Active Transportation Working Group

July 29, 2015

Rye Baerg

Active Transportation and Special Programs

SOUTHERN CALIFORNIA **ASSOCIATION of GOVERNMENTS**

50 YEARS

Agenda

- Introductions
- Active Transportation Modeling for 2016 RTP/SCS
- Active Transportation Safety and Encouragement Campaign Update
- Update on Health and Economic Benefits Study
- Next Steps

Active Transportation Modeling for 2016 RTP/SCS

July 29, 2015

Chris Grey

Fehr and Peers

Presentation Outline

- Background information

- Project goals

- Key findings

- Integration with SPM/2016 RTP

- Next steps

Project Background

- Regional agencies have typically relied on their regional models to provide key performance metrics
  - VMT, Delay, Congestion
- This approach worked well when SCAG focused on roadway and transit improvements
- But may not fully address new challenges
  - New types of strategies
  - New metrics
  - New technologies and behaviors
- Need for a new approach

2012 RTP

- SCAG is looking into a broad range of strategies to support the RTP/SCS
  - Some similar (active transportation)
  - Some new (ridesourcing)
- SCAG is being asked to new metrics
  - Public health, fiscal impacts
- SCAG has some new tools (SPM)
- Need for some supplemental analysis

Place Types

	Mixed Use Centers and Corridors
1	Urban Mixed Use
2	Urban Residential
3	Urban Commercial
4	City Mixed Use
5	City Residential
6	City Commercial
7	Town Mixed Use
8	Town Residential
9	Town Commercial
10	Village Mixed Use
11	Village Residential
12	Village Commercial
13	Neighborhood Residential
14	Neighborhood Low

	Employment Areas
15	Office Focus
16	Mixed Office and R&D
17	Office / Industrial
18	Industrial Focus
19	Low-Density Employment Park

	Suburban
20	High Intensity Activity Center
21	Mid Intensity Activity Center
22	Low Intensity Retail Centered Neighborhood
23	Retail Strip Mall / Big Box
24	Industrial / Office / Residential Mixed High
25	Industrial / Office / Residential Mixed Low

	Suburban Residential
26	Suburban Multifamily
27	Suburban Mixed Residential
28	Residential Subdivision
29	Large Lot Residential Area

