**Test Strategy - ACKO Insurance Website**

**Revision History**

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| --- | --- | --- | --- |
| **Date** | **Version** | **Author** | **Description** |
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# Scope

The purpose of this Test Strategy is to outline **how testing will be carried out for the ACKO Insurance website** ([https://www.acko.com/](https://www.acko.com/" \t "_new)) within an **Agile development environment**. This scope section defines **who is responsible for reviewing and approving this document**, the **testing activities** to be performed, and the **timelines** for these activities.

**Testing Activities and Timelines:** Testing will be performed in every sprint as per the Agile methodology. Below is the breakdown of activities and their timelines within a typical 2-week sprint:

|  |  |  |  |
| --- | --- | --- | --- |
| | **Activity** | | --- | | **Description** | **Timeline in Sprint** |
| Sprint Planning & Test Preparation | Identify user stories for the sprint, create and review test cases. | Day 1–2 |
| Test Execution (Manual & Automation) | Execute tests as features are developed and delivered to QA. | Day 3–12 |
| Defect Logging & Triage | Log bugs in Jira, assign severity/priority, discuss in daily triage calls. | Daily |
| Regression Testing | Run automated regression suite to ensure existing features are unaffected. | Day 11–12 |
| UAT Support | Assist business users in acceptance testing before release. | Day 13 |
| Sprint Review & Sign-off | Present test results, get approvals for release. | Day 14 |

**In-Scope Testing**:

* Functional Testing (Core workflows)
* Non-Functional Testing (Performance, Security, Accessibility)
* API Testing
* Cross-browser & Cross-device Testing
* Regression Automation
* UAT Support

# Test Approach

**Process of Testing**

Testing will be **sprint-based** with each sprint including:

* Test Planning & Estimation
* Test Case Design (linked to User Stories & Acceptance Criteria)
* Test Execution (Manual + Automated)
* Defect Logging & Triage
* Regression Testing
* Sprint Review & Test Sign-off

**Testing Levels**

* **Unit Testing** – Developers, as part of CI pipeline
* **Integration Testing** – API validation between UI and backend
* **System Testing** – Full workflow verification
* **User Acceptance Testing (UAT)** – Business sign-off in staging

**Types of Testing**

* **Functional Testing :** Policy purchase, premium calculation, claim submission, profile updates.
* **UI/UX Testing :** Responsive design validation, accessibility compliance (WCAG 2.1 AA).
* **Performance Testing** : Load, stress, scalability checks for peak usage scenarios.
* **Security Testing** : SSL certificate validation, OWASP Top 10 vulnerability checks, payment security validation.
* **API Testing** : REST endpoints for policy details, claims, payments.
* **Cross-browser & Cross-device Testing** : Ensuring compatibility across multiple devices and browsers.
* **Regression Testing** : Automated suite executed before each release.

**Automation Approach**

* **Tools**: Selenium WebDriver + TestNG for UI; Postman + Newman for APIs.
* **Scope:** Automate high-priority regression cases for insurance workflows.
* **CI/CD Integration:** Jenkins triggers automation suites after every build.
* **Maintenance:** Automation scripts reviewed and updated in each sprint to reflect UI or logic changes.

**Test Sign-off Process**

* All planned test cases executed and passed (or acceptable level of low-priority issues agreed upon).
* All critical/high severity defects closed before sign-off.
* Regression suite executed with 100% pass rate.
* Test Summary Report prepared and reviewed by QA Lead.
* Final sign-off from QA Manager and Product Owner before release.

**Roles & Responsibilities:**

|  |  |
| --- | --- |
| **Role** | **Responsibility** |
| QA Lead | Strategy, planning, review, sign-off |
| QA Engineer | Test design, execution, automation scripting |
| Developer | Unit testing, bug fixing |
| Product Owner | Requirement clarification, backlog grooming |
| Scrum Master | Sprint facilitation, removing blockers |

# Test Environment

**Environments & Purpose**

* **Development** – For unit & integration testing by developers.
* **Staging (Pre-production)** – Mirrors production for functional, regression, performance, and UAT testing.
* **Production** – Live environment for customers (used only for post-release verification).

**Configuration & Coverage**

* **Browsers**: Chrome, Firefox, Edge, Safari (latest 2 versions).
* **Devices**: Android (Chrome), iOS (Safari/Chrome), Tablets (iPad Safari, Android Tablet Chrome).
* **OS Support**: Windows 10+, macOS 12+, Android 11+, iOS 15+.

