MHHS PROGRAMME
Industry-led, Elexon facilitated

Day in the life of: LDSO Qualification Testing

MHHS Programme

October 2024

MHHS-DEL3226

Content and document overview

The **Qualification Testing (QT) Day in the Life** (DITL) Guidance Document provides non-SIT LDSO participants with a detailed insight into how the Programme and participants will work together during Qualification Testing.

Participants will be able to use this document to gain an understanding of how the Programme will facilitate their successful execution of QT and subsequent Test Exit.

The Programme is committed to supporting participants in building their readiness and understanding of QT. This document provides participants with detail on how QT will look and feel, and how specific processes will work. We encourage QT to be a collaborative activity.

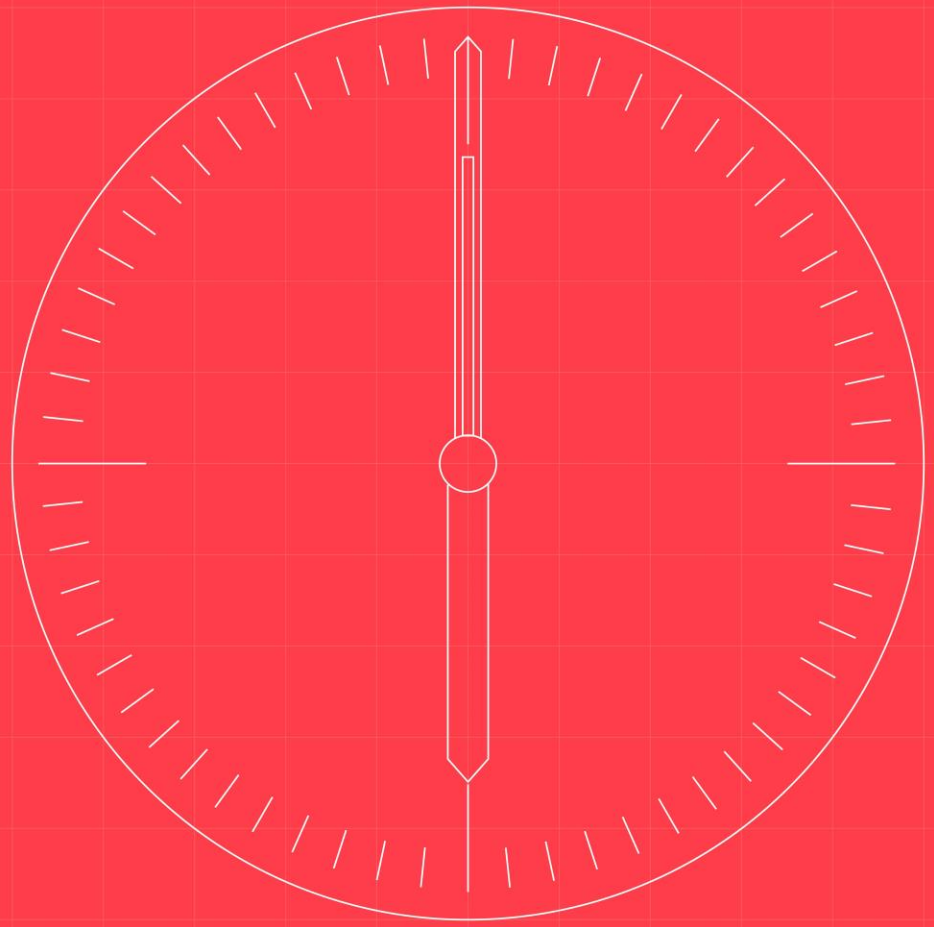
This document is intended to drive a two-way dialogue between the Programme and the QT participants. Please let us know if you have any feedback or questions that you would like to discuss further.

We hope that you find this document useful. If you have any questions, please contact **LDSO_QT@mhhsprogramme.co.uk.**

MHHS PROGRAMME
Industry-led, Elexon facilitated

Covered in this document

Points of contact



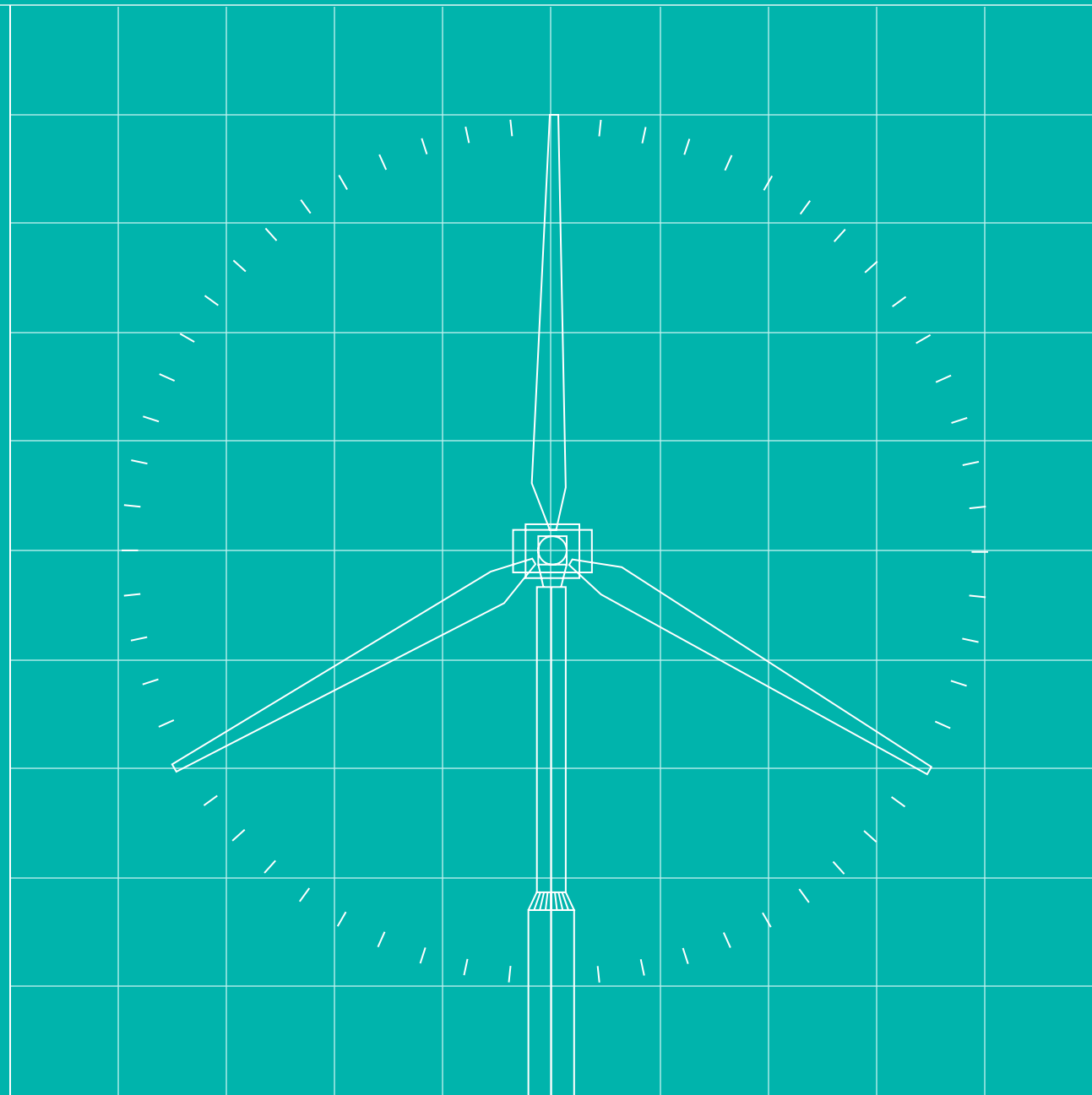
MHHS PROGRAMME
Industry-led, Elexon facilitated

Your key points of contact

We have provided the key contacts for the parties involved in your Qualification Testing. Delivering Qualification Testing successfully will be a collaborative process, it is important you have knowledge of and communication with (via Teams) key members of the Programme.

Name	Role	Email Address
Non-SIT LDSO Qualification Testing Team		
Natasha Tomic	Qualification Testing Delivery Manager	Natasha.tomic@mhhsprogramme.co.uk
Ben Wickins	Qualification Testing Project Manager	Ben.wickins@mhhsprogramme.co.uk
Sreeja Dutta	Environments and Release Lead	sreeja.dutta@mhhsprogramme.co.uk
Rowan Burrows	Qualification Engagement Lead	Rowan.burrows@mhhsprogramme.co.uk
Joseph Wardle	Test Analyst	joseph.wardle@mhhsprogramme.co.uk
Asim Majid	Test Analyst	asim.majid@mhhsprogramme.co.uk
Raina Jain	Test Analyst	raina.jain@mhhsprogramme.co.uk
Kamlesh Patel	Test Analyst	kamlesh.patel@mhhsprogramme.co.uk
Syed Naveedh	Test Analyst	syed.naveedh@mhhsprogramme.co.uk
Paul Morgan	Test Data Lead	paul.morgan@mhhsprogramme.co.uk
Sneha Singh	Test Data Lead	sneha.singh@mhhsprogramme.co.uk
Programme Party Coordinator Team		
Bushra Ali	PPC Lead	Bushra.ali@mhhsprogramme.co.uk
Francesca Drew	LDSO Engagement Lead	Francesca.drew@mhhsprogramme.co.uk
Kiran Birring-Sandhu	LDSO Engagement Lead	kiranbirring.sandhu@mhhsprogramme.co.uk
Escalation Points		
Keith Clark	Programme Director (LDP)	Keith.clark@mhhsprogramme.co.uk
Adrian Ackroyd	MHHS Client Test Programme Manager	adrian.ackroyd@mhhsprogramme.co.uk
Nicola Farley	Qualification Test Manager	Nicola.farley@MHHSprogramme.co.uk
MHHS Qualification	Elexon Qualification Team	MHHSQualification@elexon.co.uk
Retail Energy Code	REC Performance Assurance	qualification@recmanager.co.uk

Key artefacts



Key artefacts to support Qualification Testing

The Programme has produced a number of key artefacts which underly and inform qualification testing. Understanding these artefacts will be central to successfully completing qualification testing. Our table below provides a broad overview of each artefact, and links to where they are stored on the MHHS Website and Collaboration Base.

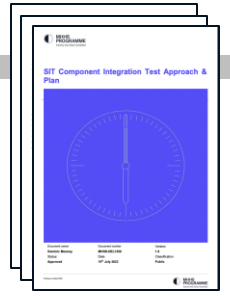
Qualification Approach & Plan and Annex 1

The Qualification Approach & Plan including Annex 1 details the associated objectives, scope, approach, schedule, management, governance and assurance of the Qualification Testing Stage

Use in Qualification Testing: Participants should use the QT approach & plan as their baseline knowledge for what will happen in QT and use it to aid their planning.

Participants can find a copy of the QA&P and Annex 1 on the MHHS Website.

Non-SIT LDSO QT Test Data Approach & Plan



The Non-SIT LDSO QT Test Data Approach & Plan provides a detailed view of the specific data requirement per participant role, including how test data is obtained and augmented.

Use in QT Execution: Participants should use the document to build a working understanding of what will be tested and how data will be provisioned for their assigned role.

Participants can find a copy of the QT Test Data Approach & Plan on the MHHS Website.

Key artefacts to support Qualification Testing

The Programme has produced a number of key artefacts which underly and inform qualification testing. Understanding these artefacts will be central to successfully completing qualification testing. Our table below provides a broad overview of each artefact, and links to where they are stored on the MHHS Website and Collaboration Base.

QT Test Cases

The QT Test Cases outline the steps and instructions that participants need to follow.

Use in QT Execution: Participants will use the Test Cases to deliver their Qualification Testing.

Participants can find a copy of the Test Cases on the Collaboration Base.

Defect Management Approach & Plan

The Defect Management Plan describes the overall approach to managing defects within the testing phases of the Programme.

Use in QT Execution: Participants should use the Defect Management Plan to ensure they are raising, triaging, categorising, and resolving defects in line with the Programme's specified approach.

Participants can find a copy of the Defect Management Plan on the MHHS Website.

Key artefacts to drive Qualification Testing execution

The Programme has produced a number of key artefacts which underly and inform qualification testing. Understanding these artefacts will be central to successfully completing qualification testing. Our table below provides a broad overview of each artefact, and links to where they are stored on the MHHS Website and Collaboration Base.

Environment Approach & Plan

The Environment Approach & Plan (EA&P) sets out detailed guidance and requirements for the use and provision of testing environments during the Test Phases.

Use in QT Execution: Participants should use the EA&P to understand the expectations for environment managers to successfully execute QT, including ways of working, allocation and configuration.

Participants can find a copy of the Environment Approach & Plan on the MHHS Website.

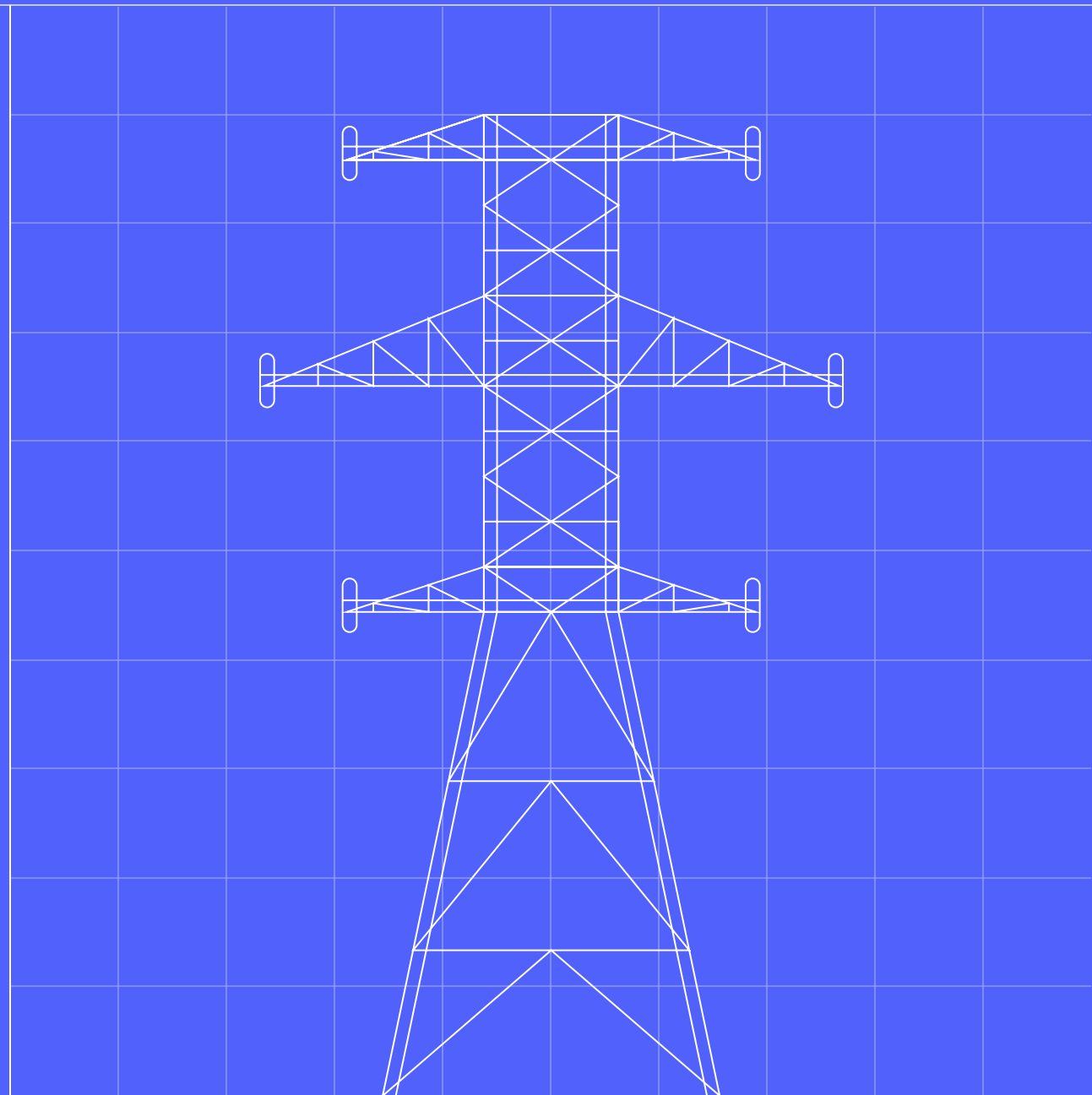
Release & Configuration Approach & Plan

The Release Management Approach & Plan (RMA&P) defines how the Programme will control release management throughout the Test Phases.