	Rural
30	Rural Residential
31	Rural Ranchettes
32	Rural Employment

	Institutional
33	Campus / University
34	Institutional
35	Parks and Open Space

Density

Mix of Uses
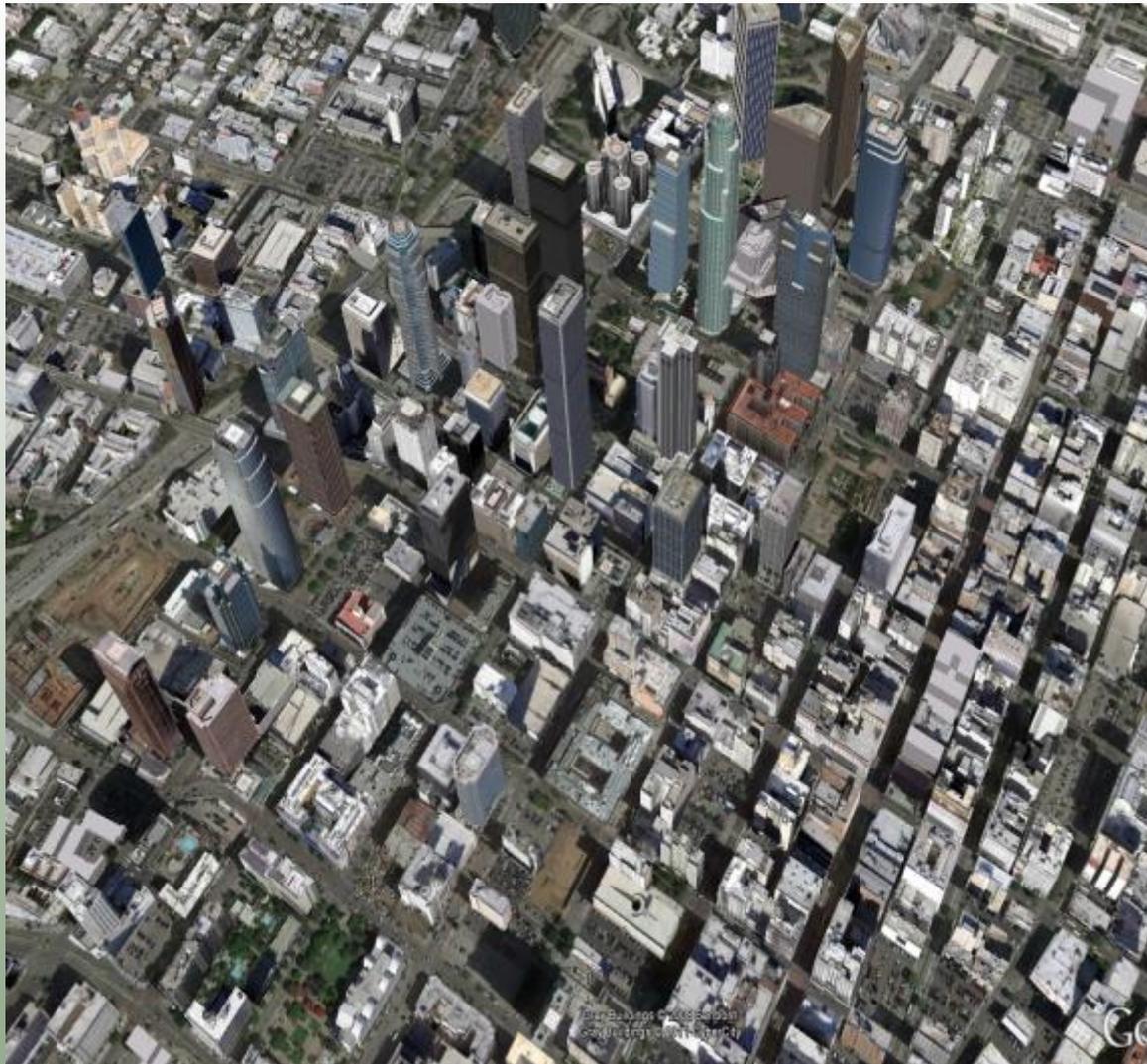
Street Connectivity
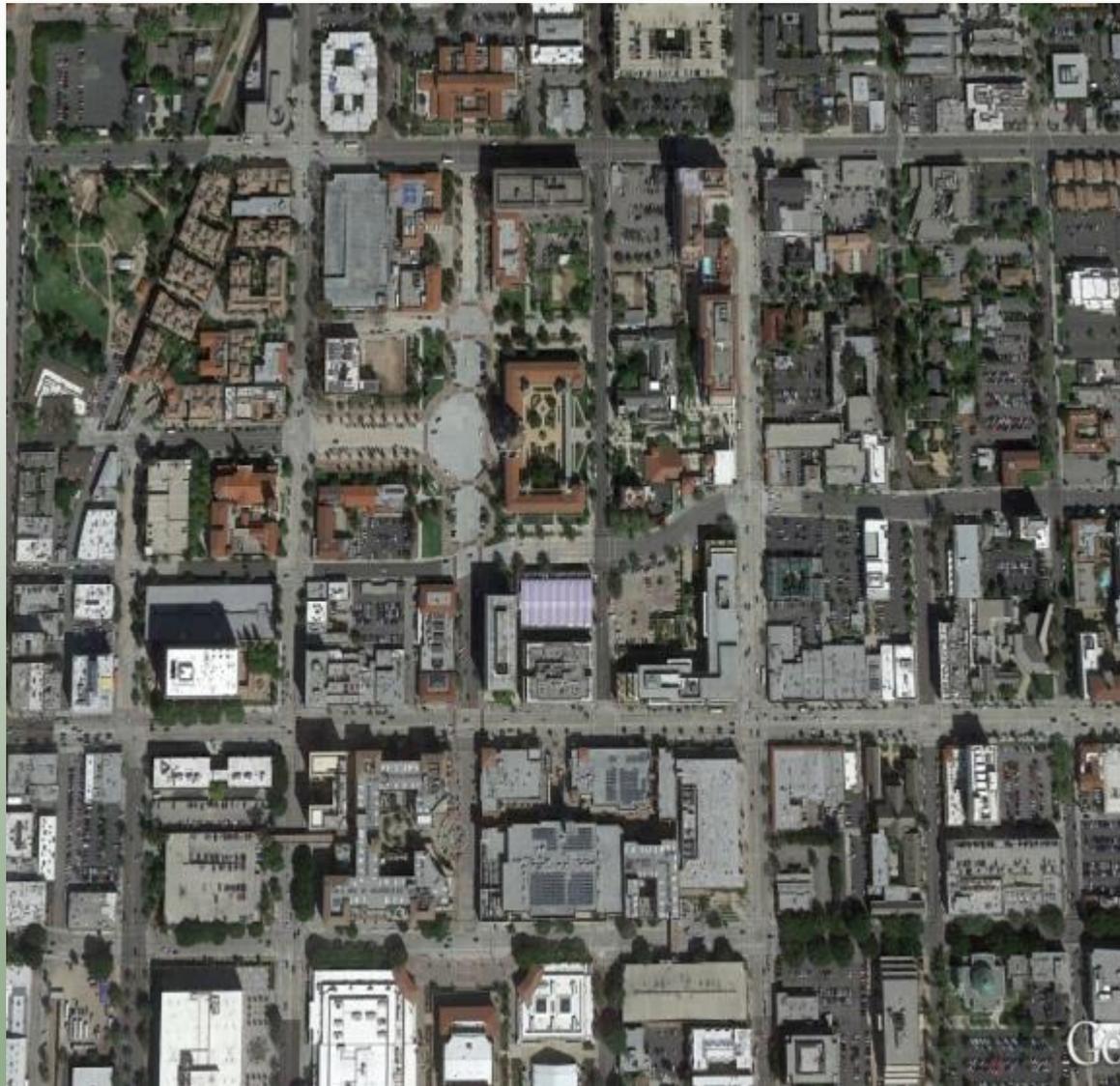
Location/Accessibility

Urban

Compact

Standard

Urban

Compact Walkable

Standard Suburban

FEHR PEERS

Project Goals

Project Goals

- Develop methodology to augment existing SPM by:
  - Enhancing sensitivity to active transportation investment
  - Allowing dynamic assessment of active transportation need/costs/benefits as land-use changes
  - Provide means to forecast benefit without precision of detailed network (since many communities do not have plans)
- Ensure applicability across SCAG region
- Limited to available data on hand
  - SPM, Travel Model, SCAG GIS
- Develop quantitative relationships wherever possible for local conditions

- Variety of models being developed or available for use

- Metro Bike Model

- Public Health Module of the SPM

- All of the other available tools either did not have the geographic coverage or include all of the needed sensitivities:

  - Land use

  - Demographics

  - Transportation characteristics

Integration with SPM

- SCAG asked that we develop a tool that worked with SPM

- Needed to work with SPM by integrating with the existing land use and demographic data

- Key variables in the SPM include:
    - Population
    - Employment
    - Placetypes
    - Intersection density
    - Transit stops

Household Travel Survey

- Local travel survey data provides quantitative relationships

- California Household Travel Survey (CHTS)

- About 100K trip records (individual trips) for the SCAG region

- 80% are auto trips, 20% are other modes

- Trip Length by mode is also reported

- Includes trips of all types (work, non-work, social, etc)

