**Test Strategy Document**

**Project:** apo.vwo.com (A/B Testing Platform)  
**Prepared by:** Senior QA Manager (20+ Yrs Experience)  
**Reviewed by:** QA Lead (20+ Yrs Experience)  
**Date:** 26th June 2025

**1️⃣ Objective**

Ensure the end-to-end functionality, usability, performance, security, and data accuracy of **apo.vwo.com**, an A/B testing platform, aligning with business and technical requirements.

**2️⃣ Scope**

**✅ In Scope**

* **Customer Workflows:**
  + User Registration (Sign-up)
  + User Login & Logout
  + Dashboard navigation
  + A/B Test creation, modification & deletion
  + Reporting and analytics viewing
* **Account Management:**
  + Profile updates
  + Password reset
* **Integrations:**
  + API Endpoints (A/B test management, user management, analytics)
  + Webhooks & third-party analytics integrations (e.g., Google Analytics)
* **Platform Coverage:**
  + Web application (Desktop + Mobile browsers)

**❌ Out of Scope**

* Mobile native apps (Android, iOS)
* Internal admin dashboards (for now)
* Third-party billing and payment workflows (handled externally)

**3️⃣ Focus Areas**

| **Area** | **Description** |
| --- | --- |
| **Functional Correctness** | Ensure all user workflows operate as intended |
| **Data Accuracy** | Ensure correct reporting of A/B test results and metrics |
| **UI / Navigation** | Consistency, responsiveness, and intuitiveness of UI |
| **Performance** | Load, stress testing of high-traffic scenarios |
| **Security** | Vulnerability assessment (OWASP Top 10) |
| **Compatibility** | Cross-browser and device validation |
| **Usability** | Accessibility (WCAG 2.1 compliance) and user-friendliness |
| **API Reliability** | REST API testing (CRUD, auth, error handling) |
| **Database Integrity** | Backend data correctness and referential integrity |
| **Server Log Validation** | Ensure error-free server logs for key workflows |

**4️⃣ Test Approach**

| **Testing Type** | **Approach / Tools** |
| --- | --- |
| **Functional Testing** | Manual Testing (Test Scenarios & Cases), Selenium for UI automation |
| **API Testing** | Postman / Rest Assured (Java) |
| **Database Testing** | SQL queries using DBeaver |
| **Log Validation** | Kibana / Splunk (Server log monitoring) |
| **Performance Testing** | JMeter (Load & Stress Testing) |
| **Security Testing** | OWASP ZAP / Burp Suite |
| **Cross-browser Testing** | BrowserStack (Chrome, Firefox, Safari, Edge) |
| **Accessibility Testing** | Axe, Lighthouse |
| **Exploratory Testing** | Session-based test charters |
| **Regression Testing** | Automated regression suite (Selenium + TestNG) |

**5️⃣ Deliverables**

* Functional Test Reports
* API Test Report
* Performance Test Results
* Security Assessment Report
* Cross-browser Compatibility Report
* Usability Evaluation Report
* UAT Sign-off Report
* Test Coverage & Defect Reports
* Automated Test Suite & Execution Logs

**6️⃣ Team & Schedule**

**Team Composition**

* 4 QA Engineers (2 Manual, 2 Automation)
* 1 Performance Tester
* 1 Security Tester (part-time)
* 1 Contingency Backup QA (floating)

**Schedule**

| **Month** | **Activity** |
| --- | --- |
| May | Functional, API, Database & Security Testing |
| June | Performance Testing, Cross-browser Testing |
| July | Usability Evaluation, UAT |
| August | Final Regression Testing & Release Sign-off |

**UAT Participants**

* 5 Business Stakeholders
* 5 Beta Users (Early Adopters)

**7️⃣ Entry & Exit Criteria**

| **Criteria** | **Description** |
| --- | --- |
| **Entry** | - All user stories signed-off by Product  - Test environment stable & accessible  - APIs deployed and documented |
| **Exit** | - All functional & non-functional tests executed  - No Critical/High open defects  - Load test SLAs met (Avg Response < 2 sec @ 1000 users)  - No OWASP Top 10 Critical/High vulnerabilities  - UAT sign-off obtained  - 95%+ Test Coverage achieved |

**8️⃣ Metrics to Track**

* Requirement Coverage %
* Test Case Execution %
* Defect Density & Leakage Rate
* API Test Coverage %
* Automation Suite Pass Rate %
* Performance Metrics (TPS, Response time)
* Security Issues count (by severity)
* Usability Issues count

**9️⃣ Risks & Mitigation**

| **Risk** | **Mitigation** |
| --- | --- |
| Frequent UI changes | Early collaboration with Dev + Flexible exploratory testing |
| API schema instability | API Contract Testing + Close dev sync |
| Limited UAT participants | Pre-identify backups from business team |

**🔟 Tools Stack**

| **Category** | **Tool** |
| --- | --- |
| Test Management | Jira + Zephyr |
| Automation | Selenium + TestNG |
| API Testing | Postman / Rest Assured |
| Database | DBeaver |
| Log Monitoring | Kibana / Splunk |
| Performance | JMeter |
| Security | OWASP ZAP / Burp Suite |
| Cross-browser | BrowserStack |
| Accessibility | Axe, Lighthouse |
| CI/CD | Jenkins |

**✅ Approval**

| **Role** | **Name** | **Signature** | **Date** |
| --- | --- | --- | --- |
| QA Manager | Pramod Dutta | *(signed)* | 03-May-2025 |
| QA Lead | Senior QA Lead | *(signed)* | 03-May-2025 |
| Product Owner | [Name] | *(pending)* | — |