



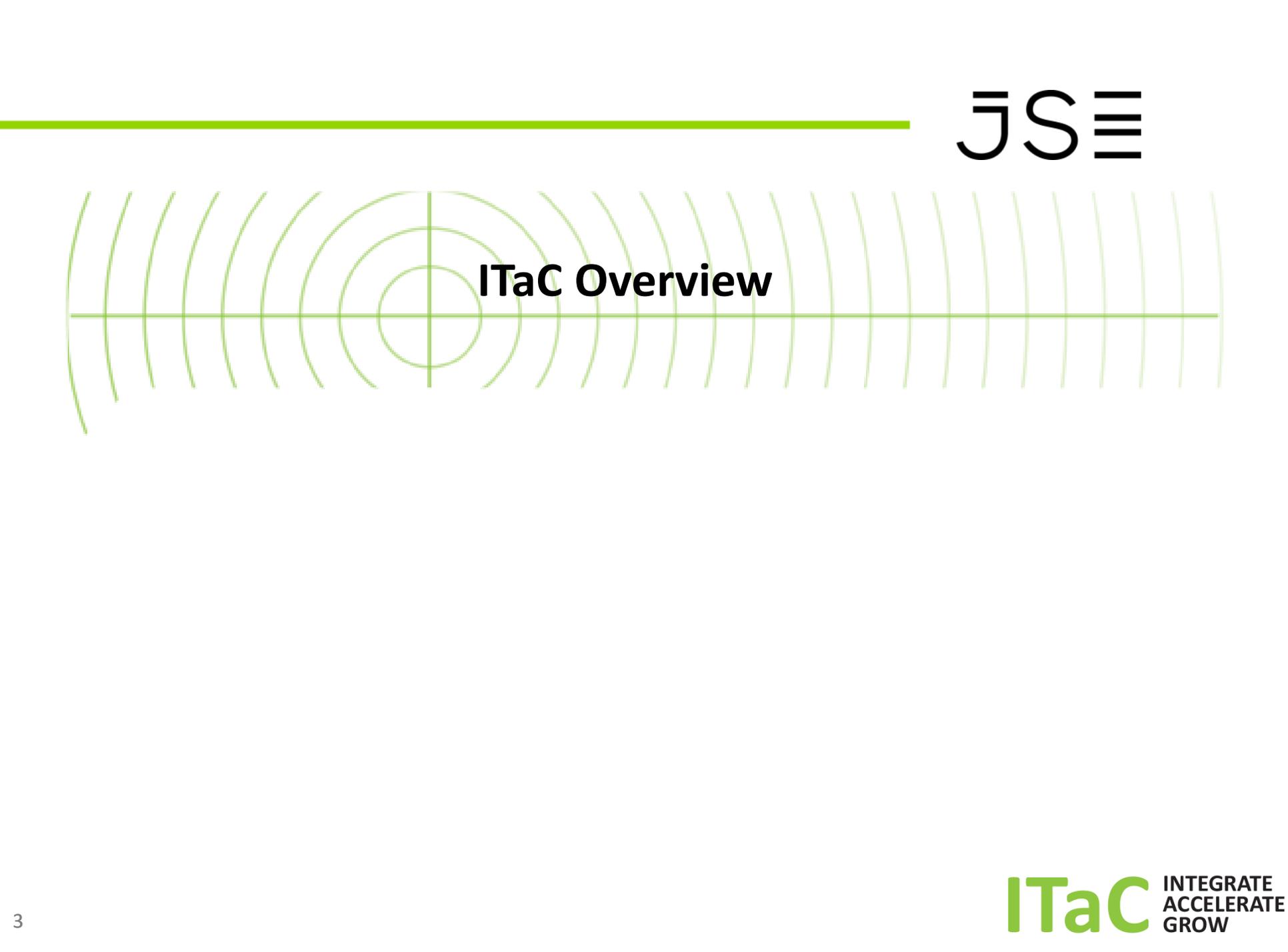
ITaC INTEGRATE
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Integrated Trading & Clearing (ITaC) London Roadshow

26 June 2018

Agenda

- ITaC Overview
- ITaC Timeline and status update
- High Level Principle Changes and Key Concepts
 - Reference Data
 - Trading
 - Post-trade
 - Market Data
 - Rules
 - Agreements
- General
- Questions?
- JSE team: Leanne Parsons, Alex Comninos, Sandra Borrageiro



ITaC Overview

Global trends we are experiencing



- Technological arms race continues (speed and latency)
- We are players on a global market stage and compete with venues even if they are not in SA (global standards and distribution)
- Increasing computer based training especially more recently use of bots (robust and flexible technology)
- Regulatory drive of products onto transparent electronic trading venues (regulatory change)
- Increasing sophistication of CCP risk management and collateral services (risk management technology)
- Differing strategic paths for trading and clearing (decoupling of trading and clearing)

What is ITaC?

Programme Overview



- The JSE currently provides trading, clearing and settlement services for:
 - Equity derivatives (EDM)
 - Currency derivatives (FXM)
 - Interest Rate derivatives (IRD)
 - Commodity derivatives (CMD)
- A **multi-year programme** to implement a new **Integrated Trading and Clearing** solution
 - Migrate all Derivative and Bond markets to the new Trading platform
- **Phased approach**

Equity Derivatives
Currency Derivatives

Interest Rate Spot and Futures *

Commodity Derivatives *

Principles



- Separation of Trading and Clearing
- Use out of box functionality aligned to international standards where possible
- Deal Management considered a Post Trade activity
- Alignment to international best practice and equivalent regulations
- Addressing some aspects that may have not been considered good practice
- Fit for purpose systems i.e. Reference data managed centrally, Billing in billing, Valuations in a Valuation system, etc.
- Clients choose their front end
- Single dissemination channel for live/intraday market data

Trading, Clearing and Information Systems

All Markets (except Bond ETP) – High-level



Trading Member

Clearing Member

Information Subscribers

ORDER & TRADE MANAGEMENT GATEWAYS

ALL MARKETS

- Trading (Native)
- Post Trade (FIX)
- Drop Copy (FIX)

EQUITY

- Trading (FIX)

DEAL MANAGEMENT & CLEARING

ALL MARKETS

- Deal Mgmt (EMAPI)
- Post Trade Risk Monitoring
- Collateral Mgmt
- Margin Methodologies
- Clearing and Settlement

REFERENCE, EOD & OTHER DATA

ALL MARKETS

- Information Delivery Portal (IDP) (FTP)
- Reference Data, Statistics & other

MARKET DATA GATEWAYS

ALL MARKETS

- Full Depth (MITCH) Throttled & Un-throttled

<p>DERIVATIVES BONDS & INTEREST RATE</p> <ul style="list-style-type: none"> LvL1 (MITCH) 	<p>EQUITY</p> <ul style="list-style-type: none"> LvL1 (FIX) Indices (FIX) News (FIX)
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ITaC Value Proposition Summary



General

- Aligned to global best practice
- Compliance with reg stds
- State of the art technology
- Cross Market Surveillance
- Standard Open APIs
- Software Provider solutions simplified

Trading

- Internationally accepted trading model and API
- Enhanced market integrity & controls
- Additional functionality
- Improved Trade Reporting
- Easier Market making
- Harmonised approach to DMA & OEA
- Ability to uniquely identify traders across markets

Post-trade

- Efficient asset utilisation (collateral)
- Intra-day risk monitoring
- Automation of Clearing Member balancing & EOD processes
- Auditable billing
- Improved MTM process
- Improved margin transparency
- Easier decomposition of margin processes

Data

- Single copy of market data
- Configurable gateways with more flexibility
- Improved access to enhanced live and non live data
- Improved robustness of valuations system and operational processes
- Ref Data standardisation

Future Opportunities

- Flexible efficient margin offset and cross market margin optimisation
- Product innovation
- One membership with authorisation by market
- Clearing of all products – central risk mgmt
- One client account or member account across markets



ITaC Timeline and status update

ITaC Timeline



- Most recent consultation with key stakeholders reached consensus on and a commitment to a targeted go-live date with a closed scope
- Go-Live is subject to certain critical milestones being met
- A Market Steering Committee comprising representatives from the JSE, Clearing Members (and their software provider), Strate and some Trading Members has been formed and kicked off last week:
 - Agree scope changes
 - Review the success of ETE testing and dress rehearsals
 - Agree market go-live readiness criteria and monitor progress against these
 - Recommend to JSE Executive Go/No-Go at Go-Live
- Minutes of the Market Steering Committee meetings which will be outcome based will be made available to all ITaC Primary and Responsible Officers

ITaC Key Dates



Date	Milestone
11 Jun – 22 Jun 2018	Clearing Member & Software Provider Testing in ETE environment
26 Jun 2018	Start of End to End Testing in ETE environment
26 Jun – 5 Jul 2018	ETE Testing – Cycle 1 Structured
9 Jul – 13 Jul 2018	Prep for MMDR; data clean up and full position take on
14 Jul 2018	Mandatory Market Dress Rehearsal (MMDR)
16 Jul – 26 Jul 2018	ETE Testing – Cycle 2 Structured
30 Jul – 10 Aug 2018	ETE Testing – Cycle 3 Scripted
13 Aug – 17 Aug 2018	Prep for Dress Rehearsal; data clean up and full position take on
18 Aug 2018	ETE Dress Rehearsal – mandatory for all clients
20 Aug – 4 Sep 2018	ETE Testing – Cycle 4 Scripted
15 Sep 2018	Go-Live Ready Dress Rehearsal – mandatory for all clients JSE will take RTC live into production
8 Oct 2018	Targeted Go-Live Date (could also use 15 Oct 2018)
12 Nov 2018	Contingency Go-Live Date

PLEASE NOTE:
Mandatory for CMs and those TMs & live Information subscribers that have not passed two dress rehearsals

PLEASE NOTE:
Mandatory for all clients

PLEASE NOTE:
Mandatory for all clients



ITaC Project Principle Changes

Agenda



- Functional Overview
 - Reference Data
 - Trading
 - Post Trade
 - Deal management
 - Clearing and Risk
 - Market Data
 - Live
 - Non Live
 - Corporate Actions

Reference Data



Market Participant Structure

Production Identifier Code



- New trading and clearing members Production Identifier Code (PIC) is 11 alpha-numeric characters for the Derivatives market
- The Production Identifier Code is also known as the Business Identifier Code (BIC) for the Equity Market
- The code is used to identify the participant on the Production System and the Test System
- The code is formatted as follows: **ABCXXXCC001**
 - First 3 characters (ABC) – this refers to the Trading member or Clearing member 3 character standardized alpha code (A-Z caps only)
 - Next 3 characters (XXX) – default characters of XXX
 - Next 2 characters (CC) – this refers to TM for trading member, CM for clearing member or IS for information subscriber
 - Last 3 characters (001) – system generated 3 digit number, incremented if there is another PIC with the same prefix

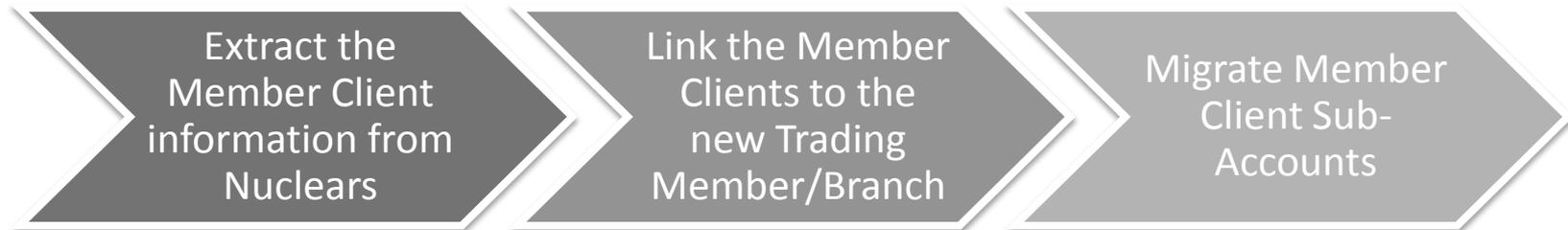
Client Reference Data

Branches



- Branches will be migrated from Nuclears to the JSE's central reference data system in their current state as part of the ITaC project
- A Branch will be:
 - Linked to the Trading Member they belong to
 - Used for Post-trade deal management activities
 - A trade can be allocated to a Branch or a Main Member
 - Post-trade system will use the account code on the trade to allocate it to the correct Member/Branch

