

Chemical Industry Services and Solutions

Supply Chain and Logistics

A research report comparing provider strengths, challenges and competitive differentiators

Customized report courtesy of:

Infosys[®]

QUADRANT REPORT | MARCH 2024 | NORTH AMERICA

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Report Author: Swadhin Pradhan

The chemical industry is undergoing a major shift in the usage of technologies to counter growing challenges

The chemical industry encompasses the transformation of various raw materials into a diverse array of products. Chemical products are used in almost all branches of industry and are highly crucial in a few, such as pharmaceutical and automotive. The chemical industry is complex and vital to the economies worldwide. The global chemical industry is amid a challenging year as geopolitical volatility, commodity price fluctuations and overall demand and supply chain issues plague the entire value chain.

Chemical companies face high feedstock and energy costs in Europe and increased competition from lower-cost producers in the U.S. However, the overall production costs in the U.S. may decrease because of falling energy prices. Demand is expected to be positive from key industries such as automotive, energy and electronics.

Chemical companies also face challenges around energy transition, carbon reduction, adopting new technologies and changes pertaining to the key end customer industries such as automotive, where the shift to electric vehicles (EV) is significant. Manufacturing operations in the chemical industry are asset-intensive and bound by regulations. However, the assets are aging, and the products produced are complex and demand better process control. While IT/OT/IIoT technologies are advancing, securing these legacy assets is a major challenge because of the cost and complexity. Advanced analytics and digital twin implementations need a lot of groundwork. The TCO also deters customers from pursuing this journey at scale. Cybersecurity risks at all levels have increased dramatically as well.

Recently, customer experience has become a key focus area for chemical companies looking to serve end customers directly, and improving CX requires the support of a resilient and responsive supply chain.

Adopting **AI**, cloud and data analytics technologies can drive innovation in process and materials



Executive Summary

This presents a slew of challenges when chemical companies are building applications or implementing solutions. Change management remains an issue when transitioning to new working methods. This landscape makes it difficult for chemical companies to choose the right solution and find system integrators with implementation experience, long-term support and other capabilities.

Automation, new cloud and analytics technologies and Al influence overall production processes and drive new materials production and development. Producers increasingly use digital technologies to develop new and sustainable materials, reevaluate supply chain structures, analyze portfolio rationalization and optimize processes. Stakeholders and consumers increasingly challenge manufacturers to adopt more sustainable and environment-friendly manufacturing practices across their value chain. Chemical companies continue to look at technology investments in AI, AR, VR, cloud, digital twin, blockchain and others to reshape key operations and business processes. New technologies such as blockchain, quantum computing and high-performance computing (HPC) also impact digitalization in the industry in areas such as product innovation. However, data management remains a crucial challenge for chemical companies, particularly in R&D, which requires identifying relevant data among large volumes for quality research and ensuring that it can used meaningfully. Mergers, acquisitions and divestitures also continue to create disparate or disjointed IT landscapes, and organizations must spend time and effort aligning them.

ISG notes the following trends in the global chemical industry for 2024:

Increasing infusion of AI into solutions:

Chemical companies and IT service providers are working across key areas to gain operational

benefits by implementing Al. Lately, GenAl, though at an early stage, has been gaining prominence in areas such as CX, supply chain, R&D and sustainability. While most solutions are at the PoC stage, the potential to scale is immense. Al can help chemical companies predict potential supply chain threats, thus allowing them to make required changes, resolve environment-related issues and prevent future disruptions. With connected operations powered by Al and ML, further facilitated by cloud and 5G networks to move information to the edge, today's chemical plants will likely be transformed into future plants, revolutionizing the ecosystem.

Aging workforce and talent shortage: Like most asset- and energy-intensive industries such as oil and gas and power and utilities, the chemical industry faces an aging workforce and knowledge retention challenges. The median worker age for the chemical industry, per the U.S. Bureau of Labor Statistics, is approximately 44 years, higher than the national average of 42 years. The industry also faces a worker skills shortage in digital and new-age technologies such as AI and ML. Chemical companies in the U.S. may also face disruptions and issues around safety and costs in operations because of the workforce shortage.

