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1 Document Management

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1.1 Disclaimer

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1.2 Version History

Version	Change Reason	By	Date
V0.1d	Initial Draft	Rohit Gogna	07/12/21
V1.0	Signed off	Rohit	24/05/22

1.3 Document Approvers (and Reviewers)

Name	Title	Approval	Date
Simon Oldnall	Horizon IT Director	Yes	
Dan Addy	Chief Architect	No	
Dean Bessell	Head of Security and Risk	No	
Ajay Patel	Head of Enterprise IT Demand	No	
Martin Godbold	Head of Horizon Live Services	No	
Katrina Holmes	Head of Branch Operations	No	

1.4 Document Reviewers

Name	Title	Version	Date
Stuart Beech	Change Management Lead	V0.2d	TBC
Harshwardhan Somon	Senior Test Manager	V0.2d	TBC
Sarah Birch	Test Architect	V0.2d	TBC

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3 Glossary of Terms

Term	Definition
POL	Post Office Limited
SIT	System Integration Testing
SAT	System Acceptance Testing
BAT	Business Acceptance Testing
UAT	User Acceptance Testing
NFT	Non-functional Testing
OAT	Operational Acceptance Testing
RBT	Risk Based Testing
SLA	Service Level Agreement
TDD	Test Driven Development
BDD	Behavior Driven Development
CR	Change Request
SC	Source Control
TCoE	Test Centre of Excellence
QA	Quality Assurance

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4 Introduction

4.1 Document Objectives

The objectives of this document are:

- To ensure that there is a collective understanding of the test activities, terms, and responsibilities across the Post Office Limited.
- Provide details to key POL stakeholders of POLs test strategy (per Programme/Project) which will provide confidence to the business. This will enable a robust process to ensure Horizon Changes are deployed into the Production environment, as part of the route to live.
- To obtain sign-off from key Business stakeholders that the testing approach/plan is achievable and responsibilities of testing activities are understood.

4.2 Scope of Document

The document provides an overview of the testing to be undertaken by the POL Test Capability in the implementation and the deployment of Horizon solutions. Therefore, the Test strategy will consider both continuous minor changes such as Operational and Service enhancements alongside major changes in the form of POL programmes and/or projects.

The scope of this document:

- Describes the scope of testing to be carried out
- Identifies POL test processes
- Identifies the various test environments
- Identifies key testing deliverables
- Identifies test data requirements
- Details the POL entry/exit per test phase and suspension criteria
- Details how defects are to be managed at POL
- Identifies test tools that will be used at POL
- Identifies POL test resource and responsibilities

4.3 Intended Audience

The intended audience for this document are:

- POL stakeholders to provide sign-off and agreement of this document
- Test resource for information purposes to enable them to understand their responsibilities'
- Development for information on the approach and their responsibilities

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4.4 Overview of Document

This is a Quality Assurance Strategy document for POL. This document is to be used by POL delivery teams, Partners, Suppliers, and stakeholders, as a guide of the quality assurance and testing activities at POL.

It should be noted that Programme Test Strategies are to be delivered by Programmes of work at POL and this this document sits at an organisational level and therefore covers how QA is to be delivered at POL as a whole. It is envisaged that Programmes will dovetail their Programme strategies in line with this document to ensure that robust testing has been carried out

Testing efforts will be prioritised based on Horizon Change business priorities, which are defined in the POL Demand Tracker, in addition to the functional and technical specifications.

This document is deemed to be a 'living document' that may be re-defined by the Head of QA, as the POL test capability evolves and progresses. New versions of this document will be distributed to all interested parties.

The following approver list have reviewed and agreed to POL QA Strategy.

Name	Title
Simon Oldnall	Horizon IT Director
Dan Addy	Chief Architect
Dean Bessell	Head of Horizon Security and Risk
Ajay Patel	Head of IT Enterprise Demand Management
Martin Godbold	Head of Horizon Live Services
Katrina Holmes	Head of Branch Operations

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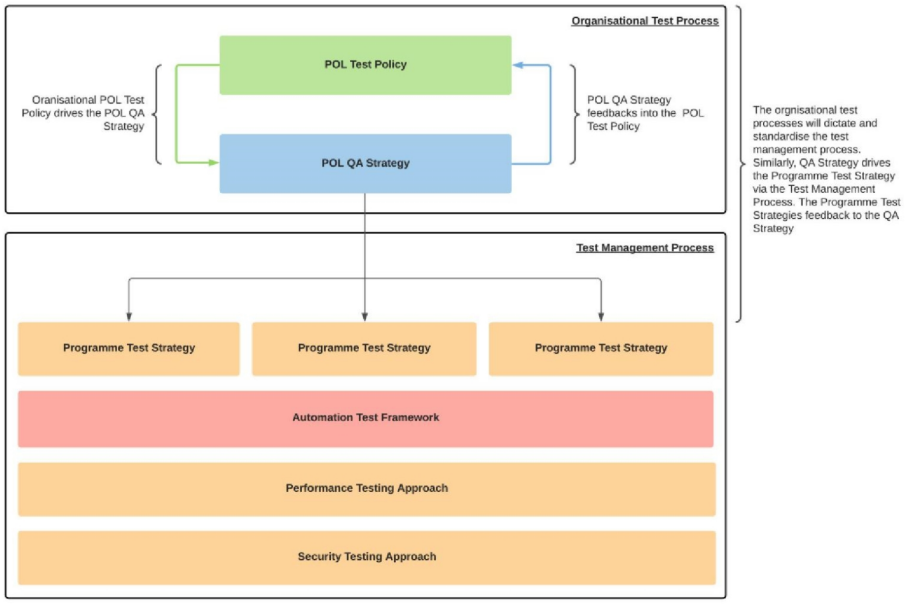
4.5 Document hierarchy

The illustration in this section conveys the test document hierarchy at POL. *IThis will be landscape mode in version 0.2d*



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5 Post Office Overview

POL has thrived at the heart of high streets and local communities across the UK for over 370 years. As one of the country's most trusted brands, POL takes its commitment to providing essential services to customers across the UK very seriously.

POL is the UK's largest retail network, as well as the largest financial services provider in the UK, with over 11,600 branches nationwide – more than all the UK's banks and building societies put together.

The POL organisation understands that the best way to provide a great service for customers is to evolve the business and adapt to the customers changing needs. That is why POL have a range of over 170 products and services, from personal financial services such as, banking, insurance, payments and travel money, to telecoms and, of course, mails.

Working at the Post Office:

Post Office colleagues are the driving force behind the POL business. Whether they are in POL branches or supporting from the POL offices, the business is proud of the energy, commitment and customer focus our people, all have in common.

All Post Office people are guided by three values and behaviours, see Code of Business Standards:

- We care by always thinking customer
- We strive to make things ever better through honest challenge
- We commit to decisive delivery

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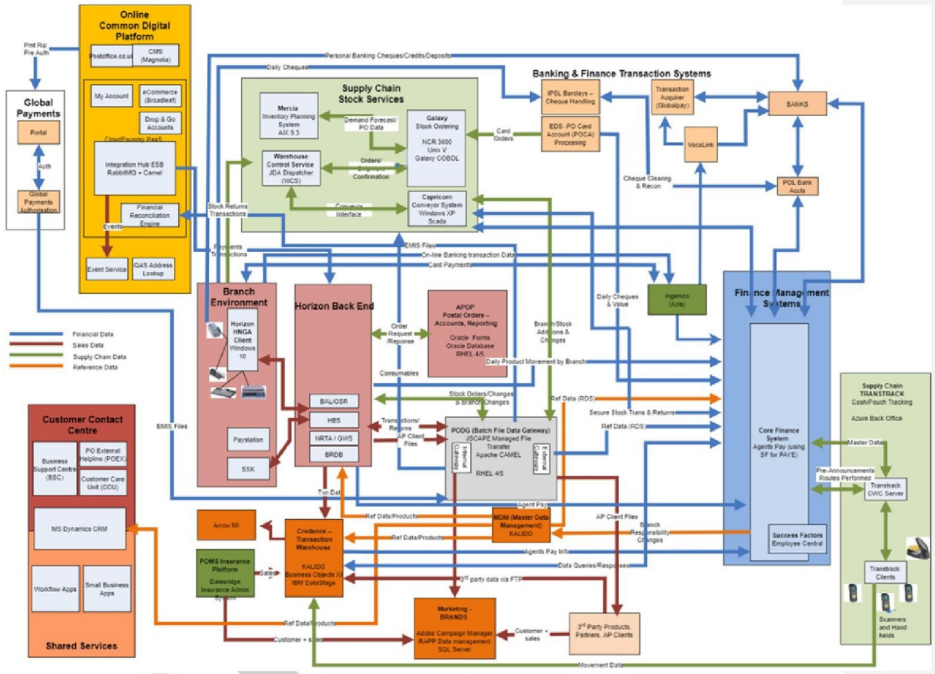
6 Horizon Solution Overview

6.1 POL IT Landscape



6.2 POL IT Landscape Summary

For avoidance of duplication and for synchroneity purposes, please refer to the POL IT Landscape document (a 'living document') by clicking here. If you require access to this document, please contact your line manager.