- Process for linking Member Client data to Branch:



Market Participant Structure

Users



- **Trader IDs** are assigned to all registered Traders , so that they can perform On Book and Reported trading functionality
- Note: Each Trader must be registered with the JSE per Market. Upon registration, each Trader is assigned a unique Trader ID 5 **numeric** digits (0-9), submitted on all orders, quotes and trade messages by a Firm to the JSE Trading System
- Where traders have multiple Nutron Logon IDs in the same market today either for the Equity Derivatives Market or Currency Derivatives Market - only one unique Trader ID will be allowed for ITaC

Clearing Member User IDs are allocated to Clearing Member Users

- Clearing Member Users are able to report Reported trades to the JSE Trading System
- They do not, however, have the ability to submit any Orders onto the Central Order Book
- The JSE Trading System caters for certain Reported trading activity performed by Clearing Member Users on behalf of Trading Member Firms

Back Officer User IDs are allocated to Back Office Users

- Back Office Users have the ability to report Reported trades to the JSE Trading System.
- Back Office Users do not, however, have the ability to submit any Orders onto the Central Order Book

Market Participant Structure

On-behalf-of CompID and Trader Groups



- A clearing member will own and login with a CompID belonging to the trading member firm dedicated as the on-behalf-of CompID
- This CompID will facilitate the trade reporting functionality executed by clearing members or on-behalf-of activity that may be required
- Without this CompID, a clearing member will not be able to perform reported trade activity
- The CompID is also important for any cancellations and default management activities that need to be performed by the clearing member on behalf of the trading member
- Trader Groups are available to segregate firms into logical partitions of either type of activity, geographically location etc.
- A public Trader Group is mandatory for all trading members. This Trader Group will drive how reported trades are initiated.
 - The code for these will be ABCXXXPBL01 where 'ABC' represents the alpha code of the member
 - These are made available every day in the client reference data files

Instrument Reference Data

New naming standards



- Three Instrument Identifiers
 - **Contract Code** (replacing the existing four character code)
 - **International Securities Identification Number (ISIN)**
 - Equity Derivatives ZAD
 - Currency Derivatives ZAF
 - **Unique ID (Numeric)**
- **New Contract Code standard**
 - Concatenation of fields
e.g. <EXPIRY DATE> <ALPHA CODE> <SETTLEMENT TYPE> <CALL/PUT> <STRIKE>
 - Max length: 50
 - Examples:
 - 01DEC15 AGL PHY ANY DN
 - 01DEC15 AGL PHY ANY 23.99C
 - 17DEC15 GOOGL CSH
 - 01DEC15 GOOGL CSH QUANTO 23.99C
 - 01DEC15 USDZAR ANYDAY
 - 17DEC15 USDZAR QUANTO 23.999C
 - 17DEC15 ALSI MINI

Instrument Reference Data

Mapping old contract codes to new contract codes



- Existing four character Contract Code will be mapped to each contract that exists at go-live. We will call this the **Old System Code**
- A Instrument Contract code mapping will be made available before go-live, but with new instruments being added daily, the final mappings will be made available on the go-live weekend
- Format in which this mapping will be made available is still to be confirmed
- For Equity Derivatives and Currency Derivatives post ITaC go-live
 - Old system code - four character code will not be allocated to any new instruments that are listed or that are created as a result of corporate actions
 - Only the new instrument identifiers will be created

Instrument Reference Data

Mapping old instrument types to new instrument types



- A mapping between the existing instrument types and how these instruments will be classified in the ITaC systems will be made available prior to ITaC go-live
- Instrument standards
 - Correct Underlying names will be used for all contracts e.g 17DEC15 ALMI will now be 17DEC15 ALSI MINI
 - Many instrument types that are currently classified as CanDo's will now have standardised instrument types and will not be part of 'Structured Products' e.g. Anydays and Quantos

Instrument Reference Data

Dividend Neutral changes



- Current system (Nutron) the Dividend Neutral is a virtual contract meaning that when the Dividend Neutral (N) contract is traded the system creates an equivalent SSF (Q) and Dividend Future (F) in equal amounts, for example:
 - Member A Buy 100 15 Jun17 AGLN
 - Member A long 100 15 Jun17 AGLQ
 - Member A long 100 15 Jun17 AGLF
- As the Dividend on AGL goes Ex on the underlying market the JSE process a Journal transaction to accommodate the Dividend going EX on the Dividend Future
- In the new ITaC implementation - the Dividend Future will no longer exist as the Dividend Neutral contract will now be “one” contract and the Journal transaction will be processed on this contract
- Main reason for the removal of the Dividend Future, when Members roll over their SSF contracts to the next expiry they do not always roll the Dividend Future

Instrument Reference Data

User created instruments



- Instrument Types permitted for user created Instruments:
 - AnyDay Futures
 - AnyDay (Naked) Options
 - Delta Options
- Instruments that are eligible for user-creation can be found in the client Trading reference data (CSV) files
- Futures can only be created if existing Futures Contracts already exist on the same underlying instrument known as Reference Instrument
- Instruments can only be created with a date before that of the furthest expiry
- Instruments created intra-day will be disseminated via the MITCH Market Data Gateways
- Embellished data will be added to the client Trading reference data (CSV) files as part of the batch end of day (EOD) run

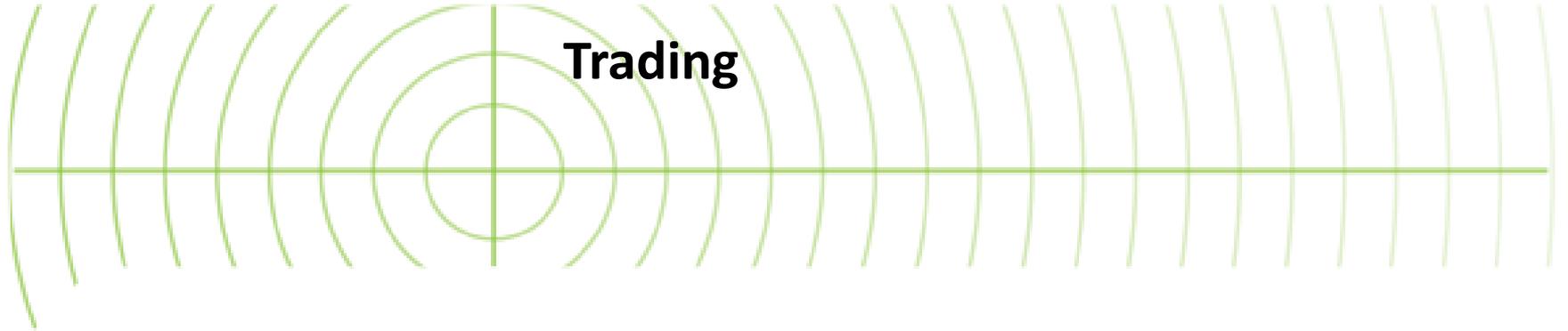
Instrument Reference Data

Automation of Corporate Actions processing

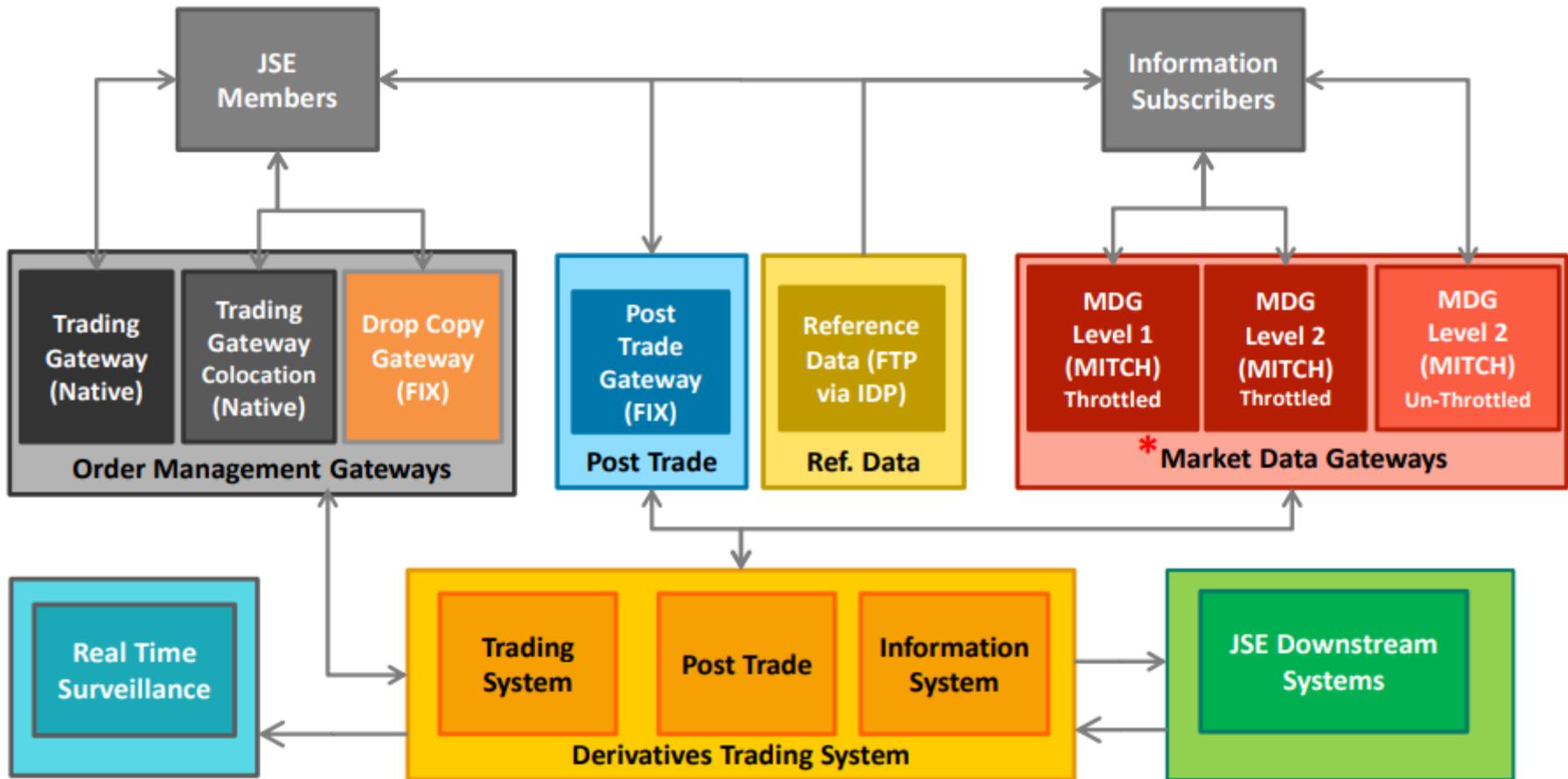


- Corporate Actions processing will be automated
 - Reference data updates – Master Data System (MDS)
 - Position adjustments – Post-trade Clearing System (RTC)
- Corporate Actions on derivatives will now be managed by the same team that manages equity corporate actions
- Market Notices will no longer be issued but information on treatment of derivatives positions as a result of corporate actions will be available on JSE website
- Corporate Actions on International Equities will be sourced from Thomson Reuters

Trading



Trading Market Layout



- There will be a set of Market Data Gateways for Equity Derivatives and a set of Gateways for Currency Derivatives
- Additional market data gateways will be introduced at a later stage for Commodity Derivatives.
- * • Interest Rate market data will be disseminated via the same gateways as Currency Derivatives

ITaC Trading Changes

Highlighting key changes and new services



ITaC Trading Key Changes

★ Trade Reporting - Specific Trade Sub-types 

More specific reporting functionality, special trade types not only one generic reported trade. Can identify activity better.

◆ Order Types and Time Enforcers 

More options for order types and ability to allow orders to live for more than one day

◆ On Book Trading 

Enhancement of Stop and Stop Limit orders and the TIF (Time in Force) additions allowing more flexibility

-  Trading Member
-  Clearing Member
-  Market Data Subscriber

◆ Option Instruments 

Dynamic Intraday auto-generation of option Strikes to follow Market Movements.

