



# HKEx Data Centre and Hosting Services

Samuel Wong

Hosting Services, Information Technology Division

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# Agenda



1 **HKEx Data Centre Highlights**

2 **HKEx Hosting Services**

3 **Benefit to Hosting Services Users**

4 **Hosting Services Rollout Update**

5 **Q&A**

# HKEx Data Center



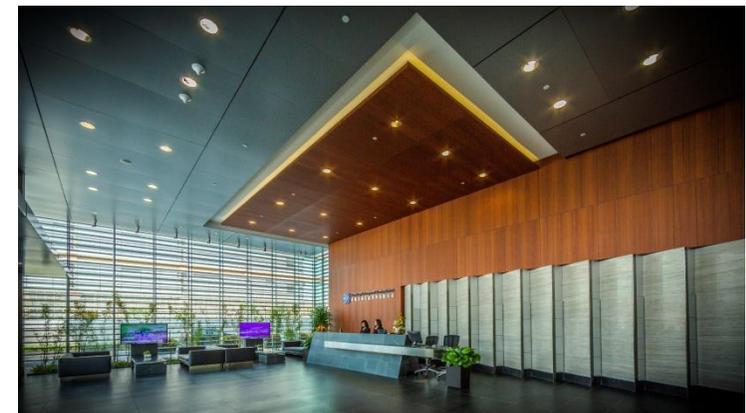
1 Chun Ying Street  
Tseung Kwan O Industrial Estate  
Hong Kong



# HKEx Data Centre Highlights



- Total floor area of **31,400 square meters**
- State-of-the-art **purpose built** facility, owned and operated by HKEx
- Designed to meet **Tier 4 specifications**
  - Dual incoming utility power from separate substations
  - Dual TBE rooms and risers to support Telco diversity
- **HKEx Hosting Services**
  - 2 floors dedicated
  - Support up to 1,200 racks
- **HKEx primary Enterprise Data Center**
  - Production site for Securities & Derivatives markets, market data and Clearing



# Green and High Availability Infrastructure



## LEED Gold Certified

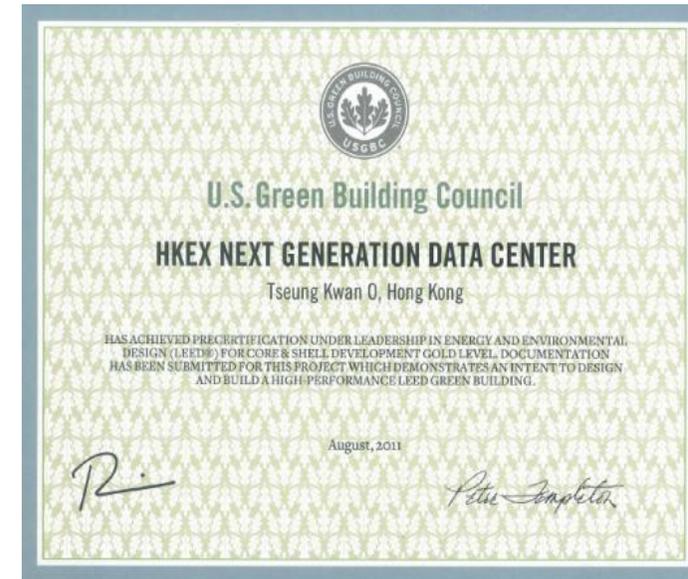
- Setting green benchmark for new data centers in Hong Kong

## Tier 4 Standard

- Supporting highest service availability of 99.995%

## Superior PUE

- Leading energy efficiency frontier for data centers in Hong Kong with a PUE<sup>1</sup> design target of 1.6



<sup>1</sup> PUE is a metric to measure data center energy efficiency. Theoretical ideal value is 1.0 while typical value in HK >2

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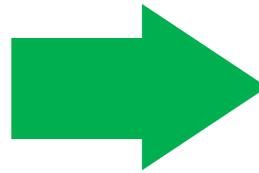
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# HKEx Hosting Services



