Are your Tableau dashboards accessible to everyone?

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Agenda

• What is disability?
• Why accessibility considerations are important?
• Our top-10 best practices of accessible Tableau design
What is disability?
According to the Americans with Disabilities Act (ADA), the Rehabilitation Act of 1973, the definition of a person with a disability is typically defined as someone who
(1) has a physical or mental impairment that substantially limits one or more "major life activities,"
(2) has a record of such an impairment, or
(3) is regarded as having such an impairment.
### Inclusive

A Microsoft Design Toolkit

<table>
<thead>
<tr>
<th></th>
<th>Permanent</th>
<th>Temporary</th>
<th>Situational</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Touch</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One arm</td>
<td>Arm injury</td>
<td>New parent</td>
<td></td>
</tr>
<tr>
<td><strong>See</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind</td>
<td>Cataract</td>
<td>Distracted driver</td>
<td></td>
</tr>
<tr>
<td><strong>Hear</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deaf</td>
<td>Ear infection</td>
<td>Bartender</td>
<td></td>
</tr>
<tr>
<td><strong>Speak</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-verbal</td>
<td>Laryngitis</td>
<td>Heavy accent</td>
<td></td>
</tr>
</tbody>
</table>
12.8%
12.8% of Americans are living with disabilities.
— Institute on Disability/UCED, University of New Hampshire

8.5%
8.5% of Californians aged 21-64 live with disabilities.
— Yang-Tan Institute on Employment and Disability, Cornell University

11%
11% (2015) of postsecondary students in the United States have disabilities.
— US National Council on Disability

34.2%
Only 34.2% of disabled post-secondary students aiming towards a four degree were able to graduate within eight years of study.
— College & Career Readiness & Success Center at American Institutes for Research
Assistive technology for the physical world
Assistive technology for the digital world
Best practices of accessible Tableau design
1) Pay close attention to the color contrast
2) Use double encoding

<table>
<thead>
<tr>
<th>Color (Hue)</th>
<th>Color (Intensity)</th>
<th>Orientation</th>
<th>Enclosure</th>
<th>Shape</th>
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<tbody>
<tr>
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<td><img src="image2.png" alt="Image" /></td>
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<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Length</th>
<th>Width</th>
<th>Size</th>
<th>2-D Position</th>
<th>Spatial Grouping</th>
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</thead>
<tbody>
<tr>
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<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
</tr>
</tbody>
</table>
3) Use descriptive hyperlinks

Use the **UC Information Center** to find more information.

Use the UC Information Center to find more information. [Click here.](#)
4) Maintain one page/don’t rely on downloads
“Our whole platform was not designed with accessibility in mind, so the things that we’ve done we’ve had to go in and retrofit and it’s way harder to do that after the fact.”

– Kyle Gupton, Director of Product Management, Tableau
5) Include dashboard level alternative text
6) Be aware of non-accessible elements

- Workbook tabs
- Dashboard Titles
- Views (graphics)
  - Title
  - View window data
  - Captions
- List and Dropdown Filters
- Categorical Legends
- (Some) Text Objects
- Web Page Objects
- Image Objects (2018.3)
- Button Objects (2018.3)
- Toolbar

X Tooltips
X Parameters
X “Pages” Function
7) Understand tableau server a version control
8) Ensure data table accessibility
9) Think about focus order

**WCAG 2.4.3**
“If a web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability.”

**Setting the focus order**
10) One key takeaway:

Include an accessibility link in on every page

That leads to a monitored mechanism for individuals to request accessible content.
Summary

1. Pay close attention to the color contrast
2. Use descriptive hyperlinks
3. Maintain one page/don’t rely on downloads
4. Consider using double encoding
5. Maintain a version control
6. Include dashboard level alternative text
7. Be aware of non-accessible elements
8. Ensure data table accessibility
9. Think about focus order
10. Include an accessibility link on every page
Questions

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