

Are your Tableau dashboards accessible to everyone?



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.

Permanent

Temporary

Situational

Touch



One arm



Arm injury



New parent

See



Blind



Cataract



Distracted driver

Hear



Deaf



Ear infection



Bartender

Speak



Non-verbal



Laryngitis



Heavy accent



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

Designing for users on the autistic spectrum

Do...

- use simple colours
- write in plain language
- use simple sentences and bullets
- make buttons descriptive
- build simple and consistent layouts

Do this.

Don't...

- use bright contrasting colours
- use figures of speech and idioms
- create a wall of text
- make buttons vague and unpredictable
- build complex and cluttered layouts

Edit Colors [Order Profitable?]

Select Data Item:

- Profitable
- Unprofitable

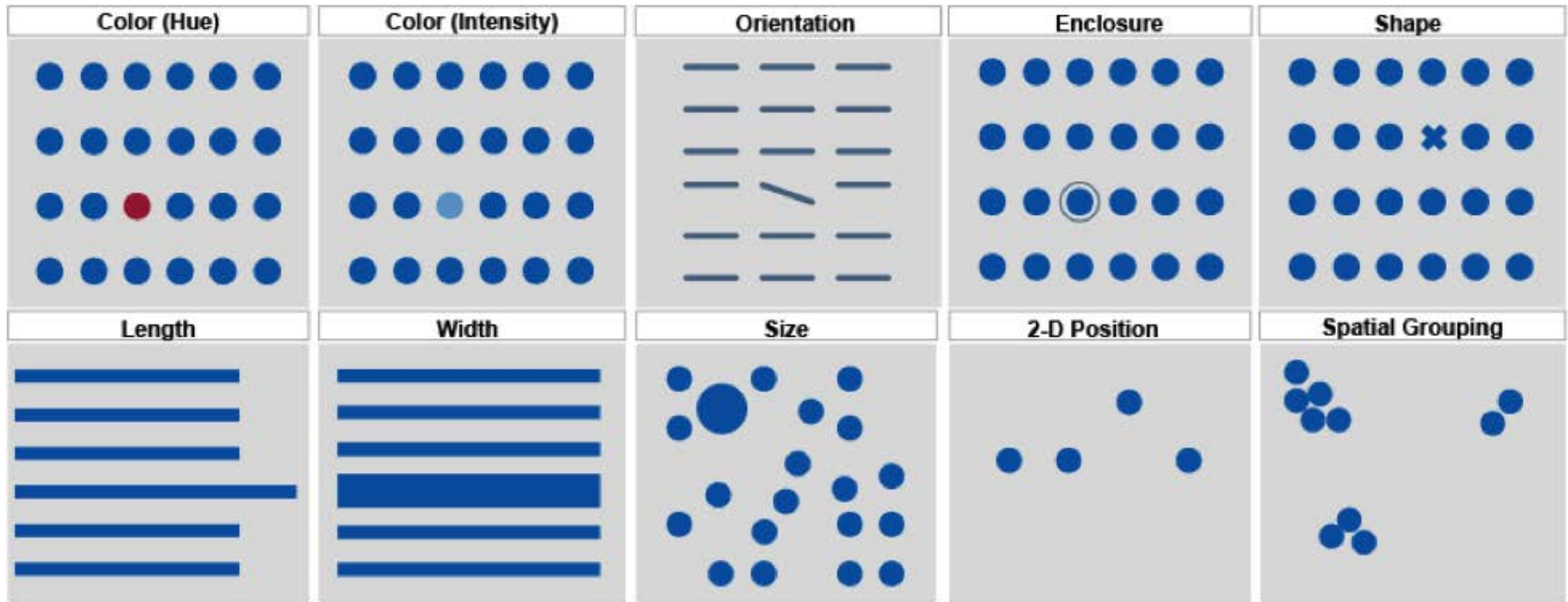
Select Color Palette:

Color Blind

Assign Palette

Reset OK Cancel Apply

2) Use double encoding



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

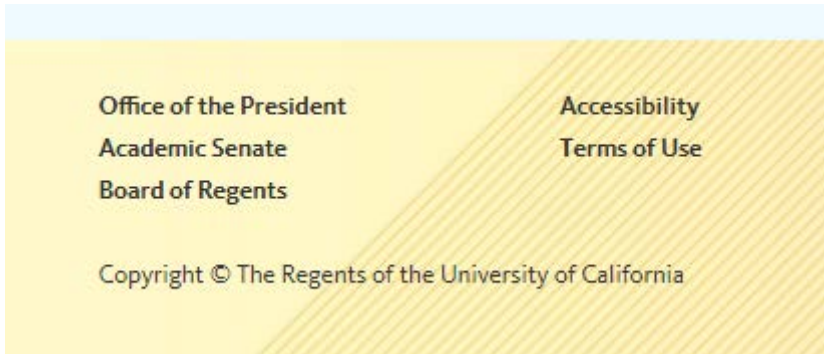
9) Think about focus order

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

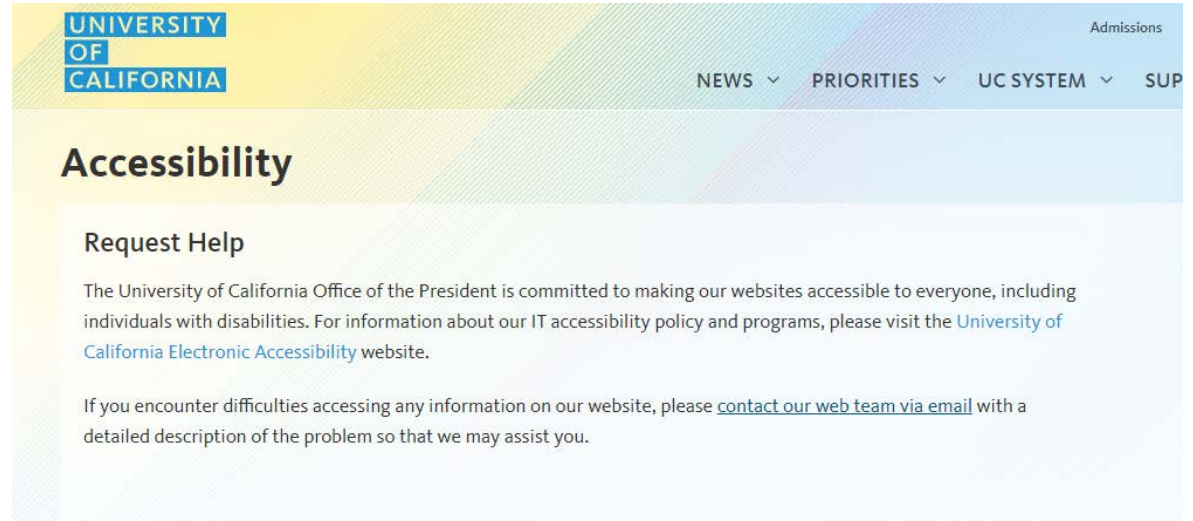
10) One key takeaway:



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

Joseph.VanMatre@ucop.edu



@JosephVanMatre

Amit.Prayag@ucop.edu