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S80 Release

Testing Plan

Version 1.0

ROLE	NAME	SIGNATURE	DATE
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1. Document control

1.1. Version history

VERSION	DATED	DESCRIPTION
0.1	22/11/04	Initial draft for internal team review
0.2	14/12/04	Initial issue for POL internal review
0.3	06/01/05	Updated version from POL internal review for external review
0.4	13/01/05	Updated to include comments from Fujitsu Services
1.0	24/01/05	Issued for Authorisation

1.2. Change co-ordinator

Chris Young, PO LTD Release Test Manager

GRO

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1.3. Related documents

REFERENCE:	TITLE	VERSION	DATE
[1]	PO Ltd High Level Testing Strategy	1.0	November 2001
[2]	PO Ltd Incident Management Procedures	1.4	September 2002
[3]	PO Ltd Measurement Incident Progress Reporting	1.0	July 2003
[4]	Testing Approach For The Horizon System	1.0	Aug 2003
[5]	PO LTD Generic Testing Approach	1.0	Sept 2003

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1.4. Distribution List

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Sue Harding	IMPACT Programme Manager	Post Office Limited	Internal
Keith Hall	IMPACT Technical Manager	Post Office Limited	Internal
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2. Contents

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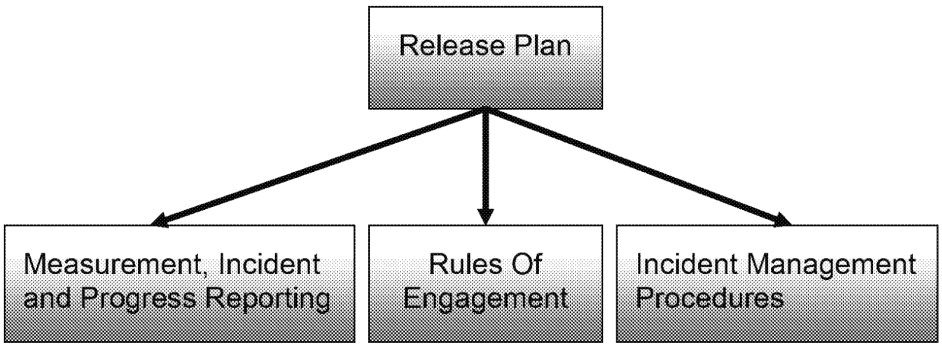
3. Introduction

This document outlines the Post Office Ltd (PO Ltd) high-level testing plan for the S80 release. It identifies the scope and approach for testing, and ascribes responsibility for testing between PO Ltd, Fujitsu Services, Prism, and other 3rd party suppliers/clients.

PO Ltd will use testing to support acceptance of the S80 release from Fujitsu Services, Prism and other 3rd party suppliers/clients, and for release authorisation of the service.

The approach detailed within this document is the approach developed over a number of Horizon releases and documented as part of the revised Fujitsu contract. This PO Ltd Generic approach was successfully validated during the S50, S60, S70 and S75 releases without any issues, and will therefore form the basis of the S80 approach.

This document sits at the top of the PO Ltd Release Testing documents Hierarchy issued for each release.



3.1. Scope of S80

The S80 release includes major projects commissioned under the Impact Programme relating to the Post office Ltd accounting process and management information. These will be delivered together with an enhancement to the Smartpost system to provide Track and Trace data to the client, and an application to provide +1 Sales prompts to front line staff during customer sessions.

The proposed content of S80 is:

- Branch Trading - the implementation of a new process in all outlets to replace the existing Cash Account process. With the introduction of Branch Trading, stocktaking, discrepancy and liability handling, periodicity and reporting formats will all change.
- SAP Financials - the implementation of a new SAP based system, (POL FS) and new business processes and procedures to support business accounting and reporting at outlet and business level. This

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event includes a large data and process migration from CBDB and it's various systems interfaces.

- Further Impact Programme deliverables to allow full integration of the new finance systems and changes to the S70 baselined versions of RDS and POL MI. The new Management Information System is a replacement for the existing systems such as LID, STAM and Intellect. It will be built on the current data warehouse functionality and reduce operating costs to the business. It will improve granularity, providing a product view of profit and loss. It will provide a single point for management information and will allow the redundant MI legacy systems to be decommissioned.

- Mails Track & Trace Integration - Enhancement of the smartpost system to allow the scanning in of mails items being posted using one of the Royal Mail or Parcel Force Track and Trace services. The project includes the ability to capture the T&T data and transmit it to the client systems via the existing Post Office Ltd external data gateway

- +1 Sales Prompts - creation of an intelligent application to run at the counter and interact with customer sessions, providing sales prompts, advice and guidance to front line staff, under central Post Office Ltd control. New reference data structures and processes will be required to ensure that the application is flexibly driven by business rules and values. This is a key interface to the existing +1 Sales Training project.

- CRs - various, to be confirmed.

The Release will also be used as a vehicle for applying PinICL fixes – as yet to be agreed.

3.2. Summary of S80 E2E Test Phases and Objectives

The E2E test cycles provide PO Ltd with an independent view of the usability and appropriateness of the system and services. It confirms end-to end data integrity across all interfacing systems and end-to-end integrity of supporting procedures. The tests will specifically seek to confirm that financial integrity is maintained across the business system.

The following areas will be exercised specifically within the test cycles with the objective of providing PO Ltd with the necessary assurances.

- Integration of upgraded RDS80 with other systems in the E2E environment

- Operation and outputs of the New PO Ltd Management Information System

- Operation of the processes supporting branch trading

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- Operation of new POL FS functionality and integration with Horizon, client and PO Ltd accounting systems.
- Operation of the new track and trace and +1 sales Prompts products.
- Migration testing in terms of POL FS Cutover from CBDB.

Regression packs will be included within the tests to ensure that existing system functionality and products that are unchanged have not been impacted.

3.3. Purpose of PO LTD S80 testing

The specific purpose of PO Ltd S80 testing is to:

- Support contractual acceptance of the new functionality and agreed change requests from Fujitsu Services, Prism, and other 3rd party suppliers/clients.
- Prove the integration of supplier systems.
- Support release authorisation for S80 by PO Ltd.

