

Chapter 4 Operational Highlights

Performance by division

	Consumer Business Group	Enterprise Business Group	Home Business Group	Retail Business
Brand name	Taiwan Mobile	Taiwan Mobile Enterprise Services	TWM Broadband	momo
Services	<ul style="list-style-type: none"> ● Voice, data and mobile value-added services for consumers 	<ul style="list-style-type: none"> ● Voice and data mobile services for enterprises ● Fixed-line services ● Cloud and enterprise total solutions 	<ul style="list-style-type: none"> ● Pay TV services (CATV/DTV) ● Cable broadband services ● Others 	<ul style="list-style-type: none"> ● E-commerce ● TV home shopping

Unit: NT\$m

	Telecom business		Cable TV business	Retail business
	Mobile business	Fixed-line broadband business		
Market position	Ranked second in a three-player market, with a market share of around 32% in terms of mobile subscribers (excluding 040 prefix)	One of top three internet service providers (ISP)	Fourth-largest multiple system operator (MSO), covering about 11% of households in Taiwan	Ranked first in B2C e-commerce
2023 revenue*	71,489		6,263	109,243
2023 EBIT*	10,711		2,188	4,385

* Source: 2023 financial reports. The difference between the sum of each division and consolidated numbers was due to interdivisional adjustments and eliminations.

Scope of Business

Business overview

Telecom Business

1. Telecom products and services

Consumer Business Group

Besides providing customers with mobile voice and data services, the Consumer Business Group offers a wealth of value-added services, exclusive games and devices. These value-added services include video and music streaming, online cloud gaming, mobile devices, IoT-related services and smart home services. The Company has also launched OP Life and Double-Play packages that offer users the ultimate innovative audiovisual experience.

Enterprise Business Group

The Enterprise Business Group offers a full range of one-stop services to corporate clients. Aside from providing basic telecommunication services, the Enterprise Business Group can also serve as an enterprise's partner in the fields of 5G solutions, AI, cloud services, IoT and information security.

2. Telecom revenue breakdown

Unit: NT\$mn

Item	Year	2023	
		Revenue	% of total
Service revenue		50,400	71%
Device sales		21,089	29%
Total		71,489	100%

3. New telecom products and services

Consumer Business Group

- (1) OP Life one-stop solution: Offer "Gamer" mobile game/VR device packages; adopt Matter connectivity standards to offer better Smarter Home packages.
- (2) momo ecosystem: Deepen cooperation with momo, offering exclusive "momobile member's day" deals for TWM users and facilitating purchases of devices and accessories using momo coins on myfone stores.
- (3) MyCharge charging platform: Establish electric vehicle charging facilities nationwide to provide charging services.

Enterprise Business Group

- (1) Multi-cloud and hybrid cloud solutions:

By combining the advantages of telecom services and collaborating with CloudMile, TWM has integrated ITG (Information Technology Group) experiences and technology, providing consulting services to help customers achieve digital transformation.

- (2) AI and industrial solutions:

TWM continues to cooperate with partners in the industrial ecosphere and combine its ITG (Information Technology Group) experiences and technology along with TWSC (Taiwan Web Service Corporation). As a result, TWM has developed generative AI services for enterprises. With AI 2.0 consulting services and application tools, it creates tailor-made solutions for customers.

- (3) 5G/Internet of Vehicles:

TWM works with private 5G vertical application partners to develop private 5G dedicated and shared services. Moreover, it has bolstered its partners' commercial promotions to boost their market share in IoV and continue to develop new IoT platform services (IoTBS, IoTA, eSIM).

(4) Enterprise cybersecurity solutions:

The adoption of digital transformation by various industries post-pandemic has led to increased cybersecurity risks. TWM has been developing solutions for information security protection to help customers improve digital resilience and empower innovative business transformation.

Cable TV and Broadband (Home Business Group)

1. CATV products and services

Its main operations cover a variety of products and services, including cable TV, HD digital TV, high-speed fiber-optic internet access, over-the-top (OTT) service platform, HomeSecurity services, A1 Box and digital TV channel content agency.

