



# Everest Group PEAK Matrix<sup>®</sup> for 5G Engineering Service Providers 2021

**Focus on NTT DATA**  
December 2021



## Background and introduction of the research

5G is much more than increased speed of data transfer. It has the potential to enable a paradigm shift in the way things work around us. Additionally, it is a key enabler of the fourth industrial revolution. Enterprises have already started preparing themselves for a shift to 5G. Some of the trends in 5G include:

- The low latency and high-speed characteristics of 5G make a variety of (erstwhile impractical) use cases possible, such as remote factory monitoring and maintenance via the Digital Twin concept, education and research using holographic interactions, high speed multi-player gaming, real-time fleet management of autonomous and connected vehicles, amongst others
- Advancements in technology have also led to a variety of developments that work in tandem with and assist 5G in creating an ecosystem capable of exponentially more vis-à-vis the incumbent networks. These include network slicing, Multi-edge Access Computing (MEC), Software Defined Networks (SDN), Network Function Virtualization (NFV), etc.
- Enterprises and institutions are increasingly investing in private 5G networks for Industrial Internet of Things (IIoT), public places such as stadiums and transport terminals, and educational establishments. This allows administrations to enable multi-vertical applications all the while ensuring data security by maintaining control over the data generated
- Since 5G is a new technology, new use cases of the same are conceived regularly in different industry verticals. As such, enterprises require assistance in designing, implementing, and scaling these use cases; service providers are increasingly collaborating with partners for use case engineering services

These developments have fueled the need to establish a compelling ecosystem of partners, and engineering service providers are actively enhancing their capabilities and offerings to help enterprises tackle these challenges in their 5G engineering journey, stay relevant, and create more value by exploring novel applications.

This research is the first edition of Everest Group's **5G Engineering Services PEAK Matrix® Assessment 2021**. It evaluates 18 engineering service providers, positions 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 5G engineering leadership, client reference checks, and an ongoing analysis of the engineering services market.

**The report assesses the following 18 leading engineering service providers featured on the 5G Engineering Services PEAK Matrix®:**

- **Leaders:** Accenture, Capgemini, HCL Technologies, Infosys, TCS, and Tech Mahindra
- **Major Contenders:** Cognizant, Cyient, DXC Luxoft, HARMAN Connected Services, L&T Technology Services, NTT DATA, Tata Elxsi, Virtusa, and Wipro
- **Aspirants:** GS Lab, TietoEVRY, and VVDN Technologies

### Scope of this report:



**Geography**  
Global



**Service providers**  
18 leading broad-based and pure-play engineering service providers



**Services**  
5G engineering services

## 5G Engineering Services PEAK Matrix® characteristics

### Leaders:

Accenture, Capgemini, HCL Technologies, Infosys, TCS, and Tech Mahindra

- This segment includes broad-based global players. Leaders have existing capabilities to build on as well as wide client bases giving them a head start over other service providers
- Leaders have end-to-end offerings across sub-segments and enjoy larger resource pools to train and deploy for engagements which makes rapid scaling of projects seamless
- Leaders are consistently investing in CoEs and labs to develop and refine their capabilities in areas such as ORAN, device and network testing, and accelerators for network transformation
- Leaders have unique partnership-led GTM strategies. They leverage their existing relationships with Telecom Service Providers (TSPs), Network Equipment Providers (NEPs), software technology firms, and hyperscalers in different geographies to gain access to a wider audience and tap into the credibility and expertise of their partners for engagements with new logos

### Major Contenders:

Cognizant, Cyient, DXC Luxoft, HARMAN Connected Services, L&T Technology Services, NTT DATA, Tata Elxsi, Virtusa, and Wipro

- The Major Contenders segment comprises both broad-based global players and pure-play engineering service providers with credible presence in the 5G engineering space across the globe
- Major Contenders have strong capabilities in some areas whereas in the others they are actively investing in gaining strong market presence. The areas of investment for the Major Contenders include building delivery accelerators, network infrastructure virtualization, network automation and orchestration, and labs for use case design and development
- Most Major Contenders are mid-sized firms that have strong vision and strategies to cover ground in the coming years

