



Promoting the provision of fixed broadband services to underserved areas

**Telecommunications Users and Consumers Advisory Committee
30 March 2017**



Underlying regulatory regime, market landscape & challenges

Underlying Policy & Regulatory Regime

Fully liberalised market

- No preset limit on no. of licensees
- No foreign ownership control
- No government funding or subsidisation



Encourage effective competition

- Facilities-based competition
- Network coverage, deployment technology & service charges are basically commercial decision of operators
- Technology neutral

Unified Carrier Licence

Fixed Broadband Market in Hong Kong

Internet Service Providers

26 Local fixed carriers

199 Service providers



Household Broadband Service Price



Monthly Charge ³ (HK\$)	100 Mbps	500 Mbps	1Gbps
	159	189	216



International Ranking



One of the fastest fixed broadband service in the world
Global ranking: **4¹**



According to press release of Fibre to the Home Council Europe -
Global FTTH ranking: **5²**



Note 1: Extracted from the “State of the Internet 4th Quarter, 2016 Report” published by Internet content delivery provider Akamai in March 2017

Note 2: Please refer to:

http://www.ftthcouncil.eu/documents/PressReleases/2016/PR20160217_FTHranking_panorama_award.pdf

Note 3: Based on the most competitive service packages offered in the market

Fixed Broadband Market in Hong Kong (2)

Household Broadband



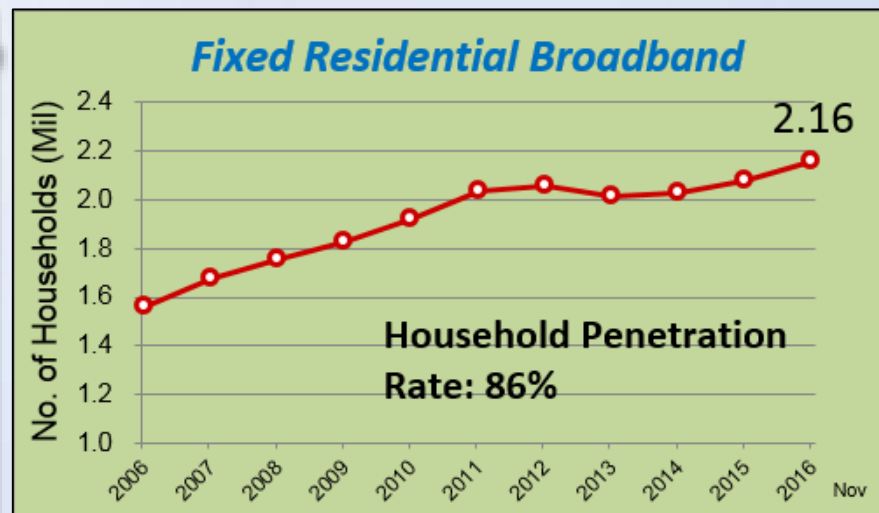
No. of registered customers: 216 mil

Penetration rate: 86%

FTTH/FTTB penetration rate: 72%

Coverage:

90% users choose broadband service plans with speed of 10Mbps or more (98% choose plan with 1.5Mbps or more)



