MHHS PROGRAMME

Industry-led, Elexon facilitated

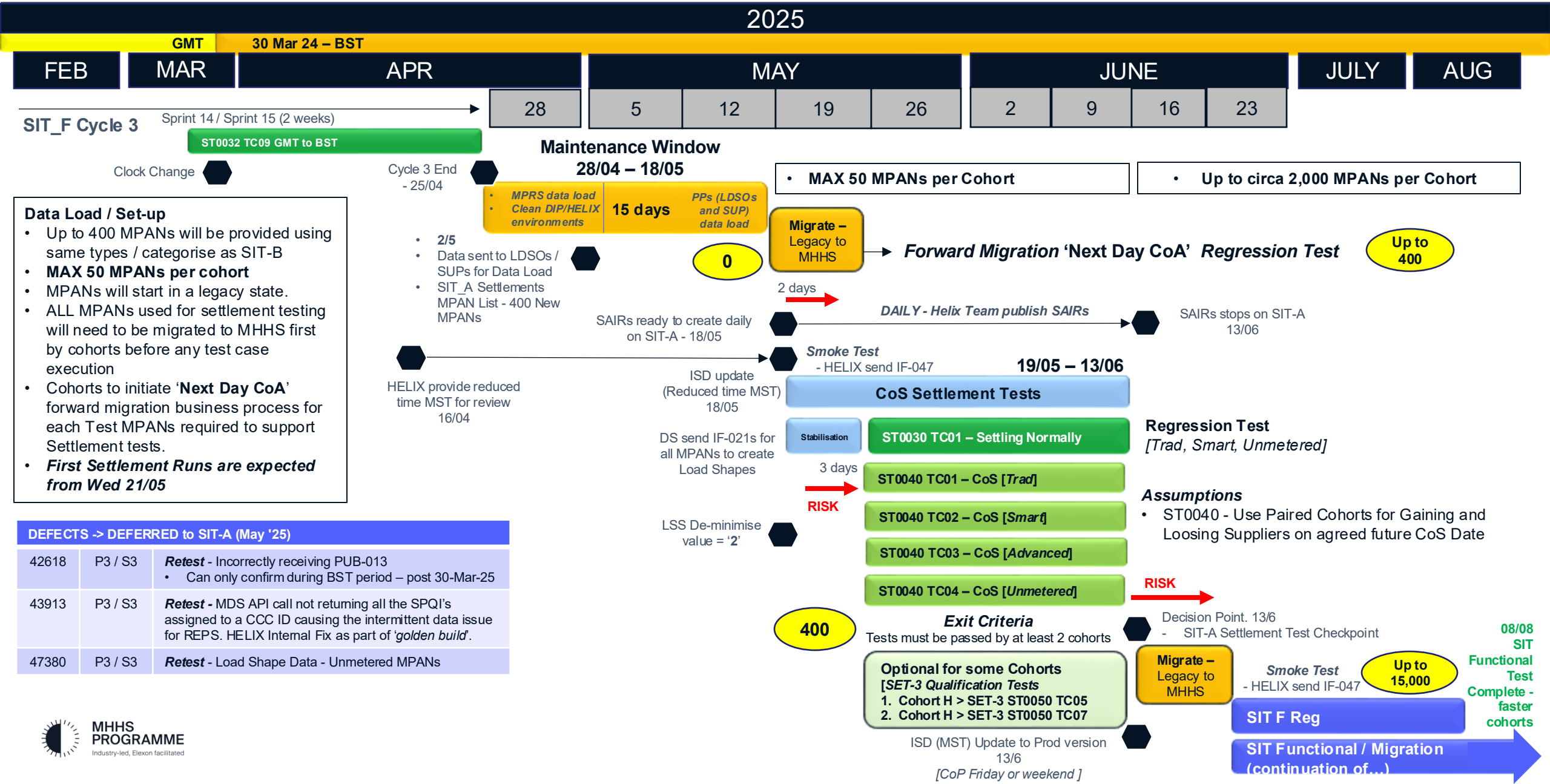
SIT-A Settlement Testing Readiness Workshop

