Data Protection Insights from Regulators in Hong Kong & Macau

1 November 2019 | Huawei Headquarters, Shenzhen

Data Protection in Hong Kong from a Regulatory Perspective

Stephen Kai-yi WONG, Barrister
Privacy Commissioner for Personal Data, Hong Kong, China





Home / Business

Huawei forges ahead with global commercialization of 5G network

By Yuan Shenggao | China Daily Global | Updated: 2019-10-15 07:38



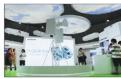
Chinese tech giant Huawei Technologies is pushing ahead with the commercialization of 5G technology, with over 50 contracts signed and 200,000 5G base stations shipped worldwide, a company executive said.

5G, fifth-generation wireless technology, allows users to surf the internet and download data at superfast speeds.

"1G and 2G technology shortened the distance between people by voice and short message. 3G and 4G enriched interpersonal interaction through mobile internet and video. And 5G will bring us to an intelligent world where everything is interconnected," said Peng Honghua, chief marketing officer of wireless business of Huawei, at the Huawei Asia-Pacific Innovation Day held in Chengdu, Sichuan province, in September.

"5G provides the ultimate experience for customers, driving mobile broadband to a new high ground of prosperity. Furthermore, it will promote digitalization and improve efficiency in more industries," he added.

















5G in Hong Kong

 Government allocated spectrum for 5G services to 4 mobile network operators in mid-Oct 2019

 5G services is expected to roll out in Q2 of 2020

Source: https://www.fiercewireless.com/5g/hong-kong-carriers-scoop-up-3-5-ghz-spectrum-at-5g-auction

FierceWireless

VIRELESS TECH 5G IC



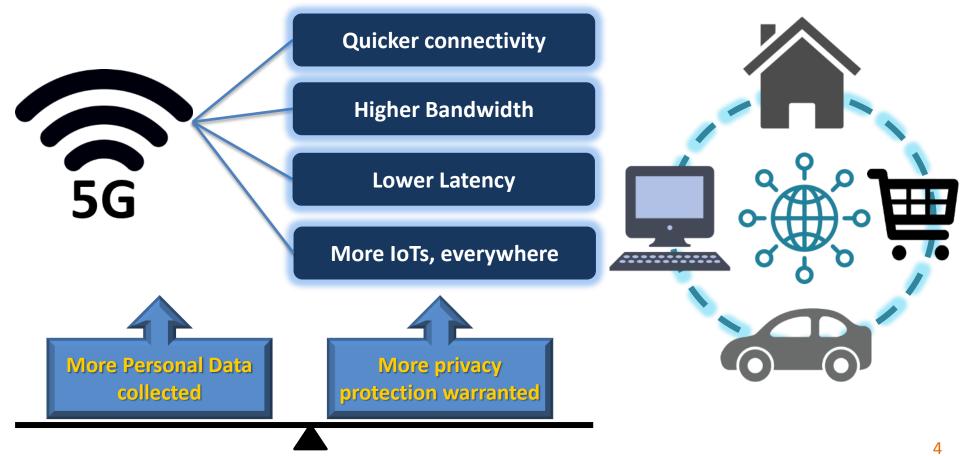
Hong Kong carriers scoop up 3.5 GHz spectrum at 5G auction

by Bevin Fletcher | Oct 16, 2019 4:04pm



Hong Kong's four mobile operators collectively spent \$128 million for 200 MHz of 5G spectrum in the 3.5 GHz band. (Getty Images)



