ACCESSIBLE FORMS WITH AEM

1. INTRODUCTION

Digital forms are a primary mechanism through which organizations deliver services, collect information, and enable transactions. Ensuring that these forms are accessible is essential to meeting the needs of users with disabilities and complying with accessibility legislation such as the Americans with Disabilities Act (ADA).

The ADA requires that online services, including forms, be accessible to users who rely on assistive technologies. In practice, this requirement is addressed by aligning digital experiences with the Web Content Accessibility Guidelines (WCAG), which provide a widely accepted, testable framework for accessibility.

This document describes how accessibility requirements defined in WCAG 2.2 can be applied to Adobe Experience Manager (AEM) Forms, including both:

- Adaptive Forms (web-based forms), and
- XDP forms generated for output (PDF-based forms)

The guidance focuses on accessibility principles, form-specific requirements, and practical considerations for achieving compliant and usable form experiences.

2. ACCESSIBILITY STANDARDS AND CONFORMANCE LEVELS

2.1 Web Content Accessibility Guidelines (WCAG)

WCAG defines how to make digital content more accessible to people with disabilities, including users with visual, auditory, motor, and cognitive impairments. The current version, WCAG 2.2, reflects advancements in technology and includes additional requirements that improve accessibility for:

- Users with low vision
- Users with cognitive and learning disabilities
- Users accessing content on mobile and touch-based devices

WCAG 2.2 is structured around four foundational principles:

- Perceivable – Information and interface elements must be presented in ways users can perceive
- Operable – Users must be able to navigate and interact with the interface
- Understandable – Information and interactions must be clear and predictable
- Robust – Content must be compatible with assistive technologies

2.2 Conformance Levels

WCAG defines three conformance levels:

- Level A
  Addresses the most basic accessibility requirements. Content that meets Level A may still present barriers for some users.
- Level AA
  Expands accessibility coverage across a broader range of users and devices. Level AA is the most commonly adopted target for organizational and regulatory compliance.
- Level AAA
  Represents the highest level of accessibility conformance and includes all Level A, AA, and AAA success criteria.

Conformance at a higher level includes all requirements of the lower levels.

2.3 Organization Specific Standard

While WCAG 2.2 provides a comprehensive set of success criteria, not all requirements may apply uniformly due to legal obligations, or delivery models (such as event-only or system-restricted forms). Organizations should review the applicable mandates and determine which WCAG success criteria and conformance levels are relevant and achievable for their forms, balancing compliance requirements with practical and operational considerations.

3. ACCESSIBILITY REQUIREMENTS APPLICABLE TO FORMS

Forms present unique accessibility considerations because they require users to understand instructions, provide input, navigate between fields, and respond to validation feedback. WCAG 2.2 includes several success criteria that are particularly relevant to form interactions.

3.1 Perceivable Form Content

Accessible forms must ensure that users can perceive all required information:

- Images, icons, and other non-text elements used within forms must include appropriate text alternatives.
- Instructions must not rely solely on visual cues such as color, position, or shape.
- Text and important visual elements must meet contrast requirements to remain readable.
- Text must remain usable when resized (for example, up to 200%) without loss of content or functionality.

3.2 Operable Form Interactions

Forms must be usable by individuals who navigate using a keyboard or alternative input methods:

- All form controls must be operable using a keyboard.
- Focus must move through form fields in a logical order that preserves meaning.
- Focus indicators must be clearly visible and not obscured by other page content.
- Interactive elements must be sufficiently large or spaced to support touch and pointer interaction, particularly on mobile devices.

3.3 Understandable Form Behavior

Forms must behave in predictable and understandable ways:

- Each input field must have a clear label or instruction describing the expected input.
- Errors must be identified in text and associated with the relevant field.
- When possible, users should receive guidance on how to correct errors.
- For forms involving legal, financial, or data-changing actions, users must be able to review and confirm information before final submission.

3.4 Robust Form Implementation

Forms must be implemented so that assistive technologies can reliably interpret them:

- Form controls must expose programmatically determinable names, roles, and values.
- Content must be structured in a way that supports screen readers and other assistive tools.

4. ADA COMPLIANCE WITH AEM ADAPTIVE FORMS

AEM Adaptive Forms provide a framework for building responsive, web-based forms that can support accessibility requirements when configured correctly.

4.1 Structural Organization and Navigation

The structure and layout of a form significantly influence usability and accessibility. Adaptive Forms support multiple layout patterns, including:

- Single page responsive layouts-page responsive layouts
- Multi-step (wizard) layouts
- Accordion layouts
- Tab-based layouts

To support predictable navigation and reduce cognitive load, multi-step wizard layouts with clearly labeled Next and Back actions are recommended for complex forms.

