Test Plan

https://www.ukrposhta.ua/ua - [Ukrposhta]

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Document History

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1	31/10/2022	Serhii Nazarchuk	Draft

Approvers List

Name	Role	Approver / Reviewer	Approval / Review Date

Reference Documents

Version	Date	Document Name

Table of Contents

1. INTRODUCTION

1.1. Purpose

This Test Plan document for the Ukrposhta site supports the following objectives:

- Identify existing project information and the software components that should be tested.
- List the recommended Requirements for Testing
- Recommend and describe the testing strategies to be employed.
- Identify the required resources and provide an estimate of the test efforts.
- List the deliverable elements of the test project.
- Test Strategy.
- Execution Strategy.
- Test Management

The final result of the testing should be the complete summary consequence of testing process with the described bugs and recommendations for the improvement of the product from the perspective of the end user.

1.2. Project Overview

The Ukrposhta site is a system (application), which enables users to create and manage shipments, use the Ukrposhta mobile application, and also use a wide range of postal, financial, and online services.

The functionality of this system spans through the entire system, making information available anywhere, anytime. Some services are available only to registered and authorized users.

1.3. Audience

● Project team members duties: perform tasks specified in this document, and provide input and recommendations on this document.

● Project Manager duties: Plans for the testing activities in the overall project schedule, reviews the document, tracks the performance of the test according to the task herein specified, approves the document and is accountable for the results.

● The stakeholders' representatives and participants: (individuals as identified by the PMO Leads) may take part in the UAT test to ensure the business is aligned with the results of the test.

● Technical Team duties: ensures that the test plan and deliverables are in line with the design, provides the environment for testing and follows the procedures related to the fixes of defects.

● Business analyst's duties: will provide their inputs on functional changes.

2. TESTING STRATEGY

2.1. Testing Objectives

The objective of the testing is to check the functionality of Ukrposhta.

The testing process includes execution of test cases, identification, correction and retesting of all bugs of high and medium severity, prioritization of bugs of lower severity for future correction.

Five stages of the testing process are planned:

- the first stage will be devoted to a detailed run of the functional tests with the detection and description of bugs;

- at the second stage, cross-browser compatibility testing will be performed with a description of the bugs found;

- the third stage is to check the bugs fixed by the developers and conduct regression testing;

- the fourth stage is to test the product design with a description of the bugs found;

- the fifth stage is UAT.

Thus, maximum detailing of the testing depth is achieved, which, in turn, allows to determine the spent resources more accurately, as well as allows project developers to correct defects at the earliest stages.

The final product of the test is twofold:

- A production-ready system;

- A set of test cases that can be reused for Functional and UAT test execution.

2.2. Testing Assumptions

- OS, approved for testing:

  -Windows 10

  -MAC OS 10.15 Catalina

- Browsers, approved for testing:

  - Google Chrome 106.0.5249.119

  - Mozilla Firefox 105.0.3

  -Microsoft Edge 106.0.1370.47

  - Safari 15.6.1

- Performance testing and security testing is not considered for this estimation.
- All the bug reports would come along with a snapshot JPEG format
- The Test Team will be provided with access to Test environment
- The Test Team assumes all necessary inputs required during Test design and execution will be supported by Development/BUSINESS ANALYSTs appropriately.
- Test case design activities will be performed by QA Group
- Preparation activities will be owned by Dev Team
- Dev team will provide Defect fix plans based on the Defect meetings during each cycle to plan. The same will be informed to Test team prior to start of Defect fix cycles
- BUSINESS ANALYST will review and sign-off all Test cases prepared by Test Team prior to start of Test execution
- Project Manager/BUSINESS ANALYST will review and sign-off all test deliverables
- The project will provide test planning, test design and test execution support
- Test team will manage the testing effort with close coordination with Project PM/BUSINESS ANALYST
- Project team has the knowledge and experience necessary, or has received adequate training in the system, the project and the testing processes.
- There is no environment downtime during test due to outages or defect fixes.
- The system will be treated as a black box; if the information shows correctly online, and in the reports, it will be assumed that the database is working properly.

