

10

MEDIA, COMMUNICATIONS AND INFORMATION TECHNOLOGY



Media, Communications and Information Technology

Macao enjoys freedom of the press, freedom of speech and freedom of publishing. Despite being relatively small, it has a sophisticated and well-developed media industry.

The Government strives to enhance the transparency of its administration and facilitate communication and dialogue with the media. This enables government messages to be delivered to the public promptly and accurately, and provides a wide range of information via the media. Furthermore, the Government expects the media to fully leverage its monitoring role, continually prompting every government department to improve its work and provide better-quality services to the community.

Macao's laws protect the rights of journalists to gather and receive news and information, and to report it, ensuring their journalistic independence.

Mass Media

Electronic Media

Macao has one free-to-air TV station, two radio stations and one cable TV station, as well as three locally based satellite TV stations.

Teledifusao de Macau (Macau Broadcasting Company, TDM) began providing public television broadcasting in 1984. Digital broadcasting commenced in 2008 and includes five free terrestrial digital broadcasting television channels: TDM Ou Mun (Channel 91), TDM Portuguese (Channel 92), TDM Information (Channel 94), TDM Sports (Channel 93), TDM Entertainment (Channel 95), one satellite television channel (Channel 96) and its website (tdm.com.mo) and the TDM app for mobile devices, and on various social media platforms such as Facebook, WeChat, YouTube, and Telegram.

TDM completed its merger with Macau Basic Television Channels Limited on 19 December 2023, with TDM as the surviving company. TDM now provides support services for residents to access basic television channels, including a total of 45 digital television channels (29 of which are also available in analogue form).

On 1 October 2023, TDM's TDM Ou Mun began broadcasting on the Guangdong Pearl River Delta TV Network (including the "Macao New Neighbourhood" in the Guangdong-Macao Intensive Cooperation Zone). Starting from 2025, viewers from across the Chinese mainland are able to watch TDM's programs, and Macau Satellite TV begins to be available in Portuguese-speaking countries in phases.

Radio Macau, a subsidiary of TDM, and the privately owned Radio Vila-Verde (Green Village) are Macao's two radio stations. Both broadcast 24 hours a day. The Radio Macau features two channels: one in Chinese, the other in Portuguese.

Macao Cable TV has been broadcasting since July 2000, and offers 93 channels (70 basic channels, 16 premium channels, five test channels, and two dedicated hotel channels); each is aired 24 hours per day. MSTV Satellite TV Company Limited – originally known as the Cosmos Satellite Television Company, which was the first operator to be granted a licence to provide

satellite television services in Macao – has offered the MSTV News Channel since January 2019, broadcasting 24 hours a day.

Macao Lotus Satellite TV Media Limited started its broadcasting service on 1 January 2009, on its Macao Lotus TV 24-hours-per-day channel.

Print Media

The history of Macao's newspaper industry can be traced back over 100 years. From 1839 to 1840, while enforcing the opium ban in Guangdong, Lin Zexu commissioned a selective translation of the English *Macao Monthly* and, for administrative purposes, published *Journal News of Macao* in Guangzhou. On 18 July 1893, Dr Sun Yat Sen and a Macanese named Francisco H. Fernandes worked together and founded *Echo Macanese*, which was published in Chinese and Portuguese. On 22 February 1897, Kang Youwei and Liang Qichao founded *The Reformer China*. After the 1911 Revolution in China, Macao's Chinese newspapers began to flourish. Several newspapers, such as *Ao Men Shi Bao* (Macao Times), *Hao Jing Wan Bao* (Oyster Mirror Evening Post), *Ao Men Tong Bao* (Macao Bulletin), and *Hao Jing Ri Bao* (Oyster Mirror Daily), were founded at this time.

Currently, Macao has 13 Chinese-language daily newspapers, which print a total of over 100,000 copies each day. Macao also has several Chinese-language weeklies.

Portuguese daily newspapers have an even longer history than the Chinese dailies. In 1822, *Abelha da China*, the first-ever daily in China, was founded and published in Portuguese. Other early-founded Portuguese papers founded in Macao include *Gazeta de Macau* (Macao Gazette), *Imparcial* (The Impartial), and *Correio de Macau* (Macao Post). Macao currently has three Portuguese dailies. There are two Portuguese-Chinese bilingual weeklies, and two English-language daily newspapers in Macao.

