

Public Health Working Group

July 14, 2015

Rye Baerg
Active Transportation and Special
Programs



Agenda

- Introductions
- Public Health Work Plan Progress
- SPM Public Health Module
- Draft 2016 RTP/SCS Public Health Strategies and Actions
- Wrap UP/Next Steps

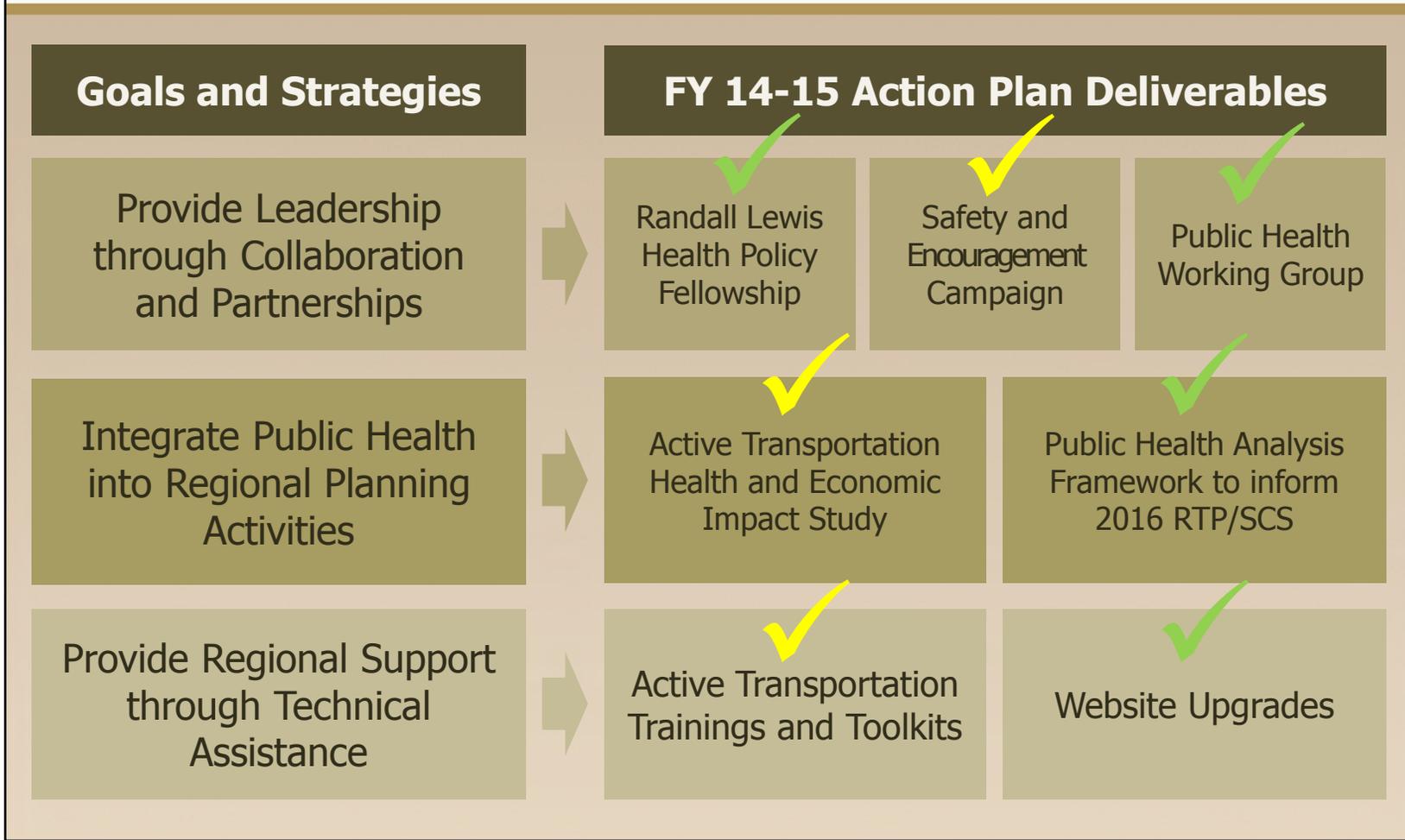
Public Health Work Plan Progress

July 14, 2015

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Active Transportation & Special
Programs



SCAG Focus: Public Health Work Program

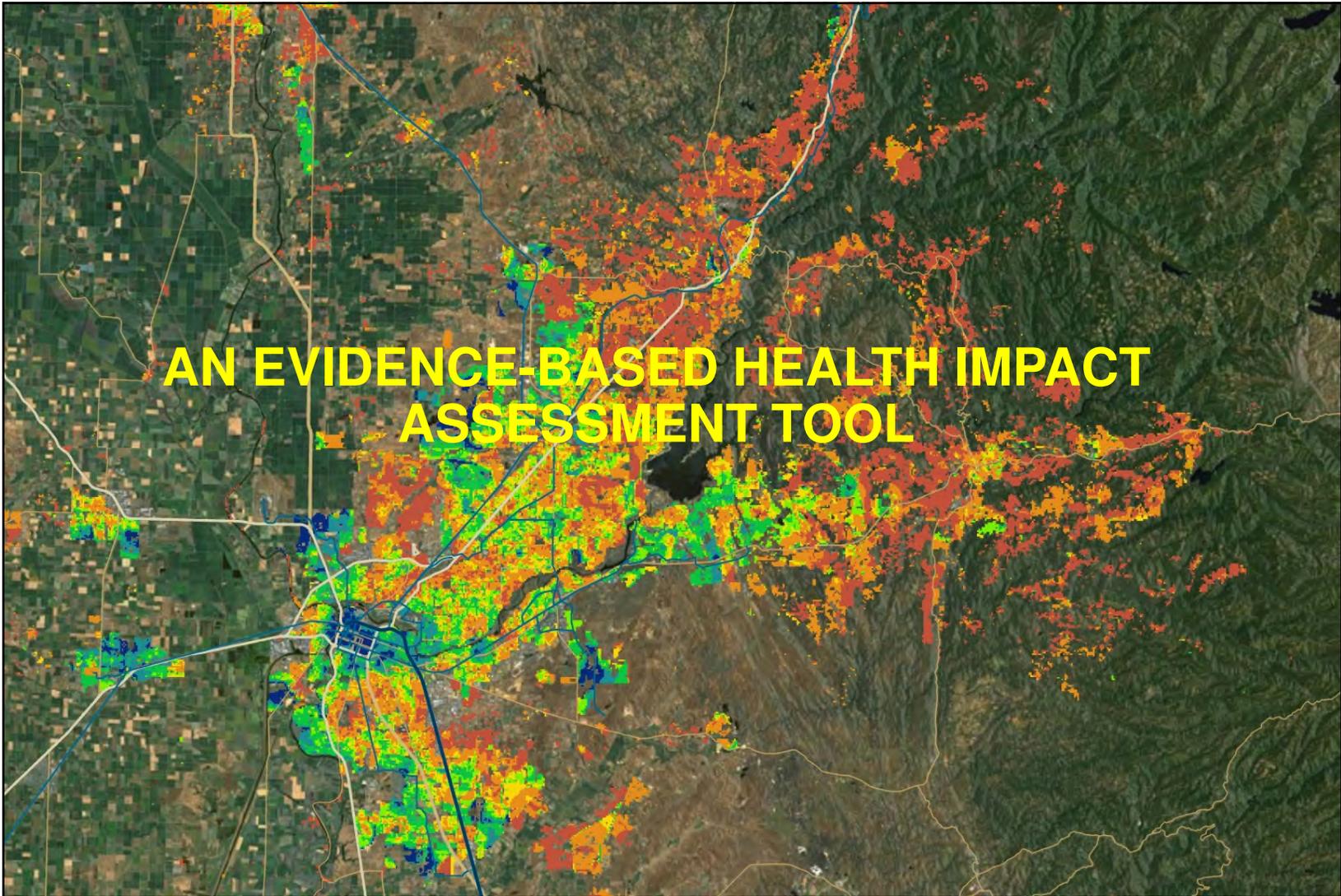


SPM Public Health Module

July 14, 2015

Larry Frank – UD4H
Joe Distefano – Calthorpe





AN EVIDENCE-BASED HEALTH IMPACT ASSESSMENT TOOL

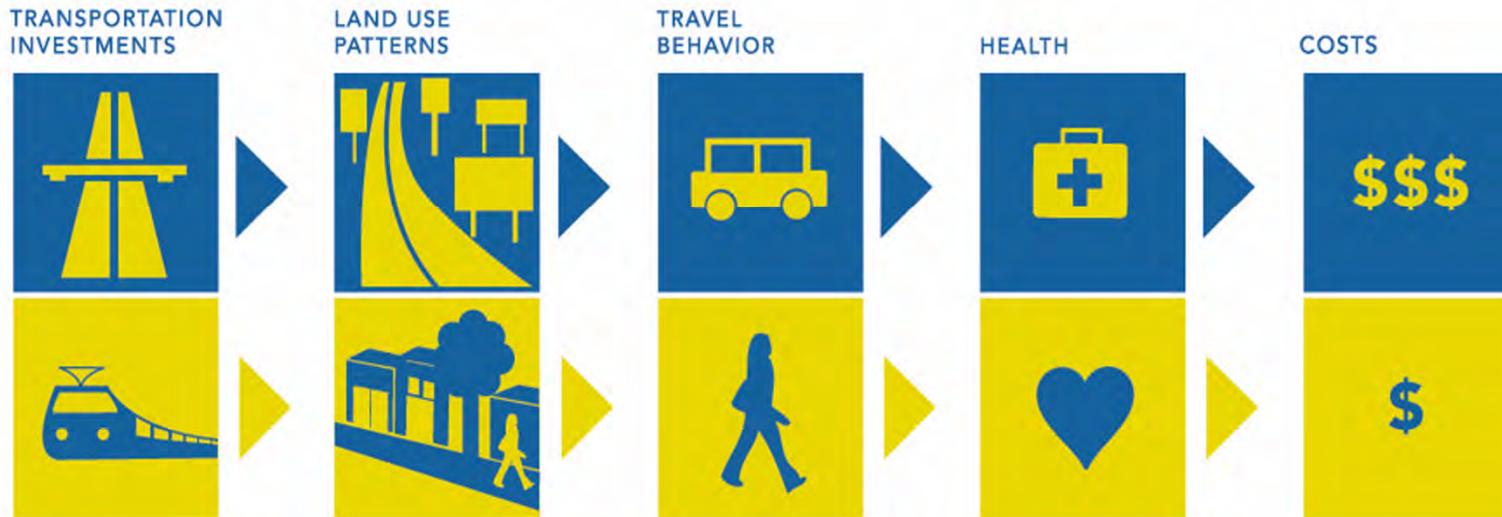
Lawrence Frank, President [Urban Design 4 Health, Inc](#)

[Urban Design 4 Health, Inc](#) Distefano, Principal

CALTHORPE ANALYTICS

CALTHORPE ANALYTICS

HOW TRANSPORTATION IMPACTS HEALTH COSTS



*“The Hidden Health Costs of Transportation”
Frank et al 2010*

American Public Health Association

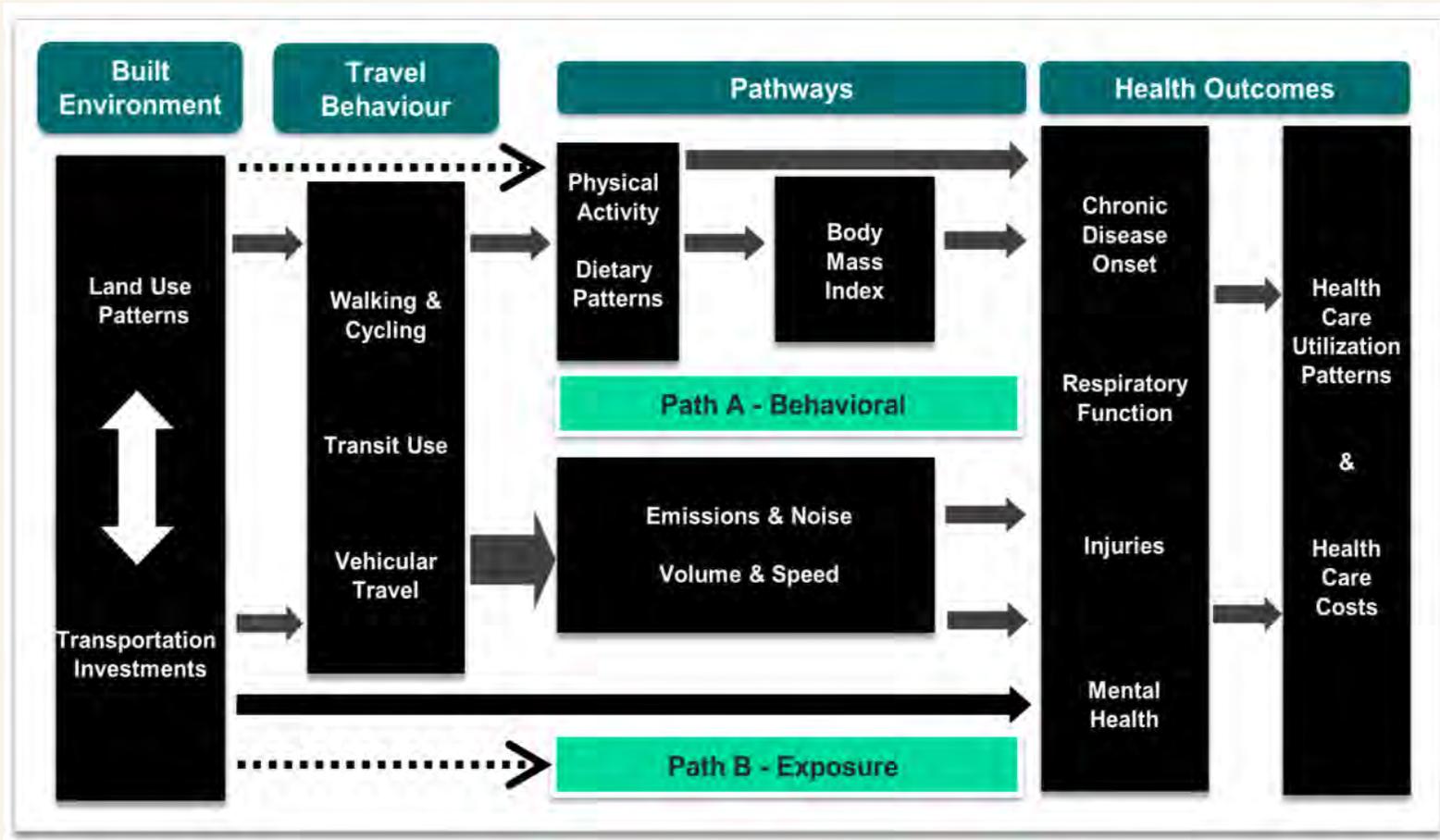
California Public Health Assessment Model: Project team members

- Steering Committee:
 - Strategic Growth Council
 - Governor's Office of Planning & Research
 - Calif. Health & Human Services Agency
 - Calif. Dept. of Public Health
 - Sacramento Area Association of Governments
 - Southern Calif. Association of Governments
 - San Diego County Dept. of Public Health
- Tech Advisory Committee:
 - UC Berkeley Safe Transportation Research & Education Center
 - Centers for Disease Control
 - Resource Systems Group
 - UCLA Center for Health Policy
 - LA County Dept. of Public Health
 - RAND Corporation
- Consultants: - Urban Design 4 Health
- Calthorpe Analytics