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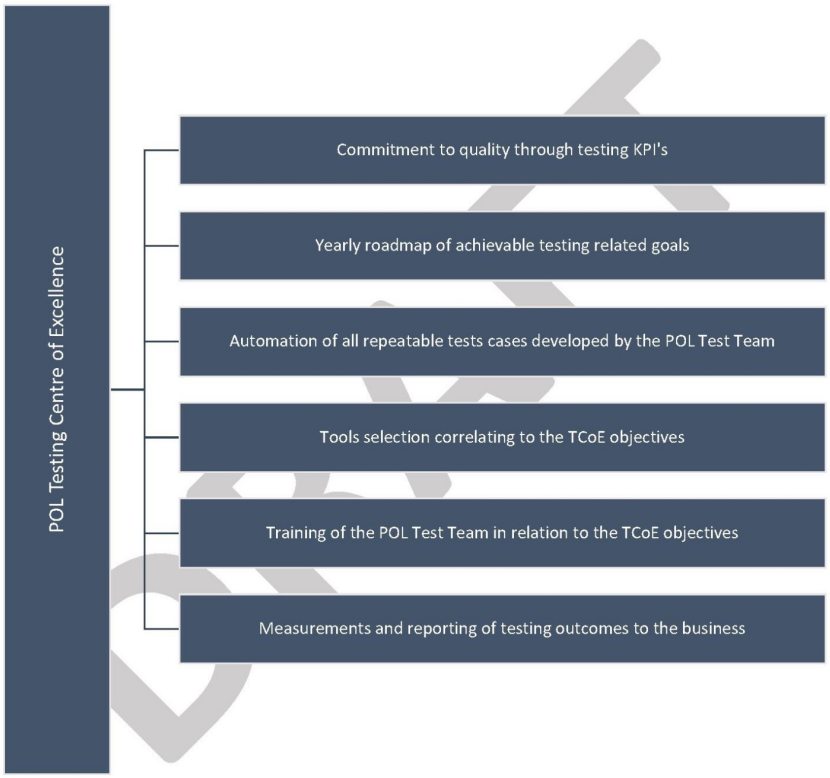
7 Post Office Test Approach

7.1 POL Test Centre of Excellence

A Testing Centre of Excellence (TCoE) is to be set up at POL. The TCoE capability is to be developed by the TCoE Manager, alongside the Head of QA. The TCoE will function at the POL organisational level. This will enable it to govern, measure and implement uniformity on POL programmes. The TCoE will include the following goals:



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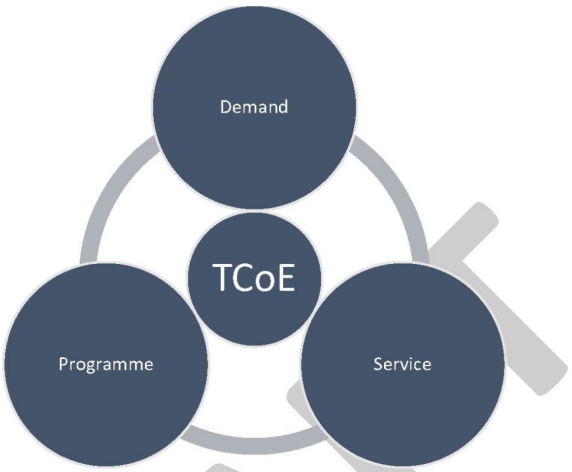
The illustration below conveys the remit of the TCoE and its level of test governance at the organisational level. It should be noted that the said remit is only applicable at a



7.2 POL QA Governance Framework

The POL QA Governance Framework is to be developed and implemented by the Head of QA and POL TCoE Team, and will be designed to function as an organisational level testing approach, with a shift-left mentality. It will seek to work in a collaborative fashion with supplier and internal development teams. The illustration below conveys the [x] steps that are to be repeated throughout the processes, giving POL, a repeatable testing model. The steps are to be implemented by the POL Test Management layer, with support from the POL Test Leadership layer.

[enter illustration here]

The aim of the POL QA Framework is to ensure swiftness, as well as nimbleness is possible, whilst meeting the quality goals, driven by KPI's set out by the TCoE.

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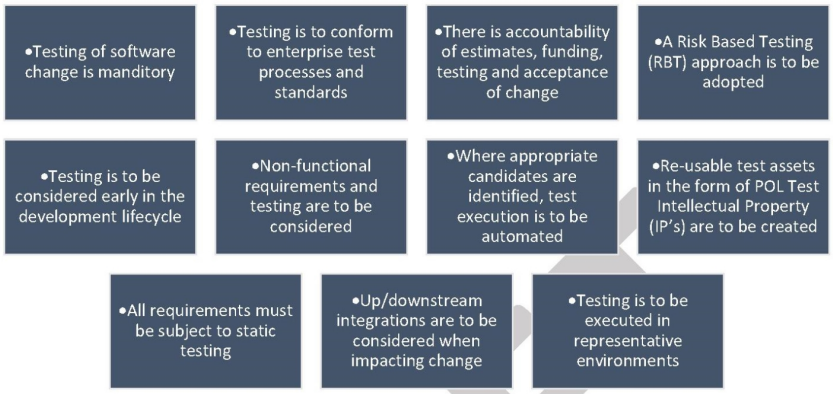
7.3 Testing Principals

The following test principles are to be adopted at POL:



Note: These test principals are captured in the POL Test Policy please refer to the POL Test Policy document for further details.

7.4 Testing Objectives at POL

The objectives of the POL Test Capability are to confirm the solution meets the signed-off functional and non-functional requirements, through verification, evidenced by test reporting. Failure to meet said requirements are to be captured in the central Test repository - Jira Software tool. The POL Test Capability are to address deviations from requirements, as early as possible in the software development life cycle and help facilitate thought leadership, to the resolution of said deviations. This is to include static testing of pre-signed off requirements.

To meet these objectives, QA processes and activities will include:

- The POL Test Team being provided ample time to perform static testing and to feedback on requirements
- Determining and reporting the quality standards of the solution are being met by implementing key quality gates throughout the delivery life cycle (including supplier quality gates into POL)
- Providing support to the business/representative and end-user teams in validating that the overall solution meets the described requirements, (both functionally and non-functionally)
- Providing the business confidence through evidence-based metrics that the solution is fit for purpose to move to the next quality gate and through to live. Where this is not the case assist in mitigating the risk through issue management
- Supporting Operational Acceptance Testing (OAT) to make sure the exit criteria is met to successfully support the live operation of a component and overall solution.

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7.4.1 Service Virtualisation

In scenarios where a software dependency has been identified by the POL Test Team, the objective of the team is to add this dependency to the POL Test Services RAID log and raise this to the appropriate development team, as a requirement to add *'service virtualisation'* so the dependency can be simulated. This will enable the team to provide testing services and reports, in line with testing objectives prior to a solution being built.

For avoidance of doubt, this approach is deemed to be applicable at both an organisational level and at a programme level. Service virtualisation at a programme level is considered a service that is applicable to only the single programme. In this scenario, the internal programme teams are to manage service virtualisation development. Where service virtualisation is beneficial at a portfolio level (org level), the service is to be available to all programmes for test purposes.

7.4.2 Automation Testing

To achieve the objectives above, an automated regression suite is to be created by the POL Automation Test Team, that will enable all regression testing to run every time code is released to an environment, whilst providing the POL Test Team with enough time to honour the testing objectives outlined above. Both manual and automation test scripts are to be run in environments, which are representative test environment and are as close as possible to live.

Like service virtualisation, an automation framework is to be developed at an organisational level. At this level, the framework is considered an internal POL product that is useable by all programmes. Just like a software product, it will have its own source control and releases, that will be distributed internally.

Scenarios where a standalone automation framework is to be created for a single programme, is to be discussed and approved by the POL Automation Manager. It should be noted that not everything is automatable, and, in some cases, automation candidates may be executed better, as manual test cases due to complexities or other reasons.

The POL Automation Team are to set up a scoring system, in cases where this is questionable and to display that the decision was metric driven, should there be an audit.

A QA Automation Approach document is to be created by the POL Automation Manager, which will be a detailed extension of the POL QA Strategy.

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7.4.3 Quality Standards and Goals

This section is intentionally left blank and will be worked on and populated with the TCoE Manager.

7.4.4 Risk-Based Testing (RBT)

Risk Based Testing (RBT) is a method in software testing in which features, or discreet components are prioritised by forming a Risk Rating against each feature or component. The formula to calculate the risk, is as follows – should there be a failure, what is the:

*Impact to business x Likelihood of failing = **Risk Rating***

The POL Test Team on any given programme of work, are in the first instance to focus testing efforts on features and components that are deemed to be of high priority. This will start with a review of the requirements for areas that are deemed high priority.

All risk analysis is to be added to a dedicated folder within a programmes folder structure, in the POL SharePoint instance. This is to empower all resources that are tagged to working on the programme to contest a risk rating for a given feature or component via a review process that is to be set up by the testing authority on the said programme.

Test cases are to be development by the POL Test Team thereafter. The POL Test Team are to develop in the first instance test cases for all high-priority features and components and then medium and low-priority. Within a priority 'batch' the test cases are to similarly be prioritised and follow a high, medium, and low approach. The test cases are to be tagged with a priority within the POL TestRail instance.

Per a functional area, the above distribution is expected, in which a small number of high-priority test cases are developed, a high number of medium-priority test cases and finally a small number of low-priority test cases are created, for execution purposes.

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8 Test Activities Summary

8.1 Delivery Test activities workflow

In Progress.

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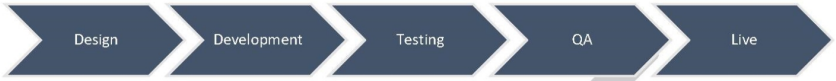
9 Test Activities

The high-level phases illustrated below are applicable to both changes made to the solution through the demand process, as well as other programmes of work within the Post Office.

9.1 Design phase



9.1.1 Programme Test Strategy

Where the POL Test Team are part of a programme, a Programme Test Strategy document is to be produced, prior to development starting. The Programme Test Strategies at the Post Office are to be templated and are not to deviate from the QA Strategy (this document), without approval from the Head of QA. All Programme Test Strategy documents, along with the programme stakeholders are to be reviewed and signed-off by the Head of QA.

