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**HKEX ORION TRADING PLATFORM
– SECURITIES MARKET (OTP-C)**

HKEX
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INTRODUCTION

HKEX ORION TECHNOLOGY INITIATIVES

What is HKEX Orion?

In 2012, HKEX embarked upon the “HKEX Orion Technology Initiatives” programme, which was a major transformation of its technology infrastructure. The programme included transforming data centres, networks, as well as the core trading infrastructure. The programme represents a significant re-investment aimed at maintaining and enhancing Hong Kong’s position as a leading international financial centre.

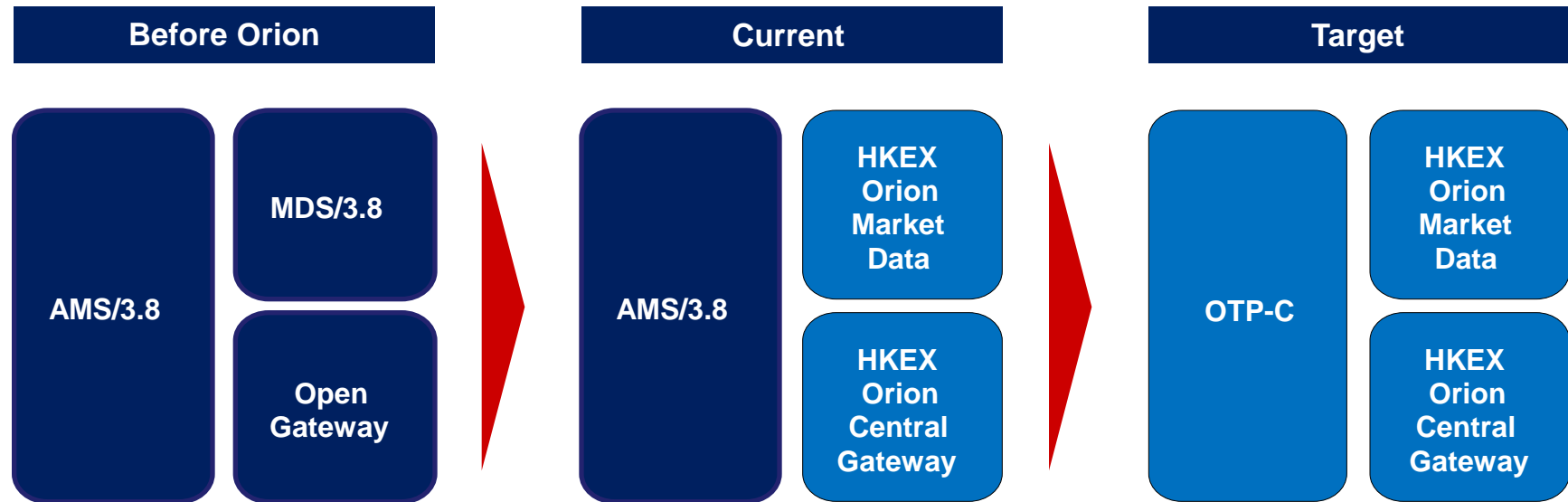
Key Benefits of HKEX Orion

HKEX Orion marks a major transformation in market access, connectivity, speed and efficiency which will benefit all participants.



INTRODUCTION

SECURITIES MARKET PLATFORM MIGRATION



Project	Objectives	Status
HKEX Orion Market Data – Securities Market (OMD-C)	<ul style="list-style-type: none"> ■ Range of market data products ■ Mainland distribution 	Delivered in 2013
Orion Central Gateway (OCG)	<ul style="list-style-type: none"> ■ Market efficiency and cost saving ■ Centralised market access point ■ New features (e.g. drop copy and cancel-on-disconnect) 	Delivered in 2014
Orion Trading Platform – Securities Market (OTP-C)	<ul style="list-style-type: none"> ■ Technology upgrade ■ Increased capacity 	Tentatively scheduled in late Q4 2017

Phased introduction to minimise participant impact



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OVERVIEW OF OTP-C TECHNOLOGICAL ADVANCEMENT

OTP-C is built to meet the future business growth in Hong Kong securities market. Therefore, by taking the advantage of open systems technology, OTP-C is designed to be:

1. **Highly scalable:** support 25 million trades/day
2. **Support higher throughput:** support 60,000 transactions/second

However, as there will be no interface changes on Orion Central Gateway (OCG) and Orion Market Data – Securities Market (OMD-C) for market participants, the change impact is shielded.



