

# The Development of 5G Services in Hong Kong

Telecommunications Users and Consumers Advisory Committee  
28 December 2021



# Summary of 5G Spectrum Assignment 2019 to 2021

2019 to 2020 : Assigned **1 980 MHz** of new **5G** spectrum in total

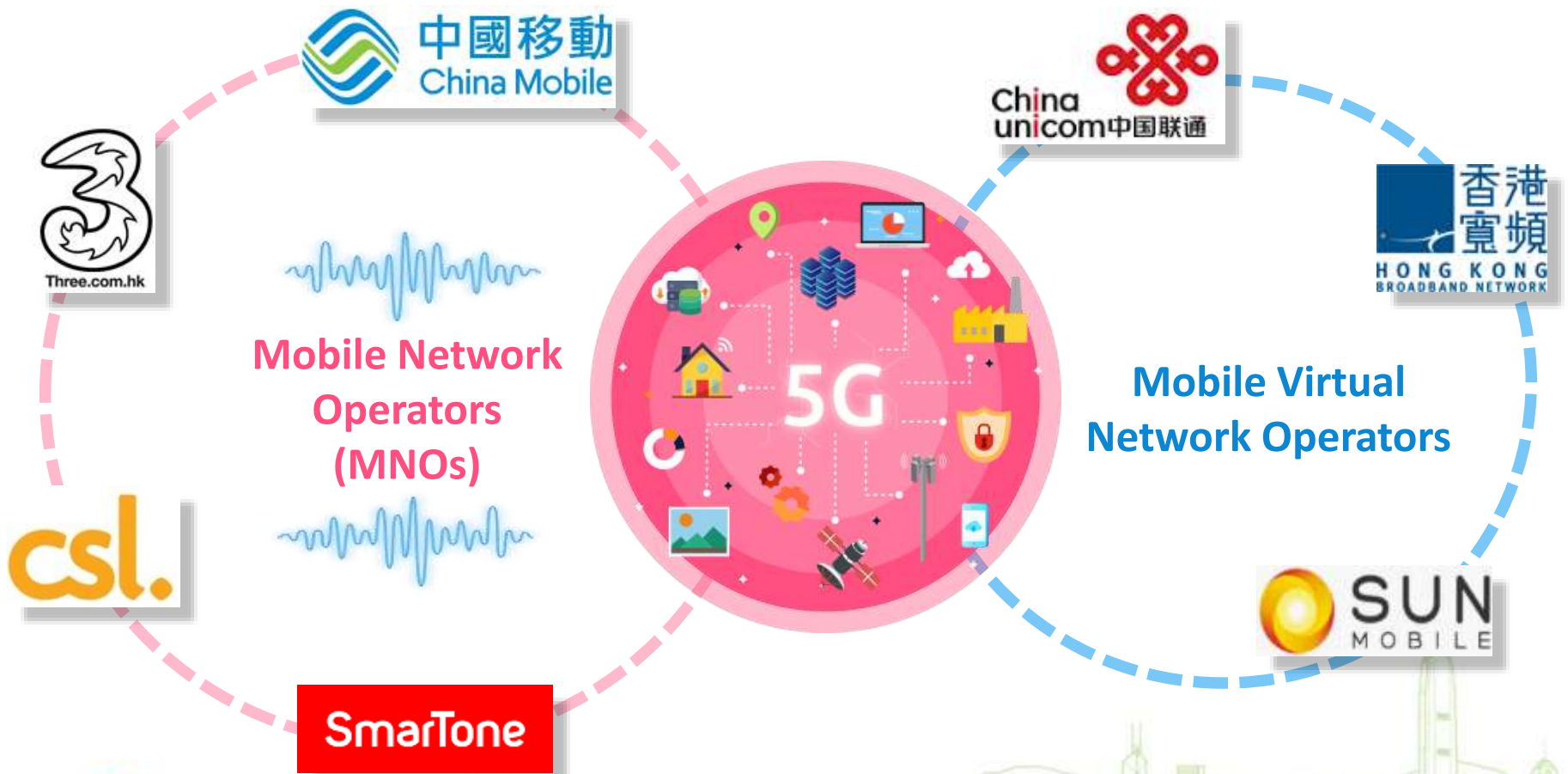
3.3 GHz Band (100 MHz)	3.5 GHz Band (200 MHz)	4.9 GHz Band (80 MHz)	26/28 GHz Band (1200 MHz)	26/28 GHz Band (400 MHz)
Indoor use only	For provision of territory-wide public mobile services			Localised wireless broadband services (shared spectrum)



October 2021 : Conclusion of the auction for 150 MHz of new **5G** spectrum for provision of territory-wide public mobile services

700 MHz Band (70 MHz) Expected to be assigned in 2022	4.9 GHz Band (80 MHz) To be assigned in end Dec 2021
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# Existing 5G Service Providers in Hong Kong