Where the POL Test Team are testing changes which are deemed to be BAU operational demand, the QA Strategy (this document) is to be followed to ensure the correct quality gates are met for change to be signed off by the POL Test Services Team.

9.1.2 Static Testing

9.1.2.1 Design Feedback

Testing is to start as early as the design phase. The POL Test Team are to work with the Architect Team to review the design and potential weaknesses. Early feedback of the designs is to be completed post-test review, through review meetings. The POL Test Team are to set up meetings with the Architect, as part of the static testing process. The meetings are to help identify and feedback on risks which are required to be discussed and potentially resolved. Following this approach will assist with the overall quality of design and requirements, which delivery will rely on as a base for the construction of the solution.

In parallel, [POL Security Services] are to perform a review of the design from a security perspective, to provide feedback on the design and mitigate security vulnerabilities caused by design issues.

Performing static testing early in the development cycle, will enable a shift-left approach and enables the Post Office to move from a defect detection to defect prevention approach.

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9.1.2.2 Functional and Technical Review

Prior to requirements being sent to the business or a supplier to be signed-off, the POL Test Team are provided ample time in which to perform a review of said requirements, whereby the POL Test Team are to challenge and attempt to 'break' the requirements through static testing. If discrepancies are found, these are to be listed and discussed with the [POL Design Team].

The aim of this approach is to reduce misunderstandings of detailed requirements both internally and externally (where Post Office suppliers are involved). Furthermore, this approach will specifically highlight requirements that compel deeper specifications. The outcome is to have the audience to have a clearer and concise requirement.

The review process is also considered a time for a POL Tester to understand what needs to be tested and how the process and flow of the overall solution has the potential to break. The review process, therefore, builds upon the creation of developing both manual test cases and automation test scripts.

Under no circumstances are the POL Test Team to review or accept requirements for test development which are in emails, instant messages or similar. Only requirements in the POL Jira Software instance are applicable for test reviews and thereafter development activities.

9.1.2.3 Requirements Sign-Off

Prior to any development activities taking place, the requirements are to be reviewed and signed off by the business. This will build upon an initial quality gate for both Post Office and supplier development activities.

Under no circumstances are the Post Office or Post Office suppliers to commence development activities with requirements that are not signed-off.

9.1.3 Automation Framework Implementation

The goal of the POL Test Team is to adopt a shift-left approach to software testing. To support this goal, the POL Automation Test Manager is to create and implement an automation testing framework. A three-tier approach is to be taken to automation.

- Tier 1: Automation of unit tests
- Tier 2: Automation of APIs (Application Programming Interface)
- Tier 3: Automation of UI – E2E scenarios

Where automation is required on a programme outside of the two-tiers described above, the approach to automation is to be guided by the programmes, Programme Test Strategy.

A POL automation approach is to be created by the POL Automation Test Manager, which will be a detailed extension of the POL QA Strategy.

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9.2 Development phase

9.2.1 Unit Testing and Test-Driven Development

Unit testing is a software development process that relies on the repetition of short development cycles where a requirement is turned into a small, well defined and discreet 'test' script written in code. The software delivered is then developed to solve the discreet 'test' script written in code. Further test scripts and working software are added, until the requirement is fully realised as a delivered feature.

This promotes a lean approach to development, specifically coding. Developers at the Post Office are to only write enough code to resolve the resolution of the unit test and to create a function that helps that unit test to pass. As a result, the code is frequently smaller, more efficient and of a better design and quality.

During a development phase, the Post Office Developer is to create a unit test for a discreet function following the method described. A unit test is thereafter to be executed prior to the code being committed to the source control and as part of the build process.

Scenarios where unit tests do not obtain a 100% pass rate, the Test-Driven Development approach is to be followed to ensure that the failing test(s) are investigated. The diagram below illustrates the approach in which this is to be accomplished.

9.2.1.1 Iterative Testing

Where agile delivery methodologies are implemented on programmes of work (such as Scrum), during the development phase, the developer and testers are to work collaboratively on the delivery of requirements. Tester(s) are to work on the creation of test scenarios, cases and scripts, which will be executed once a 'Task' is in a 'Ready for Testing' status. It should be noted that the accumulation of Tasks, would therefore make up a 'Story'. Requirements are to be gathered in the POL Jira Software instance.

During a Sprint, the POL Development Team will test at a Task and User Story level to verify that the solution meets the acceptance criteria (and moves us closer to meeting the Definition of Done (DoD)). A Product Owner (PO) is to validate the Story meets the requirements.

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9.3 Testing phase

9.3.1 POL System Integration Testing

System Integration Testing (SIT) will start once the entry criteria into SIT is met. This will be the first instance in which the solution will go through a formal entry criterion. Where possible, the environment in which SIT is conducted is to point to live or test integrations. Where this is not possible, virtualised stubs are to be used.

The POL SIT phase will validate that the solution components and interfaces integrate with other components correctly and support the fundamental end-to-end business processes. The SIT phase is to be scenario based and event driven using a risk-based testing approach. Where appropriate and to minimise risk, the POL Test Team are to test against non-human created data i.e. machine-driven data, that is as close as possible to the expected live data. This is particularly important for regression testing activities, where consistency will be paramount.

The approach to POL SIT will be to perform both positive and negative scenarios to observe and report how the system behaves to happy paths and to errors and exceptions. The POL Test Team are to develop a POL SIT suite of test cases via the data journeys. These will be part of an overall regression test suite and therefore scripts will be marked with a priority. All test cases are to be held in the Gurock TestRail POL instance.

A SIT Test Plan document will be created for each release. The SIT Test Plan will be a detailed extension of a POL test strategy

9.3.2 POL System Acceptance Testing

System Acceptance Testing (SAT) will start once the entry criteria for SAT is met. Where possible, the environment in which SAT is conducted is to point to live or test integrations. Where this is not possible, virtualised stubs are to be used.

System Acceptance Testing is to consist of functional testing of the Core Business Application. The aim of this approach is to assure the solution has been delivered to requirements and to test with an aim to break the application. Scenarios identified where interfaces are required but are directly not available to the POL Test Team will constitute as a candidate interface that requires the development team to help mimic the flow of data, through a stub.

Although SAT will primarily be executed manually, the SAT regression suite is to be automated. It should be noted, the second time a script is executed, it is considered a regression test. To this end, the aim of the POL Automation Team will be to continuously

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automate SAT scripts, so the POL Test Team are eventually able to focus on only manual SAT execution for new changes. All test cases are to be held in the Gurock TestRail POL instance.

A SAT Test Plan document will be created for each release. The SAT Test Plan will be a detailed extension of a POL test strategy

9.3.2.1 Smoke Test

During the creation of test cases, the POL Test Team are to identify and create a standalone smoke test suite for the core business application. A smoke test is a technique to assess if a build is in a 'ready' status for further testing. A smoke test is to test only critical paths and is to be executed as soon as and every time new release is available to the POL Test Team.

Were smoke tests are automated, the scripts are to be tagged as "@smoke". This is to enable the identification and execution of automated scripts, as a standalone activity as and when required by the business. Automated smoke tests are to be flexible enough for them to be executed on multiple environments, as required (this includes environments in which the business and users will perform Business and User Acceptance Testing).

Smoke tests are to be executed every time a new build is deployed to an environment under test, regardless of what phase in the SDLC (Software Development Life Cycle) or test phase. A smoke test suite is therefore deemed universally applicable to all code releases of testing.

9.3.2.2 POL Regression Testing

Additional development or code enhancements to resolve defects create a likelihood of an issue to occur in other areas of a solution. To manage this risk, the Post Office are to periodical execute regression tests.

A strategic approach is to be developed in the identification of test cases, that are deemed to be candidates for automation. A *n-1* approach is to be taken i.e. test cases applicable for automation from the previous releases will be automated. This strategic approach will enable an entire automation suite to be executed frequently (and save on execution costs). In turn, this will provide the benefit of enabling the POL Test Team to focus efforts on only new change and perform exploratory testing.

Where automation testing is not possible and the test cases are deemed to be of high priority, the POL test team are to execute these test cases manually, as a regression cycle. The POL Manual and Automation Team will tactically work together to ensure duplication is not taking place.

The POL Automation Test Team are to communicate the results of an automated regression run to the POL Manual Test Team. All failures in the automated regression run are to be verified manually by the POL Manual Test Team. If a failure is valid a bug is to be raised by the POL Manual Test Team. If the failure is not valid, the POL Manual Test Team are to communicate this to the POL Automation Test Team for investigation and maintenance.

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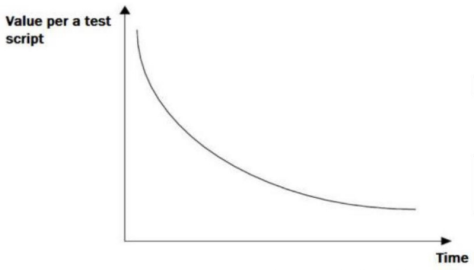
9.3.2.3 Exploratory Testing

Each time a test script is executed, its probability of finding a defect over time deteriorates. However, consistency is required to ensure that the solution has not regressed, a level of randomness will equally prove useful when testing. The POL Test Team are therefore to perform exploratory testing to compliment the (automated) regression testing cycle but without the constraints of a test case.



The 'exploratory tester' is to use the Jira Software tool to create a task issue type, which is labelled as 'exploratory'. The task is to outline the area of testing and the time constraint set against the task. The tester is to then explore and test the 'fenced' areas of the system to find defects. All findings and recommendations are to be added to Jira Software, defects are to be linked back to the task issue type and in cases where defects have been found, a test case is to be created.

