ISG Provider Lens™

Engineering Services

Chemicals & Oil & Gas - Manufacturing & Plant / Process Engineering

Germany 2019

Quadrant Report

A research report comparing provider strengths, challenges and competitive differentiators

August 2018

Customized report courtesy of:

L&T Technology Services

About this Report

Information Services Group, Inc. is solely responsible for the content of this report.

Unless otherwise cited, all content, including illustrations, research, conclusions, assertions and positions contained in this report were developed by and are the sole property of Information Services Group, Inc.

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 was current as of 30, June 2018. ISG recognizes that many mergers and acquisitions have taken place since that time but those changes are not reflected in this report.

The lead authors for this report is Rainer Suletzki.The report was edited by Heiko Henkes.

ISG Provider Lens™

ISG Provider Lens™

ISG Provider Lens™ delivers leading-edge and actionable research studies, reports and consulting services focused on technology and service providers' strength and weaknesses and how they are positioned relative to their peers in the market. These reports provide influential insights accessed by our large pool of advisors who are actively advising outsourcing deals as well as large numbers of ISG enterprise clients who are potential outsourcers.

For more information about our studies, please email ISGLens@isg-one.com, call +49 (0) 561-50697524, or visit ISG Provider Lens™ under ISG Provider Lens™.

ISG Research™

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

For more information about ISG Research™ subscriptions, please email contact@isg-one.com, call +49 (0) 561-50697524 or visit research.isg-one.com.

imagine your future®

EXECUTIVE SUMMARY

For quite some time, engineering services have been included in outsourcing and outtasking contracts; companies from technology-driven industries often leverage external suppliers that take over a significant share of the required engineering tasks. Traditionally, the focus was on constructing and designing the required components; specifically, the automotive industry uses such external services to a large extent and some of these companies have complete categories of parts such as gear units mostly developed by external providers. Similar to many other markets, the market for engineering services has been impacted by the digital transformation, which means that in the wake of technologies such as mobile connectivity, cloud data storage, IoT etc. the share of engineering services where software is key will increase significantly. To account for this trend, this study examines providers of engineering services with a focus on the digital transformation. We can distinguish the following main groups of providers:

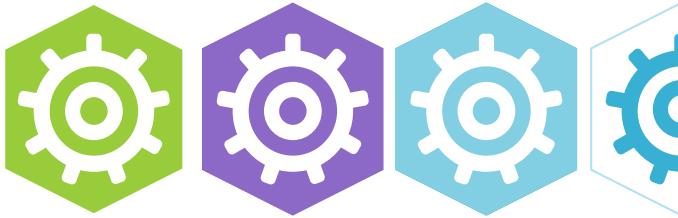
- Companies that have been active as providers of traditional engineering services for quite some time and are advancing their portfolio to address the increasing relevance of digital components.
- Companies that have their roots in the IT services market and are leveraging these competencies to address current technological trends and provide a powerful engineering services offering.

Companies that continue to focus on traditional engineering services are not analyzed. The market for engineering services with a high share of software is relatively young; as we have observed, no classification of these services has been established yet. We have differentiated between industries and also accounted for functional differences. For the purpose of this study, our classification combines functional aspects (product engineering, process/plant engineering, software/digital & platform engineering) with industries (automotive and process industries); a more detailed description can be found under "Scope of This Study". Also, there are providers where the share of services with a focus on the digital transformation is insufficient or where it was not possible to make a reliable assessment, based on available information. Therefore, these companies were not rated, which has, of course, limited the number of analyzed providers within the individual segments.

Many of the examined providers are globally active companies with headquarters outside Germany and delivery organizations in various regions. Service providers with a focus on Germany, mostly on the automotive sector, are also engaged in global activities, but are mostly servicing locations of customers with headquarters in Germany.

Additional relevant and differentiating aspects include the following:

- The maturity of contracting models, e.g., the share of services rendered on a time & material basis in relation to services based on an agreed outcome.
- The share of projects for specific components in relation to the development of software of general usability which has to be customized by the customers for their specific use cases.



