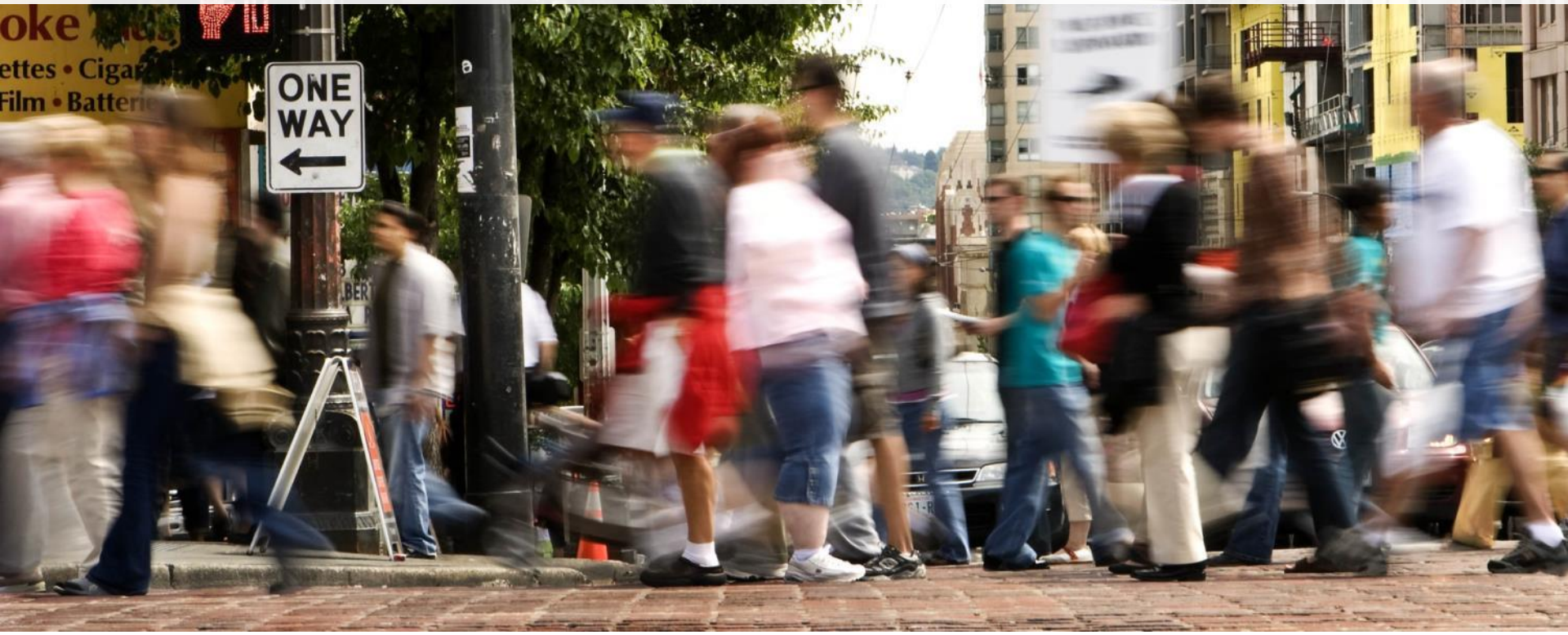
Pedestrian Master Plan Technical Update



SPAB Workshop #1: Prioritization

Michelle Marx, Brice Maryman

July 15, 2015

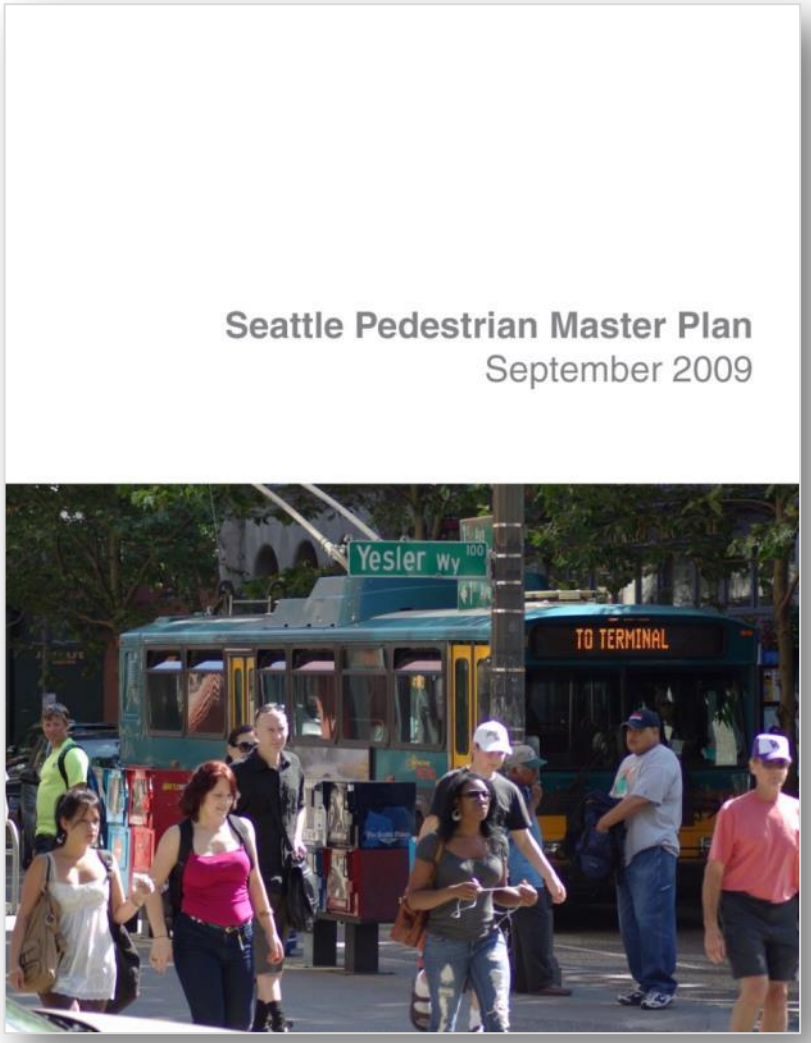
SDOT
Seattle Department of Transportation

Overview

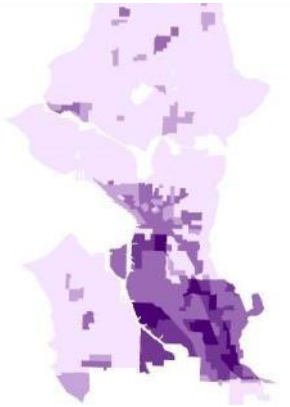
- Project schedule update
- Review current prioritization methodology
- Recap "Best Practices" findings
- Draft goals for prioritization/data update
- Preliminary recommendations and feedback from SPAB
- Next steps

Seattle's data-driven prioritization process:

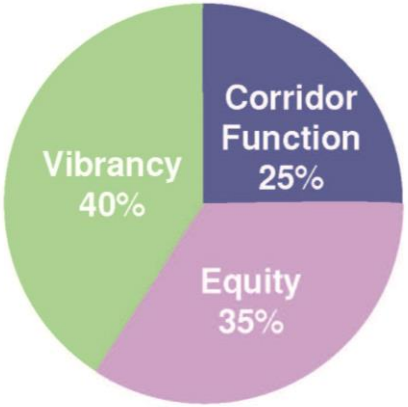
- Designed to focus resources where:
  - There is high existing and potential pedestrian demand
  - There are safety concerns
  - There are populations with the greatest need



