Project Nexus Market Trials Regression Test Approach

V1.1 FINAL DRAFT

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Version	Description	Date
0.1	Version issued for Market Participant (MP)review	23 August 16
0.2	Updated version following MP review shared with Xoserve for comment	1 September 16
0.3	Updated version sent to MTWG for final comment	6 September 16
0.4	Updated following PwC Internal Review	6 September 16
0.5	Updated following MTWG on 8 September 16	8 September 16
0.6	Final Draft	8 September 16
0.7	Updated following MTWG on 14 Sept 16	15 September 16
0.8	Updated following second round of feedback	21 September 16
1.0	Baseline version agreed at MTWG	28 September 16
1.1	Updated Xoserve Support embedded document	1 December 16

1 - Introduction

This document outlines the approach to be followed for the execution of Market Trials (MT) Regression. The document will cover the following areas:

- Context
- Test Objectives and Scope
- Test Duration and Plan
- Governance and Progress Tracking
- Market Trials Regression Entry and Exit Criteria
- Test Environment and Data
- Defect and Query Management
- Dependencies and Assumptions

This document has been produced in consultation with the Market Trials Working Group (MTWG) in order to support Market Participants in preparation for and execution of the MT Regression phase. The minutes of the MTWG meetings during which this approach was discussed are available on the Ofgem website.

The MT Regression phase is intended to demonstrate that the mandatory scenarios (C1 and C2) have not been impacted by changes and defect fixes during Market Trials.

2 - Context

Throughout Market Trials Level 3/4 testing there have been changes deployed into the MT environment and over 700 defects closed, many requiring technical fixes. Most significantly this has included the deployment of the RGMA and Unique Site solution during the MT phase. Taking these factors in to consideration, there was a desire from market participants to include an MT regression phase at the conclusion of Market Trials.

The MTWG originally recommended that a MT Regression phase was required to the Project Nexus Steering Group (PNSG) in March 2016. Following this, and as part of the industry re-planning activity between March and August 2016, the MTWG were requested to define in more detail the MT Regression approach including confirming:

- **Scope** – What processes should be tested
- **Duration** – How long those processes should take to executed
- **Operation** – How the phase would be managed, supported and governed (where different to the full Market Trial phase.)

The approach was defined by MTWG during July and August 2016. The process included incorporating feedback from Market Participants during the development of the approach through consultation by MTWG.

3 - MT Regression Objectives and Scope

Objectives

The overall objective of MT Regression phase is to demonstrate that the operation of the market critical processes required for day 1 operation of Nexus (as defined by the C1 and C2 mandatory scenarios) have not been impacted by functional releases, changes and defect fixes made during Market Trials.

A secondary objective of the phase is for participants to be able test that non-critical processes including files and reports where functionality has not changed as part of Nexus continue to operate as expected. It is important to note that the achievement of this objective is not required in order to Exit the phase.

Scope and approach

A 'controlled approach to MT Regression' will be adopted to ensure focused execution against the specific objective of the phase. This aims to allow participants to perform an appropriate amount of testing to achieve the objectives of the phase whilst limiting impact on other parallel activities within the industry plan (e.g. constraining resources). The principles of the 'controlled approach' that must be adhered are outlined below. This will be enforced through the governance and controls implemented for the phase, as outlined in Section 5.

- All Participants are encouraged to evaluate the extent of MT regression testing that may be required and submit their plans to the PwC Nexus Portal as part of the MT Regression Entry submission. Any market participant who does not intend to execute MT regression must provide a justification to PwC and Ofgem (see Section 5).

- Regression must be focussed on the C1 and C2 scenarios applicable to each organisation. The scenarios to be selected should be those impacted or associated with a scenario impacted by 'code deployment' or 'defect fixes' during MT. The completion of this element is directly linked to the exit criteria.

- Market Participants are to develop their own specific MT Regression test plans and an order of priority. Thus priority should take in to account:

    o   Number of defects raised by file type for the hub solution, as provided by Xoserve

    o   Change packs or code deployments (e.g. RGMA and Unique Sites).

    o   Internal defects of the participant

- The C1 and C2 scenarios are captured in the embedded template (note the spreadsheet has been updated to support MT Regression):

MT Regression
Mandatory Scenario (

- Where practical participants will re-use test scripts relating to C1/C2 scenarios from the MT phase.

- Limited variants for each test scenario should be performed (e.g. limited to key data variants for each scenario).

- Testing of mandatory scenarios must be rationalised where appropriate. For example, mandatory scenarios 2 to 6 may be tested as part of a change of supplier tests (mandatory scenario 7) and not tested separately if this aligns to the composition of the participant's portfolio.