★ RFQs ** 

Request For Quotes introduced to increase liquidity and matching potential. **** Post ITaC go live**

◆ Logging on 

Dealers log on to in-house front ends and connectivity is established between exchange and the firm.

◆ Front-ends **★** 



JSE will no longer provide trading and deal mgmt front-ends (Nutron)

◆ Volatility Auctions 


Dynamic and Static circuit breakers trigger Volatility Auctions. Price-band Limits no longer apply.

★ Pause Trading Session 


Ability to Pause the Market allowing Order Management without matching occurring. Improved functionality from pure Halt status.

- ★ New**
- ◆ Modified**
- ◆ Removed**

ITaC Trading Changes

Highlighting key changes and new services



- Trading Member
- Clearing Member
- Market Data Subscriber

ITaC Trading Key Changes

Intra-Day Trading Session Updates

Ability to change sessions intraday without needing to Halt Market. Potential for intraday Auctions exists.

Quotes

Easier Market-Making functionality.

Reference data

Now available via csv files on the JSE IDP site.

Latency

Improved Consistent Latency (for low latency trading).

Trade Cancellation and Corrections

Cancellation, Trade Bust and Price Adjust levels

JSE Services Agreement (JSA)

All market participants to sign JSA prior to go-live and for clearing members prior to MCMT

Drop Copy

Real-time, directly from exchange of all order statuses. For both Clearing and Trading Members.

Post Trade

Real-time, directly from exchange of all trade statuses. For both Clearing and Trading Members.

- New
- Modified
- Removed

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Trading Functionality Changes



Order and Trade Management

- Concept of status of an order/trade
 - New
 - Amend
 - Match pending
 - Withdrawn
 - Trade
 - Published
 - **Cancelled**
- Time in Force enhancements for Orders
 - GTD, GTC, GTT
- Order Type enhancements
 - MIT, MTL, Stop, Stop Limit,

Trade Functionality Changes



Off Book Trading

- Reported trading model behaviour change
 - Submit/respond model
 - Single-sided or Dual-sided
 - Trade against a firm no longer a branch
 - Reference fields for Branch
 - Reference field for client reference
- More defined Trade Sub Types (Guidance Note)
 - CFD Reported Trade (CD)
 - Negotiated Trade (NT)
 - Exchange for Physical (EP)
 - Roll Trades (RT)
 - Strategy Trade (SR)
 - Price Adjust (PA)

Trade Reporting

Important to Note



- Editing of reported trades reference fields will not be possible after they have matched and fed into the clearing system
- The Derivative Markets will not allow any backdated Reported trade submissions to be captured
- Off Book trade requests (unmatched) can be withdrawn, but only if the trade has not been accepted by the counterparty
- All Reported trades can only be booked on the **same trading day**

Trade Functionality Changes

Important to Note for Cancellations



- On Book Trading
 - Must meet criteria defined in rule 7.181 (EDM) or 7.130 (FXM – still in process of being amended)
 - If criteria met, obtain permission from Director: Market Regulation
 - If permission granted:
 - Initiate a “Trade Cancellation” through your trading front end
- Off Book Trading
 - Initiate a “Trade Cancellation” through your trading front end
 - No permission from Market Regulation required
 - Next day cancellations for off book trades can be facilitated through booking an equal and opposite off book trade
 - Off Book trade requests (unmatched) can be withdrawn, but only if the trade has not been accepted by the counterparty

Intraday Trading Sessions



- Futures Close Out – EDM
 - During a Futures Close Out (FCO) day on the Equity Derivative Market all **On-Book** Continuous Trading will cease at 12:00 for all instruments with an expiry date equal to the FCO day
 - This is the same time in which the underlying Equity Market Instruments will move into the FCO Auction Call session until 12:15
 - **Off-Book** trading will remain in trade reporting session throughout the day
- Unscheduled sessions
 - Volatility Auctions will be introduced to EDM
 - Occurs when an instrument's price moves excessively in a short space of time
 - Re-opening Auctions
 - After a Halt or Pause session
 - Halt and Pause sessions
- Price Bands will be applicable for FXM
 - Will reject any order that is submitted which breaches

Post-Trade Services

Alex Comninos

ITaC Clearing Objectives



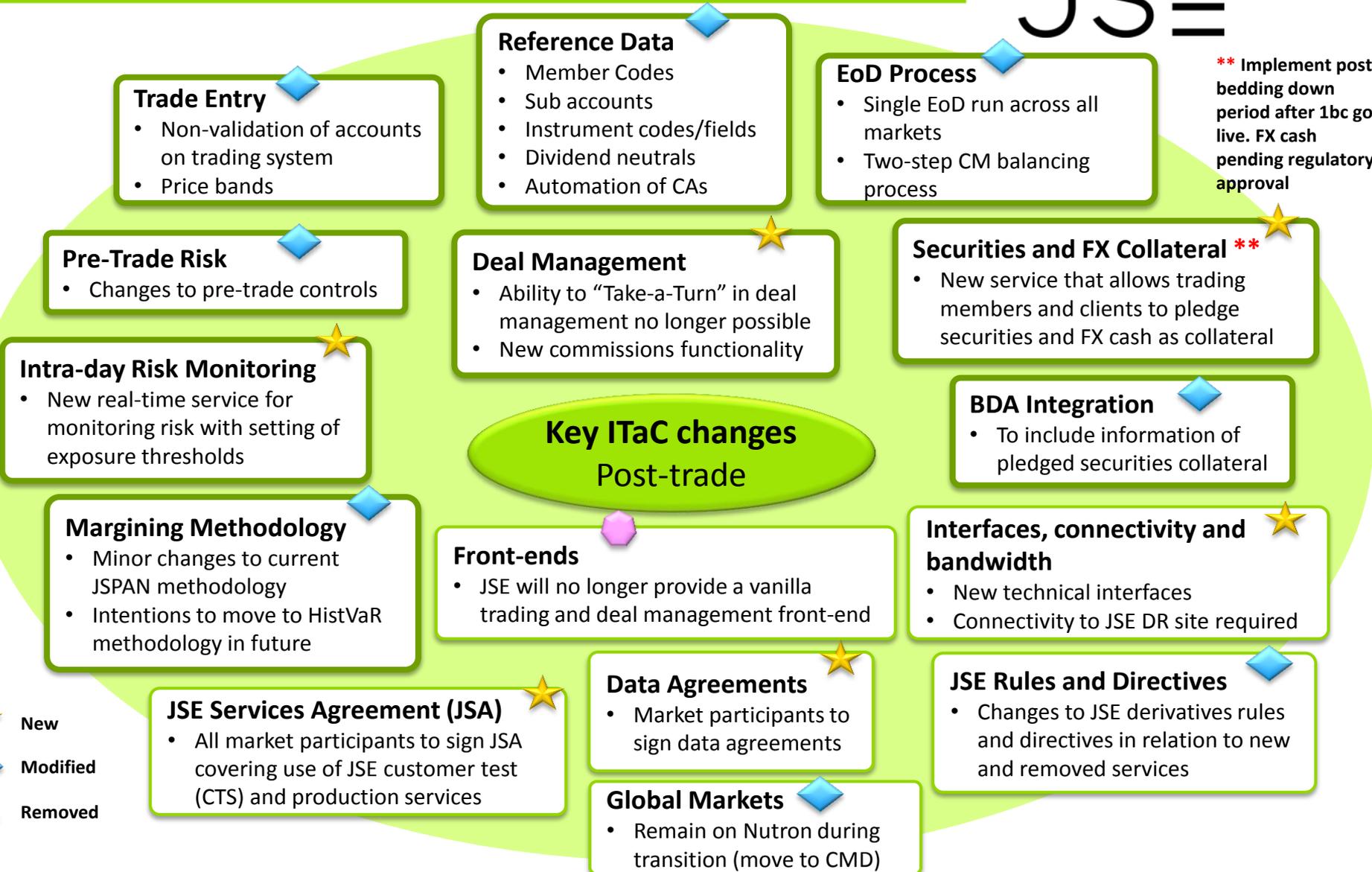
- The JSE aims to achieve its Integrated Clearing vision through ITaC
- The vision is based on three pillars
 - Centralised and more real-time risk management
 - Efficient asset utilisation
 - Consolidated clearing operations
- The JSE intends to migrate all its markets to Cinnober's multi-asset clearing technology platform
 - Proven, high-performance real-time Clearing solution