ISG Provider Lens™

Introduction

Definition

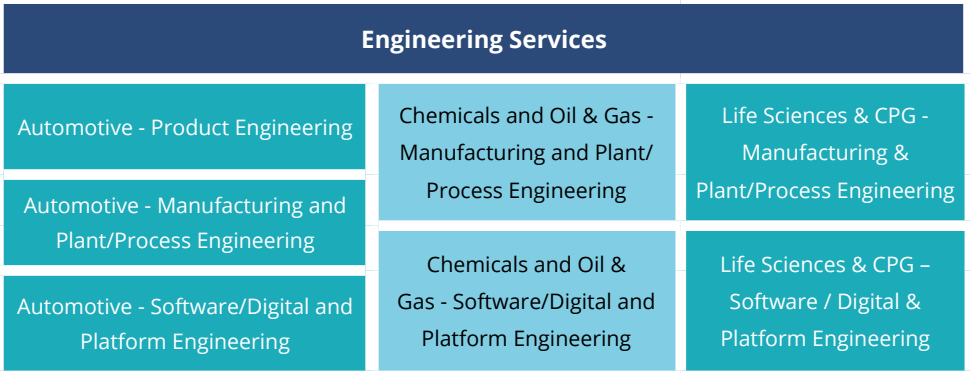
SCOPE OF THE REPORT

For the purpose of this study, the service categories were classified in a way that combines functional aspects with industries. The following industries were selected:

1. Automotive sector
2. Process industry with a focus on chemicals and oil & gas
3. Process industry with a focus on life sciences and consumer packaged goods (CPG)

The process industry was broken down to account for the fact that the life sciences and - to a smaller extent - the CPG industry must comply with regulatory requirements that clearly differ from those of the chemicals and the oil & gas industries. Within the life sciences category, we have also included medical devices, although traditionally, they fall partly under the discrete manufacturing category. However, as a result of the digital transformation, this differentiation is often not as clear as it used to be and therefore, it makes sense to include medical devices within the context of this study. For instance, pharmaceutical companies use medical devices (e.g., injectors) for interacting directly

Simplified illustration



Source: ISG 2018

Definition (cont.)

with patients to administer medication and these devices fall under the discrete manufacturing category.

The geographical coverage of this study is Germany; considering the global activities of engineering services customers, providers' global presence also played a relevant role for the analysis.

Functionally, the following categories were analyzed:

1. Product Engineering

Product engineering services (PES) are related to the development of physical products or product sub-sections utilizing capabilities that include embedded electronics – semiconductor engineering, hardware engineering, embedded systems software, verification & validation and IoT-related services, as well as overall product and systems level engineering.

2. Manufacturing & Plant / Process Engineering

Manufacturing & plant / process engineering services are related to planning, designing, modifying, optimizing and maintaining plant or manufacturing systems and equipment – with a focus on industrial IoT / Industry 4.0 applications such as connected factories, digital asset management, predictive maintenance, 3D printing, robotics / automation etc.

3. Software / Digital & Platform Engineering

Software / digital / platform engineering services consist of application software development, independent of specific hardware. It also includes IoT software applications such as connectivity, mobility, predictive maintenance, OT data analytics (OT data refers to data pertaining to sensors, machines, location etc.), digital supply chain etc., and engineering platforms related work: such as IoT, PLM, MES etc. ERP platforms are not included in the study.

Provider Classifications

The ISG Provider Lens™ quadrants were created using an evaluation matrix containing four segments, where the providers are positioned accordingly.

Leader

The "leaders" among the vendors/providers have a highly attractive product and service offering and a very strong market and competitive position; they fulfill all requirements for successful market cultivation. They can be regarded as opinion leaders, providing strategic impulses to the market. They also ensure innovative strength and stability.

Product Challenger

The "product challengers" offer a product and service portfolio that provides an above-average coverage of corporate requirements, but are not able to provide the same resources and strengths as the leaders regarding the individual market cultivation categories. Often, this is due to the respective vendor's size or their weak footprint within the respective target segment.

Market Challenger

"Market challengers" are also very competitive, but there is still significant portfolio potential and they clearly lag behind the "leaders". Often, the market challengers are established vendors that are somewhat slow to address new trends, due to their size and company structure, and have therefore still some potential to optimize their portfolio and increase their attractiveness.

Contender

"Contenders" are still lacking mature products and services or sufficient depth and breadth of their offering, while also showing some strengths and improvement potentials in their market cultivation efforts. These vendors are often generalists or niche players.

Provider Classifications (cont.)

Each ISG Provider Lens™ quadrant may include a service provider(s) who ISG believes has a strong potential to move into the leader's quadrant.

Rising Star

Rising Stars are mostly product challengers with high future potential. When receiving the "Rising Star" award, such companies have a promising portfolio, including the required roadmap and an adequate focus on key market trends and customer requirements. Also, the "Rising Star" has an excellent management and understanding of the local market. This award is only given to vendors or service providers that have made extreme progress towards their goals within the last 12 months and are on a good way to reach the leader quadrant within the next 12-24 months, due to their above-average impact and innovative strength.

