25-50% 50-75% >75%	
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Revenue of connected product engineering by value chain functions

 Ideation and design 	 Product development 	 Testing and certification 	 Product support and maintenance 	
Revenue by connect	ed product engineeri	ng segments		
Engineering and de	esign 🛛 🔵 Embe	edded engineering	 Connected platform engineering 	
Revenue by connect	ed product engineeri	ng verticals		
Aerospace and defe	ense Autor	notive	Consumer electronics	
Energy and utilities	Indus	trial products	Medical devices	
Retail	Semi	conductor	Telecom	
Others				
Revenue by connected product engineering geographies				
North America	 Unite 	d Kingdom	• Europe	
India	China	1	Japan	
Rest of Asia Pacific	e Middl	e East and Africa	South America	

Low (<15%)</p>

Others

[NOT EXHAUSTIVE]

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Case studies

CASE STUDY 1

Business challenge

The client, a heavy engineering firm, wanted to improve the performance of its automated hoisting system with advanced connectivity to overcome wiring and Wi-Fi limitations using 5G connectivity. The client required this enhancement to strengthen an automated hoisting solution that could be deployed at customer sites, such as steel plants and ports.

Solution

Capgemini, in collaboration with Qualcomm, helped the client to enhance the capabilities of automated hoisting systems. Capgemini helped the client to design, integrate, and operate the 5G network, helping the client in improving end-user productivity and efficiency while reducing the system's reliance on wiring and Wi-Fi.

CASE STUDY 2

Business challenge

The client required a connected product ecosystem, which could offer a comprehensive and connected view of cat health using the data and previous IP available through an acquisition. The client required a price-sensitive solution incorporating security protocols as per industry standards for the platform.

Solution

Capgemini helped the client using its convergent design approach to develop a solution with integration across hardware, software, and AI capabilities optimizing carbon footprint and cost of operation. Capgemini delivered the solution that claims to have positive reviews from customers, proving helpful to save cats' life.

Capgemini profile (page 3 of 6)

Solutions

Proprietary solutions

[REPRESENTATIVE LIST] [NOT EXHAUSTIVE]

Solution	Details
Jarvis	A solution based on chatbot, image processing, and log analytics to assist product support teams to address customer issues with machine learning capabilities
Data Fabric	A solution to consolidate and integrate data assets and provide analytics on asset content, relationship, control compliance, and asset quality with end-to-end data lineage visualization
Hawdi	It is an AI architecture that contributes to an enhanced edge-level real-time decision and actuation support. It can be used in collaborative devices with enhanced situational awareness and high availability through 1:N level of redundancy.
SenseForge [®]	A solution based on intelligent sensors to connect legacy machines and deploy predictive maintenance
NetAnticipate	An intent-based prescriptive AI platform to realize self-learning telecom networks for zero human-touch network operation that predicts network anomalies and takes preventive measures in real-time using a cognitive feedback loop
Industrial Edge Compute	A multi-edge computing orchestration platform to accelerate solutions for clients with pre-packaged services for development and deployment of edge use cases

Capgemini profile (page 4 of 6)

Partnerships

[REPRESENTATIVE LIST] [NOT EXHAUSTIVE]

Partner name	Details
AWS	A partnership to accelerate capabilities in cloud connectivity to enable solutions across connected product engineering verticals
Intel	A partnership to build end-to-end solutions in connected product engineering, leveraging the technology by Intel
Dassault Systèmes	A partnership to boost capabilities in design of intelligent connected products
Microsoft	A partnership to strengthen capabilities in cloud connectivity and IoT solutions
Aveva	A partnership to build sustainable industrial platforms and software
GE	A partnership focused on delivering industrial internet solutions that support secure connected assets and objects, industrial analytics, data science, and machine data management
NVIDIA	A partnership to develop capabilities in building immersive experiences in the metaverse, with integrated hardware/software solution and a digital asset creator
PTC	A partnership to create industrial solutions to help customers to design, manufacture, sell, operate, and service smart connected products
Qualcomm	A partnership to deliver a complete and flexible set of use cases and features on its hardware and software reference platform
Google	A partnership to strengthen capabilities in data analytics and Artificial Intelligence (AI)
Schneider Electric	A partnership to strengthen capabilities in adoption of 5G connectivity across connected product solutions

Capgemini profile (page 5 of 6)

Investments

[REPRESENTATIVE LIST] [NOT EXHAUSTIVE]

Investment/target	Details		
Intelligent industry lab	It is an investment advancing the digital transformation of industrial environments. With this lab at Cadiz, it aims to help clients to design innovative solutions for their operations and take advantage of all the potential that digital technologies can offer as they grow in maturity levels. It is the ideal environment to develop and validate these types of solutions without impacting their day-to-day operations.		
GenAl lab	An investment to strengthen capabilities in generative AI, to build, experiment, and test use cases of generative AI across connected product engineering		
Quantum lab	An investment to develop capabilities in computation, simulation, and machine learning, with use cases across verticals of connected product engineering		
HDL Design House	An acquisition to strengthen capabilities in design of connected products, by adding silicon engineering capabilities from the design house		
5G connectivity labs	It is an investment to strengthen capabilities in development of solutions for smart connected cities and industries, focusing on 5G communication. The 5G Labs federate an ecosystem of partners (both telecom- and technology-driven) and help build end-to-end solutions for industries.		

Recent connected product engineering services investments/acquisitions

Capgemini profile (page 6 of 6)

Everest Group assessment – Leader

Measure of capability: Low High

Market impact Vision and capability Scope of services Vision and Innovation and Market adoption Delivery footprint Portfolio mix Value delivered offered Overall strategy investments Overall 61

Strengths

- Capgemini is strengthening its capabilities in connected product engineering services through investments in next-generation technologies including Multi-access Edge Computing (MEC), industrial metaverse, Gen AI, AI on the edge, and 5G Non-terrestrial networks (NTN)
- Through strategic investments, it has built a strong ecosystem of partnerships, labs, and innovation centers, while also focusing investments on employee skillset development through certifications and CoEs
- Capgemini has developed solutions around intelligent products for edge devices, datadriven operations, device control platforms, and integration of generative AI in R&D to improve its connected product engineering services offerings
- It has a balanced delivery footprint across onshore, nearshore, and offshore regions, enabling client proximity and seamless delivery
- The company showcases flexibility in commercial constructs and leverages innovative pricing models such as outcome-based in client engagements

Limitations

- While Capgemini has focused on investments in the form of IP, labs, and partnerships, it has a relatively lower coverage of investments in employee training and quality standard certifications around cybersecurity for IoT, embedded systems, and wireless communication protocols specific to connected product engineering compared to peers
- While Capgemini has a strong presence across North America and Europe regions, it has a limited clientele across the APAC geography
- Clients expect Capgemini to continue to upskill its resources around emerging themes such as generative AI

Appendix

PEAK Matrix[®] framework

FAQs

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PE/K MATRIX®

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

Everest Group PEAK Matrix



Measures ability to deliver services successfully

PEAK MATRIX®

Services PEAK Matrix[®] evaluation dimensions



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FAQs
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Q: Does the PEAK Matrix® assessment incorporate any subjective criteria?

A: 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.

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

- A: 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.
- Q: What other aspects of the PEAK Matrix assessment are relevant to buyers and providers other than the PEAK Matrix positioning?
- A: 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.
- Q: What are the incentives for buyers and providers to participate/provide input to PEAK Matrix research?
- A: 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

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

- A: 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

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

A: 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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