



# Equitable storytelling and the pitfalls of dashboard thinking

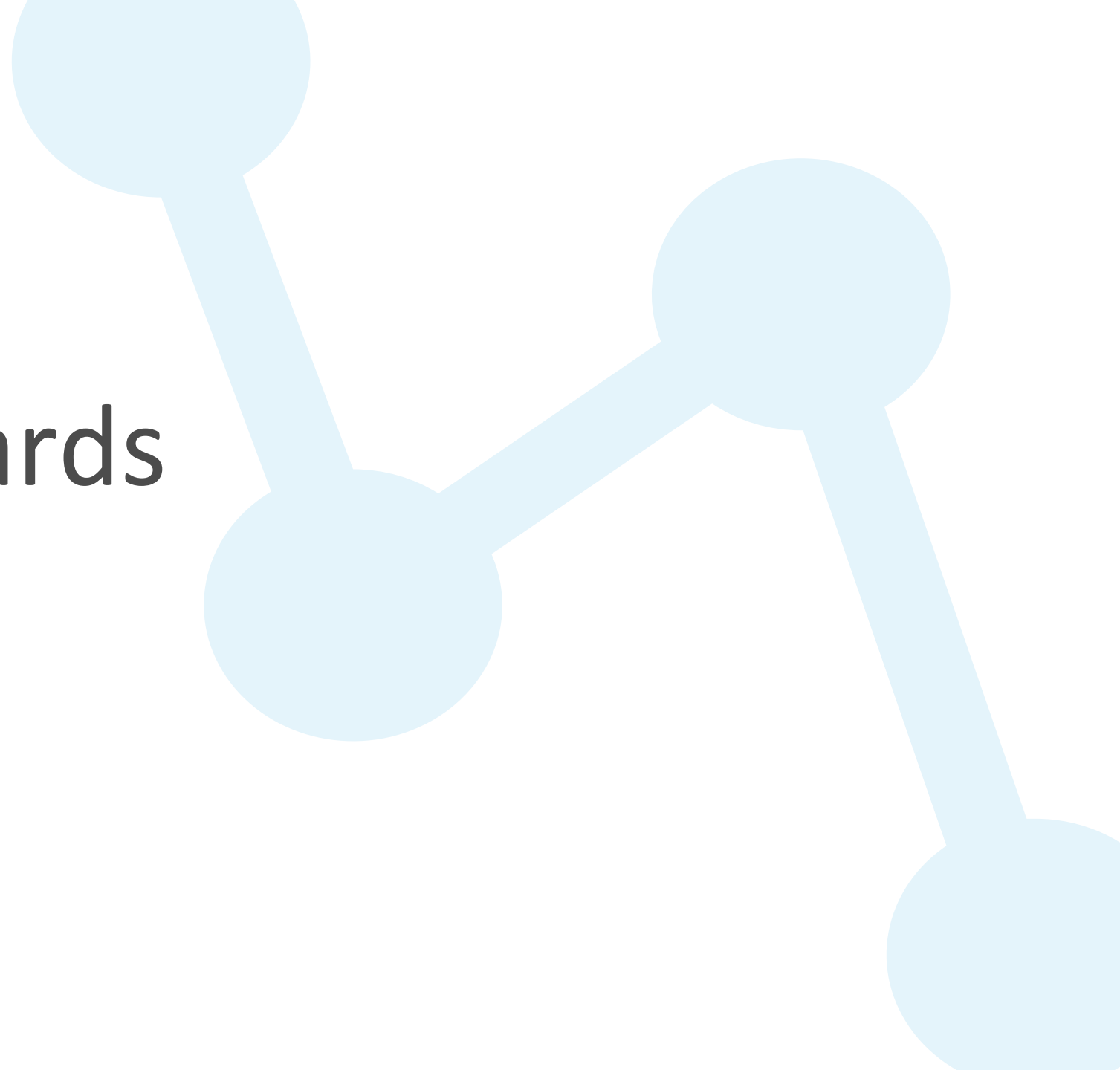
CAIR Annual Conference  
November 5-8, 2024

[Laura.Kertz@ucop.edu](mailto:Laura.Kertz@ucop.edu)

[Courtney.Wilson@ucop.edu](mailto:Courtney.Wilson@ucop.edu)

UNIVERSITY OF CALIFORNIA Office of the President

Are dashboards  
anti-equity?



