MHHS PROGRAMME
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MHHS Webinar: Systems Integration Testing (SIT) Participation

MHHS Webinar

23 February 2023

DEL-1011

Agenda

Introduction

Keith Clark

(5 mins)

SIT Overview & Timeline

Dom Mooney

(20 mins)

Benefits of participating in SIT

Keith Clark

(5 mins)

Q&A

Facilitated by Lauren Nicholls

(15 mins)

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Please send in your questions using sli.do

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Questions will be answered at the end of the webinar.

A complete Q&A will be made available on the website.

The purpose of this webinar

To provide further information on Systems Integration Testing (SIT)

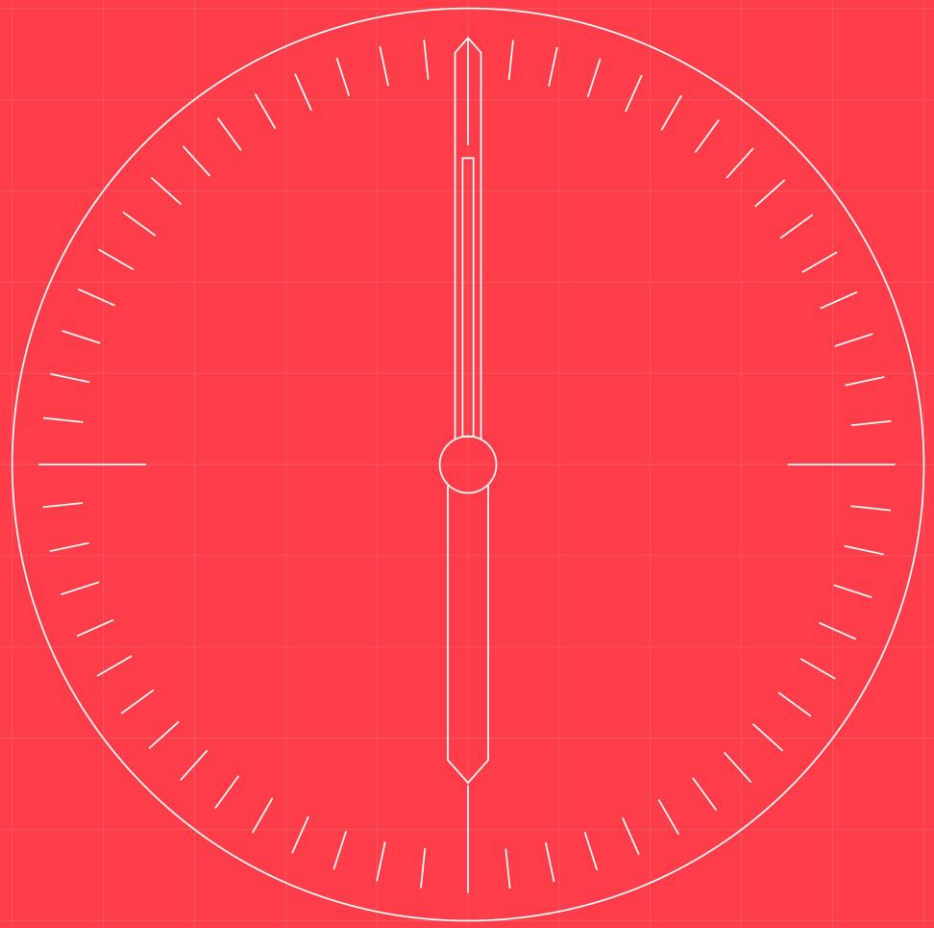
To highlight the importance of involving a broad range of constituencies in SIT

To discuss the benefits to participants of taking part in SIT

To demonstrate why SIT involvement is important to the Programme as well as participants

