Active Transportation Working Group

July 29, 2015

Rye Baerg
Active Transportation and Special Programs
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
Project Overview

• 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

REGIONAL TRANSPORTATION PLAN
2012-2035
SUSTAINABLE COMMUNITIES STRATEGY
Towards a Sustainable Future

Thank you for using the Download/Print Dashboard for the 2012-2035 RTP/SCS by The Southern California Association of Governments. In this document are PDFs of the Final 2012-2035 RTP/SCS.

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2016 RTP

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

Urban
Land Development Category (LDC)

Compact Walkable
Land Development Category (LDC)

Standard Suburban
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
Using Existing Models

• 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
Key Observations

• 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)
<table>
<thead>
<tr>
<th>Grouping</th>
<th>Place Types</th>
<th>Observed AT Mode Share</th>
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<tbody>
<tr>
<td>1</td>
<td>City Mixed Use, City Residential, Town Mixed Use, Urban Commercial, Urban Mixed Use, High Intensity Activity Center</td>
<td>25-44%</td>
<td>30%</td>
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<td>Village Commercial, Town Residential, Village Mixed Use, City Commercial, Town Commercial, Urban Residential, Industrial/Office/Residential Mixed High</td>
<td>18-27%</td>
<td>23%</td>
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<td>3</td>
<td>Neighborhood Residential, Village Residential, Campus Residential, Institutional, Suburban Multi-Family</td>
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<td>4</td>
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<td>13-18%</td>
<td>15%</td>
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<td>11%</td>
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<td>6</td>
<td>Retail Strip Mall/Big Box, Office/Industrial, Industrial Focus, Large Lot Residential, Rural Residential, Rural Employment, Rural Ranchettes, Military</td>
<td>7-10%</td>
<td>8%</td>
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Long Beach Place Type Distribution

[Map of Long Beach Place Type Distribution]

Legend:
- N/A
- Group 1
- Group 2
- Group 3
- Group 4
- Group 5
- Group 6

Scale: 3 Miles
Riverside Place Type Distribution
## Trip Lengths

<table>
<thead>
<tr>
<th>Place Type Grouping</th>
<th>Place Types</th>
<th>Walk Trip Length</th>
<th>Bike Trip Length</th>
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<td>2.5</td>
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<td>3</td>
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</table>
Integration with SPM/2016 RTP
Existing SPM Process
Proposed SPM Enhancement
Transportation Only Improvements

- 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)
<table>
<thead>
<tr>
<th>Grouping</th>
<th>Place Types</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
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<td>50%</td>
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<td>10%</td>
<td>25%</td>
<td>35%</td>
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# Bike Lane Density
*(Weighted Average of Facilities by Square Mile)*

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</tr>
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<td>0.1</td>
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<td>0.1</td>
<td>0.25</td>
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<td>3</td>
<td>Neighborhood Residential, Village Residential, Campus Residential, Institutional, Suburban Multi-Family</td>
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<td>0.75</td>
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<td>0</td>
<td>0.1</td>
<td>0.25</td>
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</tbody>
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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.
Umbrella for all active transportation encouragement + safety efforts:

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

- Infrastructure
  - Sidewalks
  - Crosswalks
  - Bike Facilities
  - Trails

**MODEL & MONETIZE**

- 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

**ECONOMIC MODELS**

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

- Cost-Benefit Analysis using per mile costs and benefits
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
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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Alan Thompson
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