

16th/ 17th Jan 2018

**NEXT GENERATION POST-TRADE
PLATFORM TOWN HALL**

NextGen



Trevor Spanner
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AGENDA

1

NextGen Strategy

2

Risk Management and Operational Change

3

Technology Change

4

Next Steps

5

Q&A





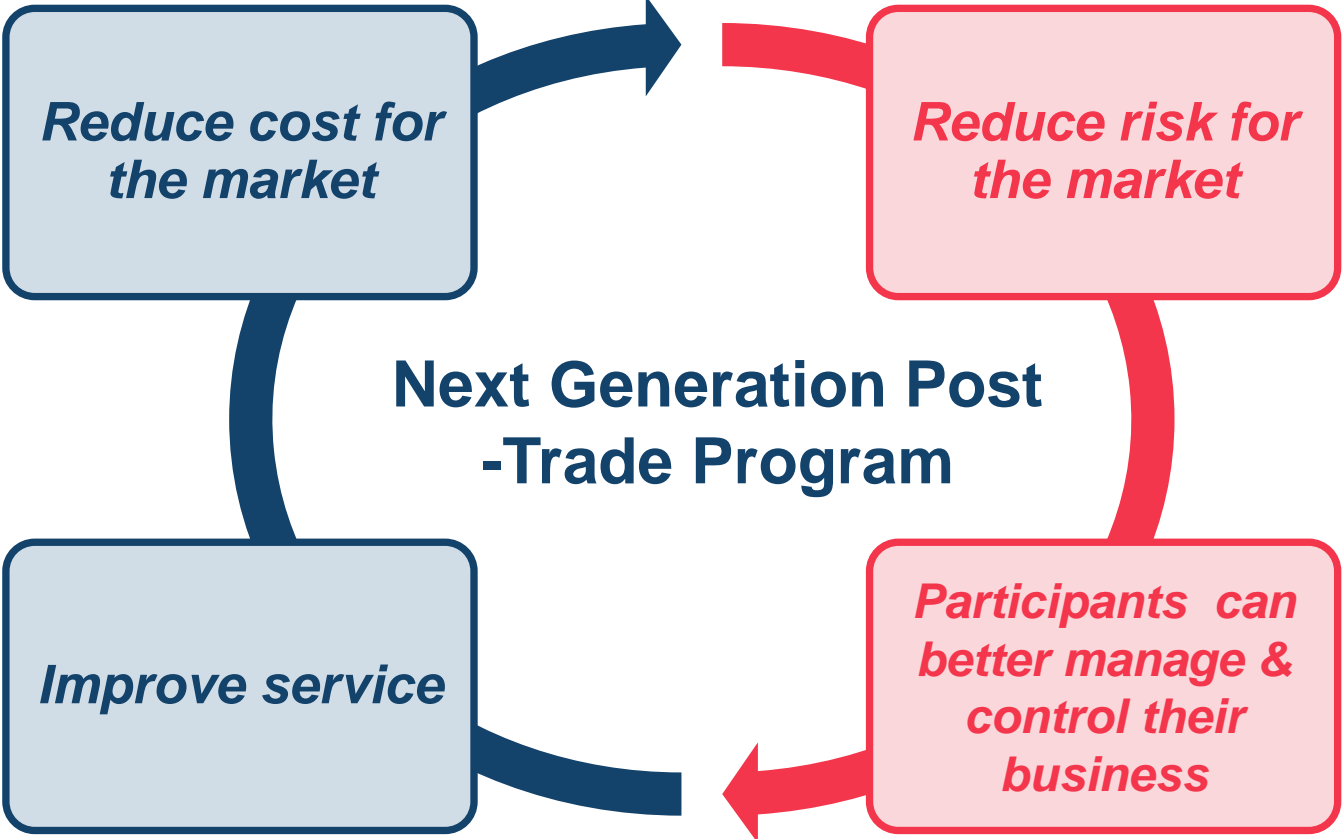
STRATEGY

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Trevor Spanner
Group Chief Information Officer

