

Engineering Services

Automotive – Manufacturing &
Plant/Process Engineering

Germany 2019

Quadrant
Report



A research report
comparing provider
strengths, challenges
and competitive
differentiators

Customized report courtesy of:



August 2018

About this Report

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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 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.



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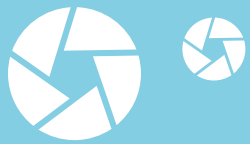
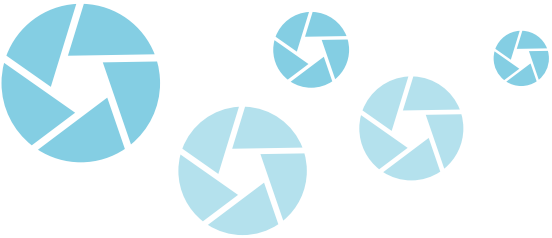
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1	Executive Summary
3	Introduction
10	Automotive – Manufacturing & Plant/Process Engineering
16	Methodology

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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:

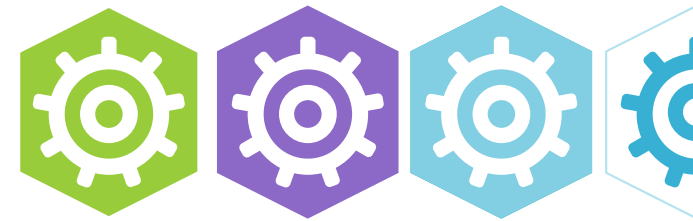
- Companies that have been active as providers of traditional engineering services for quite some time and are advancing their portfolio to address the increasing relevance of digital components.
- Companies that have their roots in the IT services market and are leveraging these competencies to address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



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

Engineering Services		
Automotive - Product Engineering	Chemicals and Oil & Gas - Manufacturing and Plant/ Process Engineering	Life Sciences & CPG - Manufacturing & Plant/Process Engineering
Automotive - Manufacturing and Plant/Process Engineering		
Automotive - Software/Digital and Platform Engineering	Chemicals and Oil & Gas - Software/Digital and Platform Engineering	Life Sciences & CPG - Software / Digital & Platform Engineering

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



AUTOMOTIVE – MANUFACTURING & PLANT/PROCESS ENGINEERING

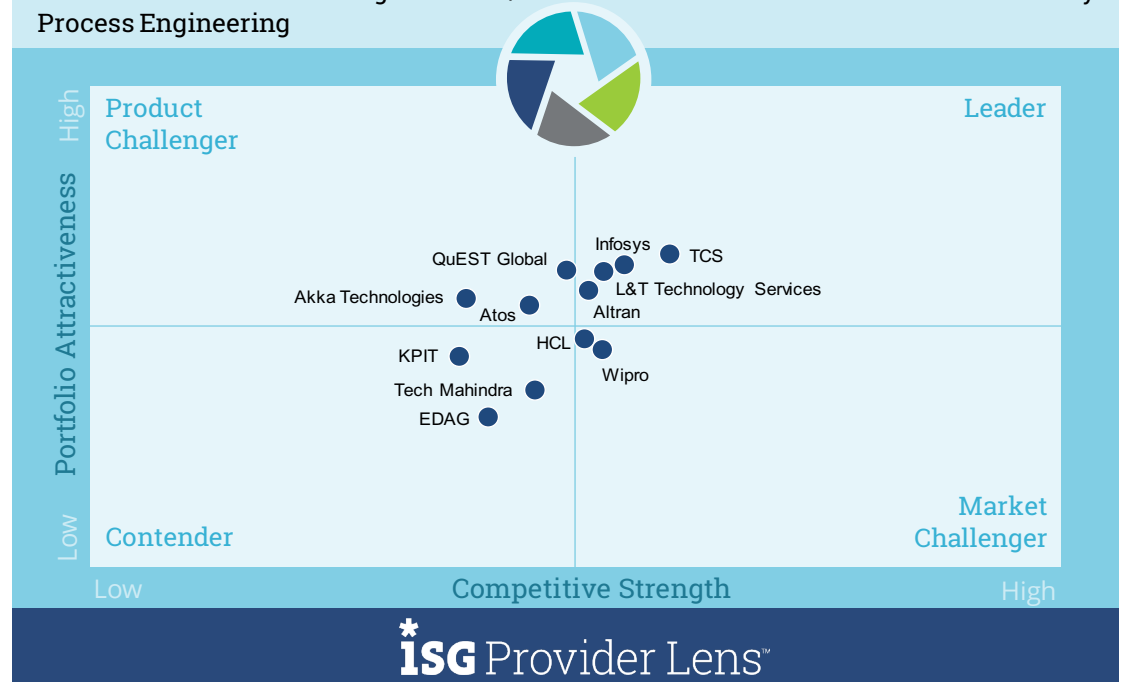
Definition

ES in automotive is helping in providing automotive players mechanism and ways to reinvent their role - focusing on core activities and creating efficient ecosystems with strategic partners. The automotive industry is facing a revolution. The automotive industry is facing a revolution. Innovation-related challenges are reshaping traditional auto industry structures and relationships — in particular, by threatening the existing distribution of profits and the boundaries between OEMs and tier-one or tier-two suppliers, as well as between automotive and tech companies.

Manufacturing & 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.