12th May 2025

Version 1.0

MHHS-DEL3706

SIT-A Settlement Testing – PoaP



DEFECTS -> DEFERRED to SIT-A (May '25)		
42618	P3 / S3	***Retest*** - Incorrectly receiving PUB-013 • Can only confirm during BST period – post 30-Mar-25
43913	P3 / S3	***Retest*** - MDS API call not returning all the SPQI's assigned to a CCC ID causing the intermittent data issue for REPS. HELIX Internal Fix as part of '*golden build*'.
47380	P3 / S3	***Retest*** - Load Shape Data - Unmetered MPANs

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Purpose of the Data Load

- We will be loading the final data into SIT-A, this will be to support:
  - The final settlement tests, and “settling normally” regression test case – Each Cohort will receive 50 MPANs
  - The regression tests
  - Additional MPANs for additional testing (e.g. Early Sandbox Testing in SIT-A environment or SIT tests not completed before regression)

How Many MPANs?

1. **Settlement – 50 per cohort, denoted with an "Allocated Test Case" reference starting with "S_"**

All of these MPANs must be loaded by Suppliers within the maintenance window as they will all be used for SIT-A Settlement Testing.

Please ONLY Migrate Settlement MPANs during the SIT-A Settlement Testing phase (19th May to 13 June)

2. **Regression– circa 1.8k per cohort, denoted with an "Allocated Test Case" reference not starting with "S_"**

Suppliers (in conjunction with their other cohort members) can determine how many of these MPANs they wish to set up in their systems.

- 2k MPANs will not be required to complete regression testing but we have provided a large number to support additional Early Sandbox testing in the SIT-A environment (or re-tests of functional SIT) if required.

Settlement MPANs Categories

MPAN Coverage Categories			Additional MPAN Data Requirements		Mpan Category
1	Traditional Single MPAN; i.e., 2 in this group	A meter reading is provided prior to the II Run which is settled using defaults. IF-021 will be generated using Load Shaping data and settles normally in the SF and RF runs	1	In-Area (Distribution Id < 24), Whole Current (Connection-Type = W),	S_T001
			2	Embedded (Distribution Id > 23), Whole Current (Connection-Type = W),	S_T001
2	Smart single MPAN	Actual Consumption is received and settles normally in the II run with no changes within the SF and RF runs	1	In-Area (Distribution Id < 24), Whole Current (Connection-Type = W),	S_S001
3	Advanced Import MPANs; i.e. 4 in this group	Actual Consumption is received and settles normally in the II run with no changes within the SF and RF runs	1	In-Area (Distribution Id < 24), Whole Current (Connection-Type = W),	S_A009
			2	In Area (Distribution Id < 24), CT-Metering (Connection-Type <> W),	S_A001
			3	Embedded (Distribution Id > 23), Whole Current (Connection-Type = W),	S_A009
			4	Embedded (Distribution Id >23), CT-Metering (Connection-Type <> W)	S_A001
4	Advanced Export MPANs; i.e. 2 in this group	Actual Consumption is received and settles normally in the II run with no changes within the SF and RF runs	1	In Area (Distribution Id < 24), CT-Metering (Connection-Type <> W),	S_A002
			2	Embedded (Distribution Id >23), CT-Metering (Connection-Type <> W)	S_A002
5	Smart Import/Export MPANs with different suppliers; i.e. 2 in this group	Actual Consumption is received and settles normally in the II run with no changes within the SF and RF runs	1	In-Area (Distribution Id < 24), Whole Current (Connection-Type = W),	S_S004 / S_S005
			2	Embedded (Distribution Id > 23), Whole Current (Connection-Type = W)	S_S004 / S_S005
6	Smart Import/Export MPANs with same suppliers, i.e. 2 in this group	Actual Consumption is received and settles normally in the II run with no changes within the SF and RF runs	1	In-Area (Distribution Id < 24), Whole Current (Connection-Type = W),	S_S002 / S_S003
			2	Embedded (Distribution Id > 23), Whole Current (Connection-Type = W)	S_S002 / S_S003
7	Unmetered MPANs, i.e. 2 in this group	Actual Consumption is received and settles normally in the II run with no changes within the SF and RF runs	1	In-Area (Distribution Id < 24), Unmetered (Connection-Type = U),	S_U001
			2	Embedded (Distribution Id > 23), Unmetered (Connection-Type = U)	S_U001
8	Traditional Single Multi-Rate MPANs (E7); i.e. 2 in this group	A meter reading is provided prior to the II Run which is settled using defaults. IF-021 will be generated using Load Shaping data and settles normally in the SF and RF runs	1	In-Area (Distribution Id < 24), Whole Current (Connection-Type = W),	S_T002
			2	Embedded (Distribution Id > 23), Whole Current (Connection-Type = W),	S_T002
9	Advanced Import Reactive Power MPANs; i.e. 2 in this group	Actual Consumption is received and the IF-021 Data is sent to the Supplier and LDSO and is not used by Settlements.	1	In Area (Distribution Id < 24), Profile Class = '00' and Measurement Class = 'C' with Main and Check Meter where Readings and Consumption Data are available for Main and Check Meter (as per DES138 data specification)	S_A003
			2	Embedded (Distribution Id >23), Profile Class = '00' and Measurement Class = 'C' with Main and Check Meter where Readings and Consumption Data are available for Main and Check Meter (as per DES138 data specification)	S_A003
10	Smart single MPANs on Monthly Consents; i.e. 2 in this group	A meter reading is provided prior to the II Run which is settled using defaults. IF-021 will be generated using Load Shaping data and settles normally in the SF and RF runs	1	In-Area (Distribution Id < 24), Whole Current (Connection Type = W)	S_S006
			2	Embedded (Distribution Id > 23), Whole Current (Connection Type = W)	S_S006