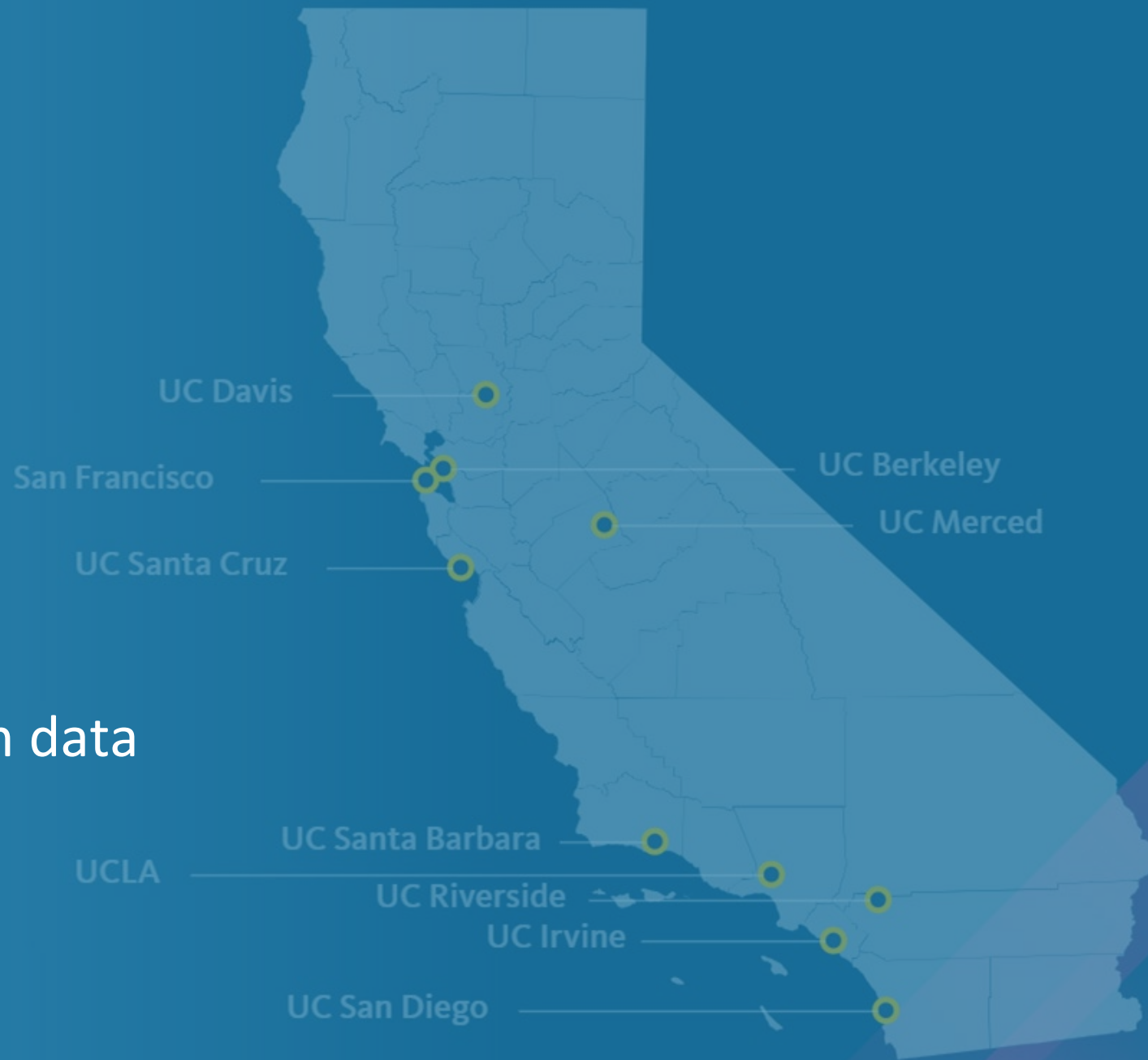
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HOLD  
THAT  
THOUGHT



# UC 2030 AND COMPACT GOALS

- B1 Increase graduation rates
- B2 Close equity gaps
- D3 Leverage campus and system data





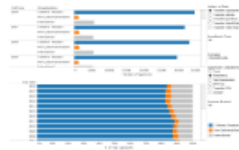
March 14, 2024

**UC 2030 dashboard**

This dashboard shows the UC 2030 goals in UC's multiyear framework.