Key Findings

- Walking is much more prevalent than we expected
  - 20% of all trips (or portions of trips) in the survey were walking

- Significant variation in walking and biking by land use
  - Less than 10% to more than 40%

- Key transportation factors
  - Bike lanes
  - Sidewalks
  - Roadway speed
  - Bus stops
  - Intersection density (crosswalk frequency)

Grouping	Place Types	Observed AT Mode Share		
		Range	Average	Median
1	City Mixed Use, City Residential, Town Mixed Use, Urban Commercial, Urban Mixed Use, High Intensity Activity Center	25-44%	30%	27%
2	Village Commercial, Town Residential, Village Mixed Use, City Commercial, Town Commercial, Urban Residential, Industrial/Office/Residential Mixed High	18-27%	23%	24%
3	Neighborhood Residential, Village Residential, Campus Residential, Institutional, Suburban Multi-Family	14-23%	20%	20%
4	Neighborhood Low, Suburban Mixed Residential, Middle Intensity Activity Center, Industrial/Office/Residential Mixed Low, Office Focus	13-18%	15%	16%
5	Residential Subdivision, Low Intensity Retail Centered Neighborhood, Parks Open Space, Mixed Office and R&D, Low Density Employment Park	8-12%	11%	10%
6	Retail Strip Mall/Big Box, Office/Industrial, Industrial Focus, Large Lot Residential, Rural Residential, Rural Employment, Rural Ranchettes, Military	7-10%	8%	8%

Figure 1
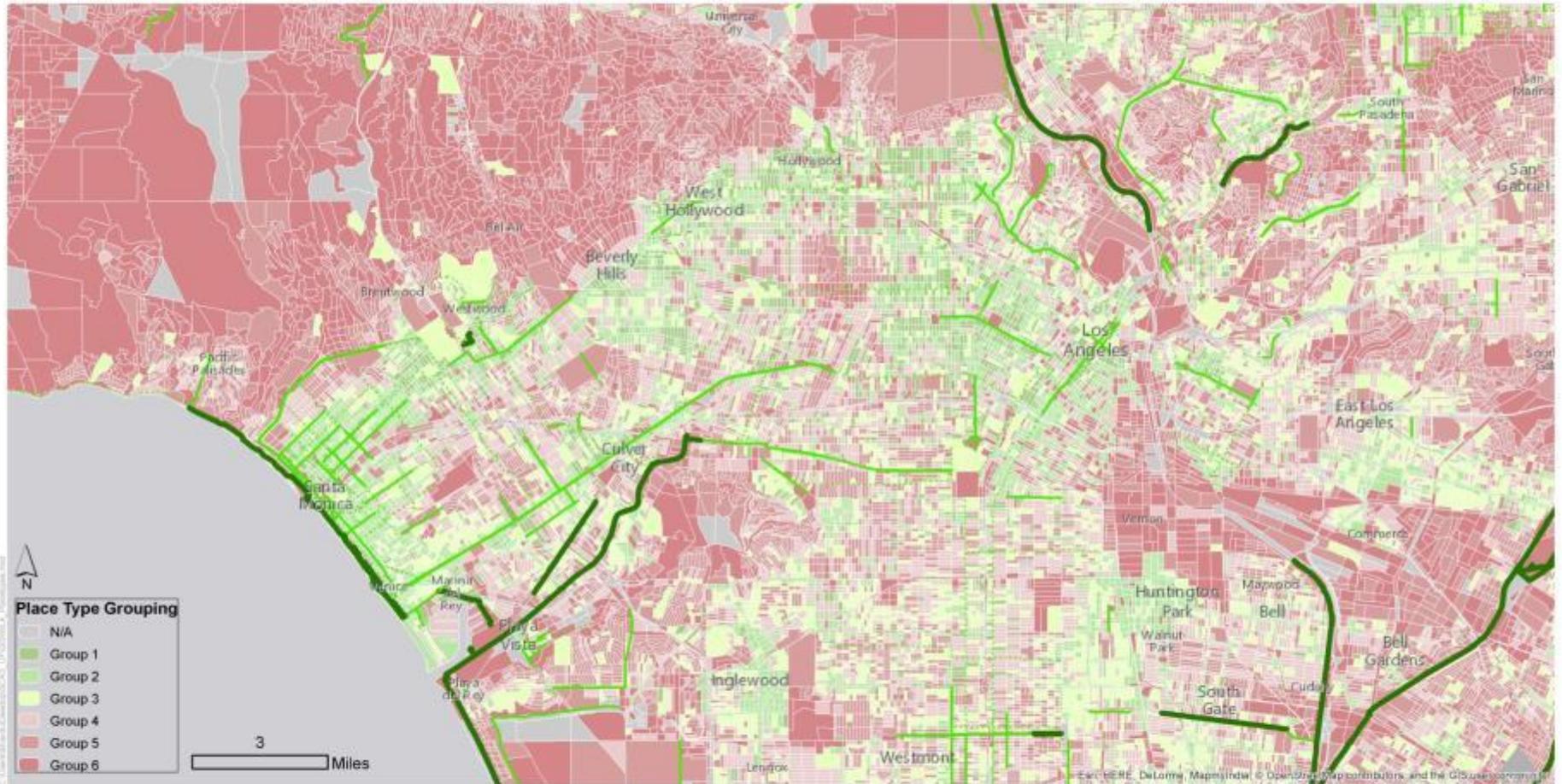West Los Angeles Place Type Grouping