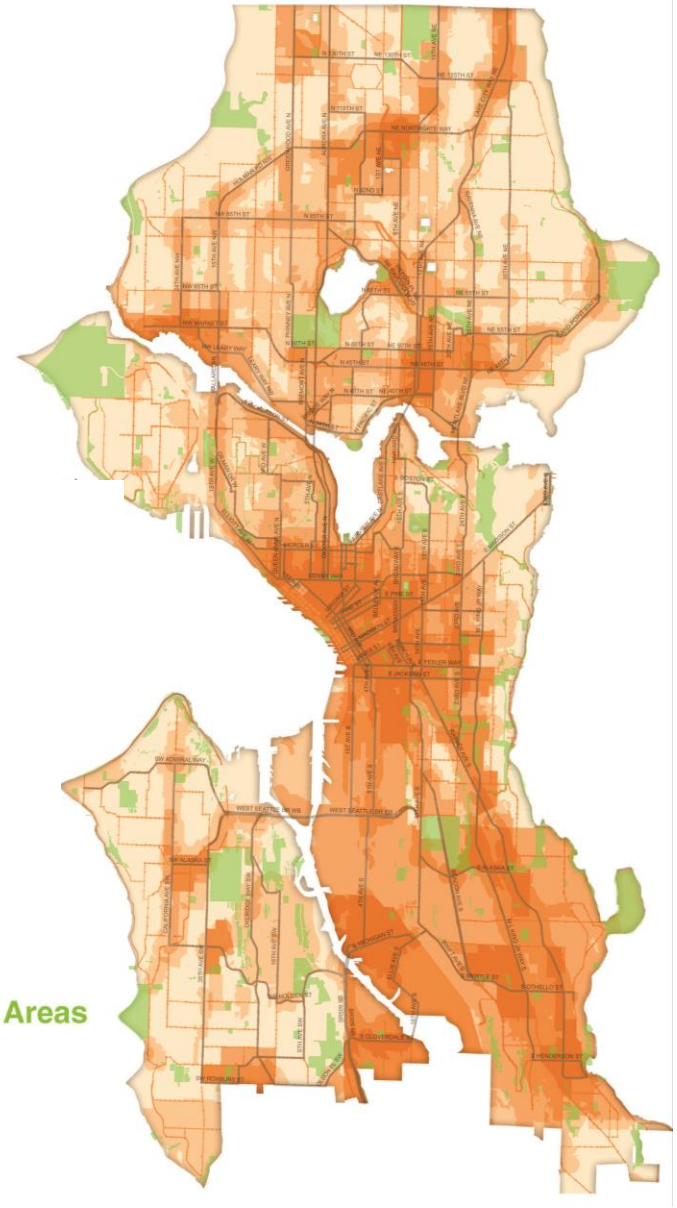
Building Blocks



Contribution to Total Score



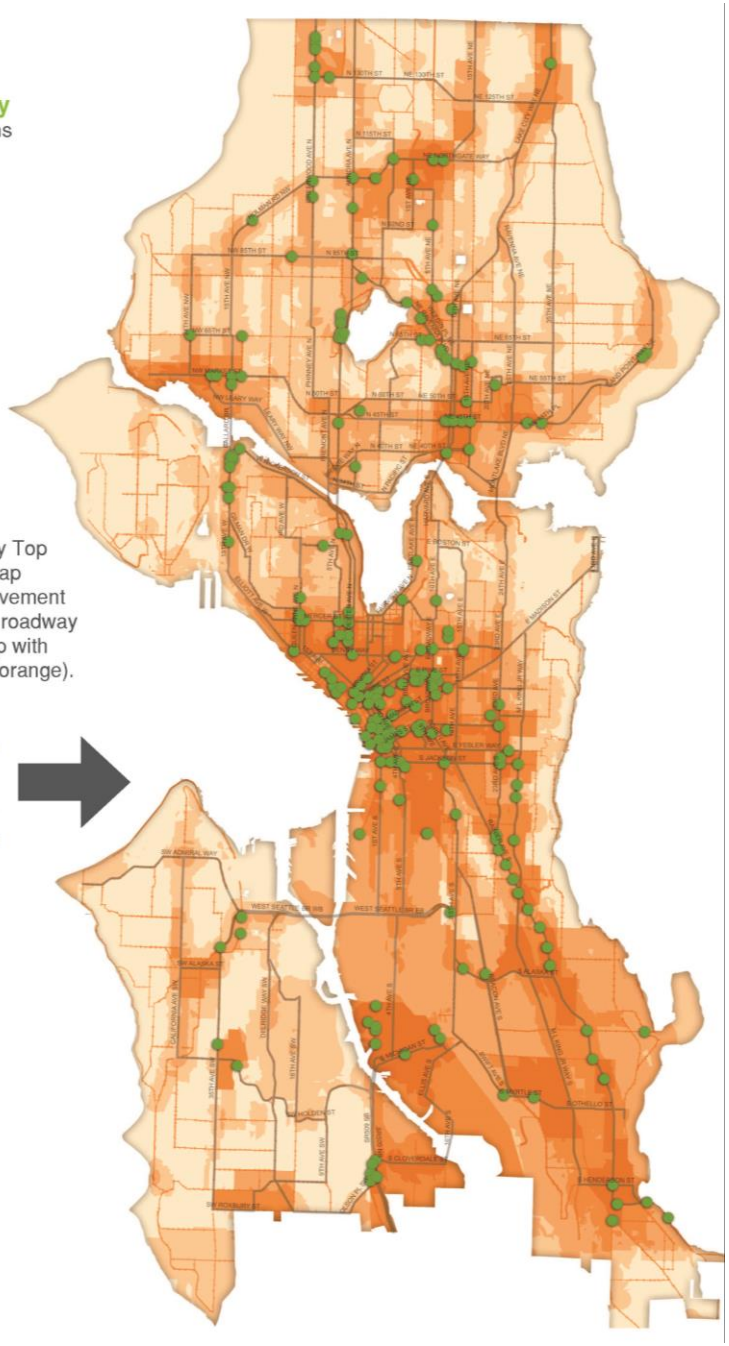
High Priority Areas



Across the Roadway

Top Tier Project Locations

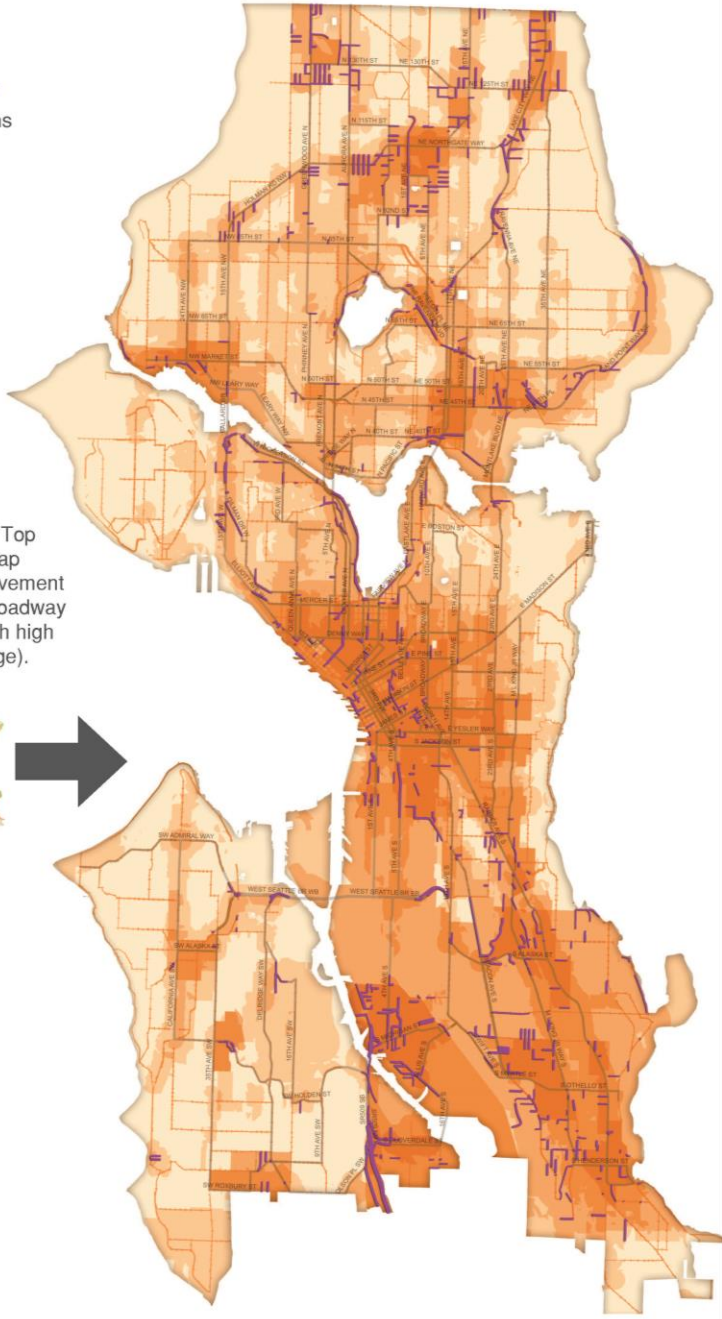
The Across the Roadway Top Tier Project Locations Map shows where high improvement opportunities across the roadway (dark green dots) overlap with high priority areas (dark orange).