Use in QT Execution: Participants should use the RMA&P to ensure that they are prepared and can deliver for the planning, scheduling and governance of the releases into the test environments for QT.

Participants can find a copy of the Release Management Approach & Plan on the MHHS Website.

Tool references and guidance



The Azure DevOps (ADO) test tool – references and guidance

The Programme is using ADO as the Test Management Tool. ADO has been configured to provide the following capabilities:

Test Management

- Driving test scheduling, coordination and execution.

Defect Management

- Raising a defect.
- Assigning a defect.
- Updating a defect.

Environments Downtime

- Provide a log of planned and unplanned environment downtime.

Release Management

- Request for Change (RFC).
- Governance of changes.
- Governance of releases centralised in MHHS Test Team.

Reporting and Dashboards

- For more information see the **Reporting** section of this guidance document.

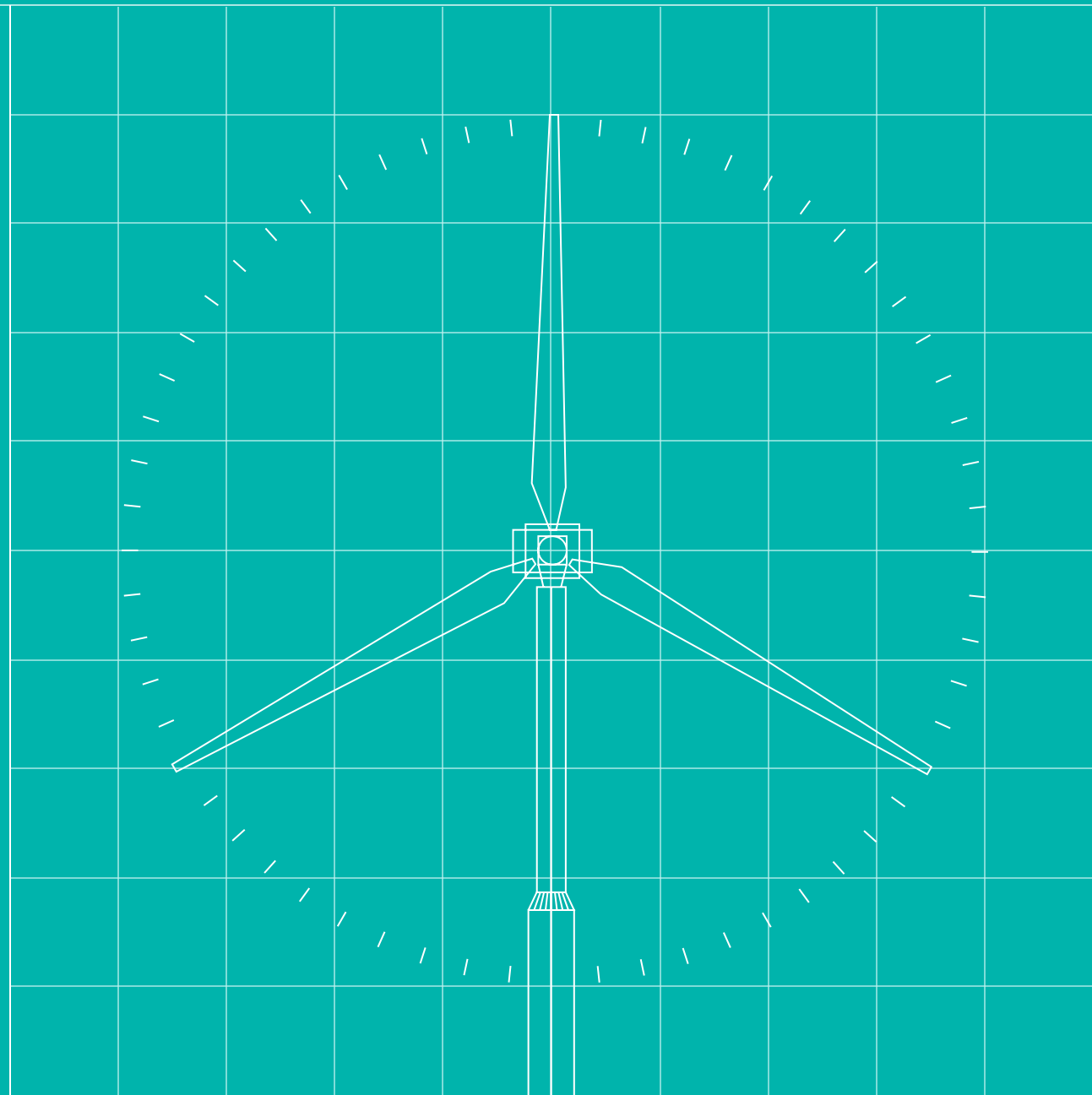
The ADO User Guide can be found on the MHHS Website. The Programme has also development Training Modules for these areas, also located on the MHHS Website.

Permissions and Access Requests	Executing Tests in ADO	Defect Management
Creating Queries and Dashboards	Release Management	Environments Downtime

Release Management Detail:

- A Request for Change (RFC) will be raised by the Central Party when they want to deploy a release.
- The QT Team will review the request and either approve or reject.
- There may be situations where a release from the Central Party/Provider conflicts with testing progress.
- This is why the Test Team will govern the release process.
- The Central Party/Provider should provide 48 hours' notice when requesting a Release. The QT Team will respond within 24 hours.

Daily activity



Roles and responsibilities during qualification testing

Role of the Participants

- To provide resources to support a 9am – 5pm testing day (UK time)
- Be accountable for the execution of allocated tests
- To self-manage test execution and to be present and responsive to the Qualification Team within MS Teams Channels
- To attend and contribute to daily stand up and defect meetings (meeting scheduling on following slide)
- To provide sufficient support resources to enable the resolution of PP defects in a timely manner
- To keep ADO up to date with the latest status of test cases
- To capture test evidence and upload into ADO
- Schedule reviews
- Provide additional data (if required)
- Jointly dynamically revise and communicate test schedule in response to blocking issues, or support capacity

Role of the LDSO Qualification Team

- Provide ADO access, training and ongoing support
- Confirm the Test Cases to be run and review additional data (if required)
- Assure test evidence and QT test Completion report
- Provide the initial ordering and test scheduling of tests
- Jointly dynamically revise and communicate test schedule in response to blocking issues, or support capacity
- Assign a QT Test Analyst for each Participant as the primary point of contact
- Triage and Manage Central Party defects
- Host and chair daily Participant meetings:
  - Stand ups
  - End of day wash up
  - Defect calls
- Provide Test & Defect MI & Reports:
  - Real time in ADO (per LDSO instance)
  - Daily LDSO Level (inc. Central Defects) via email
  - Weekly cross LDSO test and defect status via email
- Coordinate Releases and Deployments and assure PP test execution results / evidence
- Run and manage the test harness

What the week looks like

Exact timings tbc

The schedule* below sets out the interactions between LDSOs and the QT team over a typical week. In addition to these meetings, Teams channels have been set up with each LDSO to enable direct, real-time interaction.

Individual LDSO calls
Internal call
Group LDSO calls

Morning scrum with each individual LDSO to discuss:
- Plan for the day
- Test cases to be run for the data
- Test data
- Test harness interactions

	Monday	Tuesday	Wednesday	Thursday	Friday
09:00	Daily stand-up (15 mins)	Daily stand-up (15 mins)	Daily stand-up (15 mins)	Daily stand-up (15 mins)	Daily stand-up (15 mins)
10:00			Weekly progress & central defect call		
11:00	Defect call with LDSO		Defect call with LDSO		Defect call with LDSO
12:00					
13:00					
14:00	Daily defect management call with central parties	Daily defect management call with central parties	Daily defect management call with central parties	Daily defect management call with central parties	Daily defect management call with central parties
15:00					
16:00	EOD wash-up (15 mins)	EOD wash-up (15 mins)	EOD wash-up (15 mins)	EOD wash-up (15 mins)	End of week wrap up (15 mins)
17:00					

Discussion with LDSO to discuss updates on central defects and overall progress

Individual defect call with each LDSO to discuss defects

Daily defect management call with central parties to triage defects and discuss progress

End of Day wrap up with each individual calls to discuss:
- Plans vs progress
- Agree plan for tomorrow

*please note that this schedule is indicative, and timings may be flexed based on availability

MHHS PROGRAMME
Industry-led, Elexon facilitated

How we'll coordinate activities and communicate throughout the day

We will strike a balance between ensuring coordination throughout the day while also managing your capacity to execute QT.

The formal hours of execution during QT execution will be 9am – 5pm.

Throughout QT there will be a daily stand-up and a dedicated MS Teams channel. These will help to identify and coordinate the tests to execute that day.

QT Daily Stand-up | Cadence: Daily | Time: 09:00

Purpose:

- To communicate the day's testing schedule and discuss any blockers that may impact execution.

Standing Agenda:

- Validate planned tests for the day from the execution schedule.
- Validate the data allocation to be used.
- Discuss test harness interactions.
- Discuss any blockers impacting the planned scenarios.

Attendees:

- **Participants:** All designated participant attendees.
- **LDP/SRO:** Test Analyst
- **LDP/SRO** (as needed): QT Delivery Manager, QT Project Manager, Qualification Test Manager, PPC Representative. Representatives from Environments, Data, Defect Resolution, ADO support and Release Management

Outcomes:

- Participants understand the testing activities to be executed that day.
- QT Test Coordinators to understand test harness support that needs to be executed that day
- The QT Test Coordinators understand any issues and can begin to remove any blockers.

Dedicated Teams Channel

Purpose:

- To ensure continued coordination and updates throughout the day as participants execute the testing schedule.

Detailed use:

- The Teams channel will be used to allow participants to communicate the following notifications:
  - A Test Case has been triggered.
  - A Test Case has been successfully completed.
  - A Test Case has failed.
  - A Defect is being raised.
  - Any queries/issues with test data.
  - Environment downtime
  - A blocking defect impacting multiple parties
- In all cases, the notification provided must contain:
  - The Dummy MPAN Reference Number.
  - The Test Case Reference Number.

Attendees:

- **Participants:** All designated participant attendees.
- **LDP/SRO :** QT Manager/Test Lead, QT Coordinator, PPC Representative
- **Code Bodies** will also have access

Please Note:

- Participants will require MHHS log-in details to access the Teams Channel. This will be arranged in advance.

Difference between ADO and Teams Channel

ADO

Driving test scheduling, coordination and execution

Formal record of test case status – source of truth for reporting

Capturing test evidence

LDSO responsible for keeping ADO up to date

Teams Channel

To ensure continued coordination and updates throughout the day as participants execute the testing schedule.

Informal - used to manage handoffs between LDSO and LDSO QT team and provide updates on progress

Best practice tips

1. Highlight your availability and any restrictions at the daily stand up or on the Teams chat
2. Use the dedicated Teams chat as your primary source of communication
3. The testing schedule will be provided in advance*, and any updates will be communicated. Familiarise yourself with the schedule and raise any questions you have
4. Use the 'pin' functionality to capture key information at the top of the channel
5. Always ensure MPANs are redacted when submitting evidence in ADO or referencing on Teams channels
6. Team Leads are on hand to manage and swap resources so make them aware of capacity constraints
7. Use the '@' before a name to tag specific people/groups you require a response from

*The schedule may need to be adapted to align with testing progress

Regular communication and collaborative ways of working is encouraged to ensure optimal and effective day to day testing.

