FROST & SULLIVAN

2024
COMPANY OF THE YEAR

IN THE SINGAPORE DATA CENTER SERVICES INDUSTRY

EQUINIX

FROST & SULLIVAN

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. Equinix, Inc. excels in many of the criteria in the data center services space.

AWARD CRITERIA

Visionary Innovation & Performance	Customer Impact
Addressing Unmet Needs	Price/Performance Value
Visionary Scenarios Through Mega Trends	Customer Purchase Experience
Implementation of Best Practices	Customer Ownership Experience
Leadership Focus	Customer Service Experience
Financial Performance	Brand Equity

Equinix: A Leading Data Center Service Provider

Headquartered in Redwood City, California, and founded in 1998, Equinix, Inc. (Equinix) is a global provider of multitenant data center services, delivering vendor-neutral, secure network connections and shared data traffic capabilities. As a leading service provider in the industry, the company bolsters over 260 data centers, more than 10,000 customers, over 472,000 interconnections, and a reliability rate greater than 99.999%+ in 71 markets.[1] Equinix ensures high availability with infrastructure redundancy, including multiple power feeds, cooling units, and network connections. This redundancy minimizes the risk of operational downtime and enhances system reliability.

Equinix provides clear competitive differentiation in Singapore due to its unmatched focus on sustainability, value leadership through digital services, and emphasis on enabling artificial intelligence (AI) infrastructure. As a result, Frost & Sullivan is impressed with the company's growth performance and continued leadership position, particularly as it strategically overcomes Singapore's capacity limitations.

Innovation Heightening the Global Economy

Equinix is a digital infrastructure provider with expansive platform and digital services, enabling customers to create digital outcomes for their specific business use cases. As a result, the company contributes to
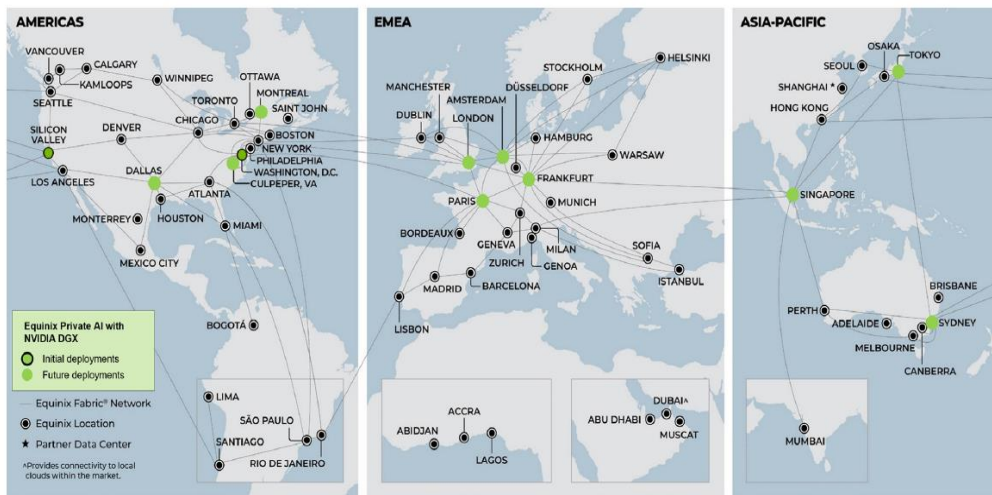
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[1] https://d1io3yog0oux5.cloudfront.net/_e23dbf0881048d81460e87ff2387c353/equinix/db/2183/23432/annual_report/Equinix-Inc_2023_Annual-Report.pdf

the overall digital economy, empowering digital innovations across various industries. Equinix focuses on innovation to continuously enhance its infrastructure, offering a comprehensive portfolio of digital solutions that extend its value beyond capacity levels and information technology (IT) infrastructure. Furthermore, the company expands its digital services by supporting the integration of new technology solutions (e.g., leveraging AI) and furthering value by giving customers access to scalable and flexible solutions to deliver on their innovations at software speed and empower their business growth.

