



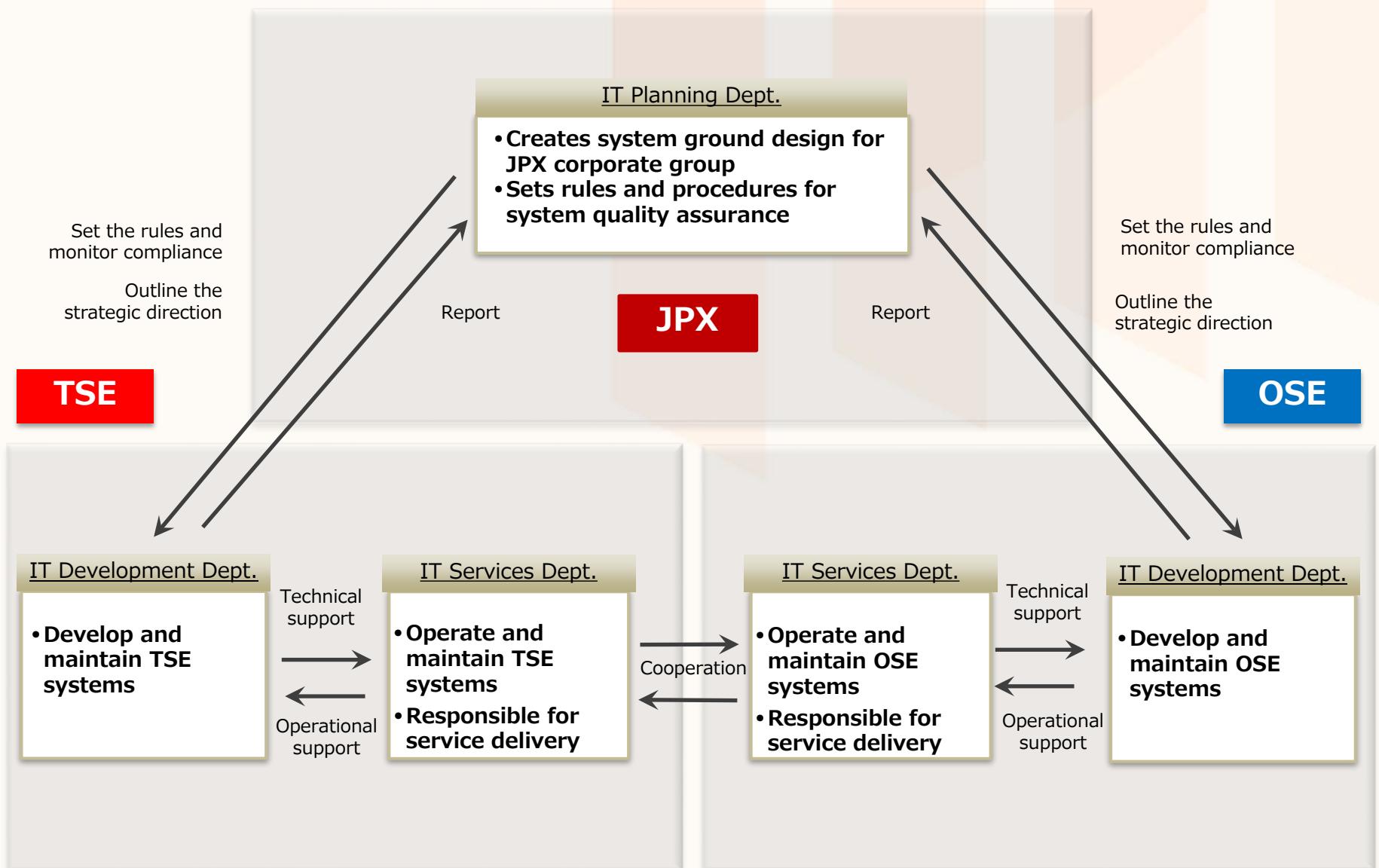
Japan Exchange Group: 'Grand Design' for a new Clearing System