Pasadena Place Type Distribution

Figure 2
Pasadena Place Type Grouping

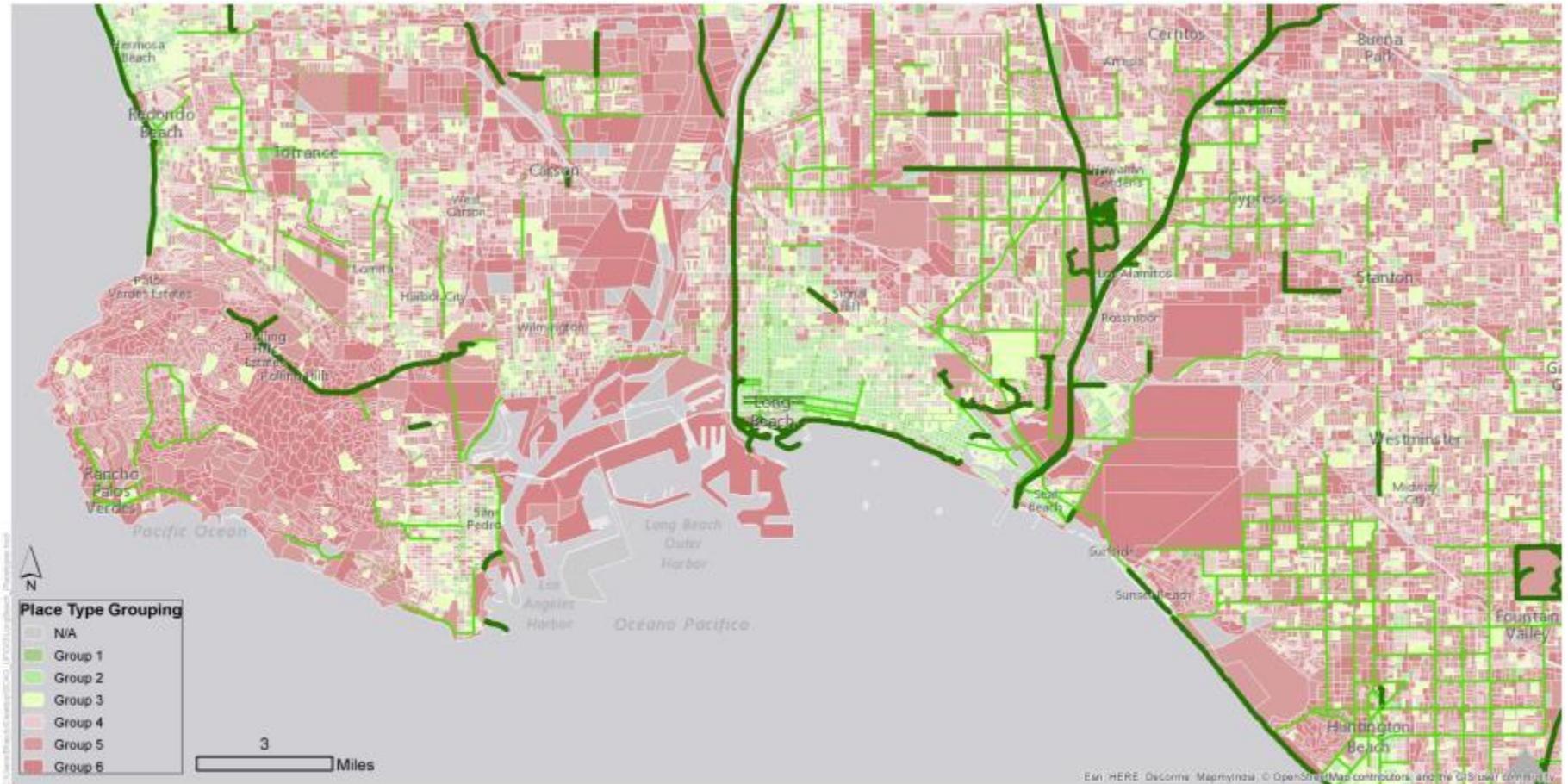# Long Beach Place Type Distribution

Figure 3
Long Beach Place Type Grouping
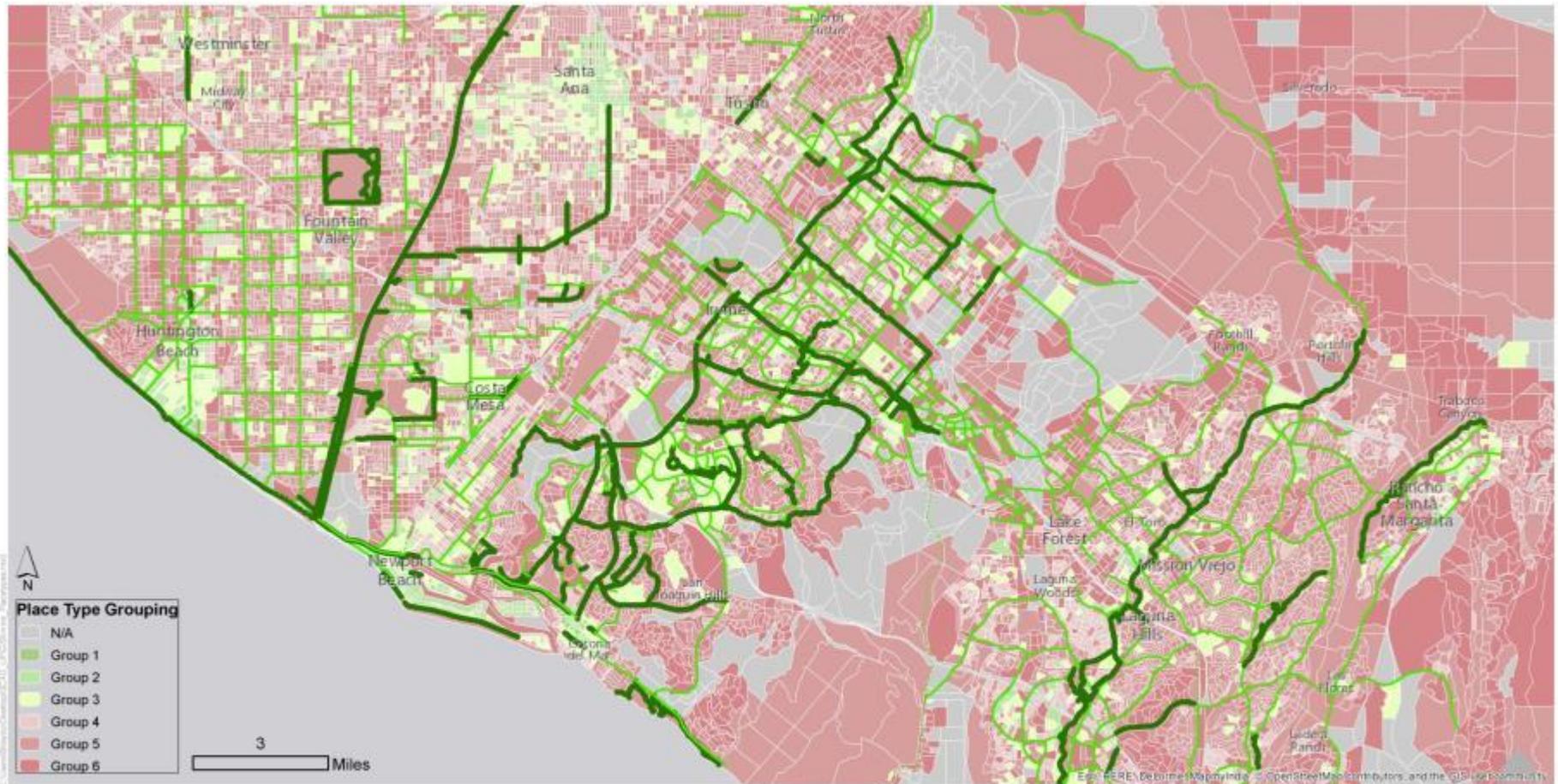
Irvine Place Type Distribution