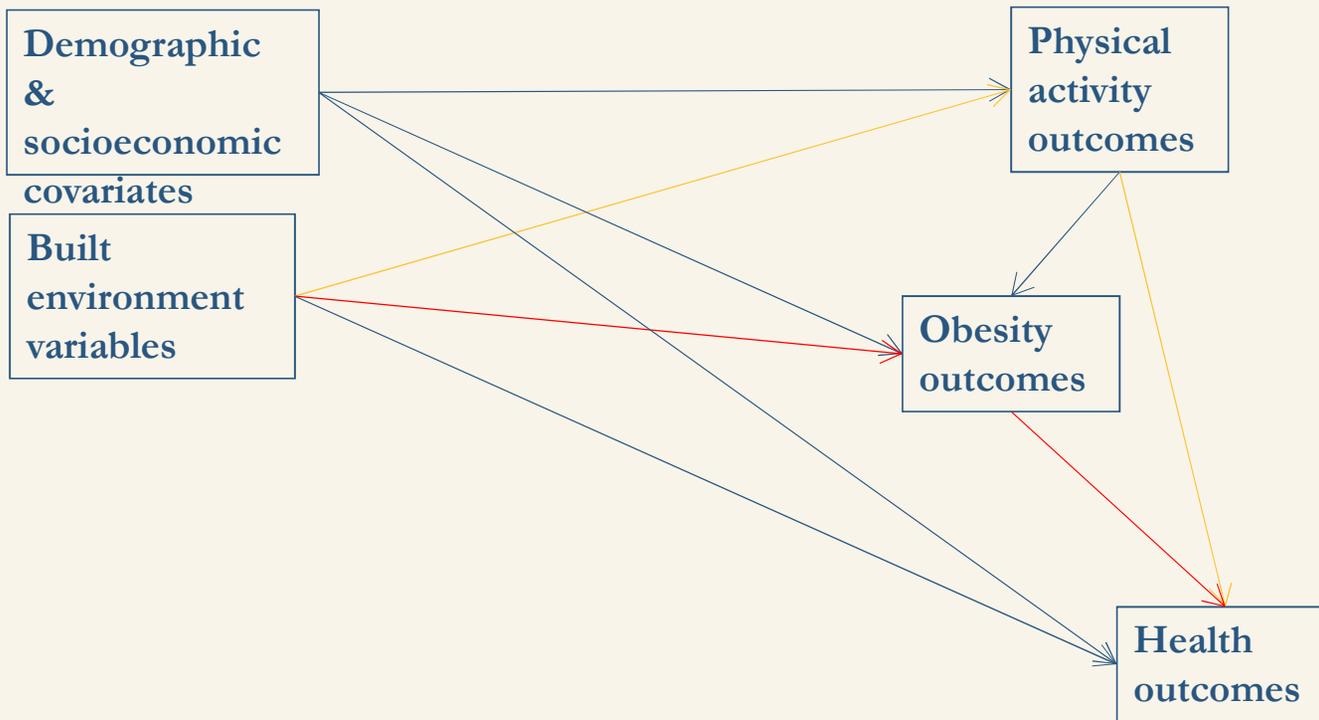
Integrating health into Scenario planning framework

- Integrating health metrics into scenario planning results in a quantitative Health Impact Assessment tool
- VERY Different approach than HEAT AND ITHIM
 - Allows land use and urban design features to be directly linked with health outcomes
- California Evidence Significant within 5% accuracy within an average block group allowing neighborhood scale planning
 - approximately 1800 people
- Makes the best use of existing data and has been reviewed and approved through a multi-stakeholder interdisciplinary peer review panel
 - Approved 2 times over the past 3 years through a CA state level IRB process for data access

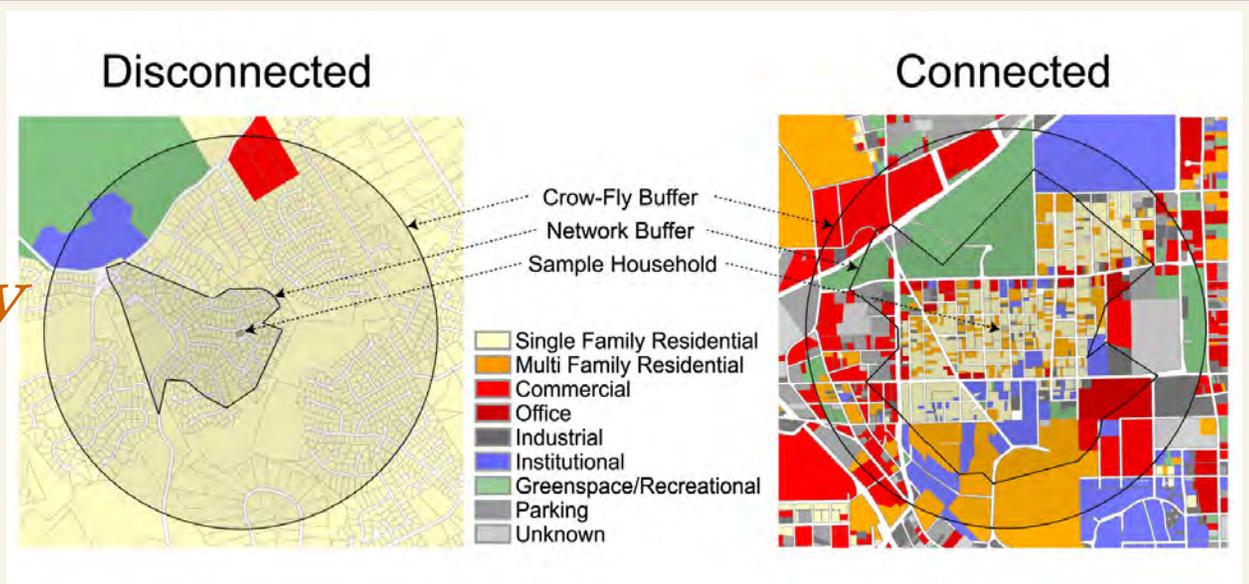
CONCEPTUAL FRAMEWORK



THE PATHWAYS



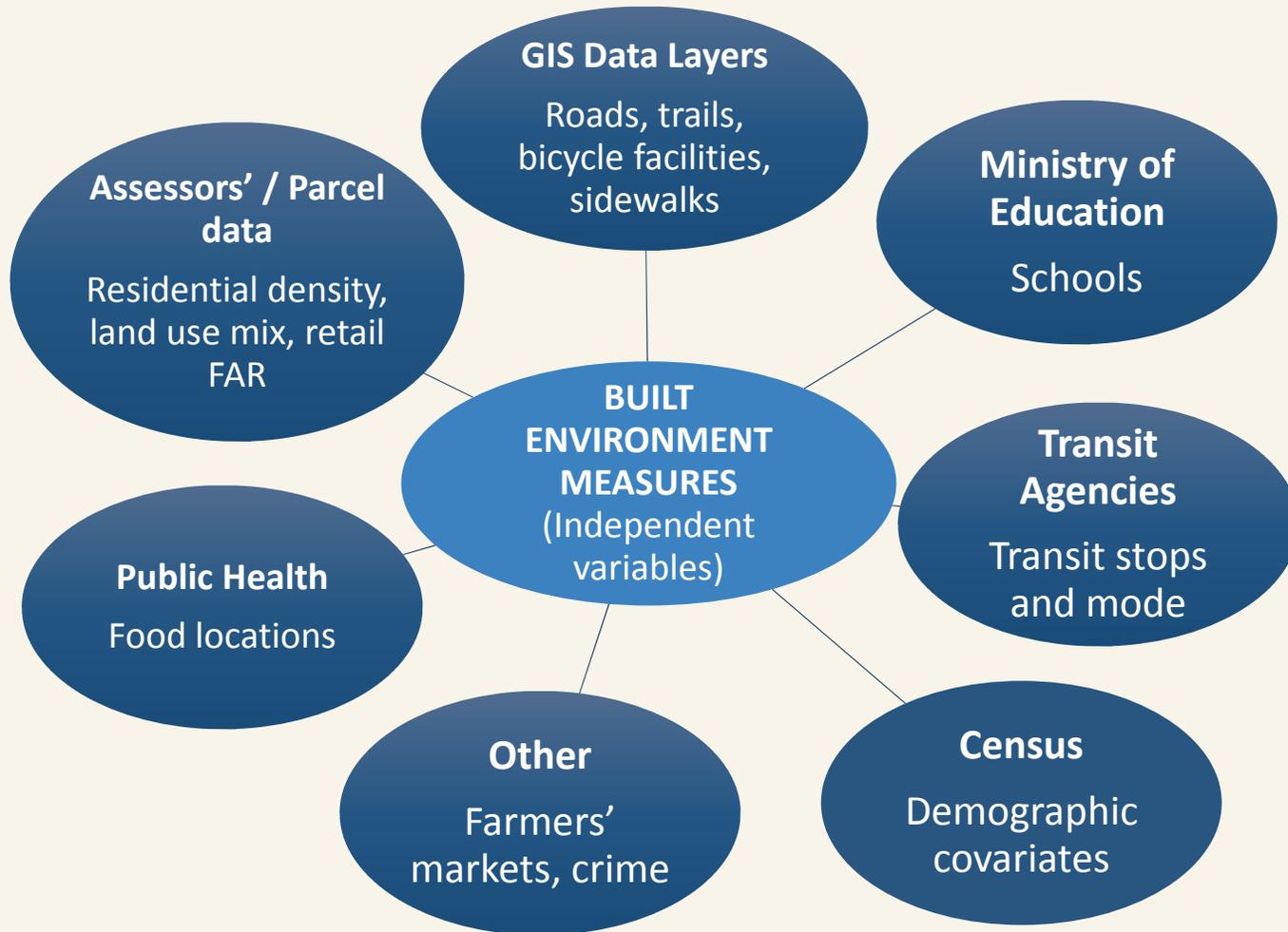
Proximity



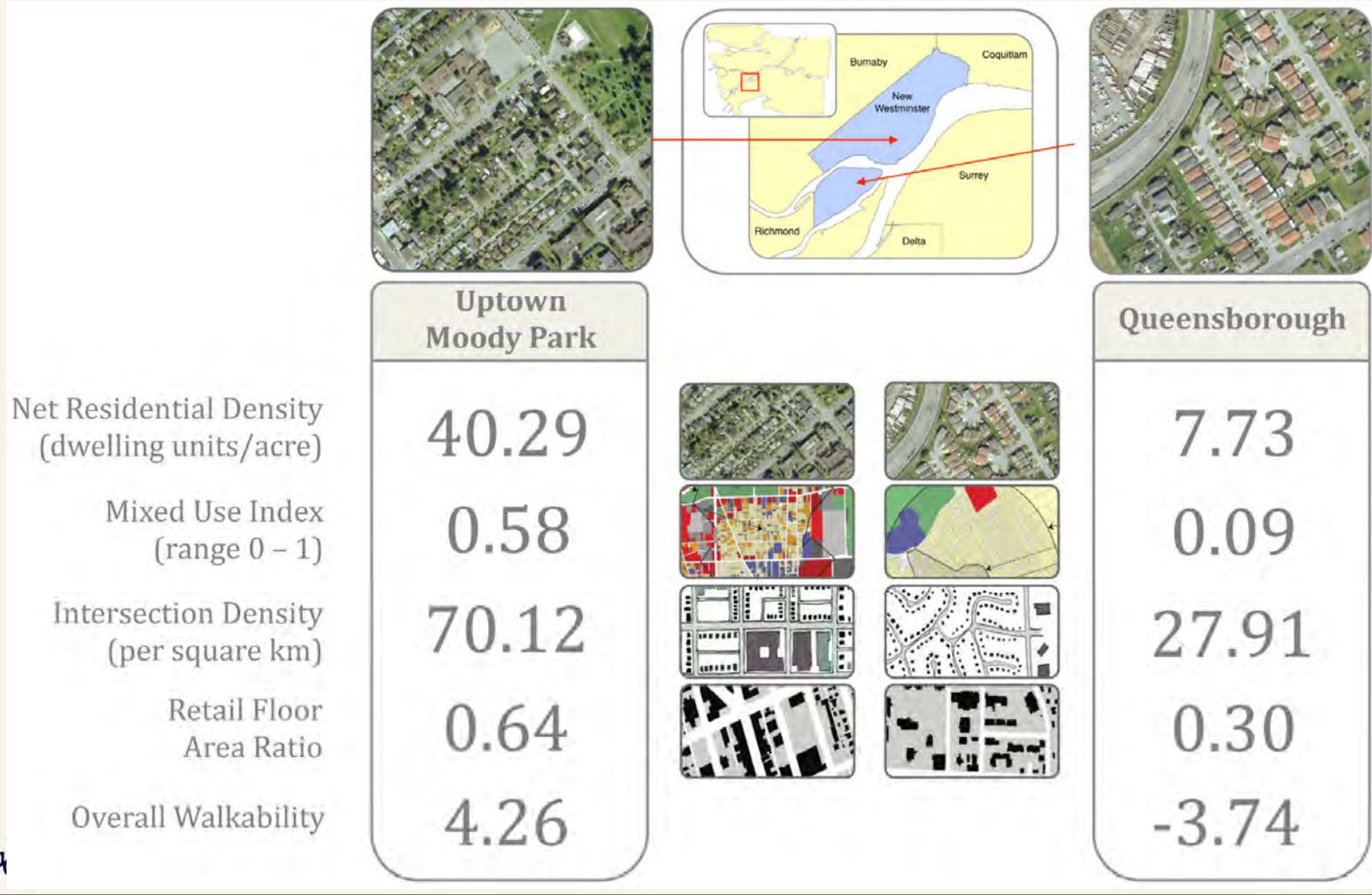
Connectivity

CALTHORPE ANALYTICS

Built Environment Data Sources



Walkability Metrics

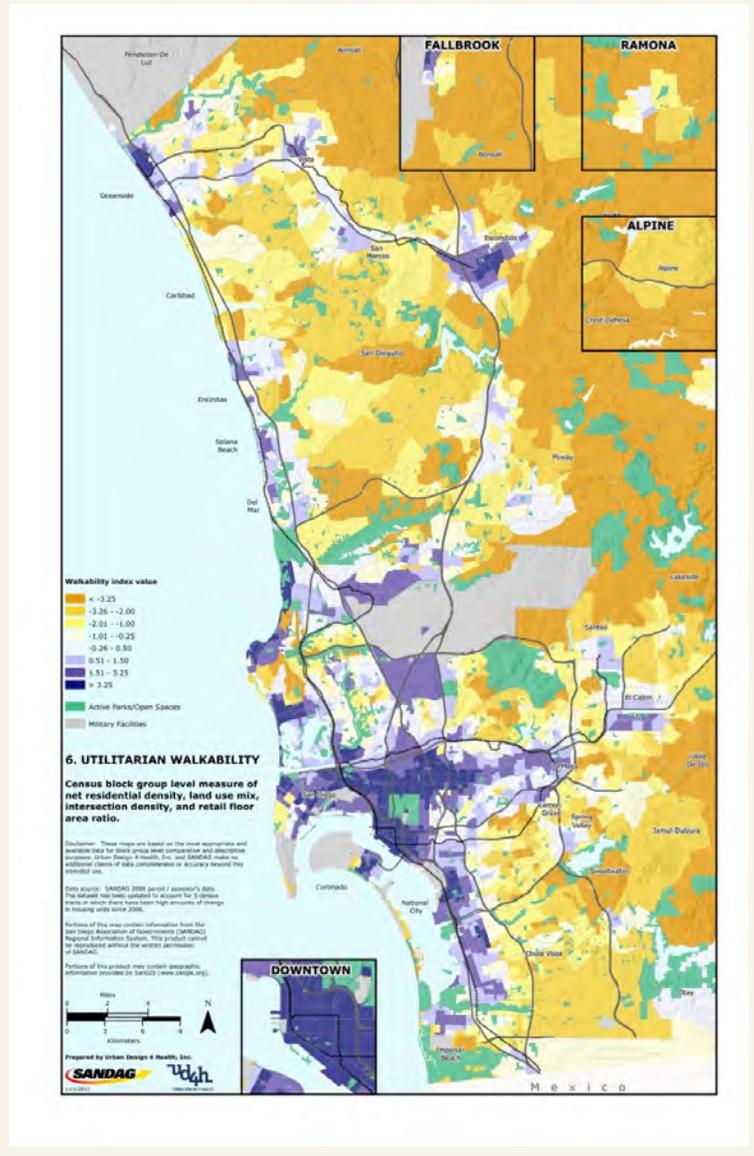
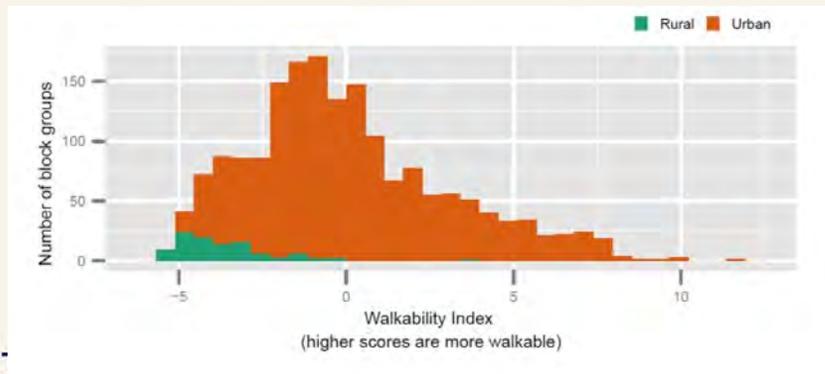