MPANs Trackers

Two Separate MPAN Trackers have been created to assist with managing the utilization of the MAPN's created.

The first one is solely for tracking the Settlement MPANs CoS SETTLEMENT_MPAN_TRACKER_V1.0.xlsx

The second one for the remainder of the MPANs. REGRESSION_MPAN_TRACKER_V1.0.xlsx

Both can be found in the in the MS Teams Channel : MPAN Tracking Tool for SIT Functional

Who loads data in the Maintenance Window?

- **Supplier:**

In the maintenance window they will load MPANs in a Legacy State using the CSV file we have provided. They should determine how many MPANs and of what type they wish to load – but they must load all settlement MPANs and enough MPANs of the right type to do all regression tests.

- **MSS, MSA:**

Do not need to load any data within the maintenance window as they will be appointed using the migration process once the testing starts. They will need to load the D0268 or D0150/D0149 that we have provided as soon as they are appointed via the IF-033 and IF-036.

- **ADS, SDS:**

Do not need to load any data within the maintenance window as they will be appointed using the migration process once the testing starts. They will receive all required data via this process – so their systems will start testing phase with no MPANs populated.

Who loads data in the Maintenance Window?

- **UMSO:**

In the maintenance window they will load MPANs in a Legacy HH state using the CSV file we have provided. They should create inventories for all MPANs. Once testing starts they will be appointed via the migration process and informed who the UMSDS is, they should then immediately send a D0388 to the UMSDS.

- **UMSDS:**

Do not need to load any data within the maintenance window as they will be appointed using the migration process once the testing starts. They will receive all required data via this process (IF-033/IF-036 and D0388 etc) – so their systems will start testing phase with no MPANs populated.

- **LDSO:**

They will populate the required MPAN data for all MPANs (15k) in the maintenance window. In previous phases this has been done via the CSV or via MPRS data sync.

- **EES:**

This needs to be agreed, but as the MPANs are in a Legacy state then the MPRS delta updates could be used (TBC – SCS and C+C)

- **Helix and DIP:**

These systems will start the phase populated with no MPANs to replicate M10, so no data loading in the maintenance window – but previously used SIT-A MPANs must be removed from those systems.

- **MPRS and DCC:**

They will populate the required MPAN data for all MPANs in the maintenance window. MPRS, CSS and DSP will remain connected to one another in the window so that BAU interfaces will be used to populate data between systems.

What about old MPAN data in SIT-A from previous phases?

- **EES/LDSO/UMSO/MPRS/Supplier/MS/CSS:**

No requirement to remove previous MPAN data (but those MPANs can no longer be used)

- **Helix and DIP:**

All previous MPAN data should be removed so the systems start with no MPANs within them