# Overview of 5G Services in Hong Kong



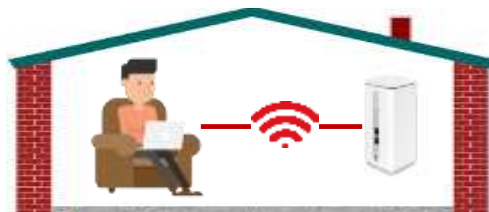
## 5G Mobile Services

Enhanced mobile broadband services for improvement of user experience



## 5G Internet of Things

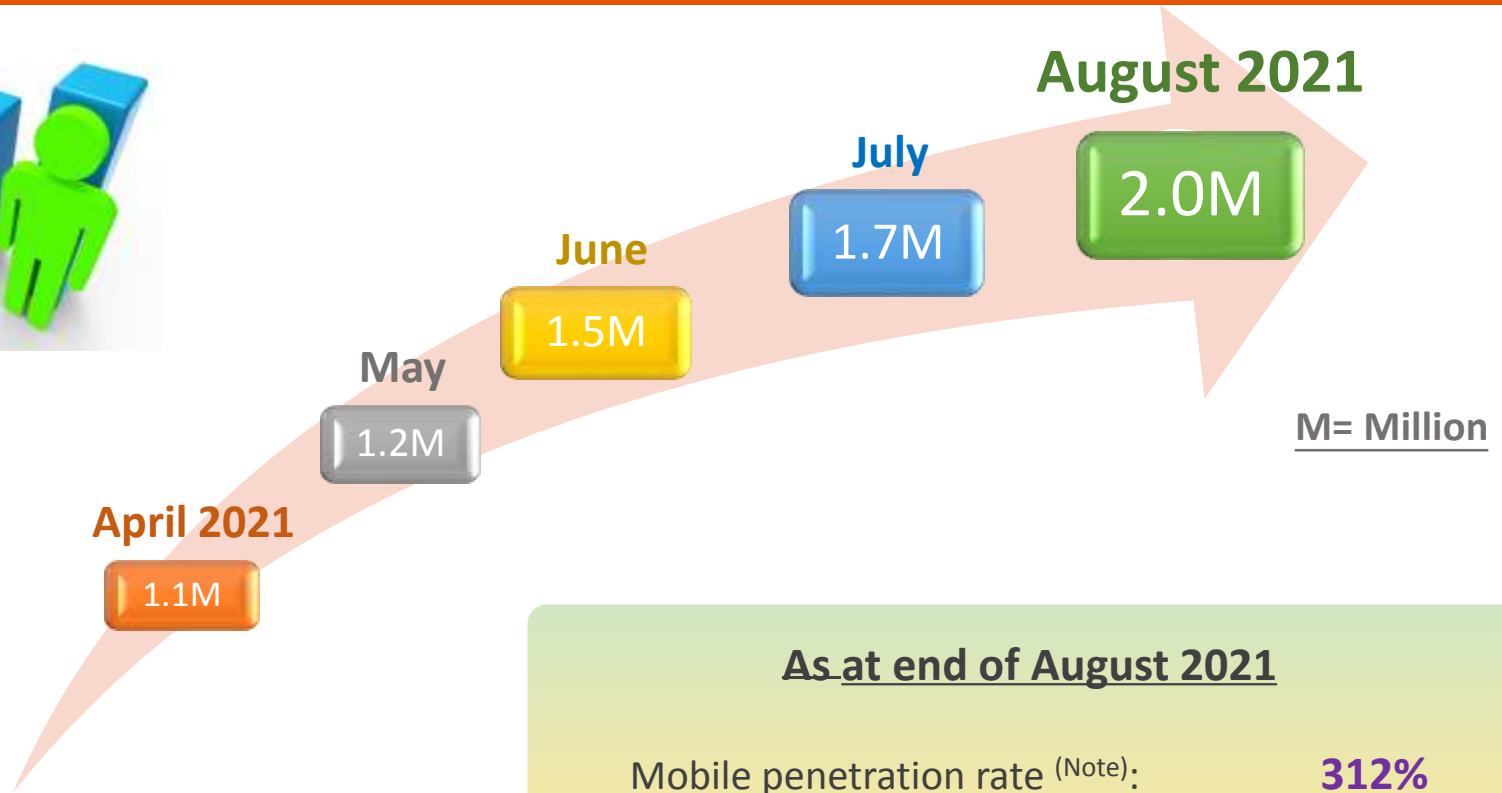
5G communications platforms enabling smart devices to exchange and process data



## Home Broadband Services Powered by 5G

Home broadband services supported by 5G mobile networks and with the use of 5G routers

# Growth in Number of 5G Subscriptions in Hong Kong



**April 2020: 5G Services Launched**

**As at end of August 2021**

Mobile penetration rate <sup>(Note)</sup> :	<b>312%</b>
5G penetration rate:	<b>27%</b>

(Note : Machine-type connections excluded)