SIT Overview & Timeline

Dom Mooney



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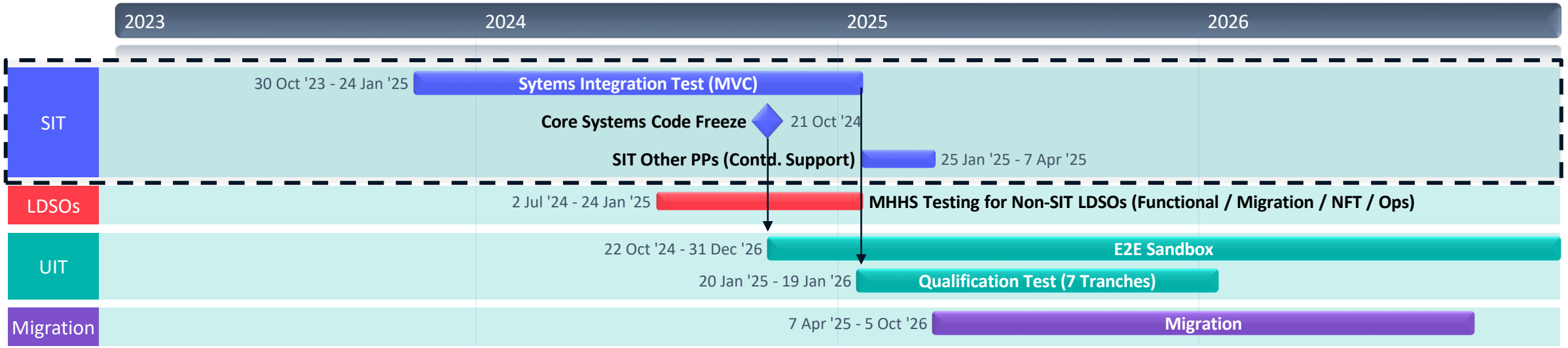
Phase	Stage	Purpose (verifies that…)
Pre-Integration Test (PIT)	Pre-Integration	Systems work as designed when running in a standalone manner (tested within a PP's own env)
Systems Integration Test (SIT)	**Component Integration**: DIP (inc. PKI)	Systems integrate as designed (Designed to De-Risk Functional Testing)
	Component Integration: Central Systems	
	Component Integration: Supplier, Data Services	
	Component Integration: Meter, Registration, UMSO, NO Services, DSP, CSS, DTN	
	Functional	Systems support full E2E business processes
	Migration	Migration processes give correct business outcome
	Non-Functional	Systems' NF characteristics are as designed
	Operational	Systems support full operational processes
User Integration Test (UIT)	Qualification	Systems support requirements for qualification
	E2E Sandbox	Systems support full business & operational processes



SIT Objectives:

- ✓ **Test the MHHS end-to-end (E2E) Design**, ensuring that the new MHHS arrangements function correctly and have been implemented in accordance with the MHHS E2E Design
- ✓ Execute test scenarios to verify the functional, non-functional and migration-related characteristics of the Market Interfaces and Services in an integrated environment

Key Principles:

- ✓ To form a **Minimum Viable Cohort** (MVC) of SIT participants needed to operate their systems in a coordinated manner, in order to complete SIT and reach Go-live at the earliest point
- ✓ The number and types of participants joining SIT must be sufficient to form the Minimum Viable Cohort (MVC)
- ✓ All SIT volunteers will be expected to **demonstrate PIT completion and SIT readiness** prior to their SIT commencement
- ✓ The MVC will be formed in the early stages of SIT Functional Test on the basis of the **fastest pace of test execution success**. Non-MVC SIT PPs will also be supported, still benefiting a faster route to Go-Live
- ✓ SIT participants are **not expected to undergo additional Qualification Testing** in the Qualification phase

SIT is open to all Market Participants

- Any participant may take part in SIT provided they are acting as a defined BSC role and ready to do so according to the timeline
- Since the purpose of SIT is to prove the MHHS E2E design, the SIT objective is reached when a group representing all BSC roles has completed the necessary testing
- We have called this group the **Minimum Viable Cohort** and its members will be identified early in SIT Functional Test according to the speed at which they are completing their tests
- SIT participants not in the MVC will be supported through SIT at their own pace

Required MVC participants

- **All providers of Central Systems** (DIP, Elexon, DCC, Recco, Electralink)
- **One of each of St. Clements** (MPRS), **i/DNOs** (UMSO and Network Operations Services) and **Supplier agents** (DV, DA, MOP services for Migration Testing)
- **At least two Service Providers** (providing Metering Services Smart and Advanced; Smart, Advanced and UMS Data Services)
- **Two Suppliers** (Change of Supply (CoS))

So far, 24 participants have volunteered, and a further 27 participants have indicated interest in taking part in SIT

What we will do as a Programme to support SIT:

- ✓ **Assure test readiness of SIT entrants**, including verifying participants have met PIT exit criteria (see PIT guidance document)
- ✓ **Provide Test Approach and Plans** for each SIT Stage
- ✓ **Specify the SIT scenarios and test cases**, and assure SIT results
- ✓ **Coordinate the availability of environments** and ensure appropriate data is available
- ✓ **Manage the SIT process using ADO** and provide access and training to participants
- ✓ **Provide defect and release management** for centrally-raised issues
- ✓ **Produce overarching Testing deliverables** (plans and reports)

