



中華電信
Chunghwa Telecom

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**COMPETITIVE
STRATEGY LEADER**

*Transforming Innovation Into High-Growth
Performance and Competitiveness*

*RECOGNIZED FOR BEST PRACTICES IN THE
TAIWAN DATA CENTER SERVICES INDUSTRY*

F R O S T & S U L L I V A N

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Best Practices Criteria for World-class Performance

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

RECOGNITION CRITERIA	
<i>Strategy Innovation</i>	<i>Customer Impact</i>
Strategy Effectiveness	Price/Performance Value
Strategy Execution	Customer Purchase Experience
Competitive Differentiation	Customer Ownership Experience
Executive Team Alignment	Customer Service Experience
Stakeholder Integration	Brand Equity

The Transformation of the Data Center Services Industry

The Taiwanese data center services space is undergoing a significant transformation, characterized by rapid growth driven by several key trends, including the rise of artificial intelligence (AI), the increasing demand for cloud services, and the push for sustainability. The country's strategic location and robust telecommunications infrastructure continue to attract significant foreign investment. As a result, Frost & Sullivan anticipates a continued rise in the market's demand for colocation services.

Despite these data center colocation growth opportunities, traditional data center infrastructure often struggles to sufficiently support the demanding workloads associated with AI training and inference and other data-intensive applications. These workloads require substantial computational processing power and storage capacity, necessitating innovative infrastructure solutions and modernization efforts across the data center services ecosystem. Within this context, service providers must develop flexible and scalable facilities that deliver sufficient power and space to accommodate intensive model training and real-time inferencing needs of emerging AI architectures.

However, as service providers scale their data center capabilities to meet the surging demand for colocation services, they face several challenges, including limited power availability in strategic locations, skilled labor shortages, and intensifying competition. To ensure continued growth, market participants must prioritize advanced solutions and sustainable practices, creating stronger value propositions to achieve strategic differentiation within the dynamic Taiwanese data center market.

Chunghwa Telecom uniquely leverages its state-of-the-art data center infrastructure and comprehensive services to meet its customers' evolving colocation needs. The company is strategically positioned to capitalize on emerging growth opportunities, effectively responding to shifting market trends and reinforcing its standing in the Taiwanese data center services sector.

Chunghwa Telecom: Future-focused, Customer- Led, Trusted Data Center Services Provider

Founded in 1996, Chunghwa Telecom is Taiwan's largest integrated telecommunications service provider, with market-leading offerings in fixed and mobile communication, broadband, and internet services on a domestic and international scale. The company leverages its extensive network infrastructure (including fixed lines, submarine cables, and 4G/5G mobile networks) to deliver a comprehensive suite of telecommunication services, from internet connectivity to specialized data center solutions for internet-based operations.

More specifically in the data center space, Chunghwa Telecom combines deep domain expertise, cutting-

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- Nishchal Khorana
Associate Partner

edge technology, and significant data center capacity to provide competitive, tailored solutions to a diverse customer base. To this end, the company offers a unique blend of next-generation data center infrastructure and customer-centric services customized to the hyperscale and retail segments. Chunghwa Telecom further distinguishes itself by offering access to Taiwan's largest network bandwidth, best-in-class reliability, and state-of-the-art cybersecurity.

With these differentiated capabilities, Chunghwa Telecom creates a strong value proposition for hyperscalers and enterprises across the Taiwanese market. Frost & Sullivan

remains impressed with the company's sustained focus on creating value in the data center services space.

Best-in-class Strategies Drive Competitive Differentiation

Chunghwa Telecom further strengthens its competitive differentiation in its domestic market by proactively realigning its strategies to address evolving market dynamics. For instance, in response to the growing AI and high-performance computing (HPC) workloads across all customer segments, the company refined its data center product strategy to initiate a transformative upgrade of its data center infrastructure. This effort includes the implementation of power density improvements, advanced cooling solutions, and high-bandwidth interconnect networks. Additionally, Chunghwa Telecom plans to introduce services optimized for AI and HPC workloads, such as graphics processing unit-as-a-service and its proprietary AI computing platform, expected to launch in the first half of 2025.¹

Overall, Chunghwa Telecom demonstrates a strong focus on addressing emerging customer needs and transforming Taiwan's digital landscape by aligning its value propositions to address AI workloads' unique requirements in its existing and planned data center infrastructure facilities. As a key strategic initiative,

¹ Frost & Sullivan discussion with Chunghwa Telecom (January 2025)

the company actively invests in expanding its comprehensive data center footprint across Taiwan. In 2023, Chunghwa Telecom initiated a hyperscale data center project in Taoyuan city, partnering with potential clients on customized data hall designs to accommodate their specific needs.

Expected to be one of the largest and most advanced facilities in the region, the Taoyuan hyperscale data center will offer an information technology (IT) load capacity of 12 megawatts (MW). Its strategic location near the Taiwan Power Company's new Extra-High Voltage Substation enhances power security and mitigates local power scarcity issues, ensuring physical redundancy and operational stability. Furthermore, the Taoyuan facility will feature Chunghwa Telecom's first high-density power rack servers, supporting a power density exceeding 10 kW per rack, a notable increase from the up to 8 kW per rack available at its older data centers. This advancement positions the Taoyuan data center to effectively meet the rising demand for colocation services tailored for high-density deployments.