3.4. Assumptions

There are a number of key planning assumptions for S80 testing by PO Ltd:

- Test Reference Data will be aligned and be provided from RDS80.
- Suppliers are responsible for and capable of carrying out internal testing to the point of delivery of a completed internal system to the PO Ltd led E2E testing phases. Albeit, PO Ltd will wish to be involved with internal testing via reviewing supplier plans, scripts, results and fault logs. In particular this will be the method used to achieve the completion of PO Ltd non-functional testing.
- PO Ltd E2E testing will not cover all permutations and combinations as these are assumed to have been covered prior to E2E, albeit a thin slice of common failures may be included.
- Requirements and acceptance criteria for all S80 components, functional and non-functional, will have been defined and agreed with all parties.
- All new processes and procedures required to support the operation of the S80 components will have been defined and agreed between all parties.
- Individual (hardware and software) components will have been tested, proved and stable before PO Ltd testing commences.
- Fujitsu Services will undertake testing during development and will have undertaken at least one test cycle as part of their System Validation and Integration (SV&I) testing.
- Fujitsu Services will undertake sufficient regression testing to demonstrate that the existing Horizon functionality will continue to work.

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- Fujitsu Services and Prism will have completed their development and functional testing prior to the final cycle of E2E testing by PO Ltd. Note: As contingency, further cycles of limited testing may be required after E2E for specific components if readiness for current testing timescales is not achieved.
- All suppliers and clients will work co-operatively to support the PO Ltd led Integration and E2E testing phases.
- A stable E2E test environment is in place, with the S70/75, and S80 (counter) code sets incorporated as appropriate.
- The necessary resources (people, environments, test data, test tools and test cards) are available from PO Ltd, Fujitsu Services, Prism and other 3rd parties to support the agreed testing schedule.
- The planned test schedule for S80 can be achieved during 3 x 10 day cycles of E2E testing. These will start on a Monday, include the middle Saturday morning (08:00 to 09:30) to ensure that weekend transactions are included in the test cycle and the final transactions will be undertaken on the Friday afternoon of the second week. Note – It is accepted that any transactions performed after this period i.e. Saturday of final week will not be reported. The rigs will then be accelerated to roll forward to produce the required reports. Checking of outputs will continue into the third week during which the rigs will be reset ready for the next cycle.

3.5. Migration Testing

The E2E cycles will carry out testing to confirm as far as possible the proposed migration approaches planned for the live migration. However, although tests will prove that the systems function as expected within controlled business scenarios, they will not provide any indication of the volumes of mismatches which may occur in live operation or the causes of those mismatches.

E2E Testing will cover a cross section of products/transaction types that will be a small percentage of the full range of products actually transacted in live operation.

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4. Testing approach

4.1. Overview

The S80 release is classed as a significant release, under the PO Ltd Generic approach, and therefore testing will include the following stages:

4.2. Internal Functional Testing

Joint working with internal functional testing via the following:

- Review Suppliers internal test plans/ scripts for completeness
- Review Suppliers internal test results / progress reports
- Review Suppliers internal testing fault logs for impact

4.3. Non Functional Testing

Joint working with Suppliers internal non-functional testing via the following:

- Suppliers document reviews
- Review Suppliers test plans for completeness
- Involvement with testing specific key tests during a Suppliers testing cycle
- Review Suppliers test results
- Review Suppliers test fault logs for impact

4.4. Direct Interface Testing

Support Suppliers through the execution of Direct Interface testing between two suppliers e.g. Horizon to POL FS

- POL to jointly produce and obtain agreement from suppliers to a DIT plan and testing schedule
- Review Interface scripts between the two supplier domains
- Support set up of test environments
- Support or coordinate the provision of required Reference Data
- Support where appropriate the tests
- Review the test results including any faults

4.5. E2E Integration Testing

This phase is where PO Ltd will lead, supported by Suppliers, in demonstrating the successful connection of all the appropriate systems (test versions) in the release E2E solution. To perform some E2E test

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transactions, to confirm the readiness of all parties to enter the PO Ltd E2E functional testing cycles.

4.6. E2E Functional Testing

This phase is where PO Ltd will lead, supported by Suppliers, in demonstrating through short "days in the life of the PO Ltd business" test cycles that the revised systems interact correctly in an E2E manner, and with the revised business process and procedures.

This is also to assure PO Ltd that changes to current systems, and the introduction of new systems have not impacted business operations. It will prove that E2E financial aspects (accounting, reconciliation, settlement, remuneration) have been and can be maintained during live operation. Provide assurance that E2E Management Information is maintained, or new information reflects the requirements and business needs.

Successful completion of this phase will lead to the introduction into the live environment via one or more of the following PO Ltd selected options:

- a pre-pilot (transactions carried out in a passive Post Office)
- pilot (small number of outlets)
- soft launch (a progressive planned roll out)
- go-live (rolled out to the full estate)

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5. PO LTD Test organisation

Testing of the S80 release will flexibly utilise the appropriate resources from within the PO Ltd Release test team that reside within the IT skills group. Some members of this team will also need to prepare for PO Ltd testing of the S90 release at various stages. Members of the team may also support other smaller self-contained testing phases e.g. card account releases.

This team consists of IT skills group resources, supplemented by appropriate external/non IT skill group resources as required.

Note: The POL S80 Release Testing Organisation Chart is included at Appendix E.

The S80 Release test team consists of:

- **A Release Test Manager,** who will oversee all S80 test preparation and E2E test execution activities.
- **Non Functional Test Manager**, who will manage all the non functional testing which includes areas such as security, performance, volume testing, resilience and Disaster recovery. This manager will be supported by external experts, as and when required.
- **Test Domains**, who coordinate and manage testing across supplier/client domains and covering a number of systems.

There are three domains which are:

  - **Client Strand Domain** – covering client data feeds for A&L, NS&I, FRTS, Camelot, Moneygram and any external client systems that will not be directly targeted within S80 other than general regression.
  - **POL FS Domain** – covering expected results for POL FS, SAPADS, STAMPS, HR SAP, POL CA&CM.
  - **Horizon Domain** – covering Fujitsu Services.

The non IT Skills Group resources required to support testing will include:

- Specialist testers, particularly to cover non-functional testing (these will be expert external consultants, brought in for specific testing activities).
- BAU resources appropriate to the release (e.g. RDS80, TIP, CACM, Network Support, MI).
- Prism resources (e.g. who support TestDirector).

5.1. Roles and responsibilities

5.1.1. Release Test Manager

The Release Test Manager has the overall responsibility for testing delivery. The responsibilities of this role are:

- Develop and maintain the S80 release test plans and test schedules.

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- Provide testing input to the S80 release plan.
- Provide test requirements coverage information to the design authority in support of the release authorisation process.
- Sign-off the completion of S80 testing.
- Manage S80 testing issues through to resolution.
- Provide risk analysis and manage any risks associated with testing the release.
- Provide a contact point for testing issues.
- Provide input to the development of S80 acceptance criteria.
- Organise the resources for the team.
- Liase with the different suppliers to maintain the relationship and agree the environment requirements for S80 testing.
- Assign, schedule and manage the day-to-day activities of the S80 test team.
- Monitor the progress of the testing activities and prepare status reports as required.
- Manage the defect/incident management process with the different suppliers.
- Prepare and distribute daily progress reports throughout the execution phases.
- Ensure that the testing activity/scripts planned during the various test phases support the verification of the functional and non-functional requirements and acceptance criteria in each domain.