Not In

This service provider or vendor was not included in this quadrant as ISG could not obtain enough information to position them. This omission does not imply that the service provider or vendor does not provide this service.

Engineering Services-Quadrant Provider Listing 1 of 2

	Automotive - Product Engineering	Automotive - Manufacturing and Plant/Process Engineering	Automotive - Software/Digital and Platform Engineering	Chemicals and Oil & Gas - Manufacturing and Plant/Process Engineering	Chemicals and Oil & Gas - Software/ Digital and Platform Engineering	Lifesciences & CPG - Manufacturing and Plant/Process Engineering	Lifesciences & CPG - Software/Digital and Platform Engineering
Akka Technologies	Contender	Product Challenger	Not In	Product Challenger	Not In	Product Challenger	Not In
Alten	Product Challenger	Not In	Not In	Not In	Not In	Product Challenger	Not In
Altran	Leader	Leader	Leader	Leader	Leader	Rising Star	Rising Star
Atos	Product Challenger	Product Challenger	Product Challenger	Product Challenger	Product Challenger	Leader	Leader
Bertrandt	Market Challenger	Not In	Market Challenger	Not In	Not In	Not In	Not In
Capgemini	Rising Star	Not In	Product Challenger	Not In	Not In	Market Challenger	Leader
Cognizant	Product Challenger	Not In	Product Challenger	Contender	Not In	Leader	Leader
EDAG	Contender	Contender	Not In	Not In	Not In	Not In	Not In
EPAM	Not In	Not In	Product Challenger	Contender	Product Challenger	Contender	Contender
HCL	Leader	Market Challenger	Leader	Not In	Contender	Not In	Product Challenger

Engineering Services-Quadrant Provider Listing 2 of 2

	Automotive - Product Engineering	Automotive - Manufacturing and Plant/Process Engineering	Automotive - Software/Digital and Platform Engineering	Chemicals and Oil & Gas - Manufacturing and Plant/Process Engineering	Chemicals and Oil & Gas - Software/ Digital and Platform Engineering	Lifesciences & CPG - Manufacturing and Plant/Process Engineering	Lifesciences & CPG - Software/Digital and Platform Engineering
Infosys	Leader	Leader	Leader	Leader	Leader	Leader	Leader
Innominds	Not In	Not In	Contender	Not In	Contender	Not In	Contender
in-tech	Not In	Not In	Contender	Not In	Not In	Not In	Not In
ITK Engineering	Not In	Not In	Contender	Not In	Not In	Not In	Not In
KPIT	Product Challenger	Contender	Product Challenger	Not In	Product Challenger	Not In	Product Challenger
L&T Technology Services	Leader	Leader	Leader	Leader	Leader	Leader	Product Challenger
QuEST Global	Product Challenger	Product Challenger	Leader	Leader	Product Challenger	Product Challenger	Contender
TCS	Leader	Leader	Leader	Leader	Leader	Leader	Leader
Tech Mahindra	Product Challenger	Contender	Product Challenger	Not In	Not In	Not In	Not In
Wipro	Leader	Market Challenger	Leader	Not In	Not In	Not In	Not In