AI Development Platform

Equinix partnered with NVIDIA to deliver ready-to-run NVIDIA DGX AI infrastructure that bridges the gap between on-premises and cloud solutions, enabling customers to operate their AI infrastructure in close proximity to their data. Equinix installs and operates each customer's privately owned NVIDIA infrastructure and can deploy services on their behalf in key International Business Exchange™.[2] The Private AI Development Platform allows users to place NVIDIA DGX's systems close to data with direct high-speed connectivity to the public cloud and an ecosystem of network service providers for data access across corporate-wide area networks (WAN). Using the service, customers can easily access their privately managed NVIDIA AI Enterprise software to streamline the development and deployment of production-grade AI applications, including generative AI. The secure platform has a data center design with specialized cooling for optimal performance and seamless connection with Equinix Fabric and the Internet to provide expert practice management from Equinix Managed Services. As a result, the platform fast-tracks value for AI to accelerate AI workflows with high-speed interconnections, allowing customers to focus on innovation.[3]

Private AI Development Platform

Source: Equinix

Equinix stands apart by integrating a global footprint with cutting-edge infrastructure, ensuring the ability to address AI needs across privacy, performance, and scalability. The Equinix solution transcends the

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[2] https://www.equinix.com/newsroom/press-releases/2024/01/equinix-announces-fully-managed-service-for-nvidia-dgx-ai-supercomputing

[3] https://www.equinix.com/resources/solution-briefs/nvidia-equinix-private-ai

limitations of traditional data centers and public clouds, offering a uniquely flexible and high-performing environment for AI operations.

Enterprises and mid-market businesses require AI-ready data centers and turnkey solutions, including small-scale training and inferencing. Equinix's diverse models and infrastructure options eliminate large capital expenditures while ensuring high performance and regulatory compliance.

Equinix customers can also build production-ready AI workloads with high throughput, low latency, and uninterrupted power supply while maintaining maximum security and control over their enterprise data.

> *"Equinix has demonstrated a strong alignment to the shifting industry trends and macroeconomic dynamics in Singapore. With continued focus on sustainability and addressing customer needs through the digital infrastructure services portfolio the service provider has been able to create a distinct market positioning and strategic advantage with their robust ecosystem."*
>
> *- Nishchal Khorana*
> *Vice President, ICT*

Deploying their AI infrastructure at Equinix provides them the benefits of private AI, which includes lower cloud data egress and AI infrastructure costs, dedicated AI infrastructure resulting in increased performance, ability to meet data residency and compliance requirements, and cloud adjacency resulting in high-speed data access. [4]

Equinix Fabric Cloud Router

Many businesses leverage multiple public cloud providers for their various IT demands and need a networking solution connecting public clouds to decrease data silos for cloud transformation acceleration. Equinix's Fabric Cloud Router is an enterprise-grade, virtual routing service that simplifies multi-cloud networking by allowing businesses to establish reliable connectivity easily and rapidly between leading public clouds (including Amazon Web Services, Azure, Google Cloud, and Oracle Cloud). It provides private, high-speed connections for more dependable performance than public internet and delivers enhanced flexibility to allow applications to run across cloud environments and adjacent infrastructure on Platform Equinix with high throughput and built-in redundancy. The solution extends a customer's WAN further by joining multiple virtual routers with multipoint connectivity across Equinix's software-defined global network in over 55 markets. Easily deployable in less than a minute, the Fabric Cloud Router leverages the company's unmatched, low latency cloud access between public clouds and offers multiple connections at rates of up to 50 gigabytes per second in a single router. It efficiently moves data between clouds and across Equinix's fabric network and scales to customers' needs by offering no predefined bandwidth commit levels or virtual connection maximum per virtual router. As a result, the Fabric Cloud Router reduces cloud egress costs and the complexity of multi-cloud deployments while enabling superior performance.[5]

Unmatched Focus on Sustainability

Equinix Sustainability Focus in Singapore

Partnership to Leverage Renewable Energy

Aligned with this company-wide focus, Equinix's Singapore location has made extensive strides to enhance its sustainability. In April 2024, the company signed an energy power purchase agreement (PPA) with