NextGen Key Drivers

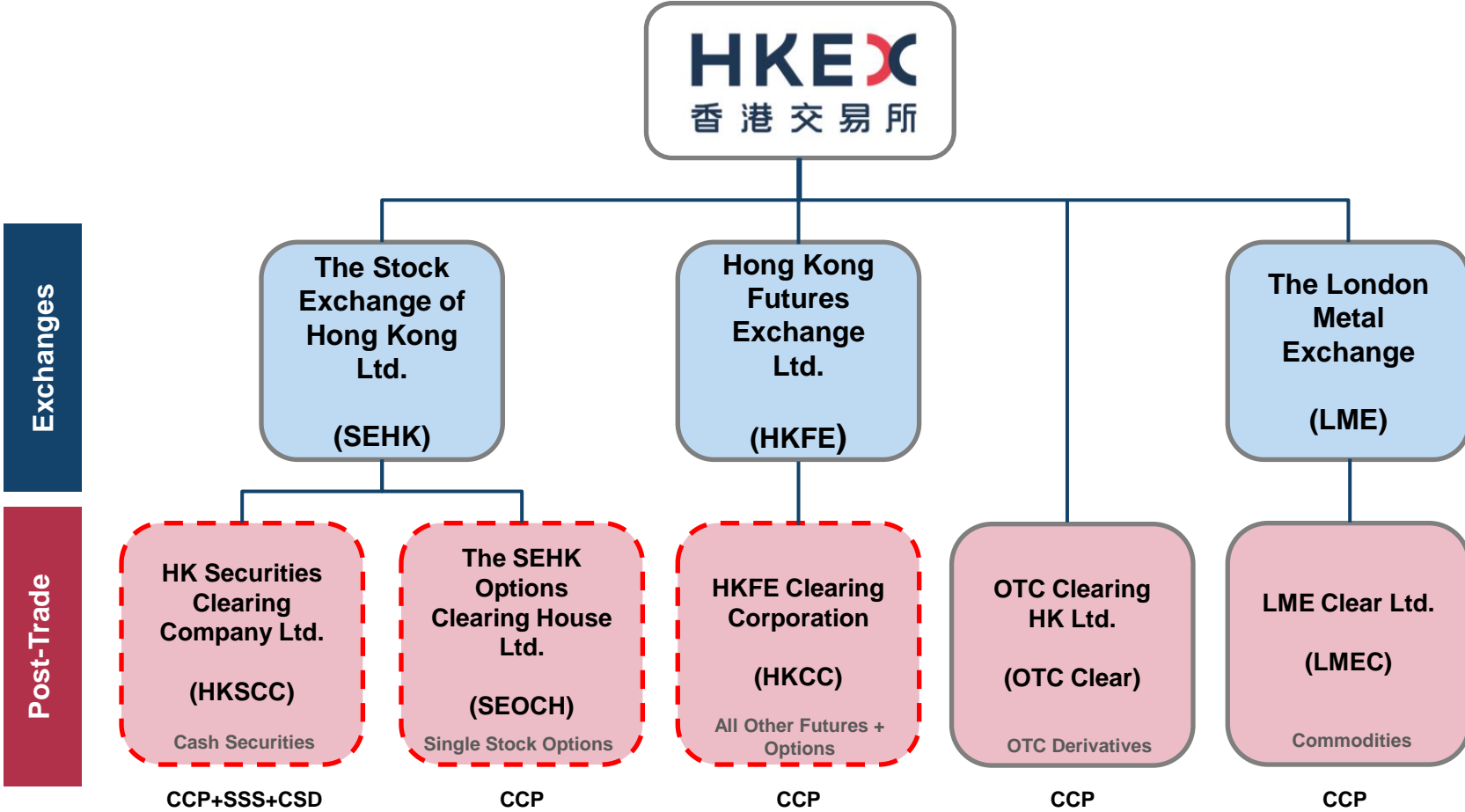
Our drivers are simple:



Driven by new technology



NextGen Post Trade Scope



 *In scope for the NextGen Post-Trade Platform*

Note:

- (1) Lines indicate functional, rather than legal, relationships between entities.
- (2) CCP: Central Counterparty ; SSS: Securities Settlement System ; CSD: Central Securities Depository