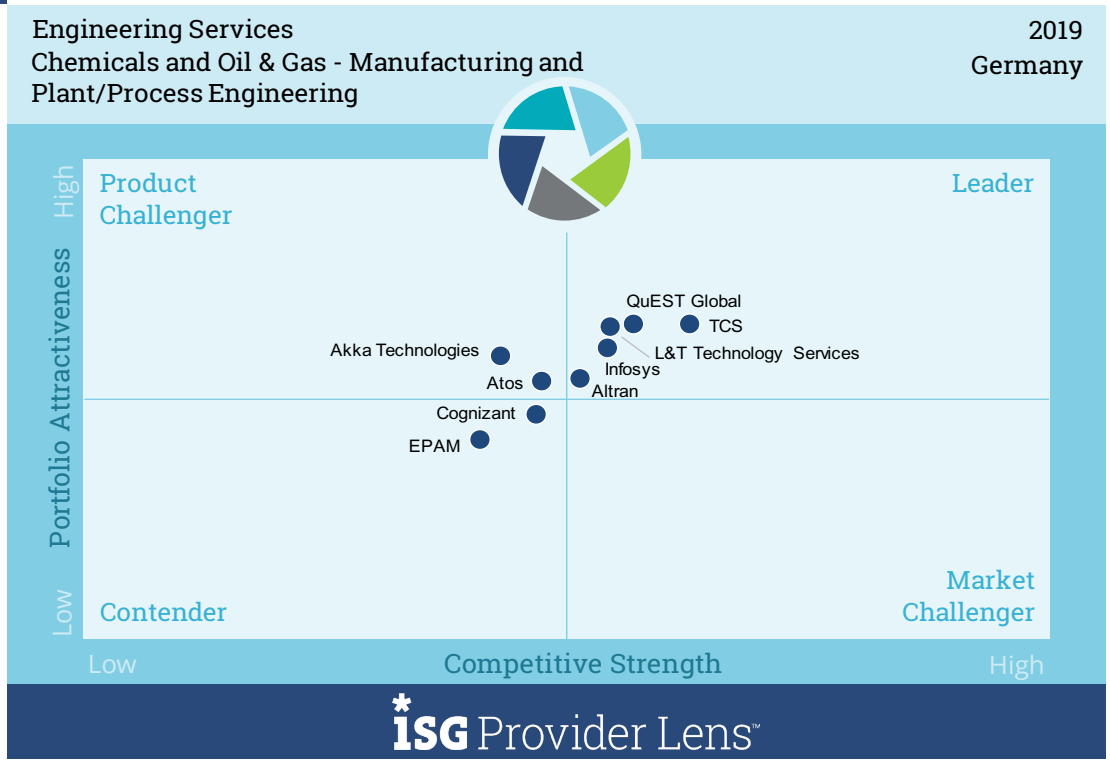
Engineering Services Quadrants

CHEMICALS & OIL & GAS - MANUFACTURING & PLANT / PROCESS ENGINEERING

Definition

ES in the process industry is helping the next wave of leaders in this industry to increase their engineering quality and performance while optimizing costs and meeting stringent compliance, safety and security standards. At the same time, implement tailored Industry 4.0, IoT and analytics services and solutions to transform data into new revenue streams and boost performance, while ensuring cybersecurity. ES Providers are partnering with process industry manufacturers to achieve the above. Specifically, in the chemicals and oil & gas business the manufacturing excellence is rather important in order to achieve best cost competitiveness.

Manufacturing and plant / process engineering services consists of planning, designing, modifying, optimizing and maintaining plant or manufacturing systems and equipment - with a focus on industrial IoT / Industry 4.0 applications such as connected factories, digital asset management, predictive maintenance, 3D printing, robotics / automation etc.

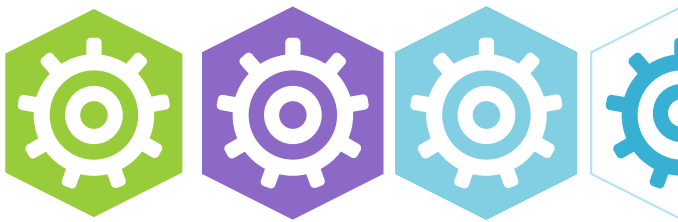


Source: ISG Research 2018

CHEMICALS & OIL & GAS - MANUFACTURING & PLANT / PROCESS ENGINEERING

Observations

- Considering the increasing adoption of digital transformation elements, e.g., mobile connectivity, cloud data platforms etc., these elements will also be increasingly connected with other elements on other business levels, enabling higher-level optimizations, e.g., in the supply chain, and extended production management capabilities.
- Often, plant management solutions, such as manufacturing execution systems (MES) or asset management systems, are still in use in this segment.
- The usage of advanced analytics, as basis for engineering-related tasks, is increasing, specifically, for optimization and operations support purposes, e.g., through predictive maintenance.
- Another use case is facility simulation (“digital twin”).



ALTRAN

Overview

Altran provides a comprehensive portfolio with a clear focus on engineering and R&D. The regional focus is on Europe and North America. The services are available for a broad scope of industries.

The company pursues a clear strategy to implement trends within the digital transformation and, thus, has a strong position in the segments that are part of this study.

Strengths

Within the chemicals and oil & gas manufacturing & plant/process engineering segment, Altran has comprehensive experience, specifically in the energy sector.

In this segment, Altran has a clear focus on the energy sector and has comprehensive competence and long-standing experience. Altran covers both traditional forms of energy, mainly oil & gas, and renewable energies.

Altran has a comprehensive partner network with companies from related industries, universities and research institutions. The customer base includes many global corporations as well as midmarket business that have a regional focus.

Altran takes over individual project tasks, but also offers to take over project management responsibility, also for complex projects. An industry-specific digital transformation offering is a key part of the portfolio.

