

HORIZONS REPORT

IoT Service Providers, 2024

The evolution of IoT services in the age of the Generative Enterprise™

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Excerpt for Hitachi Digital Services

“

In the generative AI (GenAI) era, IoT is rapidly evolving, combining technologies such as AI/ML, blockchain, edge, and 5G with smart devices, real-time data, and analytics to boost capabilities, drive efficiency, and spur innovation. Though high cost slows down GenAI adoption, it empowers IoT to predict needs, optimize processes, and transform industries, ultimately enhancing the customer experience.

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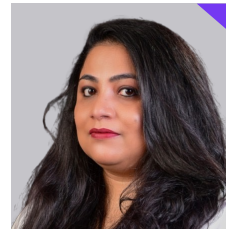
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IoT continues to deliver substantial business benefits by interconnecting devices and processes to communicate seamlessly and integrating smart devices, advanced analytics, and real-time data. As IoT technology continues to evolve, businesses are unlocking new potential, enhancing their ability to adapt to changing business requirements and capitalize on emerging technologies, thus driving business value.

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1

Introduction and the HFS value chain

Introduction

- Internet of Things (IoT) refers to a network of interconnected devices that communicate and exchange data. These devices, often embedded with sensors, software, and other technologies, range from everyday household items such as smart thermostats and wearable fitness trackers to industrial machines and infrastructure components. The purpose of IoT is to enable seamless data collection and sharing, resulting in improved efficiency, automation, and real-time insights and decision-making across various sectors.
- The IoT services landscape is rapidly evolving, and refocusing discussions to better support enterprises' transformation journeys is essential. IoT services in the Generative Enterprise era emphasize the need to explore enablement technologies such as 5G, digital twins, analytics, cloud, AI, and new operational models, thereby adopting an ecosystem approach.
- We're not just looking into the specific offerings per industry but seeking to understand what strategies can accelerate transformational journeys in the IoT space. What overarching perspectives do providers have for IoT services? How can they help organizations achieve the desired outcomes? Additionally, what can we learn from successful outcomes that have already been delivered?
- By tackling these questions, we aim to unlock how IoT can be leveraged for transformative success across various sectors. This approach ensures IoT services are about connectivity and data collection and delivering real, measurable business outcomes.
- **Inclusion criteria:** We invited diversified providers of IT services. Participation guidelines include annual IoT service revenue of at least \$100 million or an existing portfolio of IoT services that span over 50% of the HFS value chain or an existing roster of a minimum of 50 clients aligning with IoT services.
- The **HFS Horizons: IoT Service Providers, 2024 report** examines the service provider's role in the evolving IoT landscape in the age of the Generative Enterprise™. We assessed and rated the IoT service capabilities of [23 service providers](#) across four dimensions, addressing the [why, what, how, and so what](#). It focuses on the supply side, detailing the service providers' strengths and growth opportunities.

Executive summary

1 The Horizon placement

The report reviews 23 IoT service providers. Ten are classified as leaders in Horizon 3, eight as innovators in Horizon 2, and five as disruptors in Horizon 1.

- Horizon 3 firms such as Accenture, Capgemini, Cognizant, Eviden, HCL, Hitachi Digital Services (HDS), IBM, Infosys, LTTS, and TCS are recognized for their comprehensive IoT strategies, global reach, strong technology partnerships, and ability to deliver large-scale, transformative IoT solutions.
- Providers in Horizon 2, including Bosch Service Solutions, Cyient, Deloitte, KPMG, LTIMindtree, PwC, Tech Mahindra, and Wipro, are recognized for their innovative approaches, specialized IoT capabilities, and strong vertical focus, enabling them to deliver value in specific industries and niche markets.
- DXC Technology, FPT Software, NTT DATA, Persistent, and UST, positioned in Horizon 1, mainly focus on emerging IoT opportunities by leveraging their agility and cost-effectiveness. These firms are adept at delivering tailored solutions with a strong emphasis on flexibility, rapid deployment, and responsiveness to evolving market demands.

2 GenAI is transformative but not changing the IoT fundamentals

The use of GenAI in IoT systems is often considered a valuable addition rather than an essential component. While it brings significant improvements in data processing, automation, and decision-making, many companies are still in the proof-of-concept (PoC) stage when adopting it. GenAI's full potential and value in IoT are yet to be fully realized, implying that it is currently more of a 'nice to have' than a 'must-have.' The fundamental structure and purpose of IoT systems remain the same—to connect devices for data collection and exchange.

3 Broadening the transformation scope

The scope of IoT services has expanded due to industry-specific focus, strategic partnerships, and technological advancements—enabling companies to offer more comprehensive solutions to their clients. Partnerships and acquisitions play a crucial role in expanding IoT capabilities, with companies forming alliances and acquiring firms to enhance their offerings and enter new markets. Investments in labs and innovation centers support this expansion by facilitating the development of new technologies and solutions. Additionally, the focus on emerging technologies such as Industry 4.0, 5G, and edge computing is driving the evolution of IoT services and expanding their market reach.

4 Narrative shift to outcome focus

The narrative around IoT is shifting to a more business-oriented perspective. This transition emphasizes the integration of IoT with other technologies such as AI and GenAI to create larger business value. The focus is on leveraging these technologies to enhance flexibility, respond to customer needs more swiftly, and adapt business strategies based on various external factors. This shift highlights the importance of aligning technology with business objectives to drive transformation and resilience within organizations.

5 Ask for outcome-based model

Despite the growing discussion on outcome-based pricing, the market is still predominantly using traditional models such as time and material (T&M) and fixed price. Approximately 90% of engagements currently rely on these conventional models. While some new customers are open to outcome-based pricing, especially in specific scenarios (such as connected vehicles), overall market adoption remains limited. The transition to outcome-based models often requires a long-term relationship of trust with clients—which can be a barrier to their widespread adoption.

Introduction to HFS Horizons: IoT Service Providers, 2024

The evolution of IoT services in the age of the Generative Enterprise™

Welcome to our **HFS Horizons: IoT Service Providers, 2024** study. Horizons are HFS Research's [vendor evaluation research vehicle](#) designed to assess the **innovation and value potential** of vendor capabilities across three distinct horizons:

01 Horizon One

Functional digital transformation: Ability to drive **digital transformation** to digitize processes, delivering outcomes such as cost reduction, speed, and efficiency

02 Horizon Two

Enterprise transformation: Horizon 1 + Enablement of the **OneOffice™** model of end-to-end organizational alignment across the front, middle, and back offices to drive unmatched stakeholder experience

03 Horizon Three

Ecosystem transformation: Horizon 2 + Ability to drive the **OneEcosystem™** impact via collaboration across multiple organizations with common objectives of driving completely new sources of value

This study seeks to assess how well service providers meet enterprise IoT requirements, drive innovation, and unlock value by leveraging a network of IoT devices integrated with AI capabilities

HFS explores how service providers are flexing to meet enterprises' changing needs. The study evaluates the capabilities of providers across the [HFS IoT value chain](#) based on a range of dimensions to understand the **why, what, how, and so what** of their service offerings.

Evolution of IoT services in the age of the Generative Enterprise renders a real-world reflection

HFS categorizes IoT services to include strategic consulting, productization, deployment, and operations. These services are designed to optimize costs, streamline operations, and unlock new business avenues. With the rapid integration of AI capabilities and enabling technologies, such as cloud computing, edge computing, 5G, and digital twins, the IoT services landscape is witnessing a significant transformation. HFS is diligently analyzing how service providers are adapting to these shifts to meet the increasingly complex needs of their enterprise in this dynamic environment.

Strategic consulting	Productization	Deployment	Operations
• Governance frameworks and policy development for IoT • Data protection and privacy strategy, including GDPR and other compliance • IoT roadmap development, including solution architecture, design, and integration • Implementation planning for IoT systems • Compliance and innovation strategies • Business model innovation • Business case development and ROI • Prioritization of IoT initiatives • Developing strategies for the integration of IoT with other technologies • Talent management	• Product lifecycle management (PLM) with change management • Compliance with network protocols and standards • 5G readiness • Adaptation to new regulatory requirements • Embedded systems design • Custom application development • Prototyping services • Network engineering and connectivity solutions • Design and engineering of IoT-related solutions	• Integration of IoT with existing systems • End-to-end process integration • Infrastructure setup for run-time and backend systems, emphasizing security • Cloud hosting solutions for IoT applications • Network management services • Establishing cybersecurity protocols and infrastructure	• IoT platforms and applications support • Technical support for IoT products • Device and sensor management • Data management • Advanced data analytics services, including predictive maintenance and usage pattern analysis • Governance, risk, and compliance (GRC) services • Real-time monitoring and reporting services • System and process audits for compliance • Training and support for change management
Enablement technologies			
GenAI machine learning smart analytics blockchain cloud edge computing 5G robotics Web3 digital twin			

Major themes of evolution of IoT services Horizons study in the age of the Generative Enterprise

Transformation

How do you help organizations envision business transformation?
How can IoT support transformation outcomes?

Real-world outcomes

What are the metrics that matter?
Are you contracting capabilities or delivering outcomes? How are you measuring outcomes end to end?