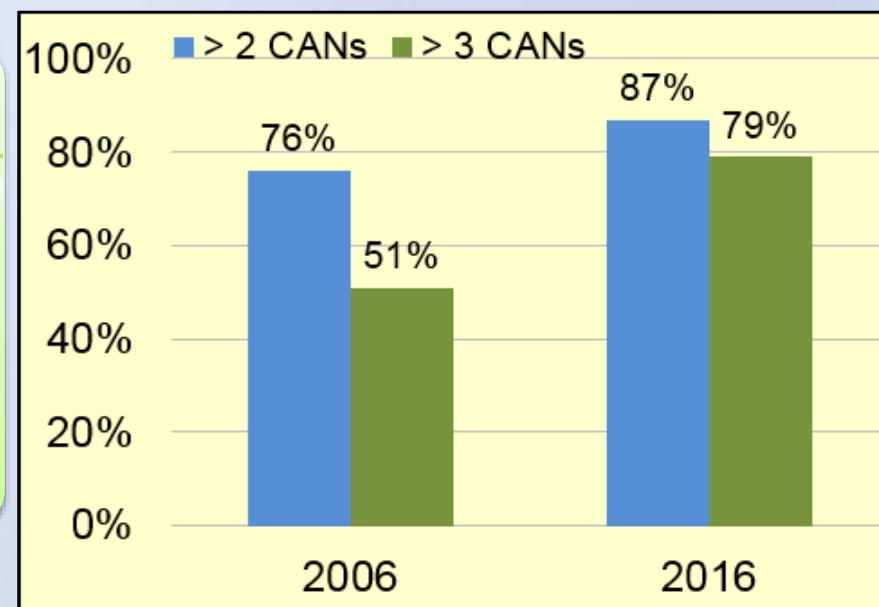
Facilities-based competition



26 Local fixed carriers

7 Self-built customer access networks ("CANs")

- 79% households have access to at least 3 CANs
- 87% households have access to at least 2 CANs



Challenges Ahead – Lack of Choices in Areas of Low Density Population

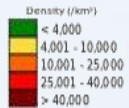


Outlying Islands



Village Houses

- Kowloon
10 Kowloon City
11 Kwun Tong
12 Sham Shui Po
13 Wong Tai Sin
14 Yau Tsim Mong
Hong Kong Island:
15 Central and Western
16 Eastern
17 Southern
18 Wan Chai



If incumbent operator uses existing telephone exchange lines to provide fixed broadband services in the concerned areas, the access speed would generally be lower



Ageing / Tenement Houses



OFCA actively provide facilitating measures to assist local fixed carriers in laying fibre networks

Fibre Network along Bridges, Tunnels & Expressways



Tsing Ma Bridge



Cross Harbour Tunnel



North Lantau Highway



Tseung Kwan O – Lam Tin Tunnel and Cross Bay Link (under construction)

Road Opening Coordination

- Setup task force and dedicated webpage to facilitate and assist operators in submitting applications for permits and joint projects
 - ▶ Expedite application handling process
 - ▶ Avoid duplicated works
 - ▶ Reduce costs
 - ▶ Minimise disturbance to the public and environment

**** Road Opening Records ****
From 2016/1/1 to 2016/1/31

Ref No.	Applicant	Project Name	Start Date	End Date	Status	Remarks	Update
2016010001
2016010002
2016010003
2016010004
2016010005
2016010006
2016010007
2016010008
2016010009
2016010010
2016010011
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2016010049
2016010050



Facilitation on Installation of In-building Facilities and Access

- Amendment of the Building (Planning) Regulations in 2006 to allow exclusion of telecommunications access facilities (e.g. telecommunications and broadcasting equipment room, cable risers) from calculation of the Gross Floor Area of the building
- Dual access requirement for public housing estates to accommodate two sets of in-building wiring systems, so that more than one operator could provide services to residents there
- Authorisation for access to buildings and mediation



Registration Scheme for Buildings with Fibre Access

- Launched in November 2010 and covered residential buildings initially; extended to cover non-residential buildings since April 2013
- Promote development of optical fibre network
- Raise public awareness about advantages of optical fibre access network
- Encourage incorporated owners and building management offices to introduce optical fibre access to the buildings



Online database for broadcasting and telecommunications infrastructure

Handling & Referral of Complaints from the Public

Ageing / tenement buildings and luxury houses in urban areas

- Kowloon City
- Yau Tsim Mong
- Sham Shui Po
- Central & Western



Village houses in rural and remote areas

- Outlying Islands
- Sai Kung
- Yuen Long
- North



- Inadequate choices of service providers
- Low broadband speed / no provision of FTTH services
- High / unreasonable service charges



