

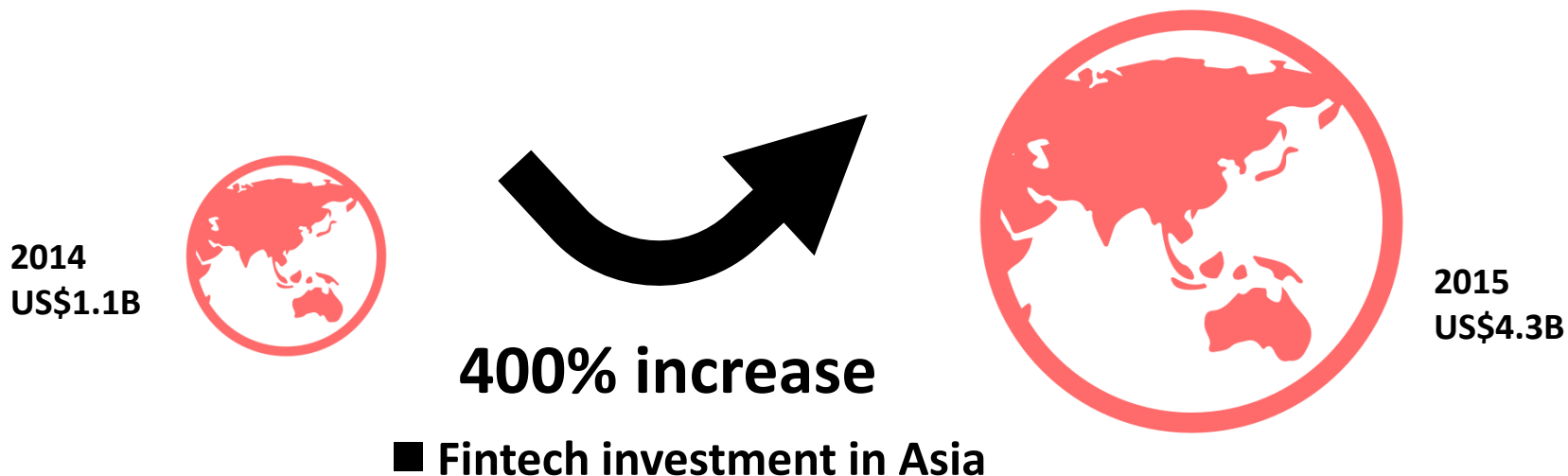
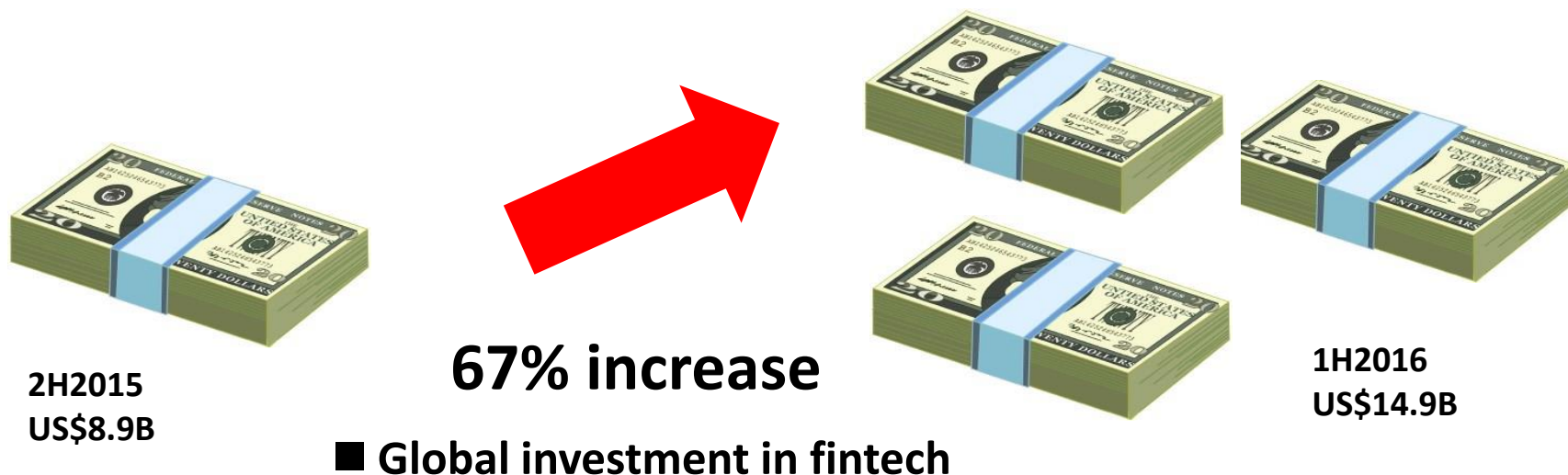


