

# **Everest Group Digital Twin Services PEAK Matrix® Assessment 2023**

Focus on Wipro September 2023



## Introduction

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 advances in next-generation technologies, has 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 also finding interest among consumer-facing industries, 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 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 21 digital twin service providers featured on the <u>Digital Twin Services PEAK Matrix® Assessment 2023</u>. 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 2022, 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 21 leading digital twin service providers featured on the digital twin services PEAK Matrix:

- Leaders: Accenture, Capgemini, Eviden, HCLTech, IBM, TCS, and Wipro
- Major Contenders: Apexon, Cognizant, Cyient, Hitachi, Infosys, LTI Mindtree, LTTS, NTT Data, Sopra Steria, and Tech Mahindra
- Aspirants: Brillio, DXC Technology, Happiest Minds, and Harman International

#### Scope of this report







# **Digital Twin Services PEAK Matrix® characteristics**

#### Leaders

Accenture, Capgemini, Eviden, HCLTech, IBM, TCS, and Wipro

- Leaders exhibit a futuristic vision for digital twin that is aimed at achieving operational efficiency and establishing an intelligent enterprise
- Leaders are focusing on forging a strong partnership ecosystem that goes beyond the hyperscalers and IoT platform providers to include specialist digital twin providers 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**

Apexon, Cognizant, Cyient, Hitachi, Infosys, LTI Mindtree, LTTS, NTT Data, Sopra Steria, and Tech Mahindra

- Major Contenders are aiming to educate enterprise customers on the concept of digital twin through thought leadership 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**

Brillio, DXC Technology, Happiest Minds, and Harman International

- 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 2023 | Wipro is positioned as a Leader



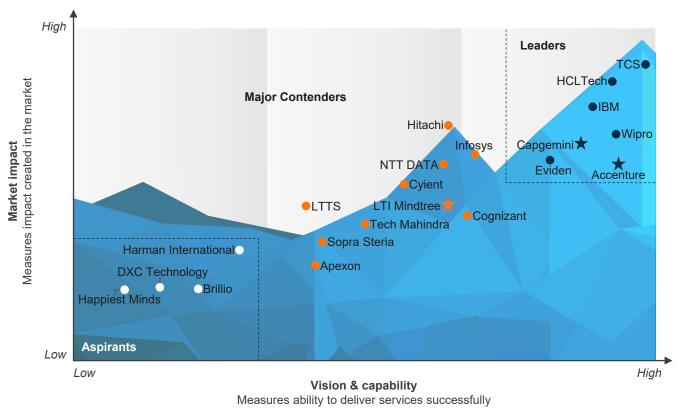
Leaders

Aspirants

**Major Contenders** 

Star Performers

Everest Group Digital Twin Services PEAK Matrix® Assessment 2023<sup>1</sup>



<sup>1</sup> Analysis for Brillio, Cognizant, DXC Technology, Eviden, Happiest Minds, Harman International, Hitachi, Infosys, LTTS, NTT DATA, and Sopra Steria excludes service provider inputs on this study and is based on Everest Group's estimates that leverage its proprietary Transaction Intelligence (TI) database, organization and public disclosures.

that leverage its proprietary Transaction Intelligence (TI) database, ongoing coverage of the service provider, and public disclosures

Confidentiality: Everest Group takes its confidentiality pledge very seriously. Any information that is contract-specific will be presented back to the industry only in an aggregated fashion Source: Everest Group (2023)



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# Wipro profile (page 1 of 5)

#### Overview

#### Company mission/vision statement for digital twin services

Wipro envisions a transformation in the engineering, operation, maintenance, and control of complex enterprise systems through the adoption of the digital twin technology. The focus is on leveraging the power of digital twins to drive transformative change in business operations. By integrating data, business processes, and applications into a unified digital ecosystem, Wipro aims to establish a single source of truth for multiple stakeholders within an enterprise. This approach enables the engineering of superior products, optimization of processes, efficient asset maintenance, and effective control of complex enterprise systems using digital twins.

