**10. Summary**

The Testing Strategy detailed in this document is designed to enhance the effectiveness, efficiency, and governance of testing processes. It emphasizes:

**Effectiveness**

* Early and continuous testing engagement through a shift-left approach.
* Improved quality and comprehensive test case coverage using structured practices such as Behavior-Driven Development (BDD) and peer reviews.
* Inclusion of downstream system impacts and Business-As-Usual (BAU) validations in testing scenarios to strengthen system stability and reduce production risks.

**Efficiency**

* Extensive automation using tools such as DataGuard, RAFT, and BDD-Gherkin to reduce manual workload.
* Standardized test management processes and structured test case documentation within JIRA to eliminate redundancy and promote reusability.
* Consistent test environment strategies to ensure reliability and repeatability of outcomes.

**Governance**

* Clear accountability and traceability established through comprehensive documentation and unified JIRA project structures.
* Implementation of standardized Key Performance Indicators (KPIs) to measure testing performance transparently.
* Structured effort estimation practices to enhance planning accuracy and resource allocation.

**Roadmap**

* Structured phases implemented over 10 weeks, concluding with a 2-week evaluation.
* Clear milestones for foundational setup, automation implementation, enhanced quality and governance, and a final comprehensive evaluation.
* Proactive contingency plans to address potential challenges, ensuring minimal disruption and continued progress.

**Roles and Responsibilities (RACI)**

* Defined roles and accountability clearly outlined for all testing activities.
* Cross-functional stakeholder engagement emphasized to streamline coordination, decision-making, and execution.
* Transition of responsibilities to delivery teams post-implementation, supported by continuous strategic consultation from the Testing Center of Excellence (TCoE).

**11. Conclusion**

The structured implementation of this Testing Strategy positions teams to consistently deliver high-quality, reliable, and compliant solutions. By embedding robust governance, comprehensive testing practices, and extensive automation into the delivery lifecycle, the strategy ensures sustained improvements across the organization's testing capabilities.

**Key outcomes include:**

* Accelerated defect detection and resolution.
* Enhanced transparency and accountability across all testing activities.
* Reduced manual testing efforts and improved productivity through automation.
* Strengthened stakeholder confidence with reliable and predictable test outcomes.

Continuous evaluation and refinement of the strategy, guided by clearly defined KPIs and stakeholder feedback, will sustain ongoing improvements and alignment with business objectives, ultimately enhancing overall business performance and user satisfaction.

**Appendix A: Test Case Standards and Guidelines**

This appendix consolidates all quality standards, templates, and design practices to ensure test case effectiveness, efficiency, and governance.

**A.1 Test Case Quality Checklist**

**Effectiveness**

* Linked to business requirements and acceptance criteria
* Clearly defined preconditions and postconditions
* Step-by-step actions with accurate input data
* Positive, negative, and edge case scenarios included
* Downstream system impacts and dependencies considered

**Efficiency**

* Reusable structure and modular format
* Consistent test data across environments
* Automation-enabled wherever applicable
* Peer-reviewed before execution to reduce rework

**Governance**

* Peer review documented and approved in JIRA
* Traceability to requirements, stories, and test results maintained
* Execution evidence (e.g., screenshots, logs) captured and stored
* Clear pass/fail status and outcome recorded

**A.2 Test Case Documentation Template**

|  |  |
| --- | --- |
| **Field** | **Description** |
| **Test Case ID** | Unique identifier for tracking |
| **Test Summary** | Brief description of the scenario being validated |
| **Linked Requirement** | User story or business requirement associated with the test |
| **Preconditions** | Conditions that must be met before executing the test |
| **Test Steps** | Detailed steps to perform the test |
| **Test Data** | Input data required for the test |
| **Expected Result** | Clearly defined outcome for each step |
| **Actual Result** | Documented result post-execution |
| **Pass/Fail** | Status of the test |
| **Evidence Location** | Location (e.g., JIRA, SharePoint) where screenshots/logs are stored |
| **Peer Review** | Reviewer name and date |
| **Final Approval** | Test Lead sign-off |

