Integrated Trading & Clearing (ITaC)

Cape Town Client Briefing

2 November 2017

ITaC INTEGRATE ACCELERATE GROW

Agenda

- ITaC project status
- High level summary of changes
- High level daily life cycle of trading and clearing
- Timeline and key dates
- Planned conceptual training
- Market data
- Mini Break
- Mandatory dress rehearsals for November 2017
- JSE Fees and cost assistance
- Questions

- Additional information included
  - Annexure B – Dress Rehearsals – Trading
  - Annexure C – Dress Rehearsals – Post-trade

ITaC INTEGRATE ACCELERATE GROW

A note of thanks…

- We would like to thank the software providers and own solution developers for their engagement and participation thus far and for meeting the milestones set!!

- Thank you to all clients for submitting their enablement requests on time in preparation for the 11 Nov 2017 dress rehearsal – a tremendous effort by all!

ITaC Status Update

Leanne Parsons

ITaC INTEGRATE ACCELERATE GROW

ITaC Status Update

Overall project status

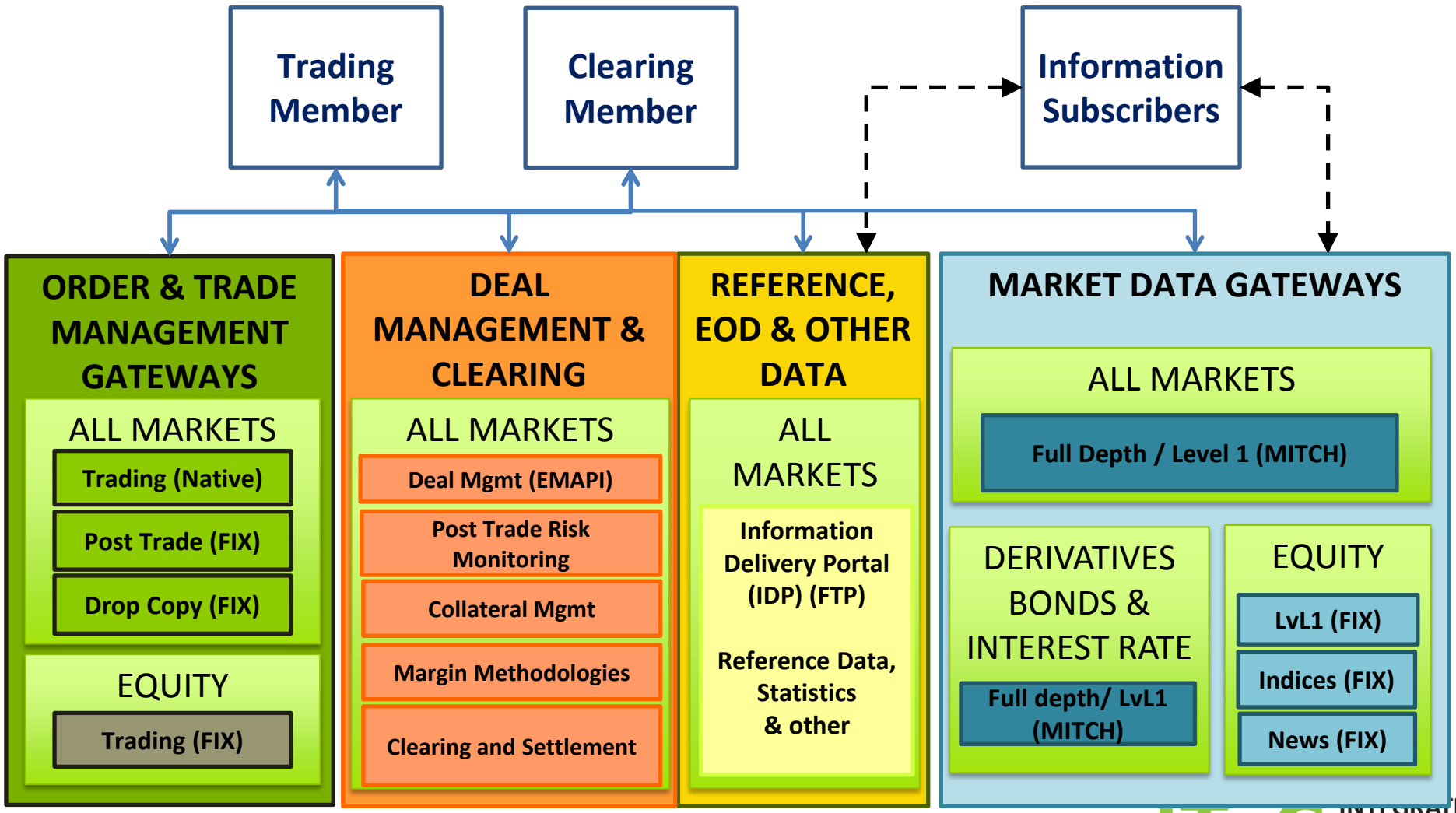
- JSE activities and milestones currently on track
- JSE Consolidated Testing progressing well and will complete as scheduled
- Voluntary Clearing Member Testing (VCMT) kicked off as planned in August and 2 software providers who have developed clearing solutions joined the testing in September. VCMT concludes on 3 November 2017.
- Two internal dress rehearsals held in Sep 2017 were successful and in some instances exceeded expectations with only minor issues being identified
- Market configuration of Equity Derivatives and Currency Derivatives markets in the trading production environment successfully completed - currently running daily (gateways up and heart beats being published)
- All software providers (who will be providing solutions for ITaC) have completed conformance
- Client readiness remains a concern and regular engagements with clients are in progress to ensure readiness for market facing dress rehearsals (11 & 25 Nov 2017) and Mandatory Clearing Member Testing (MCMT) which starts on 13 November
- JSE working closely with clearing solution software provider to ensure delivery timelines to clients will be met and any risks are being dealt with

ITaC High Level Changes

Leanne Parsons

ITaC INTEGRATE ACCELERATE GROW

High Level Architectural Overview



ITaC Trading Changes

Highlighting key changes and new services

JSE

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

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.

ITaC Trading
Key Changes

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.

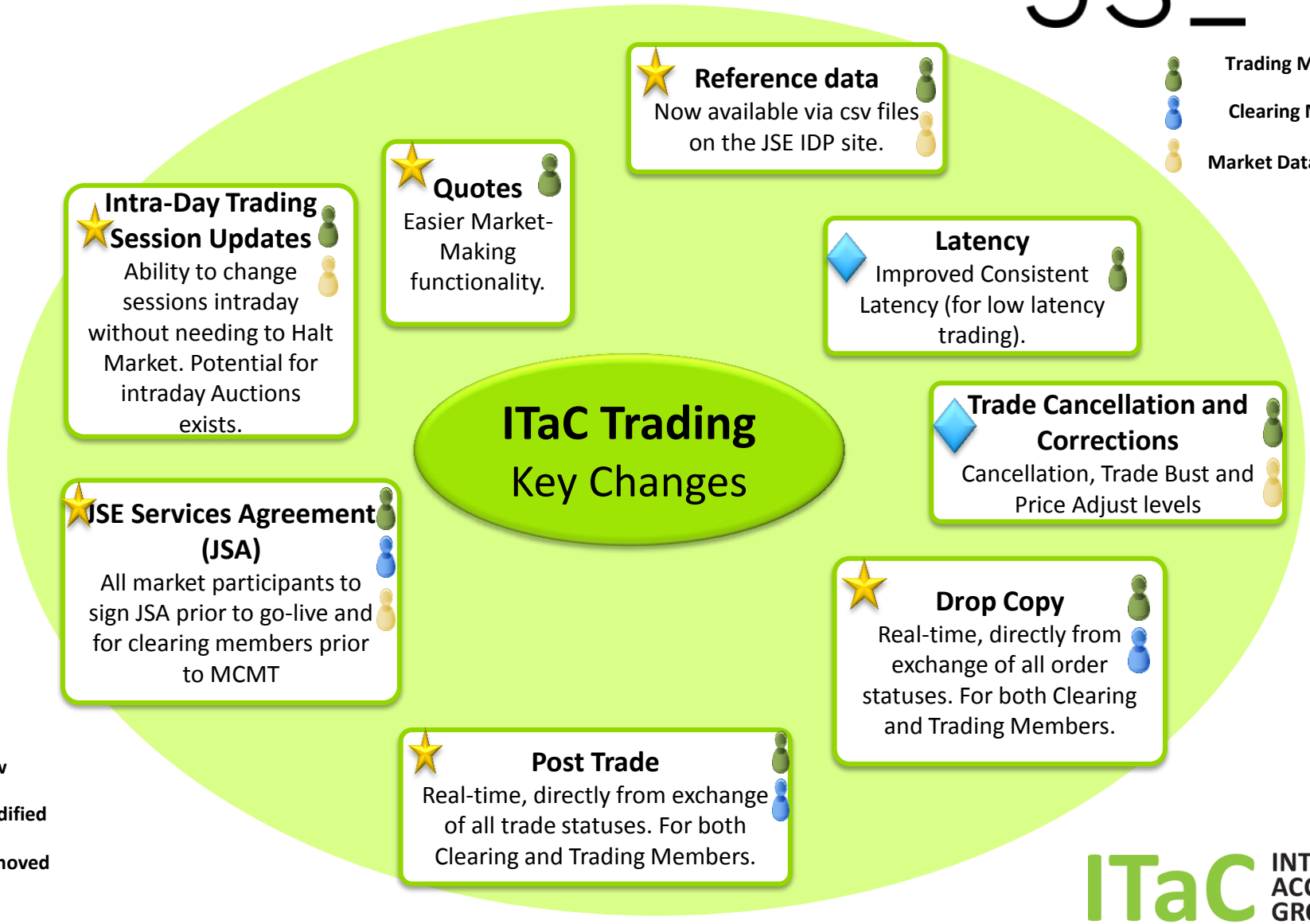
Trading Member
Clearing Member
Market Data Subscriber

