Everest Group®

Everest Group PEAK Matrix® for Digital Twin Services Provider 2022

Focus on HCL Technologies
July 2022

**Everest Group
PEAK MATRIX®**

Background of the research

As enterprises aim to become business resilient and competitive in a post-pandemic era, they are increasingly focusing on becoming digitally unified. This enterprise requirement, along with the advancements in next-generation technologies, have given rise to the concept of Digital Twin. This technology is defined as a virtual replica of physical products, processes, and systems that leverages the physical entity's real-time data for decision-making and prediction. Digital Twin is aiding firms in reducing downtime, better tracking and tracing of products, and better monitoring of asset conditions by simulating multiple scenarios. While industrial verticals are at the forefront of its adoption, Digital Twin is finding interest among consumer-facing industries too, that are increasingly experimenting with the technology.

The need for accelerated time-to-market of Digital Twins, smoother IT/ OT integration efforts, increased data and infrastructure security, and talent crunch across the various enabling technologies require enterprises to partner with service providers that can aid them in overcoming these challenges while facilitating end-to-end Digital Twin implementations.

In this research, we present an assessment of 16 Digital Twin service providers featured on the Digital Twin Services PEAK Matrix® Assessment 2022. Each service provider profile offers insights into the strengths and limitations across themes such as investments, vision, strategy, and case studies. The assessment is based on Everest Group's annual RFI process for calendar year 2021, interactions with leading Digital Twin service providers, client reference checks, and an ongoing analysis of the Digital Twin services market.

The full report includes the profiles of the following 16 leading digital twin service providers featured on the digital twin services PEAK Matrix:

- **Leaders:** Atos, HCL Technologies, IBM, TCS, and Wipro
- **Major Contenders:** Accenture, Capgemini, Cognizant, Hitachi, Infosys, LTI, NTT DATA, and Tech Mahindra
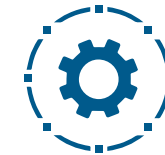- **Aspirants:** DXC Technology, Happiest Minds, and Virtusa

Scope of this report

Geography
Global

Providers
16

Services
Digital Twin services

Digital Twin services PEAK Matrix® characteristics

Leaders:

Atos, HCL Technologies, IBM, TCS, and Wipro

- Leaders exhibit a futuristic vision for Digital Twin that is aimed at achieving operational efficiency through the concept and also establishing an intelligent enterprise
- Leaders are focusing on forging a strong partnership ecosystem that goes beyond the hyperscalers and IoT platform vendors to include specialist Digital Twin vendors such as ASCon Systems to strengthen their Digital Twin services portfolio
- Leaders' strong and well-balanced capabilities in providing engineering as well as IT services is instrumental in scaling Digital Twin initiatives for customers

Major Contenders:

Accenture, Capgemini, Cognizant, Hitachi, Infosys, LTI, NTT DATA, and Tech Mahindra

- Major Contenders are aiming to educate enterprise customers on the concept of Digital Twins through thought leaderships and COEs
- Most Major Contenders have a strong portfolio of clients across all major geographies and fast-growing verticals such as manufacturing, energy and utilities, and automotive
- Some Major Contenders are aiming to differentiate self from peers by investing in vertical-specific Digital Twin solutions that will accelerate implementation for clients

**Aspirants:**

DXC Technology, Happiest Minds, and Virtusa

- Aspirants are at a relatively nascent stage in their Digital Twin offerings and exhibit limited focus on investing in Digital Twin-specific solutions
- Aspirants are currently focusing on one or two service functions across the Digital Twin value chain

Everest Group PEAK Matrix®
Digital Twin Services PEAK Matrix® Assessment 2022 | HCL Technologies positioned as Leader

