Everest Group PEAK Matrix® for Digital Product Engineering Service Provider 2022

Focus on HCL Technologies

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Background and introduction of the research

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 the 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 Digital Product Engineering Services PEAK Matrix® Assessment 2022, wherein we have presented an assessment of 30 engineering service providers featured on the PEAK Matrix, along with the sourcing considerations for enterprises. This assessment is based on the RFI responses from service 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 30 leading engineering service providers featured on the Digital Product Engineering PEAK Matrix:

- **Leaders:** Accenture, Capgemini, Cognizant, HCL Technologies, Infosys, LTTS, TCS, and Wipro
- **Major Contenders:** Bosch Global Software Technologies (BGSW), Cyient, eInfochips, Experion Technologies, GlobalLogic, GS Lab, Happiest Minds, HARMAN DTS, Infinite Computer Solutions, Innominds, Itransition, Mindtree, Mphasis, Sasken, SoftServe, Tech Mahindra, and VVDN Technologies
- **Aspirants:** Accolite Digital, Aspire Systems, Daffodil Software, e-Zest, and Sonata Software

Scope of this report

Geography
Global

Providers
30 leading engineering service providers

Services
Digital product engineering services

Digital Product Engineering Services PEAK Matrix® characteristics

Leaders:

Accenture, Capgemini, Cognizant, HCL Technologies, Infosys, LTTS, TCS, and Wipro

- The Leaders segment comprises both pure-play as well as broad-based IT-heritage firms that have developed dominant capabilities in offering multidisciplinary digital product engineering services
- 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 players 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:

Bosch Global Software Technologies (BGSW), Cyient, eInfochips, Experion Technologies, GlobalLogic, GS Lab, Happiest Minds, HARMAN DTS, Infinite Computer Solutions, Innominds, Itransition, Mindtree, Mphasis, Sasken, SoftServe, Tech Mahindra, and VVDN Technologies

- Major Contenders also comprise both IT-heritage firms as well as pure-play engineering service providers
- These players are actively making investments in establishing labs and CoEs and developing IPs and solutions in areas such as AI/ML, testing, analytics, IoT, cybersecurity, and embedded systems
- Although they have strong partnerships across software 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:

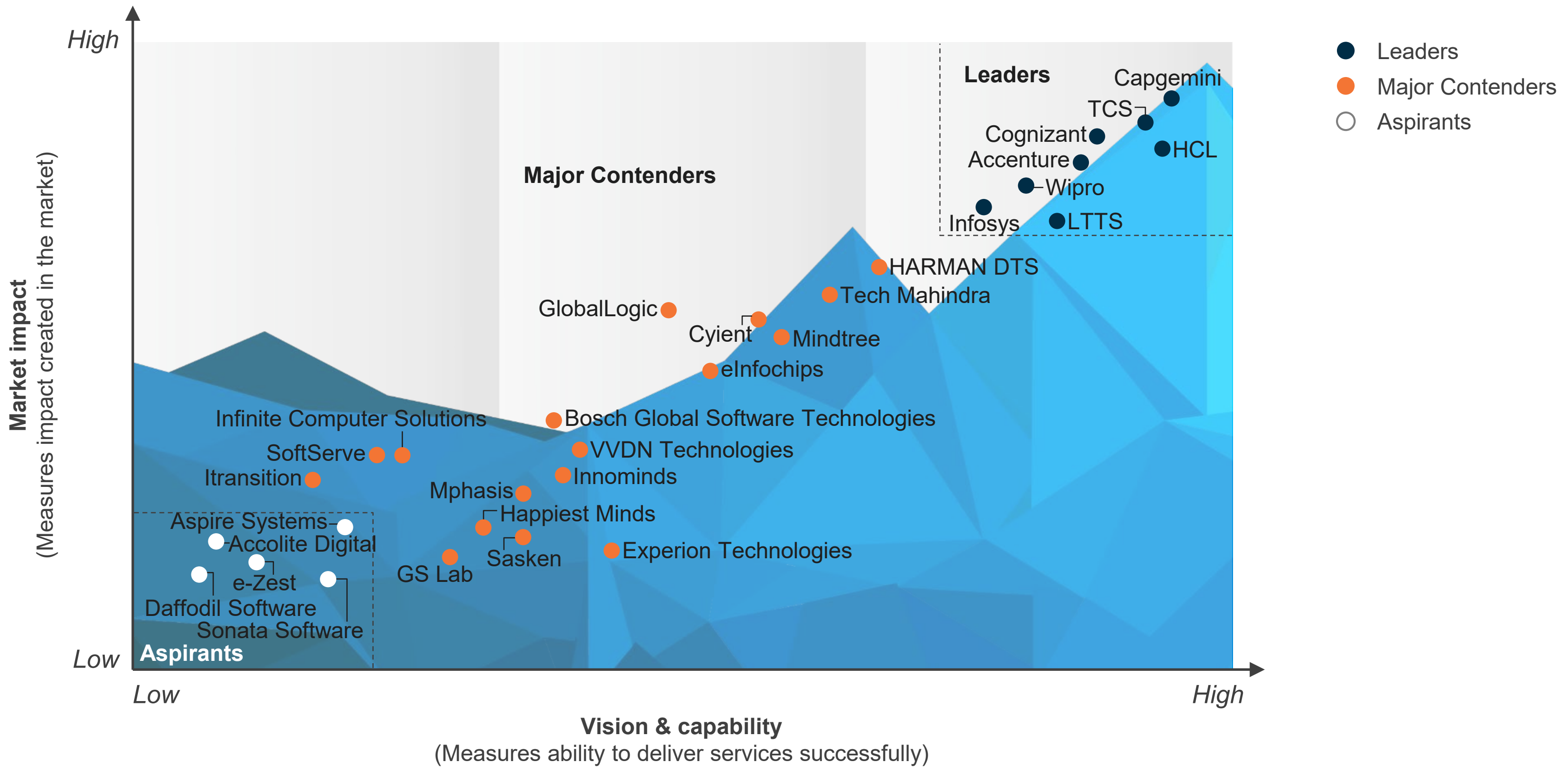
Accolite Digital, Aspire Systems, Daffodil Software, e-Zest, and Sonata Software