New
Modified
Removed

ITaC INTEGRATE ACCELERATE GROW

ITaC Trading Changes

Highlighting key changes and new services



Trading Member

Clearing Member

Market Data Subscriber

New

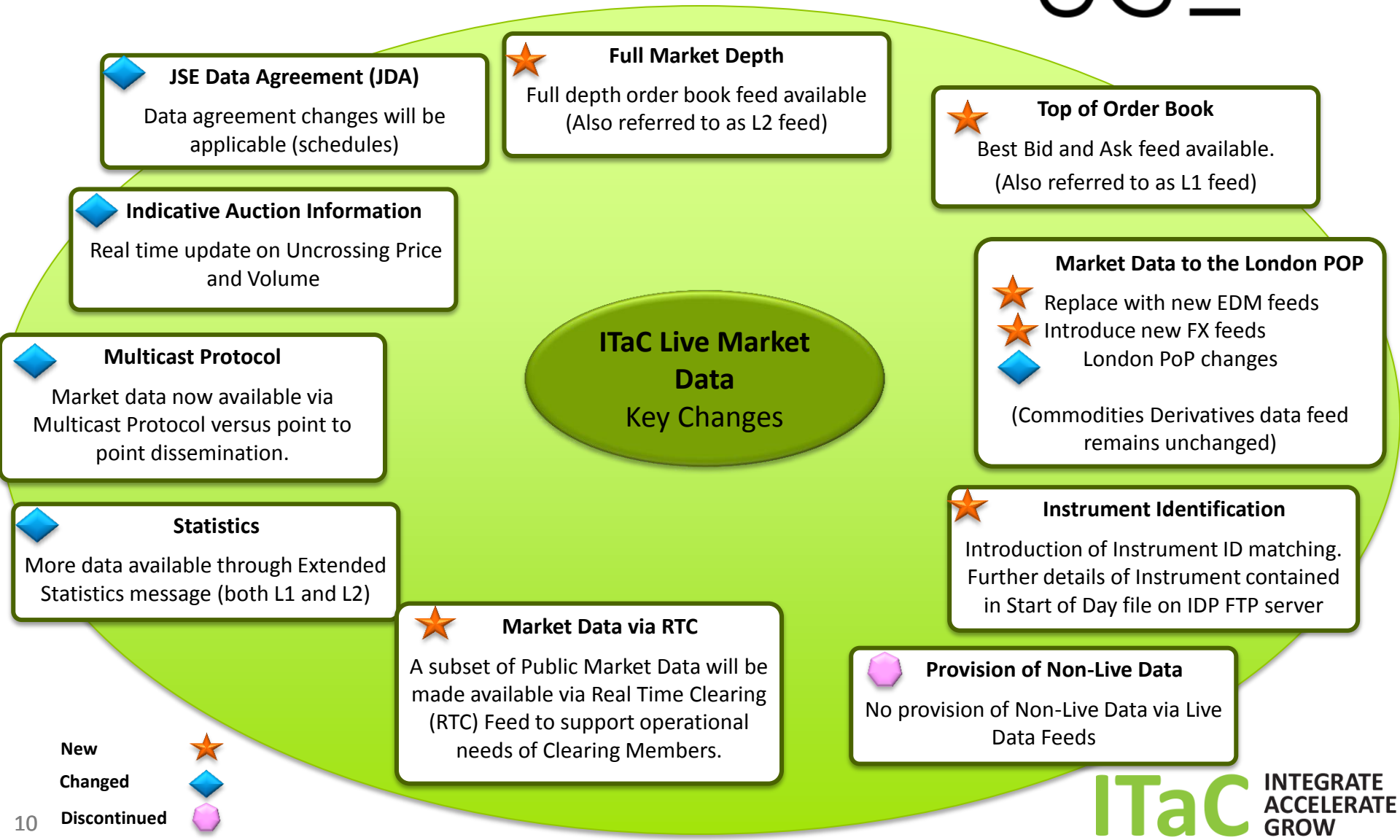
Modified

Removed

ITaC INTEGRATE ACCELERATE GROW

ITaC Live Market Data Changes

Overview



ITaC INTEGRATE ACCELERATE GROW

ITaC Live Market Data Changes

Detail

Changes to Live Data

- JSE Data Agreement to be signed
- 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*

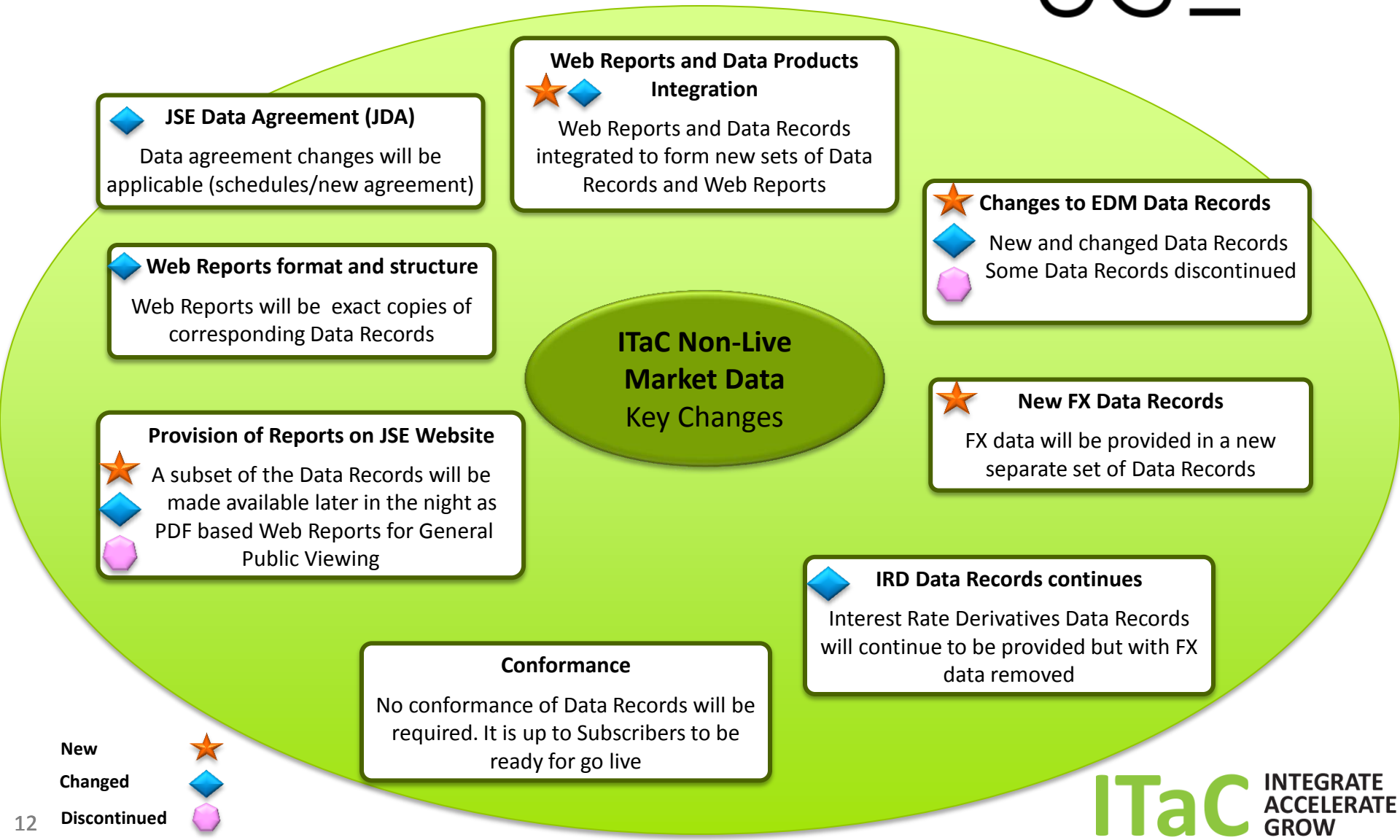
Changes to PoP Service

- 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.

ITaC INTEGRATE ACCELERATE GROW

ITaC Non-Live Market Data Changes

Overview



ITaC INTEGRATE ACCELERATE GROW

ITaC Non-Live Market Data Changes

Detail

Changes to Data Records

- JSE Data Agreement to be signed
- 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

