



TEXAS WOMAN'S  
UNIVERSITY

# Data Communications. Library Services. Community Impact

2022 CONCERT 年會 12/6/2022

Dr. Ling Hwey Jeng (鄭鈴慧)

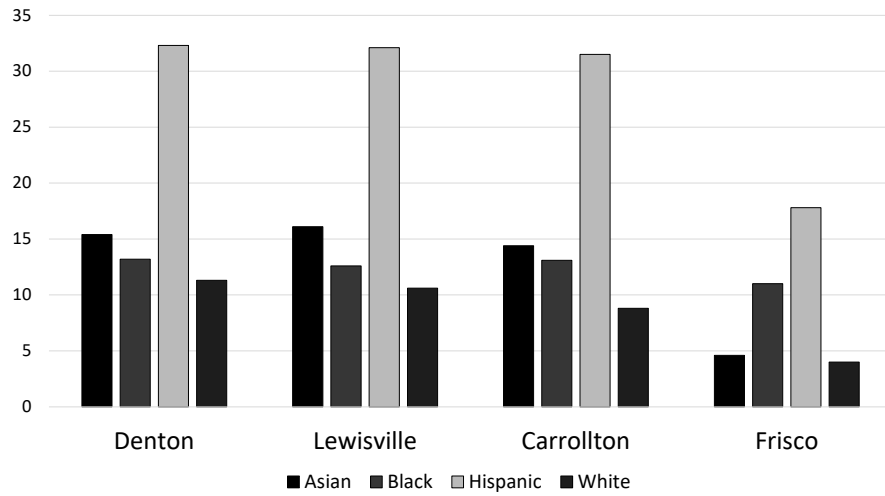
School of Library and Information Studies

## Library Funding on the Ballots

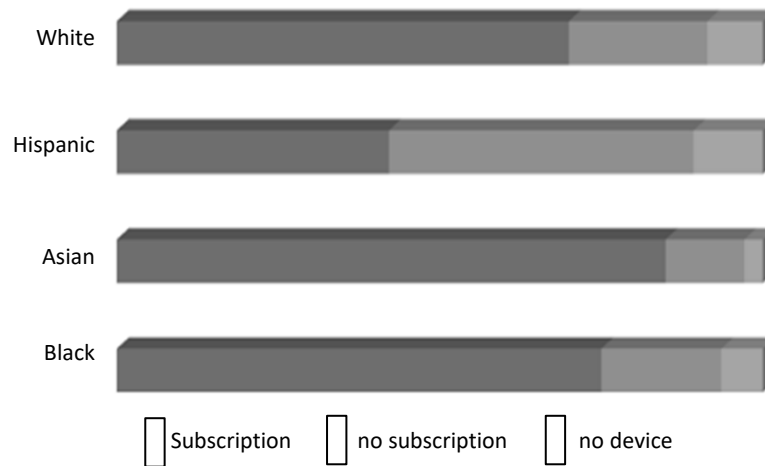
- ❖ 95% D, 80% I, 53% R against book ban
- ❖ Librarians more favorable than politicians
- ❖ 2020: 115 library funding propositions – 84% win, 1.8 B
- ❖ 2022: 55 library funding propositions
  - Base funding, expansion, construction, special projects
- ❖ Factors for defeats
  - LGBT book ban: Jamestown, MI & Jonesboro, AK defunded
  - Specific activities: drag queen storytime, Glen Carbon, IL
  - Taxes for education initiatives: Maine

(Source: Everylibrary.com)