# UNIVERSITY OF CALIFORNIA

# IRAP Information Center



February 13, 2024

**Transfer fall admissions summary**

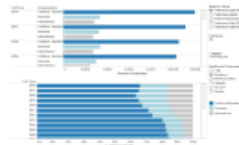
Fall applicants, admits and enrollments by first-generation, residency, ethnicity, transfer GPA and gender.



January 29, 2024

**First-generation college students**

Systemwide data on first-generation undergraduates including enrollment, demographics, disaggregated race/ethnicity enrollment data, majors, first-year retention and graduation rates, and financial support information. First-generation college student is defined as a student where neither parent nor guardian have earned a four-year degree.



February 13, 2024

**Freshman fall admissions summary**

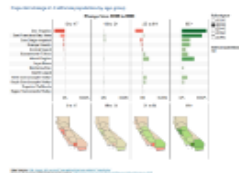
Fall applicants, admits and enrollments by first-generation, residency, ethnicity, high school GPA and gender.



January 19, 2024

**Fall enrollment at a glance**

Fall undergraduate and graduate enrollment by discipline, gender, ethnicity, residency, country (for undergraduates) and campus.



February 9, 2024

**California high school graduation project completion**

What does a changing California mean for higher education?



January 18, 2024

**Student survey completion and response rates**

UC systemwide student survey response and completion rates are presented in this dashboard. The data may be filtered by campus and year, as well several characteristics such as ethnicity, gender, First generation status, Pell status and others related to discipline and student level.





# The plan

- Gut check
- You and your dashboard
- 3 things that give us pause
- Some alternatives