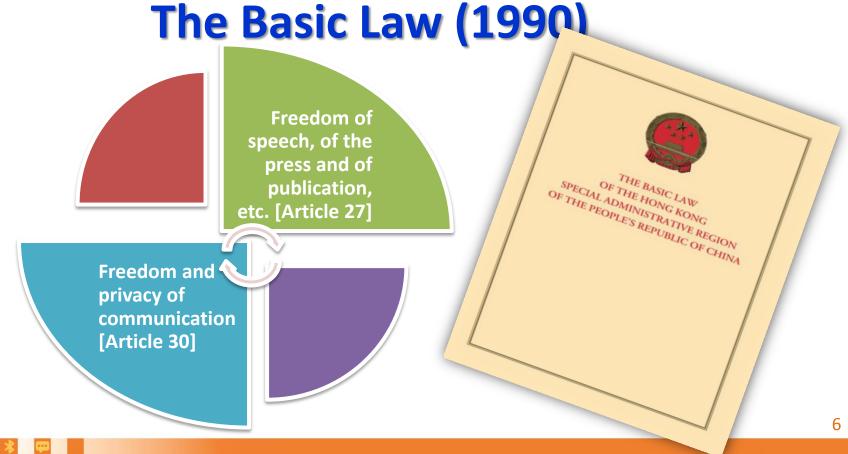






Introduction to Hong Kong's Personal Data (Privacy) Ordinance







Hong Kong Bill of Rights Ordinance (1991)

Protection of privacy, family, home, correspondence, honour and reputation

[Art. 14]

(c.f. ICCPR Art. 17)



Freedom of opinion and expression

[Art. 16]

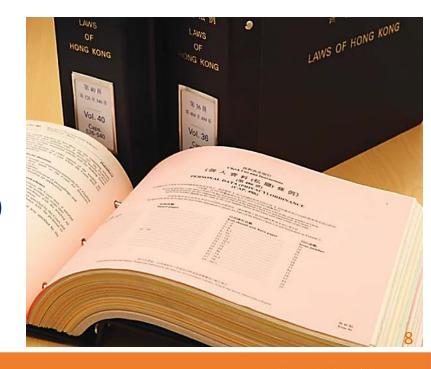
(c.f. ICCPR Art. 19)





Personal Data (Privacy) Ordinance Cap 486, Laws of Hong Kong

- Enacted in 1995
- Protects individuals' privacy in relation to personal data
- Created independent Privacy Commissioner for Personal Data
- Covers the public (including the government) and private sectors
- Referenced to 1980 OECD Privacy Guidelines and 1995 EU Data Protection Directive





Times have changed...

PDPO enacted

1995

- The world was using 2G
- Huawei was an 8 years-old company, selling fixed line telephone equipment
- Tech giants e.g. Alibaba, Google, Tecent, Facebook not yet founded

- 5G is coming soon
- Huawei's smartphone shipment exceeded
 200million units in 2018
- Tech giants are amongst the biggest and most valuable companies



2019

Personal Data (Privacy) Ordinance (1995)

Legislative background

Business Perspective

 To facilitate business environment, maintain Hong Kong as a financial and trading hub

Human Rights Perspective

 Protect individuals' personal data privacy





The OECD Guidelines 1980

Organisation for Economic Co-operation and Development

1st generation of data protection law

Commonly used internationally

Eight fundamental data protection principles







1995 EU Data Protection Directive

2nd generation of data protection law

Set out the model legal framework for all EU national laws Replaced by GDPR in 2018
(3rd generation of data protection law)





1995 EU Data Protection Directive

- Implement appropriate technical and organizational measures
- Sufficient guarantees in respect of data security provided by data processor
- Data processor must be governed by a contract

Security of processing

Data Quality

- Fairly and lawfully processed
- Collected for specified, explicit and legitimate purposes
- Adequate, relevant and not excessive
- Accurate
- Kept no longer than necessary

Right of access

Right to rectify

Right to object processing

Rights of data subject

Purpose Specification

- Identity of the controller
- Purposes of the processing
- Recipients or categories of recipients of the data
- Obligatory or voluntary provision of data



1/

HK: Personal Data (Privacy) Ordinance (1995)