People meet to trade  
***Trading Hall***



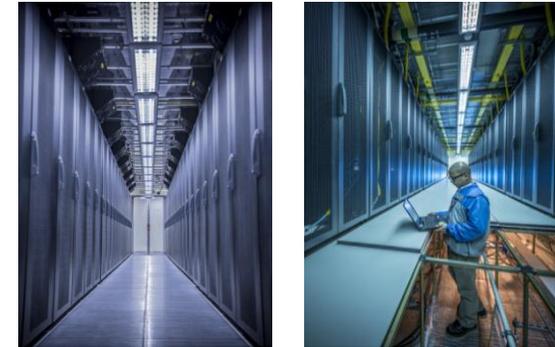
**Computers** meet to trade  
***Tseung Kwan O***

HKEx has initiated a HK\$3 billion transformational technology programme called HKEx Orion as part of its strategy to become the global exchange of choice

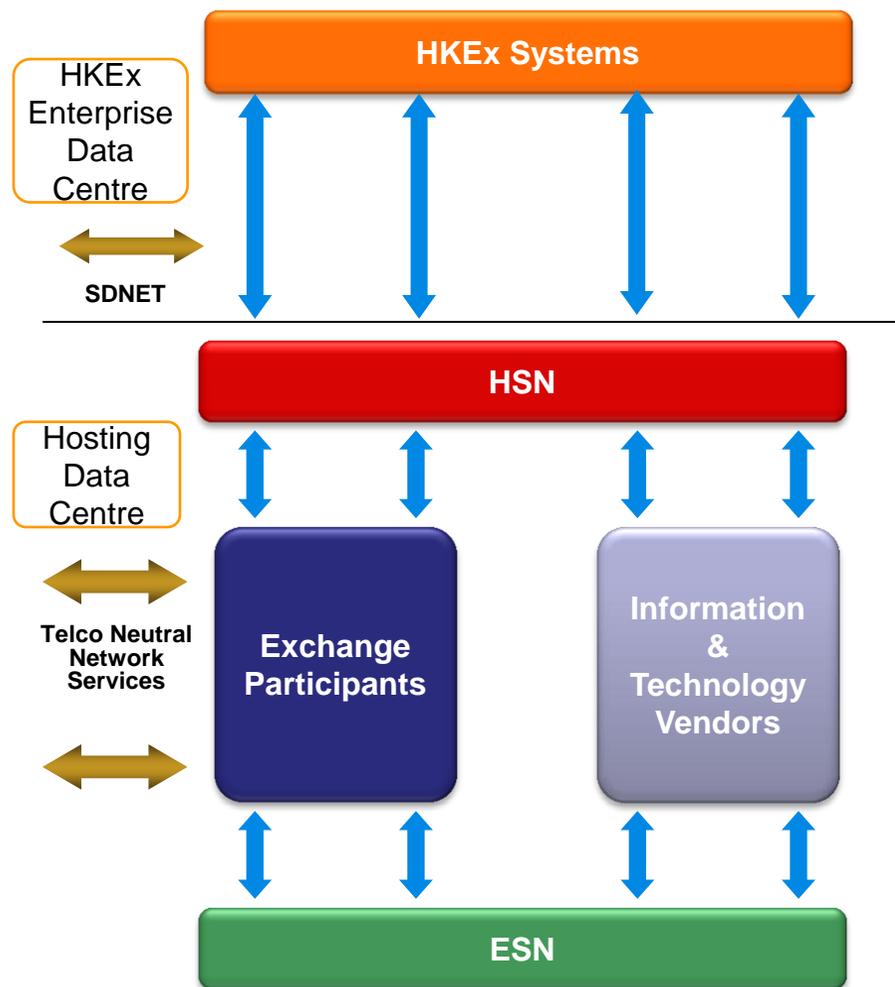
**Hosting services operated from the HKEx Data Centre is a core component of the Orion programme launched in 2012**