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Utilitarian Walkability

Made up of: Residential density, retail Floor Area Ratio, intersection density, land use mix

Regional walkability distribution, by block group



California Data sources

Provide Calif. demographics, socioeconomic status, behaviors, and health conditions:

- **UrbanFootprint** (UF) built environment, demographic, and socioeconomic data
- **Calif. Health Interview Survey** (CHIS)
- **Calif. Household Transport. Survey** (CHTS)



Strengths of approach

- **Large sample sizes**
 - 53,733 CHTS participants
 - 40,617 CHIS participants
- **Strata-specific model development**
 - 4 age groups (seniors, adults, teens, children)
 - For adults, three HH income groups (<\$50k, \$50-100k, >\$100k)
- **California-specific evidence base**
 - CHIS and CHTS data were collected from a representative cross-section of Californians
- **Variability in built environment characteristics**
 - 30-county study area covers a broad range of built environments and travel behaviors across California

Model Variables - Built Environment

- **Walkability index**
 - dwelling unit count w/n 1km
 - residential density w/n 1km
 - retail floor area w/n 1km
 - non-residential FAR w/n 1km
 - distance to nearest retail
 - distance to nearest restaurant
 - land use mix w/n 1km
 - intersection density w/n 1km
 - local street length w/n 1km
- **Transit access index**
 - transit stop count w/n 1km
 - distance to nearest transit stop
- **Rail transit access within 2km**
- **Major road index**
 - major street length w/n 1km
 - any major road within 500m
- **Regional accessibility index**
 - regional residential accessibility
 - regional employment accessibility
- **Distance to nearest school**
- **Park access**
 - Park acres w/n 1km
 - Distance to nearest park

Model Variables - Covariates

- Age
- Sex
- Race/ethnicity
- Educational attainment
- Adult employment status
- Adult home ownership
- Household income
- Household size
- Household vehicle availability
- Disability status
- Presence of children

Model development notes

- One age group-specific preliminary model was generated for each outcome with all income groups pooled together
 - Three additional models were then generated after further stratifying each age group by income group for adults
- Two-part regression was used for zero-inflated outcomes (e.g. transportation walking):
 - Part 1: binary logistic regression
 - used to model the likelihood of any activity versus no activity
 - Part 2: linear regression
 - used to model the amount of activity in minutes for only the portion of the sample with >0 minutes

Example: Calculating two-part model predictions

1. Estimate the likelihood of any physical activity
2. Estimate the amount of physical activity for those w/ any
3. Multiply (likelihood) x (min. for those w/ any)

Outcome	Likelihood	Minutes for those with any	Predicted minutes
Transportation walking	49.0%	113.8	55.7
Recreational walking	64.5%	135.8	87.6
Moderate PA	59.7%	186.9	111.5
Vigorous PA	33.9%	180.8	61.3
Total PA	NA	NA	316.2

Model development notes (cont.)

- All models adjust for:
 - All covariates
 - Categorical covariates have not yet been collapsed
 - All final built environment variables
- BMI/overweight/obesity models also adjust for:
 - Total minutes of physical activity (adults/seniors)
 - # days/wk with >60 minutes PA (teens/children)
- Health outcome models also adjust for:
 - Physical activity variables indicated above
 - BMI (adults/seniors) or BMI% (teens/children)

Model fitting process

1. Add all covariates to the model
2. Add each built environment variable to the model one-at-a-time and fit the regression model (once for each BE variable)
3. Add all built environment variables to the model simultaneously and fit the regression model

Models fitted

Data set	Age cohort						Outcome	
	Adults, by income:			Senior	Teen	Child		
	Low	Med	High					
CHIS	x	x	x	x			Walking for transportation (min/wk)	
	x	x	x	x			Walking for recreation (min/wk)	
	x	x	x	x			Moderate physical activity (min/wk)	
	x	x	x	x			Vigorous physical activity (min/wk)	
						x	x	Days/week > 60 min physical activity
						x	x	Likelihood to walk/bike from school
	x	x	x	x	x	x	x	Body mass index
	x	x	x	x	x	x	x	Likelihood to be obese
	x	x	x	x				Likelihood to have high blood pressure
	x	x	x	x				Likelihood to have heart disease
	x	x	x	x				Likelihood to have type 2 diabetes
	x	x	x	x	x	x	x	Likelihood to have poor health
CHTS	x	x	x	x	x	x	Walking for transportation (min/day)	
	x	x	x				Biking for transportation (min/day)	
	x	x	x	x	x	x	Automobile travel (min/day)	
	x	x	x	x	x	x	Recreational physical activity (min/day)	

Example model (part 1)

- Outcome = CHTS likelihood of any active transportation, binary logistic regression

	Coefficient	Standard Error	z value	p value
(Intercept)	0.6410	0.1531	4.1860	0.0000
Gender = female	-0.1874	0.0307	-6.1036	0.0000
Age	-0.0079	0.0014	-5.6287	0.0000
Race/eth = white, non-Hispanic	-0.1099	0.0459	-2.3960	0.0166
Race/eth = African American, non-Hispanic	-0.1061	0.0820	-1.2941	0.1956
Race/eth = American Indian/Alaska native	0.0534	0.2370	0.2255	0.8216
Race/eth = Asian	-0.2632	0.0537	-4.9034	0.0000
Race/eth = Native Hawaiian/Pacific islander	0.6327	0.3805	1.6630	0.0963
Race/eth = other	-0.1533	0.1150	-1.3338	0.1823
Employed = no	0.1198	0.0337	3.5537	0.0004
Education = High school diploma	-0.0871	0.0640	-1.3607	0.1736
Education = Some college, no degree	-0.0431	0.0697	-0.6179	0.5366
Education = Vocational or associate's degree	-0.1140	0.0758	-1.5034	0.1327
Education = Bachelor's degree	-0.0400	0.0676	-0.5914	0.5542
Education = Graduate degree	0.1162	0.0724	1.6050	0.1085
Home owner = no	0.2423	0.0383	6.3199	0.0000
Household size	-0.0096	0.0113	-0.8422	0.3997

Example model (part 2)

	Coefficient	Standard Error	z value	p value
Income = \$10,000-\$25,000	-0.0007	0.0897	-0.0077	0.9939
Income = \$25,000-\$35,000	-0.1003	0.0973	-1.0312	0.3025
Income = \$35,000-\$50,000	-0.3524	0.0940	-3.7492	0.0002
Income = \$50,000-\$75,000	-0.3343	0.0909	-3.6763	0.0002
Income = \$75,000-\$100,000	-0.2262	0.0948	-2.3845	0.0171
Income = \$100,000-\$150,000	-0.2836	0.0930	-3.0511	0.0023
Income = \$150,000-\$200,000	-0.2297	0.1010	-2.2756	0.0229
Income = \$200,000-\$250,000	-0.1371	0.1140	-1.2020	0.2294
Income = >\$250000	-0.1114	0.1102	-1.0107	0.3122
Walkability index	0.0271	0.0056	4.7983	0.0000
Intersection density	0.0243	0.0052	4.6324	0.0000
Transit distance	-0.0123	0.0093	-1.3205	0.1867
Rail access %	0.2832	0.0580	4.8837	0.0000
Major road exposure %	-0.0927	0.0377	-2.4621	0.0138
Regional access	0.0566	0.0095	5.9673	0.0000
School distance	-0.0250	0.0073	-3.4244	0.0006
Park access	0.0137	0.0090	1.5182	0.1290

Example CHTS adult model results

Outcome	Walkability index	Transit access	Rail access	Major road exposure	Regional access	Distance to school	Park access
any walking for transportation	+++	+++	+++		+++	---	+++
minutes/day transport walking for those with any	+++		++		++		+
any recreational PA	+++	--					+++
minutes/day of recreational PA for those with any	---			+			

+++	Positive association, $p < 0.001$ (strong statistically significant)
++	Positive association, $p < 0.05$ (statistically significant)
+	Positive association, $p > 0.05$ (not statistically significant)
-	Negative association, $p > 0.05$ (not statistically significant)
--	Negative association, $p < 0.05$ (statistically significant)
---	Negative association, $p < 0.001$ (strong statistically significant)
	Variable was tested but not selected for inclusion in the model
NA	Variable was not tested for the model

Example CHIS adult model results

Outcome	Total PA (MET-minutes)	BMI	Walkability index	Transit access	Rail access	Major road exposure	Regional access	Distance to school	Park access
likelihood of being overweight or obese	---	NA	---	-		+		--	---
likelihood of having high blood pressure	---	+++		--				+	-
likelihood of having heart disease	--	+++							-
likelihood of having type 2 diabetes	--	+++	++				--		--
likelihood of having poor self-reported health	---	+++	+	+	-	+			--

+++	Positive association, $p < 0.001$ (strong statistically significant)
++	Positive association, $p < 0.05$ (statistically significant)
+	Positive association, $p > 0.05$ (not statistically significant)
-	Negative association, $p > 0.05$ (not statistically significant)
--	Negative association, $p < 0.05$ (statistically significant)
---	Negative association, $p < 0.001$ (strong statistically significant)
	Variable was tested but not selected for inclusion in the model
NA	Variable was not tested for the model

UrbanFootprint demo model application

- Demo application compares:
 - Observed outcomes from CHIS/CHTS samples
 - Estimated outcomes when applying models to base data
 - Estimated outcomes after modifying all built environment variables by 1 decile in “healthful” direction (as shown to right)

BE variable	Change scenario
Residential density (units/acre)	+ 0.9
Non-residential FAR	+ 0.04
Retail distance (m)	- 62
Restaurant distance (m)	- 35
Land use mix index	+ 0.04
Intersection density (int/sq mi)	+ 17
Transit count	+ 8
Transit distance (m)	- 98
Rail access %	+ 0.97%
Major road exposure %	-2.13%
Park area (acres)	+ 6.4
Park distance (m)	- 95
School distance (m)	- 35

CHIS Adult Models

Mean value- Observed vs. Model, Mean Change- Model vs. Alternative

Outcome	mean sample observed outcome	mean base predicted outcome	mean change predicted outcome	absolute change (base predicted – change predicted)	% change
minutes of transportation walking (daily)	5.0	5.0	6.0	1.0	19.1%
minutes of transportation biking (daily)	1.2	1.1	1.3	0.2	17.8%
minutes of automobile transportation (daily)	74.9	75.2	74.3	-0.9	-1.2%
minutes of recreational PA (daily)	17.9	17.9	18.4	0.5	2.7%
body mass index	26.9	26.8	26.7	-0.2	-0.7%
likelihood of being overweight or obese	56.4%	56.4%	54.7%	-1.7%	-3.0%
likelihood of being obese	23.4%	23.3%	22.3%	-1.0%	-4.3%
likelihood of having high blood pressure	25.8%	25.7%	24.9%	-0.8%	-3.0%
likelihood of having heart disease	4.8%	4.7%	4.6%	-0.1%	-2.1%
likelihood of having type 2 diabetes	6.1%	5.9%	5.6%	-0.3%	-5.0%
likelihood of having poor self-reported health	17.8%	17.6%	17.5%	-0.2%	-0.9%

External Validation Results

- Results based on applying draft models to every grid cell in 30-county UF study area
 - Based on preliminary UF data
- BRFSS:

Validation set	BMI	Overweight	Obese	High BP	Heart disease	Type 2 Diabetes	Poor health
BRFSS adults	27.3	34.7%	26.5%	NA	NA	NA	17.1%
UF adults	27.5	36.7%	21.9%	23.6%	3.0%	4.0%	15.7%

- NHTS

Validation set	Walk minutes	Bike minutes	Auto minutes	Recreational PA minutes
NHTS adults	7.5	1.2	70.7	NA
UF adults	5.6	1.0	81.8	15.9

Variable Definitions

Dwelling units in transit shed	measure of residential proximity to jobs weighted by commute trips generated by job type
Employment in transit shed	measure of employment availability weighted by commute trips generated by job type
Mixed land use index	Entropy measures based on building floor area of residential , retail, restaurant/entertainment , office, public administration
Residential access index	$(resmix_dens - 1.82) / 0.9478 + (du_1km_tr - 7.451) / 1.8664$
Commercial access index	$2*((bldg_sqft_ret - 24.38) / 10.4543) + 2*((far_nonres - 0.5938) / 0.2064) - (retail_distance - 13.91) / 13.5014 - (restaurant_distance - 599.4) / 670.6584$
Park access index	$(acres_parcel_park_open_space_1km - 1.704) / 1.0956 - (park_open_space_distance - 18.48) / 11.3701$
Regional access index	$(du_variable - 24.92) / 6.0667 + (emp_variable - 26.13) / 7.2701$
Transit access index	$2*((transit_count - 3.769) / 3.9104) - (transit_distance - 4.602) / 1.8653$
Major road exposure index	$(major_street - 0.6099) / 0.8575 + (freeway_arterial_any - 0.2126) / 0.4092$
Walkability index (standard)	$2*((res_index - 0.000221) / 1.9586) + 1.5*((network_index - 1.65E-16) / 1.846573714) + (com_index - 0.0005076) / 5.3122 + 0.5*((mix5 - 0.4379) / 0.1840)$

SPZs assigned an LDC

Land Development Categories – each SPZ assigned, for base & future

•Urban

- Dwelling Units/Acre > 40 OR Employment/Acre > 70
- Intersection density (per mile) > 150

•Compact Walkable

- Dwelling Units/Acre < 40 AND Employment/Acre < 70
- Intersection density (per mile) > 150