Figure 4
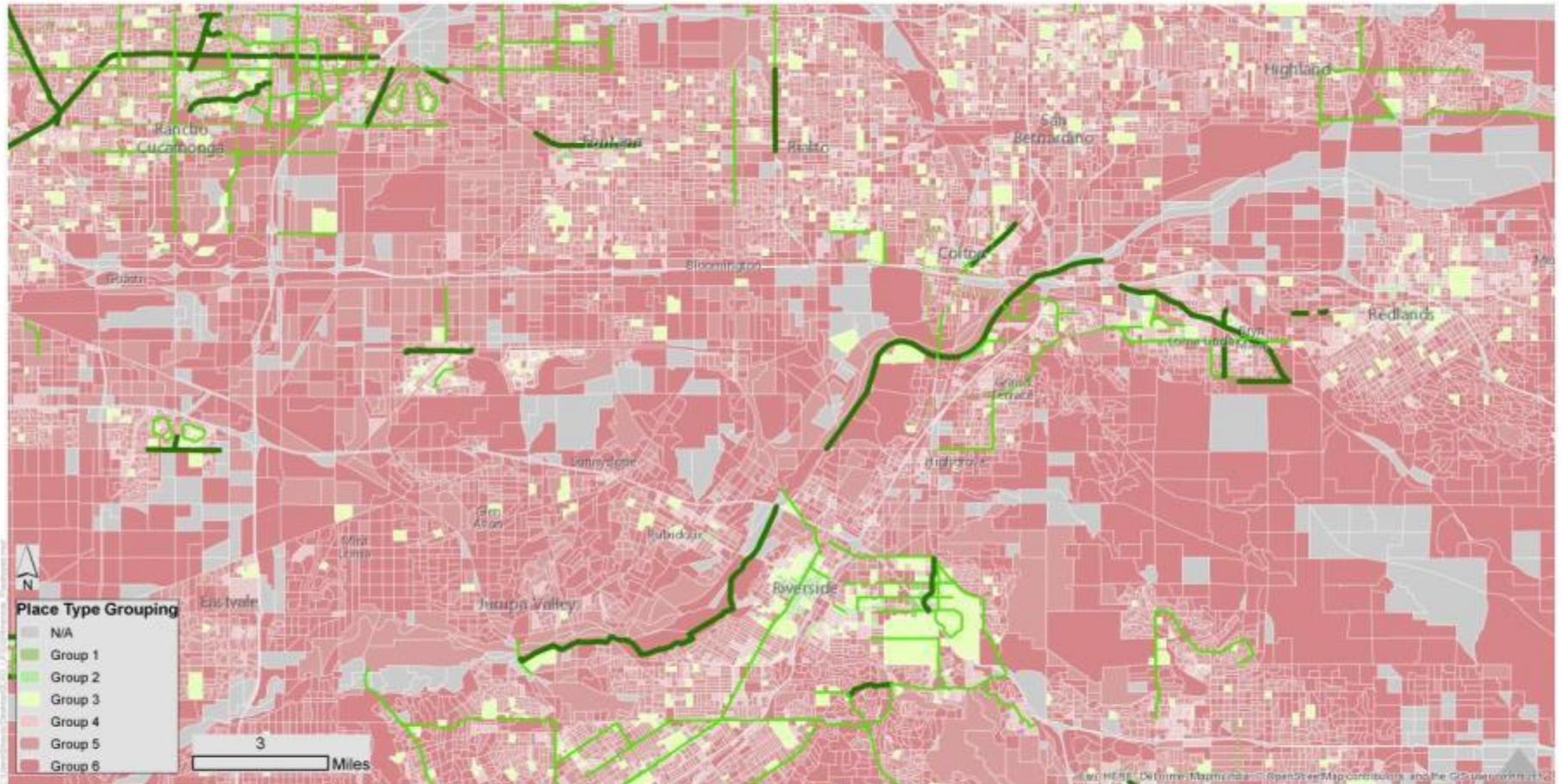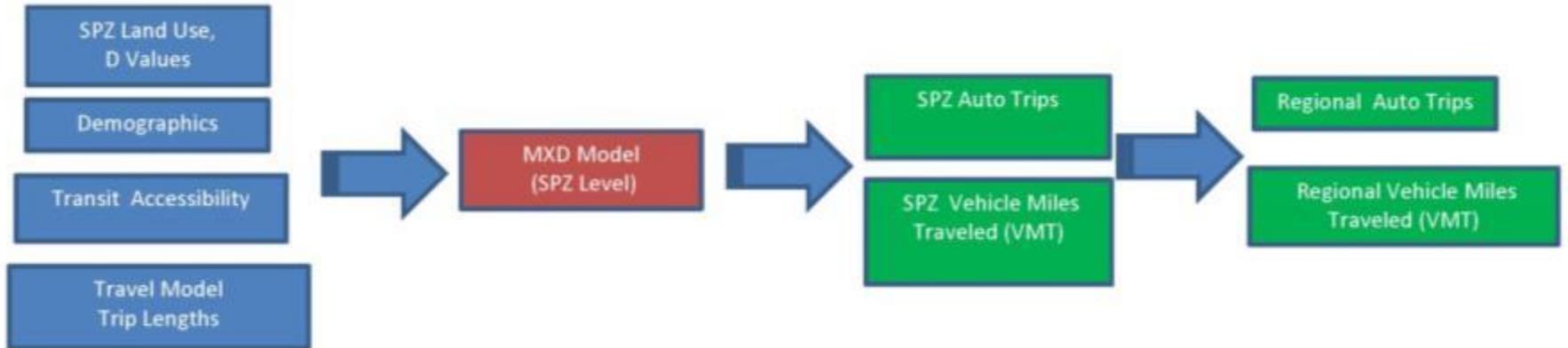Irvine Place Type Grouping