PDPO vs OECD Guidelines vs 1995 EU Directive

	PDPO	OECD Guidelines	1995 EU Directive
Collection Limitation	٧	٧	٧
Data Quality (necessary for the purposes and accurate)	V	V	٧
Use Limitation	٧	٧	٧
Purpose Specification	٧	٧	٧
Openness	٧	٧	٧
Security	٧	٧	٧
Individual Participation	٧	٧	٧
Accountability	X	٧	X 1



Definition of "Personal Data" under PDPO

"Personal data" (個人資料) means any <u>data</u> -

- (a) <u>relating</u> directly or indirectly to a living individual;
- (b) from which it is practicable for the <u>identity</u> of the individual to be directly or indirectly ascertained; and
- (c) in a form in which access to or processing of the data is practicable.

"Data" (資料) means any representation of information (including an expression of opinion) in any document.



Six Data Protection Principles (DPPs) of the PDPO

收集目的及方式 Collection Purpose & Means



資料使用者須以合法和公平的方式, 收集他人的個人資料, 其目的應直接與其職能或活動有關。

须以切實可行的方法告知資料當事人收集其個人資料的 目的,以及資料可能會被轉移給哪類人士。

收集的资料是有實際需要的,而不紹平ັ廣度。

Personal data must be collected in a lawful and fair way, for a purpose directly related to a function/activity of the data user.

All practicable steps shall be taken to notify the data subjects of the purpose of data collection, and the classes of persons to whom the data may be transferred.

Data collected should be necessary but not excessive.

準確性、儲存及保留 Accuracy & Retention



資料使用者須採取切實可行的步驟以確保持有的個人資料 Practicable steps shall be taken to ensure personal data is 準確無誤,而資料的保留時間不應超過達致原來目的的實 際所需。

accurate and not kept longer than is necessary to fulfil the purpose for which it is used.



使用 Use

個人資料只限用於收集時述明的目的或直接相關的目的。 除非得到資料當事人自顧和明確的同意。

Personal data is used for the purpose for which the data is collected or for a directly related purpose, unless voluntary and explicit consent is obtained from the data subject.



保安措施 Security



資料使用者須採取切實可行的步驟,保障個人資料不會未經 授權或意外地被查閱、處理、刪除、喪失或使用。

A data user needs to take practical steps to safeguard personal data from unauthorised or accidental access, processing, erasure, loss or use.



透明度 Openness



資料使用者須採取切實可行的步驟來公開其處理個人資 料的政策和行事方式,並交代其持有的個人資料類別和 用途。

A data user must take practicable steps to make personal data policies and practices known to the public regarding the types of personal data it holds and how the data is used.

查閱及更正 Data Access & Correction



資料當事人有權要求查閱其個人資料;若發現有關個人資料 不準確,有權要求更正。

A data subject must be given access to his personal data and to make corrections where the data is inaccurate.



The "Octopus Incident" 2010

- Found to have profiteered from sales of membership data to insurance companies for direct marketing without consent
- CEO stepped down
- PDPO amended



Updated: 2010-10-20 06:57



Amendments in 2012 – Strengthened Regulation on Direct Marketing

- Provide prescribed information to individuals (e.g. kinds of personal data to be used, classes of marketing subjects)
- Obtain individuals consent
- Allow individuals to opt out
- Maximum penalties for contravention: fine of HK\$5 million + imprisonment for 5 years





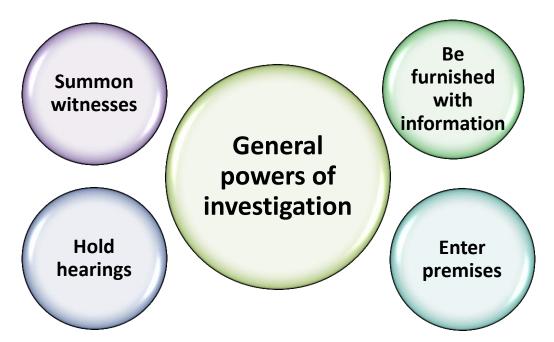
Under PDPO (non-exhaustive)







21





Obstruction to the exercise of the Privacy Commissioner's investigation power is a criminal offence.