Newspapers and magazines published in Hong Kong, the Chinese mainland and overseas are also available in Macao. In addition, Macao residents also enjoy access to radio and TV programmes made in Hong Kong and the Chinese mainland.

Media Stationed in Macao

Xinhua News Agency, People's Daily, China News Service (CNS) and Lusa-Portuguese News Agency have branches in Macao. Other media organisations with resident correspondents in Macao include China Media Group (CMG); the State Administration of Radio, Film and Television; Wen Hui Bao (Shanghai); Southern Finance Omnimedia Group (SFC); Hong Kong Economic Journal (HKEJ); EyePress News Agency; Radio Television Hong Kong (RTHK); Television Broadcasts Limited, Hong Kong (TVB), Phoenix TV and Hong Kong Ta Kung Wen Wei Media Group Limited.

Journalists' Associations

The journalists' associations in Macao include the Macao Media Workers Association, the Macao

Journalists Club, the Macao Journalists Association, the Macao Media Club, the Macao Sports Press Association, the Macao Portuguese and English Press Association and the Macao Youth Media Association.

Government Information Bureau

The Government Information Bureau (GCS) is a bureau-level administrative entity under the supervision of the Chief Executive. It assists government departments and the media by coordinating and conducting research regarding public communication, disseminating government information and arranging media interviews. The GCS regularly publishes *Macao Magazine*, the *Macao Information* booklet and the *Macao Yearbook* in Chinese, Portuguese and English; and is gradually increasing the release of new information through new media and mobile networks.

The GCS is committed to expanding its services in social media and new media, offering a variety of information to the media and the general public, including the *Macao Gov News* mobile app, an official *Macao Gov Info* WeChat account, a YouTube channel, a Facebook page, a Telegram channel, an Instagram account, MSAR Release Weibo and WeChat accounts, and a Toutiao account Macaugscn, which is published in Macao and the Greater Bay, a WeChat audiovisual account and a Douyin account. The GCS publishes the *Macao Yearbook* and *Macao Magazine* in Chinese, English and Portuguese, and launches websites and mobile applications, allowing readers to conveniently browse related information.

Regarding promotions in the Chinese mainland: the GCS continuously seeks cooperation with influential integrated media organisations in the Chinese mainland, with a view to strengthening the promotion of news and information in the Greater Bay Area, and to better tell of Macao's role in developing the Greater Bay Area. The GCS also cooperates with Greater Bay Radio from the Hong Kong-Macao-Taiwan Programme Centre of the China Media Group on a long-term basis, including through providing assistance with organising editorial reports involving the broadcast team and the new media team, as well as the collective production of a new media series, "Visit Macao" and a special column "Macao is my Home". The articles and radio features were re-posted and published on various platforms of the Central Government and the Greater Bay Area. Furthermore, the GCS continue cooperating with the People's Daily Online in the production of "Micro Macao" video series.

Disseminating Government Information

The GCS launched self-developed systems, such as the news information submission system (E-info Submit), news information management system (E-info Management) and news information dissemination system (GovInfo Hub), thus building a reliable, safe way for the receiving and release of official MSAR Government news. This also accelerates the news release process, and strengthens the mechanism for exchanging information. Also, the GCS introduced a mechanism for the receiving and release of civil defence and automatic informational. Meanwhile, the weather alert notification service from the Meteorological and Geophysical Bureau commenced, to send messages to news reporters through instant messaging applications, and publish the messages on public websites, to help with enhancing the timeliness and effectiveness of the release of important

news from the government.

At the end of 2022, the GCS expanded the hardware and software of its information dissemination platform, which significantly enhanced the capacity of the website. Also, the structure of the GCS's website was redesigned and reconstructed to cope with greater load requirements in future. In 2024, the GCS drafted, released and assisted various departments in publishing a total of 15,519 news items (press releases, press invitations, important notices, and speeches) in Chinese, Portuguese and English, as well as 221 video clips and 534 sets of photographs. In all, 770 press releases were written, 534 press photos were taken, and 37 news videos were produced by the GCS.

The GCS's MSAR News mobile app continued providing residents with real-time policy information, official news and photos, videos, trending images and local real-time weather reports.

