National Pedestrian and Bicycle Safety Data Clearinghouse
Phase I: Inventory & Framework

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Research Plan

- Literature Review
- Interviews
- Inventory
- Rating
- Identify Data Gaps
- Framework and Website Development
- Conclusions and Next Steps

Literature Review

- Data demands from safety analysis modeling
- Available data and common variables by type:
  - Collision Data
  - Exposure Data
  - Spatial/Socio-Demographic/Socio-Economic Data
  - Infrastructure/Land Use
- 25 databases identified in the literature (international)

Mode	Types	Number of databases identified in the literature
Pedestrian	Collision	5
Pedestrian	Counts	2
Pedestrian	Infrastructure	3
Bicycle	Collision	2
Pedestrian and Bicycle	Collision	7
Pedestrian and Bicycle	Counts	5
Pedestrian and Bicycle	Infrastructure	4
Pedestrian and Bicycle	Other	3

Interviews

Eight Pedestrian/Bicycle Safety Researchers Interviewed

1. What resources do you use?
2. What data do you need?
3. What data are missing that you'd like to have?
4. What % of budget goes to data collection?
5. What % of budget goes to data cleaning/ processing?
6. What features do you want?
7. How might a clearinghouse help you?
8. Online datasets we should link to the clearinghouse?

Interview Summary

| Question	Response Summary
Data used	Collisions, context, exposure, infrastructure, behavior, socio-deomgraphics, video, app data
Data needs	Collision, exposure, infrastructure, socio-demographics, transit data
Data missing	Hospital, crash typing, risk perception, exposure, sidewalks, infrastructure details, installation dates, AV ped detection, better quality
% of budget for data collection	10% to 75%, most say less than 30%
% of budget for data cleaning	5% to 70%, most say less than 30%
Features desired	Data: Hospital, weather, exposure (counts), infrastructure specifics, speed, perception, socio-demographics, transit usage, time frame of data Features: cross tab tool, download data, visualization, glossary, upload and share, mapping, analysis, categories and classification, link to other online tools, standardize quality, ease of navigation, documentation of data cleaned
Uses of Clearinghouse	Identify long time series data, improve cross-sectional studies, planning and operations, repository for bikes hare and exposure data
Existing online datasets	FARS, HSIS, NASS, state crash data, NHTS, state hospital records, SHRP2, national/state surveys, Metropolitan Travel Survey Archive, UTC datasets, Bike-Ped Portal, TIMS, Strava, Bikeshare, Census, Google Earth

Inventory of Online Datasets

- Online search of all 50 states, MPOs, cities >100,000, etc
- 4,126 publicly-available ped/bike-safety related datasets found
- Categories by type
  - Collision
  - Counts
  - Infrastructure
- Geographic Scale
  - City
  - County
  - Region
  - State
  - National

