ISG Provider Lens™

Digital Engineering Services

Analyzing digital engineering capabilities from design to customer experience

Customized report courtesy of:

GlobalLogic
A Hitachi Group Company

QUADRANT REPORT | MAY 2024 | U.S.

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Report Author: Tapati Bandopadhyay

In 2023, the digital engineering services sector underwent a major shift driven by a convergence of digital technologies. This shift encompasses significant advancements in generative AI (GenAI) applications, research POCs and pilots across all digital engineering functions, including ideation and R&D, platformization and composable design, Agile operations and product support. Existing digital technologies such as smart and RPA, microservices, AI (deep learning), computer vision and predictive ML models, have matured dramatically. This holistic transformation revolutionizes how engineering services are conceptualized, executed and delivered, reshaping the global landscape with unprecedented efficiency, flexibility and innovation. GenAI-powered efficiency in structural coding and testing, SQL code generation from natural language queries, full stacks enabling platformization, and composable design and business architecture are at the core of these developments. These advancements are elevating the creation of flexible, scalable ecosystems, wherein the digital capabilities can be seamlessly integrated and reconfigured to meet the evolving needs of digital customers.

By combining modular, agile business processes and workflows, this approach empowers organizations to rapidly adapt to changing market dynamics, accelerating time-to-market and fostering greater responsiveness to customer demands. Automation and RPA technologies have been pivotal in streamlining operations, optimizing resource allocation and enhancing productivity across the engineering lifecycle. Automating repetitive tasks and workflows allows engineers to focus on high-value activities, driving innovation and continuous improvement.

Microservices architecture further enhances agility and scalability by breaking complex engineering systems into smaller, independently deployable components, facilitating rapid development and deployment cycles. From product design and simulation to maintenance and performance monitoring,

Digital engineering services **revolutionize enterprise solutions** through new-age capabilities.

AI and ML models have already become integral to engineering services, enabling predictive analytics, anomaly detection and optimization across various domains.

These technologies give engineers real-time access to actionable insights augmented with GenAI-based knowledge search and synthesis from vast multimodal and foundational models. These are further enhanced with specific retrieval-augmented generation (RAG)/fine-tuned language net (FLAN)-based models, enabling relevant knowledge and data-driven decision-making and driving continuous improvement and innovation. As organizations continue to embrace these advancements, the digital engineering services sector is poised for unprecedented growth and transformation, unlocking new opportunities for collaboration, differentiation and value creation in an increasingly competitive global marketplace.

The field of digital engineering design, product engineering and R&D has witnessed significant advancements driven by the integration of GenAI technologies across various stages of development. GenAI also played a pivotal role in revolutionizing product design, ideation, experience design, simulation, testing and digital twin creation. Utilizing GenAI algorithms, engineers and designers can rapidly explore and assess countless design possibilities and their feasibility, optimizing for various parameters such as performance, cost, security, risk profiles, and greenness and sustainability. Innovative GenAI applications at scale also enable the creation of highly personalized and efficient products specific to industries, ranging from financial services and insurance to consumer electronics to complex industrial machinery.

Furthermore, multimodal generative models such as SORA, DALL-E, Google Gemini, GPT4 and upwards facilitate immersive experience design by rapidly simulating different digital experience environments and metaverses and predicts user preferences and behavior, enhancing product usability and satisfaction. Simulation and testing enable more accurate predictions of product performance under different conditions, accelerating the development cycle and reducing costs associated with physical prototyping. Digital twins, powered by GenAI, have become more sophisticated, offering real-time insights into product behavior and enabling proactive maintenance and optimization strategies. Overall, the integration of GenAI marks a transformative shift in digital engineering design opportunities, facilitating faster innovation cycles and more resilient product development processes.

Digital manufacturing, smart factories and business operations also witness remarkable progress, fueled by increased adoption of cutting-edge technologies such as GenAI, digital twins and predictive ML. These advancements were particularly evident in predictive maintenance, field service and remote customer support operations. Using GenAI algorithms, manufacturers can optimize production processes and product designs. They use design for manufacturing practices and digital process twins and threads to enhance efficiency and quality of manufacturing processes.

Digital twins also play a crucial role in simulating real-world manufacturing environments, enabling predictive maintenance strategies to prevent equipment failures and minimize downtime. Predictive ML algorithms quickly analyze vast amounts of data to forecast maintenance needs accurately, facilitating proactive servicing and reducing operational disruptions. Remote support operations benefit from AR tools such as Microsoft HoloLens, Google Lens and computer vision, and access to vast knowledge through LLM-based search and real-time data analytics. These applications enable faster troubleshooting and resolution of issues. Integrating these technologies ushers in a new era of agile, efficient and resilient manufacturing and business operations.

Similarly, in after-market services and support operations, cutting-edge advancements are emerging, including GenAI use cases, conversational engines, knowledge automation and RPA, advanced content search and delivery, microservices, AI and ML models. These innovations have reshaped the landscape of customer engagement and support, ushering in a new era of personalized, efficient and proactive service delivery. GenAI has emerged as a transformative tool, enabling businesses to generate tailored solutions and recommendations for customers, regardless

of troubleshooting technical issues or offering personalized product suggestions. By combining conversational engines, GenAI facilitates seamless interactions between customers and support agents, enhancing the overall CX.

Knowledge automation and RPA streamline support processes by automating repetitive tasks such as ticket routing and data entry, freeing up support agents to focus on more complex issues. Advanced content search and delivery mechanisms use AI and ML algorithms to deliver relevant and contextualized information to customers, empowering them to self-serve and resolve queries independently. Microservices architecture enhances the agility and scalability of support systems, enabling rapid development and deployment of new features and functionalities. AI and ML models are pivotal in analyzing customer data, predicting support needs and optimizing service delivery, ultimately driving higher customer satisfaction and loyalty.

A convergence of innovations marks digital business platforms centered around composable design, modular business processes and workflows, traditional automation and RPA, composable business architecture, microservices and AI and ML models. Organizations demonstrate this paradigm shift by structuring and operating their digital ecosystems, fostering agility, scalability and resilience in dynamic market conditions. Composable design empowers businesses to assemble and recompose digital capabilities and functionalities tailored to their evolving needs seamlessly. Modular business processes and workflows enhance flexibility, enabling organizations to adapt swiftly to changing requirements and opportunities. Traditional automation and RPA technologies have played a pivotal role in streamlining operations, eliminating manual tasks and enhancing efficiency across various business functions.

Composable business architecture has emerged as a strategic framework, facilitating the orchestration of diverse digital components into cohesive, adaptable systems. Microservices architecture enables organizations to break down monolithic applications into smaller, more manageable units, fostering rapid development and deployment cycles. AI and ML models have become indispensable tools for driving insights, personalization and automation, empowering businesses to make data-driven decisions and deliver superior CX. This convergence of technologies has reshaped the digital landscape and redefined how businesses innovate, collaborate and compete in the global marketplace. As organizations embrace these advancements, the journey toward digital transformation is poised to accelerate, unlocking new opportunities for growth, innovation and value creation.

Digital engineering services are at the forefront of pioneering innovation and delivering robust solutions, empowering businesses to navigate the complexities of modern technologies and ensuring agility, efficiency and growth. Providers offer comprehensive services to harness the latest in AI, cloud computing and intelligent automation, enabling enterprises to redefine their strategies, optimize operations and ensure unparalleled CX.

Provider Positioning

Page 1 of 5

	Design and Development (Products, Services and Experiences)	Integrated Customer/ User Engagement	Platform and Application Services	Intelligent Operations
Accenture	Leader	Leader	Leader	Leader
ACL Digital	Not In	Contender	Not In	Contender
Akkodis	Product Challenger	Rising Star ★	Product Challenger	Product Challenger
Apexon	Rising Star ★	Not In	Product Challenger	Not In
Ascendion	Product Challenger	Not In	Rising Star ★	Not In
Bosch SDS	Product Challenger	Not In	Not In	Market Challenger
Capgemini	Leader	Leader	Leader	Leader
CI&T	Not In	Contender	Not In	Not In
Cigniti	Product Challenger	Product Challenger	Product Challenger	Product Challenger

Provider Positioning

Page 2 of 5

	Design and Development (Products, Services and Experiences)	Integrated Customer/ User Engagement	Platform and Application Services	Intelligent Operations
Cognizant	Leader	Leader	Leader	Leader
Cyient	Leader	Market Challenger	Leader	Leader
DXC Engineering	Product Challenger	Product Challenger	Product Challenger	Product Challenger
eInfochips	Product Challenger	Not In	Contender	Contender
Encora	Contender	Contender	Product Challenger	Contender
Engineering Industries eXcellence	Not In	Not In	Not In	Contender
EPAM Systems	Not In	Market Challenger	Not In	Not In
e-Zest Solutions	Contender	Contender	Contender	Contender
GlobalLogic	Leader	Leader	Leader	Leader

Provider Positioning

Page 3 of 5

	Design and Development (Products, Services and Experiences)	Integrated Customer/ User Engagement	Platform and Application Services	Intelligent Operations
Happiest Minds	Product Challenger	Product Challenger	Product Challenger	Product Challenger
HARMAN DTS	Leader	Leader	Leader	Leader
HCLTech	Leader	Leader	Leader	Leader
Hexaware	Leader	Leader	Leader	Not In
Infinite Computer Solutions	Product Challenger	Product Challenger	Product Challenger	Product Challenger
Infosys	Leader	Leader	Leader	Leader
Infovision	Not In	Product Challenger	Not In	Not In
ITC Infotech	Product Challenger	Product Challenger	Product Challenger	Product Challenger
LTIMindtree	Leader	Leader	Leader	Leader