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New Services and Functions

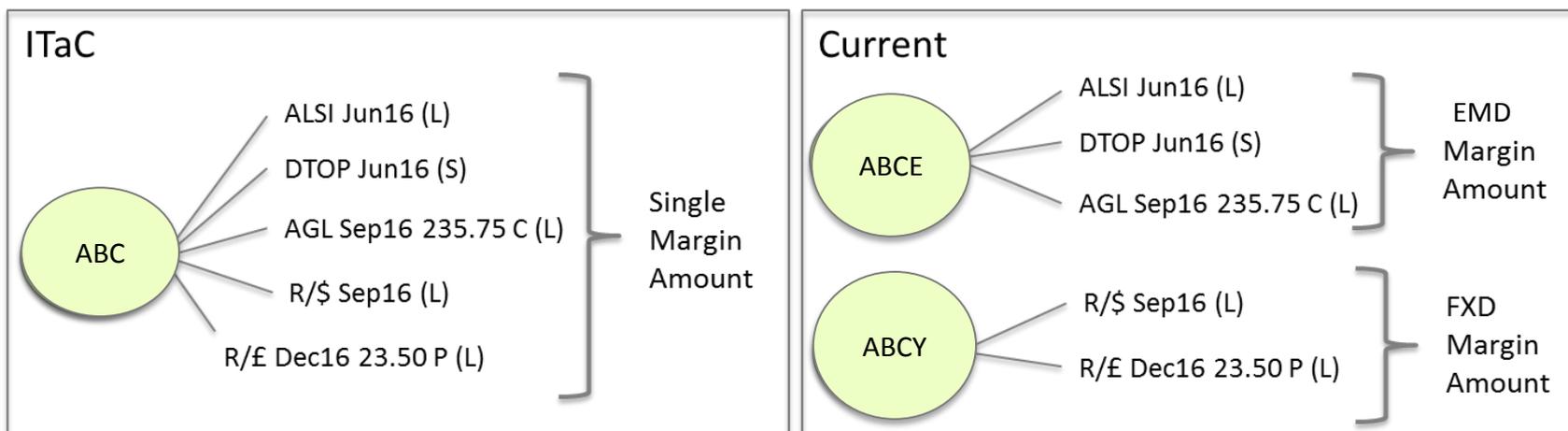
Post-trade



- New
- Modified
- Removed

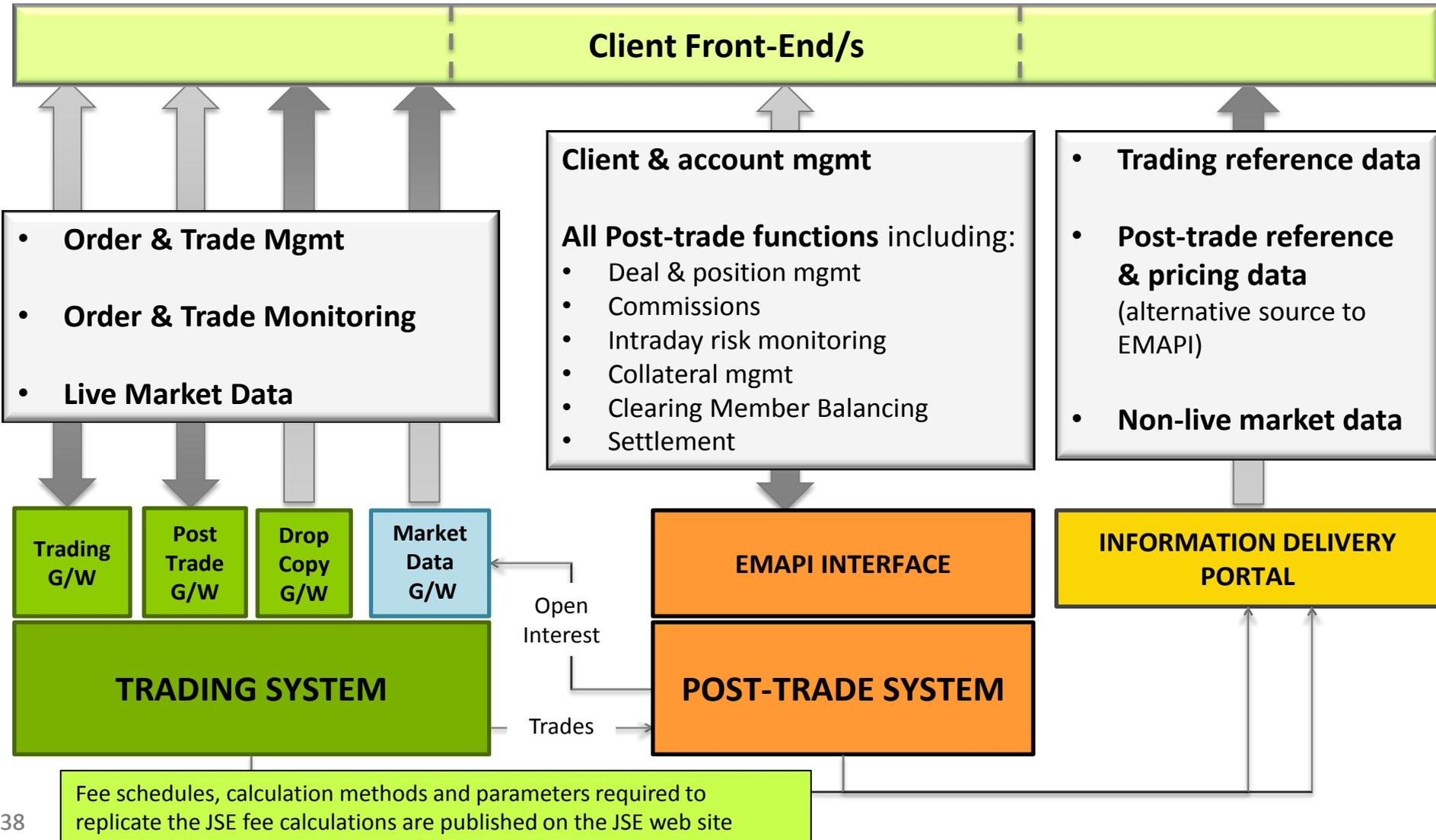
Integrated Clearing

Conceptual view of consolidated portfolio



Trading, Deal Management & Clearing

Client facing functions and interfaces



Deal Management

Actions allowed



Capacity	State of Deal* in RTC	Action allowed
Principal	-	<ul style="list-style-type: none"> • Accumulate • Deal sub account modification • Position sub account modification • Principal correction • Allocate on exception basis only • Allocation error correction
Agency	Deal is on client suspense account	<ul style="list-style-type: none"> • Accumulate • Allocate • Assign • Tripartite • Deal sub account modification • Position sub account modification
	Deal is on client account	<ul style="list-style-type: none"> • Accumulate (if traded directly on client account) • Allocation correction • Principal correction

* A deal is one side of a trade i.e. either the buy leg or sell leg of the trade

Commissions

Setup and Submission



- With ITaC go-live **taking a turn in deal management will NOT be possible**
 - Trading members will need to charge commissions for transactions concluded in an **agency capacity**
- Front-ends to cater for commission models per trading member requirements
 - E.g. percentage of trade size, flat fee
 - Fee models set up once-off and updated periodically
 - Front ends to apply the models to submit a ZAR commission amount (including VAT) to the JSE Clearing System
- Commissions may be submitted when
 - Trades are executed directly on the client account
 - Assigns, allocations or tripartite allocations are performed
- Commissions may be per deal or bulked
 - If per deal a specified deal identifier must be populated in the 'CommissionReference' field

Commissions

Monitoring & Management



- Trading members will be required to actively monitor and manage commission entries
 - Executing trading members may **cancel** a submitted commission entry
 - Recipient trading members may **reject** a commission entry

NB:

- **If a commission is rejected the trade is not rejected/cancelled**
- **If not cancelled or rejected the commission entry will be processed at EOD and will feed into net payments**

Commissions

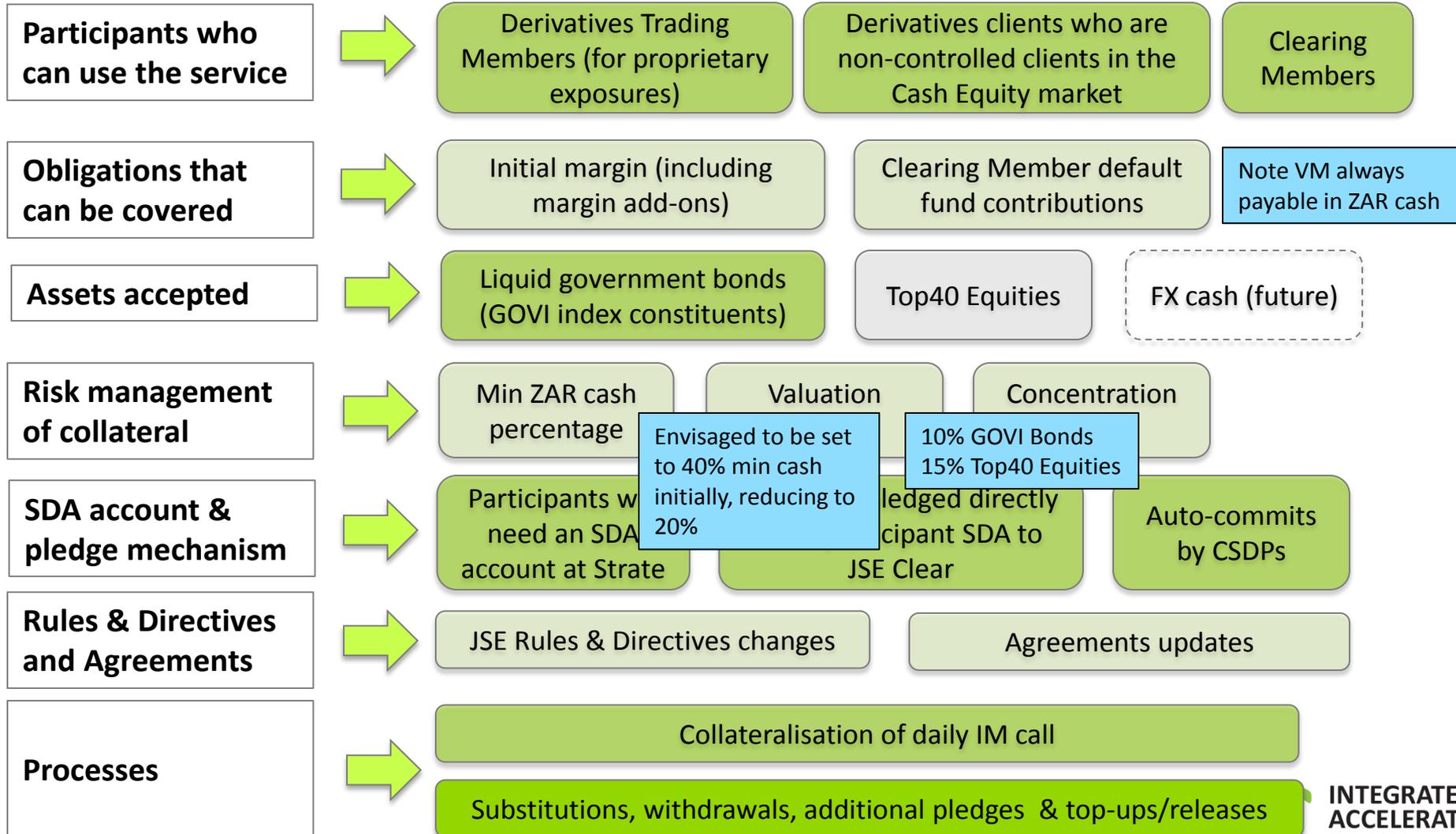
EOD Processing



- JSE Clear will facilitate
 - Settlement of net commission amounts **across Clearing Members** on T+1
- Clearing Member to facilitate
 - Processing of commissions **between their Trading Members**
- Clearing Member or Trading Member to facilitate
 - Collection of commissions charged to a Trading Member's **own clients**
- Commissions are VAT'able, therefore Members to ensure VAT invoicing and tax reporting obligations are met

JSE Clear Securities Collateral Service

Overview



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ITaC Post-trade Documentation



Business / Functional Overview Documents

Volume 00 – Post-trade Services Overview

Provides an overview of the deal management and clearing/settlement functionality available for the Equity Derivatives and Currency Derivatives markets

Volume 01 – Post-trade EMAPI Common

Describes the semantics and syntax of the common or session/admin EMAPI protocol messages

Volume 02 – Post-trade EMAPI Clearing

Describes the semantics and syntax of the clearing or application messages of the EMAPI protocol

Volume 03 – Post-trade Margin Methodology Specifications

Describes in detail the JSE margin methodology including all calculations used in deriving margins

Audience:

Post-trade Services Documentation

Business & Technical

Technical

End of Day (EOD) Services Documentation

Technical

Technical Specification Documents

EmapiTransactionsForMembers.html

HTML file describing the syntax of all EMAPI protocol messages for market participants i.e. clearing and trading members

EmapiTransaction.xsd

XML schema that EmapiTransactionsForMember.xml conforms to

EmapiTransactionForMembers.xml

XML definition of all EMAPI protocol messages for market participants

EMAPI TagWire.pdf

Describes the syntax of the TagWire encoding of EMAPI messages body

Data Service Product Specifications

Describes the format and definitions of the data products

Information Delivery Portal (IDP) User Connectivity

Describes how to connect to IDP and download data using FTP

Market Data

Leanne Parsons

Objective



Material changes to the **Public Market Data** will take place. Not only to the type of data, but also the format and structures, as well as the way that the data will be made available.

This session is relevant to all parties that have an interest in the Public Market Data that will be made available in support of the Equity Derivatives and Currency Derivatives markets



Public Market Data is defined as market data (reference, pricing and other trade related data) that does not contain information that is confidential to a specific party.

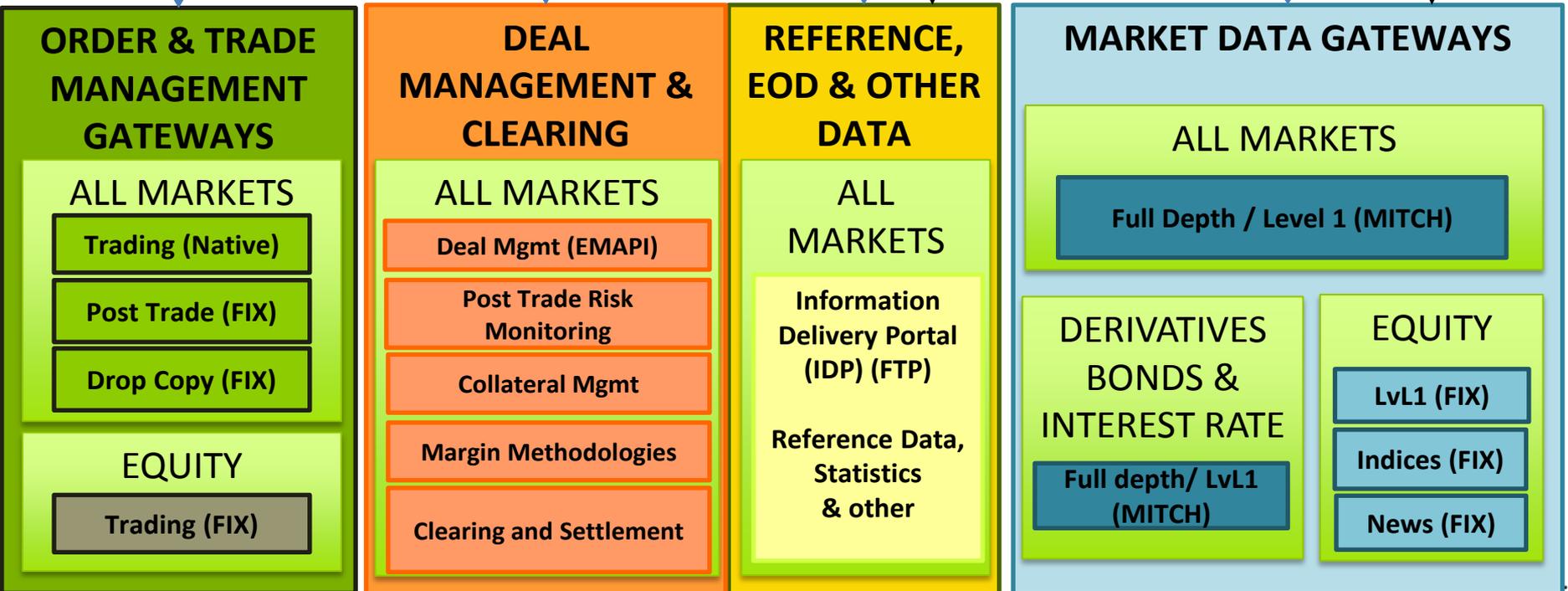
Public Market Data covers both **Live** and **Non-Live Data**

Live Market Data is data that is typically disseminated in a continuous manner (streaming) during the day.