Groups on Teams

We have set up groups if you need to contact/highlight something to a specific team within the LDSO QT team. Using these were possible, will mean that the correct person is able to respond as quickly as possible

1

@DataTeam
This will highlight your comment to Data Team within LDSO QT Team

2

@DefectTeam
This will highlight your comment to Defect management Team within LDSO QT Team

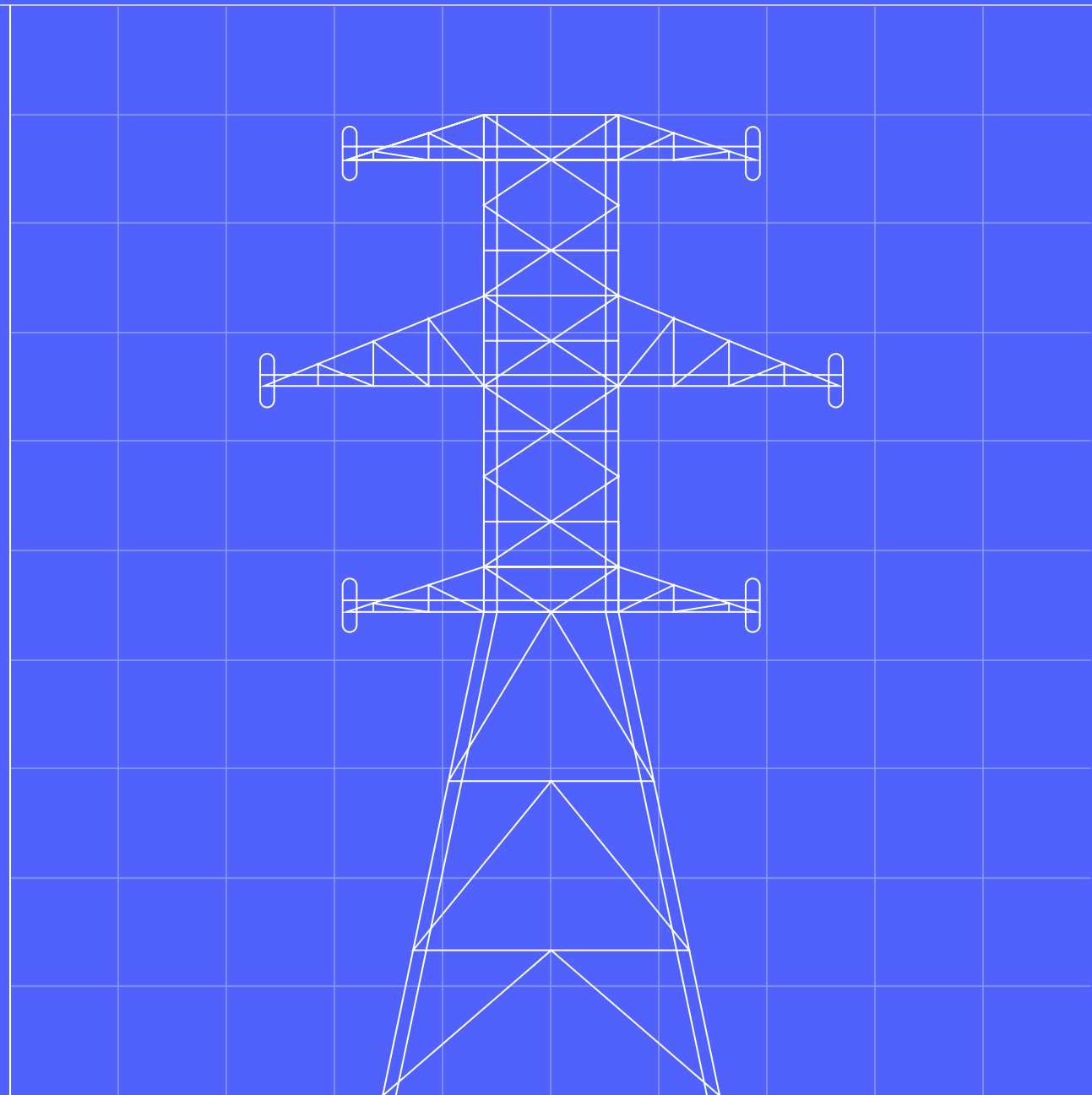
3

@NFTTeam
This will highlight your comment to Non-Functional Team within LDSO QT Team

4

@QualificationTeam
This will highlight your comment to Team Leads within LDSO QT Team

Test execution



Test Execution Planning

Planning principles

- Each Test Participant will have their own test execution schedule.
- Each test execution schedule will be aligned to the participant's test scope.
- This will allow each Test Participant to go at a pace that suits them.
- Test Execution Schedules will be used to track progress against each Test Participant.
- Plans can be provided in .xlsx or .mpp formats.
- Each Test Participant will start with Migration testing at a low intensity before increasing to a steady rate through the test window. The intention is to avoid spikes in intensity.

Timelines

- The project will provide an initial draft of each Test Execution Schedule for review in October with a view to iterate and finalise schedules by the end of November.

Planning framework

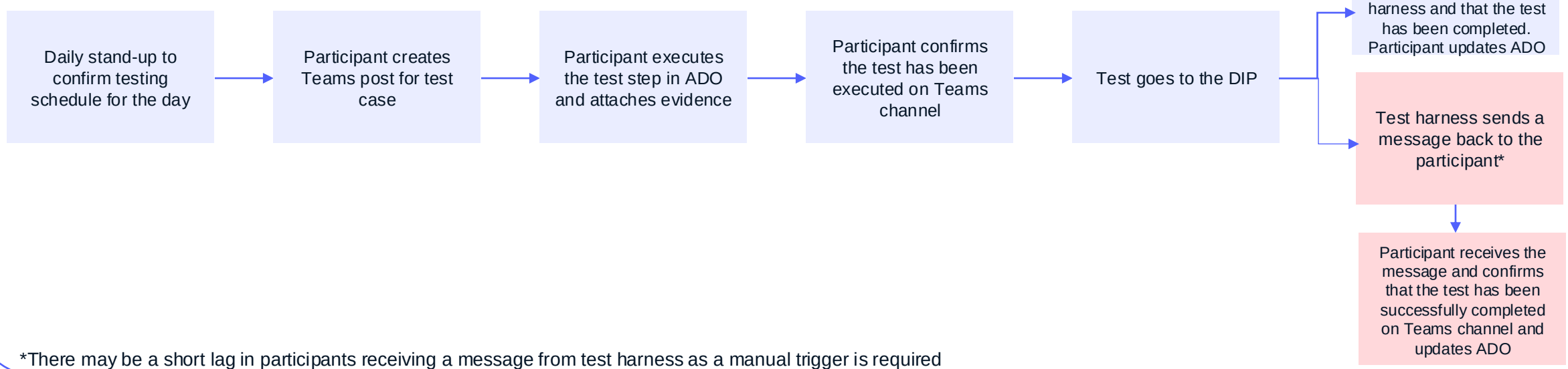
- The project is making an initial estimation of the complexity and duration of each test scenario to inform task durations.
- The project has considered test ordering
- We are also incorporating dependencies from the wider programme such as the roll out of IR 8.4.

Overview of the testing process

Potential Path 1

Potential Path 2

Scenario 1 – LDSO trigger first step of test case



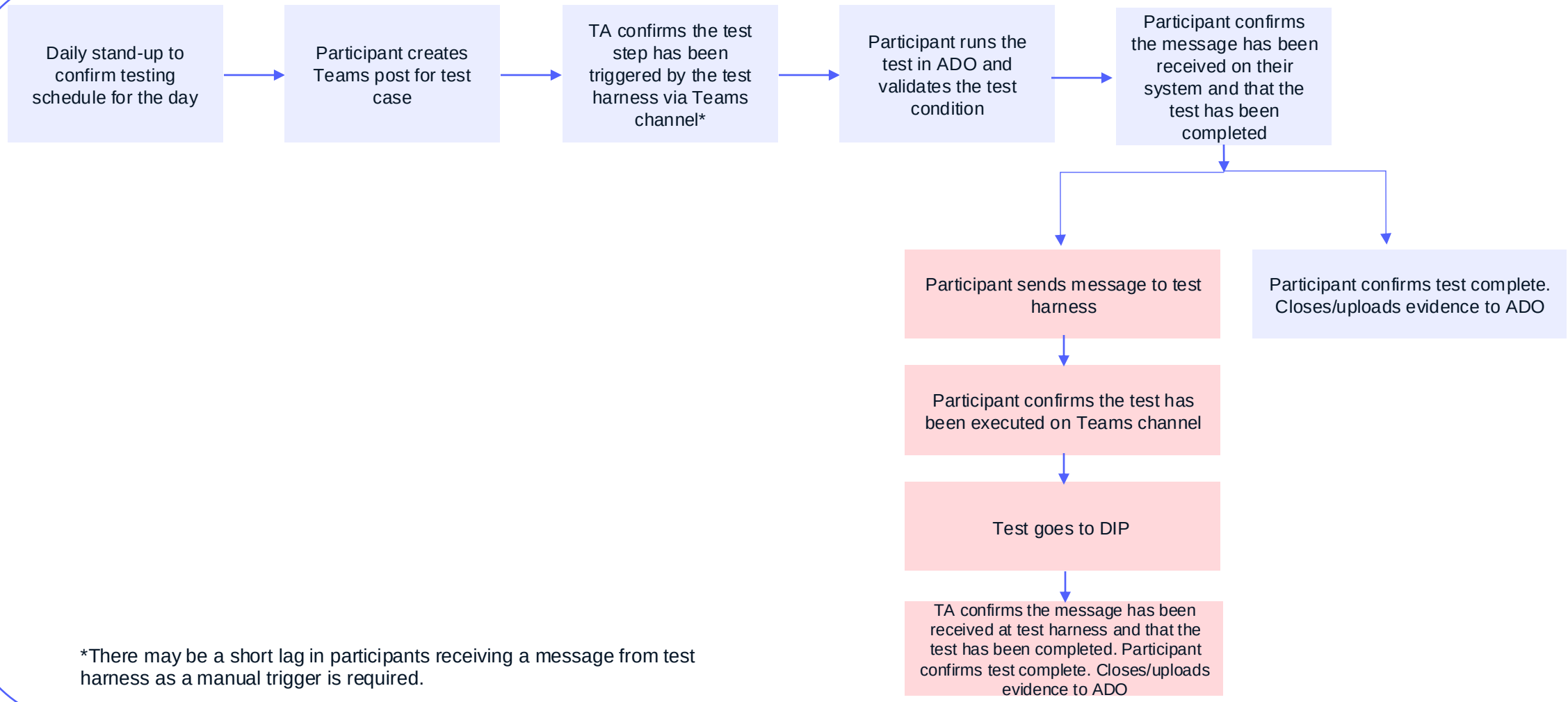
*There may be a short lag in participants receiving a message from test harness as a manual trigger is required

Overview of the testing process

Potential Path 1

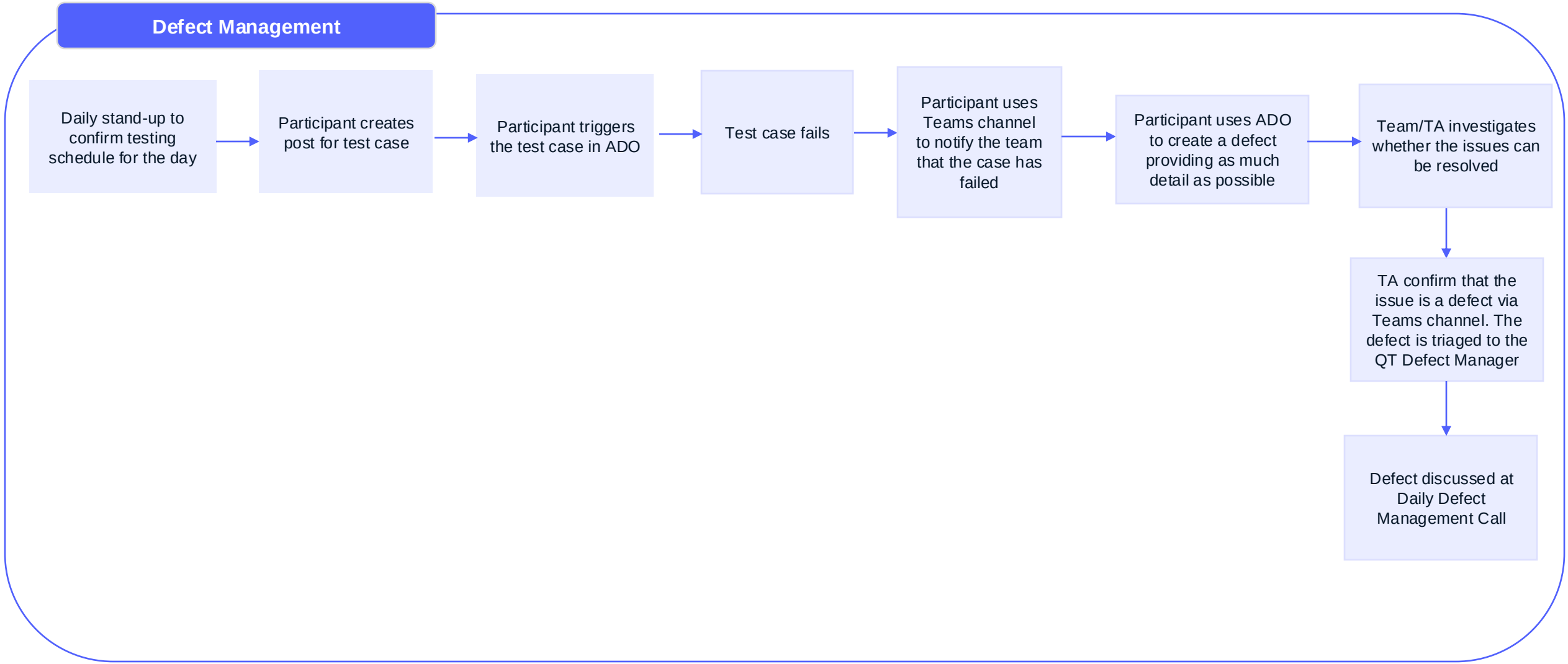
Potential Path 2

Scenario 2 – LDSO QT team trigger first step of test case



*There may be a short lag in participants receiving a message from test harness as a manual trigger is required.

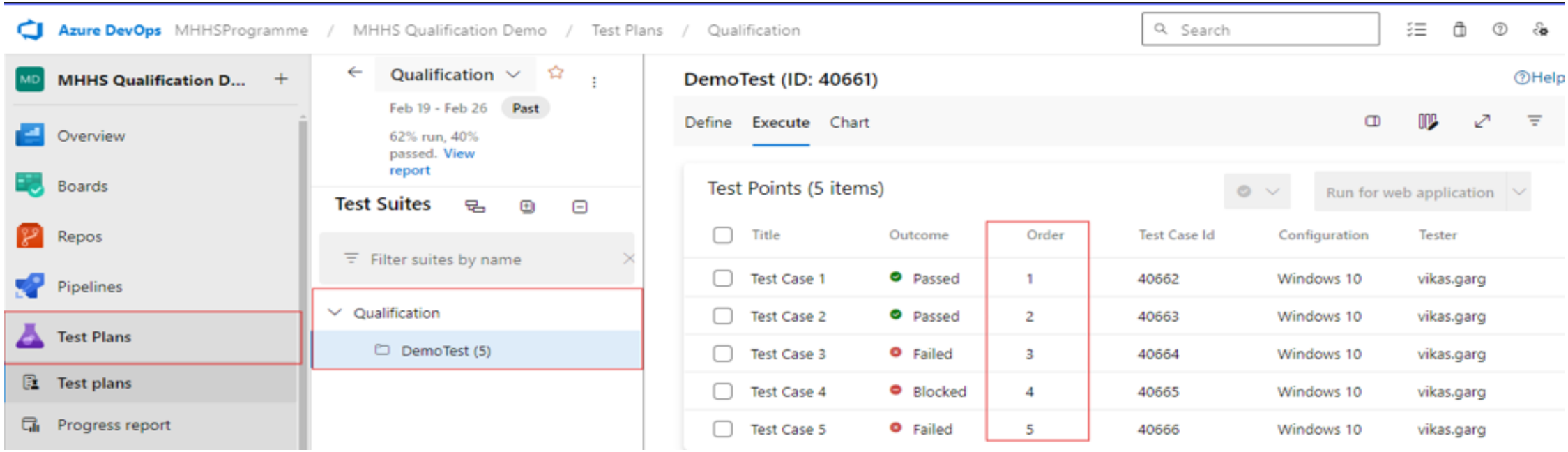
Overview of the testing process- Defects



You can view the order of allocated test cases in ADO by:

1. Opening the “Test Plans”
2. Clicking on the “Test Suite” to be executed
   - ➢ The order will be displayed in the execute and define view as highlighted below

Note: Please do not update the test case order, this test case order will be pre-populated for each ADO instance and will then be maintained by the QT Coordinator.



Supplier MPIDs

- To support Change of Supplier during Test Execution there are two dummy MPIDs. ‘MHHS’ will be used as the Outgoing Supplier and ‘MHHX’ will be used as the Incoming Supplier.