Key Objectives

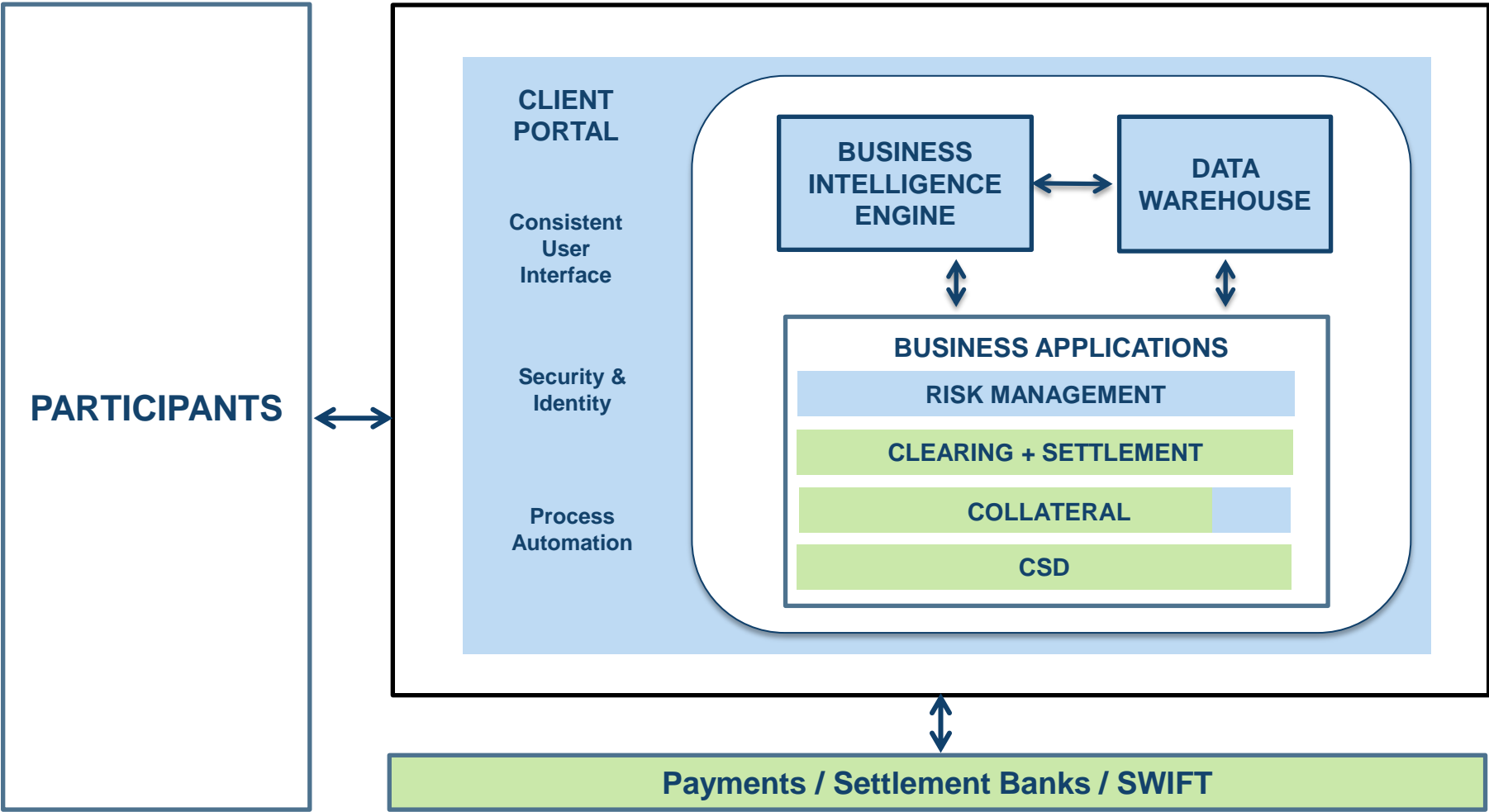
Streamline and modernise our Post -Trade systems to maintain competitiveness

- **Holistic upgrade for HKEX's post-trade infrastructure**
 - Not just a technology refresh
- **Enhance HKEX's offering throughout the post trade value chain**
 - Enhance capital efficiencies for the market
 - Improve risk management capabilities
 - Agility to launch new products and services
- **Improve efficiency and resilience**
 - Process automation & improvements
 - Cost and risk reduction
 - Maintain compliance with international regulations
- **Prepare for the future**
 - Respond to an increasingly global regulatory environment
 - Greater integration with Mainland market infrastructure
 - Support future products and services



