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2024 COMPANY OF THE YEAR

IN THE GLOBAL DATA CENTER INFRASTRUCTURE SOLUTIONS INDUSTRY

SIEMENS

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2024 BEST PRACTICES AWARD

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. Siemens excels in many of the criteria in the data center infrastructure solutions space.



Addressing Unmet Needs with Purpose and Precision

As data volumes and processing demands continue to skyrocket, traditional data center infrastructure struggles to keep pace with the growing scale and complexity of operations, resulting in numerous challenges, including downtime risks, escalating costs, mounting pressure to accelerate deployment timelines, and increasingly stringent environmental regulations. More specifically, the data center space's growing emphasis on sustainability as a strategic necessity further intensifies the need to balance sustainability efforts with operational efficiency, infrastructure resilience, and cost efficacy. As a result, data center operators increasingly seek novel solutions and sustainability-driven approaches that enable them to address the industry's prevalent scalability, interoperability, and security limitations to future-proof their businesses for long-term growth.

Within this context, solution providers must offer dedicated solutions that address the data center space's increasing demand for efficiency, sustainability, and resilience to sustain growth in this competitive market landscape. Equipped with a deep understanding of these unmet market needs, Siemens offers a diverse portfolio of groundbreaking technologies and differentiated services designed to tackle critical industry challenges, paving the way for eco-friendly, high-performance, robust, and cost-efficient data centers.

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As a global technology leader across diverse industry verticals, Siemens is renowned for its innovative, sustainable, and forward-thinking solutions. Leveraging its expertise and pedigree, the company is bringing the same transformative approach to the data center industry, driving advancements in efficiency, resilience, and sustainability to meet the demands of a rapidly evolving market. Some of the key highlights of Siemens comprehensive solution suite to serve the market's critical unmet needs include:

- **EcoTech Label**: A powerful representation of Siemens's commitment to sustainability, the EcoTech label features products like the SENTRON Electronic Circuit Protection Device, which reduces manufacturing materials and associated carbon emissions by up to 80% and 50%, respectively. Similarly, Simatic IPC BX-39, boasting 30% better energy efficiency than previous models, is another example of the company's innovative, environmentally conscious design.
- **Blue GIS (SF6-Free)**: The 8DAB Blue GIS is a revolutionary switchgear that uses clean air instead of traditional, high global warming potential sulfur hexafluoride (SF6) gas. An optimal solution to facilitate the global market's ongoing SF6 phase-out, this eco-friendly product incorporates circularity to minimize environmental impact while offering high reliability and operational safety.
- **Heat Reuse Solutions**: Siemens's programmatic controller-powered automated heat recovery systems capture and repurpose excess heat to reduce the data centers' energy consumption, enhancing overall sustainability.
- **Desigo CC Integration**: The platform integrates building management systems (BMS), electrical power management systems, and data center infrastructure management systems into a single powerful solution. Successful customer implementations of the Desigo CC system report 99.9% uptime and zero billing errors, demonstrating its ability to reduce operational complexities while optimizing performance.

Siemens leverages its market-leading portfolio to transform data centers, delivering significant advancements in efficiency, resilience, and sustainability. Through innovative tools such as SiGreen, the company enables data centers to track and reduce their Product Carbon Footprints using real-time emissions data. This commitment to sustainability is underscored by Siemens' technologies, which helped customers avoid 190 million tons of CO2 emissions in 2023 alone. In the realm of energy efficiency, Siemens' White Space Cooling Optimization technology stands out, achieving up to 38% energy savings and improving Power Usage Effectiveness (PUE) by up to 10%. These improvements not only reduce operational costs but also align data centers with industry best practices for energy performance.

To ensure resilience and business continuity, Siemens provides robust solutions such as Sinorix NXN fire protection systems and advanced access control technologies. These systems safeguard mission-critical environments, protecting against disruptions and maintaining seamless operations. By integrating these comprehensive solutions, Siemens empowers data centers to meet the demands of a rapidly evolving industry while addressing sustainability, energy efficiency, and operational reliability. Siemens stands out in highly competitive market with low product differentiation; it achieves this by delivering a distinctive combination of sustainability, innovation, and comprehensive end-to-end solutions. Its value proposition is centered around three key pillars: end-to-end sustainability services (that are highly transparent and incremental in nature), open interoperability, and long-term value driven by innovation. These

foundational elements play a crucial role in positioning Siemens as a trusted partner for data center operators seeking cutting edge critical infrastructure that are not only truly end-to-end, but also state of the art future ready solution set.