Innovation

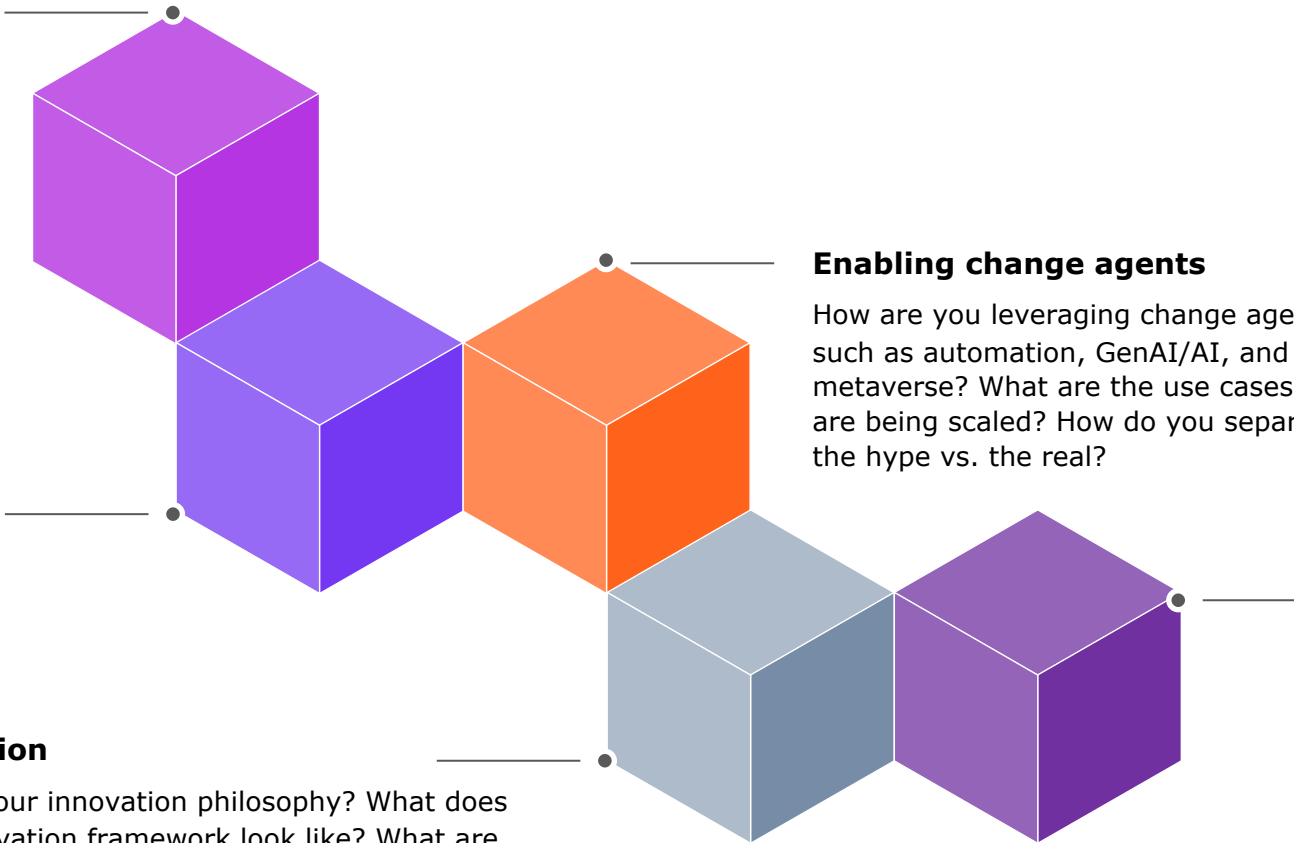
What is your innovation philosophy? What does your innovation framework look like? What are the experiences you are attempting to deliver? What is on your roadmap? Are your clients part of your innovation construct?

Enabling change agents

How are you leveraging change agents such as automation, GenAI/AI, and metaverse? What are the use cases that are being scaled? How do you separate the hype vs. the real?

Go-to-market

What is your primary value proposition to the market? Do you lead by capabilities or with challenges you address? Do you leverage an ecosystem, or do you like to go it alone? Does the market think of you as a thought leader? Do your clients seek your advice?



2

Research methodology

23 service providers covered in this report

 **accenture**

 **BOSCH**

Capgemini 

 cognizant

CYIENT

Deloitte.

 **DXC**
TECHNOLOGY

EVIDEN
an atos business

 **FPT** Software

HCLTech

 **Hitachi Digital Services**

IBM

Infosys[®]

 **KPMG**

 **LTIMindtree**

 **L&T Technology Services**

NTT DATA

 **Persistent**

 **pwc**

tcs **TATA**
CONSULTANCY
SERVICES

TECH
mahindra

U .
S T

 **wipro**

Note: All service providers are listed alphabetically

Sources of data

This Horizons research report relies on myriad data sources to support our methodology and help HFS obtain a well-rounded perspective on service capabilities of the participating organizations covered in our study. Sources are as follows:



Briefings and information gathering

HFS conducted detailed **briefings** with IoT leadership from each vendor.

Each participant submitted a specific set of **supporting information** aligned to the assessment methodology.



Reference checks

We conducted reference checks with **13 active clients and 25 active partners** of the study participants via survey-based and telephonic interviews.



HFS Pulse

Each year, HFS fields multiple demand-side surveys in which we include detailed vendor rating questions.

For this study, we leveraged our fresh-from-the-field HFS Pulse Study data featuring **~600 service provider ratings**.



Other data sources

Public information such as press releases and websites.

Ongoing interactions, briefings, virtual events, etc. with in-scope vendors and their clients and partners.

Horizons assessment methodology: IoT service providers, 2024

The “HFS Horizons: IoT service providers,2024 ” research evaluates the capabilities of service providers across a range of dimensions to understand the **why, what, how, and so what** of their IoT offerings in the age of the Generative Enterprise™. Our assessment will be based on inputs from clients, partners, and employees, augmented with analyst perspectives. The following illustrates how we will assess your capabilities:

Assessment dimension (weighting)					
		Value proposition: The Why? (25%)	Execution and innovation capabilities: The What? (25%)	Go-to-market strategy: The How? (25%)	Market impact: The So What? (25%)
		• Strategy and roadmap • Clarity of vision for IoT services and nature of outcomes • Differentiators—why clients work with you	• Breadth and depth of services across the IoT value chain • Integration of transformation and process consulting • Approach to and strength of the partner ecosystem	• What transformation outcomes are you pitching to clients? • Nature of investments in IoT (M&A, training, R&D) • Co-innovation and collaboration approaches with customers and partners, including creative commercial models	• Scale and growth of IoT business—revenue, clients, and headcount • Proven outcomes showcasing transformation enabled through IoT • Voice of the customer
Distinguishing service provider characteristics	Horizon 3	• Horizon 2 + • Ability to drive ecosystem synergy via collaboration across multiple organizations with common objectives around driving completely new sources of value	• Horizon 2 + • Strategy and execution capabilities at scale • Well-rounded capabilities across all value creation levers: talent, domain, technology, data, and change • Comprehensive industry-specific partnerships with strong partner experience (PX) • Strong industry-specific IP + joint ventures	• Horizon 2 + • Driving co-creation with clients and ecosystem partner • Effectively envisioning of outcomes and providing business assurance for transformation	• Horizon 2 + • Referenceable and satisfied clients driving new business models based on the partnership
	Horizon 2	• Horizon 1 + • Ability to drive real business outcomes and stakeholder experiences	• Horizon 1+ • Ability to support clients on their transformational journey • Global capabilities with strong consulting skills and partnerships with all major hyperscalers • Range of industry-specific partnerships and strong PX • Strong industry-specific IP	• Horizon 1+ • Proven and leading-edge proprietary assets, including different platforms • Clear articulation operating model • Capability to deliver transformation	• Horizon 1+ • Referenceable and satisfied clients for ability to drive business transformation
	Horizon 1	• Ability to drive functional optimization outcomes with selective industry capabilities	• Strong implementation capabilities • Deep engineering capabilities driving speed and efficiency • Offshore-focused with strong technical skills • Focused partnerships and strong PX • limited industry-specific IP	• Robust fundamentals of technology transformation • Technology and capability focus	• Referenceable and satisfied clients for ability to execute technology transformation

3

Market dynamics

Findings on major themes of the evolution of IoT services Horizons study in the age of the Generative Enterprise

05

Transformation

IoT enhances transformation outcomes by enabling data-driven decisions, boosting operational efficiency, and driving innovation by integrating IoT with AI and other technologies. Organizations are encouraged to focus on outcomes and strategically align technology with business goals for effective transformation.

