

A collage of several skyscrapers with glass facades, viewed from a low angle looking up. The buildings are arranged in a staggered, overlapping pattern, creating a sense of depth and architectural complexity. The colors range from light blues to warm yellows and oranges.

**\*ISG** Provider Lens™

2022

Internet of Things –  
Services and Solutions  
2022

imagine your future®

ISG (Information Services Group) (Nasdaq: III) is a leading global technology research and advisory firm. A trusted business partner to more than 800 clients, including more than 75 of the world's top 100 enterprises, ISG is committed to helping corporations, public sector organizations, and service and technology providers achieve operational excellence and faster growth. The firm specializes in digital transformation services, including automation, cloud and data analytics; sourcing advisory; managed governance and risk services; network carrier services; strategy and operations design; change management; market intelligence and technology research and analysis. Founded in 2006, and based in Stamford, Conn., ISG employs more than 1,300 digital-ready professionals operating in more than 20 countries—a global team known for its innovative thinking, market influence, deep industry and technology expertise, and world-class research and analytical capabilities based on the industry's most comprehensive marketplace data. For more information, visit [www.isg-one.com](http://www.isg-one.com).



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# Introduction

Internet of Things (IoT) applications continue to expand across industries and geographies. According to various reports, the total number of connected devices may reach 27.1 billion by 2025. In maturing markets, IoT initiatives are evolving from discrete, customized proofs of concept to enterprise-wide, scalable solutions. As part of this maturity, the ability to address industry-specific business and regulatory requirements is becoming essential. Rather than being viewed as a distinct entity, IoT is increasingly being integrated into broader transformational strategies.

A key IoT focus area is the deployment of integrated networks of smart devices that can monitor the location and movement of vehicles, equipment, goods and people, plus collect and analyze data about asset use. These initiatives support benefits such as predictive maintenance, product safety, streamlined logistics and supply chain visibility. IoT relevance is also being driven by the use of AI and data processing technologies directly at the points of business activity to securely collect, process and analyze large volumes of information.

IoT initiatives often require technology partner support in three areas: strategy consulting to identify opportunities, define objectives and chart a journey; technology implementation expertise to integrate multiple devices, applications and platforms; and ongoing management of the IoT ecosystem through managed services.

This ISG Provider Lens™ study examines a comprehensive range of IoT services and solutions, focusing on service provider capabilities, their go-to-market strategies and differentiators.

Specific takeaways for IT decision-makers include:

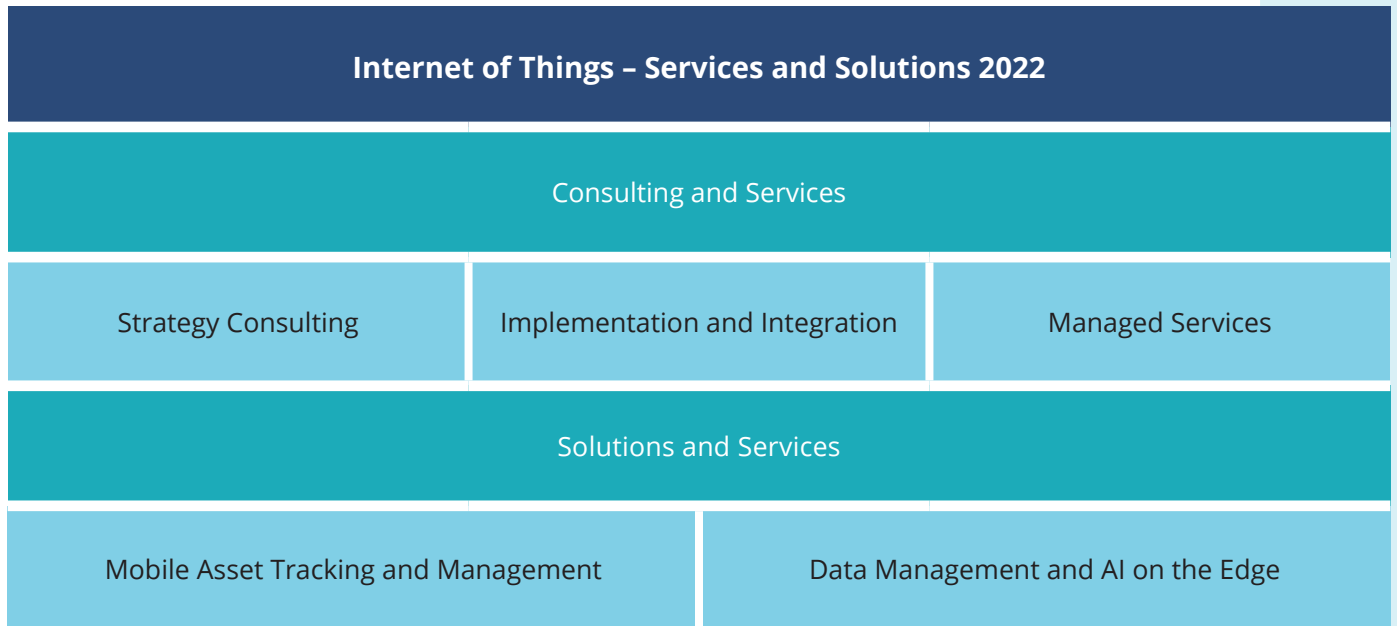
- Transparency on the strengths and weaknesses of relevant providers;
- A differentiated positioning of providers by segments and industry expertise;
- A perspective on different markets, including the U.S., Germany and Brazil