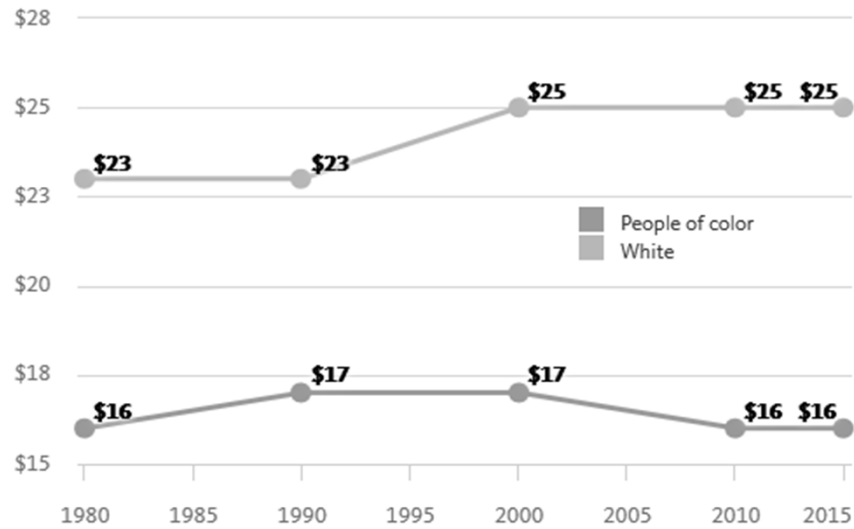
## Denton County Uninsured Population (%)