04

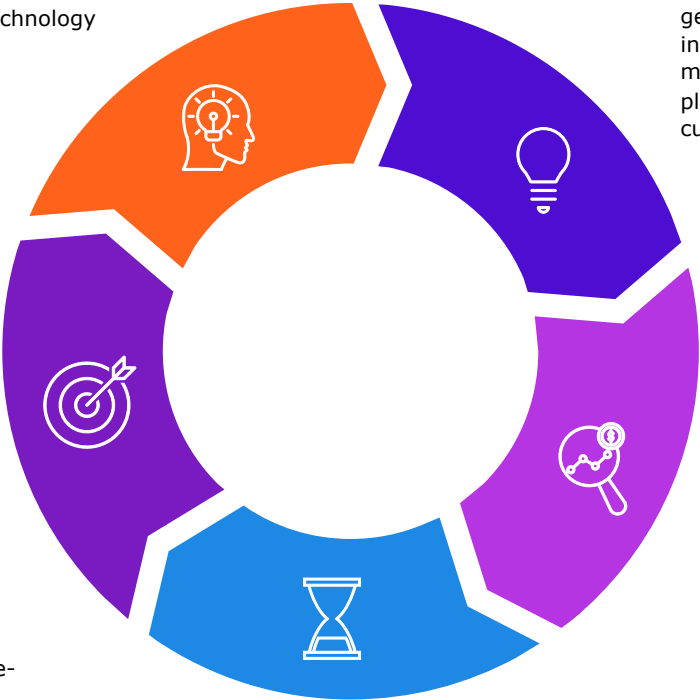
Real-world outcomes

Key metrics such as operational efficiency, cost reduction, and customer satisfaction are essential for evaluating the impact of IoT on business outcomes. The emphasis is on delivering results by measuring the comprehensive effects of IoT on business processes and customer experiences. Outcome-based pricing engagements are a growing trend with long-standing clients, prioritizing specific business outcomes over mere service delivery.

03

Innovation

The innovation philosophy centers on embedding innovation within the business model to ensure organizations are adaptive and future-ready. It shifts the focus from deploying technologies to delivering tangible outcomes, creating value proofs directly aligned with business goals. Collaboration with clients through co-creation and co-innovation sessions ensures solutions are tailored to specific needs and deliver clear business results.



01

Change agents

Automation, GenAI, and technologies such as cloud, 5G, edge computing, and blockchain enhance IoT offerings by automating processes, boosting efficiency and enabling new business models. GenAI facilitates idea generation, device identification, and data interpretation, leading to more innovative solutions. Notable applications of GenAI, such as predictive maintenance, automated code generation, and customer engagement platforms, showcase benefits such as reduced downtime and enhanced customer experiences.

02

Go-to-market

The value proposition centers on delivering comprehensive solutions that leverage IoT, AI, and emerging technologies to tackle specific business challenges and deliver measurable results. The approach focuses on directly addressing critical business problems with technology, ensuring solutions align with client needs and offer tangible value. The strategy involves using a broad partner ecosystem to enhance offerings. Clients often seek strategic advice to guide their transformation efforts and secure successful outcomes.

Market dynamics (page 1 of 4)

Industry-specific IoT applications

IoT applications are diverse, and market-ready solution providers are trying to reduce the go-to-market time. These use cases demonstrate the potential for real-time data analysis, enhanced customer experiences, and the creation of new business models. In healthcare, IoT enables remote patient monitoring and telemedicine, improving patient outcomes and reducing costs. In the automotive industry, connected vehicles enhance safety and navigation. Utilities benefit from smart grids and energy management solutions. By tailoring IoT solutions to specific industries, companies can address unique challenges and unlock new opportunities as per the industry.

Technology integration

The integration of technologies such as digital twins, AI, and robotics enhances quality control, operational efficiency, and safety in industries. Digital twins provide virtual representations of physical assets, enabling real-time monitoring and predictive maintenance. By adopting these technologies, companies can reduce costs, increase productivity, and improve product quality.

Manufacturing a key vertical in IoT services

Manufacturing is a key sector for IoT advancements, with a strong focus on enhancing IoT services through smart manufacturing and engineering. The integration of IoT in manufacturing is driven by Industry 4.0, which emphasizes the use of technologies such as digital twins and edge computing to create smart factories. In addition, GenAI has shown significant potential across the manufacturing sector, offering use cases that enhance creativity and innovation in processes such as streamlining, increased efficiency, idea generation, quality assurance, improved productivity, better decision-making, and data interpretation.

Market dynamics (page 2 of 4)

IoT security

Security remains a critical concern in IoT deployments. Companies are investing in robust security measures to protect data and ensure the integrity of IoT systems. This involves implementing encryption, authentication, and access control mechanisms, as well as conducting regular security assessments and updates.

Outcome-based pricing

In the market, there is a noticeable shift to outcome-based pricing models, although traditional models such as T&M and fixed price still dominate. Approximately 90% of engagements currently use these traditional models. However, some new customers are increasingly open to outcome-based pricing.

Hyperscalers

The IoT ecosystem features leading platforms such as Microsoft Azure IoT and AWS IoT, with service providers leveraging long-standing partnerships with Microsoft and Amazon to expand into IoT. These collaborations enable the development of solutions that harness these platforms' robust features.

GenAI

Enterprises are trying to integrate GenAI with IoT to enhance operational efficiency and decision-making. While most use cases are in the PoC stage, the research behind them is driven by an ability to deliver predictive maintenance, optimize production, and improve customer experiences. Though GenAI is still seen as a buzzword, its PoC and implementation are focused on projects with significant value. Companies are investing in partnerships and training to harness its potential, with expectations of substantial future benefits.

Sustainability

Sustainability is a key focus area, with companies leveraging IoT and AI to drive energy efficiency, reduce environmental impact, and support sustainable business practices. By prioritizing sustainability, businesses can enhance their reputation, comply with regulations, and create long-term value for stakeholders.

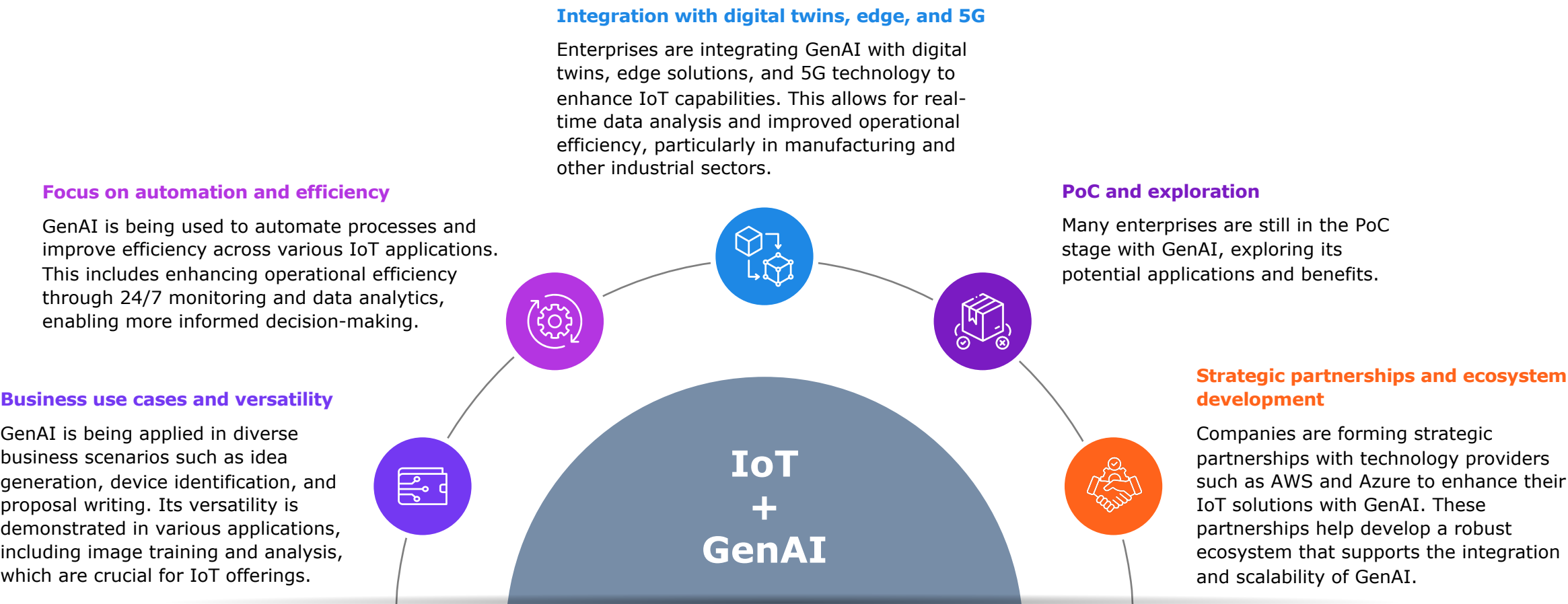
Market dynamics (page 3 of 4)

Acquisition-led growth strategy	Acquisitions are crucial for enabling service providers’ growth by enhancing their capabilities and scale. Accenture's acquisition strategy is a prime example of how acquisition-driven growth can be achieved. In fiscal year 2023, it invested \$2.5 billion in 25 strategic acquisitions. Other notable examples include Cognizant's acquisition of Belcan and HDS' acquisition of Thales, Flexware Innovation, Io-Tahoe, GlobalLogic, and Perpetuum, all bolstering HDS' offerings. Deloitte has also strengthened its IoT expertise and implementation offerings.
Strategic partnerships	Companies are investing in strategic partnerships and ecosystems to co-develop tailored IoT solutions. Collaborations with major platforms such as AWS and Azure as well as telecom players for 5G-enabled solutions are common.
Talent management	Talent management is crucial for IoT’s success. Companies are investing in training programs to equip employees with the necessary skills for IoT and AI technologies, ensuring a skilled workforce. This includes upskilling existing employees and attracting talent with expertise in data analytics, machine learning, and IoT systems.
Predictive maintenance	IoT is significantly enhancing operational efficiency through predictive maintenance, reducing equipment downtime, and improving overall equipment effectiveness (OEE). By collecting and analyzing data from sensors, IoT systems can predict when equipment is likely to fail, enabling timely maintenance and repairs. This proactive approach minimizes unplanned downtime, extends the lifespan of assets, and reduces maintenance costs.