# To well keep the Computers...

- **High power density** (6kVA) to improve equipment space efficiency
- Cold aisle **containment** improved cooling efficiency by more than 10%, first such large scale installation in Hong Kong
- **900 mm raised floor** to further improve cooling capacity
- Intelligent **motion sensors** to switch off lighting in unattended area
- **Energy dashboard** to track energy use and PUE
- **Operations Support System** to enhance efficiency and conserve paper



# To well connect the Computers...



## ■ HKEx Service Network (HSN)

- provide eligible users consolidated connection to HKEx market data, trading and clearing systems

## ■ Ecosystem Network (ESN)

- enable users to access services on offer by other ecosystem members

## ■ Cross Connections (XCN)

- put ecosystem members in touch through direct copper or fiber connection

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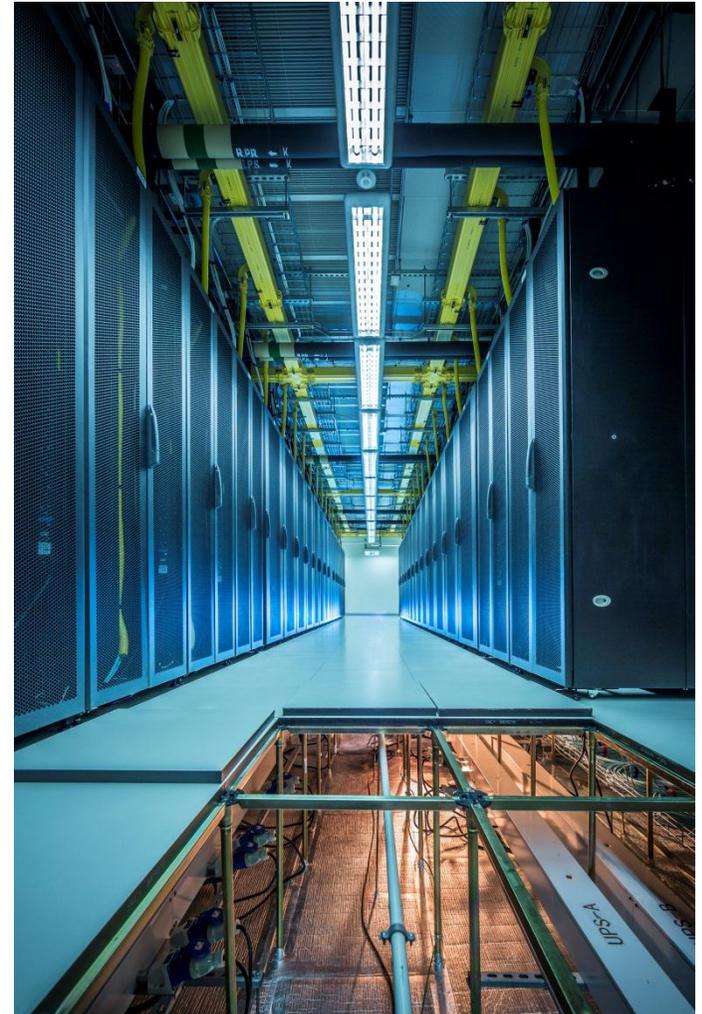
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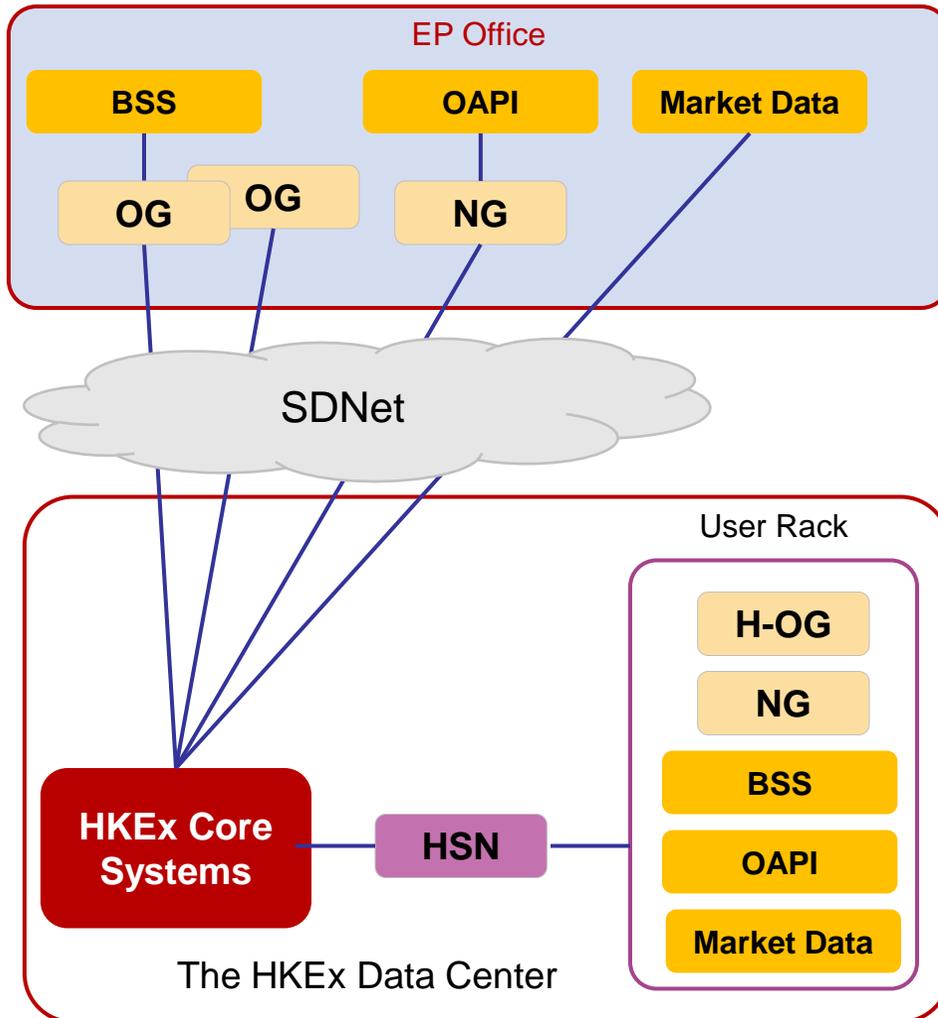
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# Benefit to Hosting Services Users

