

**Test Strategy**

**Product Name**

**Revision History**

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# Introduction

The purpose of this document is to define how the testing of Galaxie Coffee will be managed and performed by SVAM Testing Team. It specifies the objectives and scope of the work to be undertaken, the overall approach, including management of risks and constraints, and associated key roles and responsibilities.

The Test Strategy will evolve over time and will be supported by appendices created as and when additional information becomes available. These will provide further details on coverage, risks, assumptions and dependencies for each functional component.

## Purpose

The purpose of this Test Strategy is to define the overall approach that will be taken by the Testing Team when delivering testing services to all of the projects within the business.

The document helps to clarify the testing activities, roles and responsibilities, processes and practice to be used across successive projects.

Where a project’s testing needs deviate from what is covered by this Test Strategy the exceptions will be detailed in the Test Plan.

## System Overview

The project is looking forward to reconstruct Galaxiecoffee.com web site with new look and feel and new functionalities. This website allows the customer of the Galaxie Coffee to order the products online UI design and some functionality need to be changed for the following pages.

# Approach

All testing tasks will be conducted in line with the Software Test Life Cycle (STLC) and in support of the Software Development Life Cycle (SDLC). The documents used within the SDLC will be completed both by the Test Team and the project participants that are responsible for providing information and deliverables to the Test Team.

At the beginning of each Testing project, the Test Lead will review this generic Test Strategy against the Business Requirements to make an initial assessment of the test coverage that is needed, and define and agree a Test Approach for the project.

The Test Team Lead will set up a Testing Risks and Issues log.

The Risk Assessment ensures that:

* The tests can be scheduled in the most efficient way.
* Appropriate action can be taken if there is insufficient time for all the planned testing.

Although the strategic approach for testing is owned by the SVAM Test Group each level of testing is specifically owned as follows;

1. Pre-SIT Testing is the responsibility of the SVAM Test Team.
2. All the Test cases will be based on SRS.
3. There will be two cycles of Pre -SIT testing. (Pre-SIT Iteration 1 & Pre-SIT Iteration 2).
4. In the Pre-SIT 1st Iteration all the test cases will be executed including retest.
5. In Pre-SIT Iteration 2 a sanity end to end checking will be done to ensure the core business functionality with very selective test cases.
6. Retesting will be done on a defect and will validate on prejudicial areas.
7. SIT Testing will be done by Testing Team.
8. User Acceptance Testing is the also the responsibility of the SVAM Testing Team.

The below **SDLC Methodologies** shows the SVAM preferred testing process.

## Analysis & Planning Phase Entry Criteria

For EMP- Resource Allocation Module projects the following criteria need to be met before the Test Items are accepted into the Analysis & Planning Phase:

* Documentation defining the scope items are approved and at release status.
* All documents are under change control processes.

## Analysis & Planning Phase Exit Criteria

For the Analysis & Planning phase to be completed and allow items to move into the Test Phase the following criteria need to be achieved:

* Knowledge Share documents has been completed and reviewed by the Tester.
* Walkthrough and sign-off completed for the Test Plan.
* Defined Test Estimate has been published and agreed.

## Test Phase Entry Criteria

Before Test Items are made available for the Test Team to test it’s expected that:

* The Test infrastructure is available.
* All Test Items are completed and approved.
* The correct versions of the code have been deployed to the correct test environments.
* Sanity and Unit tests have been completed successfully to demonstrate readiness for testing.

## Test Phase Exit Criteria

For the Test Items to exit testing the following conditions will have to be met:

* The *Test Summary Report* will be completed.
* All planned testing activities have been completed to agreed levels.
* All high priority bugs have been fixed, retested and passed.
* No defects must be left in an open unresolved status.

## Pre-SIT Entry Criteria

Following criteria need to be met before the entering Pre-SIT.

* Unit testing has been executed.
* Pre-SIT environment is ready for testing.
* All the Pre-SIT test Cases have been reviewed and signed off by Client.

## Pre-SIT Exit Criteria

Following criteria need to be met before exit Pre-SIT Testing phase.

* All the Pre-SIT test cases have been executed.
* All the Pre-SIT test cases have been passed if anything fails or deferred or unresolved it has to be documented for the next iteration.
* Formal Pre-SIT signed off from the client stakeholders.

## UAT Entry Criteria

Following criteria need to be met before the entering UAT.

