Making Apps for Everyone: Accessibility and Inclusive Design with Mendix

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Agenda

1. What is Accessibility?
2. Accessibility & Web Development
3. State of Mendix & Showcase
4. Practical Tips
5. Coming up in Studio Pro
What is Accessibility?
1. The qualities that make an experience open to all.

2. A professional discipline aimed at achieving No. 1.
Primary Disability

Visually.
(Color) blindness

Hearing.
(Partially) deaf

Mobility.
Paralyzed, RSI, Wheelchair

Cognitive.
Seizures/Learning
Temporary & Situational

**Temporary.**

Short-term injury, language, cultural and social differences.

**Situational.**

Environmental, Personal, Social and Cultural.
Web Accessibility
Web Accessibility is about ensuring that anyone, using any browser or device is able to access content on the Web.
Accessible to what standard?

W3C  WAI-ARIA  WCAG
Accessible to what standard?

W3C  WAI-ARIA  WCAG
Accessible to what standard?

W3C  WAI-ARIA  WCAG

The International Community that creates Web Standards.
Accessible to what Standard?

W3C  WAI-ARIA  WCAG

A tool to increase the accessibility of dynamic content and UI components.
Accessible to what standard?

W3C | WAI-ARIA | WCAG

The standard for making your web content accessible for all.

Four principles with three possible grades.
Perceivable

First Principle

Information and UI components must be presentable to users in ways they can perceive.
Operable

Second Principle

User Interface components and navigation must be operable.
Understandable
Third Principle
Make text content readable and understandable.
Robust

Fourth Principle

Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.
Three Grades

A = minimum

AA = acceptable

AAA = gold standard
How it's used?

**Assistive technologies**
- Screen readers & Voice browsers.
- Word Prediction.
- Alternate input devices.
- Refreshable Braille display.

**Adaptive Strategies**
- Increasing test size.
- Reducing mouse speed.
- High contrast mode.
- Switching from mouse to keyboard and back.
State of Mendix
Evaluating Mendix

Compliant

• Be mindful of ALT content and page structure.
• Might require some customization or modeling effort.
• Be mindful of certain UI components structures e.g. groupboxes.

Compliant

• Similar to the A level.

Not Compliant

• Keyboard exceptions with UI components e.g. data grid sorting
Desktop & Web Modeler.

- Plain HTML is already pretty accessible.
- Accessible forms structures. Ordered ‘tabbing’.
- HTML5 Structural Semantics.
- Placeholder and title functionality.
- Bootstrap accessible classes.
Practical Tips
Do all your pages have page titles?

Information hierarchy starts with title of the page.
Practical Tips

Does your page have a logical order of information?

Both in hierarchy as well as good communicative sense.
Does your application have a good User Experience?

A well designed application will make it a lot easier to ‘access’.
Did you use buttons for buttons, paragraphs for paragraphs, headings for headings?

As HTML is already pretty accessible, it becomes important to model it ‘correctly’.
Do you use standard form fields or does your pages’ layout make it funky?

Only the input widget with ‘label’ set to ‘on’ links the form fields label element to the input field.
Ever used the ‘character \e601’ functionality?

Be careful with buttons that only have icons. Use the title attribute to add meaning to it.
Practical Tips

Have you tried ‘tabbing’ through your form?

Give it a try, it’s the quickest way to at least understand how navigation by keyboard will work.
Don’t underestimate the power of modelling.

You have an animation in your site? Don’t be afraid to model out its alternative content with Bootstraps ‘screen readers only’ functionality.
Start inspecting your HTML.

As assistive technologies will do that as well.
Practical Tips

Be appropriate.

For the time being: don’t forget about your largest group of users. Sometimes it’s ok to be a bit ‘less accessible’. 
Studio & Studio Pro

- **Non-text alt** improvements.
- **Widget structure** enhancements.
- Better integration with **assistive technologies**.
- **Structural improvements** to **HTML output**.