- **Highly resilient** and **secure** data center
- **Flexible** power and space **offerings** from half rack to multiple racks of different power density
- **Low latency access** to HKEx Securities and Derivative markets
- **Low latency direct** HKEx market data feeds
- **Interactive ecosystem** environment supporting electronic trading
- **Carrier neutral** with broad telecommunications carrier access
- **Less TCO** (total costs ownership)



# Benefit on HKEx Services Network



- ✓ **Low Latency connection** to HKEx Core Systems
- ✓ **Shared Access** for Multiple Trading Devices
- ✓ **Consolidated Connection** for Cross Markets
- ✓ **Cost Performance Improvement**

Cost Drivers	Savings	Remarks
Rack Space	<b>YES</b>	Aggregated Switches, Rack-mounted Gateways
Utilities	<b>YES</b>	Inclusive in Hosting Services Fees
Connectivity	<b>YES</b>	Consolidated Connection, and Shared Access
TCO	<b>&gt;20%</b>	Savings by using Hosting Services

# Benefit on Collaborative Ecosystem

- Among the first exchange pioneering collaborative Hosting Services Ecosystem
- Inspiring participation of local and international technology, market data and communication providers
- Fostering SaaS and cloud-based services for innovative trading applications



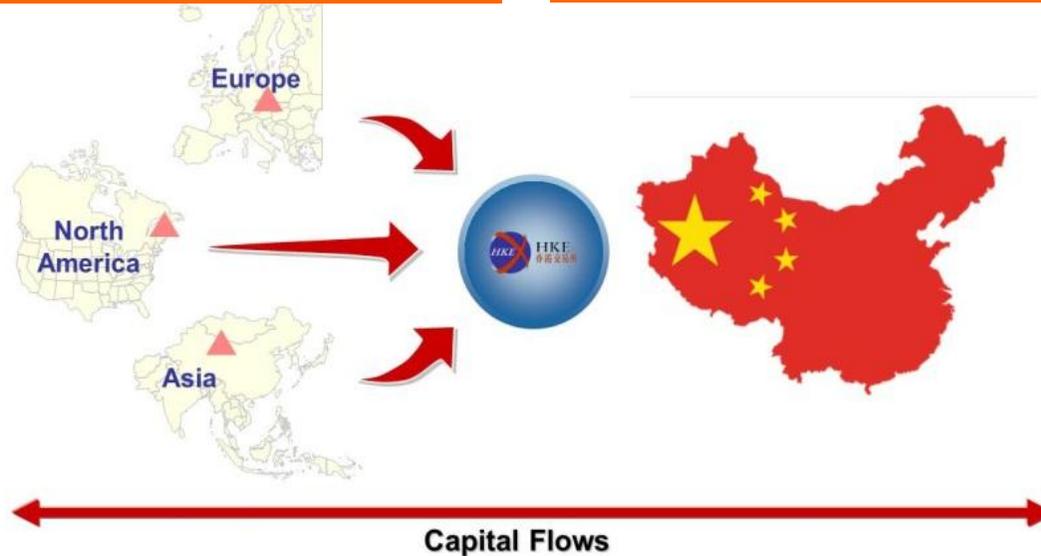
# Benefit on Ubiquitous Connectivity



Provision of carrier neutral infrastructure for world class connectivity to local, mainland and international markets

International Connectivity

Mainland Connectivity



Facilitating HKEX as a global financial hub for the Asian time zone

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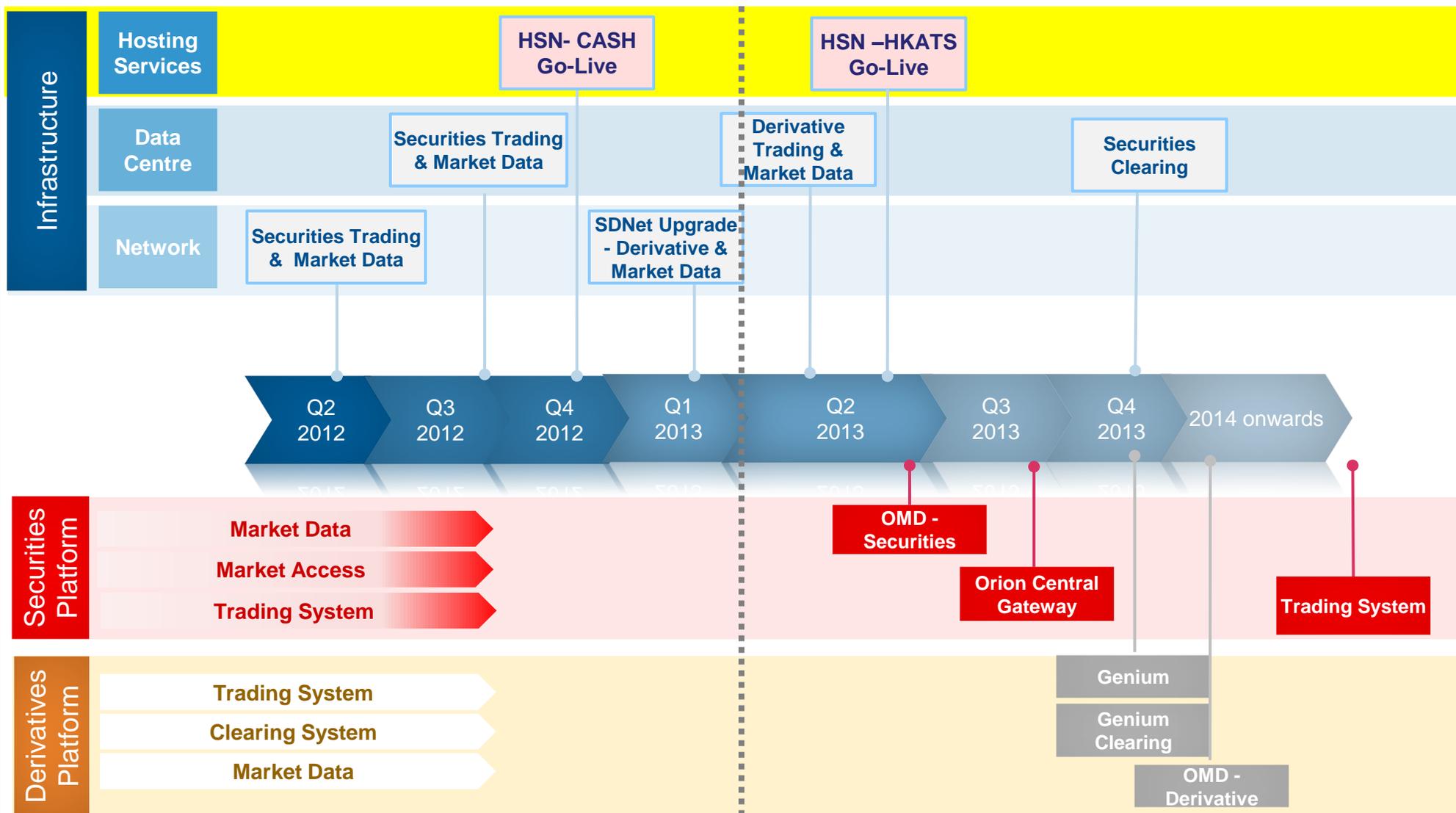
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# Supportive to HKEx Technology Initiatives