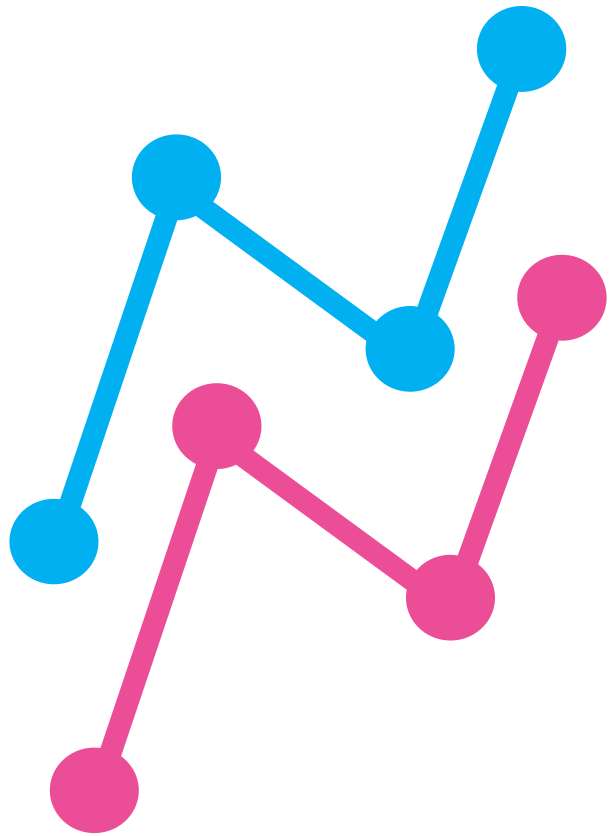
THING ONE:  
SMALL CELLS\*

\*no one should be an asterisk



THING TWO: FILTERS





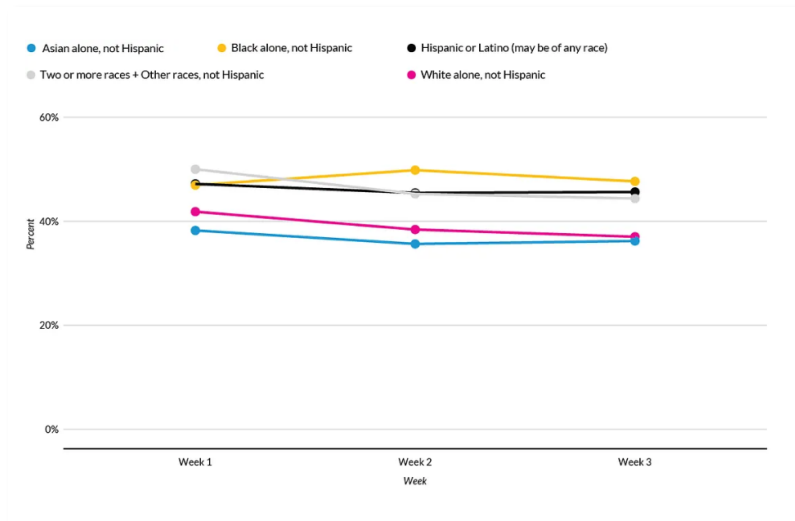
THING  
THREE:  
GAPS

# SOME IDEAS TO CONSIDER

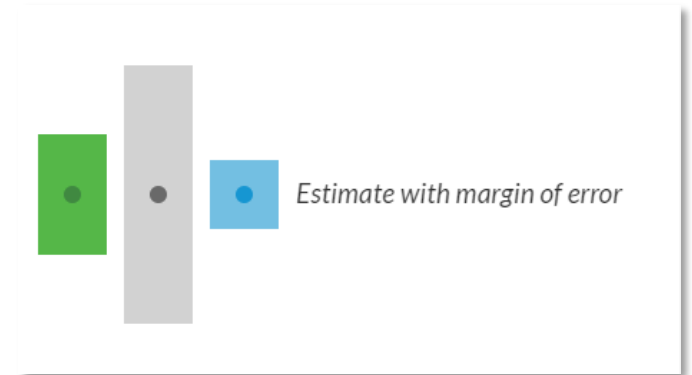
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# Urban Institute: Tracking COVID-19's Effects by Race and Ethnicity data tool