When there were news events, such as the Chief Executive's annual Policy Address, the question-and-answer session at the Legislative Assembly and the Chief Executive's press conference, the GCS live-streamed the events via its YouTube channel and Facebook page.

Registration of Periodicals

The Information Department of the GCS is responsible for registering newspapers, publishers and periodicals. Under the Media Registration Regulations, if a daily publication is registered but has not been published for 180 days, or if other registered periodicals have not been published for a period of one year or have been suspended for a period of one year, their registration will be cancelled. Registration of publications is free of charge.

In 2024, there were 111 publications registered with the GCS, including nine which were newly registered. Meanwhile, 11 publications cancelled their registrations during the year.

GCS Publication

Macao Magazine is published in Chinese, Portuguese and English, as the GCS's publication for promoting the MSAR to external audiences. It features various themes and features, in accordance with the editorial strategy of promoting the development of the MSAR and the Government's policies and initiatives to readers in Macao and overseas, reflecting the latest developments in the social, economic and livelihood aspects of the MSAR, to give readers an overall understanding of all aspects of Macao.

The Government Portal

The Government portal (www.gov.mo) was officially launched in December 2004. It offers a comprehensive platform for information and e-services provided by all Government departments. The portal gives the public access to information from various public administrative departments, the Legislative Assembly, courts, the Public Prosecutions Office and tertiary education institutions. Available in both traditional and simplified Chinese, Portuguese and English versions, the Government portal provides general information and updates about Macao to local residents,

tourists and the business community, and introduces various public services and their contact details. The portal's objectives are to announce government policies in a timely manner, enhance communication between the Government and the public, maintain administrative transparency, and collect public opinion.

Government Printing Bureau

The Government Printing Bureau is responsible for the publication of the *Macao Special Administrative Region Gazette* ("the Gazette"); the development and management of the *Gazette's* information dissemination platform and the "Accessible Legal Search" legal enquiry system; the production of the MSAR's policy addresses, budgets, general accounts and reports on budget implementation, public policy consultation documents, laws and regulations of Macao (in both separate and omnibus formats), any official printed matter that uses the emblem of Macao, any government forms, certificates and licences published in the *Gazette*, as well as printed materials with confidential contents or printed materials that require special security measures or close supervision; and the sale of printed materials published by governmental departments and other institutions.

The Macao SAR Gazette

Sections One and Two of the *Macao SAR Gazette* ("the Gazette") are published on every Monday and Wednesday, respectively; unless either of these days is a public holiday, in which case the pertinent section is published on the next working day. Announcements of urgent or ad-hoc matters that occur outside this schedule may be issued in a supplement or special section. Announcements and documents that must be published in Section One of the *Gazette* include:

1. Laws;
2. By-laws;
3. Legislative Assembly resolutions;
4. Administrative orders and orders approved by the Chief Executive;
5. Orders approved by principal government officials;
6. Related international treaties signed in the name of "Macao, China";
7. Results of Legislative Assembly elections;
8. The appointment of members of the Legislative Assembly, the appointment and termination of appointment of executive council members, the appointment and termination of appointment of presidents and judges at all levels of the courts and of public prosecutors, as well as other announcements of appointments and terminations of appointments under the law; and
9. Other documents that are to be announced in Section One of the *Gazette* by law.

In addition, the following announcements and documents must also be published in Section One of the *Gazette*:

1. Amendments to the Basic Law of the MSAR, proposals to amend the Basic Law, and interpretations of the Basic Law by the authorised entity;
2. National laws that apply to the MSAR, and interpretations of those laws by the Standing Committee of the National People's Congress (NPC);
3. Documents adopted by the NPC and its Standing Committee regarding the MSAR;
4. Regulatory documents adopted by the NPC's Preparatory Committee for the Macao Special Administrative Region, regarding the establishment and operation of the MSAR;
5. Documents authorised by the NPC and its Standing Committee and the central government; and orders, instructions and documents issued by the central government in accordance with the Basic Law of the MSAR;
6. Documents regarding the appointment and termination of the Chief Executive, principal government officials and the Public Prosecutor-General by the central government; and
7. The Chief Executive's annual policy address.