#### Digital twin services revenue

 <US\$50 million</th>
 US\$50-150 million
 US\$150-300 million
 US\$300-450 million
 >US\$450 million



Heavy industry<sup>2</sup>

Consulting

Revenue by function

Revenue by buyer size<sup>1</sup>

Design



Retail and CPG

Low (<10%)

Implementation

Medium (10-25%)

Large

High (>25%)

Maintenance

(annual revenue >US\$5 billion)

Healthcare, pharma

Energy and utilities

Transport and logistics

and life sciences



- 1 All the revenue components add up to a total of 100%
- $2\quad \text{Heavy industry includes the likes of aerospace, heavy machinery, etc.}\\$



## **Wipro profile** (page 2 of 5) Case studies

Case study 1

Enabled industry excellence by establishing a flexible digital twin strategy for lockout and tagout scenarios

#### Business challenge

The client wanted a digital twin strategy to accommodate various use cases within the industry and particularly wanted to focus on lockout and tagout scenarios. It wanted to establish a high-level architecture and define data structures for implementing digital twins. Additionally, it aimed to create a CoE to drive the development, evolution, and support of digital twins across its business units.

#### Solution

Wipro assisted the client in implementing a digital twin platform that involved various upstream refinement activities. It was built on a serverless-microservices architecture, with loosely coupled modules integrated via APIs. The platform included a data acquisition module responsible for gathering data from multiple source systems, such as IT, operational systems (e.g., SAP, PCMS, SCADA, and Historian), 3D CAD files, IoT devices, and engineering systems. It helped facilitate data management and processing and utilized a combination of Microsoft Azure services. Azure Data Lake Storage Gen2 was used to store data, Informatica IICS for data integration and management, Azure SQL Data Warehouse for data warehousing, Azure Digital Twin for modeling and simulating the twin, and Azure Data Factory for data orchestration.

#### **Impact**

- Reduced preparation and maintenance time by 80%
- Executed remote working and digital inspection

#### Case study 2

Transformed asset management with the help of Wipro's on-premise Al advisory system, which enhances efficiency and cost savings for a multi-site roll-out

#### **Business challenge**

The client faced a problem while improving asset performance and reliability. It wanted an AI-based asset healthcare solution that could accurately predict equipment failure, enabling timely corrective actions, and proactive maintenance. The client aimed to minimize costly downtime, optimize resource allocation, and enhance overall operational efficiency.

#### Solution

Wipro helped the client by providing it with a custom-built on-premise AI advisory decision support system that utilized ML models. It offered early prediction capabilities by leveraging multi-physics and data-driven predictive models to handle more than 15 complex rotary asset classes. This solution was deployed across 20 sites in a multi-site roll-out. It provided insights and guidance for decision-making, enabling businesses to address asset maintenance and performance optimization, leading to improved operational efficiency and cost savings.

#### Impact

- Saved close to US\$20 million per year on spare parts
- Saved the cost of 10,000 hours of production loss per year
- Improved productivity and asset reliability

# **Wipro profile** (page 3 of 5) Solutions, partnerships, and investments

Proprietary solutions (representative list)					
Solution name	Details				
Decentralized digital passport – asset life cycle management	It helps to create a connected value-chain of smart assets, supported by a collaboration platform involving ecosystem partners such as suppliers, contractors, and inspectors. This integrated approach ensures smooth information handover and promotes transparency, enabling efficient management of the asset's lifecycle				
Smart asset twin	It is an industrial asset health management platform that utilizes IoT, cloud, physics-based simulations, and advanced analytics. Its key features include the early detection of abnormal behavior in assets, predicting time to failure and asset failure classifications, prescriptive analysis for identifying root causes, and reducing asset health degradation to minimize energy consumption and CO <sub>2</sub> emissions				
Asset radar	It is a customizable and scalable solution that offers 24x7 asset visibility, enabling optimal asset utilization, operational insights, and increased efficiency				
Wipro HOLMES	It is an AI platform that enhances operational efficiency and user experience for businesses. It also offers algorithmic intelligence and cognitive computing across infrastructure management, applications, and key business processes. Its offerings include IT automation, test life cycle management, hyper-automation, data analysis, and cognition				
Wipro's MIQ – MPD	It is a manufacturing performance solution that offers real-time visibility across multiple sites and locations. It integrates data from various sources, both on-premise and in the cloud, enabling the automated analysis of KPIs and identification of failures. It also provides a global view of performance and delivers insights for multiple business units				
Inspect AI – computer vision-based inspection	It involves utilizing automated image and video-based computer vision analytics to detect anomalies, identify structural faults, and conduct inspections in hazardous and remote areas. It also reduces the need for manual work and enhances overall quality				