Provider Positioning

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	Design and Development (Products, Services and Experiences)	Integrated Customer/ User Engagement	Platform and Application Services	Intelligent Operations
LTTS	Leader	Leader	Leader	Leader
Motherson Technology	Product Challenger	Product Challenger	Product Challenger	Product Challenger
Mphasis	Product Challenger	Product Challenger	Product Challenger	Product Challenger
Ness Digital Engineering	Not In	Contender	Not In	Not In
NTT DATA	Product Challenger	Not In	Not In	Rising Star ★
Persistent Systems	Rising Star ★	Leader	Leader	Leader
Randstad Digital	Contender	Not In	Contender	Not In
Tata Elxsi	Product Challenger	Product Challenger	Product Challenger	Product Challenger
TCS	Leader	Leader	Leader	Leader

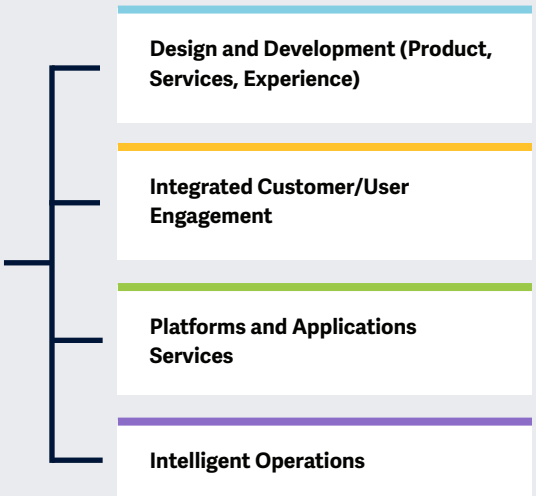
Provider Positioning

Page 5 of 5

	Design and Development (Products, Services and Experiences)	Integrated Customer/ User Engagement	Platform and Application Services	Intelligent Operations
Tech Mahindra	Leader	Rising Star ★	Rising Star ★	Leader
UST	Market Challenger	Market Challenger	Market Challenger	Market Challenger
WinWire	Not In	Not In	Contender	Not In
Wipro	Leader	Leader	Leader	Leader
Zensar Technologies	Product Challenger	Product Challenger	Product Challenger	Product Challenger

Key focus areas for **Digital Engineering Services 2024.**

Simplified Illustration Source: ISG 2024



Definition

With the rise of technological advancements, enterprises seek transformative journeys using digital technologies to expedite product and service development with enhanced quality and experience. ISG reports a 36 percent growth in the engineering market's ACV, surpassing its five-year average by 90 percent, with over 25 acquisitions in this space (ISG Index Insider).

The digital engineering market is driven by AI and industrial automation technologies, including GenAI in design, digital twins, virtual prototyping and industry 5.0, streamlining design-to-execution processes and enterprise platform outcomes, reducing operational and strategic risks, innovation cycle times and costs associated with the enterprise value chain and ecosystem.

Mobility, big data, AI and GenAI, ML, IIoT and predictive analytics drive visibility, traceability, reliability and consistency across the value chain.

This transformation digitizes the value chain, impacting foundational engineering services from product innovation to aftermarket services. The importance of tracking and tracing has heightened as it establishes a product's lineage and historical record throughout its value-addition process.

GenAI Technology has elevated expectations for digital engineering service providers, emphasizing new experience design, transformational platforms and intelligent manufacturing operations.

Industry 4.0 and 5.0, augmented by IIoT and artificial intelligence of things (AIoT), take engineering to a new era of an automated, smart, intelligent and controllable ecosystem. The market has shifted toward digital engineering transformation services, offering comprehensive strategies and data-driven product lifecycle management (PLM) for delivering digital CX services.

Scope of the Report

This ISG Provider Lens™ quadrant report covers the following four quadrants for services/ solutions: Design and Development (Products, Services and Experiences), Integrated Customer/User Engagement, Platform and Applications Services and Intelligent operations

This ISG Provider Lens™ study offers IT decision-makers:

- Transparency on the strengths and weaknesses of relevant providers
- A differentiated positioning of providers by segments (quadrants)
- Focus on the regional market

Our study serves as the basis for important decision-making by covering providers' positioning, key relationships and go-to-market considerations. ISG advisors and enterprise clients also use information from these reports to evaluate their existing vendor relationships and potential engagements.

Provider Classifications

The provider position reflects the suitability of providers for a defined market segment (quadrant). Without further additions, the position always applies to all company sizes classes and industries. In case the service requirements from enterprise customers differ and the spectrum of providers operating in the local market is sufficiently wide, a further differentiation of the providers by performance is made according to the target group for products and services. In doing so, ISG either considers the industry requirements or the number of employees, as well as the corporate structures of customers and positions providers according to their focus area. As a result, ISG differentiates them, if necessary, into two client target groups that are defined as follows:

- **Midmarket:** Companies with 100 to 4,999 employees or revenues between $20 million and $999 million with central headquarters in the respective country, usually privately owned.
- **Large Accounts:** Multinational companies with more than 5,000 employees or revenue above $1 billion, with activities worldwide and globally distributed decision-making structures.

The ISG Provider Lens™ quadrants are created using an evaluation matrix containing four segments (Leader, Product & Market Challenger and Contender), and the providers are positioned accordingly. Each ISG Provider Lens™ quadrant may include a service provider(s) which ISG believes has strong potential to move into the Leader quadrant. This type of provider can be classified as a Rising Star.

- **Number of providers in each quadrant:** ISG rates and positions the most relevant providers according to the scope of the report for each quadrant and limits the maximum of providers per quadrant to 25 (exceptions are possible).

Provider Classifications: Quadrant Key

Product Challengers offer a product and service portfolio that reflect excellent service and technology stacks. These providers and vendors deliver an unmatched broad and deep range of capabilities. They show evidence of investing to enhance their market presence and competitive strengths.

Leaders have a comprehensive product and service offering, a strong market presence and established competitive position. The product portfolios and competitive strategies of Leaders are strongly positioned to win business in the markets covered by the study. The Leaders also represent innovative strength and competitive stability.

Contenders offer services and products meeting the evaluation criteria that qualifies them to be included in the IPL quadrant. These promising service providers or vendors show evidence of rapidly investing in products/ services and a follow sensible market approach with a goal of becoming a Product or Market Challenger within 12 to 18 months.

Market Challengers have a strong presence in the market and offer a significant edge over other vendors and providers based on competitive strength. Often, Market Challengers are the established and well-known vendors in the regions or vertical markets covered in the study.

★ **Rising Stars** have promising portfolios or the market experience to become a Leader, including the required roadmap and adequate focus on key market trends and customer requirements. Rising Stars also have excellent management and understanding of the local market in the studied region. These vendors and service providers give evidence of significant progress toward their goals in the last 12 months. ISG expects Rising Stars to reach the Leader quadrant within the next 12 to 24 months if they continue their delivery of above-average market impact and strength of innovation.

Not in means the service provider or vendor was not included in this quadrant. Among the possible reasons for this designation: ISG could not obtain enough information to position the company; the company does not provide the relevant service or solution as defined for each quadrant of a study; or the company did not meet the eligibility criteria for the study quadrant. Omission from the quadrant does not imply that the service provider or vendor does not offer or plan to offer this service or solution.

Design and Development (Products, Services and Experiences)

Design and Development (Products, Services and Experiences)

Who Should Read This Section

The report is relevant for U.S.-based enterprises to evaluate providers that offer design and development services across the product development lifecycle.

In this quadrant, ISG assesses the current competitive positioning of providers based on their service portfolios, which have an end-to-end portfolio from ideation to design, prototyping to development, with quality testing and assurance across the value chain.

Enterprises build products and solutions with a customer-centric approach bonded with creativity, strategy, design, and data to re-invent businesses and drive growth. Enterprises are upgrading and expediting the development of their design portfolios and applications with minimal interruption to align with expanding business requirements.

Modern enterprises aim to create and provide a user-friendly and effortless digital experience, enabling smooth customer journeys. To accomplish this goal, enterprises choose suitable platforms and technologies with a well-defined strategy and vision to meet changing customer demands and market dynamics. Additionally, this year, the adoption of GenAI for design is still in the nascent stages, and many enterprises in the U.S. are moving from exploring to execution mode.

Companies seek to partner with providers to demonstrate robust digital strategies and design capabilities, leveraging the latest technologies and cutting-edge frameworks to deliver enhanced customer value.

Chief Digital Officers should read this report to understand the developments in the industry, enabling them to choose and partner with the right provider that can transform their digital landscapes.

Engineering leaders must read this report to comprehend the relative strengths and weaknesses of providers offering design and development services in the digital engineering space.

