

# ITaC Clearing Test Approach

Overview of the Clearing  
Member Testing Approach  
for VCMT / MCMT / PPT

July 2017



JS III

- Intro and ITaC Programme Update
- Clearing Member Testing Approach Overview
  - VCMT vs. MCMT vs. PPT
  - Test Execution Process
- Next Steps
  - Review of the Market Facing Testing Docs
  - Next CM Working Group Session
- Questions

- CTS data refresh – 19 June
- JSE internal consolidated testing
  - First phase complete - typical day in the life functionality, including:
    - Collateral (EOD and intraday securities)
    - Intraday margin call
  - Prep work for second phase in progress (to begin first week in July)
- Software Provider conformance in progress – first successful conformance completed
- Revised JSA distributed to clients on 16 June
- Clearing Member Engagement:
  - Monthly Clearing member one-on-one's initiated
  - Ongoing monthly Clearing Member working groups
  - Monthly Project Manager meetings
- The JSE will be in a position to accept securities collateral with ITaC go-live

- Target go-live date for ITaC Project 1 b/c: **Q1 2018**
  - Final date will be agreed with core stakeholders
  - Complete all the project activities in 2017
- Voluntary Clearing Member Testing (VCMT): **28 Jul to 25 Aug**
  - Client enablement and Technical Readiness Tests: 15 May – 14 Jul 2017
  - Conformance cut-off: 14 July
- Mandatory Clearing Member Testing (MCMT): **11 Sep – 6 Nov**
  - Client enablement and Technical Readiness Tests: 10 May – 25 Aug 2017
  - Conformance cut-off: 25 August
- Software provider Dress Rehearsals: **7 Oct & 21 Oct 2017**
- Mandatory Market facing Dress Rehearsals (MMDR): **11 Nov & 25 Nov 2017**

- Intro and ITaC Programme Update
- Clearing Member Testing Approach Overview
  - **VCMT vs. MCMT vs.PPT**
  - Test Execution Process
- Next Steps
  - Review of the Market Facing Testing Docs
  - Next CM Working Group Session
- Questions

# VCMT vs. MCMT vs. PPT

## *Test Phase Intent and Expected Outcomes*



- The intent and expected outcomes of each of these test phases
  - **VCMT:**
    - Stands for *Voluntary Clearing Member Testing*
    - VCMT dovetails consolidated testing in terms of scope and sequencing of content
    - The Clearing Members will connect to the test environment and will be exposed to the data created by the JSE as part of its consolidated testing phase
    - Software providers may test on behalf of clients for the duration of the VCMT test period
      - Clearing Members may opt to be involved in this testing but have all execution done on their behalf by software providers
    - Provides Clearing Members with an opportunity to interact with this data as part of intraday operations and the end of day processes
    - Clearing Members wanting to execute specific scenarios may request additional data from the JSE



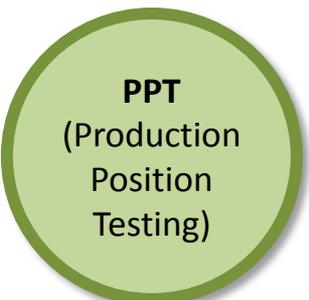
**VCMT**  
(Voluntary  
Clearing  
Member  
Testing)

- The intent and expected outcomes of each of these test phases
  - **MCMT:**
    - Stands for *Mandatory Clearing Member Testing*
    - This is scripted testing and will follow the detailed MCMT test schedule (that will be shared in due course)
    - Is intended to test the full scope of ITaC clearing functionality (as opposed to the subset of scope tested in VCMT)
    - Provides Clearing Members with an opportunity to test the full operations of their new clearing solutions and downstream systems
      - Clearing Members to request specific transactional and reference data for the execution of test scenarios for their use
    - It is imperative that Clearing members execute this testing using the solutions provided by their software providers