Outgoing Supplier - 'MHHS’

- The Non-SIT LDSO Qualification Test Data Team will create and send CSS2860 messages to the LDSOs prior to the start of Test Execution to change the Supplier in the LDSO systems.

Incoming Supplier – 'MHHX’

- Prior to running LDSO QT Test scenarios that involve a Change of Supplier the Non-SIT LDSO Qualification Test Data Team will create and send CSS2860 messages to the LDSOs to change the Supplier to the Incoming Supplier in the LDSO systems.

Agent MPIDs

- Agent MPIDs will be changed to Dummy MPIDs for the Test Harness during Migration. For Tests that involve Change of Agent ‘MHHS’ will be used for Outgoing Agents and ‘MHHX’ will be used for Incoming Agents. During Migration the ‘MHHS’ MPID will be used.

Reverse Migration MPIDs

- LDSOs will need to use the RECCo Test MPID ‘CIDC’ for reverse migration. This Test MPID is not MHHS qualified in ISD and this is required for the Reverse Migration scenario.

Test Data

LDSO QT Test Harness:
The following MPIDs, Roles and DIP IDs will be used by the LDSO QT Test Harness:

Market Participant ID	Market Participant Role Code	DIP Participant ID	DIP Market Role	Effective From Date {MP2DPM}
MHHS	O	1195000001	ADS	01/09/2024
MHHS	L	2695000001	EES	01/09/2024
MHHS	R	2595000001	LDSO	01/09/2024
MHHS	G	1995000001	LSS	01/09/2024
MHHS		1595000001	MDR	01/09/2024
MHHS		1895000001	MDS	01/09/2024
MHHS	T	1095000001	MSA	01/09/2024
MHHS	S	1295000001	MSS	01/09/2024
MHHS	P	2295000001	REGS	01/09/2024
MHHS	N	1495000001	SDS	01/09/2024
MHHS	Q	1795000001	UMSDS	01/09/2024
MHHS	3	1695000001	UMSO	01/09/2024
MHHS	G	2195000001	VAS	01/09/2024
MHHS	X	2395000001	SUP	01/01/2024
MHHX	O	1195000002	ADS	01/09/2024
MHHX		1595000002	MDR	01/09/2024
MHHX		1895000002	MDS	01/09/2024
MHHX	T	1095000002	MSA	01/09/2024
MHHX	S	1295000002	MSS	01/09/2024
MHHX	N	1495000002	SDS	01/09/2024
MHHX	Q	1795000002	UMSDS	01/09/2024
MHHX	X	2395000002	SUP	01/01/2024

Migration of legacy MPANs

- All legacy MPANs involved in test execution must be migrated to MHHS arrangements before test execution can begin.
- Change of Service Forward Migration – metering and data processes and associated test cases will be used to migrate MPANs - BP3 and BP2 FM_TS_1_TC_1_2_3_4_5_6_7.
- A test case only needs to be run once to provide test evidence, but it can also be used to aid in transitioning MPANs between legacy and MHHS state.

Scheduling

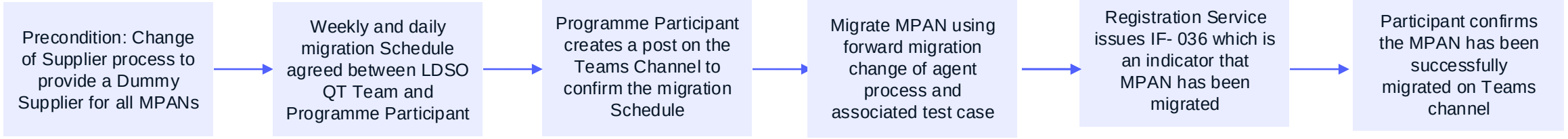
- A block of MPANs can be migrated prior to functional or non-functional testing.
- Programme Participants can choose between migrating of all MPANs in one go or small number of MPANs on ad hoc basis as required during test execution.

Process

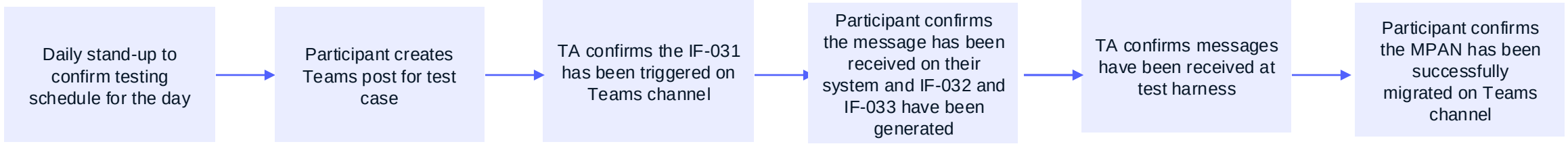
- Programme Participants can migrate MPANs at their own pace, however if migration of MPANs is performed in a bulk, it shouldn't take more than 3 weeks.
- Programme Participant to agree with LDSO QT Team a weekly and a daily migration schedule, i.e. number of MPANs to be migrated each day.
- Prior to 6th Dec, Programme Participants to confirm that data has been uploaded on their systems, CSS messages and dummy data should be included in the data upload to support Change of Agent processes.
- Follow steps in the forward migration test case. As a first step, LDSO QT Team will issue a service appointment –IF-031 request using the test harness tool.

Migration of Test Data

Migration Steps



Forward Migration Change of Agent



Use of IF-047s in Qualification Testing

- Receipt and processing of a PUB-047 is a requirement in both Non-SIT LDSO and Non-SIT Supplier and Agent Qualification Testing
- In both Non-SIT LDSO and Non-SIT Supplier and Agent Qualification Testing, Central Settlement Systems and publication of ISD is being simulated by a Test Harness
- Avanade has confirmed that the DIP can support multiple Central Settlement Systems but can't route traffic between them
- However, the staggered start times of Qualifying Parties in Qualification Testing will **require sending of multiple IF-047s which will be received by all DIP Users** in the UIT environment not matter which test harness set it

If receipt of a PUB-047 is likely to cause a Qualifying Party problems (e.g. trigger an automated ISD load), the Qualifying Party can disable receipt of PUB-047s using their DIP interface (once they have passed the PUB-047 Qualification Test Case).

DIP message tracker

An additional UI is available for use within the DIP to allow participants to view messages sent into and out of the DIP.

DIP message tracker- Sent messages UI

- LDSO, when sending or receiving a DIP Message' should use the DIP Message Tracker to check whether or not a message was sent or received successfully by the DIP.
- This feature is provided to assist Participants with confirming the status of messages, which is expected to be useful for supporting both testing and live service activities.
- The use of the DIP Message Tracker is expected to be a useful tool in support of Participants providing evidence as part of raising defects for any missing messages i.e. including UI screenshot /analysis with the defect.
- All Participants with Log-In accounts to the DIP Portal have access to this new feature.
    - Where additional accounts are required then these can be set up by each Participants admin user.

For further information please refer to the following guidance that can be found on your Teams channel in the general folder

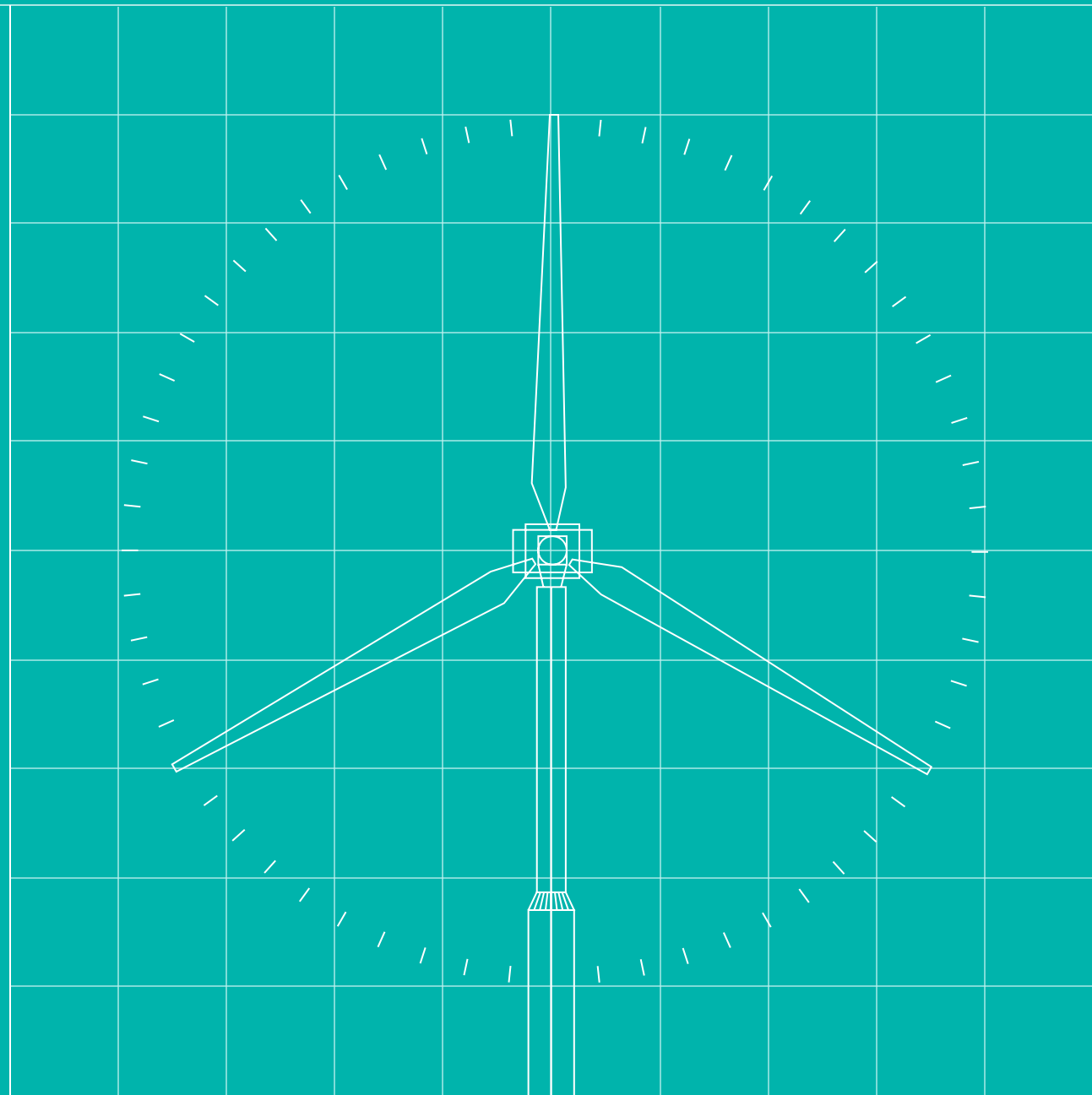
DIP message Replay Functionality

An additional UI is available for use within the DIP portal to provide receiving parties an option to replay messages

- There is an option to replay Messages is now available via the DIP portal. The message receiving party can use the replay functionality.
- This feature is provided to assist Participants to receive messages by replaying if for some reason the message was lost due to system failure (alongside several other scenarios). The replay functionality will enable participants to retrieve messages from DIP archive.
- Current limitation in the UIT environment is only messages sent within 5 calendar days before current date can be resent/replayed.
- All Participants with Log-In accounts to the DIP have access to this new feature. Where additional accounts are required then these can be set up by each Participants admin user.
- If a LDSO wants to use this feature in QT, we ask that you first discuss this with the LDSO QT to confirm it is appropriate to use it (please note this will need to be a swift action to avoid the 5-calendar day period timing out).

For further information please refer to the following guidance that can be found on your Teams channel the General Folder

Test evidence



Introduction to test evidence capture requirements

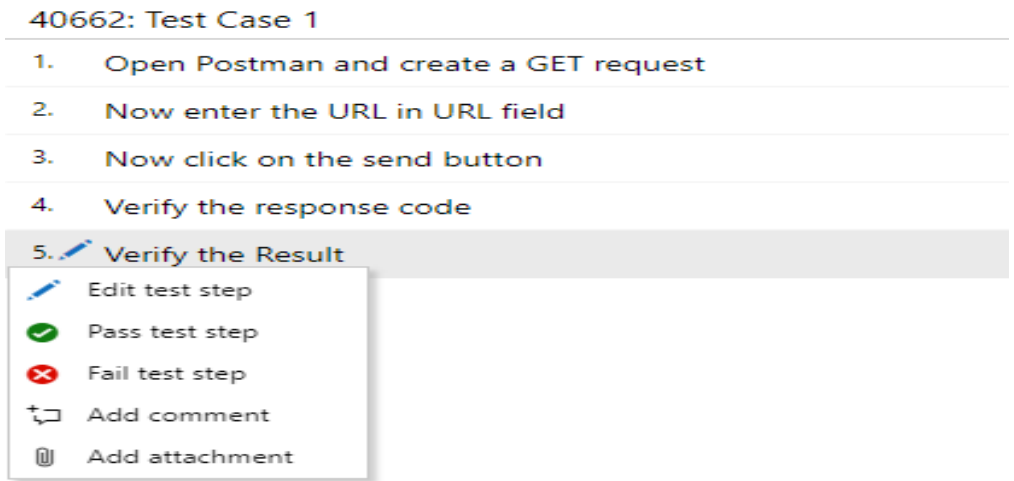
- Participants executing QT will need to provide test evidence for their test steps in ADO.
  - In the test cases, we highlight what steps will require test evidence.
  - This evidence will be used during test assurance to validate actual vs. expected results of the tests.
  - Test evidence is also critical for triaging defects.
- Test evidence should be captured and uploaded into ADO at the point of test execution, or no later than the end of the business day.
  - Any exceptions to this timing of evidence upload will need to be specifically agreed with the QT Manager.
- Screenshots of the test system, messages, and/or electronic logs of messages must be provided as appropriate and should be annotated with the Test Case reference and test step they apply to.
- The evidence is standard for any test assurance process and should be similar to participants own quality gate and internal audit.
- Migration – Will be run multiple times to upload data to the environment. Participants will be required to provide test evidence for its first successful operation. We will not need post-trial evidence.

When submitting evidence in ADO, MPANs must be redacted.