Starting in 2024, Chunghwa Telecom is also implementing an "Existing Building Retrofitting Project" aimed at enhancing AI-readiness across its existing facilities. Starting with a thorough assessment of over 20 buildings (evaluating aspects such as power, space, and floor loading), the project identifies several target sites for conversion into data centers. These retrofits incorporate upgrades such as new mechanical and electrical systems, including air-conditioning units and an independent water system to support water-cooled servers.

As a result of these continuous investments in footprint expansion, Chunghwa Telecom reported a high double-digit IT load capacity growth and expanded operational raised floor space to approximately 213,300 square feet in 2024.² Looking ahead, the company intends to construct new data centers and retrofit more existing facilities to address its domestic market's growing demand for data center services, planning to increase its total IT load capacity and solidifying its position as the leading data center service provider in Taiwan.³

Frost & Sullivan believes Chunghwa Telecom is effectively aligning itself to changing customer needs and expectations. The company's clear strategic vision and execution focus underpin its strategic differentiation and competitive positioning for many years into the future.

Sustainability as a Strategic Advantage

Chunghwa Telecom demonstrates an unwavering commitment to sustainability. By aligning its green strategy with the growing environmental demands of hyperscalers and enterprises, the company emphasizes operational efficiency and reduced resource consumption across its data center infrastructure. As such, Chunghwa Telecom consistently invests in cutting-edge data center innovations, delivering eco-friendly solutions without compromising performance and reliability.

To reinforce this sustainability focus, Chunghwa Telecom integrates advanced technology with a strong emphasis on environmental responsibility, resulting in truly 'green' data centers. For instance, the

² Ibid.

³ Ibid.

company utilizes energy-efficient cooling technologies, such as liquid cooling and free cooling, to enhance its facilities' energy efficiency, reporting a noteworthy power usage effectiveness value of less than 1.63.⁴

"To reinforce this sustainability focus, Chunghwa Telecom integrates advanced technology with a strong emphasis on environmental responsibility, resulting in truly 'green' data centers. For instance, the company utilizes energy-efficient cooling technologies, such as liquid cooling and free cooling, to enhance its facilities' energy efficiency, reporting a notable power usage effectiveness value of 1.63."

- Sama Suwal
Best Practices Research Analyst

Moreover, Chunghwa Telecom recognizes the environmental impact of the energy-intensive data center industry and is committed to transitioning fully to renewable energy by 2030, with a goal of achieving net-zero emissions by 2025. To support this ambition, the company actively invests in renewable energy development. By the end of 2023, the company completed a total of 69 solar power installations, boasting a combined capacity of 5,557 kW-peak.⁵

Overall, Chunghwa Telecom advances its innovation, sustainability, and footprint expansion initiatives by strengthening its partner ecosystem, which includes technology vendors, system integrators, and cloud service providers. This collaborative strategy enables

the company to deliver more comprehensive solutions and services. By taking such a proactive approach, Chunghwa Telecom adapts to evolving industry trends while establishing itself as a progressive partner in a landscape that increasingly values collaboration and innovation.

Roadmap to Success: Customer-centric, Continuous, Proactive

Chunghwa Telecom goes beyond its extensive expertise and best-in-class capabilities, with customer value as a strategic imperative. The service provider continues to focus on enhanced data reliability and security, while also delivering increased benefits in energy efficiency and cost savings. Chunghwa Telecom leverages a skilled and professional data center maintenance team, along with cutting-edge infrastructure that holds both domestic and international certifications (including Uptime Institute M&O, Telecommunications Industry Association-942 Rated 3, Service Organization Controls 1 and 2 Type 2, Payment Card Industry Data Security Standard, and International Organization for Standardization 27001) to drive this success.

Chunghwa Telecom enhances its customer-centric value proposition by adapting to changing customer needs through ongoing innovation and a commitment to service excellence. To this end, the company actively gathers customer feedback to identify areas for improvement, ensuring that consumer insights are swiftly communicated to relevant departments via its feedback handling system. Regular review meetings align services with customer expectations, fostering a culture of continual improvement. As a testament to this dedication, Chunghwa Telecom achieved a service satisfaction rating of 4.77 out of 5 and an 85.2% customer satisfaction rate in 2023, reflecting a 2.7% increase from the previous year.⁶

⁴ <https://www.cht.com.tw/en/home/cht/esg/environmental-sustainability/environmental-sustainability-actions#:~:text=The%20IDCs%20of%20Chunghwa%20Telecom,with%20the%20PUE%20at%201.63.>

⁵ Ibid.