Dataset by Type

Percent of Datasets in Inventory
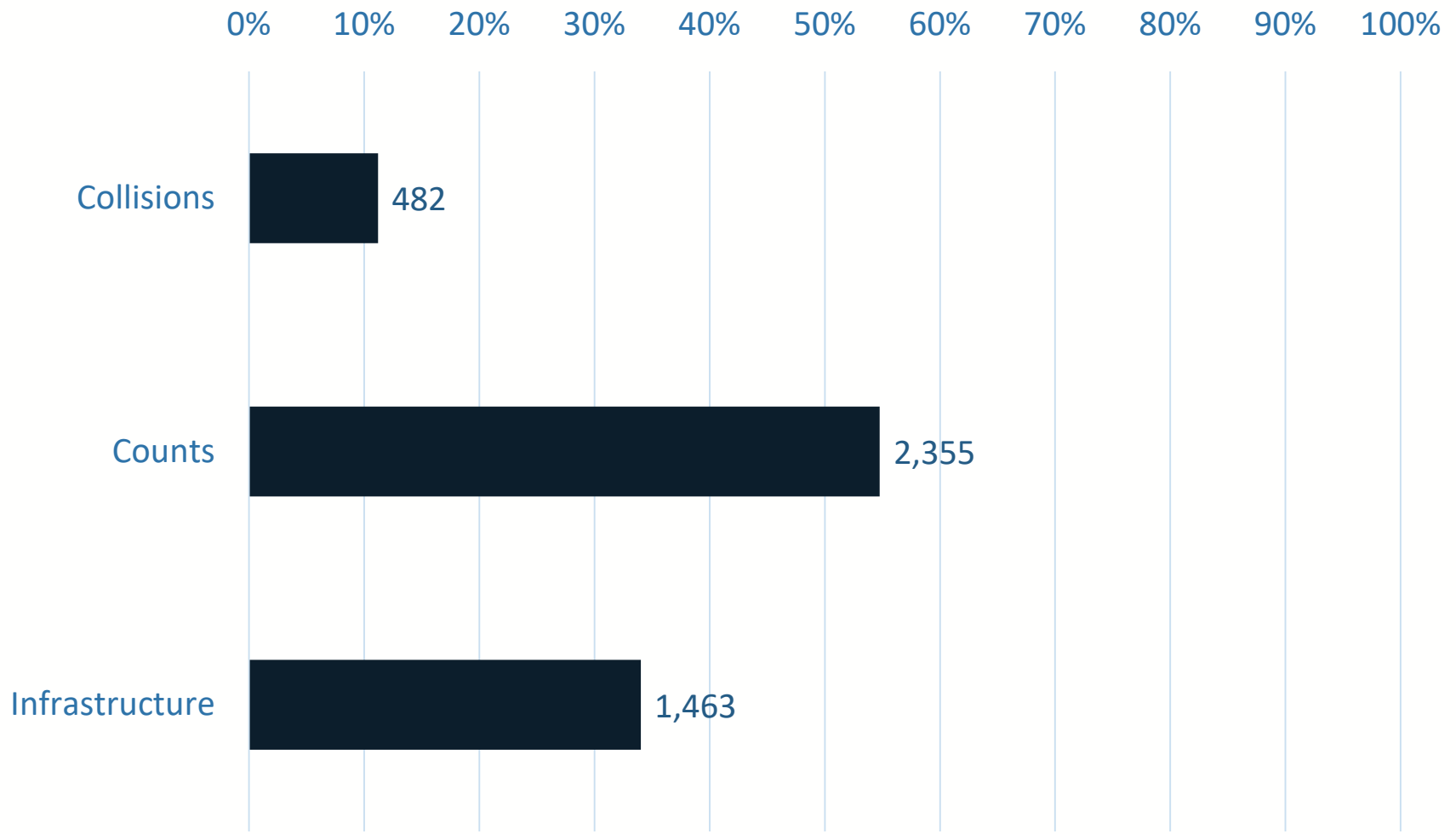
Datasets by Geographic Scale

Percent of Datasets in Inventory
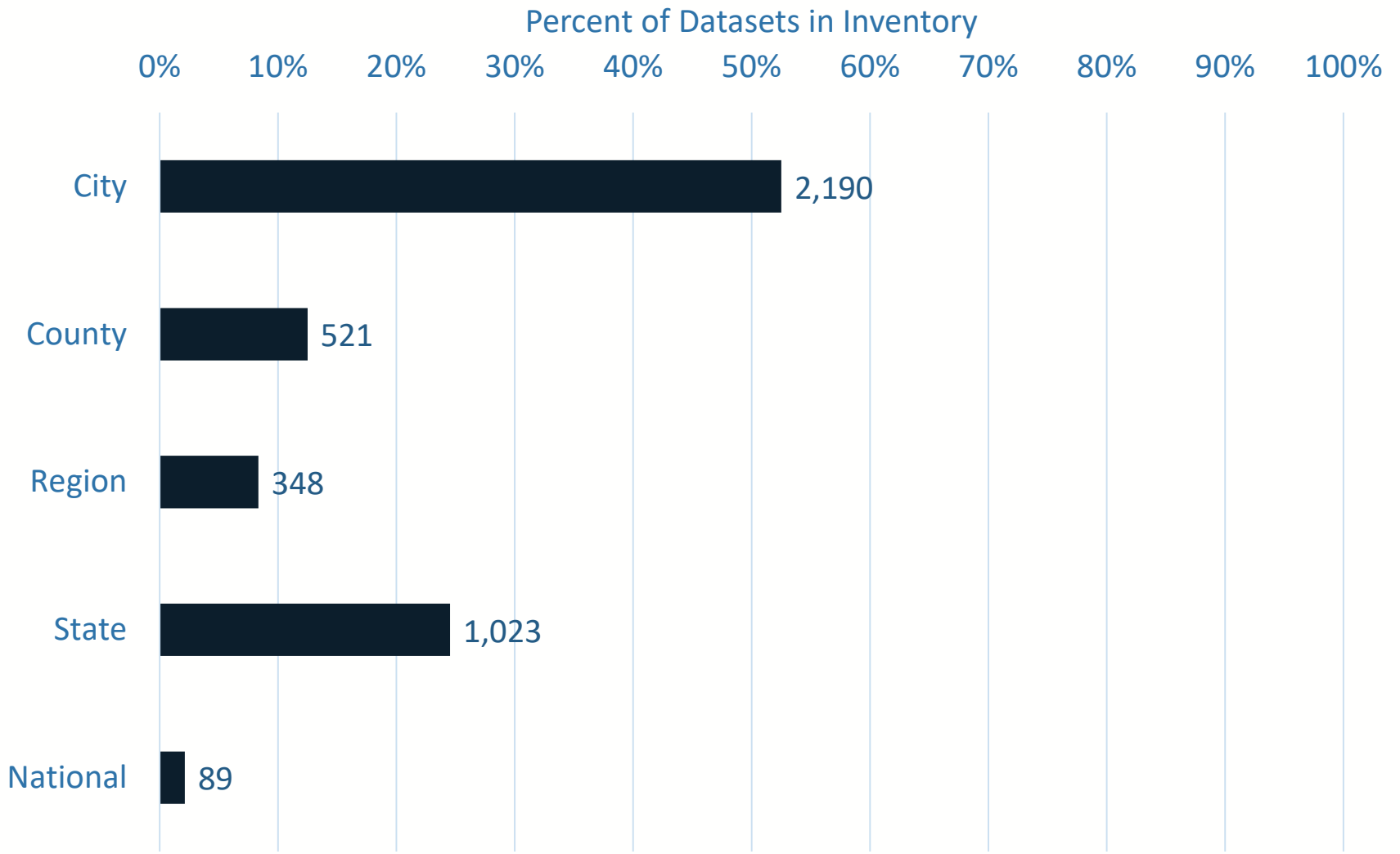
Rating of Datasets

