eMobility Services and Solutions

A research report comparing provider strengths, challenges and competitive differentiators

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Introduction

From Robert Anderson's experiments in the 19th century to the 1888 debut of the first electric vehicle (EV), Flocken, the EV concept has had a far-reaching impact on the future. This impact extends not only as a breakthrough but also in reshaping the overall concept of mobility. Rising mega cities, deteriorating air quality, growing concerns surrounding climate change and the associated political pressure further accelerated the reemphasis on electric vehicles in the first two decades of the 21st century.

eMobility is the principle of using electric propulsion for a wider range of transportation services. It allows a shift away from CO_2 emitting fossil fuels toward energy derived from sustainable sources. It uses electric propulsion for a wide range of transportation modes and associated infrastructure to enable a connected mobility concept. Because the transportation sector accounts for approximately 30 percent of global energy demand, the potential for decarbonization is huge. Countries worldwide seek to implement eMobility solutions to reduce CO2 and other greenhouse gases. Electrification remains a central tenet in most sectors' decarbonization strategies.

This Provider Lens study aims to understand the need for eMobility services and solutions and their importance while assessing providers' capabilities in this rapidly evolving space. Decarbonization through energy transition remains a key focus across industry verticals for 2024 and beyond, with eMobility standing as a critical component. Achieving this transition requires cooperation and coordination among multiple industries, including power and utilities, manufacturing and retail.

This study focuses on what ISG perceives as the most critical aspects of **eMobility services and solutions** in 2024

- **Mobility as a Service (MaaS)**
- **Electric Mobility Systems (EMS)**
- **Manufacturing**

Simplified Illustration Source: ISG 2024

Definition

The ISG Provider Lens™ eMobility Services and Solutions 2024 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 global markets

ISG Provider Lens™ studies serve as an important decision-making tool for positioning service providers, growing key relationships and go-to-market considerations. ISG advisors and enterprise clients also use information from these reports to evaluate their current vendor relationships and potential engagements.

Definition

The mobility concept has evolved to include a comprehensive ecosystem that offers various choices such as city bikes, electric scooters, shared car rides, ticket purchasing, city traffic monitoring, route planning, parking options, integrated payments and real-time charging for EV users. These services are conveniently accessible through mobile apps, contributing to the MaaS concept. MaaS encompasses a broad spectrum of mobility services in the market, with a shared economy playing a crucial role in delivering additional value to its participants. Realizing this concept requires supporting technology development and infrastructure provided by various service providers specializing in offering solutions to the eMobility market.

The MaaS ecosystem comprises transport infrastructure, transportation services, information systems and payment services. The shared goal within this ecosystem is to enhance overall mobility experiences and improve transportation networks by leveraging cutting-edge, new-age technologies.

The rapid proliferation of smartphones acts as the driving force behind the development of diverse eMobility solutions. By providing access to numerous possibilities, versatile smartphones play a pivotal role in the swift expansion of the MaaS concept and smart city solutions.

Eligibility Criteria

1. Demonstrate **expertise in MaaS** for clients within the global eMobility sector
2. Showcase **successful MaaS-related engagements** (past/present) with at least three mobility/eMobility companies
3. **Provide services and solutions** in at least one of the following MaaS-related areas:
    - Application development management
    - Mobility strategy
    - Total experience (TX), including CX and EX
    - Data analytics
    - Mobility enablement, including aspects such as:
        - Cloud
        - Compliance
        - Cybersecurity
4. Demonstrate **strong partnerships with industry** associations, regulatory bodies, technology firms and startups specializing in the eMobility space
5. Offer **referenceable eMobility use cases** showcasing various services and solutions across the value chain

Definition

The future of eMobility will feature of a vast network of interconnected EVs, smart charging stations and information systems, merging the electricity and mobility sectors. As the energy transition unfolds, limitations within the traditional power grid are becoming increasingly evident. New requirements arise due to substantial power inflow from renewable energy sources and changing consumption patterns, such as self-consumption optimization and EV charging processes. Addressing this volatility requires fundamental changes in the electricity infrastructure to ensure power grids' future stability. Some of the most important changes include enhanced grid monitoring granularity and increased automation of energy management using information and communication technology (ICT). In this respect, ICT has a prominent role in enabling intelligent energy management, which fosters efficiency across generation, transmission, distribution and consumption systems.