2. CATV revenue breakdown

Unit: NT\$mn

Item	Year	2023	
		Revenue	% of total
Pay TV service		3,097	49%
Cable broadband service		2,040	33%
TV content agency and others*		1,126	18%
Total		6,263	100%

* Including channel leasing revenue

3. New CATV products and services

(1) HD digital TV services:

TWM has led the industry in ushering in a whole new era in home entertainment with its introduction of 4K content and multi-angle vision.

(2) High-speed fiber-optic internet access services:

Given the increasing demand for high-speed internet access, TWM Broadband launched 1Gbps+WiFi 6 and Mesh WiFi 6 services, and aims to offer even faster access in the near future.

(3) Digital home services:

The Company is developing multiple value-added services, such as IoT, cloud games and smart home applications.

Retail Business (momo.com Inc. or “momo”)

1. Retail products and services

momo offers e-commerce and TV home shopping services:

(1) e-commerce

momo sells over 5 million stock keeping units (SKUs), a quarter of which offer 24-hour delivery guarantee. It also provides 24-hour online customer service and a supplier contact platform to satisfy customers' shopping needs.

(2) TV home shopping

momo has its own professional studio and filming team that provides momo TV programs to 5 million cable TV and 2.1 million MOD households nationwide.

0800 toll-free hotline and mobile app allow consumers to purchase products featured on momo TV programs or the momo TV app. A customer service team works around the clock to answer questions about product features, as well as purchase and return policy.

2. Retail revenue breakdown

Unit: NT\$mn

Item	Year	2023	
		Revenue	% of total
E-commerce		105,136	96%
TV home shopping and others		4,107	4%
Total		109,243	100%

3. New categories and services

(1) momo has continued to usher in more international brands and expand its product categories. Its TV home shopping platform has also been introducing more overseas niche products to enhance its unique platform. momo has stepped up its logistics network build-out to accelerate last-mile delivery to shorten delivery times and offer customers greater convenience. In terms of mobile device application, momo has deployed AI technology to improve voice and image searches, enhance information security and manage risks.

(2) momo's TV home shopping business has steadily adapted to changes in consumer lifestyle and trends. To enhance engagement with its client base and boost customer stickiness, it has expanded its TV fan clubs' operations, launched a TV app, broadcast live-stream videos on Facebook, and listed on Chunghwa Telecom's MOD. It has also laid out plans for cooperation with livestreaming influencers and major OTT operators.

(3) momo plans to set up logistics centers in southern and central Taiwan to improve shipping efficiency.

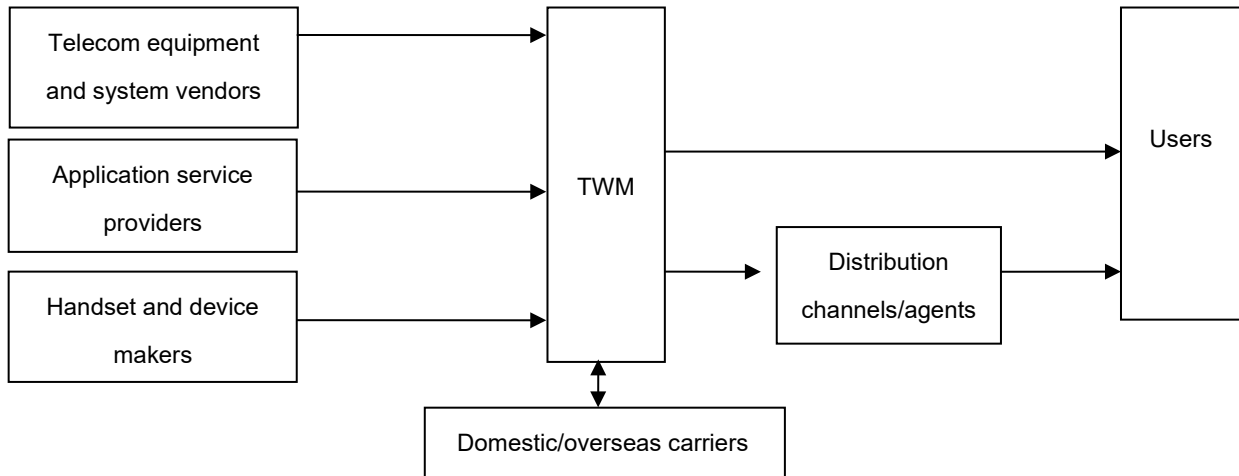
Industry overview

Consumer Business Group

1. Industry status and development

It has been almost four years since 5G's launch and the three major operators' infrastructure development has peaked, yet there is still a lack of a killer app. The mergers between Taiwan Mobile and Taiwan Star, and between Far EasTone and Asia Pacific Telecom had been approved by the National Communications Commission, and completed. With 5G penetration's increasing and the widespread adoption of home broadband, the focal point for consumer engagement is shifting toward smart homes, IoT devices and exclusive terminals, as well as media services.