COMPLAINTS

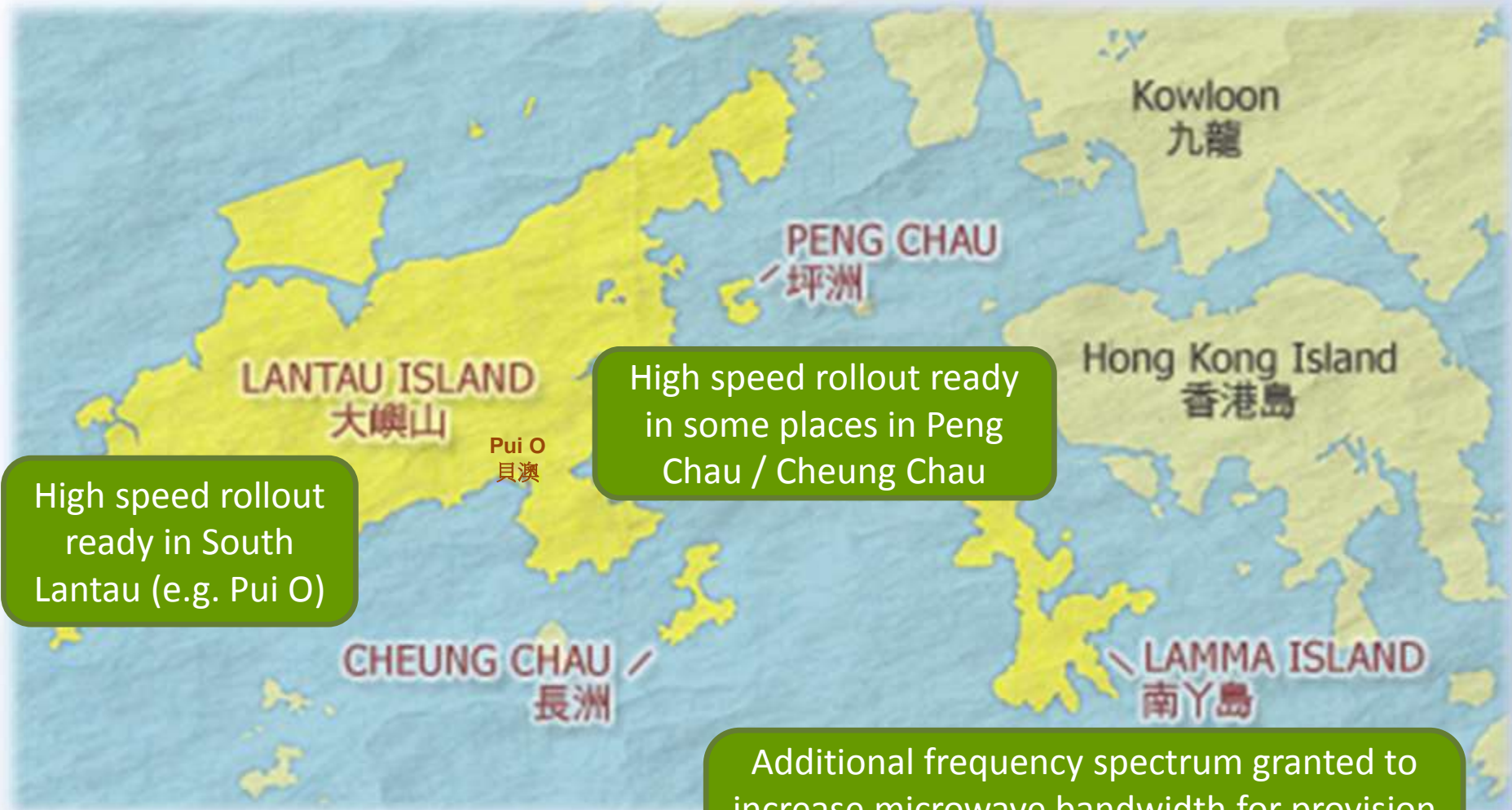
FOLLOW UP ACTION

Refer the subject matters of complaints to major fixed carriers for their consideration on network development planning



Latest developments in underserved areas

Latest Network Rollout in Outlying Islands



High speed rollout ready in South Lantau (e.g. Pui O)

High speed rollout ready in some places in Peng Chau / Cheung Chau

Additional frequency spectrum granted to increase microwave bandwidth for provision of better broadband service to Lamma; Upgrade in progress

Rural Areas & Villages - Wireless Fixed Broadband Service

An operator targeting rural areas and villages

- Assigned 30 MHz of spectrum in the 2.3 GHz band
- Uses radio spectrum to provide fixed telecom service
- Network coverage spans in East, West & North of New Territories



Network coverage requirements



- Coverage of network and service reaches 4,000 village houses by end of March 2018