By providing critical decision-making insights into provider positioning and key relationships, the analysis helps ISG advisors and enterprise clients evaluate current vendor relationships and potential engagements.

# Quadrants Research

As a part of this ISG Provider Lens™ quadrant study, we introduce the following five quadrants under IoT - Services and Solutions 2022:

Simplified illustration



Source: ISG 2022

The 2022 study refreshes quadrants to reflect the latest developments in IoT market and technology trends. Strategy Consulting, Implementation and Integration and Managed Services are broken out into three discrete focus areas to highlight the essential phases of planning, deployment and ongoing management of IoT initiatives. Mobile Asset Tracking and Management, meanwhile, focuses on use cases related to monitoring the location, movement and activity of assets, and on leveraging data analytics to improve business outcomes. For Data Management and AI on the Edge, we examine new capabilities around processing massive volumes of data directly at the point of critical activity.

## Strategy Consulting

This quadrant assesses service providers for their capabilities to lay the strategic groundwork for successful enterprise-wide deployment of IoT technology. Key considerations include the ability to align objectives to specific industry, competitive and regulatory needs and provide fresh, cross-industry perspectives. Strategy consulting services include planning, development of competitive business cases, and analysis for overall cost and return on investment (ROI).

The report also analyzes consulting services around edge computing, data collection and analysis, and the strategic role of innovative technologies such as AI and machine learning (ML) in enabling and monitoring the IoT functionality. The security capabilities assessment includes the provider's strategies used for managing multiple devices and networks in an integrated and heterogeneous environment.

### Eligibility criteria

- Ability to develop an end-to-end roadmap; implement a pilot; lay out a strategy for deployment at scale; integrate adequate security, networking and data analytics; and build partnerships across the IoT ecosystem
- Clear definition of overall IoT objectives and alignment with business goals plus specific milestones and metrics to enable ROI tracking throughout the initiative
- Strategic planning for market, product, service and business model development to address a wide range of industry requirements
- R&D focus on internal and third-party innovations and integration of emerging technologies such as AI, augmented reality, blockchain, multi-access edge computing (MEC) and 5G
- Detailed understanding of IoT capabilities around supply chain, logistics and smart buildings, and industry-specific expertise in manufacturing, healthcare, retail and other sectors

## Implementation and Integration

This quadrant assesses service providers for their capabilities around IoT technology implementation and integration into processes, business models and operational environments. This includes addressing specific industry and regulatory requirements, and providing innovative cross-industry perspectives. Integration and implementation services include full or partial project management, technology integration and project execution services on the levels of device, platform, network, data storage and analytics, applications and security. Based on connected framework or ecosystem requirements, service providers must demonstrate the right mix of technological and organizational capabilities as well as technology, local delivery and innovation partners to achieve defined business outcomes.

It also considers provider implementation and integration capabilities around edge computing, data collection and analysis, AI and machine learning, including the ability to leverage data collection and analytics to drive innovation and ongoing improvement. Security capability assessments include appraising the provider's ability to implement and maintain endpoint and network security, and to provide ecosystem protection.