Riverside Place Type Distribution
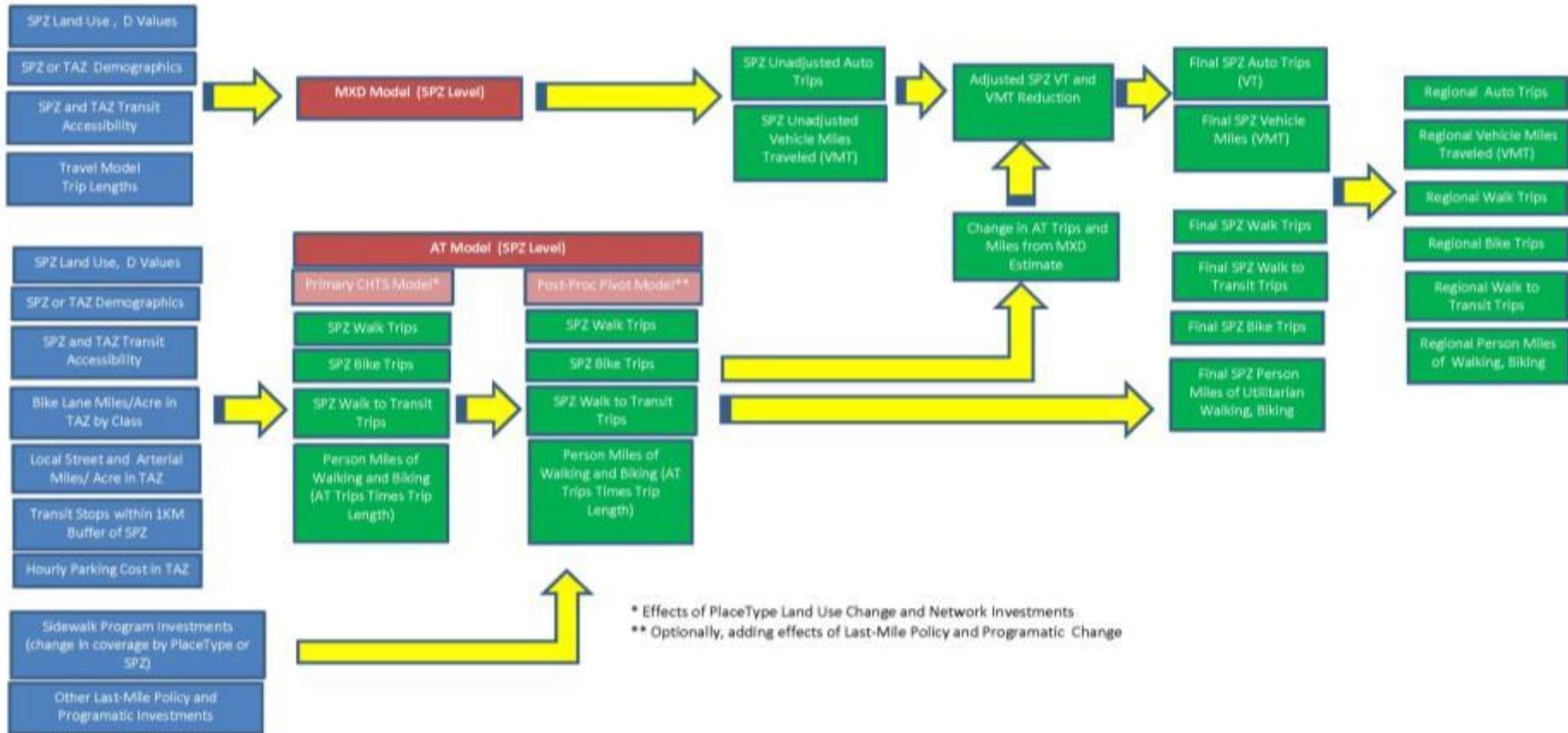

Figure 5
Riverside Place Type Grouping

Trip Lengths

Place Type Grouping	Place Types	Walk Trip Length	Bike Trip Length
1	City Mixed Use, City Residential, Town Mixed Use, Urban Commercial, Urban Mixed Use, High Intensity Activity Center	0.5	2.5
2	Village Commercial, Town Residential, Village Mixed Use, City Commercial, Town Commercial, Urban Residential, Industrial/Office/Residential Mixed High	0.5	2
3	Neighborhood Residential, Village Residential, Campus Residential, Institutional, Suburban Multi-Family	0.5	2
4	Neighborhood Low, Suburban Mixed Residential, Middle Intensity Activity Center, Industrial/Office/Residential Mixed Low, Office Focus	0.5	3
5	Residential Subdivision, Low Intensity Retail Centered Neighborhood, Parks Open Space, Mixed Office and R&D, Low Density Employment Park	0.7	2.5
6	Retail Strip Mall/Big Box, Office/Industrial, Industrial Focus, Large Lot Residential, Rural Residential, Rural Employment, Rural Ranchettes, Military	0.7	3

Integration with SPM/2016 RTP

Existing SPM Process

Proposed SPM Enhancement

* Effects of PlaceType Land Use Change and Network Investments
** Optionally, adding effects of Last-Mile Policy and Programatic Change

- Transportation only factors include:
  - Bike lane density
  - Percent of roadways with sidewalks
  - Transit stops
  - Intersection density
  - Network density of lower speed roads (25 mph)
  - Network density of higher speed roads (35 mph)

Percent of Roadways With Sidewalks

Grouping	Place Types	Low	Medium	High
1	City Mixed Use, City Residential, Town Mixed Use, Urban Commercial, Urban Mixed Use, High Intensity Activity Center	50%	75%	100%
2	Village Commercial, Town Residential, Village Mixed Use, City Commercial, Town Commercial, Urban Residential, Industrial/Office/Residential Mixed High	50%	75%	100%
3	Neighborhood Residential, Village Residential, Campus Residential, Institutional, Suburban Multi-Family	35%	50%	100%
4	Neighborhood Low, Suburban Mixed Residential, Middle Intensity Activity Center, Industrial/Office/Residential Mixed Low, Office Focus	35%	45%	100%
5	Residential Subdivision, Low Intensity Retail Centered Neighborhood, Parks Open Space, Mixed Office and R&D, Low Density Employment Park	20%	40%	50%
6	Retail Strip Mall/Big Box, Office/Industrial, Industrial Focus, Large Lot Residential, Rural Residential, Rural Employment, Rural Ranchettes, Military	10%	25%	35%

Bike Lane Density
(Weighted Average of Facilities by Square Mile)

Grouping	Place Types	Low	Medium	High
1	City Mixed Use, City Residential, Town Mixed Use, Urban Commercial, Urban Mixed Use, High Intensity Activity Center	0	0.1	0.25
