



Shift Left: Use Accessibility To Improve Your Project Bottom Line

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All on the Same Page: Definitions and Background

Humans, with Disabilities



What Kinds of Disabilities?

- Born with them (congenital)
 - Develop at some point (acquired)
 - Happen for a period of time (temporary)
- Hearing
 - Vision
 - Speaking
 - Moving
 - Thinking

ADA vs Law vs Standard



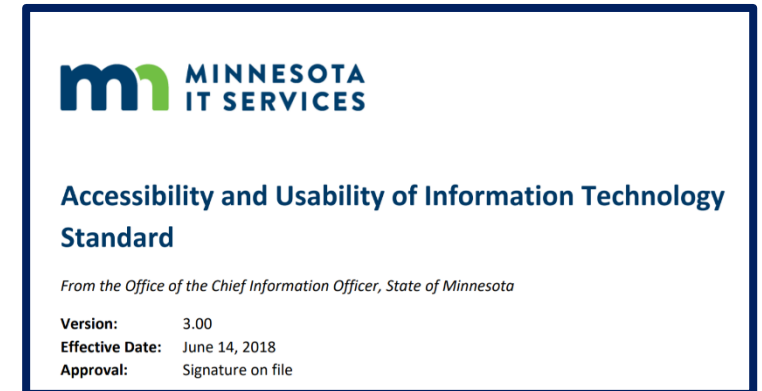
The screenshot shows the ADA.gov website header. On the left is the ADA.gov logo with the text "United States Department of Justice Civil Rights Division". To the right is the title "Information and Technical Assistance on the Americans with Disabilities Act". A search bar contains "Search ADA.gov" and a "go" button. Below the search bar is a "More Search Options" link. A navigation menu includes "Law / Regulations", "Design Standards", "Technical Assistance Materials", and "Enforcement". A highlighted menu item reads "TEXT OF THE ADA As Amended" and "The Americans with Disabilities Act of 1990 and Revised ADA Regulations Implementing Title II and Title III".

Americans with Disabilities Act of 1990, As Amended



The screenshot shows the Minnesota Legislature website. The header includes "Minnesota Legislature" and a navigation menu with "House", "Senate", "Joint", "Schedules", "Committees", "Bills", "Law", "Multimedia", and "Publications". Below the header is a banner for the "Office of the Revisor of Statutes" with a photograph of the Minnesota State Capitol. A search bar is present. The main content area shows the path "2019 Minnesota Statutes > ADMINISTRATION AND FINANCE > Chapter 16E > Section 16E.03" and the title "2019 Minnesota Statutes". The statute text reads "16E.03 STATE INFORMATION AND COMMUNICATIONS SYSTEMS."

State of Minnesota Digital Accessibility Law



The screenshot shows the Minnesota IT Services logo, which consists of the letters "mi" in a stylized font followed by "MINNESOTA IT SERVICES". Below the logo is the title "Accessibility and Usability of Information Technology Standard". Underneath is the text "From the Office of the Chief Information Officer, State of Minnesota". At the bottom, there is a table with the following information:

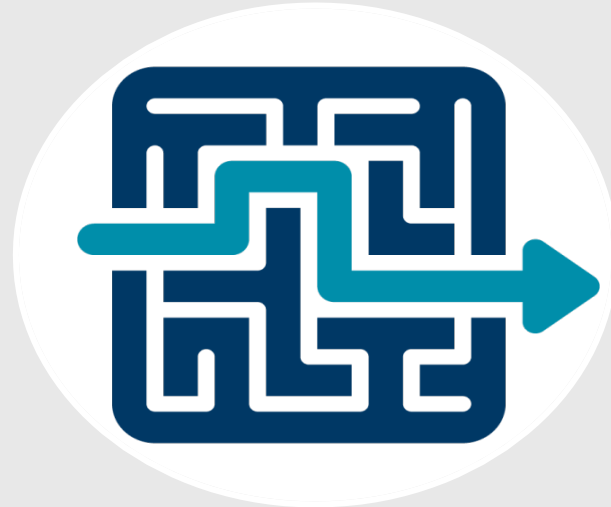
Version:	3.00
Effective Date:	June 14, 2018
Approval:	Signature on file

State of Minnesota Accessibility Standard

Which Kind of Digital Accessibility?