Enforcement Actions

- Serve enforcement notice on the relevant data user directing the data user to remedy, and if appropriate, prevent any recurrence of the contravention
- Non-compliance with an enforcement notice is a criminal offence (maximum fine HK\$50,000 and imprisonment for 2 years, and a daily fine of HK\$1,000 in case of a continuing offence)



Criminal Investigation and Prosecution

- The Privacy Commissioner does not have criminal investigation power
- Referral to the Police for criminal investigation and prosecution by the Department of Justice where appropriate



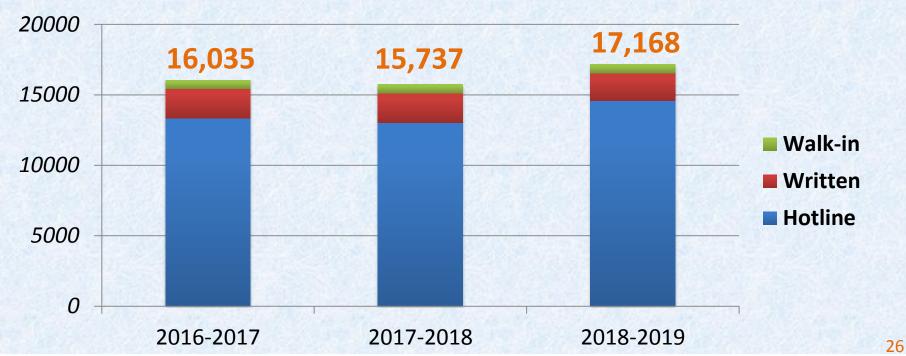
Civil Claims for Compensation



- An individual who suffers damage, including injury to feeling, by reason of a contravention of the PDPO in relation to his personal data, is entitled to obtain compensation from the data user concerned
- The Privacy Commissioner may grant legal assistance to the aggrieved individual



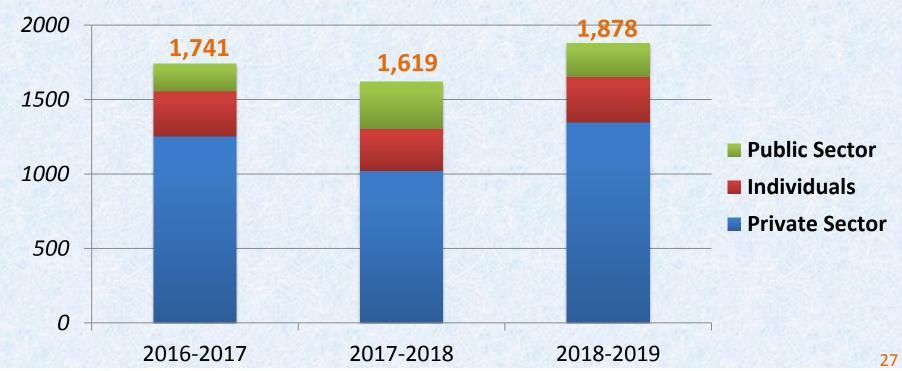
No. of Enquiries (Recent 3 Fiscal Years)





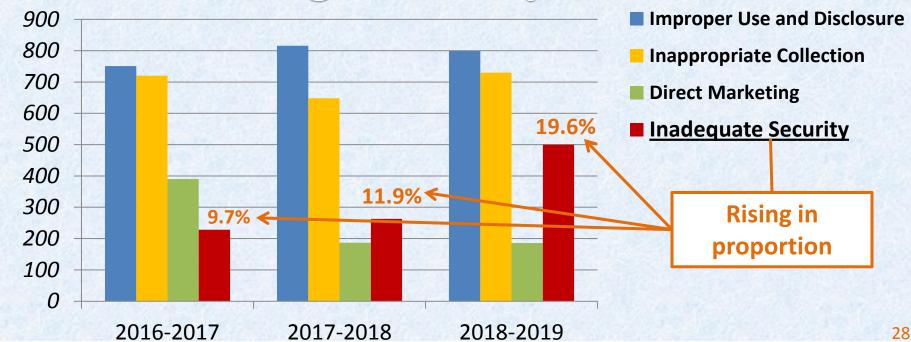


No. of Complaints (Recent 3 Fiscal Years)