The following announcements and documents must be published in Section Two of the *Gazette*:

1. International treaties applicable to the MSAR;
2. Agreements on judicial mutual assistance, and mutual exemption of visa requirements by the MSAR and other countries or regions with the assistance and authorisation of the central government;
3. Judicial mutual assistance agreements signed with judicial authorities in other areas or regions in the Chinese mainland;
4. Statements and announcements made by the Legislative Assembly;
5. Statements and announcements made by the Government; and
6. Other documents that are to be announced in Section Two of the *Gazette*, by law.

Since 2000, the Government Printing Bureau has posted the complete contents of Section One and Section Two of the *Gazette* on its website. However, according to the law in force at the time, the above-mentioned announcements and documents are required to be announced in the printed version of the *Gazette*; in other words, only the paper version of the *Gazette* has legal effect, while the electronic version of the *Gazette* is for information purposes only.

With the increasing popularity of the Internet, online access to statutory information has gradually become a mainstream approach. The MSAR Government amended the related legislation, so that from 2022 onwards the *Gazette* is no longer published in printed form but solely in electronic form.

As of 31 December 2024, the Government Printing Bureau had established an online database comprising documents covering approximately 191,000 laws and regulations, international laws, executive orders and announcements for public access on Accessible Legal Search platform. The Government Printing Bureau's website recorded over 6.40 million hits in 2024, averaging over 530,000 hits per month.

Information Technology Science and Technology Committee

After the establishment of the MSAR Government, the Science and Technology Committee was established under By-law No. 16/2001. In 2023, the structure and functions of the Science and Technology Commission were re-established under By-law No. 14/2023. According to By-law No. 14/2023, the Science and Technology Committee is an advisory body to the MSAR Government, and its purpose is to advise the Government on the formulation of policies and plans to promote the development of technological innovation industries and scientific research.

The Committee is chaired by the Chief Executive and vice-chaired by the Secretary for Economy and Finance; the other members include:

- The Secretary for Social Affairs and Culture or his representative;
- The Director of the Economic and Technological Development Bureau;
- The Chairman of the Executive Committee of the Science and Technology Development Fund;
- The Chairman of the Administrative Management Committee of the Monetary Authority of Macao;
- The General Secretary of the Manpower Development Committee;
- The Director of the Pharmaceutical Administration Bureau;
- The Rector of the University of Macau;
- The Rector of the Macao Polytechnic University;
- The Rector of the Macau University of Science and Technology;
- The President of the Board of Directors of the Macau Productivity and Technology Transfer Center (CPTTM), and
- A maximum of 25 experts, scholars and community members who have excelled in the fields of science, technology, innovation or related industries.

The Economic and Technological Development Bureau is responsible for providing administrative and technical support for the Committee.

The Science and Technology Development Fund

In 2004, the MSAR Government promulgated By-law No. 14/2004 to establish the Science and Technology Development Fund, and in 2021, the Government amended this By-law through By-law No. 1/2021.

According to By-law No. 1/2021, the Science and Technology Development Fund is a public corporate institute with administrative and financial autonomy and with its own property. It is supervised by the Secretary for Economy and Finance.

The Science and Technology Development Fund (FDCT) aims at aligning its efforts with the MSAR's technological development policies, and providing funds to various projects that promote Macao's capacities and competitiveness in scientific research and innovation. In alignment with the FDCT's objectives, the following projects are sponsored:

1. Projects which help deepen and intensify technical knowledge;
2. Projects which help improve productivity of corporations and strengthen their competitiveness;
3. Projects which are beneficial to developing the research, promotion and innovation of Macao industries;
4. Projects which help motivate transformation of research outcomes;
5. Projects which help motivate external technological cooperation;
6. Technological transformation projects that prioritise socio-economic development; and
7. Patent applications.

FDCT is responsible for the related work on science and technological rewards in Macao SAR, and can recommend that research institutes and staff in the MSAR apply for relevant rewards in response to invitations issued by the Chinese mainland or renowned science and technological reward-awarding institutions in other countries or regions. Besides, FDCT also provides funding to scientific research platforms based in Macao SAR.

Macao Post and Telecommunications Bureau

Since its foundation on 1 March 1884, the Macao Post Office – which in 2017 was renamed Macao Post and Telecommunications Bureau (CTT) – has operated as a provider of postal services, complying with international conventions. On the same day, the first Macao stamp, titled “Crown”, entered into circulation. In fact, Macao's postal service history dates back a century earlier, to 1798, when sea mail services officially began.