* SIT signed off.
* SIT test execution reports.
* Agreement to the System Acceptance Testing Readiness Report.
* Test environments and interface infrastructure delivered by Client

## UAT Exit Criteria

Following criteria need to be met before exit SIT Testing phase.

* All the UAT test cases have been executed properly.
* *The target will be no show stoppers for the commencement of Operational Verification.*
* If any minor issue/issues (Cosmetic/minor validation which does not effect to the system) present in the system that has to be specified in the Test Closure Report and client should agree on that.
* Test Closure Report signed off from the client stakeholders.

## Change Management

The Build Manager/Project Manger will ensure that once testing begins no changes or modifications are made to the code used to create the build of the product under test. The Build Manager/Project Manger will inform the Test Team against which version testing will begin.

If changes or modifications are necessary through bug resolution or for any other reason the build Manager will inform the Test Team prior to the changes being made

## Measures and Metrics

At the Initiation Phase of the project the Test Team will publish a set of measures and metrics related to the test activities. The Test Plan also defines the milestone dates for key deliverables such as the Test Plan and these are metrics captured for ongoing statistical process analysis across successive projects

**Test Execution and Progress**

* Number of Tests Cases Executed vs. Test Cases Planned.
* Number of Test Cases Passed, Failed, Rejected and Deferred.
* Total Time Spent on Execution vs. Planned Time.

**Bug Analysis**

* Total Number of Bugs Raised and Closed per Test Run.
* Total Number of Bugs Closed vs. Total Number of Bugs Re-Opened.
* Bug Distribution Totals by Test Item by Severity per Test Run.

Down time tracking sheet will be maintained for the test execution separately.

# Test Items

For each Release the Test Engineer will create a table of Test Items that will be in scope of the testing being planned. These will be identified from the Scope Items in a given Release.

In addition the Test Engineer will record any Test Items that cannot be tested by the test team. The Test Plan will contain Test Items that are In-Scope and Out-of-Scope

# Features to be tested

The test plan records all of the features to be tested for the Test Items in scope.

# Features not to be tested

Performance testing, Automated Regression, Database Testing all forms of Non-Functional, Accessibility Compliance Testing, User Documentation Review.

# Testing Tasks

The tasks testing team will cover during testing. A sample has been described under.

The Testing Tasks that the Test Team will deliver cover the following scope:

* **Fully In Scope:** Functional.(Black Box) , Browser Compatibility.( IE 8 and higher only, Chrome, Firefox and Safari
* **Out of Scope:** Performance testing, Automated Regression, all forms of Non-Functional, Accessibility Compliance Testing, User Documentation Review.

# ‘Pass/Fail’ Criteria

Each Test Item will be assigned a Pass or Fail state dependant on two criteria:

* Total number and severity of Bugs in an Open & Unresolved state within Bug tracking tool.
* The level of successfully executed test requirements.

The combination of both criteria will be used to recognise the Test Item can be declared Test Complete. However as this is a minimum level of quality that is believed achievable it’s recommended that where project timescales allow further testing and development should be conducted to raise the overall quality level*.*

**Table of Issue Severity**

| Severity | Definition |
| --- | --- |
| S1 | Crash/Legal – System crash, data loss, no workaround, legal, Ship Killer |
| S2 | Major – Operational error, wrong result |
| S3 | Minor – Minor problems |
| S4 | Incidental – Cosmetic problems |
| S5 | N/A – Not Applicable; used for feature requests and Development Tasks |

The total MAXIMUM number of issues recorded in Bugzilla that can remain in an Open & Unresolved state for the Test Item and be acceptable for release.

**Table of Test Scenario Priority**

|  |  |
| --- | --- |
| Test Scenario | Definition |
| P1 – Critical | Essential to the Product |
| P2 – Important | Necessary to the Product |
| P3 – Desirable | Preferred, but not essential to the Product |

The MINIMUM set of Test Scenarios that must pass before the Test Item can be considered for release.

Unforeseen issues arising during the Test Phase may impact the agreed ‘Pass/Fail’ Criteria for the Test Item. Issues can be managed through review with the Test Team and the project authorities.

The following artefacts will be produced during the testing phase.

# Test Deliverables

* **Test Strategy**

The testing strategy will define the objectives of all test stages and the techniques that apply. The testing strategy also forms the basis for the creation of a standardised documentation set, and facilitates communication of the test process and its implications outside of the test discipline. Any test support tools introduced should be aligned with, and in support of, the test strategy.