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9.4 Quality Assurance Phase

9.4.1 Non-functional Testing

Non-functional Testing (NFT) will start once the entry criteria for the applicable NFT type of testing is met. The NFT test phase verifies that non-functional features have been developed to perform as described by the NFT requirements and design specifications. Testing is to include validation activities of the procedures, operational processes and applications.

Three types of Non-functional testing are applicable at the Post Office:

- Performance Testing
- Security Testing
- Operational Acceptance Testing

9.4.1.1 Performance Testing

Performance testing is to be performed on a dedicated NFT environment that is representative of the production environment. This is so the dedicated NFT environment is subject to a representative load to validate the performance of the applications. Distinct types of loads are to be applied to verify scenarios, which will include spikes and gradual increases in load caused by more traffic over time.

Although it may be deemed less of an importance to perform performance testing on solutions hosted in the cloud, the applications themselves that are hosted in the cloud remain candidates for performance optimisation activities.

Performance testing activities are to start early, in which the Performance Test Manager will conduct an initial evaluation to understand the NFR (Non-Functional Requirements) requirements or to put forward NFR requirements, as part of the demand process, to help guide change requests further with Non-functional Requirement (NFR) considerations. Detailed test scenarios and test data models are to be created during the design phase as preparation to assure maximum system and application coverage is achieved by the Post Office.

A Performance Testing Approach document is to be created by the Performance Test Manager, which will be a detailed extension of the POL QA Strategy.

9.4.1.2 Security Testing

Please refer to D: 07-010 – HZ Security Testing Strategy and Governance Framework

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9.4.1.3 Operational Acceptance Testing

OAT is to validate that the applications and business operational processes, process and operational readiness of the solution. OAT is to be executed mostly independently of other test phases, although overlaps with penetration and performance testing are likely to occur.

OAT is to be managed by POL Services Team with support from the Head of Testing and QA. The POL Services Team will plan and execute OAT, ensuring it has alignment and minimal impact with test delivery activities, whilst maintaining the full, planned OAT test coverage.

Where applicable, suppliers will be responsible for supporting the POL Services Team in test planning, environmental set-up, and test execution activities, which will include but are not limited to defect diagnosis and change management. The POL Services Team, along with the Head of Test and QA are to arrange and manage conversations with the suppliers.

Where OAT test activities are applicable for a release, an OAT Test Plan document is to be created. The OAT Test Plan will be a detailed extension of the POL QA Strategy (org level)

9.4.2 POL Business Acceptance Testing

Business Acceptance Testing (BAT) will start once the entry criteria into BAT is met. The BAT phase will validate that the agreed requirements have been met. POL Business Managers are to performs checks on core business processes & flows, as well as ensure POL meets (where applicable) its compliance and legislative requirements.

Business test scenarios are to be created by the POL Business Managers. Scenarios which are to be executed to verify business processes and flows are to be behaviour driven and are to correlate and with different end-user personas. Scenarios which are compliance or legislative, are to be validated by executing a separate test suite, named “Compliance”. This approach will enable the test suites to be executed and reported independently of one another.

Although the POL Test Team will not execute BAT test scenarios, testing support will be provided for test management tools, defect triage meetings and exit / entry criteria evidence required by the Business Managers. All test cases are to be held in the Gurock TestRail POL instance. All BAT bugs are to be tagged with BAT in the Jira Software tool and are to be traceable back to the requirements.

A BAT Test Plan document will be created for each release. The BAT Test Plan will be a detailed extension of a POL test strategy

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9.4.3 User Acceptance Testing

User Acceptance Testing (UAT) will start once the entry criteria into UAT is met. The UAT phase will validate that the agreed requirements fit the needs of the end-users, when the solution is integrated with all interfaces, both internally and externally.

Identification of persona-driven test scenarios are to be created by the business managers and end-users as a collaborative effort. The POL Test Team are to support this activity through training of testing best standards, test tooling and bug reporting.

All UAT bugs are to be tagged with UAT in the Jira Software tool and are to be traceable back to the requirements.

A UAT Test Plan document will be created for each release. The UAT Test Plan will be a detailed extension of a POL test strategy

9.4.3.1 UAT in Model Office vs Non-Model Office

The Model Office is the first instance in which people, process and technology come together in a staged setting. The technology at this point will have gone through several testing and quality cycles to ensure that the end-users are testing against proven technology. Therefore, the aim of UAT in the model office will be to ensure that processes outside of the technology are efficiently workable with the technology, by end-users.

To this end, UAT is to be executed by end-users, with the support of both the POL Test Team and POL Business Managers. At the Post Office UAT will have two approaches (1) UAT (non-model office) and (2) UAT (model office). Where, major changes are required to be tested UAT is to be conducted in a Model Office setting to bring together the people, process and technology.

Where minor changes are made to the baselined core business application through reference data changes, then UAT can be conducted virtually. All test cases are to be held in the Gurock

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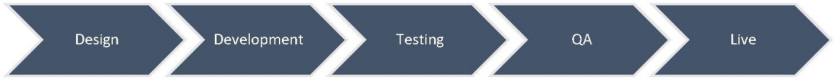
9.5 Live phase



Testing activities are not applicable in the live phase; however, the POL Test Team can perform non-intrusive checks of the application, in live.

9.5.1 Problems and Incidents in Live

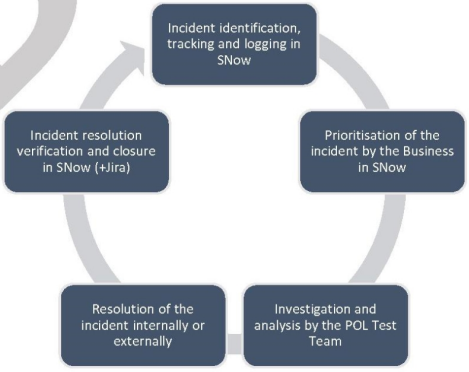
Once a release is in live, issues are no longer to be referred to as defects but instead incidents. These incidents are to be identified, logged in the ServiceNow application and prioritised by a business representative.

The POL Service Test Team are to investigate the issue and provide their input. Where applicable, a test case is to be created. As part of the investigation, the POL Service Test Team are to refer to the original requirements and put forward a case of it being a Change Request (CR) where the requirement is fully met. This is to follow the demand process.

Scenarios where the requirement is not fully met, will require the incident to be recorded in the Jira Software tool and prioritised in correlation with the business priority. This incident is to be tracked to resolution, by the POL Service Test team, including a retest of the resolution, to provide the business confidence it can be deployed to live.

Problems are considered the root cause of many incidents. In other words, multiple incidents have the same pointer or symptom. The same process described above applies for problems.

9.5.1.1 Incident Management Process



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10 POL Quality Gates

The following table conveys the official POL quality gates that will be implemented on all programmes of work. Under no circumstances do the POL Test Capability accept a quality gate not being met. IN PROGRESS **[Now available in an excel sheet in the same folder as this document]**

Gate ID	Gate Name	Criteria	Owner	Sponsors
QG_001	Signed-off requirements		Supplier	Head of QA, Programme Test Manager, IT Director
	POL Supplier quality gate			
	POL Testing quality gate			
	POL QA quality gate			
	Production quality gate			

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11 Entry, Exit and Suspension Criteria

11.1 Entry Criteria

The following entry criteria will be applicable for all programmes and projects across the Post Office Limited. Programme Test Strategies are to follow the entry criteria below, as a minimum standardised baseline. behaviours

11.1.1 Sprint Testing (commencement only)

Identifier	Criteria	Responsibility
IT_EC01	Task or Story in the POL Jira Software instance havechanged status to indicate it is ready for testing	POL Development Team
IT_EC02	Testing resource support is available and ready	POL Test Capability
IT_EC03	Test data has been uploaded and made available to test resources	POL Development Team
IT_EC04	If available, test automation scripts are ready to be executed	POL Test Automation Team
IT_EC05	Where automation is not possible, test cases have been uploaded to the POL TestRail instance and are in a ready to execute state	POL Test Team
IT_EC06	The test environment is available to the test resources and ready for the test team to execute against	POL Development Team
IT_EC07	The correct build has been deployed to the test environment	POL Development Team
IT_EC08	Proven service virtualisation is developed for test purposes and has been integrated to the test environment	POL Development Team
IT_EC09	Definition of Done (DoD) has been created and agreed by stakeholders	POL Product Owner, POL Scrum Master, POL Development Team

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11.1.2 System Integration Testing

Identifier	Criteria	Responsibility
SIT_EC01	Development activities are completed and thus construction is deemed complete	POL Development team
SIT_EC02	Login and access details have been created and have been provided to test resources	POL Development Team, Supplier Development Team
SIT_EC03	A SIT Test Plan has been reviewed and signed-off by stakeholders	POL Test Team
SIT_EC04	Testing resource support is available and ready	POL Test Team
SIT_EC05	Test data has been uploaded and made available to test resources	POL Development Team, Supplier Development Team
SIT_EC06	If available, test automation scripts are ready to be executed	POL Test Automation Team
SIT_EC07	A SIT cycle is ready to be executed	POL Test Team
SIT_EC08	The test environment is available to the test resources and ready for the test team to execute against	POL Development Team, Supplier Development Team
SIT_EC09	The correct build has been deployed to the test environment	POL Development Team, Supplier Development Team
SIT_EC10	Proven service virtualisation is developed for test purposes and has been integrated to the test environment	POL Development Team, Supplier Development Team
SIT_EC11	If applicable, supplier testing exit criteria is met	All suppliers
SIT_EC12	Testing risk assesement is complete, all risks to test execution have been mitigated or have been accepted	POL Test Team, POL stakeholders, POL Development Team, Suppliers
SIT_EC13	SIT kick-off meeting is completed	POL Test Team