2. Industry value chain



3. Product development trends and competitive landscape

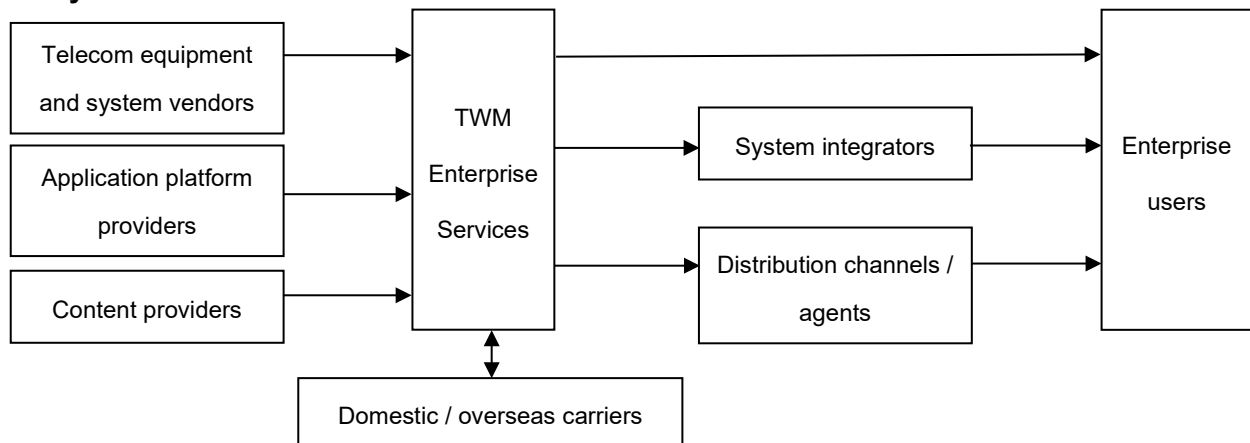
With the completion of the two mergers, price-cutting competition in the mobile market is expected to end, leading operators to focus on enhancing user contributions. The 5G competition is expected to switch to smart homes, IoT, exclusive devices and streaming/video services.

Enterprise Business Group

1. Industry status and development

Companies' commitment to carbon reduction and sustainable development has propelled demand for automation, data visualization and transformation consulting services. Furthermore, the need for cloud, IoT and cybersecurity applications driven by AI should bring more business opportunities to ICT providers.

2. Industry value chain



3. Product development trends and competitive landscape

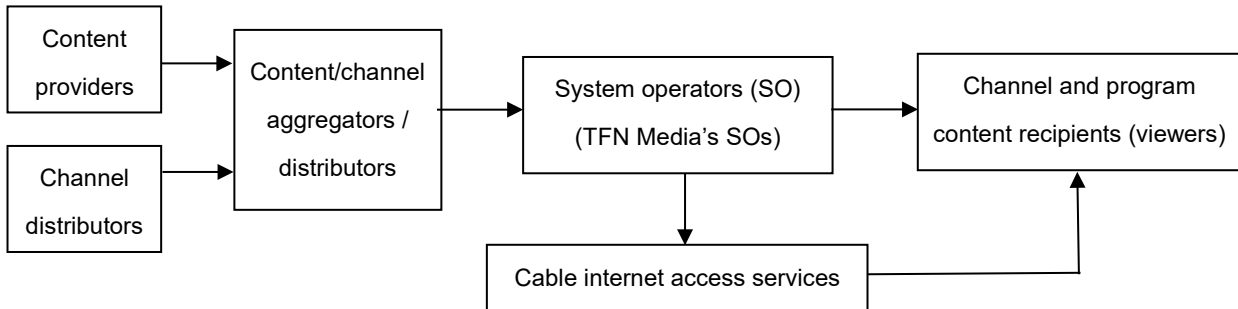
The opening of the O-RAN and dedicated 5G network has spurred telecom operators to build 5G network ecosystems and actively seek partnerships, as well as explore innovative vertical application opportunities. Through the merger with Taiwan Star, the Company has added numerous SME customers. The Company plans to launch more diverse telecommunications and SaaS services to help SMEs enhance their competitiveness and accelerate the adoption of beyond-5G vertical applications, thereby facilitating industrial transformation and upgrading.

