FROST & SULLIVAN

EQUINIX
RECEIVES THE 2023
COMPANY OF THE
YEAR AWARD

*Identified as best in class in the Singapore
data center services industry*

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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 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: An Established Global Leader

Equinix, a California-based company established in 1998, is a leader in the global digital infrastructure industry and caters to various industries, such as cloud services, healthcare, payments, federal governments, and content and digital media. Its extensive software-defined solutions and services portfolio includes Equinix Fabric™, Network Edge, Equinix Precision Time™, Equinix Metal™, global solutions enablement, managed services, global customer care, and Equinix Marketplace. Platform Equinix™ allows customers to distribute hybrid cloud solutions and deploy on-demand connections across an extensive ecosystem of cloud networks and industry partners, driving innovation to obtain a competitive advantage in the digital economy. With over 240 data centers covering 29 million+ global square feet in 71 markets across 32 countries and six continents, Equinix is a preferred vendor-agnostic provider that meets digital leaders' high-performance demands. As global data volumes continue to accelerate, Equinix surpassed a new milestone of 30 terabits per second or peak traffic across its global Internet Exchanges, accounting for a 50% increase in approximately 18 months.[1] Equinix's diverse and dedicated workforce creates solutions to meet customers' business challenges, connect communities, and promote long-term economic growth, contributing to a sustainable digital world.

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[1] https://www.equinix.com/newsroom/press-releases/2023/05/equinix-reports-first-quarter-2023-results (Accessed in June 2023)

Laser-like Focus on High-performance Network Connectivity and Robust Ecosystems

As a densely populated and resource-constrained island, Singapore has very limited space for development. In 2022, Singapore lifted its development moratorium that halted development in 2019 and put new guidelines in place that promote responsible development, energy usage, and sustainable practices. The government now only allows 60 megawatts of new capacity per year and requires a power usage effectiveness of 1.3 for new data centers. In 2023, the Singapore Economic Development Board (EDB) and the Infocomm Media Development Authority (IMDA) awarded four data center operators the opportunity to add 80 MW of new capacity through its pilot Data Centre – Call for Application (DC-CFA)

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>
> *- Nishchal Khorana*
> *Vice President and Global Program Leader: ICT*

exercise. As one of the selected operators, Equinix embraces the opportunity to "strengthen Singapore's digital capabilities, delivering sustainable digital infrastructure that will fuel the digital economy, cultivate digital ecosystems, and align to Singapore's Green Plan."[2]

Equinix opened its fifth IBX® data center (SG5) at Tanjong Kling in 2021. The facility has over 41,700 square feet of colocation space and an initial capacity of 1,300 cabinets. Keeping within the remit of Singapore's new data center quota system, it launched three additional expansions

(phases 2 to 4) in 2022 and scheduled the opening of two more phases (5 and 6) for 2023 at a total cost of $173 million. With these expansions, Equinix Singapore used a substantial tranche of available capacity to strengthen its cross-island presence and location diversity. SG5 will offer 5,000 cabinets and almost 129,000 square feet of colocation space at full build-out.[3] Moreover, the facility received Singapore Building and Construction Authority's Green Mark Platinum certification for sustainable design and practices. It connects with four other Equinix IBX® data centers in Singapore through low-latency dark fiber links to deliver optimal functionality and value for fast-digitalizing organizations and economies.

Singapore offers access to one of the world's three Gateway Roaming Exchange peering points. It integrates with Equinix IBX data centers, Platform Equinix®, and Equinix Fabric™ to bridge different networks and facilitate seamless communication and data transfer, delivering a superior user experience congruent with the company's reputable brand, which stands for EQUality, Neutrality, and Internet eXchange. Thus, Equinix Singapore provides the most comprehensive range of secure and reliable connectivity options and carrier-neutral data centers, allowing customers to take advantage of robust industry ecosystems. Equinix Singapore cultivates close partnerships with the major cloud providers (i.e., Amazon Web Services, Azure, Google, IBM, Alibaba, and Oracle) and has six on-ramps available. Furthermore, its on-demand infrastructure accelerates digital service delivery and consumption at scale, enabling the deployment of computing, networking, and storage solutions within minutes to boost customers' agility and help them increase their digital advantage.