Growing cybersecurity threats: The chemical industry faces a wide range of cyber risks as digitalization becomes mainstream. The increasing integration of IT/OT has led to increased data and information security vulnerabilities. Issues with higher cybersecurity risk for the industry include supply chain attacks, increased connectivity and disruptive digital technology, the IoT, malware and ransomware.

Raw material or feedstock price volatility: Due to rising costs and supply chain disruptions because of geopolitical situations, key supply and demand centers are pressing the need for digital technologies to hedge prices and control volatility. In industries such as paints and coatings, companies are facing cost pressure from increased raw material prices. Chemical companies are also facing operational challenges due to fluctuating commodity prices, logistics and shipping costs and volatility in feedstock prices. Therefore, companies must invest in a trusted supply chain, strong market intelligence and digitalized inventory and order management to overcome the abovementioned challenges.

Tightening industry regulations across geographies: Chemical companies are

overwhelmed by increasing scrutiny and rising compliance needs resulting from international standards and frameworks. The companies are looking to dedicate significant resources to reporting and need better and faster analytics to drive decision-making. Environmental, social and governance (ESG) influence is a global phenomenon, and organizations must comply with local laws and global mandates. Managing economies of scale and being carbon neutral is equally crucial but costly.

Sustainability and ESG reporting: Increasing government and investor pressures have forced companies to consider sustainability across the chemical value chain. Global financial institutions and banks want to see their portfolios aligned with chemical organizations that take their sustainability and ESG goals seriously. Moreover, as energy efficiency, circular economy, smart manufacturing technologies and optimization of plant design and operations become critical, integration with sustainability and environment goals is fast becoming the need of the hour. Enterprises are increasingly investing in tracking Scope 1 and Scope 2 emissions necessary to decarbonize their internal value chain. Scope 3 emissions (from the value chain) are the most significant chunk of overall emissions. The emissions from activities outside organizational control can be complex to measure and manage. Companies can reduce their carbon footprint by focusing on the right energy mix.

Challenges in supply chain optimization and

logistics: Lack of standardized methodologies and frameworks and the limited influence of suppliers are key challenges. The chemical industry should integrate operations using big data analytics into supply chain management (SCM) to address them. Other challenges include the lack of visibility, process complexity and unpredictability of demand and supply. As a result, the chemical sector should prioritize continuous improvement in technological advancements. Managing logistics is another significant concern due to geopolitical volatility and regulation uncertainties. This was particularly evident with increased delivery difficulties due to the COVID-19 pandemic. Therefore, a well-functioning chemical logistics system is a priority for suppliers, manufacturers and customers. Cybersecurity and sustainability are other challenges that providers assist companies with, as supply chain vulnerabilities can lead to a cyberattack, disrupting warehouse and manufacturing operations and sites.

Green chemistry and circular economy:

Chemical companies constantly try to replace traditional processes with optimal alternatives that minimize waste, water usage, emissions, energy consumption and environmental impact. They increasingly focus on recycling and upcycling materials to manage waste. The R&D function is open to leveraging new digital interventions such as cloud, AI, ML and IoT to improve its working process.

Legacy systems and lack of integration: Most industries, such as chemical, don't have the infrastructure to adopt new technologies. The chemical industry is competitive and requires large data and IT infrastructures that increase the CapEx for legacy systems modernization and achieve IT/OT integration. Legacy systems are not yet set up to report the specific metrics needed for ESG analysis and reporting. Converting these systems, adding new sensors, managing disparate data streams and homogenizing data into coherent analytics pose a significant challenge for all enterprises, especially those with high emissions, high risk and direct material usage. The high cost of acquiring new technology into the organization and increasing user adoption among the chemical value chain stakeholders is a constant challenge. Companies have moved from IT/OT to IT-OT-Engineering Technology (ET) convergence, creating the need for engineering capabilities to drive factory automation. As manufacturing companies such as chemical producers drive digital transformation initiatives, product lifecycle management (PLM) and digital twins are becoming important for discrete and process manufacturing companies to enable better designs, optimize processes and accelerate engineering.