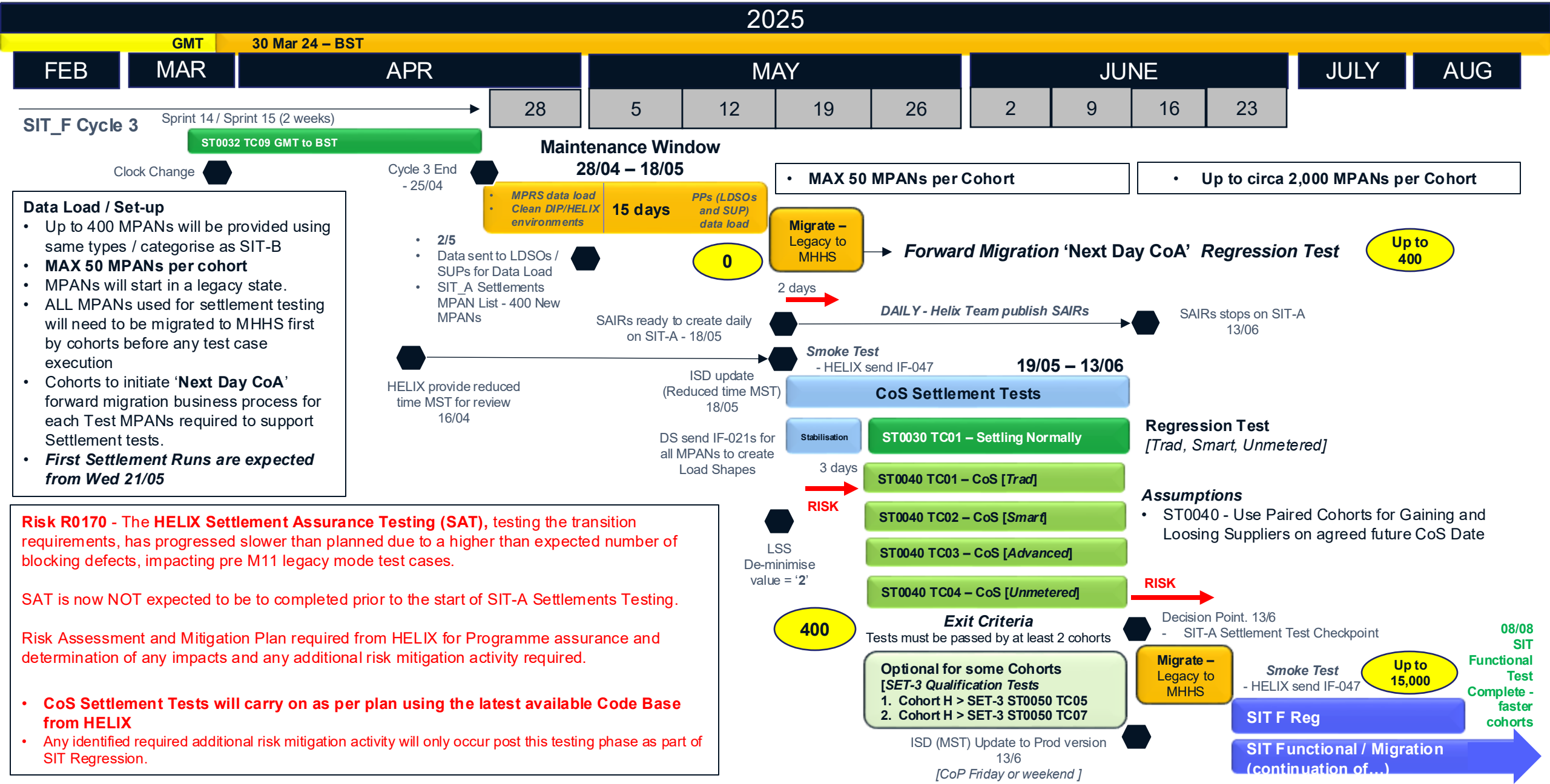
- **DS:**

All previous MPANs should be deleted

- **DCC:**

All previous MPANs should be deleted to make room for the new MPANs

SIT-A Settlement Testing – PoaP



Risk R0170 - The **HELIX Settlement Assurance Testing (SAT),** testing the transition requirements, has progressed slower than planned due to a higher than expected number of blocking defects, impacting pre M11 legacy mode test cases.

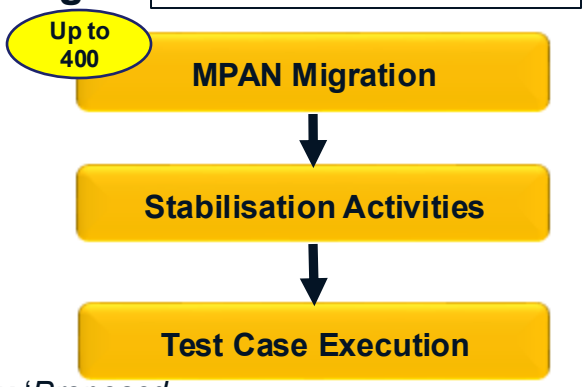
SAT is now NOT expected to be to completed prior to the start of SIT-A Settlements Testing.