# Hosting Services Rollout Update



## 2012

Q3

- ✓ Data Centre Relocation – Cash Trading & Market Data Systems to TKO

Q4

- ✓ Hosting Services – Cash Trading & Market Data Live
  - ✓ Successfully launched in December 2012 as scheduled
  - ✓ 100+ racks sold
  - ✓ 60+ subscribers including EPs, IVs, and other service providers
  - ✓ 20%~ securities market turnover is handled by Hosting

## 2013

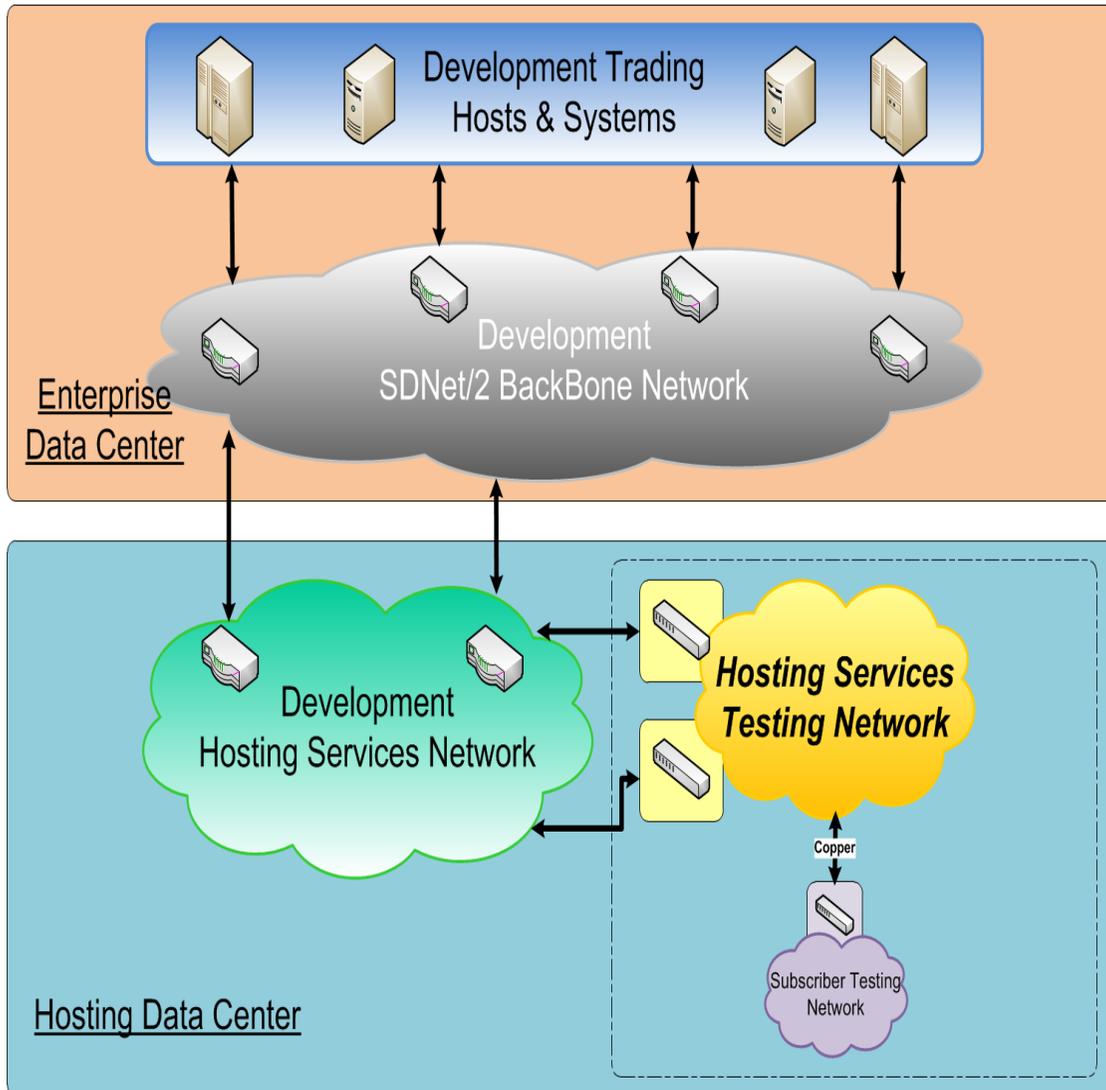
Q2

- Data Centre Relocation – Derivatives Trading Systems to TKO
- Hosting Services Testing Network (HSTN) Launch
- Hosting Services – Derivatives Trading Live