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11.1.3 System Acceptance Testing

Identifier	Criteria	Responsibility
SAT_EC01	Development activities are completed and thus construction is deemed complete	POL Development team
SAT_EC02	Login and access details have been created and have been provided to test resources	POL Development Team, Supplier Development Team
SAT_EC03	A SAT Test Plan has been reviewed and signed-off by stakeholders	POL Test Team
SAT_EC04	Testing resource support is available and ready	POL Test Team
SAT_EC05	Test data has been uploaded and made available to test resources	POL Development Team, Supplier Development Team
SAT_EC06	If available, test automation scripts are ready to be executed	POL Test Automation Team
SAT_EC07	A SAT cycle is ready to be executed	POL Test Team
SAT_EC08	The test environment is available to the test resources and ready for the test team to execute against	POL Development Team, Supplier Development Team
SAT_EC09	The correct build has been deployed to the test environment	POL Development Team, Supplier Development Team
SAT_EC10	Proven service virtualisation is developed for test purposes and has been integrated to the test environment	POL Development Team, Supplier Development Team
SAT_EC11	If applicable, supplier testing exit criteria is met	All suppliers
SAT_EC12	Testing risk assesement is complete, all risks to test execution have been mitigated or have been accepted	POL Test Team, POL stakeholders, POL Development Team, Suppliers
SAT_EC13	SAT kick-off meeting is completed	POL Test Team

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11.1.4 Performance Testing

Identifier	Criteria	Responsibility
PER_EC01	A Performance Test Plan has been reviewed and signed-off by stakeholders	POL Performance Manager
PER_EC02	A dedicated and scaled environment is available for NFT execution	POL Development Team
PER_EC03	Environment monitoring tools are integrated and have been proven to be working as expected	POL Performance Manager, POL Development Team
PER_EC04	Work Load Models (WLM's) have been developed and mapped to the performance requirements	POL Performance Manager
PER_EC05	Performance testing scenarios have been socialised and approved	POL Performance Manager
PER_EC06	NFRs (Non Functional Requirements) and volumetric data has been agreed and signed-off by a POL business representative	POL stakeholders, POL Performance Manager
PER_EC07	Performance testing resource is ready to monitor test execution	POL Performance Manager

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11.1.5 Penetration Testing

Identifier	Criteria	Responsibility
PEN_EC01	SoW (Statement of Works) agreed with penetration testing supplier	Penentration supplier
PEN_EC02	Authorisation form has been completed and signed-off by IT Director	POL Security Archietect
PEN_EC03	If applicable, penetration testing supplier questionaire or entry criteria has been fufilled	POL Security Archietect
PEN_EC04	System owners (including cloud providers) have been informed and permissions have been obtained and stored	POL Security Archietect
PEN_EC05	Access have been provided to pentration testing supplier to the POL Jira Software instance so bugs can be logged in a standalone project *(access only to relevant project(s) applicable to supplier)*	POL Security Archietect
PEN_EC06	Other NFT is not being conducted in parallel on the same environment	POL Head of QA, POL Security Archietect
PEN_EC07	Test data has been uploaded to a NFT environment and is available to the penetration testing supplier	POL Security Archietect
PEN_EC08	All planned development and testing activities are complete	POL Security Archietect

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11.1.6 Business Acceptance Testing

Identifier	Criteria	Responsibility
BAT_EC01	SAT exit criteria is honored	POL Test Team
BAT_EC02	UAT environment is in a ready status	POL Development Team/Partner
BAT_EC03	BAT scripts are in a ready to be executed	POL BAT Lead
BAT_EC04	Live integrations are pointing to the UAT test environment and stubs are set up where this is not possible	POL Development Team/Partner
BAT_EC05	If applicable, the business has set up any required content in the application	POL BAT Lead
BAT_EC06	All required configurations have been set up by the business	POL BAT Lead
BAT_EC07	Training required for the application, or any tooling has been completed	POL BAT Lead/POL Test Team
BAT_EC08	Login details for the application have been provided to the POL BAT Test Team	POL BAT Lead
BAT_EC09	BAT test execution support is ready	POL BAT Lead
BAT_EC10	Risks have been examined and been mitigated or removed	POL BAT Lead
BAT_EC11	Login details to test tool and bug tracking tools have been provided to the POL BAT Test Team	POL Test Team

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11.1.7 User Acceptance Testing

Identifier	Criteria	Responsibility
UAT_EC01	BAT exit criteria is honored	POL Test Team
UAT_EC02	UAT environment is in a ready status	POL Development Team/Partner
UAT_EC03	UAT test plan has been signed-off	POL UAT Lead
UAT_EC04	UAT scripts are in a ready to be executed	POL UAT Team
UAT_EC05	Live integrations are pointing to the UAT test environment and stubs are set up where this is not possible	POL Development Team/Partner
UAT_EC06	If applicable, the business has set up any required content in the application	POL BAT Lead
UAT_EC07	All required configurations have been set up by the business	POL BAT Lead
UAT_EC08	Training required for the application, or any tooling has been completed	POL BAT Lead/POL Test Team
UAT_EC09	Login details for the application have been provided to the POL UAT Test Team	POL UAT Lead
UAT_EC10	UAT test execution support is ready	POL UAT Lead
UAT_EC11	Risks have been examined and been mitigated or removed	POL UAT Lead
UAT_EC12	Login details to test tool and bug tracking tools have been provided to the POL UAT Test Team	POL Test Team

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11.1.8 Operational Acceptance Testing

Identifier	Criteria	Responsibility
OAT_EC01	To be confirmed	To be confirmed

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11.2 Exit Criteria

The following exit criteria will be applicable for all programmes and projects across the Post Office Limited. Programme Test Strategies are to follow the exit criteria below, as a minimum standardised baseline.

11.2.1 Sprint Testing

Sprint exit criteria is not applicable in an agile methodology. Instead, please refer to the Definition of Done on the programme.

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11.2.2 System Integration Testing

Identifier	Criteria	Responsibility
SIT_EX01	All tests have been documented and results have been recorded	POL Test Team
SIT_EX02	All open defects have a resoluton plan that has been agreed with stakeholders	POL Test Team, POL Head of Demand
SIT_EX03	Defect levels are within stated thresholds	Supplier, POL Test Team
SIT_EX04	All planned test scripts have been executed at least once	POL Test Team
SIT_EX05	The test phase QA completion report has been completed signed-off by the POL Head of QA	POL Test Team, POL Head of QA
SIT_EX06	SIT test phase closure meeting has been completed	POL Test Team

Severity	Threshold total
Blocker	0
Critical	0
Major	25
Minor	30
Trivial	35

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11.2.3 System Acceptance Testing

Identifier	Criteria	Responsibility
SAT_EX01	All tests have been documented and results have been recorded	POL Test Team
SAT_EX02	All open defects have a resoluton plan that has been agreed with stakeholders	POL Test Team, POL Head of Demand
SAT_EX03	Defect levels are within stated thresholds	Supplier, POL Test Team
SAT_EX04	All planned test scripts have been executed at least once	POL Test Team
SAT_EX05	The test phase QA completion report has been completed signed-off by the POL Head of QA	POL Test Team, POL Head of QA
SAT_EX06	SAT test phase closure meeting has been completed	POL Test Team

Severity	Threshold total
Blocker	0
Critical	0
Major	20
Minor	25
Trivial	30

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11.2.4 Performance Testing

Identifier	Criteria	Responsibility
PER_EX01	All tests have been documented and results have been recorded	POL Performance Test Manager
PER_EX02	All open defects have a resoluton plan that has been agreed with stakeholders	POL Performance Test Manager
PER_EX03	All high priority test scenarios have passed or have been accepted by the business as a risk with a resolution plan	POL Performance Test Manager, Head of QA
PER_EX04	All high and medium prioirty scenarios have been executed at least once	POL Performance Test Manager
PER_EX05	Performance test QA report has been published and signed-off by the Head of QA.	POL Performance Test Manager, Head of QA
PER_EX06	The performance test closure meeting has been completed and the performance QA report have been reviewed	POL Performance Test Manager

Severity	Threshold total
Blocker	0
Critical	0
Major	10
Minor	15
Trivial	20

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11.2.5 Penetration Testing

Identifier	Criteria	Responsibility
PEN_EX01	All tests have been documented and results have been recorded	Supplier, POL Security Archietect, POL Head of QA
PEN_EX02	All open defects have a resoluton plan that has been agreed with stakeholders	POL Security Archietect, POL Head of QA
PEN_EX03	Re-testing activities are completed and set to a [ready for testing] status have been verified by the penetration testing supplier	Supplier, POL Security Archietect, POL Head of QA
PEN_EX04	Defect levels are within stated thresholds	Supplier, POL Security Archietect, POL Head of QA
PEN_EX05	All planned test scripts have been executed at least once	Supplier, POL Security Archietect, POL Head of QA
PEN_EX06	The test phase QA completion report has been completed by the penetration testing supplier and signed-off the POL Security Architect and POL Head of QA	Supplier, POL Security Archietect, POL Head of QA

Severity	Threshold total
Blocker	0
Critical	0
Major	5
Minor	10
Trivial	15

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11.2.6 Business Acceptance Testing

Identifier	Criteria	Responsibility
BAT_EX01	All test scripts have been executed at least once	POL BAT Team
BAT_EX02	Test phase completion report is distributed and signed-off	POL BAT Lead
BAT_EX03	Defects are within stated thresholds	POL Development Team/Partner
BAT_EX04	Test phase closure meeting has been completed	POL BAT Lead
BAT_EX05	Any outstanding defects are agreed with stakeholders and have a resolution plan	POL UAT Lead/POL Test Team
BAT_EX06	All test documentation and results have been recorded and filed	POL BAT Lead
BAT_EX07	All compliance or legistative related test scripts have been executed with 100% pass rate	POL BAT Lead