Challenges around supply chain, ESG reporting, R&D, price volatility and feedstock availability are forcing chemical companies to adopt modern practices and technologies. Although digital twin, additive manufacturing, AI and ML, and HPC developments are leading to a more robust industry, challenges around new business models, talent and skills remain.

Provider Positioning Page 1 of 3

	Digital IT/OT Services	Supply Chain and Logistics	Sustainability and Innovation
Accenture	Leader	Leader	Leader
Atos	Contender	Not In	Not In
Capgemini	Leader	Leader	Leader
CGI	Contender	Contender	Contender
Cognizant	Product Challenger	Product Challenger	Product Challenger
Deloitte	Leader	Leader	Leader
DXC Technology	Product Challenger	Product Challenger	Product Challenger
EY	Product Challenger	Product Challenger	Leader
Fujitsu	Product Challenger	Product Challenger	Product Challenger
Genpact	Product Challenger	Rising Star ★	Product Challenger

Provider Positioning Page 2 of 3

	Digital IT/OT Services	Supply Chain and Logistics	Sustainability and Innovation
HCLTech	Leader	Leader	Leader
Hitachi Digital Services	Product Challenger	Contender	Contender
IBM	Leader	Leader	Leader
Infosys	Leader	Leader	Leader
KPMG	Contender	Market Challenger	Market Challenger
Kyndryl	Rising Star ★	Product Challenger	Product Challenger
LTIMindtree	Product Challenger	Product Challenger	Product Challenger
NTT DATA	Product Challenger	Product Challenger	Product Challenger
PwC	Leader	Leader	Leader
TCS	Leader	Leader	Leader

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Provider Positioning Page 3 of 3 Digital IT/OT Services Supply Chain and Logistics Sustainability and Innovation Tech Mahindra Product Challenger Product Challenger Rising Star ★ Wipro Leader Leader Leader YASH Technologies Contender Contender Contender



Understand

key industry challenges and **assess** service provider capabilities to address the **unmet needs** of enterprise clients. Digital IT/OT Services
Supply Chain and Logistics
Sustainability and Innovation

Definition

The ISG Provider Lens™ Chemical Industry Services and Solutions study offers the following to business and IT decision-makers:

- Transparency on the strengths and weaknesses of relevant providers
- A differentiated positioning of providers by segments on their competitive strengths and portfolio attractiveness
- Focus on different markets, including North America and Europe

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

Simplified Illustration Source: ISG 2024

Scope of the Report

In this ISG Provider Lens[™] quadrant report, ISG covers the following three quadrants for services/solutions: Digital IT/OT Services, Supply Chain and Logistics, Sustainability and Innovation.

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
- Focus on Global market

This ISG Provider Lens[™] study offers ITdecision makers: Our study serves as the basis for important decision-making in terms of positioning, key relationships and go-to-market considerations. ISG advisors and enterprise clients also use information from these reports to evaluate their existing provider.

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).

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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 guadrant 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.



Supply Chain and Logistics

Supply Chain and Logistics

Who Should Read This Section

This quadrant is relevant to North American chemical enterprises evaluating supply chain and logistics service providers.

In this quadrant, ISG highlights the current competitive positioning of providers offering supply chain and logistics services to chemical businesses in North America and how each provider differentiates itself in the region based on its breadth of services and market strength.

North American enterprises are emphasizing a well-connected supply chain with streamlined operations. There is an increased focus on digital transformation and sustainable ecosystems. Enterprises are seeking providers offering comprehensive business strategies, consulting services and platforms to assist them in modernizing the supply chain.

Enterprises are facing challenges in diversifying their supplier networks to mitigate risks, ensure continuity and enhance adaptability and resilience against disruptions stemming from global events. They are also grappling with challenges in managing the complexities of planning, such as balancing make-to-stock (MTS) and make-to-order (MTO) approaches, improving visibility into the material flow and scaling up the utilization of multimodal transportation.