Market dynamics (page 4 of 4)

Connected products	There has been a growing trend of developing connected products such as smart home devices, connected vehicles, and industrial equipment. Connected products offer real-time data and insights, allowing companies to deliver personalized services and improve customer satisfaction. They also enable new business models such as subscription services and pay-per-use offerings.
Localization	Companies are expanding their global operations and scalability of IoT services, focusing on delivering solutions that cater to diverse geographic markets and industry needs. This involves establishing partnerships with local players, adapting solutions to regional requirements, and leveraging global delivery models.
Geospatial capabilities	Geospatial technologies, including digital twins and digital geographies, enhance IoT solutions by providing detailed spatial data and insights for various applications. These technologies enable real-time monitoring and analysis of geographic information, supporting decision-making and optimization in urban planning, transportation, and environmental management. Integration supports the development of smart cities and infrastructure, ultimately transforming how organizations manage and interact with the physical world.

Navigating the IoT and GenAI integration landscape



Sample: N = 15 services providers
Source: HFS Research, 2024

Harnessing the power of IoT and GenAI: Few use cases across industries

■ PoC + getting implemented ■ Use case development underway

Optimization and efficiency	Product and process development support	Operational support and customer experience	Workforce support and training
Asset maintenance planning with GenAI to improve equipment uptime, reduce maintenance costs, detect anomalies, ensure safety, and enhance operational efficiency.	Use of GenAI to generate documents based on model variations and digitization will help clients access them from anywhere via mobile/web, giving OEMs quick access in a digital format.	Large language model (LLM)-based conversational interface for rich telematics information, driving the ability to search/query about various metrics on telematics and cloud operational data.	Virtual field assistant for engineers to provide on-demand access to engineering expertise, improving problem-solving and decision-making abilities.
Understanding the state of grids for more efficient energy consumption, minimizing losses, improving overall grid efficiency, and digitizing documentation, infrastructure maps, etc.	Synthetic data generation for accelerating the training of machine learning models for digital twins, cutting down on device dependency and time.	Use semantic search based on context, such as product information, customer information, complaints, feedback, maintenance history to support customer conversations (chatbot), or product support knowledge search.	Personalized and immersive occupational health and safety (OHS) training, safely exposing trainees to realistic scenarios and thereby reducing or better responding to real OHS incidents.
Supply chain optimization with GenAI's ability to simulate, model, and generate data-driven insights through supplier assessment and scenario analysis.	Enabling urban planners in the ideation and design of novel urban concepts, generating 3D city models, simulating natural disasters, planning, and building resilient urban infrastructure.	Use GenAI to analyze log data and tickets while providing insights about managing and operating large IoT solutions.	
GenAI to interpret and make sense of IoT data available to end-users through natural language processing (NLP) interfaces.	Use of GenAI in hospital operations to understand the functioning of the emergency rooms.	Use digital twins with an NLP conversational interface to provide easy interaction and make the system-generated knowledge available to the correct user.	

Source: Service provider briefings

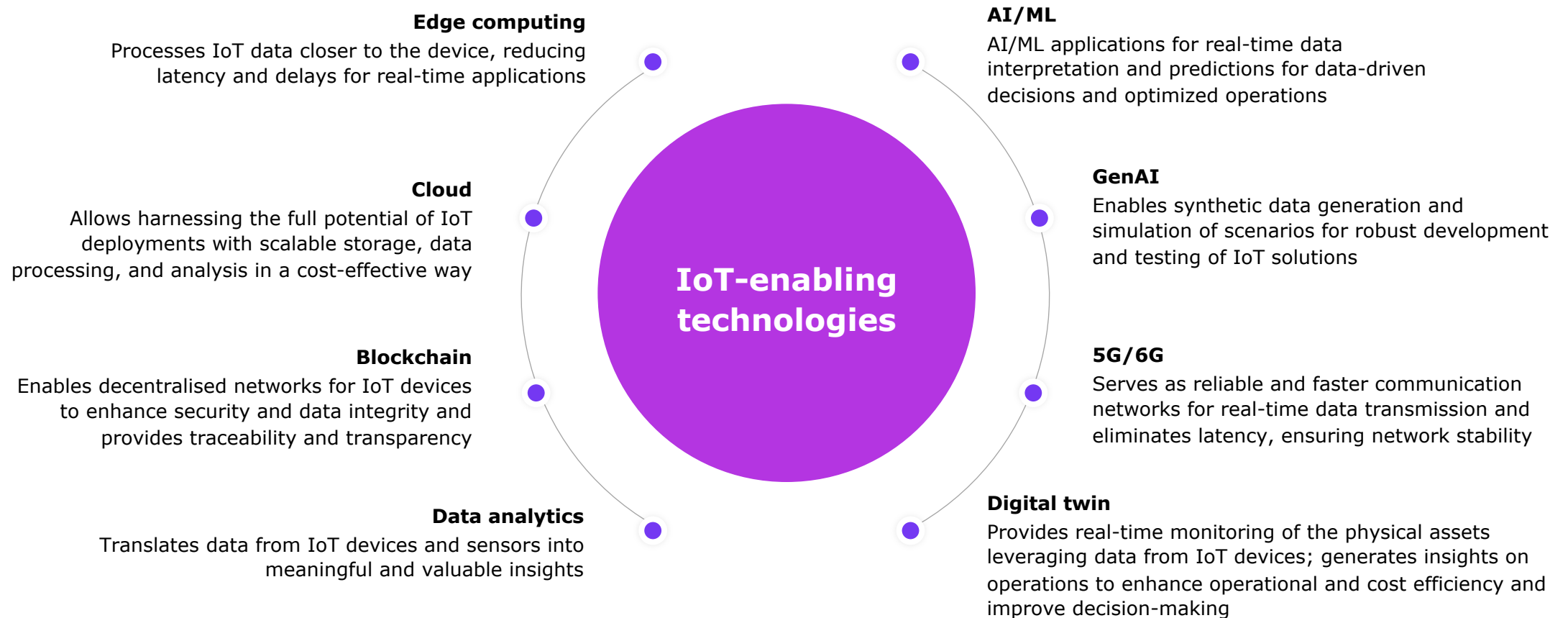
GenAI + IoT market dynamics and implementation challenges

While numerous potential use cases exist for GenAI in conjunction with IoT, only a few have moved beyond the PoC stage to actual implementation—indicating several dynamics at play in the market.

- **Exploratory phase:** The fact that most use cases are still in the PoC stage suggests that the market is in an exploratory phase. Companies are experimenting with GenAI and IoT to understand their potential benefits and limitations before committing to full-scale implementation.
- **Technical and integration challenges:** Implementing GenAI with IoT involves complex integration and technical challenges, slowing down the transition from PoC to production. Companies encounter difficulties in seamlessly integrating these technologies into existing systems and processes.
- **Market readiness and adoption:** The slow pace of implementation also indicates the market is not fully ready for the widespread adoption of GenAI in IoT—attributed to the lack of skilled personnel, insufficient infrastructure, or the need for further technological advancements.
- **Cost considerations:** As companies are willing to invest in solutions that meet their needs, cost is not necessarily a deterrent. However, the financial implications of scaling up from PoC to full implementation can be a factor when adopting a cautious approach.

To summarize, the current market dynamics suggest that while there is significant interest in the potential of GenAI and IoT, the transition from experimentation to widespread adoption is tempered with technical, financial, and strategic considerations. Companies will likely continue exploring the integration of GenAI with IoT, but its widespread implementation will depend on overcoming these challenges and demonstrating clear value.

Integrating IoT with diverse technologies such as AI/ML, blockchain, and 5G to enhance its capabilities and bring business value



Each technology complements IoT's ability to deliver advanced, secure, and efficient solutions across various industries, highlighting the importance of a holistic approach to IoT ecosystem development.