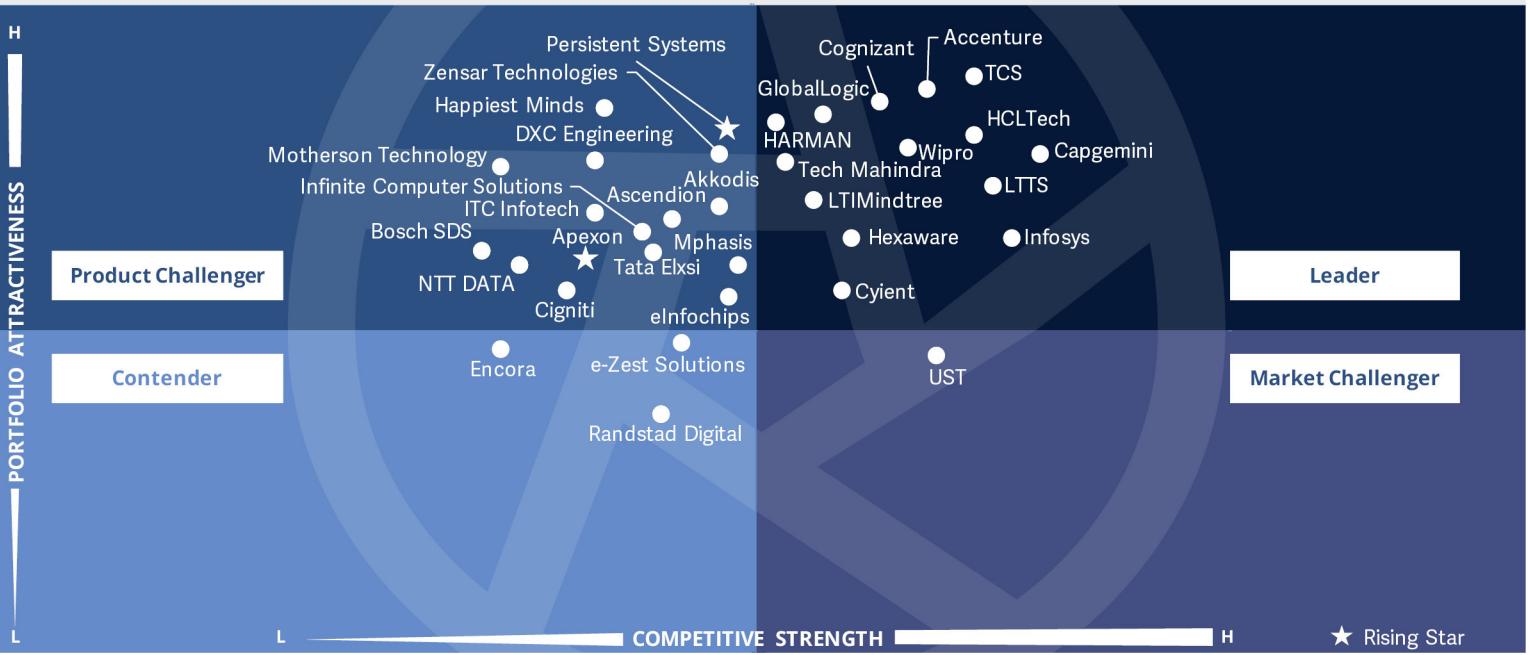
Software development and technology leaders should read this report to understand the relative positioning of providers and how their digital engineering offerings can impact an enterprise's transformation initiatives.

ISG Provider Lens™

Source: ISG RESEARCH

Digital Engineering Services
Design & Development (Products, Services and Experiences)

U.S. 2024



This quadrant evaluates providers in the design and development space that **use evolving practices, prototyping** and **design frameworks to enhance** value proposition. They **prioritize sustainability, incorporate AI** in their design processes and use GenAI applications.

Tapati Bandopadhyay

Definition

This quadrant assesses providers' ability to deliver integrated hardware and software and new data-driven product development and feature augmentation services. These services range from ideation and strategy to design and R&D, leveraging capabilities across rapid and agile design, prototyping and quality testing. Some of the resulting benefits include faster product innovation cycles and time-to-market, the creation of smarter and more connected digital products, and an improved CX. Key enabling capabilities include design thinking and digital product design techniques. This encompasses the entire new product introduction (NPI) process, right from the ideation to pilot runs of the product or services under consideration. It is known as Idea to Realization, which validates the new product ideas in the form of new features to be added to the existing product.

The tools and techniques used to track design changes across the value chain of the NPI process are enables by technologies such as computer-aided design (CAD), computer-aided manufacturing (CAM) and computer-aided engineering (CAE). Recent advancements in GenAI have exponentially augmented digital experience design capabilities, with generative design and simulations as well as virtual prototype design and testing on a large scale.

Eligibility Criteria

1. Breadth of lifecycle coverage: Support for product/service combinations and digital business platform development strategy, **new product/ service/business design and development capabilities,** integrate and scale, and support/ maintain stages
2. Proven experience in ideation, innovation, and engineering of digital value offerings: Use of **design thinking** capabilities, new **product/ service strategy** formulation requirements analysis, **market feedback/ research,** demonstrated **generative design** capabilities supporting ideation and innovation
3. Digital CX design competency: User/ persona-based journey mapping, design and storyboarding, **UI/UX design**, industrial design, service design and interaction design, net new **hyperpersonalization** and platform experience design with **GenAI** e.g. with personal digital avatars as service assistants
4. New software operating models: Ability to support **agile, continuous, and rapid development, CI/CD and continuous testing** unit and integration processes, managing the AI use cases and data lifecycles

5. Digital technology and capabilities: Covering new product/service/ experience design such as using **digital twins, rapid prototyping,** autonomous and continuous testing and **quality management** through platforms/solutions/ testbeds, PLM, data and model-driven engineering
6. Ability to ideate, strategize, design and develop new connected digital experiences: Functionality and use cases of **AR/VR/MR and extended/ immersive reality, additive manufacturing, 3D printing,** linked services, products, features and other digital systems, networks and value chains
7. Showcase of **PoC and use cases** including leveraging **GenAI** in design and experience management.

Observations

The digital engineering services sector is undergoing significant transformation driven by technological innovations and evolving market demands. Recent trends that global system integrators (GSI) are aligning to are:

- A strategic pivot toward sustainability
- Integrating AI in design processes
- Exploring GenAI applications

Strategic Adoption of GenAI

While GenAI has been a topic of interest across various technology sectors, its adoption within digital engineering services has been notably cautious and selective. Several leading GSI (Global System Integrators) have started incorporating GenAI instances into their portfolios to boost creativity, efficiency and innovation in product design and development. These integrators are using GenAI to automate the creation of design alternatives, optimize solutions for complex engineering problems and facilitate rapid prototyping.

Emphasis on Sustainability in Design

Sustainability has emerged as a central theme in the design practices of many digital engineering service providers. Recognizing the urgent need for environmentally responsible solutions, GSI are integrating sustainable design principles across the project lifecycle. This shift involves evaluating environmental impact, optimizing resource use and incorporating renewable energy sources.

Mainstreaming AI in Design Processes

The use of AI in design has transitioned from experimental to mainstream within the digital engineering services offered by GSI. AI technologies are now integral to enhancing the design process, from conceptualization to final execution. These tools enable the analysis of vast data sets for insights, automate routine tasks and facilitate complex decision-making.

From the 102 companies assessed for this study, 32 qualified for this quadrant, with 14 being Leaders and two Rising Stars.

accenture

Accenture revolutionizes R&D with advanced technology, enhancing ROI, security and sustainability. It digitalizes engineering using cloud technology to connect data and create digital product representations, tackling IoT complexities for improved performance and success.

Capgemini

Capgemini employs its Rapid Design and Visualization (RDV) framework to rapidly prototype and visualize CX. Its omni-channel experience strategy ensures consistent and trust-building interactions across all touchpoints.

cognizant

Cognizant's holistic design and development services encompass the entire product lifecycle from ideation to sustenance. Acquisitions such as ESG Mobility and Bright Wolf underscore its strategy to strengthen capabilities in digital engineering, IoT, and analytics.

Cyient

Cyient's design and development services are grounded in a holistic approach that integrates classic product engineering and design thinking with advanced digital technologies.

GlobalLogic

GlobalLogic's strategic design studio, Method, exemplifies a comprehensive approach to creating UX, blending business branding with customer relations to craft engaging and intuitive services.

HARMAN

HARMAN Digital Transformation Solutions approach integrates design thinking and advanced technology services, including AI, data analytics and immersive experiences, to navigate the complexities of new product development efficiently.

HCLTech

HCLTech demonstrates a comprehensive product and platform engineering approach, providing end-to-end solutions across diverse industries such as consumer electronics, telecommunications and healthcare.

Hexaware

Hexaware stands out in the design and development space, owing to its impactful digital products created by blending exceptional talent, domain expertise and innovative frameworks such as RapidX and Amaze®.

Infosys

Infosys distinguishes itself in the design and development space through user-centric solutions across industrial, biomedical and digital domains. It uses its innovative knowledge-based engineering (KBE) technology to automate product design and development.

LTIMindtree

LTIMindtree emphasize the experience economy in its approach to design and development, blending design thinking with innovation to create transformative solutions.

L&T Technology Services

LTTS' design and development initiatives are characterized by its strategic use of GenAI for generative design, optimizing various aspects such as topology, simulations and validation. Its approach enhances design innovation and tailors solutions based on industry needs.

TCS TATA CONSULTANCY SERVICES

TCS demonstrates a comprehensive approach to product design and development across various industries, especially in automobile and aeronautics, supported by robust AI frameworks for accelerated development and validation.