End-to-end sustainability services

Recognizing sustainability as an ongoing journey rather than a one-time fix, Siemens focuses on realistic, actionable, and highly customized strategies to drive tangible and incremental improvements for its customers. The company works closely with data centers to help them implement sustainable practices that reduce energy consumption, optimize resource utilization, and minimize carbon footprint. Furthermore, Siemens actively collaborates with specialist industry partners to incorporate sustainability throughout the entire data center lifecycle, from design and construction to operation and decommissioning. Moreover, Siemens offers sustainability consulting through its GBS project management services, aligning businesses with Environmental, Social, and Governance (ESG) requirements and reporting frameworks.

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>
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> ***Global Vice President of Research***

Overall, the company's holistic, pragmatic, and synergistic approach aligns with the realities of digital transformation, ensuring that long-term sustainability is both practical and attainable.

Open Interoperability

Siemens differentiates itself by offering open, interoperable solutions that seamlessly integrate with its data center customers' existing systems. Specifically, the Siemens Xcelerator (SX) platform enables devices and systems from various manufacturers to connect and interact, eliminating vendor lock-ins and simplifying communication across diverse technology stacks. For instance, the company ensures that its systems can plug into various BMS easily, enabling broad compatibility without extensive integration efforts. This open approach not only enhances operational efficiency but also strengthens customer relationships, fostering a collaborative environment in which all system components work together effectively. Furthermore, by addressing the market's prevalent interoperability challenge, Siemens helps mitigate cybersecurity complexities across both operational technology and information technology layers, promoting a more secure and streamlined infrastructure for customers, particularly in the hyperscale and colocation sectors.

Long-term Value Through Innovation

As a result of these differentiated capabilities, Siemens has established itself as a trusted partner for data centers worldwide by delivering innovative solutions that directly and proactively address their critical unmet needs. The company's unique combination of cutting-edge technologies, sustainability-driven solutions, and exceptional service makes it the go-to choice for data center operators seeking to future-proof their operations and stay ahead of environmental regulations.

Forging Ahead: Competitive Edge Through Vision and Seamless Execution

Siemens bolsters its competitive edge obtained through its differentiated portfolio by actively tracking industry megatrends to ensure its solutions remain at the forefront of industry transformation. To this end, the company invests in dedicated market intelligence and internal strategy teams to continuously monitor evolving market trends and competitor activities. These teams collaborate with Siemen's marketing and communication departments, ensuring insights from Voice of Customer (VoC) studies and third-party market research are directly fed into product roadmaps and strategy development.

Siemens's active involvement with data center associations and strategic partnerships across the hyperscale, colocation, and enterprise segments positions it to anticipate and adapt to market shifts effectively. Supported by a robust collaborative network and dedicated internal market intelligence teams, the company comfortably outpaces competitors in identifying and capitalizing on emerging opportunities driven by significant market changes.

Informed by this multi-faceted approach, Siemens strategically aligns its business around three industry megatrends, i.e., digital transformation, sustainability, and decarbonization, building its offerings around digitalization, energy efficiency, and resilient infrastructure. An excellent example of this market-driven innovation is its flagship SX platform that enables customers to integrate cutting-edge digital solutions with real-world infrastructure, thus addressing the demand for more efficient and sustainable operations.

Digitalization

As data centers evolve into highly interconnected and complex ecosystems, the need for advanced operational management becomes paramount. Siemens addresses this challenge with its cutting-edge digital solutions, which include AI-driven real-time monitoring and optimization tools. These technologies not only enhance visibility into critical infrastructure performance but also enable proactive decision-making to reduce energy consumption, improve system reliability, and maximize efficiency. By integrating these innovative tools, Siemens empowers data centers to meet the growing demands for sustainability, operational resilience, and cost-effectiveness in an increasingly competitive landscape.

Sustainability

Rising energy costs, growing customer expectations for environmentally friendly operations, and intensifying regulatory pressures are driving the urgent need for sustainable solutions in the data center industry. Siemens is at the forefront of this transition, delivering advanced technologies such as Blue GIS and Battery Energy Storage Systems as sustainable alternatives to traditional diesel generators. These innovations not only help mitigate environmental impact but also address key industry challenges, enabling data centers to align with evolving market demands and regulatory requirements while achieving operational excellence.