•Standard Suburban

- Intersection density (per mile) < 150

•Transit

- YES: high quality transit stop/station within 1km of SPZ centroid
- NO: high quality transit stop/station NOT within 1km of SPZ centroid

- **High quality transit:** A rail stop or a bus corridor that provides or will provide at least 15-minute frequency service during peak hours

Comparison Methodology

- **Base to future -- What stays the same?**
 - people
 - locations
 - Compare SPZs with same base/future Land Development Categories
- **Base to future -- What changes?**
 - built environment & presence of transit (as categorized by LDC)
 - >20 pairs of base/future LDCs
 - Chose 5 pairs (with largest change) to present

Comparison Pair	Urban form change (LDC)	Transit	# of SPZ
1	standard to compact	no	26
2		future only	151
3	standard to urban	no	6
4		future only	4
5	Compact -- no change	future only	106

- physical activity & health outcomes
 - population weighted means are reported here

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CALTHORPE ANALYTICS





2016
2040 RTPSCS

PUBLIC HEALTH MODELING

SCAG Joint Public Health/
SPM Working Group Meeting

A Presentation by Calthorpe Analytics
July 14, 2015

CALTHORPE ANALYTICS



2016 2040 RTPSCS

CALIFORNIA PUBLIC HEALTH ASSESSMENT MODEL

SCAG Joint Public Health/ SPM Working Group Meeting

A Presentation by Calthorpe Analytics & UrbanDesign4Health
July 14, 2015

CALTHORPE ANALYTICS



CALTHORPE ANALYTICS

2016 RTP/SCS Scenario Alternatives

MAJOR COMPONENTS

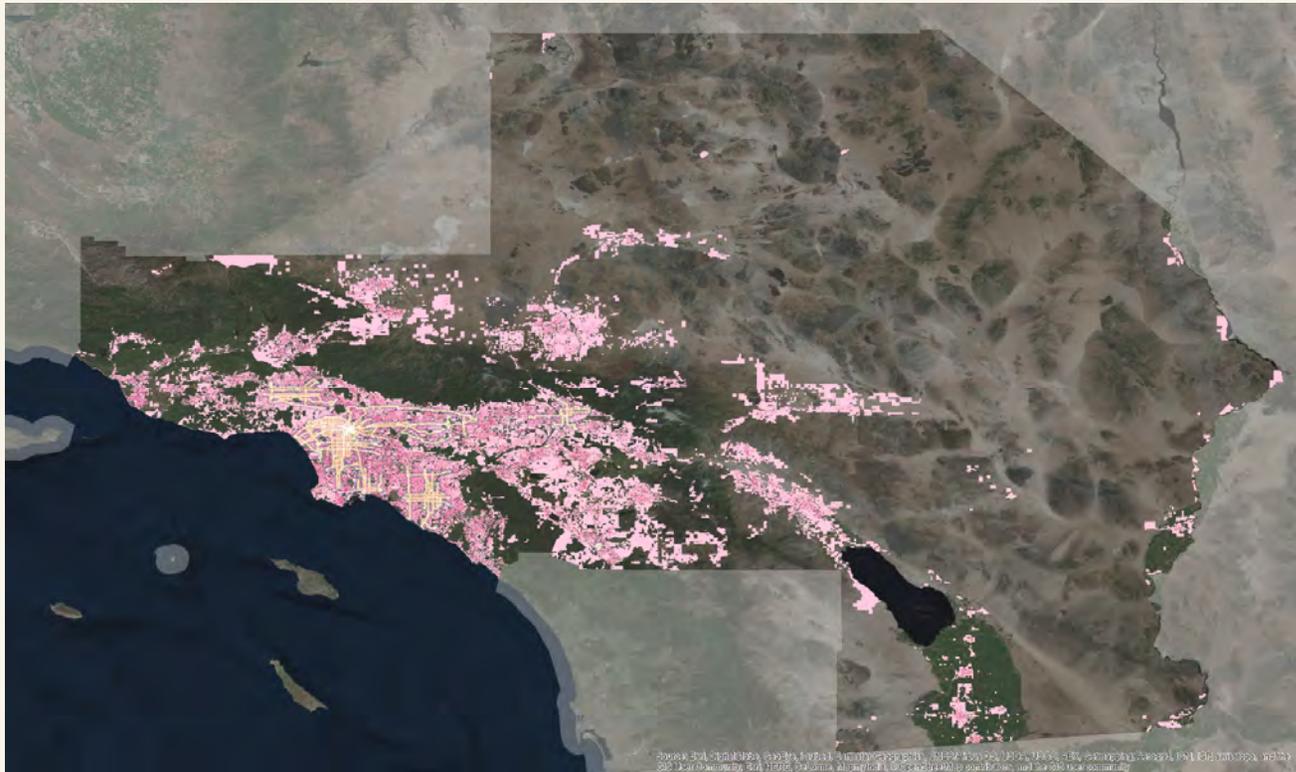
Projections (2012-2040)
 21% Population Growth
 25% Housing Growth
 32% Jobs Growth

- **2012** Base Year: 18 million population, 6.4 million homes, 7.4 million jobs
- **2012-2040** Change: 3.7 million population, 1.6 million homes, 2.4 million jobs
- **2040** End State: 21.7 million population, 8 million homes, 9.8 million jobs

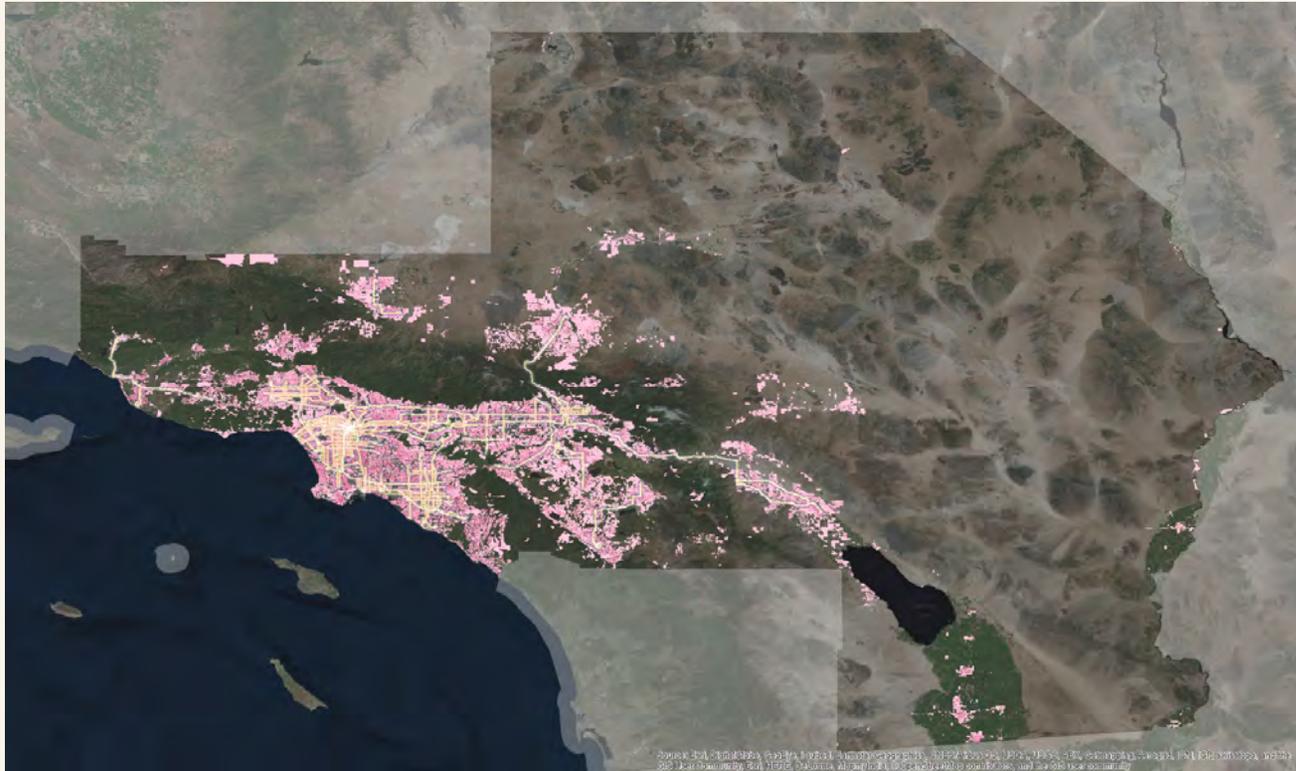
	TREND	2012 PLAN UPDATE	POLICY A	POLICY B
Theme	Past trends extrapolated forward	How does the 2012 Plan look 4 years later?	More focused land use to meet shifting demographics and preferences	More aggressive transit investments, land use coordination, technology change
Transportation Network	✓ 2012 RTP Network	✓ Updated 2012 RTP Network ✓ HQTA/TPA Focus per local plans	✓ Updated 2012 RTP Network ✓ Additional HQTAs ✓ Active Transport Investment ✓ Improved Walkability ✓ 'Last-Mile' Focus	✓ Updated 2012 RTP Network + New ✓ Increase in bus headways ✓ Additional Active Transport Investment ✓ Improved Walkability ✓ 'Last-Mile' Focus



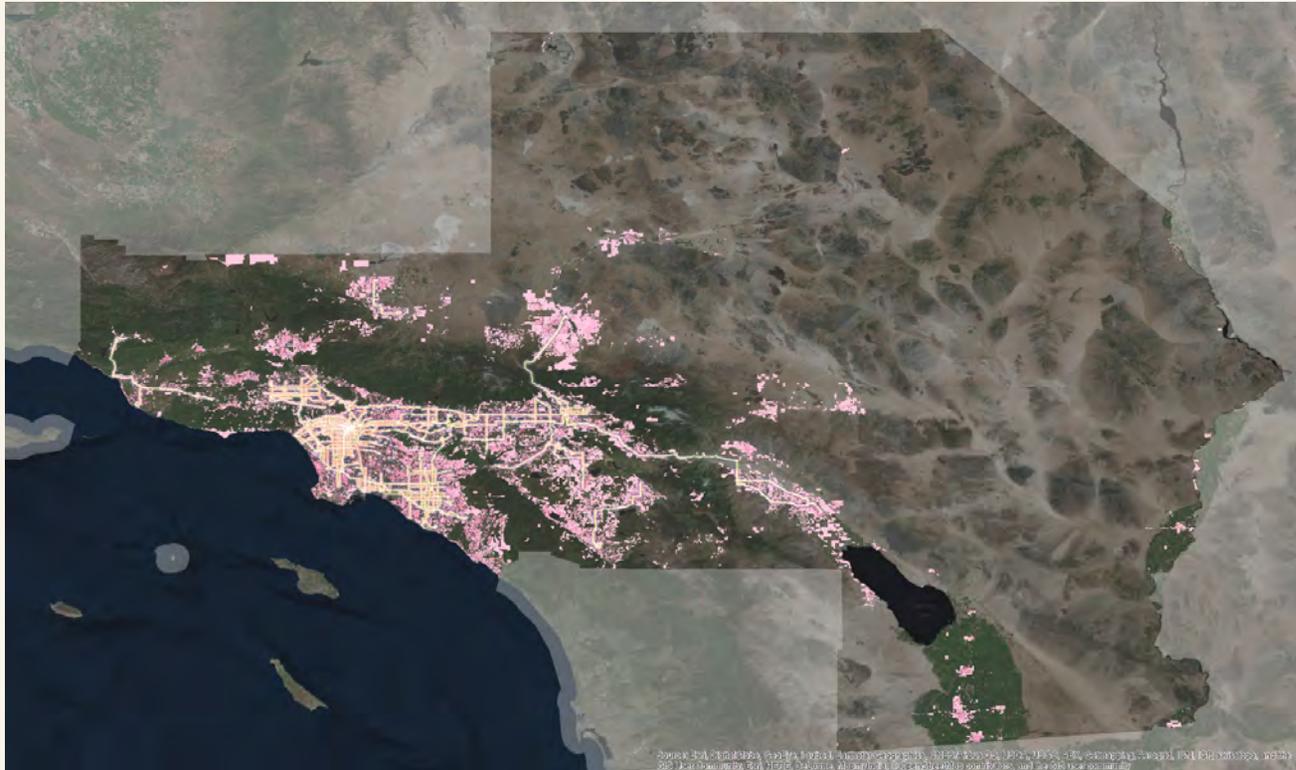
1. Trend



2. 2012 Plan Update



3. Policy A



Place Types

35 Detailed 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

~ 100 Building Types

Mixed Use
Skyscraper Mixed Use
High-Rise Mixed Use
Mid-Rise Mixed Use
Low-Rise Mixed Use
Parking Structure/Mixed Use
Main Street Commercial/Mixed Use High (3-5 Floors)
Main Street Commercial/Mixed Use Low (1-2 Floors)
Residential
Skyscraper Residential
High-Rise Residential
Urban Mid-Rise Residential
Urban Podium Multi-Family
Standard Podium Multi-Family
Suburban Multifamily Apt/Condo
Urban Townhome/Live-Work
Standard Townhome
Garden Apartment

Studies of Places Across California and the West



Place Types

35 Detailed 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 RSD
	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 Subdivisions
	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

Key Characteristics

Density

Mix of Uses

Street Connectivity

Location/Accessibility

Land Patterns



Urban



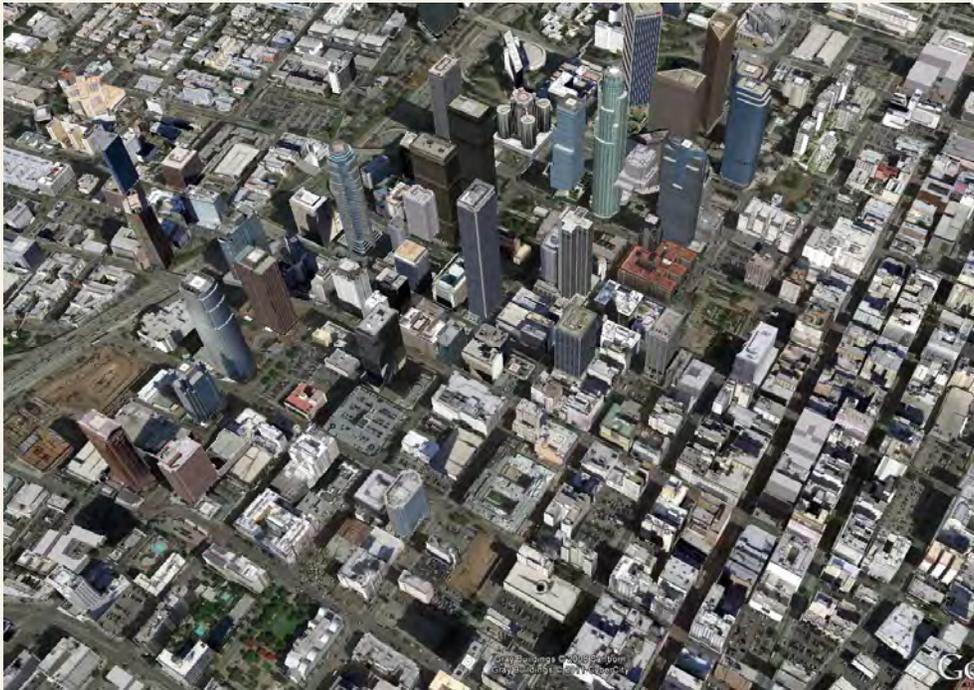
Compact



Standard

Urban

Land Development Category (LDC)