### Eligibility criteria

- Ability to provide end-to-end integration and implementation support to clients across an IoT value chain that includes devices, sensor integration, analytics, data and visualization, networks, and integration into enterprise applications, including enterprise resource planning (ERP), customer relationship management (CRM), IT/OT integration and manufacturing execution systems (MES)
- Ability to extract, manage and analyze data from multiple devices and from multiple sources and platforms, and apply findings to drive innovation and ongoing improvement
- Ability to implement and integrate security solutions that holistically address end-to-end requirements at the endpoint, network and ecosystem levels
- Expertise (as evidenced by certifications and accreditations) in key development languages such as Java, Python and Script

## Managed Services

This quadrant assesses service providers for their capabilities in managing the overall IoT ecosystem to enable scalable solutions and support ongoing IoT-enabled business operations, and to foster innovation and continuous improvement. Comprehensive managed services encompass management of security, cloud, networks, devices and other equipment, data, platforms, applications, and IoT analytics.

Here, IoT analytics offerings include data management and intelligence to improve business outcomes, predictive analytics, data visualization to bolster operations, and IoT analytics platform maintenance for scalability. Service providers are assessed for their capabilities to manage and upgrade existing IoT systems and solutions, particularly by leveraging emerging technologies such as 5G, extended reality and AI.

### Eligibility criteria

- Application of skills, resources and solutions to provide ongoing services support across the IoT ecosystem; specifically, ability to respond to and address emerging challenges and opportunities related to security (such as Zero Trust architectures), networking (such as 5G), cloud data, device, analytics, and platform management
- Support of active clients across the IoT value chain with use cases and market awareness of such services
- Partnerships that provide complementary capabilities to support the unique managed service needs of different clients and applications
- Expansion plans and focus on key industries and regions
- Capabilities to effectively drive Change Management at the business, process and technology levels, and to pro-actively implement emerging technologies into existing IoT environments.



## Mobile Asset Tracking and Management

This quadrant assesses provider capabilities around implementing intelligent, industry-focused solutions that connect devices to monitor the location, movement and environment of vehicles, equipment, products and people. The combination of smart mobile connectivity, remote monitoring and visual analytics is applicable to a wide range of critical business requirements in industries such as transportation, healthcare, energy and construction, and can drive dramatic improvements in logistics, supply chain visibility, safety and regulatory compliance. Effective deployment of such solutions requires integration of sensors, track-and-trace solutions, video systems and analytical platforms, along with a deep understanding of industry challenges and client requirements. In this context, cross-disciplinary partnerships serving multiple industries and the ability to integrate a variety of technologies and functions are essential.

### Eligibility criteria

- Ability to integrate track-and-trace solutions with emerging technologies such as AI and edge computing, and ability to deploy specialized systems and provide support
- Ability to identify and measure benefits such as improved efficiency, smooth logistics, supply chain visibility and sustainability
- Ability to use data collection and analysis to support continuous improvement
- Security coverage, including security engineering, for improved controls in operations, plus expertise in protecting mobile transportation and logistics ecosystems
- Expertise in network and connectivity services, including 5G and the edge
- Comprehensive partner ecosystem that integrates technology products (such as smart video systems) and industry knowledge (such as healthcare) to address specific requirements and identify and address critical issues

## Data Management and AI on the Edge

This quadrant assesses providers that develop end-to-end strategies and implement IoT edge systems that rapidly and securely process large volumes of data, with minimal dependence on central storage processing. Key capabilities considered here include the ability to build, deliver and support solutions for dedicated compute and data processing power at the device level, specifically for cameras and visual data, to address bandwidth requirements and latency issues, either independently or within a multi-party arrangement of partners and third-party providers. The analysis gauges if providers' innovative edge systems integrate AI and machine/deep learning capabilities — both hardware and software — to undertake certain complex analytics on the edge. This edge capability allows a system to make immediate decisions and take rapid actions locally, without being dependent on the analytics capabilities of cloud-based or centralized systems.