Engineering Services
Automotive - Manufacturing and Plant/
Process Engineering

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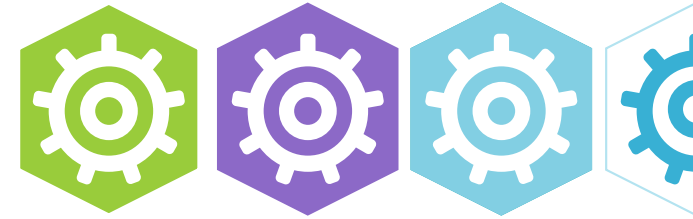


Source: ISG Research 2018

AUTOMOTIVE – MANUFACTURING & PLANT/PROCESS ENGINEERING

Observations

- Compared to the automotive product engineering segment, the number of providers is relatively low; most of these players have their roots in traditional engineering and are able to translate their long-standing design and construction experiences into process-related areas of production.
- Providers that come from the IT services segment are challenged to transfer their IT know-how onto processes where availability and real-time requirements, control and regulation play a key role. Some are quite successful and two of these providers achieved a leadership position in this segment.
- As we have observed, the adoption of advanced analytics is increasing, e.g., for predictive maintenance or similar applications.
- In some cases, the portfolio also includes co-responsibility, e.g., for continuous production process support.



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

Altran's manufacturing & plant/process engineering portfolio for the automotive industry features a broad functionality, combined with the skillful usage of experiences from other industries.

Altran's portfolio within this segment covers the relevant aspects such as process design, process improvements, process and quality control, automation etc.

The combination of manufacturing and process engineering know-how on the one hand and product engineering on the other hand also enables the provider to incorporate results from product development and design into the respective production, which makes Altran a qualified partner for customers that want to consolidate their provider landscape.

Altran operates a specific center of excellence for manufacturing & product engineering, which enables them to enhance their portfolio with respective current trends and developments, getting ready to address transformation towards smart and connected factories or Industry 4.0.

Altran has a broad customer base in the automotive industry and many reference projects in Germany.



Caution

The provider should continue to strengthen IoT aspects to improve integration of manufacturing and process engineering into the overall supply chain.

Altran must better address big data issues within the analytics context.



2019 ISG Provider Lens™ Leader

In the manufacturing & process engineering segment for the automotive industry Altran is a provider with great competence and long-standing experience.

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

Infosys knows how to transfer their long-standing IT service provisioning experience in the automotive industry into process-related areas such as manufacturing engineering and develop specific solutions for respective relevant tasks.

Infosys has delivery centers in all relevant regions and is a powerful partner, specifically for companies with global presences. Specific strengths include the provider's comprehensive product life cycle management and production automation know-how. Infosys can also leverage their own analytics platform to also address big data aspects, for instance, for predictive maintenance use cases.

In addition to this functionality, Infosys has profound IoT and Industry 4.0 know-how and is able to provide good support for the evolving transformation in production-related areas. Another important aspect is the provider's production process simulation competence ("virtual twin").

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

Caution

Infosys should strive to also take over project management tasks for more complex projects to strengthen the respective customer relationship.

The provider should strengthen their position in Germany (through delivery centers, reference projects etc.).



2019 ISG Provider Lens™ Leader

Infosys is a powerful partner to support the agile implementation of manufacturing and plant engineering solutions for the automotive 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

The L&T Technology Services portfolio for manufacturing & plant/process engineering for the automotive sector features a multitude of services, demonstrating the high competence of this provider in this segment.

On the functional side, all areas of vehicle production are addressed (chassis, drive, electrical equipment, safety, entertainment, telematics etc.); on the process level, the portfolio covers all aspects from advance planning (virtual manufacturing) and concrete process design (digital & lean manufacturing) to validation & verification.

The provider leverages their product engineering competence to also provide suitable solutions for process design and production preparation. Respective human resources are used across multiple functions to achieve a maximum breadth of useful know-how.

The share of managed projects, where the provider takes over responsibility for the development of production-related solutions, 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.



Caution

The provider should work to better address advanced analytics and big data aspects within their portfolio.

The provider should also take efforts to engage in partnerships with IT technology providers such as Apple and Google.



2019 ISG Provider Lens™ Leader

L&T Technology Services is a competent partner in the manufacturing & plant/process engineering segment and provides very broad coverage of all relevant functionality.

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

The portfolio demonstrates the provider's high competence for process-related areas such as manufacturing engineering and contains specific solutions for respective relevant tasks within this context.

TCS has great competence when it comes to simulating production processes ("digital twin") which is used for production facility design as well as continuous advancements and efficiency gains.

Another focus is on production process automation, where TCS can leverage their comprehensive know-how of key technologies such as sensor technology; TCS is able to cover key technology aspects as a "one-stop shopping" provider.

On the analytics side, TCS provides a platform for the integrated management of product, process and facility data which also accounts for respective information on required resources.

Continuous support of software used for operating production facilities is an essential component of the portfolio, which positions TCS as a suitable partner across the whole life cycle of a production plant.



Caution

Within their manufacturing & plant/process engineering portfolios for the automotive sector, TCS should better address and include respective analytics offerings.



2019 ISG Provider Lens™ Leader

TCS is able to transfer their long-standing IT service experience into process-related manufacturing & plant engineering areas.

The background features a dark blue lower half and a light blue upper half. On the dark blue background, there are several circular icons resembling camera apertures. These icons are arranged in a diagonal line from the bottom left towards the top right. Each icon is composed of six triangular segments meeting at a central point. The segments are colored in various shades of blue, ranging from light to dark, and some are outlined in white. The word "Methodology" is written in a white, serif font on the right side of the dark blue background.

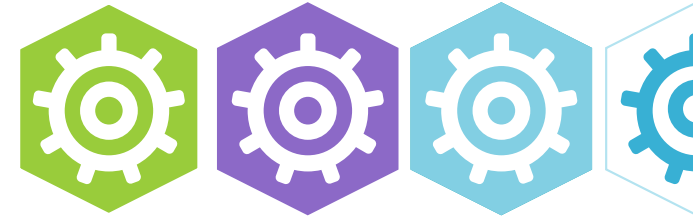
Methodology

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



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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 primary 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

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