## Denton County Broadband Access by Race and Ethnicity, 2018



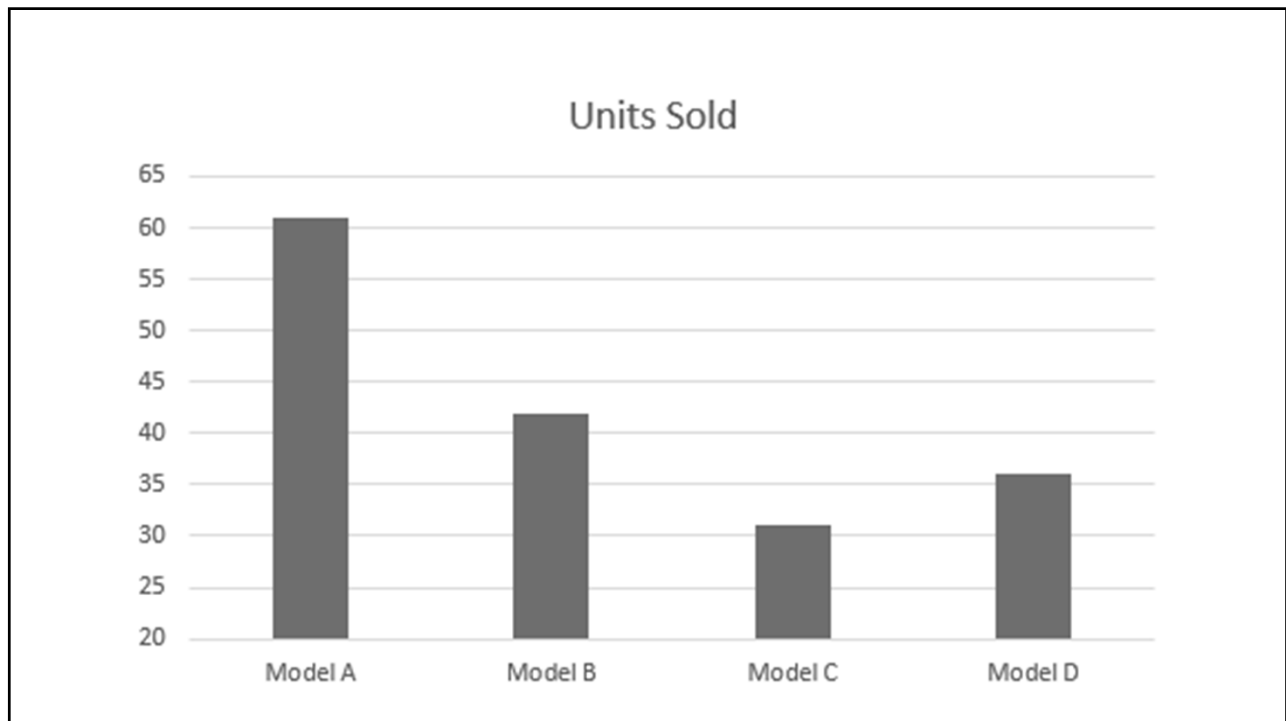
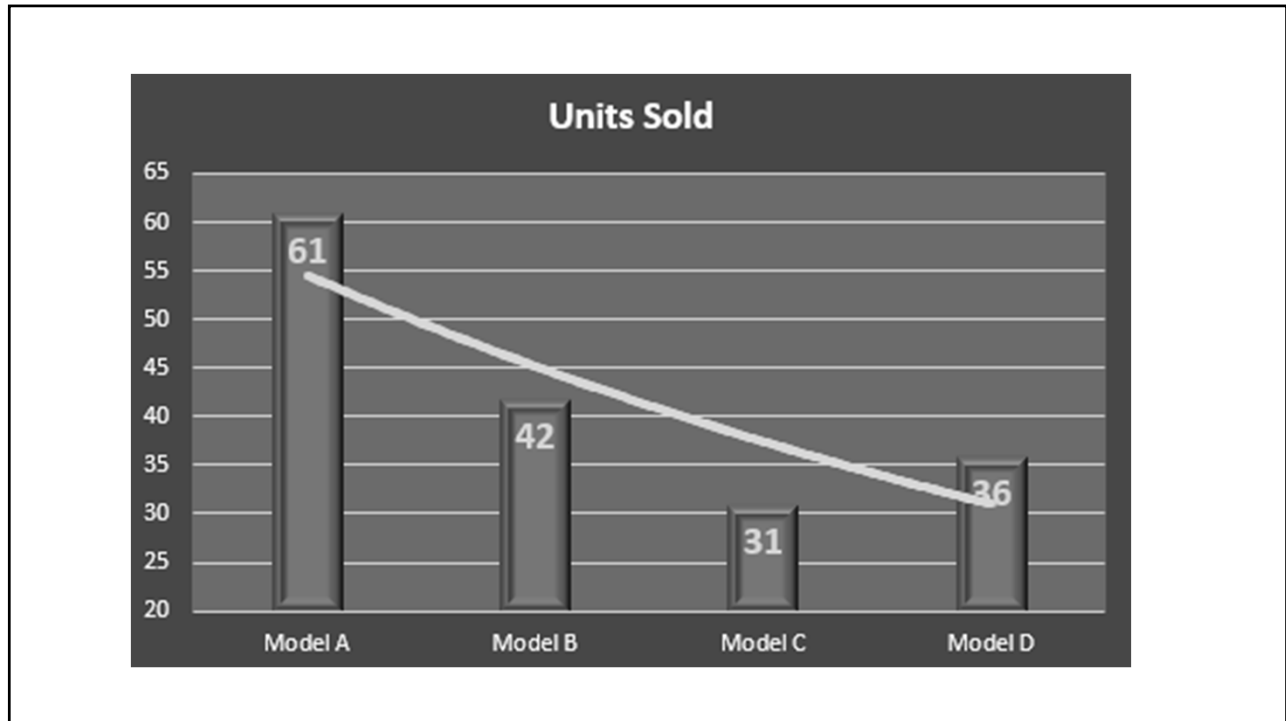
## Racial Economic Gaps in DFW