Resilient Infrastructure

In an increasingly digitalized world, Siemens delivers scalable and energy-efficient solutions designed to meet the unique demands of hyperscale, colocation, and edge computing markets. As the surge in data center capacity accelerates—fuelled by advancements in cloud computing, AI, and the Internet of Things

(IoT)— Siemens is strategically positioned to expand its market share across key segments, including hyperscale, colocation, and enterprise.

Central to this strategy is the company's Xcelerator marketplace, a powerful platform that fosters value-added partnerships and facilitates entry into emerging markets. This innovative approach not only strengthens Siemens's competitive edge but also amplifies its growth potential by enabling seamless collaboration and expanding its reach within a rapidly evolving industry landscape.

- **Hyperscale Data Centers**: Siemens's scalable and energy-efficient solutions are crucial for this rapidly growing sector, which has enormous power requirements and demands operational resilience. The company's solutions for hyperscalers include prefabricated modular units, high-voltage power distribution, and advanced liquid cooling systems, all optimized by AI for scalability and cost-efficiency.
- **Colocation Providers**: Facing increasing demand for sustainable and digital solutions, colocation providers will benefit from Siemens's advanced offerings to enhance operational efficiency and address evolving regulatory requirements for sustainability. By delivering innovative solutions tailored to these needs, Siemens empowers providers to align with industry trends while maintaining a competitive edge.
- **Edge Computing**: As edge data centers proliferate, Siemens's real-time monitoring and digital-first capabilities offer critical support for decentralized models. For this sector, the company offers compact, ruggedized infrastructure designed for any setting, complemented by remote monitoring and management capabilities, ensuring processing power is optimally positioned close to the data generation source.

Frost & Sullivan commends Siemens for its unwavering dedication to identifying and addressing visionary megatrends. By not only meeting the current demands of data centers but also shaping a more sustainable and interconnected future, Siemens demonstrates its forward-thinking leadership and commitment to innovation.

Value Creation Through Technology and Innovation

Siemens continues to lead the market by leveraging AI-driven technologies to deliver superior performance, energy efficiency, and sustainability through the entire lifecycle of data center operations., with a significant focus on its Building X Suite. This suite drives operational efficiency and sustainability across the entire data center lifecycle. Key technologies in Siemens's Building X Suite include:

- **Building X Energy Manager** optimizes energy consumption through AI-driven analytics, helping data centers meet sustainability goals and operational efficiency targets.
- **Building X Sustainability Manager** tracks carbon emissions and energy performance, providing real-time data to ensure facilities reduce their environmental impact over time.
- **Building X Lifecycle Digital Twin** offers real-time, data-driven insights for predictive maintenance, performance optimization, and decision-making throughout the data center lifecycle.

Some of the company's AI-driven performance and asset management capabilities encompass:

- **Asset Performance Management:** Predicts equipment failures, identifies patterns in system behavior, and schedules preventive maintenance, thereby reducing unplanned downtime and maximizing the critical infrastructure lifespan.
- **AI Insights**: Integrated AI continuously analyzes real-time data, optimizing both energy efficiency and sustainability, ultimately reducing operational costs while helping customers meet environmental benchmarks.
- **Comprehensive Lifecycle Support**: With the Building X Digital Twin, Siemens simulates data center operations from design to decommissioning, allowing customers to improve performance, scalability, and flexibility.

By integrating AI and digital twins-enabled capabilities across its portfolio, Siemens provides customers unparalleled performance optimization and sustainability management. To this end, solutions like Sentron PowerManager and Desigo CC give customers full visibility into energy usage, facilitating better decision-making, cost savings, and sustainability improvements.

In addition to this technology leverage, Siemens implements several best-in-class practices to drive consistent success, primarily through the SX platform, which accelerates its customers' digital transformations. Key elements of these practices include:

- **Modular and Interoperable Portfolio**: SX offers a curated selection of IoT-enabled hardware, software, and digital services from Siemens and its partners. This modular approach ensures that customers can easily integrate solutions across domains, enhancing efficiency and allowing scalability.
- **Open Ecosystem of Collaboration**: SX is built on an open ecosystem, promoting collaboration between solution vendors, technology partners, and developers. This prevents vendor lock-in and allows customers to benefit from innovations across the industry.
- **Scalability and Flexibility**: The platform's modular offerings can be customized and scaled based on individual customer needs. Many services are available "as-a-service," reducing operational complexity and upfront investments, making advanced technologies accessible to businesses of all sizes.
- **Sustainability Focus**: By leveraging IoT, AI, and digital twins, the platform helps customers optimize energy efficiency and reduce their carbon footprints, aligning with global ESG standards.
- **Cybersecurity**: As digitalization advances, cybersecurity becomes an increasingly pressing concern. Within this context, SX ensures comprehensive cybersecurity across all solutions and the partner ecosystem, protecting against emerging threats.