Many new services have been introduced since the establishment of Macao Post and Telecommunications Bureau. Alongside traditional postal services and Macao Postal Savings, established in 1917, Macao Post took over the operation of telephone and wireless telegraph services in 1927. In response to social development, some of these services were transferred to other entities or public departments. In 1981, the Companhia de Telecomunicacoes de Macau (CTM) took over the operation of telecommunications. In 2000, the Post Office's role as the supervisory body for telecommunications services was transferred to the former Bureau of Telecommunications Regulation (DSRT).

On 19 December 2016, the MSAR Government issued By-law No. 29/2016 – Amendment to Regulation of Organisation of Postal Services, to rename Macao Post as the Macao Post and Telecommunications Bureau (CTT) and merge it with DSRT, with effect from 1 January 2017. As a bureau-level administrative entity with legal personality, the CTT enjoys autonomy over administration, finances and property, and performs the function of a credit institution. It aims to

provide postal public services, and regulate, monitor, promote and coordinate any activity related to the telecommunications industry in Macao. It is under the supervision of the Secretary for Transport and Public Works.

Postal Services

To promote the development of e-commerce and enhance the customer experience, the Macao Post and Telecommunications Bureau installed the first batch of e-locker self-service mailing machines in Nova Taipa Post Office and Mong Ha Post Office. There are plans to install more e-locker self-service mailing machines at the Taipa Ferry Terminal Self-Service Post Office and the EMS Mails Collection Centre. Furthermore, the Taipa Ferry Terminal Post Office (located in the Arrival Hall) will be upgraded to a 24-hour self-service postal centre, with a variety of self-service machines to provide convenient round-the-clock postal services.

In 2024, the volume of local mail decreased by 11 percent compared to 2023, reflecting the widespread adoption of electronic communication technologies in social and economic activities, as well as the continued promotion of electronic services by public utilities and financial institutions.

Regarding international mail, in 2024 the outbound international surface mail decreased by 15 percent compared to 2023, while international airmail increased by 22 percent. Inbound international surface mail remained steady compared to 2023, while inbound international airmail decreased by two percent. The main destinations for outbound mail were the Chinese mainland, Hong Kong, the United States, Portugal, the Taiwan region, the United Kingdom, Canada, Australia, Singapore and Germany. The primary sources of inbound mail were Hong Kong, the Chinese mainland, Japan, Portugal, the Taiwan region, the United Kingdom, Singapore, the United States, Jersey Island, and the Netherlands.

Regarding registered mail, in 2024 the volume of local mail decreased by one percent compared to 2023. The volumes of outbound and inbound international airmail increased by 50 percent and 136 percent, respectively. The volumes of outbound and inbound international surface mail decreased, by approximately one percent and 10 percent, respectively.

EMS and Postal Parcels

With Macao residents traveling across the border and shopping more frequently, both the outbound and inbound mail volumes for EMS and postal parcels significantly decreased compared to 2023.

The volumes of EMS outbound and inbound mail in 2024 decreased by 19 percent and 15 percent, respectively. The main destinations of EMS items were the Chinese mainland, Hong Kong, the Taiwan region, the United States and Japan. The main sources of EMS items were Japan, the Chinese mainland, the Taiwan region, Hong Kong and Canada. Currently, the EMS covers about 200 countries and regions.

Regarding postal parcels, in 2024 the volume of outbound and inbound surface mail decreased by 31 percent and 17 percent year-on-year, respectively; the volume of outbound and inbound airmail also decreased by 25 percent and 13 percent, respectively, compared to 2023. The overall volumes of outbound and inbound postal parcels decreased by 28 percent and 14 percent, respectively,

compared to 2023. The main destinations for outbound parcels were the United States, Australia, Canada, the Taiwan region, and Japan; while the main sources of inbound parcels were Japan, the Taiwan region, Germany, the United States and Australia.

Secure Electronic Postal Services

The Secure Electronic Postal Services has developed a solid platform for electronic deliveries. Services launched include provision of Postal Registered Electronic Mail, Postal Electronic Mail, e-bill services, electronic version of Delivery Advice of EMS mail or parcels via SEPBox and an e-locker registration service. In response to the growing demand for convenient electronic services, users can now access their Safe Electronic Post Box through “Macao One Account” or “Business & Associations Platform”. Individual users can also authorise the CTT to register for the Safe Electronic Post Box with information on “Macao One Account”, completing the registration process on the “Macao One Account” without having to visit a counter or information kiosk in person.

