

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

2024 CUSTOMER VALUE LEADER

*IN THE TAIWANESE
5G SERVICES INDUSTRY*

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

BEST
2024 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. Chunghwa Telecom excels in many of the criteria in the Taiwanese 5G space.

AWARD CRITERIA	
<i>Business Impact</i>	<i>Customer Impact</i>
Financial Performance	Price/Performance Value
Customer Acquisition	Customer Purchase Experience
Operational Efficiency	Customer Ownership Experience
Growth Potential	Customer Service Experience
Human Capital	Brand Equity

Financial Performance

Chunghwa Telecom, headquartered in Taipei, Taiwan, boasts the fastest 5G mobile network in the

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country. The company has successfully leveraged innovative 5G applications, backed by its strong reputation for customer service, to push 5G subscriptions to exceed 3 million in 2023. The stable growth in 5G mobile penetration rate was able to drive mobile services revenue and mobile postpaid average revenue per user (ARPU) by 6.4% and 4.2% year-on-year (YoY), respectively, in 2023. Notably, the average mobile monthly fee uplift resulting from 4G to 5G migration in the consumer segment increased to 44.9%, thus delivering impressive performance for the company. Chunghwa Telecom is one

of the few mobile operators in the region that can not only lead the local market with 5G but also monetize 5G so that it contributes materially to total revenue.

Customer Acquisition

Chunghwa Telecom’s increasing customer support for 5G is driven by the robust 5G partner ecosystem that allows the company to enter new markets and develop new revenue streams with first-to-market solutions that offer unique experiences and interactive services. Collaborations with strategic partners

have resulted in new growth opportunities that promote smart applications and expand reach amongst government agencies and select industries. The company provides customized digital transformation services in 6 key solution areas: smart manufacturing, smart healthcare, smart transportation, smart environment, smart buildings, and traffic enforcement cameras. This approach helps acquire new customers.

Chunghwa Telecom is investing in upgrading to a 5G standalone (SA) architecture to enable network slicing. This can help offer dedicated channels that can withstand peak-hour traffic and is suitable for large-scale 5G applications that require guaranteed bandwidth. With 5G SA powering network slicing, the company can more adequately address market demand for 5G applications and take traditional 5G private network construction to the next level. A major milestone in 2023 for the company was the cross-border alliance forged with Singtel. This helped Chunghwa Telecom integrate and scale 5G applications on a single platform while achieving international alignment and compatibility. The company also has research and development (R&D) talent that can align with top-notch 5G technology development to build the latest applications.

Chunghwa Telecom has developed 5G applications that are addressing pain points and improving the lives of Taiwanese people. In smart transportation, the company leverages AI analysis to predict intersection events, generate event detection alerts, and facilitate dynamic passive pedestrian detection at intersections. This helps reduce traffic accidents caused by vehicle or pedestrian negligence. In entertainment, the company recently used 5G network slicing and AI to generate music and images on the KKBOX chart, creating the first interactive performance in a concert for thousands of people. AR/VR technology is combined with low-latency 5G to develop 8K remote visual communication. The latest AI technology is also used to assist in industrial upgrading and driving the development of smart cities.

In smart healthcare, the company has combined 5G network slicing with St. Paul's Hospital's emergency rescue system to build Taiwan's first 5G Emergency Rescue Green Corridor to improve emergency treatment efficiency. The incorporation of 5G network slicing into emergency medical systems allows for the immediate and real-time transmission of patient treatment and relevant physiological data from the ambulance to the emergency room, enabling nurses and emergency physicians to deliver prompt care. 5G Artificial Intelligence of Things (AIoT) techniques have also been used to develop the Newborn Remote Smart Monitoring System, using Taiwan Food and Drug Administration (TFDA)-certified wearable pulse oximeters and thermometers for newborns to monitor vital signs such as heart rate, blood oxygen levels, and temperature. The company also creates applications for medical AI platforms and personal care management platforms, such as AI cardiovascular risk analysis, AI sleep apnea screening, and dementia care, integrating various medical resources and data to offer comprehensive medical services and personalized care solutions.

Growth Potential

Chunghwa Telecom is an integrated service provider with a mobile network and owns the majority of Taiwan's fixed-line infrastructure, which is supplemented by undersea cables and satellite coverage. The company is still the largest mobile operator in Taiwan, even after the completion of industry consolidation in 2023, and will benefit from the easing of competition from 2024 onwards. Going forward, Chunghwa

Telecom will strengthen its leadership in mobile services revenue and market share with outstanding mobile network and service quality. The company plans to leverage collective strengths, deepen engagement with key enterprise customers, and expand its digital ecosystem through strategic alliances

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to further drive growth momentum and collaboratively create a better future. By focusing on fixed broadband speed upgrades and increasing investment in original video content, 5G will both be enabled and leveraged to drive greater growth for the company. Support for key initiatives, such as sustainable transformation, AI transformation, resilience and security enhancements, and further development of opportunities with 5G smart

applications, will drive the innovation and growth of its ICT business. With key requirements to address customer needs pinned down as a plan, the company is well on its way to achieving its 3 major visions: to become an international benchmarked enterprise based on sustainable development, to become a leading brand of digital ecosystem co-creators, and to become a top-notch technology conglomerate with a market value surpassing a trillion NT dollars.