June 29th, 2017

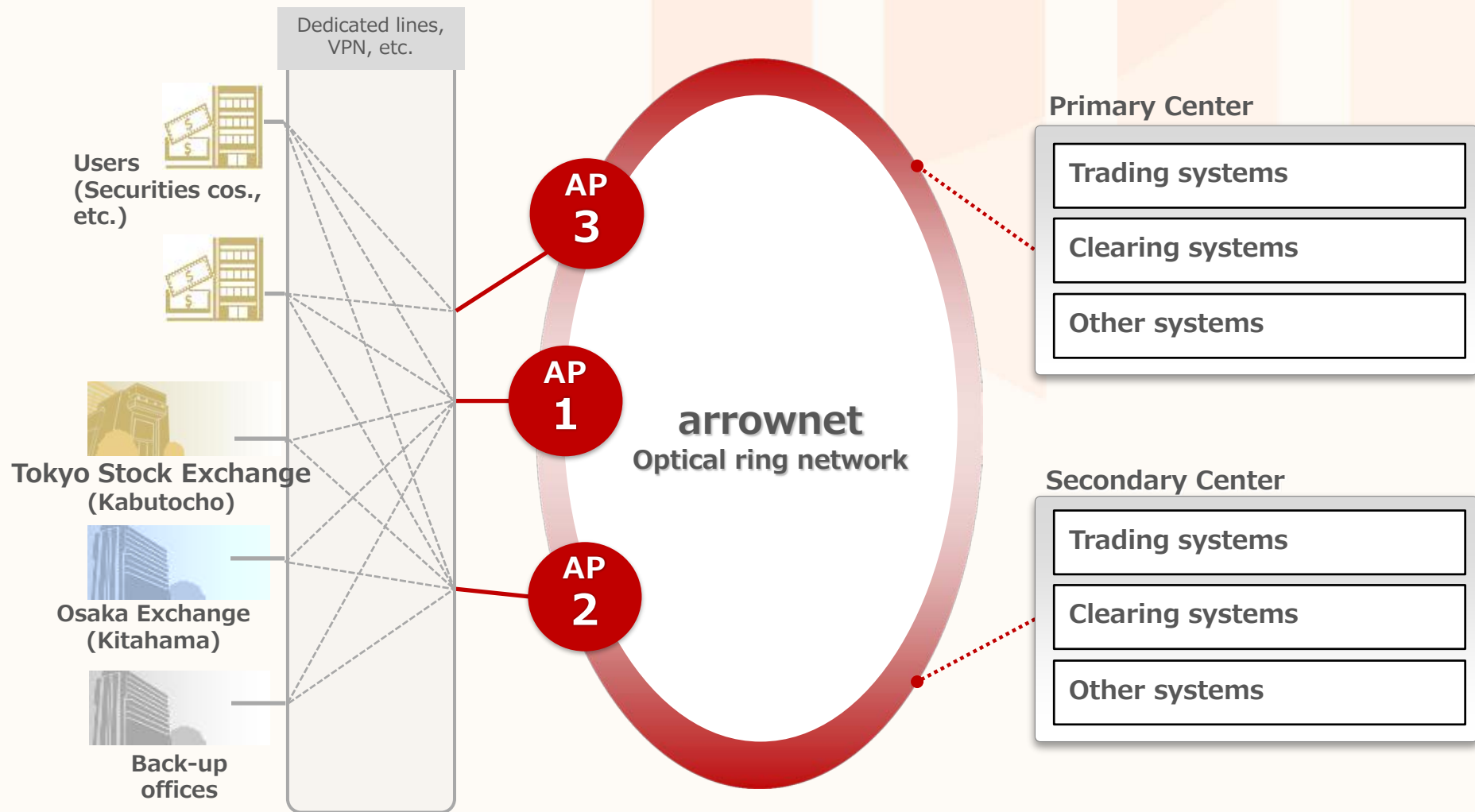
EXTENT Conference, London

Peter Babucke, Clearing Systems, JPX

JPX IT Organizational Chart



JPX IT Systems Setup



Overview of JPX Systems 1

1. Trading System

TSE	arrowhead (cash trading)	<ul style="list-style-type: none">• In-house system developed with Japanese system vendor• Stocks (domestic, foreign, preferred, etc.), ETF, REIT, convertible bonds, etc.
	ToSTNeT (Off-auction cash trading)	<ul style="list-style-type: none">• In-house system developed with Japanese system vendor• Off-auction: ToSTNeT trading for stocks, domestic convertible bonds, etc.
OSE	J-GATE (Futures/options trading)	<ul style="list-style-type: none">• NASDAQ Genium Package• Futures: Japanese indices, overseas indices, volatility indices, bonds, etc.• Options: Equity options, index options, JGB futures options

2. Market Information System

TSE	Market Info. System	<ul style="list-style-type: none">• Issues data, price, quote, trading volume, turnover, etc
	ISC	<ul style="list-style-type: none">• About 100 indices, statistics (Index Statistics Calculation Engine)

Overview of JPX Systems 2

3. Information Systems

TDnet

- TDnet facilitates electronic transmission of timely disclosure information of listed companies through the network to media outlets and investors.

4. Clearing Systems

TSE

Clearing Systems

JSCC Clearing System (Cash/Derivatives): In-House (Japanese system vendor)

JGB Clearing System: In-House (Japanese system vendor)

