



# Are We Neglecting the 20%?

## Accessibility of Emergency Management Websites

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Funded by



- The mission of the Wireless RERC is to research, evaluate and develop innovative wireless technologies and products that meet the needs, enhance independence, and improve the quality of life and community participation of people with disabilities.

# People With Disabilities in the U.S.

- Nearly 1 in 5 or (20%) of people in the U.S. have a disability as of 2010.
- Approximately 57 Million People  
(U.S. Census, 2012)



# People with disabilities and Internet Use

- People with disabilities are frequent users of the Internet, but many Federal websites are inaccessible.
  - Inaccessible when people cannot use the website based on:
    - Perceptual

(Jaeger, 2006; Olalere & Lazar, 2011)

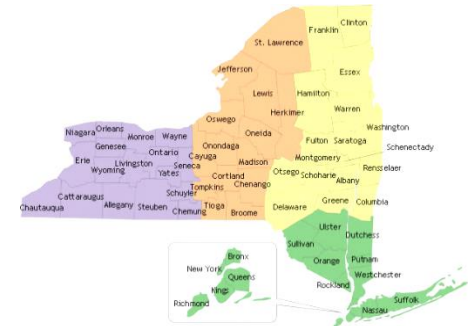
# Government Websites in the U.S.

- Often used as a source of information
  - 61% of adults used government websites.
  - 46% look up what services a government agency provides.
  - 41% download government forms.
  - 31% also use blogs and social media to connect with government.

(Pew Research Center, 2010)

# People with Disabilities & Disasters

- Communications Concerns
- Federal Court Rulings in two states
  - Issues in communications during emergencies



# Craig Fugate (FEMA Administrator)

- “rather than trying to convince the public to adjust to the way we at FEMA communicate, we **must adapt** to the way the public communicates.”



