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Project Test Plan Template

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***Working with the template:** the template Test Plan specifies a number of points that should be addressed while planning testing activities in a release of a particular application. These points map the high level test process defined in ABB Test Strategy into an application-specific software development process as well as the testing tools used by the application team. Also, they provide release-specific information pertaining to testing, like the schedule of testing activities, staffing or application quality risks. While the **testing process part** and the **release-specific part** are present together in the template, you may also split them into separate documents. Provide information specified in the sections below and remove the explanations text in blue color. In case the current test process does not include a certain test phase, e.g., Static Analysis, state “Not Used” rather than remove the section and provide short explanation why it is not used. Sections that are not relevant to the project at all mark as “Not Applicable” and provide short explanation. In case the requested information is included in another document, provide a reference, e.g., “See document X” along with additional comments, if needed. Add sections that are not in the template but are important for planning testing in the project. Regarding the usage of test tools supporting testing, e.g. HP ALM for test management, document the key configuration decisions, e.g. custom fields to be used. In the explanations text, references to HP ALM are made to illustrate the usage of a Test Management Tool. However, the points to document are applicable regardless of the used tool.*

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2 Distribution list

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3 Introduction

3.1 Purpose of Document

In case this document is also to cover additional releases, e.g. maintenance releases that are done in parallel, modify the text below.

The purpose of this document is to prescribe the scope, approach, resources, and schedule of the testing activities in <Application, release version> on the component, integration, application and system integration levels. Also, the document defines the usage of tools supporting the execution of the plan, HP ALM in particular.

The Test Plan includes *quality risks* for the <Application, Release version> re-release and contingences resulting from the risk-based approach to testing. On the other hand, the document does not cover *project risks* related to testing, e.g., schedule slippage. The latter are to be covered elsewhere, as a part of comprehensive project risk plan.

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3.2 Related Documents

01 [Test Strategy](#)

02 *Include project-specific documents used as test basis as well as process documents used by the application team, e.g., application-specific code review procedure.*

4 Background

4.1 <Application, Release version> Scope and Schedule

Provide a short characteristic of the scope (major changes planned in the release, characteristics of defects to be fixed (high level description rather than details) and schedule. In case this is referenced in another document, provide a reference "See document XXXX"

4.2 Testing Schedule

Include test milestones identified in the software project schedule. Define any additional test milestones needed. Estimate the time required to do each testing task.

4.3 Application Quality Risks Management

Application quality risks are potential failure areas in the application after its release. These risks can be expressed as the potential that the software can harm company business, it will not perform a specific function, it will have poor non-functional characteristics, e.g. usability or performance, or that problems with data integrity will be

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encountered. Provide information on how the quality risks are recorded as well as who and when will maintain this list, e.g. QA Lead, after each test cycle.

The risk-based approach is used to determine the extensiveness of testing and order of test execution. For this reason, a list of potential quality problems that may appear in the application after its release is maintained. Testing mitigation actions are recorded for risks in this list.

See

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Appendix A: Application Quality Risk.

4.4 Assumptions

Document the assumption based on which you perform the test planning. Example: what kind of methodology is used in project, is Continuous integration and Continuous Delivery used in project etc..

5 Testing Improvement Goals in <Application, Release version>

Remove this section in case your quality goals or test process improvement goals are not tied to the release and specified elsewhere. Otherwise, identify how you want to improve testing in the upcoming release – this could be specific quality improvement goals for the application, e.g., decrease # of defects found in 2 weeks after release by x% and/or process-related goals, e.g., continuous integration, requirement-to-test traceability, improved reporting (use of metrics for testing), expanding the regression test suite.

6 Scope of Testing Activities

6.1 Test Items

On a high level, identify what is to be tested – the whole application or specific components, integration with other specific applications, changes within the environment (hardware, software). Items that are to be specifically excluded from testing should be identified.

Supply references to documentation and other artifacts (e.g. requirements stored in HP ALM) that are to be used as test basis (reference information for writing test cases

6.2 Features to be tested

The release will most likely include new requirements and a number of bug fixes to the currently deployed version. Identify where to find specification of requirements and defects to fix, e.g., defects with Target Release field set to a certain value. Add information on requirements representation in HP ALM/Octane/AzureDevOps that pertains to testing.

6.3 Features out of scope

Describe list of features that not be tested. For example: there are

7 Approach

Describe the overall approach to testing during the requirements development, design and development, acceptance testing and deployment stages.

- *Outline (continuous) integration and testing approach during design and development.*
- *Outline continues delivery*

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- *Outline Tools for requirement , tasks, defects and test cases storage , tools supporting test design and test execution. ABB recommended are listed [here](#)*

7.1 Test Automation

Outline what is in test automation scope: ex regression tests, performance tests. For functional test automation recommended setup is to use Selenium WebDriver. Describe selection criteria what test cases are selected to automation and target execution time. Outline approach for test automation maintenance and updates.