Risk Assessment and Mitigation Plan required from HELIX for Programme assurance and determination of any impacts and any additional risk mitigation activity required.

- **CoS Settlement Tests will carry on as per plan using the latest available Code Base from HELIX**
- Any identified required additional risk mitigation activity will only occur post this testing phase as part of SIT Regression.

SIT-A Environment Data Load and Set-up processes required to support SIT-A Settlement Testing

- MAX 50 MPANs per Cohort



Maintenance Window Activity - HELIX and DIP systems start with clean systems with 0 migrated MPANs.

1. *MPAN Migration*
   - Activity anticipated to start on Monday ***19-May-2025***
   - All MPANs will start in a legacy state, the 400 settlement MPANs will need to be migrated to MHHS first.
   - PPs to initiate forward migration business processes for **ALL 400** Settlement Testing MPANs to support Settlement tests.
   - Use 'Next Day CoA' migration event approach
     - Supplier sends IF-031 with *Service Provider Appointment Scenario* = 'MCA' (Migration Change of Agent) with **next day** '*Proposed MS EffectiveFrom Date*' i.e.**20-May-2025**
     - Data Service and Metering Service appts must also be sent via IF-034s on this date prior to gate closure
     - All migration related messages must be sent and completed by gate closure on the 19-May-2025 (by 15:00 hrs)
     - This will enable the IF-036s to be sent filly completed at 15:30
     - The MTDs (D0150/149 and D0268) can then be loaded and sent by the MS to the SUP, LDSO and DS
2. *Stabilisation Period*
   - Once MPAN is successfully migrated, Data Services shall start sending daily IF-021s for ALL migrated MPANs to start the support the creation of Load Shapes by LSS. Expected to take up to 3 days.
3. *Test Case Execution*
   - Test Case execution can only occur once the previous 2 stages are complete
   - Earliest successful Settlement Runs are expected from Wed *21-May-2025*
   - Activity anticipated to start on Monday ***26-May-2025***

Up to 15,000

Note - Following completion of SIT-A Settlement Testing, further legacy MPANs will be migrated to MHHS using the same Migration Chorography approach to support functional / regression tests

Week 1 Choreography

	Day	Activity	Who	Time
Week 1	Monday	Send IF-047	Helix	By 0930
	Monday	Load ISD	All	By 1030
	Monday	Send IF-031	SUP	By 1200
	Monday	Send IF-032 and IF-033	SCS	By 1300
	Monday	Send IF-034	MS/DS	By 1400
	Monday	Send IF-035	SCS	By 1400
	Monday	Gate Closure Event	REGS	At 1730 (BST)
	Monday	Send IF-036	SCS	Post gate Closure
	Monday	Send D0388	UMSO	Post gate Closure
	Tuesday	MS and DS effective from date Event	All	At 00:00
	Tuesday	Load and send MTDs (D0150/D0149/D0268)	MS	By 1200
	Wednesday	DS to send first set of IF-021s	DS	By 1200
	Thursday	DS to send DAILY IF-021s *(Note - Repeat for each test date going forward)*	DS	By 1200
	Friday	DS to send DAILY IF-021s *(Note - Repeat for each test date going forward)*	DS	By 1200
	Thursday or Friday	* **TBC - ST0040** TC01/02/03&04 – CoS TCs – Incoming Supplier sends ***Switch Request to CSS*** and ***IF-031*** for future dated CoS event	SUP	Before Gate Closure (15:30)
Week 2	Monday	**Spring Bank Holiday**	All	n/a
	Tuesday	Test Case Execution	All	n/a

SIT-A Settlement Testing - Test Cases in Scope – (7)

Maximum of 50 MPANs available per cohort

Settlement Regression Tests (SET 1)

All Cohorts

- **ST0030 TC01 - Settling Normally**

Notes

- *Test executed on the basis of reduced MPAN Coverage (2 MPANs per set)*
  - *2 – Smart Single MPAN*
  - *3 – Advanced Import MPAN*
  - *7 – Unmetered MPAN*

4-6

SIT-A CoS Settlement Tests (SET 2)