Accommodation



Usability

Section 508, as qualified:

- E202.2 (legacy ICT) does not apply.
- E205.3: Electronic Content, Agency Official (and the remainder of 205.3).
- 412.7: append sentence: When ICT is structured there shall be the ability to override automatic e.g. sign language interpreter.
- Any conditions or definitions that are superseded by definitions of “agency” and “undue burden.”
- [Web Content Accessibility Guidelines \(WCAG\) 2.0](#) compliance is encouraged.

Digital Accessibility Success Criteria

- Buy and use “as is”
- Buy and customize
- Build
- Vendor customizes or builds



Purchase/Procurement Process

- Request for Proposals (RFP)
- Contract (Components, Language)
- Custom off the Shelf (COTS)
- Licensing
- Professional/Technical Services
 - Staff Augmentation
 - Provider of Content, Assets or Services
 - Training Provider (sometimes online)



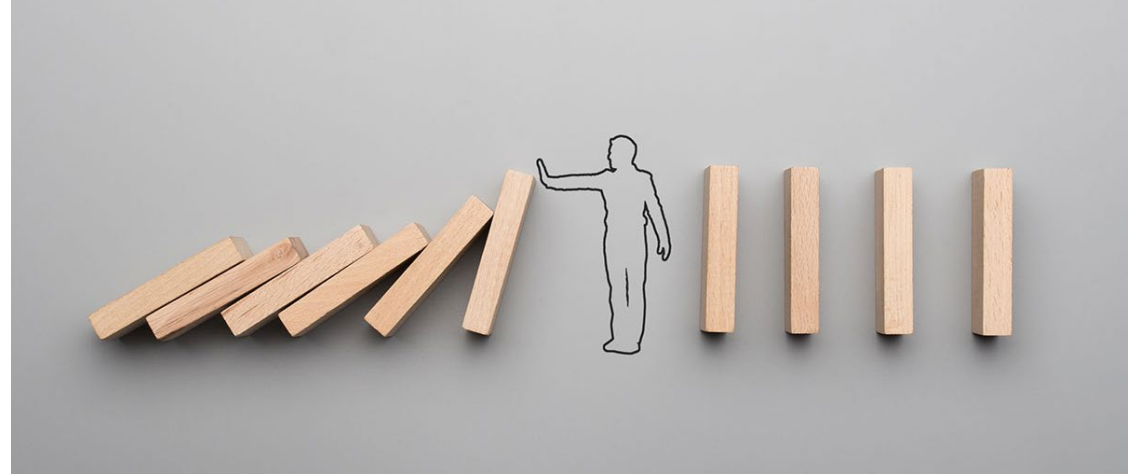
Ideally

- Totally inclusive process/environment
- All team members have digital accessibility skills
- Roles and responsibilities in project are clearly defined
- Checks and balances throughout the process



But in Reality...

- Some inclusion
 - Varying digital accessibility skills
 - Professionals playing multiple roles due to many reasons
 - Uncertainty where responsibility lies
 - Accessibility checking typically occurs at end of project
- ...leading and advocacy required in every role



All Project Participants Matter

- Stakeholders
- Usability Testers
- Business/IT
Governance Committee
- End Users



Digital Accessibility Champions

- **What is an accessibility champion:** A person who fights or argues for digital accessibility or on behalf of someone else
- Until the ideal is reality?

Carpe diem!



Return On Investment (ROI)

The 1-10-100 Rule

– used to quantify the hidden costs of poor design and quality

(The 1-10-100 rule is a quality management concept developed by G. Loabovitz and Y. Chang that is used to quantify the hidden costs of poor quality.)

\$1 \$10 \$100

Before the Formal Project Life Cycle?



Everyone has a role...