Instructions for how to capture test evidence in ADO

When you execute a set of test case steps allocated to your role you must capture evidence for those test step **in a word document with annotations** (See Template Attached / Embedded below)

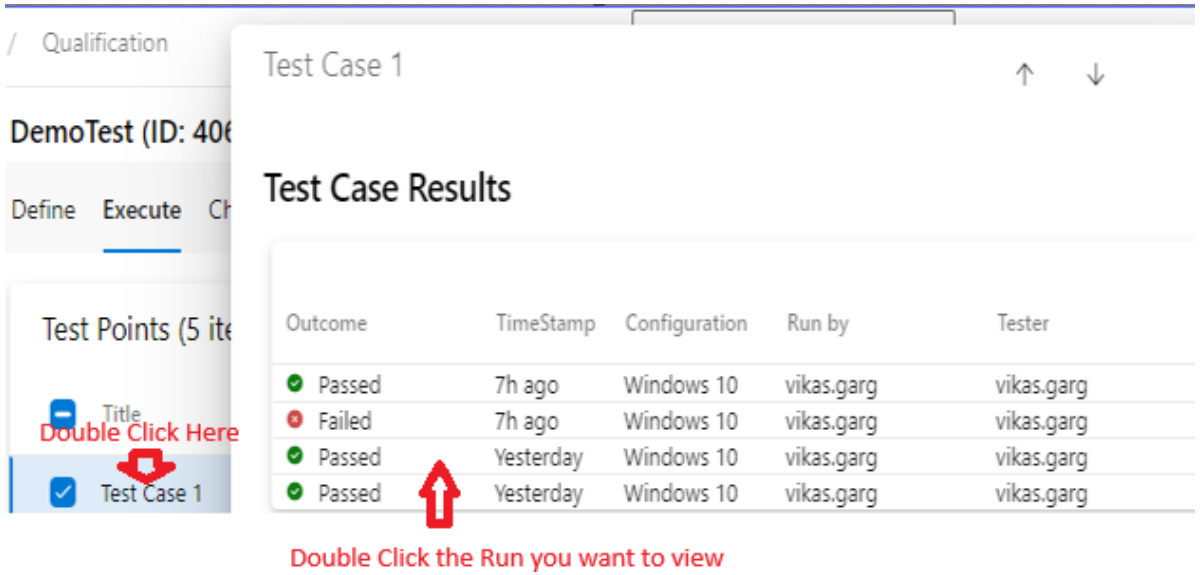
1. Ensure any payload sent is added to the evidence document as a .txt file
2. Ensure that the response message from the DIP is added to the test case evidence pack as a .txt file
3. Ensure the test data MPAN reference number (**not actual MPAN, this must be obscured within all evidence**) is added to the first step as a comment to ensure all teams are aware of the test data in use
4. The test evidence pack should be attached to the final step from the allocation to your role. Each step's evidence should be annotated as per the template example and screenshots, or log files should be added
5. Once the steps are executed and the evidence is captured in the word document, please add evidence to a step in ADO by right clicking on that step and use the 'Add attachment' option shown below



QT Template

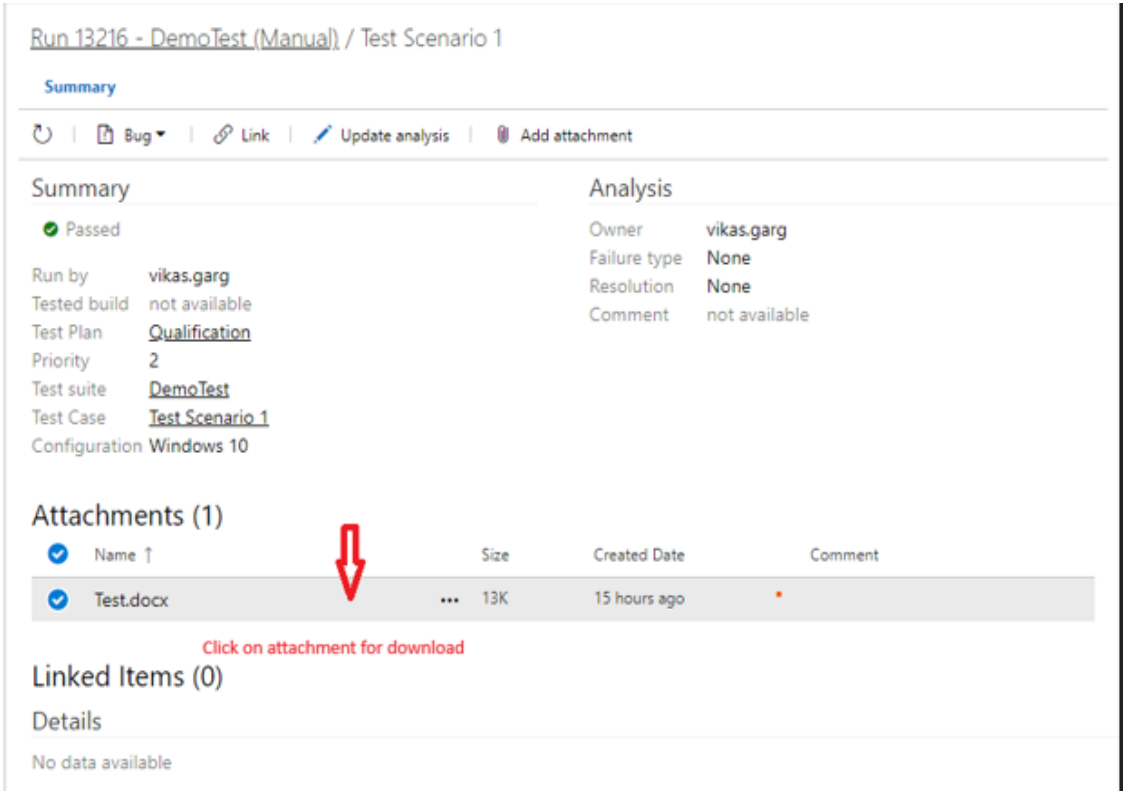
1. Viewing previous runs

- Find the test case in ADO test plans
- Double click the test case to view runs
- Double click the run you want to view



2. Downloading attachments

- The test run window will open with all steps visible
- You can download any attached files



Additional test data guidance

Data security

All test data and evidence should follow data privacy guidelines. This includes obfuscation for the following items:

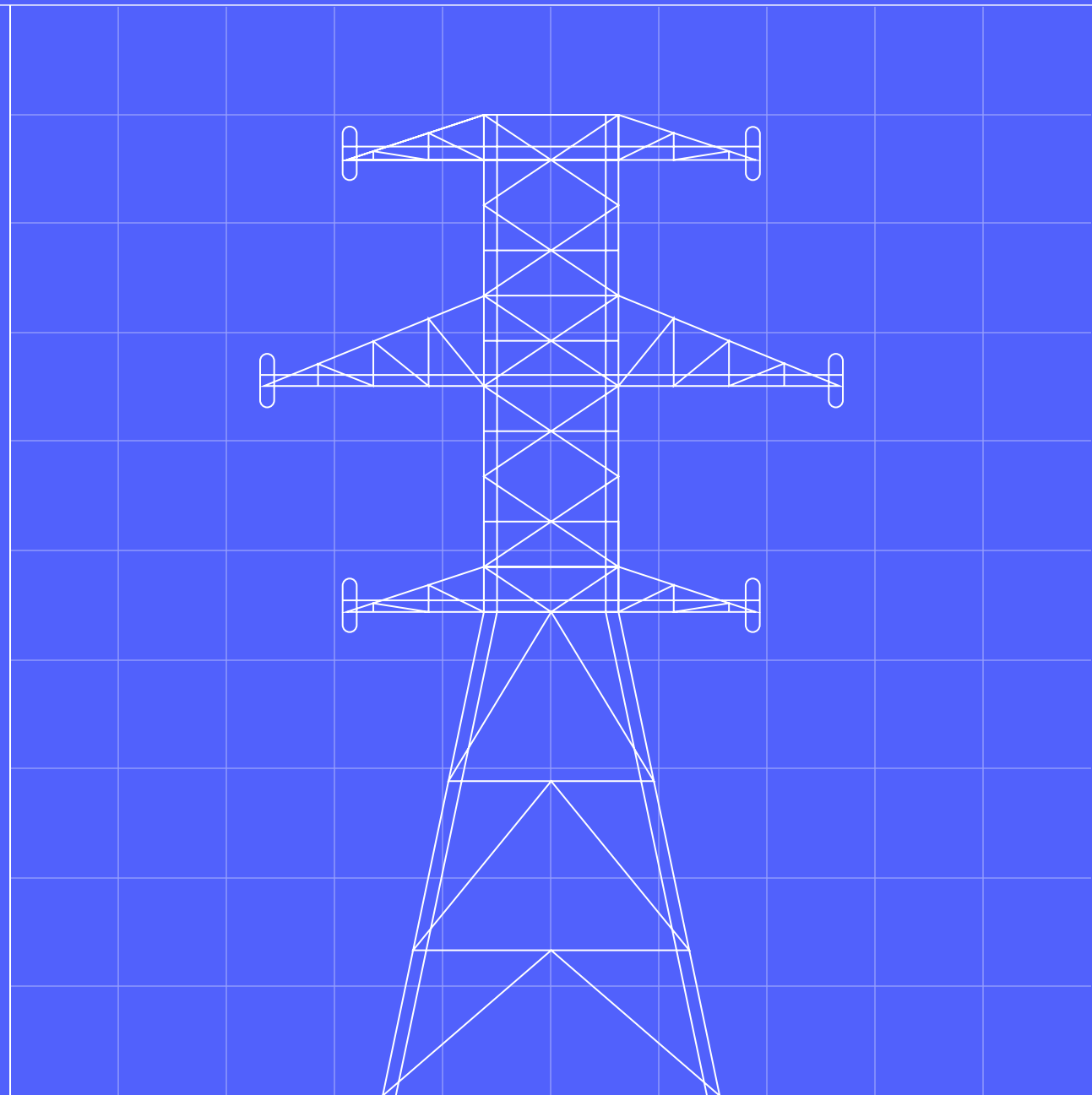
MPANs	Customer Addresses (inc. street no., street name and postcode)	Meter IDs	Meter Serial Numbers

- Please note that during non-SIT LDSO QT these items **should not** be shared across any communication channels such as email, Teams or SMS, ADO.
- MPANs should always be referred to by the MPAN reference ID. Guidance on how to assign an MPAN reference has been provided, please contact LDSO_QT@mhhsprogramme.co.uk if you have not received this email.
- An internal MPAN reference number will be allocated to MPANs within the Test Harness – this reference will be prefixed with 'MPAN' and will be different to the MPAN reference ID provided by the LDSOs
- These items can be shared over the programme SFTP to MHHS Programme participants.

Note that during assurance review, if it's identified that an MPAN has not been redacted, the PP that has uploaded the information with the MPAN could be asked to:

1. Download all test case evidence from the test run
2. Request ADO team to delete and re-upload a new version of the TC
3. Then re-upload all evidence into the new run and reinstate the run status

Test exit



Test exit – work off items and test completion

Work off items

Guidance:

- Work-off items will need to be agreed with LDSO QT Team and code bodies
- If LDSOs are aware of any defects that they are unlikely to be able to fix prior to end of QT, we would strongly advise engaging with LDSO QT Team and Code Bodies as early as possible to flag these issues
- Please note: If Code Bodies do not agree to a work off plan, then the party will be blocked from exiting QT.

Template and instructions:

Work off plan template

Test completion template

Guidance:

- The objective of the Test Execution Completion Report is to provide a complete report of QT for the MHHS solution, specifically:
  - ✓ Provide information on defects identified during QT test phase and any outstanding defects
  - ✓ Provide enough information for Code Bodies to instil confidence that enough testing has been carried out to a sufficient quality to meet QT exit criteria.

Template and instructions:

Qualification test completion report

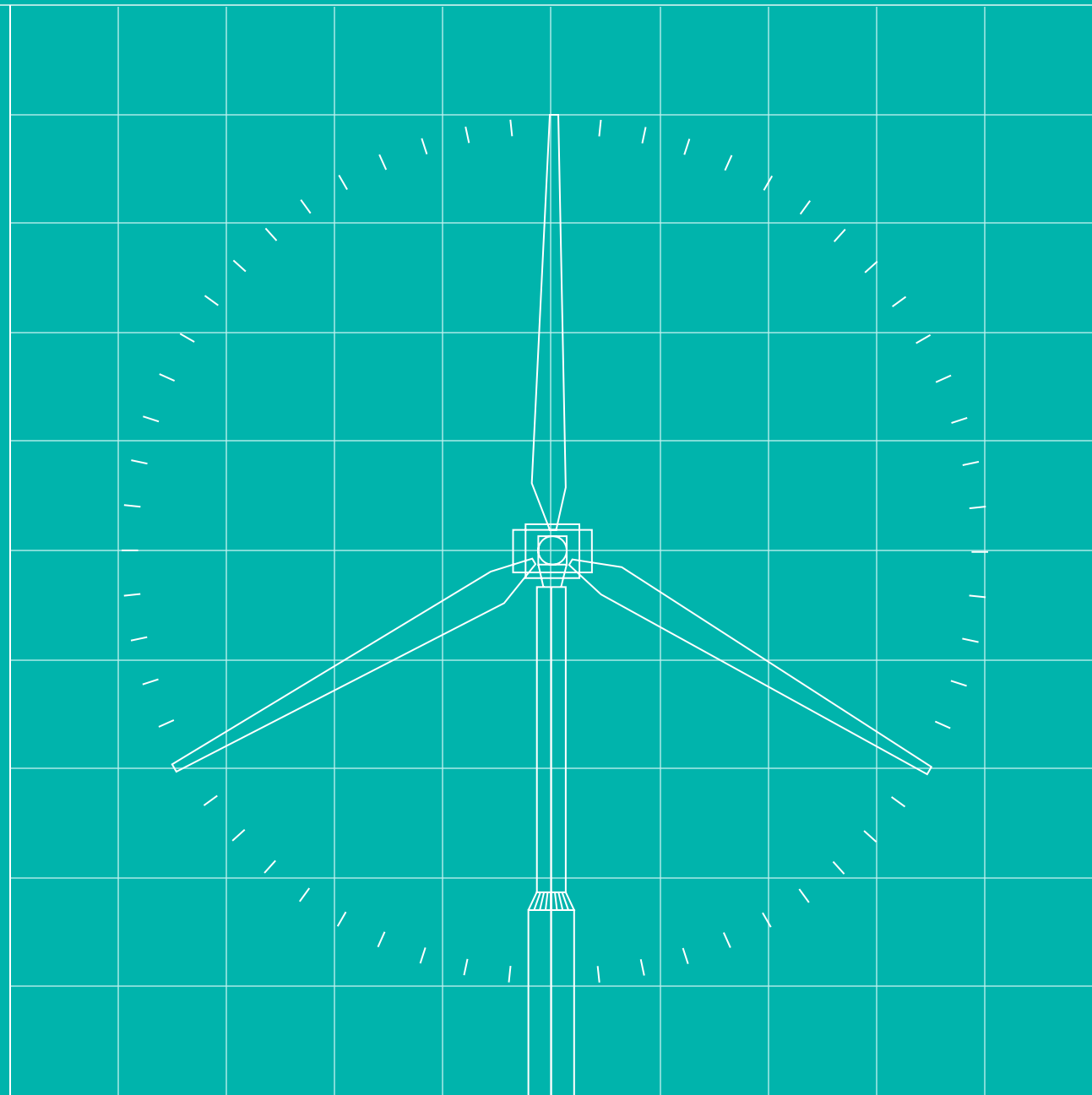
Test exit – criteria

To exit Qualification Testing, you will need to demonstrate that the following criteria have been satisfied:

- No outstanding Severity 1 and Severity 2 Defects.
- 100% test execution coverage, including functional, non-functional, migration and operational testing with approval from Code Bodies for any de-scoped/ failed test cases prior to QT completion.
- Sev3 and Sev4 defects that cannot be resolved during QT are documented with impacts assessment and a work off plan by the Programme Participant, reviewed by the MHHSP LDSO QT Team and agreed with Code Bodies ahead of QT completion.
- Test results and evidence has been captured in the test management tool and has been assured by MHHSP LDSO QT Test Team.
- LDSO QT Completion Report including work off reviewed by MHHSP LDSO QT Team and submitted to Code Bodies.
- Completion of any PIT work-off plans or deferred PIT activity (as agreed with Code Bodies).