* **Test Plan**

Used to prescribe the scope, approach, resources, and schedule of the testing activities. To identify the items being tested, the features to be tested, the testing tasks to be performed, the personnel responsible for each task, and the risks associated with this plan.

* **Test Cases**

Detail the pre-conditions, test steps and expected and actual outcome of the tests. There will be positive and negative test cases*.*

* **Periodic progress and metric update reports.**
* **Bug Reporting.**
* **Test Summary Reports.**
* **Test Closure Report.**

# Responsibility Matrix

| **Role** | **Responsibility** |
| --- | --- |
| Project Manager | * Provide management oversight.
* Acquire appropriate resources.
* Participate in the Change Control Board.
* Prepare Master Project Plan.
* Coordinate both development and testing team.
* Interact with the client and ensure the requirement and delivery of the product.
* Ensure that test strategy and test plan are followed
* Provide planning and logistics support
* Coordinate with Development Team, Test Lead, , and other interfacing functional areas
 |
| Test Engineer | * Prepare Test Strategy document.
* Prepare the Test Plan
* Understand the requirement and prepare the Test Cases.
* Test Case peer review.
* Provide input on product quality.
* Provide test criteria.
* Execute Test Cases.
* Document test results.
* Analyze and ensure recovery from test failures.
 |
| System Administrator | * Ensure that the test environment and assets are managed and maintained.
* Administer access for the test system.
* Install and support the recovery of the test environment and configuration.
* Monitor overall system performance and availability.
 |

# Schedules and Resource Plans

**Team Plan**

The Test Team will maintain a Team Plan which records individual assignment to testing tasks against assignable days. This will also record time planned and delivered against the tasks which will be used to update relevant Project Schedules and be used in periodic reporting.

**Test Schedule.**

| **Task** | **Start Date** | **End Date** |
| --- | --- | --- |
|  |  |  |
|  |  |  |

**Resource List:**

| **Name** | **Role** | **Location** | **Email** |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# Risks and Contingencies

*<Risks & Contingencies for the project can be identified and communicated under.>*

| **Sl No** | **Risk** | **Mitigation Strategy** | **Impact** |
| --- | --- | --- | --- |
| 1 |  |  |  |
| 2 |  |  |  |

# Assumptions

The following assumptions can be kept in mind:

* Any required business information or development documentation is available in advance of test preparation activities.
* The scope of the project is defined.
* The required test environment and data are available prior to testing.
* There are key contacts assigned by the project directorate and the analysis team to liaise with the test team.
* All iterations will have been unit tested and all defects corrected prior to delivery to integration testing.
* All parties involved in the programme adhere to the Change Management process.
* All parties involved in the programme adhere to the Configuration and Release Management processes.
* Progress reports will be made to the project directorate on a regular basis.
* A test summary will be made available to the project directorate at the end of test execution.

# Appendix I

Below are the test-related tasks:

* Test Strategy
	+ Define Testing approach.
	+ Define Roles and Responsibility.
	+ Define all Testing Task.
	+ Define Risk and Mitigation.
	+ Identify requirements for test.
	+ Determine the types of tests required.
	+ Define the Measure and Metrics for the project.
	+ Identify Tools to be used.
* Plan Test
	+ Identify requirements for test.
	+ Assess risk.
	+ Identify test resources.
	+ Create schedule.
	+ Generate Test Plan.
* Design Test
	+ Identify and describe test cases.
	+ Identify and structure test procedures.
	+ Review and assess test coverage.
* Execute Test
	+ Execute Test procedures.
	+ Evaluate execution of Test.
	+ Recover from halted Test.
	+ Verify the results.
	+ Investigate unexpected results.
	+ Log defects.
* Evaluate Test
	+ Evaluate Test-case coverage.
	+ Analyze defects.
	+ Determine if Test Completion Criteria and Success Criteria have been achieved.

# Appendix II

Test Case Design Template is attached below:



# Appendix III

**Progress report Format given below**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Module Name** | **No. of Test Cases** | **No. Of Test Cases Passed** | **No. Of Test Cases Failed** | **Left to Execute** | **Defects Open** | **Defects Closed** | **Status** |
|   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |

**RAG Status**

**Green** = the testing is on target against the plan.

**Yellow** = the testing is behind plan and position cannot be retrieved within the remaining period of this test cycle.

**Red** = the testing is behind plan and position cannot be retrieved prior to implementation.