- Where participants have similar or shared solutions, such as those provided by Utiligroup or Datamere, they should share testing between organisations. This will require collaboration between these participants and should be reflected in market participant MT Regression test plans. PwC is ready to help facilitate participants joining up on test plans if necessary.

- Only P1 or P2 defects will be worked on by Xoserve during the MT regression window. P3 defects will not be fixed and there will be a process established to either accept for go-live or workarounds agreed. P4 defects will not be fixed and accepted for go-live. The process for agreeing workarounds will be developed by the MTWG with the final list of workarounds being reviewed at MTWG with a recommendation to PNDG. The PNSG will be consulted if an escalation is required.

- Market Participants must submit their MT regression plans to PwC and Ofgem to check they are consistent with the above criteria, before they can begin MT Regression.

- Participants will be able to execute tests during MT Regression that relate to non-critical processes, this includes both non-critical processes and files or reports where functionality has not changed as a result of Project Nexus. Any defects on these lower priority processes will automatically be classified as P4 and will not be worked on Xoserve. These defects will be maintained in a central repository and may be discussed on the weekly calls where participants believe they require an escalated priority.

- If participants believe they have discovered a significant issue and they are unable to reach a satisfactory conclusion with Xoserve through the weekly MT Regression calls, they should use the Project Nexus risk and issue management process and explain why they require resolution prior to go-live. This will be assessed initially by the PMO and raised to PNDG if required.

- Xoserve will adopt a best endeavours approach when providing responses to participant queries on non-mandatory scenarios.

- Participants that intend to perform testing outside of the C1/C2 processes must provide their rationale for these tests when submitting their test plans. This needs to have demonstrated that they have reviewed the information provided by Xoserve about the level of internal testing carried out on non C1/2 files and reports. In addition participants should explain how additional testing during MT Regression adds sufficient value to them.

- Xoserve, PwC and Ofgem will monitor file flows during MT regression and will take action with participants where their testing activity is unrelated to the MT Regression objectives. Ultimately, if a market participants actions are affecting the delivery of the overall Programme, this will be escalated to Ofgem and the PNSG to consider what action to take, including considering whether the party in question should be able to continue participating in MT regression.

- CMS will be available for MT Regression from 9 - 31 Jan 2017.

4 - Duration and Plan

The duration of the MT Regression phase has been defined as 2 months and 2 weeks and will commence on 9 January 2017. It is recognised that some preparatory activities may be required such as read submissions and the commencement of gain processes in order to fully utilise the 2 invoice cycles. Participants will be able to commence these activities following the completion of the 'code stability' milestone which is currently planned for December 2016.

The proposed duration is driven by the MT 'lifecycle', as captured in the original Market Trials Approach document, to allow sufficient time to test mandatory scenarios in real-time within the test window. This includes:

- Two invoice cycles including one full read submission window;
- Time to verify reconciliation invoices; and
- Periodic processes to be triggered such as Monthly AQ, IDL's, EQL, DDS and IQL.

In addition a 1 month of contingency is included should any critical (P1) or high defects (P2) be discovered that would prevent the market from exiting MT Regression. Any contingency cycle would require a review to determine if a fresh baseline of code would be required.

It should be noted that a DNI window will commence during MT Regression. The timeline is outlined below:

Process Area	Sub Process	Scheduled Date
Identification of Eligible Sites	EPD file issue date	19/12/16
	EPS file issue date	19/12/16
	ESP file issue date	06/01/17
Interruption Invitation to shippers	Last date for submitting RSP Files	13/01/17
	PIR file issue date	16/01/17
Bid Window	Bid Window start date	14/02/17
	Bid Window end date	24/02/17
DNI Contract Outcome	CTN file start date	27/02/17
	CTN file end date	02/03/17
	CID file issue date	04/03/17
	BIS file issue date	04/03/17
Summary Files Identification of Eligible Sites	SRL & SRZ files issue to Networks	05/03/17
	EPD file issue date	19/12/16

5 - Governance and Progress Tracking

In order to achieve the 'controlled approach to MT regression', as set out in the objectives in Section 3, the following controls will be in operation to govern and track progress:

Test plan provision and review

- Participants will have their access to the MT environment removed should they not submit an MT regression test plan and mandatory scenario checklist. This will be submitted on the PwC assurance portal as part of the Entry criteria to the phase, as outlined below.