Source: HFS Research, 2024

Strategic growth and collaborations: Shaping the future through key partnerships and acquisitions

Key mergers and acquisitions during 2020–2024	
Accenture	Navisite, Partners in Performance, Flutura, Eclipse Automation, Trancom, Headspring, Albert, umlaut, DI Square, Imaginea, PLM Systems, VanBerlo, ESR Labs
Bosch Service Solutions	Elpro Group AG, a minority investment in Sfara
Cognizant	Belcan, Mobica, TQS Integration, Cognizant Mobility, Bright Wolf
Cyient	Citec
Deloitte	Optimal Design, Tezeva and FaktoryWize, Dextra Technologies
Eviden	Ipsotek, DataSentics, Ideal, Processia, Miner & Kasch
EY	Pythagoras, SecureWorx, Doberman
FPT Software	Intertec International, Cardinal Peak, AOSIS, Base Enterprise

Key mergers and acquisitions during 2020–2024	
HCLTech	HPE, ASAP, Starschema, Quest Informatics Private Limited
Hitachi Digital Services	Thales, Flexware Innovation, Io-Tahoe, GlobalLogic, Perpetuum
IBM	StreamSets, Omnio Edge
Infosys	InSemi, in-tech
LTIMindtree	Mindtree
LTTS	Smart World & Communication
NTT DATA	Apisero, Aspirent
PwC	A minority stake in Cybus GmbH
Tech Mahindra	Cerium Systems
Wipro	ITI, PARI, Eximius Design

Partnerships and collaborations











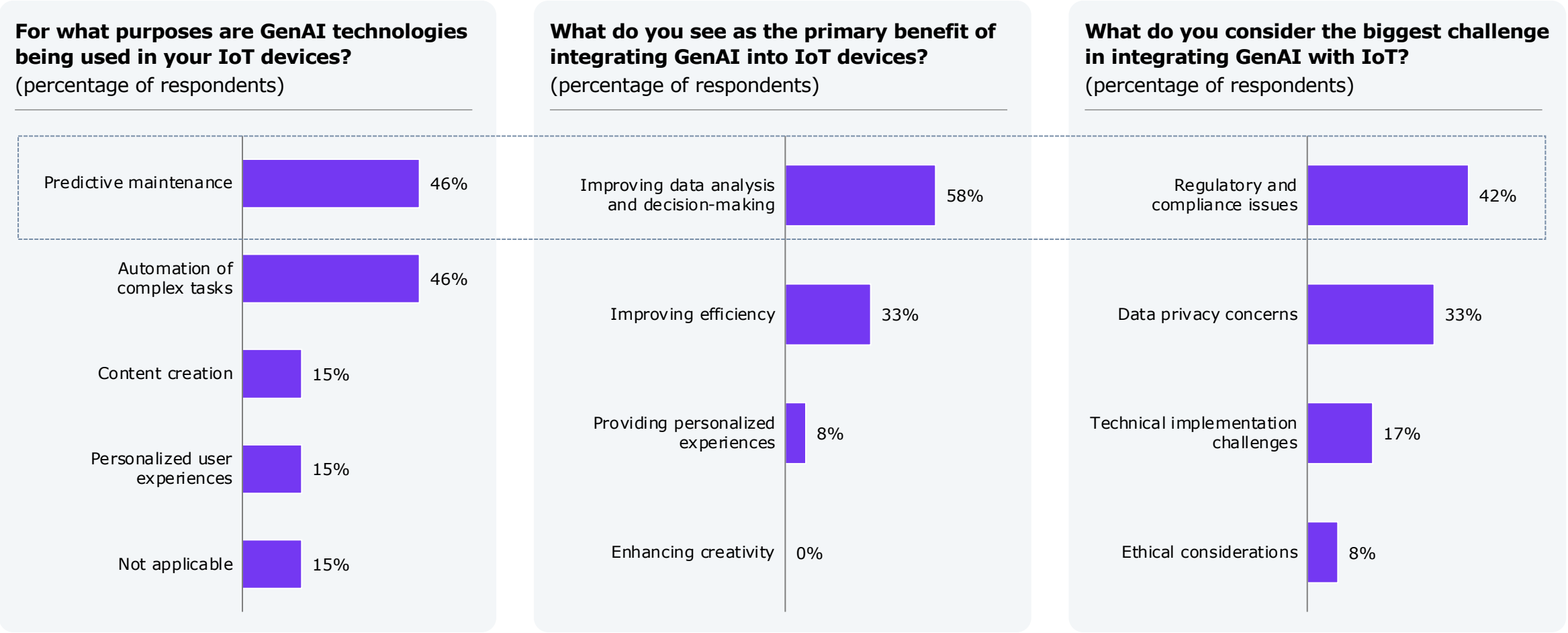






Source: Service provider briefings

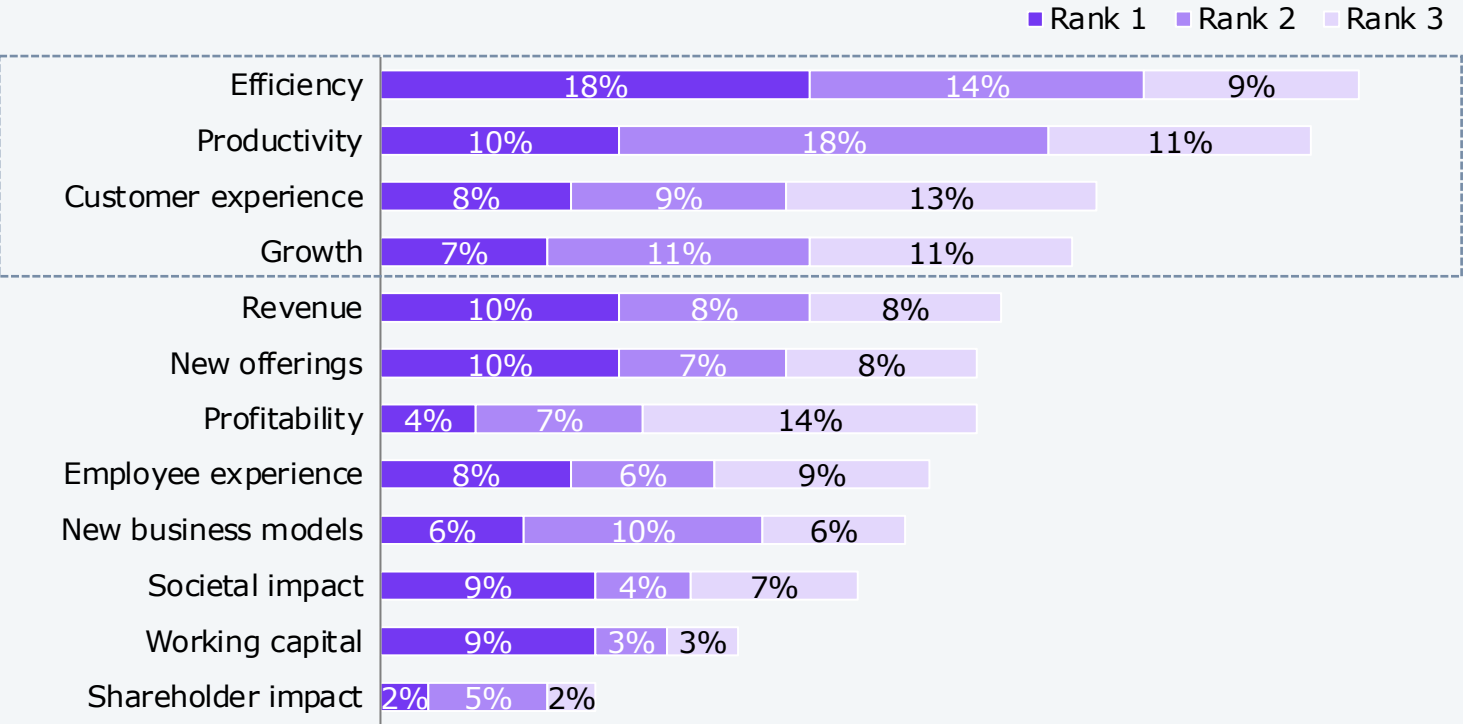
GenAI boosts IoT with improved decision-making and efficiency, but regulatory and privacy challenges need strategic solutions



Sample: N=13 IoT client references
Source: HFS Research, 2024

IoT boosts efficiency, productivity, and customer experience in the enterprise environment

Please select the top three benefits for IoT third-party service
(percentage of respondents)