ITaC INTEGRATE ACCELERATE GROW

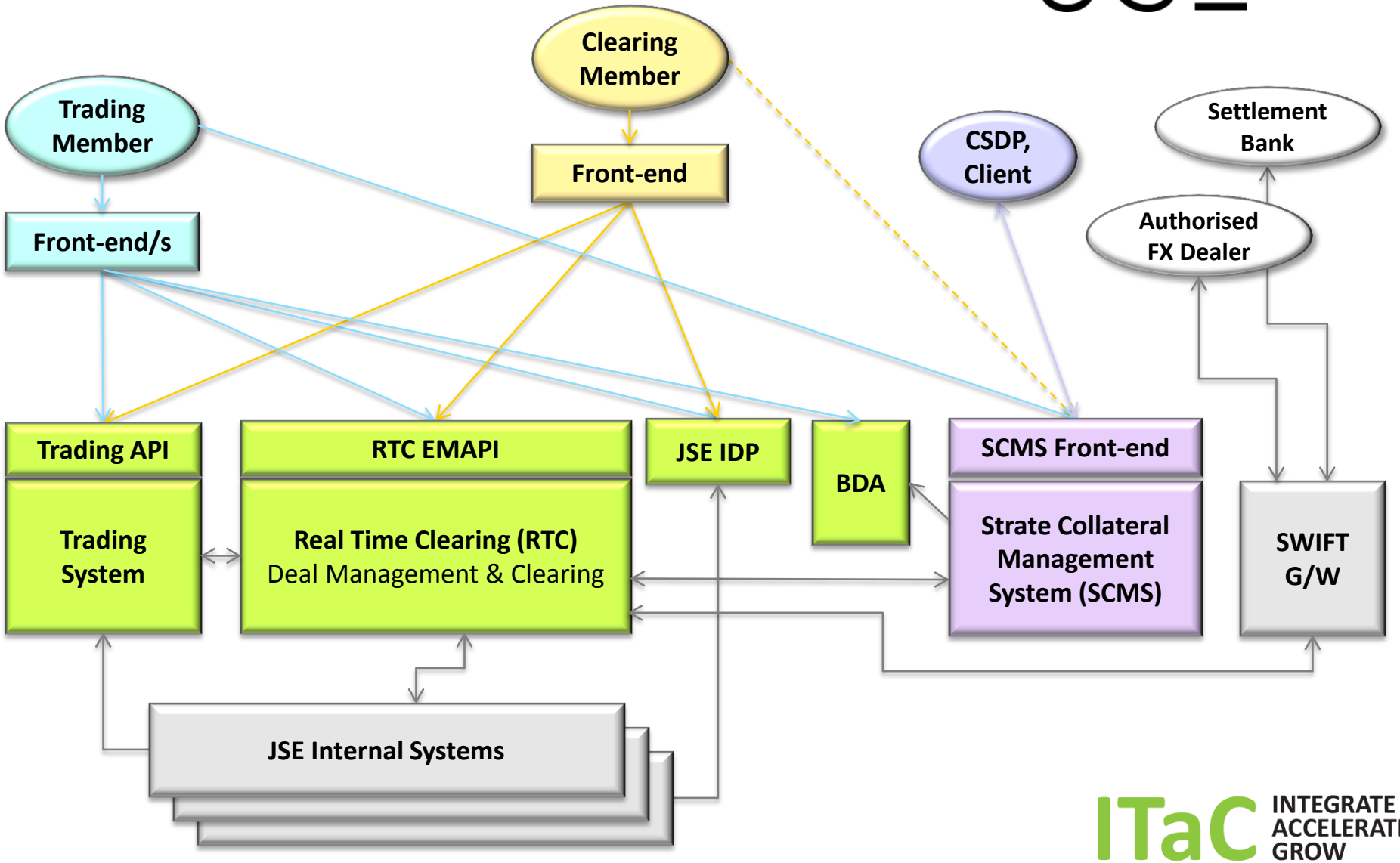
ITaC Non-Live Market Data Changes

Data record commercials

EOD Data product fees:	ZAR (Excl. VAT)	USD
End of Day Products - <u>Equity Derivatives</u> - Data Records:		
Category: Rates (RED01; RED02; RED03)	-	-
Category: Risk (ADD01; IED01)	-	-
Category: Statistics (DED01; DED02; DED03; DED04; SED02; OED02; PED01; AED01)	Fees applicable	
Category: Valuations (MED01; MED02; CED01; IED02; LED01; LED01)		
End of Day Products - <u>Currency Derivatives</u> - Data Records:		
Category: Rates (RCD01; RCD02; RCD03)	-	-
Category: Risk (ACD01; ICD01)	-	-
Category: Statistics (DCD01; SCD02; OCD02; MCD02; MCD04; MCD05)	Fees applicable	
Category: Valuations (MCD01; MCD02; CCD01; CCD02; CCD03)		

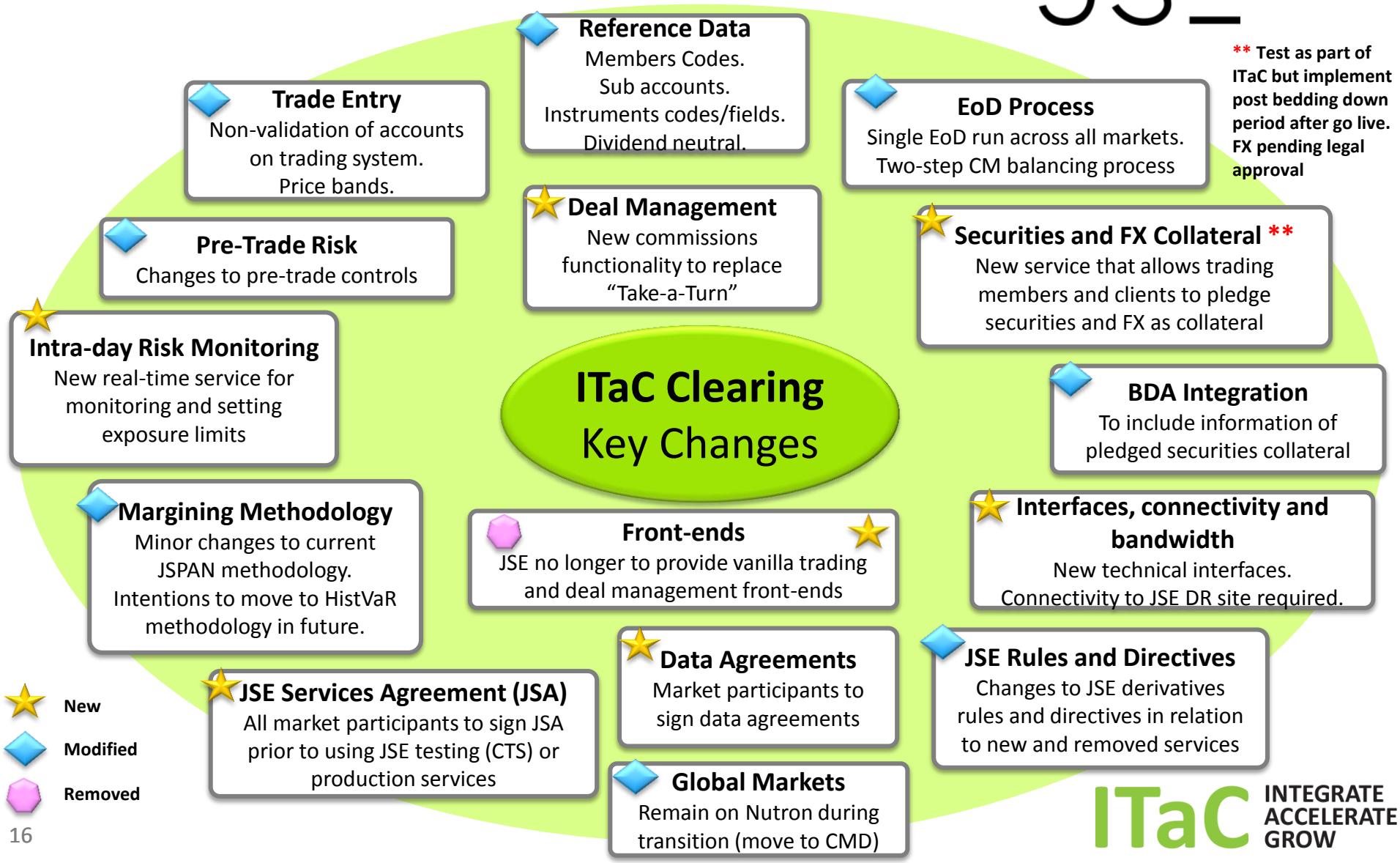
ITaC Systems

Post-trade perspective



ITaC Clearing Changes

Summary of key changes and new services



** Test as part of ITaC but implement post bedding down period after go live. FX pending legal approval

ITaC INTEGRATE ACCELERATE GROW

Instrument Reference Data

ITaC INTEGRATE ACCELERATE GROW

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

ITaC INTEGRATE ACCELERATE GROW

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 spreadsheet will be made available for dress rehearsals, but with new instruments being added daily, the final mappings will be made available on the go live weekend

- 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

ITaC INTEGRATE ACCELERATE GROW

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

ITaC INTEGRATE ACCELERATE GROW

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

ITaC INTEGRATE ACCELERATE GROW

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

ITaC INTEGRATE ACCELERATE GROW

Instrument Reference Data

User created instruments

- Instrument Types permitted for user created Instruments:
  - AnyDay Futures
  - AnyDay (Naked) Options
  - Delta Options
  - Forward/Forward FX