Broadband network coverage in rural areas



Choice of available service providers



Broadband speed

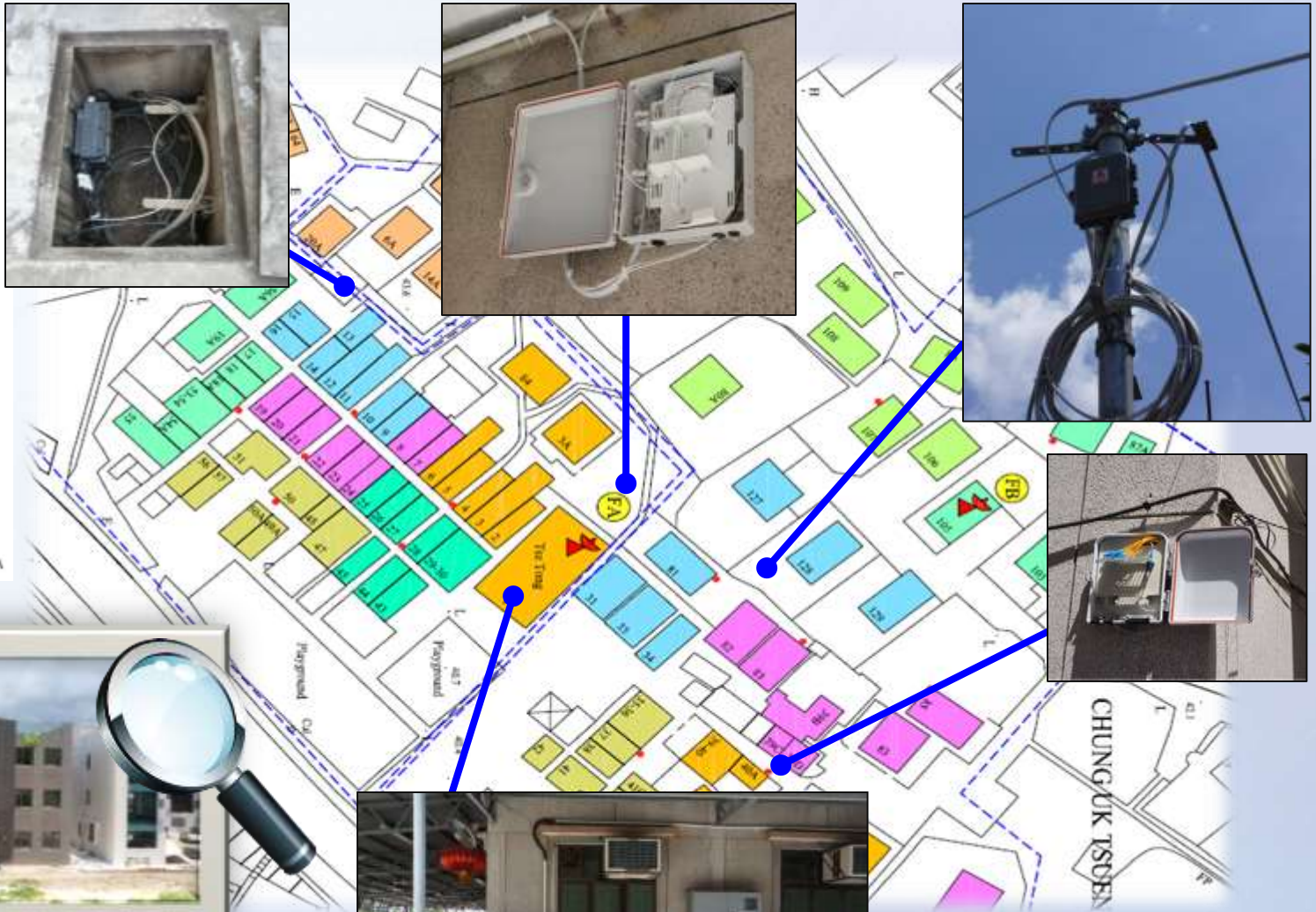


Service charge



Localised Fibre Network within Villages

- LOCAL BOX
- LOCAL BOX LOCATION
- SUB LOCAL WITH SPLITTER
- SUB LOCAL '1'
- SUB LOCAL '2'
- SUB LOCAL '3'
- SUB LOCAL '4'
- SUB LOCAL '5'
- SUB LOCAL '6'
- SUB LOCAL '7'
- SUB LOCAL '8'
- LOCAL BOX COVERAGE BOUNDARY AND PRIVATE AREA



Target Market of Another New Local Fixed Carrier – Villages & Ageing Buildings



Villages

- Residents and commercial users (e.g. shops, restaurants, etc.) in rural villages
- 3-year target: cover ~300 villages
- 10-year target: cover ~500 villages



Ageing Buildings

- Residents and commercial users without FTTH coverage in selected ageing buildings in urban areas
- 10-year target: ~1,000 buildings



Thank You