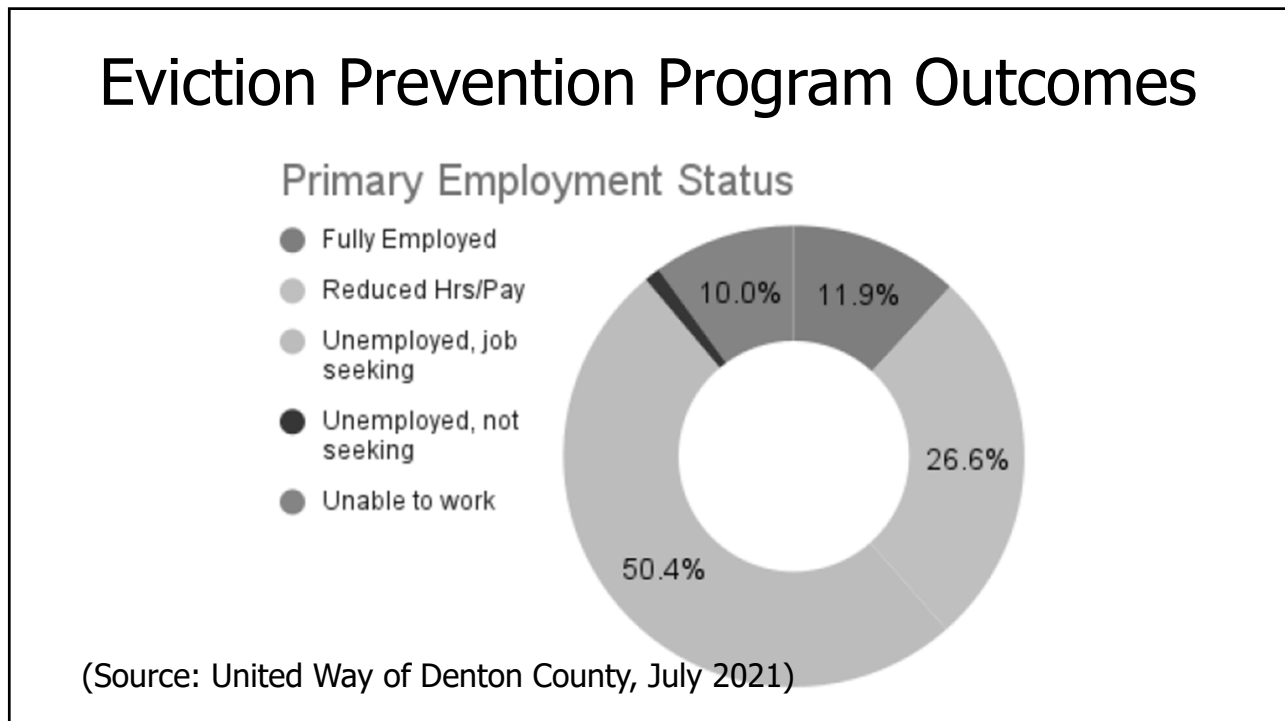
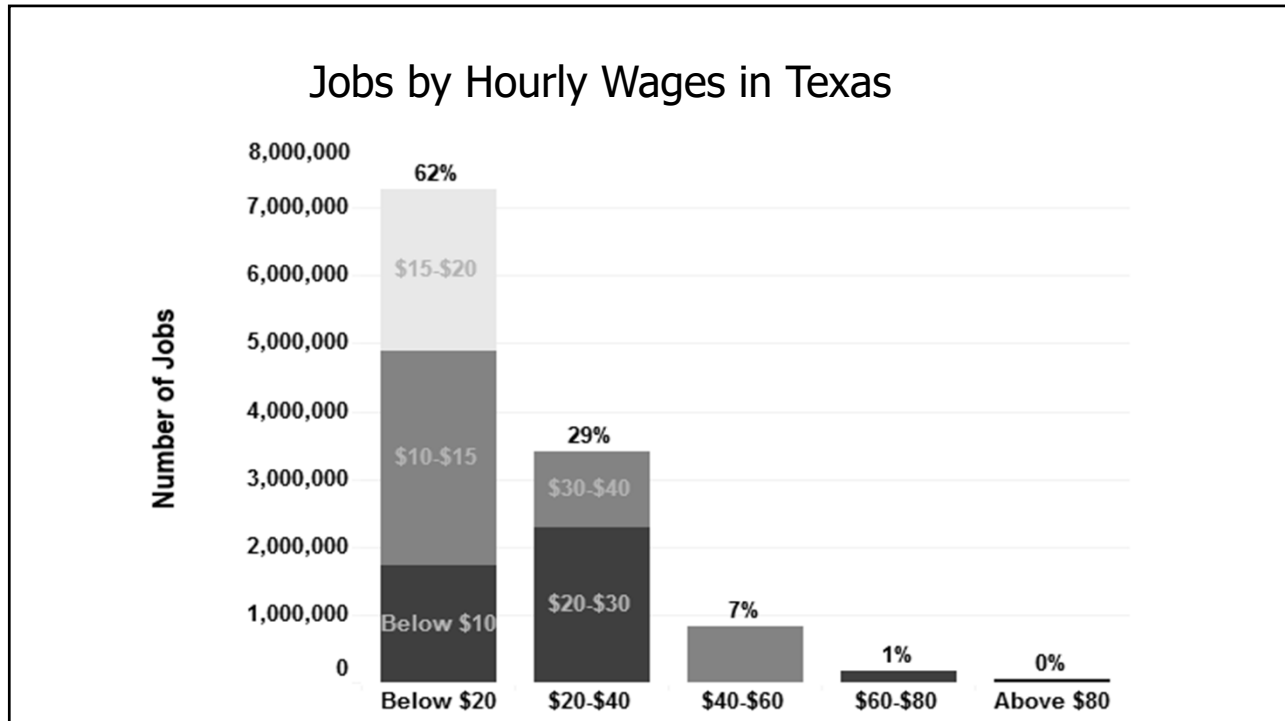