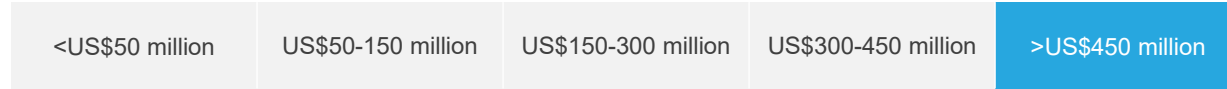**Everest Group Digital Twin Services PEAK Matrix® Assessment 2022[1]**
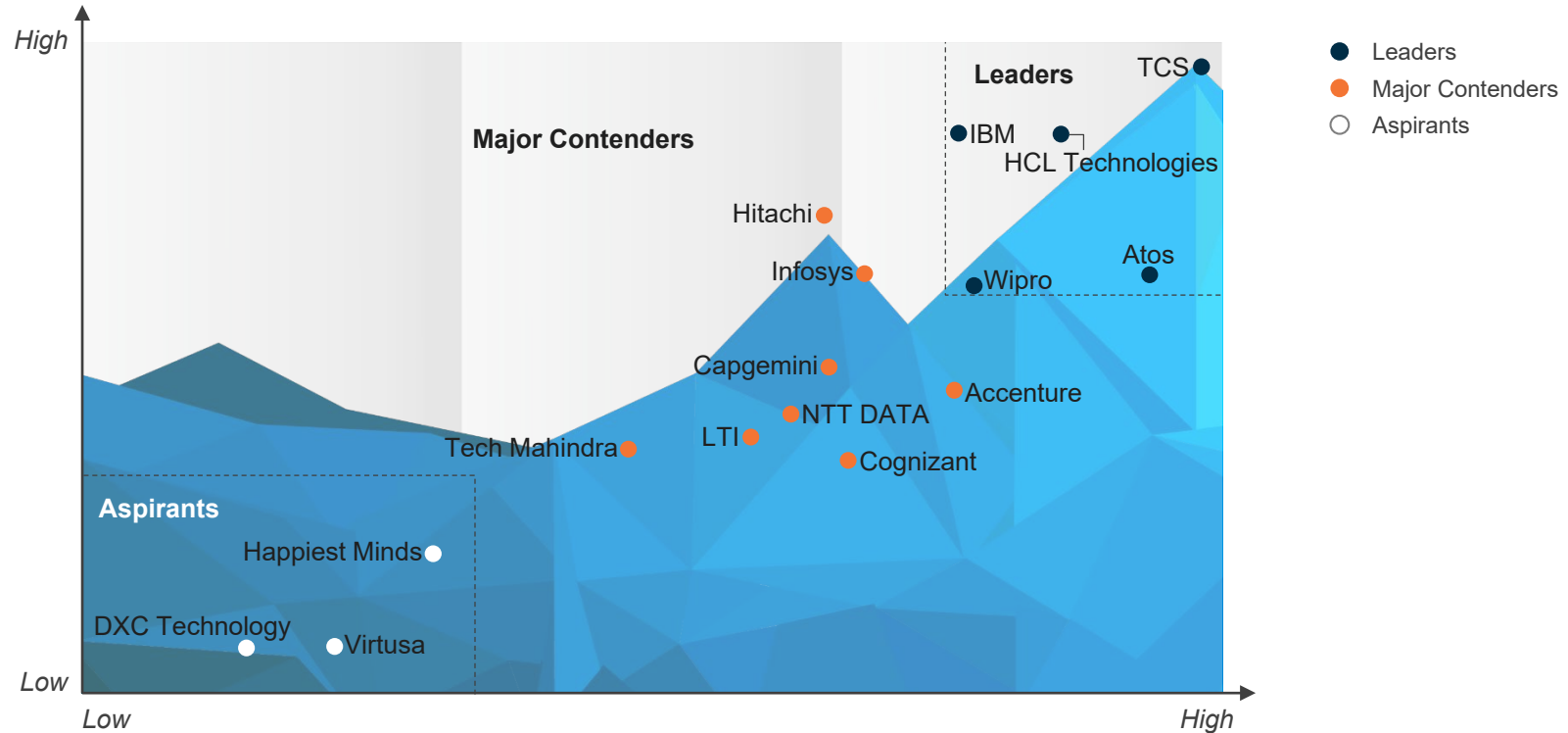
HCL Technologies | Digital Twin services profile (page 1 of 4)
Overview

