University of California Tableau User Group (UC TUG)

Hosted By:

UC Berkeley Office of Planning & Analysis (OPA)

October 12, 2018
Agenda

◈ Introductions & Overview of Our Berkeley (5 minutes)
◈ Our Berkeley Display Architecture (10-15 minutes)
   ◦ Portal page, GitHub, embedded Tableau
   ◦ Transition from Public to onsite Tableau Server
◈ Visualizations (10-15 minutes)
   ◦ Bump charts, mixing in D3
◈ Web Content Accessibility (10-15 minutes)
   ◦ Basic Principles, Testing, Resources
◈ Q & A (10 minutes)
◈ Next Meeting & Close (5 minutes)
Introductions

- Russ Acker - Office of Planning & Analysis, Interim IR Systems Manager
- Noam Manor - Student Affairs Division, Data Analytics Manager
- Sara Quigley - Office of Planning & Analysis, Data Visualization & Research Analyst

- Our Berkeley Data Digest

Our Berkeley is a new public-facing website featuring data and narratives on the major dimensions of UC Berkeley. It currently contains 21 dashboards covering a wide variety of subjects, all developed and released in the course of the last year.

https://opa.berkeley.edu/our-berkeley
Beginnings of Our Berkeley

❖ One of Vice Chancellor-Finance Rosemarie Rae’s strategic initiatives for 2017-18 was “Leveraging Data for Strategic Decision Making”
❖ Presentation on staff headcount for Academic Senate
❖ Goals for an interactive data digest
  ❖ Authoritative, public-facing site for UC Berkeley data
  ❖ Provide data that informs strategic priorities and tells the Berkeley story
  ❖ Straightforward access to our data, with context
  ❖ Transparency and consistency in data and narratives
  ❖ Comparisons to peer institutions where appropriate
❖ Inspired by UC Info Center and Purdue University Data Digest
Our Berkeley Architecture

- Portal Page uses Drupal-based Open Berkeley
- Easy to build & intuitive navigation
- Can’t put JavaScript in pages
- Berkeley now has a centrally-funded, on-premise, private instance of GitHub Enterprise
- Can store lots of different kinds of code and data
- Automatic version control
- GitHub Pages allow for flexible display, but still Berkeley-branded
GitHub Pages have embedded Tableau dashboards or embedded D3 code

Surrounding page has Berkeley Brand elements

Page also includes “Sources & Methodology” and “Notes on Other Available Data” sections

Tableau Server

Currently using Tableau Public Server (aggregated data)

Will switch to on-site Tableau Server in Spring 2019
Where possible, we’ve tried to display data in visually interesting ways to maintain user interest.

- **Bump charts**
- **Sankey diagrams**
- Packed bubble charts
- Treemaps
- Choropleth maps
- Embedded D3
According to a US Census Bureau report, “About 56.7 million people—19% of the population—had a disability in 2010, according to a broad definition of disability, with more than half of them reporting the disability was severe.”

https://www.tragicdesign.com/
Accessibility Principles

- Make the page keyboard navigable
  - using id, aria-label, role and tabindex attributes
- Make link text meaningful and human-readable
- Leverage the ARIA spec to make the page work with assistive technologies.
  - ARIA = Accessible Rich Internet Applications
Accessibility Testing

- Test keyboard navigation and control
  - tab order, “skip to content” option
- Ensure that the narrative and the tabular data are accessible
- Tools
  - ChromeVox
  - VoiceOver
  - Web Accessibility Evaluation Tools List

https://www.w3.org/WAI/ER/tools/
Tableau Embed Code

the `<object>` element attributes

- `aria-label`: holds the narrative content
- `tabindex`: provides keyboard navigability
- `id`: provides a ‘skip to content’ target

```html
<div class='tableauPlaceholder' id='viz1521831076895' style='position: relative'>
  <noscript>
    <a href='#'>
      <img alt='Story 1' src='https://&#47;public.tableau.com&#47;static&#47;images&#47;en&#47;enrollment-headcount-campus_0&#47;Story1&#47;1_rss.png'
      style='border: none;'/>
    </a>
  </noscript>
  <object aria-label="UC Berkeley's total year-average campus enrollment is 41,000 students. Campus enrollment has grown by more than 16% over a 7-year period beginning in 2010.... UC Berkeley has increased the number of undergraduate California residents and maintained a steady proportion of non-resident students, whose tuition dollars support all undergraduates.' class='tableauViz' id='viz1' style='display:none; tabindex:-1'>
    <param name='host_url' value='https%3A%2F%2Fpublic.tableau.com%2F'>
    <param name='embed_code_version' value='3'>
    <param name='site_root' value=''>
    <param name='name' value='enrollment-headcount-campus_0%26%2F;Story1'>
    <param name='tabs' value='no'>
    <param name='toolbar' value='no'>
    <param name='static_image' value='https://&#47;public.tableau.com&#47;static&#47;images&#47;en&#47;enrollment-headcount-campus_0%26%2F;Story1%26%2F;1.png'>
    <param name='animate_transition' value='yes'>
    <param name='display_static_image' value='no'>
    <param name='display_spinner' value='yes'>
    <param name='display_overlay' value='yes'>
    <param name='display_count' value='no'>
    <param name='filter' value='publish=yes'>
  </object>
</div>
```
Next Meeting

- November 9th 2018
- Host – UC San Diego