Non-Live Market Data is data that is not Live Market Data. Non-Live data is typically produced at point in time during and after the trading day.

Delayed and **Historical** data are also classified as Non-Live Data.

High Level Architectural Overview



High Level Architectural Overview

Market Data Focus



ORDER & TRADE MANAGEMENT GATEWAYS

ALL MARKETS

- Trading (Native)
- Post Trade (FIX)
- Drop Copy (FIX)

EQUITY

- Trading (FIX)

DEAL MANAGEMENT & CLEARING

ALL MARKETS

- Deal Mgmt (EMAPI)
- Post Trade Risk Monitoring
- Collateral Mgmt
- Margin Methodologies
- Clearing and Settlement

REFERENCE, EOD & OTHER DATA

ALL MARKETS

- Information Delivery Portal (IDP) (FTP)
- Reference Data, Statistics & other

MARKET DATA GATEWAYS

ALL MARKETS

- Full Depth / Level 1 (MITCH)

DERIVATIVES BONDS & INTEREST RATE

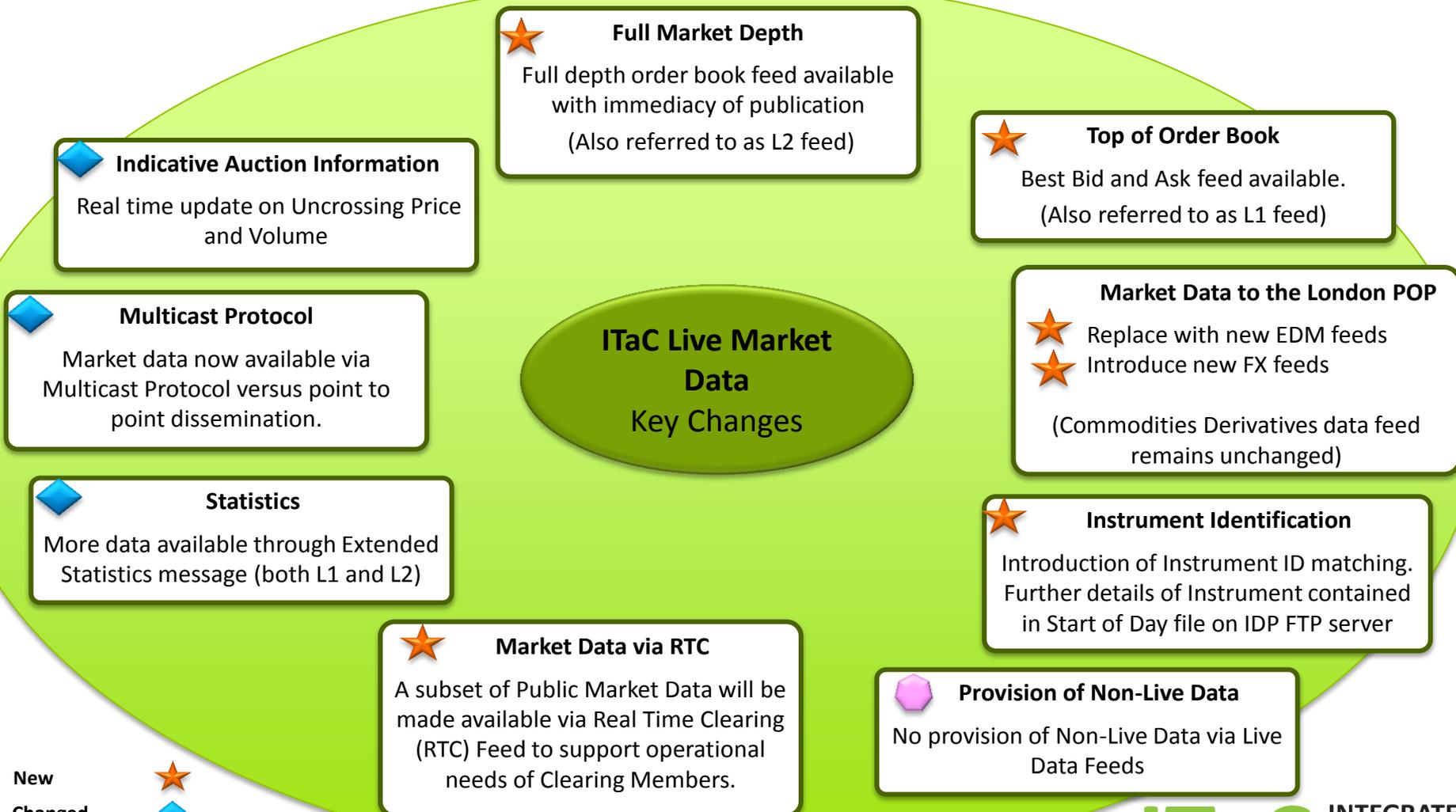
- Full depth/ LvL1 (MITCH)

EQUITY

- LvL1 (FIX)
- Indices (FIX)
- News (FIX)

Changes to Live Data

Overview



New
Changed
Discontinued



Changes to Live Data

Detail



Changes to Live Data

- Two types of MITCH based Live Data Feeds per market
 - **Full Depth (L2)** Data Feed – Throttled and Unthrottled
 - **Top (L1)** of Book Data Feed
- Both feed types will include Extended Statistics
- The Extended Statistics message also includes three key Derivatives data values (**Open Interest, Notional Exposure and Notional Delta Exposure**)
- Non-Live Data will not be made available via the Live Data feeds
- Subset of Public Market Data made available via RTC Feed is to support the operational functioning of Clearing Members. Any other use of this Public Market Data will be need to be licensed separately. *Refer to the Volume PT02 – Post-trade EMAPI Clearing for further information*

Changes to PoP Service

- Replacement of the current EDM Data feed (JSE Derivatives Market format) with the two new MITCH EDM Data feeds
- Introduction of the two new MITCH FX Data Feeds.
- All new data feeds will be Multicast MITCH format.
- The existing Commodities data feed will continue unchanged.

Changes to Live Data

AS-IS to TO-BE



Current EDM Live Feeds	New/Changed EDM Live Feeds	New/Changed FX Live Feeds	Current FX Live Feeds
Depth of 9 Snapshot feed	Full Depth (L2) Tick by Tick Live Data Feed (Throttled) 	Full Depth (L2) Tick by Tick Live Data Feed (Throttled) 	Depth of 10 Snapshot feed
	Full Depth (L2) Tick by Tick Live Data Feed (Unthrottled) 	Full Depth (L2) Tick by Tick Live Data Feed (UnThrottled) 	
	Top of Book (L1) Live Data Feed 	Top of Book (L1) Live Data Feed 	
Live Snapshot Data Feed available in DITCH format via JSE PoP	Full Depth (L2) Tick by Tick Live Data Feed (Throttled) via POP Solution 	Full Depth (L2) Tick by Tick Live Data Feed (throttled) via Pop Solution 	No FX live data available via PoP Solution
	Full Depth (L2) Tick by Tick Live Data Feed (Unthrottled) via Pop Solution 	Full Depth (L2) Tick by Tick Live Data Feed (Unthrottled) via Pop Solution 	
Non-Live Data available for download via Live Feed via special messages (Download message 36, Mark to Market Rates (123), Daily Rates (124) and Early Valuations (127))	Non-Live data not available via live Feeds 	Non-Live data not available via live Feeds 	Non-Live Data available for download via Live Feed via special messages

- New 
- Changed 
- Discontinued 

Changes to Non-Live Data Overview



Web Reports and Data Products Integration

Web Reports and Data Records integrated to form new sets of Data Records and Web Reports

Web Reports format and structure

Web Reports will be exact copies of corresponding Data Records

Provision of Reports on JSE Website

 A subset of the Data Records will be made available later in the night as PDF based Web Reports for General Public Viewing



Conformance

No conformance of Data Records will be required. It is up to Subscribers to be ready for go-live

Changes to EDM Data Records

 New and changed Data Records
 Some Data Records discontinued

New FX Data Records

FX data will be provided in a new separate set of Data Records

IRD Data Records continues

Interest Rate Derivatives Data Records will continue to be provided but with FX data removed

ITaC Non-Live Market Data Key Changes

New 
Changed 
Discontinued 

Changes to Non-Live Data

Detail



Changes to Data Records

- FX data will move from being provided via IRC Data Records to new set of FX Data Records
- IR Derivatives data will continue to be provided via existing IRD Data Records
- **16 EDM Data Records** will be made available
- **2 current EDM Data Records** will be discontinued
- **13 FX Data Records** will be made available

Changes to Web Reports

- A set of Web Reports will continue to be published on JSE website for General Public viewing
- Web reports will be provided in PDF form and most will be provided at midnight
- Web Reports will have same fields and same fields sequence as corresponding Data Records
- **10 EDM Web reports** will be provided
- **5 current EDM Web Reports** will be discontinued
- **9 FX Web Reports** will be provided
- **5 current FX Web Reports** will be discontinued

Changes to Non-Live Data

AS-IS to TO-Be for Equity Derivatives

New

Changed

Discontinued



Current Data Records		New/Changed Data Records	New/Changed Web Reports	Current Web Reports
Daily Traded Statistics - DED (D - 19:30)	Daily Traded Statistics - DED (D - 20:00)			EDM Daily Stats (D - 19:30)
Daily Full Market Type Totals - SED (D - 19:30)	Daily Full Market Type Totals - SED (D - 20:00)			
Daily Full Market Overall Totals - OED (D - 19:30)	Daily Full Market Overall Totals - OED (D - 20:00)			
Daily Full Market Statistics - DED (D - 19:30)	Market Statistics - DED (D - 20:00)			
Interest Rates - RED (D - 19:30)	South African Rates (D - 10:00, 11:00 and 20:00)		South African Rates (D - 10:00 and 11:00)	JIBAR Rates (D - 10:00 & 11:00)
Mark to Market - MED (D - 19:30)	MTM All - MED (D - 20:00)		MTM All (D - midnight)	MTM All Report (D - 17:00)
Daily Traded Type Totals - SED (D - 19:30)				
Daily Traded Overall Totals - OED (D - 19:30)				
	Monthly Market Statistics - DED (M - 20:00)		Monthly Market Statistics (M - midnight)	EDM Monthly Market Statistics (M - 19:30)
	Weekly Full Market Statistics - DED (W - 20:00)			

D - Daily, W - Weekly, F/N - Fortnightly, M - Monthly, Q - Quarterly

Changes to Non-Live Data

AS-IS to TO-Be for Equity Derivatives

New

Changed

Discontinued



Current Data Records		New/Changed Data Records		New/Changed Web Reports		Current Web Reports	
	Early MTM - MED (D - 15:30)					MTM Fair Report (D - 15:30)	
	Margin Requirements - IED (F/N - 20:00)			Margin Requirements (F/N - midnight)		Margin Requirements (F/N - 19:30)	
	Close Out Prices - CED (Q - 12:00)			Close Out Prices (Q - midnight)		Close Out Prices (Q - 12:00)	
	Dividends - IED (D - 17:00)			Dividends (D - midnight)		Dividends (D - 17:00)	
	Volatility Surfaces - LED (F/N - 15:30 and 17:30)			Volatility Surfaces (F/N - midnight)		Volatility Skew Indices (F/N - 19:30)	
	All Contract Details - AED (D - 20:00)			All Contract Details (D - midnight)		All Contract Details (D - 19:30)	
	Options Daily Traded - PED (D - 20:00)			Options Daily Traded (D - midnight)		Options Daily Traded (D - 19:30)	
	Risk Parameters - ADD (D - 20:00)			Risk Parameters (D - midnight)		Risk Parameters (D - 19:30)	
	Detailed Instruments XED (D - 20:00)						
						Anchor Volatility (D - 16:00)	
						Volatility Skew Transpose (D - 16:00)	
						Volatility Skew SSF (D - 16:00)	