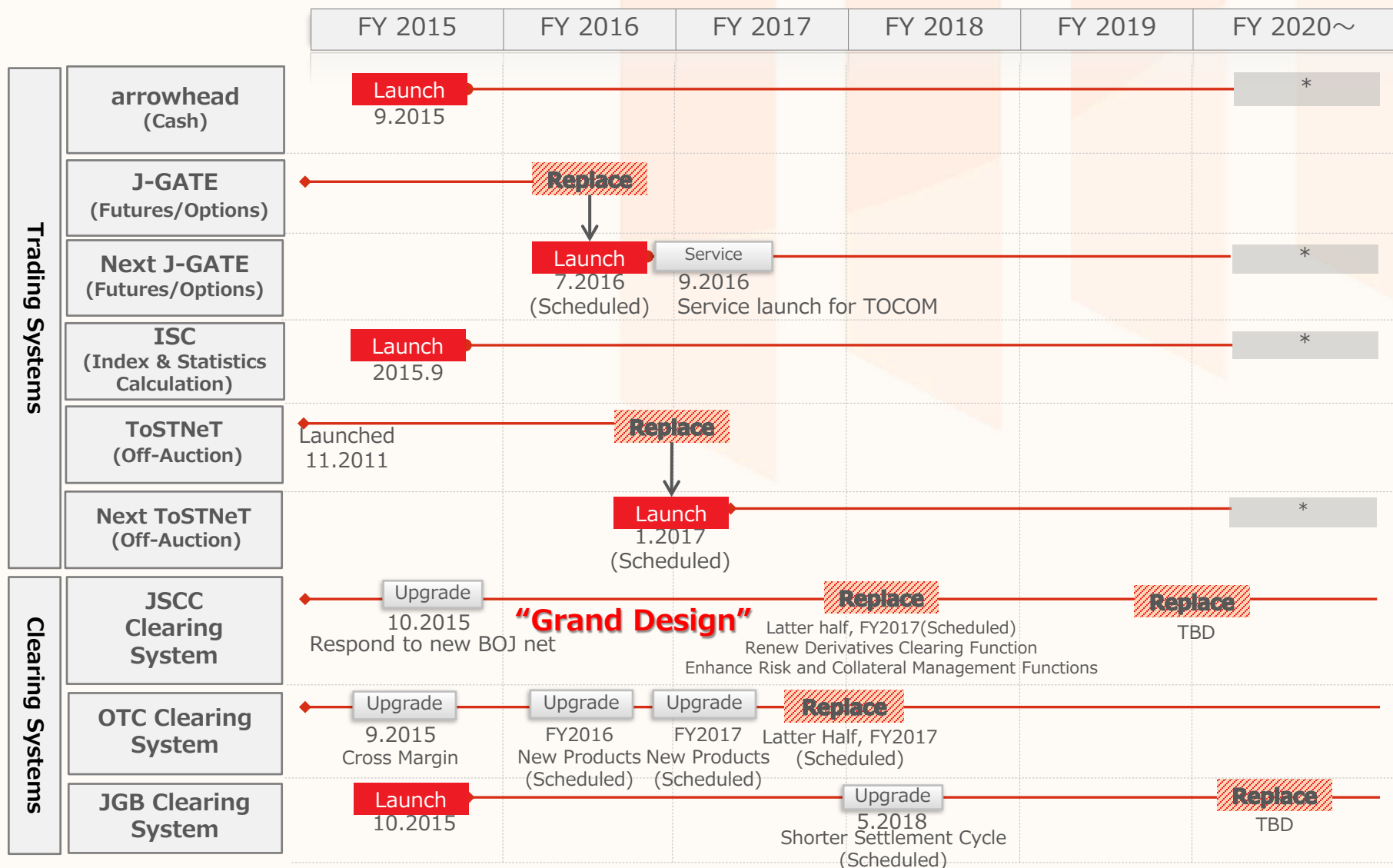
OTC Clearing System: Calypso

5. Network

arrownet

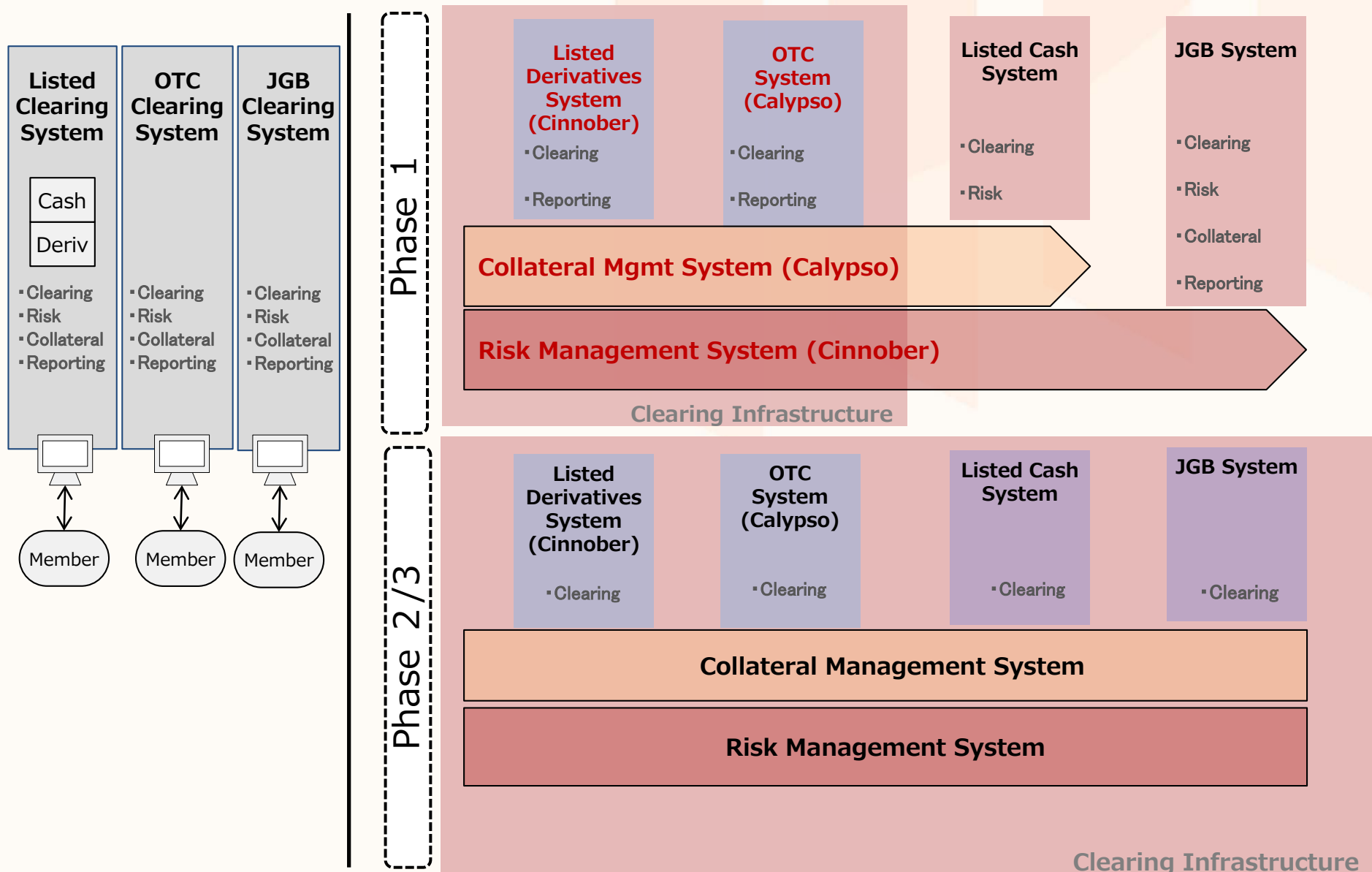
- Cutting-edge network infrastructure connecting JPX's trading, information, etc. systems (such as arrowhead) with trading participants and users.