Along the Roadway

Top Tier Project Locations

The Along the Roadway Top Tier Project Locations Map shows where high improvement opportunities along the roadway (purple lines) overlap with high priority areas (dark orange).



Vibrancy

Potential Pedestrian Demand

Vibrancy
Potential Pedestrian Demand

Low High

Low Potential Demand


stairs


bridges/overpasses


cafes/restaurants


local bus stop

Medium Potential Demand


school


shared use trail


grocery store

hospital


libraries, community centers, social services

High Potential Demand

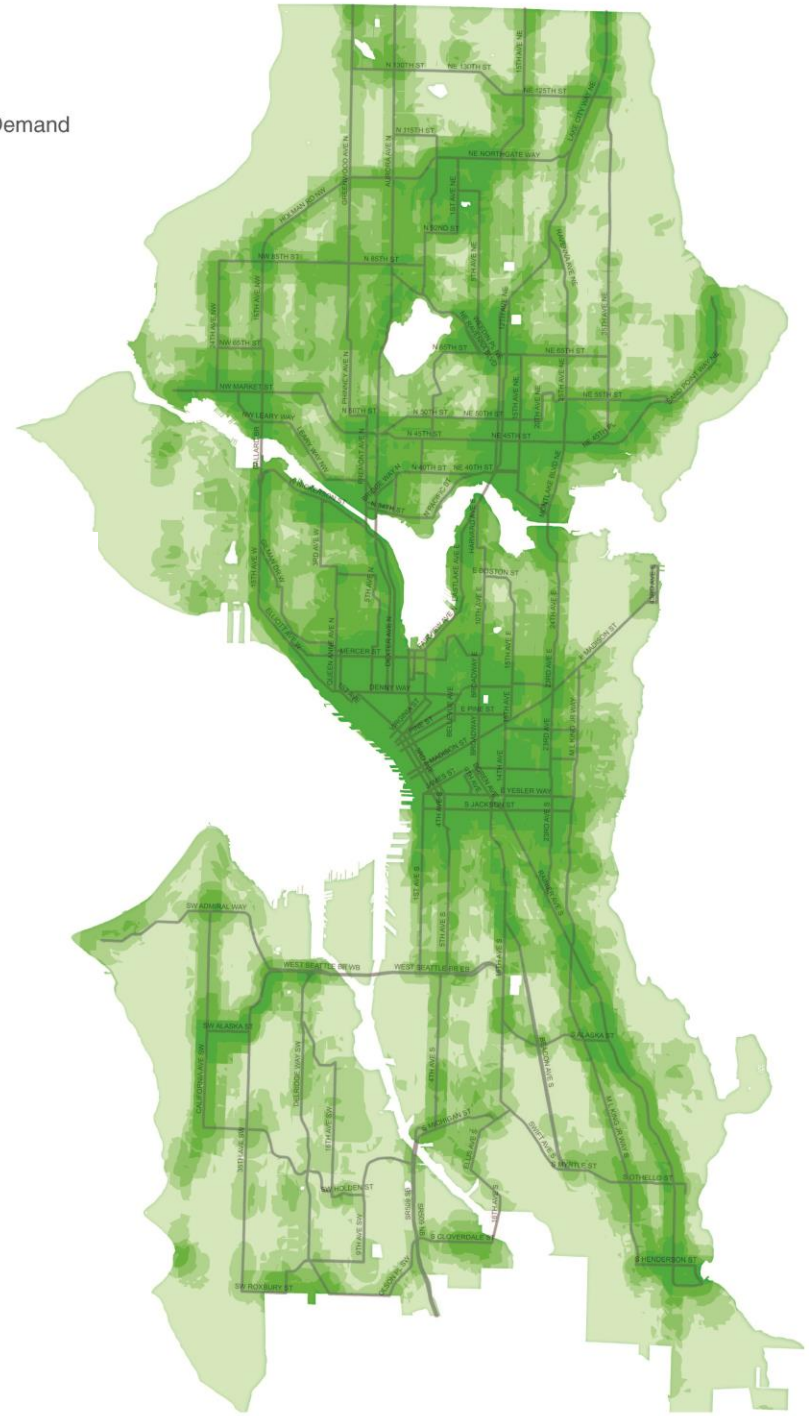

university or college


regional or citywide attraction: park or museum


apartments, condos, mixed use


bus transfer point (five or more routes) or light rail station


center city retail

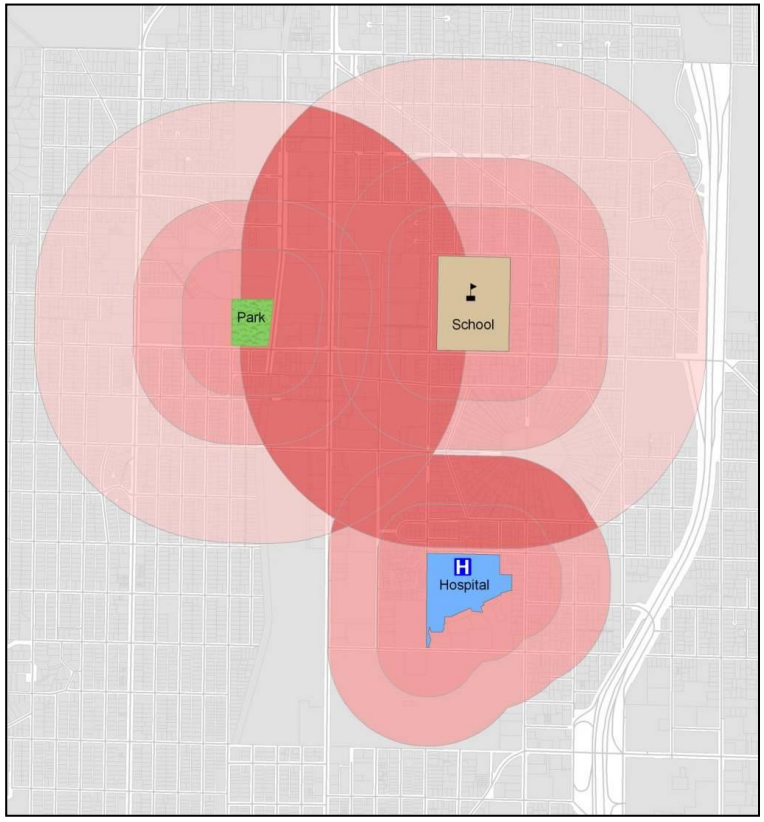


Vibrancy

Potential Pedestrian Demand

Table 1: Pedestrian Generators/Demand

Category	Sub-Category	Examples/Notes	Weight 1/8 Mile	Weight 1/4 Mile	Weight 1/2 Mile
High Generator	University or College		15	10	5
Highest Possible Value: 70	Major Generator	Pike Place, convention center, Greenlake and Myrtle Edwards Park, etc.	15	10	5
	Light Rail	-	10	5	3
	Multi-family, condominiums, and apartments		10	5	3
	Major Bus Stop	5 or more routes	10	3	1
	UVTN Route (definite rapid service)	-	10	3	1
Medium Generator	School	Daycare, primary, public, private, etc.	5	3	1
Highest Possible Value: 35	Major Retail	Grocery store, regional retail, etc.)	5	3	1
	UVTN Route (definite local service)	-	5	3	1
	Hospital	-	5	1	0
	Trails	-	5	3	1
	Community Services	Community centers, libraries, post offices, social services, etc.	5	3	1
	Park	Park, greenbelt, open space, etc.	5	3	1
Low Generator	Minor Retail	General retail, office, etc.	3	1	0
Highest Possible Value: 13	Minor Bus Stop	-	3	1	0
	Park and Ride Location	-	3	1	0
	Bridges	-	3	1	0
	Stairs	-	1	0	0