There will be no formal exit gate for LDSO QT as the submission of LDSO QT Completion Report to Code Bodies will mark the end of test execution phase.

Defects



How the Programme manages defects

The process map opposite articulates the MHHS Programme's **Defect Management Process.**

Triage:

- When a defect is raised by the QT participant, the defect will be reviewed by the QT Defect Manager.
- Defects will be triaged by the Qualification Team to determine which 'resolving team' is required to resolve the defect.
- This will be determined at Daily Triage Meetings.

Assignment:

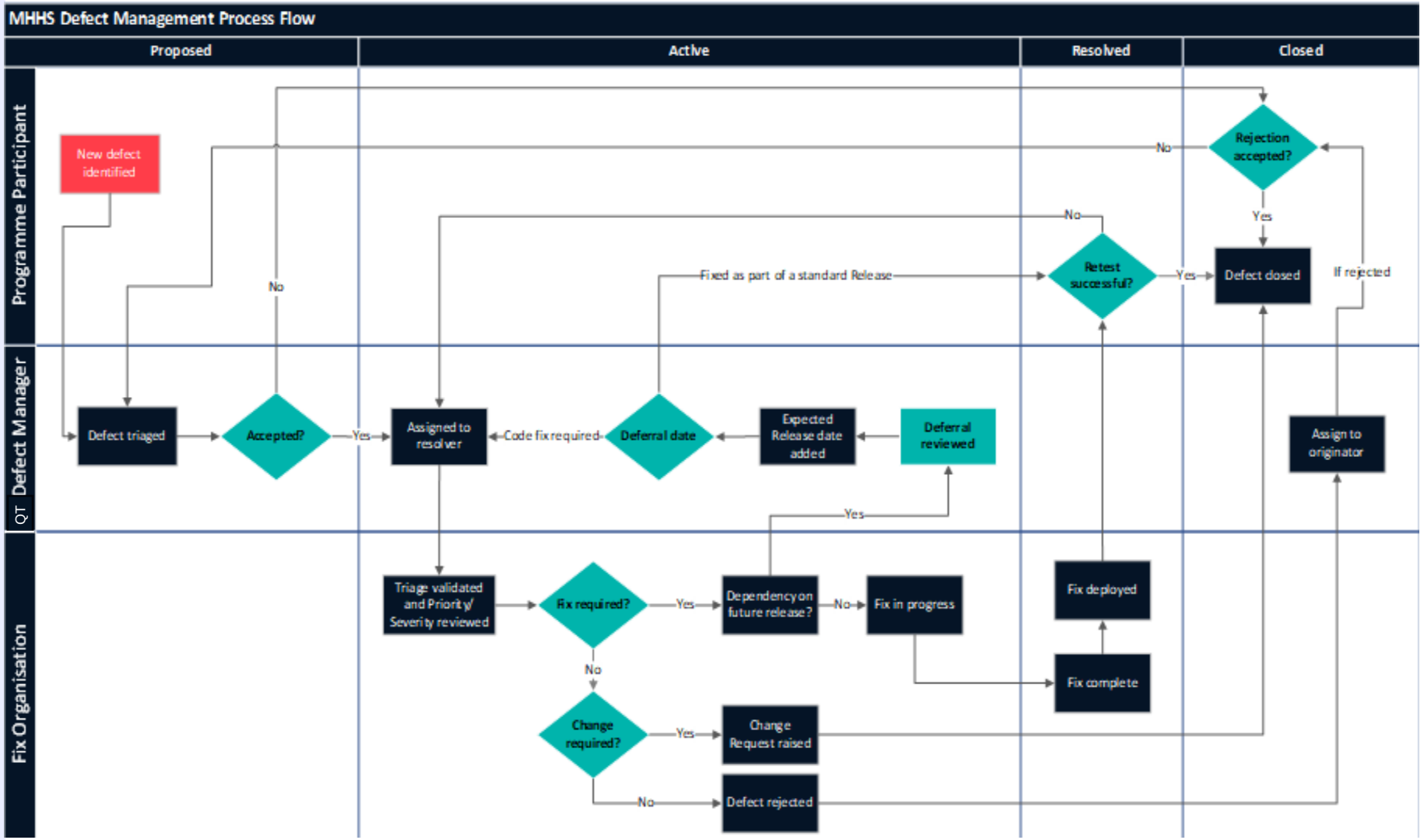
- Defects will be assigned to one of the Resolving Teams. This could be the LDSO if a defect is deemed to be an internal rather than central defect.

Resolution:

- The responsible Resolving Team will undertake Root Cause Analysis to determine how to resolve the defect.
- When resolved, the defect status will be changed. The final status is 'Ready for Retest'.
- Defects are then bundled into a Release, and 'Request for Change' is submitted to the Qualification Test Team for Release Approval.

SLAs

- Defects resolutions are subject to SLAs. They begin when the defect is raised and allocated by Triage and end when it has been deployed.
- Please refer to the Defect Management Plan, section 8.3 for details of the SLA Response / Fix Times applicable for Central Part defects.



1. Defect A is raised at Participant instance level and replicated to the master instance;

2. Defect A is triaged (driven by master instance not identifying Participant instance) and by consensus of opinion, is believed to impact Participant 2 and Participant 4;

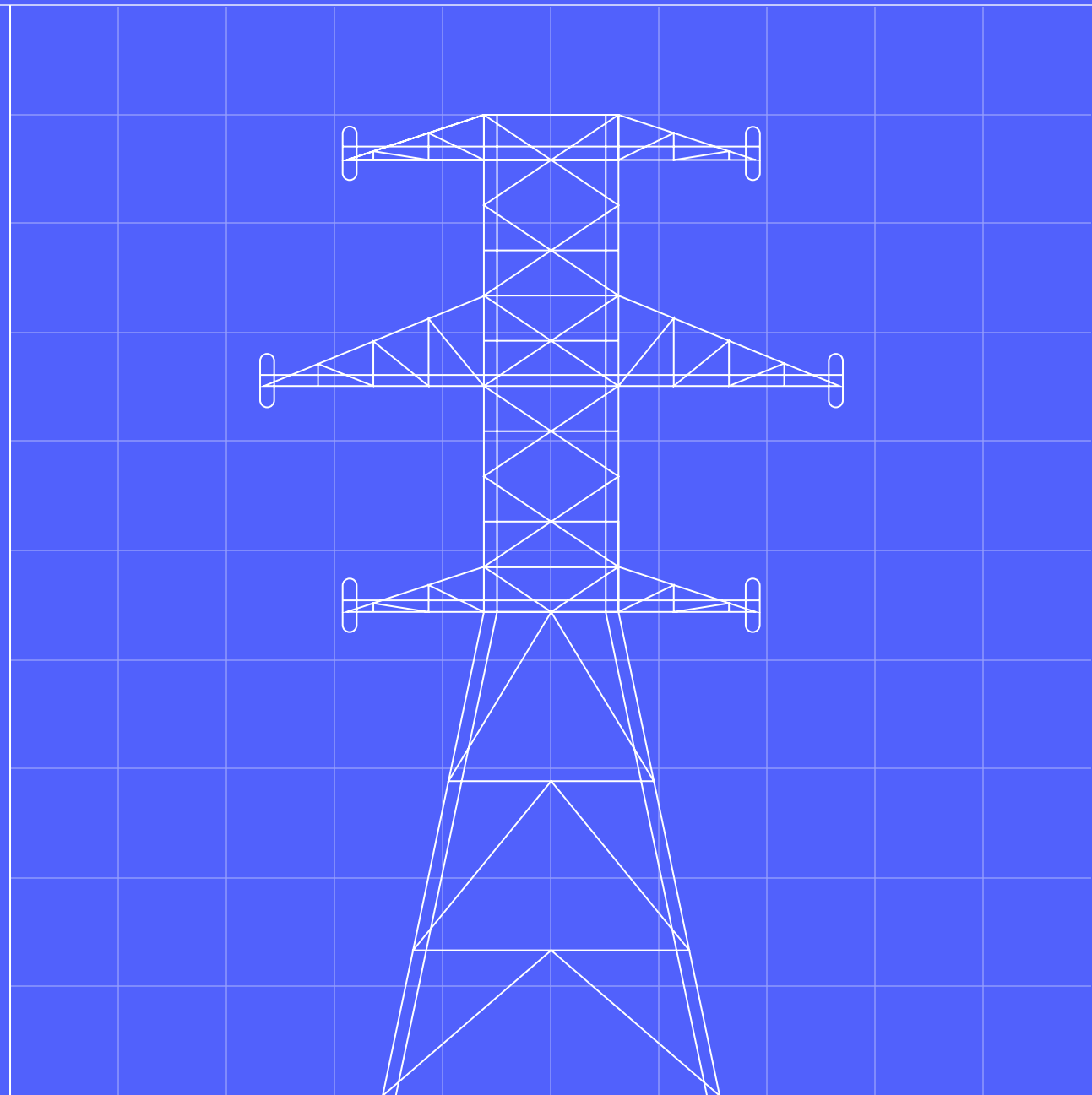
3. The Parent, (Defect A) is copied manually into instances Participant 2 and Participant 4.

Outcomes:

- No failed tests at Participant level are orphaned

- ADO recognises which is the Parent and which are the Child defects. This will enable to provide Reporting on Parent / Child defects.

Release management

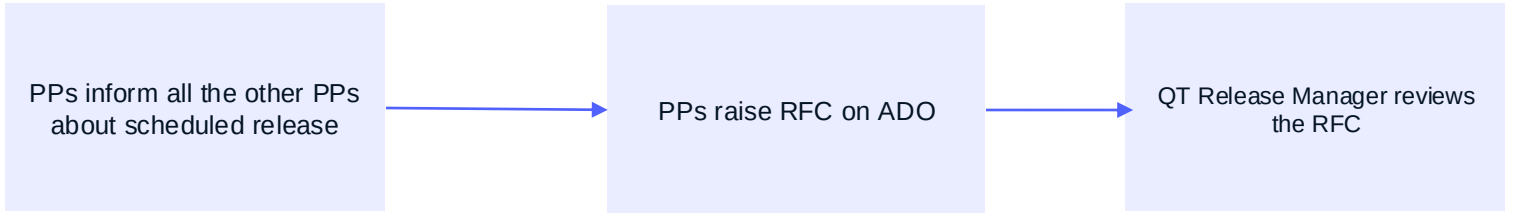


Release management – Non-Central Parties

All Programme Participants (Non-Central Parties) should raise an RFC for each of their releases. This is an FYI rather than 'asking permission'.

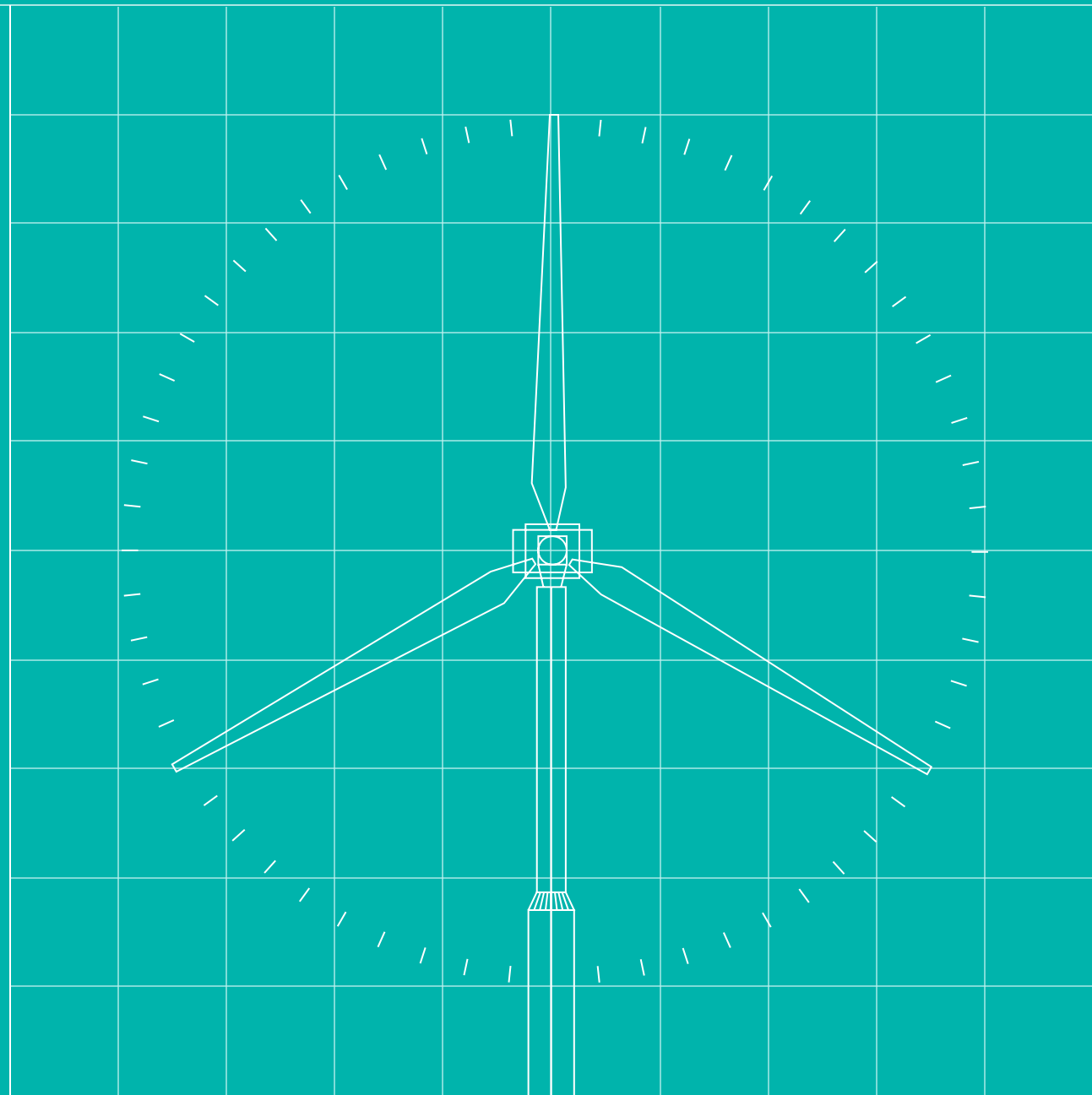
Release Type	Definition	Frequency	Notice Required (Central Parties)	RFC Required in ADO
Major	Release of software that contains significant additions of functionality	Ad hoc	Several Weeks (Variable)	Yes
Minor	Release of software that contains minor additions of functionality	Weekly	1 Business Day	Yes
Patch	Release of software that bundles defect fixes, for example a scheduled weekly release of defect fixes.	Weekly	1 Business Day	Yes
Emergency	Release of software which contains a fix for a blocking testing defect that cannot wait until the next scheduled Patch Release	Ad hoc	1 hour	Yes

Participant Raising RFC



Note: central parties would need to raise a RFC, which would go through an approval process. See slide 52 in the Appendix for further details on the RFC process.