Home Business Group

1. Industry status and development

Cable TV faces challenges from alternative services, such as IPTV, digital terrestrial TV and other emerging media (e.g., OTT video streaming) that have successively entered the market. The cable TV industry is facing a critical period of transformation.

2. Industry value chain



Aided by its control over last mile access to customers, TWM Broadband is aiming to take the lead in vertical integration to build up its core competitiveness and explore new business opportunities in the digital age.

3. Product development trends and competitive landscape

Fixed broadband is a saturated market that is dominated by Chunghwa Telecom and characterized by slowing growth. Technological advances and the demand for 5G indoor coverage have also spurred intense competition on pricing and speed. Furthermore, with the CATV industry becoming fully digitalized, user demand for high-definition digital TV channels and OTT content has increased. 4K content and smart home applications, such as internet-connected and voice control devices, are the future trends.

Retail Business

1. Industry status and development

As a leader in the B2C market, momo continues to build up its logistics and warehousing system, providing fast delivery services and a one-stop shopping experience for consumers, while expanding its economies of scale and raising barriers to entry in the B2C industry.

2. Industry value chain



momo sources its products from suppliers and sells them through its TV home shopping networks, online shopping sites and mail order catalogues for members and general consumers.

3. Product development trends and competitive landscape

- (1) E-commerce: Competition is no longer limited to e-commerce channels. Fast delivery and cold chain logistics services are maturing. Groceries have become a new focus of competition between e-commerce platforms and hypermarket chains.

(2) TV home shopping: The rise of virtual shopping platforms, such as e-commerce and mobile commerce, has intensified competition in TV home shopping. momo has countered this challenge by collaborating with key opinion leaders or influencers, launching its own mobile apps and leveraging its social platform and capabilities, including livestreaming, to bolster engagement with members and its customer base.

Major research and development achievements

The Company's research and development expenditures for 2023 and up to January 31, 2024 amounted to NT\$511.574 million and NT\$51.34 million, respectively. The main technologies and products resulting from these efforts are as follows:

Project name	Description
Image-to-image translation-based acceleration for indoor ray-tracing mode	Use deep learning technologies to establish generative models for various signal receptions. 1. Leverage image translation techniques to convert indoor images into 3D architectural layouts. 2. Further translate these 3D layouts to depict indoor network coverage.
MyVideo	Offer new streaming formats with home-cinema quality. Enhance encryption security for diverse devices.
Number masking service	Offer a comprehensive management interface and streamline integration processes to lower the threshold for enterprise customers to adopt the service.
MyMoji	Develop GIF stickers and provide users with the ability to generate a personal 3D avatar simply by taking a selfie with their smartphones to enhance user engagement.
Anti-fraud solution	Use AI to identify phishing websites and enhance communication security. Features include real-time identification of unknown calls, automatic checking of suspicious links, and blocking of high-risk numbers.
Online traffic profiling	Employ AI and search engine technology for tagging, enhancing business value.
Pedestrian flow and tide analysis	Utilize triangulation technology for regional hotspot research in public and private sectors.
OPBiz	OPBiz provides applications for myBZ+ My Store, mobile landline, store broadband and various SaaS services.
OP Pay-BNPL (buy now pay later)	1. Enhance credit risk management with a review system for better installment payment services. 2. Create a platform for automated transaction settlements and quick daily disbursements via online banking.
M+/M+ Meet	Develop the M+ Meet large-scale video conferencing system, offering an enterprise-level solution with cloud-based integration and multi-device login capabilities.
Smart voice platform	Combine speech-to-text (STT), natural language understanding (NLU), and text-to-speech (TTS) technologies to accurately interpret and respond to customers' verbal commands.
Smart outbound system	Develop a dialing and recording system that can be used not only as a customer relationship management tool for physical stores, but also for telemarketing to improve the efficiency of telemarketing personnel and increase the probability of closing deals.