TE
ATE

Changes to Non-Live Data

AS-IS to TO-Be for Currency Derivatives



Current Data Records		New/Changed Data Records		New/Changed Web Reports		Current Web Reports	
Daily Traded Statistics - DIR (D - 19:30)		Daily Traded Statistics – DCD (D – 20:00)					
Daily Full Market Type Totals – SIR (D - 19:30)		Daily Full Market Type Totals – SCD (D – 20:00)					
Daily Full Market Overall Totals – OIR (D - 19:30)		Daily Full Market Overall Totals – OCD (D – 20:00)					
Daily Traded Type Totals – SIR (D - 19:30)							
Daily Traded Overall Totals – OIR (D - 19:30)							
Mark to Market – MIR (D - 19:30)		MTM All - Record Type MCD (D – 17:00)		MTM All (D – 17:00)		5PM Daily Mark to Market (D – 17:00)	
		Early MTM – MCD (D – 15:00)				3PM Currency Derivatives MTM (D - 15:30)	
		Risk Parameters – ACD (D 20:00)		Risk Parameters (D – midnight)		Risk Array (D – 19:30)	
		Daily Market Statistics – MCD (D – 20:00)		Daily Market Statistics (D – midnight)		YieldX Daily Stats (D – 19:30)	
		Weekly Market Statistics – MCD (W – 20:00)		Weekly Market Statistics (W – midnight)		Weekly Market Statistics (W – 19:30)	

D – Daily, W – Weekly, F/N – Fortnightly, M – Monthly, Q – Quarterly

Changes to Non-Live Data

AS-IS to TO-Be for Currency Derivatives

New

Changed

Discontinued



Current Data Records		New/Changed Data Records		New/Changed Web Reports		Current Web Reports	
	(M – 20:00) Monthly Market Statistics – MCD			Monthly Market Statistics (M – midnight)		Monthly Market Statistics (M – 19:30)	
	Margin Requirements – ICD (F/N – 20:00)			Margin Requirements (F/N – midnight)		Margin Requirements (F/N – 19:30)	
	Rand Spot – CCD (D - 10:00 & 16:00)			Rand Spot (D - midnight)		Rand Spot (D – 10:00 & 17:00)	
	Close Out Prices - CCD (Q - 12:00)			Close Out Prices (Q - midnight)		Close out prices (Q - 12:00)	
	South African Rates – RCD (D - 10:00, 11:00 and 20:00)			South African Rates (D - 10:00 & 11:00)		JIBAR Rates (D – 10:00 & 11:00)	
	Detailed Instruments XED (New) (D – 20:00)						
						Daily Turnover Summary (D – 18:00)	
						Daily Detailed Turnover (D – 18:00)	
						HiLo (D: 18:00)	
						MTM YieldX (D – 15:30)	

D – Daily, W – Weekly, F/N – Fortnightly, M – Monthly, Q – Quarterly

Changes to Non-Live Data

AS-IS to TO-Be - Detailed Change Impact Analysis



An AS-IS to TO-BE Change Impact Analysis document (Excel) has been created for the convenience of Information Subscribers.

It maps out, in more detail, the changes to the Data records and Web reports.

Also included is a data field location matrix that lists each data element and indicating in which Data Records that will be made available and indicating the data record(s) where the data element is included.

Non-Live Market Data Products Change Impact Analysis

Summary of Key Value Points

JSE



More data feed types will be made available



More data will be made available to International Information Subscribers via the JSE PoP with the addition of FX Data feeds



Live feeds will be multicast MITCH format so more standardisation which lowers complexity and skills requirements



More Non-Live data, including reference data, will be provided via new Data Record based products



Provision of Data Records in standardised manner will lower complexity and skills requirements



Subscribers to Data Records will get proactive alerts if delivery problems occur



Subscribers to Data Records will get advance notice, by means of formal notices, before changes are done



Covering Live and Non-Live Data Usage via Data Agreement will mean that Information Subscribers have certainty about their data use rights

Legal and Commercials



All Information Subscribers to the Live and Non-Live Data Products will be required to sign the JSE Data Agreement (JDA) which will stipulate the terms and conditions governing access and use of the Public Market Data

The subset of Public Market Data made available via RTC will also be covered by the data agreement so Clearing Members are also required to sign the JDA. Most Clearing members have already signed the JDA.

Information Subscribers that have already signed the JDA will just need to sign new/revised schedules

The data agreement must be completed and signed before 30 July 2018 for ETE testing participants and 31 August 2018 for clients intending to go-live with ITaC

To account for the cost in producing and supporting the Live and Non-Live Data Products, and taking into consideration the perceived value of the data, the JSE has is conducting a review to decide on the appropriate data fees which will be based on the different uses of the data

The applicable data fees will be communicated once the review exercise is complete so that Information Subscribers can make informed Data Product subscription decisions

Rules Overview



High level overview of changes



- Best execution and off book trades
 - The principle of best execution is set out in new rule 7.15 (Trading with or on behalf of clients – best execution)
 - members must act in the best interests of their clients at all times
 - all transactions in derivative securities must be conducted through the order book of the JSE, unless
 - the negotiation of a transaction and its reporting to the JSE trading system is in the best interests of the client, and
 - the transaction qualifies as an off book transaction
- Securities collateral
 - Amendments to permit members, subject to their adherence to the agreements, risk policies and associated processes of the JSE to pledge, in addition to cash, JSE listed securities as initial and additional margin
 - Amendments to the default section of the rules set out the consequences of a default in respect of such securities collateral held, and give the JSE the ability, in the event of the default of a client, trading member or clearing member, to sell any securities pledged in accordance with the rules, within three days of an event of default to ensure a fair and orderly market

High level overview of changes



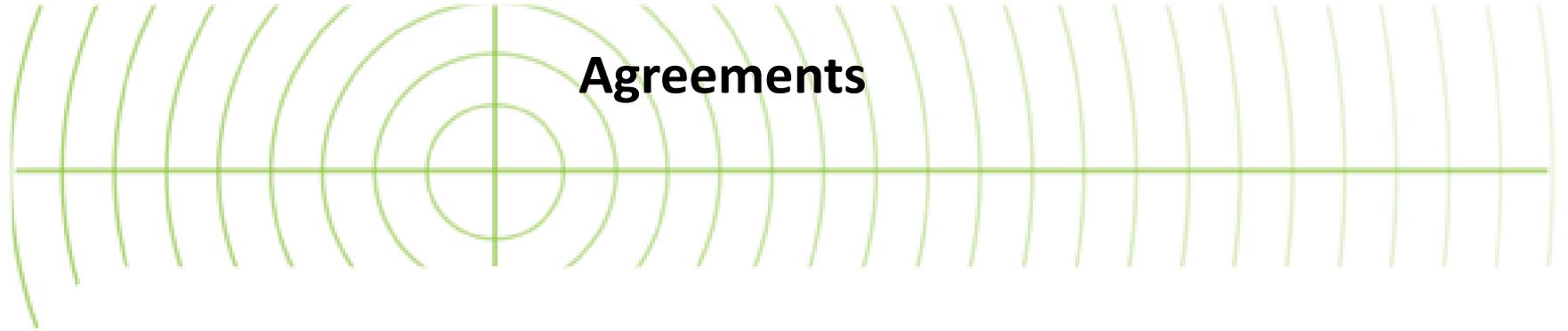
- The functionality of the system has facilitated the introduction of two new proposed reported trade types, being Roll Trades and Strategy Trades
 - Roll trades - members will be able to close out positions in a futures contracts for an expiry date and to open positions on the same terms for a later expiry date, provided that the rolling of the positions in this way is in the best interests of the clients
 - Strategy Trades - members will be able to link two or more transactions in options or futures in one or more underlying instruments in the JSE trading system and in so doing give effect to the investment strategy of the member or its client
- Rule 7.60.2 that deals with client registration has been expanded to include all of the mandatory details that are required to be submitted to the JSE by members when registering a client account
- Rule 7.181 (Trade cancellations and price adjustments) has been amended to reflect the manner in which erroneous trades will be cancelled when the new system is implemented and the associated processes are set out in the proposed amendments to the directives

High level overview of changes



- The terminology in respect of “on book” and “off book” transactions has replaced the references to “on-ATS” and “off-ATS” transactions and references to the various systems of the JSE, which previously referred to the specific markets on which particular securities were traded, now refer to the JSE trading system
- Rule 4.10.5 has been inserted to cater for trading in the so-called global market securities which are available to trade in both the equity derivatives and commodity derivatives markets. These securities will continue to trade on the Nutron trading platform utilised by commodity derivatives members but equity derivatives members will be granted access to the Nutron trading platform to trade specifically in these global market securities

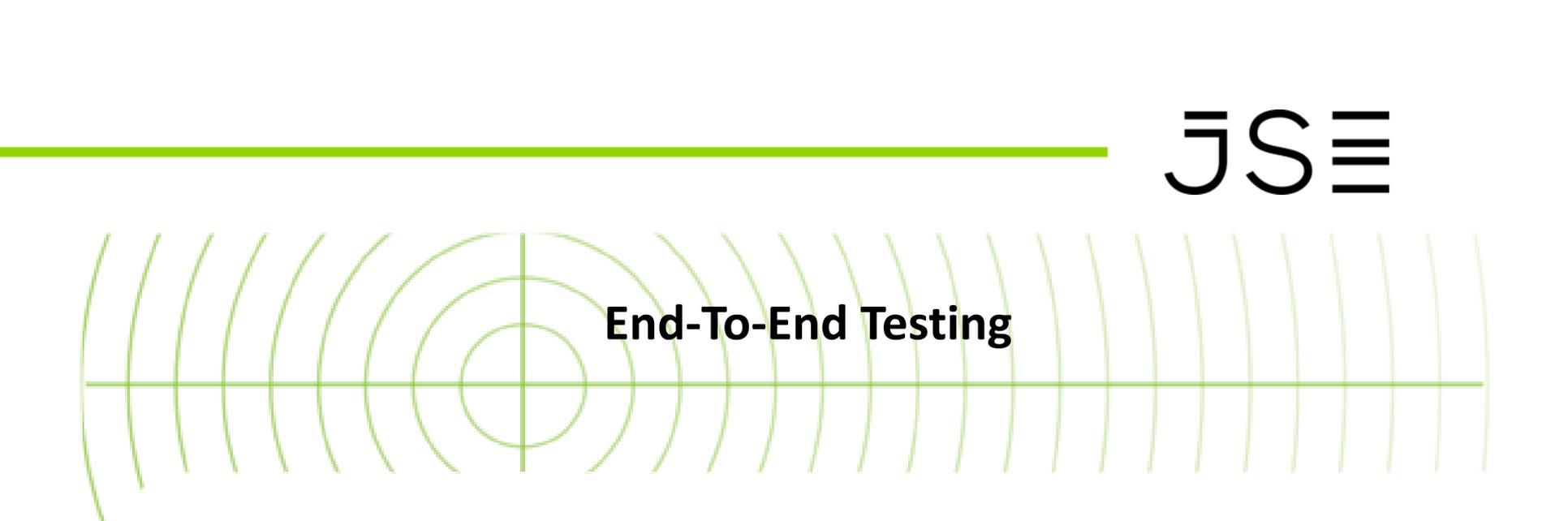
Agreements



ITaC Agreements – cutoff date reminder



- **JSE Services Agreement (JSA)**
 - Signed JSA is required to access all production and test services including the End-To-End environment
 - JSA must be signed by Friday, 27 July 2018 which is prior to the start of Scripted End-To-End testing on Monday, 30 July 2018
- **JSE Data Agreement (JDA)**
 - Signed JDA is required to access all real-time market data (production and test) and non-live market data (production and test)
 - JDA must be signed by Friday, 27 July 2018 for clients wishing to participate in Scripted End-To-End testing which starts on Monday, 30 July 2018
 - JDA must be signed by 31 August 2018 for all other clients not participating in ETE testing



End-To-End Testing

End-To-End (ETE) Testing



- Two phases of End-to-end testing are envisaged:
 - **Structured ETE testing** - test specific identified scenarios and events on specific days
 - **Scripted ETE testing** – ring fenced with specific data and functionality on specific days with specific expected outcomes as well as other testing along side
- **Structured ETE testing starts on 26 June and will have 2 cycles**

Full Direct participation

Trading members connect and execute throughout Cycles;
Clearing members execute On-Behalf-Of's and clearing functions;
EOD reports checked by clearing members, trading members and clients;
Live Market Data verified by subscribing clients

Partial Direct participation

Trade packs submitted by JSE;
Deal management executed by Trading Members;
Clearing Members execute On-Behalf-Of's and clearing functions;
EOD reports checked by clearing members, trading members and clients;
Live Market Data verified by subscribing clients

Indirect participation

Trading packs submitted by JSE;
Clearing Members execute On-Behalf-Of's and clearing functions;
EOD reports checked by clearing members, trading members and clients;
Non-Live Market Data products checked by subscribing clients

- Testing will be managed and any unusual activity will need to be addressed
- Outcomes of ETE testing will be measured against identified criteria and results published

End-To-End (ETE) Testing – High Level Plan



- **Structured ETE testing** - test specific identified scenarios and events on specific days
 - 2nd week – any additional scenarios that are required to be included in week 2, please submit requirements by no later than 12h00 Monday 25 June 2018

Structured ETE

1st Week

26 – 29 June 2018

2nd Week

2 Jul – 6 July 2018

High level plan

By 09h00

Standard JSE trade pack processed by JSE

07h30 – 13h30

Execute On Book trading.
Report Off Book trades.
Generate user created instruments and trade on these.
Process live market data.