2	Village Commercial, Town Residential, Village Mixed Use, City Commercial, Town Commercial, Urban Residential, Industrial/Office/Residential Mixed High	0	0.1	0.25
3	Neighborhood Residential, Village Residential, Campus Residential, Institutional, Suburban Multi-Family	0	0.1	0.75
4	Neighborhood Low, Suburban Mixed Residential, Middle Intensity Activity Center, Industrial/Office/Residential Mixed Low, Office Focus	0	0.1	0.75
5	Residential Subdivision, Low Intensity Retail Centered Neighborhood, Parks Open Space, Mixed Office and R&D, Low Density Employment Park	0	0.1	0.75
6	Retail Strip Mall/Big Box, Office/Industrial, Industrial Focus, Large Lot Residential, Rural Residential, Rural Employment, Rural Ranchettes, Military	0	0.1	0.25

Implementing Transportation Only Improvements

- Change in either bike lane density or percent of roads with sidewalks or both
- First Mile/Last Mile
  - Likely both but perhaps mostly sidewalks
  - Could also be modeled through changes in transit stops or land uses
- Additional bike infrastructure
  - Will increase bike lane density directly, which will lead to increased biking trips

Magnitude of Change

- Changing land use to more dense, mixed use
- 100% sidewalk coverage
- Increasing intersection density
- Increasing bike lane density

Results- Walking and biking mode share could increase to 20-30%, all other items being equal

Next Steps

What Happens Next?

- SCAG will be engaging Calthorpe to code these variables and equations into the SPM

- We prepared a spreadsheet version to analyze strategies for RTP

- SCAG will be evaluating a variety of strategies using available tools
  - Could be SPM
  - Could be spreadsheet tools
  - Could be other methods TBD

- Depends on schedule and other factors

Future Work

- SCAG has an extensive database of land use, demographic, transportation, and travel behavior information

- Locally collected data

- Records on 20,000 households and 100,000 trips

  – Statistically valid survey

  – Includes data on trip type, trip location, and information on traveler

- SCAG could assist CTC's, COG's, Counties, and Cities in doing a similar or related analysis

Questions

Active Transportation Safety and Encouragement Campaign Update

July 29, 2015

Rye Baerg

Active Transportation and Special Programs

Fall Advertising Strategy

- Prioritized goal: Raise awareness of pedestrian & bicyclist safety
- Rooted in SCAG's Needs Assessment
- Data-driven from collision reports and demographic studies
  - Audiences
  - Geography
  - Messages
  - Timing

Paid Media

- Target Demographic
  - Primary: Adult Drivers ages 25-54
  - Secondary: Pedestrians & Bicyclists
  - English & Spanish
- Point of Engagement Media Strategy
- Transit, Billboards, Radio & Digital
- Dates: Flighted 9/28 – 11/30
- Leveraging Donated Media