- 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 IPs are limited

Everest Group PEAK Matrix®

Digital Product Engineering Services PEAK Matrix® Assessment 2022 | HCL Technologies positioned as Leader

Everest Group Digital Product Engineering Services PEAK Matrix® Assessment 2022[1,2,3]



1 Assessments for SoftServe and Tech Mahindra 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 buyers.
2 Assessment of Capgemini is inclusive of Altran (part of Capgemini) and reflects their joint capabilities and market impact.
3 While GlobalLogic was acquired by Hitachi in July 2021, the assessment has been conducted on the basis of GlobalLogic as a stand-alone entity only.

Source: Everest Group (2022)

HCL Technologies | digital product engineering services profile (page 1 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

- HCL Technologies has made investments in establishing labs and testing facilities in areas such as cybersecurity, 5G, connectivity, hardware engineering, semiconductor testing, simulation, and AI
- Multiple acquisitions have enabled HCL Technologies to create differentiation in the market by expanding its capabilities in areas such as chip and design services, IoT, embedded systems, and data engineering
- It is perceived as a player that offers high flexibility and possesses a diversified talent pool with competency across multiple domains
- Clients appreciate its talent management strategy, especially in identifying people with the right skill sets and providing incentives to retain them

Limitations

- Clients expect HCL Technologies to be more proactive in communicating challenges or suggestions during the project and have pointed out project management as one of the improvement areas
- It has a limited delivery presence in the Latin American and Eastern European geographies

HCL Technologies | digital product engineering services profile (page 2 of 4)

Overview

Vision & strategy

HCL Technologies envisions to be the strategic partner of choice for enterprises in their endeavor to leverage next-generation technologies to deliver enhanced consumer experiences. To achieve this vision, HCL Technologies has developed a growth strategy backed by investments in next-generation technologies, solution accelerators, digital talent, and a partnership ecosystem-driven approach to unlock value for customers.

HCL supports its customers in envisioning and building a digital engineering foundation. With its current set of offerings that encompasses the entire product value chain, HCL Technologies helps its customers create business value by leveraging software, data, connectivity, and digital technologies.