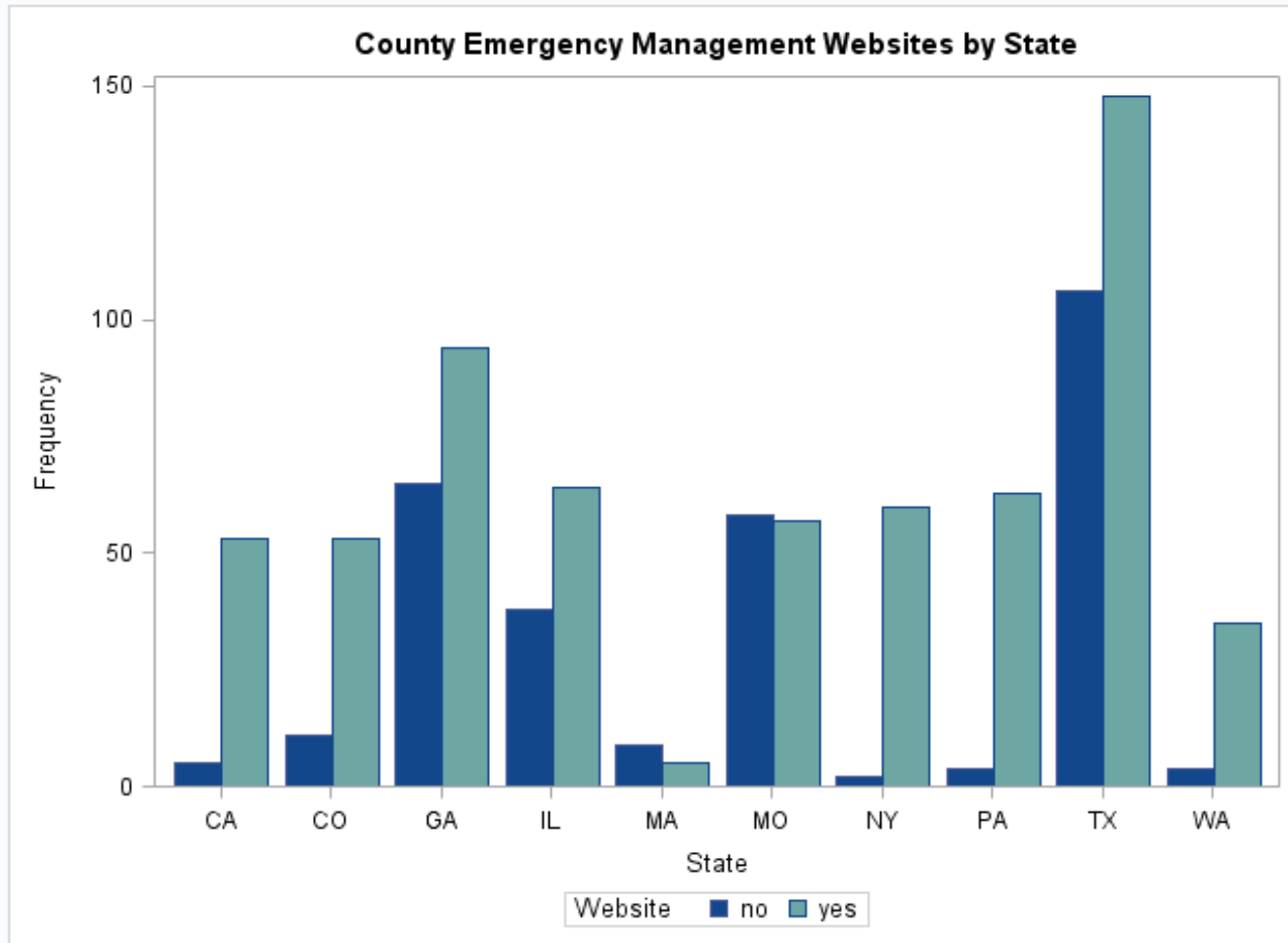
# Emergency Management Websites

- Important information on EM webs
  - How to prepare
  - Who to contact
  - Where to shelter
  - When to go/stay
  - What hazards are near





# Emergency Management Websites overall



# Content on EM websites

- Important information (2013)
  - Nearly 41% provide disaster kit information.
  - Over 42% include subscription for alerts.
  - 31% have a social media presence.



# Method: EM Website Accessibility

- Exploratory
- World Wide Web Consortium ,Version 2
  - Perceptions
  - Operation
  - Understanding
  - Robustness