## Data Visualization

Clarity is the key

- ❖ Background color – white space
- ❖ Foreground color – simple colors
- ❖ Features to avoid: gradients, pictures, gridlines, effects (shadows, glow, etc.)



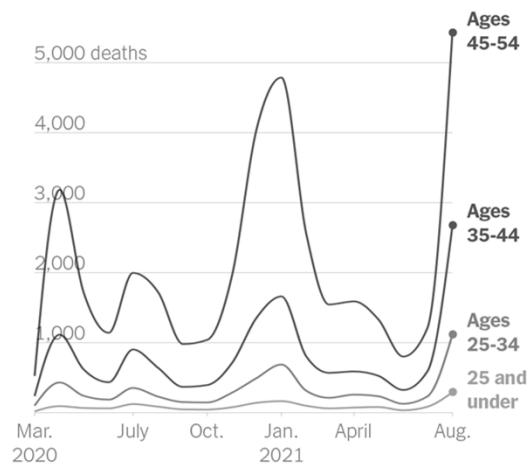


## Effective Visualization

- ❖ Keep it on one screen or one page
- ❖ Make it attractive – visually pleasing and balanced
- ❖ Tell the story in 5 seconds
- ❖ Make story consistent to data
- ❖ Choose proper charts (bar, pie, line, etc.)
- ❖ Use sharp contrast to highlight
- ❖ Easy-to-read fonts

(Knaflic 2015)

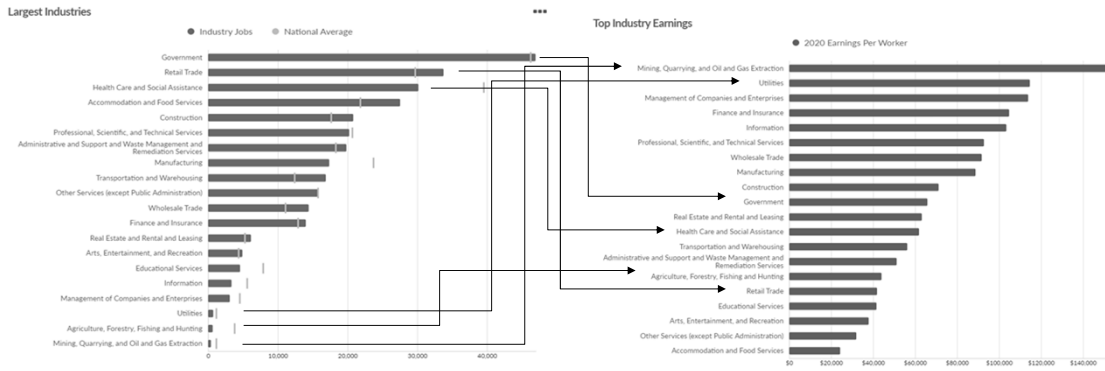
A record number  
of younger people  
died during the  
Delta surge



