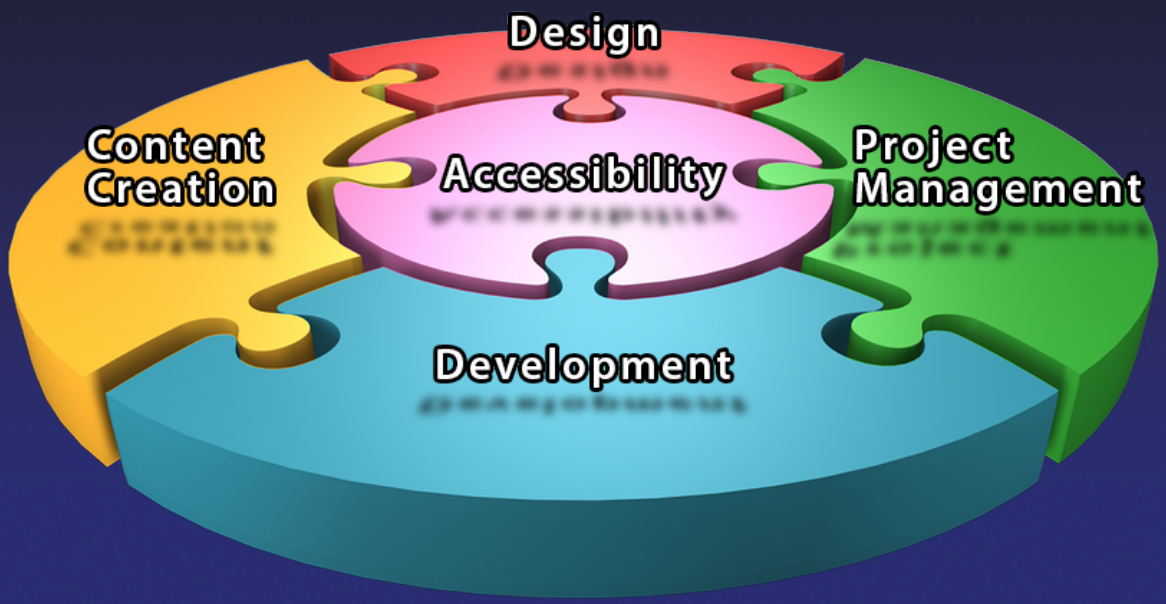
Accessibility Beginning-To-End:

Accessibility in Web Design Workflows



What We Will Cover Today

We will:

- Discuss basic web accessibility
- Explore accessibility considerations for project roles
- Consider how project roles must work together for accessibility

We will not:

- Discuss advanced accessibility topics
- Give you a formula to use
- Tell you how to do your job

Accessible – A Definition

"Accessible" means that individuals with disabilities are able to

- independently acquire the same information,
- engage in the same interactions, and
- enjoy the same services within the same timeframe

as individuals without disabilities, with substantially equivalent ease of use.

Department of Justice

Disability – A Definition

A disability is — with respect to an individual:

1) a physical or mental impairment that substantially limits one or more major life activities; OR

2) a record of such an impairment; OR

3) being regarded as having such an impairment

(Americans with Disabilities Act, Section 3)

Impact of Disabilities

- Difficult to perceive presented information
- Difficult to interact with a user interface
- Difficult to determine the purpose of a web page or user interface
- Difficult to remember details
- Increase the time needed to complete a task

Disabilities often require an alternative mode of interaction

Common Disabilities

Visual

- Blindness / Low-Vision
- Color-Blindness

Auditory

- Deaf / Hard-of-Hearing

Kinesthetic

- Low-Mobility
- Low-Coordination

Cognitive

- Impaired Information Processing
- Impaired Memory

How Disabilities Affect Interaction: Users Who are Blind

Users who are blind:

- Perceive one element at a time
- Navigate using the keyboard (tab and arrow keys)
- Use enter key or space bar to select/ activate an item

Require:

- Extra semantic information (e.g. markup that describes structure and purpose)
- Keyboard operability
- Extra time to complete tasks