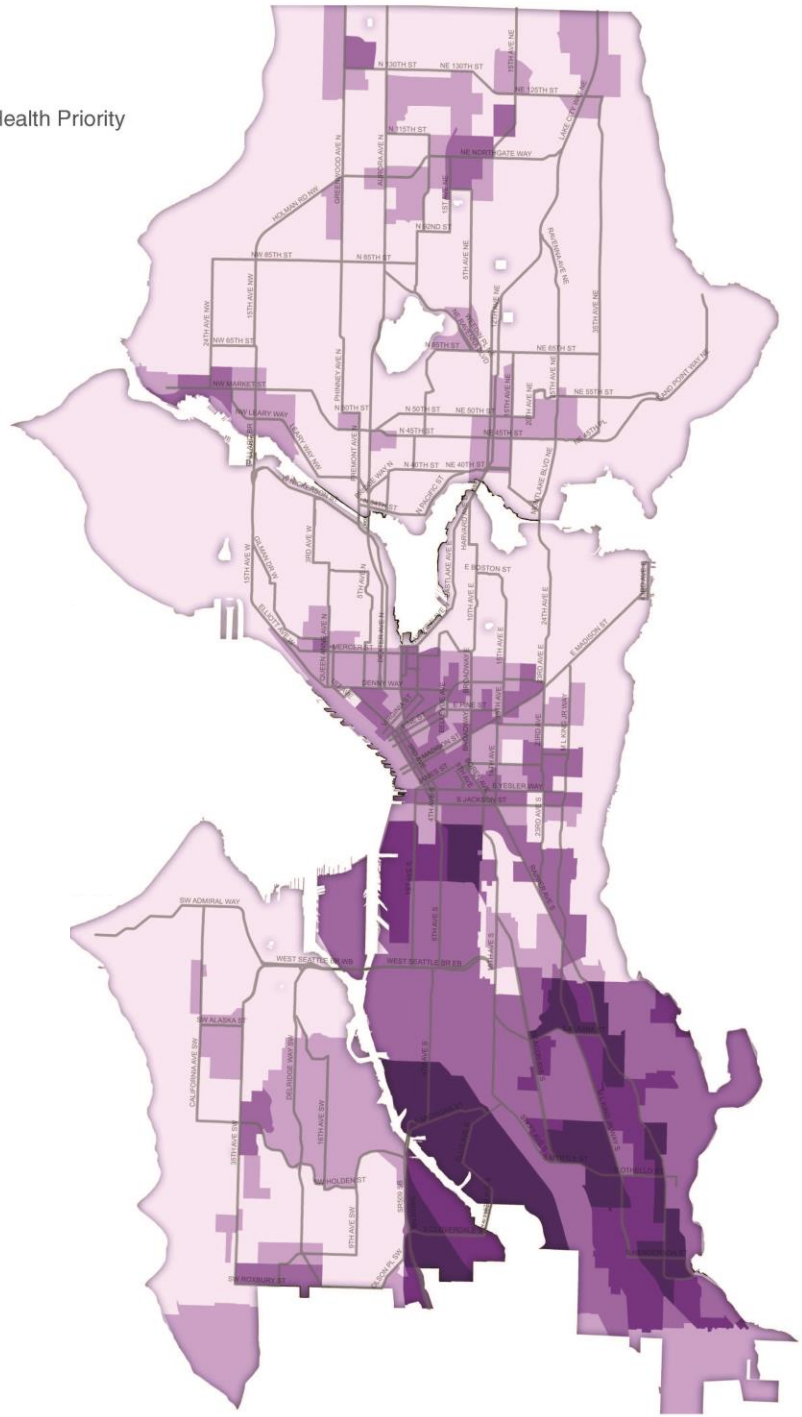


Equity

Evaluates where improvements will serve those with the greatest need

Data evaluated:

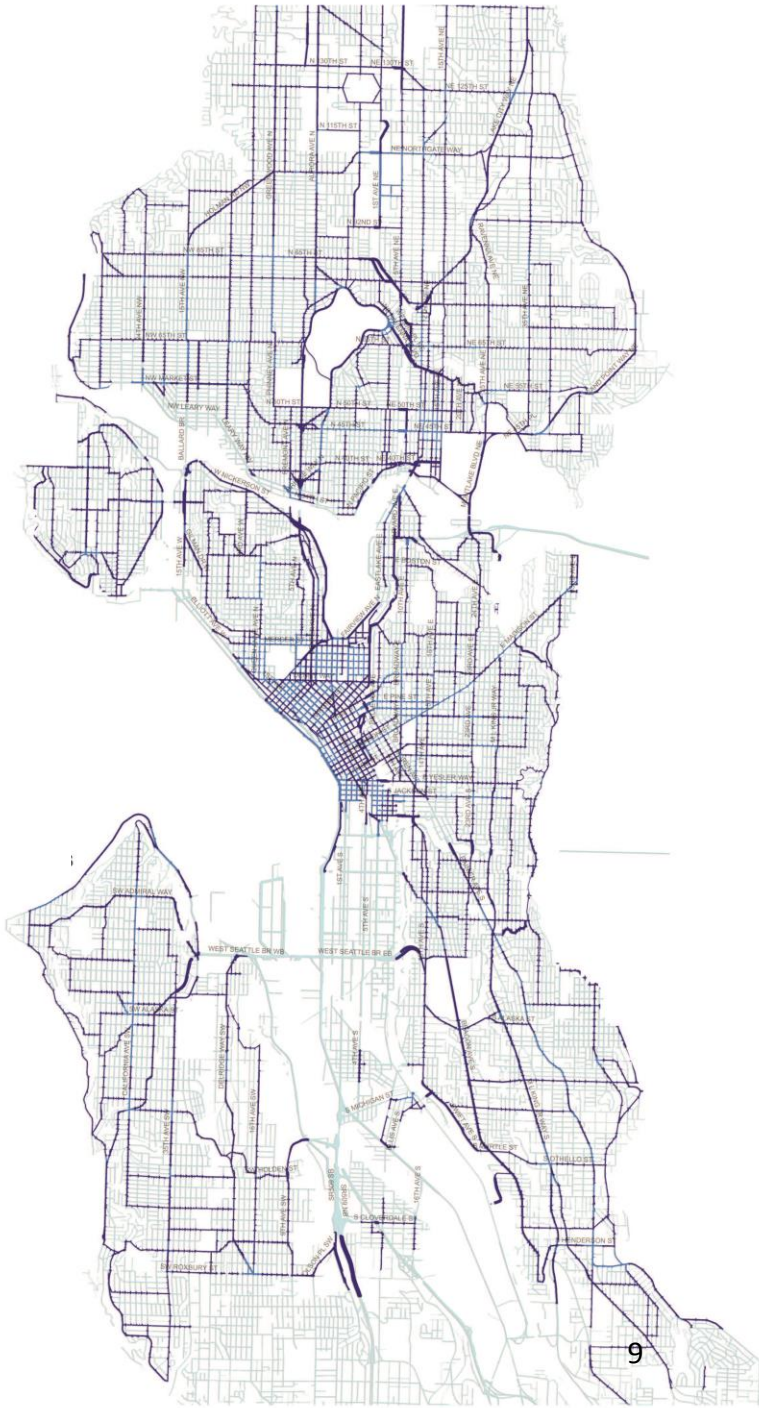
- Income (census)
- Automobile ownership (census)
- Disability population (census)
- Diabetes rates (King County Health Report)
- Physical activity rates (King County Health Report)
- Obesity rates (King County Health Report)



