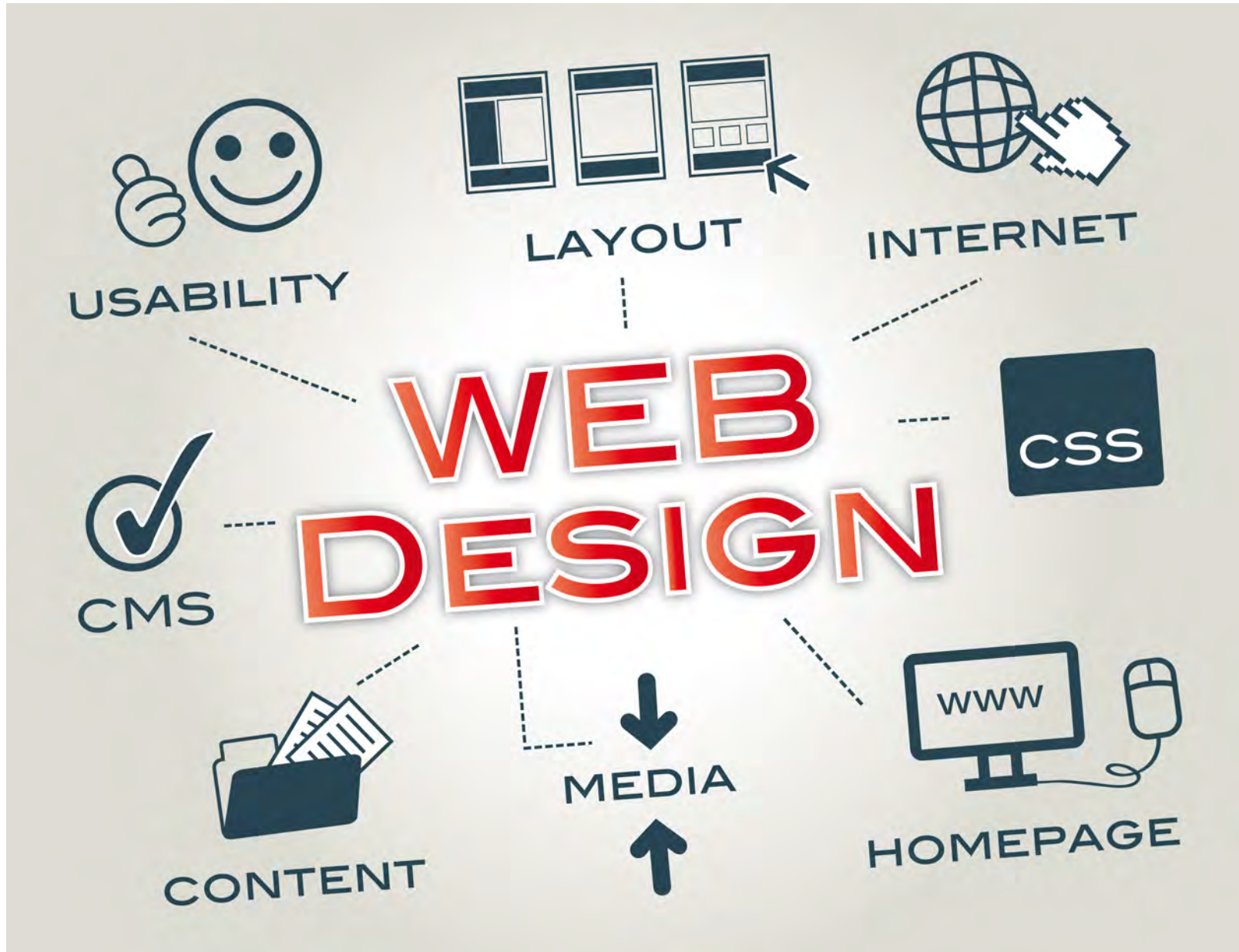


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Accessible Web Design



Why Remove Barriers?

- People with disabilities use the internet.
- Many people with disabilities find the internet gives them greater or the only access to goods and services **if ...**
 - **the websites are accessible.**

Why Remove Barriers?

- ADA obligation to provide effective communication and equal access to goods and services.
- Brings a greater market to your services.
- Design techniques that remove barriers for people with disabilities are also appreciated by the general public.
- **Accessible Design = Good Design**

How Do We Remove Barriers?