- 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

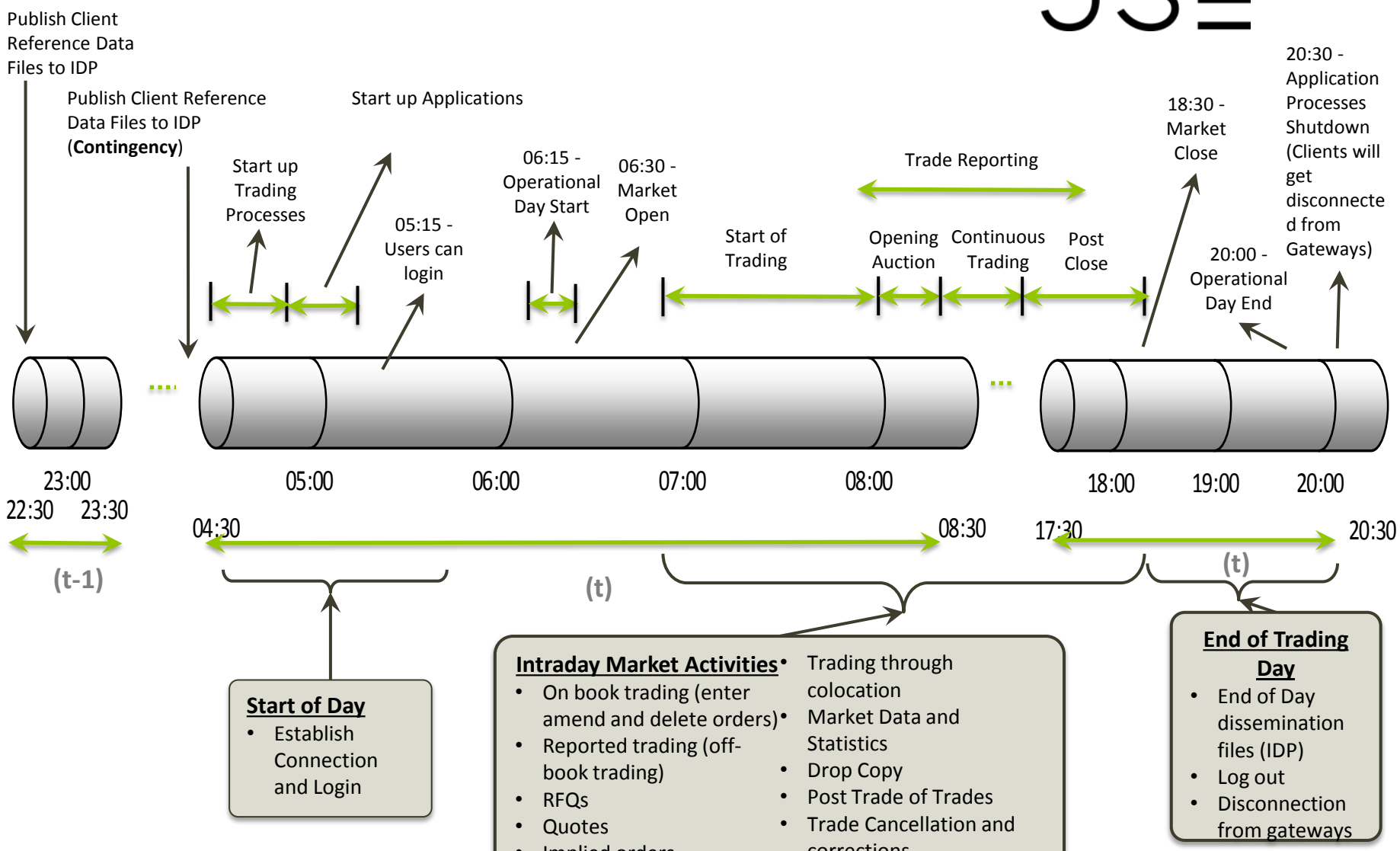
ITaC INTEGRATE ACCELERATE GROW

Trading and Post-trade Daily Life Cycle

ITaC INTEGRATE ACCELERATE GROW

Daily Trading Lifecycle

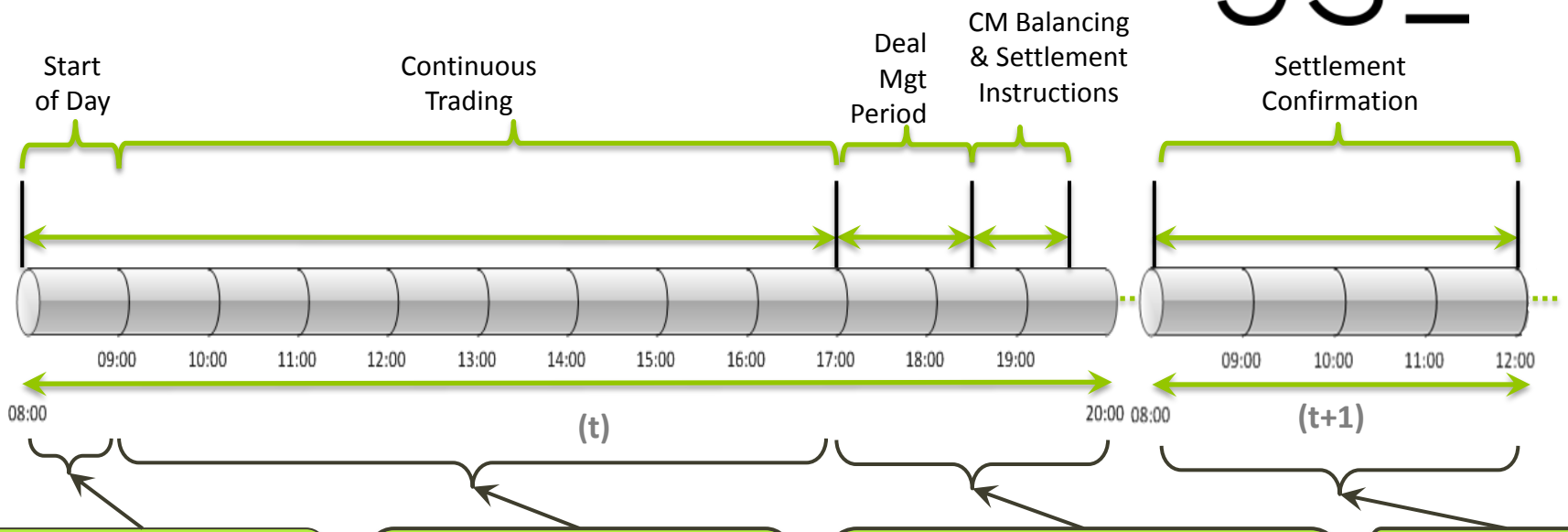
Timeline of a typical day



ITaC INTEGRATE ACCELERATE GROW

Daily Post-trade Lifecycle

Timeline of a typical day



Start of Day (SoD)

- Data Downloads:
  - Member, Client & Account Data
  - Instrument Data
  - Risk Data
  - MtM Prices (T-1)
  - Public Member & Branch Codes

Intra-Day

- Trade, Deal, Position updates
- Deal Management
- Commissions Management
- Collateral Intra-day Process
- Price Updates
- Intraday Risk Monitoring
- Intra Day Reference Data Updates
- Publishing of Rates (JIBAR)
- Early valuations

End of Day (EoD)

- Final Deal & Commission Management
- Contract Expiries and Allocations (Futures and Options)
- Margin Calculations
- Clearing Member Balancing
- Collateral calls
- Billing
- Generation of Payment Instructions

Ad-Hoc

- Default Management
- Transfers
- Corporate Actions

Next Day

- SWIFT Payment Processing

ITaC INTEGRATE ACCELERATE GROW

Daily Post-trade Lifecycle

Key times and activities

Time	Description	Functionality Available
05:00	System is started	
05:00	Business date is set Reference data and transactional data available for download	Client loading
08:00	RTC starts receiving trades from the trading system	• Trade management • Commission management • Client loading • Indicative risk calculation • Risk alerting • Reporting • Position updates
10:00 (TBC)	Intraday collateral rebalancing process	Allows participants to change the mix of collateral posted against the previous day's margin call. For example substitute cash for securities or vice versa
11:00	Publication of rates e.g. JIBAR, STEFFI, Overnight deposit	
15:00	Early valuations - publication of prices	

Time	Description	Functionality Available
17:00	Central order book trading closes for currency derivative trading. Only deal management and booking of reported trades can be done	• Trade management • Receiving reported trades • Client loading • Indicative risk calculation • Risk alerting
17:30	Central order book trading closes for equity derivative trading. Only deal management and booking of reported trades can be done	• Trade management • Receiving reported trades • Client loading • Indicative risk calculation • Risk alerting
18:30	Trade management state ends (18:00 for FXD)	
18:30	"End of day" procedures begin, including: • Option and future expiration • Calculation and publication of initial and variation Margin, Fees, Commissions, Interest on Margin, etc. • Clearing Member balancing • Pledge and release of securities collateral • Settlement instructions	Client loading
	"Post end of day" state begins	
	Transfers and corporate actions	

27

ITaC INTEGRATE ACCELERATE GROW

Securities Collateral

Overview

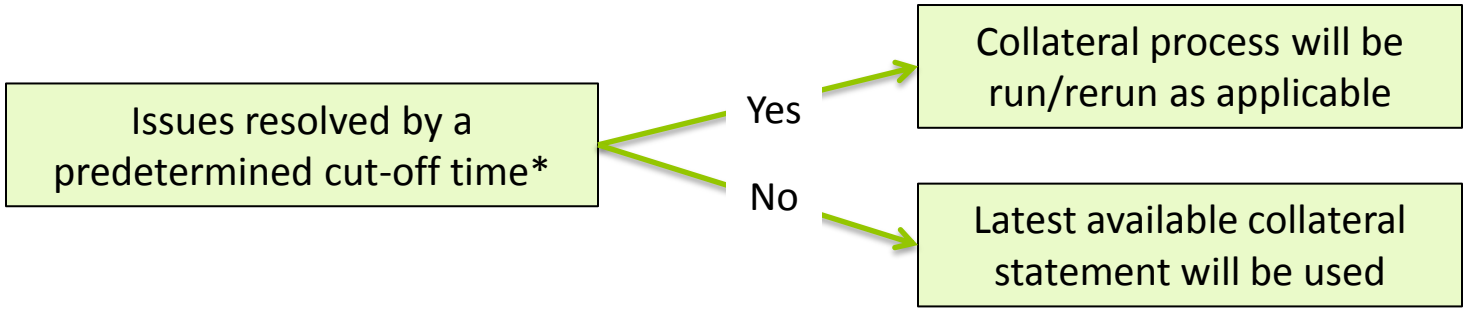
Participants who can use the service	Derivatives Trading Members (for proprietary exposures); Derivatives clients who are non-controlled clients in the Cash Equity market; Clearing Members
Obligations that can be covered	Initial margin (including margin add-ons); Clearing Member default fund contributions
Assets accepted	Liquid government bonds (GOVI index constituents); Top40 Equities; FX cash (future)
Risk management of collateral	Min ZAR cash percentage; Valuation; Concentration Envisaged to be set to 40% min cash initially, reducing to 20% 10% GOVI Bonds 15% Top40 Equities
SDA account & pledge mechanism	Participants w… need an SDA… account at Strate; …ledged directly …cipant SDA to JSE Clear; Auto-commits by CSDPs
Rules & Directives and Agreements	JSE Rules & Directives changes; Agreements updates
Processes	EOD process – collateralisation of daily IM call Intraday processes – substitutions, withdrawals & top-ups/releases

Securities Collateral

EOD Exception Scenarios

- EOD exception scenarios include
  - **Delays** in EOD balancing with Clearing Members and/or in collateral processes e.g. due to system issues experienced by JSE, Strate or CSDPs
  - **Issues identified post EOD balancing** with Clearing Members which require rerunning of Clearing EOD process to recalculate initial margins

- Approach to collateral management in the event of exceptions



**The predetermined cut-off time is dependent on finalisation of the SLAs of the various participants involved in the EOD collateral process (JSE, Clearing Members, Strate, CSDPs)*

ITaC INTEGRATE ACCELERATE GROW

Securities Collateral

EOD Exception Scenarios (cont.)