- Project Manager
- [Business Owner]
- Business Analyst
- Digital Accessibility Specialist
- Design
- Developer
- Quality Assurance



- Implementing accessibility is not only a concern for developers, but for the whole team
- People who are knowledgeable about accessibility need to work together throughout the project life cycle
- Including accessibility at the start in the establishment of the technical specifications is necessary
- Choosing accessible technologies makes the process much more inherently accessible

Project Manager, Planning

Ensuring optimization of the production chain:

- Review steps of web development life cycle and ensure accessibility is included
- Make sure everyone understands their role and responsibilities for accessibility
- At every milestone verify accessibility has been checked
- Identify technology platforms and tools, ensure their accessibility limitations have been identified

Project Manager, Budget

- Plan a budget and schedule to include accessibility testing within the development cycle and before production release

In cases where resources or skills are not available within the team:

- Budget for contracted testing accessibility
- Budget for training and/or hiring in order to develop accessibility knowledge and skills noting that training is required for:
 - Content providers
 - Designers
 - Developers

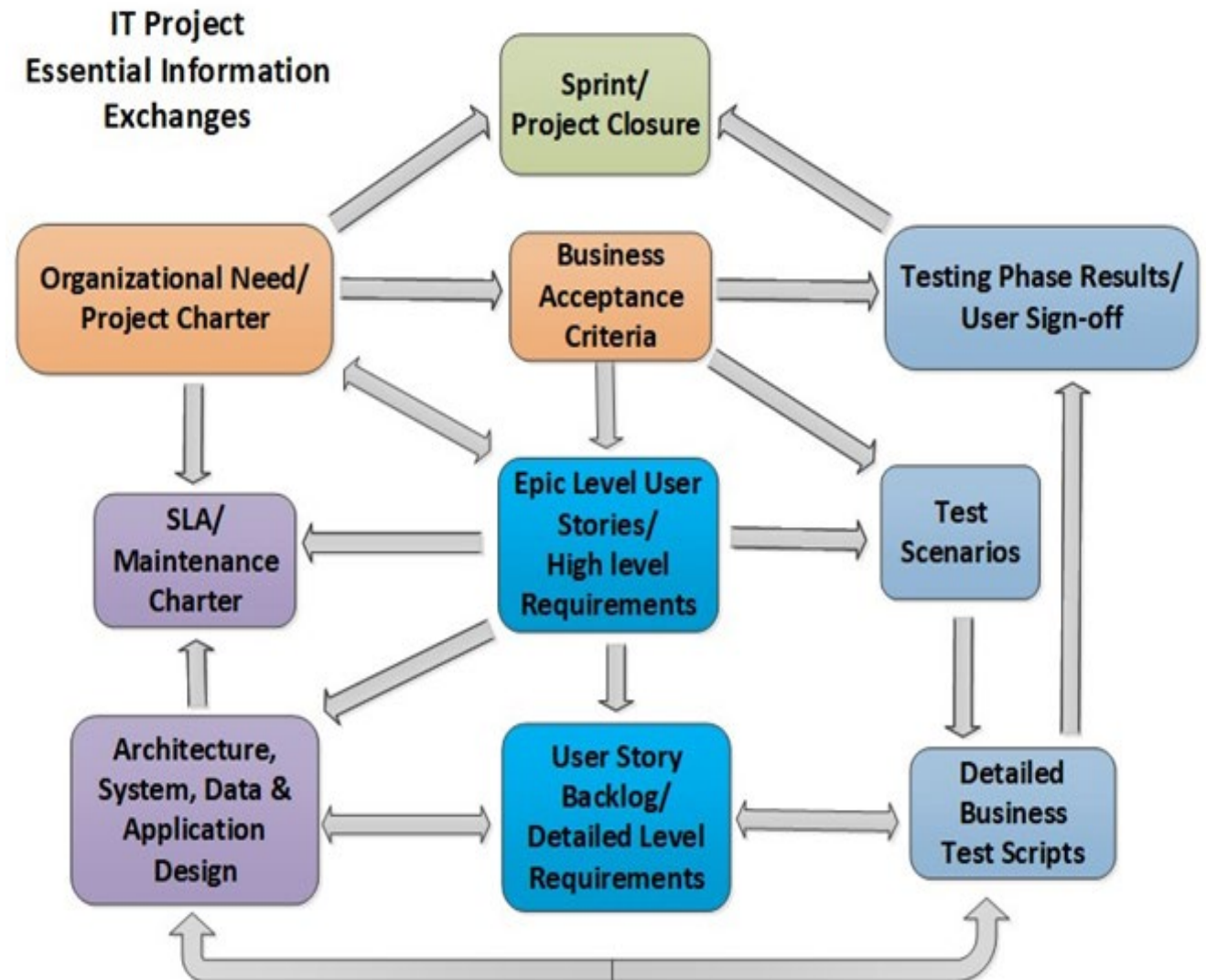
- Focus on ensuring business-side needs are met
- Involvement may vary
- Team member with awareness of specific business-side considerations
- Varying levels of experience with the project life cycle and vocabulary/concepts