Navigation must follow a meaningful sequence so that keyboard users and screen-reader users encounter fields in a logical order.

4.2 Labels and Screen Reader Text

Each form field must clearly communicate its purpose. While the visible label may be brief, screen-reader text may need to provide additional context. For example, a date field may visually display “Date of Birth” while screen-reader text announces, “Enter your date of birth.”

AEM Adaptive Forms allow authors to configure screen-reader text through accessibility properties, enabling clear communication without altering the visual design.

4.3 Visual Presentation and Styling

Accessible visual design supports users with low vision and color-vision deficiencies:

- Text and interactive elements must meet contrast requirements.
- Color should not be the sole means of conveying information such as required fields or error states.
- Components should visually indicate different states (default, focus, error, disabled) in a consistent and perceivable way.

4.4 Error Identification and Feedback

When validation errors occur:

- The error must be described in text.
- The affected field must be clearly identified.
- Where possible, guidance should be provided on how to resolve the error.

This approach reduces user frustration and improves successful form completion.

5. ADA COMPLIANCE WITH XDP FORMS FOR OUTPUT (PDF)

Organizations often require accessible PDF outputs for records, confirmations, or regulatory processes. Accessibility requirements apply equally to these output forms.

5.1 Document Structure and Semantics

Accessible PDF forms must include:

- Proper heading hierarchy to convey document structure
- Logical reading order
- Correct tab order for keyboard navigation

These elements allow screen-reader users to understand and navigate the document effectively.

5.2 Alternative Text and Field Descriptions

Images and form fields in XDP forms must include descriptive text that can be read by assistive technologies. AEM Forms Designer provides multiple options for defining screen-reader text, allowing authors to select the most appropriate source (caption, tooltip, name, or custom text).

5.3 Lists, Captions, and Controls

List structures must be properly tagged so that assistive technologies can identify list relationships. Field captions must provide sufficient context, with additional descriptive text supplied when needed.

5.4 Visual Presentation and Styling

Accessible visual design supports users with low vision and color-vision deficiencies:

- Text and interactive elements must meet contrast requirements.
- Color should not be the sole means of conveying information such as required fields or error states.
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5.5 Error Identification and Feedback

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- Where possible, guidance should be provided on how to resolve the error.

6. ACCESSIBILITY TESTING AND VALIDATION

Accessibility must be verified through testing to ensure requirements are met in practice.

6.1 Screen Reader Testing

Screen readers simulate how users with visual impairments interact with forms. Testing with screen readers helps validate:

- Reading order
- Field labels and instructions
- Error announcements
- Keyboard navigation flow

We recommend using Non Visual Desktop Access or NVDA for screen reading as it is a free and open-source, portable screen reader. This works well with both Adaptive and PDF output forms. In order to use NVDA, download the latest version from its website and follow the setup instructions.

6.2 Automated and Manual Evaluation Tools

In addition to conducting screen reader tests, further assessments are necessary to ensure the comprehensive accessibility of a form. The following sections outline the procedures for evaluating both Adaptive and PDF output forms.

6.2.1 Adaptive Forms

Adaptive Forms can be evaluated using browser-based accessibility tools to identify issues related to structure, labels, focus behavior, and keyboard navigation. Adobe recommends using ANDI to check the accessibility of AEM Adaptive Forms. Forms should be reviewed to ensure that no *Danger Alerts* are reported, and any identified issues should be addressed before the form is published.

6.2.2 PDF Output Forms

For PDF output forms, accessibility validation should be performed using dedicated PDF accessibility tools.

Testing should begin with the built-in **"Accessibility Check"** available in Adobe Acrobat to identify common structural and tagging issues.

Following this initial review, PDF forms should be validated using PAC 2026, a free PDF accessibility checker available at https://pac.pdf-accessibility.org/en, to confirm proper tagging, reading order, and overall document accessibility. Any issues identified during testing should be remediated until accessibility requirements are met.

7. CONCLUSION

Ensuring that forms are accessible is not just a matter of regulatory compliance, it is fundamental to delivering inclusive and equitable services to all users. By rigorously aligning AEM Forms implementations with WCAG 2.2 requirements, organizations demonstrate a strong commitment to accessibility and social responsibility. This approach guarantees that both web-based and PDF-based forms are accessible to everyone, including individuals who depend on assistive technologies, ultimately broadening reach, enhancing user experience, and fostering trust with all audiences.