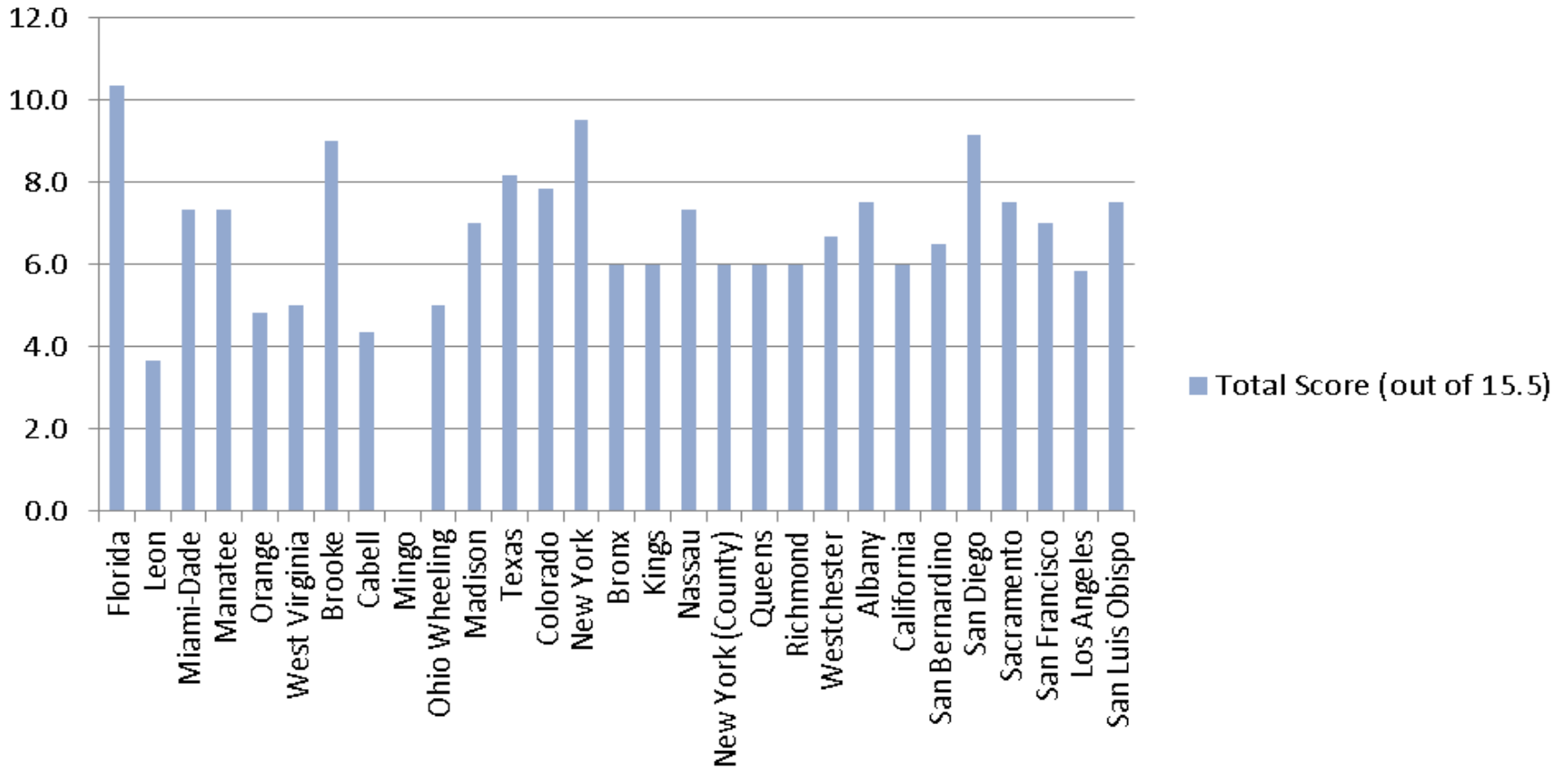


# Analysis of W3C guidelines

- We ranked several websites identified by FEMA based on compliance with W3C perception based guidelines
  - Use of text alternative formats
  - Use of Audio/Video
  - Adaptable content (highly subjective)
  - Ability to adjust (color, contrast, text)