- Test plans submitted will be reviewed on a sample basis by PwC to ensure testing is in line with the objectives scope of testing for MT regression. Test plans will be challenged if they show testing beyond the scope and objectives set out for the MT regression test phase and ultimately, if required, escalated to Ofgem and the PNSG to consider what action to take. This includes considering whether the party in question should be able to participate in MT Regression.

Test monitoring

- Test execution will be monitored through the PwC assurance portal against each organisations MT Regression test plan and MT Regression checklist.

- File volumes will continue to be monitored to ensure testing is being executed in line with the objectives and scope of the phase.

- Any defect raised in MT Regression should reference a successful test executed or relevant defect raised in Market Trials. Raised defects will be reviewed on a sample basis to validate they relate to a successful test executed in Market Trials. Where participants are testing files and reports that have not changed, and may not have been tested in MT, this should be indicated when raising a defect and the defect will automatically be assigned a Priority 5.

MT Regression Entry Criteria

The MT Regression Entry Criteria have been captured at two levels:

1. Market wide criteria that need to be achieved
2. Market Participant level criteria that each participant needs to achieve.

The tables below outline the specific criteria:

Table 1 – Market wide MT Regression Entry Criteria

MT Regression Market Wide MT Regression Entry		Thresholds	
Criteria	Assessment metric	Red (fail)	Green (pass)
Regression test approach (including support approach), scope, lifecycle and defect management approach approved.	MT Regression Approach approved by PNSG	No	Yes
Risks and assumptions related to regression phase accepted.	Risks and Assumptions signed off by PNSG	No	Yes
Market exit of L3/4 MT achieved prior to regression entry	Final Market Exit position signed off by PNSG	No	Yes
Code freeze applied and exception process agreed.	Code freeze and exception process agreed at PNSG	No	Yes
Market coverage of C1/C2 scenarios sufficient to prove regression across processes	PwC review of consolidated MT Regression entry submission	One or more scenarios are planned to be tested by one or zero participants.	All scenarios are planned to be tested by at least two participants within each sector

Table 2 – Market Participant Level MT Entry Criteria

MT Regression Market Participant Specific MT Regression Entry		Thresholds	
Criteria	**Assessment metric**	**Red (fail)**	**Green (pass)**
Market Participant MT Regression plan defined	Participant self-assessment on PwC portal includes their MT regression plan and a completed MT regression mandatory scenario checklist. PwC review of plan confirms it is in line with objective and scope/approach for MT Regression. Where non C1/2 scenarios are included the plan should include a rationale.	No	Yes
Resources are identified and available to support MT Regression	Participant self-assessment on PwC portal confirms resources are in place	No	Yes
Awareness/understanding of scope and approach	Participant self-assessment on PwC portal confirms understanding of scope and approach	No	Yes
Required dummy data defined and provided for regression testing.	Participant self-assessment confirms dummy data requirements have been met	No	Yes

A detailed MT Entry submission timeline will be circulated by the PwC Nexus Assurance Portal team. This will align to the new baselined industry plan.

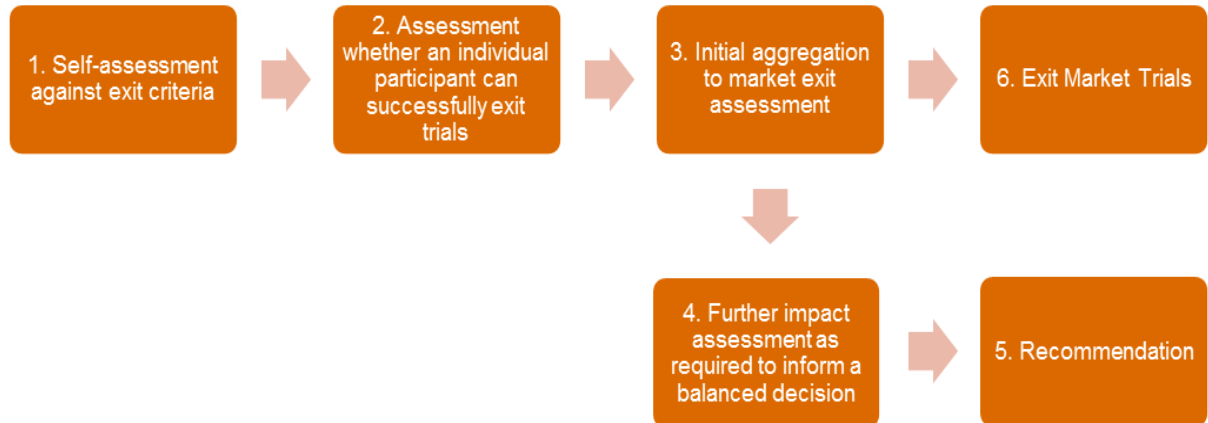**MT Regression Exit Criteria**

Table 3 – Market Participant MT Regression Exit Criteria

The below Exit Criteria apply to each MT Participant and it will be expected that they can provide evidence that they have been achieved.