7.2 Test Planning and Control

Specify which tool will be used for test management and storage. In case HP ALM is used, this point covers Management tab: Releases and Cycles as well as assigning Test Sets to Cycles in the ALM Test Lab Describe requirement-to-test and defect-to-test traceability.

7.3 Test Analysis and Design

Describe the structure of the application tests suite (the overall set of test cases) as well as properties of a test case. In the structure of the test suite, take into account: functional and performance tests, tests for new requirements and regression tests for the whole application. For a test case, describe mandatory properties, test configurations – possible multiple environments or data sets for which test case could be executed. In HP ALM, this covers the Test Plan.

7.4 Test Implementation

Describe who, when, and how will write test cases and who will approve them. In case some tests will be automated, describe the approach: scope and tools.

7.5 Test Execution

Describe how test execution will be managed. In HP ALM, this covers the Test Lab tab. Specify the criteria to be used to determine whether each test item (requirement, defect) has passed or failed testing, e.g., all associated test cases in all configurations selected for execution must be executed with the PASS result.

7.6 Evaluation of Exit Criteria, Metrics and Reports

Specify the criteria to be used to determine whether the testing has been completed successfully. For example, “Tests that cover all new/changed requirements pass. Regression test suite X passes. All defects are addressed: re-tested and closed or postponed in a defect tracking system. Test reports are available and reviewed by CCB.”

Specify the metrics and reports the project will use and how they are calculated in the used tools.

Provide storage for Test results and Requirements to tests traceability. and deriving expected results): e.g., requirements specification, design specifications, user manuals; operations guides; installation guides.

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8 Test Phases

Specify which of the following will be used and how: scope, tools, applicable metrics and quality targets, etc. This may include including/excluding certain parts of the application in a certain test phase, e.g. unit testing of component X, integration testing between components Y and Z. .

8.1 Requirements Review

Specify scope, tools, applicable metrics (if available) and quality targets, etc.

8.2 Design Review

Specify scope, tools, applicable metrics (if available) and quality targets, etc

8.3 Code Review

Specify scope, tools, applicable metrics (if available) and quality targets, etc

8.4 Static Analysis

Specify scope, tools, applicable metrics (if available) and quality targets, etc

8.5 Unit Testing

Specify scope, tools, applicable metrics (if available) and quality targets, etc

8.6 Integration Testing

Specify scope, tools, applicable metrics (if available) and quality targets, etc

8.7 System Integration Testing

Specify scope, tools, applicable metrics (if available) and quality targets, etc

8.8 Regression Testing

Specify scope of manual and automated regression , ways to add test cases to regression suite , tools used to execute regression, ways to reporting statuses to team applicable metrics (if available) and quality targets, etc, summary report description and information who should be notified on results and list of reported defects

8.9 Stage Deployment Testing

Specify scope, tools, applicable metrics (if available) and quality targets, etc

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8.10 User Acceptance Testing

Specify scope, tools, applicable metrics (if available) and quality targets, etc

8.11 Production Deployment Testing

Specify scope, tools, applicable metrics (if available) and quality targets, etc

8.12 Usability testing

Specify scope, tools, applicable metrics (if available) and quality targets, etc

8.13 Security testing

Specify scope, tools, applicable metrics (if available) and quality targets, etc

8.14 Performance testing

Specify scope, tools, applicable metrics (if available) and quality targets, etc

8.15 Other non- functional testing

Specify scope, tools, applicable metrics (if available) and quality targets, etc

9 Test Closure Activities

Specify actions needed after the release, e.g., changing status of fixed defects in the defect management tool, test case maintenance activities, post-release review, archiving, gathering metrics etc.

10 Defect Management

Specify how defects are handled- where are they stored – HP ALM, Octane, Azure Dev Ops or excel - who is reviewing defects and when , who decided which one should be potentially fixed and which rejected . Specify the used list of defect statuses and the flow of transformations between them, identifying who and under what circumstances can do the change. A state diagram is a common way of representing this.

11 Environmental Needs for Testing

Specify the environments (hardware & software) used for testing and their usage – DEV, TEST, STAGE, PRODUCTION. In case connections to other collaborating systems are needed specify the requirements for testing.

12 Roles, Responsibilities and Staffing

Define the test team and make assignments to roles defined in the Test Strategy. If needed, identify training options for providing necessary skills.

13 Revisions

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Appendix A: Application Quality Risk List

Quality Risk ID	Risk	Related Requirement	Severity*	Probability*	Risk Mitigation
QR1					

* Scale: Very High, High, Medium, and Low

Department	GF-IS ADM Applications Performance & Excellence (APE)
Approver	Giulio Bitella, Global Department Manager
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