Oct. 1, 2021 | Source: C.D.C.



# Labor Market Industry Characteristics



(Denton County Economic Development Office 2021)

## Data Integrity

How much can I trust the data presented to me?

## When Data Lie to You

- ❖ Source? Sampling bias?
  - Small sample biases: how many times to flip coin
  - Changing definition – What is a farm
- ❖ What percentage – Homeless decreased from 13% to 10% v. Homeless decreased 23%
- ❖ Definition of average – Mean, Median, Modal

## The Well-Chosen Average



Average household  
income \$147,438

Average household  
income \$32,570





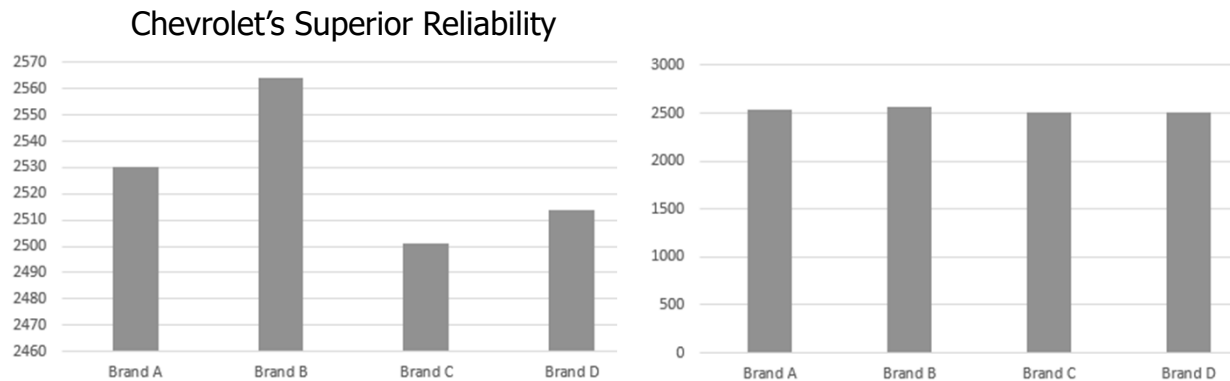
## When Data Lie to You

- ❖ Proving without proving – Cold medicine cures cold in 7 days
- ❖ False conclusion
  - Countries with higher milk consumption have higher cancer rates
  - Chicago has high murder rate under Democratic mayors, so Democrats are bad for community safety.

The Dove that broke the Iron Fence



## Customers Ranked Chevrolet Most Reliable or Did They?



(Source: JD Power 2018)

## How to Be Critical about Data

- ❖ Who says so?
- ❖ What sources of data they used?
- ❖ What's missing?
- ❖ Did someone change the subject?
- ❖ Does it make sense?