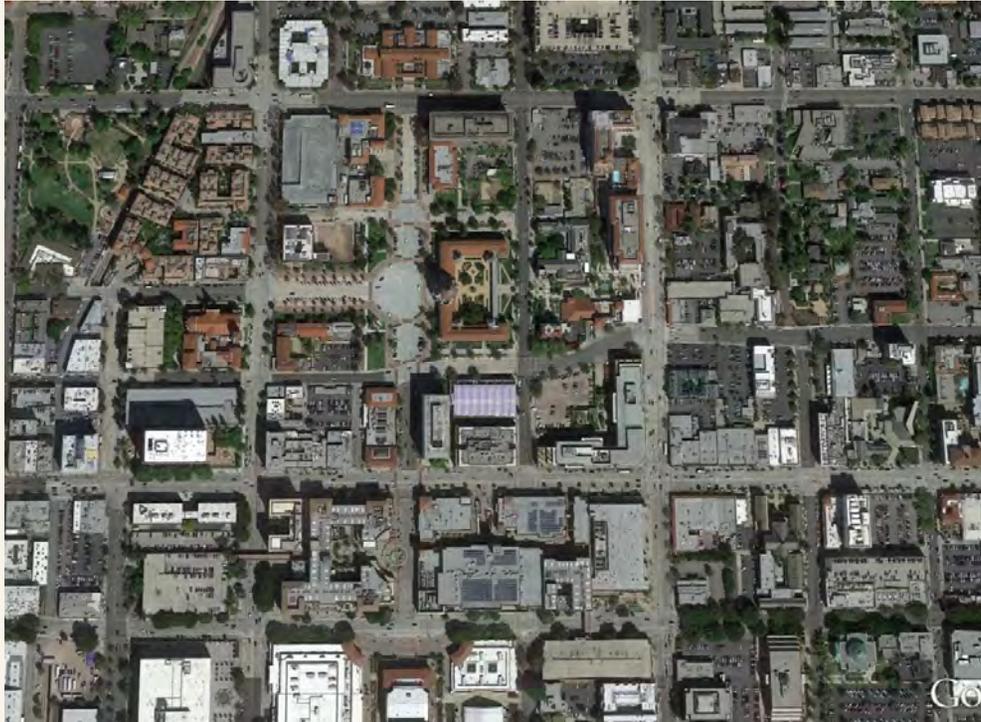
Land Development Category (LDC)

Urban



Land Development Category (LDC)

Compact Walkable



Land Development Category (LDC)

Compact Walkable



Land Development Category (LDC)

Standard Suburban



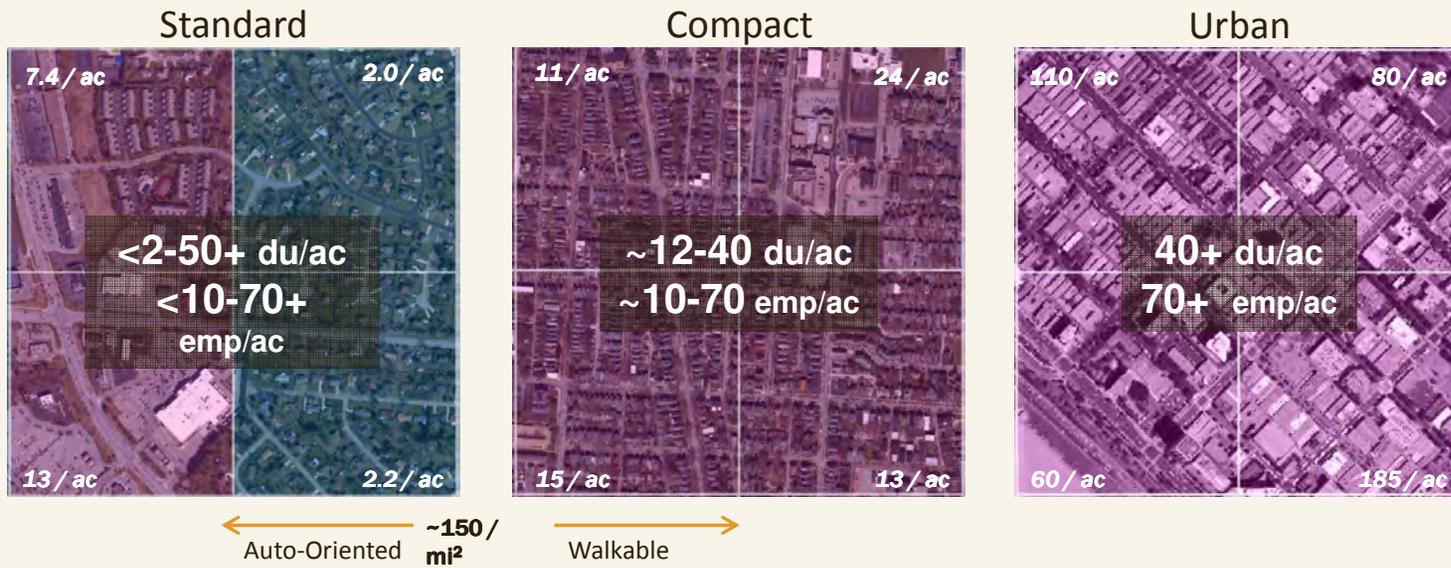
Land Development Category (LDC)
Standard Suburban



Walkability



Intensity and Mix of Use



Household Driving & Walking

Standard



* Regional average

 76 miles/day

 7 min/day

Compact



 35 miles/day

 23 min/day

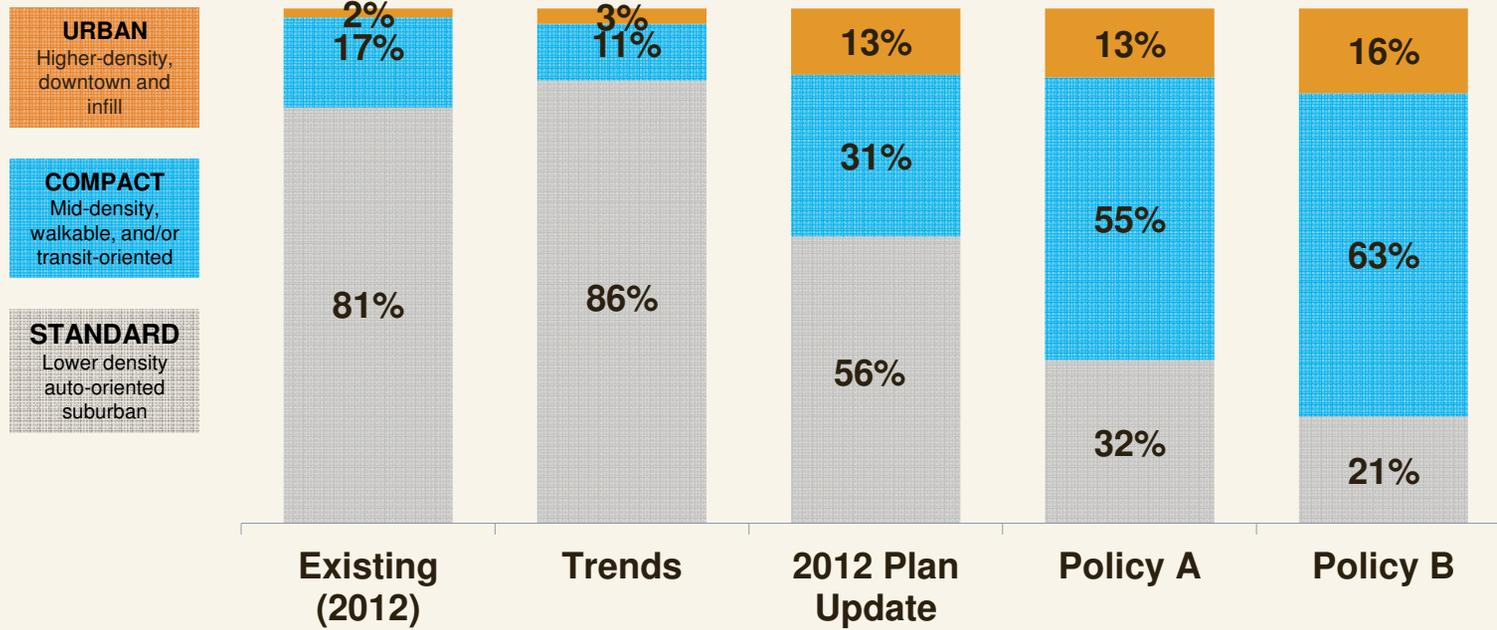
Urban



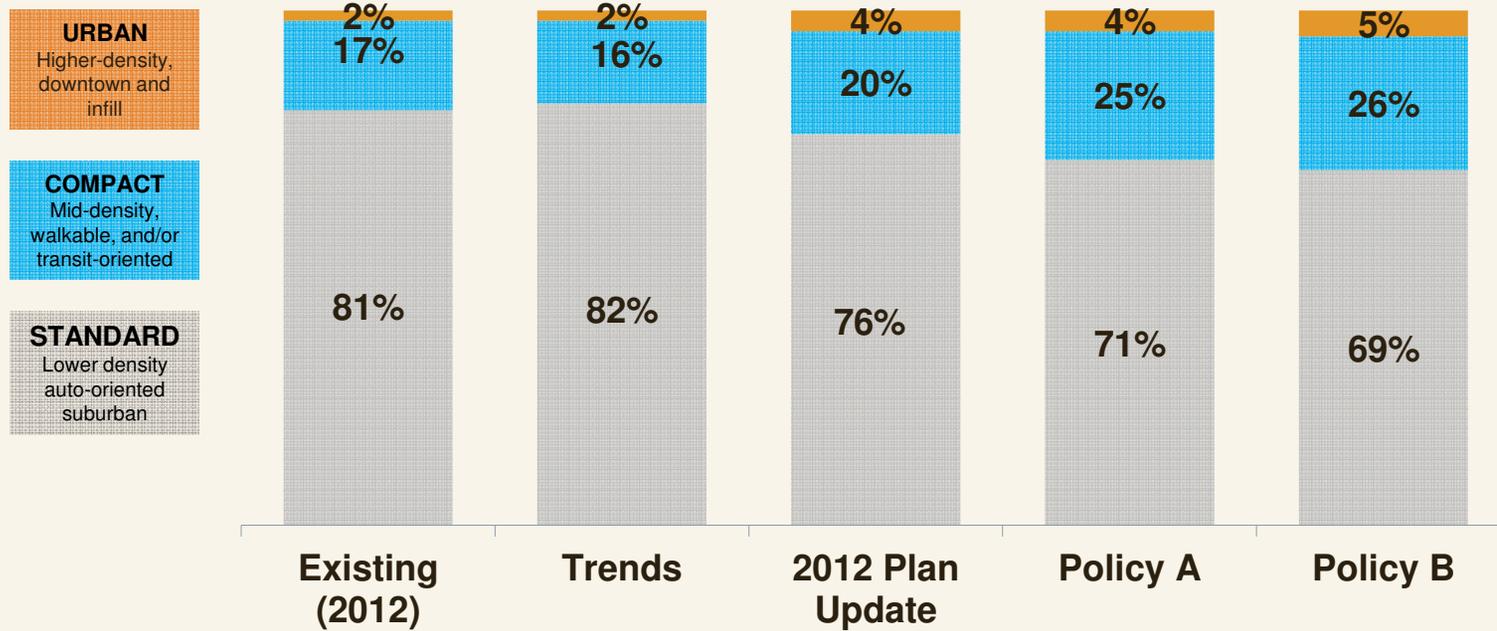
 13 miles/day

 35 min/day

Land Patterns New Growth (2012-2040)

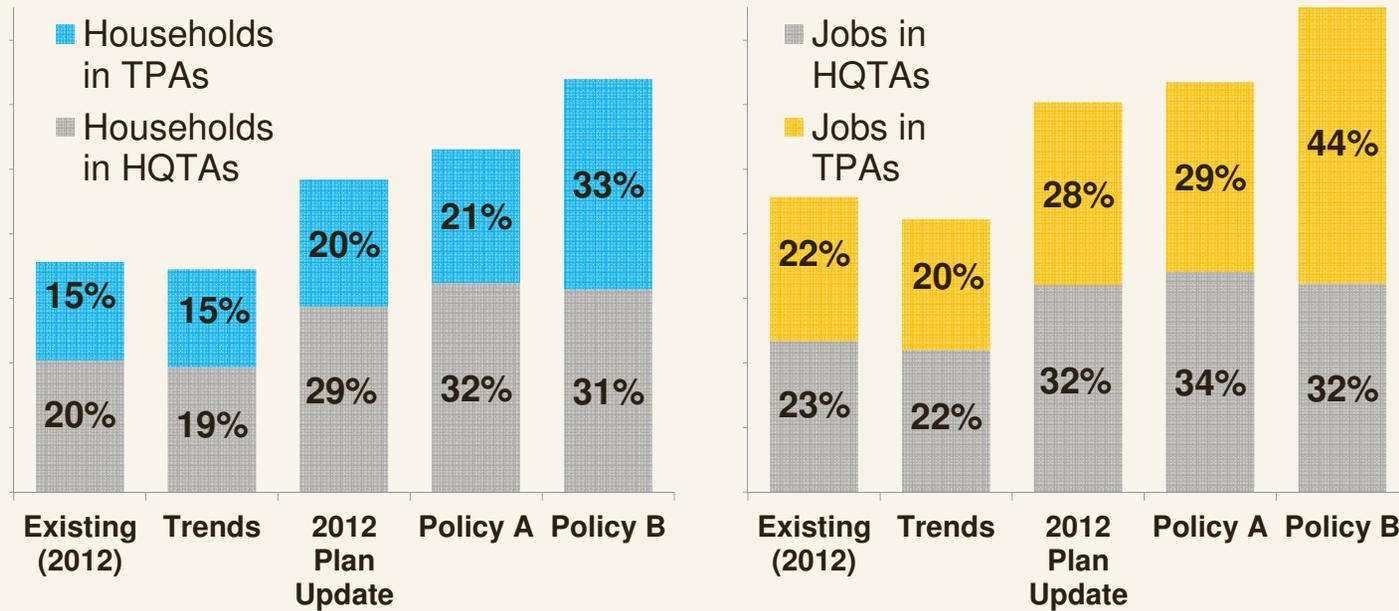


Land Patterns End State (2040)



HQTA & TPA Focus

Households and Jobs in High Quality Transit Areas (HQTAs) and Transit Priority Areas (TPAs) - 2040