EMS covers various technologies (batteries, charging technologies, drivetrains and EVs), infrastructure (physical and organizational aspects of charging stations, electricity grid, information and communication technology) and users (manufacturers, suppliers, end-users, service providers, governments and agents). Successfully implementing this concept requires multilevel support, well-designed system architecture and an extensive public infrastructure network.

Eligibility Criteria

1. Demonstrate **experience working within the EMS domain** for clients in the global eMobility space
2. Showcase **successful engagements in EMS** and related projects (past/present) with a minimum of three mobility/ eMobility companies
3. **Provide offerings and services** in at least one of the following EMS-related areas:
    - Maintenance, repair and overhaul (MRO)
    - Batteries, charging technology, drivetrains and EVs
    - Charging stations
    - Electricity grids
    - Information, communication and monitoring
4. Exhibit **strong partnerships with industry** associations, regulatory bodies, technology firms and startups specializing in the eMobility space
5. Offer **verifiable eMobility use cases** showcasing various services and solutions across the value chain

Definition

One of the biggest challenges eMobility ecosystem and manufacturers face is the high cost of building their manufacturing facilities. As companies seek more productive automation and assembly technologies to boost quality and speed to market, EV and ecosystem companies face new hurdles in scaling up battery packs, e-axle production and other common assembly workflows. EVs require different manufacturing processes than traditional vehicles and manufacturers must evolve, adapt and overcome various manufacturing challenges, including high costs, scalability and efficiency. Integrating EV production into an existing assembly site is also challenging. Most manufacturers strive to retain common facilities to minimize capital expenditure.

Traditional automobile OEMs transitioning to EVs leverage next generation technologies for various benefits, including accelerated market entry, cost savings, flexibility and access to specialized knowledge and technology.

Technology suppliers are providing greater accuracy, energy efficiency and durability in assembly tools by incorporating intelligent device controllers directly in the workers' tools for easier, lower cost "hand-held" automation. These smart tools enable data capture to measure and record the torque and angle for every joint, ensuring correct assembly while providing full traceability. With the control systems becoming more flexible, options for plug-and-play subsystems are enabling manufacturers to achieve faster engineering turnaround.

Eligibility Criteria

1. Exhibit **experience working within the manufacturing systems** for clients in the global eMobility space
2. Demonstrate **successful manufacturing systems-related engagements** (past/present) with a minimum of three mobility/ eMobility companies
3. **Provide services and solutions** in at least one of the following manufacturing-related areas:
   - Manufacturing execution systems
   - Shop floor analytics
   - Asset management
   - Quality management
   - Predictive maintenance
   - Plant automation
4. Display **strong partnerships with industry** associations, regulatory bodies, technology firms and startups specializing in the eMobility space
5. Offer **verifiable eMobility use cases** showcasing various services and solutions across the value chain

Quadrants by Region

As a part of this ISG Provider Lens™ quadrant study, we are introducing the following three quadrants on eMobility services and solutions in 2024

Quadrant	Global
Mobility as a Service (MaaS)	✔
Electric Mobility Systems (EMS)	✔
Manufacturing	✔

Schedule

The research phase falls in the period between January and February 2024, during which surveying, evaluation, analysis and validation will take place. The results will be presented to the media in June 2024.

Milestones	Beginning	End
Survey Launch	January 16 2024	
Survey Phase	January 16, 2024	February 23, 2024
Sneak Previews	April 2024	
Press Release & Publication	June 2024	

Please refer to this link to view/download the ISG Provider Lens™ 2024 research agenda

Access to Online Portal

You can view/download the questionnaire from here using the credentials you have already created or refer to the instructions provided in the invitation email to generate a new password. We look forward to your participation!

Research Production Disclaimer:

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

ISG Star of Excellence™ – Call for nominations

The Star of Excellence™ is an independent recognition of excellent service delivery based on the concept of "Voice of the Customer." The Star of Excellence™ is a program, designed by ISG, to collect client feedback about service providers' success in demonstrating the highest standards of client service excellence and customer centricity.