### Eligibility criteria

- Strategy formulation for data management and AI on the edge solutions, including definition of use cases, edge AI functionalities and key deliverables, building blocks and requirements, prototyping, deployment and maintenance at scale
- Deep understanding of IoT edge solutions and experience in developing edge solutions and services, including prototyping and deployment at scale, local power and network management, managed edge solutions, and edge maintenance and services
- Deep understanding of IoT data management and analytics solutions and experience in developing IoT data management solutions and services, including Edge Data Management and Analytics strategies, data transmission and quality handling, storage, visualization and reporting.
- Deep understanding of AI and experience with machine/deep learning technologies, including frameworks for data collection, modeling, validation and producing a deep learning model. This understanding extends to aspects such as dedicated hardware/chip design optimized for AI and machine learning operations (MLOps), AI-specific ethical issues, and deep learning model operations
- Ability to design and manage a closed feedback loop to monitor AI model performance and bias over time, and to trigger corrective actions (such as retraining, redesigning or phasing out)
- Ability to design and deploy applications that need to deliver computing power at the device level to address bandwidth needs and latency requirements

# Quadrants by Region

Quadrants	U.S.	Germany	Brazil
Strategy Consulting	√	√	√
Implementation and Integration	√	√	√
Managed Services	√	√	√
Mobile Asset Tracking and Management	√	√	√
Data Management and AI on the Edge	√	√	√

# Schedule

The research phase falls in the period between **February and March 2022**, during which survey, evaluation, analysis and validation will take place. The results will be presented to the media in **June 2022**.

<b>Milestones</b>	<b>Beginning</b>	<b>End</b>
Launch	February 17, 2022	
Survey Phase	February 17, 2022	March 14, 2022
Sneak Preview	May 11, 2022	June 15, 2022
Press Release	June 2022	

Please refer to the [link](#) to view/download the ISG Provider Lens™ 2022 research agenda:

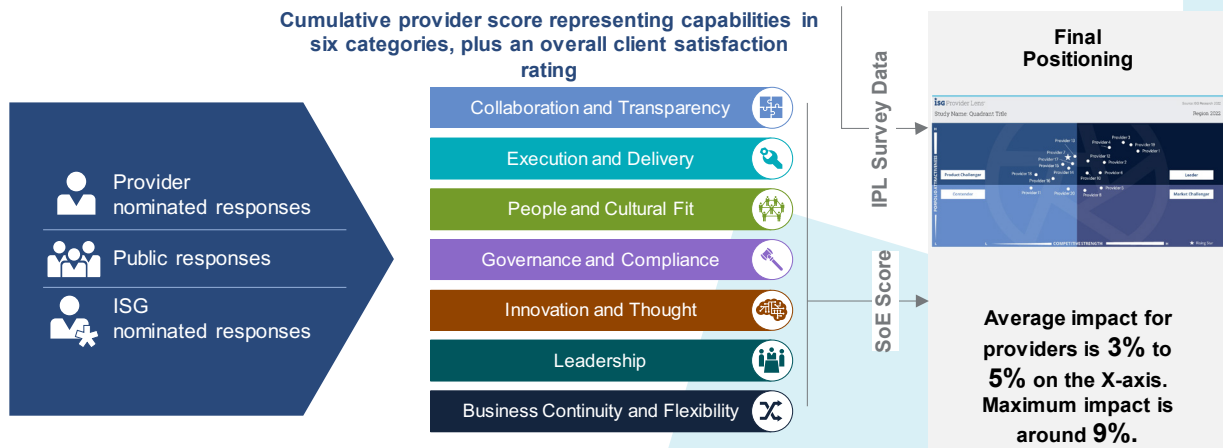
## Access to Online Portal

You can view/download the questionnaire [at the ISG website](#), using the credentials you have already created or refer to instructions provided in the invitation email to generate a new password. We look forward to your participation!

## ISG Star of Excellence™ – Call for nominations

The Star of Excellence is a leading independent recognition of service delivery excellence based on the concept of “Voice of the Customer.” This ISG program collects client feedback regarding service providers’ performance in demonstrating the highest standards of client service, excellence and customer centricity.

The global survey examines services associated with IPL studies, providing ISG analysts with a benchmark for measuring client sentiment and insight into the customer experience. This information complements advisor feedback that IPL leverages in its practitioner-led consulting approach.



Providers are invited to [nominate](#) their clients to participate. Once the nomination has been submitted, ISG will notify both parties. ISG anonymizes all customer data and does not share it with third parties.

To ensure your selected clients complete the feedback for your nominated engagement, please use the Client nomination section on the Star of Excellence [website](#).