⁶ <https://www.cht.com.tw/en/home/cht/esg/customer-care/customer-relationship-management>

Chunghwa Telecom's dedication to customer satisfaction reinforces its status as a trusted brand in Taiwan with an established client base. Some of the company's notable customers from the financial and service industries include PXPAY Plus, MasterLink Securities IT, Mega Securities, Union Insurance, CTBC Holding, EVA air, PChome Online, and Cola Travel.

Overall, Chunghwa Telecom demonstrates impressive growth potential driven by its customer-oriented approach, extensive expertise, and industry-leading capabilities, which collectively support its strong financial performance. In 2024, the company's colocation services revenue reached a robust 14% increase compared to 2023.⁷ This momentum positions Chunghwa Telecom favorably for continued expansion in the data center services sector.

Frost & Sullivan believes Chunghwa Telecom is well-poised to achieve sustained growth with its strategic differentiation in the Taiwanese data center services space in the coming years.

Conclusion

Frost & Sullivan believes that innovation and alignment to growth opportunities drive future success; many factors contribute, yet having a competitive strategy is critical. Chunghwa Telecom understands this core concept and is leading the Taiwanese data center services market due to its focused strategies, helping it outpace competitors.

Chunghwa Telecom strengthens its significant competitive differentiation in the Taiwanese data center services market by proactively and continually realigning its strategies to address evolving market dynamics and customer needs. A key focus of the company is the ongoing expansion of its data center footprint across Taiwan, aimed at accommodating the growing demand for colocation services, particularly for high-density deployments. A notable initiative includes the ongoing construction of a strategically located 12-megawatt hyperscale data center in Taoyuan City, poised to be among the largest and most advanced in the region. Additionally, Chunghwa Telecom is undertaking an "Existing Building Retrofitting Project" to bolster artificial intelligence-readiness in its existing facilities, further solidifying its commitment to innovation and customer-centric solutions.

With its strong overall performance, Chunghwa Telecom earns Frost & Sullivan's 2025 Taiwan Competitive Strategy Leadership Recognition in the data center services industry.

⁷ Frost & Sullivan's Discussion with Chunghwa Telecom (January 2025)

What You Need to Know about the Competitive Strategy Leadership Recognition

Frost & Sullivan's Competitive Strategy Leadership Recognition is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Recognition Analysis

For the Competitive Strategy Leadership Recognition, Frost & Sullivan analysts independently evaluated the criteria listed below.

Strategy Innovation

Strategy Effectiveness: Effective strategy balances short-term performance needs with long-term aspirations and overall company vision

Strategy Execution: Company strategy utilizes best practices to support consistent and efficient processes

Competitive Differentiation: Solutions or products articulate and display unique competitive advantages

Executive Team Alignment: Executive team focuses on staying ahead of key competitors via a unified execution of its organization's mission, vision, and strategy

Stakeholder Integration: Company strategy reflects the needs or circumstances of all industry stakeholders, including competitors, customers, investors, and employees

Customer Impact

Price/Performance Value: Products or services offer the best ROI and superior value compared to similar market offerings

Customer Purchase Experience: Purchase experience with minimal friction and high transparency assures customers that they are buying the optimal solution to address both their needs and constraints

Customer Ownership Excellence: Products and solutions evolve continuously in sync with the customers' own growth journeys, engendering pride of ownership and enhanced customer experience

Customer Service Experience: Customer service is readily accessible and stress-free, and delivered with high quality, high availability, and fast response time

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty, which is regularly measured and confirmed through a high Net Promoter Score®

Best Practices Recognition Analytics Methodology

Inspire the World to Support True Leaders

This long-term process spans 12 months, beginning with the prioritization of the sector. It involves a rigorous approach that includes comprehensive scanning and analytics to identify key best practice trends. A dedicated team of analysts, advisors, coaches, and experts collaborates closely, ensuring thorough review and input. The goal is to maximize the company's long-term value by leveraging unique perspectives to support each Best Practice Recognition and identify meaningful transformation and impact.

		VALUE IMPACT	
STEP		WHAT	WHY
1	Opportunity Universe	Identify Sectors with the Greatest Impact on the Global Economy	Value to Economic Development
2	Transformational Model	Analyze Strategic Imperatives That Drive Transformation	Understand and Create a Winning Strategy
3	Ecosystem	Map Critical Value Chains	Comprehensive Community that Shapes the Sector
4	Growth Generator	Data Foundation That Provides Decision Support System	Spark Opportunities and Accelerate Decision-making
5	Growth Opportunities	Identify Opportunities Generated by Companies	Drive the Transformation of the Industry
6	Frost Radar	Benchmark Companies on Future Growth Potential	Identify Most Powerful Companies to Action
7	Best Practices	Identify Companies Achieving Best Practices in All Critical Perspectives	Inspire the World
8	Companies to Action	Tell Your Story to the World (BICEP*)	Ecosystem Community Supporting Future Success

*Board of Directors, Investors, Customers, Employees, Partners

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 Generator™

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:

- **Megatrend (MT)**
- **Business Model (BM)**
- **Technology (TE)**
- **Industries (IN)**
- **Customer (CU)**
- **Geographies (GE)**

