ISG Provider Lens™

Multi Public Cloud Services

SAP HANA Infrastructure Services

A research report comparing provider strengths, challenges and competitive differentiators

QUADRANT REPORT | DECEMBER 2023 | NORDICS

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Who Should Read This Section

This report is relevant to enterprises across industries in the Nordics for evaluating providers of SAP HANA infrastructure services for SAP S/4HANA workloads and large-scale HANA databases. In this quadrant report, ISG highlights the current market positioning of service providers in the region and shows how they address the key challenges of enterprises based on the depth of their service offerings and market presence.

Enterprises operating in the Nordics are currently facing challenges related to maintaining critical SAP workloads that include financial burdens, intricate data management, change management and the scarcity of skilled personnel. A considerable number of enterprises have introduced SAP HANA into their digital transformation initiatives and are actively seeking hyperscale providers to assist them in overcoming these hurdles.

Enterprises are focusing on achieving cost reductions, enhancing agility, fortifying security and resilience, harnessing the potential of data analytics and implementing solutions tailored to specific industries for the migration of SAP workloads. Furthermore, there has been a noticeable increase in the integration of third-party applications with SAP S/4 HANA.

To address these challenges effectively and facilitate scalability according to use and operational needs, service providers need to help enterprises capitalize on computational resources, storage options and connectivity for hosting their SAP workloads. Enterprises are progressively incorporating SAP HANA into their business processes, with a particular focus on meeting IT infrastructure requirements and on integration with third-party tools.

IT leaders should read this report to better understand SAP HANA infrastructure service providers' relative strengths and weaknesses and the impact of providers' market approaches on public cloud strategies.

Software development and technology leaders should read this report to understand SAP HANA infrastructure providers' capabilities for migrating workloads to the public cloud.

Sourcing, procurement and vendor management professionals should read this report to develop a better understanding of the current landscape of SAP HANA infrastructure service providers in the Nordics.

Definition

This quadrant assesses cloud infrastructures best suited to host SAP's software portfolio, emphasizing SAP S/4HANA workloads and large-scale HANA databases. Participating providers offer IaaS, including infrastructure operations, facilities, provisioning and scaling capacity for SAP workloads.

Key criteria for assessment include the IaaS providers' offering of data migration tools, technical support, system imaging, backup and restore capabilities, disaster recovery solutions, resource usage monitoring and dashboard management solutions. These tools required can be a part of the standard IaaS offerings or provided by partners in a marketplace.

Infrastructure providers that participate in the RISE with SAP program receive a higher rating. However, RISE participation is not a mandatory requirement for inclusion in this quadrant. Ideally, the infrastructure provider should have a broad ecosystem, including SAP partners, enabling them to support clients in automating and operating their SAP instances in the cloud.

The cloud infrastructure provider should also offer pre-sales support to help clients with migration planning, cloud architecture design, sizing and performance optimization, licensing considerations, system and database configuration, virtual private network configuration and third-party vendor solutions (toolsets). The support analysis focuses on the vendor's service partner ecosystem and their expertise in conducting related migrations and operations.