**MCMT**  
(Mandatory  
Clearing  
Member  
Testing)

- The intent and expected outcomes of each of these test phases
  - **PPT** (*Parallel phase - testing with daily cut of production positions*):
    - Proposal that this will be done post MCMT
    - Production data will be copied from Nuclears and migrated into RTC
    - The end of day will be run on this cut of positions using the Nuclears prices
    - JSE will balance back to the Clearing Members with the data created on RTC (*the aim is not to balance back to Nuclears data*)
    - The intent is to run this for 5 business days
    - This will be done in a separate environment which would require additional connectivity setup

A circular callout with a green border and a light green background. The text inside is centered and reads: PPT (Production Position Testing).

**PPT**  
(Production  
Position  
Testing)

- Functional scope to be covered in each phase:
  - **VCMT**
    - All functional scope completed in the first phase on consolidated testing AND whatever scope has been completed in the second phase of consolidated testing by the time VCMT starts will be included
    - The testing schedule for phase 2 is still in the process of being determined and details of this will be shared in the workshop in July
  - **MCMT**
    - All ITaC scope will be completed over the course of the entire MCMT test phase
    - The full functional scope is described in the MCMT Test Scenarios document, which will be published to the market in due course
      - Should CMs require additional test scenarios to be included these should be raised during the document review process
  - **PPT**
    - This will be focused exclusively on assessing end of day functionality

- Intro and ITaC Programme Update
- Clearing Member Testing Approach Overview
  - VCMT vs. MCMT vs. PPT
  - **Test Execution Process**
- Next Steps
  - Review of the Market Facing Testing Docs
  - Next CM Working Group Session
- Questions

- Recap of the VCMT prerequisites:
  - Signing of the updated JSE Services Agreement (JSA)
  - Ordering and configuration of enablements (7 day SLA)
  - Connectivity testing
  - Conformance of software
  - Provision of Test Manager details to JSE
  - If testing is to be done by software providers (on behalf of the Clearing Members) formal notification of this is required

- **VCMT:**
  - VCMT will be structured according to the internal operating schedule (as defined by the consolidated testing phase)
  - The schedule will include details relating to (amongst others):
    - When will system be available for login
    - Times when matching and deal management can take place
    - Frequency of price events
    - Start of end of day schedule
  - The JSE will take responsibility for a number of actions during the course of the day, including loading of trades and deal management
  - **Clearing Members are able to supplement this** with their own activities

- **MCMT:**
  - MCMT will be structured according to a test schedule which will specify the specific test conditions to be completed per day
  - Daily schedule will also be provided as part of this test phase
- **PPT:**
  - Will follow its own shortened daily schedule as this phase of testing concentrates on end of day

- The JSE will be leveraging test scenarios defined for its internal “Consolidated Testing” phase for the *Voluntary* and *Mandatory* testing phases
  - **VCMT** will cover the bulk of the scenarios completed during the Consolidated Testing phase, barring some exclusions
  - **MCMT** will cover the entire spectrum of scenarios
- A number of scenarios have been defined under the following functional areas:
  - Corporate Actions
  - Deal Management
  - Client Management
  - Collateral Management
  - End of Day
  - Default Management
  - EOD Schedule Management
  - Commissions
  - Instrument Management
  - Intraday Schedule Management
  - Position Management
  - RTC Market Data
  - RTC Reports
  - Settlement Management
  - Trade Management