Price/Performance Value

Taiwan has achieved remarkable technological advancements and innovations in telecoms, establishing a leading position in the advanced technology industry, as recognized by the US International Trade Administration.¹ Chunghwa Telecom has played an instrumental role in this achievement. In 2021, Chunghwa Telecom established the 5G accelerator to assist Taiwanese start-ups in developing and commercializing 5G applications that meet industry needs. The company’s 5G private network growth contributed to its ICT business’ double-digit revenue growth YoY in 2023. The company has successfully empowered hundreds of enterprises across various industries during the digital transformation wave, earning significant recognition from its customers.

The company has undertaken various hands-on strategies to offer better customer value. For small and medium-sized enterprises (SMEs), it has introduced a lease-to-own model that effectively lowers the entry threshold for customers who want to incorporate 5G into their businesses. The company has implemented 5G private networks to enhance operations and innovation, which has successfully created a stable revenue stream and expanded its market share in the 5G private network space. The revenue contribution from ICT and AIoT was significant in December 2023, with double-digit YoY growth coming from smart meter and smart building projects. For the enterprise segment, the company provides various 5G application solutions and network options that enable access to applications and services anytime, anywhere.

The company acquires new customers and retains existing ones by maintaining a high-quality, widespread network infrastructure across Taiwan, encompassing both urban and rural areas. It strives to deploy cutting-edge technologies to provide high-speed and reliable connectivity and offers a range of tariff

¹ <https://telecomreviewasia.com/news/featured-articles/4147-taiwan-s-contribution-to-the-global-5g-supply-chain-and-infrastructure>

plans, including options tailored for the elderly and underprivileged groups, and innovative value-added services. For VIPs, it offers exclusive privileges to entice them with better value and expand the more lucrative segment of its customer base. Chunghwa Telecom continues to enhance its distribution channels, proactively engages customers with suitable renewal plans, and continuously streamlines both online and offline operational processes to improve customer satisfaction.

Customer Ownership Experience

Chunghwa Telecom ensures that it consistently meets and exceeds customer experience needs with the 5G experience of its service, covering 97.6% of the country's population. The company is ahead of its 2 closest competitors, who currently have 88.9% and 85.6% population coverage, respectively, and poorer coverage quality across Taiwan. Chunghwa Telecom offers the fastest median speeds in Taiwan, according to Speedtest Intelligence® data for Q2–Q3 2023, with a clear lead over its peers with speeds of 361.83 Mbps for download and 61.4 Mbps for upload.² The company utilizes 5G in combination with video streaming services and AI technology to enhance the audio-visual experience for customers. The 3 key features of 5G, i.e., high speed, low latency, and high bandwidth connectivity, are leveraged heavily to offer customers diverse viewing experiences, including VR, AR, 4D, multi-angle perspective, and ultra-high definition (UHD) videos that enhance their cinematic experience.

The company is at the forefront of 5G application development and is creating a new wave of smart services that provide customers with higher-quality services and digital applications. Leveraging the capabilities of 5G, Chunghwa Telecom consumers can now live stream traditional cultural events in Taiwan and immerse themselves in local festivals. For instance, it combined its innovative 5G technology with 360-degree panoramic technology at the 2024 Taiwan Lantern Festival, and the result was a stunning showcase of light and shadow performances that would not have been possible before. With many fruitful milestones in this space, Chunghwa Telecom is paving the way for others to follow.

Brand Equity

Chunghwa Telecom's brand is perceived positively based on its service experience, which is the result of the company's commitment to customer centricity. Customers exhibit high brand loyalty, as evident from the low churn rate, earning the company global recognition. Chunghwa Telecom has been the winner in Taiwan of the Speedtest® Best Mobile Network Coverage and Best Mobile Network awards for 5 consecutive years from 2018 to 2022 and the Fastest 5G Mobile Network award for 2021–2022.³ Few mobile operators in the world are able to win as triple champions for fastest internet speed, best coverage, and best network for 5 consecutive years. The Speedtest® result is corroborated by Open Signal, which acknowledged in 2023 that Chunghwa Telecom customers experience the fastest internet speeds in Taiwan for both overall and 5G mobile services.⁴

² <https://www.speedtest.net/awards/taiwan/#:~:text=Chunghwa%20Telecom%20is%20Taiwan's%20Speedtest>

³ <https://www.cht.com.tw/en/home/cht/messages/2023/0228-1400?year=2023&month=2&category=86F3795F01B14D7FADFD148D9FC695EA&list=%7b8DAECF69-AEF0-4F1B-B066-3306E547COCC%7d>

⁴ <https://www.opensignal.com/reports/2023/12/taiwan/mobile-network-experience>

Conclusion

Chunghwa Telecom, Taiwan's largest integrated telecoms service provider, is at the forefront of the industry, driving innovation with 5G. It is creating ground-breaking smart services that offer customers enhanced solutions and digital applications. The company's commitment to meeting and exceeding the needs of its customers with 5G is truly commendable and has enabled it to position itself far ahead of its competitors.

With its strong overall performance, Chunghwa Telecom earns Frost & Sullivan's 2024 Taiwanese Customer Value Leadership Award in the 5G industry.

What You Need to Know about the Customer Value Leadership Recognition

Frost & Sullivan's Customer Value Leadership Award recognizes the company that offers products or services customers find superior for the overall price, performance, and quality.

Best Practices Award Analysis

For the Customer Value Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Business Impact

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

Customer Acquisition: Customer-facing processes support efficient and consistent new customer acquisition while enhancing customer retention

Operational Efficiency: Company staff performs assigned tasks productively, quickly, and to a high-quality standard

Growth Potential: Growth is fostered by a strong customer focus that strengthens the brand and reinforces customer loyalty

Human Capital: Commitment to quality and to customers characterize the company culture, which in turn enhances employee morale and retention

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