Eligibility Criteria

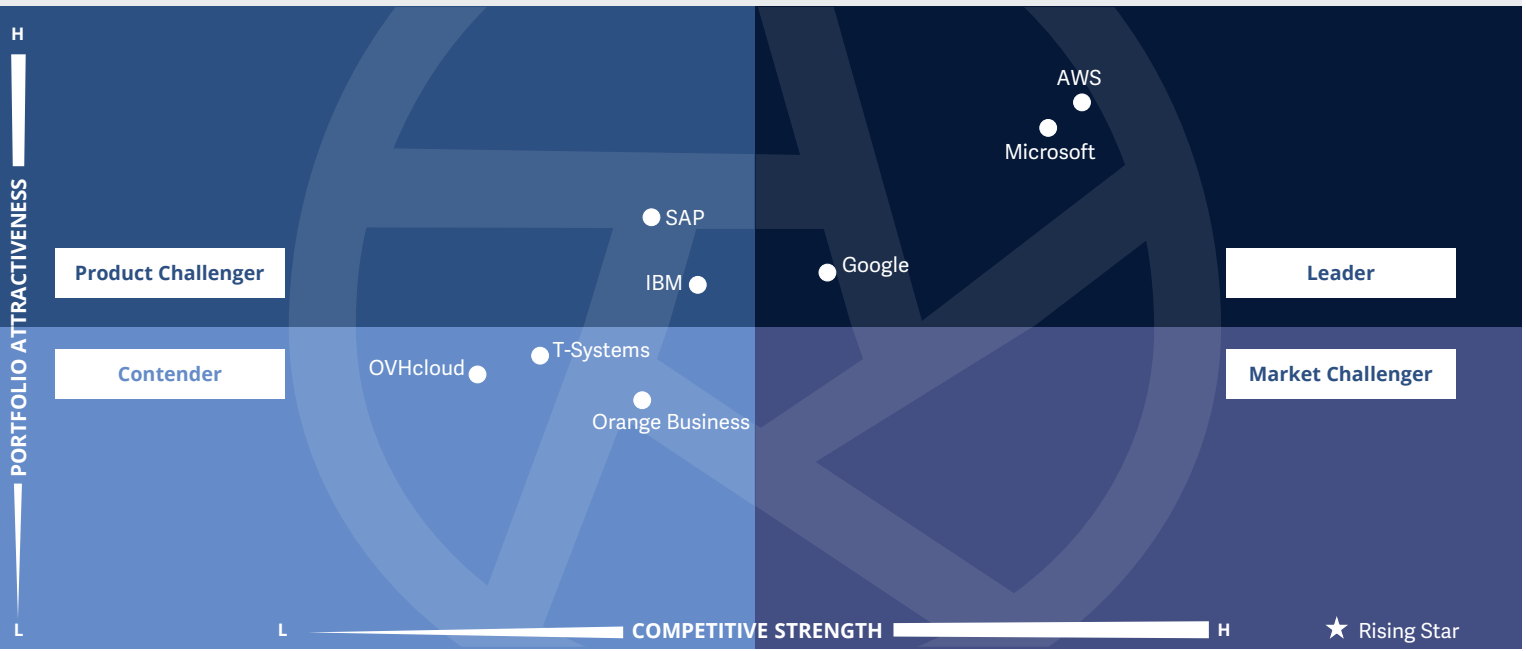
1. IaaS to include **SAP-certified servers** with storage and connectivity for SAP products. Availability of SAP HANA instances in multiple memory sizes, enabling **on-demand upscaling** to accommodate instance growth and upgrades with minimum service interruptions.
2. Memory capacity exceeding **6 TBs per virtual machine**
3. Easy access, **transparent prices,** consumption-based, reserved instance and dedicated instance billing models
4. Recognized **quality standards** and **service certifications,** with a strong focus on **data protection** and cybersecurity
5. **Low-cost storage** for backups and archiving
6. **Multi-region** disaster recovery capabilities
7. Automated **backup and restore functionality** (platform-based, proprietary or partner solutions)
8. Frameworks and **tools for application** and **data migration**
9. An ecosystem of **certified partners** with SAP specialization.

ISG Provider Lens™

Source: ISG RESEARCH

Multi Public Cloud Services
SAP HANA Infrastructure Services

Nordics 2023



This quadrant assesses service providers that offer **SAP products hosting**, especially SAP HANA, in **public cloud** shared environments with standard services and **SAP-certified infrastructure**.

Rohan Thomas

Leader

"AWS offers purpose-designed infrastructure and a suite of tools and services that streamline its SAP applications' migration, operation and modernization."

Rohan Thomas

AWS

Overview

AWS is headquartered in Washington, U.S. and operates in 32 countries. In FY22, the company generated $80.1 billion in revenue, with Compute, Storage, and Database as its largest segment. In the region, it has three availability zones to host SAP HANA and other SAP ERP versions in Stockholm and an Oslo-based local zone in the pipeline. AWS offers tailored infrastructure, tools and services for seamless SAP migration, operation and modernization. With a secure and extensive cloud infrastructure and more than 200 AWS services, it empowers SAP customers to optimize their investments, enabling business transformation.

Strengths

Leading cloud infrastructure: AWS offers the world's most comprehensive and widely adopted cloud platform, featuring over 200 fully featured services across global data centers. AWS' extensive global cloud infrastructure with 31 regions, 99 availability zones, over 450 POPs and more than 400 edge locations, makes it preferable to most enterprises and government agencies.