The global survey is all about services that are associated with IPL studies. In consequence, all ISG Analysts will be continuously provided with information on the customer experience of all relevant service providers. This information comes on top of existing first-hand advisor feedback that IPL leverages in context of its practitioner-led consulting approach.

Providers are invited to nominate their clients to participate. Once the nomination has been submitted, ISG sends out a mail confirmation to both sides. It is self-evident that ISG anonymizes all customer data and does not share it with third parties.

It is our vision that Star of Excellence™ will be recognized as the leading industry recognition for client service excellence and serve as the benchmark for measuring client sentiments.

To ensure your selected clients complete the feedback for your nominated engagement please use the Client nomination section on the Star of Excellence™ website.

We have set up an email where you can direct any questions or provide comments. This email will be checked daily. Please allow up to 24 hours for a reply.

Here is the email address:
ISG.star@isg-one.com

Contacts For This Study

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Project Manager

ISG Provider Lens Advisors Involvement Program

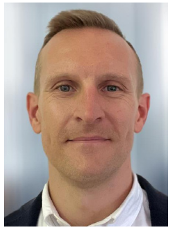
ISG Provider Lens offers market assessments incorporating practitioner insights, reflecting regional focus and independent research. ISG ensures advisor involvement in each study to cover the appropriate market details aligned to the respective service lines/technology trends, service provider presence and enterprise context.

In each region, ISG has expert thought leaders and respected advisors who know the provider portfolios and offerings as well as enterprise requirements and market trends. On average, three advisors participate as part of each study's quality and consistency review team (QCRT). The QCRT ensures each study reflects ISG advisors' experience in the field, which complements the primary and secondary research the analysts conduct. ISG advisors participate in each study as part of the QCRT group and contribute at different levels depending on their availability and expertise.

The consultant advisors:

- Help define and validate quadrants and questionnaires,
- Advise on service provider inclusion, participate in briefing calls,
- Give their perspectives on service provider ratings and review report drafts.

ISG Advisors to this study



Matt
Warburton

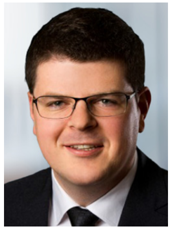
Principal Consultant and ANZ Sustainability Lead - Tech Mod Bill

Iain
Fisher

Director - Research

Andreas
Fahr

Partner & Managing Director - Sales Market DACH Bill



Philipp
Glatz

Partner - Manufacturing Bill

Invited Companies

If your company is listed on this page or you feel your company should be listed, please contact ISG to ensure we have the correct contact person(s) to actively participate in this research.

ABB
Accenture
Akkodis
Alectra Energy Solutions
Altair
ALTEN
Amazon (AWS)
Aptiv
Atos
BENTELER
Bertrandt
Capgemini
CARIAD
CGI
Cognizant
Cyient
Dassault Systemes
Deloitte
DXC Technology
EDAG
Ericsson
Faurecia
FERCHAU
FEV
Genpact
Gilbarco (EVerse)
Google
HARMAN Connected Services
HCLTech
Hitachi Energy
Honeywell
IAV
IBM
Infosys
KPIT
Kyndryl
LTIMindtree
LTTS
Magna International
Marelli
NTT data
OHM Global Mobility
ONOMOTION
PwC
Quantron AG
Randstad Digital
Schneider Electric
Siemens Mobility
TCS
Tech Mahindra
T-Systems
Wipro
ZF Friedrichshafen

ISG 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 webpage.

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.

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

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

ISG

ISG (Information Services Group) (Nasdaq: III) is a leading global technology research and advisory firm. A trusted business partner to more than 900 clients, including more than 75 of the world's top 100 enterprises, ISG is committed to helping corporations, public sector organizations, and service and technology providers achieve operational excellence and faster growth. The firm specializes in digital transformation services, including automation, cloud and data analytics; sourcing advisory; managed governance and risk services; network carrier services; strategy and operations design; change management; market intelligence and technology research and analysis.

Founded in 2006, and based in Stamford, Conn., ISG employs more than 1,600 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.

ISG Provider Lens™

JANUARY, 2024

REPORT: EMOBILITY SERVICES AND SOLUTIONS