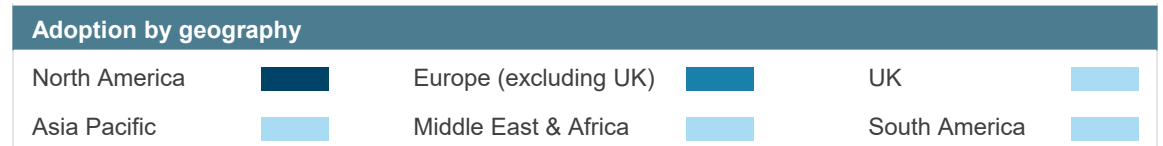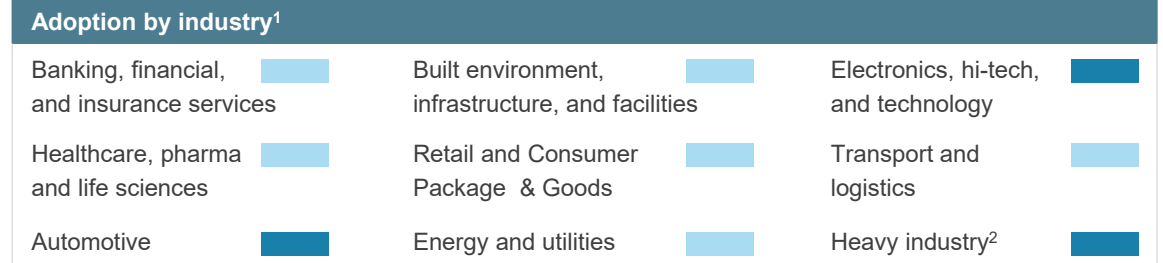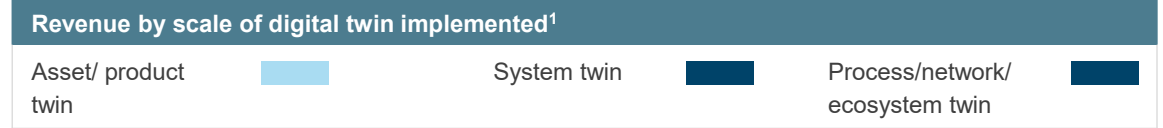Low (<10%) | Medium (10-25%) | High (>25%)

Company mission/vision statement for digital twin services

HCL Technologies envisions leveraging its domain expertise, technology leadership, and network of partners and customers to drive operational efficiencies, revenue growth, and superior experience for all stakeholders through the digital ecosystem.

Digital twin services revenue

<US$50 million	US$50-150 million	US$150-300 million	US$300-450 million	>US$450 million
				>US$450 million

Revenue by scale of digital twin implemented[1]

Asset/ product twin		System twin		Process/network/ ecosystem twin	

Revenue by function

Consulting		Design		Implementation		Maintenance	

Adoption by industry[1]

Banking, financial, and insurance services		Built environment, infrastructure, and facilities		Electronics, hi-tech, and technology	
Healthcare, pharma and life sciences		Retail and Consumer Package & Goods		Transport and logistics	
Automotive		Energy and utilities		Heavy industry[2]	

Adoption by buyer group

Small (annual revenue < US$1 billion)		Medium (annual revenue = US$1-5 billion)		Large (annual revenue > US$5 billion)	

Adoption by geography

North America		Europe (excluding UK)		UK	
Asia Pacific		Middle East & Africa		South America	

1   All the revenue components add up to a total of 100%
2   Heavy industry includes the likes of aerospace, heavy machinery, etc.

HCL Technologies | Digital Twin services profile (page 2 of 4)
Case studies

Case study 1	Root cause analysis of field failures

Client: a leading renewable energy company

Business challenge
The client faced challenges with higher failure rate of drive trains in the field. They also faced issues with the increase in downtime, maintenance, and warranty costs.

Solution
HCL Technologies connected the turbine and drive shaft sensors through a device gateway to the operational datahub. The firm aggregated and normalized drive train performance data, superimposed field conditions on the simulation models to replicate field behavior and identified the root cause for field failures with respect to product specifications.

Impact
- Client was able to reduce the turn-around time to fix field issues and this decreased the downtime significantly
- Additionally, it helped improve next-generation products and their performance, thereby reducing the warranty costs for the client

Case study 2	Real-time performance information using machine data acquisition framework

Client: a leading aerospace manufacturer

Business challenge
The client wanted to transition to new product at high production rates in an environment characterized by customer specific configuration, manual processes, varying supply chain capacities, and inflexible automation solutions.

Solution
HCL Technologies enabled adoption of knowledge-based digital twin platform, providing real-time visibility into shop floor through simulations, predictions, and connected production. To achieve this, HCL leveraged its Machine Data Acquisition Framework.