Notable AWS ProServe expertise: AWS ProServe possesses extensive expertise in SAP on AWS, collaborating closely with service teams to champion the customer's perspective. This practice benefits from substantial project experience to provide 14 packaged solutions, resulting in an exceptional 9.9 CSAT score in 2022 and significant cost reductions through automation. An integral aspect of this capability is its engagement with the AWS SAP partner network, promoting the exchange of best practices and packaged offerings.

Prolific SAP Hosting on AWS: AWS possesses extensive SAP expertise and offers leading services, focusing on customer input and engineering efforts. AWS introduced the AWS SDK for SAP ABAP, simplifying SAP process modernization and allowing seamless integration with over 200 AWS services. This empowers customers to leverage SAP inside their AWS environments to further innovate.

Caution

AWS regions in the Nordics may offer fewer availability zones than regions such as the U.S., potentially restricting options for critical high-availability setups. While additional availability zones are accessible from other regions, clear communication with the Nordic customers is essential.

Observations

While numerous Nordic companies are embracing SAP S/4HANA services for enhanced agility, SAP is actively promoting its integration into public cloud services through initiatives like Embrace and RISE with SAP. Despite the availability of mature SAP S/4HANA offerings by major hyperscalers in the region, some customers remain hesitant to make the transition to cloud-based solutions. Overall, the SAP HANA infrastructure services market has exhibited consistent growth in recent years and is likely to continue on this trajectory in the future.

Hyperscalers are significantly investing in new data centers across the Nordics, focusing on infrastructure optimized for SAP HANA workloads in response to the growing demand for such services in the region. In addition to data center expansion, they are diversifying their SAP/HANA infrastructure service offerings, including managed SAP HANA and disaster recovery services. Partnerships with SAP and its partners bolster these efforts to support businesses in adopting SAP HANA workloads effectively and maximizing their investments.

Orange Business is a new entrant in this quadrant, offering a comprehensive suite of consulting services, ranging from testing, deployment and PoC development to SAP solution optimization.

From the 49 companies assessed for this study, eight have qualified for this quadrant, with three being Leaders.

AWS

AWS is renowned for its global cloud infrastructure, comprehensive SAP hosting services and expert SAP solutions through AWS ProServe. Its collaboration and track record result in cost-effective solutions and high customer satisfaction.

Google

Google Cloud's SAP HANA services provide seamless migration support for transitioning SAP workloads to the cloud while fostering collaborative partnerships with customers. It offers robust security features, including data encryption and compliance certifications.

Microsoft

Microsoft Azure provides robust SAP HANA infrastructure support, accommodating a wide range of SAP applications, from OLTP to OLAP workloads. Its collaboration with SAP accelerates the adoption of SAP S/4HANA and SAP Cloud Platform on Azure.

Appendix

Report Author: Rohan Thomas

Solutions that improve interoperability and cost efficiency on multicloud will gain prominence

The Nordics market has a higher level of digital maturity than most other regions across Europe, mostly owing to Denmark, Sweden, Finland and Norway ranking 1, 3, 7 and 12, respectively, on IMD's Digital Competitiveness. Strong public policies driving investments in R&D and workforce training, resilient network infrastructure and other regional developments have catapulted this ranking. Hence, typical Nordic enterprises have a higher probability of operating workloads in multicloud environments.

In the Q3 2023 ISG Index™ call for the EMEA's market, it was reported that the combined market (managed services and XaaS) witnessed a four percent decline versus the prior year, with the annual contract value (ACV) reaching $21.7 billion. ISG observed slowing demand for XaaS, with year-to-date spending declining at 10 percent, while demand for SaaS rose by 2 percent. However, managed services gained traction and grew by 2 percent, with ACV reaching $11.9 billion. ISG also noticed that a total of 818 managed services contracts were signed as of the third quarter of 2023, among them were 10 megadeals whose combined ACV was 55 percent higher than that of the 11 megadeals signed through the first nine months of 2022. Within managed services, the ITO market grew by 2 percent to $9.1 billion, and the BPO market also grew by 2 percent to reach an ACV of $2.8 billion. In the third quarter versus the prior year, Nordics rose 7 percent in managed services, to $486 million. Year to date, it saw a rise of 8 percent, to $1.2 billion.