Major nature of violations of the PDPO alleged in complaints







Data breaches reported to PCPD





In 2018, data of 1.4 billion people around the world were compromised



...Data breach is a "new norm"



Data security – The pressing issues

IT is increasing integrated into business operations

Increase in sophistication of hackers
(Hacking as a Service, or HaaS,

emerges)

Cyberattack is not "if" but "when"





Data breach of an airline based in HK affecting 9.4m passengers

Background

Data breach notification lodged to PCPD on 24 Oct 2018

- Unauthorised access to airlines information systems
- 9.4 million passengers from over 260 countries / jurisdictions / locations affected
- Personal data involved consisted mainly of name, flight number and date, email address, membership number, address, phone number





Data breach of an airline based in HK affecting 9.4m passengers

PCPD's investigation and findings

Investigation focuses

Data security

Data retention period

Contraventions

Various data security failures (see next slides)

Not taking all reasonably practicable steps to erase unnecessary HK Identity Card No. of passengers





Data breach of an airline based in HK affecting 9.4m passengers

Date security failures include:

Risk alertness being low

Corporate governance failure

Vulnerability scanning exercise at a yearly interval (too lax)



- Failure to identify and address the commonly known exploitable vulnerability
- Failure to have an effective personal data inventory

Operational measure failure

Failure to apply effective multi-factor authentication to all remote access users





Data breach of an airline based in HK affecting 9.4m passengers

PCPD's enforcement action

Enforcement Notice

Engage independent data security expert to overhaul systems

Implement effective multifactor authentication for remote access

Conduct effective vulnerability scans

Engage independent data security expert to review / tests system security

Devise clear data retention policy, specify retention period(s) and ensure effective execution

Completely obliterate all unnecessary HKID Card numbers







Challenges in the digital age



(1) Excessive collection of personal data

67.2% respondents
think smartphone APPs
collect unnecessary
personal information

62%

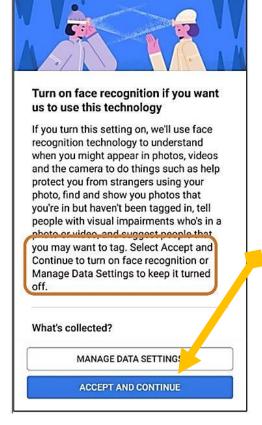
Location Contacts Call Record SMS Record Webcams Microphone

Source: China Consumers' Association 'Report on Personal Data Leakage from APPs' (August 2018)

Data







Apps used "dark patterns" to discourage users from exercising their privacy rights:

- Making the least privacy-friendly settings as the default settings
- Making the alternative privacy settings difficult to navigate
- Using eye-catching buttons for less privacy-friendly options
- Emphasize the positive aspects of less privacy-friendly options, glossing over potential privacy risks
- Falsely claim that not accepting the default option would affect the functionality

Source: Norwegian Consumer Council - "Deceived by Design" (June 2018)





BUSINESS NEWS AUGUST 29, 2017 / 1:02 PM / 2 YEARS AGO

Uber to end post-trip tracking of riders as part of privacy push

Dustin Volz



❖ In 2016, after an update of its app, Uber started asking for permission to track customers' location even after their rides.

After facing backlash, Uber restored users' ability to share location data only while using the app in 2017.