Corridor Function

Roadway Characteristics

- Balances street classification and land use by assigning a score for each designated street type
  - 25 points:
    - Regional Connectors
    - Commercial Connectors
    - Local Connectors
  - 15 points:
    - Main Streets
    - Mixed Use Streets
    - Green Streets
  - 10 points:
    - Residential Streets
    - Residential Green Streets
    - Industrial Access/Arterial Streets
- Prioritizes improvements to auto-oriented street type

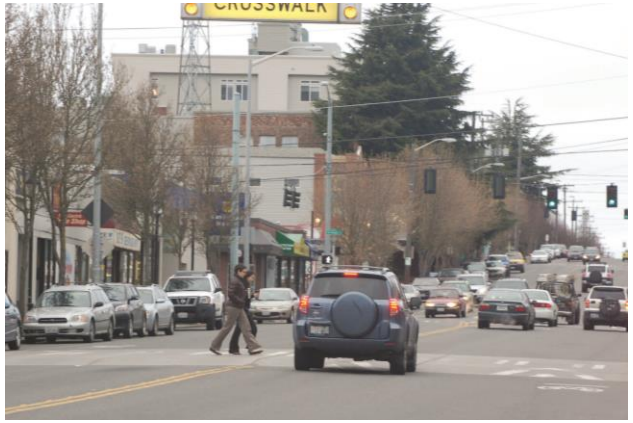


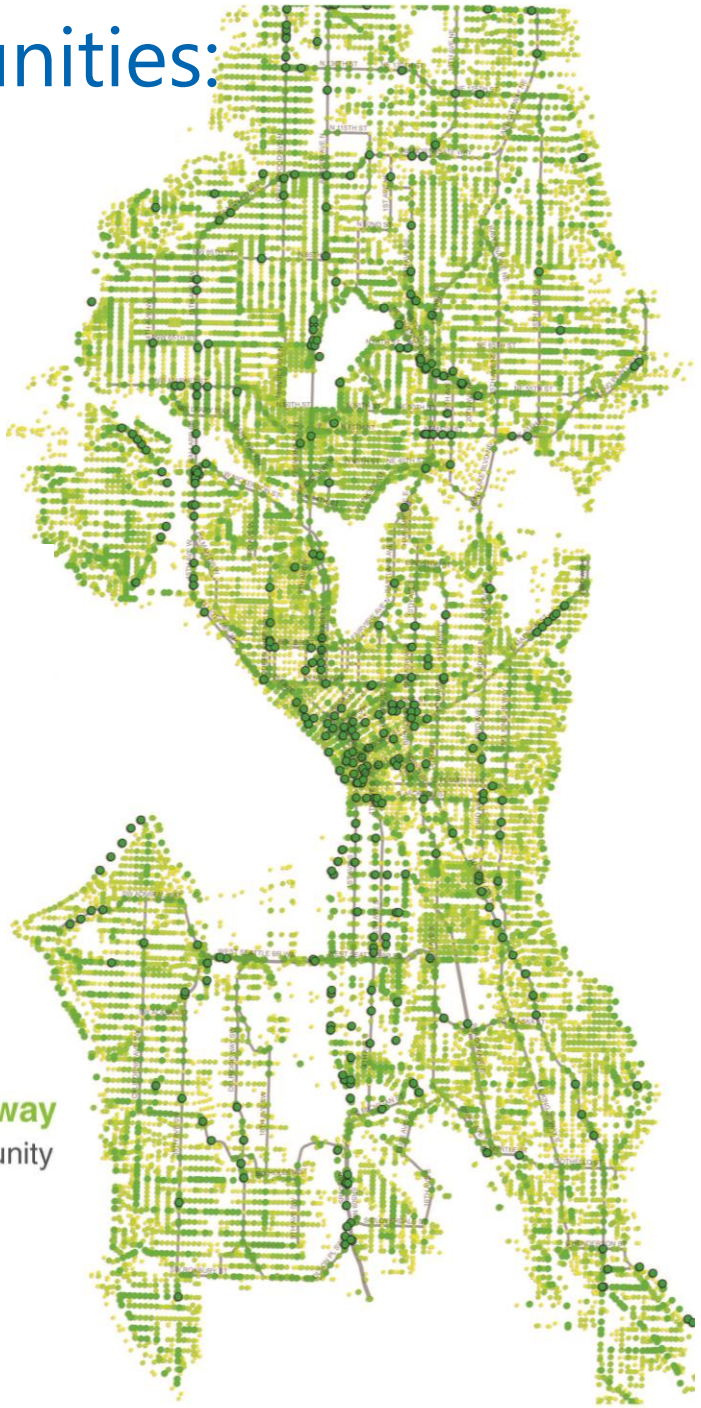
Assessing Improvement Opportunities:

Crossing the Roadway

Data evaluated:

- Roadway width
- Traffic volumes
- Posted speed limits
- Signal/stop controlled
- Distance between signals/stop signs
- Existence of crosswalks
- Existence of curb ramps
- Collisions