Project name	Description
Digital identity verification	Utilize artificial intelligence and machine learning as an alternative to traditional customer identity verification solutions.
Customer fraud/credit control	Utilize big data and new rule engine technology, analyze customers' DCB(Direct carrier billing), telecom/non-telecom service usage, and transaction records to detect abnormal customer behaviors.
Using customer behavior and product big data to establish related product tags	Utilize optical character recognition (OCR) technology for online shopping search and keyword search. Create hashtags through analysis of images of newly added products from suppliers and extracted keywords from text descriptions to connect independent products. Customers can use these hashtag to link to related product pages for easier and more accurate product searches.

Sales development plans

Consumer Business Group

1. Short-term plan

- (1) Establish MyCharge platform to provide charging services for electric vehicles nationwide as part of its venture into the green energy market.
- (2) Introduce the "Certified Used Phone Product" program to encourage people to purchase used phones through special plans that cater to the diverse preferences of users.
- (3) Expand the range of one-stop service experience products (OP Life Packages); collaborate with various mobile/VR gaming devices to launch the Smart Gamer Set; utilize Matter to connect cross-brand IoT products and create a more diverse smart home set, driving users to choose higher rate plans and enhance customer loyalty.
- (4) Deepen integration with momo shopping resources to create a 5G sales advantage; offer consumer rewards in the form of momo coin rebates; allow the use of momo coins for purchases of phones/accessories/MyMoji; expand the utility and management of momo coins to create group synergy.

2. Medium to long-term plan

- (1) Become a leading brand in smart homes: Establish Taiwan Mobile's smart home brand to integrate users' network environment, smart home appliances/devices, data and services to provide a one-stop service solution and become the core partner brand in creating smart homes.
- (2) Continuously monitor the development of eSIM applications and market information related to intelligent vehicles and applicable hardware for smart wearable devices, and explore collaboration opportunities.

Enterprise Business Group

1. Short-term plan

- (1) Actively develop solutions for the manufacturing, retail, medical care, finance and government sectors, and integrate 5G technology and partner application services to promote industrial innovation and upgrading.
- (2) Promote cloud services to meet the needs of enterprises.
- (3) Implement sustainable value in the process of enterprise product promotion and cultivate brand ESG development.

2. Long-term plan

- (1) Actively expand the industrial ecosystem, launch innovative vertical integration solutions that meet different industries' requirements, improve enterprise customers' operating efficiency, and expand TWM's presence in foreign markets.
- (2) Continue to develop diversified cloud services and accelerate the practical applications of AI to help corporate customers speed up their digital transformation.
- (3) Improve sales growth productivity and strengthen the relationship between customers and TWM products.

Home Business Group

1. Short-term plan

- (1) TWM Broadband will continue to optimize its network infrastructure in regions where it already operates CATV systems and provide more HD digital content and video on demand to set the foundation for its digital services.
- (2) TWM Broadband launched 1Gbps super high-speed internet access service and HD digital TV service to boost its cable broadband and digital TV service penetration rates, as well as increase its ratio of high-speed broadband internet users.

2. Long-term plan

The Home Business Group plans to integrate HD digital content, multiple-viewing terminal devices, high-speed fiber-optic internet access services and cloud technology to introduce more innovative and value-added digital TV services, allowing families and individual subscribers to enjoy the benefits of “multi-screens and a cloud” (i.e., mobile phones, PCs, tablets and TVs) and experience smart living.

Retail Business

1. Short-term plan

- (1) E-commerce: Provide differentiated and value-added services by leveraging big data analysis to optimize product portfolios and recommend more personalized products to customers; deepen cooperation between momo and leading brands; and integrate offline and online loyalty programs.
- (2) TV home shopping: Enhance distribution channel's competitiveness by listing more branded products from overseas, cultivating fan bases on social platforms, such as Facebook and LINE, and cooperating with e-commerce suppliers to expand product offerings.