# Partner name Details Google Entered into a collaborative partnership with GCP, Salesforce, and Electric Imp IoT to revolutionize the connected car space and enhance cold chain management and refrigeration Microsoft Partnered with Microsoft for the Microsoft IoT Elite Certified Partner status with a dedicated team of over 300 experts in Azure IoT. It includes 30+ consultants specializing in Azure architecture that sustained a training model that enables to train 20+ Azure resources every month. The expertise spans various solutions, including smart/digital signage, remote asset management/maintenance, service platforms, conditional/predictive maintenance, smart water metering, cold chain management, and more AWS Partnered with AWS for a cloud-based solution specifically focusing on IoT services such as Greengrass; it aims to enhance its crucial business processes effectively. Intel Partnered with Intel for incorporating advanced technologies at the edge, utilizing Atom, Galileo, and Edison chips for Proofs-of-Concept (PoCs) and Proofs-of-Value (PoVs), as well as X86 data centers for centralized processing.

# **Wipro profile** (page 4 of 5) Solutions, partnerships, and investments

Other investments (representative list)							
Investment name	Details						
Talent development initiatives	<ul> <li>Cloud academy – invested in multiple cloud services training such as Azure, AWS, GCP, and certifications, which helps Wipro to produce massive strength in the cloud domain</li> <li>loT academy – created a pool of loT architects and engineers while also facilitating the reskilling of engineers from other domains</li> <li>Azure loT &amp; digital twin – involved in building a team that specializes in Azure cloud services, with a particular focus on loT and the Azure digital twin stack</li> <li>SmartTwin academy – implemented to address the requirements for data architects and data engineers with expertise in the knowledge graph and digital twin technologies such as Neo4j and Cosmos</li> <li>Top Coder – invested to utilize its large pool of global experts and specialists as a virtual workforce; this investment accelerated development by leveraging the expertise and availability of these professionals</li> <li>TopGear Program – invested in establishing a training infrastructure and delivery program to up-skill and cross-skill employees, and focusing on developing future-oriented skills</li> </ul>						
CoE	<ul> <li>IoT CoE – deployed for the development of a cover device to facilitate the management of analytics and data, ensuring data integrity and security</li> <li>3D Printing CoE – established labs for rapid experimentation, validation, reverse engineering, product realization, and testing, all housed under one roof; this facility provides a streamlined approach to developing and validating the form and non-functionality of a product</li> </ul>						
Acquisitions	<ul> <li>Acquired ITI, which is now a part of Wipro's ER&amp;D Services, and operates as a wholly-owned US subsidiary; it offers customers a comprehensive platform to drive innovation and engineer cutting-edge products and platforms at a large scale</li> <li>Acquired Eximius, to enhance market leadership in VLSI and systems design services, increasing market presence and technical expertise in the semiconductor ecosystem</li> <li>Acquired Pari, a prominent industrial automation company that operates both domestically and internationally; it provides industrial automation solutions, covering both physical automation projects and digital factory initiatives to the customers</li> <li>Acquired Cellent, to enhance the presence in the DACH region, particularly in the manufacturing and automotive sectors</li> </ul>						

# Wipro profile (page 5 of 5) Everest Group assessment – Leader

Measure of capability: Low







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**

- Wipro's industry-specific digital twin solutions enable it to quickly execute extensive digital twin projects
- It leverages its consulting acumen to create a robust digital twin implementation approach that helps enhance complex business systems, leading to better operational effectiveness
- Wipro leverages its robust network of partners to foster the collaborative development of solutions, thereby enhancing its capabilities and delivering added value to its clients