### Aspirants:

GS Lab, TietoEVERY, and VVDN Technologies

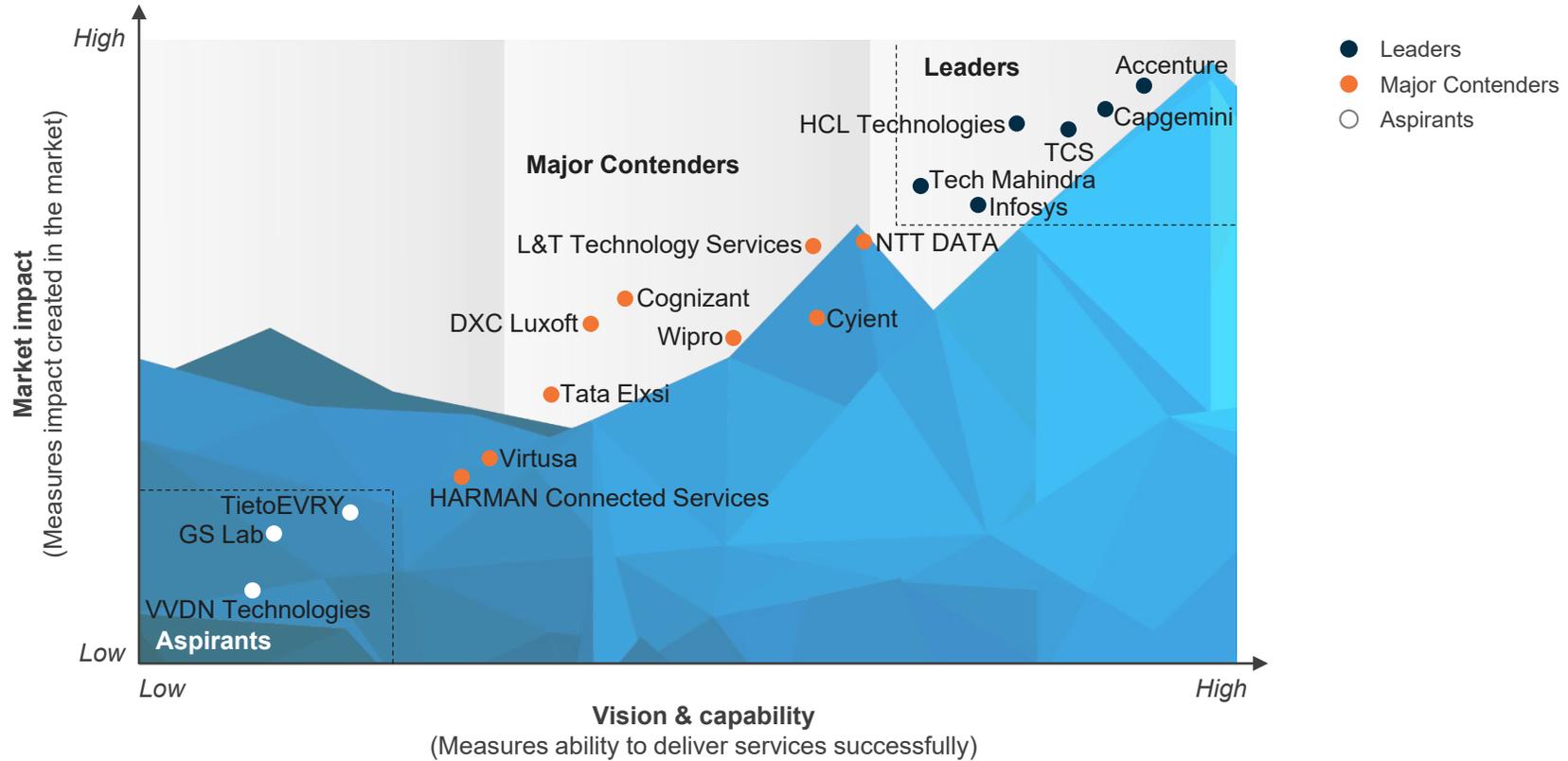
- Aspirants possess strong capabilities in specific technology areas and value chain elements. However, they have limited global presence and limited resource pool to tap into, making it difficult for them to gain traction globally. This might make it difficult for them to gain exposure with large projects dealing in end-to-end 5G engineering services
- Majority of the partnerships in this segment are focused on enhancing existing capabilities rather than aiming at exploring domains that these players are not active in