PALO ALTO, Calif. (Reuters) - Uber Technologies Inc is pulling a heavily criticized feature from its app that allowed it to track riders for up to five minutes after a trip, its security chief told Reuters, as the ride-services company tries to fix its poor reputation for customer privacy.



FILE PHOTO - An Uber sign is seen in a car in New York, U.S. June 30, 2015. REUTERS/Eduardo

The change, which restores users' ability to share location data only while using the app, is expected to be announced on Tuesday and rolled out to Apple Inc iPhone users starting this week. It comes as Uber tries to recover from a series of crises culminating in the ouster of Chief Executive Travis Kalanick and other top executives.

Source: https://www.reuters.com/article/us-uber-privacy-idUSKCN1B90EN (29 Aug 2017)



(2) Covert collection of personal data





Westfield is using facial detection software to watch how you shop

- □ Hidden facial detection cameras installed inside of advertising light boxes, in large malls in Australia and Newland, for mall runners to analyse the customers and deliver personalised advertisement.
- They run **without obtaining consent** from customers prior.

Source: https://www.news.com.au/finance/business/retail/westfield-is-using-facial-detection-software-to-watch-how-you-shop/news-story/7d0653eb21fe1b07be51d508bfe46262 (19 Oct 2017)





MailOnline

Privacy fears after woman says Alexa recorded a private conversation and sent it to a random contact

- · Portland woman discovered her Alexa recorded and sent a private conversation
- · It was only until a contact let her know that she became aware of the flaw
- · Amazon says it's aware of the issue and in the process of releasing a fix
- · Issue raised the ire of privacy advocates who worry Alexa is spying on its users

By ANNIE PALMER FOR DAILYMAIL.COM
PUBLISHED: 23:22 BST, 24 May 2018 | UPDATED: 11:52 BST, 25 May 2018



Source: Daily Mail (24 Mar 2018)

- A user of the Amazon smart home speaker found out that the voice assistant 'Alexa' recorded and sent out a private conversation to her contacts.
- The speaker woke up due to a word in background conversation sounding like the wake word "Alexa". Then the subsequent conversation was heard as a command "send message".





(3) Increased outsourcing of data processing

More data collected in the digital age, more needs for outsourcing data processing

There may be unknown/little control over data storage locations

Outsourcing arrangements may be rapidly changing or loose

Amplifying privacy and security risks

Data processors not directly regulated by the PDPO

Problematic for:

Data retention

Data security





(4) Profiling and Re-identification

- A team of academics at the University of Melbourne were able to re-identify a publically available anonymised dataset consisting medical billing records
- By linking unencrypted parts of the record with publicly known information, the team re-identified 7 prominent people
- The dataset contained records of 2.9 million people



Re-identification possible with Australian de-identified Medicare and PBS open data

Using publicly known information, a team of researchers from the University of Melbourne have claimed to re-identify seven prominent Australians in an open medical dataset.



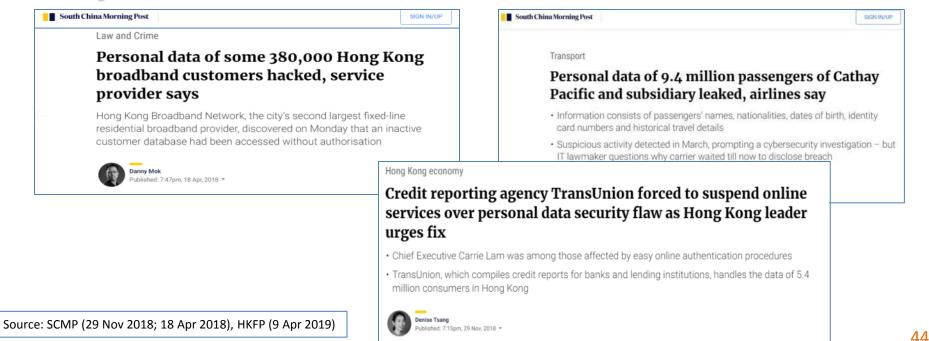
By Chris Duckett | December 18, 2017 -- 01:01 GMT (09:01 GMT+08:00) | Topic: Security

The dataset containing historic longitudinal medical billing records of one-tenth of all Australians, approximately 2.9 million people, has been found to be re-identifiable by a team from the University of Melbourne, with information such as child births and professional sportspeople undergoing surgery to fix injuries often made public.