**A.3 BDD (Behavior-Driven Development) Scenario Template**

Use the Gherkin format for structured, business-aligned test scenarios:

|  |  |
| --- | --- |
| **Section** | **Example** |
| **Feature** | User Login |
| **Scenario** | Successful login with valid credentials |
| **Given** | User is on the login page |
| **When** | User enters valid credentials and clicks submit |
| **Then** | User is redirected to the dashboard |
| **And** | Welcome message is displayed |

**A.4 Sample Test Case Using BDD Within the Template**

|  |  |
| --- | --- |
| **Field** | **Description** |
| **Test Case ID** | TC-BDD-001 |
| **Test Summary** | Validate successful login using valid credentials |
| **Linked Requirement** | REQ-AUTH-001 |
| **Preconditions** | User is registered with valid credentials and navigates to the login page |
| **Test Steps** | **BDD Scenario (Gherkin Format):Feature**: User Login Validation**Scenario**: Successful login with valid credentials**Given** the user is on the login page**When** the user enters valid username and password**Then** the user should be redirected to the dashboard**And** the welcome message should be displayed |
| **Test Data** | Username: john.doe Password: Welcome@123 |
| **Expected Result** | Dashboard loads successfully and displays the personalized welcome message |
| **Actual Result** | Dashboard displayed with "Welcome, John!" message |
| **Pass/Fail** | Pass |
| **Evidence Location** | JIRA > TC-BDD-001 > Attachments > Screenshot\_LoginSuccess.png |
| **Peer Review** | Reviewed by A. Sharma on 11-Apr-2025 |
| **Final Approval** | Approved by V. Patel |

**Appendix B: Peer Review Guidelines**

Reviewers must validate each test case against the checklist in **Appendix A**.

**Review Criteria**

* Business alignment and traceability
* Completeness across scenario types (positive/negative/edge)
* Downstream impact inclusion
* Accuracy of test data and steps
* Clear expected and actual results
* Presence of evidence and review history

**Review Steps**

1. Open the test case in JIRA.
2. Review against the checklist in Appendix A.
3. Log feedback or required corrections.
4. Confirm final approval and document reviewer name/date.

**Appendix C: Structured Training Framework**

**Training Modules and Delivery**

|  |  |  |
| --- | --- | --- |
| **Module** | **Key Topics** | **Delivery Mode** |
| Agile Testing | Sprint planning, ceremonies, agile roles | Workshops / Online |
| Technical Skills | Python, SQL, data analysis, dashboards | Hands-on Labs / Self-paced |
| Domain Knowledge | Value stream–specific processes and workflows | Scenario-based eLearning |
| Stakeholder Management | Communication, feedback, conflict resolution | Interactive sessions |
| Testing Strategy Overview | Live or recorded TCoE-led sessions on strategy and standards | Live Webinars / Recordings |

**Appendix D: Effort Estimation Guidelines**

Effort estimation is standardized to ensure planning accuracy and transparency.

**Effort Classification**

|  |  |  |
| --- | --- | --- |
| **Complexity** | **Definition** | **Estimated Range** |
| Low | Simple logic, minimal dependencies | 1–3 hours |
| Medium | Moderate complexity and coverage | 4–8 hours |
| High | Complex logic, high test volume | 8+ hours |

**Estimation Approach**

* Estimate effort per requirement.
* Document effort at story level in JIRA.
* Review estimates regularly as requirements evolve.

**Appendix E: Test Automation Reference**

This appendix outlines automation focus areas and provides access to relevant resources.

**Test Automation Categories**

|  |  |  |
| --- | --- | --- |
| **Category** | **Description** | **Primary Tools** |
| **Regression Testing** | Automated re-validation of stable features | DataGuard, RAFT |
| **Scenario-Based Validation** | Business logic checks using data comparisons and rules | BDD with Gherkin, BigQuery |
| **Metadata/Reference Testing** | Validates table structures, mappings, and reference data | RAFT |

**Reference Material and Demo Access**

|  |  |
| --- | --- |
| **Resource** | **Description** |
| TCoE SharePoint: Automation Docs | Implementation guides, code snippets, and patterns |
| Looker Dashboard Demo | Example dashboards from DataGuard validations |
| GitHub Repo (Internal) | Shared library of automated test cases |
| BDD Scenario Templates | Gherkin templates for reuse |

*Note: Internal links will be shared via the TCoE onboarding and strategy documentation portal.*