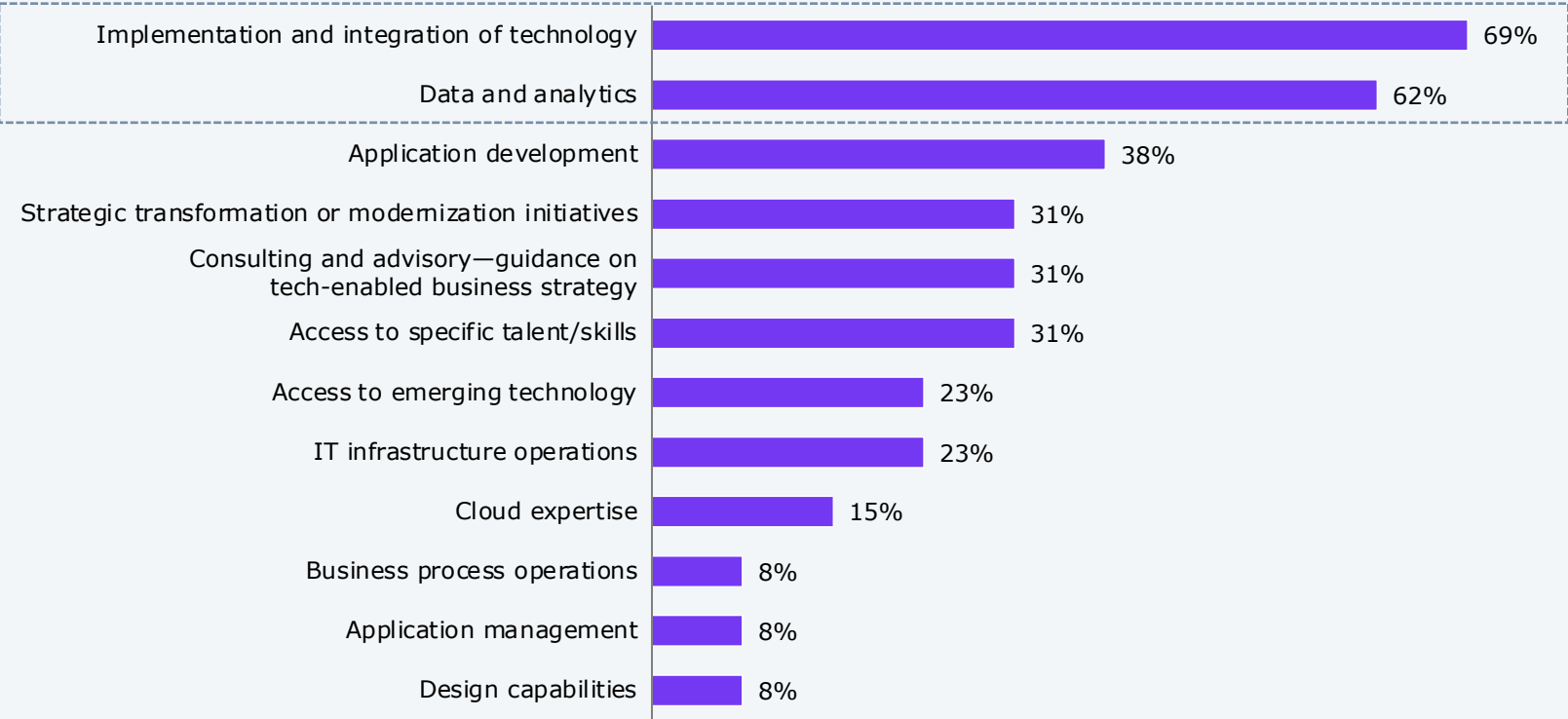


- For IoT third-party services, the top three benefits ranked by your organization are efficiency, productivity, and customer experience.
- Efficiency is recognized as the most significant benefit, with 18% of respondents ranking it first, reflecting IoT's capacity to streamline operations and reduce costs.
- Productivity follows, highlighting IoT's role in enhancing work processes and output.
- Customer experience is also a key benefit, jointly ranked third, illustrating the significant impact of IoT on enhancing customer interaction and satisfaction.

Sample: 2024 HFS Pulse Research, N=105 executives across Global 2000 enterprises
Source: HFS Research, 2024

Technology implementation and integration and access to data and analytics capability are among the top services sought by clients

What do you use this service provider for? (percentage of respondents)

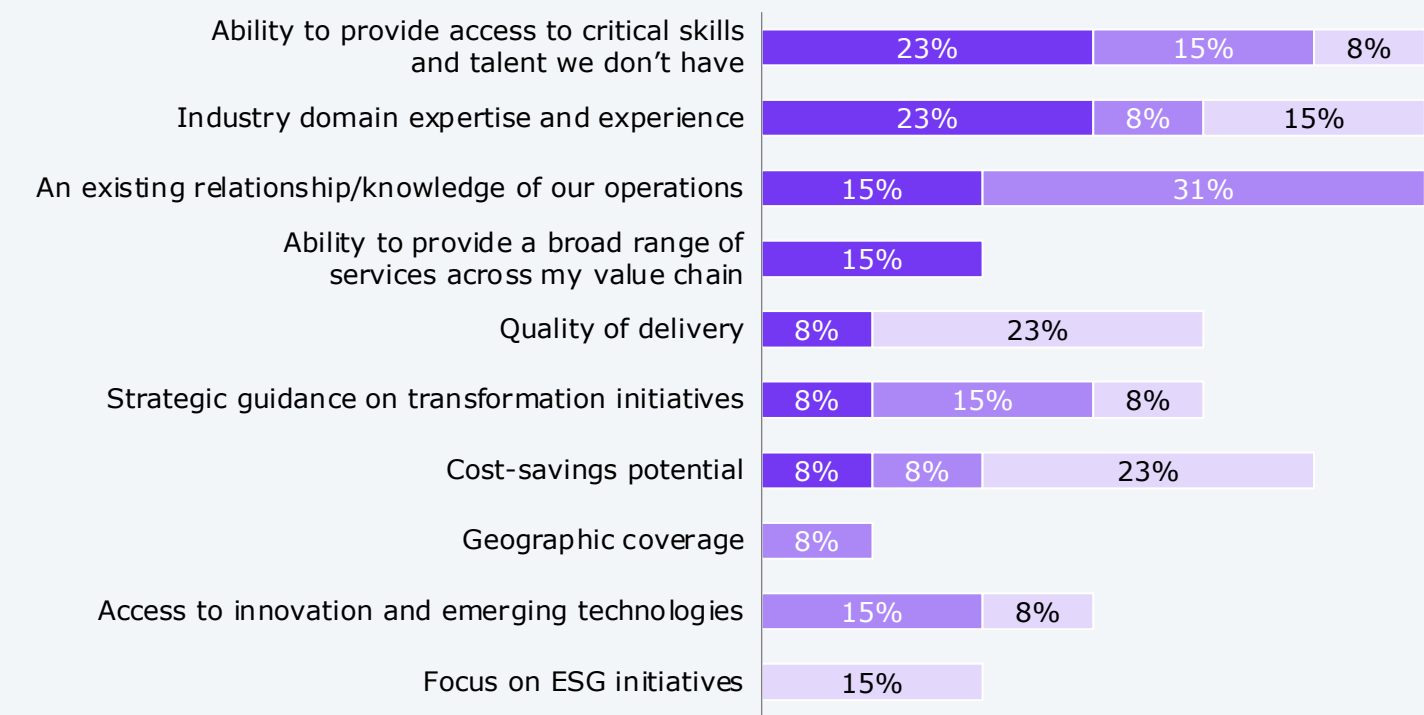


- These high percentages of implementation and integration of various technologies and data and analytics services reflect service providers’ role in helping organizations effectively integrate complex systems and leverage data for informed decision-making.

Sample: N=13 IoT client references
Source: HFS Research, 2024

Critical skills, industry expertise, and existing relationships are top factors in choosing service providers

How did you pick this service provider? Please rank the top three criteria.
(percentage of respondents)

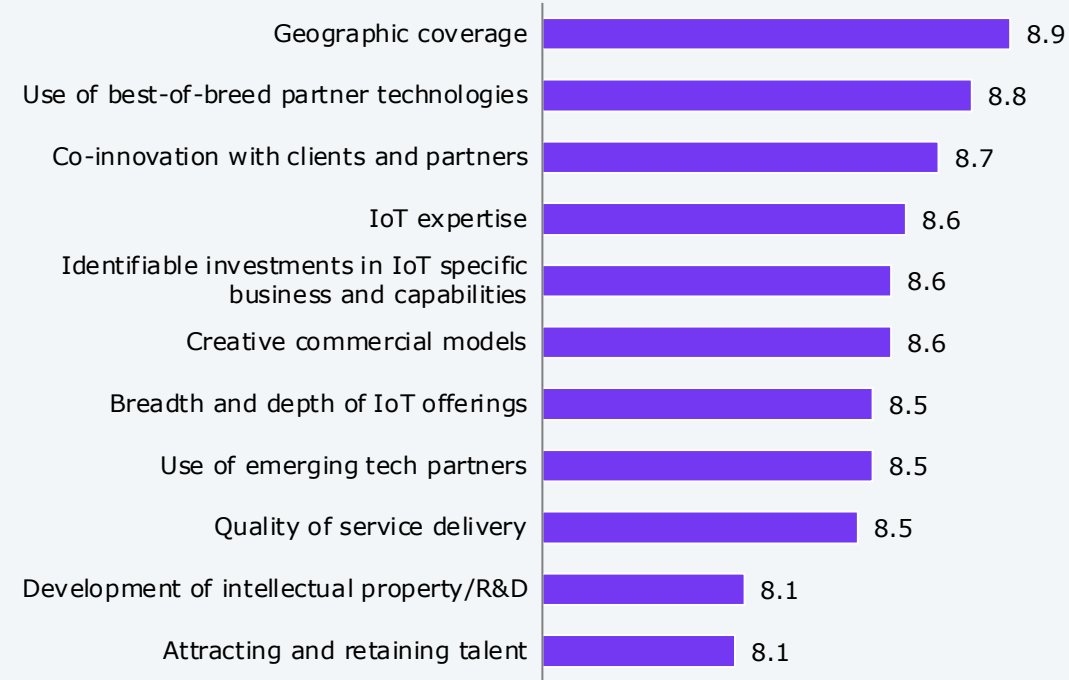


- The need for access to critical skills and talent and specific industry expertise primarily influences the selection of service providers. This highlights the strategic importance of specialized capabilities that businesses may lack internally.
- An existing relationship and knowledge of operations also play a significant role, indicating that familiarity and trust in understanding organizational needs are crucial.
- This suggests businesses prioritize service providers with specific technical skills and industry knowledge, a proven track record, and deep understanding of their operations. This will enhance collaboration and ensure tailored service delivery.