How Disabilities Affect Interaction: Users Who Are Low-Vision / Colorblind

Users who are low-vision / colorblind:

- May need to magnify the screen
- May not perceive color information

Require:

- Higher color contrast ratios
- Clear visual information structure

How Disabilities Affect Interaction: Users Who are Deaf / Hard-of-Hearing

Users who are deaf / hard-of-hearing:

- May not perceive audible cues
- May have difficulty reading with animation present
- English is a second language for some; ASL is not English

Require:

- Captions or transcripts
- A way to stop animations

How Disabilities Affect Interaction: Users With Motor Impairments

Users with motor impairments:

- May not be able to use a mouse
- Navigate using tab key
- Use enter key or space bar to select/ activate an item

Require:

- A clear visual focus indicator
- Keyboard operability
- Logical tab order

How Disabilities Affect Interaction: Users With Cognitive Impairments

Users with cognitive impairments:

- May have difficulty remembering steps
- May have trouble focusing on tasks
- May have trouble with complex information

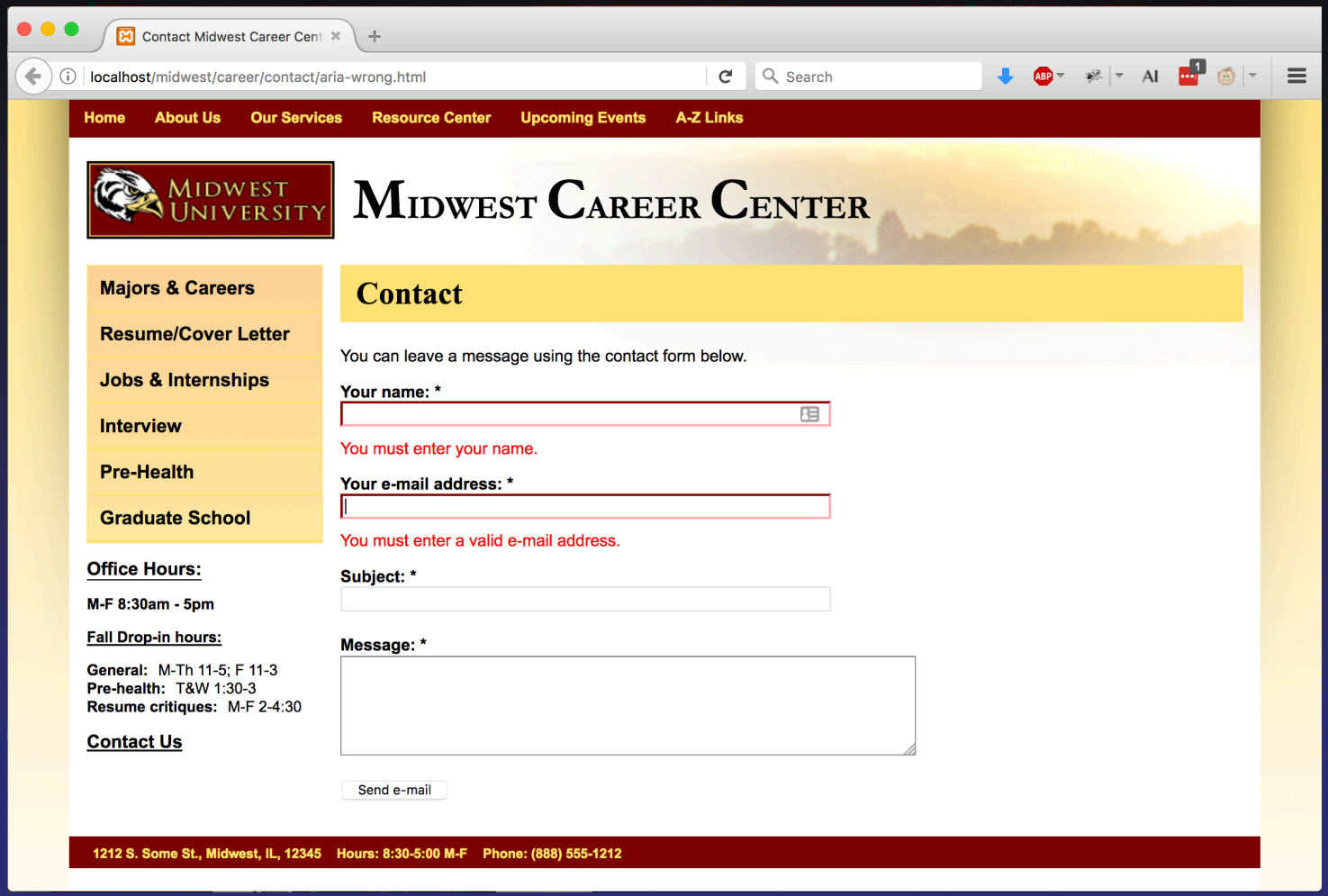
Require:

- Clear visual information structure
- Clear visual focus indicator
- Clear process indicators
- Extra time to complete tasks
- Avoidance of jargon and overly complex language

Implications

- Accessibility support is not an enhancement
  - Enhancements enrich the user experience
  - Accessibility allows “equivalent ease of use”
- Accessibility support is multi-faceted
  - Must consider multiple modalities of interaction
  - User needs sometimes compete
- Address accessibility throughout the project life-cycle
  - Not always possible to add accessibility at the end
  - Ensure accessibility requirements are understood by all project team members

An Example


Contact Midwest Career Cent
localhost/midwest/career/contact/aria-wrong.html
Search
Home
About Us
Our Services
Resource Center
Upcoming Events
A-Z Links
Midwest University
Midwest Career Center
Majors & Careers
Resume/Cover Letter
Jobs & Internships
Interview
Pre-Health
Graduate School
Office Hours:
M-F 8:30am - 5pm
Fall Drop-in hours:
General: M-Th 11-5; F 11-3
Pre-health: T&W 1:30-3
Resume critiques: M-F 2-4:30
Contact Us
Contact
You can leave a message using the contact form below.
Your name: *
You must enter your name.
Your e-mail address: *
You must enter a valid e-mail address.
Subject: *
Message: *
Send e-mail
1212 S. Some St., Midwest, IL, 12345 Hours: 8:30-5:00 M-F Phone: (888) 555-1212

A Framework for Accessibility

- Accessibility support should not be random!
- Use accessibility laws and standards to guide your approach
  - Section 508 of the Rehabilitation Act of 1973
  - W3C Web Content Accessibility Guidelines (WCAG) 2.0
- Automated tools can help you
  - Ainspector Sidebar for Firefox
  - Functional Accessibility Evaluator (FAE)

WCAG 2.0 Principles

- Organized into 4 general principles:
  1. Perceivable
  2. Operable
  3. Understandable
  4. Robust
- These are referred to as the **POUR Principles**.
- Success Criteria Level AA is mandated by Section 508 (beginning January 2018)

Principle 1: Perceivable

Information and user interface components must be presentable to users in ways they can perceive.

This means:

- Using multiple ways to convey information
- Alerting users to dynamic changes in accessible ways

Principle 2: Operable

User interface components and navigation must be operable.

This means:

- Making all functionality available via the keyboard
- Providing users enough time to complete actions
- Helping users navigate

Principle 3: Understandable

Information and the operation of user interface must be understandable.

This means:

- Ensuring that content is understandable without visual cues like proximity or color
- Making pages appear and act in predictable ways
- Helping users avoid and correct mistakes

Principle 4: Robust

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

This means:

- Conforming with recognized standards
- Using appropriate semantic markup for interactive widgets
- Testing all supported platforms

Agenda for Today

1. Small-group discussion based on project role (35 min.)
    - Designer
    - Developer
    - Content Creator
    - Project Manager
2. Break (10 min.)
3. Cross-role project: Build a website! (45 min.)
    1. Change to a new group based on your number
4. Group Presentations / Closing Remarks (30 min.)