Impact
- Client was able to capture plant performance information in real time
- Enabled process adaptation by linking plant simulation and plant execution
- Increased overall plant productivity

HCL Technologies | Digital Twin services profile (page 3 of 4)
Solutions, partnerships, and investments

Proprietary solutions (representative list)	
Solution name	**Details**
ECCO Digital Thread platform	An enterprise content and collaboration platform to improve data visibility and traceability using digital thread
PICASSO	A platform-framework for intelligent, connected, autonomous, and secure service offerings to build and implement digital service platforms on connected ecosystem of assets
Connected Assets in Regulatory Environment (CARE)	A customizable springboard software platform that provides a unified approach to medical device management, mobility, big data, ecosystem integration, patient information management, and cybersecurity in regulated environments
AI.ON	Automated workflow solution to create end-to-end ML/DL pipeline and simplify creation and deployment of optimal models
Xtern Hypersuite Workbench	Workbench that empowers delivery of XR experiences at scale for enterprises by leveraging XR platforms, tools & technologies to industrialize creation of XR experiences
Real Time Manufacturing Insights	Solution helps reduce the resolution time to analyze the root cause of machine downtime, scrap losses, inventory carrying cost enabled by real time

Partnerships (representative list)	
Partner	**Details**
Microsoft	Strategic 360° partnership encompassing over 30+ years of trusted relationship involving investments to help customers accelerate its digital transformation journey
Google Cloud	Partnership aimed towards creating and enabling enterprise cloud native solutions & customer IT transformations powered by Google Cloud Platform to reduce enterprise costs
IBM	Partnership for delivery of modernized digital application, integrated application-infrastructure autonomics & orchestration, mainframe transformation, & cognitive capabilities
Critical Manufacturing	A partnership that allows HCL Technologies to offer services, consulting, training, and aftermarket support to complex discrete industries

Other investments (representative list)	
Investment name	**Details**
Patents	Focus on building the innovation culture resulting in filing 300+ patents in digital engineering space
Labs & COE's	$60Mn+ invested in setting up 100+ engineering labs and 20+ COE's, globally
Acquisitions	HCL has made multiple acquisitions to bolster capabilities in digital engineering domain, some of the key acquisitions include Sankalp Semiconductors, Geometric, and H&D International

HCL Technologies | Digital Twin services 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

- HCL's strong partner ecosystem with specialist players operating in Digital Twin, along with the firm's engineering prowess, are aiding the firm to scale services to clients

- HCL also showcases a strong focus on acquisitions, establishment of labs/COEs, and developing thought leadership in the space of Digital Twins to better collaborate with and educate enterprise clients

- HCL exhibits a futuristic vision and roadmap with a focus on enabling an intelligent enterprise twin as well as a digital thread or a 'twin2twin' ecosystem as part of its metaverse strategy

Limitations

- Clients seek improved resource quality in terms of technical knowledge to be exhibited by HCL teams in their engagements

- APAC-based enterprises may find limited proof points by HCL, given that the firm's client base is heavily concentrated in North America and Europe

- Clients seeking end-to-end support from their service partner may see limited proof points exhibited by HCL owing to the firm's limited focus on consulting and designing stages of Digital Twin engagements