5.1.2. Non Functional Test Manger

The Non Functional Test Manager has the responsibility for the delivery of Non Functional testing. Reporting to the Release Test Manager the Non Functional Test Manager will review the individual supplier designs and the PO Ltd business requirements to determine the scope of the Non Functional testing required for S80. This will consider aspects such as security, performance, volume and disaster recovery. The responsibilities of this role are:

- Review supplier Non Functional specifications and determine level of testing required for security, performance, volume, disaster recovery and other Non Functional infrastructure changes.
- Produce/review test scripts for all Non Functional testing.
- Agree a witnessing plan for Non Functional testing with each supplier/client.
- Co-ordinate tests between interfacing suppliers/clients, as necessary.
- Provide Non Functional testing input to the S80 Release Test Plans.

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- Provide input to the development of S80 acceptance criteria.
- Develop and maintain the S80 testing plans for the Non Functional test phases.
- Sign-off the completion of S80 Non Functional testing.
- Manage S80 Non Functional testing issues through to resolution.
- Provide risk analysis and manage any risks associated with Non Functional testing.
- Provide a lead contact point for Non Functional testing issues.
- Organise the Non Functional testing resources, including supporting the Release Test Manager obtaining additional non-core resources to support Non Functional testing.
- Liase with the different suppliers/clients to maintain the Non Functional testing relationship.
- Prepare status reports as required throughout the test preparation stage.
- Assign, schedule and manage the day-to-day Non Functional testing activities.
- Monitor the progress of the Non Functional testing activities.

Manage the Non Functional defect/incident management process with the different suppliers.

- Prepare and distribute progress reports throughout the execution phases.
- Ensure that the testing activity/scripts planned during the Non Functional phases support the verification of the non-functional requirements and acceptance criteria in each domain.

5.1.3. Horizon Test Manager

Reporting to the Release Test Manager, the Horizon Test Manager will be responsible for the creation, maintenance and execution of the High Level test plans (HLTPs) and counter test scripts. The responsibilities of this role include:

- Manage the development of test scripts to assure the new counter functionality in relation to:
    - +1 Sales Prompts
    - Smartpost Track & Trace
    - Branch Trading
    - Any other changes to functionality being introduced by Fujitsu Services as part of S80 (e.g. CRs, fixes for previous releases)
- Manage the co-ordination of the interface testing (DIT phase) of all interfaces where Fujitsu Services are identified as the primary owner of that interface (see Appendix B).

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- Assist in the development and/or review of testable acceptance criteria for functional and non-functional requirements within the Horizon domain.
- Manage the selection and updating of existing test scripts required to support regression testing of the existing functionality including:
    - EPOSS transactions.
    - AP transactions (including barcode, magnetic stripe and SMART).
    - Banking transactions.
    - Debit Card transactions.
    - New functionality introduced at S70/S75.
- Manage the development of counter test scripts to support the testing of any new non-counter functionality for S80 (e.g. reconciliation processing, external system requirements, PO Ltd back end requirements).
- Manage the scheduling/planning of the counter tests scripts into test sets relating to cycles and/or test days within the overall S80 Test Plans.
- Team lead the Horizon testers throughout the preparation and execution of the S80 testing activities.
- Execute testing scripts.
- Co-ordinate the scheduling/planning of tests into cycles and test days with Fujitsu Services, PO Ltd and other suppliers.
- Complete status reports for the Horizon domain.
- Collect and collate test results.
- Prepare defect reports and provide an impact analysis rating (low, medium or high) for both the business and testing impacts.
- Re-test fixes.
- Provide the liaison between Fujitsu Services and Post Office Limited/External Systems for testing activities.
- Manage the Horizon counter test environment.
- Provide risk analysis and manage any risks associated with the Horizon testing domain.
- Support the Release Test Manager in obtaining additional resource as required to support the E2E test phase.

5.1.4. Horizon Test Analysts

Reporting to the Horizon Test Manager, the Horizon test analysts will be responsible for the creation, maintenance and execution of the HLTPs and counter test scripts. They will also deputise as the Horizon test manager when required. The responsibilities of this role include:

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- Act as the author for HLTPs and test scripts to test the new counter functionality in relation to:
    - +1 Sales Prompts
    - Smartpost Track & Trace
    - Branch Trading
    - Any other changes to functionality being introduced by Fujitsu Services as part of S80 (e.g. CRs, fixes for previous releases)
- Maintain/update existing test scripts used during S70 and S75 testing for regression purposes.
- Schedule/plan test scripts within cycles and/or test days (test sets within TestDirector) as per the S80 test plans.
- Maintain the script schedules (TestDirector test sets) throughout S80 testing.
- Execute test scripts.
- Support integration test execution.
- Provide testing expertise and training to the testers both on initial recruitment and as support on an ongoing basis.
- Collect and collate test results to assist in preparation of Expected Results.
- Prepare defect reports and provide an impact analysis rating (low, medium or high) for both the business and testing impacts.
- Re-test fixes and confirm successful completion.

5.1.5. Horizon Test Operators

Reporting to the Horizon Test Analysts, the Horizon Test Operators will be responsible for the creation, maintenance and execution of the counter test scripts during the E2E cycles.

The responsibilities of this role include:

- Maintaining/updating all test scripts used during S80 E2E testing.
- Executing testing scripts.
- Completing status logs.
- Collecting and collating test results.
- Document defects.
- Re-testing fixes and confirming successful completion.

5.1.6. POL FS Domain Test Manager

Reporting to the Release Test Manager, the POL FS Domain Test Manager will be responsible for the creation, maintenance and execution of HLTPs,

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test scripts and expected results for the back end systems The responsibilities of this role include:

- Manage the co-ordination of the interface testing (DIT phase) of all interfaces identified at Appendix B where the primary owner of that interface is Prism POL FS.
- Gather test requirements for the S80 release from all impacted PO Ltd areas including:
    - POL FS
    - CA&CM.
    - HR SAP
    - STAMPS
    - SAPADS
    - Audit and Security.
    - Finance.
- Assist in the development of testable acceptance criteria for any functional and non-functional requirements within the POL FS domain.
- Act as the author for test scripts and obtain sign off from the relevant PO Ltd areas (as detailed above).
- Liaise with the PO Ltd BAU areas to identify and obtain the required resources for test preparation/execution.
- Execute test scripts.
- Co-ordinate the scheduling/planning of tests into cycles and test days with the relevant PO Ltd teams.
- Complete status reports for the POL FS domain.
- Collect and collate test results.
- Prepare defect reports and provide an impact analysis rating (low, medium or high) for both the business and testing impacts.
- Re-test fixes.
- Provide the liaison and issue management between the third party suppliers and PO Ltd personnel for testing activities.