NextGen Post Trade Environment

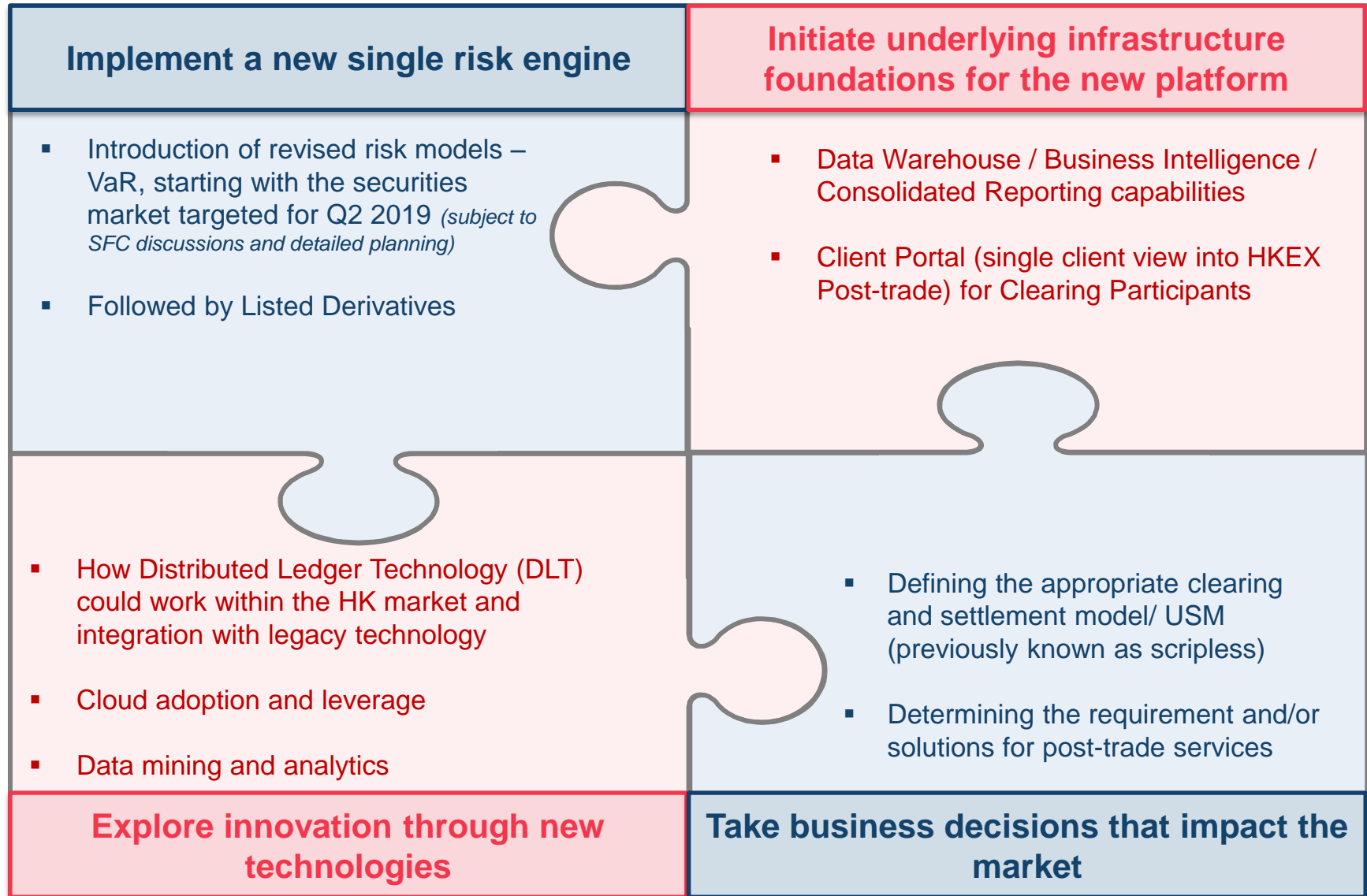
Phase 1 2019 Phase 2 2019 +



Reduce cost and risk for the market as a whole, improve service and provide tools for Participants to better manage and control their businesses