# Everest Group PEAK Matrix®

## 5G Engineering Services PEAK Matrix® Assessment 2021 | NTT DATA positioned as Major Contender



Everest Group 5G Engineering Services PEAK Matrix® Assessment 2021<sup>1,2</sup>



1 Assessments for Cognizant, L&T Technology Services, TietoEVRY, VVDN Technologies, and Wipro 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 group) and reflects their joint capabilities and market impact.

Source: Everest Group (2021)

# NTT DATA | 5G engineering services profile (page 1 of 4)

## Everest Group assessment – Major Contender

Measure of capability:  Low  High

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

### Strengths

- Has a large revenue base for 5G and is flexible in delivering projects; this includes its openness to experiment with changing scopes, different pricing models, etc.
- Positioned as a strong player which has established partnerships and is increasing investments in building 5G engineering capabilities in areas such as network slicing, network virtualization, and open RAN
- Clients appreciate NTT DATA for the quality of projects delivered, technical expertise, adherence to timelines, and project management skills

### Limitations

- 5G engineering services are heavily focused on Europe; can increase global footprint to tap into the growing demand in other geographies
- Needs to showcase better price competitiveness to effectively compete against offshore-heavy players
- Active mostly in 5G engineering services for TSPs and enterprise customers; can consider boosting presence in services for Network Equipment Providers (NEPs) and User Equipment Providers (UEPs)

# NTT DATA | 5G engineering services profile (page 2 of 4)

## Overview

### Vision & strategy

NTT proposes an Innovative Optical and Wireless Network (IOWN) concept as a long-term vision for 5G engineering services. IOWN is a new communication infrastructure that offers high-speed broadband communication, ultra-low energy consumption, and enormous computing resources by using innovative optical technologies. NTT has started R&D with the aim of finalizing specifications in CY2024 and realizing the concept and implementing large-scale deployments in CY2030.

In the short to medium term, NTT DATA intends to support monetization solutions for the 5G era through proof-of-concepts and flexible solutions enabling reduction in operating costs for CSPs. Furthermore, NTT DATA plans to invest in joint innovation projects with its partners Fujitsu, NEC, and Mavenir in the next 12-18 months.

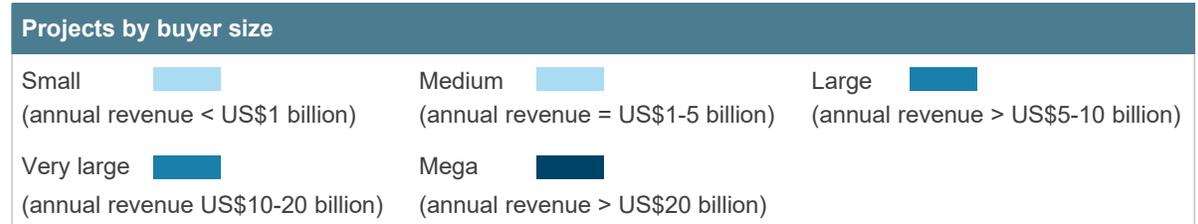
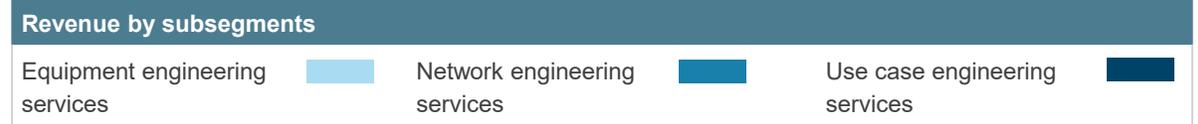
### 5G engineering services revenue (April 2020–March 2021)