All Cohorts
(1 MPAN per TC)

- **ST0040 TC01 – Trad**
- **ST0040 TC02 - Smart**
- **ST0040 TC03 - Advanced**
- **ST0040 TC04 – Unmetered**

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Please see supporting document
MHHS-DEL3523
ST0040 - Test Execution Choreography Guidance

Supporting Market Role Qualification Testing (SET 3)

Cohort H only

- **ST0050 TC05 - Impacts by IF-024 Supplier Advisory Notifications to DS - Smart Off-Peak E10**
- **ST0050 TC07 - Impacts by IF-024 Supplier Advisory Notifications to DS - Adv LTV Expires**

	ST0030 TC01	ST0040 TC01	ST0040 TC02	ST0040 TC03	ST0040 TC04	ST0050 TC05 (SUP)	ST0050 TC07 (ADS + SUP)	(Supplementary) ST0014 TC01
Cohort A	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	n/a	n/a	n/a
Cohort B	[redacted]	[redacted]	[redacted]	[redacted]	n/a	n/a	n/a	[redacted]
Cohort C	[redacted]	[redacted]	[redacted]	[redacted]	n/a	n/a	n/a	n/a
Cohort E	[redacted]	[redacted]	[redacted]	[redacted]	n/a	n/a	n/a	n/a
Cohort F	[redacted]	[redacted]	[redacted]	[redacted]	n/a	n/a	n/a	n/a
Cohort G	[redacted]	[redacted]	[redacted]	[redacted]	n/a	n/a	n/a	n/a
Cohort H	[redacted]	[redacted]	[redacted]	[redacted]	n/a	[redacted]	[redacted]	n/a
Cohort J	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	n/a	n/a	n/a

2

Notes

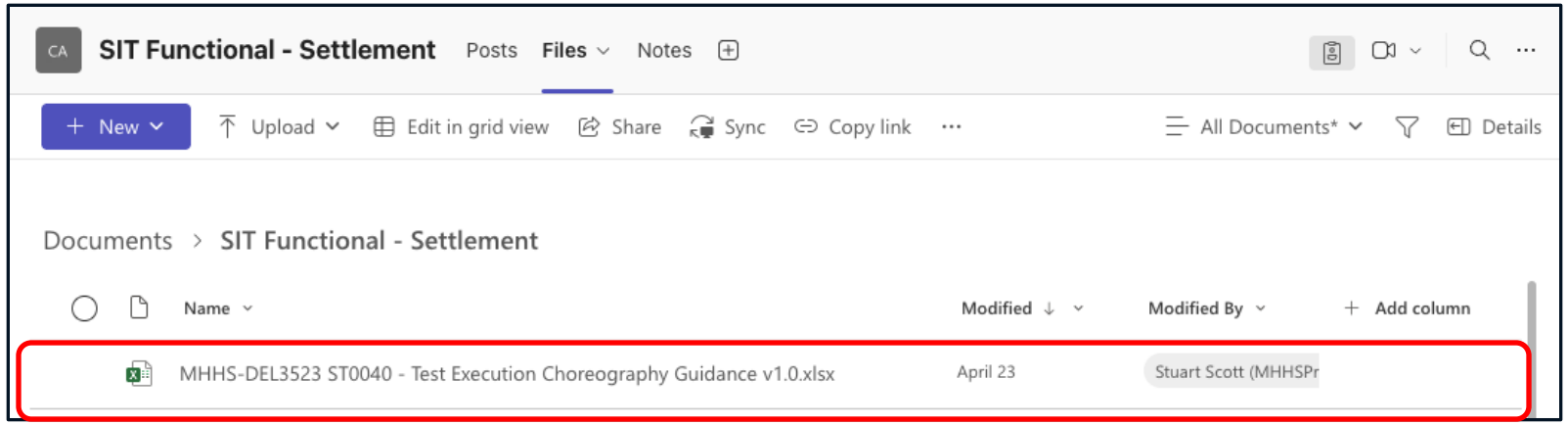
1. **Additional MPANs –** Extra MPANs must also be migrated to act as cover MPANs for Test Cases and to help with the Stabilisation period of loading consumption data into the Settlement Runs. Up to the max 50 level.
2. **Supplementary tests** - Participants may choose to conduct further supplemental settlement regression testing over and above those set out by the Programme (should timescales allow). Subject to:
   a) Prior programme agreement of supplementary tests to be executed
   b) Demonstratable cohort capacity to execute the supplementary tests without impacting the completion of SIT-A Settlement Testing and /or the Exit Criteria

