

Connecting Today with Tomorrow:

Modernising Our Platform Business

John Buckley

Head of Exchange Operations and Transformation

Richard Leung

Group Chief Technology Officer



Strong Platform Foundations

Market Capitalisation

▲ 71%

2016-21 growth

SB Stock Connect ADT

▲ 1,038%

2016-21 growth

Cash Market ADT

▲ 149%

2016-21 growth

Peak Cash Trading
System Performance

20K

transactions per second¹

3 Exchanges

5 Clearing
Houses



Leading
availability



Scalability



Trusted
partner

1. 3 Dec 2021. Source: HKEX.

Where We Are Investing

Modernise our infrastructure



Strengthening Core Platforms



Providing Seamless Access

Evolve from an infrastructure-led to a client-led model



Creating Client Journeys



Aligning our Operating Model

Technology Building Blocks



Big Data & Analytics



Modular Architecture



Open APIs



Cloud Services



DLT & Smart Contracts

Strengthening Core Platforms

Modernise our Infrastructure

Create a roadmap to evolve our legacy systems

Evaluate cloud technology in platform solutions

Implement DLT for new / emerging opportunities

Establish data & analytics as core capabilities

Reinforce our resiliency and build capacity for future growth



Addressing Technological Debt



- ✓ Trade
- ✓ Post Trade
- ✓ Risk Management
- ✓ Market Surveillance

Employing New Architectural Approach



- ✓ Cloud Solutions
- ✓ DLT Solutions
- ✓ Modular Designs
- ✓ Data Governance

Upholding Reliability and Availability



- ✓ 100% availability
- ✓ Mature resilience model
- ✓ Active capacity planning
- ✓ Strengthen cyber resilience

Strengthening Core Platforms | Key Initiatives

Modernise our Infrastructure

Risk Management Platform



VaR Platform

New risk management platform to modernise our risk model with VaR



VaR Online

Online margin simulation services

Trading System



HKATS Enhancement

Improve derivatives trading platform, interface and access



LMEselect 10

Develop new LME trading platform with HKEX Orion technology

Post-Trade System



Post Trade Gateway

Modernise interfaces to improve connectivity



CCASS Modernisation

Connect participants of HKEX's post trade ecosystem



PTG & CCASS

Seamless future system upgrades for participants

Enterprise Digital Solutions



Cloud Solutions

New corporate platforms to improve agility and scalability



AI-enabled Solutions

Delivering improvements in processing accuracy and operating leverage



OPAS Platform

Workflow and case management system to enhance collaboration



Big Data & Analytics



Modular Architecture



Open APIs



Cloud Services



DLT & Smart Contracts

Digitise all interactions between our clients and HKEX

Enable smoother onboarding and access to our platforms

Enhance data distribution to end clients

Publish our enterprise roadmaps for data, digital and cloud architecture



Improve Client Experience



Client Connect

Digitalise all operational interactions with HKEX through the Client Connect portal



Single sign-on

Access HKEX's client service platforms with the same set of credentials



IdM

Digital Identity and Access Management to support secure remote access



Sanctum

Set up data and analytics marketplace for easy access to our market data



Testing services

Provide advanced test facility (env. and automation tools) for testing and simulated trading