Core System Replacement: Master Plan



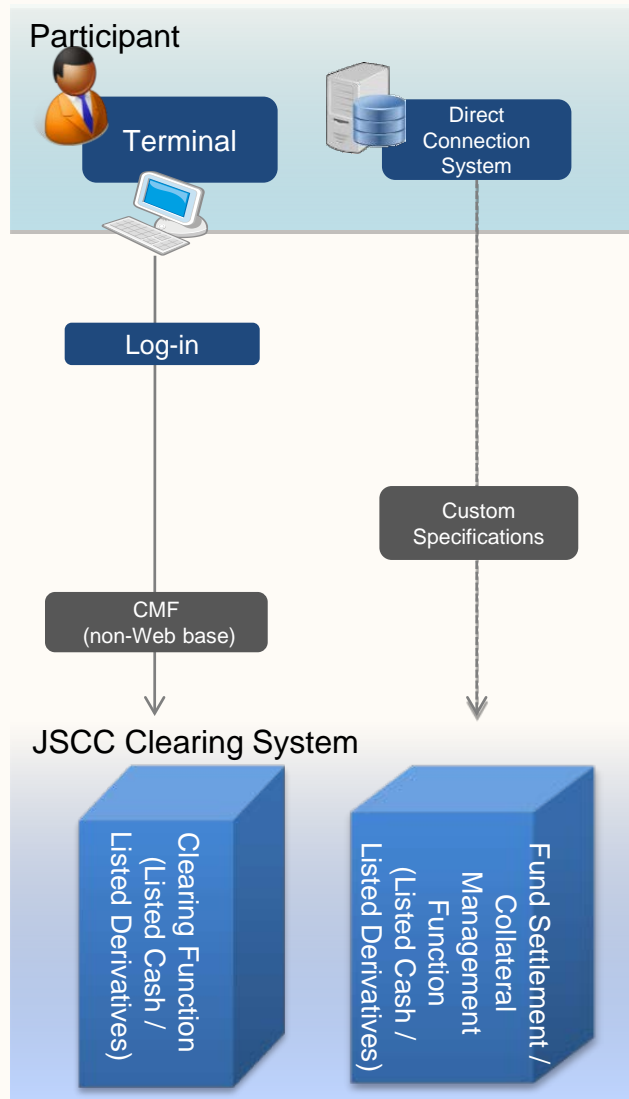
* Details will be subject to future discussions.