Direct any questions or provide comments to [star@isg-one.com](mailto:star@isg-one.com). This email will be checked daily; please allow up to 24 hours for a reply.

### Research production disclaimer:

ISG collects data for the purposes of writing research and creating provider/vendor profiles. The profiles and supporting data are used by ISG advisors to make recommendations and inform their clients of the experience and qualifications of any applicable provider/vendor for outsourcing work identified by the clients. This data is collected as part of the ISG FutureSource™ process and the Candidate Provider Qualification (CPQ) process. ISG may choose to only utilize this collected data pertaining to certain countries or regions for the education and purposes of its advisors and not to produce ISG Provider Lens™ reports. These decisions will be made based on the level and completeness of information received directly from providers/vendors and the availability of experienced analysts for those countries or regions. Submitted information may also be used for individual research projects or for briefing notes that will be written by the lead analysts.

# List of companies to be invited for the survey

**Are you in the list or do you see your company as relevant provider that is missing in the list?**

Please contact us to ensure your active participation in the research phase.

Accenture	Cognizant	GAVS Technologies
Advantech	Comcast Business	GE
Alcatel	Computacenter	Genpact
Algar	Conduent	Haltian
Altizon	Constanta	HARMAN
AltSource	Cyient	HCL
American Tower	Deloitte	HERE Technologies
Appnovation	Desh Tecnologia	Hexaware
Arqia	Deutsche Telekom	Hitachi Vantara
Atos	Device Insight	HPE
AT&T	DMI	IBM
Bain and Company	DXC Technology	Indra
Birlasoft	eInfochips	Infogain
BMS Tecnologia	Embratel	Infogrid
Bosch	emids	Infosys
BT	Engineering	Inmetrics
BWS	EPAM Systems	Innominds
Camaro Electric	Equinix	Instituto Atlântico
CANCOM	Ericsson	Intel
Capgemini	EXL	KHOMP
CAS Tecnologia	EY	KORE
CGI	Forcam	KPMG
Cisco	Fractal	Logicalis
Claro	Fujitsu	LTI

# List of companies to be invited for the survey

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LTTS	q.beyond	Thales
Lumen	Qualcomm	TIM
M2 Data	QuEST	TIVIT
Marlabs	Rackspace Technology	TNS
Materna	Reply	Unisys
Microland	Siemens	UST
Mindtree	SLK Software	V2Soft
MOB Innovation & Business	Softline	Valantic
Mphasis	Software AG	Verizon
Musca Tecnologia	SONDA	Virtusa
NexTrue	ST Microelectronics	VIVO Empresas
NTT DATA	Stefanini	Vodafone
Oi Soluções	Sutherland	VVDN
Open Cadd	Syntax	WEG
Oracle	Tata Communications	Wipro
Orange Business Services	TCS	YSSY
Persistent	Tech Data	Zensar
PwC	Tech Mahindra	Zebra Technologies

# Contacts for this study



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## Do you need any further information?

If you have any questions, please contact us at [isglens@isg-one.com](mailto:isglens@isg-one.com).



# ISG Provider Lens QCRT Program Description

ISG Provider Lens offers market assessments incorporating practitioner insights, reflecting regional focus and independent research. ISG ensures advisor involvement in each study to cover the appropriate market details aligned to the respective service lines/technology trends, service provider presence and enterprise context. In each region, ISG has expert thought leaders and respected advisors who know the provider portfolios and offerings as well as enterprise requirements and market trends. On average, three advisors participate as part of each study's Quality & Consistency Review Team (QCRT). The QCRT ensures each study reflects ISG advisors' experience in the field, which complements the primary and secondary research the analysts conduct. ISG advisors participate in each study as part of the QCRT group and contribute at different levels depending on their availability and expertise.

The QCRT advisors:

- help define and validate quadrants and questionnaires,
- advise on service providers inclusion, participate in briefing calls,
- give their perspectives on service provider ratings and review report drafts.

The ISG Provider Lens QCRT program helps round out the research process, supporting comprehensive research-focused studies.

# Quality & Consistency Review Team for this study



John Lytle  
Director, Manufacturing



Matteo Gallina  
Principal Consultant, Digital  
Strategy & Solutions



Andrew Sauter  
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## Do you need any further information?

If you have any questions, please contact us at [isglens@isg-one.com](mailto:isglens@isg-one.com).