Tech Mahindra

Tech Mahindra's focus on continuous feedback and incremental releases, underpinned by design thinking, positions it as a leader in delivering innovative and customer-centric product solutions.

wipro

Wipro's Engineering Edge sets the bar in the design and development space, melding chip-to-cloud innovation with a focus on automotive and 5G, propelled by a robust partner network for global market leadership.

Apexon

Apexon (Rising Star) distinguishes its design and development capabilities through a holistic approach to creating digital products that deliver tangible business value and engaging UX.

Persistent

Persistent Systems (Rising Star) emphasizes a human-centered and innovation-led approach to design and development, blending design thinking with technology expertise to uncover digital opportunities.

Leader

"GlobalLogic uses its strong technology partner ecosystems aptly to enable clients' digital product and service design based on experience simulations and AI-powered testing."

Tapati Bandopadhyay

GlobalLogic

Overview

GlobalLogic is a Hitachi Group company headquartered in San Jose, California, U.S., operating in over 20 countries. It has over 30,000 employees across more than 50 offices. It has 35 engineering centers and nine design studios focused on building advanced products. In FY23 the company had more than 600 active clients. Guided by its strategic design studio, GlobalLogic adopts a holistic approach to UX in its design and development services. Its portfolio of accelerators and intelligent solutions such as federated blockchain and Dr. Koogle strengthens it as a leader in delivering user-centric and technologically advanced solutions.

Strengths

Global technology partnerships: GlobalLogic collaborated with several cloud, AI, data technology platform companies and hyperscaler partners to redefine the technology innovation landscape. Through groundbreaking experience design initiatives, GlobalLogic helped clients ideate, build, test and deliver a comprehensive suite of products, services and solutions to drive digital transformation across design and R&D, manufacturing and engineering operations and digital CX, with platform engineering capabilities. Using its combined expertise on cutting-edge technologies from the technology partners, GlobalLogic empowers clients to innovate, adapt and thrive in the fast-paced digital competition.

Experience-driven product design and R&D: GlobalLogic offers standard and mature frameworks and methodologies designed to accelerate new product ideations, modernization and incremental and disruptive innovation in a streamlined manner. Using ML and GenAI use cases, GlobalLogic enables clients to optimize product designs, enhance collaboration and expedite time-to-market.

Domain-relevant design: By harnessing its deep domain expertise and technological prowess, GlobalLogic empowers clients to deliver superior products to meet evolving customer demands.

Caution

GlobalLogic should frequently promote and increase the visibility of its innovative platforms such as learning experience platform (LXP) in the U.S. market to attract and retain talent. It also needs to better communicate its strength in software product development in the long term, along with success stories in the product engineering segment.

Integrated Customer/User Engagement

Integrated Customer/User Engagement

Who Should Read This Section

The report is relevant for U.S.-based enterprises evaluating providers offering integrated customer and user engagement through aftermarket services.

In this quadrant, ISG assesses the current competitive portfolio of providers that offer advanced aftermarket services and utilize digital platforms like AI-driven customer support, virtual agents, self-help knowledge bases, and augmented reality/virtual reality (AR/VR) for field assistance, ensuring compelling customer experiences.

Additionally, the enterprises are looking to improve their training of shopfloor operators through immersive technology to optimize time and effort and provide a secure environment for the employees.

Enterprises recognize the significance of providing customers with an omnichannel experience throughout their digital journey. By embracing digital technologies like predictive analytics, enterprises can deliver personalized services and recommendations, effectively leveraging tailor-made solutions to meet customer needs.

Enterprises are exploring and inventing new business models to achieve world-class CX. Improved CX, UX, and employee experience also improve enterprises' brand image.

Enterprises prefer providers to improve their customer and user engagement. These providers should have strong capabilities across omnichannel support, hyper-personalized experiences, advanced analytics services, and security/privacy in the aftermarket services space.

Chief Digital Officers should read this report to understand the developments in the industry, enabling them to choose and partner with the right provider that can transform their digital landscapes.

Engineering leaders must read this report to comprehend the relative strengths and weaknesses of providers offering intelligent aftermarket portfolios in the digital engineering space.

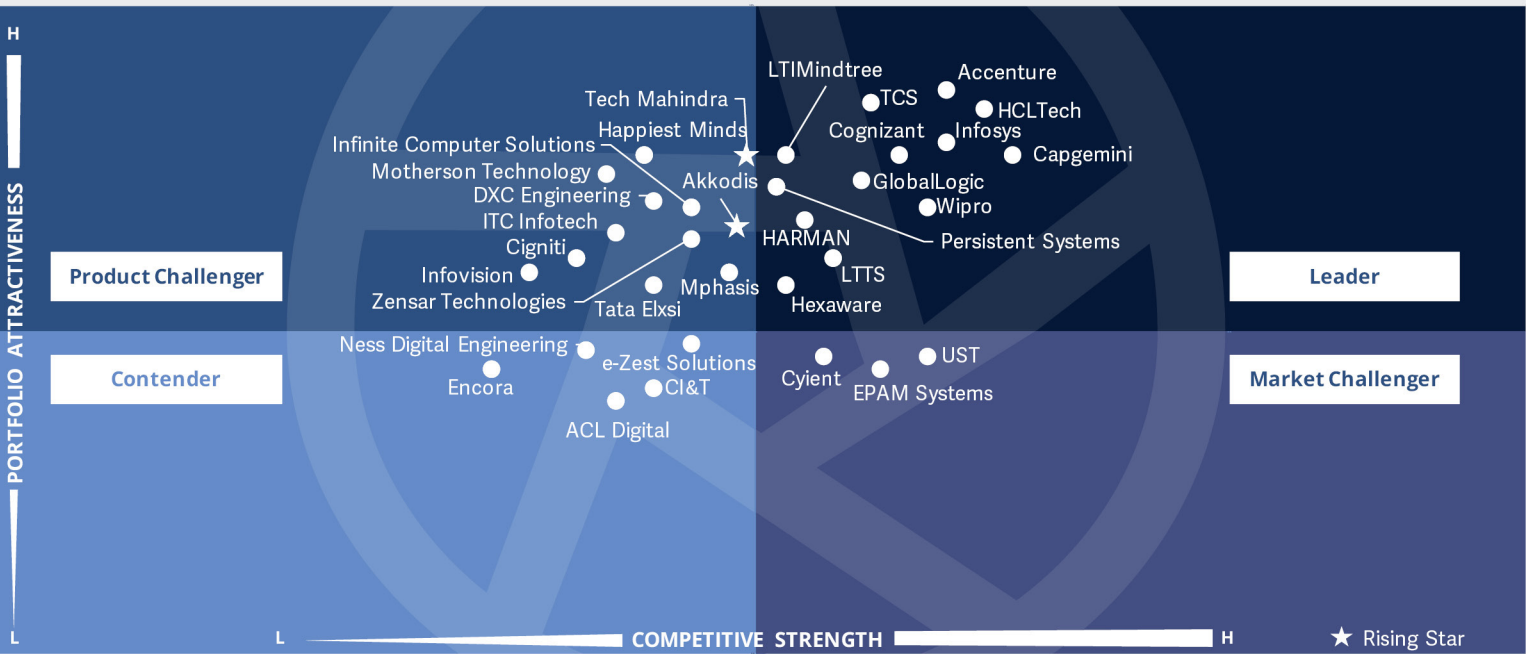
Software development and technology leaders should read this report to understand the relative positioning of providers and how their digital engineering offerings can impact an enterprise's transformation initiatives.

ISG Provider Lens™

Source: ISG RESEARCH

Digital Engineering Services
Integrated Customer/User Engagement

U.S. 2024



This quadrant assesses providers' ability in leveraging advanced and innovative technologies such as **GenAI, ML and AR/VR** to revolutionize customer interactions, setting new benchmarks in **personalized, efficient and engaging customer service.**

Tapati Bandopadhyay

Definition

This quadrant covers providers using intelligent aftermarket services to deliver customer services and product support through digital platforms. Providers' key capabilities in this space include providing AI-enabled customer services, virtual agents, self-service knowledge support, remote services and field support, and using AR/VR technology for remote services using drones and real-time experience management. Effective customer and user engagement services are crucial as they directly affect the customer and the end-users of the product or services. The degree of customer satisfaction achieved relative to their expectations ultimately influences their decision for repeat purchases and serves as a critical determinant of success.

Feedback in the form of the voice of the customer (VoC) obtained from various down-the-line digital sources plays a vital role in making a self-learning, auto-correcting process that remains highly relevant to the customer, as well as the CX providers.

Eligibility Criteria

1. Predictive maintenance competency: Use of **data analytics, AI and machine learning in maintenance, field service management** and **self-healing services**
2. Warranty management, lifecycle management and maintenance, repair, and operations **(MRO)** capabilities: Focus on **digital experience platforms service**, customer engagement, query resolution and support
3. Innovation in **aftermarket services** interfaces: Including **UI/UX design** and engineering and product/service **personalization**
4. Experience with new business and service models: Using IoT technologies, **AR/VR-powered digital avatars** and virtual customer care assistants, real-time knowledge support, and predictive actions suggestion engines to provide **remote infield customer service** and help
5. Content delivery capability: Autonomous and intelligent content distribution, on-demand, **AI-powered** self-service knowledge help such as using NLP, NLU, NLG, conversational AI, and virtual agent support
6. Leverage customer and market feedback (VoC): **Value-added utilization** of customer, field and market **feedback** across all relevant channels, including social media and web Track and trace capability across the value chain
7. Showcase of Proof of Concepts and Use cases leveraging **GenAI for content development, knowledge curation, and feedback mechanisms** that could support different processes.