Severity	Threshold total
Blocker	0
Critical	0
Major	15
Minor	25
Trivial	35

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11.2.7 User Acceptance Testing

Identifier	Criteria	Responsibility
UAT_EX01	All test scripts have been executed at least once	POL UAT Team
UAT_EX02	Test phase completion report is distributed and signed-off	POL UAT Lead
UAT_EX03	Defects are within stated thresholds	POL Development Team/Partner
UAT_EX04	Test phase closure meeting has been completed	POL UAT Lead
UAT_EX05	Any outstanding defects are agreed with stakeholders and have a resolution plan	POL UAT Lead/POL Test Team
UAT_EX06	All test documentation and results have been recorded and filed	POL UAT Lead

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Severity	Threshold total
Blocker	0
Critical	0
Major	20
Minor	30
Trivial	40

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11.2.8 Operational Acceptance Testing

Identifier	Criteria	Responsibility
OAT_EX01	To be confirmed	To be confirmed

Severity	Threshold total
Blocker	0
Critical	0
Major	10
Minor	15
Trivial	20

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11.3 Defect Acknowledgement Times

Severity	Expected Target
Blocker	Defect is to be acknowledged within 2 hours of initial assignments. Notification of review and predicted resolution time is to be communicated within 4 hours
Critical	Defect is to be acknowledged within 2 hours of initial assignments. Notification of review and predicted resolution time is to be communicated within 4 hours
Major	Defect is to be acknowledged within 24 hours of initial assignments. Notification of review and predicted resolution time is to be communicated within 48 hours
Minor	Defect is to be acknowledged within 48 hours of initial assignments. Notification of review and predicted resolution time is to be communicated within 1 week
Trivial	Defect is to be acknowledged within 48 hours of initial assignments. Notification of review and predicted resolution time is to be communicated within 1 week

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11.4 Suspension of Testing

The following suspension criteria is applicable across the POL portfolio, programmes of work and during the execution of the

Criteria	Evidence
Smoke tests fail for a new build	Any test cases marked as Smoke Test fail, as evidenced in the [Test Management Tool]
A significant amount of test data is not available or is incorrect such that the quality of testing is compromised	If 40% of test cases planned are not executable over a [1 day] period, as evidenced in the [Test Management Tool]
Test Readiness Checklist has not been met	[25%] of the criteria have not been honoured, evidenced by the [test readiness health check document]
Smoke tests fail for a new build	Any script that has been tagged as a smoke test both manual or automated fail, as evidenced in either the manual test management tool or automation reports
More than [35%] of the test cases that are to be executed have been proven to be flawed	[35%] of test cases that were planned to be executed by the POL Test Team have failed within a single day, as evidenced in the POL TestRail instance
Test execution is no longer possible or meaningful due to unresolved failures	Resolution of blocker or critical defects have not occurred within the agreed target resolution times; therefore, it is not possible for testing to progress to a reasonable level
At least 35% of planned test execution has failed within a single testing cycle or where the number of defects encountered at a testing stage, would result in 35% of planned tests to fail	Evidenced within the test automation report or within the POL TestRail instance, in which over 35% of test scripts have failed or evidenced by defects in the POL Jira Instance resulting 35% of test scripts failing

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Further to the suspension of testing, testing will be resumed when the above conditions have been resolved. Where the suspension criteria are required to be exercised, the test authority on a programme is to seek execute the suspension of testing. Test suspension is to be comprehensively communicated by the test authority, to the business stakeholders (including the Head of QA) with evidence.

11.4.1 Test Resumption Criteria

Where the test authority has decided to suspend testing, the criteria for resuming testing is outlined, as follows:

- A reasonable caveat is in place to enable testing to continue. The risk has been mitigated or resolved.
- A new code release is made available for testing
- Environmental issues have been addressed and resolved
- Test cases have been corrected and baselined
- Test data issues have been resolved and corrected

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12 Scope of Testing

The scope of testing is to be determined at a programme level. However, per the principals of testing, found in the POL Test Policy 'all changes are to be tested'. This will include the any changes that are part of the current 'three routes to live':

•Counter business application changes

•Reference data / AP-ADC changes

Data centre service changes

12.1 Out of Scope for POL Test Team

The following areas of testing are out of scope for the POL Test Team:

- Where new compliance is introduced, it is the responsibility of the POL business representative to author and maintain compliance related test scripts and to execute them in the first instance. As there is currently not a POL compliance test suite at POL, it is to be created by the POL Business Managers. Test scripts are to be uploaded to the POL TestRail instance and are to be executed from this instance, thereafter.

- Where new legislation by Government is introduced, it will be the responsibility of the POL business representative to author and execute the test cases in the first instance. This is to assure legislation has been met and can be evidenced by the business. As there is currently not a POL legislation test suite, it will need to be created by the POL Business Managers. Test scripts are to be uploaded to the POL TestRail instance and are to be executed from this instance, thereafter.

In both cases above, test cases will automatically deemed as high priority. Test cases, wherever possible are therefore to be automated for regression testing purposes. Any test cases that are not automatable are to be executed manually during the POL BAT phase.

Further to the above, where change has not been agreed with the Head of IT Enterprise Demand Management via the Demand process, testing will be considered out of scope for the POL Test Team.

Where an impact assessment (IA) is conducted by the POL Test Team and a feature is untestable, the POL Test Team are to articulate this during the IA phase. Once agreed, these items will be considered out of scope for testing purposes. Lastly, all standalone out of the box (OTB) software and hardware is considered out of scope of testing, for example anti-virus software or barcode reader.

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13 Defect Management

This section of the document will cover the pre-production defect management process that is to be followed within the Horizon Improvements Programme. Post-live, the process is to follow the incident management process, which is governed by the POL Services.

For avoidance of doubt, defects are to be managed through Jira Software and Incidents are to be managed through ServiceNow.

At the time of writing this document, an integration between Jira Software and ServiceNow is being explored to help harmonise the information flow between the two platforms and to make sure information on incidents is synchronised.

At POL, a defect is to be defined as a state in which the software developed during SDLC, does not meet a requirement or as per POL business or end-user expectation which is non-functional but can be considered a reasonable cosmetic change, with minimum impact to the underlying solution. A defect is therefore an error in the coding or logic of said solution, which will cause the software to malfunction or produce incorrect/unexpected results.

13.1 Defect Classification

POL will delivery operations are to apply on the agreed definition of severity and priority, which are described below. Defects are to be assigned a severity by the reporter of the defect. A priority is to be assigned to a defect only during a Defect Triage Meeting (DTM) by a business representative. Dependent on the stage of testing, the business representative can be considered (1) a Product Owner (2) Business Manager (3) end-user (via Business Managers).

Defects are to be initially fixed based on severity ratings. Whilst assigning of a priority remains important, the process calls for firstly focusing on technical factors that help the system reach a level of stability, prior to priority being set on outstanding defects. This enables the delivery to ensure that the solutions core functionality is working prior to business validation or 'showcasing'.

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13.1.1 Severity Definitions

At POL, the defect severity represents the technical product impact, or in other words how badly is the technical solution broken. To enable this to be communicated clearly for triage, the following severity levels and definitions are applicable, at POL.

Severity	Evidence
Blocker	Waiting on confirmation from the Defect Triage Meeting PPT. Once agreed, the definition here will be populated.
Critical	Waiting on confirmation from the Defect Triage Meeting PPT. Once agreed, the definition here will be populated.
Major	Waiting on confirmation from the Defect Triage Meeting PPT. Once agreed, the definition here will be populated.
Minor	Waiting on confirmation from the Defect Triage Meeting PPT. Once agreed, the definition here will be populated.
Trivial	Waiting on confirmation from the Defect Triage Meeting PPT. Once agreed, the definition here will be populated.

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13.1.2 Priority Definitions

At POL, the defect priority represents the impact to the business. Priority can be assigned as early as the POL testing phase, but only by Product Owners, Business Managers, or end-users (via Business Managers).

To enable this to be communicated clearly for triage, the following priority levels and definitions are applicable, at POL.

Priority	Evidence
Urgent	Waiting on confirmation from the Defect Triage Meeting PPT. Once agreed, the definition here will be populated.
High	Waiting on confirmation from the Defect Triage Meeting PPT. Once agreed, the definition here will be populated.
Medium	Waiting on confirmation from the Defect Triage Meeting PPT. Once agreed, the definition here will be populated.
Low	Waiting on confirmation from the Defect Triage Meeting PPT. Once agreed, the definition here will be populated.

On a given programme or project, the Development Lead is responsible for assigning the defects to a developer for further investigation and resolution (where a defect has been raised during BAT / UAT, the POL test team are responsible for validating the defect, prior to it being assigned to the Development Lead.

The following should be noted during a quality gate (including within test phase exit's):

- The POL Test Team accept zero Blocker or Critical severity defects
- The POL Test Team accept zero Urgent or High priority defects

In exceptional circumstances, where the above statements are not met, the POL Test Team are to articulate the findings via a report. The report is to highlight mitigations for each issue, where applicable. The report is to be sent to [role/department] to determine if the risks are acceptable to proceed to the next stage.