- Implication of exception scenarios if the predetermined cut-off time is missed

Exception	Collateral statement used	Business implication
Delays	Collateral statement received prior to EOD process on T at 18h00 *Statement based on T-1 exposures*	Differences between IMs at EOD on T and T+1 will need to be settled in cash
Issues identified post, requiring correction of IM on T or T+1	Collateral statement received as part of initial Clearing EOD at 19h30	Differences between initial and corrected IMs will need to be settled in cash

NOTE: The intraday collateral process is envisaged to run mid-morning ~10am

Exact time to be finalised considering:

- Money market/treasury desk windows i.e. cut-off times for Clearing Members/participants to arrange the necessary cash funding
- Cash Equity and Bonds settlement windows/timings
- SAMOS payment window cut-off

ITaC INTEGRATE ACCELERATE GROW

Securities Collateral

Client enablement process

Step 1	Contact trading member or clearing member to initiate enablement process
Step 2	Contact CSDP to create a new Segregated Depository Account (SDA) at Strate
Step 3	Complete securities collateral enablement forms* and submit to Strate
Step 4	Receive confirmation from Strate once client accounts are loaded into the collateral management system and linked to the client's JSE derivatives account
Step 5	Transfer eligible securities into newly created SDA at Strate

*** List of forms to be completed by all new clients at Strate**

- Collateral Management Service Agreement (CMSA) for Collateral Givers
- Customer and Segregated Depository Application Form
- Strate Collateral Management Eligibility Giver Forms

Commissions

Summary of JSE Commissions Service

- Trading members to capture commissions for transactions concluded in an agency capacity
- Primary role of JSE Clear will be to act as a payment clearinghouse to ensure settlement of net commission amounts across Clearing Members on T+1
  - Commissions will be rolled up to the Clearing Member level at EOD and **net** amounts per Clearing Member will be settled on T+1
- Commissions data entered into the Clearing system will be provided back to Trading and Clearing Members to support
  - Cash collections and payments from/to trading member and clients
  - Reporting, reconciliations and VAT invoicing

ITaC INTEGRATE ACCELERATE GROW

Commissions

Summary of JSE Commissions Service (cont.)

- Trading Members and Clearing Members will need to have relevant front-end capabilities to utilise the new JSE commission service
  - Commission entries submitted to JSE Clearing system to contain the commission as a ZAR cash amount inclusive of VAT --->
    - Commission fee structures and models to be built into participants' front end solutions
  - Other information to be included in commission entries
    - Market and Recipient Trading Member (mandatory)
    - Reference fields (optional) to assist in identifying the trade or trades for which the commission is being charged (commissions entries can be captured per trade or bulked)

- Trading members will be required to actively monitor and manage their commission entries
  - Executing trading members may cancel a submitted commission entry
  - Recipient trading members may reject a commission entry
  - If not cancelled/rejected the commission entry will be processed at EOD

ITaC INTEGRATE ACCELERATE GROW

ITaC Project Timeline and Key Dates

Leanne Parsons

ITaC INTEGRATE ACCELERATE GROW

Project ITaC Count Down

As at 2 November 2017

6 business days

to 11 Nov 2017

1st market facing

dress rehearsal

73 business days

to Go Live

19 Feb 2018

Just over 15 weeks!

JSE

JSE Services Agreement (JSA) & Trader Audit status

- **JSA Status**
  - All JSE Trading and Clearing Members that participate in the Equity Derivatives and Currency Derivatives Markets as well as real-time Information Subscribers
  - All JSA's for existing (Equity Market clients) and new clients have been issued to clients
  - Targeting end December 2017 to have all JSA's signed
  - JSA Workshop held 2 October 2017 – assisted in giving clarity and initiated some good engagements. Any additional queries to be sent to JSA@jse.co.za

    - Total JSA's distributed 148
    - Issued Percentage complete 100%
    - JSA's returned by clients 33%

- **Member Alpha code and Trader and Contact Audit**
  - Total Members contacted 150
  - Total Responses received 149
  - Winding down 5
  - Updated on CRM 140
  - ITM Alpha Code Confirmed (EDM & IRC) 90 (active)
  - Percentage Overall Complete 90%

ITaC INTEGRATE ACCELERATE GROW

ITaC Timeline & Key Dates

- Milestones completed successfully

Date	Milestone
22 Sept 2017	Conformance cut-off date

First Software Provider /Own solution developer Dress Rehearsal	
21 Sept 2017	Enablement requests for 7 Oct dress rehearsal
28 Sept 2017	Live Connectivity (LCON) tests to be completed
7 Oct 2017	First Software Provider/Own Solution developer dress rehearsal

Second Software Provider /Own solution developer Dress Rehearsal	
12 Oct 2017	Enablement requests for 21 Oct dress rehearsal
19 Oct 2017	Live Connectivity (LCON) tests to be completed
21 Oct 2017	Second Software Provider/Own Solution developer dress rehearsal

ITaC Timeline & Key Dates

Date	Milestone
Voluntary Clearing Member Testing (VCMT)	
3 Nov 2017	As requested by clients - extended time to 3 Nov 2017
Mandatory Clearing Member Testing (MCMT)	
13 Nov – 15 Dec 2017	MCMT Phase 1
8 Jan – 9 Feb 2018	MCMT Phase 2
Collateral Management testing by CSDPs to be facilitated	Timelines to be agreed with CSDP forum - meeting scheduled for 9 Nov 2017 at which this will be discussed

Note: Collateral Management will be tested during MCMT however it will **not be enabled from the ITaC go live day**

– the functionality will be turned on after an agreed production bedding period

– JSE will consult with clients to agree what a suitable bedding period should be

ITaC INTEGRATE ACCELERATE GROW

ITaC Timeline & Key Dates

- Upcoming Milestone 2017

Date	Milestone	Status
26 Oct 2017	Enablement cut-off date for all clients	All enablements received have been processed (bear in mind standard SLA is 7 days)
2 Nov 2017	Complete all Live Connectivity (LCON) tests (technical)	Tests to prove technical handshake between application adaptors and the JSE Gateways - Currently underway
11 Nov 2017	Mandatory Market Facing Dress Rehearsal 1	Simulate a production business day - On Track
25 Nov 2017	Mandatory Market Facing Dress Rehearsal 2	Simulate a production business day

ITaC Timeline & Key Dates

- Upcoming Milestones 2018

Date	Milestone	Status
1 Feb 2018	Final enablement amendments - cut-off date	Final enablement amendment request submissions (bear in mind standard SLA is 7 days)
8 Feb 2018	Final Live Connectivity (LCON) tests	Last date to prove any enablement amendments ahead of go live
17 Feb 2018 Contingency 24 Mar 2018	Mandatory Market Facing Dress Rehearsal 3	Execute final deployment and implementation activities Simulate a production business day
19 Feb 2017 Contingency 26 Mar 2018	**ITaC Go live**	Equity Derivatives and Currency Derivatives start trading and clearing through the new ITaC solutions And are published via JSE PoP Decommissioning of Equity Derivatives and Currency Derivatives trading and clearing on the legacy Derivatives Nutron/Nuclears solution Decommissioning of the DITCH Equity Derivatives market data feed to JSE London PoP

Market Facing Dress Rehearsal Summary

Date	Description	Objective	Participation	Schedule
7 Oct 2017 21 Oct 2017	Software Provider Dress Rehearsal	Prove technical deployment activities and basic functional tests to test a **selected set** of their clients site setups	**Mandatory** for all trading, market data and clearing solution Software providers, own solution developers and SIPs	**Successfully Completed**
11 Nov 2017 25 Nov 2017	Mandatory Market Facing Dress rehearsal	Prove technical enablements and connectivity and conduct full functional testing	**Mandatory** for all member and live market data subscribers	08h00 – 14h00 **On Track**
17 Feb 2018 and contingency 24 Mar 2018	Proposed FINAL Mandatory Market Facing Dress rehearsal	Prove final cut-over deployment activities and technical connectivity tests (some functional testing may be required)	**Mandatory** for all members and live market data subscribers	08h00 – 14h00

ITaC INTEGRATE ACCELERATE GROW

Planned Conceptual Training

ITaC INTEGRATE ACCELERATE GROW

Conceptual Training scheduled for 2017

- Post-trade Services Conceptual Training
  - Session 1: 3 November 2017 – 13h00 – 14h30
  - Session 2: 16 November 2017 – 13h00 – 14h30
  - Sessions are open to all clients who wish to gain a better understanding of the ITaC Clearing process and is NOT limited to Clearing Members only
  - Both sessions will cover the same content
  - If you wish to attend, please email GabrielleHB@jse.co.za

- Trading Conceptual Training
  - Session 1: 8 November 2017 – 10h00 – 12h00 – invitation to be issued
  - Session 2: TBC

- Non-Live Market Data information session
  - Scheduling is in progress – to be confirmed