Altran does not only take over individual project tasks, but also offers industry-specific standard solutions, e.g., for modeling and simulation use cases or specific analytics solutions for oil & gas production.

Caution

As opposed to the situation in the US; the share of managed projects or managed services in Europe could be increased to limit the share of T&M-based projects.

2019 ISG Provider Lens™ Leader

Altran is a highly competent partner for the oil & gas industry and is able to manage complex projects.

INFOSYS

Overview

Infosys is a global provider whose portfolio comprises traditional IT services as well as digital transformation services across industries to address customers' core business processes, with a specific focus on agile implementation. The engineering services examined within this study are one of several focus areas within the Infosys portfolio.

Strengths

The Infosys portfolio comprises traditional IT services as well as all kinds of industry-specific services, e.g., for the oil & gas sector, which also address production-related areas.

Infosys knows how to transfer their long-standing IT service experience into process-related areas such as plant/process engineering and develop specific solutions for respective relevant tasks.

For the oil & gas industry Infosys provides a portfolio that comprises specific solutions to address all production stages (upstream, midstream, downstream) to help achieve efficiency gains, provide operational support and maintenance services as well as advance the solutions. Services for key suppliers are also available.

Infosys has delivery centers in all relevant regions and is a powerful partner, specifically for companies with global presences. Including oil & gas companies.

Infosys can also leverage their own analytics platform to also address big data aspects, for instance, for predictive maintenance use cases.

The share of managed projects, where Infosys takes over development responsibility, is rather high.

Caution

The provider should better leverage their existing know-how to provision solutions for the chemical industry.

2019 ISG Provider Lens™ Leader

Infosys is a powerful provider of industry-specific plant/process engineering IT services across all production stages in the oil & gas industry.

L&T TECHNOLOGY SERVICES

Overview

L&T Technology Services is a global IT service provider with a specific focus on engineering and research & development. Services include product development, product life cycle management, engineering analytics, machine-to-machine connectivity and IoT.

The company has presences in all relevant regions and enjoys a strong position in Germany.

Strengths

Based on their strong position in the traditional engineering services segment L&T Technology Services is able to also provision the required digital transformation capabilities.

L&T Technology Services provides a very comprehensive and diverse portfolio of manufacturing & plant/ process engineering functionality for the chemicals and the oil & gas industries. The offering covers traditional engineering services such as mechanical engineering as well as new digitization-related areas such as digital design & implementation and digital asset management.

The share of managed projects, where the provider takes over responsibility for IT platform development, is relatively high.

L&T Technology Services is a member of all relevant industry-specific technology forums and associations and also has a broad customer base in this segment.

Similar to product life cycle management in the product engineering segment L&T Technology Services offers an integrated plant life cycle management for this segment which covers all relevant functionality within the life cycle of a production facility.

L&T Technology Services has many references and use cases in this segment.

The portfolio also includes solutions based on mobile devices.

Caution

The provider should strengthen and enhance partnerships with IT technology providers to better address digital transformation aspects, also in this segment.

2019 ISG Provider Lens™ Leader

In the manufacturing & plant/process engineering segment for the chemicals and oil & gas sector L&T Technology Services provides a convincing portfolio and great competence.

QUEST GLOBAL

Overview

QuEST Global is a global player with an exclusive focus an engineering services provisioning. The focus is on product engineering and production engineering; digital transformation aspects have already been integrated into the provider's strategy. Recently, QuEST Global has strengthened their focus on software & platform engineering. Since its foundation in 1997 the provider has achieved growth rates that are above the industry average.

The company also enjoys a relevant position in Germany, also through acquisitions.

Strengths

QuEST Global provides a broad portfolio of manufacturing and plant/process engineering functionality specifically for oil & gas companies to support facility development & construction as well as operations.

QuEST Global provides comprehensive services to support production facility operations as well as operational tasks outsourcing services. A key focus is on facility management (measurement and control).

Another important part of the portfolio is asset management to achieve efficiency gains and address the challenge of long-term price increases for oil and gas.

To increase customers' performance, both under cost and productivity aspects, QuEST Global also provides comprehensive advanced analytics services specifically for the oil & gas sector (e.g., finite element analysis (FEA)).

QuEST Global also supports the supply chain management aspects of engineering services, specifically for this segment.

QuEST Global has a broad customer base as well as numerous references and use cases.

Caution

The provider should not only offer operational task outsourcing, but should increase the share of managed projects, i.e., take over responsibility within customer projects.