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[4] https://www.equinix.hk/solutions/private-ai/equinix-colocation
[5] https://www.equinix.hk/products/digital-infrastructure-services/equinix-fabric/fabric-cloud-router

Sembcorp Industries, which will initiate a 75 megawatt-peak solar energy project. This partnership is one of the largest data centers renewable energies PPAs in Singapore. The PPA leverages renewable energy sourced from solar panels installed across 1,290 housing development board (HDB) blocks and 99 government sites created by the HDB SolarNova 7 program. This gives Equinix's 22 global PPAs, which are projected to contribute over three million megawatt hours of renewable energy annually to local grids worldwide. [6]

Ongoing Research for Sustainable Back-up Power-Options

Equinix is conducting a research project with the Department of Electrical and Computer Engineering and the Centre for Energy Research & Technology under the National University of Singapore College of Design and Engineering, evaluating the efficacy of various environmentally viable backup power supply options, including hydrogen-fueled generators, proton-exchange membranes (PEM) fuel cell systems, and alternative generator technologies. The research project is evaluating the technical parameters (e.g., efficiency, temperature variations, start-up time, ramp rate to reach full load, fuel flexibility, total cost of ownership, and net present cost) for each system to determine its viability as backup power supply options for data centers during power outages. While still ongoing, the study showcases PEM fuel cells and alternate generator technologies as promising backup power solutions. This research partnership marks a significant step toward a sustainable digital economy and simultaneously demonstrates Equinix Singapore's commitment to pushing the innovation boundaries for global sustainability.[7]

Creating Data Center Sustainability Benchmarks

Equinix joined a partnership with Infocomm Media Development Authority (IMDA) and Dell to drive innovation and reshape how digital infrastructure is designed, deployed, and maintained. The group aims to develop a comprehensive process to measure, capture, and audit quantifiable sustainability improvement in the form of energy and carbon emission savings. As such, it provides guidance and recommendations to modernize digital infrastructure deployment with the aim of promoting sustainable digital solutions and green technology practices in Singapore.[8] This partnership showcases Equinix's focus on promoting green practices to drive the development of sustainable digital applications in Singapore.

In addition to its commitment in enabling sustainability, Equinix focuses on data centers as a good neighbor to promote digital infrastructure's role in society. For example, the company partners with local academic institutions, helping to extend their student knowledge and expertise through onboarding and internships. For example, established since 2021 at Singapore Management University (SMU), the Equinix Sustainability Scholarship is offered to third-year SMU undergraduate students enrolled in any SMU School who have declared a major in Sustainability. This focus on community further sets Equinix apart, as bolstering the education of the next generation of IT specialists, the company helps to extend overall digital capabilities, industry expertise, and innovation.

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[6] https://www.equinix.sg/newsroom/press-releases/2024/04/equinix-supports-singapore-s-green-plan-by-entering-a-renewable-energy-ppa-with-sembcorp

[7] https://www.equinix.sg/newsroom/press-releases/2023/10/equinix-and-nus-college-of-design-and-engineering-explore-the-viability-of-hydrogen-for-sustainable-power-generation

[8] https://www.equinix.sg/newsroom/press-releases/2023/08/singapore-elevates-sustainable-digital-infrastructure-beyond-data-centers

Company Wide Sustainability Excellence

Equinix is a leader in sustainability, becoming the first data center company globally to commit to being climate neutral by 2030 in 2021.[9] The company works intensively toward achieving this goal, making extensive investments ($78 million invested in emergency efficiency focused on enhancing operational

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> *- Nishchal Khorana*
> *Vice President, ICT*

excellence and energy demand reduction in 2023) and forming partnerships to continuously enhance its sustainability. In 2023, Equinix experienced a 24% reduction in its Scope 1 and 2 (market-based) emissions since 2019, utilizing 96% renewable energy, marking the sixth year in a row with over 90% global renewable energy coverage. Furthermore, the company received an A Carbon Disclosure Project rating for the second consecutive year and experienced a 1.42 average annual power usage effectiveness, an 8.8% improvement from 2022.[10] Equinix has also issued ~$4.9B in green bonds to date, and they have fully allocated the net proceeds of the outstanding green bonds, bringing improvements in multiple areas including green buildings, renewable energy, energy efficiency, water efficiency, waste reduction and clean transportation.