Revenue by geography

Low (<10%) | Medium (10-30%) | High (>30%)

North America	High	India	Low	Rest of APAC	Low
UK	Medium	China	Low	Middle East & Africa	Low
Europe (excluding UK)	Medium	Japan	Medium	Rest of the World	Low
South America	Low				

Revenue by industry

Low (<10%) | Medium (10-20%) | High (>20%)

Automotive	Medium	Medical devices	Medium	Energy & utility	Low
Aerospace & defense	Low	Telecom	Low	Retail	Low
Consumer electronics	High	Industrial products	Medium	Others	Medium

Revenue by value chain function

Low (<15%) | Medium (15-30%) | High (>30%)

Ideation & design	Low
Product development	High
Testing & certification	High
Product support & maintenance	Medium

Digital product engineering projects by buyer size

Low (<15%) | Medium (15-30%) | High (>30%)

Small (annual revenue < US$1 billion)	Low
Medium (annual revenue US$1-5 billion)	Low
Large (annual revenue US$5-10 billion)	Medium
Very large (annual revenue US$10-20 billion)	Medium
Mega (annual revenue > US$20 billion)	High

Source: Everest Group (2022)

HCL Technologies | digital product engineering services profile (page 3 of 4)

Case studies and solutions

Case study 1	Helped a consumer electronics company to accelerate digital TV software development

Business challenge

The client was looking for a partner that could launch and create a continuous release solution for multiple digital TV models across all geographies. The client also needed OS Upgrade support for market released models and field trial support across multiple countries.

Solution and impact

HCL Technologies supported in design, development, and testing of TV software from the application layer to broadcast stack layer. It took complete responsibility of android OS upgrades and provided build & release support with ~80 releases/year. Over 400 patches on TV were delivered seamlessly, maintained high-quality standards, and kept the customer's brand quality promise.

Case study 2	End-to-end support for a leading office automation OEM to build a self-service solution

Business challenge

The client was facing increasing competition in the market from a rival product and was looking for a partner to aggressively launch a self-service and minimal-contact solution to be used on its multi-functional printers to be deployed across office and retail stores and outlets.

Solution and impact

HCL Technologies developed a cloud-based solution for easy-to-use scanning, copying, and printing and integrated it with payment options. It was responsible for end-to-end coverage from ideation to deployment, covering architecture design, testing, and development support including Android OS customization. The solution enabled a new revenue stream by developing a reusable framework that enabled quick customization and deployment to target similar retailers and partners, thus reducing the TCO of the solution.

Proprietary solutions (representative list)

Solution	Details
Connected Assets in Regulated Environment (CARE)	A micro-services architecture featured a multi-tenant platform that helps in building a regulated medical class software in a short span of time; it brings together packaged application frameworks, reusable software components, automation tools for developers and testers, support for architectural pattern, and practice templates to accelerate software development
Cloud Bridge	A set of solutions to automate transition to cloud-native architecture and operations
eDAT	A platform to test multiple interfaces (digital, analog, audio, video, and speech) and multiple DUTs with a single tool allowing for a 30% reduction in effort and cost of ownership, and reduction in testing cycle times by 70-80%
Marvel 360	A framework for end-to-end test automation of microservices applications; it addresses functional and non-functional testing requirements to improve efficiency and accelerate the automation life cycle for microservices, APIs, and web services
NOESIS	A platform that accelerates end-to-end cognitive solution development and deployment on edge and cloud; it also has provision for device enablement and management
PiCASSO	A platform-based framework for intelligent, connected, autonomous, and secure service offerings to build and implement digital service platforms on top of a connected ecosystem of assets
Xtern	A workbench that empowers to deliver XR experiences at scale; it leverages XR platforms and tools and technologies to industrialize the creation of XR experiences

HCL Technologies | digital product engineering services profile (page 4 of 4)
Investments and partnerships

Key alliances and partnerships (representative list)

Company	Details
AUTOSAR	A partnership to provide solutions for various layers of AUTOSAR stack for enterprises to develop and establish an open industry standard
GCP	A GCP Premier Partner that helps enterprises accelerate the adoption of GCP and development of hybrid and cloud-native ecosystems
Intel	A collaboration to build a future-ready reference architecture for digital technology platform solutions to accelerate customers' digital journeys, including datacenter management, cloud-native transformation, software-defined networks, artificial intelligence, and the digital workplace
NVIDIA	A collaboration to provide high-performance and scalable products and solutions that deliver real business benefits to enterprises
PTC	A partnership to build capabilities in domain areas such as digital product development, product lifecycle management, software lifecycle management, IoT, and AR
Xilinx	A certified member of Xilinx alliance program to help enterprises develop products faster on targeted design platforms