- Understand how people with disabilities access websites and identify common barriers.
- Follow web accessibility guidelines. (WCAG 2.0)
- Commit to accessibility in policy, planning, and procurement.

Web Content Accessibility Guidelines (WCAG 2.0)

- The most commonly used guidelines in US
- Developed by the Web Accessibility Initiative
- Consists of 3 levels.
 - Level A, Level AA, Level AAA
 - Courts and Settlement Agreements have used WCAG v2 when requiring web accessibility.

Web Content Accessibility Guidelines (WCAG 2.0)

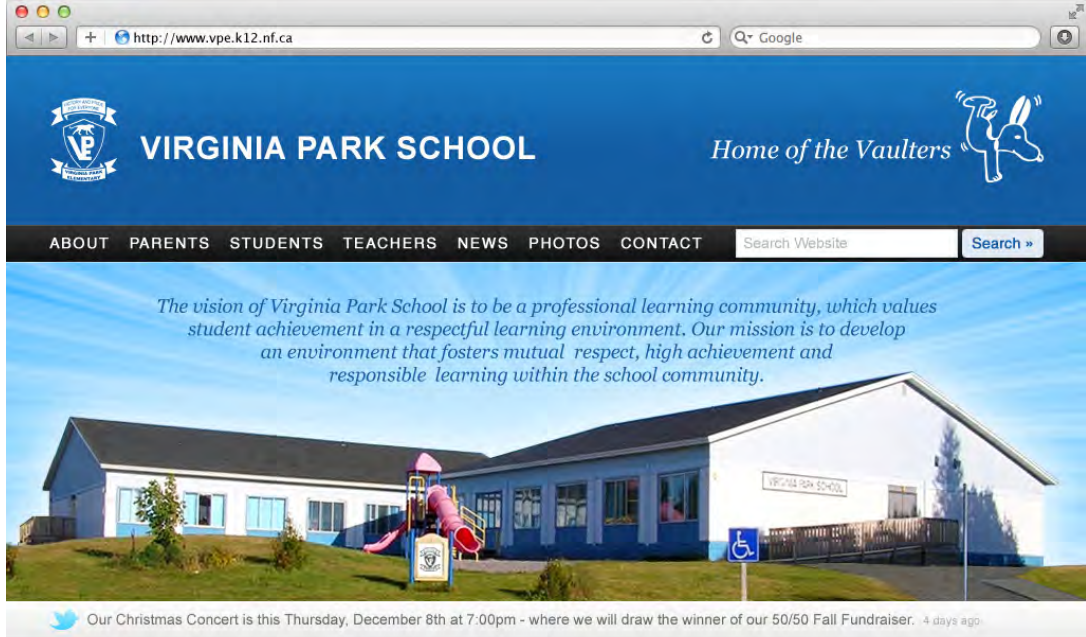
- Levels help ensure websites provide the access that people with disabilities **MUST** have to use the website.
 - Some features are helpful, make using the internet much easier for people with disabilities.
 - Other features are **necessary** and without them users with disabilities would have **no** access to internet content!

Principles of Accessible Web Design

- WCAG is based on four principles of accessible web design.
- All of the guidelines will fall into one of these four principles.
- These principles offer a good structure to understand how people with disabilities use the web and barriers to web access.

WCAG Principles: **POUR**

- Content must be **perceivable**.
- Interface elements in the content must be **operable**.
- Content and controls must be **understandable**.
- Content must be **robust** enough to work with current and future technologies.



Most people will "perceive" this page visually.

- Read text.
- See the photos/graphics.
- Navigate by viewing the entire page at once.

LATEST NEWS

50/50 Fall Fundraiser

On Friday, October 28th Virginia Park School Council kicked off the 8th Annual 50/50 Fall Fundraiser. This fundraising event has been a tremendous success at Virginia Park Elementary. Last year's prize was over \$5,000. This year, tickets are \$2.00 each or 3 for \$5.00. 10,000 Tickets have been printed. Please make every effort to sell your 30 tickets and we encourage you to take more if you have sold the first 30. The draw will take place at the Christmas Concert on Thursday, December 8th at 7:00pm. Good luck to everyone!

[Read More »](#)

[More News »](#)

CALENDAR

« DECEMBER 2011 »

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31



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[Terms of Use](#) | [Privacy Policy](#) | [Site Map](#) | [Admin](#)
Website Designed by Troy Templeman

NEWSLETTER

Email Address

[Sign Up »](#)

Blind users will perceive the page by hearing screen reading software read the content to them.