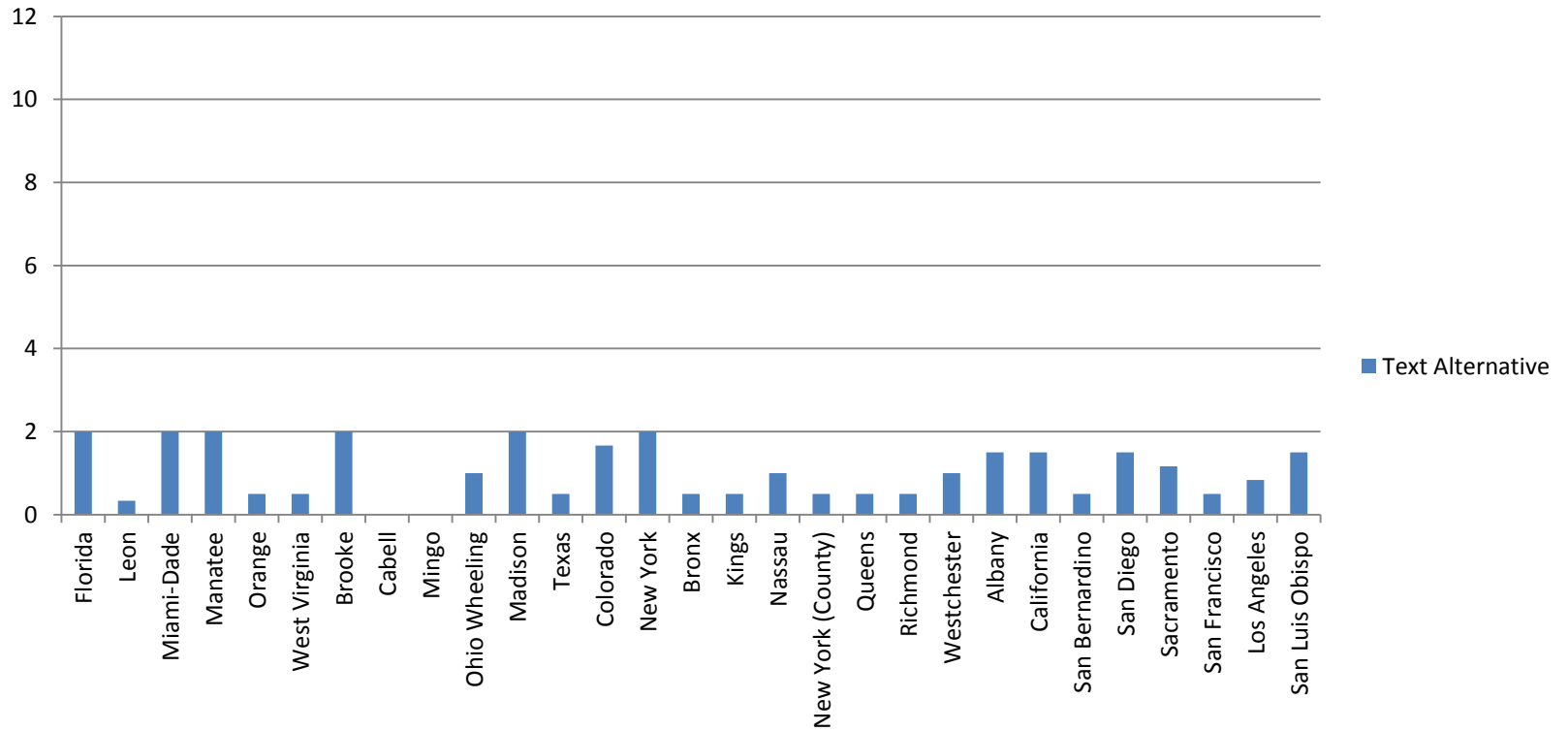
# Total Ranked Score: W3C

## Assessment of EM Websites: W3C Perception



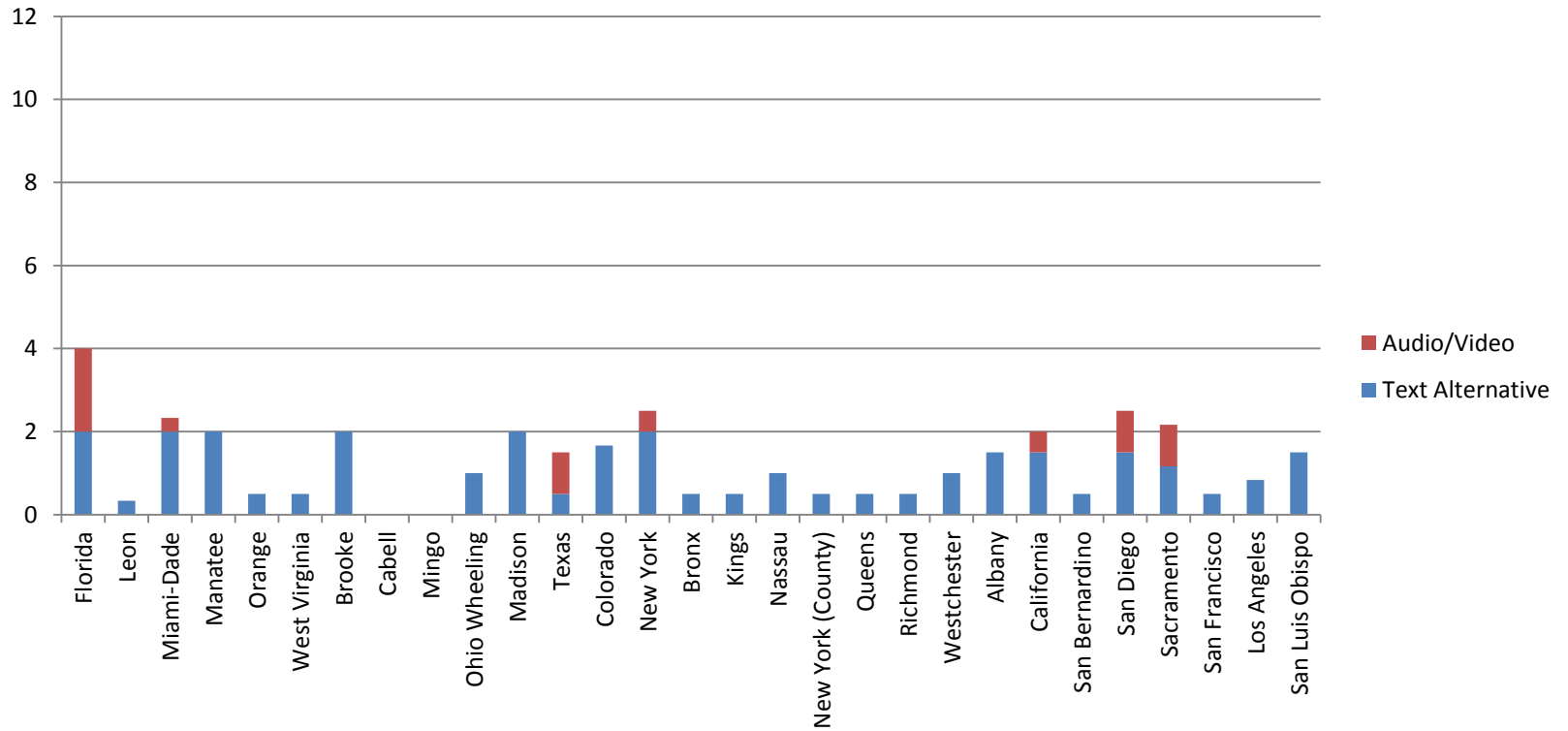