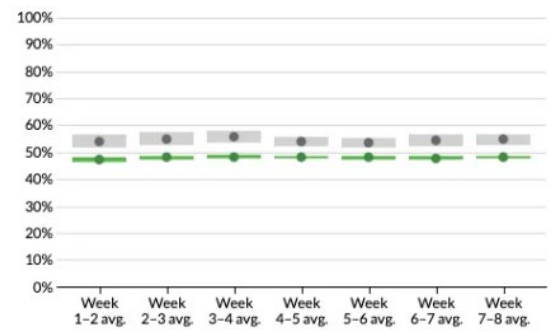
## FROM THIS



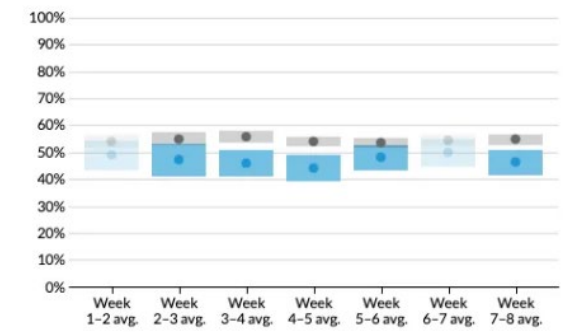
## TO THIS



### All



### Asian



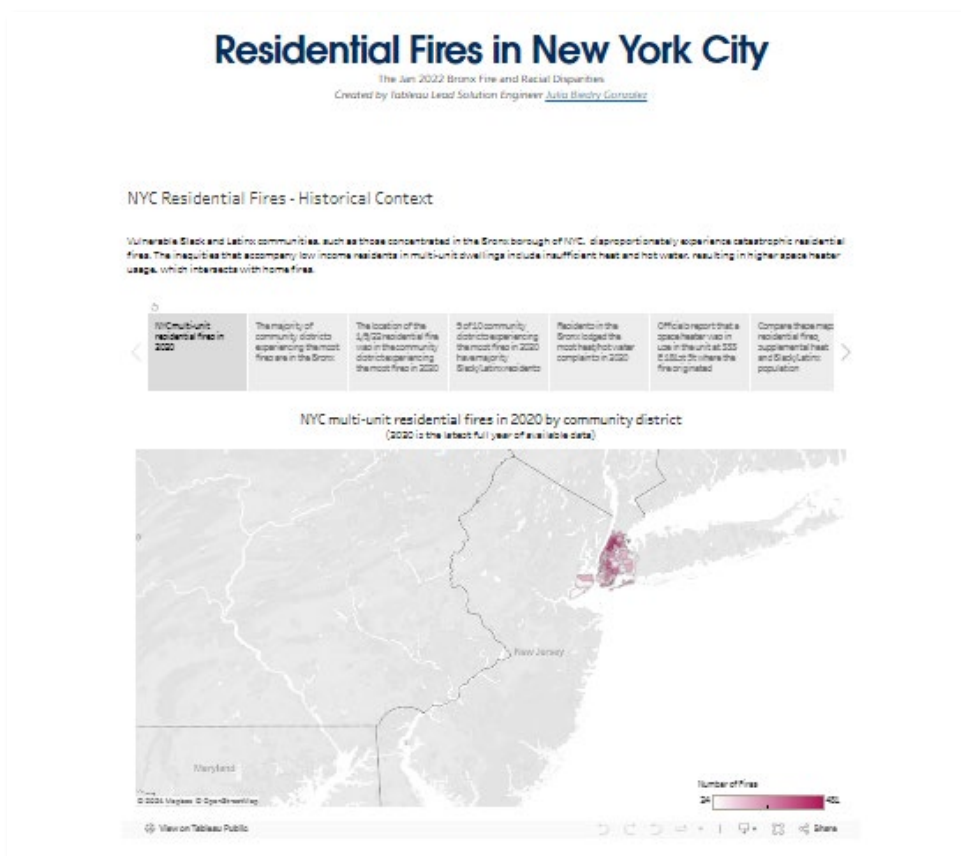
<https://urban-institute.medium.com/applying-racial-equity-awareness-in-data-visualization-bd359bf7a7ff>

Share of adults in households where at least one person has lost employment income since March 13

- National average
- State or metro area average
- Race/ethnicity average
- Statistically significant difference
- No statistically significant difference

# Tableau Foundation: Data stories **with context**

## THE DATA



## DON'T **HAVE TO** SPEAK FOR THEMSELVES

### The data

Data used for this visualization was collected from the US Census - NYC Demographics 2020 and the NYC Open Data Portal Fire Incident Dispatch data, Heat/Hot Water Complaints, and the Use of Supplemental Heat.

### The visualization

This story points-style dashboard shows why the January 2022 Bronx fire was not an isolated incident, and how historically Black/Latinx residents in the Bronx have been disproportionately affected by residential fires. The dashboard also compares Black/Latinx residents and fires in the Bronx to heat and hot water complaints, which can lead to the use of a supplemental heat source such as a space heater. This visualization uses data from 2020, the most recent full year of available data for fires, and 2017, the most recent available data year for supplemental heat.

### The historical context

Fires have disproportionately affected Black and Latinx communities, especially in the Bronx borough of NYC. Fires do not start on their own, and the data shows how landlord negligence in public or low-income housing in primarily Black and Brown communities can lead to tragedies such as this one. Many articles published in the wake of this tragedy outline the experience of residents in buildings like the one at 333 E 181st, where heat and hot water complaints go ignored.

### The current implications

Advocates can use the tool to visually show the historical context contributing to the tragic January 2022 Bronx fire. This tragedy gained media attention, but Bronx residents have historically suffered from residential fires at a higher rate than other parts of NYC. Black and Latinx people live in the Bronx in greater concentrations than in other borough, and heat/hot water complaints and space heater usage are also concentrated in the Bronx. All of this data paints a picture of inequity: poorly maintained buildings, landlord negligence, and higher levels of fire hazard for people who live in the Bronx.

## Data Deep-Dive

### Key takeaways to guide analysis

#### Unfortunately, this is not an isolated incident.

6 of the top 10 NYC districts that experienced the most fires in 2020 are located in the Bronx. 9 of the 10 NYC community districts with the most fires in 2020 have majority Black/Latinx residents. The location of the Bronx fire at 333 E 181st St, in the community district 205, had the most fires in 2020, totaling 481.

#### The Bronx has the highest heat/hot water complaints and concentrated space heater usage.

In 2020, residents in the Bronx lodged 58,857 heat/hot water complaints with the city (1 complaint per 25 residents).

#### Advocates can use the dashboard to help Black and Latinx residents in low income or public housing.

Black and Latinx people live in the Bronx in greater concentrations than in other boroughs and these residents have historically suffered from residential fires at a higher rate than other parts of NYC.