This only works if the site is coded in a way that screen reading software can "read".

What a web page looks like and the content on the page is determined by source code: HTML—This is what screen reading software "reads"

```
<td width="333" valign="top" bgcolor="#ffffff"><br /><div id="box1">
```

```
<div class="style31" id="box6">Registration will open <br />
```

```
January 6, 2017<br /> </div> <h1 class="about">
```

The National ADA Symposium is an annual conference on the Americans with Disabilities Act. This four-day event features 72 breakout sessions, pre-conference, keynote, welcome reception and exhibits.

```
</h1><br /> </div> </td>
```

```
<td width="303" align="left" valign="top" bgcolor="#ffffff"><br /><div id="box2"><h1>Designed For:</h1>
```

```
<ul>
```

```
<li>ADA Coordinators</li> <li>Advocates</li> <li>Architects</li> <li>Business  
Community</li> <li>Code Officials</li> <li>Educators</li> <li>Government  
Officials</li> <li>Human Resource Specialists</li>
```

```
</ul> </div>
```

Some things we need to do to make content perceivable for screen reader users.



- Images need alternate text tags for screen readers.
- ``

Alternate Description for Images



This image can't be read by a screen reader but the content needs to be conveyed.

By putting an alt tag in the text the screen reader reads the information to the student.



This image is purely for decoration and conveys no content. In order to let the screen reader move past the image, it should be given a null " " alt tag.