Sample: N=13 IoT client references
Source: HFS Research, 2024

Service providers excel in IoT delivery, significantly improving the customer experience and business efficiency, but focus on driving bottom-line impact and employee experience can be enhanced

Based on your experience, rate the service provider across the following parameters (scale of 1 to 10, where 1 is poor and 10 is excellent; mean score shown in the chart)



Rate how well your service provider has delivered the following outcomes (scale of 1 to 10, where 1 is below expectations and 10 exceeds expectations; mean score shown in the chart)

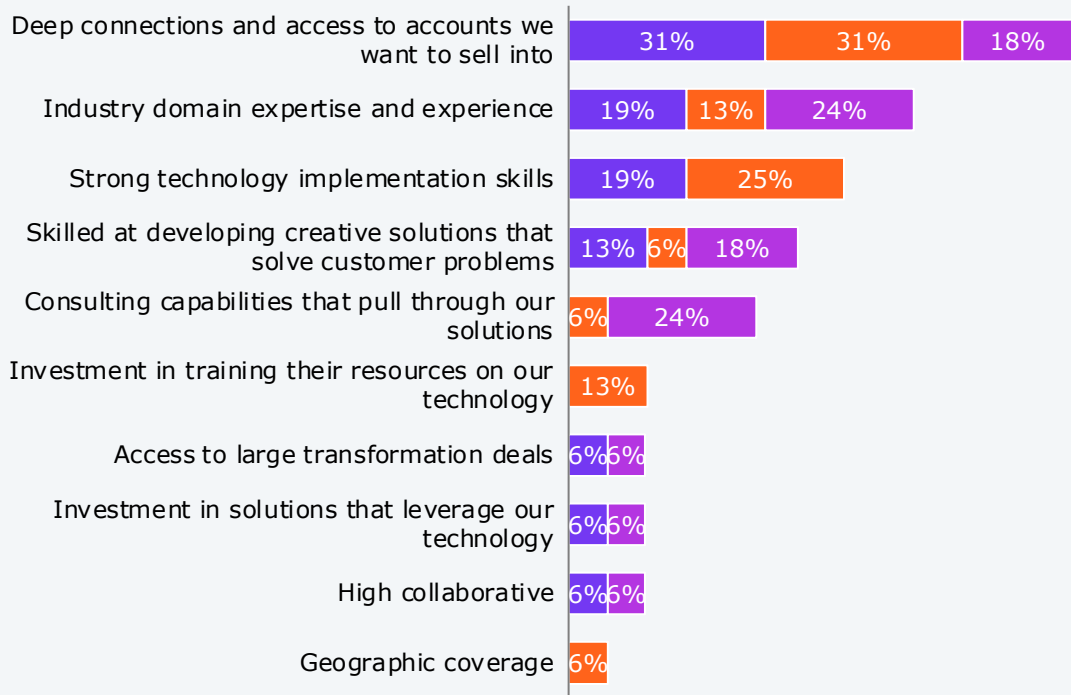


Sample: N=13 IoT client references
Source: HFS Research, 2024

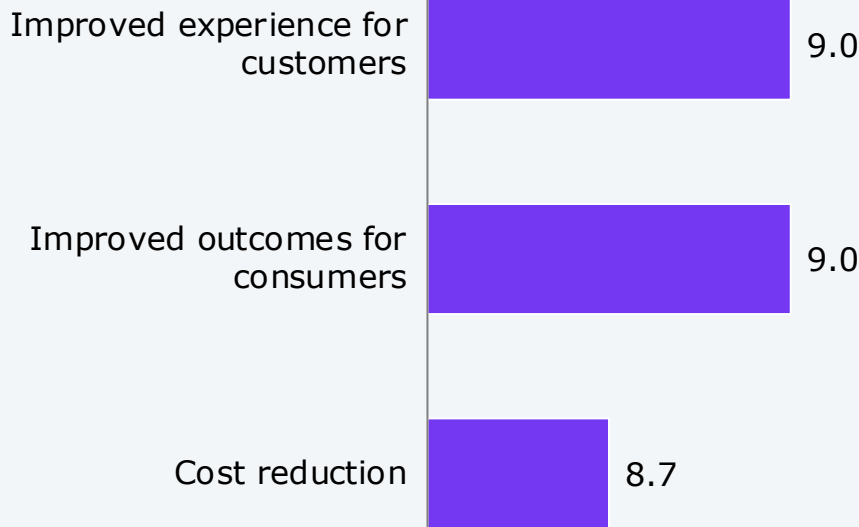
Service providers excel in accessing accounts, domain expertise, and delivering high customer satisfaction and outcomes for partners

Why do you partner with this service provider? Rank the top three criteria.

(percentage of respondents)



How would you rate the current performance of your service provider partner in each of the following three value descriptions where you engage together with enterprise clients (scale of 1–10, where 1 is poor and 10 is excellent; mean score shown in the chart)



Sample: N=25 IoT partner references
Source: HFS Research, 2024

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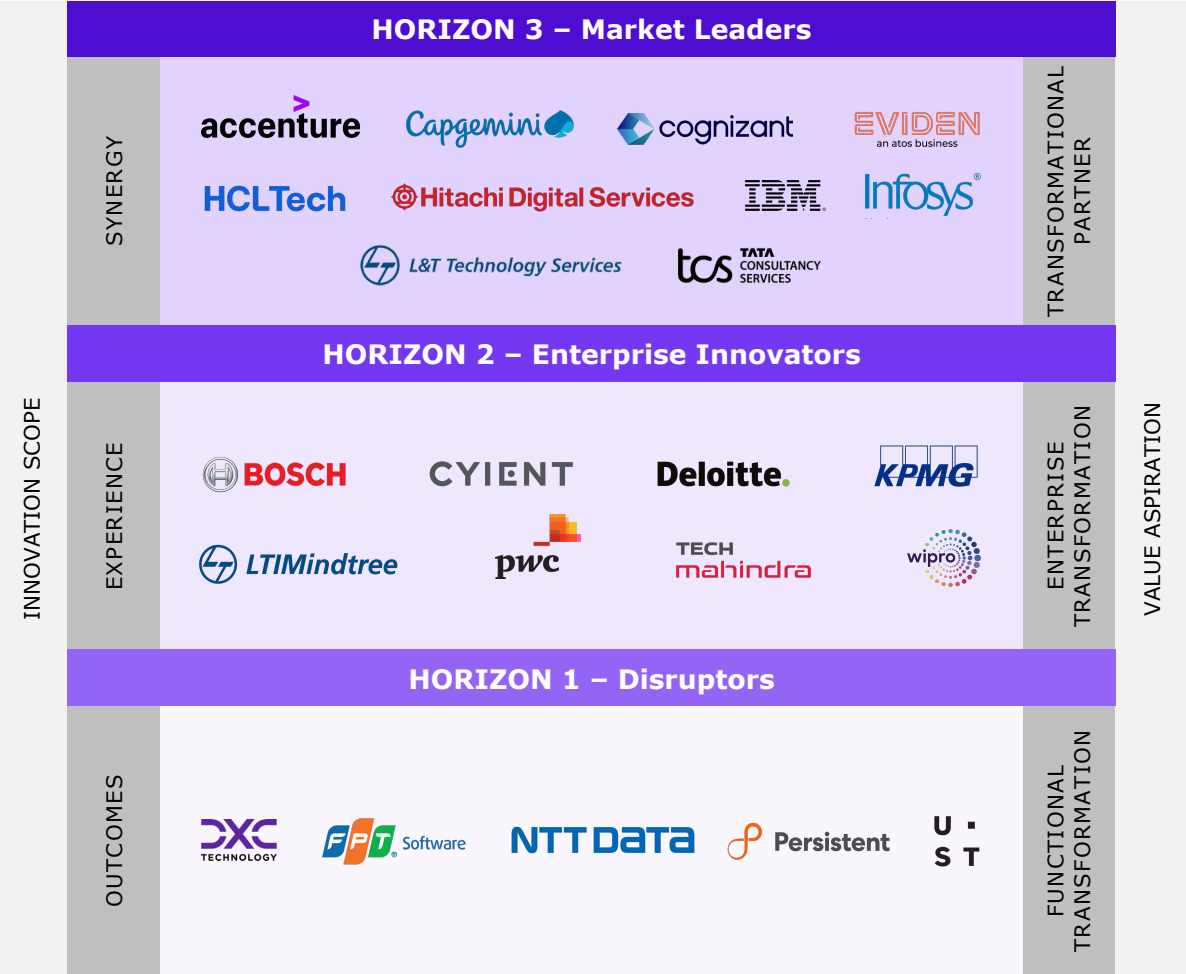
Horizons results: IoT service providers, 2024