This year, service providers are investing heavily in strengthening their partnerships with industry associations, regulatory bodies, tech vendors and startups to offer intelligent supply chain solutions. This effort aims to provide cost optimization, enhanced productivity and real-time visibility with a continuous focus on solidifying the providers' market presence. The providers are also tapping into the power of GenAl to pioneer new service offerings throughout the supply chain network by collaborating with hyperscalers such as Microsoft and AWS.



Supply chain leaders should read this report to understand supply chain complexities, foster the integration of supply chain and procurement functions and enhance operational visibility.

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Technology leaders, such as CTOs and innovation heads, should read this report to assess supply chain provider capabilities and leverage IoT and cloud technologies for enhanced supply chain resilience.



Strategy leaders should read this report to gain insights into how providers offer advisory and implementation services in supply chain management, assisting enterprises in fortifying their supply networks.



Digital leaders, such as CDOs and ClOs, should read this report to drive digital transformation across the supply chain and help streamline processes by effectively automating key supply chain components.

Source: ISG RESEARCH **ISG** Provider Lens **Chemical Industry Services and Solutions** North America 2024 Supply Chain and Logistics Accenture Infosys Tech Mahindra -IBM Capgemini Genpact **ATTRACTIVENESS** TCS Kvndrv DXC Technology Deloitte Wipro Cognizant NTT DATA HCLTech **Product Challenger** Leader PwC LTIMindtree Fuiitsu Hitachi Digital Services ► KPMG PORTFOLIO **Market Challenger** Contender CGI YASH Technologies I COMPETITIVE STRENGTH н ★ Rising Star

The quadrant assesses providers specializing in services that **aid manufacturing and chemical companies in streamlining factory or shop floor operations,** encompassing offerings such as manufacturing execution systems (MES) and process and quality management solutions.

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Definition

The chemical supply chain has undergone significant changes in recent years, primarily driven by inadequate risk management and a lack of resilience in global value chains. Chemical producers have invested significant time and resources in supply chain initiatives. However, there is considerable room for improvement, owing to the industry's legacy infrastructure, growing market and increasing product complexity.

This quadrant focuses on solutions that will help companies manage functions such as procurement, warehousing, inventory, fulfillment, transportation and logistics. Supply chain and logistics operations services emphasize helping chemical industry clients achieve resilient, adaptive, connected, datadriven and sustainable supply chains and logistics to mitigate global disruptions and instability. Transforming supply chain and logistics operations will transform businesses, reduce operational costs and increase service levels.

Eligibility Criteria

- I. Proven expertise in providing leading ERP and supply chain management (SCM) packages
- 2. Ability to provide IT and business strategy and consulting services to help companies reduce supply chain complexities either on their own or through partners
- 3. Ability to define the roadmap and help to design, implement and maintain IT systems and manage back-office processes
- 4. Ability to provide offerings and services in at least one or more of the following areas, but not limited to:
 - Warehouse management
 - * Logistics and transportation management systems

- * Purchasing
- * Shipping
- * Traceability
- * Scheduling
- * Order managemen
- * Control tower
- * Forecasting
- * Demand planning
- * Materials management
- * Third-party risk management
- * Supply chain optimization
- * Supply chain segmentation
- * Supply chain planning and BPO
- * Sustainability solutions in the supply chain

5. Expertise in applying nextgeneration technologies,

> including automation, analytics IoT, AI, cybersecurity, cloud, AR, VR, mixed reality (MR) and blockchain

6. Potential to demonstrate strong partnerships with

industry associations, regulatory bodies, technology firms and startups specializing in the chemical industry

7. Capability to offer referenceable case studies from chemical and related industries.

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Supply Chain and Logistics

Observations

Most chemical manufacturers face operational issues due to supply chain challenges, transportation disruptions and delays. Lack of visibility into inventory, demand shifts and logistical issues significantly impact chemical manufacturing operations. Companies also face difficulties in supplier visibility related to raw material and transit visibility and look for supplier collaboration platforms.