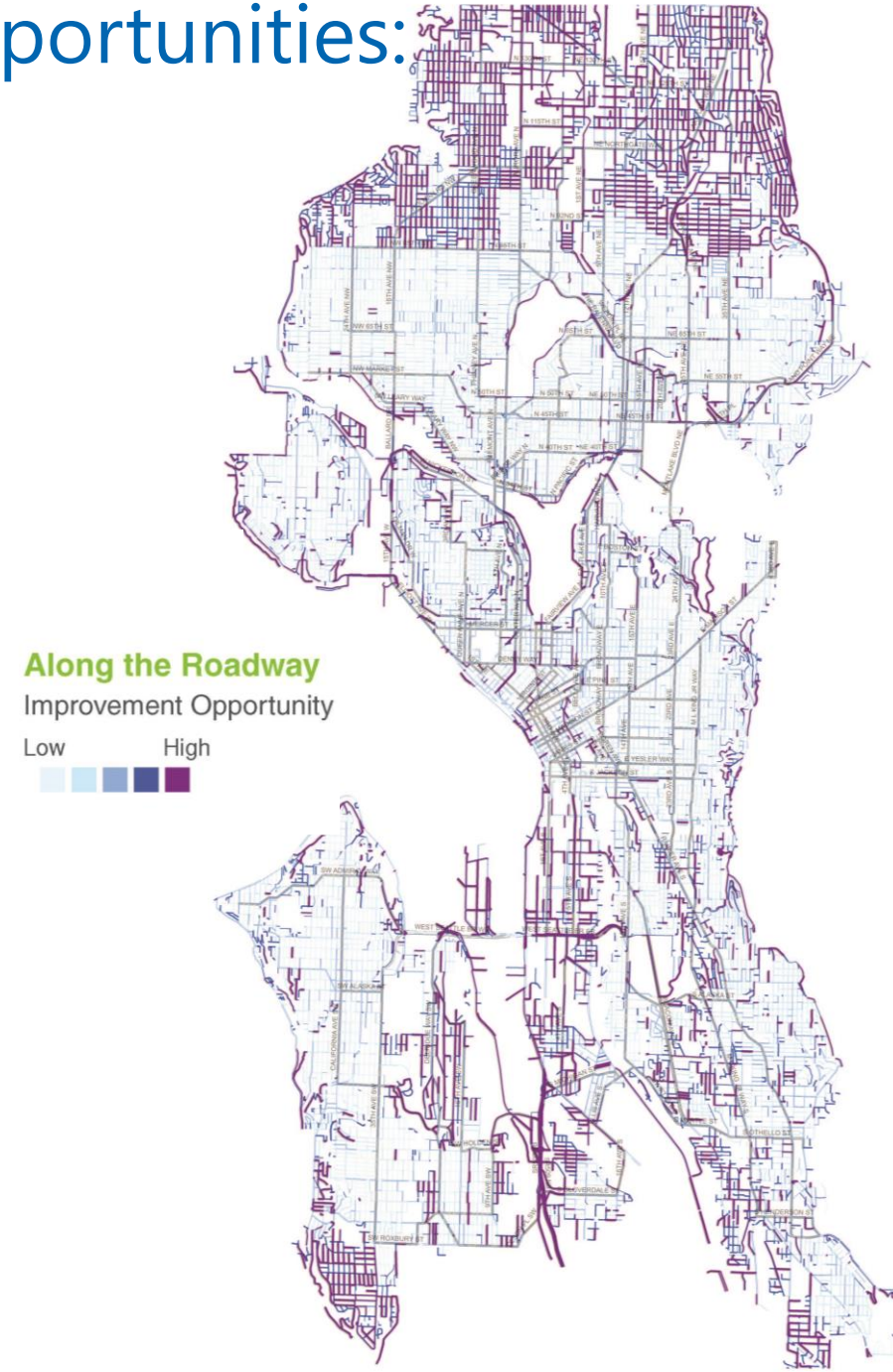


Assessing Improvement Opportunities:

Along the Roadway

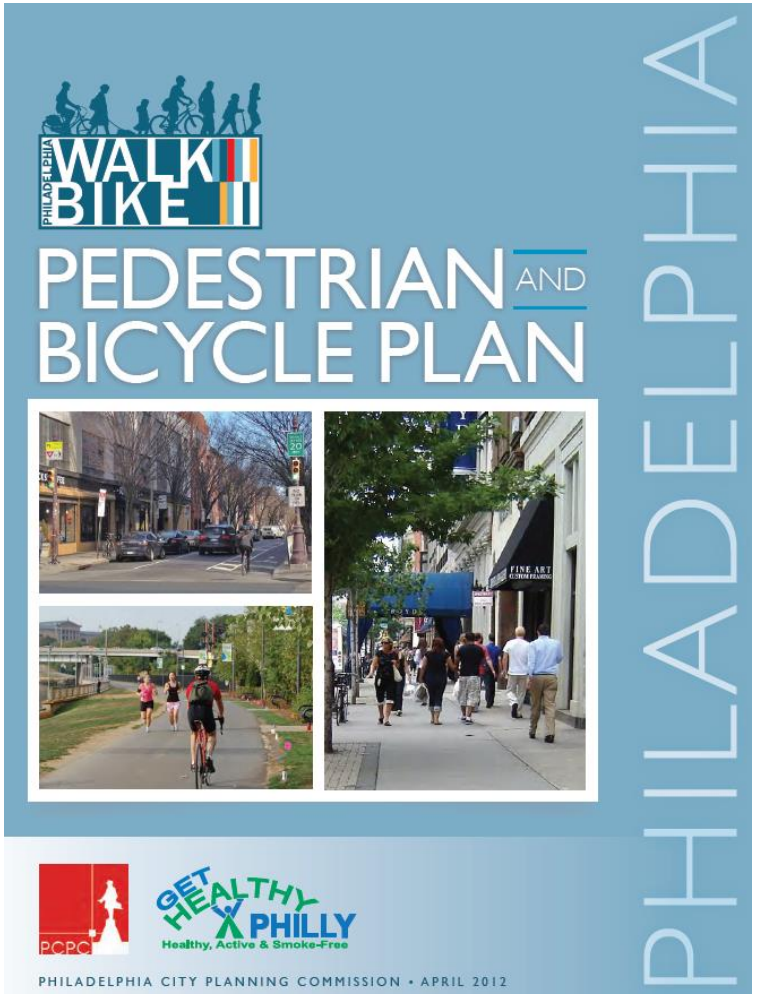
Data evaluated:

- Presence of sidewalks
- Presence of curb
- Presence / width of buffers
- Traffic volumes
- Speed limit
- Slope
- On-street parking
- Length of block



"Best Practices"

- Review of cities often identified as walkable and had Ped Plans updated since 2009:
  - New York (2010)
  - San Francisco (2010)
  - Boston (2014)
  - Philadelphia (2012)
  - Chicago (2011)
  - Sydney, Australia (2015)
  - Vancouver, Canada (2012)



"Best Practices"

- Review of Papers from Advocacy Groups:
  - Advocacy Advance: a partnership between Alliance for Walking and Biking and The League of American Bicyclists
  - Policy Link and Prevention Institute
  - Victoria Transport Policy Institute
  - Smart Growth America / National Complete Streets Coalition

Alliance for Biking & Walking
Building the People Powered Movement

PolicyLink

Prevention Institute
Prevention and equity at the center of community well-being

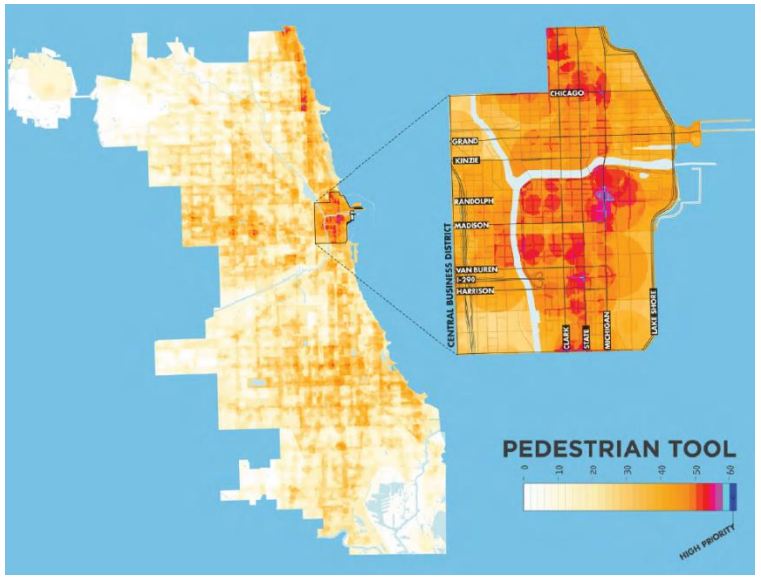
Smart Growth America
Making Neighborhoods Great Together

National Complete Streets Coalition

"Best Practices" – Prioritization

- Findings:
  - Criteria relates to Plan goals and policies
  - Seattle's methodology (including health and equity data) is cited as a Best Practice
  - Data driven prioritizations support funding requests
  - Locations *and* conditions of existing facilities used

	CITYWIDE DATASETS UTILIZED
SAFETY	PEDESTRIAN CRASHES, STREET CLASSIFICATION, SIGNAL CONTROL, CRIME DATA, PROXIMITY TO SCHOOLS/PARKS/LIBRARIES, HOSPITALS, AND COMMUNITY CENTERS
CONNECTIVITY	311 CALL DATA ON SIDEWALK CONDITIONS AND SNOW REMOVAL, PROXIMITY TO BARRIERS SUCH AS EXPRESSWAYS
LIVABILITY	DISTANCE TO TRAIN STATIONS AND BUS STOPS, PRIORITY BUS ROUTES, PROXIMITY TO B AND C LAND USES, EMPLOYMENT DENSITY, PROXIMITY TO UNIVERSITIES/COLLEGES
HEALTH	HOSPITALIZATION RATE OF DIABETES AND HYPERTENSION, HEART DISEASE MORTALITY RATE, ASTHMA RATE, HEAT ISLAND COVERAGE
EQUITY	AREAS OF LOW INCOME, PERCENT POPULATION WITH A DISABILITY, PERCENT WALK/BIKE/TAKE TRANSIT TO WORK, POPULATION DENSITY, AUTOMOBILE OWNERSHIP RATES



City of Chicago

Draft goals for updated prioritization:

- Update outdated data
- Align methodology with updated Plan goals
- Revise criteria to align with recent SDOT/City initiatives
- Simplify methodology and/or terminology

Updated PMP goals

- **Safety**: Reduce the number and severity of crashes involving pedestrians.
- **Equity:** Make Seattle a more walkable city for all through equity in public engagement, service delivery, accessibility, and capital investments.
- **Vibrancy:** Develop a connected pedestrian environment that sustains healthy communities and supports a vibrant economy.
- **Health:** Get more people walking to improve health and increase mobility.