    Functional Testing

- Functional testing will be done manually using the exploratory, and the ad-hoc testing methods from the perspective of the end user of the site.
- The Test Team will perform Functional testing only on Ukrposhta

    UAT

- UAT testing execution will be performed before product release and QA Group will provide support for UAT

2.3. Test Principles

- Testing will be focused on meeting the business objectives, cost efficiency, and quality.
- There will be common, consistent procedures for all teams supporting testing activities.
- Testing processes will be well defined, yet flexible, with the ability to change as needed.

- Testing activities will build upon previous stages to avoid redundancy or duplication of effort.
- Testing environment and data will emulate a production environment as much as possible.
- Testing will be a repeatable, quantifiable, and measurable activity.
- Testing will be divided into distinct phases, each with clearly defined objectives and goals.
- There will be entrance and exit criteria.

2.4. Data Approach

- Functional testing of the Ukrposhta will be executed from the perspective of the end user of the site.

2.5. Types of Testing

2.5.1. Functional Testing

PURPOSE: Make test cases; identify functional bugs, and inconsistencies with the requirements and expectations of the user through the implementation of standard as well as non-trivial test scenarios.

SCOPE: The scope of functional testing corresponds to the next table:

No	Description
1	Header
1.1	The "УКРПОШТА Сильні разом" button
1.2	The phone link
1.3	The e-mail link
1.4	The "контакт-центр" link
1.5	The clicking on the "Трекінг", the "Послуги", the "Тарифи", the "Відділення", the "Філателія", the "Кар'єра", the "Бізнесу" sections
2	Login/registration
2.1	New user registartion
2.2	Personal cabinet
2.3	Login
2.4	Registered user
2.5	Unregistered user
2.6	Localization switch
3	The main page
3.1	Check the slider
3.2	Search
3.3	The "Розрахувати" service
3.4	The "Оформити" service

3.5	The "Знайти індекс" service
3.6	The "Передплатити" service
3.7	The "Поштові послуги" service
3.7.1	The "Доставка по Україні" section
3.7.1.2	The "Як доставити" subsection
3.7.1.3	The "Де замовити" subsection
3.7.1.4	The "Як відстежити" subsection
3.7.1.4.1	The "Мобільний застосунок" service
3.7.1.4.2	The "Чат-бот Укрпошти" service
3.7.2	The "Доставка документів" section
3.7.3	The "Доставка з інтернет-магазинів (відновлено)" section
3.7.4	The "Доставка ліків" section
3.7.5	The "Доставка за межі України" section
3.7.6	The "Доставка в Україну" section
3.8	The "Започаткуйте успішний міжнародний бізнес" section
3.9	The "Фінансові послуги" section
3.9.1	The "Грошові перекази" service
3.9.1.1	The "Переказати гроші онлайн" service
3.9.2	The "Оплата онлайн" service
3.9.3	The "Міжнародні перекази" service
3.9.4	The "Страхування" service
3.10	The "Знайти індекс" service
3.11	The "Новини" section
3.12	The "Для юридичних осіб" section
4	The "Трекінг" section
5	The "Послуги" section
6	The "Тарифи" section
7	The "Відділення" section
8	The "Філателія" section
8.1	The "Поштовий маркет"
8.1.3	The cart
9	The "Кар'єра" section
10	The "Бізнесу" section" section
11	Footer

TESTERS: Testing Team.

METHOD: The testing will be performed using the exploratory testing method, and the ad-hoc testing method from the perspective of the end user of the site.

TIMING: after setting up the test environment, and making test cases.

2.5.2. Cross-browser testing

PURPOSE: Check the correct working of the project in different browsers.

SCOPE: The testing is performed in the next browsers:

- Google Chrome 106.0.5249.119

- Mozilla Firefox 105.0.3

-Microsoft Edge 106.0.1370.47

- Safari 15.6.1

TESTERS: Testing Team.

METHOD: The testing will be performed using the exploratory testing method, and the ad-hoc testing method from the perspective of the end user of the site with the same test cases, which were used for the functional testing.

TIMING: after completing the functional testing.

2.5.3.   Regression testing and checking of fixed bugs

PURPOSE: Checking the changes made on the site in order to make sure that the new version does not contain errors in the already tested parts of the site.

SCOPE: In the course of regression testing, the following types of tests will be conducted:

▪ Verification Tests

▪ Version testing

▪ Testing related to functionally

TESTERS: Testing Team.

METHOD: Verification tests, version testing, testing related to functionality.