2019 ISG Provider Lens™ Leader

QuEST Global provides a powerful engineering services portfolio specifically for the manufacturing & plant/process engineering segment for the oil & gas industry.

TCS

Overview

The TCS portfolio provides a very comprehensive coverage of industries and a very broad functionality of services. The provider covers traditional IT services as well as current trends and the digital transformation, also within the engineering services context which are analyzed within this study. The company has delivery centers in all important regions, including Germany.

Strengths

TCS is not only a powerful provider of general IT services, but also offers various highly specific competencies for the manufacturing & plant/process engineering segment for the chemical and oil & gas industry.

The portfolio includes industry-specific platforms for production monitoring, predictive maintenance and asset management as well as solutions that work with data supplied by drones, which is highly interesting for upstream production in the oil & gas sector.

TCS has a large customer base in this segment, specifically among globally active energy companies.

TCS can rely on a comprehensive global network of partners, including research institutions and innovation labs that are specifically relevant for this industry. TCS also is a member of relevant industry forums.

Current trends such as IoT and mobile connectivity are already integrated in many of these solutions, and thus, TCS is well prepared to address the digital transformation in this segment and can be recommended as a capable partner accordingly.

Caution

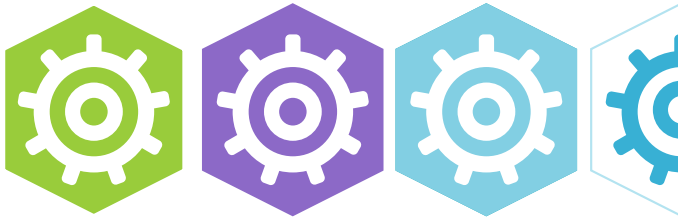
The provider could better address big data aspects, specifically within this context.

2019 ISG Provider Lens™ Leader

As a globally active and powerful provider TCS provides a comprehensive manufacturing & plant/process engineering portfolio for the chemicals and oil & gas industries, including IoT and mobile components.

Methodology

METHODOLOGY



The ISG Provider Lens™ 2018 – Engineering Services research study analyses the relevant software vendors and service providers in the German market, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research methodology.
The study was divided into the following steps:

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

Authors and Editors

Rainer Suletzki, Author

Senior IT Management Advisor, Germany

Mr. Suletzki relies on a deep understanding of core business processes and in-depth know-how of IT management. He has more than 30 years of experience as Senior IT Manager, Senior Project Manager and – at the beginning of his career – as IT consultant. His main areas of expertise comprise IT application management, IT architecture, data modelling as well as IT sourcing strategy and execution

Rainer acts as independent consultant with a focus upon application management for SAP and specifically for SAP HANA. On behalf of ISG he conducts studies within the framework of ISG Provider Lens and takes on client projects with definition of IT strategy and the resulting sourcing decisions.

Before becoming an independent consultant, Rainer worked more than 30 years for a global German Life Science corporation.

Rainer holds graduate degrees in Economics and Computer Sciences.

Authors and Editors

Heiko Henkes, Editor

Director Advisor, ISG Research Lead

Mr. Henkes is a Director Advisor at ISG; in this role, he is responsible for strategic business management and acts as leader of ISG's team of research advisors. He is also in charge of bringing together IT trend topics within the digital transformation context and acts as keynote speaker on current and future IT trends.

Since 2013, Heiko has advised both ICT providers and users on current digital transformation topics such as Cloud Computing, Artificial Intelligence and the Mobile Enterprise.

In his work with IT Providers, he has a focus on go-to-market strategies and strategic portfolio development as well as on the strategic marketing and sales development. Heiko also analyzes and evaluates business processes, product-specific target markets and IT provider through classical competitive analyses. Within this context, Heiko supports companies to undergo continuous transformation, combining IT competencies with sustainable business strategies and change management.

His primarily focus lies on business development activities, further development and internationalization of the ISG Provider Lens™ (IPL) product-related processes beside his role as IPL Topic Leader to guide and sync all analyst team members.

Before joining ISG (Experton Group), Heiko worked as analyst manager for TechConsult GmbH.

Heiko holds a degree in economics with a major business informatics and marketing of the University of Kassel and is fluent in English.

ISG Provider Lens™ | Quadrant Report
August 2018

Proprietary and Confidential

ISG (Information Services Group) (NASDAQ: III) is a leading global technology research and advisory firm. A trusted business partner to more than 700 clients, including 75 of the top 100 enterprises in the world, 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; technology 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 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.