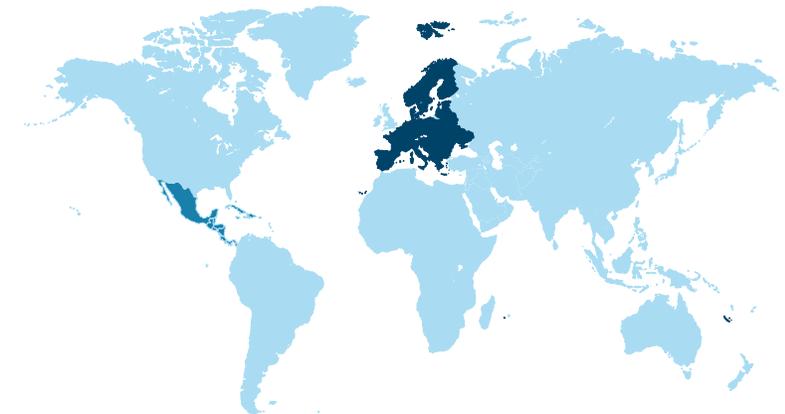
### YoY growth rate in 5G engineering services revenue (April 2020–March 2021)



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



Revenue by geography Low (<15%) Medium (10-25%) High (>25%)



# NTT DATA | 5G engineering services profile (page 3 of 4)

## Case studies and solutions

**Case study 1**      **Roaming hub creation for British multinational telecommunications company**

**Business challenge**  
 Creation of a (pre-standard) 5G SA roaming hub lab and successfully emulating roaming hub services for use by other mobile operators and by the client themselves.

**Solution and impact**  
 NTT DATA's technology, roaming, and business teams, took this first step towards commercial 5G roaming. Continued efforts with relevant industry bodies comprise roaming hub requirements in the 5G industry standards, which will allow mobile operators and their suppliers to bring true 5G roaming to end users. The lab will be upgraded to the upcoming standard architecture, following GSMA / 3GPP endorsement.

This builds on existing 4G and non-standalone 5G roaming hub which provides more than 90 existing mobile operators and businesses with global roaming connectivity for around 750 million customers worldwide.

**Case study 2**      **Colombian fixed & mobile CSP leader in the market**

**Business challenge**  
 Development of 5G digital solutions to speed up efficient deployment, reduce CapEx, and avoid issues such as long, daily meetings; repeated site visits; lack of clear, real-time oversight and more.

**Solution and impact**  
 NTT DATA integrated big data, computing vision, robotic process automation, Self Organizing Network (SON), and centralized drive test tools under an orchestration framework and workforce management to speed up and at the same time generate savings on the network rollout process. Integrated hybrid cloud-based solution helped 5G Rollout under a zero-touch concept from site survey to initial tuning considering not only technical process automation, thereby delivering CAPEX and OPEX savings.

Proprietary solutions (representative list)	
Solution	Details
5G campus network	A fully virtualized 5G private network that enables enterprises to take full control of their communication services adapting them to their specific needs.
5G Enabling Fabric (5G EF)	A cloud-based environment designed to help MNOs and third-party service providers rapidly deploy new 5G services for their enterprise customers.
5G Network as a Service (NaaS)	Enables MNOs to offer enterprise customers highly personalized services while ensuring cost-effective end-to-end management of the network services lifecycle.
Security Edge Protection Proxy (SEPP)	A cloud-native proxy that can enable 5G Telco operators in managing 5G standalone roaming with other MNOs or carriers.
FastOSS	Collaboration aimed at deploying OSS stack on cloud that enables performance, fault, quality and experience management, network inventory and active topology for hybrid networks (virtual + legacy), service orchestration and activation, workforce management, etc.