Future Vision of the JPX Clearing System

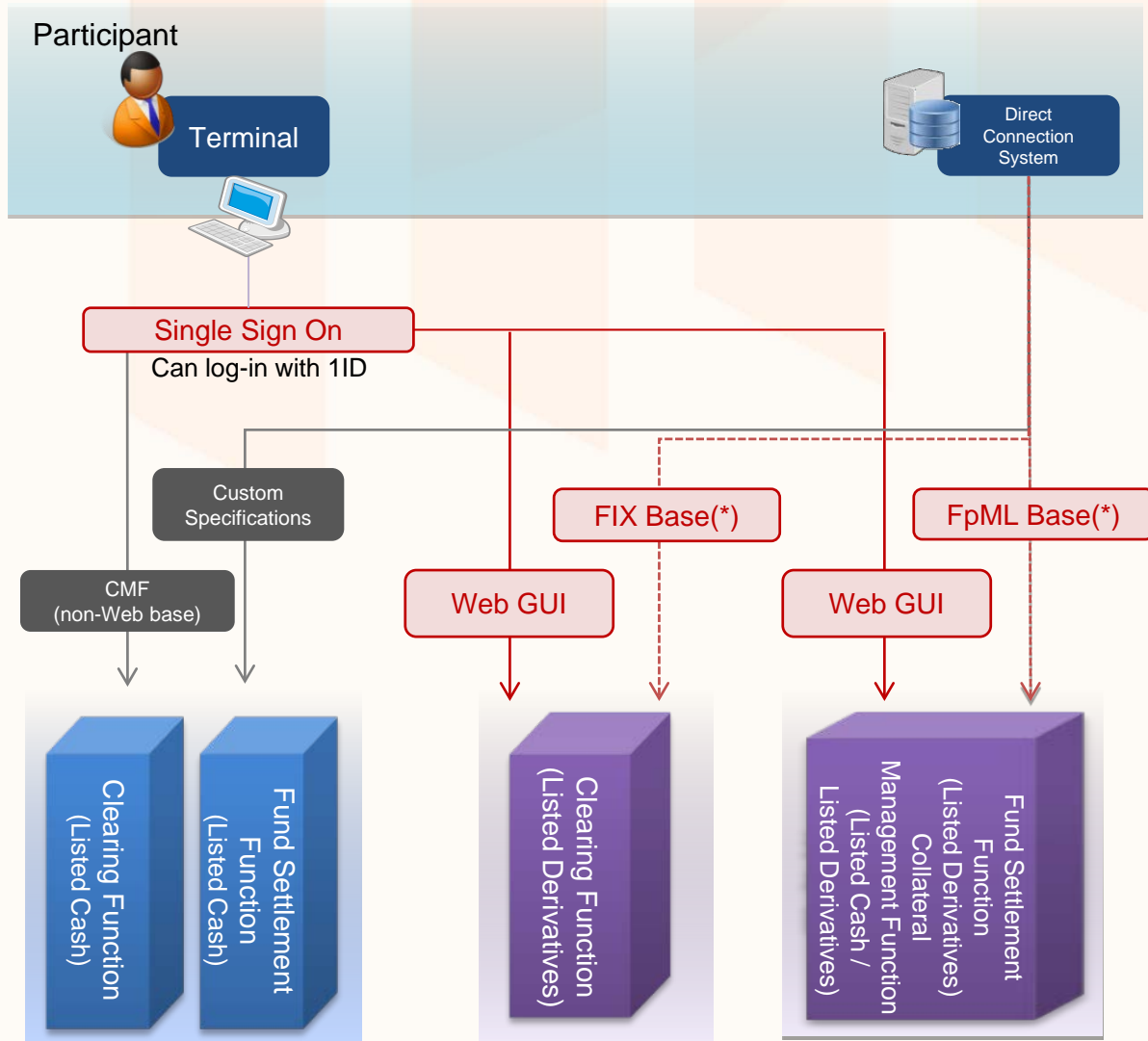


Clearing System after Replacement

As Is



After Change



(*) Global standard specifications will be adopted.

Agile Testing and Migration (with Cinnober)

2016.05

2017.07

2018.02

Cinnober Sprint Release (1-15)

SP1...

SP15

.....

..