Source: https://www.zdnet.com/article/re-identification-possible-with-australian-de-identified-medicare-and-pbs-open-data/



(5) Increased number of data breach incidents due to cybercrime or human errors – some examples in Hong Kong:







Privacy risks of 5G

Vision of 5G: always available, anytime, anywhere

Ubiquitous connection = continuous tracking and monitoring of individuals via smartphones, <u>IoTs</u>, and use of services

More IoTs connected to 5G networks, but IoT devices generally have lower security standards, making the risk of data breach higher

5G signal ranges are shorter, meaning more cell site may have to be built, which makes the tracking of individual's location more precise than before







Possible reforms of the PDPO in light of digital challenges



Possible amendments to PDPO in response to ICT developments:

(1) Expand the definition of 'personal data' under PDPO:

Personal data may include:

- Information practicable to ascertain an identity (direct/indirect); and
- Information *relating to an identifiable* person



Definitions of "personal data"

PDPO	Overseas (e.g. AU, CA, EU)
 Criteria: Practicable to <u>ascertain identity</u> 	Criteria: Relating to or about an <u>identifiable</u> individual
Meaning:Knowing who a person is	 Meaning: Able to <u>single out</u> a person, not necessarily knowing who the person is
 Result: Narrower scope of personal data and less protection to privacy 	Result: Wider scope of personal data and stronger protection to privacy



(2) Additional regulation on the retention of personal data

- Disclose personal data retention policy
- Stipulation of maximum retention period



(3) Regulate data processors directly

Data processors' obligations on:

- retention period of personal data
- security of personal data
- notification to data users of data breaches without undue delay



(4) Mandatory Breach Notification

- Notify both the PCPD and the impacted individuals
- High threshold for breach notification "real risk of significant harm" to individuals
- Set **time limit** e.g. 5 days for notifying PCPD; 'as soon as practicable' for notifying individuals
- Allow for investigation period for 'suspected breach' before notification



(5) Accountability Principle

Include accountability principle in PDPO



(6) PCPD's Powers

Confer additional powers on the PCPD to:

- Conduct criminal investigations/prosecutions
- Impose administrative fines
- Make prohibitive orders



Recent 'Doxxing' in Hong Kong

- Privacy intrusive/intimidating messages and posts spreading at an alarming rate
- From 14 June to 21 October 2019, the PCPD
 - Received and found 2,683 cases
 - Written 84 times to 13 platforms to request deletion, 612 links (37%) removed
 - 1,297 cases have been referred to the
 Police for investigation



Intimidating message online: "Get prepared to pick up with a linen bag after school"





Possible regulatory response to doxxing

- Give the PCPD powers to conduct criminal investigation and prosecution of criminal offences
- Allow PCPD to apply to court for injunction stopping doxxing
- Amending the scope of protection to include platforms and webpages that have relatively close connection to Hong Kong
- ❖ Give the PCPD powers to **directly issue prohibitive orders** to relevant social media platforms and website (e.g. take down doxxing posts, provide personal data of those posting doxxing messages)





The roles of the PCPD



<u>PCPD's Roles</u> – <u>Enforcer</u> + <u>Educator</u> + <u>Facilitator</u>

PCPD's Strategic Focus







Data Ethics and Trust





Data Ethics

2017

Ethics on AI -

First being discussed at the ICDPPC meeting held in Hong Kong

2018

"Ethical Accountability Framework for Hong Kong, China" published by PCPD

"Declaration on Ethics and Data Protection in Artificial Intelligence" made by the ICDPPC in Brussels