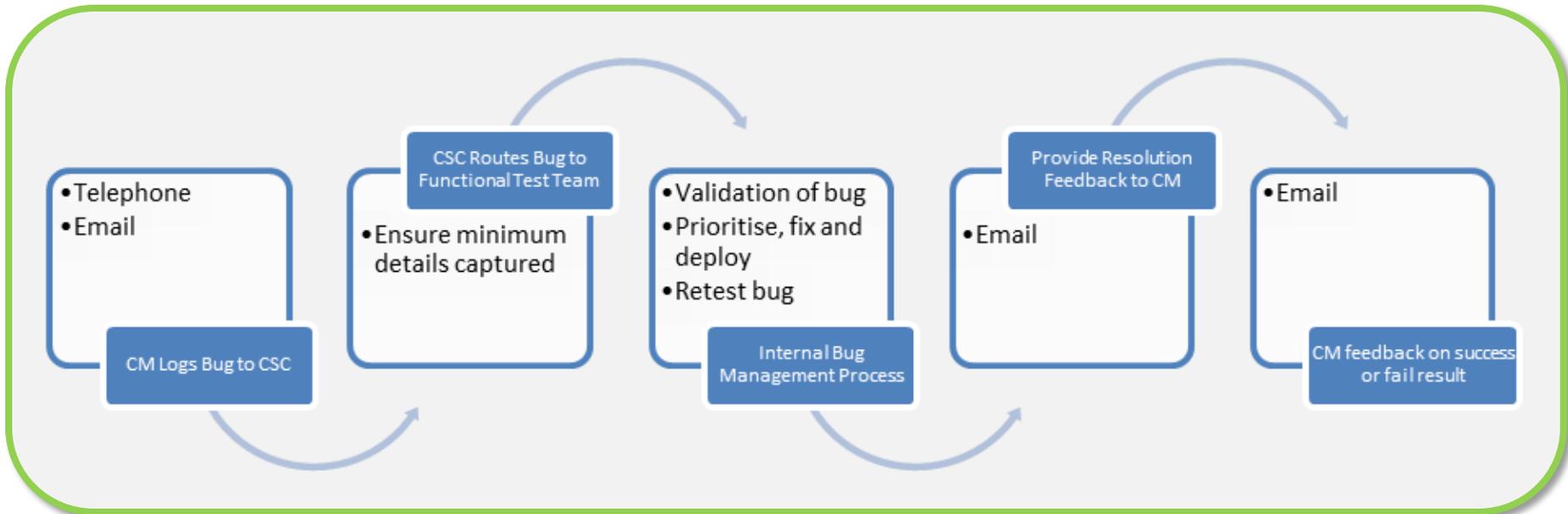
An explicit list of all business scenarios will be circulated to CMs for review and sign-off

- Explanation of the JSE testing environment and data set-up:
  - The JSE will be using a unique environment for the execution of VCMT and MCMT
  - This environment will be populated with a subset of converted production data – attributes of this data will be aligned to the current production data
  - A limited amount of ring fencing of CM data will be done during VCMT, while for MCMT the JSE will facilitate ring fencing of transactional and reference data to allow segregation of testing

- Explanation of **entry and exit** criteria per phase of testing
  - **VCMT:**
    - “Entry criteria” already specified in the prerequisites listed previously
    - While there are no formal exit criteria for VCMT, CMs will be required to participate in regular checkpoints to give feedback on the outcomes of their testing involvement
  - **MCMT:**
    - “Entry criteria” – same as VCMT
    - “Exit criteria” – although we will be targeting specific outcomes (*100% Requirement coverage / 95% Test Execution pass rate / all Critical or High Severity bugs are closed*), the final acceptance will be agreed with the market
  - **Production Position Testing (Parallel Testing):**
    - Although no explicit entry criteria will be defined, Production Position Testing will only be started once all significant defects from the MCMT phase have been resolved

CMs will be required to provide signed off test certificates at the end of MCMT and Production Position Testing to confirm their acceptance of the solution

- Explanation of how defects are to be logged and categorised:
  - CMs are required to log any problems encountered with the JSE CSC team
    - All issues reported will be analysed by the JSE and allocated to the relevant team for further analysis and feedback
    - This will ensure tracking of the issues reported and feedback provided
  - General questions should also be logged using the same process



All defects will be logged with the CSC Department – either via email or telephone

### VCMT

- Daily progress tracking mails:
  - All CMs will be required to send the JSE a daily summary of progress achieved
  - JSE will conduct daily one-on-one calls with participants to assess the outcomes of the daily testing/ assist in query resolution
- Weekly progress meetings:
  - A weekly group conference call will be done at the end of each testing week with all market participants to provide a progress update
  - The update will include a log of any issues / defects reported