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13.2 Defect Process

The processes for Test Incident Management are not to vary across the programmes, test phases and quality gates. The processes are to have the following cohesions:

- A defect manager is to review outstanding defects and incidents to ensure that a resolution plan is firmly in place and that this plan is tracked and outcomes are reported to relevant stakeholders
- All defects are required to be logged against a requirement. Else, they are to be considered candidates for the change request processes
- A daily defect triage meeting (DTM) is to be conducted as soon as a phase of testing starts. The Defect Triage Team are to ensure defects are classified correctly (per the definitions outlined in the 'Defect Classifications' section). Priority is to be set only by the business or end-users at the appropriate time. This is outlined in the Defect Triage Meeting document.
- The detail of a single issue is to be recorded and tracked in a centralised repository, so there is a single source of truth and to enable quicker triaging and resolution. Defects are to have traceability to a design requirement, a build or other test artefacts that are relevant to the defect and resolution.
- Defects are to be logged by the person that has discovered the defect in the POL Jira Software instance, following the standardised approach to defect creation. Please refer to the POL Defect Standardisation approach.

13.2.1 Defect Triage Meeting (DTM)

In line with the POL Test Capability objectives, the POL Test Managers are to ensure that defects are reviewed, resolved and retested swiftly. In recognition of this, the POL Test Managers are to review the severity and priority of defects, with the Defect Triage Team (DTT).

A Defect Triage Meeting (DTM) is to be set up by the POL Test Managers and is to invite business, project management, development and test representation. In this meeting participants are to go through bugs in severity order (pre-POL BAT and UAT) and then in priority order (during POL BAT and UAT).

The following format therefore applies:

- Review all newly raised defects in the past 24 hours
- Confirm the severity and priority ratings are correct (dependent on phase)
- Review all Blocker and Critical defects and confirm an estimated fix time

The meeting is to take place daily for 20 minutes and is deemed standard practice for all POL programmes of work, regardless of delivery methodology. The aim of this meeting is to provide 24-hour windows in which defects are reviewed and updated on consistently.

POL staff are encouraged to read D: 09-028 – Defect Triage Meetings, to understand how the DTM process and resolution sequences are to be implemented as standard practice on programmes.

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13.3 Defect Statuses

Status	Summary
Backlog	The backlog is the accumulation of all issue types in the POL Jira Software Instance and form part of the Product Backlog Items (PBI's) – which include bugs.
Selected for resolution	The bug has been selected to be resolved as part of the next build.
In Dev	The bug has been picked up by a POL developer and is being investigated
3rd Party Fix	POL have established that the bug requires a supplier to fix the issue
Fixed	The bug is deemed fix by the POL developer or by a supplier
On SV&I	The bug fix has been deployed to the SV&I environment and is ready for retesting
SV&I verified	The bug has been confirmed as fixed by the POL Test Team or supplier team. The fix is ready to be deployed to the LST environment
On LST	The bug has been confirmed as fixed by the POL Test Team or supplier team. The fix is ready to be deployed to the model office environment
Ready for POL Testing	The bug has been deployed to the model office and is ready for retesting
Closed	The bug has been deemed closed and no further action is required

When future state environments are available, this flow will be simplified further. A flow has been created as a future state and is ready for this purpose.

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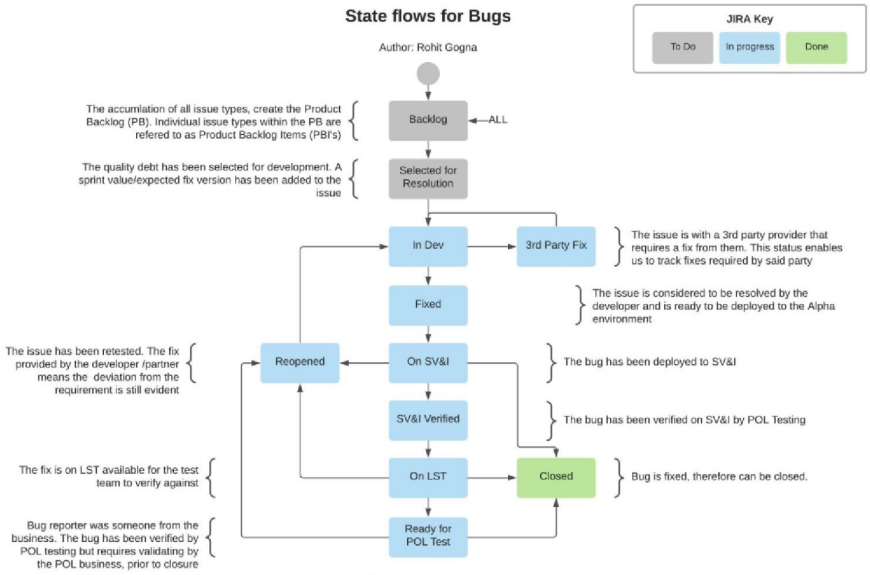
13.4 Defect Workflow

To be confirmed as part of the POL Jira Software bug issue type standardisation. Temporary flow added in the interim. Page will be landscape in the next version



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14 Test Data

14.1 Pre-test execution

Pre-POL test execution on an environment, the requirement to identify appropriate test data for test execution will be deemed a compulsory activity by the team performing the test execution. Data is to be made available to the test execution team, at least 7 days prior to the planned test execution activities starting, per the test plan and test entry criteria.

14.2 Obtaining Test Data

The types of data required to support the testing of each deliverable at both a programme level and organisational level and how it is to be generated, is required to be agreed at an organisational level for the core regression testing suite and at a programme level, per a test phase for a given release.

The following stages are to be considered when discussing the generation of test data:

Establish the scope	•Establish the scope of the inputs and outputs that are required to reach a level of confidence that test scripts can be executed smoothly (including any gaps)
Confirmation of data inputs	•Perform an analysis of the requirements as part of a 'static testing' approach and confirm the data inputs required to enable test execution
Analysis of available data	•Check if usable data is already present and how it can be sourced to populate a test environment for testing activities (including the volume of test data required)
Identification of alternative data	•Where no data sources are available to the POL Test Team, discuss this with the design/development teams to identify alternative data sources that could be used

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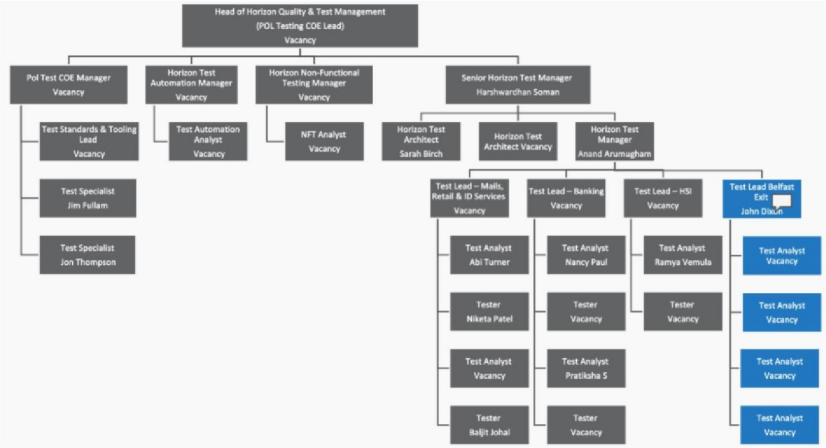
15 Test Organisation

15.1 Horizon Quality and Test Management

This sub-section is to be put in landscape view in the next version and synchronised with the look and feel of the rest of the document



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16 Test Roles and Responsibilities - TBC

16.1 POL Test Leadership

Role	Reasonability
POL Head of QA and Test Management	This role will be responsible for: • TBC
POL TCoE Test Manager	This role will be responsible for: • TBC
POL Automation Test Manager	This role will be responsible for: • TBC
POL Performance Test Manager	This role will be responsible for: • TBC
POL Senior Test Manager	This role will be responsible for: • TBC

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16.2 POL Test Management

Role	Reasonability
POL Head of QA and Test Management	This role will be responsible for: • TBC
Horizon Senior Test Manager	This role will be responsible for: • TBC
Test Architect	This role will be responsible for: • TBC
Horizon Test Manager	This role will be responsible for: • TBC

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16.3 POL Test Team

Role	Reasonability
POL Test Lead	This role will be responsible for: • Day-to-day responsibility for test delivery • Maintainer of test schedule • Maintainer and executor of test plan • Co-Ordinator of test case/script creation and test execution • Responsible for providing a progress and test report • Plan and manage test data • Co-Ordinator of communication between cross-functional teams • Peer reviewer of test assets • Participator of Defect Triage Meetings
POL Senior Test Analyst	This role will be responsible for: • Following and understanding the POL Test Delivery Strategy • Reviewing functional and technical requirements • Development of Test scripts • Execution of Test Scripts • Raise, retest and close defects • Perform regression testing following defect resolution • Informing the POL Test Lead of any issues that may affect the schedule, budget, or quality of the product or the testing process
POL Test Analyst	This role will be responsible for: • Following and understanding the POL Test Delivery Strategy • Reviewing functional and technical requirements • Development of Test scripts • Execution of Test Scripts • Raise, retest and close defects • Perform regression testing following defect resolution

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	• Escalators of issues to POL Test Lead
POL Junior Tester	This role will be responsible for: • Following and understanding the POL Test Delivery Strategy • Development of Test scripts • Execution of Test Scripts • Raise, retest and close defects • Perform regression testing following defect resolution This role will require a quick progression based on a competency framework to POL Test Analyst in 6 months or less. Therefore, these positions are considered the same grade.