*What do we learn from bad data?*

## Data Communications

- ❖ Data collection
  - Sources and data dictionary
  - How data are entered – manual, import, real-time
- ❖ Data triangulation – GIS & cross-section attributes
- ❖ Data visualization
  - Presentation with context, dashboard
- ❖ Data storytelling for impact
  - Quantitative v. qualitative

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## IMLS Public Library Survey

- ❖ Budget
- ❖ Expenses (staff, collections, etc.)
- ❖ Staff size
- ❖ # programs offered, types, attendance
- ❖ Collection size, by types
- ❖ Circulations
- ❖ Library visits
- ❖ Reference transactions
- ❖ ILL requests
- ❖ # computers and usage
- ❖ Website visits

## IMLS Public Needs Survey

- ❖ Have you visited? in-person and via website, frequency, length of visit
- ❖ Activities during visit (check out books, use computers, etc.)
- ❖ Who went with you
- ❖ Did you use the computer / internet? For what?
- ❖ Website visits? What activities?
- ❖ Satisfaction of the visits

## Data Storytelling with Impact



(Source: TSLAC 2017)

## IMPLAN: Economic Impact Analysis for Planning

- ❖ Reference services
- ❖ Library programs
- ❖ Volunteers
- ❖ In-Library Use
- ❖ Electronic databases
- ❖ Circulation
- ❖ Computers
- ❖ Internet access

(Source: TSLAC 2017)

**Panos Mourdoukoutas** @PMourdoukoutas · Jul 21  
 Amazon Should Replace Local Libraries to Save Taxpayers Money via @forbes  
 forbes.com/sites/panosmou...

7.8K 270 805

**Talia** @2020fight · Jul 23  
 Replying to @PMourdoukoutas @Forbes  
 My students don't have internet at home. They don't have money to buy books.

**Deep State Jane** @LJDSpeaks · Jul 23  
 People cannot seem to grasp the concept that we are not all sharing the same experiences. There are 41000 students in our district. 30% do not have consistent access to the internet .

**Sara L. Dörner** @SaraDörner · Jul 23  
 Replying to @PMourdoukoutas @Forbes  
 My children, ages 2 and 5 have attend art and education sessions at the library every weekend. Librarians teach them a love of learning at an early age. My husband and I are taking classes to learn another language & at no point is this tied to sales figures.

**Shona Thoma 2018** @shinyshona · Jul 23  
 Replying to @PMourdoukoutas @Forbes  
 Why don't we replace professors with google?

**Lena M.** @LenaPresents · Jul 23  
 Instead of turning to the streets, kids turn to our library.

**Yue-Ting Siu** @TVL\_ting · Jul 23  
 Replying to @PMourdoukoutas @Forbes  
 Shameful article that embarrasses your position in academia @Forbes @LIUPost. As a fellow prof &

**Terry Donald** @MaineXavier · Jul 23  
 Replying to @PMourdoukoutas @Forbes  
 Wow. The most dickish tweet outside of the trump administrat going to a library and see what actually goes on

**Lesli the Librarian** @z674 · Jul 23  
 Replying to @PMourdoukoutas @Forbes  
 Guess what? Today, in Houston, #LIBRARIES are being used as cooling centers. Gee, all those tax dollars saving people from heat stroke. #SaveLibrariesSaveTheWorld

**bess anderson** @beanders · Jul 23  
 Replying to @PMourdoukoutas @Forbes  
 This indicates a deep lack of understanding of what libraries do and provide for their communities, as well as a deep disregard for public community space.

**Bramby** @Radd\_librarian · Jul 23  
 Replying to @PMourdoukoutas @Forbes  
 NO, THEY SHOULDN'T.

**Panos Mourdoukoutas** @PMourdoukoutas · Jul 22  
 Let me clarify something. Local libraries aren't free. Home owners must pay a local library tax. My bill is \$495/year.

7.3K 361 1.8K

Replying to @PMourdoukoutas  
 Nor are police departments, or fire departments, or the roads you travel on, ... Like the local police departments, local libraries are public investments. And smart ones too. @PMourdoukoutas

Replying to @PMourdoukoutas  
 If @PMourdoukoutas lives in Texas, every one of the 495 dollars he contributes to the smart public investment in his local libraries would generate \$4.64 to his local economy. Name another public industry that achieves higher ROI than the libraries.