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[2] 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 (Accessed in June 2023)
[3] https://www.equinix.sg/newsroom/press-releases/2022/04/equinix-supports-singapore-s-green-plan-and-regional-digital-hub-ambitions-by-expanding-its-fifth-data-center (Accessed in June 2023)

Equinix demonstrates a strong growth strategy in Singapore by aligning with the shifting market trends and customer needs, driving initiatives to enhance customer value. Moreover, Equinix Singapore's interconnection-oriented approach sparks the acquisition of 'magnet' customers who draw new users to its centers. As a leader in digital services who continues to invest heavily in research and development, the company draws innovative industry peers to its thriving ecosystem. Its customers are influential, addressing digital transformation demands successfully across every sector to thrive while ensuring environmental sustainability.

Best Practices Implementation to Enhance Customer Value

Equinix has made significant strides in achieving climate neutrality and achieved a year-over-year increase in renewable procurement on a gigawatt/hour basis.[4] Its data centers in Singapore provide a Map of Initiatives[5] that displays real-time environmental data to monitor power consumption, renewable energy usage, and carbon footprint, allowing customers to track their progress against sustainability goals. Its Green Power Reports with detailed individual carbon footprints empower customers to make responsible consumption choices. Frost & Sullivan commends Equinix for collaborating with its customer and supplier base to promote responsible and sustainable practices that support them in addressing the 1.5-grade Celsius global warming scenario by establishing science-based goals for 2025.

Recently, the data service provider announced a partnership with the Centre for Energy Research and Technology (CERT) under the National University of Singapore's (NUS) College of Design and Engineering to explore technologies that enable hydrogen as a green fuel source for mission-critical data center infrastructure. A comprehensive analysis between proton-exchange membrane fuel cells (i.e., generating power with hydrogen and oxygen) and fuel-flexible linear generators (i.e., switching between fuels like hydrogen, biogas, and various renewable liquid fuels) confirms the efficiencies of these clean onsite power generation technologies, supporting Singapore's hydrogen strategy.[6] The study finds that PEM fuel cells are the most efficient with an efficiency range of 45% to 57%. Additionally, they use the least amount of fuel per megawatt hour. However, these fuel cells have narrow permissible operating conditions, with a 0 to 50 degrees Celsius temperature range. The fuel cells and hydrogen generators need to be tightly controlled for temperature, humidity, and ventilation, unlike alternative generator technologies with broader operating limits. Notably, PEM fuel cells are an eco-friendly option as they produce zero emissions when using hydrogen as fuel input, which is not the case with alternative generator technologies and hydrogen generators that emit certain levels of greenhouse gases.[7]

The digital economy heavily relies on data centers. Equinix's strategic partnerships with organizations like the CERT at NUS accelerate digital expansion while fulfilling its environmental obligations in alignment with the country's Green Plan 2030. This initiative forms part of its Future First strategy, which continues to evaluate onsite solar opportunities, onsite generation from fuel cells, and any other distributed low-

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[4] https://www.equinix.com/newsroom/press-releases/2023/05/equinix-reports-first-quarter-2023-results (Accessed in June 2023)
[5] https://sustainability.equinix.com/map-of-initiatives/ (Accessed in June 2023)
[6] https://www.equinix.com/newsroom/press-releases/2022/09/equinix-and-nus-centre-for-energy-research-technology-partner-to-advance-hydrogen-technologies-for-data-centers (Accessed in June 2023)
[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 (Accessed in October 2023)

carbon technology that could benefit the industry, global economies, and the planet. By incorporating sustainable practices, Equinix helps customers to facilitate economic growth eco-responsibly.