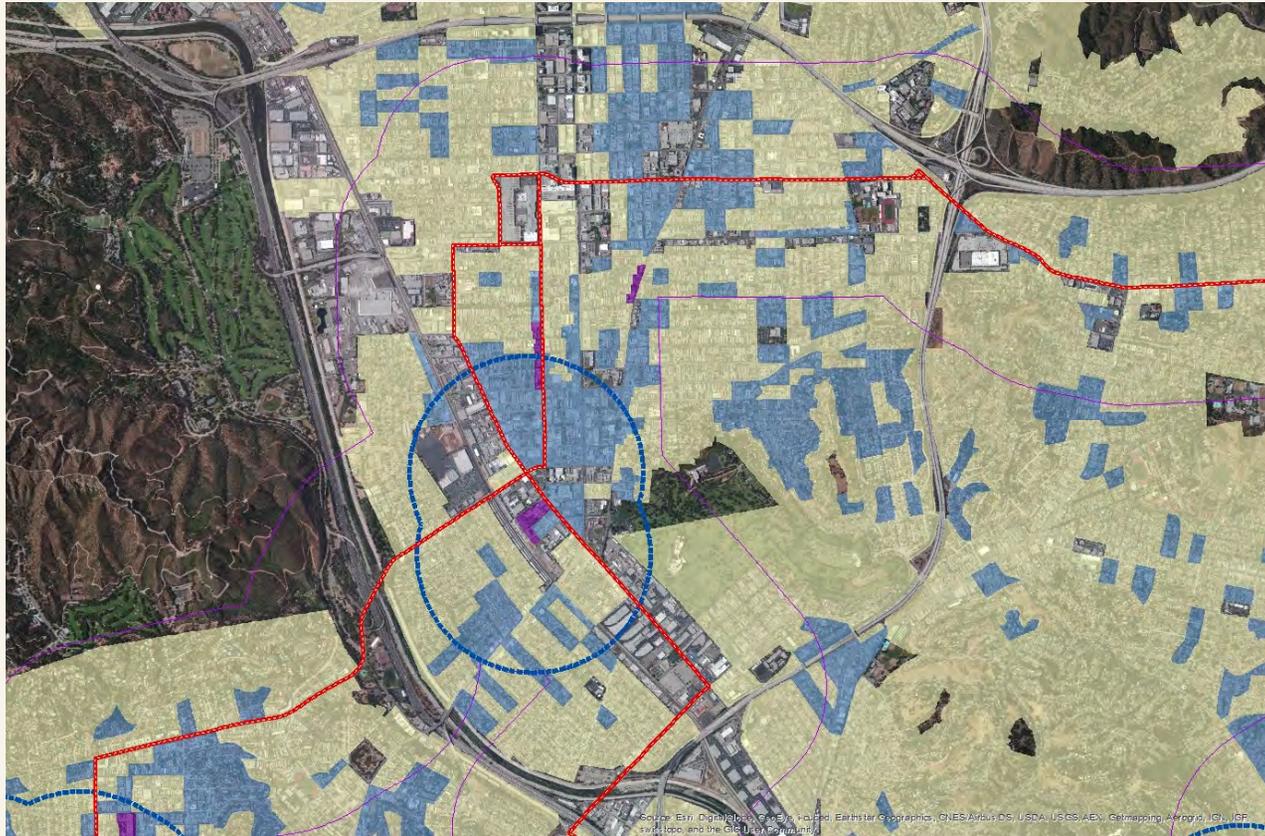




Base
Year
(2012)



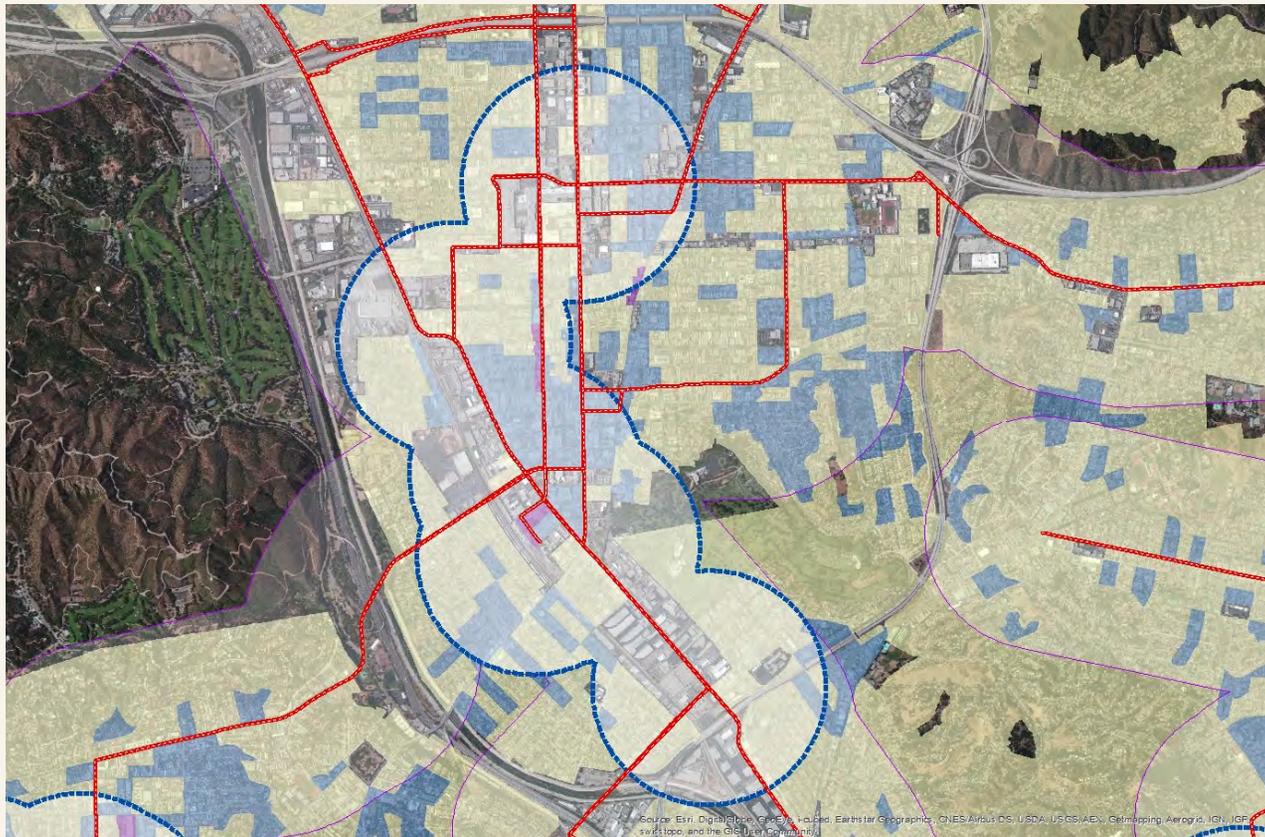
Base
Year
Transit



Base
Year
Land Use
by LDC

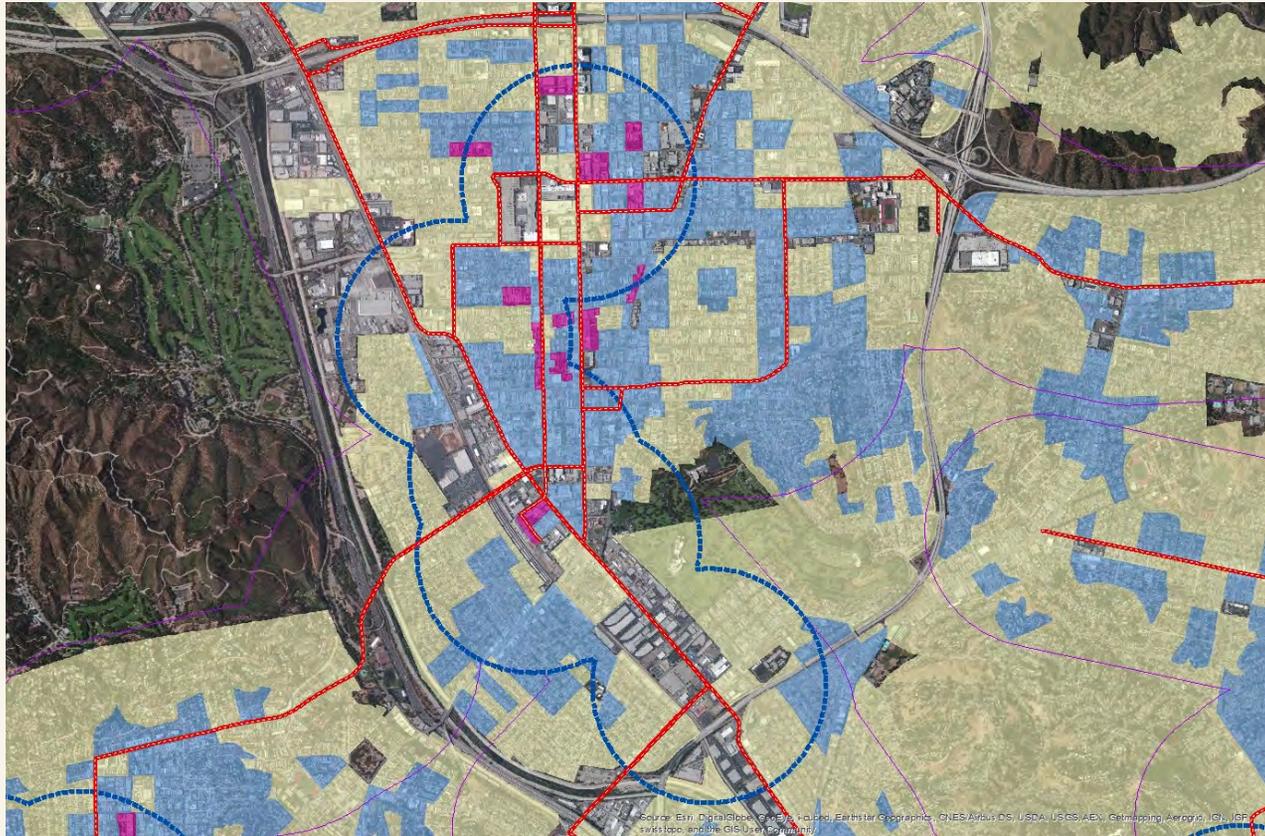
2012
HQTA &
TPA
HH: 35%
Jobs:
45%

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroV, GeoMapping, AeroGRID, IGN, ICF, swisstopo, and the GIS User Community



2040
TPAs &
HQTAs
(Policy A)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community



2040
Land Use
by LDC
(Policy A)

2012
HQTA &
TPA
HH: 35%

Jobs:
45%

2040
HQTA &
TPA
HH: 53%

Jobs:
63%

Land Development Category (LDC)
Standard Suburban



Land Development Category (LDC)
Compact Walkable

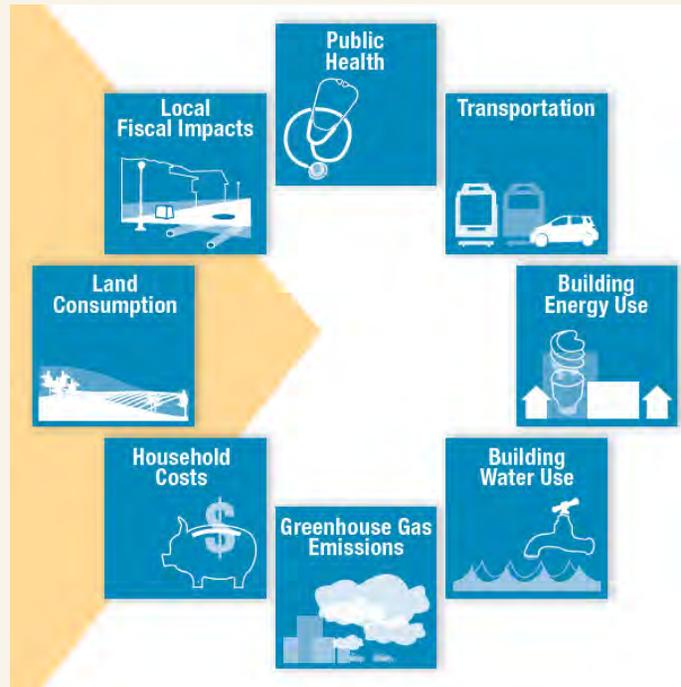




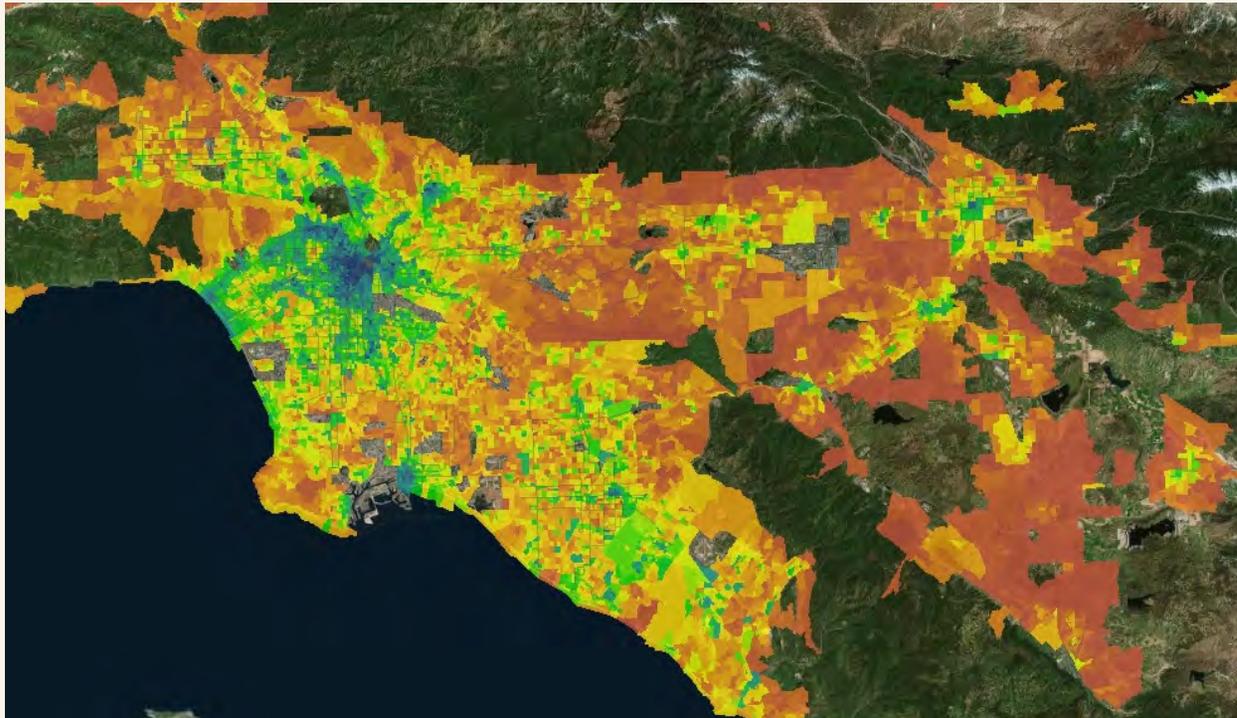
Scenarios Analysis

2016
2040 **RTPSCS**

Multi-Metric Analysis = More Informed Decisions



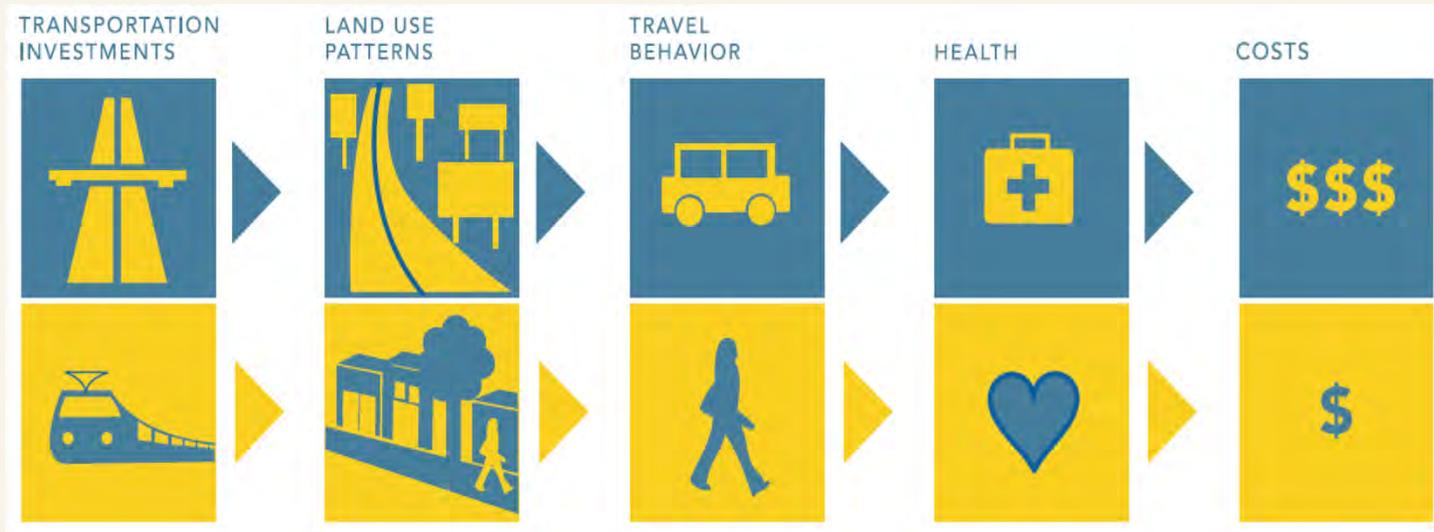
Active Transportation & Health Impacts



Base Year
(2012)
Walking
(min/day)

Active Transportation & Health Impacts

Built Environment → Travel Behavior → Health Outcomes



Source: *The Hidden Health Costs of Transportation*. Frank et al 2010

Active Transportation & Health Impacts



Base Year Land Use



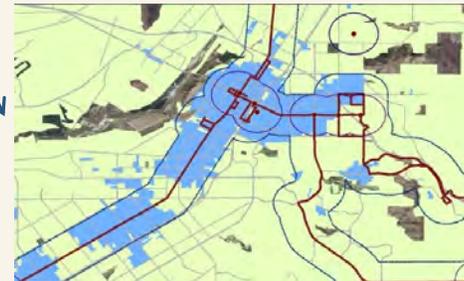
Base Year Walkability/Transit



Future changes in transportation, housing, and jobs.