TIMING: after fixing bugs.

2.5.4.   Testing of the design

PURPOSE: Verification of the product design

SCOPE:

 -registration/login form;

- personal cabinet;

- site pages;

- postmarket;

-cart;

- the "Оплата онлайн" interface;

- the "Грошові перекази" interface;

- the "ОСЦПВ" form.

TESTERS: Testing Team.

METHOD: Ad-hoc testing

TIMING: after completing regression testing.

2.5.5. Test Acceptance Criteria

TEST ACCEPTANCE CRITERIA

1. Test cases approved and signed-off prior to start of Test execution

2. Development completed.

3. Test environment is configured and ready to use.

Sign-off	Readiness
- Approved Use cases - Approved Test cases	- Development completed - System ready for testing on Test environment - Defect fixes is planned

2.5.6. Test Deliverables

TEST DELIVERABLES

S.No.	Deliverable Name	Author	Reviewer
1.	Test Plan	Test Lead	Project Manager/ Business Analyst's
2.	Functional Test Cases	Test Team	Business Analyst's Sign off
3.	Logging Bugs	Test Team	Test Lead/ Programming Lead
4.	Daily/weekly status report	Test Team/ Test Lead	Test Lead/ Project Manager
5.	Test Closure report	Test Lead	Project Manager

2.5.7. Milestone

MILESTONE LIST

The milestone list is tentative and may change due to below reasons

a) Any issues in the System environment readiness

b) Any change in scope/addition in scope

c) Any other dependency that impacts efforts and timelines

2.5.8. User Acceptance Testing (UAT)

PURPOSE: this test focuses on validating the business logic. It allows the end users to complete one final review of the system prior to deployment.

TESTERS: the UAT is performed by the stakeholders' representatives.

METHOD: Since the business users are the most indicated to provide input around business needs and how the system adapts to them, it may happen that the users do some validation not contained in the scripts. Test team write the UAT test cases based on the inputs from End user and Business Analyst's.

TIMING: After all previous stages of testing are done. Only after this testing is completed the product can be released to production.

TEST DELIVERABLES

S.No.	Deliverable Name	Author	Reviewer
1.	UAT Test Cases	Test Team	Business Analyst's Sign off

2.6. Testing Effort Estimate

Task	Workload	Start date	Expiration date
Making the test plan	12 hours	31.10.2022	01.11.2022
Making checklist, test cases	32 hours	02.11.2022	07.11.2022
Test execution	32 hours	08.11.2022	11.11.2022
Test Analysis	12 hours	14.11.2022	15.11.2022
Summarizing	12 hours	15.11.2022	16.11.2022

3. EXECUTION STRATEGY

3.1. Entry and Exit Criteria

- The entry criteria refer to the desired conditions in order to start test execution.
- The exit criteria are the desirable conditions that need to be met in order to proceed with the implementation.
- Entry and exit criteria are flexible benchmarks. If they are not met, the test team will assess the risk, identify mitigation actions and provide a recommendation. All this is input to the project manager for a final "go-no go" decision.
- Entry criteria to start the execution phase of the test: the activities listed in the Test Planning section of the schedule are 100% completed.

Exit Criteria	Test Team	Technical Team	Notes
100% Test Cases executed			
95% pass rate of Test Cases			
No open Critical and High severity defects			
95% of Medium severity defects have been closed			
All remaining defects are either cancelled or documented as Change Requests for a future release			
All expected and actual results are captured and documented with the test script			
All test metrics collected based on reports			
All defects logged in HP ALM			
Test Closure Memo completed and signed off			

3.2. Test Cycles

- There will be two cycles for functional testing. Each cycle will execute all the test cases .
- The objective of the first cycle is to identify any blocking, critical defects, and most of the high defects. It is expected to use some work-around in order to get to all the test cases.

- The objective of the second cycle is to identify remaining high and medium defects, remove the work-around from the first cycle, correct gaps in the scripts and obtain performance results.
- UAT test will consist of one cycle.