# HKMA's Fintech Facilitation Office

**Nelson Chow**

**Chief Fintech Officer  
Fintech Facilitation Office  
Hong Kong Monetary Authority**

# Growing Interest in Fintech Development





# Why Fintech is Relevant to You?

## Largest companies in the world by market capitalisation - 2006

Rank	Name	Primary Industry	Market Value (in USD millions)
1	Exxon Mobil	Oil and gas	446,943
2	General Electric	Conglomerate	383,564
3	<b>Microsoft</b>	<b>Software</b>	<b>293,537</b>
4	<b>Citigroup</b>	<b>Banking</b>	<b>273,691</b>
5	Gazprom	Oil and gas	271,482
6	<b>ICBC</b>	<b>Banking</b>	<b>254,592</b>
7	Toyota Motor Corporation	Automotive	241,161
8	<b>Bank of America</b>	<b>Banking</b>	<b>239,758</b>
9	Royal Dutch Shell	Oil and gas	225,781
10	BP	Oil and gas	218,643

In 2006, only 1 out of the 10 largest companies in the world was from the technology industry



# Why Fintech is Relevant to You?

## Largest companies in the world by market capitalisation - 2016

Rank	Name	Primary industry	Market Value (in USD millions)	P/B Ratio
<b>1</b>	<b>Apple Inc.</b>	<b>Technology</b>	<b>592,207</b>	<b>4.62</b>
<b>2</b>	<b>Alphabet Inc.</b>	<b>Technology</b>	<b>551,723</b>	<b>4.17</b>
<b>3</b>	<b>Microsoft Corporation</b>	<b>Software</b>	<b>470,175</b>	<b>6.69</b>
<b>4</b>	<b>Amazon.com, Inc.</b>	<b>Online retail</b>	<b>374,312</b>	<b>21.04</b>
5	Berkshire Hathaway Inc.	Investment	364,302	1.35
<b>6</b>	<b>Facebook Inc.</b>	<b>Technology</b>	<b>358,896</b>	<b>6.62</b>
7	Exxon Mobil Corporation	Oil and gas	353,754	2.07
8	Johnson & Johnson	Healthcare	318,438	4.38
9	General Electric Company	Conglomerate	260,261	3.18
<b>10</b>	<b>Tencent</b>	<b>Technology</b>	<b>250,981</b>	<b>11.98</b>

In 2016, 6 out of the 10 largest companies in the world are from the technology industry



## Technology Firms that Provide Financial Services

**Google Wallet**

**Android Pay**

**Apple Pay**

**Apple Wallet**

**MYbank**

**Alipay**

**Ant Financial**

**WeChat Pay**

**WeBank**



**IF YOU THINK FINTECH  
IS NOT RELEVANT TO YOU,**



**YOU BETTER THINK TWICE**



# Fintech Landscape

## Payment

Payment processing, Money transfer Mobile payments, Forex, Credit cards, Prepaid cards, Reward programs

## Insurance

Broking, Underwriting, Claims, Risk tools

## Planning

Business process automation, CRM, Compliance & KYC, Inventory & Supply chain mgmt., Personal finance tools

## Lending / Crowdfunding

Crowdfunding platforms, Peer-to-peer lending, Mortgages & corporate loans

## Security

Digital identity, Authentication, Fraud mgmt., Cybersecurity, Data encryption

## Blockchain

Blockchain protocol dev, Digital currency, Smart contracts, Payments & settlement via Blockchain, Asset & Identity mgmt

## Trading & Investments

Investment mgmt., Roboadvisory, Trade pricing & algos, Trading IT, Trading platforms, Brokerage, Clearing