OVERVIEW OF OTP-C MINOR ENHANCEMENTS IN TRADING FUNCTIONALITY UPON LAUNCH

Enhancements (Optional)	Description
<p>Allow changing the non-price/non-quantity related attributes of an order in Pre-Order Matching/ No Cancellation/ Random Closing Periods</p>	<ul style="list-style-type: none"> ➤ Changing non-price/non-quantity related attributes of an order will be allowed in: <ul style="list-style-type: none"> • Pre-Order Matching Period of Pre-Opening Session (POS) • No Cancellation Period and Random Closing Period of Closing Auction Session (CAS) ➤ Example of non-price/non-quantity related attributes: <ul style="list-style-type: none"> • Order Capacity • Short Sell Indication • Broker Comment • Broker Location ID • Disclosure Instruction
<p>Enhancements of the existing “mass order cancellation” and “OBO single order cancellation” functions</p>	<ul style="list-style-type: none"> ➤ In AMS/3.8, “mass order cancellation” cannot cancel special/odd lot orders. In OTP-C, “mass order cancellation” will cancel all orders including board lot, special lot and odd lot orders. ➤ In AMS/3.8, “OBO single order cancellation” cannot cancel special/odd lot orders. In OTP-C, “OBO single order cancellation” can cancel all kinds of orders including board lot, special lot or odd lot orders.

There will be no impact to EPs’ trading functions even if their BSS are not changed



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IMPACT ON EPs AND OMD-C CLIENTS

	Potential Question	Answer
1	Is migration to OTP-C mandatory?	➤ Yes, migration to OTP-C is mandatory to all EPs and OMD-C Clients
2	Are there any changes to OCG?	➤ No change to OCG interface, the throttling mechanism and the capacity per OCG order flow session
3	Are there any changes to OMD-C?	<ul style="list-style-type: none"> ➤ No change to OMD-C interface and message dissemination protocol ➤ The multicast channels for the dissemination of a small number of existing OMD-C messages will be changed after OTP-C goes live
4	Are there any enhancements in trading functionality?	<ul style="list-style-type: none"> ➤ Minor optional enhancements in trading functionality are introduced ➤ It is up to EPs to decide whether or not to implement these enhanced trading functionality on their systems
5	Is participation in testing required?	<ul style="list-style-type: none"> ➤ EPs should participate in End-to-End (E2E) test and Market Rehearsals (MRs) ➤ OMD-C Clients are also required to participate in MRs



IMPACT ON EPs AND OMD-C CLIENTS

	Potential Question	Answer
6	Will the new enhancements made on AMS/3.8 be carried over to OTP-C?	<ul style="list-style-type: none">➤ Yes, new enhancements made on AMS/3.8 before the rollout of OTP-C will also be included in the implementation of OTP-C unless otherwise stated
7	Will a separate E2E test environment be provided for OTP-C?	<ul style="list-style-type: none">➤ Yes, a new E2E test environment will be set up for OTP-C➤ The existing E2E test environment for AMS/3.8 will still be available for EPs to conduct the required testing (e.g. Phase 2 implementation of CAS).