NextGen 2018/19 Programme of Work – Four Areas of Focus



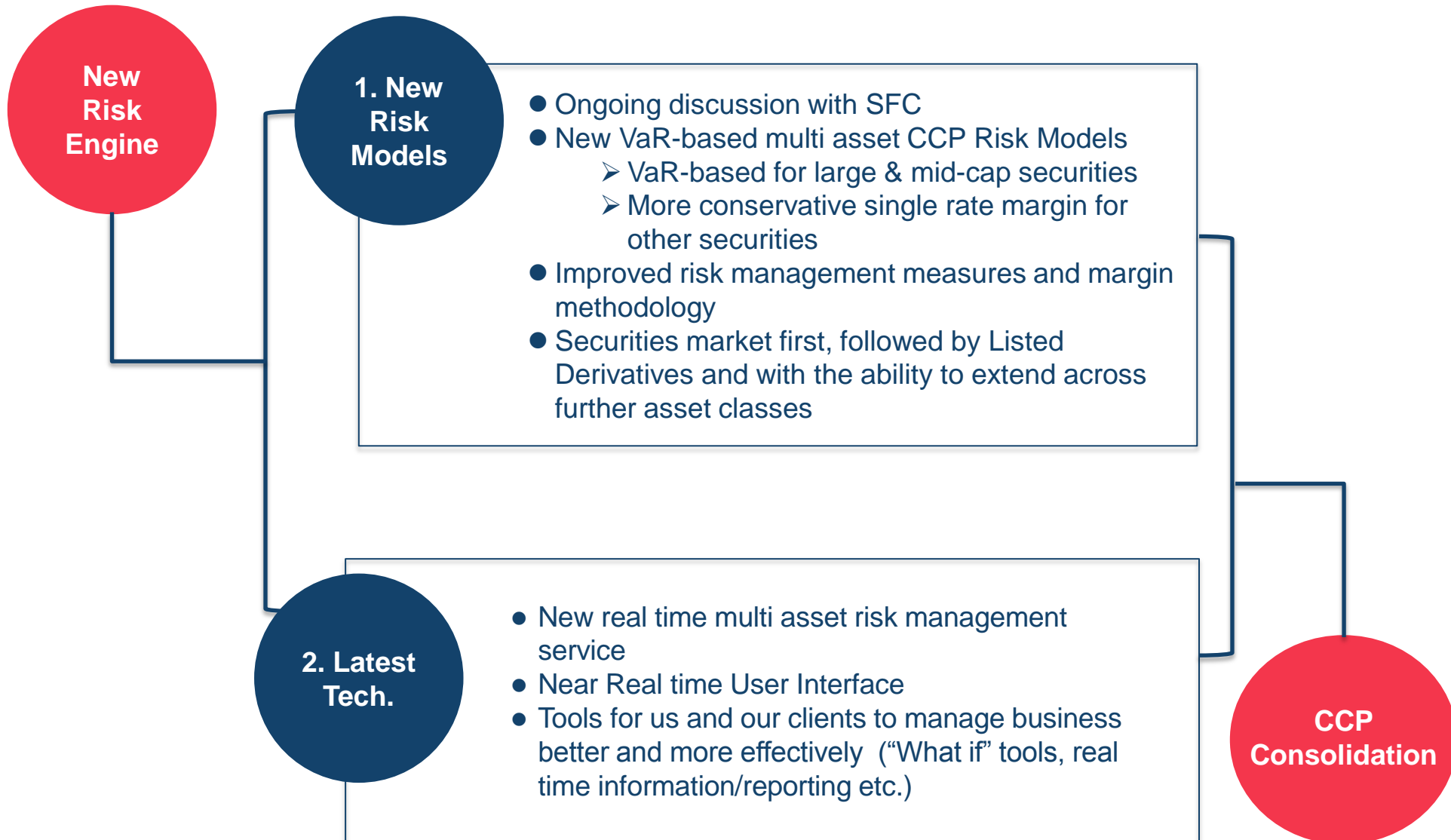


RISK / OPERATIONS

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Calvin Tai
Joint Chief Operating Officer

Multi Asset Single Risk Engine



New Risk Model – Overview of Changes

Current HKSCC Model

Single scenario to capture CP's risk exposure

- **Initial Margin:** single margin rate based on Hang Seng Index (HSI) applied to all securities
- **Stress Testing:** up and down scenario applied to all securities to generally cover systemic risk



Next Generation Risk Models

Multiple scenarios to capture CP's risk exposure

- **Initial Margin:** Better reflects exposure of different stocks positions and offers risk offset within the portfolio
- **Stress Testing:** Multiple product-specific scenarios applied to each security

Improved risk protection to market and higher margin efficiency to participants



New Single Risk Engine - Drivers

Robust and Efficient Risk Management Capabilities

- Support and better scale for additional products and services
- Near real-time monitoring, reporting and management of risks
- Portfolio margining within and across asset classes with NG Risk Models
- Support growing usage of non-cash collateral with enhanced risk management capabilities

1 Robustness & Resilience

- Strengthens robustness and resilience of CCP and markets

2 Risk-based Approach

- Initial Margin (IM) and Default Fund (DF) better reflect the portfolio risk of each CP
- Higher IM requirement for portfolios with higher risk; reinforces the “defaulter-pays” principle

3 Capital Efficiency

- Higher capital efficiency for CPs due to lower risk-based margin requirements → beneficial to competitiveness of Hong Kong financial market

4 International best practices

- Consistent with global practices
- Enhanced compliance with evolving international and regulatory standards

Provides better protection for HKEX and overall capital savings for the market



Core Components - Multi Asset Single Risk Engine

Near Real Time User Interface

- Allow users' to access the most up to date risk information

Tools to better manage your business

- Provide a more comprehensive picture of risk exposure

“What if” tool

- A simulation tool that helps predicts the outcome base on users' preference of inputs

CCP Consolidation - Key Drivers

1

COMPETITIVE POSITIONING
and making the model future-proof

- *Modernizing current structure to support expansion and market growth*
- *Capital & collateral efficiencies of CPs are key differentiators*

2

STRATEGIC TIMING/ OPPORTUNITY
to simplify current platform

- *Launch of NextGen offers a prime strategic opportunity to implement a simplified structure*
- *Aligning HKEX with international practices*

3

OPERATIONAL EFFICIENCIES
by removing duplicated functions

- *Savings for market participants & HKEX*
- *Better scale for Cover 2 ¹ and/or higher ADT*
- *Efficient use of liquidity resources*

4

DIRECT FINANCIAL SAVINGS
for HKEX and the market

- *Reduce capital contributions by CPs and HKEX*
- *Reduce reliance on bank financing*