Focus Group Insights

- Motivators for walking and biking:
  - Health (primary)
  - Recreation/enjoyment
  - Alternative to parking/sitting in traffic (in LA)
- Barriers for walking and biking:
  - Long distances
  - Lack of time – "busy with work"
  - Not feeling safe – "crazy drivers"

Focus Group Insights

- Safety is seen as important.
- Different mode, different mindset (blame game)
- People admit to unsafe behaviors.
- "When I'm in a hurry"
- Drivers have the upper hand.
- Threat of injury/death is strong motivator.
- But we don't want to discourage walking/biking.
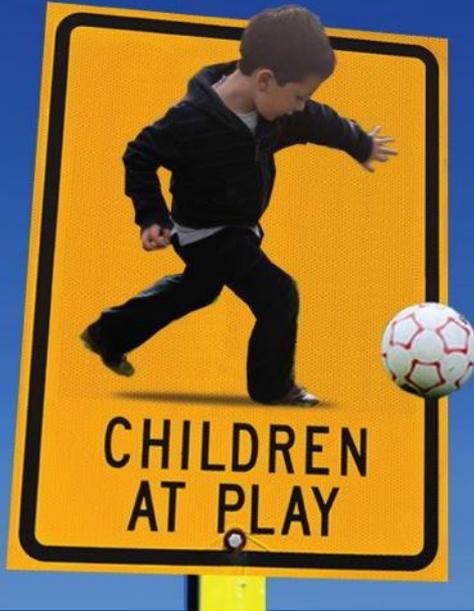
It's not just a sign.

Slow down.

Brand/Program Names

Umbrella for all active transportation encouragement +safety efforts:

- Safety Ad Campaign
- Public Relations
- Tactical Urbanism Events
- Website
- Active Transportation Toolkits

Campaign Assets/Digital Toolkits

Stakeholders will have access to digital toolkits, which will include the following assets:

- FAQ documents for Walking, Cycling and Driving
  - Will be available in multiple languages, including English, Spanish, Vietnamese, Chinese, Korean

- Topline Statistics related to Walking, Cycling, Driving

- Visual assets from Active Transportation Advertising Campaign

- Easily-repurposed social media posts for stakeholders to upload to Facebook and/or Twitter

Update on Health and Economic Benefits Study

July 29, 2015

Rye Baerg

Active Transportation and Special Programs

Active Transportation Health and Economic Impact Study
Contract No. 15-018-C1

Prepared for SCAG Active Transportation Working Group

Dr. Nicole Iroz-Elardo, Project Manager & Data Analyst
Urban Design 4 Health
July 29, 2015

Goal

Goal: **Estimate current annual** public health, transportation and **economic costs and benefits of bicycling and walking** on the SCAG region's economy

Key Elements:

- Build from evidence and best practices
- Use local data when available
- Identify appropriate non-local data when needed
- Develop a study process for use by local partners

Timeline: Summer 2015 – early 2016

Why?

- Evidence suggests **active transportation investments can have broad-reaching implications for health and** local and regional **economies**.

- Impacts **often receive less attention** in the regional planning process.

- **Economic benefits** associated with transportation investments, **including health-related impacts** (over time), are **significant**

  – may be far greater than infrastructure costs

Conceptual Model

CHARACTERIZE

MODEL & MONETIZE

ECONOMIC MODELS

Infrastructure
- Sidewalks
- Crosswalks
- Bike Facilities
- Trails

Routine Travel Behavior
in SCAG Region (Walking & Biking)

Consumer Behavior
- Recreational Equipment
- Local Bike Shops
- Spending in Mixed Use Small Businesses
- Tourism
- Special Events (CicLAvia)
- Housing Prices
- Avoided Vehicle Ownership Costs

Public Health Benefits
- Physical Activity
- Better Air Quality

REMI (Input-Output)
to understand understand the Active Transportation System's contribution to the regional economy

Cost-Benefit Analysis
using per mile costs and benefits

ud4h   AECOM

What? (general)

- **Describe and model** the economic impacts of providing for and the use of the active transportation system

- Support **integration of results into economic models** and processes already in use by SCAG

What? (more specific)

Example Variables – behavior

- % of people who walk, bicycle, drive, transit
- Average walk/bicycle trip distance & trip count

Example Variables – network

- Length of bicycle lane, trail by county and/or major municipality

Example Variables – health

- % reduction in all-cause mortality
- % reduction in population with diabetes, cardiovascular disease, asthma, etc.
- % change in meeting BMI guidelines

Example Variables – jobs and money

- Jobs created by infrastructure and ongoing maintenance spending
- Number of visitors and spending for major athletic events, marathons, CicLAvia, group rides, tours
- Economic output by store type (e.g. local bike shops, rental outlets, etc.)
- Rent/cost premium based on proximity to different facility types
- Development cost savings – e.g. reduced parking requirements if near a facility
- Annual consumer costs for different modes of transportation
- Reduction in healthcare expenditures attributable to chronic disease reduction from active transportation

Ud4h   AECOM

Who?

- Urban Design 4 Health
  - National firm specializing in interactions between land use, built environment, transportation, air quality, behavior and public health.
  - Leader in the translation of evidence on built environment and health relationships into decision support tools
  - www.ud4h.com

- AECOM Technical Services
  - Extensive experience modeling transportation investments, economic development, real estate, tourism and culture, and sustainable development.
  - www.aecom.com

Contact Information

- Dr. Lawrence D. Frank: ldfrank@ud4h.com

- Dr. Nicole Iroz-Elardo: nirozelardo@ud4h.com

Next Steps

- 2015 RTP/SCS
  - Draft RTP/SCS (November)
  - Draft PEIR (November)
  - Final 2016 RTP/SCS and PEIR to General Assembly (April 2016)

- Active Transportation Working Group
  - Next Meeting October/November
- Public Health Strategies and Actions
  - Comments Due July 31st

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