Recently, ISG rolled out the Star of Excellence™ program, which is based on the voice of the customer concept. Here, providers are rated on six parameters, namely Service Delivery, Governance and Compliance, Collaboration and Transparency, Innovation and Thought Leadership, People and Culture Fit, and Business Continuity. The scores and data come from the Star of Excellence™ study that measures CX with providers based on direct

Microservices and **container tech** help companies move from **monolithic** cloud architectures.

client feedback. ISG found that the average provider CX score for the public cloud domain in Western Europe was 78.14 in 2022.

While most companies in the region adopted cloud computing in a bid to build a cost-effective and easy-to-scale data center environment, many have experienced a further increase in operating expenditure. Consequently, some companies have returned to private or hybrid cloud environments to save on operating costs. Others that continue to use their multicloud environments will require solutions that can enable more agile and cost-effective operations.

Enterprises opt for multicloud and polycloud environments to harness a diverse array of features that might otherwise be limited to specific cloud platforms. However, this architecture is riddled with inadequate visibility, leading to interoperability and vendor lock-ins. The top-down approach that cloud strategists have used while architecting an environment has exacerbated these conditions. Interoperability and vendor lock-ins have enhanced the need to integrate technologies that enhance automation across several touch points in multicloud environments, thereby optimizing the operating expenditure of the cloud model adopted.

The need to optimize cloud operations to reduce costs has become more urgent recently, mostly unleashed by geopolitics. According to Eurostat, electricity prices for non-household consumers rose by approximately 40 percent during the first half of 2022 compared with that of 2021. In 2022, the electricity price rise was uneven across the Nordic countries, with Finland experiencing significantly lower prices at 20 percent. In contrast, Sweden, Norway and Denmark experienced price rises of 60 percent, 75 percent and 100 percent, respectively.

The increases in prices of electricity will have inflationary pressure and result in wage increases for employees. Yet, many companies would prefer to host their data in an infrastructure spread across the Nordics, primarily due to enhanced data security and stringent laws governing it.

Furthermore, as data sovereignty continues to proliferate across states in the EU, it will significantly impact the local storage of sensitive data specific to key countries in the Nordics per EU and regional regulations. The sovereign cloud solutions will be custom to the specifications of an end user's industry background.

While companies from the midmarket are almost at the same level as large enterprises regarding digital savviness and cloud adoption, they have some nuanced differences. The size of an enterprise contributes to the intricacies involved in migrating to public clouds, particularly for well-established companies with legacy data center environments, making the transition challenging. In contrast, large enterprises have access to a larger, well-trained workforce and have the financial capacity to invest in elaborate IT transformations.

Following are key trends associated with the public cloud market in the Nordics.

1. Multicloud orchestration: Although most enterprises in the Nordics have continued to leverage a multicloud environment for some time now, orchestration is still in its infancy. This entails multicloud end users utilizing hyperscaler services irrespective of the environment in which the data is hosted. Most service providers are inclined to build interoperability and cloud-agnostic capability, which is still in its infancy. Building a scalable and truly cross-functional multicloud environment will substantially reduce cloud costs and improve sustainability.
2. FinOps implementation: FinOps is the practice of continually optimizing the operational costs of the cloud. The practice is gaining significant traction among the enterprises here, mostly driven by inflationary pressures induced by an increase in energy expenditure. Cloud unit economics — a metric that gives companies better visibility in ROI per unit investment in the cloud — will grow in demand as companies try to figure out what levers they should focus on to reduce costs and enhance savings. These would include finding idle or overworked instances and reviewing contracts to identify partially utilized savings plans. Unlike the waterfall method of optimizing cloud costs, Finops consists of

advisory services and tools that work from the ground up. FinOps is synonymous among companies using the cloud, many of whom are in the walk phase of the implementation.