  Implementing these best practices through the SX platform yields substantial benefits for customers pursuing long-term growth, including faster time-to-market, lower initial investment, decreased operational complexity, continuous innovation, and enhanced applicability.

- **Faster Time-to-Market**: SX's plug-and-play capability allows businesses to adopt and scale new technologies faster, enhancing their competitiveness.
- **Cost Reduction**: Siemens's pay-as-you-go model lowers upfront costs, making advanced solutions accessible to smaller businesses and contributing to broader digital adoption.

- **Continuous Innovation**: The platform fosters ongoing collaboration, ensuring businesses stay future-proof as they adapt to evolving market trends. This flexibility promotes long-term growth and operational efficiency.
- **Sustainability**: SX's focus on energy management, emissions tracking, and predictive maintenance solutions helps companies align with sustainability goals while reducing operational costs.
- **Wide Industry Applicability**: The platform supports various industries, including data centers, industrial operations, and buildings, facilitating digitalization and resilience in operations through tools like Building X and Industrial Operations X.

Overall, the SX platform's flexible, open, and sustainable approach empowers Siemens to help customers unlock substantial value, innovate continuously, and adapt to changing market demands with ease.

Driving Success by Unlocking New Horizons

Siemens's approach goes beyond its extensive expertise and best-in-class capabilities, with customer value as a strategic imperative. Through the years, the company has earned a sterling reputation supporting its data center customers' path towards sustainable, resilient, and cost-effective operations.

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Siemens places high importance on delivering exceptional customer experiences, combining tailored solutions with continuous feedback mechanisms to enhance satisfaction. To this end, the company's dedicated inside sales team offers around-the-clock online and telephone support, ensuring timely resolution of customer queries, reducing downtime, and improving service reliability. Similarly, Siemens's global, regional, and country-level corporate account management (CAM) teams provide personalized support, supporting long-term, trusted customer relationships. The company bolsters this support through its Chennai-based Center of Competence (CoC) that offers specialized project support, optimizing performance for regional data center projects and providing technical expertise. Together, Siemens's CAM teams and CoC ensure long-term, customized support, fostering loyalty and repeat business.

Furthermore, Siemens positions itself as a leader in delivering advanced modular, scalable, and AI-driven solutions that align with key market trends and evolving customer needs. To maintain this differentiation, the company implements a structured feedback loop via net promoter score surveys, VoC studies, and industry events to drive continuous customer-led refinement of its products and services.

Siemens's ongoing partnerships with prominent companies, such as Greenergy, NxtGen Datacenter & Cloud Technologies Pvt Ltd, and Novva Data Centers, demonstrate its ability to deliver tailored solutions that drive successful outcomes. These partnerships reflect Siemens's dedication to understanding and exceeding customer needs through collaborative efforts.

For instance, Siemens helped NxtGen, one of India's largest colocation data center providers, to significantly improve the uptime and operational efficiency at its Bangalore-based facility. The customer implemented Desigo CC to monitor all disciplines across the data center, including fire safety, physical security, energy management, and HVAC monitoring, to optimize energy efficiency, increase staff productivity, and improve overall sustainability.

In fiscal 2023, Siemens reported impressive financial results, with revenue increasing by 8% year-over-year to €77.8 billion. The fourth quarter alone saw a 10% rise in revenue, driven by strong performance in the industrial sector. Orders also grew by 7%, reaching €92.3 billion, thanks to high demand in various sectors. The industrial business reported an 11% profit increase, totaling €11.4 billion, and maintained an operating margin of 16.5% for the fourth quarter, reflecting effective operational management. Siemens's net income nearly doubled to a historic high of €8.5 billion, while free cash flow reached a record €10 billion, indicating solid cash generation.