Overcoming Regulatory Barriers for Impressive Growth

In 2019, Singapore placed a moratorium on new data centers due to environmental and energy concerns, which halted data capacity expansion in the region. While the country recently removed the moratorium in 2022, the Singapore Economic Development Board (EDB) is more selective in approving data center projects, only allowing those for pilot projects that fulfill the new requirements for greener methods of operations.[11] Working closely with IMDA, Equinix, together with three other operators, were selected by the EDB for a portion of approximately 80 megawatts of new capacity through the Data Centre-Call for Application exercise. The EDB's selection of Equinix showcases the company's success in enhancing sustainability in the data center industry, as it was one of only four companies in the country awarded new capacity.[12] The company is working to get the new data center ready as soon as possible, enhancing its future growth potential from the additional capacity.

Despite the removed moratorium, data capacity remains stagnant throughout Singapore due to the strict limitations of approved projects, thereby hindering data center service providers' expansion in the country. Equinix Singapore demonstrates commitment to empowering its customers to embrace digital

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[9] https://www.equinix.sg/newsroom/press-releases/2023/10/equinix-and-nus-college-of-design-and-engineering-explore-the-viability-of-hydrogen-for-sustainable-power-generation

[10] https://d1io3yog0oux5.cloudfront.net/_e23dbf0881048d81460e87ff2387c353/equinix/db/2183/23432/annual_report/Equinix-Inc_2023_Annual-Report.pdf

[11] https://www.ashurst.com/en/insights/lessons-from-singapore-data-centres/#:~:text=Singapore%20eventually%20lifted%20the%20moratorium,for%20greener%20methods%20of%20operations.

[12] https://www.imda.gov.sg/resources/press-releases-factsheets-and-speeches/press-releases/2023/four-data-centre-proposals-selected-as-part-of-pilot-data-centre-call-for-application

transformation. The company commits to furthering its efficiency and plans to begin leveraging liquid cooling in Singapore in six months. Furthermore, Equinix's Singapore business attributes greater focus to its digital services (e.g., Fabric Cloud Router, interconnections, and cloud-adjacent storage), which extend value to customers.

Finally, Equinix's Singapore location is positioned for future growth bolstered by its continuing commitment to efficiency and empowering the global transition to generative AI solutions. With Singapore being a leading location for subsea cables to land, data is already located there, empowering it to be a key location for inferencing data for use in AI models. Equinix demonstrates low latency and unmatched scalability capabilities, positioning it as a key geographic and innovation partner.

Frost & Sullivan is particularly impressed with the strategic initiatives in this region, as it showcases Equinix's capacity to flourish despite challenging regulatory constraints. Moreover, the company's approval for additional capacity from the EDB showcases its strong position and success in enabling sustainability, empowering a cleaner future and contributing to the digital economy.

Conclusion

Equinix, Inc. (Equinix) is a digital infrastructure provider of multitenant data center services, delivering vendor-neutral, secure network connections and shared data traffic capabilities in their high-performance data centers. The company offers a robust and resilient infrastructure to support demanding applications and business requirements, contributing to the overall global digital economy and enabling advanced innovation and heightened customer outcomes. In Singapore, Equinix sets itself apart from competitors through its impressive focus on sustainability, with multiple partnerships and initiatives that create strategic differentiation and enhance customer value. Finally, Equinix bolstered its value proposition through an increased focus on energy efficiency and extensive digital services to drive growth. For its exceptional overall performance, Equinix has been awarded Frost & Sullivan's 2024 Singapore Company of the Year Award in the data center services industry for the fourth consecutive year.

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

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)