5.1.7. Client Strand Domain Test Manager

Reporting to the Release Test Manager, the Client Strand Domain Test Manager will be responsible for:

- Provide the liaison between the PO Ltd and Horizon domains to all external Clients involved in the release. These include:
    - A&L
    - NS&I

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  - FRTS
  - Camelot
  - Moneygram
  - Any other external client systems may be identified to be included within the release.

- Gather the business and client/supplier test requirements for each of the systems detailed above.
- Provide client liaison during interface testing (DIT phase) as required.
- Assist in the development of testable acceptance criteria for functional and non-functional requirements for each supplier.
- Manage the development of the HLTPs and test scripts for these domains.
- Work with other members of the testing team to co-ordinate the scheduling of the test into cycles and test days within the S80 test plans.
- Executing test scripts as required.
- Co-ordinating the tests with the relevant supplier teams in these domains.
- Completing status reports for the Client Strand domain
- Collecting and collating test results.
- Preparing reports and provide an impact analysis rating (low, medium or high) for both the business and testing impacts.
- Re-test fixes.
- Provide the liaison and issue management between the each of the suppliers and PO Ltd personnel for testing activities.
- In support of the Release Test Manager, assist in the provision of co-ordination across all of the domains (PO Ltd, Horizon and external systems) throughout the E2E test phases, ensuring that all scripted tests for each domain are supported/planned within dependant domains where necessary.
- In support of the Release Test Manager provide the consolidation of status and incident reporting across all client strands.

5.1.8. Non Horizon Domain Test Analysts

Reporting to the POL FS or Client Strand Domain Test Manager, the domain test analysts will be responsible for the creation, maintenance and execution of the HLTPs and test scripts for their domain. They will also deputise as their Domain test manager as and when required.

The responsibilities of this role include:

- Support the co-ordination of the interface testing (DIT phase) of all interfaces identified at Appendix B where the primary owner of that interface is their Domain.

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- Gather test requirements for the S80 releases from all impacted areas within their domain.
- Assist in the development of testable acceptance criteria for any functional and non-functional requirements within their domain.
- Act as the author for HLTPs and test scripts and obtain sign off.
- Execute test scripts.
- Co-ordinate the scheduling/planning of tests into cycles and test days with the other domains.
- Collect and collate test results.
- Prepare defect reports and provide an impact analysis rating (low, medium or high) for both the business and testing impacts.
- Re-test fixes.

5.1.9. Test Support

A number of test support tasks are required to ensure the co-ordination and maintenance of all test environments and test tools.

These activities will be performed within the test domains as appropriate to include:

The specification and, in liaison with BAU areas, the provision of PO Ltd reference data required to support the E2E test environment. Also to specify non-PO Ltd reference data required to support the E2E test environment (e.g. simulator tables, Mails Reference Data, margin and spot rate files). The responsibilities of this role also include:

- Specification of all reference data required to support S80 testing.
- Co-ordination of delivery of non-RDS80 data to relevant suppliers.
- Management/maintenance of Test Tools (e.g. TestDirector).
- Maintenance of central 'pool' of test scripts.
- Maintenance of test environments details, including use of simulators, access/availability of external supplier test systems (e.g. NBE, LINK, e-Pay, NatWest Streamline).
- Co-ordination of E2E test environment requirements/usage.
- Gather the expected result requirements of all domains for the test phases and develop/maintain a system to meet those requirements.
- Manage the production of detailed expected results for all domains throughout the test phases.

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6. Test environment management

A key element of the testing framework is the management of the E2E test environment. This environment consists of a number of test rigs and/or simulators, which can be connected together and configured, with suitable test data, to perform the required tests. Suppliers will provide, maintain, support and operate the test rigs within their domain. PO Ltd will have overall management and co-ordination of the E2E test environment.

Maintenance of the environment plan will be the responsibility of the Test Support Domain. It will be the Test Support's responsibility to ensure that external suppliers are aware of their responsibilities for delivering facilities to the agreed plan.

The following sections describe the S80 testing environments, including the tools, simulators and test data required for day-to-day operation of the test environment.

6.1. Horizon configuration

The Horizon E2E test rig at Fujitsu Services consists of the following elements:

- 12 Counter terminals in the Post Office test room at Feltham (room F1) – that have existing connectivity to the Post Office testing network.
- A mixture of single, dual and multi-counter office configurations, consisting of the 12 counter terminals.
- Network monitoring/message spy software to assist in incident investigation.
- Connections to the NBX and e-Pay.
- Connection to Streamline for debit card regression testing
- EMIS Tool which is required to provide EMIS files in support of regression testing of DRS outputs relating to debit or credit card transactions
- Transaction Enquiry Service (TES)
- Connection to the PO Ltd test gateways for:
    - Delivery of TIP transaction, cash account and client summary files. (S70 & S75 pre migration to S80)
    - Receipt of PO Ltd reference data from RDS80.
    - Delivery of the spot rate and margin files from FRTS via the FTMS/TIP gateway and the EDG.
    - Delivery of the daily Trx file for FRTS via the FTMS/TIP gateway.
    - Delivery of the control totals file for PO Ltd to the PO Ltd gateway
    - Delivery of DRS reconciliation/reports.

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  - Delivery of MIS reports.
  - Delivery of NBX Reports
  - Delivery of MI interface files for POL MI system
- Connection to Lexcel simulator to emulate EBT card account
- Connection to Lexcel simulator to emulate LINK
- Direct connection to Alliance & Leicester test system or connection to Lexcel simulator (dependent upon client test requirements).

6.2. Post Office configuration (provided by Prism)

- Two test gateways to support the file transfers from Horizon NBX and DVLA.
- Reference Data System to provide test reference data, and to enable testing of the enhanced RDS80 functionality and procedures.
- New POL Management Information System
- Delivery of reconciliation and MIS reports.
- Connections to the Electronic Data Gateway.
- Connections to POL FS
- OPTIP Test Environment (Pre migration)
- Connections to STAMPS
- Connections to HR SAP
- Connectivity from Horizon to POL FS

6.3. Streamline configuration

Connectivity to the Streamline test environment via an X25.TNS protocol connection will be required for on-line EMV Retail testing and Streamline, VISA and Mastercard transactions

An ISDN connection is required for Payment File (and EMIS File if necessary).

6.4. Test data -

In this context, test data takes the following forms:

- Physical objects are required to support testing – such as DVLA tax discs and bar codes, network banking cards, debit cards, ETU PIN cards, ETU cards, AP & OBCS barcodes, Avery Scales, rate boards, POUCH barcodes.