07h30 – 13h30

Perform deal management activities

13h30 – 16h00

End of day procedures and balancing with Clearing Members

To Note:

Trading Members to perform an Own Order Book and / or Own Trade Book Download to synchronise JSE generated trades in their system.

Live market data subscribers to verify multicast data.

Perform deal management and your own internal downstream integration testing

NLMD files available from ~20h00
(check next business day)

End-To-End (ETE) Testing



- **What are the service times for ETE testing ?**
 - 07h30 – 13h30 Trading (On Book, Off Book) and real-time/live Market Data published
 - Opening Auction: 7:30 – 8:00 (EDM only)
 - Continuous Trading: 8:00 – 13:00
 - Post Close: 13:15 – 13:30, Market End: 13:30, Day End: 15:00
 - 07h30 – 13h30 Real-Time Clearing for deal management and clearing activities
 - ~13h30 – 16h00 End of day clearing procedures and other EOD processes
 - ~20h00 Availability of Non-Live Market Data files (check next business day)
- **Where can I access the ETE testing documentation?**
 - All documentation required for ETE testing will be available on the JSE [ITaC webpage](#) under the section “End-To-End Testing”
- **How will we be kept informed of ETE testing progress and status?**
 - A communication webpage has been created to keep clients updated on the status and progress of ETE testing
 - The URL will be sent to all ETE participants as and when we confirm their participation
- **Who do we contact for first line support of all queries, enablement or issues experienced during ETE testing?**
 - Contact Client Service Centre (CSC) on CustomerSupport@jse.co.za
or +27 11 520 7777

End-To-End (ETE) Testing



- **What should be tested?**
 - All front end software and functionality
 - All downstream, back office integration and other impacted systems
 - Market Making and automated trading applications
 - DMA applications
 - Reports to Clients
 - System set up and configuration especially client account parameters (e.g. commission %), trader permissions, tripartite arrangements
 - NOT A VOLUME TEST – keep volumes low to ensure verification and checking of data is simplified
- **Examples of scenarios**
 - Client Management
 - E.g. Add, Amend client
 - Instrument Management
 - E.g. Add tradeable instrument and execute trades
- **Examples of Business Events**
 - Month end
 - Futures close out
 - Currency expiry

End-To-End (ETE) Testing – How to get access?



- **Members and Live Information subscribers** to contact CustomerSupport@jse.co.za via email to request enablement IP address information and to schedule required connectivity tests
 - Provide the ComplIDs for Trading and RTC that you will connect with
 - Request the target IP address details for Native Trading, Post Trade and Drop Copy Gateway and ensure you configure these in your test environment
 - Production enablements as used during dress rehearsals have been copied to ETE environment - no new enablements will be created and JSE will update existing enablements to include the IP addresses that you will connect from
 - CSC will arrange for NW enablement of the nominated ComplIDs
 - Participants can only join ETE testing at the start of a week and/or cycle and the cut off is 12h00 on the Wednesday (Thursday/Friday for enablement and LCON)
 - Test connectivity (LCON) to the ETE environment prior to the start of a week and/or cycle
 - Template of information required:

Software Provider	XXX			
Member Firm	Native ComplID	Trading	Post Trade ComplID	Drop Copy ComplID
ABC				

- **Non-Live Information subscribers** to contact MDSupport@jse.co.za via email to request access to the Non Live Market Data products



Dress Rehearsal 14 July 2018

Measuring Success of Dress Rehearsals



- What the JSE measures – input/suggestions welcome

Trading

Connectivity and authentication
Order management & On Book trading
Off Book Trade Reports (incl OBO)
Trade Cancellations (incl OBO)
Trading Session changes
User created instruments

Market Data

Connectivity and authentication
Successfully receive and process real-time multicast data and replay/recovery
Process trading session changes published e.g. auction, uncrossing etc.

Deal Management

Connectivity and authentication
Perform deal management activities e.g. Assign, allocate, tripartite etc.
Capture service fees (commissions)
View positions

Clearing

Receive and process trades
Perform deal management activities e.g. assign, allocate, tripartite
Capture service fees (commissions)
View positions
Verify booking fees
Verify margins

Measuring Success of Dress Rehearsals

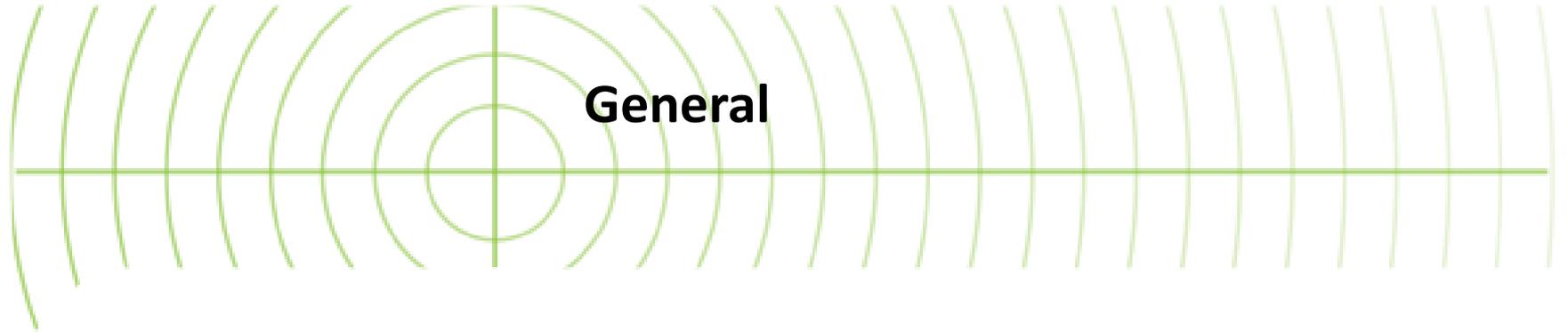


- Feedback from clients to simplify the dress rehearsal functional test checklist
 - JSE busy revising the trading and post-trade business test checklists to be more meaningful and relevant to traders and/or back office staff and guide important scenarios for testing
 - For trading members, JSE will indicate who your two trading counterparties are for the day for trading
 - For clearing members, JSE will agree with clearing member, the trading members to be used for On-Behalf-Of's for Off Book Trade Reporting
 - **Dress rehearsal checklists do not need to be completed and returned to JSE but Members will need to confirm what business functionality is NOT APPLICABLE to their business**
 - JSE will use transaction data from the systems to evaluate results for pass criteria
 - Business functionality that is NOT APPLICABLE to their business will only be excluded when deriving dress rehearsal results if this has been provided to the JSE
 - Technical system test criteria will not change from previous dress rehearsals and measurement of technical transactions will remain as is – this applies to trading, market data and post-trade
- Pass / Fail criteria will mostly be the same as for 12 & 26 May 2018 except we will add criteria for ensuring normal market behaviour e.g. volatility auctions and price band breaches
- Measurement criteria for 18 August 2018 Dress Rehearsal will be increased to cover go-live readiness aspects

Participation in Dress Rehearsals – 14 July 2018



- This dress rehearsal is **Mandatory** for:
 - All Clearing Members
 - All Equity Derivatives and Currency Derivatives Trading Members that have not successfully passed 2 dress rehearsals
 - Letters confirming your overall Firm's dress rehearsal results and required participation for 14 July 2018 will be issued to compliance officers this week
 - All Live Information subscribers with direct connectivity to the JSE (for ITaC EDM and FXM services) that have not successfully passed 2 dress rehearsals
 - Letters confirming your overall Firm's dress rehearsal results and required participation for 14 July 2018 will be issued to key contacts this week
 - All software providers (trading, deal management and clearing)
 - All Shared Infrastructure Providers (SIPs)
- Even though it is not mandatory for International Access Point clients subscribing directly to the JSE (for ITaC EDM and FXM services) to test – it is highly recommended
- Non Live Market Data subscribers do not participate in the dress rehearsal – they can participate in End-To-End Testing



General

- International Access Point replaced JSE London PoP
 - Clients wanting to receive live JSE data can contract with an accredited Extranet Services Provider (ESP) and the ESP will connect you to where the JSE delivers the data
 - Currently 4 accredited ESPs
- Colocation
 - Significant reduction in JSE fees
 - First rack build out sold out and JSE commissioning additional racks
- Bond ETP
 - Will be implemented during Jul 2018
 - Clients must sign a JSA for access to Trading Services, Live Data Services and Test Services
 - Clients must sign a JDA for access to EOD files

- Equity Market tiered building model
 - Will be implemented 30 July 2018
 - Trading fees will be progressively lower for each incremental tier with 6 tiers of value thresholds
 - Trade cap of R400 for Central Order Book trades
 - Complex order suite consisting of 5 trade types has a cap of R3000
 - XTs, VTs, Pegged Hidden Orders, BTs, OPs

Questions?



Please refer all queries to the
JSE Client Service Centre (CSC)



CustomerSupport@jse.co.za



+27 11 520 7777

ITaC High Level Impact Summary

Trading



NEW

- Connectivity and bandwidth requirements
- JSE Services Agreement (JSA) for connectivity to Production and Customer Test Service (CTS) services
- Intra-day risk monitoring including exposure thresholds
- Real time Drop Copy feed “Copy to” functionality of all orders and trades
- Real time Post Trade feed of all trades
- Enhanced trading functionality
 - Intra-Day Trading Session Updates
 - Pause session
 - Off book and On Book Trades
 - Quotes for Market Makers
 - Circuit breakers - Dynamic and Static circuit breakers trigger Volatility Auctions
- Reference Data
 - Enhanced Instrument Identification codes including ISIN and Unique Numeric ID
 - Instrument mapping between old and new instrument codes - four character code will not be allocated to any new instruments that are listed or that are created as a result of corporate actions
 - Firm and trader identification codes
 - Enriched reference data files available via file transfer/download
- EDM only – intraday creation of anyday instruments