Q4

- Data Centre Relocation – Clearing Systems
- Hosting Services – Clearing Live

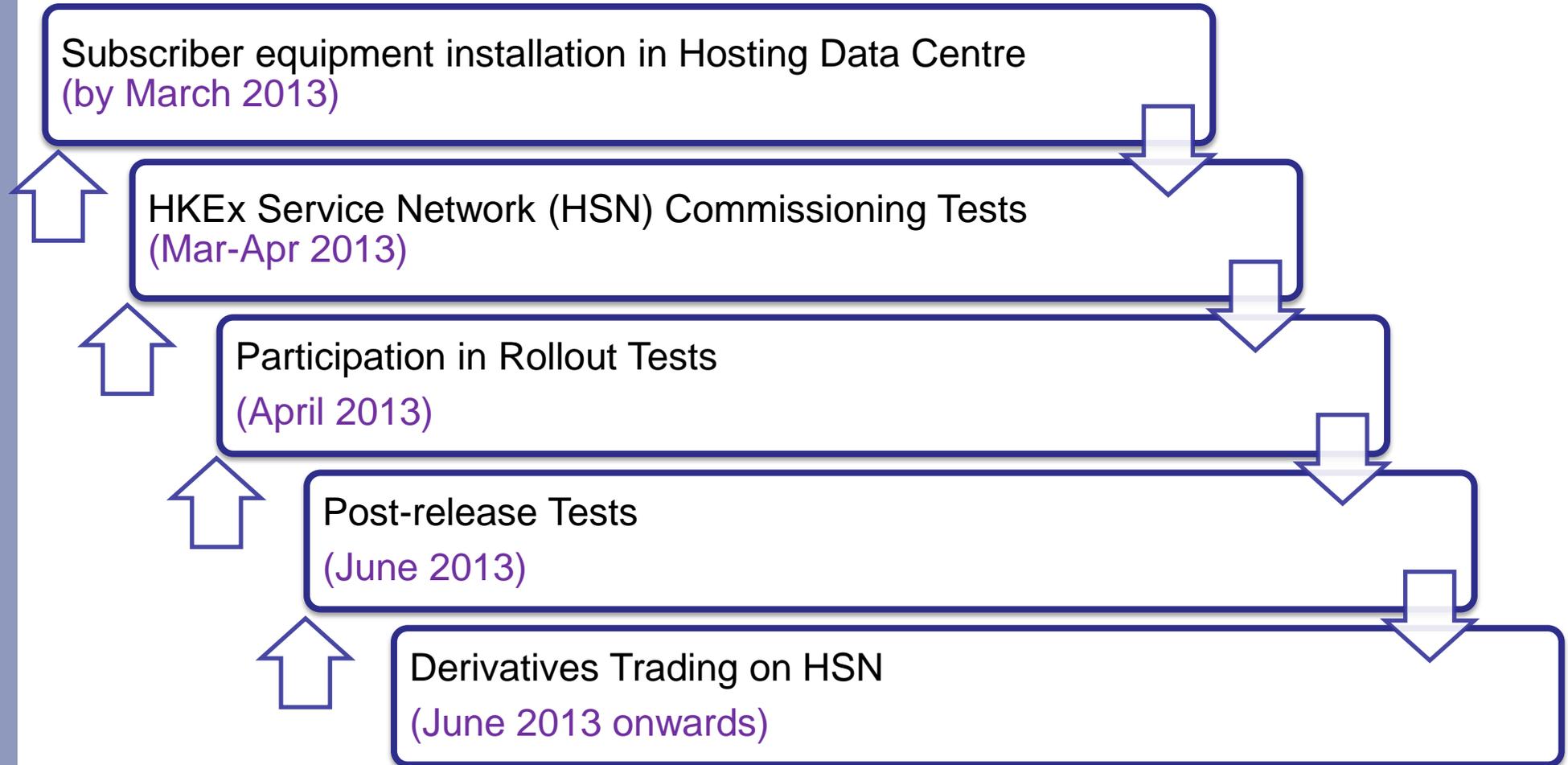
# Hosting Services Testing Network (HSTN)



- Support for various HKEx Orion Technology initiatives
  - Orion Market Data
  - Orion Central Gateway
  - Genium Upgrade
- Eligible for Hosting Services users
  - Exchange Participants
  - Information Vendors
  - Technology Solution Vendors
- One more choice in addition to existing SDNET testing lines
- Same services features as HSN Production ports, except
  - Copper wires interfaces
  - Only pairs of 100M ports and 1G ports on UTP are available

# Hosting Services Derivatives Trading

(for derivatives market participants)



# Simple Subscription Process



## Subscribe HKEx Hosting Services

- Complete Hosting Services Subscriber Agreement and Order Form
- Deposit equivalent to 3-month of Monthly Recurrent Fee

## Arrange relocation of HKEx Gateways

- Securities and Derivative Markets - Contact HKEx Trading Division
- Market Data - Contact HKEx Market Data Department
- Clearing - Contact HKEx Clearing Division
- SDNet/2 - Contact Accredited Vendors

## Service Delivery

- Upon HKEx's acceptance, Subscriber shall provide set-up details for services provisioning purpose
- HKEx Hosting Services will confirm service commencement date

- HKEx Website on Hosting Services

<http://www.hkex.com.hk/eng/prod/hosting/hostingservices.htm>

- Welcome Kit for Hosting Services Subscribers
- HKEx Hosting – Interface Specification on Connectivity Services and Timing Service
- HSN Network Commissioning Test Plan

# Contact Details



For more information about HKEx Hosting Services, please contact

- Direct Email Address:

[hssales@hkex.com.hk](mailto:hssales@hkex.com.hk)

- General Enquiries:

Tel: +852 2211 6447



HKEX  
香港交易所

## Questions and Answers

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