## Data & Analytics

Big Data solutions, Data visualization, Predictive analytics, Data providers





# Development of Fintech in Hong Kong

- The free market environment, the robust legal framework and being an international financial centre make Hong Kong conducive to Fintech development
  - Presence of 52 of the top 100 fintech companies in the world



- Increasing number of payment service companies operating in Hong Kong
  - Paypass, PayWave and ApplePay are getting increasingly popular
  - 13 stored value facilities licences granted





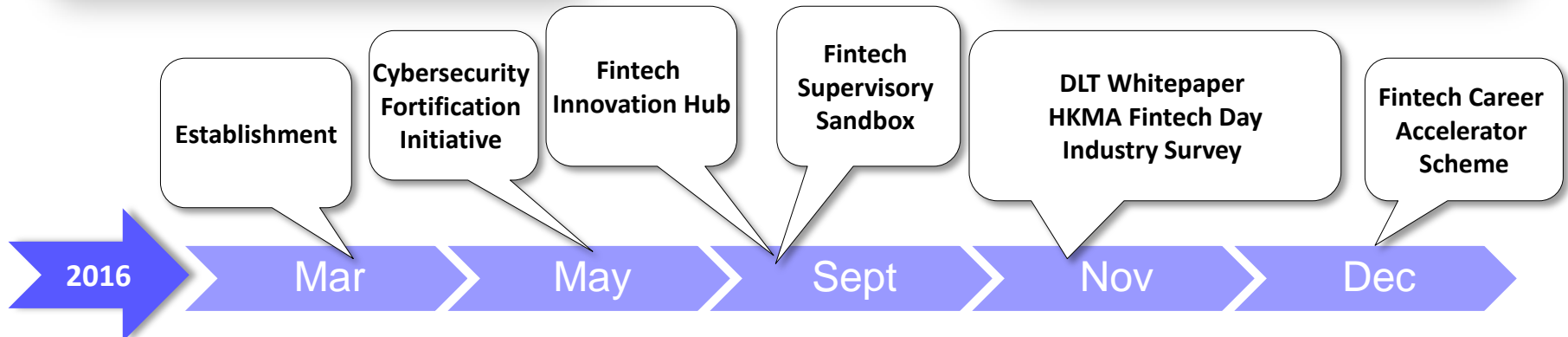
# Establishment of Fintech Facilitation Office (FFO)

**Research and Application**  
an **initiator** of industry research in potential application and risks of fintech solutions