Big Data & Analytics



Modular Architecture



Open APIs



Cloud Services

Creating Client Journeys

Build client journeys through application solutions

Provide a common client experience for all HKEX services

Build strategic technology partnerships

Actively support Hong Kong's roadmap as an IFC



Clients



Issuers

Investors

Market Participants

Partners



Employees

Technology Providers

Exchange Partners

Hong Kong



Regulators

Community

Financial Centre

For Issuers



Project Signal

New data-driven online platform to digitise SEHK's interaction with issuers



Project FINI

Scalable cloud-based platform to conduct faster, smoother, HK equity offerings



IR Connect

Platform for issuers to connect with existing and prospective shareholders

Key account management



For Investors



Stock Connect H-1 Trading

Eliminate Stock Connect pre-holiday non-trading days to improve market liquidity



RMB Counters

RMB counter trading to further build offshore liquidity in RMB



HKEX Synapse

Northbound Stock Connect trade enrichment with smart contract technology



Big Data & Analytics



Modular Architecture



Open APIs



Cloud Services

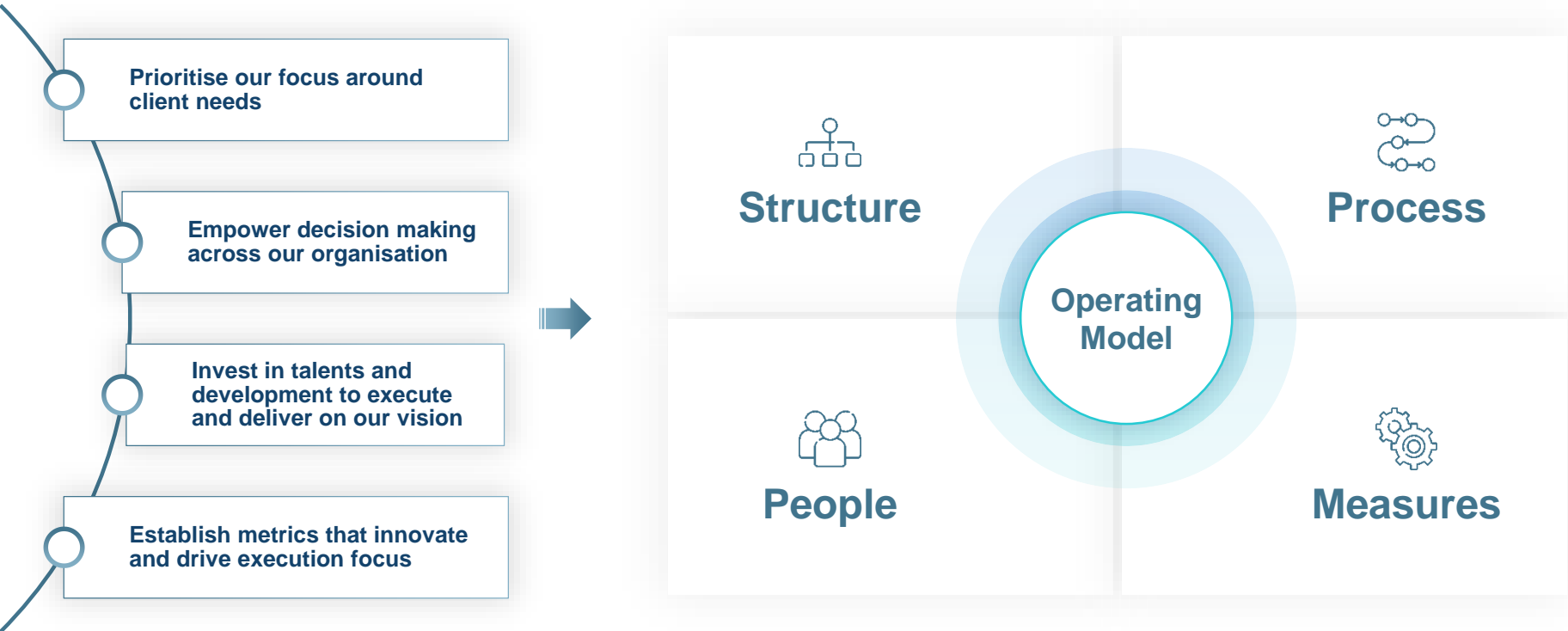


DLT & Smart Contracts

Multi-year Modernisation Journey



Aligning our Operating Model

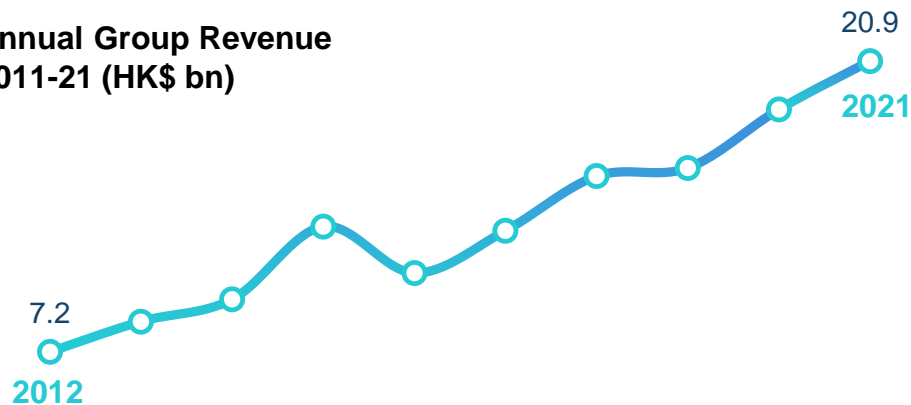




Highly successful business,
investing from a position of strength

HKEX

Annual Group Revenue
2011-21 (HK\$ bn)



... a newly aligned operating model will future-proof us for decades to come, enabling...

- ✓ Asset agnostic core systems
- ✓ Open & modular architecture
- ✓ Tokenisation of traded instruments
- ✓ Cloud-enabled infrastructure
- ✓ Digital end-to-end client journeys

Delivering Benefits for All

For our Clients



**Low friction
of access**

**Efficient platform
solutions**

**Faster time
to market**

For our Partners and Employees



**Collaborative
partnerships**

**Purpose-driven
career paths**

**Supportive work
environment**

For Hong Kong



**Connect great ideas and
businesses with global capital**

**Spearhead FinTech
ecosystem**

**Reinforce HKEX and Hong
Kong's position as a trusted
international financial centre**

To Modernise our Platform Business, We are...



Sustaining investment to **strengthen our core platforms** in risk, trading, post-trade and digital



Building more **seamless access** to our platforms for convenience and efficiency



Putting **client journeys** at the forefront of our priorities in application development



Aligning our end-to-end operating model to support HKEX as the Marketplace of the Future