3. Data Sovereignty: Gaia-X is a European initiative formed to protect data security, privacy and sovereignty from non-EU entities. Formed by diverse stakeholders from the EU, the Gaia-X sets forth a comprehensive set of guidelines that sovereign data should follow. A key piece of the framework is data residency within the geography of an EU-member state. Additionally, the guidelines advocate for open-source technologies, enhanced encryption and governance compliance. The Nordics has a heritage of robust data privacy laws, and adopting a sovereign cloud ecosystem should follow suit. The enterprise community is eager to leverage sovereign clouds that are industry-specific. However, there is significant groundwork to be covered by all stakeholders in this regard. European service providers that can offer sovereign IaaS in alignment with Gaia-X recommendations and managed service providers capable of advising and implementing sovereign cloud solutions tailored to specific industry backgrounds should enhance their market presence.
4. Corporate restructuring, alliances and partnerships: In November 2022, the merger of LTI with Mindtree took effect. This entity now provides a set of services that are more comprehensive than before and has gained traction in the region. On the other hand, in April 2023, Atos split into new 'Atos' and 'Eviden' to provide seamless consulting, transformation and managed services to its customers. Mergers and divestitures such as these will leave an impact on the Nordic multi public cloud market.
5. Microservices and container technologies: These technologies will continue to gain traction as companies try to build agile applications to realize the scalability of the multicloud. Large enterprises in the Nordics will require cost-efficient managed container services as they try to break away from their monolithic architecture.
6. Focus on sustainability: Companies across the Nordics have stringent ESG commitments and choose service providers who take sustainability goals seriously. GreenOps is a niche in FinOps practice, allowing companies to reach business objectives while prioritizing sustainability.
7. While the Nordics has reached a high level of digital maturity, issues related to multicloud adoption are prevalent. Enterprises are seeking solutions to enhance visibility, interoperability and automation across the multicloud environment while reducing cost and improving the sustainability of the cloud operation..

FinOps practices are poised to maintain a strong appeal as companies aim to optimize and reduce their high operational expenses. Moreover, the concept of sovereign clouds is garnering attention in the Nordics as companies here endeavor to safeguard the privacy and security of sensitive data.

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 quadrant 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.

The ISG Provider Lens™ 2023 – Multi Public Cloud Services study analyzes the relevant software vendors/service providers in the Nordics market, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research™ methodology.

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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 service providers and analysis of publicly available market information from multiple sources. The data collected for this report represent information that ISG believes to be current as of November 2023 for providers that actively participated and for providers that did not. ISG recognizes that many mergers and acquisitions may have occurred since then, but this report does not reflect these changes.

All revenue references are in U.S. dollars ($) unless noted otherwise.

The study was divided into the following steps:

1. Definition of Multi Public Cloud Services market
2. Use of questionnaire-based surveys of service providers/ vendors across all trend topics
3. Interactive discussions with service providers/vendors on capabilities and use cases
4. Leverage ISG's internal databases and advisor knowledge and experience (wherever applicable)
5. Detailed analysis and evaluation of services and service documentation based on the facts and figures received from providers and other sources.
6. Use of the following main 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

Author

Rohan Thomas
Senior Lead Analyst

Rohan Thomas has nearly a decade's worth of knowledge expertise in the realms of ICT, which include telecommunications, data centers, and networks and application performance management. At ISG, Rohan is the lead analyst for ISG Provider Lens™, leading research activities and benchmarking exercises pertaining to the regional adoption of digital infrastructure such as private/hybrid cloud.

He has a Bachelor's degree in Mechanical Engineering from Visveswaraya Technological University and a Master's degree in Computer Aided Design and Manufacturing from Vellore Institute of Technology.

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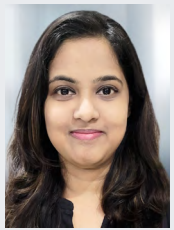

Meenakshi Srivastava
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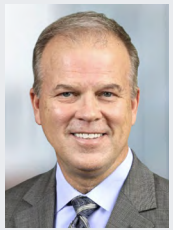
Meenakshi Srivastava is a Senior Research Analyst at ISG and is responsible for supporting and co-authoring Provider Lens™ studies on the Private Hybrid Cloud Data Center. She creates content for Provider Lens™ studies and supports lead analysts in the research process for multiple regions. She has an experience of 3 years in IT industry and 2.5 years in market research industry. She is also responsible for authoring the enterprise context and global summary reports for her respective study.

Prior to her role in ISG, she has worked on various signature research projects which involved both qualitative and quantitative analysis as well as content creation and contextualization for other market research firm. She has an expertise of working on both primary and secondary research projects and is also associated with other custom and ad-hoc research projects.

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 research director, principal analyst 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.

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.

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For more information, visit isg-one.com.

ISG Provider Lens™

DECEMBER, 2023

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