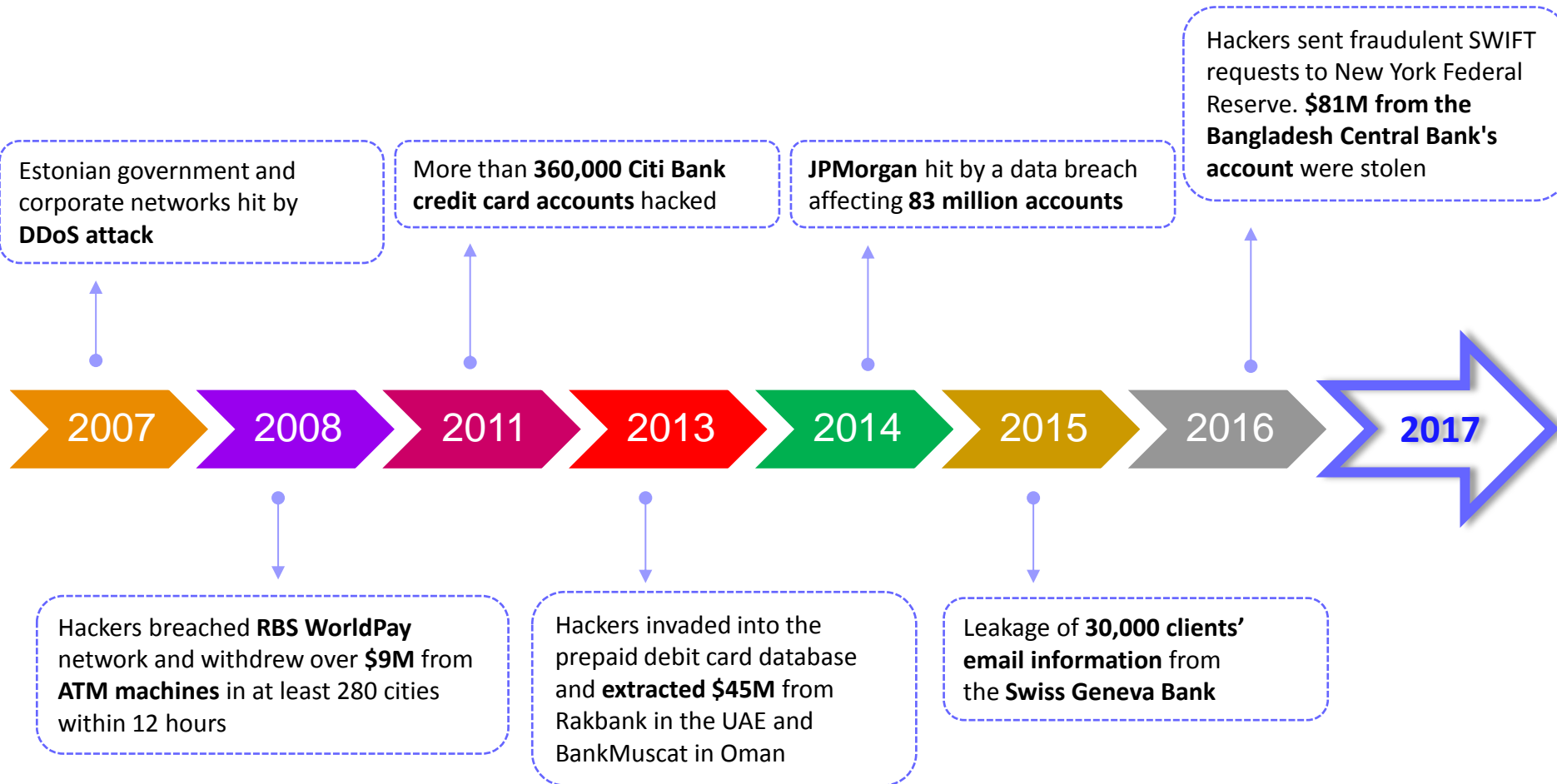
**Industry Liaison**  
a **platform** for exchanging ideas of innovative fintech initiatives among key stakeholders