In addition, the Safe Electronic Post Box (SEPBox) service registration points cover organisations including the Social Security Fund, Municipal Affairs Bureau, various post office branches under the Macao Post and Telecommunications Bureau and eSignTrust Registration Authority.

Philately

In 2024, the CTT issued 13 sets of stamps and one set of labels, with 13 themes. These included philatelic products for the “25th Anniversary of the Establishment of the Macao Special Administrative Region”, the “25th anniversary of the establishment of the Macao Garrison of the Chinese People’s Liberation Army”, the “140th Anniversary of Macao Post and Telecommunications”, “Macao Bridge” and the “50th Anniversary of the Inauguration of Governor Nobre de Carvalho Bridge”. Additionally, the release of philatelic products featuring historical, cultural, and local characteristics of Macao – such as “Collections of the Palace Museum”, “Macao Intangible Cultural Heritage” and “Macao Nature Trails” – further enriched the selection of Macao’s postal products.

In addition to stamp issues, the CTT also launched several philatelic products, including the thematic pack “Chinese Zodiac (Label Stamps)” album, the thematic pack “25th Anniversary of the Establishment of the Macao Special Administrative Region”, and the “2024 Annual Album”. Prepaid postcards featuring designs of Macao A-Ma Cultural Village, Our Lady of Carmel Church, Taipa Houses and Pak Tai Temple were also popular.

The Chinese Zodiac philatelic series has always been popular among collectors, and welcomed a new highlight in 2024. The CTT collaborated with China Post and Hongkong Post, to jointly issue philatelic products featuring the Year of the Loong. This included the first-ever joint issue of a souvenir sheet and commemorative envelope by the three regions, sold in thematic packs.

Regarding philatelic gifts, the CTT issued a gift set featuring a *gaiwan* (Chinese lidded bowl) and stamps to mark the Year of the Loong, containing a set of ceramic *gaiwan* and stamp packs with “Spring” as the theme.

The CTT specially launched the “Philatelic Gift Promotion for Dual Celebrations”, to show appreciation for the continued support of philatelists.

To commemorate and celebrate special occasions, the CTT offered 13 commemorative postmarks in 2024. Additionally, following requests by two organisations, the CTT produced exclusive customised presentation packs for them.

In terms of philatelic exhibitions, the CTT participated in the “China 2024 Asian International Stamp Exhibition” held in Shanghai, to promote Macao stamps and enhance the image of Macao’s philatelic products in the international philatelic market. During the exhibition, the CTT, together with the Macao Philatelic Association, signed an agreement with the Fédération Internationale de Philatélie (FIP) for the Macao 2026 Specialized World Stamp Exhibition, marking the official commencement of preparations for this high-profile philatelic event.

Caixa Economica Postal

Caixa Economica Postal (Postal Savings Office or CEP) is a credit institution operated by the CTT that serves as the CTT’s cashier. It also provides a wide range of bank related services, such as credit facilities, electronic payments, currency exchange services and the Easy Transfer system for the public.

In terms of credit facilities, CEP chiefly provides civil servants and employees of public services and private companies who sign an employee credit service agreement with guaranteed short-term credit. In 2024, CEP approved loans totalled nearly 190 million patacas.

CEP’s electronic payment platform provides an online payment service for the public. The public can also apply for or settle payments of various government services via this platform in real time. In 2024, approximately 90,000 payment transactions were settled.

Furthermore, CEP provides currency exchange services for 17 currencies, including Macao Patacas, the Hong Kong Dollar, Renminbi, US Dollar, Euro and Japanese Yen.

With the implementation of the Easy Transfer system, the Caixa Economica Postal continued providing customers with convenient local interbank transfer services in 2024.

The Credit Data Platform was officially launched in 2023. As of 1 January 2024, 30 participating banks in Macao are required to apply for personal credit reports through the platform, with customers’ consent, in accordance with the requirements of the Monetary Authority of Macao. In 2024, the platform received approximately 85,000 applications for personal credit reports.

eSignTrust

As the only authentication entity approved by the Government, eSignTrust has been issuing electronic signature certificates to citizens, corporations and government departments, providing them with online identity authentication services and strengthening the authentication quality of electronic documents. In accordance with Law No. 5/2005 Electronic Documents and Digital Signatures, an electronic document signed with electronic certification is legally binding.