Observations

GSI increasingly focus on enhancing CX and user engagement through innovative technology applications. The adoption of GenAI in customer support, the development of industry-specific solutions and the creative use of AI and ML, including chatbots and AR and VR, are at the forefront of these efforts. These advancements signify a strategic pivot toward more personalized, efficient and interactive customer engagement models driven by the latest technology innovations.

GenAI in Customer Support

GenAI is revolutionizing customer support services offered by GSI, ushering in a new era of personalized and efficient user assistance. By using GenAI technologies, service providers can create more nuanced and context-aware responses to customer inquiries, automate the generation of support content and predict customer needs more accurately.

Tailored Industry-specific Solutions

Recognizing different sectors' unique challenges and requirements, digital engineering service providers and GSI increasingly focus on developing industry-specific solutions. These bespoke services aim to address the exact pain points of each industry, offering targeted improvements in CX and operational efficiency.

Innovative AI-ML Applications in CX

The use of general AI and ML technologies fosters innovation in CX strategies, notably through the deployment of chatbots and the application of AR and VR. Chatbots powered by AI and ML are becoming increasingly sophisticated and capable of conducting natural conversations, providing instant customer support and even personalizing interactions based on user history. Meanwhile, AR and VR technologies create immersive experiences that engage, educate and assist customers in novel ways.

From the 102 companies assessed for this study, 31 qualified for this quadrant, with 13 being Leaders and two Rising Stars.

accenture

Accenture's advanced customer engagement services create personalized customer journeys for growth, focusing on understanding needs and unifying front-office systems. This approach aims to enhance customer satisfaction, employee experience and revenue by responding effectively at scale.

Capgemini

Capgemini invests significantly in CX/UX R&D, prioritizing immersive and engaging user interfaces. Its commitment to immersive commerce, field services and the metaverse showcases a progressive strategy for enhancing customer interactions.

cognizant

Cognizant excels in creating integrated customer and user engagement solutions, employing a blend of design capabilities and technical expertise. It focuses on experience strategy and design, digital commerce and omnichannel experiences.

GlobalLogic

The imperative of adapting to rapidly changing consumer preferences drives **GlobalLogic**'s approach to integrated CX and user engagement. Its digital-first strategy underscores its ability to navigate the complexities of high-tech product engineering.

HARMAN Digital Transformation Solutions versatile CX/UX design platform, HARMAN eNOVA, exemplifies its generative content creation and management capability, enhancing conversational experiences across customer products and organizational processes.

HCLTech integrates digital process operations with technology-led digital operations to meet market demands efficiently. Its CoForce for support framework further exemplifies using cognitive analytics and GenAI to optimize product support activities.

Hexaware designs its CX solutions to use GenAI-powered experiences, offering hyperpersonalization and efficiency through analytics.

Infosys excels in creating integrated customer and UX by using AI and digital technologies such as AR and VR, digital twins and Industry 4.0 frameworks. Its approach encompasses many industries such as high-tech, retail and healthcare.

LTIMindtree's integrated customer and user engagement offerings use AI-based solutions such as virtual agents and AR and VR technologies, to enhance customer service and support.

LTTS designs its integrated CX/UX engagement strategies to optimize the customer journey through a balanced mix of design and technology. Its reusable components and innovative platforms illustrate a commitment to efficient and effective CX solutions.

Persistent Systems' conversational platform solutions and GenAI initiatives aim to automate customer engagement and provide hyperpersonalized experiences, enhancing customer interactions and satisfaction.

TCS is advancing in integrated CX/UX engagement using IoT and digital platforms to transform CX. Its practice in connected products and servitization aims to enhance product reliability and create new revenue streams.

Wipro's ai360 initiative redefines integrated customer/user engagement, harnessing AI and AR/VR for immersive experiences, complemented by cutting-edge additive manufacturing for on-demand global services.

Akkodis (Rising Star) excels in end-to-end digital operations and support, enhancing digital operations and CX and DX transformations.

Technology Mahindra (Rising Star) excels in integrated CX/UX services with a 360-degree approach, blending experience design with disruptive technologies such as IoT and AI to transform operations.

Leader

"GlobalLogic is working extensively on AI-powered solutions to elevate CX and digital business support to the next levels of responsiveness, responsibility and autonomous actions."

Tapati Bandopadhyay

GlobalLogic

Overview

GlobalLogic is a Hitachi Group company headquartered in San Jose, California, U.S., operating in over 20 countries. It has over 30,000 employees across more than 50 offices. It has 35 engineering centers and nine design studios focused on building advanced products. In FY23 the company had more than 500 active clients. GlobalLogic profoundly engages with the technology sector, fostering innovation and excellence in product development through its integrated CX and UX engagement services.

Strengths

AI and GenAI use and enablement in CX: GenAI-powered chatbots or conversational AI agents, enabled with predictive analytics, domain-specific knowledge automation and LLM applications, can deliver disruptive and innovative CX. GlobalLogic delivers seamless and personalized experiences across all touchpoints and channels using automation and data.

Customized support enablement: By providing tailored support and proactive engagement, GlobalLogic enables clients to drive customer satisfaction and retention. These tailored support and engagement offerings make apt use of digital technologies based on specific client's customer support requirements.

Enabling client outcomes through CX: GlobalLogic empowers its clients to improve customer retention and loyalty. Software and data engineering prioritizes cloud-centric, data-driven approaches, security sensitivity, edge-computing and intelligent autonomy to navigate customer journeys. Through this data-integrated and algorithmic approach, clients receive optimal customer support solutions.

Caution

Software-defined industry solutions and transformations in product companies should be associated with the digital maturity curves. The provider must communicate effectively about its GTM by industry verticals and offerings such as the Magento platform on its research partner platforms.

Platforms and Application Services

Who Should Read This Section

The report is relevant for U.S.-based enterprises evaluating providers offering platforms and applications services to design and deliver platform engineering competencies.

In this quadrant, ISG assesses providers' current competitive and portfolio strengths that offer business and technical design proficiency, build new experiences leveraging digital ecosystems, and orchestrate platforms and microservice-based architectures.

The Platformization approach has seen incredible positive effects amongst enterprises in the U.S. AI-augmented applications are on the rise, automating and enhancing tasks across various scenarios. These intelligent applications enhance user experiences by integrating precise predictions, suggestions, and data-driven decision-making functionalities.

Enterprises view integrating advanced AI technologies, such as generative AI and machine learning, as essential for application development and testing. These AI-augmented tools facilitate tasks like translating legacy code, transforming design into code, and improving testing capabilities.

Providers should adopt business models focused on delivering outcomes aligned with customer expectations, meeting evolving needs and providing greater accountability, quality, and risk-sharing. Enterprises favor providers offering services throughout the application lifecycle, spanning development, modernization, and maintenance. They are searching for providers offering comprehensive application services coupled with a unified transformation strategy.

Chief Digital Officers should read this report to understand the developments in the industry, enabling them to choose and partner with the right provider that can transform their digital landscapes.

Engineering leaders must read this report to comprehend the relative strengths and weaknesses of providers offering platform development services in the digital engineering space.

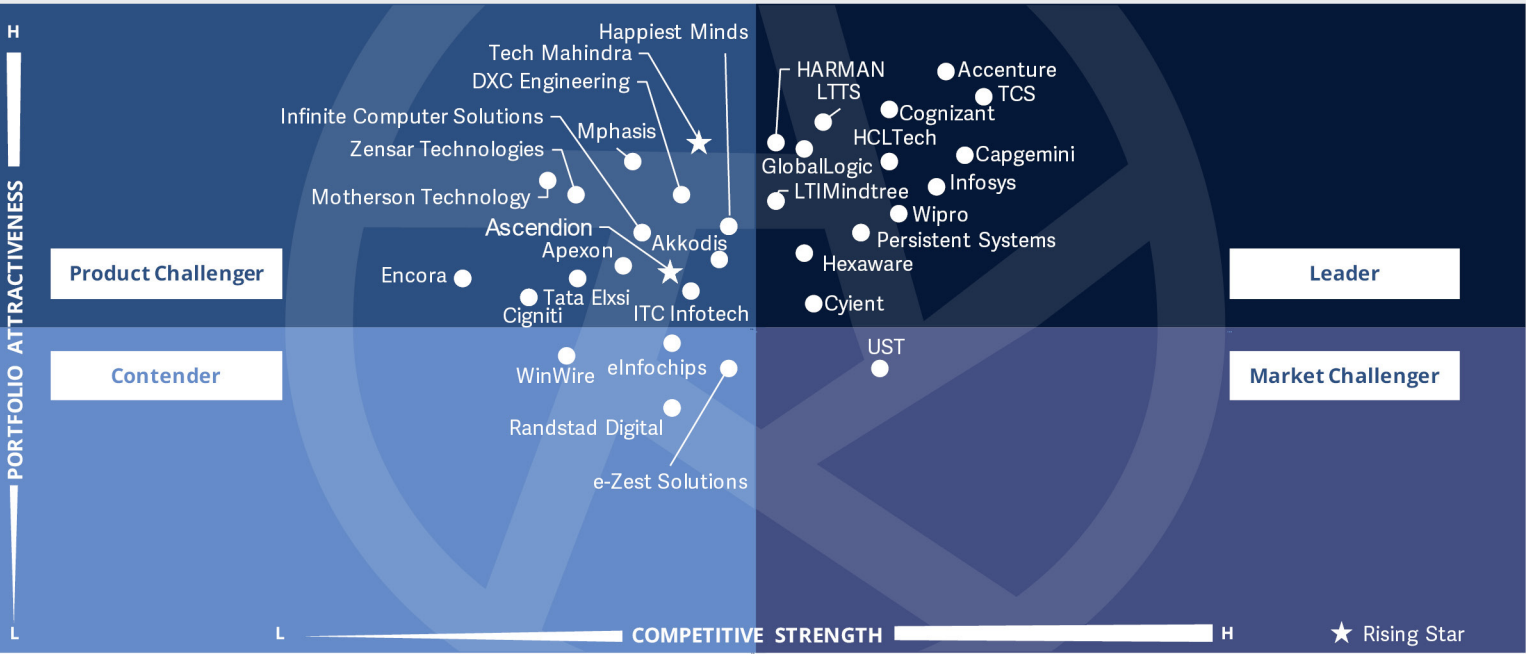
Software development and technology leaders should read this report to understand the relative positioning of providers and how their digital engineering offerings can impact an enterprise's transformation initiatives.