Supply chain resilience is another major challenge across the chemical industry value chain. Thus, companies seek visibility and transparency from their suppliers and logistics service providers. Chemical companies invest in digital technologies such as IoT and cloud to facilitate this and make their control towers more robust.

As chemical companies intend to serve end customers directly, they require IT service providers with capabilities around inventory tracking optimization, smart warehousing, order fulfillment and managing and building an effective distribution network. The chemical sector seeks to prioritize continuous improvement in technological advancements in sustainability and logistics to address the abovementioned challenges. Service providers aid companies in developing a digital transformation strategy by building capabilities such as digital twins for supply chains, supply chain as-a-service and GenAl implementation to drive logistics visibility.

From the 35 companies assessed for this study, 22 have qualified for this quadrant, with nine being Leaders and one a Rising Star.

accenture

Accenture, with one of the largest industrial sector practices, has comprehensive supply chain and logistics solutions. Its integrated solutions drive value for clients across the operating value chain in sourcing, procurement and planning.

Capgemini

Capgemini's intelligent manufacturing and supply chain offerings address business and technological challenges around strategizing, accelerating and securing their Industry 4.0 journey. Intelligent supply chain transformations help clients respond to new supply chain paradigms.

Deloitte.

Deloitte's consultative and design thinking approach leads its focus on industry-specific digital solutions. The firm's digital supply networks are helping energy and chemical companies transform their operations.

HCLTech

HCLTech's supply chain capabilities are part of its Digital and Analytics (D&A) practice. The practice leverages its own tools, frameworks, accelerators and partner solutions driven by technologies, including AI, big data, predictive analytics and digital control towers.

Supply Chain and Logistics

IBM.

IBM provides solutions for various supply chain and logistics challenges through its robust technology, consulting and manufacturing background. Its proprietary software portfolio and focus on blockchain and Al cloud technologies help the firm create differentiated solutions.

Infosys

Infosys' supply chain and logistics solutions focus on enabling smart and increasingly resilient chemicals, materials and agribusiness by extracting insights from critical supply chain touchpoints and cloud adoption. pwc

PwC, through its consulting operations, provides solutions for sourcing, procurement and connected supply chains. The digital solutions are optimized and embedded with tax, risk, compliance, cybersecurity and managed services capabilities.

CONSULTANCY SERVICES

TCS' supply chain services include product selection advisory, consulting, implementation and niche solutions development for the chemical industry. These are based on its four foundational pillars: talent management, partner ecosystem, innovation and process improvement.



Wipro leverages its cross-industry capabilities, focusing on the cloud, consulting and advisory services, technology solutions, transformation capabilities and accelerators to provide a range of cross-industry logistics and supply chain offerings.

G	genpac

Genpact (Rising Star) has a multipronged strategy to grow its chemical business by enhancing solutions in the supply chain and procurement space. It invests in people, technology, client centers, CoEs and partnerships to expand supply chain transformation capabilities.

Infosys

Overview

Infosys is headquartered in Bengaluru, India. It has more than 328,700 employees across 274 offices in 56 countries. In FY23 the company generated \$18.2 billion in revenue, with Financial Services as its largest segment. Infosys' digital SCM and procurement suite of solutions and services are part of Infosys Cobalt, a set of services, solutions and platforms for enterprises to accelerate their cloud journey. The company is forging new partnerships with product players, such as SAP and Oracle, to develop industry-specific solutions. The firm's business process management (BPM) capabilities are a great differentiator for manufacturing and other supply chain clients.

Strengths

A well-balanced supply chain solutions

portfolio: Infosys Cobalt Agri-Chem solutions help chemical companies build supply chain resilience. The solutions include TradeEdge demand sensing, demand forecasting, supply chain control tower and inventory optimization. Infosys Catalyst, built on SAP S/4HANA, helps chemical companies optimize and customize various functions. The firm also has solutions such as supply chain as a service (SCaaS) and planning as a service, which leverage its BPM capabilities.