Your obligations as a SIT participant:

- ✓ **Produce test artefacts to the SI team**. These include:
  - PIT Test Approach and Plan
  - Requirements Traceability Matrix (RTM)
  - Scenarios and Test Cases
  - PIT Testing Completion Report
  - SIT Readiness Report
- ✓ **Demonstrate test environment network connectivity** and test data readiness to the SI team, prior to the commencement of SIT
- ✓ **Define the detailed SIT test steps** and record your SIT execution results in the MHHS Test Management Tool (ADO)

Participation in SIT

- We expect a **SIT participant to engage as a defined BSC MHHS Role** and not as a sub-component of a Role
- Apart from the Central Systems, the Roles are as follows:
  - **Supplier**
  - **Smart Metering Service**
  - **Metering Service Advanced**
  - **Smart Data Service** (including MDR)
  - **Advanced Data Service**
  - **UMS Data Service**
  - **Registration Service**
  - **UMSO**
  - **Network Operations Service** (LDSO in the Design)
- From the outset of SIT CIT this will include the use of any systems in your estate which are necessary to support the MHHS end-to-end process*
- We cannot define what these systems are (only you can do that) but for example, in order to conduct the Change of Supply (CoS) tests, you will need the system that triggers the CoS process to be part of the test (we would imagine this is your CRM)

Placing reliance

- As a principle, we want to ensure that there is no unnecessary duplication of effort for participants in achieving the programme testing objectives (either in SIT or Qualification)
- If your software provider or service provider has successfully completed SIT we intend **to allow reliance to be placed on that testing,** subject to our verifying that your system and service arrangements are the same as those on which you are placing reliance
- We will ask you (in conjunction with your software/service provider) to provide a clear statement of the architecture of the software to demonstrate that all the features/configurations that you use have been tested
- The criteria for when Reliance can be placed is in the process of being developed by the programme and Code Delivery Bodies and a 'MHHS Placing Reliance Policy' document is due to be issued out for industry consultation in early March 2023
- The policy will also define how the process will be managed and assured
- Subject to industry agreement the policy will be approved by TMAG and BSC / REC PAB in late March 2023

***For more information on SIT scope, participants can reference the 'MHHS-DEL872 – SIT Scope for Voluntary Participants' Planning' document currently being developed in SITWG**