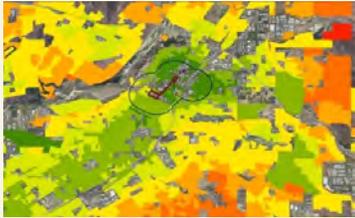
Future Year Land Use



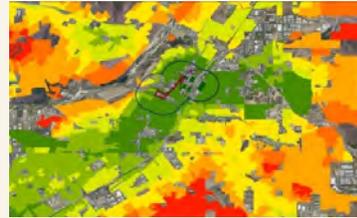
Future Year Walkability/Transit

Example Changes in Built Environment Variables

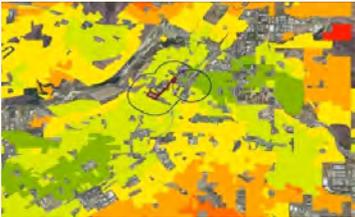
Base Year (2012)



Base Walkability



Base Transit Access

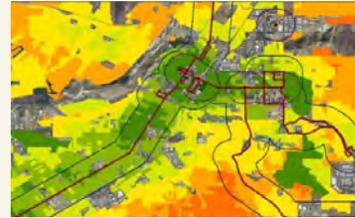


Base Residential Mix

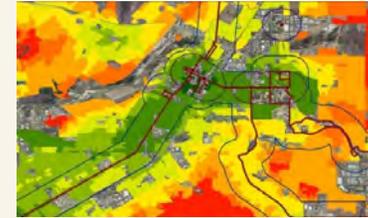


Base Commercial Mix

Future Year (2040)



Future Walkability



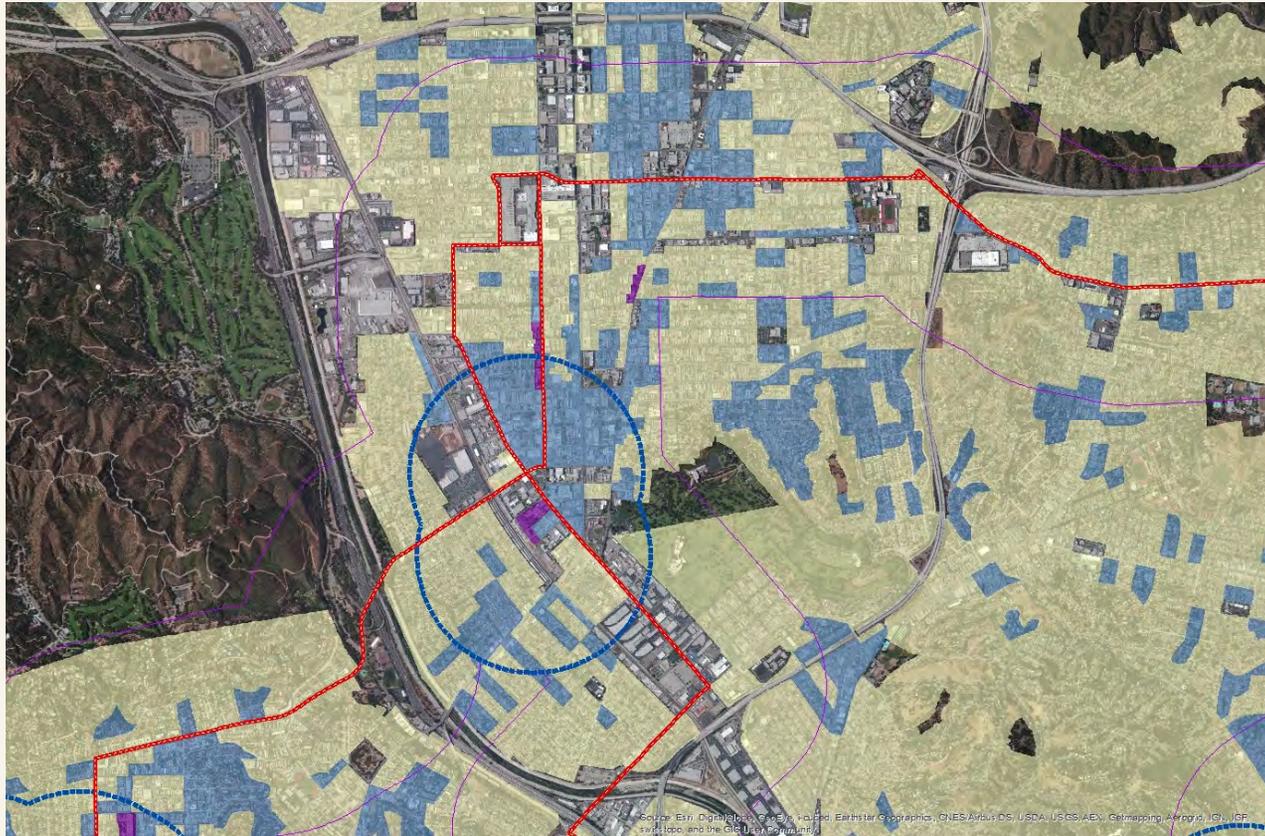
Future Transit Access



Future Residential Mix



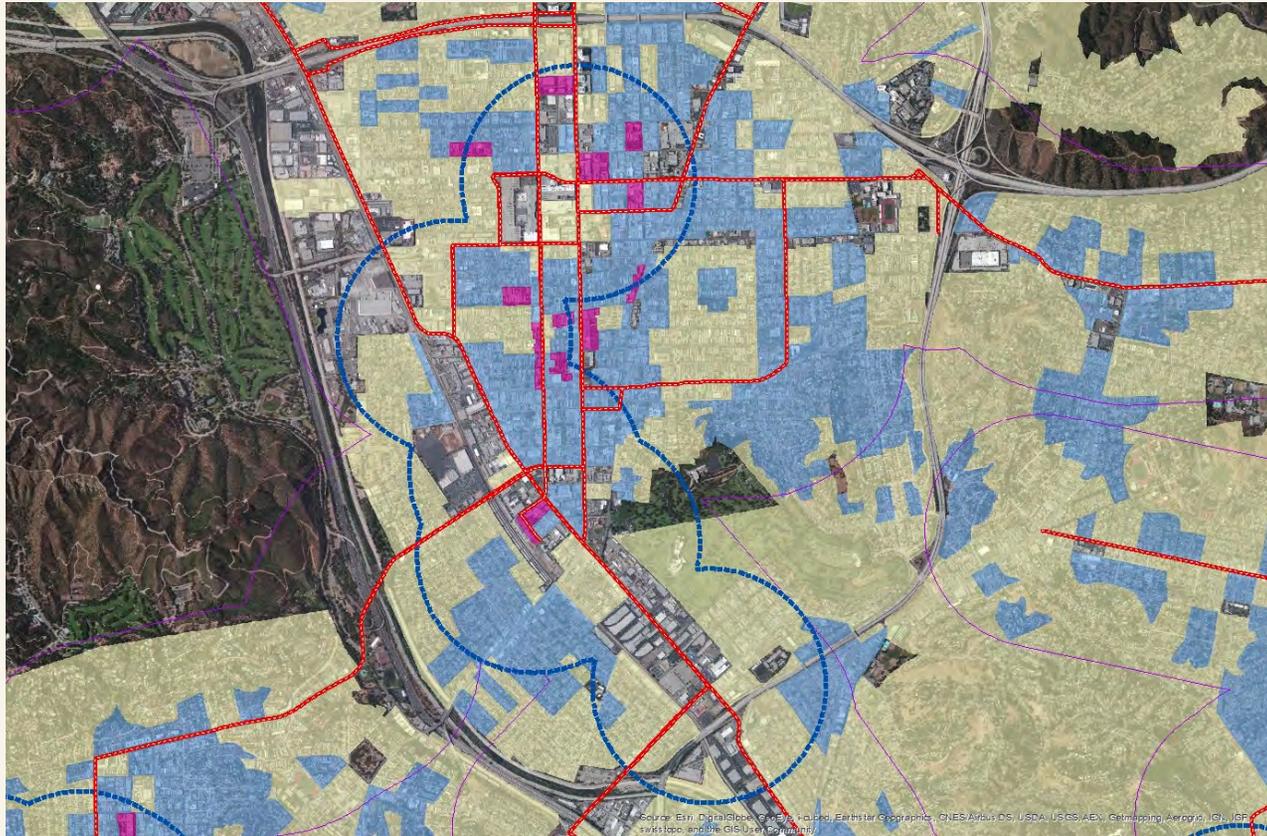
Future Commercial Mix



Base
Year
Land Use
by LDC

2012
HQTA &
TPA
HH: 35%
Jobs:
45%

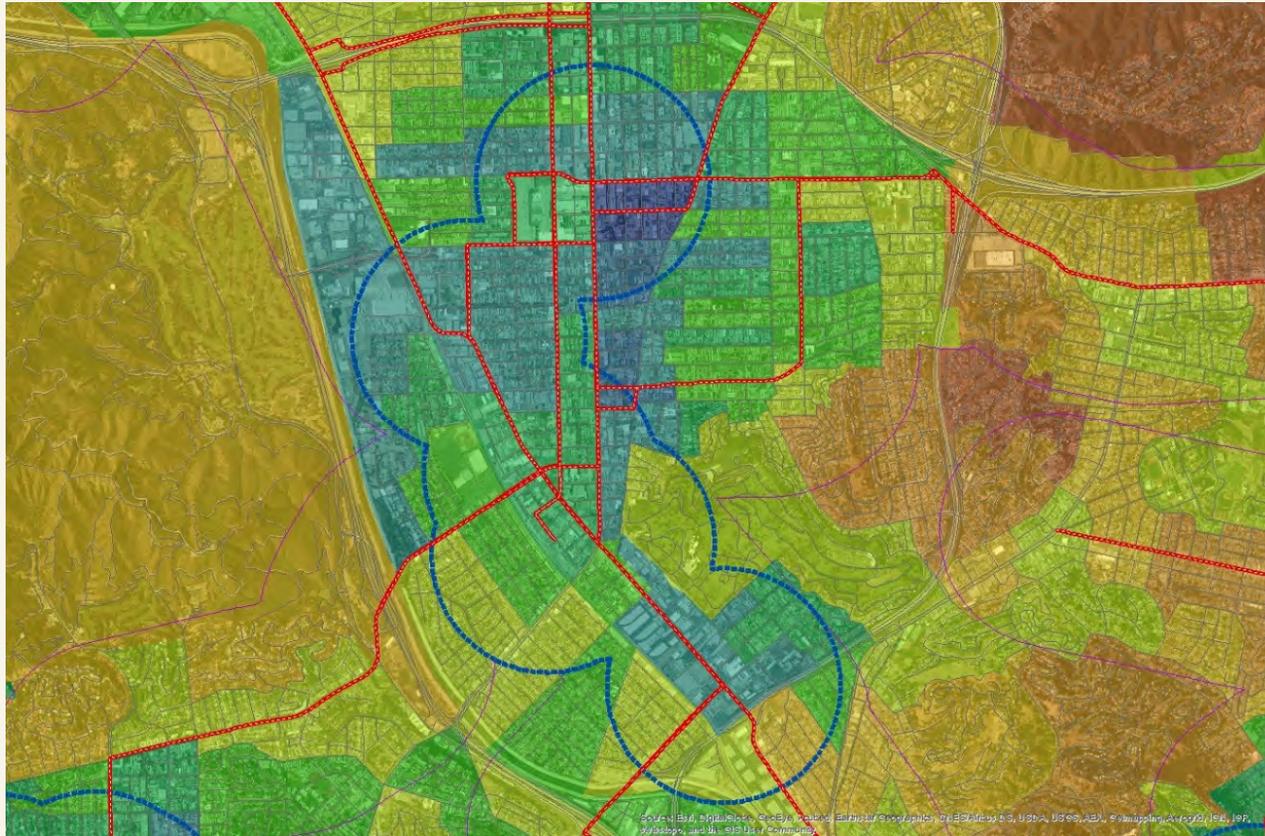
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroV, GeoMapping, AeroGRID, IGN, ICF, swisstopo, and the GIS User Community