### MCMT

- Daily progress tracking calls:
  - All CMs will be required to populate a test reporting template and submit to the JSE
  - JSE will conduct daily one-on-one calls with participants to assess the outcomes of the daily testing/ assist in query resolution
- Weekly progress meetings:
  - Daily reports will be consolidated to create a weekly summary
  - A weekly group conference call will be done at the end of each testing week with all market participants to provide a progress update
  - The update will include a log of any issues / defects reported

# Test Execution Process

## Testing Progress Tracking – Proposed Template



| TEST PLANNING DETAILS |                       |                         |          |                          |                         |                         |                          | EXECUTION STATUS |
|-----------------------|-----------------------|-------------------------|----------|--------------------------|-------------------------|-------------------------|--------------------------|------------------|
| Cycle                 | Planned Execution Day | Execution Date          | Duration | Delay in Days (WorkDays) | Actual Execution Date   | Actual Completion Date  | Tracking                 | Execution Status |
| Cycle 1               | Day 6                 | Tuesday, May 23, 2017   | 2        | 4                        | Monday, May 29, 2017    | Tuesday, May 30, 2017   | COMPLETED WITH DELAY     | Passed           |
| Cycle 2               | Day 12                | Wednesday, May 31, 2017 | 1        | 0                        | Wednesday, May 31, 2017 | Wednesday, May 31, 2017 | COMPLETED WITH EXCEPTION | Blocked          |
| Cycle 2               | Day 12                | Wednesday, May 31, 2017 | 1        | 0                        | Wednesday, May 31, 2017 | Wednesday, May 31, 2017 | NOT YET COMPLETED        | Not Run          |
| Cycle 5               | Day 6                 | Tuesday, May 23, 2017   | 2        | 0                        | Tuesday, May 23, 2017   | Tuesday, May 24, 2017   | NOT YET COMPLETED        | In Progress      |
| Cycle 1               | Day 2                 | Wednesday, May 17, 2017 | 1        | 0                        | Wednesday, May 17, 2017 | Wednesday, May 17, 2017 | COMPLETED                | Passed           |
| Cycle 1               | Day 2                 | Wednesday, May 17, 2017 | 1        | 0                        | Wednesday, May 17, 2017 | Wednesday, May 17, 2017 | COMPLETED                | Passed           |
| Cycle 1               | Day 2                 | Wednesday, May 17, 2017 | 1        | 0                        | Wednesday, May 17, 2017 | Wednesday, May 17, 2017 | COMPLETED                | Passed           |
| Cycle 1               | Day 2                 | Wednesday, May 17, 2017 | 1        | 0                        | Wednesday, May 17, 2017 | Wednesday, May 17, 2017 | COMPLETED                | Passed           |
| Cycle 1               | Day 2                 | Wednesday, May 17, 2017 | 1        | 0                        | Wednesday, May 17, 2017 | Wednesday, May 17, 2017 | COMPLETED                | Passed           |
| Cycle 1               | Day 2                 | Wednesday, May 17, 2017 | 1        | 0                        | Wednesday, May 17, 2017 | Wednesday, May 17, 2017 | COMPLETED                | Passed           |
| Cycle 1               | Day 2                 | Wednesday, May 17, 2017 | 1        | 0                        | Wednesday, May 17, 2017 | Wednesday, May 17, 2017 | COMPLETED                | Passed           |
| Cycle 1               | Day 2                 | Wednesday, May 17, 2017 | 1        | 0                        | Wednesday, May 17, 2017 | Wednesday, May 17, 2017 | COMPLETED                | Passed           |
| Cycle 1               | Day 2                 | Wednesday, May 17, 2017 | 1        | 0                        | Wednesday, May 17, 2017 | Wednesday, May 17, 2017 | COMPLETED                | Passed           |
| Cycle 1               | Day 2                 | Wednesday, May 17, 2017 | 1        | 0                        | Wednesday, May 17, 2017 | Wednesday, May 17, 2017 | COMPLETED                | Passed           |
| Cycle 1               | Day 2                 | Wednesday, May 17, 2017 | 1        | 0                        | Wednesday, May 17, 2017 | Wednesday, May 17, 2017 | COMPLETED                | Passed           |
| Cycle 1               | Day 2                 | Wednesday, May 17, 2017 | 1        | 0                        | Wednesday, May 17, 2017 | Wednesday, May 17, 2017 | COMPLETED                | Passed           |
| Cycle 2               | Day 12                | Wednesday, May 31, 2017 | 1        | 0                        | Wednesday, May 31, 2017 | Wednesday, May 31, 2017 | COMPLETED                | Passed           |
| Cycle 2               | Day 12                | Wednesday, May 31, 2017 | 1        | 0                        | Wednesday, May 31, 2017 | Wednesday, May 31, 2017 | COMPLETED                | Passed           |
| Cycle 2               | Day 12                | Wednesday, May 31, 2017 | 1        | 0                        | Wednesday, May 31, 2017 | Wednesday, May 31, 2017 | COMPLETED                | Passed           |
| Cycle 2               | Day 12                | Wednesday, May 31, 2017 | 1        | 0                        | Wednesday, May 31, 2017 | Wednesday, May 31, 2017 | COMPLETED                | Passed           |
| Cycle 2               | Day 12                | Wednesday, May 31, 2017 | 1        | 0                        | Wednesday, May 31, 2017 | Wednesday, May 31, 2017 | COMPLETED                | Passed           |