CHANGED

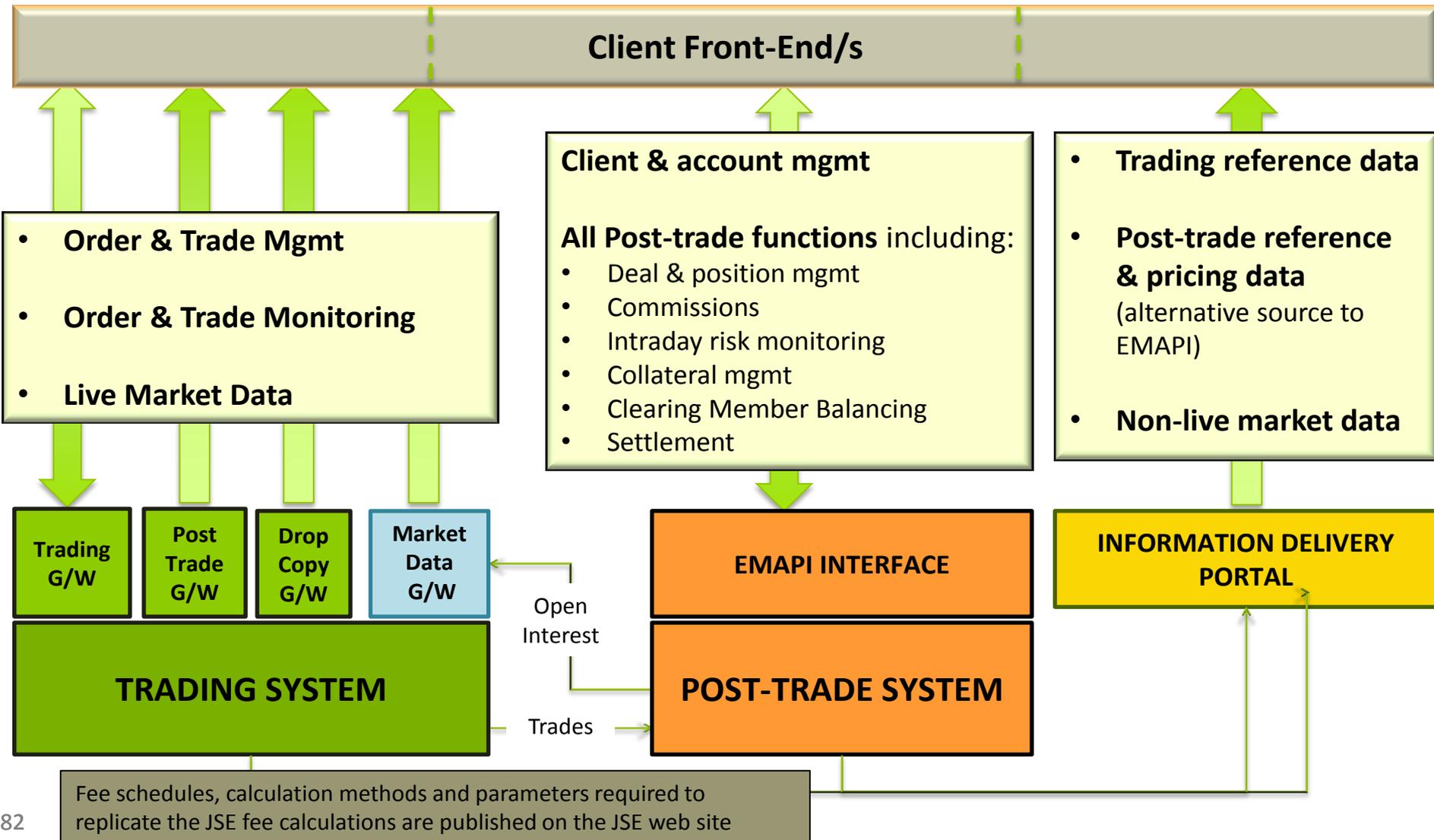
- Enhanced order types and ability to allow orders to live for more than one day
- Enhanced Stop and Stop Limit and Time in Force functionality
- Firm Login versus Trader login
- More specific Off Book trade reporting functionality with special trade types
- Improved consistent latency and performance throughput
- Dynamic Intraday auto-generation of option Strikes
- Authentication and access management managed via in-house front ends
- Enhanced trade cancellation and price adjust levels
- Indicative Auction Information published real-time during auction periods
- Multicast Protocol for all Market Data including via JSE London PoP
- Real time statistics and full market depth as well as top of book published real-time
- Data Agreements for new Trading and Information Subscriptions

DECOMMISSIONED

- NUTRON front-end to be decommissioned by JSE – clients to find replacement front-ends by engaging directly with software providers
- EDM Only
 - Price band limits for On Book central order book trading no longer apply
 - Dividend Future will no longer exist as the Dividend Neutral contract will now be “one” contract and the Journal transaction will be processed on this contract
- Global Market connectivity migrated from Equity Derivatives to Commodity Derivatives market in July 2017

Trading and Post-trade (Deal Management & Clearing)

Client facing functions and interfaces (contd.)



ITaC High Level Impact Summary

Post-trade Deal Management and Clearing



NEW

- Connectivity (to trading system for on behalf activity) and Bandwidth requirements
- JSE Services Agreement (JSA) for connectivity to JSE production and Customer Test Service (CTS) services.
- JSE Data Agreement to access public market data
- Deal management
 - Commissions functionality to replace "Take-a-Turn"
- Securities and FX collateral service that allows participants to pledge securities as collateral
- Intra-day risk monitoring service for real-time monitoring of risk including exposure thresholds and alerts

CHANGED

- JSE Rules and Directives relating to new, changed and removed services
- Reference Data
 - Trading Member codes are being consolidated
 - Instruments codes
 - Dividend neutral contract positions to be held directly in dividend neutral contract
 - Sub accounts – new House suspense account (error account)
- Single end-of-day run across all markets with a 2-step clearing member balancing process
- EOD re-run process change
- Automated confirmation of balancing
- Collateral management part of the EOD process.
- Inclusion of pledged securities collateral information in BDA
- JSPAN Margining Methodology changes
- Pre-trade risk controls changes with some controls shifting to trading front-ends and some new controls in the Trading system
- Non-validation of accounts on trading system
- Price bands changes
- Automation of corporate actions

DECOMMISSIONED

- Market Notices will no longer be issued for corporate action changes however information on treatment of derivatives positions as a result of corporate actions will be available on JSE website
- Global Market connectivity migrated from Equity Derivatives to Commodity Derivatives market – Completed earlier in 2017
- NUTRON front-end to be decommissioned by JSE – clients to find replacement front-ends by engaging directly with software providers

Instrument Reference Data: User created instruments

Creating an AnyDay Future



Step 1:

Identify eligible Reference Instrument

- Value in *Expiry Group* field
- *User Creation Allowed* field must have a value of either '1' (AnyDay Future) or '3' (AnyDay Future and Naked Option)

Step 2:

Create AnyDay Future

- Key fields the Message:
 - Reference Instrument, Maturity Date, Reference Price, Security Type

Step 3:

Validation by JSE Trading System

- No existing instruments with same underlying, Instrument Category, Sub-Category and Expiry Date
- Expiry Date is before last standard contract
- Expiry Date is not a holiday or FCO
- Validate Reference Instrument

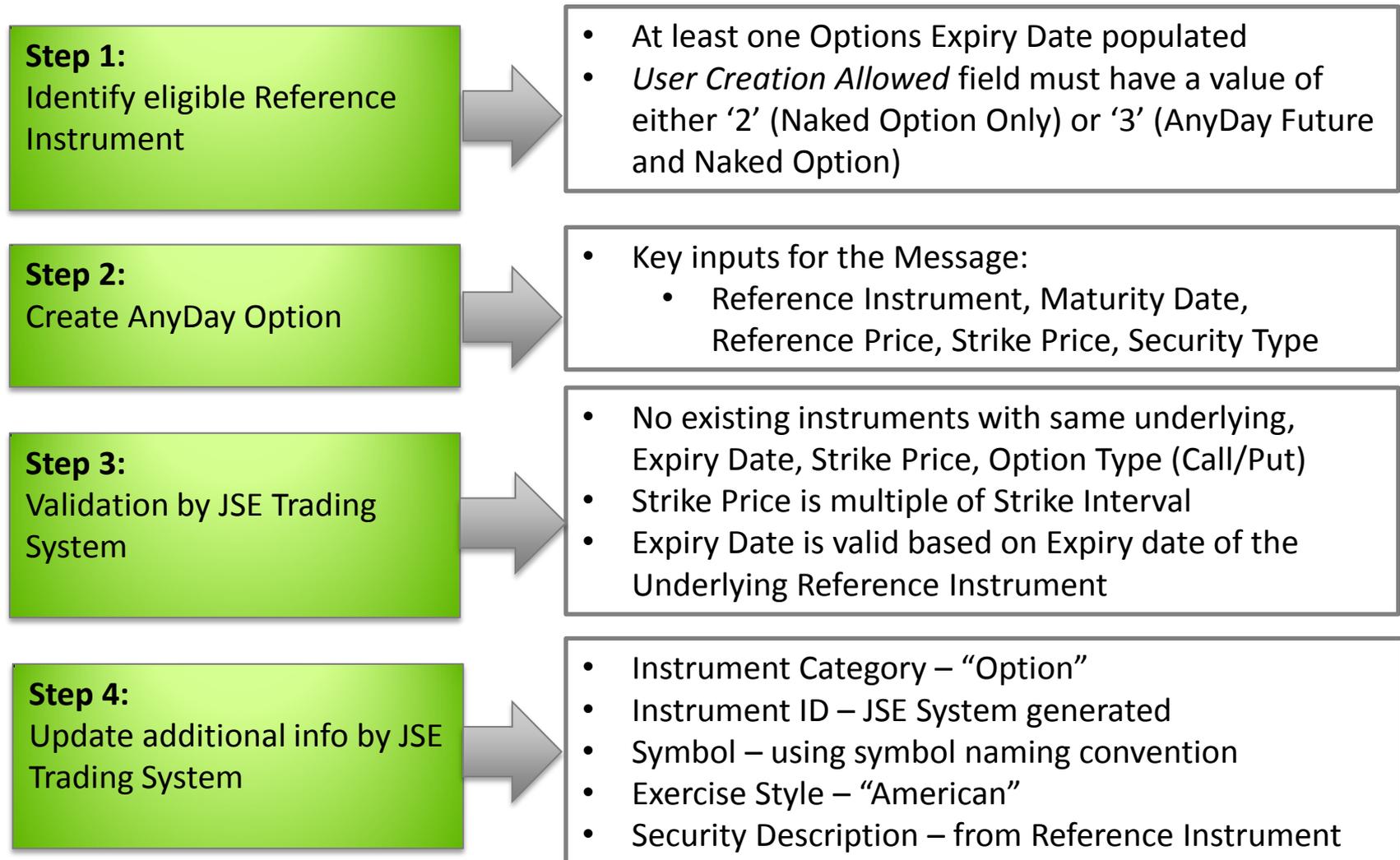
Step 4:

Update additional info by JSE Trading System

- Instrument Category – “AnyDay”
- Instrument ID – JSE System generated
- Symbol – using symbol naming convention

Instrument Reference Data: User created instruments

Creating an AnyDay (Naked) Option



Instrument Reference Data: User created instruments

Creating a Delta Option



Step 1:

Identify eligible Reference Instrument

- At least one Options Expiry Date populated
- *User Creation Allowed* field must have a value of either '2' (Naked Option Only) or '3' (AnyDay Future and Naked Option)

Step 2:

Create Delta Option

- Key inputs for the Message:
 - Reference Instrument, Security Type

Step 3:

Validation by JSE Trading System

- Option Strike Interval of the “Leg 1 Futures instrument” is not null or zero
- No existing instruments with identical legs

Step 4:

Update additional info by JSE Trading System

- Expiry Date – Same as Leg 2 Options instrument”
- Instrument Category – “Delta_Opt”
- Instrument ID – JSE System generated
- Symbol – using symbol naming convention
- Leg 1 Instrument – Future Instrument
- Leg 2 Instrument – Option Reference Instrument
- Security Description – from underlying Option
- Option Type – “Call Delta” or “Put Delta”

ITaC High Level Impact Summary

Market Data



NEW

- Connectivity and bandwidth requirements
- JSE Services Agreement (JSA) for connectivity to Production and Customer Test Service (CTS) services

CHANGED

- JSE Data Agreement/schedules to be signed
 - all data distributors including Shared Infrastructure providers
- Market Data fees
- Non Live Market Data
 - Fundamental changes to Non Live Market Data
 - FX data will move from being provided via IRC Data Records to new set of FX Data Records
 - IR Derivatives data will continue to be provided via existing IRD Data Records
 - 16 EDM Data Records will be made available
 - 13 FX Data Records will be made available
- Web Reports
 - A set of Web Reports will continue to be published on JSE website for General Public viewing
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 - 9 FX Web Reports will be provided

DECOMMISSIONED

- EDM and FX Non Live Market Data via NUTRON front-end to be decommissioned by JSE – clients to find replacement front-ends by engaging directly with software providers and review new non-live data products available
- 2 current EDM Data Records will be discontinued
- 5 current EDM Web Reports will be discontinued
- 5 current FX Web Reports will be discontinued