Program Release
Parameter

[JPX]

Functional Test

Testing environment



Program
Release

[JPX]



Performance Test

Acceptance Test

Production environment

Current system

Historical data
Master data
Trade data

[JPX]



[Cinnober]



Go Live



[JPX]



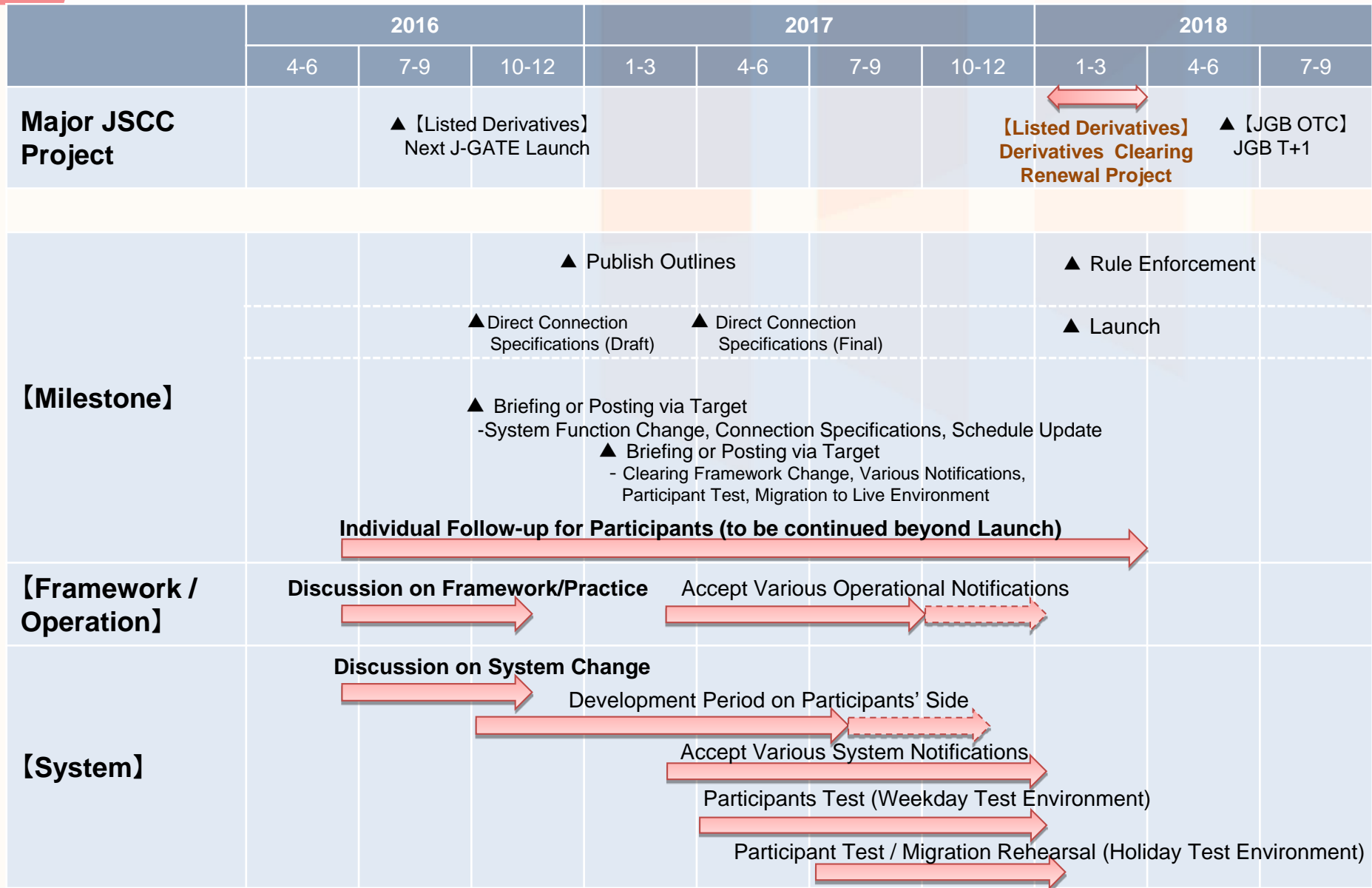
[JSCC]
Account Update
Master Update



Failover Test

Migration Rehearsal

Milestones and Test Timeline



Thank you

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