In addition, the company launched an employee-driven charitable organization, The Equinix Foundation, in September 2022. It leverages strategic partnerships and philanthropic grant-making to advance digital inclusion, showcasing the company's ongoing commitment to social sustainability. WeAreEquinix Singapore raised over SGD 13,000 through campaigns, charity walks, and other events, enabling 29 Equinix cyclists to participate in the Ride for Rainbows event, which supports children with chronic illnesses and provides compassionate services to their families.[8] Other initiatives of The Equinix Foundation include affordable connectivity for communities, digital literacy training, access to technology education, and technical career development.[9]

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>
> *- Riana Barnard*
> *Best Practices Research Analyst*

Primed by its Future First strategy, Equinix received the Green Innovation Award at the 2022 Singapore Environmental Achievement Awards ceremony, recognizing the multinational corporation's leadership and outstanding achievements in developing and implementing eco-friendly technologies and practices.

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Leveraging Strategic Partnerships to Strengthen its Stance

Equinix builds its services, collaborating closely with a range of stakeholders and partners to evolve alongside market needs and trends. Over the years, Equinix's sterling reputation and customer-centric framework led to its coveted preferred partner status. For example, Equinix and NVIDIA have joined forces to launch the **NVIDIA LaunchPad program**, giving access to top artificial intelligence (AI) infrastructure globally across nine Equinix IBX® data centers. This partnership highlights Equinix's dedication to integrating AI and enhancing customer value to stay ahead of the curve. Equinix Metal™ provides reliable and efficient support for this collaboration.

Aiming to implement a healthcare strategy tailored to Singapore's population diversity (i.e., Chinese, Indian, and Malay) through precision medicine, four **A*STAR research institutes** (i.e., the Genome Institute of Singapore, the Bioinformatics Institute, the Institute of High-Performance Computing, and the Institute for Infocomm Research), created a massive Asian genetic databank. However, the aggregated data volume will reach the petabyte scale (as one person's genome sequence constitutes 200 gigabytes of data). Hence, research institutions require a high-speed, high-throughput, reliable data connection to transfer these heavily regulated data sets.[10]

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[8] https://sustainability.equinix.com/social/connecting-our-communities/ (Accessed in June 2023)
[9] https://www.equinix.com/about/equinix-foundation (Accessed in June 2023)
[10] https://blog.equinix.com/blog/2022/03/15/advancing-genomic-sequencing-and-public-health-with-digital-infrastructures/ (Accessed in June 2023)

Equinix's digital infrastructure and solutions (e.g., Equinix Fabric™ and Equinix Metal™) enable researchers to interconnect physical and virtual infrastructure to collaborate and scale hybrid deployments seamlessly and cost-effectively. It offers two scenarios, i.e., federating data using Network Edge or colocation facilities:[11]

1. Equinix Metal™ offers secure genomics data storage with dedicated servers and cloud processing through Network Edge and Equinix Fabric™. Researchers can rapidly scale up or down with a pay-as-you-go model and collaborate globally with flexible connections to genome institutes.

2. Equinix also offers secure and reliable colocation services for sensitive genomics data. With Equinix Fabric™, institutions can safely share and explore data through a private link, encouraging global collaborations. It also supports secure hybrid cloud architectures for private workloads in cloud environments, ensuring peak performance, reliability, and security.

Genomics research proliferates and shows excellent potential to improve healthcare outcomes. Advanced sequencing technologies allow for detailed genetic studies, leading to new disease insights and personalized treatments. The field is burgeoning and offers tremendous growth opportunities for data center service providers.

Frost & Sullivan believes Equinix is well-positioned to drive Singapore's data center services space into its next growth phase, capturing market share and sustaining its leadership in the coming years.

Conclusion

Equinix's extensive software-defined solutions and digital services portfolio allows customers in Singapore to distribute hybrid cloud solutions and deploy on-demand connections across a comprehensive ecosystem of cloud networks and industry partners to gain a competitive advantage in the digital economy. The data center service provider addresses the demand in the market through capacity expansion, strategic partnerships, and an ecosystem-centric approach to remain a trusted partner. Equinix addresses customers' unmet needs with client-centric strategies and exemplifies best practice implementation. It invests in green buildings and energy efficiencies, advancing low-carbon energy policies, driving change, and encouraging innovation.

With its strong overall performance, Equinix earns Frost & Sullivan's 2023 Singapore Company of the Year Award in the data center services industry.

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[11] https://www.equinix.com/resources/solution-briefs/healthcare-genome-sequencing (Accessed in June 2023)

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)**