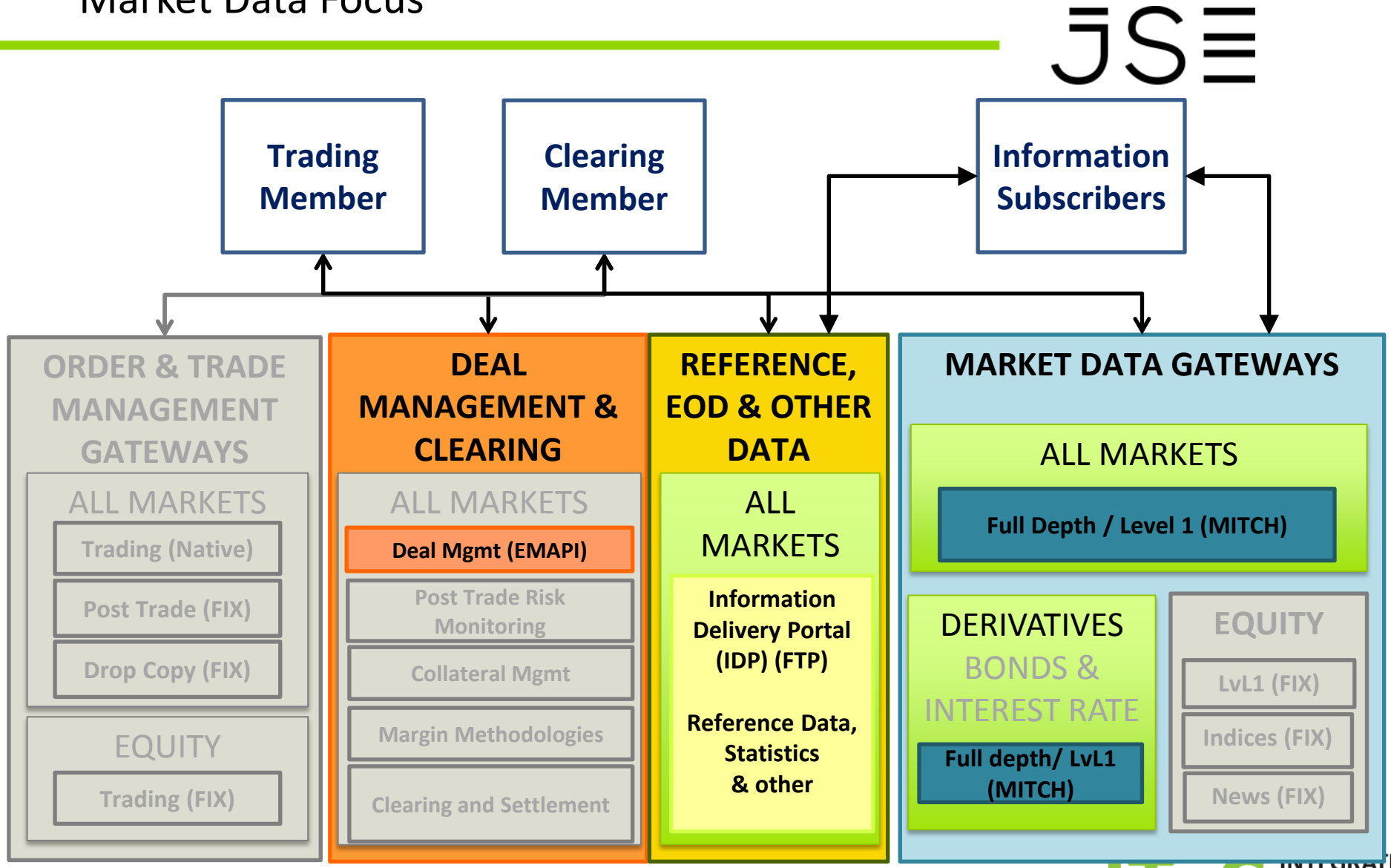
ITaC INTEGRATE ACCELERATE GROW

Market Data

ITaC INTEGRATE ACCELERATE GROW

High Level Architectural Overview

Market Data Focus



Market Data Principles

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 information 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.

ITaC INTEGRATE ACCELERATE GROW

Standard Public Market Data Use policy and Data Fee principles

All JSE data fees have been finalised and are being communicated in one-on-one consultations and/or notices as per standard JSE JDA notice periods

Public Market Data *is defined as market data (reference, pricing and trade related data) that is distributed to the broader market and not confidential to a specific party*

1. The access and use of all **Public Market Data** is charged for unless there is an exception e.g. FSB for regulatory purposes. In cases where non-chargeable usage is involved, JSE prefers, for flexibility, to set the non-charge boundaries by the usage of the data and not the type of party involved.
2. In terms of data fees, the JSE typically charges **licence fees for the internal use or external distribution** of market data, regardless of the type of party.
3. For some data products, the JSE also levies **End User fees.** The type of End User fees will be dictated by the type or data and data product and **Non-Display** usage of the data also incurs data fees which are separate.
4. In terms of **Delayed data**, even though the JSE does not provide delayed data, the JSE does charge a distribution licence fee but no End User Fees.
5. Where appropriate (mostly in the non-Live space), the JSE also charges a **Data Product fee**, which is over and above the data licence fee.

All data subscriptions are governed by a data agreement that need to be signed by any party receiving JSE data. (regardless of the party, whether charged or not as the agreement stipulates the data use rights and user obligations)

47
ITaC INTEGRATE ACCELERATE GROW

Changes to Non-Live Data

AS-IS to TO-Be - Equity Derivatives

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 - 20:30)		EDM Daily Stats (D – 19:30)
Daily Full Market Type Totals – SED (D – 19:30)	Daily Full Market Type Totals – SED (D – 20:30)		
Daily Full Market Overall Totals – OED (D – 19:30)	Daily Full Market Overall Totals – OED (D – 20:30)		
Daily Full Market Statistics – DED (D – 19:30)	Market Statistics – DED (D – 20:30)		
Interest Rates – RED (D – 19:30)	South African Rates (D - 10:00, 11:00 and 20:30)	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 - 20:30)	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 – 20:30)	Monthly Market Statistics (M – midnight)	EDM Monthly Market Statistics (M – 19:30)
	Weekly Full Market Statistics – DED (W – 20:30)		

New

Changed

Discontinued

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

ITaC INTEGRATE ACCELERATE GROW

Changes to Non-Live Data

AS-IS to TO-Be - Equity Derivatives

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 – 20:30)	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 – 20:30)	All Contract Details (D – midnight)	All Contract Details (D – 19:30)
	Options Daily Traded – PED (D – 20:30)	Options Daily Traded (D – midnight)	Options Daily Traded (D -19:30)
	Risk Parameters – ADD (D – 20:30)	Risk Parameters (D – midnight)	Risk Parameters (D -19:30)
			Anchor Volatility (D – 16:00)
			Volatility Skew Transpose (D – 16:00)
			Volatility Skew SSF (D – 16:00)

New

Changed

Discontinued

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

ITaC INTEGRATE ACCELERATE GROW

Changes to Non-Live Data

AS-IS to TO-Be - 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 – 20:30)		
Daily Full Market Type Totals – SIR (D - 19:30)	Daily Full Market Type Totals – SCD (D – 20:30)		
Daily Full Market Overall Totals – OIR (D - 19:30)	Daily Full Market Overall Totals – OCD (D – 20:30)		
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 20:30)	Risk Parameters (D – midnight)	Risk Array (D – 19:30)
	Daily Market Statistics – MCD (D – 20:30)	Daily Market Statistics (D – midnight)	YieldX Daily Stats (D – 19:30)
	Weekly Market Statistics – MCD (W – 20:30)	Weekly Market Statistics (W – midnight)	Weekly Market Statistics (W – 19:30)

New

Changed

Discontinued

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

ITaC INTEGRATE ACCELERATE GROW

Changes to Non-Live Data

AS-IS to TO-Be - Currency Derivatives

Current Data Records	New/Changed Data Records
	(M – 20:30) Monthly Market Statistics – MCD
	Margin Requirements – ICD (F/N – 20:30)
	Rand Spot – CCD (D - 10:00 & 16:00)
	Close Out Prices - CCD (Q - 12:00)
	South African Rates – RCD (D - 10:00, 11:00 and 20:30)

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

New

Changed

Discontinued

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

ITaC INTEGRATE ACCELERATE GROW

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

ITaC INTEGRATE ACCELERATE GROW

Mini Break

Market Facing Dress Rehearsals for November 2017

Leanne Parsons

ITaC INTEGRATE ACCELERATE GROW

Participation in Dress Rehearsals

- ITaC November dress rehearsals are **mandatory** for:
  - All JSE Trading and Clearing Members that participate in the Equity Derivatives and Currency Derivatives markets regardless of how they access JSE trading and post trade services; and
  - All Real-time Information subscribers that connect directly to the JSE
  - All applications that connect directly to the JSE ITaC Equity Derivatives and Currency Derivatives production Gateways (i.e. API adapter) - software that is not tested during these Dress Rehearsals will not be able to be deployed for go live
  - All CompIDs required for go live
  - 11 Nov 2017 – clients **may test** with **multiple** software providers
  - 25 Nov 2017 – clients **may only test** with the **software they intend to go live** with

- Only enablements that PASS the LCON tests will be available during the dress rehearsals
- Not mandatory for every trader to participate, however every Trader ID should be tested to prove correct authorisation in JSE systems and Software Front Ends
- Only conformed software can be used in dress rehearsals
- Dress rehearsals will be conducted in the JSE production environment

Participation in Dress Rehearsals

- Non Live Market Data subscribers do not need to participate in the November dress rehearsals
  - NLMD test files have been provided to clients
  - JSE looking to provide additional NLMD data files to clients as part of the Mandatory Clearing Member Testing (MCMT) – details will be communicated in due course

- Ensure you attend training for the software that you will be testing
- Ensure you have the support helpdesk contact details of your software provider for support during the dress rehearsals

- Contact the JSE urgently (ITaC@jse.co.za) if you are not able to meet the criteria or cut off dates

- Dress Rehearsal Checklists can be downloaded from the "Other Documentation" section of the ITaC webpage **https://www.jse.co.za/services/itac**
  - **Mandatory Market Facing Dress Rehearsal Checklist (Trading) v1.0.pdf**
  - **Mandatory Market Facing Dress Rehearsal Checklist (Post Trade) v1.0.pdf**

ITaC INTEGRATE ACCELERATE GROW

Dress Rehearsal Objectives

- Prove technical enablements and front-end connectivity – ensure permissions and authentication is correct

- Conduct functional testing of trading and post-trade systems that you wish to implement
  - Test all functionality that your business is dependent on and that you do on a daily basis
  - Capture a controlled set of orders and trades, perform deal management activities and verify the outcome of the results on all screens, reports, downloads etc.
  - These are not high volume tests – the focus should be integrity and accuracy of transactions generated
  - JSE has published a high level checklist of functionality to guide functional testing

- We recommended you test any downstream integration systems that are dependent on the ITaC API adapters to ensure end to end functionality prior to go live

- Familiarise yourself with the new systems and your new front-ends

ITaC INTEGRATE ACCELERATE GROW

Trading and Information Dress Rehearsal Schedule

Dress Rehearsal Times		
Start	End	Functional Testing to commence
04:15	14:00	Trading and Market Data systems start/end - heart beats start flowing
06:30	07:00	Start of day reference data published
		Off Book Trade Reporting period start – All Markets
08:00	12:00	- *Cash Bonds*
08:00	12:00	- *Commodity Derivatives (CDM)*
08:00	12:00	- *Interest Rate Derivatives*
08:00	12:00	- Equity Market (EQM)
08:00	12:00	- **Currency Derivatives (FXD)**
08:00	12:00	- **Equity Derivatives (EDM)**
08:20	08:30	**EDM - Open Auction**
08:30	12:00	*Continuous Trading: Cash Bonds & IR Derivatives (IRD)*
08:30	08:40	*Commodity Derivatives: Pre-open*
08:30	08:40	EQM for JSE & NSX : Open Auction (All segments)
08:40	11:40	EQM for JSE & NSX : Continuous trading
08:30	12:00	**EDM - Continuous trading**
08:30	12:00	**FXD: Continuous trading**
08:40	12:00	*Commodity Derivatives: Continuous Trading*
11:40	11:45	EQM - Closing Auction
11:45	12:00	EQM – CPP → CPX → EOD Volume Auction (5min each)
12:00	14:00	**Admin Period for All Markets**