For its data center business, Siemens recorded significant growth, closing fiscal 2023 with an order volume of over €2 billion. Looking ahead to Q3 2024, the company expects a remarkable 50% year-on-year growth, outpacing market trends and indicating a solid increase in market share. It is noteworthy that during fiscal 2024, Siemens exceeded its ambitious expectations for order intake in the data center business with a growth rate of over 60%, reaching more than €3.6 billion Euros. This surge is largely driven by heightened demand for electrification, automation, and safety solutions, particularly among AI companies focused on expanding their capacity. Additionally, Siemens has expanded its network of COC to the Asia-Pacific region, while the United States continues to lead in volume, with promising growth identified in the Europe, Middle East, and Africa regions.

Siemens's ability to deliver strong financial results while maintaining high profitability is a testament to its strategic initiatives. Overall, the company's strategic financial management, coupled with digital transformation success, positions the company ahead of competitors, making it as a standout performer in the market.

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Conclusion

The global data center space's growing emphasis on sustainability as a strategic necessity intensifies the need for new solutions and novel approaches to balance sustainability efforts with operational efficiency, infrastructure resilience, and cost efficacy. Equipped with a deep understanding of these unmet market needs, Siemens offers a diverse portfolio of groundbreaking technologies and differentiated services designed to tackle critical industry challenges; ultimately paving the way for eco-friendly, high-performance, robust, and cost-efficient data centers. Furthermore, the company's ongoing commitment to track and address visionary megatrends, its best practices implementations, and technology leverage empower it to not only meet the demands of today's data centers but forge the path for a more sustainable and connected tomorrow.

Siemens earns Frost & Sullivan's 2024 Global Company of the Year Award for its strong overall performance in the data center infrastructure solutions industry.

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What You Need to Know about the Company of the Year Recognition

Frost & Sullivan's Company of the Year Award is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Award Analysis

For the Company of the Year Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Visionary Innovation & Performance

Addressing Unmet Needs: Customers' unmet or under-served needs are unearthed and addressed by a robust solution development process

Visionary Scenarios Through Mega Trends: Long-range, macro-level scenarios are incorporated into the innovation strategy through the use of Mega Trends, thereby enabling first-to-market solutions and new growth opportunities

Leadership Focus: Company focuses on building a leadership position in core markets and on creating stiff barriers to entry for new competitors

Best Practices Implementation: Best-in-class implementation is characterized by processes, tools, or activities that generate a consistent and repeatable level of success

Financial Performance: Strong overall business performance is achieved in terms of revenue, revenue growth, operating margin, and other key financial metrics

Customer Impact

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and high quality

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty

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About Frost & Sullivan

Frost & Sullivan is the Growth Pipeline Company™. We power our clients to a future shaped by growth. Our Growth Pipeline as a Service™ provides the CEO and the CEO's growth team with a continuous and rigorous platform of growth opportunities, ensuring long-term success. To achieve positive outcomes, our team leverages over 60 years of experience, coaching organizations of all types and sizes across 6 continents with our proven best practices. To power your Growth Pipeline future, visit Frost & Sullivan at http://www.frost.com.

The Growth Pipeline Engine™

Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fuelled by the Innovation Generator™.
Learn more.

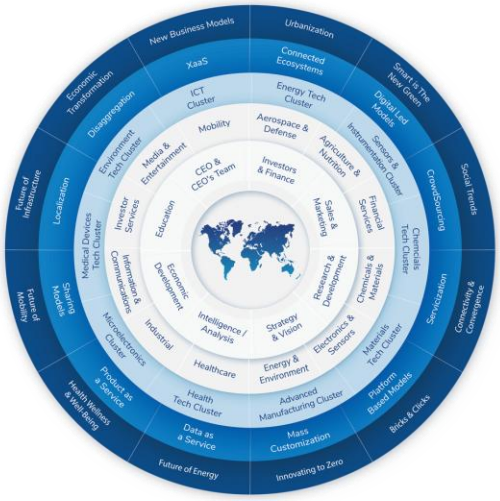


Key Impacts:

- **Growth Pipeline:** *Continuous Flow of Growth Opportunities*
- **Growth Strategies:** *Proven Best Practices*
- **Innovation Culture:** *Optimized Customer Experience*
- **ROI & Margin:** *Implementation Excellence*
- **Transformational Growth:** *Industry Leadership*

The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.



Analytical Perspectives:

- Mega Trend (MT)
- Business Model (BM)
- Technology (TE)
- Industries (IN)
- Customer (CU)
- Geographies (GE)