****Data Management****

* Dedicated **test data sets** with dummy customer profiles, policies, and claims.
* Automated **data reset** after test cycles.
* Production data masked if used in lower environments.

**Backup & Recovery**

* Daily backups of staging DB.
* Restore plan in place for data corruption or rollback testing.

# Testing Tools

|  |  |  |
| --- | --- | --- |
| **Category** | **Tool** | **Purpose** |
| Test Management | Jira | User story & test case tracking |
| Automation | Selenium WebDriver + TestNG | Regression automation |
| API Testing | Postman | REST API validation |
| Performance | Apache JMeter | Load & stress testing |
| CI/CD | Jenkins | Automated test execution |
| Defect Tracking | Jira | Bug logging & tracking |
| Collaboration | Confluence, Slack | Documentation  & communication |

# Release Control

* Agile sprint releases every **2–3 weeks**
* Each release to have **version ID** & **change log**
* Regression suite execution before production deployment
* All **critical/high severity defects** to be fixed before release

**Release Control Plan :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step | Activity | Owner | Tools/Artifacts | Notes |
| 1 | Sprint Planning | Scrum Master, Product Owner | Jira, Confluence | Define sprint scope & acceptance criteria |
| 2 | Development Build Creation | Dev Lead | Git, Jenkins | Code merged to develop branch for build |
| 3 | Build Verification Testing (BVT/Smoke) | QA Engineer | Selenium, TestNG | Validate basic stability before further testing |
| 4 | Functional & Regression Testing | QA Team | Jira , Selenium | Execute all test cases and log defects |
| 5 | Defect Triage & Fix Verification | QA Lead, Dev Lead | Jira | Close all critical/high severity defects |
| 6 | Performance & Security Testing | QA Specialists | JMeter | Ensure performance SLAs met & vulnerabilities fixed |
| 7 | UAT Execution | Product Owner, Business Users | Staging Environment | Business sign-off required |
| 8 | Release Sign-off | QA Manager, Product Owner | Test Summary Report | Formal approval before deployment |
| 9 | Production Deployment | DevOps | Jenkins, Git | Deploy outside peak business hours |
| 10 | Post-Release Verification | QA Engineer | Selenium, Manual Checks | Perform sanity testing in production |
| 11 | Release Retrospective | Scrum Master, Team | Confluence | Document lessons learned for next sprint |

# **Risk Analysis**

The following table outlines the key risks identified for the ACKO Insurance website, along with their potential impact and corresponding mitigation strategies. These risks cover regulatory, technical, operational, and security aspects of the platform. By proactively identifying and addressing these risks, the project team can ensure smooth functionality, compliance with industry standards, and a secure user experience.

|  |  |  |
| --- | --- | --- |
| **Risk** | **Impact** | **Mitigation** |
| Changes in insurance regulations | High | Contact sync with compliance/legal |
| Browser/device compatibility issues | Medium | Maintain updated testing matrix |
| Payment gateway outage | High | Use sandbox & fallback integration |
| API downtime from third-party services | Medium | Mock API testing during outages |
| Data security breach | High | Conduct periodic penetration testing |

**Reporting:**

* Daily Stand-up updates
* Sprint Review Reports in Confluence
* Final Release Test Summary Report

# Review and Approvals

The Test Strategy document will go through structured review and approval steps to ensure accuracy, completeness, and alignment with ACKO’s business and technical requirements.

**Review Process**

* **Internal QA Review** : Conducted by the QA Lead to ensure coverage of all testing types, tools, and processes.
* **Cross-Functional Review** : Shared with Development Lead, Product Owner, and Scrum Master for feedback on technical feasibility and alignment with Agile sprint goals.
* **Compliance & Security Review** : If required, the document is reviewed by the compliance/security team to ensure adherence to insurance regulations and security standards.

### ****Approval Process****

* **QA Manager** : Confirms that all QA-related processes, tools, and coverage meet the quality goals.
* **Product Owner** : Validates that the strategy meets business objectives and user acceptance criteria.
* **Project Manager** : Ensures the strategy aligns with project timelines, deliverables, and release schedules.

**Approval Signatures**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Role** | **Date** | **Signature** |
|  | QA Manager |  |  |
|  | Product Owner |  |  |
|  | Project Manager |  |  |

**Document Storage**

* The final approved Test Strategy will be stored in **Confluence** with version history for stakeholder access.