Reporting



Governance and reporting

Governance

The LDSO QT Team will monitor progress of non-SIT LDSO QT participants and adhere to the agreed decision-making and escalation principles. Any issues related to Central Systems will be raised through MHHSP governance.

An overview of the governance structures in place:

- ✓ Regular bilateral sessions with participants to discuss testing progress and any issues. Any escalations will be reviewed in line with our escalation route, which can be found on page 50 of this document.
- ✓ LDSO QT participants should communicate with the LDSO QT Team /Code Bodies if they are facing an issue which is blocking their testing, or they have concerns they may not complete testing for the scope of LDSO QT within programme timelines.
- ✓ The LDSO QT Team would then work with participants and Code Bodies on mitigation actions to overcome blockers in testing to support participants to complete LDSO QT.

Reporting

Regular reporting will enable us to track qualification testing progress and support you to manage any risks or issues.

An overview of the reporting requirements:

- ✓ LDSO QT Team will provide regular reporting on the progress towards meeting the entry criteria, milestones as well as the progress of LSDO QT participants.
- ✓ During test execution, ADO will be used for test management and will be used to provide reports on LDSO QT participants' test progress and coverage.
- ✓ ADO will be used for assurance against LDSO QT participants' plans and scope. To support this LDSO QT participants are expected to update ADO on a daily basis.

Engagement during QT

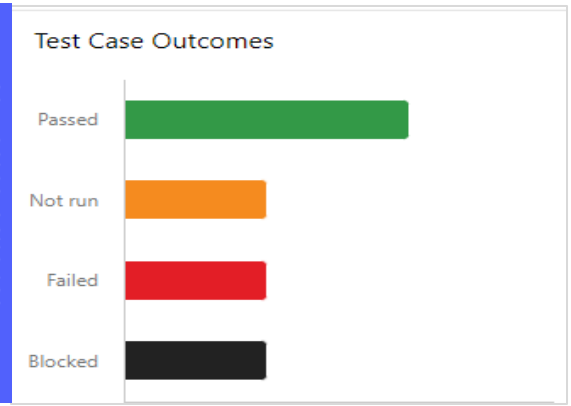
We will continue the regular engagement and governance forums that are in place. These forums will provide you with additional opportunities to discuss qualification testing.

	Meeting	Scope	Frequency
1	Bilaterals	1:1 touchpoints with LDSOs to share updates and discuss progress, risks or issues.	Every 4 – 6 weeks
2	LDSO QT Sub-group	During QT, this forum will also cover: • Overall QT progress • Common issues/blockers • Execution or exit updates	Monthly* **The frequency of this meeting will be reviewed as needed*
3	Qualification Working Group (QWG)	Forum which includes the Code Bodies to discuss the approach and progress of Qualification Testing.	Monthly
4	Qualification Advisory Group (QAG)	Forum to oversee the development, management and delivery of Qualification.	Monthly

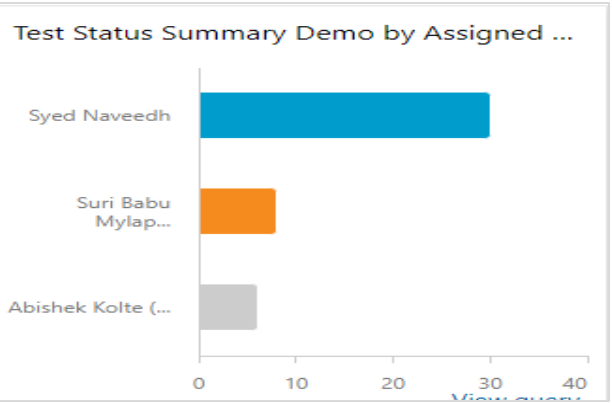
ADO participant test status dashboards

There are a range of dashboards available on ADO that participants can run at any time to summarise test status information. These dashboards will also be available to view on your Teams channel. See here for further guidance.

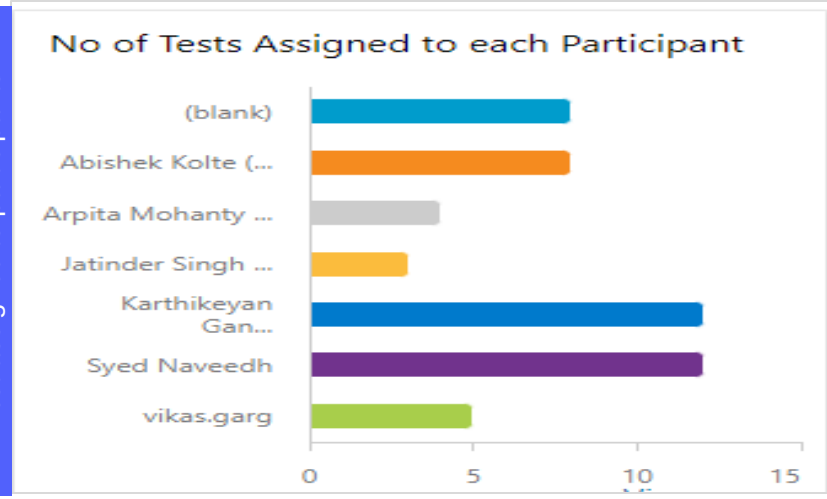
Test case outcomes



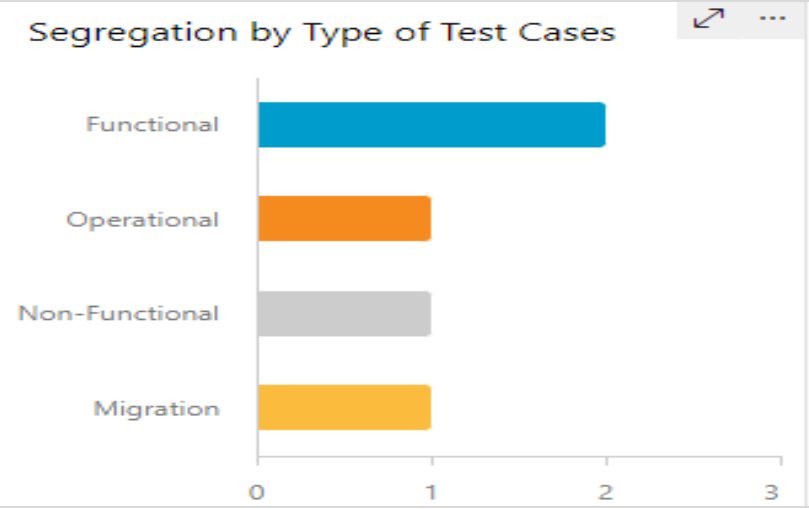
Test status summary



Test assigned to participants



Segregation by test type

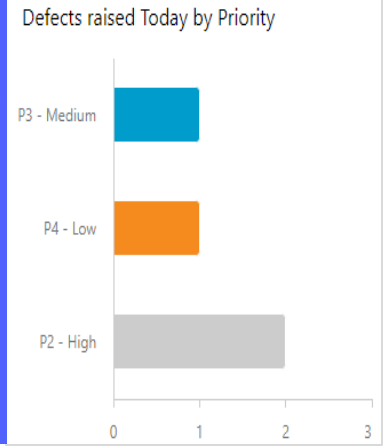


Note: These are screen mock ups have been populated with dummy data.

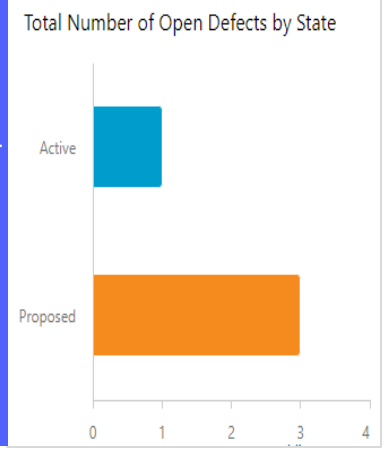
ADO participant defect status dashboards

There are a range of dashboards available on ADO that participants can run at any time to summarise test status information. These dashboards will also be available to view on your Teams channel. See here for further guidance.