- A detailed checklist is available on the ITaC webpage under the other documentation section
- A volume test period will be allocated during the continuous trading periods

ITaC INTEGRATE ACCELERATE GROW

Post-trade Dress Rehearsal Schedule

Dress Rehearsal Times		
Start	End	Functional Testing to commence
05:30	14:00	Post-trade Real Time Clearing (RTC) system start - Open state: Reference data subscriptions, position management, member client maintenance
08:00	12:00	Equity Derivatives (EDM) and Currency Derivatives (FXD) Markets - **Off Book Trade Reports start feeding into RTC for all ITaC markets**
08:30	12:00	EDM – **On Book Trades feed through to RTC** (starting after auction period), deal management, commissions, intraday price updates and risk monitoring
08:30	12:00	FXD – **On Book Trades feed through to RTC**, deal management, commissions, intraday price updates and risk monitoring
08:30	12:00	*CDM, Cash Bonds & IRD – Deal & Position Management*
12:00	12:15	**EDM – EOD Deal & Position Management period**
12:00	12:15	**FXD – EOD Deal & Position Management period**
12:00	12:15	*CDM, Cash Bonds & IRD – EOD Deal & Position Management period*
12:15	14:00	**EDM & FXD - JSE End of Day batch processing commences**
12:15	14:00	*CDM, Cash Bonds & IRD - Clearing EOD process* *(net payments from legacy systems will be fed into new ITaC systems)*

- A detailed post-trade checklist is available on the ITaC webpage under the other documentation section
- A volume test period will be allocated during the continuous trading period which will also feed trades into the Clearing Solution

ITaC INTEGRATE ACCELERATE GROW

11 Nov 2017 – Dress Rehearsal Key Dates

- Mandatory Market facing Dress Rehearsal scheduled for – 11 Nov 2017
  - Key activities leading up to the dress rehearsal

Date	Milestone	Status
3 Nov 2017	Data cut taken from trading and post-trade systems for dress rehearsal (includes firm, trader ids, enablements, instruments etc.)	Executed by JSE within JSE environments - **No action for clients**
8 Nov 2017	Trading reference data client CSV files published	Software Providers, Shared Infrastructure Providers (SIPS), own solution developers and Host-to-Host clients to download files and process data
9 Nov 2017	Post-trade reference data can be downloaded via the RTC API (EMAPI)	Software Providers, Shared Infrastructure Providers (SIPS), own solution developers and Host-to-Host clients to download and process data
10 Nov 2017	Updated Trading reference data client CSV files published	Software Providers, Shared Infrastructure Providers (SIPS), own solution developers and Host-to-Host clients to download files and process data

ITaC INTEGRATE ACCELERATE GROW

Client Reference Data for Dress Rehearsals

- **Firm and Trader Details**
  - New ITaC Firm data will be used for the dress rehearsals
  - The JSE Client Data team has provided compliance officers of Trading and Clearing Members with new production Firm details as was required for the enablement order forms
  - In addition, Trading and Clearing Member's compliance officers were provided with a full list of Trader IDs that will be loaded for them into the new trading system
  - Trader IDs must be provided to your software providers/solution developers so that these can be configured for use via the front-ends provided
  - An audit of all Trader IDs is required and must be completed end of November 2017
  - For any Trader ID amendments, Compliance Officer must complete the Officer Registration/Deregistration form on the JSE website and email the completed form to ClientData@jse.co.za
  - New Trader ID standard is **5 numeric digits (0-9) –** confirm how your software provider has implemented this as they may mask it from you
  - Traders registered in the Equity Derivatives and Currency Derivatives Markets will have one common unique numeric Trader ID across all markets for ITaC

ITaC INTEGRATE ACCELERATE GROW

Post-trade Client Reference Data

- New ITaC Firm data will be used for the dress rehearsals
- JSE Client Data team has provided compliance officers of Trading and Clearing Members with new production Firm details as was required for the enablement order forms
- In addition, Trading and Clearing Member's compliance officers were provided with a full list of Trader IDs that will be loaded for them into the new trading and clearing systems
  - Clearing Members have a Trader ID for Trading Members they clear for (to do On Behalf Of)
  - Clearing Members also have their own Trader ID for back office activities

- All member clients and accounts including sub accounts which have an open position (open interest) as at end of day on 3 November 2017 will be migrated to the new Real Time Clearing (RTC) system
- All Tripartite agreements involving member clients loaded into RTC (refer point above) will be migrated
- In addition, we will migrate all accounts that have a zero open position but with interest accrued as at end of day on 3 November
- All open positions in production as at COB on Friday, 3 November 2017 for the instruments that have been loaded, will also be loaded in the dress rehearsal environment

- As per letter to **Compliance Officers** sent **5 Oct 2017 by JSE Market Regulation**
  - *Derivatives Rule 7.60.2 states that a member may not trade for or on behalf of a client until that client has been registered and Rule 7.60.2.2 specifies the information that a trading member must obtain from a client in order to register them. The JSE, in accordance with Rule 7.60.2.3, maintains a record of the clients that have been registered by members, as well as the client registration information members have captured in terms of Rule 7.60.2.2. The responsibility for ensuring that client registration details are up to date at all times is that of the member, as specified in Rules 7.60.2.3.1 and 7.60.2.3.2.*
  - Compliance Officers must ensure that members undertake an exercise to **clean-up the client registration data** that they have captured on the JSE derivatives system prior to the go live of ITaC
  - Compliance officers are reminded to provide JSE Surveillance with a monthly update in respect of the progress of this exercise
  - Confirmation of the completion of the client registration data clean-up exercise is required from members by **31 December 2017**

Instrument Reference Data

- All existing production derivative instrument types and new instrument types as per the new reference data standards and will be tested during dress rehearsals
- The following new instrument types will be included
  - Single Stock Dividend Neutral Anyday Future
  - International Equity: Anyday Future; Dividend Neutral Future; Dividend Neutral Inverse Calendar Spread; Dividend Neutral Anyday Future; Quanto Dividend Neutral Future
  - International Index: Anyday Futures & Options; Quanto Futures & Options
  - Forex Index: Future; Inverse Calendar Spread
  - Quanto Forex Anyday Futures & Options

- Annexure A at the end of this presentation contains a full list of new and existing instrument types
- For more details, please refer to ITaC Instrument Reference Data Quick Reference Guide
- A mapping between the old and new Contract codes will be provided prior to the dress rehearsals

Instrument Master ID	Nutron Code	ITaC Instrument Name	ITaC Contract Code	ISIN	ITaC Instrument Type
1000666	IMPS	IMP Single Stock Cash Base 100	21SEP17 IMP CSH	ZAD000000016	Single Stock Future
1000667	IMPS	IMP Single Stock Cash Base 100	21DEC17 IMP CSH	ZAD000000024	Single Stock Future
1000671	IMPS	IMP Single Stock Cash Base 100	21SEP17 IMP CSH 54.6P	ZADA00000018	Single Stock Option
1000672	IMPS	IMP Single Stock Cash Base 100	21SEP17 IMP CSH 54.6C	ZADA00000026	Single Stock Option
1000681	IMPS	IMP Single Stock Cash Base 100	21SEP17/21DEC17 IMP CSH	ZAD000000065	Inverse Calendar Spread

Support during Dress Rehearsals

- First line support to all client
- Standard production support model will be followed during dress rehearsals – the Client Service Centre (CSC) is the first point of call and can be contacted on:
  - CustomerSupport@jse.co.za or
  - +27 11 520 7777
- Dress rehearsal status updates will be reported via a webpage to clients at the following link: **https://www.jse.co.za/services/technologies/market-communications**

- Clients to ensure the network changes and connectivity is in place
- Clients to ensure Customer Enablement Information Forms (CEIFs) are accurate – as this is the information that has been captured into the production systems
  - CEIF contains all CompID and IP Addresses information per client
  - Each client will receive 3 IP Addresses primary, secondary and tertiary
  - These are the only IPs a client will be able to access in Production and Dress Rehearsals
  - Must **PASS** LCON tests prior to the dress rehearsals

- Clients making use of a Shared Infrastructure Provider (SIP) – **note!**
  - SIPs will conduct LCONs with the JSE on the client's behalf to confirm that the backend can logon to the JSE for that client
  - Clients must test that they can logon to their SIP application from the desktop front-ends provided

ITaC INTEGRATE ACCELERATE GROW

User Readiness Tracking

- Each JSE client will be assigned a JSE user readiness contact (“buddy”)
- The JSE appointed representative will contact the nominated ITaC person within the firm to exchange contact details (by Wed 8 Nov)
  - this person will be your escalation contact (if required) during the dress rehearsals
  - If a more senior escalation contact is required, please contact Leanne Parsons who is the JSE senior executive contact for ITaC and can be contacted via LeanneP@jse.co.za or via Client Service Centre (CSC) +27 11 520 7777

- Clients must monitor the JSE webpage for dress rehearsal status updates
- Clients who wish to subscribe to the dress rehearsal SMS updates must provide the following details to their user readiness representative or email ITaC@jse.co.za
  - Firm Name
  - Name & Surname
  - Cell phone Number
  - Email Address

- JSE will require sign-off from the ITaC Responsible Officer per client to confirm their success/results in the dress rehearsal – a template will be provided for this feedback
  - Technical capability successful
  - Tested minimum functionality and was successful
  - Enablements successful
  - Reference Data processing
  - Trader Groups and Trader IDs correct

