



Catching Accessibility Gaps Before They Become Compliance Risks

Automating web accessibility scans across authenticated and unauthenticated journeys to significantly reduce compliance liabilities and user experience barriers before release.

Overview

We used the NFP platform to run accessibility scans on the client's web application, with pages fed in through automated site crawling or Flowtrace-recorded user journeys.

- **Automated Accessibility Testing Engine:** Enabled broad site discovery and authenticated workflow testing behind login walls, mapping violations directly against WCAG, Section 508, and EN 301 549 compliance standards.
- **Measurable Quality & Compliance Impact:** Replaced manual spot checks with automated scans completed in minutes, delivering real-time severity breakdowns and pre-release remediation.



Client Profile

Operating globally across North America, Europe, and Asia-Pacific, the client is a major technology services firm. The organization maintains complex web applications and platforms that must adhere to international accessibility regulations and universal usability standards.

Absence of Structured Accessibility Controls

Standard QA workflows focused on functional verification while omitting accessibility checks, leading to late-stage discovery and expensive retrofits.

- **Silent Violation Accumulation:** Standard QA cycles lacked structured accessibility processes, allowing violations to pass undetected into production.
- **Assistive Technology Barriers:** Missing alt text, broken semantic structures, and unlabelled interactive elements rendered applications unusable for screen reader and keyboard-only users.

- **Inconsistent Manual Spot Checks:** Reliance on ad hoc browser extensions like axe DevTools or WAVE created fragmented coverage with no central tracking or compliance visibility.
- **Regulatory & Legal Exposure:** Inability to continuously verify compliance against WCAG, Section 508, and EN 301 549 exposed the organization to legal liabilities, fines, and audit failures.

Solution: Automated Accessibility Testing via NFP

We integrated automated accessibility scanning into the Non-Functional Platform (NFP), running accessibility scans through flexible page ingestion mechanisms.

- **Automated Page Discovery Crawling:** Configured intelligent site crawlers to auto-discover and queue pages across configurable depth levels without manual URL entry.
- **Authenticated Journey Recording via Flowtrace:** Utilized NFP's Flowtrace recorder to capture complex, multi-step user interactions and credential-based login flows to audit pages sitting behind login walls.
- **Multi-Standard Compliance Mapping:** Configured NFP's in-house scanner to evaluate application DOMs against WCAG, Section 508, TTV5, EN 301 549, and ACT guidelines simultaneously.
- **Centralized Real-Time Severity Dashboard:** Built automated reporting pipelines that categorize violations by severity (Critical, Major, Minor, Trivial), affected page, and functional category (e.g., Text Alternatives, Name/Role/Value, Forms).

Technical Highlights

- **In-House Scan Engine:** NFP's own accessibility scanner runs automated audits in minutes rather than days.
- **Flowtrace Authenticated Journey Capture:** Enabled scriptless recording of authenticated user journeys to extend accessibility coverage into protected application environments.

- **Flexible Page Ingestion Options:** Supported both broad automated web crawling and targeted user journey recordings using Flowtrace as separate execution options to cover both unauthenticated site surfaces and protected pages behind login walls.
- **Structured Categorization Schema:** Classified findings automatically across functional domains, including Text Alternatives, ARIA attributes, Forms, and Focus States.
- **Centralized Accessibility Reports:** Generated comprehensive, audit-ready compliance reports accessible directly from the NFP dashboard, providing severity classifications, standard mappings, and prioritized remediation data.

Proactive Governance and Reduced Remediation Costs

- **Pre-Release Risk Reduction:** Surface accessibility defects during development, significantly mitigating the risk of costly post-release code refactoring and non-compliance liabilities.
- **Multi-Standard Coverage in One Pass:** Reduces the need for separate regulatory audits with single-scan evaluations against global accessibility mandates.
- **Prioritized Remediation:** Provided engineering teams with clear severity-ranked issue queues to resolve high-risk barriers first.
- **Auditable Compliance Record:** Established a documented baseline of application accessibility posture for internal governance and client audits.

Metric (5 Pages)	Manual Testing	Testing with NFP
 Testing time	1-2 days	~10 mins
 Accessibility issues identified	15 - 20 (spot checks only)	80-90
 Manual effort	~16 hrs	~5 mins (request creation)
 Standards assessed	1	5 (WCAG, Section 508, TTV5, EN-301-549, ACT)

Accessibility Transformation Results