**DRAFT**

- CMs will be required to provide formal sign-off of each of the principle test phases they are involved in, namely:
  - MCMT
  - Production Position Testing
  - Final Mandatory Dress Rehearsal
- A test certificate will be published at the end of each of these test phases and will require signature from the CM primary Officer

### Clearing Members

VS.

### JSE

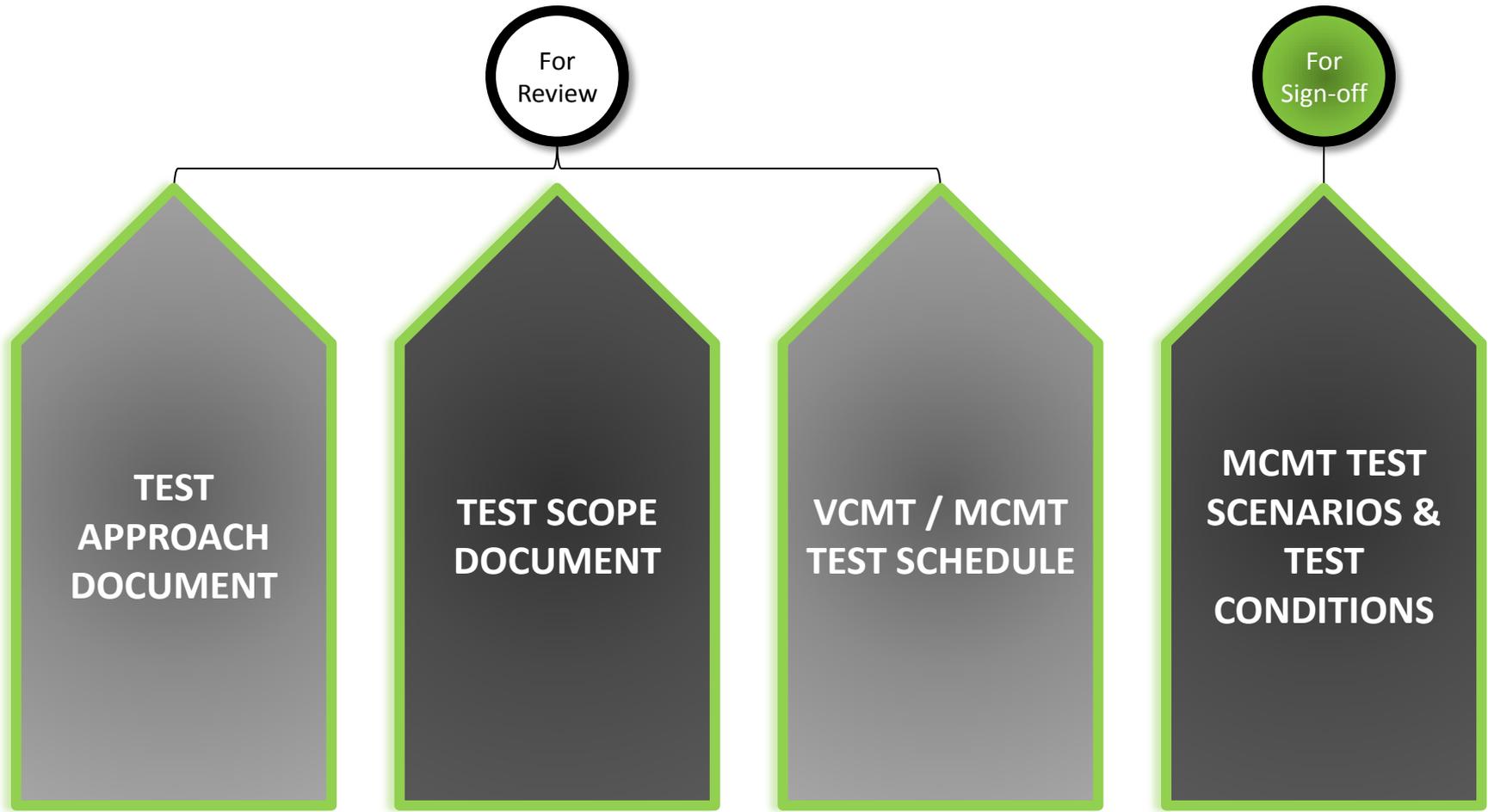
- Explanation of the key Clearing Member testing resources:
  - The role of the **Clearing Member test manager** is be the single point of interaction with the JSE
  - Responsible for test progress tracking
    - The JSE will distribute a progress tracking template
  - Logging of defects
  - Issue escalation

- Explanation of the key JSE testing resources:
  - The JSE's **Clearing Testing Coordinator** will be the primary touch point between the JSE and CMs
  - The coordinator will be responsible for daily progress monitoring and resolution of non-technical queries (not defects)
  - The coordinator will also be responsible for the dissemination of weekly progress summary reports

- Intro and ITaC Programme Update
- Clearing Member Testing Approach Overview
  - VCMT vs. MCMT vs.PPT
  - Test Execution Process
- **Next Steps**
  - **Review of the Market Facing Testing Docs**
  - Next CM Working Group Session
- Questions

# Review of Market Facing Testing Docs

*Docs to be distributed*



- Intro and ITaC Programme Update
- Clearing Member Testing Approach Overview
  - VCMT vs. MCMT vs.PPT
  - Test Execution Process
  - JSE / Clearing Member Engagement During Test Execution
- Next Steps
  - Review of the Market Facing Testing Docs
  - **Next CM Working Group Session**
- Questions

- Recap of the functional scope to be covered in VCMT vs. MCMT (*based on the updated and signed-off Test Scenarios*)
- Detailed walk-through of the test execution schedule
- Recap of details of the Test Execution Process
  - Progress tracking
  - Defect logging
  - Issue resolution and escalation

- Intro and ITaC Programme Update
  - Clearing Member Testing Approach Overview
    - VCMT vs. MCMT vs.PPT
    - Test Execution Process
    - JSE / Clearing Member Engagement During Test Execution
  - Next Steps
    - Review of the Market Facing Testing Docs
    - Next CM Working Group Session
- Questions