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- System data – such as PO Ltd reference data, MAILS tariff data, MID / TID data for debit card and ETU, margin and spot rate files for Bureau.

The following sections describe physical and system data in more detail.

6.4.1. Physical test data -

The following set of physical objects will be manufactured, maintained and referenced within the appropriate test scenarios and scripts. Where required, corresponding system data will be generated and loaded into the appropriate test system/simulator to enable the use of the objects within the test environment.

- Network Banking Cards – A set of banking cards for each FI involved in regression testing, to exercise response / outcome code combinations.
- Debit Cards – A set of magswipe debit and credit cards, again exercising response code variations for use when interfacing with the Streamline test system.
- AP Tokens – AP tokens of various types (magnetic card, smart and barcode) for regression purposes.
- OBCS Barcodes – For regression testing purposes.
- Card account Card Receipt barcodes – As per AP tokens.
- PIN & ETU Cards – A set of PIN and ETU cards.
- Smartpost labels

6.4.2. System test data

Test data required by supporting systems will be specified in advance, and published within the 'S80 Release E2E Test Reference Data Specification' this will allow the creation of test scenarios and detailed test planning.

- POL RDS80 reference data – A backup of the live reference data position has been taken, on top of this the following data will be created:
    - Outlet data, including outlet structures and opening times.
    - Standing Data such as new Customer Verification Method, Permitted Methods of Entry and Banking Operation Types
    - Outlet links to non-core products (not EMV Retail or EMV Banking)
    - Additional EFTPoS schemes to support Credit Card
    - Additional Retail and Banking operations, items, cards, bankcard elements, etc.
- Type C reference data to support Identification of cash and near cash items for SAP FIN.
- MAILS Tariff Data – usually taken from the latest live version available.
- MID / TID Data –for Debit Card and ETU transactions.
- Response Data – to be loaded into the

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  - Simulators within LINK Domain
  - Streamline Test System EMIS Response Data – Actions required to authorise/pend/reject Debit Card transaction received in the daily payment files.
- ETU Response Data – as per the network banking simulator above.
- Rate and Margin Data – to provide rate and margin data for updating of rate board and reference during bureau transactions.
- Type D reference data to control the routing of banking transactions via the NBX.
- Revised POL accounting structures/data for Horizon and POL FS.
- POL FS reference data feed to RDS80.

6.5. Testing tools

TestDirector will be used to manage the following elements of testing:

- Requirements – a hierarchy of requirements that are then used as a basis for the creation of test scenarios.
- Test Planning – a repository for the test scenarios generated to prove requirements and system functionality.
- Test Execution – groups of test scenarios, planned into logical test sets, and executed in a controlled manner.
- Incident Management – tracking the lifecycle of identified incidents, through identification, action, retest and resolution.
- Test Reporting – management information on each of the above elements, in graph and tabular form.

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7. Testing Procedures

7.1. Requirements

The requirements of each project within the release are included within a catalogue of business requirements (Conceptual Designs) that will be used as a basis for testing and system acceptance. The requirements are owned by the PO Ltd Design Authority, with changes and updates being managed through formal change control.

Once a baseline set of requirements is available, it will be imported into TestDirector. This will form the basis of test scenario creation, with each scenario being linked to an originating requirement. Once tests are executed, a view of requirements coverage can be easily obtained.

7.2. Test Specification

Testing the integration of supplier domains will be based on the interface specifications produced by the relevant suppliers. There are Application Interface Specifications (AIS) and Technical Interface Specifications (TIS) for all inter-domain interfaces. Integration testing will develop test scenarios and test scripts using the agreed AIS and TIS.

PO Ltd testing supports the PO Ltd Release Authorisation process that is based on the solution achieving the acceptance criteria/methods defined within the Conceptual Designs (CD). These acceptance methods are used as the basis for determining the requirements that can be accepted through PO Ltd testing, and developing test scenarios and test scripts for E2E testing to support those requirements.

The Test Team will use the Requirements Catalogue and CD to develop the Test Scenarios required to cover the identified requirements and document these within a High Level Test Plan (HLTP) for each project. The High Level Test Plan is a deliverable to the Project manager and PO Ltd Design Authority for each area, that have responsibility for ensuring that the scenarios cover the requirement and acceptance criteria satisfactorily and sign off the Test Plan.

Following development of the HLTP, lower level tests are developed and input to Test Director, under the relevant folder for execution during E2E Testing.

Appropriate BAU resources will be required to contribute to the development, review and acceptance of test scenarios and scripts.

Test scenarios and test scripts developed by PO Ltd will be held in TestDirector, together with the Requirements Catalogue and High Level Acceptance Criteria for S80.

7.3. Test Planning –

The test plan is a section of TestDirector where tests are created and stored in a logical hierarchy, or Test Plan Tree. The Test plan tree contains a

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number of folders/strands covering regression testing of the E2E solution. These are supported by a folder for each project within the S80 release, which contain appropriate tests to cover functionality for that area.

The release is broken down into the relevant test phases, and then into the components of each test phase. For integration testing, this would be each domain, but for interface testing, it could be each interface under test.

7.4. Test Execution

Tests will be taken from the Test Plan Tree and allocated into a Test Set. A Test Set is a logical grouping of tests in run order. Test Sets will be executed, and the results of each test within the set updated. Tests may be classified as 'Passed', which indicates a successful run, or classified as 'Not Run', 'Failed' or 'Not completed', in which case, an incident may be raised.

7.5. Incident Management

The E2E test phase assumes that all systems and processes have been thoroughly tested in isolation, and should therefore be fault free. However, with all linked interfaces in place, system and/or procedural incidents will be found.

Given that the objective is to fix any faults that will impact testing or live operation, it is critical that the status of all incidents are monitored.

TestDirector is used to manage any incidents that are raised. Incidents will be classified and managed as documented within the 'PO Ltd Test Incident Management Process' [2]. Copies of this document will be issued to all parties involved in the S80 release.

However, the following sections provide a brief overview of the incident management process.

7.5.1. Incident management approach

High impact incidents must be fixed, and the service and associated systems/processes must be retested to ensure the fix is successful and it has not resulted in the introduction of any new incidents elsewhere in the service.

The details of each incident identified will be recorded and classified, and the incident status monitored throughout its lifecycle. Standard reports will be produced to support management reporting and analysis.

All incidents are linked to test scenarios, so that it is possible to identify which test to rerun once the defect has been resolved.

7.5.2. Incident classification

Incidents will be categorised by test phase and then major component.