3.3. Validation and Defect Management

- It is expected that the testers execute all the scripts in each of the cycles described above. However, it is recognized that the testers could also do additional testing if they identify a possible gap in the scripts. This is especially relevant in the second cycle, when the Business analyst's join the TCOE in the execution of the test, since the BUSINESS ANALYSTs have a deeper knowledge of the business processes. If a gap is identified, the scripts and traceability matrix will be updated and then a defect logged against the scripts.
- The defects will be tracked through HP ALM only. The technical team will gather information on a daily basis from HP ALM, and request additional details from the Defect Coordinator. The technical team will work on fixes.
- It is the responsibility of the tester to open the bug reports, link them to the corresponding script, assign an initial severity and status, retest and close the bug report; it is the responsibility of the Defect Manager to review the severity of the defects and facilitate with the technical team the fix and its implementation, communicate with testers when the test can continue or should be halt, request the tester to retest, and modify status as the defect progresses through the cycle; it is the responsibility of the technical team to review HP ALM on a daily basis, ask for details if necessary, fix the bug, communicate to the Defect Manager the fix is done, implement the solution per the Defect Manager request.

Bugs found during the Testing will be categorized according to the bug-reporting tool "Mercury HP ALM" and the categories are:

Severity	Impact
1 (Critical)	This bug is critical enough to crash the system, cause file corruption, or cause potential data loss It causes an abnormal return to the operating system (crash or a system failure message appears). It causes the application to hang and requires re-booting the system.
2 (High)	It causes a lack of vital program functionality with workaround.

3 (Medium)	This Bug will degrade the quality of the System. However, there is an intelligent workaround for achieving the desired functionality - for example through another screen. This bug prevents other areas of the product from being tested. However other areas can be independently tested.
4 (Low)	There is an insufficient or unclear error message, which has minimum impact on product use.
5(Trivial)	There is an insufficient or unclear error message that has no impact on product use.

3.4. Test Metrics

Test metrics to measure the progress and level of success of the test will be developed and shared with the project manager for approval. The below are some of the metrics

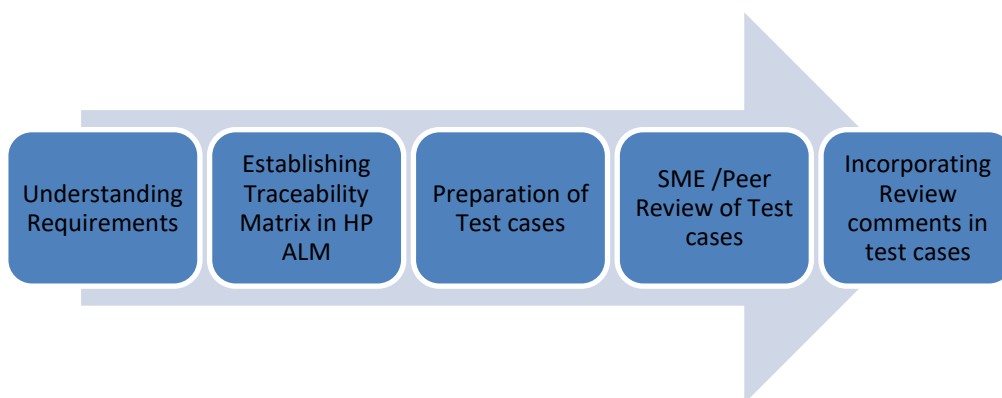| Report	Description	Frequency
Test preparation & Execution Status	To report on % complete, %WIP, % Pass, % Fail Bug reports severity wise Status – Open, closed, any other Status	Weekly / Daily (optional)
Daily execution status	To report on Pass, Fail, Total bugs, highlight Showstopper/ Critical defects	Daily
Project Weekly Status report	Project driven reporting (As requested by PM)	Weekly – If project team needs weekly update apart from daily and there is template available with project team to use.

4.   TEST MANAGEMENT PROCESS

4.1. Test Management Tool

HP Application Lifecycle Management is the tool used for Test Management. All testing artifacts such as Test cases, test results are updated in the HP Application Lifecycle Management (ALM) tool.

● Project specific folder structure will be created in HP ALM to manage the status of this DFRT project.

● Each resource in the Testing team will be provided with Read/Write access to add/modify Test cases in HP ALM.

● During the Test Design phase, all test cases are written directly into HP ALM. Any change to the test case will be directly updated in the HP ALM.

● Each Tester will directly access their respective assigned test cases and update the status of each executed step in HP ALM directly.

● Any defect encountered will be raised in HP ALM linking to the particular Test case/test step.

