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**Software Quality Assurance Plan (SQAP)**  
**Project/Product Name:** Disco  
**Prepared By:** DirectScale  
**Prepared For:** Tranont  
**Approved By:** Scott Wood **Signature:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Author(s):** Austin Martineau

**Revision History**

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**1.** **Purpose and Scope**

**Purpose:**  
This Software Quality Assurance Plan (SQAP) aims to establish the framework for ensuring the quality of the Disco project, a cloud-based software solution designed for direct and social selling companies. This document outlines the quality assurance (QA) processes, tools, metrics, and resources necessary to deliver a high-quality product.

**Scope:**  
The scope of this SQAP includes testing all functional and non-functional aspects of the Disco project, with particular emphasis on manual, automated, and regression testing. Specific exclusions include system integrations not covered under this project scope.

**2.** **Definitions and Acronyms**

| **Term** | **Definition** |
| --- | --- |
| QA | Quality Assurance: Ensures that software quality meets defined standards. |
| API | Application Programming Interface: A set of protocols for building software applications. |
| UI | User Interface: The graphical layout of an application. |
| SQA | Software Quality Assurance: Ensures the software development process meets quality standards. |

**3.** **Reference Documents**

* Disco Strategic Test Plan, Version 1.0
* DirectScale Product Feature List
* Disco-Client Contract Agreement
* IEEE 730-2014 Standard for Software Quality Assurance Plans

**4.** **SQA Plan Overview**

**4.1 Organization and Independence**

The QA team for the Disco project operates independently of the development team to ensure unbiased testing and reporting. Roles and responsibilities are as follows:

* **QA Lead:** Coordinates testing efforts, and oversees test execution.
* **QA Engineers:** Perform manual and automated testing.
* **Developers:** Responsible for unit testing.
* **UX Designer:** Conducts UX testing.

**4.2 Software Product Risk**

Potential risks associated with the Disco project include:

* **Project Risks:** Delays in development, incomplete requirements, and stakeholder miscommunication
* **Product Risks:** Inaccurate or incomplete test cases, regression issues, undetected critical bugs.

**4.3 Tools**

The following tools will be used in the QA process:

* **JIRA:** For test case management and bug tracking.
* **Selenium:** For automated UI testing.
* **Postman:** For API testing.
* **Azure DevOps:** For CI/CD pipeline and version control.

**4.4 Standards, Practices, and Conventions**

* **Testing Standards:** IEEE 829 (Test Documentation) and IEEE 730 (SQA).
* **Practices:** Agile development and testing methodology, Test-Driven Development (TDD).
* **Conventions:** Follow company coding standards and naming conventions for test cases.

**4.5 Effort, Resources, and Schedule**

* **Effort:** Estimated total effort for testing activities is 40% of the development lifecycle.
* **Resources:** Two full-time QA engineers, one automation specialist, access to testing environments, and necessary tools.
* **Schedule:** Testing to begin in the Development phase and continue through to Production. Specific milestones will be defined in alignment with project goals.

**5.** **Activities, Outcomes, and Tasks**

**5.1 Product Assurance**

**5.1.1 Evaluate Plans for Conformance**

Review all project and test plans to ensure they align with the defined requirements and objectives for Disco.

**5.1.2 Evaluate Product for Conformance**

Ensure that the Disco product adheres to functional and non-functional requirements as per the contract and project specifications.

**5.1.3 Evaluate Product for Acceptability**

Test results will be measured against acceptance criteria, with a pass rate of at least 95%.

**5.1.4 Evaluate Product Life Cycle Support for Conformance**

Ensure that all lifecycle phases (Development, Testing, Deployment) are covered in the QA process.

**5.1.5 Measure Products**

Track test case execution, failure rate, and defects using metrics defined in the strategic test plan.

**5.2** **Process Assurance**

**5.2.1 Evaluate Life Cycle Processes for Conformance**

Ensure the QA processes comply with the defined lifecycle model and best practices.

**5.2.2 Evaluate Environments for Conformance**

Validate that testing environments match production as closely as possible.

**5.2.3 Evaluate Subcontractor Processes for Conformance**

TBD – Subcontractor processes will be evaluated as applicable.

**5.2.4 Measure Processes**

QA processes will be continuously monitored, with metrics such as the percentage of test cases executed and defect resolution rate.

**5.2.5 Assess Staff Skills and Knowledge**

TBD – Staff skill assessments will be conducted to identify training needs.

**6.** **Additional Considerations**

**6.1 Contract Review**

All contracts, including the Disco-Client agreement, will be reviewed to ensure compliance with QA standards.

**6.2 Quality Measurement**

Defect rates, test case execution percentages, and other quality metrics will be tracked regularly.

**6.3 Waivers and Deviations**

TBD – Any deviations from the QA process will be documented and reviewed for approval.

**6.4 Task Repetition**

Regression testing will be repeated as necessary to cover new builds and features.

**6.5 Risks to Performing SQA**

TBD – Risks will be assessed on an ongoing basis.

**6.6 Communications Strategy**

The QA team will provide regular reports to project stakeholders, ensuring that issues are communicated promptly.

**6.7 Non-conformance Process**

Non-conformances will be logged in JIRA and tracked until resolution.

**7.** **SQA Records**

**7.1 Analyze, Identify, Collect, File, Maintain and Dispose**

Test records, including defect logs and test case execution reports, will be maintained in JIRA and stored for the project duration.

**7.2 Availability of Records**

All SQA records will be available to project stakeholders upon request.