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The following details are held within the incident management system to assist the fault analysis and resolution process:

- The date the incident was found
- A description of the incident
- Details regarding how to reproduce the incident (or a clear statement that the incident cannot be reproduced)
- The version of the system or process in which the incident was found (and where appropriate, details of any environmental conditions)
- The name of the person who detected the incident
- Reference to the test case (or Acceptance Test if appropriate)
- Testing phase in which the incident was found
- The severity of the incident [ratified by the incident review meeting]:

Severity	Description
High	An incident that has serious impact on functionality or reliability, such that the service or components of the service are either: • Not available or are inoperable • Prevent further testing of the service or component of the service • Prevent key data being passed to another system • Would render the service unfit for operational use For a high severity incident, there is no workaround available.
Medium	An incident that is obvious to all or many users, but it would not prevent operation of the service and the service remains usable. A medium severity incident either: • Restricts testing, but testing could continue in the short term without too much detrimental effect • Would cause significant operational problems For a medium severity incident, a workaround is available, but only possible in the short term.

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Severity	Description
Low	A minor incident, which might not be noticed by all users, as: • Its is either cosmetic or an inconsistency • The service remains usable • It does not impede further testing For a low severity incident, either a minor workaround, or no workaround, is required.

- The priority or urgency for which a fix is needed by the testers or the business [ratified by the incident review meeting]:

Priority	Description
High	Required immediately, as testing cannot continue for the system, or key functions of the system are impaired.
Medium	Needs to be fixed as soon as possible (within suppliers' agreed turn-round times), as it stops or significantly restricts testing of a particular function or component of the system. A medium priority incident must be fixed prior to pilot (soft launch).
Low	There is no urgent need, as the impact of the incident is low and does not impeded testing or would not prevent a move into pilot (soft launch).

If a test team within one of the System Suppliers identifies and raises the incident the following additional information will be recorded on the manual Incident Tracking form:

- The originating organisation.
- The originating organisation's unique reference number from their own Incident Management system.

N.B. Supplier raised incidents will be identified by using a combination of the supplier organisation name and their unique reference number e.g. Prism 001.

The supplier identifier will be entered into TestDirector so that it is interlocked with the PO LTD incident tracking.

- The name of the organisation assigned to investigate and resolve the incident [coordinated by the Test Stage owner or Domain Coordinator and ratified by the incident review meeting]:

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- The status of the incident within the incident management system (see the following section for a description of the incident lifecycle) [ratified by the incident review meeting]:

Status	Set when	Set by
New	The incident is reported	The person who reports the incident. Test Operator/Test Analyst or Test Stage Owner/Domain Co-ordinator
Open	The Test Stage Owner/Domain Co-ordinator /Domain Owner agree that the incident must be fixed	Test Analyst or Test Stage Owner/Domain Co-ordinator
Rejected	The Test Stage Owner/Domain Co-ordinator /Domain Owner agree that the incident has been raised in error	Test Analyst or Test Stage Owner/Domain Co-ordinator
Deferred	The Test Stage Owner/Central Co-ordinator or daily progress meeting determine that the incident is to be deferred, or is an enhancement, and is to be fixed at some point in the future, after E2E testing.	The Test Stage Owner/Central Co-ordinator.
Fixed	The incident has been fixed, tested in development and is available for testing	The Test Stage Owner/Domain Co-ordinator.
Closed	When the fix is included within a full release and this release has been tested by an independent tester to show the incident is fixed	The individual who identified the incident. Test Operator/Test Analyst or Test Stage Owner/Domain Co-ordinator

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Reopen	When the incident is shown to still be present	The individual who identified that the incident is not fixed Test Operator/Test Analyst or Test Stage Owner/Domain Co-ordinator

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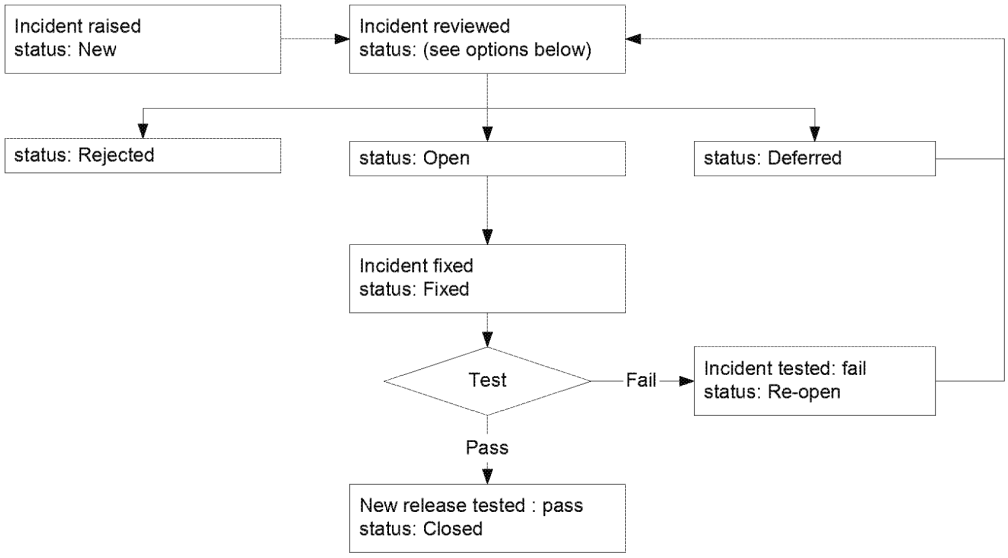
7.5.3. Incident management process

The diagram below shows the lifecycle for an incident reported by PO Ltd or suppliers, indicating how the status changes as the incident is reviewed, fixed and re-tested.



7.5.4. Fix management

In order to ensure that fixes and changes to software and environment levels are maintained in a controlled manner it is necessary to implement the following tightly controlled processes:

- Each System Supplier will appoint a Version Control Representatives to act as their central notification point through whom all communications and approvals pass.
- On entry into the PO Ltd Testing, the system suppliers will be responsible for baselining their system levels as a reference point for future updates. The version levels of the supplier systems will be notified to the PO Ltd Testing Domain owner who will distribute this information to all interested parties.
- No updates to systems, applications, data or environments impacting the systems within the scope of the release will be permissible unless agreed and approved with the PO Ltd Testing Domain owner. All updates will be controlled by the PO Ltd Testing Domain owner.
- Fixes or changes will be compiled into release packages.
- On completion of a release package to match a release window, each supplier will create a list of content for their package including all fixes

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and changes being applied. Each supplier will also indicate the new version level of their system(s) and pass this on to the PO Ltd Testing Domain owner.

- On agreement of the release content, the system suppliers will implement their fixes and changes within the pre-agreed release window.