**Regulatory Interface**  
an **interface** between market participants and regulators within the HKMA

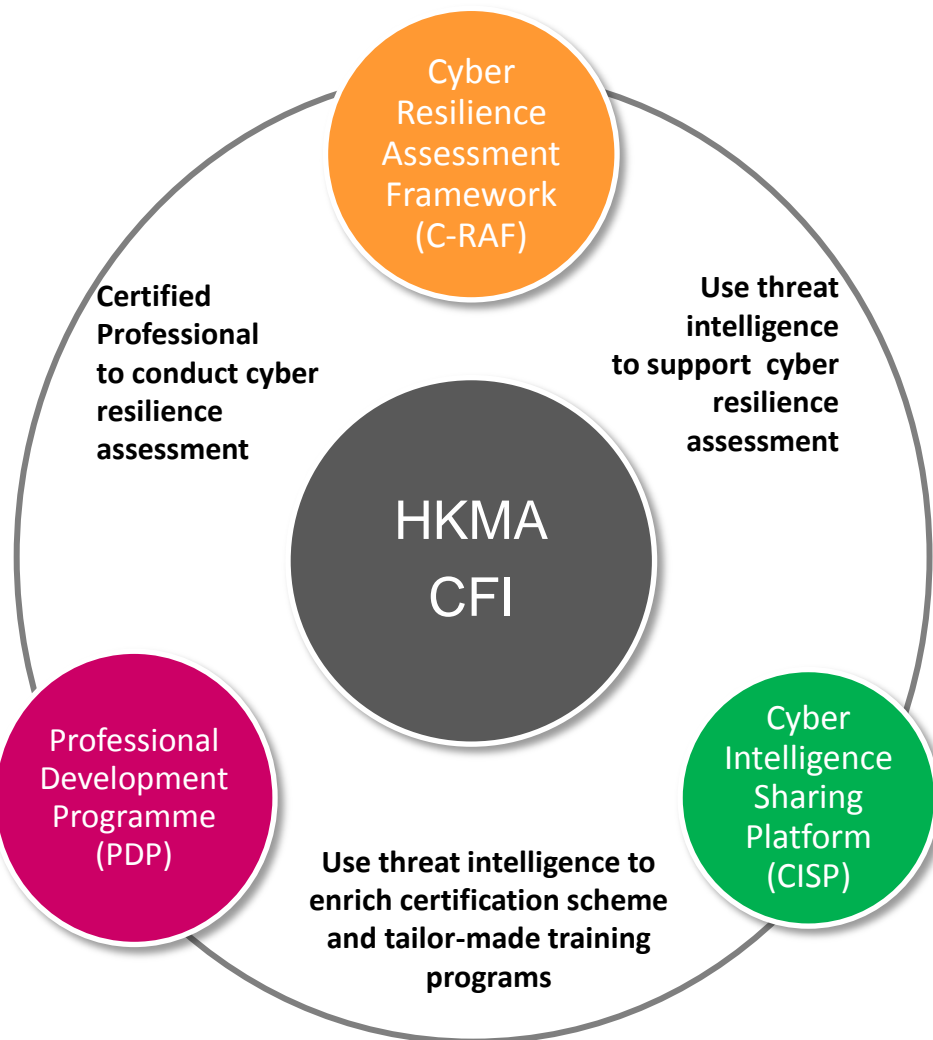




# Global Cyber Security Incidents from 2007



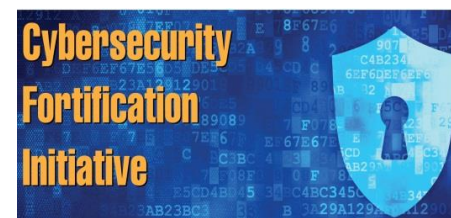
# Cybersecurity Fortification Initiative (CFI)



## Goals:

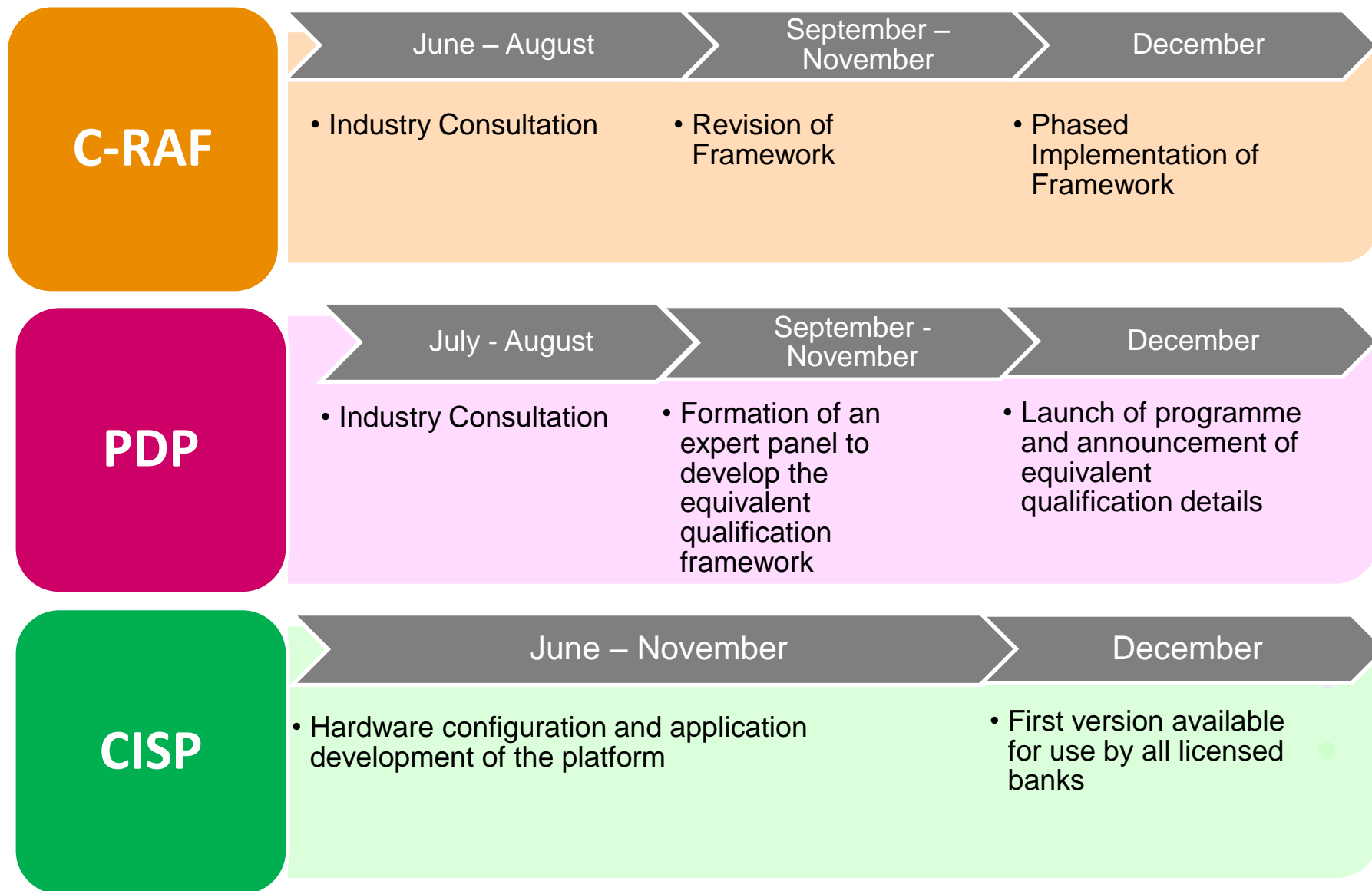
- Provide a more structured framework for assessing cyber resilience
- Provide more focused trainings for cybersecurity professionals
- Adopt a more comprehensive approach for looking at cyber risks