Extra

Assumptions

- PPs will have available and use the same resources for *SIT-A Settlement Testing* as were used to complete *SIT-B Settlement Testing*.
- Continuity of test resources at the same levels as per previous Settlement Testing activity will be crucial to ensure that all migration activities and subsequent tests are completed by the target end date and help reduce the need for / or risk level associated with any TIMEOUT decision

SIT-A Settlements Testing – Test Execution Guidance .. Please Read



Title	**MHHS-DEL3523** **ST0040 - Test Execution Choreography Guidance**
Description	This document has been created to provide guidance to support the execution of Test Case ST0040 TC01, TC02, TC03 and TC04 as part of SIT-A Settlement Testing. **This document provides supporting information for which actions are expected to occur when over the life of the test to support PPs with test case execution.**
Scenario ID	SITFTS-ST0040
Theme	Settlement
Scenario Title	COS only or COS with change of Metering Service and/or Data Service where Settlement is working prior to and after the COS

ST0040 - TC01- Trad

Test Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Current / Loosing Supplier (SUPC)														
				Settlement Date										
	[D]	[D]+1	[D]+2	[D]+3	[D]+4	[D]+5	[D]+6	[D]+7	[D]+8	[D]+9	[D]+10			
		ACTION - Send IF-041 Ccustomer Read for SD [D]		**CoS Effective Date**										
			LSS Run	Validate Output reports (Defaults)		**SF Run**	**ACTION** - Validate Output reports (Actuals)	**END(1)**	**RF Run (optional)**	**(optimal) ACTION** - Validate Output reports (Actuals)	**END(2)**			
			II Run	**ACTION -** Send IF-021s for SD [D]										
Incoming / Gaining Supplier (SUPI)														
				Settlement Date										
	[D1] -3	[D1] -2	[D1] -1	[D1]	[D1] +1	[D1] +2	[D1] +3	[D1] +4	[D1] +5	[D1] +6	[D1] +7	[D1] +8	[D1] +9	[D1] +10
	ACTION - Send IF-031 for future dated CoS Event with effective date of sending date +3 days [D]			**CoS Effective Date**	**ACTION** - Send IF-041 CoS Read for SD [D1]	**LSS Run**	**ACTION** - Validate Output reports (Defaults)		**SF Run**			**RF Run (optional)**		
						II Run	**ACTION -** Send IF-021s for SD [D1]			**ACTION** - Validate Output reports (Actuals)	**END(1)**		**ACTION** - Validate Output reports (Actuals)	**END(2)**

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Guidance to Note .. Please Read

- Please remember that this Testing phase is occurring in **BST** and so PPs need to remember to ensure that the BST considerations for date/time formats will apply.
- Specific consideration required for the Agent appointment process supporting the forward migration process in relating to the MDR Effective From dates within the IF-031 (sent by Supplier) and IF-034 (sent by Data Services) messages.
- This applies for BOTH ***supplierNominatedMDREffectiveFromDate*** and/or ***SDSNominatedMDREffectiveFromDate***
- Please see the following guidance document previously issued [MHHS-DEL2860 MHHS DateTime Guidance]

MHHS Guidance

FAQs - IR7 Design

How do I populate a block with SP Date/Times and MDR Date/Time Data Items?

This occurs in IF-031 B071 Block.

The "supplierNominatedMDREffectiveFromDate" is in the same block in the IF-031 as the "proposedDataServiceDIPEffectiveFromDate". The two dates in the same block are set in different time formats as per the example shown.

It is important to note that the "supplierNominatedMDREffectiveFromDate" must be set to midnight UTC and therefore the MDR is effective 1 hour later than the DS during BST, as per the design – please see 03_REGS_Notes "Time" in DES-138.