#### Limitations

- There is potential for improving its digital twin capabilities by building advanced solutions and intellectual property for industry- and domain-specific requirements
- There is a scope of broadening its cognitive technology capabilities to be able to offer a greater range of analytics
- Clients expect Wipro to enhance its domain expertise in order to effectively address complex and nuanced business challenges in their engagements

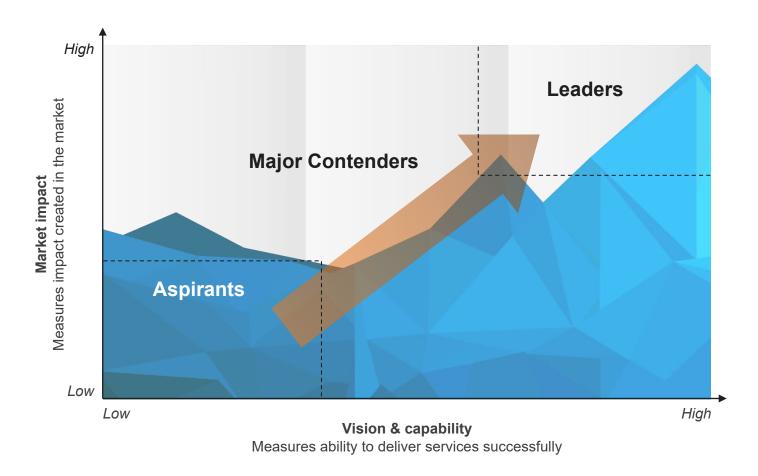
# **Appendix**



# **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**

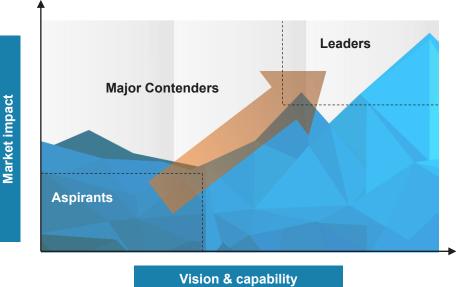
Number of clients, revenue base, YoY growth, and deal value/volume

#### 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



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

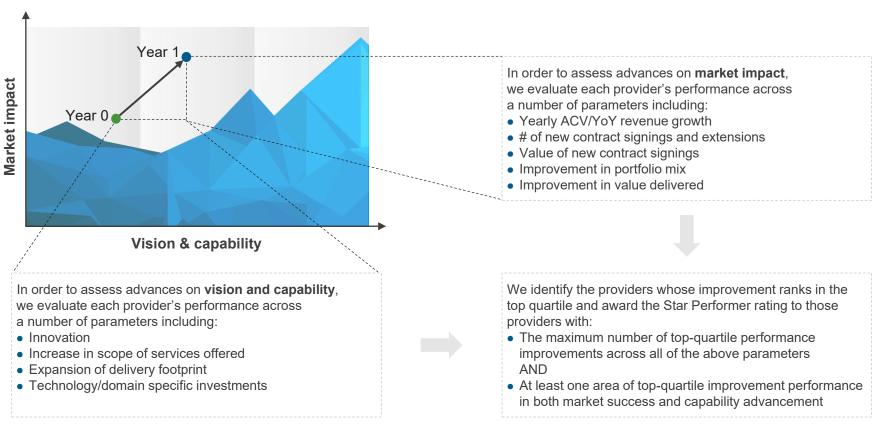


# Everest Group confers the Star Performers title on providers that demonstrate the most improvement over time on the PEAK Matrix®



Methodology

Everest Group selects Star Performers based on the relative YoY improvement on the PEAK Matrix



The Star Performers title relates to YoY performance for a given vendor and does not reflect the overall market leadership position, which is identified as Leader, Major Contender, or Aspirant.



## **FAQs**

#### Does the PEAK Matrix® assessment incorporate any subjective criteria?

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.

#### 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 the PEAK Matrix assessment are relevant to buyers and providers other than the PEAK Matrix positioning?

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.

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

- 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

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

- 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

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

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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