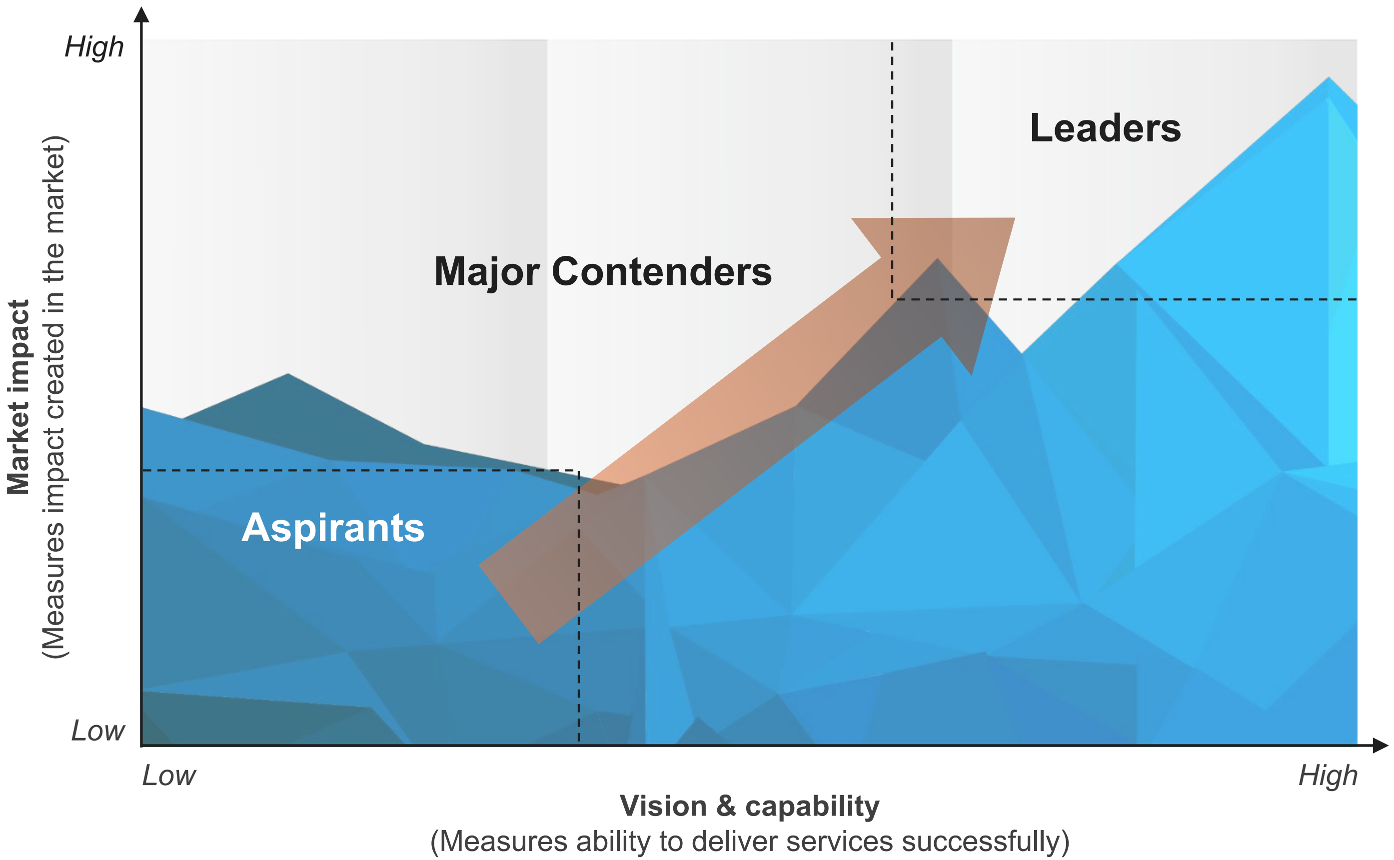
Recent digital product engineering services investments/acquisitions (representative list)