# Gaps versus scores

## CENTER FOR URBAN EDUCATION EQUITY INDEX

The EI is useful for measuring **representational equity**, which is the proportional participation of a disaggregated subgroup in all perspectives of institutional performance at campus, division, department, and course levels. The EI is expressed in the following formula:

$$\begin{array}{l} \text{Equity Index of} \\ \text{Disaggregated} \\ \text{Subgroup for the} \\ \text{Outcome of} \\ \text{Interest} \end{array} = \frac{\text{Disaggregated Subgroup with the Outcome /} \\ \text{All Students with the Outcome}}{\text{Disaggregated Subgroup in the Reference Group /} \\ \text{All Students in the Reference Group}}$$

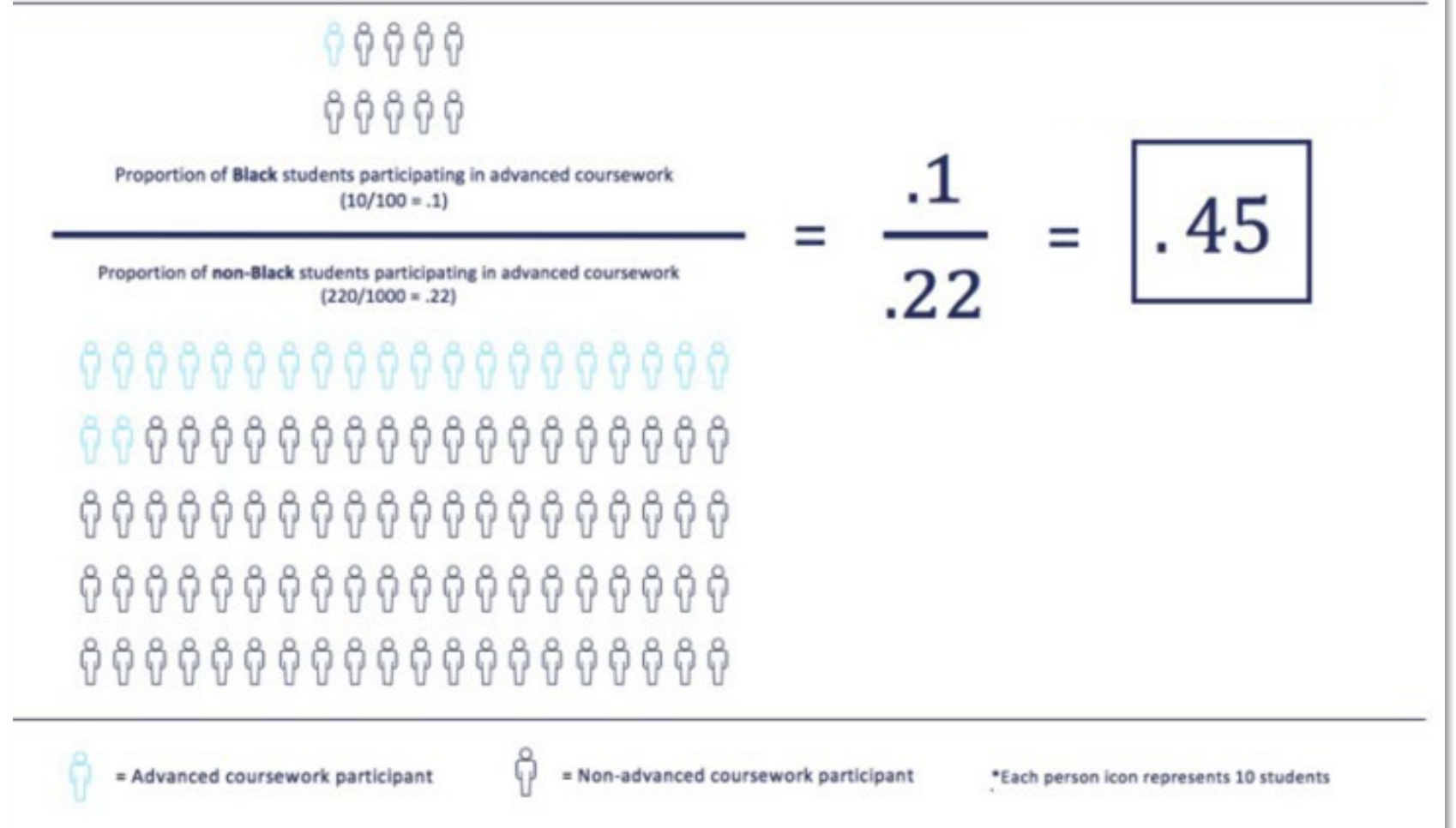
[https://static1.squarespace.com/static/5eb5c03682a92c5f96da4fc8/t/5f3a1a566ced5e0ad47879fb/1597643354901/Data+Tools\\_Summer2020.pdf](https://static1.squarespace.com/static/5eb5c03682a92c5f96da4fc8/t/5f3a1a566ced5e0ad47879fb/1597643354901/Data+Tools_Summer2020.pdf)