Existing prioritization methodology

- **Safety**: Reduce the number and severity of crashes involving pedestrians.
- **Equity:** Make Seattle a more walkable city for all through equity in public engagement, service delivery, accessibility, and capital investments.
- **Vibrancy:** Develop a connected pedestrian environment that sustains healthy communities and supports a vibrant economy.
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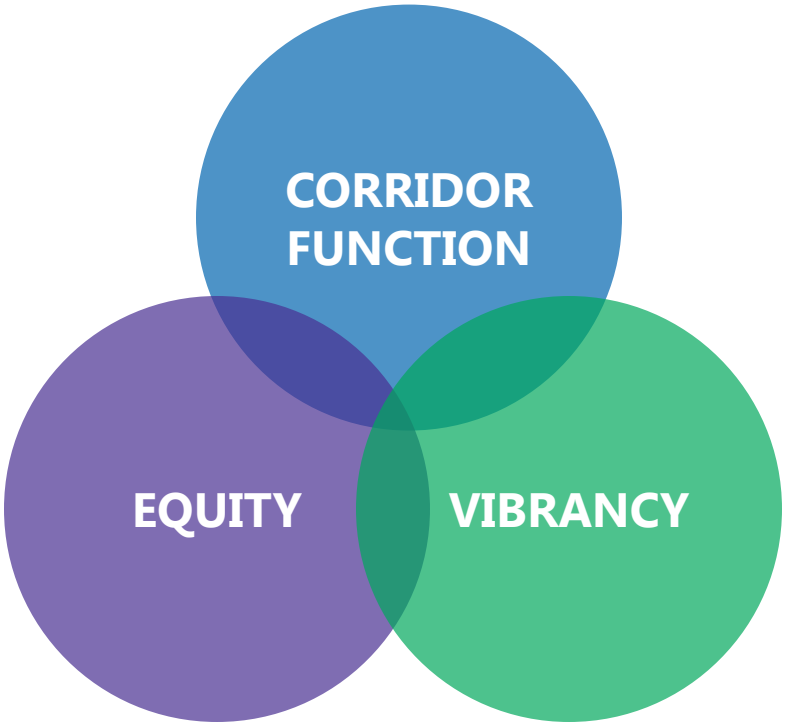

Proposed prioritization methodology

- **Safety**: Reduce the number and severity of crashes involving pedestrians.
- **Equity:** Make Seattle a more walkable city for all through equity in public engagement, service delivery, accessibility, and capital investments.
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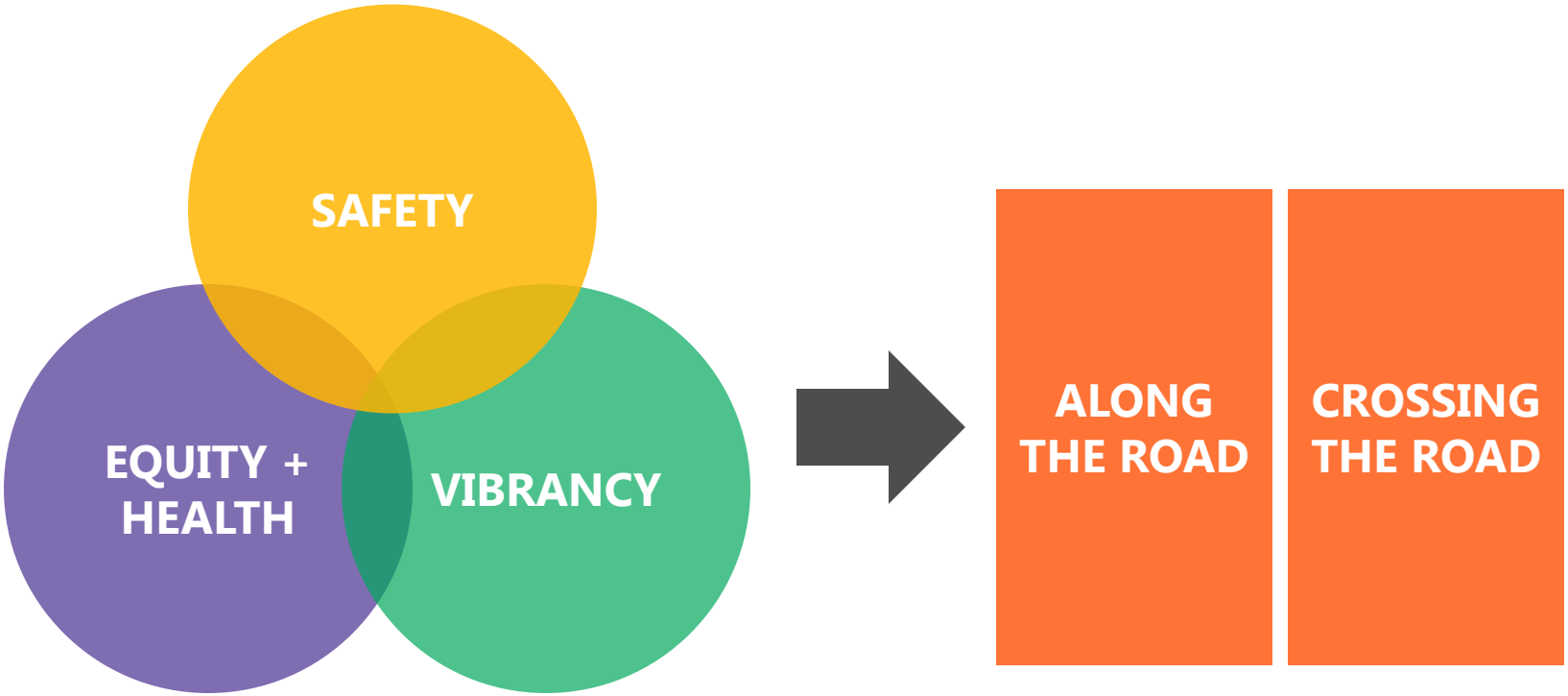
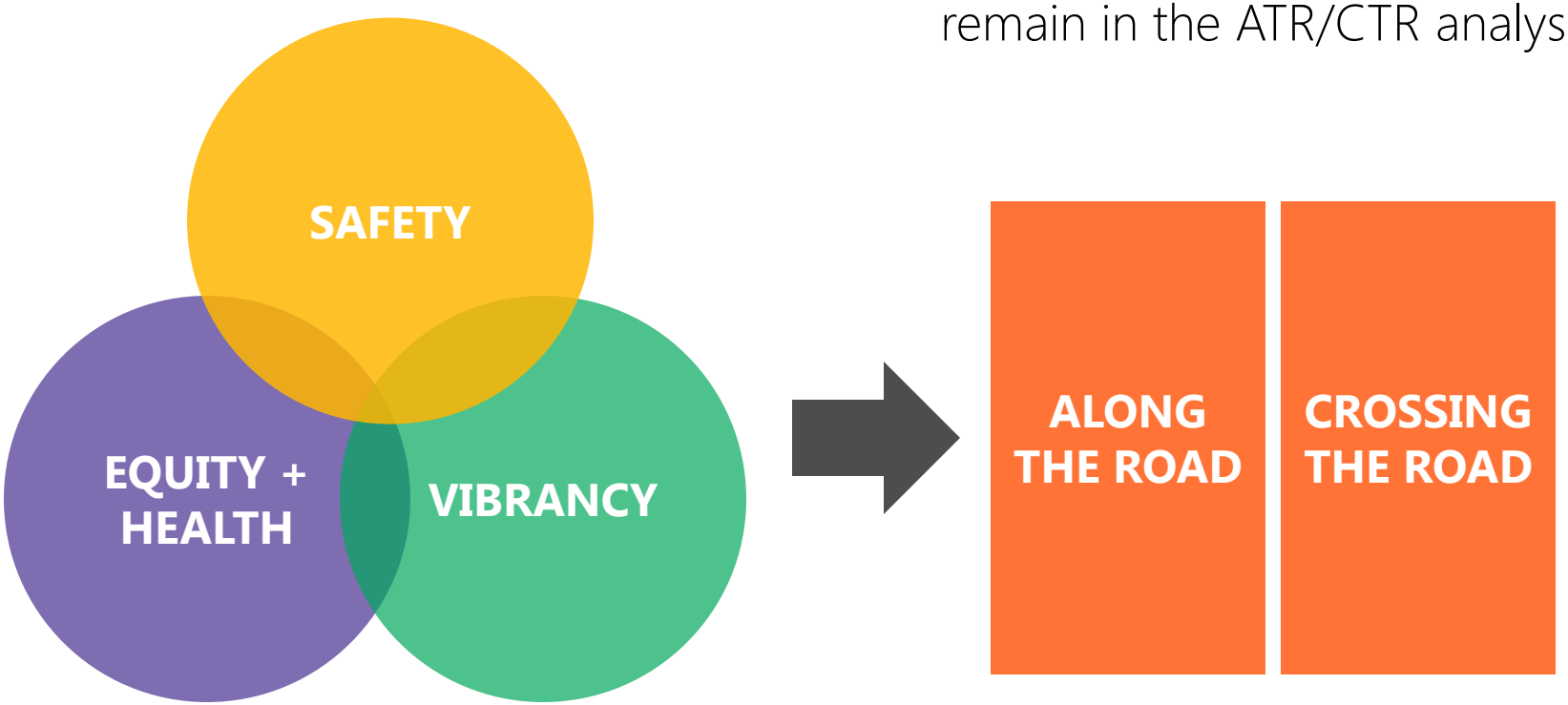