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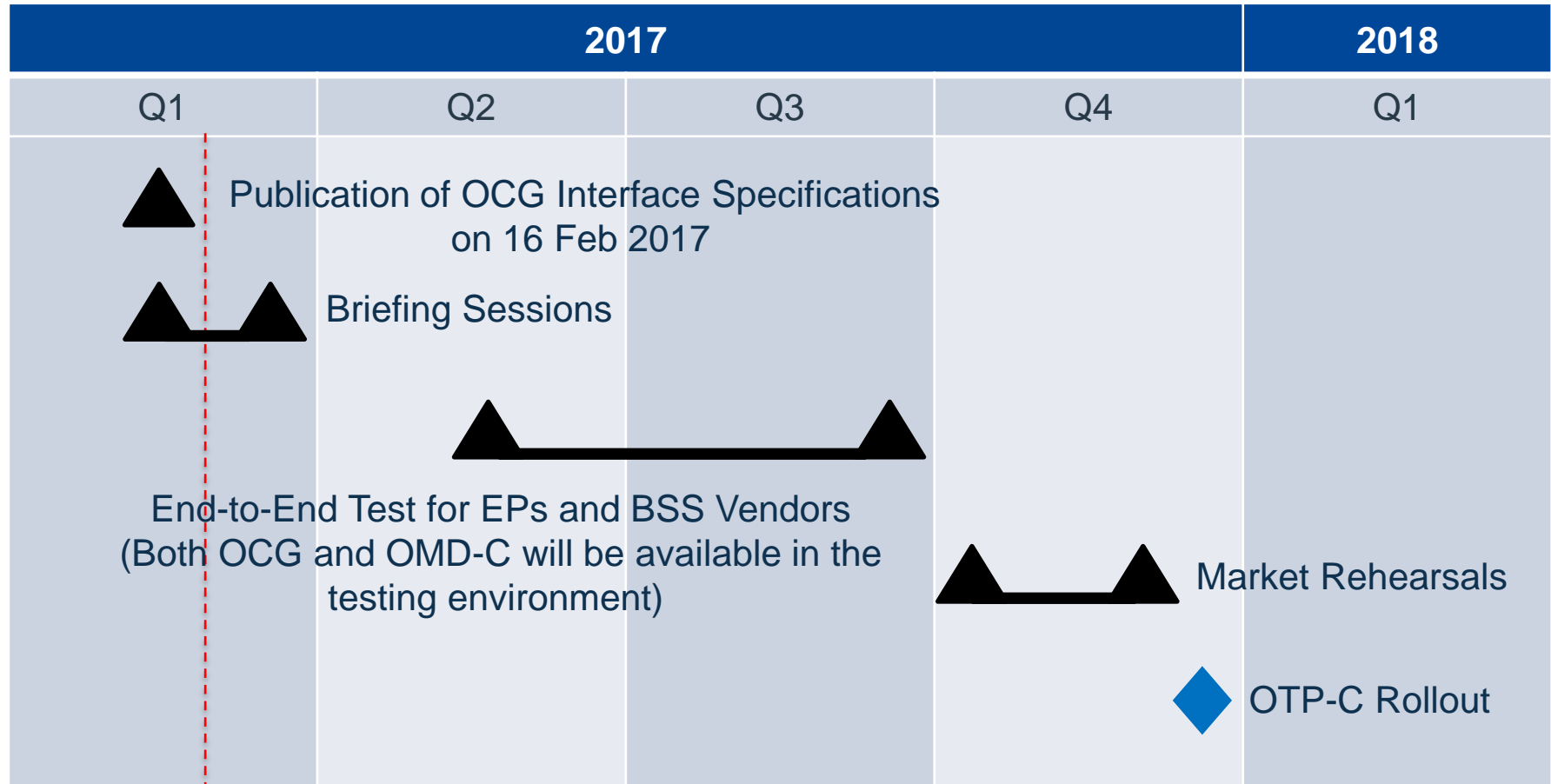
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TENTATIVE IMPLEMENTATION SCHEDULE



We are here

The schedule is subject to market readiness and relevant regulatory approvals



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TESTING ARRANGEMENT

Test	Arrangement
Offline Simulation Test	<ul style="list-style-type: none"> ➤ Testing with an offline OCG simulator is not required as there is no change in the OCG interface ➤ For OMD-C, an Offline Simulator Tool including canned data will be provided in Q2 2017. OMD-C Clients can experience the effect of the change of dissemination channels by using this tool
End-to-End (E2E) Test	<ul style="list-style-type: none"> ➤ All EPs having Broker Supplied System (BSS) connecting to OCG should participate ➤ An E2E testing environment of OCG and OMD-C connecting with OTP-C will be offered in late Q2 2017 ➤ E2E test can be conducted by BSS vendors on behalf of their clients. However, individual EP will be required to provide declarations on the readiness of their BSS software's ability to interact with OTP-C to the Exchange
Market Rehearsals (MRs)	<ul style="list-style-type: none"> ➤ MRs will be conducted over a number of weekends in Q4 2017 ➤ All EPs and OMD-C Clients are required to join the MRs to verify their system compatibility



ENQUIRIES

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Q & A