User Readiness Tracking

- Some Items that will be tracked to assess your readiness for go live:
  - Nutron front-end solution replacement decision finalised and relevant agreements in place (if applicable)
  - Confirmed market data subscriptions for live and non live data – targeting end Dec 2017
  - Signed JSA and related JDA (if applicable) – targeting end Dec 2017
  - Direct connectivity to JSE finalised (if applicable) – direct, colocation or JSE PoP
  - Confirmation that minimum bandwidth requirements of your solution are in place i.e. between client and JSE or client and their SIP
  - All enablements for dress rehearsals complete and Customer Enablement Information Form (CEIFs) signed off
  - Live Connectivity tests successfully completed for all enablements
  - Successful participation in the mandatory dress rehearsals
  - Participation in conceptual training for trading and/or post-trade services as well as Non Live Market Data services if subscribed to (optional but recommended)
  - Trading and Clearing Members: Trader ID audit and clean-up is complete and signed off
  - For Clearing Members, audit and clean-up of member client data has to be completed by end Dec 2017 and monthly status updates to JSE Surveillance
  - Review of updated Rules and JSE Directives completed

ITaC INTEGRATE ACCELERATE GROW

Dress Rehearsal Summary Checklist

- To ensure readiness for the dress rehearsals in Nov:
  - Front-end and other software successfully deployed into your environment
  - Signed Customer Enablement Information Form (CEIF)
  - Successful LCON test to prove end-to-end connectivity and receipt of multicast heartbeats
  - Attend JSE conceptual training available
  - Attend software training by your software provider/developer
  - Download and review dress rehearsal checklists – define your firm test scenarios
  - Confirm to JSE “buddy” the key ITaC contact for the dress rehearsal
  - Provide contact details to JSE for SMS updates
  - Ensure clear roles and responsibilities within your team for testing and signoff of functionality required
  - Log all issues identified with JSE Client Service Centre (CSC) team
  - Ensure each user has their required front-end login credentials (to be provided by software provider/developer)
  - Completed dress rehearsal feedback form to be sent to JSE post the dress rehearsal
  - Trading and Clearing members to agree dress rehearsal interactions and requirements

ITaC INTEGRATE ACCELERATE GROW

Go live criteria

- **Minimum Go Live criteria for all clients**
  - Successful dress rehearsals and successful MCMT
  - Only conformed software that was successfully tested during mandatory dress rehearsals can be used in the production environments and therefore go live
  - Only enablements (CompIDs) successfully tested during the mandatory dress rehearsals can go live with ITaC
  - Clients must ensure that they connect via an accredited JSE Network Service Provider (NSPs) or an accredited Shared Infrastructure Provider (SIPs)
  - Signed JSE Services Agreement (JSA) and JSE Data Agreement (JDA) to be in place
  - All user readiness checklist items completed and signed off
  - For Clearing Members:
    - Clearing Members to ensure signed JSA is submitted prior to the start of Mandatory Clearing Member testing (MCMT) on 13 Nov 2017
    - Successful participation in Mandatory Clearing Member Testing (MCMT)
    - Signoff of data take-on open positions
  - A freeze period is proposed post go live – this means a freeze to all enablements whether new/changed as well as the take-on of new clients/services

JSE Cost Assistance

Leanne Parsons

ITaC INTEGRATE ACCELERATE GROW

JSE Cost Assistance

- At this stage, the JSE is not able to offer a front end that works from a commercial, risk and legal perspective and therefore the JSE's original determination of not providing a front-end (first communicated in March 2015 and regularly thereafter) to the market remains
- However, we do understand the front end cost concern raised by clients so the JSE will be:
  - providing support to members in the form of a monthly credit to members for a period of time. The amount will be based on a % of Transaction Fees currently paid to the JSE (subject to a max % of Fees);
  - waiving connectivity fees for the Equity Derivatives and Currency Derivatives Markets for a period of one year post ITaC go-live;
  - waiving Customer Test Service (CTS) fees for duration of the ITaC implementation period up to ITaC go-live;
  - we also encourage clients to engage with software providers to drive down their proposed fees

JSE Service Fees Clarification

Leanne Parsons

ITaC INTEGRATE ACCELERATE GROW

JSE Services Fees Clarification

- **Transaction (Booking) Fees**
  - Not changing as a result of ITaC
- **Connectivity Fees**
  - Introduction of a standard connectivity fee for min set of CompIDs to trading system
  - Fee has been set at R1000 per month
- **Testing Services**
  - Typically only used by software providers or own solution developers and not members
  - Testing services for ITaC will remain free until ITaC go-live
  - Post Go-Live:
    - Fees for test services for trading and clearing members will be included in the applicable system's service and/or transactional fees
    - Fees for test services will be applicable for all other clients
- **JSE Risk Management Fee**
  - Currently charged as a haircut on margin
  - JSE will not be charging differently for cash or securities collateral
  - JSE aiming to consolidate and use a single rate across all markets and is currently being communicated in one-on-one discussions

Questions?

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

CustomerSupport@jse.co.za

+27 11 520 7777

ITaC INTEGRATE ACCELERATE GROW

Annexure B
Dress Rehearsals – Trading

To allow trading and clearing members, market data clients and any other clients of the JSE to simulate an operational day on new the ITAC production trading system

- This is achieved by ensuring all technical activities are completed and enabled and all functionality exists on the system including, but not limited to:

  - Proving successful routing connectivity into the JSE ITAC Trading infrastructure including all TCP connections and UDP subscriptions.

    JSE production IP Address information circulated to all clients at end of August (trading members, software providers and Shared Infrastructure Providers (SIPs)) to assist clients with early change management implementation

  - Proving successful connectivity and login to the JSE production environment and all trading and market data gateways both TCP and multicast (UDP) including from JSE Client Access Network and JSE Colocation:
    - Native Trading Gateway
    - Drop Copy Gateway
    - Post Trade Gateway
    - Market Data Gateways (Level 1 and Level 2)

    Standard LCON process applies. Enablement order forms must be submitted by each trading member to ensure CompID details can be setup

Annexure B
Dress Rehearsals – Trading

- Proving successful creation of member firms and all associated enablements:
  - TraderGroups are created successfully on the system and used by trading firms, this will include the public-facing trader group
  - CompIDs are enabled and logged in across all gateways and a 'on-behalf-of' CompID has been provided to the clearing member by each trading member
  - TraderIDs are enabled and exist for all confirmed traders/dealers

- Proving readiness to JSE systems from client's perspective:
  - Client frontend integration to the new Trading system and amended production system for non-ITaC derivatives markets
  - Frontends that are exclusively used internally by all clients that have undergone changes
  - Integration of all client systems downstream due to ITAC implementation
  - Communication or system changes to the clearing member and how processes may have changed

ITaC INTEGRATE ACCELERATE GROW

Annexure B
Dress Rehearsals – Trading

- Proving Reference Data consumption and usage by all participants
  - Connectivity to the JSE IDP site for reference data files
  - User-created instruments
    - Create an option on an Anyday Future that has been created by the firm already as per instructions to be provided by the JSE
    - Create a DELTA option
  - Auto-creation of strikes limited to ALSI, DTOP, USDZAR

- Proving Order and Quote submission and flow
  - Implied Across orders are only enabled for
    - ALSI, DTOP, USDZAR
  - Submit at least one order in the market the client is a member of
  - Cancel an order and amend an order
  - Ensure quotes are submitted if clients are market makers
  - *Optional: submit an order type using each TIF, not only DAY e.g. GTC, GTD, etc*

ITaC INTEGRATE ACCELERATE GROW

Annexure B
Dress Rehearsals – Trading

- Proving an On Book trade match
- Proving an On Book trade on a strategy instrument for a
  - Delta Option and
  - Inverse Calendar Spread
- Proving Off Book Trades – all 5 types (CFD Trade, Roll Trade, Strategy Trade, Negotiated Trade, Price Adjust)
  - Should submit at least one dual- and one single-sided Off Book Trade Report per trade type
- Proving On-behalf of Trading
  - Clearing members to submit at least one Off Book Trade Report on behalf of a trading member
- Proving On Book/Off Book Trade Cancellations
  - Clearing members to cancel one On Book Trade and one Off Book trade on behalf of one of their trading members
- Proving existing production for CMD; Cash Bonds & IRD

ITaC INTEGRATE ACCELERATE GROW

Annexure B
Dress Rehearsals – Trading Success Criteria

- Principle is to allow all clients to test all of their systems and interactions to the JSE and also allow them to perform a production-like trading day
- JSE will check that clients have performed the minimum requirements, but will not expect a checklist to be submitted as proof of their testing
- No pass/fail reports will be issued by the JSE
- Clients to conduct sufficient testing and full functional highly recommended
- JSE will require signoff from the Responsible Officer to confirm their success in a dress rehearsal – a template will be provided
    - Technical capability successful
    - Tested minimum functionality and was successful
    - Enablements successful
    - Reference Data correct
    - Trader Groups and Trader IDs correct
    - Confirmation to proceed to next phase

ITaC INTEGRATE ACCELERATE GROW

Annexure C
Dress Rehearsals – Post-trade

To allow trading and clearing members, market data clients and any other clients of the JSE to simulate an operational day on new the ITAC production Post-Trade Solution

Overview

- This is achieved by ensuring all technical activities are completed and enabled and all functionality exists on the system including, but not limited to:
  - Proving successful routing connectivity and authentication into the JSE ITaC Post-trade solution including all TCP connections
  - JSE production IP Address information will be circulated to all clients
  - Enablement order forms must be submitted by each trading and clearing member and market data client to ensure User ID details can be setup

ITaC INTEGRATE ACCELERATE GROW

Annexure C
Dress Rehearsals – Post-trade

- Proving readiness to JSE systems from a client's perspective:
  - Client frontend integration to the JSE ITaC Post-trade Solution
  - Integration of all client systems downstream due to ITaC implementation
  - Proving of successful login to the JSE's Post-trade Solution and testing of all subscription mechanisms as well as consumption of reference and transactional data
  - Proving existing production for CMD, Cash Bonds & IRD

ITaC INTEGRATE ACCELERATE GROW

Annexure C
Dress Rehearsals – Post-trade

High level functionality

- Consumption of start of day and intraday reference data updates
- Listening to trade updates resulting from trading engine activities
- Listening to subsequent position and risk event updates resulting from trading engine activities
- Performing deal management activities and listening to resultant position and risk event updates
- Performing commissions management activities
- Listening to price events and resultant intraday risk event updates
- JSE will run the Clearing EOD after the deal management period ends

Note: Securities collateral is not in scope of the dress rehearsals; this will be test in MCMT

ITaC INTEGRATE ACCELERATE GROW