ISG Provider Lens™

Source: ISG RESEARCH

Digital Engineering Services
Platform and Application Services

U.S. 2024



This quadrant analyzes GSIs' ability to develop **modular, adaptable technology ecosystems** that **support agility, scalability and innovation**. The focus is on delivering **flexible, future-proof solutions** to enhance efficiency and provide a competitive edge.

Tapati Bandopadhyay

Definition

This quadrant assesses service providers' ability to design and deliver digital platform engineering competencies. Key capabilities include proficiency in business and technical design, building new experiences and leveraging digital ecosystems, orchestration platforms and microservice-based architectures. This analysis also covers containerization, connected intelligence and real-time experience management across products, services and UX.

The new paradigm of platforms represents an abstraction of standardized, modularized and well-articulated process elements across the value chain, which can be applied and leveraged as virtually independent components to address specific functionalities and, hence define specific outcomes.

Platforms serve specific purposes and functions that are delivered as platform services and can be easily configurable and extendable. They also yield benefits such as simplified maintenance, reduced changes for variants, decreased setup and changeover time, streamlined diagnosis and enhanced overall reliability in the process. Platforms also allow plug-and-play operations, demonstrate a heightened level of maturity and introduce consistency to the value chain.

Eligibility Criteria

1. Digital ecosystem orchestration platform capabilities: Design, build, deliver, support, and monetize using **digital ecosystem orchestration** platforms for streamlined commerce.
2. Technology platforms engineering capabilities: Building and operating a common platform as a product for technology teams to **reduce the time-to market** and complexity
3. Product/service configurability and personalization abilities: Use of **behavioral intelligence and predictive analytics** on real-time/streaming data from users and smart connected devices
4. Core platform strategy and engineering capabilities: Helping businesses shift from a product to a platform mentality by architecting and **developing an API** and ecosystem strategy for a scalable and future-ready platform
5. Cloud-native design skills: Ability and agility to leverage **cloud-based digital platform ecosystem**
6. Engineering ADM competency: ADM ability with a focus on **smart, connected product,** design and cloud-native, digital-native design
7. Capabilities and proven experience: Utilize integrated digital technology platforms and digital experience **of connected systems, hardware and software**

8. Ability to **augment** and **synchronize users' digital experience in real-time**
9. Ability to **design, build, test,** deliver, run, and augment **reusable functions/ modules** in digital
10. Experience in **code capability**
11. Showcase of and **Use Cases leveraging GenAI** in content development and knowledge curation.

Observations

The trends of codifying industry best practices, integrating sustainability and governance considerations and adopting composable architecture underline the transformation of digital engineering services. GSI continue to pioneer these developments and set new benchmarks for operational excellence, sustainability and technological agility.

Industry Best Practices Codified in Platforms

Service providers increasingly embed industry best practices directly into digital platforms and applications. This approach ensures that solutions are technically robust and aligned with various sectors' specific regulatory, operational and quality standards. By codifying such practices, integrators enable organizations to accelerate digital transformation journeys while ensuring compliance and operational excellence.

Sustainability, ESG and GRC

Sustainability, ESG and ERC considerations have become a central theme in the development of digital engineering services. Integrators are incorporating ESG criteria and GRC frameworks into their platforms, ensuring that digital solutions are efficient, compliant, responsible and sustainable. This emphasis on sustainability reflects a broader corporate and societal shift toward environmental stewardship, ethical governance and social responsibility. By embedding these principles into digital platforms, integrators are helping organizations meet their sustainability goals and adhere to increasingly stringent regulatory environments.

Composable Architecture

Adopting composable architecture is another significant trend shaping the digital engineering services space. This architectural approach enables the modular construction of digital services and platforms, allowing businesses to adapt and evolve their technology ecosystems in response to changing needs and opportunities. Composable architecture supports agility, scalability and innovation, facilitating the rapid deployment of new features and services.

From the 102 companies assessed for this study, 31 qualified for this quadrant, with 14 being Leaders and two Rising Stars.

accenture

Accenture excels in the platform economy, aiding firms in adopting platform-centered models with cutting-edge technology and skills for swift service launches, efficient scaling and technology integration, promoting vast opportunities through ecosystem-oriented platforms.

Capgemini

Capgemini's ADMnext service encapsulates its forward-looking application development and maintenance approach, emphasizing agile, DevOps and cloud technologies –powered by in-house consulting expertise and global delivery capabilities.

cognizant

Cognizant designs its Platform and Application Services to ensure business agility and innovation. Its Software and Platform Engineering Unit offers integrated services across digital experience, digital engineering and application services.

Cyient

Cyient's comprehensive suite of solutions and services, backed by strategic frameworks and accelerators, positions it as a key enabler in helping customers through every stage of digital transformation.

GlobalLogic

GlobalLogic uses specific accelerators such as Tech Transform and Gen AI-based solutions, along with integrating tools such as Microsoft Copilot, to enhance developer productivity and product delivery efficiency.

HARMAN Digital Transformation Solutions offers a customized platform and application development services that cover consulting, UI/UX design, microservices architecture, data and AI solutions and DevOps, providing comprehensive support from concept to deployment.

HCLTech uses its CoForce for Intelligent Software Engineering solution to augment development and testing processes, enhance efficiency and code quality and reduce operational costs across the development lifecycle.

Hexaware's platform and application services aim to accelerate digital modernization through innovative platforms that automate and enhance the software development lifecycle.

Infosys showcases a robust portfolio of platform and application services. Its offerings such as the Infosys Live Enterprise Suite, Infosys Nia and Infosys Cobalt, demonstrate a commitment to enabling digital transformation through comprehensive, modular solutions.

LTIMindtree excels in delivering platform and application services that address the needs of a digitally transformed business environment. Its expertise in data, microservices, architecture and migration supports the development of futuristic platforms.

LTTS' expertise in connecting products, predictive maintenance, AI and ML positions it as a key player in digital engineering, helping clients pivot to digital platforms effectively.

Persistent Systems has established itself as a trusted partner in digital product engineering, assisting in every stage of the software product lifecycle.

TCS focuses on utilizing GenAI to enhance IoT and digital engineering applications, demonstrated through various use cases and the propriety frameworks, which positions TCS as a forward-thinking player in driving digital transformation.

Wipro's Platform and Application Services are revolutionized by its Fullstride Cloud Design Studios, advancing cloud transformations and 5G innovations for next-gen automotive and connectivity platforms.

Ascendion (Rising Star) revolutionizes Platform and Application Services with its Digital Ascender, a GenAI-based AVA studio that automates the software development lifecycle, enhancing engineer productivity.

Tech Mahindra (Rising Star) offers a comprehensive service portfolio, combined with its focus on GenAI and metaverse applications, to drive innovation and deliver cutting-edge solutions across various sectors.

Leader

"GlobalLogic excels at delivering and enabling software and data-driven experience platforms for client's business workflows and intelligent ecosystems."

Tapati Bandopadhyay

GlobalLogic

Overview

GlobalLogic is a Hitachi Group company headquartered in San Jose, California, U.S., operating in over 20 countries. It has over 30,000 employees across more than 50 offices. It has 35 engineering centers and nine design studios focused on building advanced products. In FY23 the company had more than 500 active clients. It startegically utilizes modern tools and adopts an agile approach to software development in its platform and application services. Its emphasis on improving product delivery through GenAI applications and developer productivity tools positions it as a key player in driving digital transformation.

Strengths

Software, data and experience-driven digital platform offerings: GlobalLogic has been pushing the boundaries of digital engineering and innovations through platformization consulting, execution, ideation and strategy enablement. It has established its position as a trusted partner for platform business innovation in an agile, dynamic, value-orchestrated approach. Through its customer-centric approach to continuous innovation, GlobalLogic has focused on enabling clients' digital transformation, empowering businesses to compete and disrupt their verticals and industry ecosystems.