Appendix

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

Everest Group PEAK Matrix
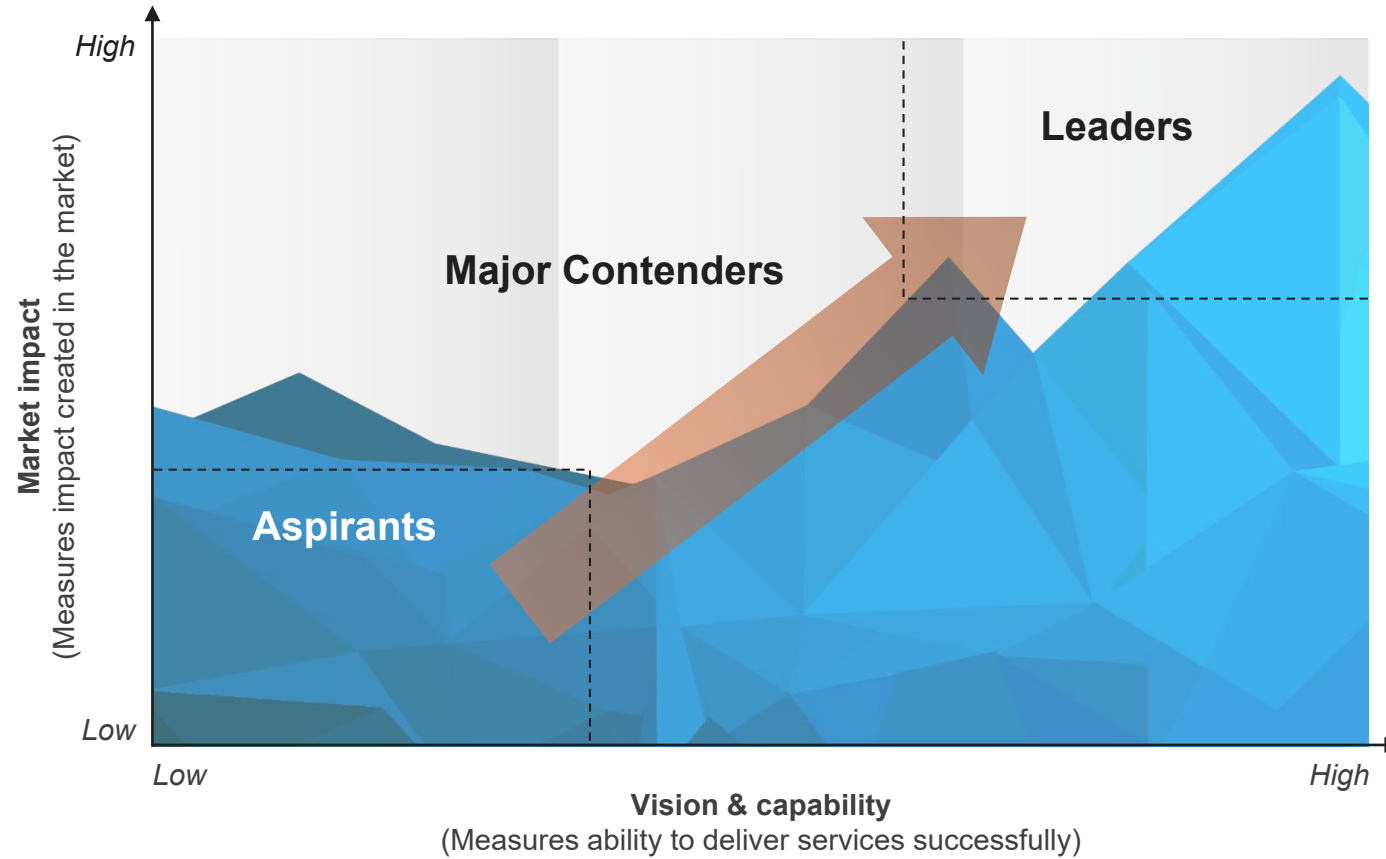
Services PEAK Matrix® evaluation dimensions

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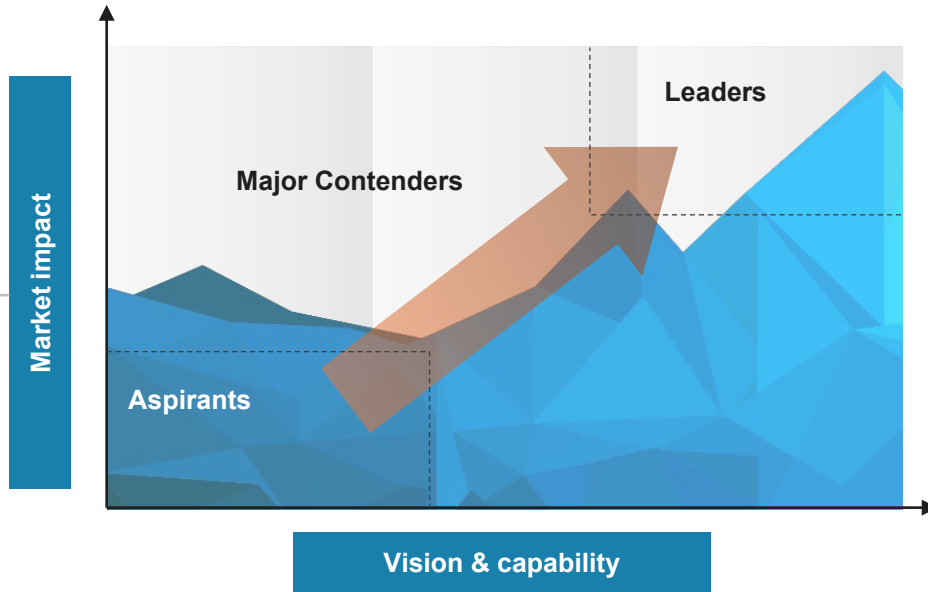
Measures ability to deliver services successfully.
This is captured through four subdimensions

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

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

Everest Group®

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