7.6. Test reporting

Monitoring the progress and measuring the success of E2E testing is a vital management tool required to assess the suppliers performance against requirements, as input into the Release Authorisation/Acceptance process, and to gauge the business and systems readiness to move into a live environment. Test reporting will be managed in accordance with PO Ltd Measurement Incidents and Progress Reporting [3]. This document resides within the PO Ltd Testing document hierarchy and sits under this Test Plan. It will be issued to all parties involved in the S80 release. This section provides a brief overview of the document's coverage.

During the previous major PO Ltd releases the PO Ltd testing team developed and maintained a reporting system covering **progress**, **measurement** and **incidents** across the release.

Daily progress reports were completed by each domain and consolidated into a release progress report.

Incidents statistics and details were maintained monitored and reported.

Measurement information provided reporting on three dimensions across the release; Performance, Confidence and Coverage.

This reporting stream allows progress to be measured in a controlled manner, giving managers a clear picture of the current status and the rising confidence of the system(s) and processes under test.

For The S80 Release, the outputs from Test Director will be used to create the reporting described above.

7.7. Test schedule

As with previous releases, planned test schedules, which show the PO Ltd led phases, have been developed to support S80 testing and are documented separately in appendix C.

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8. Appendix A – Glossary of Terms & Abbreviations

AIS	Application Interface Specification
APS	Automated Payments System
A&L	Alliance & Leicester
BAU	Business as Usual
BCM	Business Change Management
CD	Conceptual Design
DIT	Direct Interface Test
DR	Disaster Recovery
DRS	Data Reconciliation Service
DVLA	Driver & Vehicle Licensing Agency
E2E	End-to-end
EDG	Electronic Data Gateway
ETU	Electronic Top-Ups
FI	Financial Institution
FRTS	First Rate Travel Services
HLTP	High Level Test Plan
HMIS	Horizon Management Information System
LINK	LINK banking network
LINK FI	A financial institution connected via the LINK network
NBX	Network Banking Engine Replacement
NNDB	National Network Data Base
NS&I	National Savings & Investments
NSSC	National Secure Stock Centre
PIN	Personal Identification Number
PO Ltd	Post Office Ltd.
POL FS	Post Office Ltd Financial Systems
RDS80	Reference Data System

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SV&I Testing	System Validation and Integration Testing
TID	Terminal Identifier
TIS	Technical Interface Specification

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9. Appendix B - S80 DIT Interfaces

Ref	From	To	Description	Comment	Lead Owner	Support Role
1.	TMS (Horizon)	POL FS (Txn Data)	Transaction Data via XI Middleware.		Fujitsu Services	Prism (POL FS)
2.	TMS (Horizon)	First Rate Travel Service (FRTS)	Transaction Data/ Controls Totals via EDG.		Fujitsu Services	Prism (EDG) First Rate
3.	TMS (Horizon)	MI (Txn Data)	Transaction Data via FTMS		Fujitsu Services	Prism (MI)
4.	TMS (Horizon)	HR SAP	Remuneration Data via FTMS		Fujitsu Services	Prism (HR SAP)
5.	TMS (Horizon)	PO Ltd Gateway	CTS Data via FTMS		Fujitsu Services	Prism (PO Ltd Gateway)
6.	TMS (Horizon)	Track and Trace Clients	Track and Trace Data via EDG		Fujitsu Services	Prism (EDG) PO Ltd (Track and Trace Client)
7.	RDS 80	TMS (Horizon)	Reference Data via FTMS		Fujitsu Services	Prism (RDS80)
8.	POL FS	TMS (Horizon)	Direct Link for Txn Corrections		Prism (POL FS)	Fujitsu Services

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Ref	From	To	Description	Comment	Lead Owner	Support Role
9.	POL FS	NS&I	Transaction Summaries via FTMS/EDG		Prism (POL FS)	Fujitsu Services (FTMS) Prism (EDG)
10.	POL FS	A&L	Transactions via FTMS/EDG		Prism (POL FS)	Fujitsu Services (FTMS) Prism (EDG)
11.	POL FS	ESFS	Financial Data via FTMS		Prism (POL FS)	Prism (ESFS) Fujitsu Services (FTMS)
12.	POL FS	BACS	BACS Payments File via FTMS		Prism (POL FS)	POL/Prism (BACS) Fujitsu Services (FTMS)
13.	POL FS	SAPADS	Payment Values via FTMS		Prism (POL FS)	Prism (SAPADS) Fujitsu Services (FTMS)
14.	POL FS	RDS 80	Reference Data via FTMS		Prism (POL FS)	Prism (RDS80) Fujitsu Services (FTMS)
15.	RDS 80	POL FS	Reference Data via FTMS		Prism (POL FS)	Prism (RDS80) Fujitsu Services (FTMS)
16.	SAPADS	POL FS	Transactions via FTMS		Prism (SAPADS)	Prism (POL FS) Fujitsu Services (FTMS)
17.	STAMPS	POL FS	NSSC Stock via FTMS		Prism (POL FS)	STAMPS Fujitsu Services (FTMS)
18.	Camelot	POL FS	Transaction Data via EDG/FTMS	Development of CR248 (POL FS client data feeds) is unlikely to be completed for DIT	Prism (POL FS)	POL (Camelot) Prism (EDG) Fujitsu Services (FTMS)
19.	Money gram	POL FS	Transaction Summaries via EDG/FTMS	Development of CR248 (POL FS client data feeds) is unlikely to be completed for DIT	Prism (POL FS)	POL (Moneygram) Prism (EDG) Fujitsu Services (FTMS)

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Ref	From	To	Description	Comment	Lead Owner	Support Role
20.	EDS	POL FS	TVL, Personal Banking and Cheques data via EDG/FTMS	Development of CR248 (POL FS client data feeds) is unlikely to be completed for DIT	Prism (POL FS)	POL (EDS) Prism (EDG) Fujitsu Services (FTMS)
21.	FRTS	POL FS	Travellers Cheques data via EDG/FTMS	Development of CR248 (POL FS client data feeds) is unlikely to be completed for DIT	Prism (POL FS)	POL (First Rate) Prism (EDG) Fujitsu Services (FTMS)
22.	A&L	POL FS	Giro Errors via POL Gateway	Development of CR248 (POL FS client data feeds) is unlikely to be completed for DIT	Prism (POL FS)	POL (A&L) Prism (POL Gateway)
23.	A&L	POL FS	ATM Transaction Summaries via POL Gateway	Development of CR248 (POL FS client data feeds) is unlikely to be completed for DIT	Prism (POL FS)	POL (A&L) Prism (POL Gateway)
24.	HANCO	POL FS	ATM Transaction Summaries via POL Gateway	Development of CR248 (POL FS client data feeds) is unlikely to be completed for DIT	Prism (POL FS)	POL (HANCO) Prism (POL Gateway)
25.	TRM	POL FS	ATM Transaction Summaries via POL Gateway	Development of CR248 (POL FS client data feeds) is unlikely to be completed for DIT	Prism (POL FS)	POL (TRM) Prism (POL Gateway)
26.	Bank Machines	POL FS	ATM Transaction Summaries via POL Gateway	Development of CR248 (POL FS client data feeds) is unlikely to be completed for DIT	Prism (POL FS)	POL (Bank Machines) Prism (POL Gateway)
27.	DVLA	POL FS	Transaction Summaries via POL gateway	Development of CR248 (POL FS client data feeds) is unlikely to be completed for DIT	Prism (POL FS)	POL (DVLA) Prism (POL Gateway)