End-to-end platform solutions: GlobalLogic continued to innovate in platform engineering services, offering end-to-end solutions for building, managing and optimizing digital platforms and ecosystems.

Enabling technology architecture: GlobalLogic helps clients start by reimagining their businesses on a digital platform architecture. From cloud-native and secure development to GRC-focused systems and microservices architecture, GlobalLogic provides clients with scalable and adaptable platforms that facilitated innovation at scale.

Caution

GlobalLogic must better highlight successful platform stories; for example, integration of auto OEM software such as ECU and ADAS, and in-vehicle map in cars, to further strengthen its position in the market. There are also huge GenAI opportunities in content, communications and media platforms that can be promoted.

Intelligent Operations

Who Should Read This Section

The report is relevant for U.S.-based enterprises with legacy factories and production plants evaluating providers offering intelligent operations across industries.

In this quadrant, ISG assesses providers' competitive and portfolio strengths that address enterprise requirements with smart and latest digital technologies and help them set up intelligent greenfield and brownfield plants and operations.

The most significant shift observed in Intelligent Operations deployments in the past 24 months is the growing insistence of manufacturers to integrate and link their business and operational procedures throughout "The Digital Thread." This encompasses the entire product lifecycle, from design to operation.

Enterprises are pursuing holistic services encompassing all aspects, from technology implementation to strategic insights, operational excellence, and a dedication to sustainability, aligning with the evolving expectations of enterprise clients.

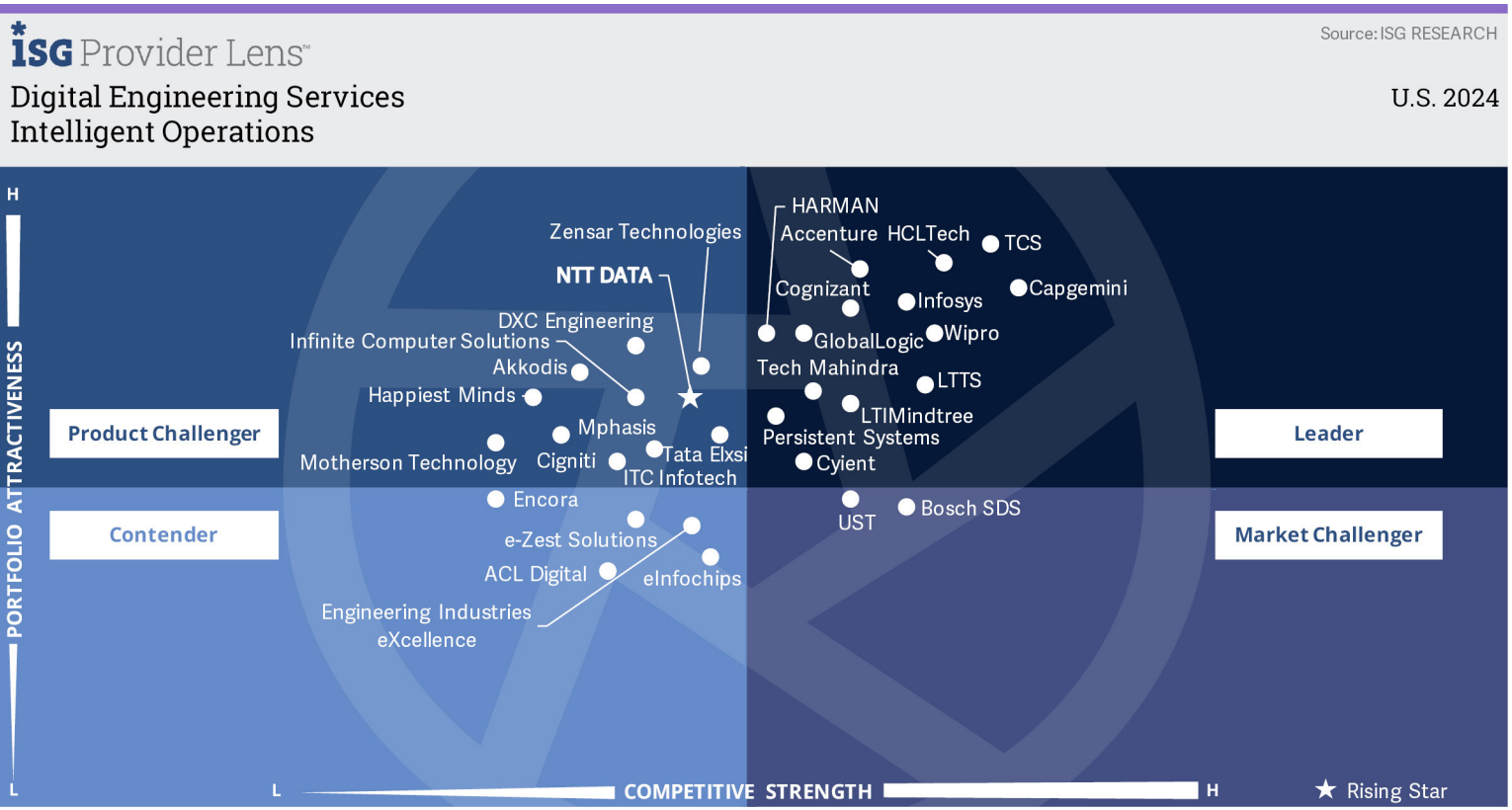
As enterprises integrate environmentally sustainable practices into their intelligent operations, they increasingly emphasize the importance of environmental sustainability and compliance. Additionally, they aim to contribute to circular economy objectives, including waste reduction and resource recycling.

Enterprises prefer providers that can develop customized software and platforms to achieve better workflow, industrialize processes and components, and accelerate innovation.

Engineering leaders should read this report to understand better the relative strengths and weaknesses of providers offering intelligent operation portfolios.

Manufacturing leaders should read this report to understand better the current landscape of digital engineering service providers in the U.S.

Software development and technology leaders should read this report to understand the relative positioning of providers and how their digital engineering offerings can impact an enterprise' transformation initiatives.



This quadrant evaluates the evolution of digital engineering services, focusing on **integrating IT/OT,** using advanced technologies. It assesses the **ability to innovate and adopt these trends, setting new benchmarks** for operational excellence.

Tapati Bandopadhyay

Definition

This quadrant assesses service providers offering intelligent operations to clients across industries, particularly with legacy factories and production plants. These providers offer smart and new digital technologies and methods and help set up intelligent greenfield and brownfield plants and operations. Intelligent operations encompass paradigms such as Industry 4.0, 5.0, smart industries and IIoT that significantly impact the industry. These trends are aimed at making connected, autonomous operations capable of self-decision-making and auto-correction. Key aspects of these intelligent operations include machines communicating with each other, fetching the status of various operations and making informed decisions and corrections at both upstream and downstream ends. This helps reduce manual dependencies and interventions, leading to an increase in operational efficiency.

Eligibility Criteria

1. Proven experience in design, implementation and operations: Technologies, methods, structures and processes used in the context of **Industry 4.0, smart factories, smart production/operations,** supply chain, distributions, and service operations
2. **Breadth and depth** of coverage in **connected operations** for different types of industries in the target regions, with proven examples
3. Experience in **OT solutions,** specifically across data, security, and people aspects
4. Experience with applying digital technologies, Including various **digital threads** such as real-time AI and machine learning, remote, field, and hazardous operations management, real-time data engineering, edge computing, 5G, industrial cybersecurity, and cloud engineering
5. Asset performance, maintenance, and lifecycle management: Covering **asset performance monitoring,** maintenance schedules, lifetime value optimization and predictive maintenance
6. **ESG compliance** resources: Support for environmentally sustainable smart operations.
7. Demonstrated experience with new business/operating models: New ways of operating and optimizing highly **flexible and intelligent production** and assembly lines/flow operations, supporting new business models

Observations

The Intelligent and connected operations in the digital engineering services sector transforms as GSI and service providers embrace advanced predictive operational models that foster intelligent and interconnected operations. Adopting new technology defines how organizations design, implement and manage their digital infrastructure operations, offering new opportunities for efficiency, innovation and competitive differentiation.

Tighter Integration of IT and OT

Integrating IT and OT has become a pivotal practice among GSI and service providers, reflecting a strategic move toward creating more cohesive and efficient operational ecosystems. This tighter integration facilitates real-time data exchange and automation across business processes, enhancing operational efficiency and enabling more informed decision-making.

Enhanced Business Technology Layers with IoT, AI and ML

Integrating advanced technologies such as IoT, AI and ML into business operations has become a hallmark of modern digital engineering services. These technologies are embedded into the operational fabric of organizations, creating intelligent networks that can predict maintenance needs, optimize resource allocation and enhance CX. From improving supply chain visibility to enabling intelligent manufacturing practices, GSI and service providers use these technology layers to drive transformational outcomes.

Mainstreaming of Digital and Process Twins

Digital twins and process twins have transitioned from a niche application to a mainstream practice in operations management. Digital twins offer a virtual representation of physical assets or systems, enabling detailed analysis and simulation to optimize performance. Process twins or threads extend this concept to operational processes, providing a dynamic model for analyzing and improving workflows.

From the 102 companies assessed for this study, 31 qualified for this quadrant, with 14 being Leaders and one Rising Star.

accenture

Accenture excels in intelligent operations, blending technological advances with process innovation for agility and enhanced CX. Its guide emphasizes talent, data, automation, cloud and partnerships to transform operations and drive growth.