**We are happy to consider ideas for possible collaboration with other central banks or regulators**





# Progress of the CFI

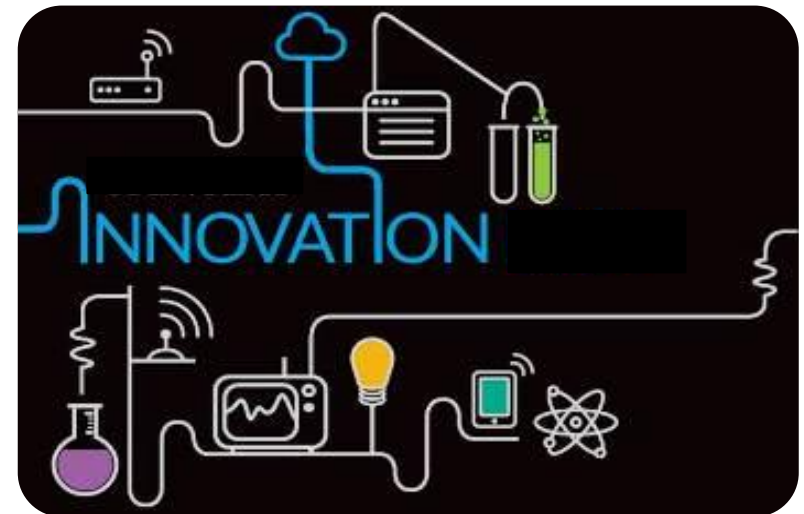
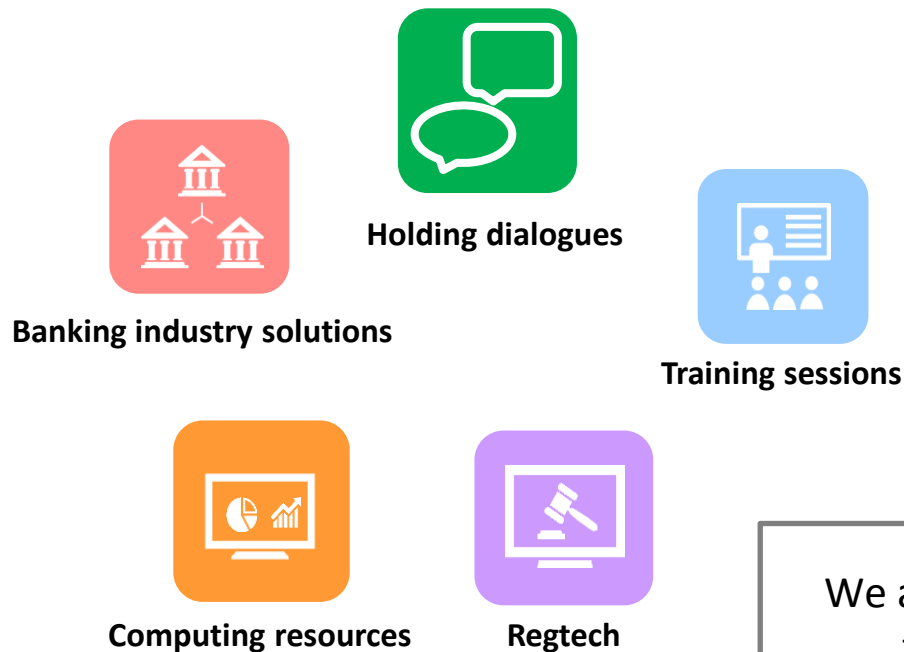