The “eSignCloud” function allows users to perform single or bulk electronic signatures, meeting various usage needs and providing a convenient and flexible way to handle business tasks.

By the end of December, the total number of valid electronic signatures had increased by around two percent year-on-year. In terms of the types of certificate services, the greatest year-on-year increase was for qualified certificates, up by around seven percent; followed by “eSignCloud”, which increased by around one percent. There was a year-on-year decrease of around five percent for standardised certificates.

Comparing by user category, the individual and institutional users of qualified certificates increased by 22 percent and 10 percent, respectively, mainly driven by legal compliance requirements. Individual and institutional users of “eSignCloud” also recorded year-on-year increases, of about 41 percent and 16 percent, respectively, mainly driven by trademark registration applicants and electronic customs declaration applications from external trade operators. However, government users of “eSignCloud” experienced a year-on-year decrease of around 13 percent.

In 2024, CTT continued approving internationally recognised WebTrust for Certification Authorities, and acquired the WebTrust Seal for seven consecutive years.

In 2024, the cumulative number of “eSignCloud” signings was approximately 458,500. There were a total of 1,194 registrations and renewals for the electronic certification “eSignCloud” service (938 new applications and 256 renewals). The total usage of eSignTrust via “Macao One Account” was approximately 24,500 times, with personal “eSignCloud” certificates processed through “Macao One Account” accounting for 86.9 percent.

Telecommunications Services

Fixed-network and External Telecommunications Services

The fixed public telecommunications network and service licences held by CTM and MTEL Telecommunication Company Limited, as well as the Interim Review of the Public Telecommunications Service Concession Agreement held by CTM, expired on 30 September 2024. Given that the Government is considering the future development of fixed network infrastructure, and to ensure the stable provision of public telecommunications services, the Government decided to extend the validity of the two fixed public telecommunications network and service licences, as well as the concession contracts, until 30 September 2025. Furthermore, new clauses were added to the contract renewals, incorporating CTM’s fixed telecommunications underground cable network, related fixed telephone service facilities, and associated assets as public property of the Special Administrative Region. This will allow the Government to possess a complete telecommunications infrastructure in future.

At the end of 2024, there were 81,260 fixed-network lines in Macao, along with 436 public payphones on the Macao peninsula and on the two islands. These public phones can also be used to make international direct calls (IDD). Currently, callers in Macao can make IDD calls to 241 countries and regions.

Public Mobile Telecommunications Services

At the end of 2024, there were four mobile telecommunications network operators in Macao,

namely the Companhia de Telecomunicações de Macau (CTM), China Telecom (Macau) Company Limited, Hutchison Telephone (Macau) Company Limited and SmarTone Mobile Communications (Macau) Limited, offering 3G and 4G telecommunications services. The CTM and China Telecom (Macau) Co Ltd also provide 5G services. SmarTone Mobile Communications (Macau) Limited ceased providing mobile telecommunications services on 11 November 2024.

In July 2022, the MSAR Government extended the 3G licences of the four mobile operators for two years, until 4 June 2025, and the 4G licences for five years, until 23 June 2028.

The Government issued 5G licences to CTM and China Telecom (Macau) Co Ltd in November 2022, with a term of eight years effective from 8 November 2022. The licensed companies launched their services in mid-November 2022. By the end of 2024, the outdoor coverage rate of the 5G network in Macau had exceeded 90 percent. Currently, mobile services in Macao are 5G-based, with the numbers of 4G and 3G users gradually declining.

At the end of 2024, there were 1,448,713 mobile telecommunication users, with the per capita mobile penetration rate at 211 percent ^(Note 1).

Mobile Communication Service Information		
Year	No. of mobile phone users	No. of rechargeable mobile phone cards
2020	832,949	788,268
2021	880,785	393,962
2022	925,809	287,407
2023	1,000,449	373,677
2024	1,042,680	406,033

Internet and Broadband Services

At the end of 2024, there were 214,928 broadband subscribers, approximately 1.5 percent more than in 2023. Among them, 192,989 were residential broadband service subscribers, representing approximately 94 percent of all households ^(Note 2).