Acceptable constructions of B071

```
"B071": {
    "proposedDataServiceDIPID": "1476539032",
    "proposedDataServiceMPID": "SDSS",
    "proposedDataServiceDIPEffectiveFromDate": "2025-04-30T00:00:00+01:00",
    "contractReferenceDataService": "DS-123-123",
    "appointmentScenario": "COS",
    "supplierNominatedMDRDIPID": "1825123845",
    "supplierNominatedMDRMPID": "MMDR",
    "supplierNominatedMDREffectiveFromDate": "2025-04-30T00:00:00+00:00",
```

OR

```
"B071": {
    "proposedDataServiceDIPID": "1476539032",
    "proposedDataServiceMPID": "SDSS",
    "proposedDataServiceDIPEffectiveFromDate": "2025-04-29T23:00:00+00:00",
    "contractReferenceDataService": "DS-123-123",
    "appointmentScenario": "COS",
    "supplierNominatedMDRDIPID": "1825123845",
    "supplierNominatedMDRMPID": "MMDR",
    "supplierNominatedMDREffectiveFromDate": "2025-04-30T00:00:00+00:00"
```

SIT-A Settlements Testing – Exit Criteria

Set	Test Activity	Reason for Testing	No. of Test Cases	Exit Criteria	Planned Time-Out Conditions
SET-1	**Settlement Regression Tests** *- Settling Normally Test Case*	The main Settling Normally test case (*ST0030 TC01*) will be run before the main Regression test phase in parallel with the other SIT-A Settlement tests **Regression Testing the MHHS Programme E2E Design** - Integrity and accuracy of Elexon Central Settlement Systems, including Helix internal and output accuracy checks, Supplier output report accuracy checks successfully tested ***Notes*** *1. All LDSO Test Steps will be set to 'Pass with Observation'* *• LDSOs are not set up in SIT-A to receive the IF-021 consumption data on SIT-A or receive the settlement output reports for ingestion into their associated DUoS Billing Systems as this was not part of the original test scope.*	**1**	**Test must be Passed by at least 2 cohorts** As per SIT-B Settlement Testing, this TC does not need to be completed by ALL cohorts • Test Case allocated for execution to ALL cohorts to support each cohorts own Regression Confidence	**If required, TIMEOUT Approach will be considered** **- Decision for 13/6** • *As per SIT-B SET-2 exit criteria, if not all tests have been passed – SITAG will consider any risk level when deciding to cease Settlement testing in SIT-A* • ***Risk** – delays in cohorts completing the Settling Normally test case could result in subsequent delays for the later main Regression Testing activity and the continuation of any unfinished SIT Functional (SITF) and SIT Migration (SITM) tests in the SIT-A environment.*
SET-2	**Settlement Accuracy Tests** *- CoS Settlement Testing*	**Testing the MHHS Programme E2E Design** - Additional coverage of key events that can impact reported consumption totals, and critical parameters, from one Settlement run to another, or from one Settlement day to another TC execution requires HELIX Settlement Accuracy Input Reports for validating the CoS Event changes impacts on Settlements. ***Notes*** *1. These CoS event TCs were originally categorised as SET-2 Settlement Accuracy Tests and more specially "Functionality – Change Conditions"* *2. These change conditions are being tested as part of SIT-A Functional Testing and these settlement test versions are testing the functional change impact on the settlement process and output reports*	**4**	**Test must be Passed by at least 2 cohorts** As per SIT-B Settlement Testing, this TC does not need to be completed by ALL cohorts • Test Case allocated for execution to ALL cohorts to support each cohorts own Regression Confidence	**If required, TIMEOUT Approach will be considered** **- Decision for 13/6** • *As per SIT-B SET-2 exit criteria, if not all tests have been passed – SITAG will consider any risk level when deciding to cease Settlement testing in SIT-A* • ***Risk** – delays in cohorts completing the CoS Settlement case could result in subsequent delays for the later main Regression Testing activity and the continuation of any unfinished SIT Functional (SITF) and SIT Migration (SITM) tests in the SIT-A environment.*
SET-3	**Supporting Market Role Qualification Tests**	**Supporting Qualification Testing** These are carried over tests that were not completed by cohorts in SIT-B Settlement testing. These are required to be run to provide Test Coverage by Market Role to support Qualification Testing.	**2**	**All tests must be Passed, but not necessarily as part of SIT-A Settlement Testing** • Only 1 cohort is required to execute these 2 tests	**If required, TIMEOUT Approach will be used** • *Tests SHOULD be passed in this test period, but if not, SIT-A Settlement Testing will end to enable SIT Regression Testing to start on schedule* • *Tests would need to be completed prior to the start of the cohorts final Regression testing in SIT-A* • ***Risk** - Failure to complete these tests before end of SIT will put the Cohorts Qualification AT RISK*

Participants' feedback - opportunity for participants to add feedback for discussion