# NTT DATA | 5G engineering services profile (page 4 of 4)

## Investments and partnerships

### Key alliances and partnership (representative list)

Company	Details
AGC (glass manufacturer)	Partnership for developing a glass antenna to improve 5G reception inside buildings (collaboration between NTT DOCOMO and AGC)
Amazon Web Services (AWS)	Partnership with cloud platform provider for scalability
FastWeb	Partnership to develop 5G Fixed Wireless Access (FWA) RAN coverage to NTT DATA 5G labs for joint PoCs (Visiva)
Google Cloud Platform (GCP)	Partnership with cloud platform provider for scalability
Intel	Accelerator for network infrastructure
Fraunhofer Institute	5G SA RAN and core network for 5G standardization and 5G private lab environment
Fujitsu	Alliance to develop power-efficient hardware
Magma	Partnership for open source community products
Mavenir	Partnership to deploy ORAN solutions in both public and private 5G network, benefiting clients through low-cost deployment with open technologies, and reducing dependence on system suppliers
Microsoft Azure	Partnership with cloud platform provider for scalability
NEC	Partnership with 5G showcasing lab in Germany, with a dedicated radio unit for ORAN
Redhat	Partnership to leverage IT infrastructure provider for virtualization
VMWare/Velocloud	Partnership for developing SD-WAN appliances (5G Core, edge/MEC applications delivery)

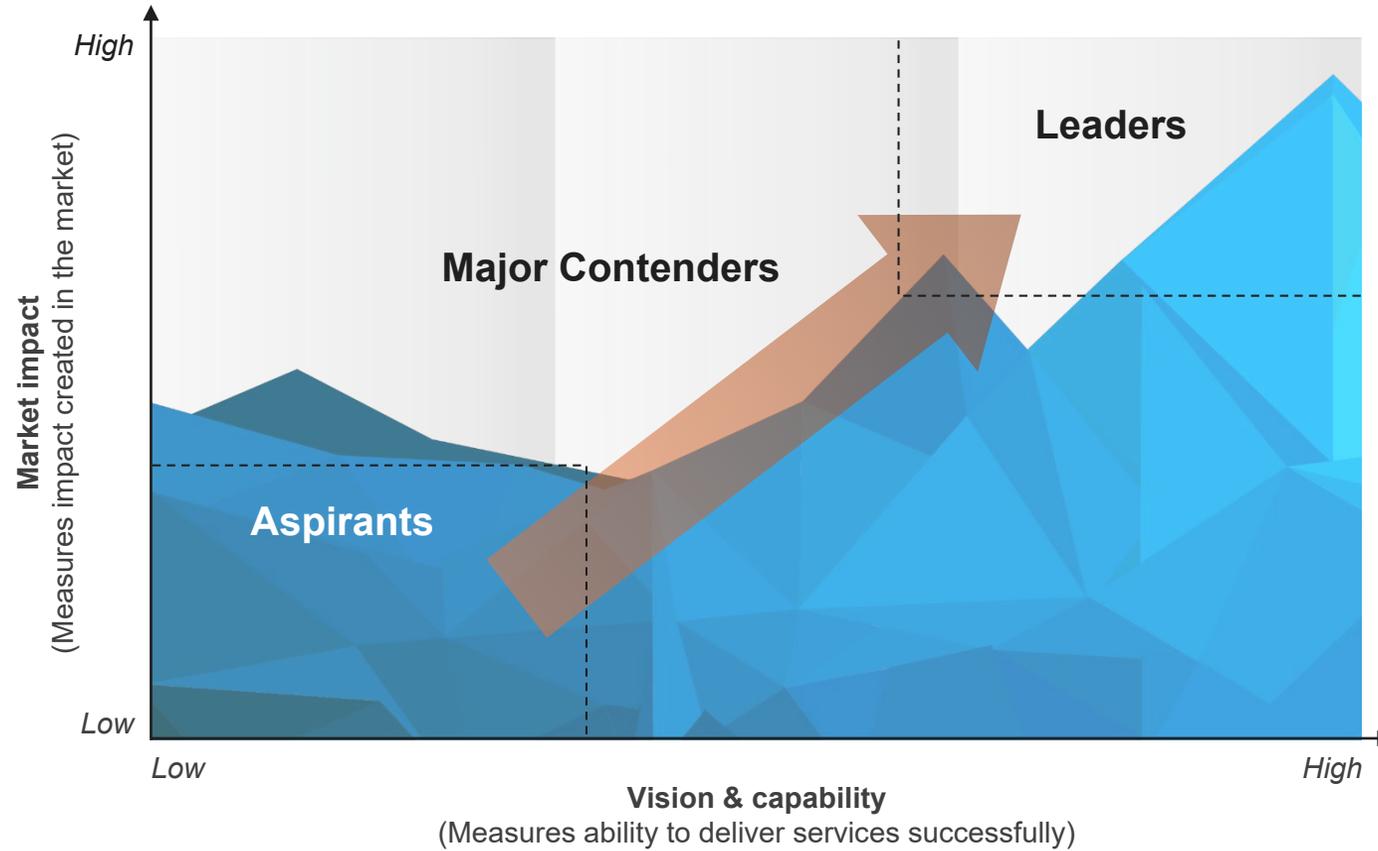
### Recent 5G engineering services investments/acquisitions (representative list)