# Gaps versus scores

KENTUCKY  
DEPARTMENT OF  
EDUCATION

EQUITY  
DASHBOARD  
GUIDANCE

## Example 1: Under-Representation in Advanced Coursework









# Discussion guide:



# <https://tinyurl.com/equity-dash>

UNIVERSITY OF CALIFORNIA Institutional Research and Academic Planning

Let's think ABOUT

-  The people behind the data.  
Building community. Does 'best practice' mean 'optional' practice? What if you were in charge...  
[Urban Institute Checklist](#)
-  New to dashboards?  
You can spend some time with the [UC Information Center](#). Do you have any initial reactions? Any recommendations for our practice?
-  Tableau Contextualizing Data Practice.  
Have you seen this practice before? Who would write the copy? Does context change?  
[Tableau featured equity content](#)
-  Urban Institute project redesign.  
(plays well with 1, 5)  
Does the redesign introduce new issues (problems)?  
[Redesign narrative](#)
-  Kentucky Dept of Education Equity Dashboards.  
(plays well with 4, 6)  
What stands out? (For better or for worse?)  
[Equity toolkit guidelines document](#)
-  Center for Urban Education Equity Index.  
(plays well with 5)  
"Equity Index" versus "Risk Ratio". Words, methods. What matters?  
[CUE data tools](#)