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Ref	From	To	Description	Comment	Lead Owner	Support Role
28.	Branch Sales Targets	MI	Management Information via POL Gateway		Prism (MI)	POL (BST) Prism (POL Gateway)
29.	Sales Forecasts	MI	Management Information via POL Gateway		Prism (MI)	POL (SF) Prism (POL Gateway)
30.	Fixed Income	MI	Management Information via POL Gateway		Prism (MI)	POL (FI) Prism (POL Gateway)
31.	Camelot	MI	Transaction data via EDG		Prism (MI)	POL (Camelot) Prism (EDG)
32.	Non Horizon Data	MI	Financial Services, Change Giving ATMS, Home Phones etc. transaction data via POL Gateway		Prism (MI)	POL (Various) Prism (POL Gateway)
33.	RDS 80	MI	Reference Data to MI	Interface Connection method to be agreed	Prism (MI)	Prism (RDS 80)
34.	EDS	MI	TVL, Personal Banking and Cheques data via EDG		Prism (MI)	POL (EDS) Prism (EDG)
35.	ESFS	MI	Income Data via Direct Interface		Prism (MI)	Prism (ESFS)
36.	MI	HR SAP	Non Horizon Remuneration data via Direct Interface		Prism (MI)	Prism (HR SAP)
37.	EDS	MI	Card Account data via POL Gateway		Prism (MI)	POL (EDS/Card Account) Prism (EDG)

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Ref	From	To	Description	Comment	Lead Owner	Support Role
38.	HR SAP	RDS 80		Interface to be agreed	Prism (RDS 80)	Prism (HR SAP)
39.	RDS 80	Siebel		Interface to be agreed	Prism (RDS 80)	Prism (Siebel)

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10. Appendix C – Test Plan – Key High Level Testing Milestones

Activity	Start Date	End Date	Lead
S80 Direct Interface Testing	24/01/05	04/02/05	PO Ltd Test Team
S80 Prism POL FS functional testing	19/11/04	20/01/05	Prism
S80 Fujitsu SV&I Cycle 3	28/02/05	18/03/05	Fujitsu Services
S80 E2E Testing Cycle 1	14/02/05	25/02/05	PO Ltd Test Team
S80 E2E Testing Cycle 2	07/03/05	18/03/05	PO Ltd Test Team
S80 E2E Testing Cycle 3	29/03/05	08/04/05	PO Ltd Test Team

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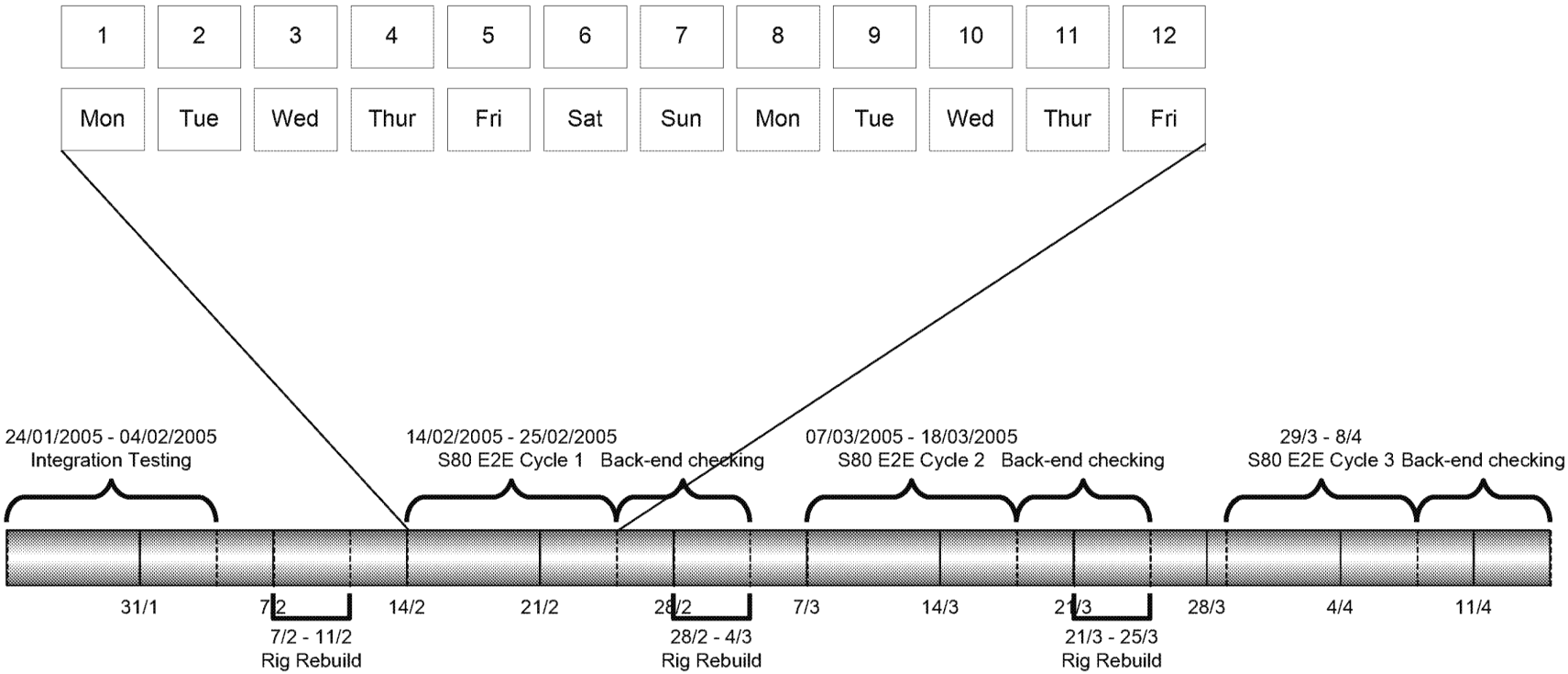
11. Appendix D – Testing Schedules



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12. Appendix E – POL S80 Testing Organisation.