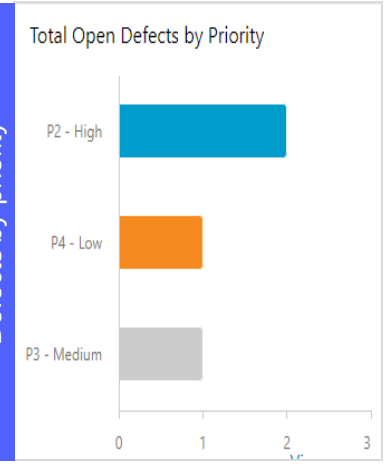
Defects raised today



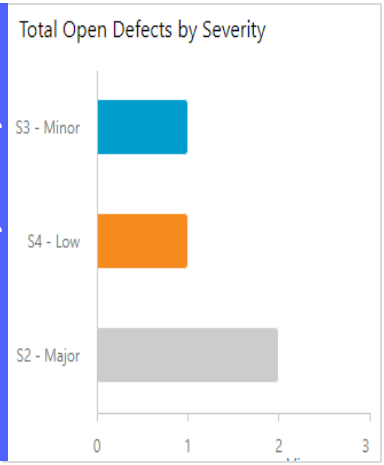
Total defects open



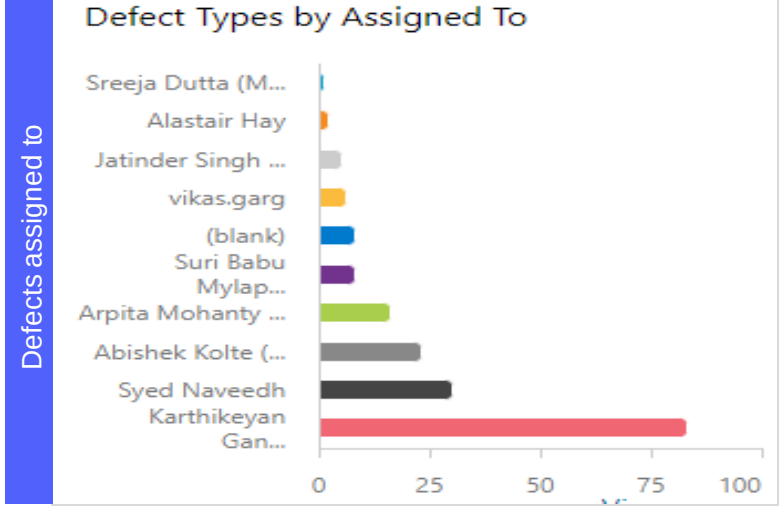
Defects by priority



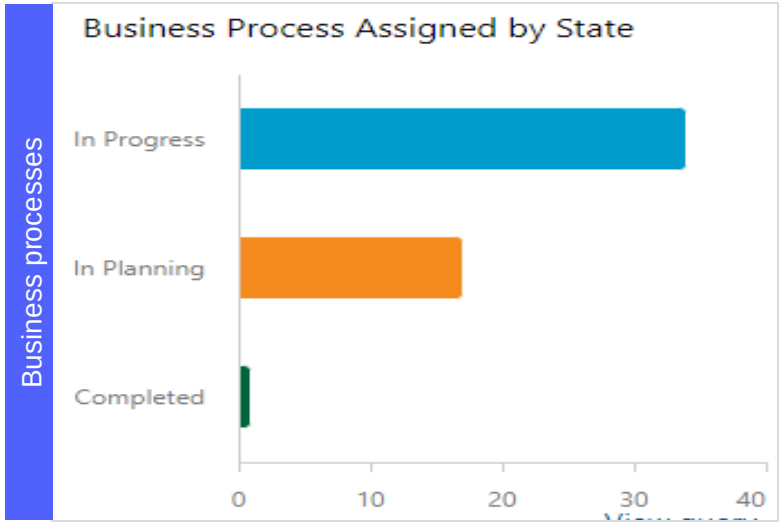
Defects by severity



Defects assigned to



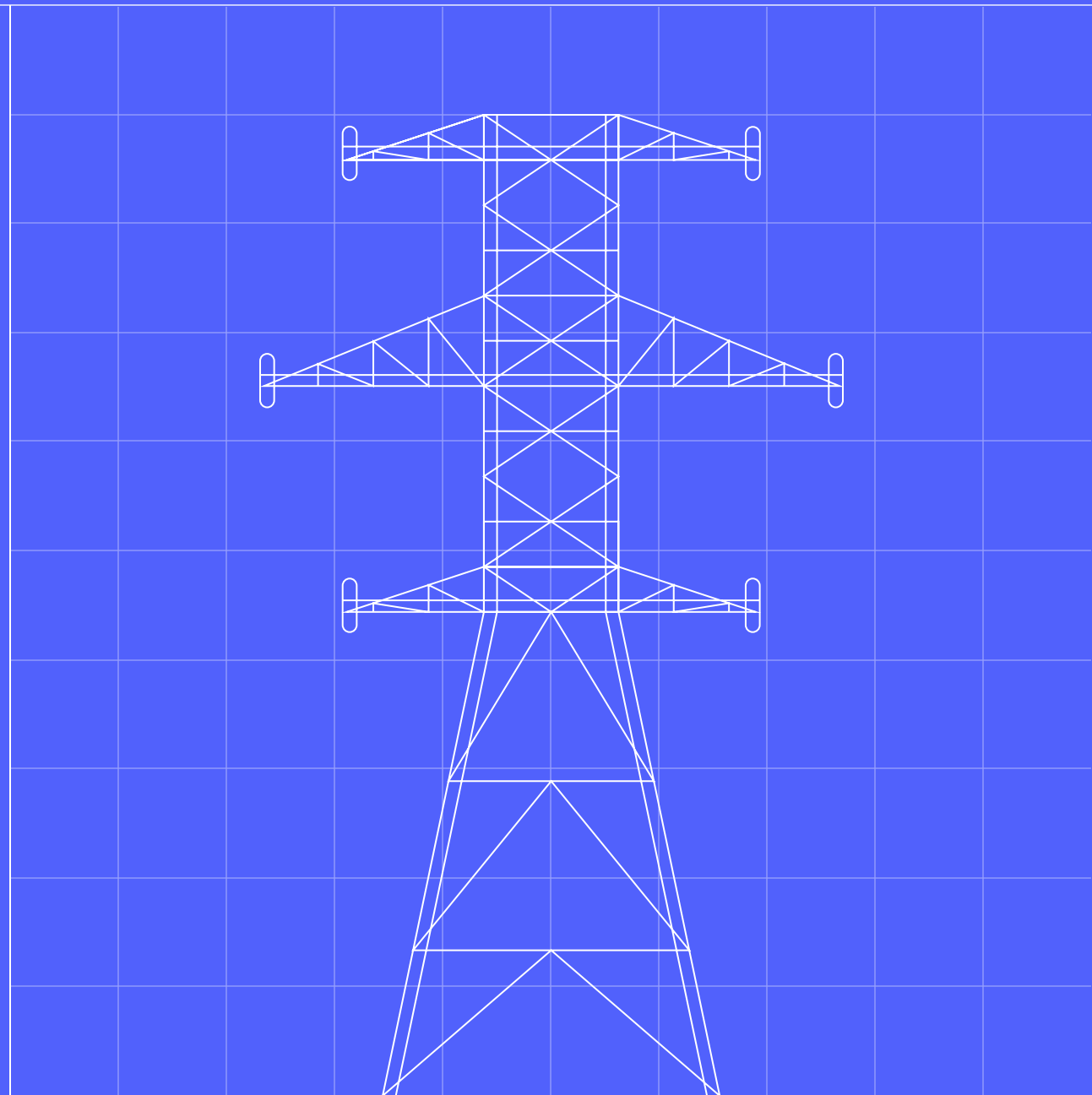
Business processes



Note: These are screen mock ups have been populated with dummy data

MHHS PROGRAMME
Industry-led, Elexon facilitated

Escalation



Escalation – overall process

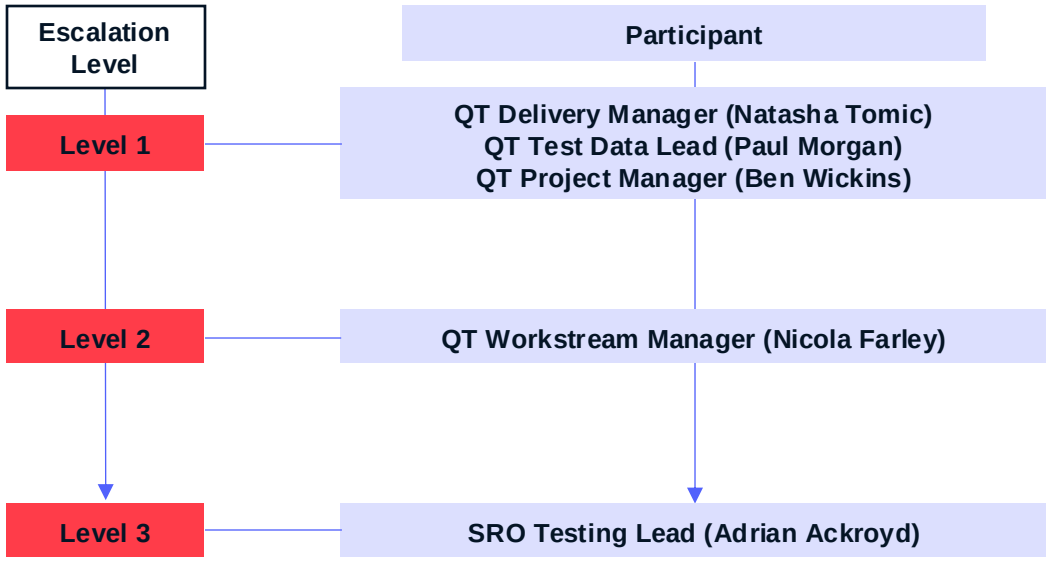
While it is the goal of the Programme to ensure a collaborative and successful approach to Qualification Testing, we understand there may be instances where the Programme and participants are not in agreement. The purpose of the escalation process is to ensure timely and satisfactory resolution that mutually benefits the Programme and participants and allows for Qualification Testing to continue to progress.

In the first instance we urge that Participants attempt to resolve matters with their Test Analyst, however if this can't be achieved, the below outlines the escalation route for participants. Please note: Code Bodies would be informed of escalations but would not be a direct escalation route.

Testing Escalations

A Testing Escalation would trigger in the following circumstances:

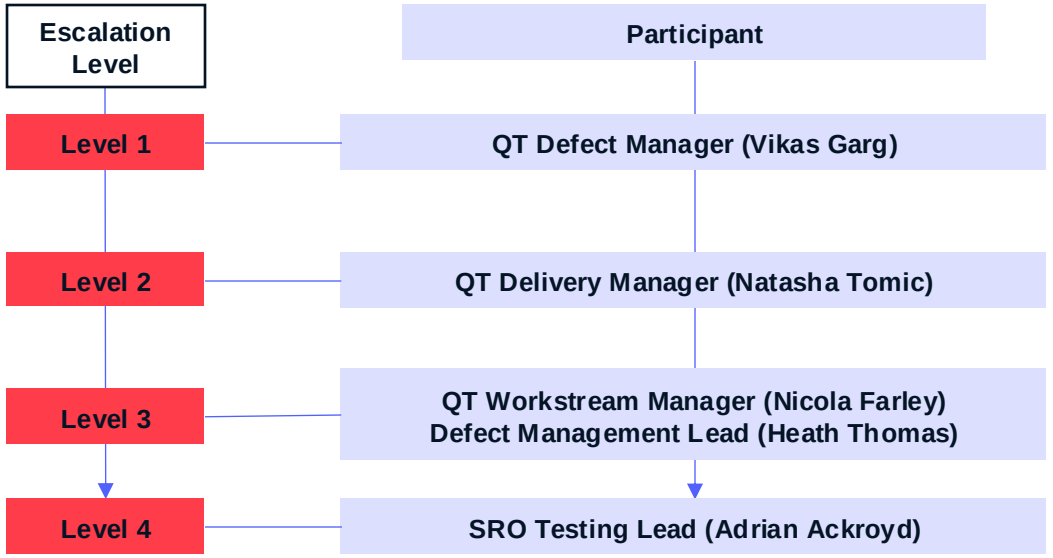
- Test Participant is blocked and requires additional support from the programme to resolve.
- Participant has an internal issue which may impact or delay their test execution completion.



Defect Escalations

A Defect Escalation would trigger in the following circumstances:

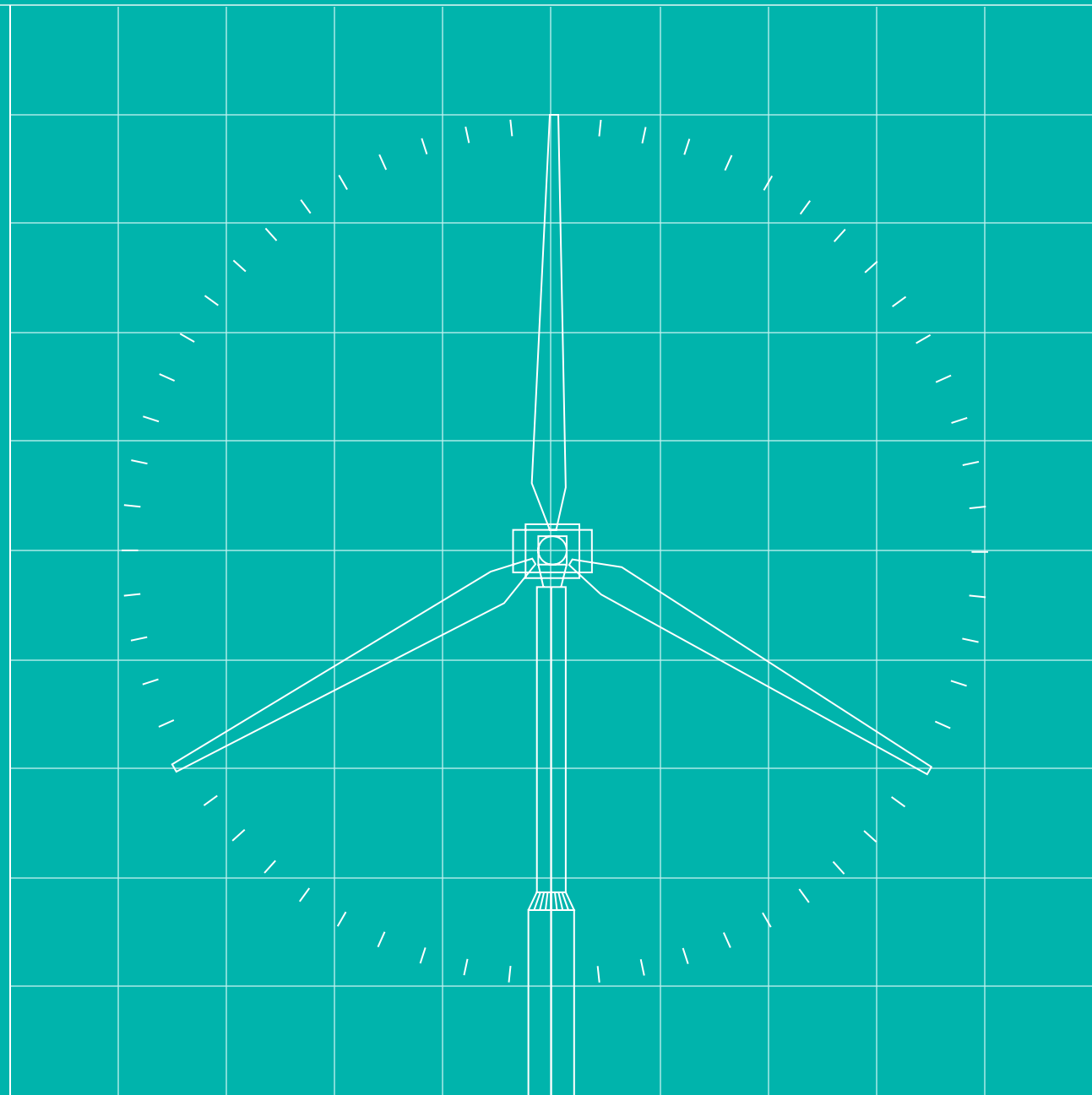
- The Test Participant and/or Fix Organisation response times are longer than target service levels.
- Failure to agree on the Target Fix Organisation; or
- Failure to agree on the defect severity or priority.



MHHS PROGRAMME
Industry-led, Elexon facilitated

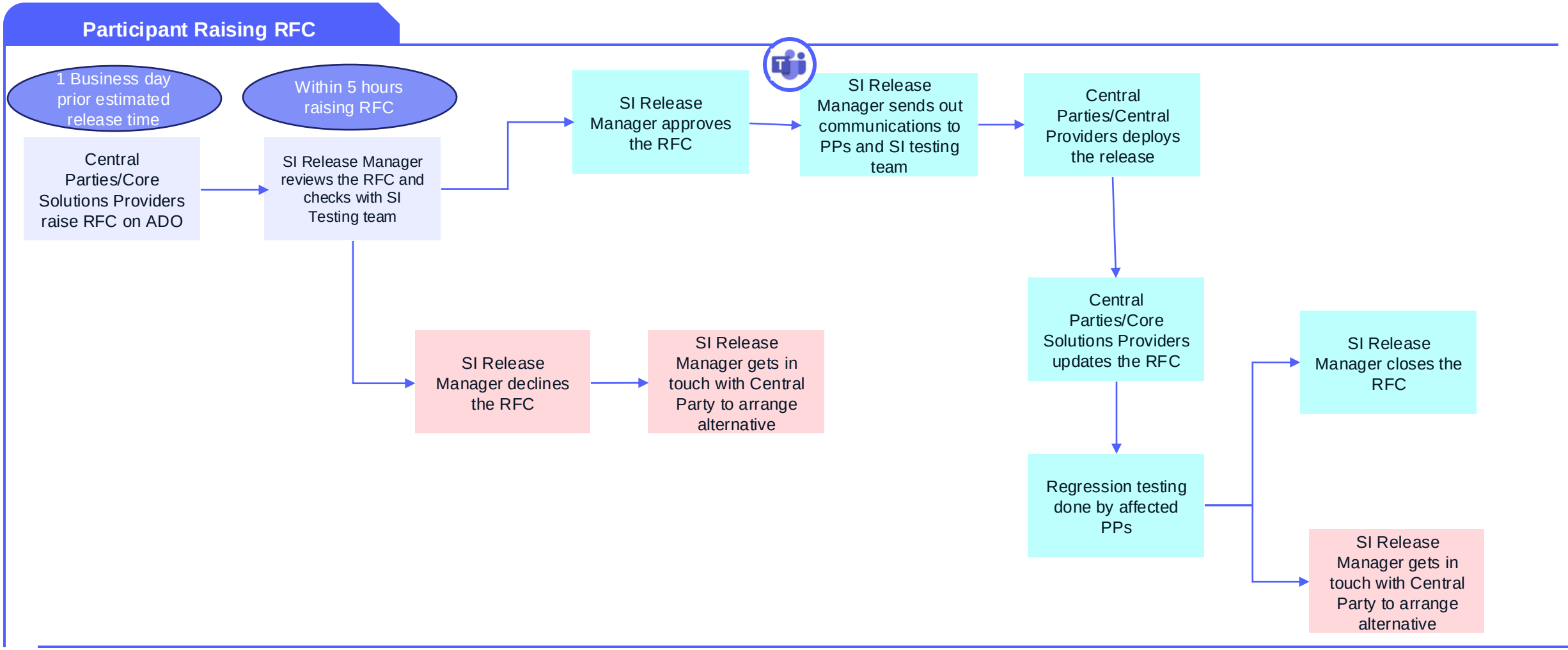
Additional escalation route: if a participant would like to raise an escalation outside of the QT team, please contact the **Programme Party Coordination (PPC) Team.**

Appendix



Release Management – Central Parties

All Central Parties / Central Providers would need to ask permission to the SI Release Manager by raising RFC in ADO. All the other PPs would need to raise RFC to keep the SI Release Manager informed.



Defect classifications and definitions

Defects are assigned a severity based on their impacts to the business. These are as follows:

Severity	Definition
S1 – Critical	A problem that indicates a complete shut-down of a process, such as: •Has no workaround •Affects all users •Affects all system usage activities •Could cause significant loss of revenue •Will cause interruption of a major process
S2 – Major	A problem that is not easily recoverable without significant manual effort: •A workaround would involve a high level of additional user effort •Creates significant operational risk •Affects most users and most system usage activities •Data corruption (recoverable)
S3 – Minor	A problem with a business impact where: •A workaround would involve a moderate level of additional user effort •Creates moderate increase in level of operational risk •Affects significant number of users and system usage activities. Can be recovered from at a later stage without impacting Operational Efficiency
S4 – Low	A minor problem which: •A workaround would involve little additional user effort •Carries little operational risk •Affects a small number of users and small number of system usage activities •Does not impact functionality of the system or cause serious confusion to the user

Further details on the defect management plan can be found here.

Defect classifications and definitions

The following priorities describe the urgency of a fix at the time of submission and are in terms of how the test team is affected i.e. a minor defect may still be high priority if it blocks other tests from being run:

Priority	Definition
P1 – Critical	A problem has occurred that has rendered further testing impossible either at a functional or a team level
P2 – High	Unable to complete test but can continue other tests. Test thread to be completely re-tested
P3 – Medium	Able to complete the test but with significant non-compliance. May not require complete re-testing of the test thread
P4 – Low	Able to complete the test but with minor non-compliance. Will not require complete re-test of the test thread. Minor non-compliance is a defect which does not impact the functionality and which an explanation would temporarily resolve

Further details on the defect management plan can be found here.