# 5G Network Coverage and Performance



Mobile Network Operators  
launched 5G services respectively from 1 April 2020

After 1.5 years



## 5G network coverage

Over 90% population coverage



All local MTR stations



Major shopping malls, core business areas and densely populated areas



Hong Kong's 5G network coverage  
ranked first globally

### OPENSIGNAL



Average download  
speed

134.8 Mbps



Average  
upload speed

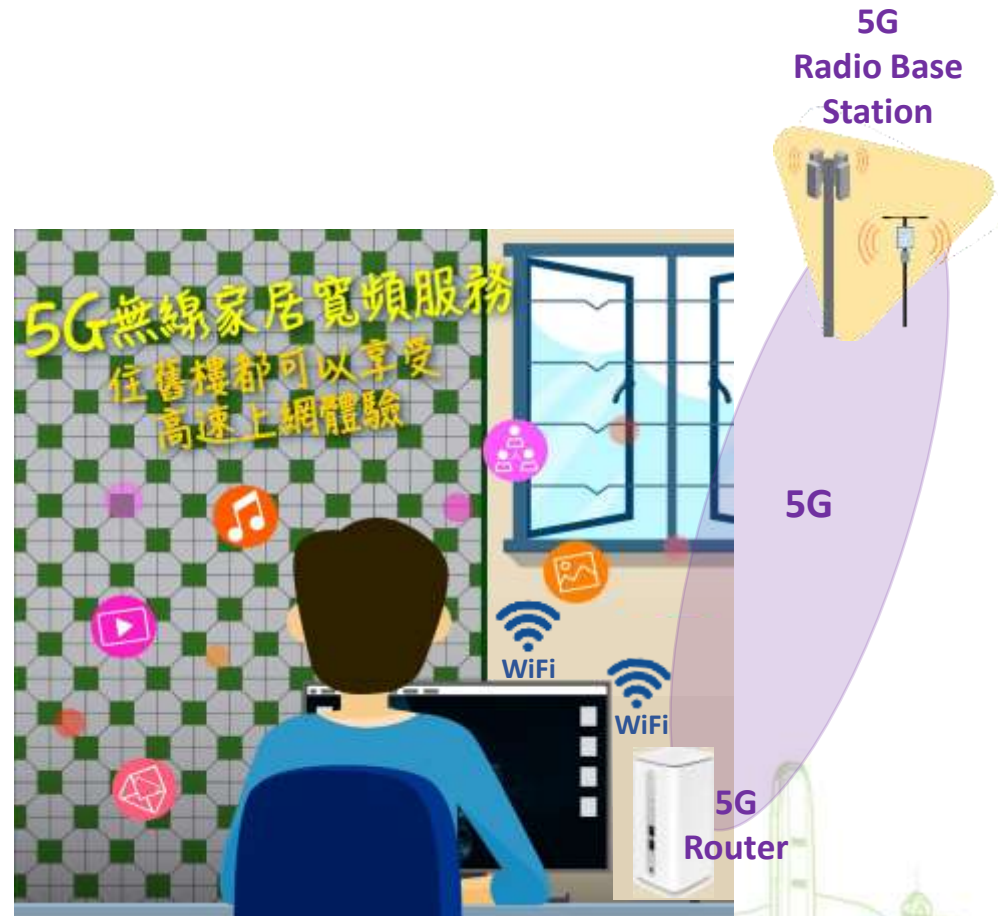
21.5 Mbps

# Home Broadband Services Powered by 5G

Over 90% of the population is already covered by 5G mobile networks

Some old tenement buildings do not have high speed broadband services supported by fibre-to-the-building (FTTB) or fibre-to-the-home (FTTH) technology

Residents may consider subscribing to wireless home broadband services supported by mobile networks as an alternative to the traditional fixed home broadband services



# How to obtain 5G coverage information?

## MNOs



Browse MNOs' webpages for coverage information



Contact MNOs direct

## Information Provided by Third Parties



Coverage maps provided by some mobile apps in the market



Seek advice from friends and relatives using 5G services



<https://www.5g.gov.hk/en/what-is-5g/coverage.html>

## User Experience

Actual speed may vary due to a number of factors, such as:

number of customers using the network at the time, network traffic, devices used by the customers, location of the customers, frequency bands used, and network settings, etc.





# How to choose the right 5G mobile phone?

## Support for 5G Services in Hong Kong



5G handset models available in the market (especially those sold in overseas markets or overseas online shops) may not support all the technical features and functions of local 5G networks and services

## Whether All the SIM Card Slots can Support 5G Connectivity at the Same Time



[https://www.ofca.gov.hk/en/consumer\\_focus/guide/general/selection\\_of\\_5g\\_handsets/index.html](https://www.ofca.gov.hk/en/consumer_focus/guide/general/selection_of_5g_handsets/index.html)

## Support for 5G Frequency Bands in Hong Kong

5G Bands	Frequency Bands
n1	1.9 – 2.2 GHz
n78	3.3 GHz and 3.5 GHz
n79	4.9 GHz

# Examples of 5G Applications

## Detection of unauthorised access to tunnel restricted area



## Inspection of remote radio base stations by drones



## Remote medical training and consultation



# Better 5G User Experience

As the MNOs deploy more spectrum for providing 5G services and continue to roll out their 5G networks to improve coverage, it is expected that 5G user experience will continue to improve



Upon availability of mobile networks and user equipment supporting millimetre wave in the high frequency band (26/28 GHz) in the market, mobile phone users will be able to use 5G services supported by a larger bandwidth, thereby getting a faster and smoother 5G experience and enjoying more innovative services



# Thank you