Proposed prioritization methodology

- Reframe "Corridor Function" as "Safety"
- Account for demand and connectivity within the "Vibrancy" analysis

- Question: Would we also want to increase the weight, given Vision Zero objectives?
- Question: Which datasets would be evaluated in the Safety analysis, and which would remain in the ATR/CTR analysis?



Discussion: Reframe "Corridor Function" as "Safety"

Corridor Function

Removed factors	
Seattle street types	Removed as these are being updated and because previous auto-prioritization policy language has been removed from City's planning documents.

Safety

Potential New factors	
5-year collision rates	Update to include most recent data.
Arterial speed limit	Collisions at speed are more serious, often resulting in fatalities or serious injury.
High speed (+25 mph) without sidewalks	Speed without mitigating infrastructure
High speed (+25 mph) without buffers	Speed without mitigating infrastructure
Pedestrian and Bicycle Facility Safety Analysis work (?)	Does the current work being completed by SDOT's Bike/Ped program yield GIS-ready results?

Discussion: **Equity + Health**

Existing 2009 factors	
Auto ownership	Same data and methodology; updated.
Low income population	Same data and methodology; updated.
Disability population	Same data and methodology; updated.
Diabetes rates	Same data and methodology; updated. *Note: SKCPH does not currently have funding to update these measures in the future.
Physical activity rates	Same data and methodology; updated. *Note: SKCPH does not currently have funding to update these measures in the future.
Obesity rates	Same data and methodology; updated. *Note: SKCPH does not currently have funding to update these measures in the future.

Potential New factors	
Communities of color	Used in Seattle 2035, RSJI, Move Seattle/Levy, BMP Equity Analyses
Age 17 and younger	Used in RSJI, Move Seattle/Levy, BMP equity analyses
Age 65 and older	Used in RSJI, Move Seattle/Levy, BMP equity analyses
Low English-speaking ability	Used in Seattle 2035 Equity Analysis
Low educational attainment	Used in Seattle 2035 Equity Analysis
Renter households	Used in Seattle 2035 Equity Analysis
Housing cost-burdened households	Used in Seattle 2035 Equity Analysis
Canopy cover	Data per OSE/DPD

Discussion: **Vibrancy (+ Connectivity?)**

Existing 2009 factors	
Universities or Colleges	Same data and methodology; updated.
Major Generator (e.g. Pike Place, Convention Center)	Same data and methodology; updated.
Multi-family, condominiums and apartments	Same data and methodology; updated.
Major Retail	Same data and methodology; updated.
Minor Retail	Same data and methodology; updated.
Hospital and Community Service	Same data and methodology; updated
Park and Open Space	Checking with DPR to determine if they have recently mapped access points
Population forecast	Same data and methodology; updated.
Employment forecast	Same data and methodology; updated.
Light rail stations	Same data and methodology; updated.
Major bus stops	Same data and methodology; updated; depending on Frequent Transit Network
Minor bus stops	Same data and methodology; updated.
Trails	Same data and methodology; updated.
Bridges	Same data and methodology; updated.
Stairways	Same data and methodology; updated.

Discussion: **Vibrancy (+ Connectivity?)**

Potential New Factors	
P-zones	As adopted by the City
Urban Villages/Seattle 2035 Land Use (TOD)	As adopted by the City
Frequent Transit Network corridor	Per adopted TMP
Safe Routes to School	Need to confirm these are GIS-based
Neighborhood Greenways	Per adopted BMP

Removed factors	
Park and Ride locations	Removed because this is being picked up elsewhere (e.g. FTN, Bus Stops)
UVTN Route (definite rapid service)	Now using Frequent Transit Network (see Corridor Function & Quality)

Discussion: **Crossing the Roadway**

Existing 2009 factors: Segment Value Calculation*	
Street classifications (proxy for volume)	Discussion: Could the FHWA ARNOLD dataset be used as a better proxy?
Arterial speed limit	
Road width	
Distance between traffic signals and stop signs	

Existing 2009 factors: Intersection Value/Balance Calculation*	
Crosswalk	
Curb ramp	Discussion: To be updated via current ADA ramp audit?
Signal control	
Stop sign control	
Number of collisions	Discussion: include collisions in analysis again?
Closes a network gap	Crossing completes a pedestrian infrastructure network link within various distances (e.g. 1/8, 1/4 mile).

*Note: Residential Areas and Interstate Highways are not counted

Discussion: **Along the Roadway**

Existing 2009 factors
Street classifications (proxy for volume)
Arterial speed limit
Buffer
Sidewalk status
Slope (along)
Parking
Curb
Length of block

Potential New factors	
Peek hour parking	Differentiated, and likely higher rated, than parking. Buffer during the busiest times.
Street trees	Presence of trees as a buffer and indicator of a quality walking environment. To be updated when SDOT's street tree inventory is completed.
Alleys	Used as a proxy for access control, limited to alleys, rather than many driveways.
Completes a network gap	Crossing completes a pedestrian infrastructure network link within various distances (e.g. 1/8, 1/4 mile).

Next steps

Mid August	TAC Workshop #2: Toolbox
September 2	SPAB Workshop #2: Toolbox
September 24	SPAB Workshop #3: Performance Targets