Moreover, the urban wireless broadband network project commenced in 2009, and began providing services to residents and tourists in September 2010. As at the end of 2024, there were 178 WiFi Go service spots, and over 467 million successful connections had been recorded.

In 2017, the CTT allowed licensed internet service providers (ISPs) to install outdoor Wi-Fi hotspots and provide services to the public. To further expand the coverage of free Wi-Fi in Macao, the “FreeWiFi.MO” plan was launched in December that year, aiming to encourage institutions in Macao to provide free Wi-Fi services to residents and tourists. The plan gained support and

participation from organisations, which include Internet service providers, government departments, hotels, hospitals, shopping malls, banks, on-call taxis, public utilities and the beverage industry. At the end of 2024, there were 587 locations providing the service.

After Law No. 13/2019 – the Cybersecurity Law was promulgated on 22 December 2019, the CTT, as a designated cybersecurity monitoring entity, has the responsibility of monitoring the private operators of critical infrastructure in four categories: regulating audio-visual broadcasting, operating fixed or mobile telecommunication networks, and providing Internet connection services, wholly owned public corporations, and non-profit public legal bodies for managing activities limited to scientific and technological areas. In 2024, the CTT regulated 31 entities, of which four were granted exemptions. In addition, the CTT continues to supervise effective implementation of the real name registration and preservation of records of changes of network addresses.

Television Services

Regarding terrestrial pay television services, in April 2019, the Government endorsed the renewal of the non-franchised contract for Macao Cable TV for five years. Subsequently, to ensure the continuity of terrestrial pay television services, the service term was further extended to 30 September 2025.

The Government promulgated a new executive order in July 2014, exempting satellite television receivers with diameters of less than three meters from approval by the Government, provided that the receivers are used for receiving television channels for private viewing. This enables the public to conveniently access television programmes via satellite signals.

Registration and Management of Internet Domain Names

Following the expiry of the term of the University of Macau to manage and register the domain “.mo” for the Macao SAR, the Government established the new Macao Network Information Centre in March 2011. In 2014, the Macao Network Information Centre introduced services for Chinese and Portuguese domain names for the Internet country code “.mo” and supported electronic payment, optimisation of the application procedures and amendment of domain names, to provide more diverse, better quality domain name services. The IPv6 and “.mo” domain name services were introduced in 2015 and 2018, respectively, further advancing the development of domain name services in Macao.

Laws and Regulations

The Legal regime of radiocommunications came into effect on 1 January 2025, replacing Decree-Law No. 18/83/M of 12 March and the Decree-Law no. 48/86/M (Administrative Regime of Radiocommunication Services) of 3 November, as well as parts of the Decree-Law No. 29/94/M of 14 June. The bill mainly covers the licensing regime of the radiocommunication networks and stations, the homologation and sales licences of radiocommunication equipment, the licensing regime of radio operators, as well as the establishment of the punishment regime for violations of the bill and the amounts of penalties for infringements. On the other hand, to cope with the entry into force and implementation of the law, a complimentary administrative regulation will be

elaborated, to regulate the legal regime for radiocommunications. Also, by Dispatch of the Chief Executive, the amounts of the fees applicable to the provision of radiocommunication services within the scope of the execution of this law and its complementary administrative regulation will be set and updated, along with the update to the employee badge of CTT staff who perform supervisory duties as required by this law.

By-law No. 13/2024 on the installation and operation regime for data centres officially came into effect on 1 April 2024. Since then, investors interested in establishing data centres can submit applications to the CTT. Upon obtaining approval from the Chief Executive, they can proceed with the establishment and operation of data centres.

Note 1: The calculation was based on a figure of 688,300 from the 2024 population census as reported by the Statistics and Census Service.

Note 2: According to the results of the 2024 population census published by the Statistics and Census Service, there were 205,000 households at the end of the year.



Statistical Enumerators





The Statistics and Census Service compiles and publishes around 240 sets of statistical data annually, covering areas such as population, society, and the economy, for reference by all sectors of the community. Some of this data is regularly collected from business entities, households, and visitors by the Service's enumerators, who travel throughout the city, diligently gathering information according to the requirements of each survey. The quality of every statistical survey and official statistical data relies on the support and cooperation of respondents. Statistics are collected from the public and used for the public; accurate data provides a true reflection of people's livelihoods and benefits both Macao residents and the development of all sectors.