Digital Twin Services – Provider Compendium 2023

October 2023: Complimentary Abstract / Table of Contents

EGR-2023-33-CA-6155

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- Modern Application Development (MAD)

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- Rewards and Recognition
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- Service Optimization Technologies
- Software Product Engineering Services
- Supply Chain Management (SCM) Services
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Contents

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Contents

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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 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 [Digital Twin Services PEAK Matrix® Assessment 2023](#). 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.

This 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, LTIMindtree, LTTS, NTT DATA, Sopra Steria, and Tech Mahindra
- **Aspirants:** Brillio, DXC Technology, Happiest Minds, and HARMAN International
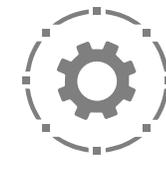
Scope of this report

Geography
Global

Providers
21

Services
Digital twin

Focus of the research

NOT EXHAUSTIVE

Consulting	**Design and implementation**	**Maintenance and management**
Strategy formulation, use case development, roadmap development, and technology assessment	Digital twin solution designing and implementation, system integration, and technology deployment	Ongoing management, monitoring, support, and upgrades/ updates

Digital twin services

Digital entity modeling/simulation engineering
Leveraging domain expertise to model entity based on product or process architecture, semantic modeling, 3D CAD modeling, multi-physics simulation design, and digital twin configuration and management

Sensor and actuator engineering
Sensor and actuator requirement analysis, selection, and deployment including configuration, provisioning, and interfacing with digital twin, support for firmware upgrade, and device management

Infrastructure and security
Cloud platform development, edge-based deployment, device permissions, back-up, authentication, data encryption, and vulnerability assurance

Gateways and network
Device connectivity, device registration, cloud/ edge connectivity, communication interfaces, device management, and performance management

Platform integration
Platform development/customization, API integration/runtime management, system performance management, connectors design and build, and system upgrade

Applications
Application development, Application Programming Interface (API) development and publishing, user interface design, customer experience management, application distribution, and interoperability

Digital thread, data management, and analytics
Digital thread design and implementation, master data management, big data solution integration, data storage, cleaning and mining, event processing, predictive analytics, prescriptive analytics, visualization, reporting, and dashboards

IT / OT integration
Integration of data and related information from operational control systems into IT to take high-value decisions and support feed-forward from the digital twin

Source: Everest Group (2023)

Overview and abbreviated summary of key messages

This report examines the digital twin services provider landscape. It focuses on service provider position, assessment of the provider capabilities, and key strengths and limitations of these service providers. It also identifies the key implications of the research findings for buyers and service providers.

Some of the findings in this report, among others, are:

Digital twin service provider capability

- Digital twin service providers can be classified into Leaders, Major Contenders, and Aspirants on a capability-market-share matrix
- Accenture, Capgemini, Eviden, HCLTech, IBM, TCS, and Wipro are the Leaders in this digital twin services PEAK Matrix assessment with several IT service providers emerging as Major Contenders
- Accenture, Capgemini, and LTI Mindtree are Star Performers based on their performance improvement over the year

Service provider characteristic

- 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 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 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

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The report has 21 digital twin services provider profiles

Provider 1 profile (page 1 of 4)
Overview

Company mission/vision statement for digital twin services
Provider 1 merges the physical and digital realms, enabling transformative b
creation of digital twins. Leveraging IT/OT and ET data, it drives engineering
excellence. By utilizing exponential technologies such as AI, IoT, cloud, and
skills, and performance levels. It advises, builds, moves, manages, and oper
elevated cost efficiencies and performance benchmarks.

Digital twin services revenue

<US$50 million	US$50-150 million	US$150-300 million	US$3

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

Provider 1 profile (page 2 of 4)
Case studies

Case study 1	Description 1

Business challenge
Data is essential for understanding the effects of climate change and pollutio
However, crewed research ships are costly to build and maintain, and their
limited. To help offset these challenges, scientists are increasingly turning to
drones, robots, and buoys to gather data in a cost-effective manner. By usin
data over large areas and for longer periods of time, giving them a more co
ocean's health.

Solution
The solution included the implementation of an XYZ, which offered automat
This enabled efficient and timely decision-making processes. Additionally, a
employed to pre-process large volumes of data, facilitating the generation o
This solution helped address the challenge of handling and analyzing subst
and cost-effective platform was leveraged, allowing scientists to gather mor
platform played a significant role in expanding their research capabilities an
associated with data collection in oceanic environments.

Impact
- Rise in the number of open datasets for universities and research establis
- Reduced cost to run from c£10,000 per day to nil for a research missions
- Advancing the science of marine autonomy

Provider 1 profile (page 3 of 4)
Solutions, partnerships, and investments

Proprietary solutions (representative list)

Solution name	Details
Solution 1	Solution 1 is a virtual representation This can result in improved efficien
Solution 2	A sustainable datacenter is designe renewable energy sources. Monitor

Partnerships (representative list)

Partner name	Details
Partner 1	Combination of Partner 1's platform for modernizing assets, optimizing
Partner 2	Along with XYZ-managed services to reduce emissions specifically rel

Other investments (representative list)

Investment name	Details
Investment 1	A US digital product engineering se
Investment 2	A developer of industrial device co integration time to extract data fron
Investment 3	A telecommunications consulting s innovate, and transform their busin

Provider 1 profile (page 4 of 4)
Everest Group assessment – Position

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
- Provider 1 is focused on creating innovative business models that allow it to provide greater value to its customers
- It showcases strong focus on upskilling and cross-skilling of employees for strengthening its employee base for digital twin implementation
- Provider 1's well-distributed global presence makes it a suitable choice for clients in any region that are looking for digital twin solutions
- It has a strong focus on cybersecurity coupled across all its offerings

Limitations
- Clients seek innovative and tailored pricing strategies from Provider 1 in their engagements
- Clients expect Provider 1 to demonstrate better thought leadership and engage in market-facing conferences to educate them on its capabilities and value delivered with its digital twin offerings
- It has room to expand its offshore operations while also prioritizing talent reskilling and upskilling initiatives

4

Research calendar
Digital Services

Reports title	Release date
Technology as a Strategic Differentiator in an Organization's Growth	June 2022
Digital Twin Services PEAK Matrix® Assessment 2022	July 2022
Systems of Growth – Building a Platform-based Operating Model to Innovate and Differentiate at Enterprise Speed and Scale	July 2022
Digital Twin Services Provider Compendium 2022	August 2022
Web 3.0 Trailblazers – the Top Start-ups Building the Next Generation of the Internet	October 2022
Exponential Technology Radar 2023: Picking the Right Battles	February 2023
Digital Transformation Consulting Services PEAK Matrix® Assessment 2023	March 2023
Enterprise Blockchain Services PEAK Matrix® Assessment 2023	April 2023
Digital Services State of the Market 2023: Fostering Innovation During the Downturn	May 2023
Enterprise Services Blockchain Services Provider Compendium 2023	July 2023
Digital Twin Services PEAK Matrix® Assessment 2023	August 2023
Exponential Technology Radar 2023 – Navigating the Future with Blockchain, Metaverse, and Digital Twin	September 2023
Digital Twin Services – Provider Compendium 2023	**October 2023**
Enterprise Extended Reality and Metaverse Services PEAK Matrix® Assessment 2023	Q1 2024
Enterprise Extended Reality and Metaverse Services – Providers Compendium 2023	Q1 2024

Note:　Click to see a list of all our published Digital Services reports

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