SIT Component Integration (CIT) is the 1st SIT stage

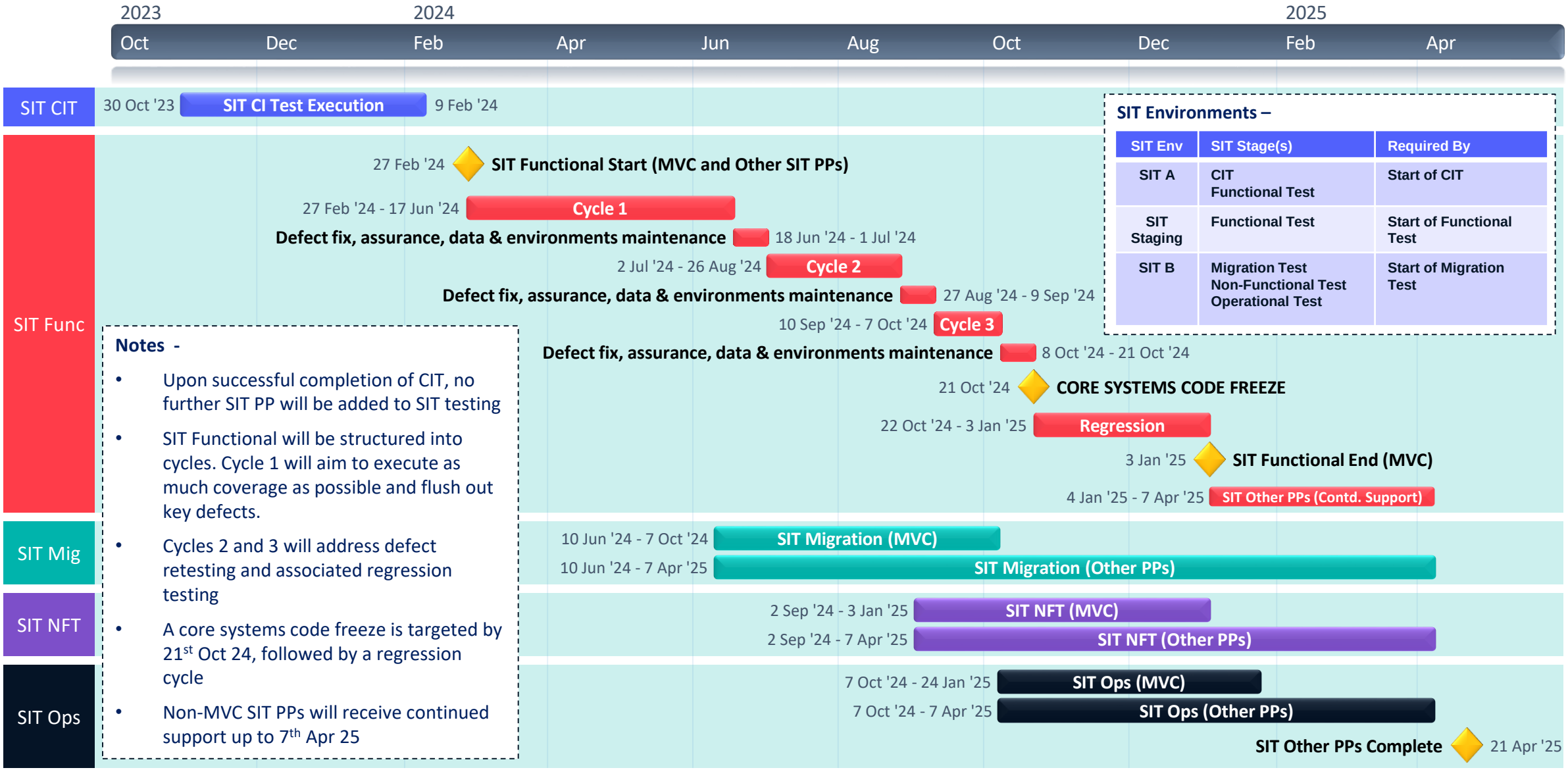
- **Designed to De-Risk SIT Functional Testing**
- **Verify ability to take on Industry Standing Data (ISD)** for each component within MHHS Architecture
- **Verify ability to send/receive Interface IF/PUB messages** for each component within MHHS Architecture (one example of each IF/PUB message type valid for the participant's Role)
- **Verify Data Integration Platform (DIP) routing -** Route each type of IF message according to Always, Primary and Secondary. Send and receive each IF and PUB between all participants, as progressively more components are added to the integrated environment.

SIT CIT Progressive Integration

- Participants progressively onboarded by system / role
- PIT and SIT readiness aligned to CIT entry point

SIT CIT Entry Interval	SIT CIT Entry Date	Systems / Services
1	30 Oct 23	DIP, VAS, Settlement Operations, LSS, MDS
2	13 Nov 23	DTN, MPRS
3	27 Nov 23	Smart Data Services, Advanced Data Services
4	11 Dec 23	Metering Services
5	15 Jan 24	Suppliers, Network Operations, UMSO
6	29 Jan 24	DSP, CSS, EES, UMSDS

SIT Plan on a Page (POAP)