# Rankings: Breakdown

## Text Alternative



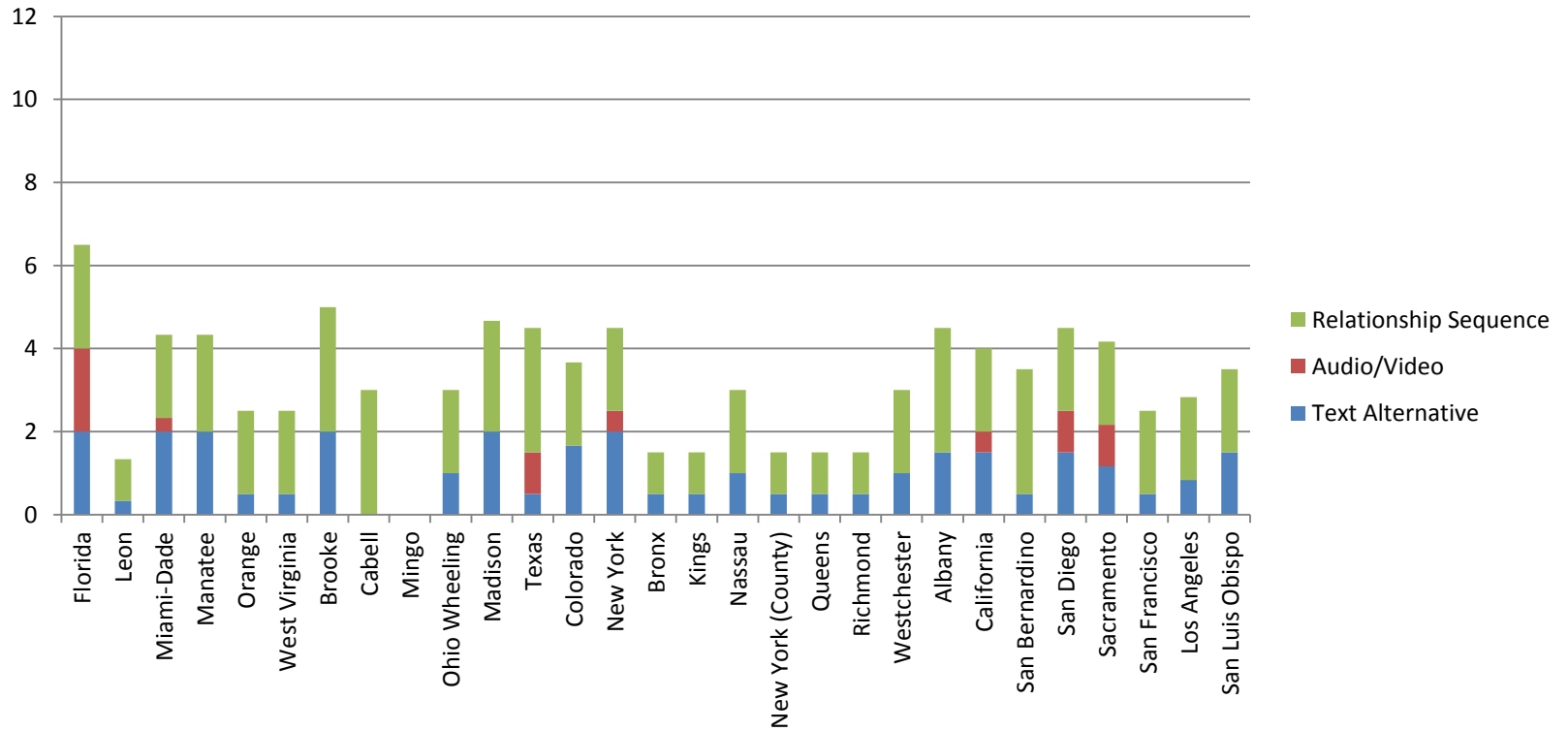
# Rankings: Breakdown

## Text Alternative & Audio/Visual



# Rankings: Breakdown

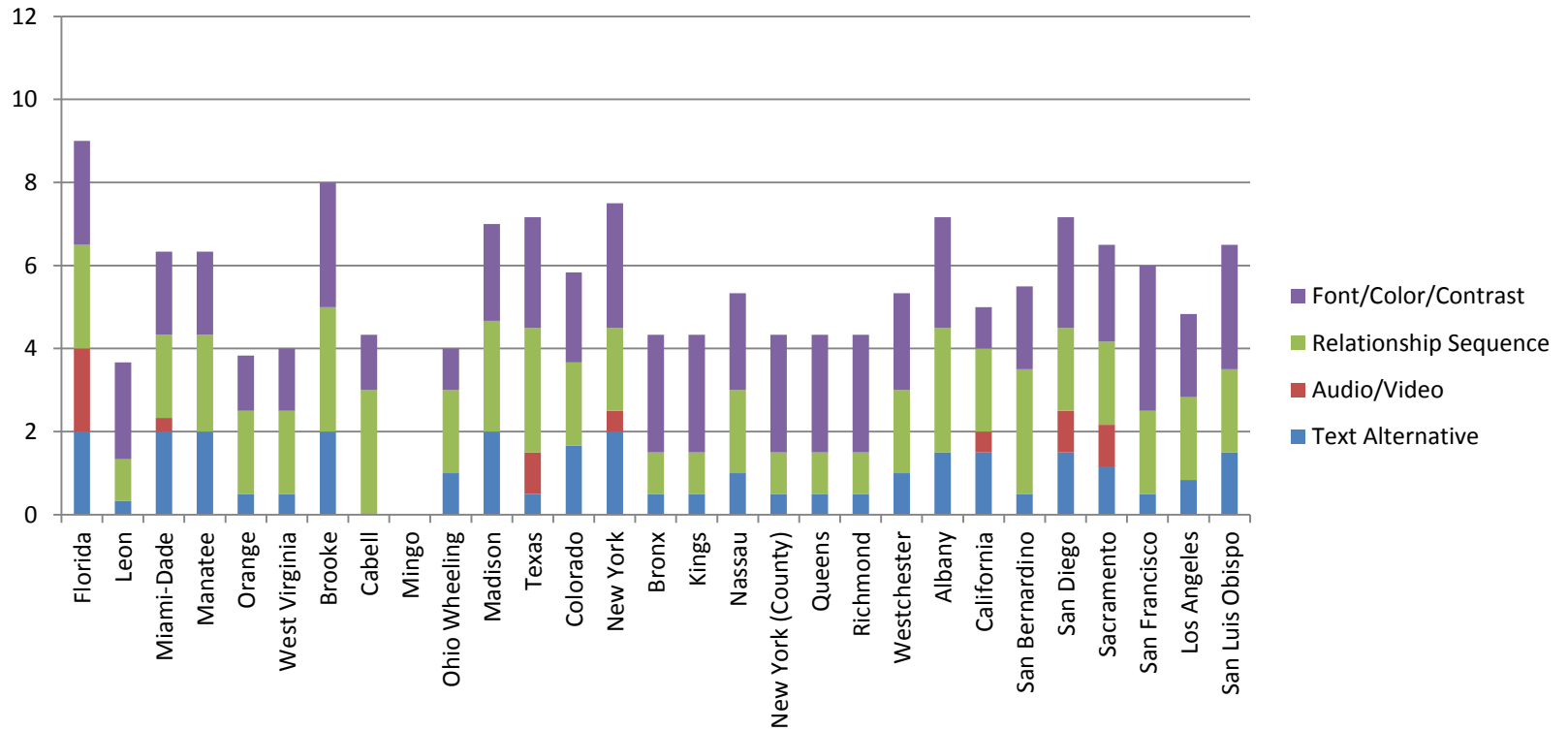
## Text Alternative, Audio Visual, & Relationship Sequence