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17 Environments

17.1 Current environments

Current environment available for testing

Environment	Description	Responsibility
SV&I	The Solution Validation and Integration environment has been specifically tailored / designed to support functional testing to validate customer business requirements for project related change. It is representative of LIVE in that it has many of the capabilities that operate in the LIVE environment: "Real" Counter and peripheral hardware supplied and managed by Computacenter, with Verizon managed Branch networking integrated with a fully managed Data Centre and real interfaces to third parties – albeit with test end points. It is used by many user groups and is seen as the "busiest" of test environments servicing multiple requests on a regular basis.	Fujitsu
LST	The Live System Test environment is in place to support the LIVE environment, focussing on the patching and maintenance of the individual components that make up the Horizon solution. For Project change, LST is used primarily to rehearse the deployment/migration activities with the same tooling/teams and process that would be used for LIVE. However, the POL Test Team believe this is not only limited to the said activities but also to some further changes and testing from a partner perspective.	Fujitsu
RDT	RDT is not a full-blown replication of the production Horizon environment. It only has elements required to support operation of branch counters, and the delivery of reference data to said counters. This means it has several counters (spread across Fujitsu Bracknell, Future Walk, Finsbury Dials, and some home locations). Within the Horizon data centre, it has a BAL (Branch Access Layer) server, connecting to the BRDB (Branch Database), connections to RDMC (Reference Data Management Centre) and	POL/Fujitsu

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	RDDS (Reference Data Distribution Service). It does not have connections or processes to support many Back Office processes (i.e. connections to Credence for MI data or CFS for finance reconciliation and settlement). It also does not have any connectivity to external systems, so it is not possible to test transactions that interface with third party systems. Some internal stubs and emulators are provided by Fujitsu, but the scope and effectiveness of these is diminishing and will be completely redundant once the Belfast Exit Program completes. This negates RDT as a meaningful option to replicate E2E business transaction flows.	

17.2 Proposed environments

Proposed environments as a future state view

Environment	Description	Responsibility
Manual	The purpose of this environment is to provide the manual test team a dedicated environment from which to test the latest build. An array of manual test activities can take place in this environment. Overall, this environment will serve as an environment from which both manual SAT and SIT test phases can be executed from. This environment is virtual and should be accessable via a PC/laptop.	POL Test Team
Automation	The purpose of this environment is to provide the automation test team a dedicated environment from which to run the automation test suite with the latest build. Where possible, both the manual and automation test environments should be coordinated during an official test phase. The purpose of having a dedicated environment is to ensure that automation tests run based on consistency and uninterrupted. This environment is virtual.	POL Automation Team
QA	The purpose of the QA environment is to enable Product Owner Checks, Business Acceptance and User Accetance Testing activities. This environment will be used by	POL Business Team

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	business representative, business managers and users to validate that the product meets the business needs. This environment will be virtual with release candidates deployed.	
NFT	The purpose of the NFT environment is to provide a dedicated environment for performance and penetration testing activities. This environment will be virtual with release candidates deployed.	POL Test Team
Model Office	The model office will knit together the people, process and technology. The software deployed to the staged Post Office counters will have been quality checked and signed-off software. This will enable the checking of 'real-world' scenarios related to different real-world personas. Where the releases versions are coordinated with production, the environment can be used to check live incidents.	POL Business Team

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18 Test Deliverables

18.1 Supplier Test Deliverables

Asset	Summary	Responsibility
Test Strategy or Approach	A document that provides the test approach that the supplier is to undertake in delivering a tested solution to the client	All suppliers
Test Reports	A summary of test activities completed (or not completed) and the results achieved during each phase of testing including test cycles executed and associated bugs	All suppliers
QA Sign-off Reports	A detailed report of the overarching testing completed with insights to ALL open bugs in the system. This is to be used to form an initial acceptance to POL test activities	All suppliers
Release Notes	Documents that are to be distributed with the software release to POL. This document also builds upon initial acceptance by the POL Test Team	All suppliers

18.2 Deliverables to POL Testing

Asset	Responsibility
Functional requirements	POL Design Team
Non-functional requirements	POL Design Team
Epics, Features, Stories, Tasks	POL Design Team
Technical architecture	POL Chief Architect
Project, Programme or Release plans	POL Project, Programme or Release Manager

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18.3 Deliverables from POL Testing

Asset	Summary	Format
POL QA Strategy	The organisational test strategy (this document)	PDF
Test Approach	A single testing approach across the POL Landscape for the following areas: • Performance test approach • Automation test approach • Security test approach • Operational acceptance testing approach	PDF
Programme Test Strategy	Within the framework of the QA Strategy, a Programme Test Strategy is to be created when a programme is created	PDF
Defect Standardisation	A document providing a the detail of how defects are to be written by anyone creating a bug in the POL Jira Software instance	PDF
Core Regression Pack	A living test suite that is to be maintained by the POL Test Team. Used for Horizon related testing and considered a strong automation candidate	TestRail
Weekly status reports	A weekly status report of test activities at a portfolio level, including any areas of concern	PPT

Other deliverables are applicable; however, these are considered programme level deliverables, which will include and are to be added to the Programme Test Strategy:

- Requirements risk analysis,
- QA sign-off documents,
- High-level estimates,
- Daily test reports and;
- Inputs to portfolio reporting

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19 POL Test Reporting

This section of the POL QA Strategy will outline the reports that are to be generated by the POL Test Team at all stages of the System Development Lifecycle and Release Lifecycle. Reporting is an important aspect of testing, as it will enable the POL Test Team to communicate testing outcomes to relevant stakeholders and therefore afford constructive discussions and metric-driven decision making. All reporting is considered a snapshot and any changes made to the solution are therefore subject to further testing.

At a programme level, reports will be added to the relevant folder structure within the programme itself. At an organisational level, particularly when the core regression suite is executed reporting is to be stored in a dedicated location on SharePoint.

19.1 Portfolio Reports

Report Name	Purpose	Frequency
Weekly portfolio test reports	A weekly status report of test activities at a portfolio level aross all programmes and demand, including any areas of concern with portfolio level RAID items	PPT

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19.2 Programme Reports

The following reports are required across all programmes or projects

Report Name	Purpose	Frequency
Smoke test report	A 'quick fire' report that provides the development team insights in a deployment to a given environment. The report will be used to provide evidence that the test team are in a 'ready' position to proceed with further tests	Everytime a new deployement occurs for an environement under test. Where smoke tests are automated, this report is to be automatically generated.
Entry criteria report	Initially presented as a health check at least one month prior to planed test activities, this report will communicate if an entry criteria has passed or failed to be met. This is produced per a test phase and is based on the relevant entry criteria for a given test phase	One month prior to planned test activities starting. The first three weeks this entry criteria will be managed weekly the last week as a run up to test activities start, changed to daily
Exit critera report	Presented as a health check everytime a daily test report is published. The report is to have a RAG status with a passed or failed status of if the exit has been met. The report is based on the relevant exit criteria for a given test phase	Embedded withing the daily test progress report
Daily test progress report	A detailed daily report of the test activities progress for each test cycle (which is related to a test phase), along with the scripts planned, how many have been executed, metrics, RAID items and downtime metrics	Daily
QA sign-off	A overall detailed report of the overarching testing completed with insights to ALL open bugs in the system. This is to be used to form acceptance to the service team.	Part of the UAT exit criteria

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20 Assumptions and Dependencies

20.1 Assumptions

Identifier	Assumption
AS_001	Suppliers will have resources available to execute internal system testing
AS_002	Suppliers will have resources available that will enable the communication of bug resolution times and bug fixing
AS_003	Commercial contracts with suppliers will have a standardised set of test clauses in the contract that will enable quality gates, test resolution times and entry criteria into POL testing to be honored, to be contractual
AS_004	Suppliers, the business and end-users will use the POL Jira software instance
AS_005	The POL Jira software instance will be security protected, so suppliers or end-users do not view data that is not relevant to them. In each case, NDAs are to be signed to enable the access of the POL Jira Software instance
AS_006	The POL Horizon Quality and Test Management organisation does not own security testing, but are to assist with the facilitation and co-ordination of such activity
AS_007	Business and end-user representatives will be made available to perform Business Acceptance Testing and User Acceptance Testing
AS_008	Where it is wholly applicable, suppliers will develop or assist in the development of stubs, emulators, or simulators for testing purposes
AS_009	Enough time will be provided for core regression testing to take place
AS_010	Programme Test Managers will have a level of autonomy within the framework of the QA Strategy to form their own Programme Test Strategy

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20.2 Dependencies

Identifier	Dependency	Responsibility
DEP_001	Target resolution times for defects are to be agreed and followed	Suppliers, POL Development Team
DEP_002	Signed-off requirements are to be provided to the POL Test Team in a timely manner	Suppliers, POL Design Team
DEP_003	Security strategy document is to be made available for review by the Head of QA	Security Architect

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21 Appendix

21.1 Reference Data Test Readiness Checklist

The following criteria is to be met for reference data changes, prior to any test activities taking place.

Identifier	Criteria	Responsibility
REF_001	POL Tester has been tagged to a project time code in Snow	POL Project Manager
REF_002	Requirements have been signed off by a POL Business Manager	POL Business Manager
REF_003	Requirements have been signed off by the POL Design Representative	POL Design Team
REF_004	Solution design is to be signed off by the Chief Architect	POL Chief Architect
REF_005	A detailed project plan, which contains an implementation plan is made available to the POL Test Team	POL Project Manager
REF_006	Defect 'Target resolution times' are to be agreed with the POL Reference Data Team	POL Reference Data Team
REF_007	Defect 'Target resolution times' are to be agreed with the 3rd party suppliers that are required to fix bugs	POL Project Manager
REF_008	A formal release is to be provided to the POL Test Team, no new development scope is permitted thereafter (except for defect fixes)	POL Reference Data Team
REF_009	Test data is uploaded and available to the POL Test Team at least 24 hours prior to the test execution start date	POL Reference Data Team
REF_010	Where applicable, Release Notes are to be provided to the POL Test Team	POL Reference Data Team
REF_011	Where applicable, Unit Testing has passed with an outcome of 100% pass rate	POL Reference Data Team