Replying to @PMourdoukoutas  
 Professor @PMourdoukoutas, please bookmark this for your own future reference  
 tsl.texas.gov/roi

# Data Are about People

*Who defines our identity?*

## Effective Storytelling

- ❖ Active participants
  - Listen, reinforce, synthesize, question
- ❖ Do we have a different example?
- ❖ Be the 2<sup>nd</sup> storyteller
- ❖ We/Our, not You/Your
- ❖ A collective narrative as power
- ❖ Construct a public rhetoric to affect change



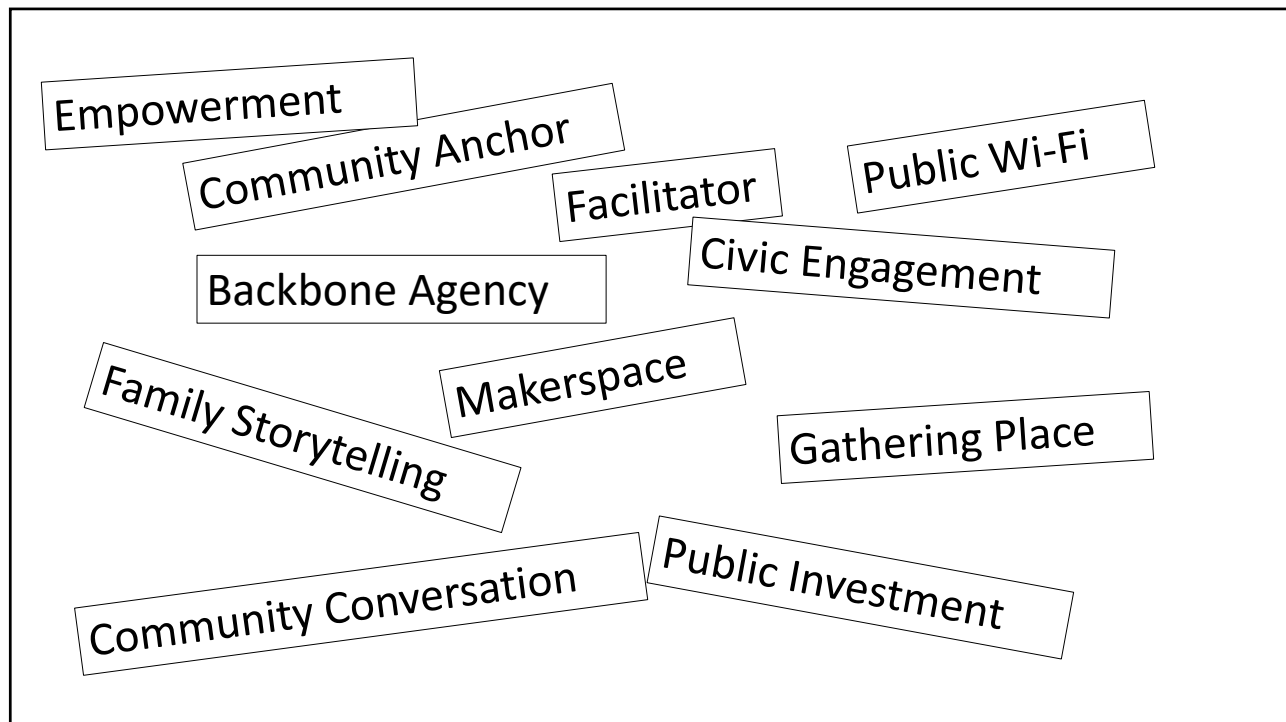
MEDIUM.COM

### There's Something Wrong with the Library's Image: A Pictorial Guide

(Source: Oleg Kagan, *Medium.com*, 8/2/2018)







## Data Storytelling

- ❖ Quantitative – Charts, dashboards
- ❖ Qualitative – Stories we gather from the community
- ❖ It's not your story; it's not my story. It's our story

Thank you  
Ask Me Anything