● During Defect fix testing, defects are re-assigned back to the tester to verify the defect fix. The tester verifies the defect fix and updates the status directly in HP ALM.

● Various reports can be generated from HP ALM to provide status of Test execution. For example, Status report of Test cases executed, Passed, Failed, No. of open bug reports, Severity wise bug reports, etc.

4.2. Test Design Process

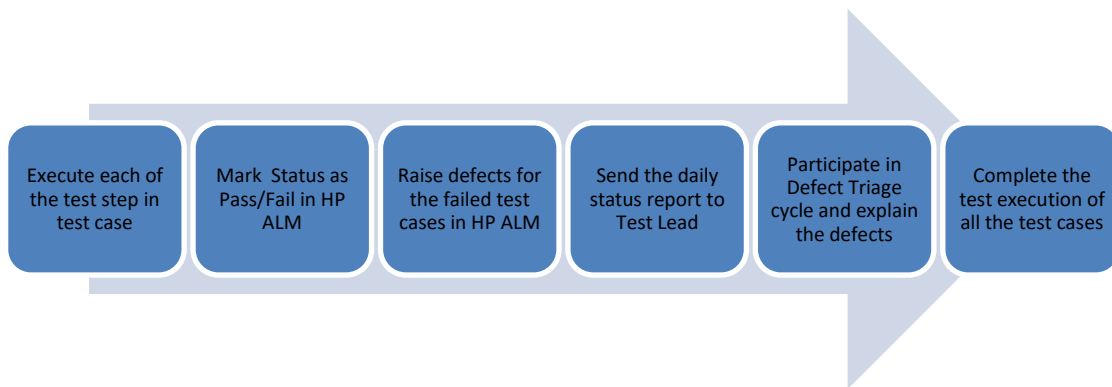| Understanding Requirements	Establishing Traceability Matrix in HP ALM	Preparation of Test cases	SME /Peer Review of Test cases	Incorporating Review comments in test cases

● The tester will understand each requirement and prepare corresponding test case to ensure all requirements are covered.

● Each Test case will be mapped to Use cases to Requirements as part of Traceability matrix.

- Each of the Test cases will undergo review by the BUSINESS ANALYST and the review defects are captured and shared with the Test team. The testers will rework on the review defects and finally obtain approval and sign-off.
- Testers will maintain a clarification Tracker sheet and the same will be shared periodically with the Requirements team and accordingly the test case will be updated. The clarifications may sometimes lead to Change Requests or not in scope or detailing implicit requirements.
- Sign-off for the test cases would be communicates through mail by Business Analyst's.
- Any subsequent changes to the test case if any will be directly updated in HP ALM.

4.3. Test Execution Process

| Execute each of the test step in test case | Mark Status as Pass/Fail in HP ALM | Raise defects for the failed test cases in HP ALM | Send the daily status report to Test Lead | Participate in Defect Triage cycle and explain the defects | Complete the test execution of all the test cases |

- Once all Test cases are approved and the test environment is ready for testing, tester will start an exploratory test of the application to ensure the application is stable for testing.
- Each Tester is assigned Test cases directly in HP ALM.
- Testers to ensure necessary access to the testing environment, HP ALM for updating test status and raising defects. If any issues will be escalated to the Test Lead and in turn to the Project Manager as escalation.
- If any showstopper during exploratory testing will be escalated to the respective development SPOCs for fixes.
- Each tester performs step by step execution and updates the executions status. The tester enters Pass or Fail Status for each of the step directly in HP ALM.
- Tester will prepare a Run chart with day-wise execution details
- If any failures, bug will be raised as per severity guidelines in HP ALM tool detailing steps to simulate along with screenshots if appropriate.
- Daily Test execution status as well as bug status will be reported to all stakeholders.

- Testing team will participate in defect triage meetings in order to ensure all test cases are executed with either pass/fail category.
- If there are any bugs that are not part of steps but could be outside the test steps, such defects need to be captured in HP ALM and map it against the test case level or at the specific step that issue was encountered after confirming with Test Lead.
- This process is repeated until all test cases are executed fully with Pass/Fail status.
- During the subsequent cycle, any bugs fixed applied will be tested and results will be updated in HP ALM during the cycle.