Business Owner, Content

When content providers understand the requirements for accessible content, they play a vital role in ensuring that web pages contain information which is well structured with heading levels, links are clearly defined, tables are used for data and not presentation, captions or transcripts are provided for videos or audio recordings, error messages can easily be detected and interpreted.

Business Analyst (BA)

- Business Analyst can be an important Digital Accessibility Advocate through their IT project role.



Business Analyst Technical Specifications

In drafting the technical specifications, the criteria for an accessible product will need to be documented in some or all of the following areas:

- Software specifications
- Design specifications
- Functional design specifications
- User acceptance criteria

- International Institute of Business Analysis (IIBA) Body of Knowledge (BABOK) governs the Business Analysis Discipline.
- BABOK instructs:
 - Analyzing your project Stakeholder to help plan Stakeholder engagement and managing business requirements.
- Digital Accessibility requires:
 - Works with team to collaborate on and communicate Digital Accessibility requirements

Designer, Initial Mockups

Designer responsibilities related to accessibility include:

- graphic and user interface design of web pages and applications

Include accessibility at the start, when establishing the technical specifications:

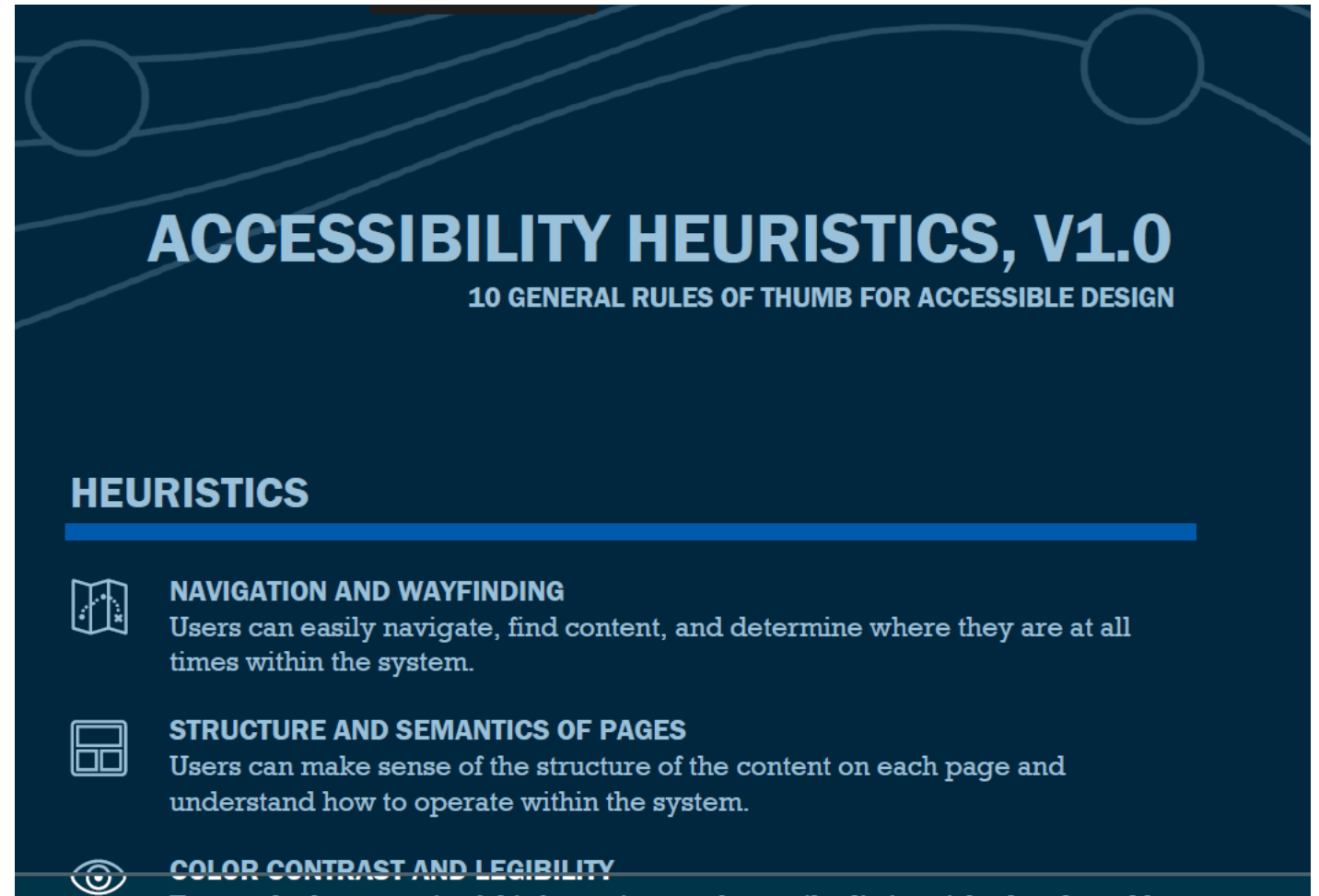
- colors
- font sizes
- interface design

Mockups - Top 10 Things to Catch in Wireframes

- Tap/click target size
- Complex interactions
- Linear flow issues
- Keyboard issues
- Proximity related issues
- Naming/labeling of controls
- Complex form field labeling
- Error messaging strategy
- Using color alone to convey meaning
- Overly complex language

Accessibility Specialist

- Reviews wireframe and ensures accessibility requirements are well defined