SIT Environments –

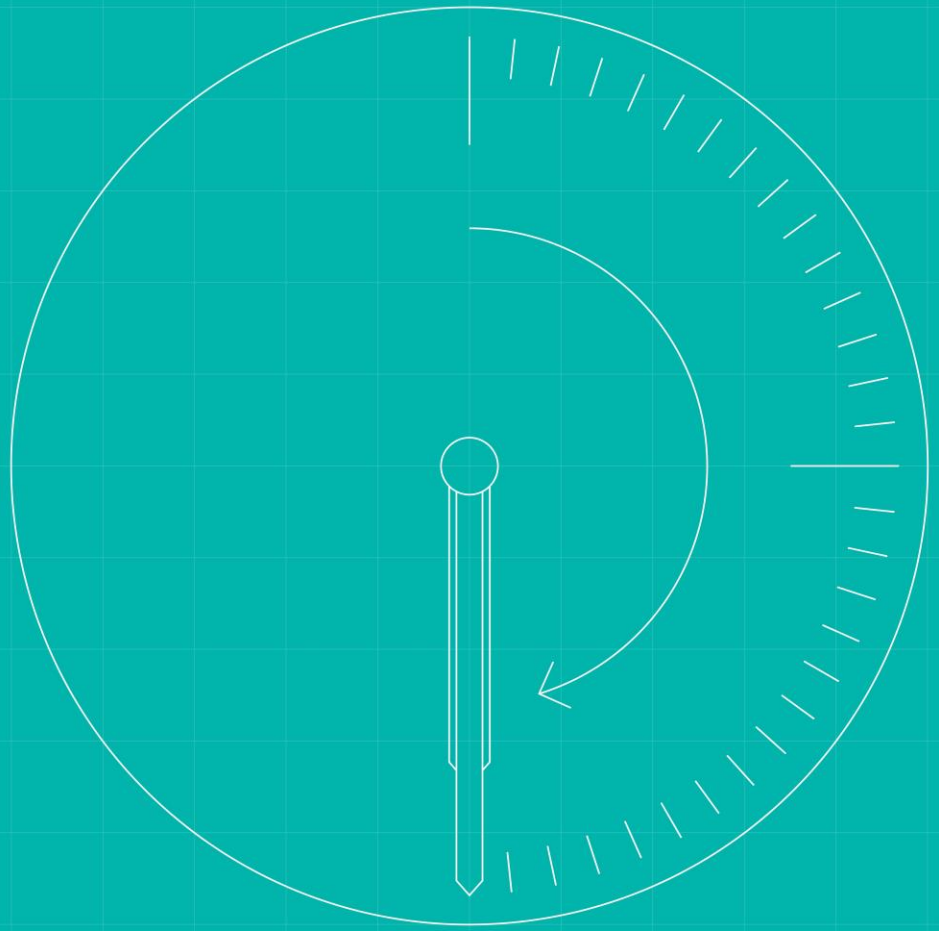
SIT Env	SIT Stage(s)	Required By
SIT A	CIT Functional Test	Start of CIT
SIT Staging	Functional Test	Start of Functional Test
SIT B	Migration Test Non-Functional Test Operational Test	Start of Migration Test

Notes -

- Upon successful completion of CIT, no further SIT PP will be added to SIT testing
- SIT Functional will be structured into cycles. Cycle 1 will aim to execute as much coverage as possible and flush out key defects.
- Cycles 2 and 3 will address defect retesting and associated regression testing
- A core systems code freeze is targeted by 21st Oct 24, followed by a regression cycle
- Non-MVC SIT PPs will receive continued support up to 7th Apr 25

Benefits of participating in SIT

Keith Clark



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Benefits of participating in SIT

First to market

- Competitive advantage for early movers
- Earlier commercial benefits realised

Earlier customer benefits

- Earlier offering of products/services that make use of MHHS arrangements
- Responsiveness to future customer needs

De-risking delivery

- Earlier discovery of any defects and more time to address them, thereby de-risking participant delivery

Priority Design Assurance support

- Priority Design Assurance Support from the MHHS SI Design Team

Additional Migration time

- By starting migration earlier, additional time for migration of MPANs before M14 (deadline by which all suppliers must be ready to accept MPANs under the new TOM)

Programme Success

- Overall benefits of the Programme realised sooner
- Programme success benefits the wider participant community

If you would like to take part in SIT but have not yet registered your interest,
please email the PMO team by the 23 April 2023

PMO@mhhsprogramme.co.uk

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Any questions about SIT?

sli.do

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Questions will be answered at the end of the webinar.

A complete Q&A will be made available on the website.

SITWG

- **What**: The System Integration Testing Working Group (SITWG) is a Level 4 Working Group
- **Purpose**: To define the approach to SIT for the Programme, informing participants of the SIT they must carry out
- **Who**: Open to all participants, SIT leads and SMEs encouraged to join
- **When:** First Thursday of each month, 1400-1600
- If you'd like to attend please email PMO@MHHSProgramme.co.uk

NFTWG

- **What:** The Non-Function Test Working Group (NFTWG) is a Level 4 Working Group
- **Purpose**: To develop and maintain the approach to Non-Functional testing for the MHHS Programme and for oversight of the test preparation and execution
- **Who**: Open to all participants, Non-Functional Testing leads and SMEs encouraged
- **When:** Third Tuesday of each month, 1400-1530 (Mobilisation in progress)
- If you'd like to attend please email PMO@MHHSProgramme.co.uk

Testing Queries

- **Testing team inbox:** The Testing team is keen to hear all your questions and feedback. Please email them at Testing@MHHSProgramme.co.uk.
- **PPC Bilaterals & Testing**: If you'd like to schedule an in-depth session with a member of the Testing team, you can do this via one of your monthly PPC bilaterals.
- Please reach out to your PPC Representative or email the PPC team at PPC@MHHSProgramme.co.uk