

## Overview

Hong Kong has one of the most sophisticated and successful telecommunications markets in the world. This has been an important factor in Hong Kong's development as a leading business and financial centre. In 2016, the gross output of the telecommunications sector amounted to HK\$93 billion and employed around 20 100 persons.

All sectors of Hong Kong's telecommunications market have been liberalised with no foreign ownership restrictions. The government's objectives are to provide a level playing field in the telecommunications market and ensure that consumers get the best services available in terms of capacity, quality and price.

### The Communications Authority

The Communications Authority (CA) is an independent statutory body established under the Communications Authority Ordinance (Cap. 616) on 1 April 2012, comprising 10 non-officials from various sectors of the community and two public officers. The CA is a unified regulatory body for the broadcasting and telecommunications industries in Hong Kong. It regulates the broadcasting and telecommunications industries in accordance with the Broadcasting Ordinance, Telecommunications Ordinance, Communications Authority Ordinance, Broadcasting (Miscellaneous Provisions) Ordinance, Trade Descriptions Ordinance and Competition Ordinance. It also enforces the Unsolicited Electronic Messages Ordinance.

The Telecommunications Affairs Committee is set up under the CA to offer advice and report to the CA on relevant telecommunications matters.

The Office of the Communications Authority (OFCA), the CA's executive arm and secretariat, helps the CA administer and enforce the relevant ordinances governing the broadcasting and telecommunications industries.

### Local Fixed Carrier Services

The local fixed carrier services market is fully liberalised. There is no pre-set limit on the number of licences issued, nor deadline for applications. Furthermore, there is no specific requirement on network rollout or investment. The level of investment is determined by the market.

As at November 2017, there were 27 licensees permitted to provide local fixed carrier services on a competitive basis. They are PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited, HKBN Enterprise Solutions Limited, WTT HK Limited, HGC Global Communications Limited, Hong

Kong Broadband Network Limited, Twnogas Telecommunications Fixed Network Limited, ComNet Telecom (HK) Limited, TraxComm Limited, HKC Network Limited, Hong Kong Cable Television Limited, Reach Networks Hong Kong Limited and Reach Cable Networks Limited, Telstra International HK Limited and Telstra International Limited, Verizon Hong Kong Limited, SmarTone Communications Limited, Vodafone Enterprise Global Network HK Limited, Hong Kong Telecommunications (HKT) Limited, China Mobile Hong Kong Company Limited, 21 ViaNet Group Limited, NTT Com Asia Limited, Equinix Hong Kong Limited, China Telecom Global Limited, Big Big Channel Limited, PCCW Global (HK) Limited, Superloop (Hong Kong) Limited, China Unicom (Hong Kong) Operations Limited, Village Telephone Limited and First Champion Limited.

As a result of open competition in the local fixed carrier services market, the active network rollout by fixed carriers since 1995 and the Government's impetus to encourage further network rollout by the withdrawal of mandatory Type II interconnection policy at the end of June 2008, 88.4 per cent and 79 per cent of residential households were able to enjoy a choice of at least two and three local fixed networks respectively as at March 2017.

Fixed-line users can make an unlimited number of calls within Hong Kong on payment of a fixed monthly charge. With the emergence of new technologies, Internet protocol telephony services are also available in the market. Further, under the unified carrier licence jointly held by PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited, the licensee has a universal service obligation to provide a good, efficient and continuous basic service, including the provision of public switched telephone services to consumers anywhere in Hong Kong within a reasonable period of time.

As at September 2017, there were around 4.2 million fixed lines, including about 2.33 million lines for residential customers. The telephone density was about 56 per cent by population or 92 fixed lines per 100 households, which was among the highest in the world.

Local fixed carriers are required to facilitate fixed number portability which enables consumers to switch to another local fixed operator without having to change their telephone numbers.

### **Fixed Broadband Services**

Fixed broadband Internet access services are very popular in Hong Kong. With the increased competition and coverage of broadband service using asymmetric digital subscriber line (ADSL), fibre-to-the-building (FTTB)/fibre-to-the-home (FTTH), hybrid fibre coaxial cable and other technologies, broadband networks cover virtually all commercial buildings and households. As at September 2017, there were 227 Internet service providers licensed to provide broadband services, and about 2.64 million registered customers using fixed broadband services. Fixed broadband services are currently available at speeds up to 10 Gbps (Gigabits per second). In the residential market, over 92 per cent of the households are using fixed broadband service. Internationally, Hong Kong's fixed broadband penetration rate and average broadband speed are among the highest in the world. According to the *State of the Internet 1st Quarter, 2017 Report* published by the Internet content delivery provider Akamai, Hong Kong has an average peak connection speed of 129.5 Mbps (Megabits per second) which is one of the highest in the world.

Operators have been vigorously rolling out Wi-Fi networks. As at November 2017, there were 48 594 public Wi-Fi hotspots in the city and the number continues to grow, and free Wi-Fi services were available to the public in 636 government premises.

### **External Telecommunications Services**

As at November 2017, there were 258 licensees authorised to provide external telecommunications services (ETS) in Hong Kong.

International Direct Dialing (IDD) service to most countries and regions of the world is available. In 2016, the volume of outgoing and incoming traffic for telephone calls were 7 494 million minutes and 1 659 million minutes respectively.

Competition has resulted in a substantial reduction in IDD call rates and improved quality of services.

### **External Telecommunications Facilities**

As at November 2017, there were 43 licensees permitted to operate either external cable or non-cable based facilities for the provision of external telecommunications services.

Hong Kong adopts the open sky policy in regulating the provision of satellite services. Satellite-based telecommunications and television broadcasting services are provided via a multitude of satellites in the region with around 230 satellite earth station antennas operated by a number of fixed carriers and broadcasters.

As a major telecommunications and internet hub in the region, Hong Kong has eight submarine cable landing stations and is connected to 11 regional and transcontinental submarine cable systems. It is also connected to the Mainland via 20 overland cables. As of June 2017, the total equipped capacity of external telecommunications facilities was over 52 700 Gbps.

### **Mobile Services**

Competition in public mobile services is vibrant. Currently, there are four mobile network operators, namely, China Mobile Hong Kong Company Limited, Hong Kong Telecommunications (HKT) Limited, Hutchison Telephone Company Limited and SmarTone Mobile Communications Limited, providing a wide range of public mobile services. The availability of mobile number portability service since March 1, 1999 has contributed to promoting effective competition among the mobile network operators as it allows customers to retain their telephone numbers when they switch to another mobile network operator.

In September 2017, the number of mobile service subscribers was 18.25 million, representing one of the highest penetration rates in the world at about 247 per cent. Among these subscribers, 16.76 million were 3G/4G service customers.

Other than basic voice services, mobile data services are very popular among consumers. As at September 2017, local mobile data usage recorded a surge to 28 296 Terabytes (i.e. 28 295 964 Gigabytes), or an average of 3 829 Megabytes per capita. This represents a growth of 1.24 times in the mobile data usage over the same period in 2016 and 1.51 times over the same period in 2015.

In addition to 3G services, all four mobile network operators have deployed 4G services utilising Long Term Evolution (LTE) technology. This has enabled mobile service subscribers to enjoy data downlink speeds of up to 600 Mbps. With a wide range of high-speed mobile data services available in the market, subscribers are able to download and upload large files via the Internet and enjoy faster and better quality video-streaming and web-browsing on mobile devices.

**Office of the Communications Authority  
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