HFS Horizons: Summary of providers assessed in this report

Providers	HFS point of view
Accenture	A holistic transformation partner, employing an acquisition-led strategy to enhance its capabilities and offerings
Bosch Service Solutions	Integrates data and services along with offering tailored IoT solutions for mobility, building, logistics, and fleet sector
Capgemini	Driving IoT transformation with an aim to build an intelligent operating environment
Cognizant	Strengthening engineering with Belcan and scaling IoT globally
Cyient	Leverages its engineering expertise to drive IoT engagements
Deloitte	Aims to offer advisory-led services across the IoT spectrum
DXC Technology	A provider of end-to-end IoT services including integration and consulting
Eviden	Offers GenAI-enhanced, industry-specific IoT solutions
FPT Software	Offers enhanced security, functionality, and user experience through IoT expertise
HCLTech	Building on its engineering strength using Industry NeXT framework
Hitachi Digital Services	Seamlessly integrates OT for industrial and manufacturing performance

Providers	HFS point of view
IBM	Enables IoT transformation with business-focused solutions
Infosys	Adopts a cloud-first, AI-driven approach to deliver IoT solutions
KPMG	Helps clients by providing integrated business solutions
LTIMindtree	Transforming industries with AI-driven IoT, delivering real-time insights and impactful solutions
LTTS	Engineering DNA powering industry-focused IoT solutions
NTT DATA	A provider of end-to-end IoT solutions
Persistent	Helps clients maximize value from IoT integrations
PwC	Leverages industry expertise to help implement IoT strategies
TCS	A provider of end-to-end digital business transformation, focusing on industry-ready solutions
Tech Mahindra	A telco-driven IoT provider following a platform-based approach
UST	A platform-driven provider of IoT services
Wipro	Integrates strategy, engineering, and managed services for IoT-related transformation

HFS Horizons: IoT Service Providers, 2024



Note:All service providers within a Horizon are listed alphabetically.
Source: HFS Research, 2024

Horizon 3: Ecosystem transformation

- Horizon 3 service providers demonstrate:
- Horizon 2 + ability to drive the **OneEcosystem™** impact via collaboration across multiple organizations with common objectives around driving completely new sources of value
 - Innovation scope at the ecosystem level, with the resulting value delivered focused on growth through new business and collaboration models
 - Strategy through execution at scale with sophisticated capabilities across all value creation levers
 - A culture of innovation to develop IP while adopting emerging tech to address complex industry challenges

Horizon 2: Enterprise transformation

- Horizon 2 service providers demonstrate:
- Horizon 1 + enablement of the **OneOffice™** model of end-to-end organizational alignment across the front, middle, and back offices to drive unmatched stakeholder experience
 - Innovation scope at the end-to-end enterprise level, with the resulting value delivered with an ability to support clients on their enterprise transformation journey
 - Platform assets-built ground up and augmented through inorganic assets
 - Ability to address outcomes through proprietary or industry-specific technologies (platforms, applications)

Horizon 1: Functional digital transformation

- Horizon 1 service providers demonstrate:
- Ability to drive digital transformation to digitize processes, delivering outcomes such as cost reduction, speed, and efficiency across the IoT services value chain
 - Focus on technology implementation with technical skills and partnerships to optimize legacy processes and tactical operational challenges while addressing client and industry-specific challenges

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Hitachi Digital Services profile: IoT service providers, 2024

Hitachi Digital Services: Seamlessly integrates OT for industrial and manufacturing performance

HORIZON 3 – Market Leader  HORIZON 2 – Enterprise Innovator HORIZON 1 – Disruptor	Strengths Value proposition: HDS’ IoT offering value proposition is built on its extensive experience in both operational technology (OT) and information technology (IT), spanning over a century. Its IoT practice provides services across advisory, development, and product implementation. Growth proof points: HDS has focused on inorganic growth through acquisitions and strategic investments. It has invested more than \$10 billion in recent acquisitions related to digital transformation. It achieved a 15-20% YoY growth rate for its revenue, headcount, and clients. Key differentiators: HDS distinguishes itself through its expertise in IT and OT. It also benefits from a rich partner ecosystem and the One-Hitachi initiative, which provides scalable and reusable foundational solution templates tailored for different industry verticals Outcomes: HDS has driven transformative outcomes for clients using IoT and AI technologies. A Japanese automotive giant utilized IoT to achieve \$70 million in cost savings and a \$1.1 million reduction in non-production energy costs. HDS’ AI-driven solutions in transportation reduced repair times by 15 minutes per truck in over 800 workshops, enhancing maintenance scheduling. Customer: The client appreciated HDS for taking the time to deeply understand the requirements and engage in healthy challenges. Partnerships: Partners have praised HDS for its global reach, scalability, and ability to sell digital transformation and back it up with implementation services.	Development opportunities What we’d like to see more of: A better integration of emerging technologies such as GenAI to enhance IoT service offerings and drive better outcomes. Room for growth: HDS can expand its IoT solutions into sectors that are currently underrepresented in its portfolio, such as healthcare, oil and gas, travel, hospitality, and logistics. Customer: Clients expect HDS to manage scope creep effectively. Partner: Partners expects HDS to strengthen its domain expertise and increase its service delivery across Europe, building on its strong presence in the US and Japan.	
Key offerings HDS IoT service offerings: System integration services, advisory and consulting, managed services, analytics services, security services Key offerings: Asset lifecycle management, smart factory solutions, energy trade and risk management, grid modernization SI, smart spaces and video intelligence, multi-cloud managed services		Mergers and acquisitions (2020–2024) *Hitachi Conglomerate acquisition as OneHitachi initiative Thales: Hitachi Rails acquired Thales Ground Transportation Systems (2024). Flexware Innovation: Hitachi Acquires Industry 4.0 Systems Integrator (2022). Io-Tahoe: Hitachi Vantara acquired Io-Tahoe, a subsidiary of the UK energy company Centrica (2021). GlobalLogic: Hitachi acquired GlobalLogic (2021). Perpetuum: Hitachi Rail acquired railway technology firm Perpetuum (2020).	
Partnerships ISV and tech partners: Cloudera, Snowflake, MongoDB, Litmus Automation, MathWorks, Teradata, Databricks, Collibra Alliance partners: Salesforce, Nvidia, Intel, AT&T, SAP, Vodafone, Verizon, Oracle Hyperscalers and ERP alliances: AWS, SAP, Google Cloud, Microsoft, Oracle Other partners: Hitachi group companies such as Hitachi Rail, Hitachi Energy, Hitachi R&D, Hitachi Omika Works, and Hitachi Hi-Tech	Key clients Number of IoT services clients: Not disclosed Key clients: - Logan Aluminum - Bengalla Mining Company - Sandvik - Penske - Hitachi Rail Europe	Global operations and resources IoT services-related headcount: Not disclosed Number of delivery and innovation centers: Delivery centers in NA, Europe, and APAC - Application reliability centers in Dallas, Texas, US - Hyderabad, India, and Tokyo, Japan - Digital studios in Santa Clara, Charlotte, US, and London, UK - Engineering centers in Canada, US, UK, Portugal, India, Vietnam, and Japan	Flagship internal IP HARC-OT Accelerators: A set of targeted accelerator solutions IAMS-R: A centralized integrated EAM system Smart Factory: Transformation of traditional manufacturing and industrial practices, utilizing modern technology HVMS: Manages videos and devices and bridges hardware with analytics and visualization

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Mayank is an Associate Practice Leader at HFS Research, with an industry focus on healthcare and life sciences and a horizontal focus on IoT, Industry 4.0, and sustainability. He is a certified Sustainability and Climate Risk (SCR) professional from the Global Association of Risk Professionals (GARP). He has nearly a decade of experience in research, pre-sales, and software development, has contributed to business strategy and pre-sales at Altimetrik, and has worked on M&A analytics. At HCLTech, he supported R&D for a major medical device client.

He holds a certificate in strategic management from IIM Kashipur. He has a master's in business administration from Birla Institute of Technology and Science College, Pilani (BITS, Pilani University) and a bachelor's in engineering in electrical and electronics. He is presently pursuing a post graduate diploma in public health management.



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Anushka is a Senior Analyst at HFS Research, covering the business services—F&A, sourcing, and procurement domain.

She has nine years of experience in research, corporate strategy, and project management, focusing on the manufacturing, automotive, education, and food and facility management sectors. She has led and executed multiple research and consulting projects around key industry topics, including Industry 4.0. Before joining HFS, she worked with Sodexo and KPMG. At Sodexo, she developed the 2025 strategic roadmap for Sodexo's food services and facility management business in India, working closely with the country president and business heads and defining the go-to-market strategy. She was also driving PMO for key strategic initiatives across businesses.

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