Alternate Description for Images

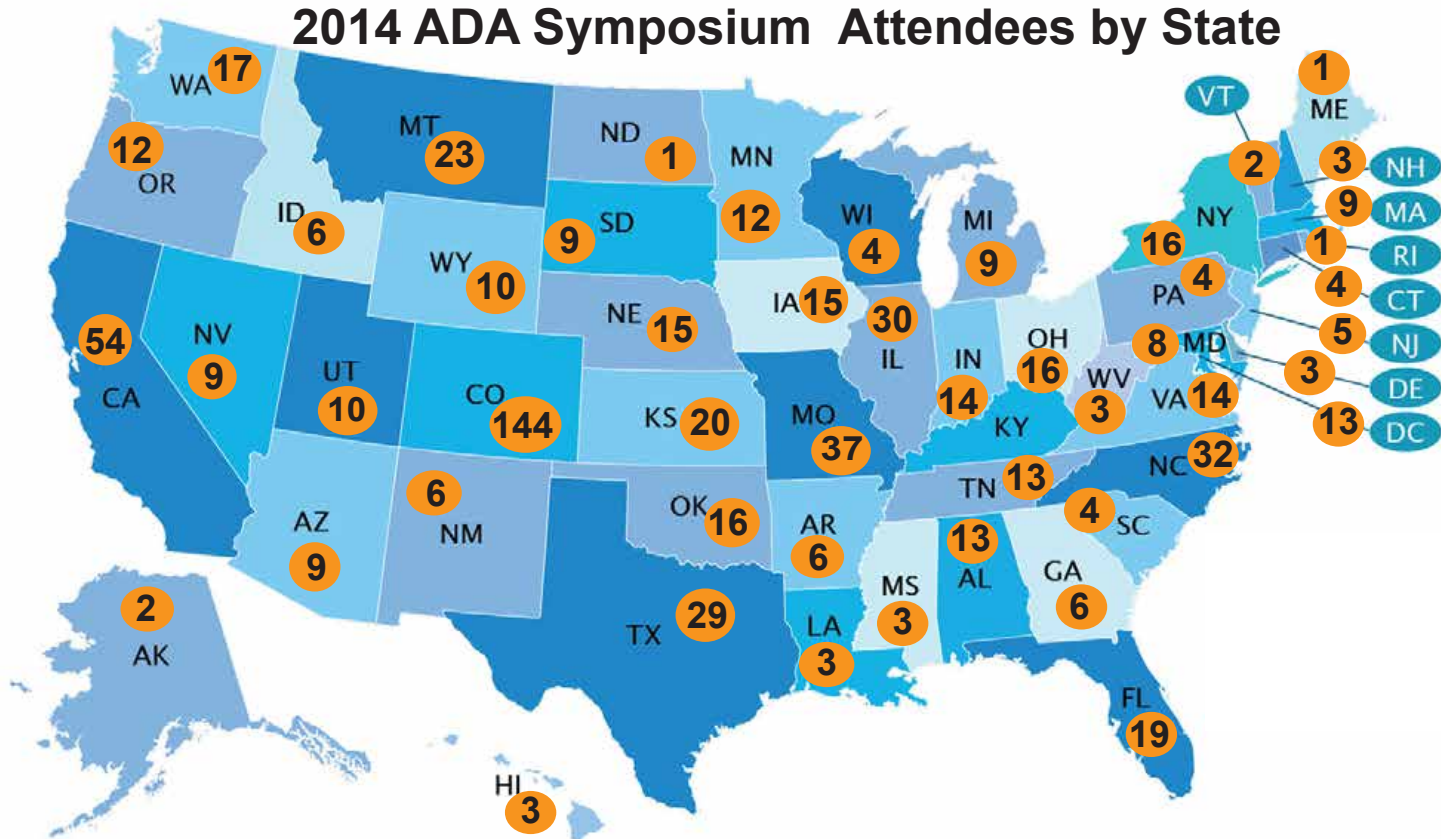


An image may not contain text but still help convey information.

The alternative text for this image:

“The image depicts child pulling on ear, a common behavior when children have earaches.”

Alternate Description for Images



This image has information that is too lengthy for alternative text. The student could link to a text depiction of the graphic information.

Perceivable

Content should be adequate contrast.
Either light on dark background or dark
on light background.

Content should be adequate contrast.
Either light on dark background or dark
on light background.

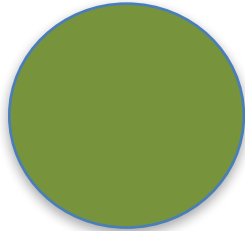
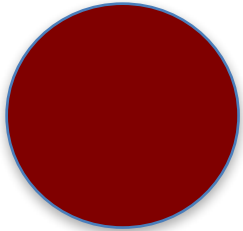
Content should be adequate contrast.
Either light on dark background or dark
on light background.

Perceivable

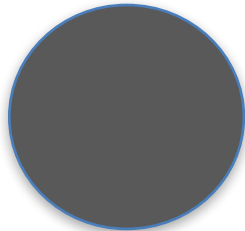
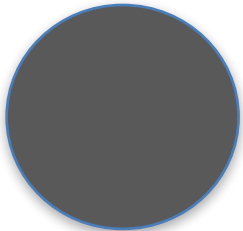
- In the middle of this text is a **link** to another website.
- In the middle of this text is a link to another website.
- In the middle of this text is a **link** to another website.
- In the middle of this text is a link to another website.

The red link becomes almost invisible for someone who is color blind

Perceivable



Click the red button to submit.



Click the red button to submit.



Click the red button marked submit.

About Color



Don't be afraid of color. It augments content and helps navigate the website more easily. Most people benefit from the wise use of color.

However, make sure information is not dependent only on color!

Perceivable-Audio



Videos need to be captioned for the deaf and hard of hearing.

Accessible Multi-Media



Videos should be captioned.

If audio, provide visual.

If visual, provide and audio.

Accessible Multi-Media

Closed captioning can be done easily for small projects.

Consider outsourcing larger projects.



Closed Captions may be turned off and on by user and transcript is “synced” to video.

Open Captions are embedded.

Operable

Along with perceiving content users have to be able to interact with the website.

Example:

- Moving through the site using navigation and links.
- Entering information into forms and submitting.

How do we make sites operable?

- Operable with a keyboard or device other than a mouse.
- Give users enough time to read and use content
- Do not use content that causes seizures
- Help users navigate and find content

Operable



- Website code should allow alternatives to a mouse controlled by hands.

Operable



A person who is blind or low vision will not be able to recognize a Captcha security log-in.

Addictive_ID	1
Student Name	John
Phone No	1345567
Address	3-E Hall Rd
Course Code	2

Someone with poor motor control may not use a mouse and need to be able to use a keyboard to navigate.

Operable

The screenshot shows a web application window titled 'Final Evaluation' with a sub-tab 'Evaluation Form'. The main content area is titled 'Evaluation Form' and contains several input fields and buttons. The fields are arranged in a table-like structure:

Addictive_ID	1	<input type="button" value="←"/>	<input type="button" value="→"/>
Student Name	John	<input type="button" value="Add Record"/>	
Phone No	1345567	<input type="button" value="✖"/>	
Address	3-E Hall Rd		
Course Code	2		

Users with disabilities may need more time to complete tasks such as filling out a form or completing a test on-line.