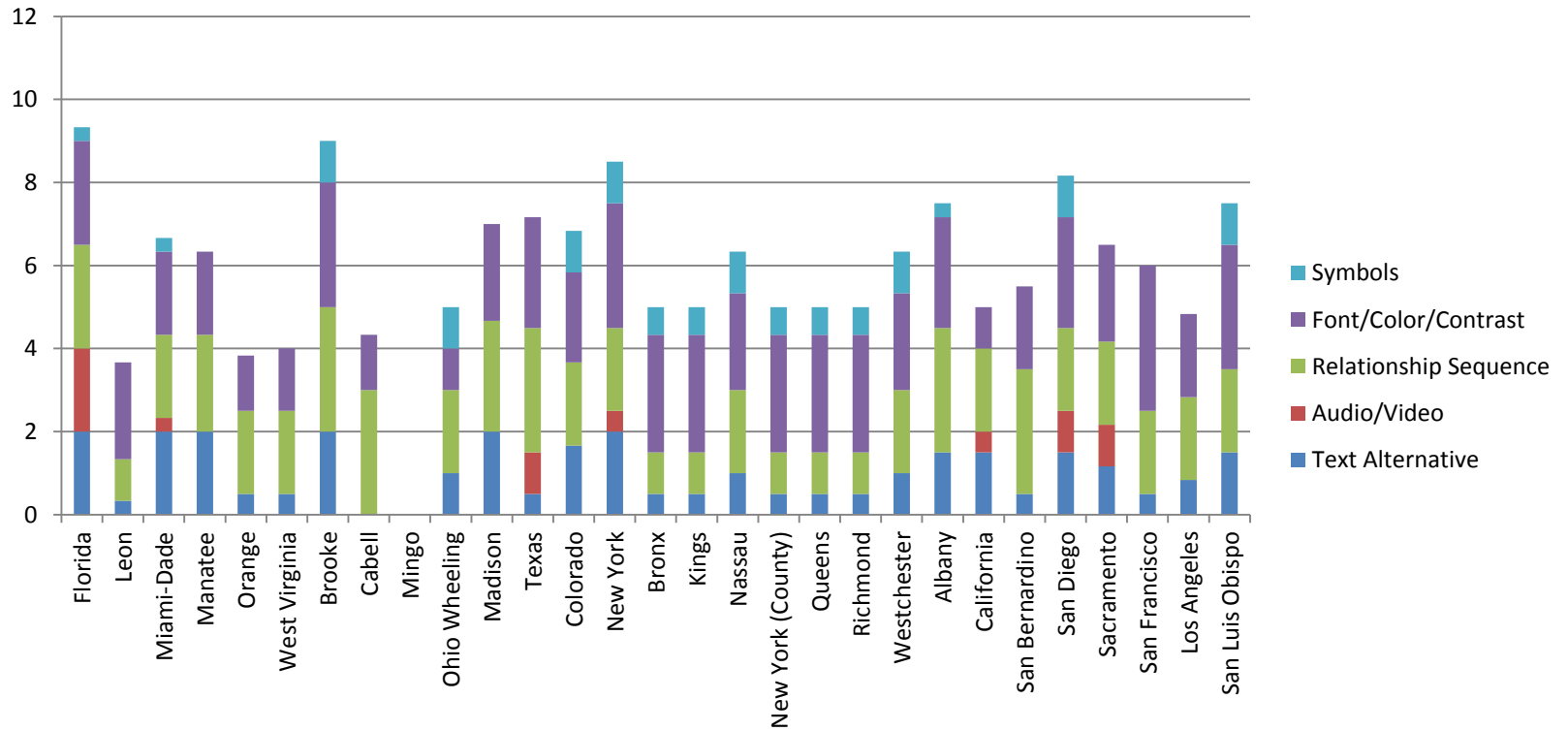
# Rankings: Breakdown

## All 4 Categories



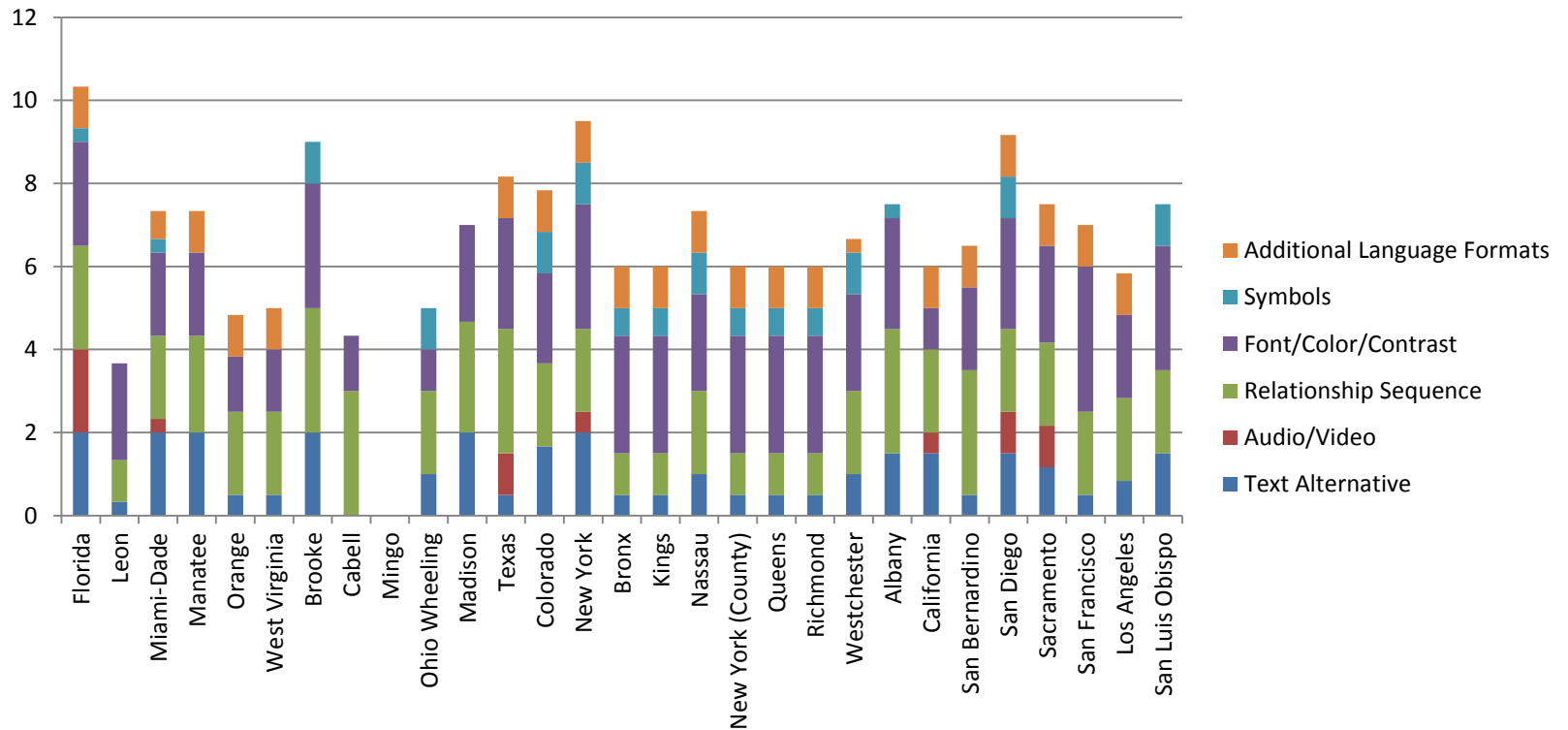
# Rankings: Breakdown

## All 4 Categories & Symbols



# Rankings: Breakdown

## All 4 Categories Plus Symbols & Additional language formats



# Suggestions

- Encourage accessible design
  - Use basic resources free from W3C
  - Seek to include individuals with disabilities at the planning stage.
- Alternative text for graphics
- Include the ability to change the contrast and color within the webpage

# Suggestions

- Use of video information can benefit those with sensory, cognitive and developmental disabilities.
  - Captioning
  - ASL interpretation
  - Transcription

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