**URBAN  
INSTITUTE  
COVID PROJECT**



**KY DEPT of ED  
DASHBOARDS**



**TABLEAU DATA  
EQUITY STORIES**



**CUE EQUITY  
INDEX**

<https://tinyurl.com/equity-dash>





# DO NO HARM GUIDE

## Applying Equity Awareness in Data Visualization

IGNATIUS SCHWABISH AND ALICE FENG  
MAY 9, 2023



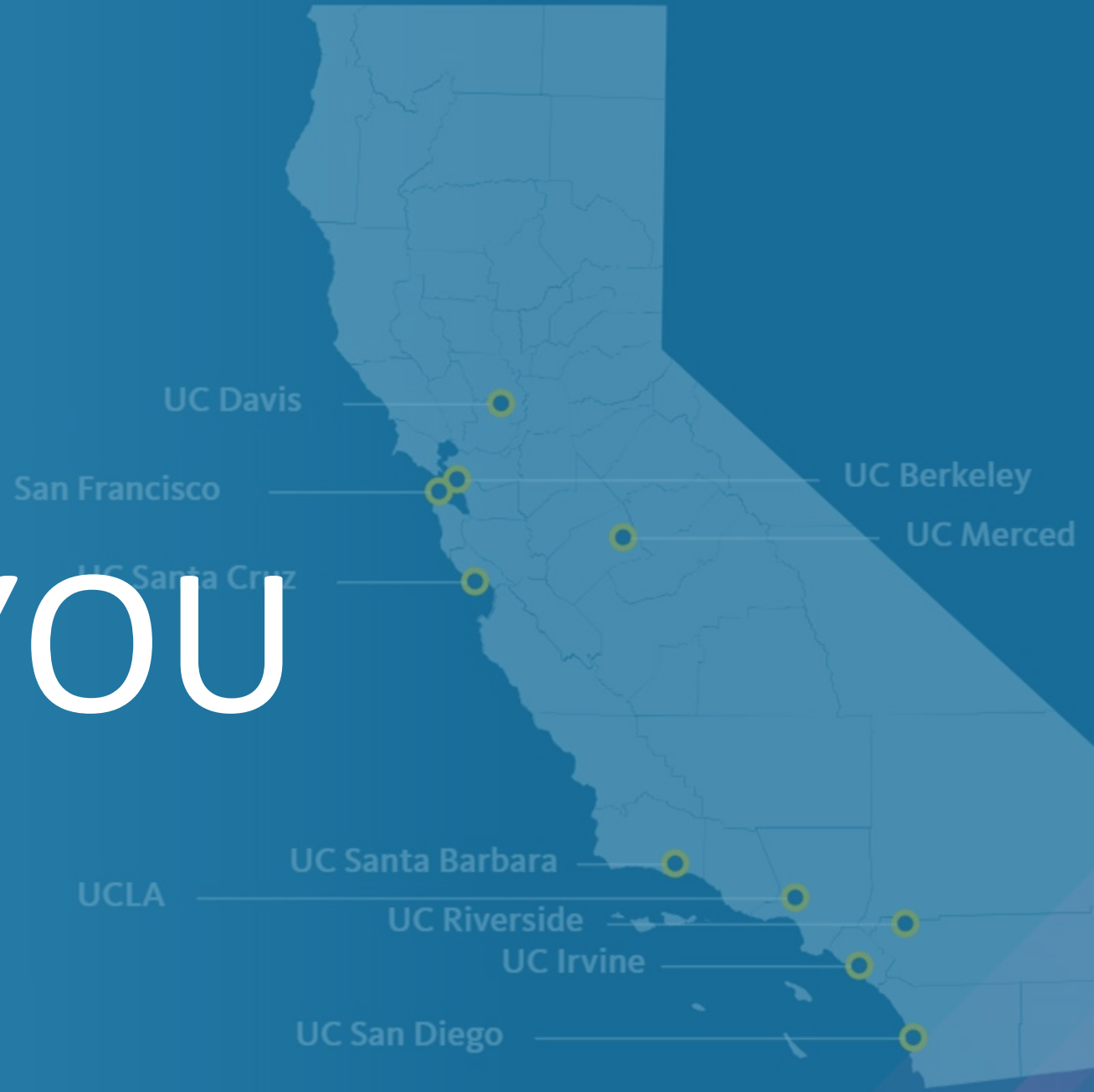
## THE RACIAL EQUITY IN DATA VISUALIZATION CHECKLIST

- Does the communicator understand the data they worked with, including how it was sourced, who was or was not represented in it, why it was collected, and who benefits or is harmed by having these data collected?
  - Has the communicator carefully considered words, phrases, and labels that are used to describe people, groups, and communities?
  - Has the communicator considered colors that are inclusive of different groups and that are accessible for people with different abilities?
  - Has the communicator considered the order of numbers or estimates in tables, charts, and diagrams? Some options include sorting alphabetically or by magnitude of estimate/number, population size, and sample size (weighted or unweighted).
  - Has the communicator considered alternative words or phrases for groups that may be classified as "other" in the original data? Some alternatives include another race; additional groups; all other self-descriptions; people identifying as other or multiple races; identity not listed; and identity not listed in the survey.
  - Have all icons and images been reviewed with a racial equity lens?
  - Would alternative graph types do a better job presenting the data? Do all groups need to be positioned within the same graph?
  - Has the research team communicated with the people or communities that they are focusing on or wishing to communicate with? If not, what people, groups, or organizations can the team contact?
  - Is the research team—and the organization more generally—diverse in its composition and work practices to be able to facilitate better understanding of different groups?
  - Does the final communication product meet the needs of the audience or user?
- Teams should consider these issues throughout the research and communication process. Use these checkboxes as a reminder:
- Proposal development stage
  - Strategic planning stage
  - Data collection phase
  - Analysis phase
  - Data visualization phase
  - Writing phase
  - Editing phase
  - Outreach and final publication stage

The full report, *Do No Harm Guide, Applying Equity Awareness in Data Visualization*, is available at <http://urban.is/donoharm>.

# THANK YOU

QUESTIONS?



# WE'D LOVE TO HEAR FROM YOU

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UNIVERSITY  
OF  
CALIFORNIA

Office  
of the  
President



Laura Kertz

SENIOR EQUITY AND  
DIVERSITY ANALYST

[Laura.Kertz@ucop.edu](mailto:Laura.Kertz@ucop.edu)



Courtney Wilson

ACADEMIC PLANNING  
AND RESEARCH ANALYST

[Courtney.Wilson@ucop.edu](mailto:Courtney.Wilson@ucop.edu)