Capgemini

Capgemini offers a comprehensive suite of intelligent operations services that enhance manufacturing, supply chain and service operations, making them more efficient, cost-effective and sustainable.

cognizant

Cognizant designs its operations offerings for smart manufacturing to transform operations and deliver production efficiency, speed-to-market and customer satisfaction.

Cyient

Cyient's intelliCyient solutions suite and its focus on improving asset efficiency and performance through digitalization demonstrate its strategic approach to enabling intelligent operations in manufacturing and beyond.

GlobalLogic

GlobalLogic's approach to intelligent operations centers around using the latest tools and methodologies for software development, following a POC/MVP approach to ensure swift and effective solutions.

HARMAN Digital Transformation Solutions offers comprehensive intelligent operations solutions for discrete manufacturing, encompassing strategy consulting, solution design, development and support.

HCLTech offers solutions to transform intelligent operations across various sectors, focusing on smart manufacturing, automation and digital integration.

Infosys drives intelligent operations by integrating digital threads, AI and advanced technologies to enhance efficiency and collaboration across engineering, operational and informational domains.

Insight NXT, an enterprise platform designed to autonomously derive intelligence from connected ecosystems, powers **LTIMindtree**'s intelligent operations.

LTTS highlights its intelligent operations capabilities by innovatively using GenAI to augment operational efficiency and frontline worker effectiveness. By automating various operational processes, it employs AI to transform operations drastically.

Persistent Systems is enhancing its intelligent operations offerings by integrating GenAI for frontline work in asset management, focusing on providing prescriptive recommendations and optimizing maintenance scheduling.

TCS' approach to integrating GenAI for various industry-specific use cases such as golden batch analysis, augmented digital twins, clinical research and operational risk assessment, showcases a commitment to improving efficiency, safety and productivity in operations.

Tech Mahindra's intelligent operations capabilities use Industry 4.0 technologies to transform traditional manufacturing processes. Its focus on digitalization, analytics and GenAI enables clients to achieve greater operational visibility and efficiency.

For intelligent operations, **Wipro**'s SMART manufacturing and Industry 4.0 solutions integrate digital with physical automation, driven by AR and VR enhancements and a comprehensive Industry 4.0 ecosystem.

NTT DATA (Rising Star) focuses on data-driven initiatives and AI-driven solutions, ensuring clients achieve enhanced operational efficiency, readiness and decision-making, establishing it as an innovative partner that enables intelligent operations.

Leader

"Through data-driven operations, GlobalLogic helps clients achieve optimal and efficient business processes and supply chains."

Tapati Bandopadhyay

GlobalLogic

Overview

GlobalLogic is a Hitachi Group company headquartered in San Jose, California, U.S.,operating in over 20 countries. It has over 30,000 employees across more than 50 offices. It has 35 engineering centers and nine design studios focused on building advanced products. In FY23 the company had more than 500 active clients. GlobalLogic characterizes its intelligent operations capabilities with a forward-thinking approach to software development and product innovation. It employs modern tools and methodologies and focuses on rapid prototyping and iteration to deliver technologically advanced solutions.

Strengths

Process transformations to streamline operations: Through seamless integration of technology and processes, GlobalLogic enables clients to streamline operations, reduce costs and improve overall business process efficiencies and performance. It has been continuing to push the boundaries of digital engineering in operations. It has strengthened its position as a trusted partner and strategic advisor, driving innovation and delivering high-impact client outcomes. Through its focus on operational excellence for clients, a customer-centric approach and continuous innovation, GlobalLogic remains at the forefront of digital transformation, empowering businesses to thrive in digital partner ecosystems.

Data-driven operations enablement: Using data-driven insights and intelligent automation, GlobalLogic helps clients transform their operations, achieve greater production and service operations efficiency and drive sustainable growth in digital business outcomes.

Digital technology stacks in operations: The Integrated operations solutions have received a significant boost with GlobalLogic teams' focus on optimally using data insights from ML and advanced analytics, automation and IoT capabilities.

Caution

The GenAI use case patterns that GlobalLogic has been researching to build its GenAI common platform need to be communicated effectively as an early mover across available practice research platforms and partner ecosystems in the U.S. market.

Star of Excellence

A program, designed by ISG, to collect client feedback about providers' success in demonstrating the highest standards of client service excellence and customer centricity.

Source: ISG Star of Excellence™ research program, Insights till May 2024

In the ISG Star of Excellence™ research on enterprise customer experience (CX), clients have given feedback about their experience with service providers for their **Digital Engineering** services.

Based on the direct feedback of enterprise clients, below are the key highlights:

Client Business Role

▲ **Most satisfied**
Shared Services Operations

▼ **Least satisfied**
Legal/Compliance

Region

▲ **Most satisfied**
Eastern Europe

▼ **Least satisfied**
Middle East

Industry

▲ **Most satisfied**
Oil and Gas

▼ **Least satisfied**
Pharmaceuticals and life sciences

Industry Average CX Score

▲ Highest CX: 86.7
▼ Lowest CX: 66.6

CX Score: 100 most satisfied, 0 least satisfied
Total responses (N) = 266

Most Important CX Pillar

Collaboration and Transparency

Service Delivery Models	Avg % of Work Done
Onsite	50.7%
Nearshore	22.4%
Offshore	26.9%

Appendix

Methodology & Team

The ISG Provider Lens 2024 – Digital Engineering Services research study analyzes the relevant software vendors/service providers in the U.S. market, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research methodology.

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The research and analysis presented in this report includes research from the ISG Provider Lens program, ongoing ISG Research programs, interviews with ISG advisors, briefings with services providers and analysis of publicly available market information from multiple sources. The data collected for this report represents information that ISG believes to be current as of April 2024, for providers who actively participated as well as for providers who did not. ISG recognizes that many mergers and acquisitions have taken place since that time, but those changes are not reflected in this report.

All revenue references are in U.S. dollars ($US) unless noted.

The study was divided into the following steps:

1. Definition of Digital Engineering Services market
2. Use of questionnaire-based surveys of service providers/ vendor across all trend topics
3. Interactive discussions with service providers/vendors on capabilities & use cases
4. Leverage ISG's internal databases & advisor knowledge & experience (wherever applicable)
5. Use of Star of Excellence CX-Data
6. Detailed analysis & evaluation of services & service documentation based on the facts & figures received from providers & other sources.
7. Use of the following key evaluation criteria:
   * Strategy & vision
   * Tech Innovation
   * Brand awareness and presence in the market
   * Sales and partner landscape
   * Breadth and depth of portfolio of services offered
   * CX and Recommendation

Lead Author

Dr. Tapati Bandopadhyay

Lead Analyst and Research Partner

Dr. Tapati Bandopadhyay has been an inventor, builder, practitioner and researcher in AI, intelligent automation and related domains, for 27+ years. She has been a global practice leader and executive-level advisor & consultant in AI-automation-cloud and services management, covering MLOps, AIOps, CloudOps, DataOps, ModelOps & DevOps metrics-driven practices and data and AI story-building and story-telling practices and tools.

As an ISG Lead Analyst on AWS and in AI-ML, consulting & managed services, she is responsible for defining and leading the ISG Provider Lens branded research projects for the US market. With more than 25 years of experience focused on AI, ML, data sciences and intelligent automation technology development, strategy and adoption practices across key industries, including BFSI, manufacturing & FMCG, retail, media, hi-tech & telco's, governments and healthcare services.

Research Analyst

Srinivasan PN

Senior Lead Analyst

Srinivasan PN is a Senior Lead Analyst at ISG and is responsible for supporting and co-authoring ISG Provider Lens™ studies on Digital Engineering, AWS & Google Ecosystem. His area of expertise lies in engineering services and digital transformation.

Srinivasan has close to a decade of experience in the technology research industry, and in his prior role, he carried out research delivery for both primary and secondary research capabilities.

Srinivasan also authors enterprise context reports and global summary reports for his expertise. He also supports the advisors with his research skills and writes papers about the latest market developments in the industry.

IPL Product Owner

Jan Erik Aase

Partner and Global Head – ISG Provider Lens™

Mr. Aase brings extensive experience in the implementation and research of service integration and management of both IT and business processes. With over 35 years of experience, he is highly skilled at analyzing vendor governance trends and methodologies, identifying inefficiencies in current processes, and advising the industry. Jan Erik has experience on all four sides of the sourcing and vendor governance lifecycle - as a client, an industry analyst, a service provider and an advisor.

Now as a partner and global head of ISG Provider Lens™, he is very well positioned to assess and report on the state of the industry and make recommendations for both enterprises and service provider clients.

ISG Provider Lens™

The ISG Provider Lens™ Quadrant research series is the only service provider evaluation of its kind to combine empirical, data-driven research and market analysis with the real-world experience and observations of ISG's global advisory team. Enterprises will find a wealth of detailed data and market analysis to help guide their selection of appropriate sourcing partners, while ISG advisors use the reports to validate their own market knowledge and make recommendations to ISG's enterprise clients. The research currently covers providers offering their services across multiple geographies globally.

For more information about ISG Provider Lens™ research, please visit this webpage.

ISG Research™

ISG Research™ provides subscription research, advisory consulting and executive event services focused on market trends and disruptive technologies driving change in business computing. ISG Research™ delivers guidance that helps businesses accelerate growth and create more value.

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