Understandable

- Content should be understandable—clear, simple language.
- Supplementing text with illustrations, video, etc. can be helpful.
- Users must be able to understand the **functionality** of a website.
 - Navigate to other pages
 - Easily use features such as “shopping”

How do we do this?

- Make text readable and understandable.
- Make content appear and operate in predictable ways.
- Help users avoid and correct mistakes.

Understandable

Create a Clear Visual Hierarchy

Organize and prioritize the contents of a page by using size, prominence and content relationships. Let's look at these relationships more closely. The more important a headline is, the larger its font size should be. Big bold headlines help to grab the user's attention as they scan the Web page. The more important the headline or content, the higher up the page it should be placed. The most important or popular content should always be positioned prominently near the top of the page, so users can view it without having to scroll too far. Group similar content in a similar visual style, or in a clearly defined area.

Create a Clear Visual Hierarchy

Organize and prioritize the contents of a page by using size, prominence and content relationships.

Let's look at these relationships more closely:

- **Size.** The more important a headline is, the larger its font size should be. Big bold headlines help to grab the user's attention as they scan the Web page.
- **Prominence.** The more important the headline or content, the higher up the page it should be placed. The most important or popular content should always be positioned prominently near the top of the page, so users can view it without having to scroll too far.
- **Content Relationships.** Group similar content in a similar visual style, or in a clearly defined area.

Understandable

Make text readable and understandable.

Make content appear and operate in predictable ways.

Headings,

Fonts,

White space:

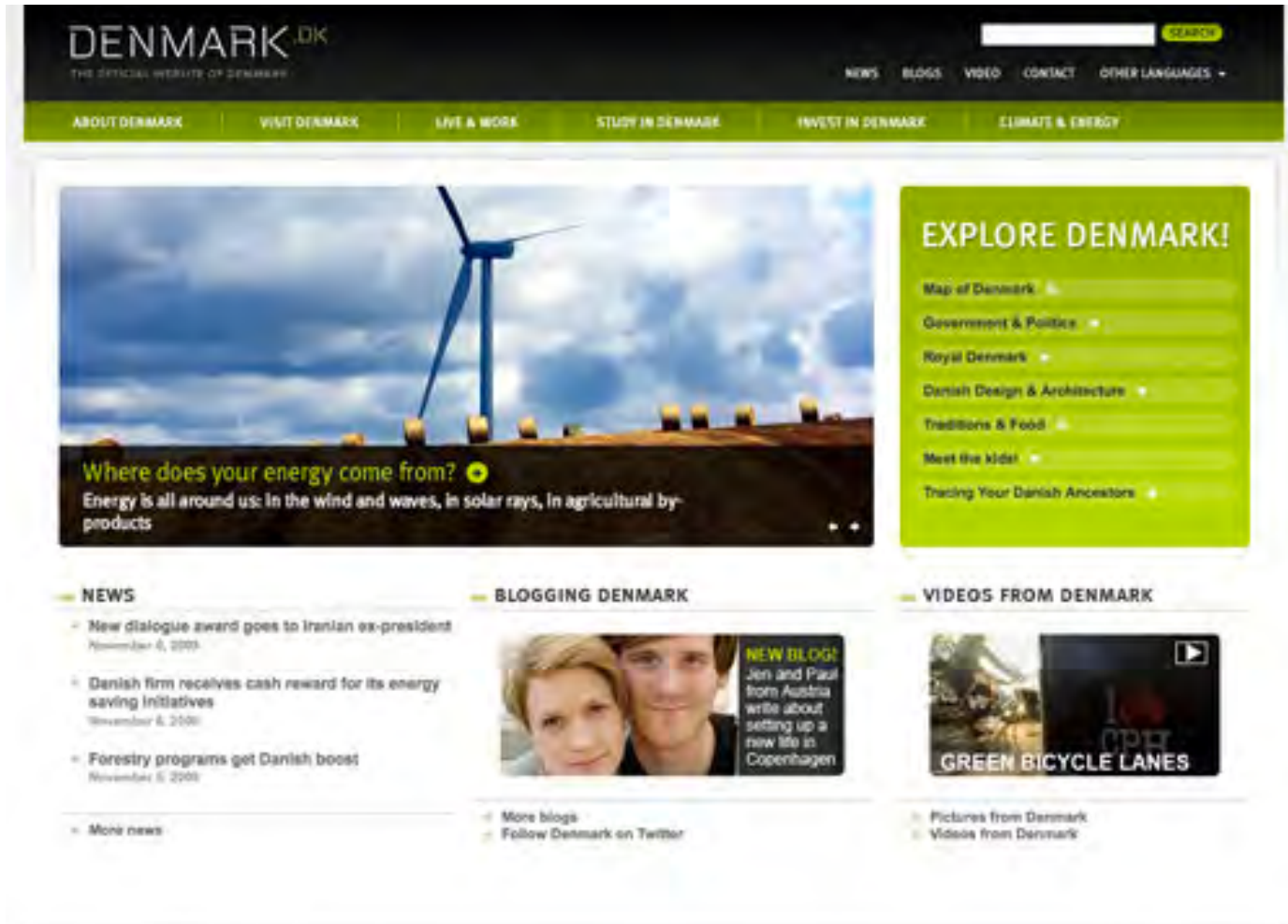
All of the Elements used to in the layout should be consistent throughout the site.