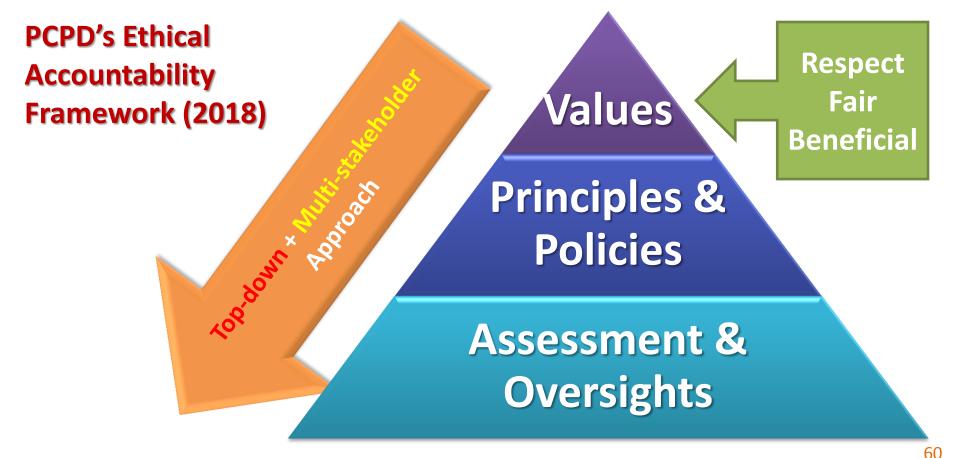
ICDPPC Permanent Working Group on Ethics and Data Protection in Al established (co-chaired by CNIL, EDPS and PCPD/HK)

2019

"Ethics Guidelines for Trustworthy AI" issued by the European Commission















- To all authorized institutions
- Expressing support to PCPD's concept of data ethics and stewardship
- Encouraging adoption of PCPD's <u>Ethical</u> <u>Accountability Framework</u> in development of Fintech in order to-
 - Address privacy concerns of customers
 - Enhance customers' trust in using Fintech



ICDPPC Declaration on Ethics and Data Protection in Artificial Intelligence (October 2018):

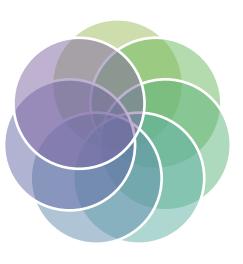
Six Core Principles





Reducing biases or discriminations

Empowerment of every individual



Systems transparency and

Continued

attention

and vigilance

intelligibility



Ethics by design

EU's "Ethics Guidelines for Trustworthy AI" (2019)



7 key requirements:

- 1. Human agency and oversight
- 2. Technical robustness and safety
- 3. Privacy and data governance
- 4. Transparency
- 5. Diversity, non-discrimination and fairness
- 6. Societal and environmental well-being
- 7. Accountability







ICS > 35 > 35.030

ISO/IEC 27701:2019

Security techniques — Extension to ISO/IEC 27001 and ISO/IEC 27002 for privacy information management — Requirements and guidelines

- World's first international standard for managing privacy information
- Building on ISO 27001 and ISO 27002
- Assisting in compliance with personal data protection laws

Four core parts:

- Personal information management system
- Information security techniques and good practices
- Guidance for PII controllers (i.e. data users)
- Guidance for PII processors (i.e. data processors)







"NIST Privacy Framework: A Tool for Improving Privacy Through Enterprise Risk Management" (Draft as in Sep-2019)

A Framework for driving better privacy engineering and help organizations protect individuals' privacy by-

- building customer trust;
- fulfilling compliance obligation;
- facilitating communication on privacy; and practice with stakeholders.







Ethical Accountability Framework for Hong Kong, China

A Report prepared for the Office of the Privacy Commissioner for Personal Data

Analysis and Model Assessment Framework



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