1. Counterparty default assumptions: default of the two largest Participants



**NEXTGEN COMMON SERVICES
&
TECHNOLOGY**

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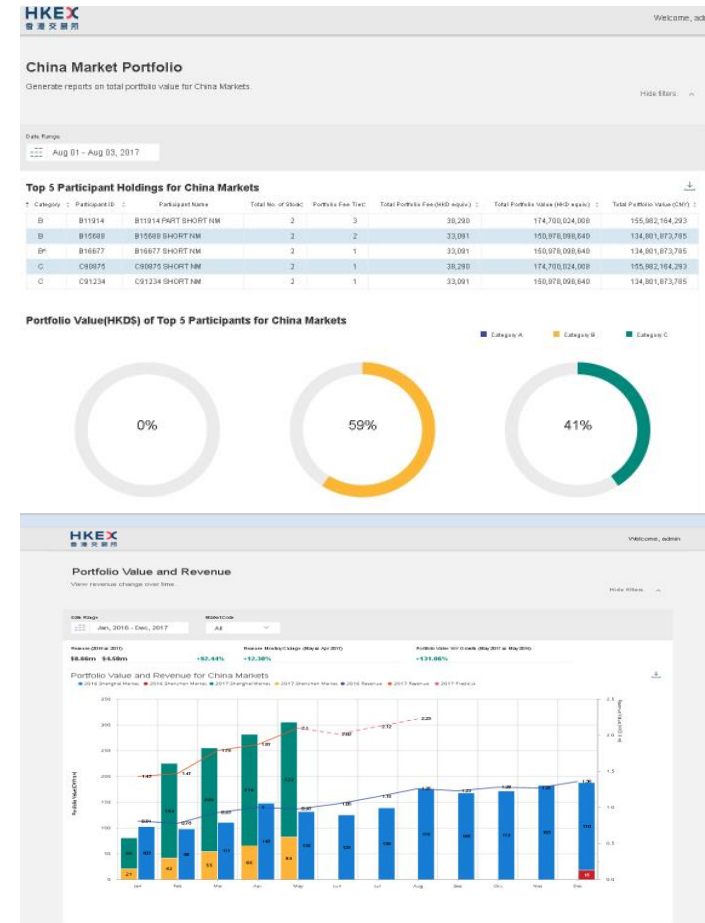
Richard Leung
Chief Technology Officer

Data Warehouse & Business Intelligence

Allows Clients and HKEX to better manage their businesses

- Provides business intelligence and analytics for clients and ourselves to gain insight into our market and performance
- Offers a Dashboard to collate and display data and reports, a full query analytical tool, and powerful reporting capabilities
- Automated, machine readable reports – CSV files etc.
- New tools and services to CPs such as interactive queries

Data Warehouse	<ul style="list-style-type: none"> - Centralized data repository - Interfacing capability with data sources (e.g. Legacy and new post trade systems including market data).
Business Intelligence	<ul style="list-style-type: none"> - Customizable dashboards - Interactive queries and analysis tool and associated visualizations in form of reports - Role based access control to functions and data
Services	<ul style="list-style-type: none"> - Data modelling, automated, machine readable reports - New tools and services to CPs and internal users, such as interactive queries



Client Portal

1. Web Portal

- Single entry point
- Customisable user dashboard
- Centralized alert and notifications
- Tailored HKEX News and Updates

2. Workflow Engine and e-Forms

- Automated communication
- Digitization of manual forms
- Simplified operations
- Streamlined processes

3. Identity and Access Management

- Enterprise-grade security
- Flexible and client-controlled user account structure
- Integration across NextGen applications
- Depth of knowledge of market

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SEARCH Search for any content

Mr. Smith

Alert -Workshop for Analysts on HKEX's Revenue is cancelled

APPLICATION STATUS	View All	TODAY TASKS (5)	View All
Investors & Analysts Q3 2017 Results 3 Jul, 1:00pm	Approved	IPO Application 1:00pm	
Request for Position Transfer 5 Jul, 3:00pm	Pending	Request for Position Transfer 3:00pm	
Workshop for Analysts on HKEX's Revenue 6 Jul, 5:00pm	Rejected	Workshop for Analysts on HKEX's Revenue 5:00pm	

CALENDAR Jul, 2017

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

● HKEX Event
● Your company Event
● Application deadline

HENG SANG INDEX

DEF Limited

\$23.6
+3.4

OCT NOV DEC

LATEST NEWS View All

- Report on Initial Public Offering Applications, Delisting & Suspensions (As at 28 February 2017) 2 days ago
- Shenzhen Stock Connect Begins! - Watch the highlights of the launch of Shenzhen-Hong Kong... 2 days ago