State-wide, non-PDF datasets were rated on a 5-star scale with 5 being best based on

- Temporal Completeness
- Spatial Completeness
- Linkability

	1 Star	2 Stars	3 Stars	4 Stars	5 Stars	Total Number of Datasets
Collisions						
Collision Event	0	1	42	40	17	100
Collision Summary	0	0	3	7	3	13
Counts						
Ped/Bike Short Duration Counts	0	1	8	6	1	16
Ped/Bike Permanent Counts	0	0	4	4	2	10
AADT Counts	0	15	78	100	62	255
Infrastructure	9	230	41	20	7	307
Total	9	247	176	177	92	701

Data gaps

Data needs and gaps by priority:

1. Pedestrian and Bicycle Count Data provide a fundamental metric of exposure. Both high quality Short Duration and Permanent count data are needed, since so little is currently available on exposure.

2. The ability to link datasets needs to be improved.

3. The accuracy of data needs to be better assessed and improved.

4. Funding for data collection and management for pedestrian and bicycle safety related data needs to increase.

Framework and Website: pedbikedata.org

Search Results

Search Results Expanded

EXPORT RESULTS TO EXCEL

City: 89 Results

County: 5 Results

Palm Beach MPO - Regional Greenways
Infrastructure (Bicycle Facilities, Pedestrian Facilities)
GIS | Palm Beach, CA | | Publicly Available | SEE DETAILS

Traffic counts and collisions
Collisions, Counts (Motor Vehicle), Infrastructure (Street Network/Centerlines, Pedestrian Facilities)
GIS | Larimer County, CO | | Publicly Available | SEE DETAILS

Lee County Bike-Ped Facilities
Infrastructure (Bicycle Facilities, Pedestrian Facilities)
GIS | Lee County, FL | | Publicly Available | SEE DETAILS

multi-use pathways and sidewalks in Ada and Canyon counties
Infrastructure (Pedestrian Facilities)
GIS | Ada and Canyon counties, ID | | Publicly Available | SEE DETAILS

Transportation Data, Ramsey County, Minnesota
Infrastructure (Street Network/Centerlines, Bicycle Facilities, Pedestrian Facilities)
GIS | Ramsey, MN | 2015 (every 3 years) | Publicly Available | SEE DETAILS

Region: 9 Results

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Example Details Page

Data Source Details

Palm Beach MPO - Regional Greenways

Agency/Owner: Palm Beach MPO

Data Type: Infrastructure (Bicycle Facilities, Pedestrian Facilities)

Facility/Treatment Types: greenways

Geographic Scale: County

City/County: Palm Beach

State: CA

Date Ranges:

Format: GIS

Availability: Publicly Available

MPO Name: Palm Beach MPO

Static Data: No

URL: https://www.arcgis.com/apps/Viewer/index.html?appid=c031ddf4e2d44afe98edb42e934579dd

Next Steps

- Phase 2 – User Experience Improvements (2019-2020)
  - Interview and survey users
  - Prioritize and Select Improvements
  - Make Improvements
  - Outreach
    - Report back to interviewees and other stakeholders
    - Spread the word about the Clearinghouse

- <u>Potential</u> improvements
  - Improve geographic search capability (add a map)
  - Improve temporal search capability
  - Expand ratings to include all datasets and add to search
  - Add online submission form for broken links
  - Post a data dictionary
  - Quality check existing Clearinghouse