Investment/Target	Company description
CoE and labs	Investment into developing multiple collaboration centers, innovation labs, digital labs, R&D centers, and experience centers such as open network CoE in Spain, network engineering CoE in Italy, Enso lab in Germany, and 5G-enabling fabric lab in Italy
Emerging themes	Investment in the development of 5G Network-as-a-Service (NaaS), 5G-enabling fabric, 5G campus network, and 5G security edge protection proxy

# Appendix

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

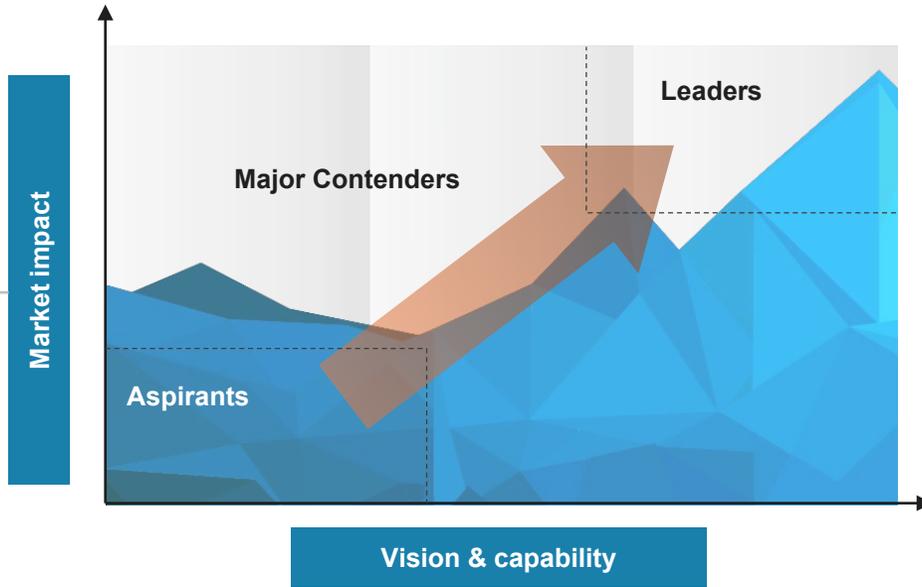
Everest Group PEAK Matrix®



# Services PEAK Matrix® evaluation dimensions

Measures impact created in the market – captured through three subdimensions

- Market adoption**  
Number of clients, revenue base, YOY growth, new client wins, prominent pricing models, and deal value
- Portfolio mix**  
Diversity of client/revenue base across geographies, verticals and type of clients
- Value delivered**  
Value delivered to the client based on customer feedback and transformational impact



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, alliances, M&A, and service enablement
- 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 service 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 service 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 service 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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