MT Regression Exit Criteria	Assessment metric	Thresholds	
		Red (fail)	Green (pass)
100% execution of participant test plan relating to C1/C2 processes	Participant self-assessment includes regression exit report	No	Yes
Zero P1/P2 defects	Participant /Xoserve are reporting zero P1/2 defects	No	Yes
Industry agreed P3 defect list	• Participant self-assessment confirms that they have agreed the final P3 defect list and any associated workarounds • PNDG have agreed the final list of defects which have been accepted by the Xoserve service management function to be planned in to future releases where applicable.	No	Yes
Workarounds are documented and agreed	• Participant self-assessment confirms they have documented and agreed the workarounds • PNDG have agreed the final list defects.	No	Yes
Numbers of agreed workarounds are sustainable.	• Participant self-assessment confirms they have documented and agreed the workarounds • PNDG have agreed the final list.	No	Yes

The flow below illustrates the process that that PwC will follow in order to assess whether the market participants have met the entry and exit criteria and determine if the market, in aggregate, can enter or exit market trials with acceptable levels of risk to consumers and the critical market processes.

Figure 2: Process for assessing MT Regression Exit.

PwC and Ofgem will aggregate the information and consult with the MTWG to arrive at an MT Regression exit recommendation. The ultimate decision to exit MT Regression will be taken at the PNSG

Test Suspension

If, during the execution of MT regression, the original objectives and scope of the phase are undermined (e.g. due to high defect volumes or any other reason), this will be escalated through the Project Nexus Governance process. The MTWG will monitor through weekly; defect volumes, defect fix types (e.g. data, code change, infrastructure) and Support Capacity

Test progress will be monitored by PNDG and any decision to suspend the phase will be recommended by PNDG for approval at PNSG. As above, individual participants may have their access revoked if they persist in an unjustified deviation from their agreed MT regression test plan.

6 - Test Environment and Data

Test Environment

The test environment will remain the same as for Market Trials. This includes all pre-fixing and connectivity. Please refer to the main Market Trials Approach for further information.

Data

Following consultation with Market Participant it was determined that full data refresh was not required to support MT Regression Testing. The impact of doing this was estimated at a 3-4 month delay in the plan and as a result participants agreed that an updated gains and losses report with only essential additional dummy data would be sufficient to support the phase.

The updated gains and losses report will cover the period from 1 January 2016 to 1 July 2016. However, it will not include iGT data. Participants should contact their iGT partners to assist with identification suitable gains/losses iGT data. Should this not meet requirements, participants should, by exception, request dummy iGT data to be created.

Dummy data requirements have been provided by Market Participants and analysed by Xoserve. The volume and complexity does not currently present a risk to the commencement of MT Regression.

7 - Defect and Query Management

Defect Management

The process for raising defects will largely remain the same as for full Market Trials. There will be an additional requirement for participants to reference any relevant defects or successful tests executed in full Market Trials to assist Xoserve investigations.

During the MT Regression phase it is anticipated that there will be a reduced level of defects from the Market Trials execution phase. In order to maintain stability only P1 and P2 defects will be fixed by Xoserve. P3 defects will be recorded and Xoserve will work with participants to agree workarounds where required.

A weekly deployment window will be made available for defect fixes to be made to the Market Trials environment. Should this need to be used to resolve P1 or P2 defects Xoserve will consult with the participants to evaluate the risk and ultimately determine whether defects will be deployed.

The definition of P1 and P2 defects will remain the same as in full Market Trials. P2 defects will be defined as:

The volume of defects open at the end of MT Regression testing is included as one of the Exit Criteria in section 5.

As stated earlier in this document any defect raised on a non C1/2 process will be prioritised as a P4.

Query Management

The process for raising queries will largely remain the same as for full Market Trials. It is anticipated that there will be a lower volume of queries in MT Regression and queries will only be addressed if they relate to the C1/C2 MT Regression scope. Business process queries will not be replied to and will be referred back to the originating organisation for internal resolution

8 - Xoserve Support

The Xoserve support arrangements are outlined in the embedded document:

Xoserve support
during the MT Regres

9 - Assumptions

Assumptions

The proposed approach is underpinned by a set of assumptions that can be found in the latest industry planning documents.