Partnership with key product players:

Infosys partners with industry-leading product companies for supply chain and procurement-related products. The company's partners include SAP, Oracle, Kinaxis, JDA, Blue Yonder and E2Open. Infosys leverages the partnerships in core ERP implementation and specific areas such as control towers, planning and scheduling and demand forecasting.

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Leader

Experienced talent pool: Infosys has a large supply chain practice focused on industries, including chemicals. Infosys' supply chain practice has more than 7,500 supply chain consultants who work on core areas of SAP SCM. The company also differentiates its offerings by leveraging its wider consulting and execution team comprising practitioners and domain, process and technology experts. Infosys has a localization and global talent strategy, which helps it hire local talent.

Caution

Swadhin Pradhan

"Infosys' supply chain solutions for the chemical

a mix of accelerators and partner capabilities."

industry are driven by Infosys Cobalt-led solutions that help the company deliver digital offerings with

> Through its Agri-Chem solutions, Infosys should continue collaborating with product OEMs and vendors to expand its digital supply chain solutions. The company must consider expanding its commercial contracts beyond time and material (T&M) and fixed price.



Methodology & Team

The ISG Provider Lens 2024 – Chemical Industry Services and Solutions research study analyzes the relevant software vendors/service providers in the North America market, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research methodology.

Study Sponsor:

lain Fisher

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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 March 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 Chemical Industry Services and Solutions market
- Use of questionnaire-based surveys of service providers/ vendor across all trend topics
- 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

- 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 Analyst

Swadhin Pradhan Senior Manager and Principal Analyst

Swadhin Pradhan brings more than two decades of technology, business and market research experience and expertise to ISG clients. He has rich experience executing market/competitive intelligence (MI/CI) and quasi-consulting projects in the manufacturing, energy and resources industry.

Prior to ISG, Swadhin worked with MI/CI and thought leadership organizations of large tech and consulting firms such as IBM and Deloitte. At ISG, He focuses on ISG Provider Lens™. His research and analysis for ISG clients concentrates on Energy, Resources and Manufacturing market development, disruption and change. He currently contributes to ISG's Provider Lens[™] global research studies as a lead analyst.

Swadhin holds an MBA in Marketing and Finance from the Institute for Integrated Learning in Management (IILM), New Delhi, and an engineering degree in Electronics and Telecom.



Research Analyst

Varsha Sengar Senior Research Analyst

Varsha Sengar is a senior research analyst at ISG and is responsible for supporting ISG Provider Lens[™] studies on Workday, Retail & CPG, Manufacturing and Chemicals Services and Solutions. She has over 7 years of experience in technology research and consulting. At ISG, she is responsible for delivering enterprise' perspective for IPL and collaborates with analyst, advisors, and enterprise clients on various research requests which include primary and secondary research. She supports the lead analysts across multiple regions in the research process and authors the global summary report. Prior to this role, she has carried out multiple ad-hoc projects and competitive benchmarking reports delivering industry level actionable insights and recommendations Her area of expertise lies across various technologies like IoT, Artificial Intelligence, Smart Homes, and Autonomous Driving.



Study Sponsor



lain leads ISG's Future of Work, Customer Experience and ESG solutioning redefining business models and operating models to drive out new ways of working with a CX and ESG focus. He joins up end to end value chains across a number of markets and advises clients on where digital and technology can be used to maximize benefit. A regular Keynote speaker and online presenter, lain has also authored several eBooks on these subjects.



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.

İSG 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 <u>webpage</u>.

İSG 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.

ISG offers research specifically about providers to state and local governments (including counties, cities) as well as higher education institutions. Visit: <u>Public Sector</u>.

For more information about ISG Research[™] subscriptions, please email <u>contact@isg-one.com</u>, call +1.203.454.3900, or visit research.isg-one.com.

İSG

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Founded in 2006, and based in Stamford, Conn., ISG employs 1,600 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 isg-one.com.



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REPORT: CHEMICAL INDUSTRY SERVICES AND SOLUTIONS

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