# HKMA-ASTRI Fintech Innovation Hub

## Features:

- A neutral ground to develop industry-wide Fintech solutions
- Users: HKMA, banks, SVF issuers and Fintech solution developers

## Major functions:



We are in discussion with several banks to arrange testing of their fintech projects in the Hub

# Fintech Supervisory Sandbox

## Features:

- Pilot trials without the need to achieve full compliance with supervisory requirements

## Benefits:

- Banks can refine their initiatives with real-life data and user feedback
  - Better meet customers' needs
  - Reduce the risks for formal launch
- Speed up the rollout of initiatives
- Reduce cost incurred



2 banks have already made use of the sandbox to conduct pilot trials of their biometric authentication and securities trading/custodian system

# Study on Distributed Ledger Technology (DLT)

- Commissioned ASTRI to conduct a study on DLT

## Key objectives:

- to undertake an examination of DLT, identify its potential, its risks, and its regulatory and legal implications;
- to identify possible applications of DLT to banking services by engaging in proof-of-concept work;
- to provide control guidance to the banking sector; and
- to share any lessons learned and experience with the fintech industry and banking sector in Hong Kong so as to facilitate further developments in DLT

- First milestone completed and a whitepaper was issued
- Next version of the whitepaper will be published in the second-half of 2017



# Industry Liaison Events



Time	Event	Participants
Jun 2016	Fintech O-2-O Meetup on Cybersecurity	200 people from fintech-related sectors
Jul 2016	International conference on risks and opportunities of adopting Fintech solutions	170 people, including global and regional regulators
Aug 2016	First “needs-driven” event - 10 fintech companies presented their solutions to a major bank in HK	90 people, including 70+ representatives from a major bank in HK
Sep 2016	Blockchain matching event - participants were invited to exchange ideas on different blockchain solutions	60 people, including representatives from 9 fintech firms and 15 corporations and banks
Nov 2016	HKMA Fintech Day – sharing from the HKMA and its 3 strategic partners, Cyberport, HKSTP and ASTRI on collaborative initiatives and future plans	500 people from banks, public sector, technology companies, fintech firms, SVFs, media and professional services firms



# Industry Survey

- An industry survey was issued to gauge the views of industry players on possible barriers or catalysts (in terms of regulatory requirements or policies) which the HKMA may need to take note of as the fintech industry progresses



- In light of comments collected, the HKMA will consider refining our regulatory requirements to further support innovative work

# Fintech Career Accelerator Scheme

6 months or 1 year internships  
offered by banks



Domain-specific training  
provided by the HKMA and ASTRI



Preferred disciplines:  
engineering, science, business & finance, and law

Overview:

- To expand the talent pool of the fintech sector in Hong Kong
- 11 local and international banks offering more than 70 intern positions for both undergraduate and postgraduate students in 9 local universities

# Insurtech

- A sub-category of fintech seeking to address existing challenges and reshape the insurance industry
- In a survey conducted by PwC in 2016, 74% of respondents from the insurance industry believed that some parts of their businesses are at risk of disruption from fintech innovation. 32% of the insurers surveyed did not deal with fintech at all

Key areas of Insurtech:



## Customer Engagement

- ❑ Digital claim process
- ❑ CRM



## Law and Regulations

- ❑ Smart contract
- ❑ Automated compliance



## Internet of Things

- ❑ Vehicle telematics
- ❑ Asset and home security



## Wealth Management

- ❑ Robo-advisory
- ❑ Digital saving plan



## Data Analytics

- ❑ Dynamic underwriting
- ❑ Personalized policy



## Information Security

- ❑ Cyber attack



**Thank You**