As per Process, final sign-off or project completion process will be followed

4.4. Test Risks and Mitigation Factors

Risk	Prob.	Impact	Mitigation Plan
SCHEDULE Testing schedule is tight. If the start of the testing is delayed due to design tasks, the test cannot be extended beyond the UAT scheduled start date.	High	High	The testing team can control the preparation tasks (in advance) and the early communication with involved parties. Some buffer has been added to the schedule for contingencies, although not as much as best practices advise.
RESOURCES Not enough resources, resources on boarding too late (process takes around 15 days.	Medium	High	Holidays and vacation have been estimated and built into the schedule; deviations from the estimation could derive in delays in the testing.
DEFECTS Defects are found at a late stage of the cycle or at a late cycle; defects discovered late are most likely be due to unclear specifications (or	Medium	High	Defect management plan is in place to ensure prompt communication and fixing of issues.

their absence) and are time consuming to resolve.			
SCOPE Scope completely defined	Medium	Medium	Scope is well defined but the changes are in the functionality are not yet finalized or keep on changing.
Natural disasters	Low	Medium	Teams and responsibilities have been spread to two different geographic areas. In a catastrophic event in one of the areas, there will resources in the other areas needed to continue (although at a slower pace) the testing activities.
Non-availability of Independent Test environment and accessibility	Medium	High	Due to the non-availability of the environment, the schedule gets impacted and will lead to the delayed start of Test execution.
Delayed testing due to new Issues	Medium	High	During testing, there is a good chance that some "new" defects may be identified and may become an issue that will take time to resolve. There are defects that can be raised during testing because of unclear document specifications. These defects can yield an issue that will need time to be resolved. If these issues become showstoppers, it will greatly impact the overall project schedule. If new defects are discovered, the defect management and issue

			management procedures are in place to immediately provide a resolution.

5. COMMUNICATIONS PLAN AND TEAM ROSTER

5.1. Role Expectations

The following list defines in general terms the expectations related to the roles directly involved in the management, planning or execution of the test for the project.

SN0.	Roles	Name	Contact Info
1.	Project Manager		
2.	Test Lead		
3.	Business Analyst		
4.	Development Lead		
5.	Testing Team		
6.	Development Team		
7.	Technical Lead		

5.1.1.   Project Management

Project Manager: reviews the content of the Test Plan, Test Strategy and Test Estimates signs off on it.

5.1.2.   Test Planning (Test Lead)

- Ensure entrance criteria are used as input before start the execution.
- Develop test plan and the guidelines to create test conditions, test cases, expected results and execution scripts.
- Provide guidelines on how to manage defects.
- Attend status meetings in person or via the conference call line.

- Communicate to the test team any changes that need to be made to the test deliverables or application and when they will be completed.
- Provide on premise or telecommute support.
- Provide functional (Business Analysts) and technical team to test team personnel (if needed).

5.1.3. Test Team

- Develop test conditions, test cases, expected results, and execution scripts.
- Perform execution and validation.
- Identify, document and prioritize defects according to the guidance provided by the Test lead.
- Re-test after software modifications have been made according to the schedule.
- Prepare testing metrics and provide regular status.

5.1.4. Test Lead

- Acknowledge the completion of a section within a cycle.
- Give the OK to start next level of testing.
- Facilitate defect communications between testing team and technical / development team.

5.1.5. Development Team

- Review testing deliverables (test plan, cases, scripts, expected results, etc.) and provide timely feedback.
- Assist in the validation of results (if requested).
- Support the development and testing processes being used to support the project.
- Certify correct components have been delivered to the test environment at the points specified in the testing schedule.
- Keep project team and leadership informed of potential software delivery date slips based on the current schedule.
- Define processes/tools to facilitate the initial and ongoing migration of components.
- Conduct first line investigation into execution discrepancies and assist test executors in creation of accurate defects.
- Implement fixes to defects according to schedule.

6. TEST ENVIRONMENT

Ukrposhta servers will be hosted at the Ukrposhta company's site.

Windows, and MAC OS environment with Google Chrome 106.0.5249.119, Mozilla Firefox 105.0.3, Microsoft Edge 106.0.1370.47, Safari 15.6.1and later should be available to each tester.

7. APPROVALS

The Names and Titles of all persons who must approve this plan.

Signature:	
Name:	
Role:	
Date:	

Signature:	
Name:	
Role:	
Date:	