- Manually tests templates and key pages for accessibility (keyboard only and screen reader).



- The development stage can make or break the accessibility of a project. A good development workflow with a focus on accessibility will address accessibility issues immediately.
- There is no single correct development cycle and can vary based on the feature being implemented, the environments available for testing (including desktop and mobile devices), and other factors.
- Utilizing well developed business requirements, annotated wireframes, the online Application and Website Style Guide and code repositories is important during the development stage.
- It is vital to test iterations of the product during the development phase – both automatic and manual.

Accessibility testing is no different from the other types of testing required for:

- quality assurance,
- testing the experience and usability,
- business requirements implementation and
- when ensuring the developers followed the proper guidelines and requirements.

Quality Assurance (QA)

QA use automatic and manual accessibility testing techniques (i.e. keyboard only).

- Use WCAG 2.0/2.1 guidelines
- Section 508

In the project sign-off, include the acknowledgment for accessibility conformance.

Celebrate this as an achievement with the team and in the project launch!

Document the lessons learned in implementing accessibility. This can be a very useful source of information in the post project phase and for future projects.

Subscribe to the Office of Accessibility Newsletter

[Office of Accessibility newsletter](#)

Text to # 468311: MNIT A11y

(You will receive our welcome message back.)

- Tips on digital accessibility
- Announcement of new resources
- Stories about current projects (all types)
- Upcoming events and trainings



Resources and Citations

- [Minnesota's Office of Accessibility website](#)
- [Deque](#)
- [WebAIM Million](#)

Thank you

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