Quality Assurance Engineer Assignment

# Assignment #1: Channable Tool – Test Plan & Test Cases

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**Test Plan: Channable QA Trial – Items Overview & Single Item Pages**

**1. Executive Summary**

This test plan outlines a comprehensive and structured approach to validating the core functionalities, UI behavior, data integrity, security, and performance of the Items Overview and Single Item pages within the Channable QA Trial project. A hybrid strategy combining manual exploratory testing and automated test suites integrated into CI/CD pipelines will be employed to ensure a robust, reliable, and user-friendly product aligned with business goals and user expectations.

**2. Introduction**

This document defines the testing strategy and planned activities for validating the Items Overview and Single Item pages in the Channable platform. These components are pivotal to end-to-end user workflows, and their quality directly influences user trust, satisfaction, and operational efficiency.

**3. Test Objectives**

* Validate core functionality of Items Overview and Single Item pages against specifications.
* Ensure consistent, responsive, and accessible UI components.
* Verify backend API integration and data accuracy.
* Identify and mitigate security and performance issues.
* Assess user experience via usability and accessibility testing.

**4. Business Impact**

Ensuring defect-free operation of these pages reduces production incidents, improves customer satisfaction, and enhances the platform’s reputation. This contributes to increased adoption, reduced churn, and better business outcomes.

**5. Test Scope**

**In Scope**

* **Items Overview Page:** listing, filtering, sorting, bulk actions, pagination, UI responsiveness, error handling, keyboard navigation
* **Single Item Page:** detailed view, field validations, image previews, navigation, scroll behavior, accessibility

**Out of Scope**

* Admin or Settings pages
* Mobile responsiveness (handled separately)

**6. Risk Assessment & Mitigation**

|  |  |
| --- | --- |
| **Risk** | **Mitigation Strategy** |
| **Backend API instability** | Implement API contract tests, use mocks |
| **Cross-browser UI issues** | Comprehensive cross-browser testing |
| **Accessibility gaps** | Integrate automated tools + manual audits |
| **Performance under load** | Conduct stress testing with monitoring tools |

**7. Test Activities**

**Items Overview Page**

* Validate item list rendering with accurate data and pagination.
* Check filtering, sorting, and search functionality.
* Test bulk actions (add/delete columns) and data persistence.
* Handle error states (no results, API failures).
* Verify UI responsiveness and keyboard navigation and exploratory testing.
* Confirm correct navigation to Single Item Page.

**Single Item Page**

* Ensure data matches with overview listings.
* Validate image previews and extra image links.
* Check layout consistency and scroll behavior.
* Test back-navigation from multiple entry points.
* Gracefully handle empty or missing data.
* Perform accessibility and cross-device/browser checks.
* Conduct exploratory testing targeting edge cases.

**8. Test Execution Methods & Tools**

|  |  |  |  |
| --- | --- | --- | --- |
| **Phase** | **Method** | **Purpose** | **Tools Used & Justification** |
| **Early Phase** | Manual Testing | Initial sanity/UI/usability reviews | DevTools, Sheets for quick logs |
|  | Exploratory Testing | Identify real-user scenarios and hidden defects | Session-based scenarios |
|  | Screenshot & Recording | Visual bug capture for issue reporting | Snipping Tool, ScreenRec |
| **Core Testing** | Functional Testing | Validate workflows and feature logic | Manual + Selenium/Playwright |
|  | Automation Testing | Accelerate regression and cross-browser checks | Selenium (JavaScript/Java), Playwright (TypeScript) |
|  | API Testing | Validate backend communication | Postman, REST Assured |
|  | UI Testing | Confirm layout and UI consistency | Selenium/Playwright |
| **Non-functional** | Accessibility Testing | WCAG 2.1 AA compliance checks | Axe, WAVE, screen readers |
|  | Localization Testing | Validate translation and layout | Manual with locale switcher |
|  | Compatibility Testing | Check across OS/browser variants | BrowserStack, |
|  | Performance Testing | Ensure app stability under load | JMeter, NeoLoad |
|  | Security Testing | Session timeout, auth checks | DevTools |
| **Final Phase** | Regression Testing | Validate unchanged features | Automated in CI/CD |
|  | Bug Tracking | Log and monitor defects | Jira, Azure DevOps |
|  | Screen Recording | Visual reproduction for bugs | Snagit, ScreenRec |

**9. Success Metrics**

* Defect density < 0.5 per 1,000 test cases
* ≥ 85% test automation coverage
* Page load time < 3 seconds
* API response time < 500ms (P95)
* Zero critical/major production defects

**10. Performance Benchmarks**

* **Page Load Time:** < 3 seconds
* **API Response Time:** < 500ms
* 100 concurrent users supported, error rate < 5%

**11. Browser & Device Coverage**

|  |  |  |  |
| --- | --- | --- | --- |
| **Browser** | **Versions** | **Devices** | **Operating Systems** |
| **Chrome** | Latest + 2 | Desktop, Tablet | Windows 10/11, macOS |
| **Firefox** | Latest + 2 | Desktop | Windows, macOS |
| **Safari** | Latest | Desktop | macOS |
| **Edge** | Latest | Desktop | Windows |

**12. Test Environment & Data**

* Dedicated QA/staging environment with integrated services
* Use anonymized, representative test data across scenarios
* Ensure data compliance with privacy regulations (GDPR)

**13. Priority Areas**

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| --- | --- |
| **Priority** | **Focus Areas** |
| **High** | Functional, Security, API, Data Integrity |
| **Medium** | UI, Usability, Session, Performance, Accessibility |
| **Low** | Localization, Logging, Backup |

**14. Entry & Exit Criteria**

**Entry Criteria**

* QA environment accessible and stable
* Backend APIs deployed and functional
* UI components deployed and testable

**Exit Criteria**

* All critical and high-severity issues resolved
* Complete regression suite passed
* Final test report signed off

**15. Test Reporting & Communication**

* Daily test status via Jira dashboards and stand-ups
* Defects categorized by severity and tracked until closure
* Final test summary report with key metrics and recommendations

**16. Test Timeline**

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| --- | --- |
| **Week** | **Activities** |
| **Week 1** | Planning, test case design, environment setup |
| **Week 2** | Functional, UI Testing |
| **Week 3** | API, Security, Performance Testing |
| **Week 4** | Regression, Exploratory Testing, Reporting |

**17. Collaboration & Communication**

* Regular collaboration with developers, product owners, and analysts
* Defect triage meetings for prioritization and quick resolution

**18. Exploratory Testing Approach**

Dedicated exploratory sessions will simulate real-world use cases, discover hidden issues, and enhance coverage beyond scripted scenarios. Findings will be logged for continuous improvement and regression coverage.

**Test Cases: Channable QA Trial – Items Overview & Single Item Pages**Refer to the Excel sheet **"Channable tool - Test Cases and Bug Report"**

| **Content** | **Sheet Name** |
| --- | --- |
| **Test Cases – Overview Page** | Test Cases - Items Overview Page |
| **Test Cases – Single Item** | Test Cases - Single Item Page |
| **Bug Report** | Bug Report - Items Overview Page |
| **Docs Summary** | Bug Report Document, Test Case Document |