ACTIVITIES STREAM View All

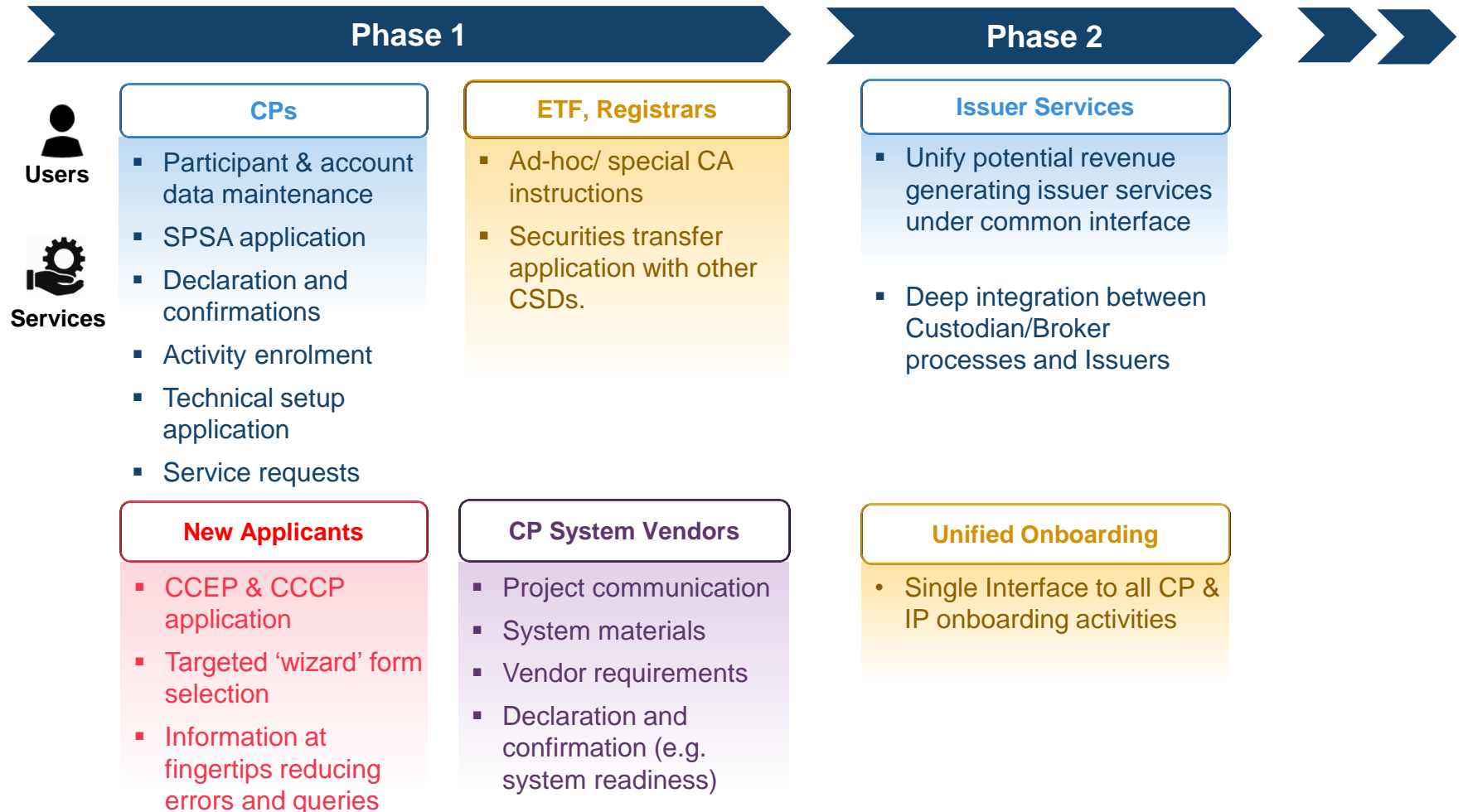
- Coleman @JP Morgan request on trading products 3 mins ago
- David Tom @CLC Futures Ltd request on trading products 3 mins ago
- Smith John @JP Morgan request on trading products 3 mins ago

QUICK LINKS

- View recent notice >
- View recent document >
- View recent reports >
- View recent events >
- View latest short market reports >

A secure, attractive and easy to use portal for all participants to access HKEX services.