Understandable

Help users avoid
and correct mistakes

- Error Messages are Helpful
- Give the Option to Re-enter, Save or Resubmit Information.
- Give users information to avoid mistakes such as “only click once”.
- Avoid the “endless loop cycles” where users can’t request passwords or are cycled back to where they started.

Understandable



Sites should be easy to navigate. Intuitive. Simple. Consistent Elements Throughout the Site.

Understandable



Sites should be easy to navigate. Intuitive. Simple. Consistent Elements Throughout the Site.

Content Order for Screen Readers

Screen Readers always read code from left to right.
If information is conveyed in a different order on document, it can be very confusing.

January ↓	April ↓	July ↓	October ↓
February ↓	May ↓	August ↓	November ↓
March ↓	June ↓	September ↓	December ↓

Robust

Website should be accessible to different browsers and work with different assistive technologies.

Should also be accessible by different technologies:
Smart-Phone, computer, tablet.

Robust



It may look great on the exterior!

But the coding may not look so good and make it difficult for assistive technologies and software to be used.



Creating Accessible Websites

Note that creating accessible websites involves:

- ✓ Accessible coding techniques. i.e.; form labels, alt tags
- ✓ Design techniques: Color choice, lay-out choice,
- ✓ Content development

It's a team approach!

Creating Accessible Websites

If you are building it yourself—make sure your developers have access to support and training.

If you are paying someone else to build it—make sure they build a system that is accessible/lets you add accessible content.

If you are buying it (Word Press, Joomla)—make sure the systems you have invested in are accessible.

RTF or plain text format content (Word/.pdf) can save time and resources in the future.

Accessible Design = Good Design

Note that most of the actions that make sites more accessible also make them easier to use for everyone.

All of these features make websites more user-friendly.

Color contrast that is highly visible.

Extended time to use interactive features such as shopping carts, submission forms, log-ins and ways to correct errors.

Consistent design and elements.

Good lay-out and text formatting techniques to help readability and understanding.

Simple, clean design.

Also–

Documents that are part of a websites content should also be accessible.

Most Common:

- Word Documents
- Portable Documents Files .pdfs

Accessible PDF's

Portable Document Files (PDF's) that are scanned are really images and cannot be read by a screen reader!

- PDF's can be accessible, but the text must be given a heading structure.
- Images and graphics must be tagged with alternate text descriptions.
- Elements in PDF's must be given a content order, if needed.

Accessible PDF's

PDF Days Europe 2014

June 16–17, 2014
Cologne, Germany

PDF...

- **learn all about it**
besser verstehen
- **efficient use**
effektiver nutzen
- **optimal deployment**
optimal einsetzen
- **practical tips and tricks**
praktische Tipps und Tricks
- **for users and developers**
für Anwender und Entwickler

The logo for the PDF Association, featuring a stylized grid of red squares to the left of the text "PDF association".

PDF
association

This pdf
could be
made
accessible
very easily.

Accessible PDF's



Complicated pdf's such as this infographic may require a text version to provide equivalent information.

Resources

Web Aim www.webaim.org

World Wide Web Consortium Web Accessibility Initiative

www.w3.org/WAI

Article: *Accessibility Evaluation Tools*

<http://webaim.org/articles/tools/>

WCAG 2.0 Checklist (short version)

<http://webaim.org/standards/wcag/checklist>

Official WCAG 2.0 Specifications

<http://www.w3.org/TR/WCAG20/>

Thank You

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