Investment/target	Details
Center of Excellence (CoE)	Investment to set up CoEs in areas such as IoT, cloud transformation (multi/hybrid), connectivity and 5G/edge, extended reality, cognitive solutions, AI, imaging and robotics, embedded systems, RPA, and user experience
Geometric	Acquisition to strengthen digital product engineering capabilities in the automotive and industrial domains
Innovation labs	Invested over US$60 million to build labs in the product engineering space to accelerate development of next-generation digital products
Investment in next-generation themes/solutions	Investment to build solutions in image analytics, NLP, and data analytics to deliver various applications; it also enables HCL to execute projects that require AI/ML adoption on video, speech, voice to text, images, machine learning, and automation
Patents and joint IP development	HCL has filed 1,500+ patents and IP solutions including those filed on behalf of customers; it has also invested in numerous joint IP development initiatives with its customers/partners in next-generation themes as well as for creating domain-centric solutions; some of these engagements also involve GTM partnerships
Sankalp Semiconductors	Acquisition to expand into new market-domains, especially in analog and mixed signal design
Talent development	Investment to build digital engineering talent at scale to meet growing market demand

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

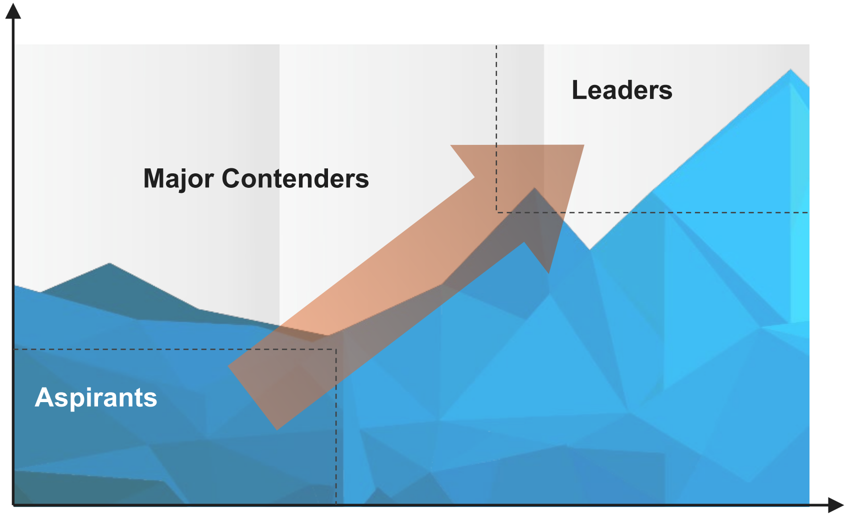
Portfolio mix

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



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

FAQs

Does the PEAK Matrix® assessment incorporate any subjective criteria?

Everest Group's PEAK Matrix assessment adopts an unbiased and fact-based approach (leveraging provider / technology vendor RFIs and Everest Group's proprietary databases containing providers' deals and operational capability information). In addition, these results are validated / fine-tuned 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 PEAK Matrix assessment are relevant to buyers and providers besides the "PEAK Matrix position"?

A PEAK Matrix position is only one aspect of Everest Group's overall assessment. In addition to assigning a "Leader", "Major Contender," or "Aspirant" title, Everest Group highlights the distinctive capabilities and unique attributes of all the PEAK Matrix providers assessed in its report. The detailed metric-level assessment and associated commentary is helpful for buyers in selecting particular providers/vendors for their specific requirements. It also helps providers/vendors showcase their strengths in specific areas

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

- Participation incentives for buyers include a summary of key findings from the PEAK Matrix assessment
- Participation incentives for providers/vendors include adequate representation and recognition of their capabilities/success in the market place, and a copy of their own "profile" that is published by Everest Group as part of the "compendium of PEAK Matrix providers" profiles

What is the process for a provider / technology vendor to leverage their PEAK Matrix positioning and/or "Star Performer" status ?

- Providers/vendors can use their PEAK Matrix positioning or "Star Performer" rating in multiple ways including:
  - Issue a press release declaring their positioning. See citation policies
  - Customized PEAK Matrix profile for circulation (with clients, prospects, etc.)
  - Quotes from Everest Group analysts could be disseminated to the media
  - Leverage PEAK Matrix 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 the designated POC at Everest Group.

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

PEAK Matrix assessments are designed to serve present and future needs of the enterprises. 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 as well as serve the future expectations of enterprises

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