Client Portal Phased Scope

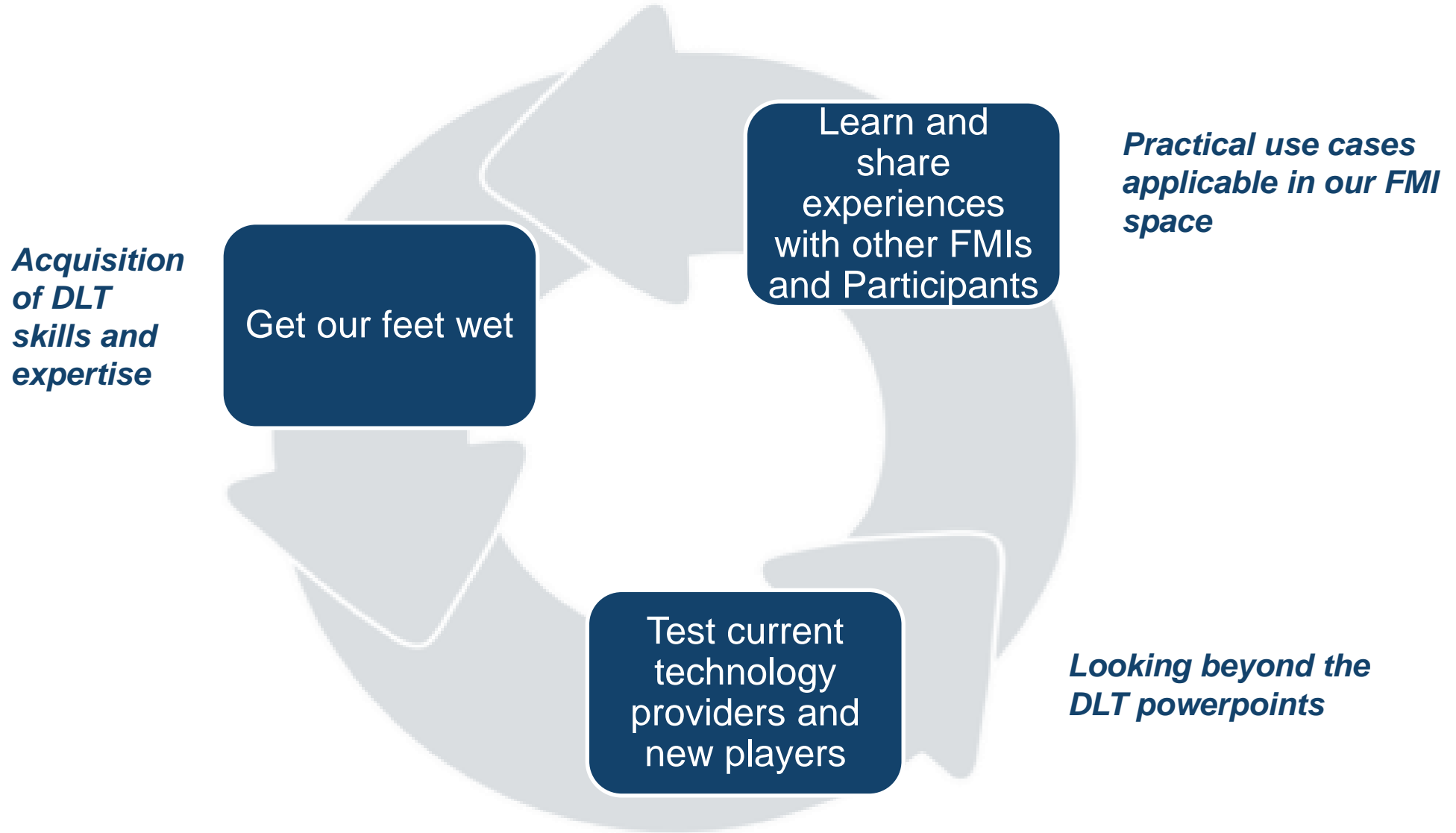


Digitising over 90 individual forms in Phase 1

Transitional business services will be migrated back to their respective applications in the future.



HKEX DLT Strategy – Identifying Potential Value to Our Industry





NEXT STEPS

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Trevor Spanner
Group Chief Information Officer

CP NextGen Operational / Technical Changes

New Risk Models VaR

- *VaR parameter file available via browser / Secure File Transfer (SFTP)*
- *Machine readable .csv or similar*
- *CP can use the file to calculate the portfolio margin*

Reports

- *Consolidated set of standard automated Clearing Reports – including risk and position reports*
- *Position and price reports will be provided at day-end*
- *Clearing Participants retrieve NextGen reports via Secure File Transfer (SFTP)*

Margin Simulation Tools

- *Several options and a combination of options can be offered to CPs*
- *Browser based / API / Parameter File etc....*

Next Steps

- Publish Project Plans and Key Milestones – Q1 2018
- Publish dates for all technical specifications – Q1 2018
 - Automated Reports specification
 - VaR Parameter File specification
 - Connectivity Specification
 - User Guides etc.
- Continue/ Initiate CP Working Groups as required, for e.g.:
 - Clearing Risk WG
 - Report Data Specification WG
 - Client Portal WG
 - NG Technical WG
 - USM Working Group
- Active engagement with Industry Bodies
 - Broker Associations
 - ASIFMA
 - FIA



Client Improvement Timeline: Key Post Trade BAU and NG Highlights:2018 - 2019

Projects	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Ongoing Enhancements (BAU)								
Corporate Actions Automation <i>- Focus on 3 key notifications – Technical Testing available from 2nd half of 2018. Business rollout subject to issuer readiness</i>								
Stock Connect Enhancement - Holiday Trading <i>- Aligning Holidays in China & Hong Kong - Technical readiness, business rollout subject to regulatory approval</i>								
Stock Connect Enhancement <i>- Non-CNH Collateral for Prepayment</i>								
Genium 4 Upgrade <i>- Retirement of CLICK and Network Gateway (NG)</i> <i>- Central Gateway as the only access point to HKATS and DCASS</i> <i>- Introduction of Web Based Core Desktop (CD)</i>								
CCP Recovery Plan Measures <i>-including close-out netting provisions, SITG</i>								
NextGen Programme								
New Single Risk Engine (Cash)								
New Single Risk Engine (Listed Derivatives)								
Data Warehouse (New Reporting)								
BI Tool								
Client Portal								



Q & A

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