2040
Land Use
by LDC
(Policy A)

2012
HQTA &
TPA
HH: 35%
Jobs:
45%

2040
HQTA &
TPA
HH: 53%
Jobs:
63%



2040
Walking
Minutes
per Day
(Policy A)

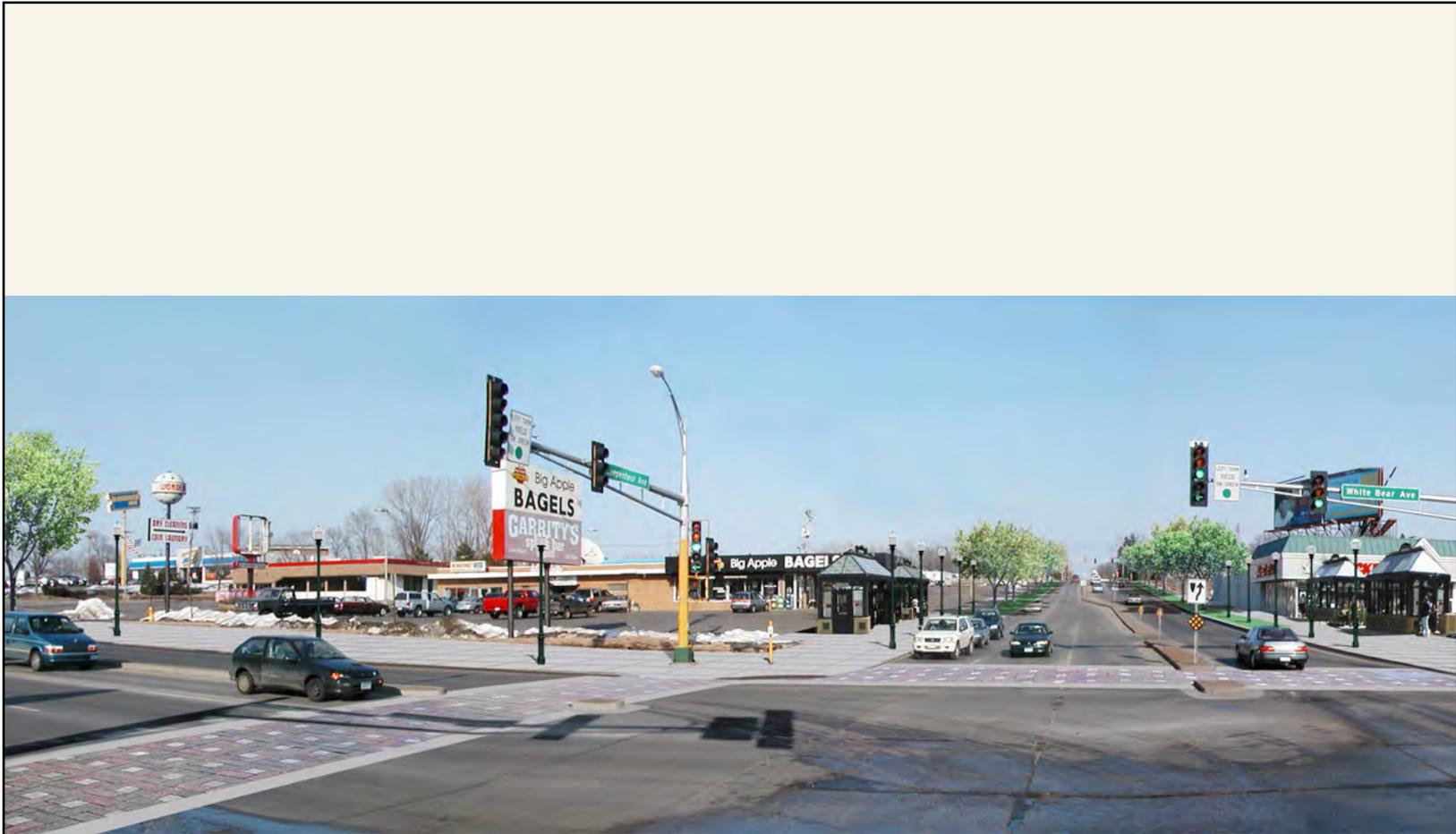
Active Transportation & Health Impacts



Adults: Ages 18-65	Base Year 2012	Net Change: (2012 – 2040)
Recreation Physical Activity - Minutes Daily	13 min	+ 9%
Walking - Minutes Daily	23 min	+ 10%
Biking - Minutes Daily	3 min	+ 12%
Auto - Minutes Daily	55 min	- 6%
Obese Population (%)	21.5%	- 3%
Poor Health Population (%)	24.1%	- 13%
High Blood Pressure (%)	19.6%	- 1%
Diabetes - Type 2 (%)	5.6%	- 11%

Land Development Category (LDC)
Standard Suburban





Land Development Category (LDC)
Compact Walkable



Land Development Category (LDC)
Standard Suburban





vdh

CALTHORPE ANALYTICS

Land Development Category (LDC)

Compact Walkable



Development Type & Mobility

SCAG Region 2012*



* Based on preliminary UrbanFootprint regional analysis

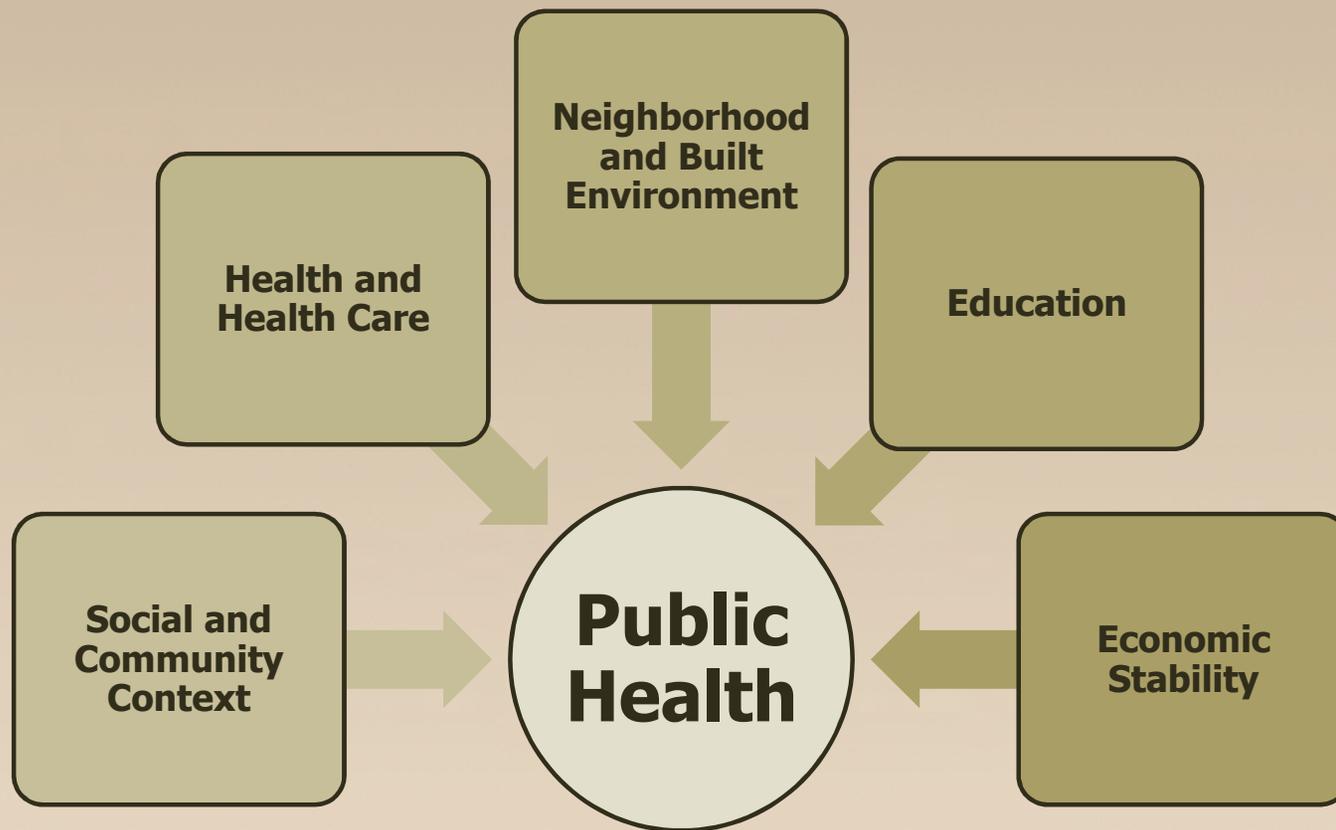
Public Health Strategies and Actions for the 2016 RTP/SCS

July 7, 2015

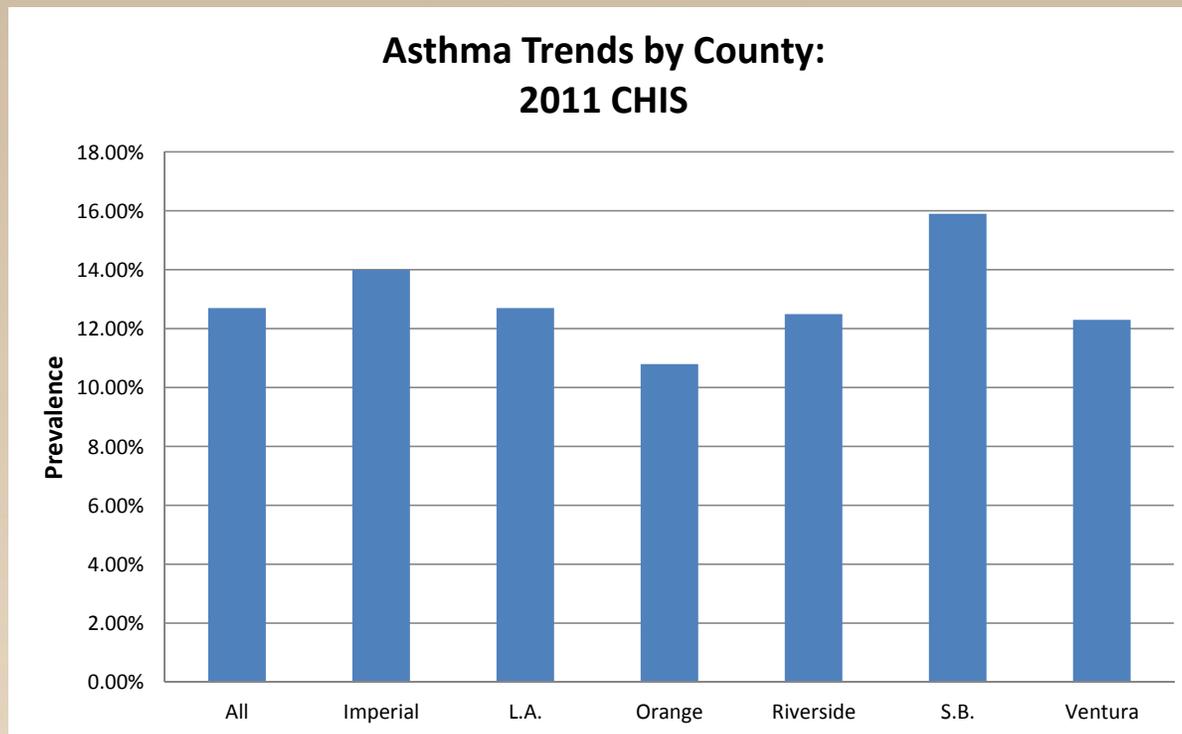
Rye Baerg
Active Transportation & Special
Programs



Social Determinants of Health

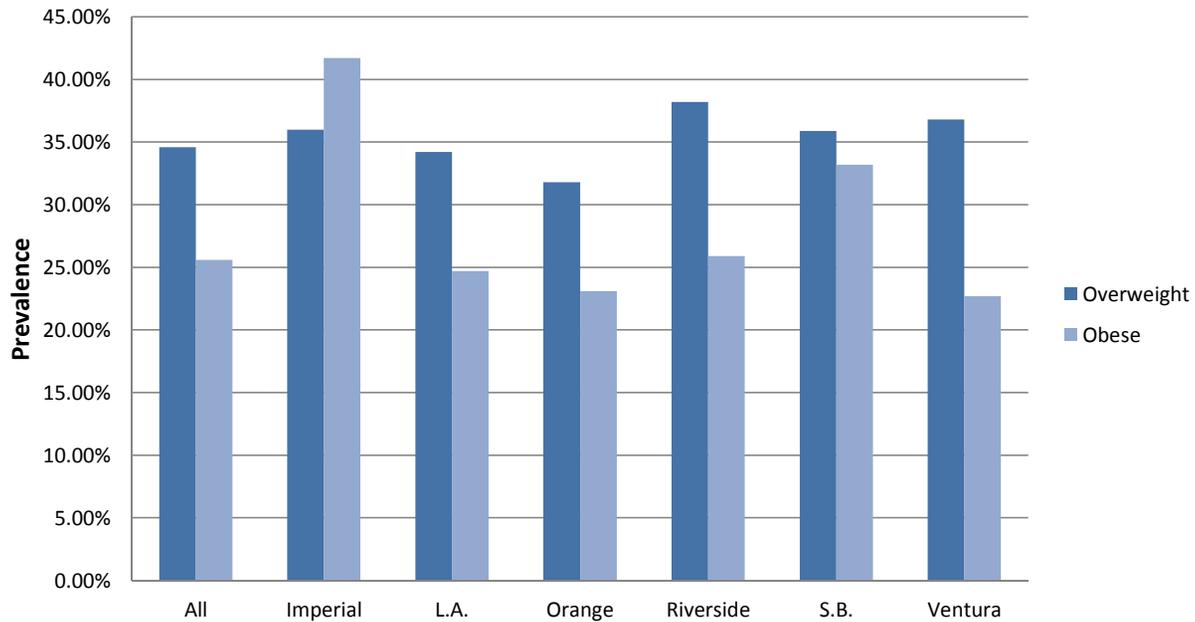


SCAG Region Public Health Outcomes

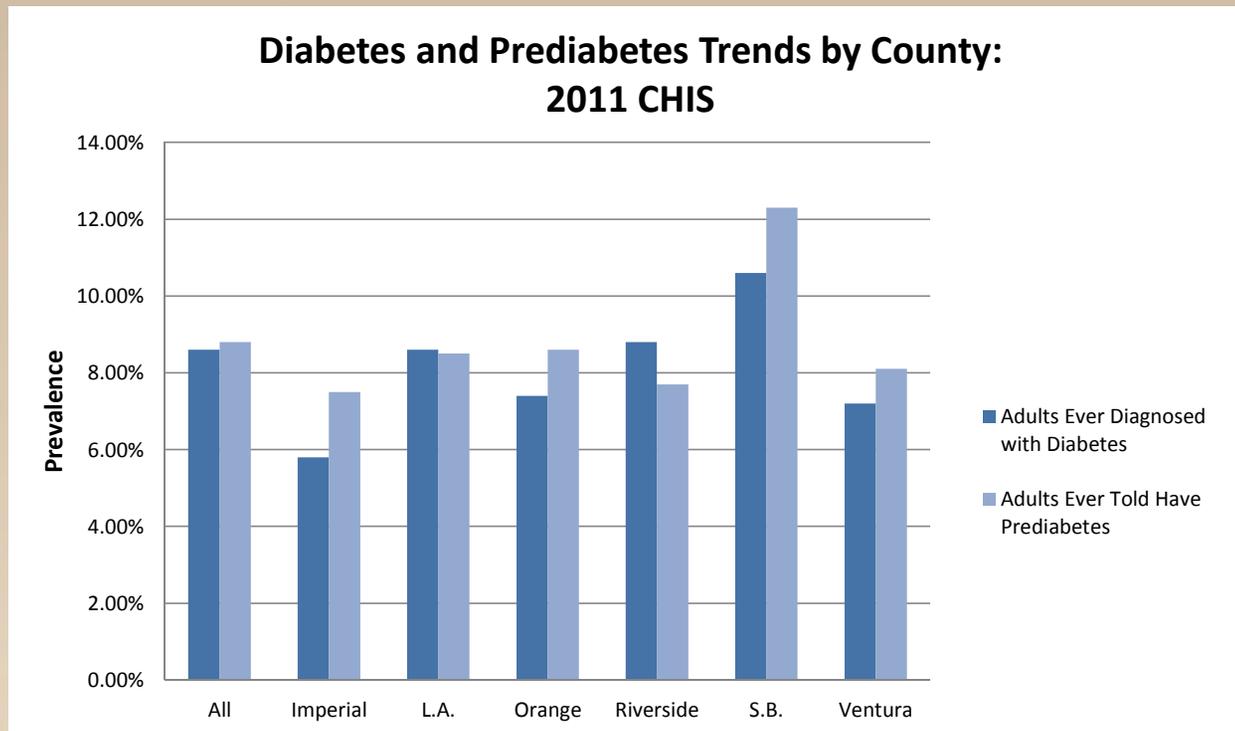


SCAG Region Public Health Outcomes

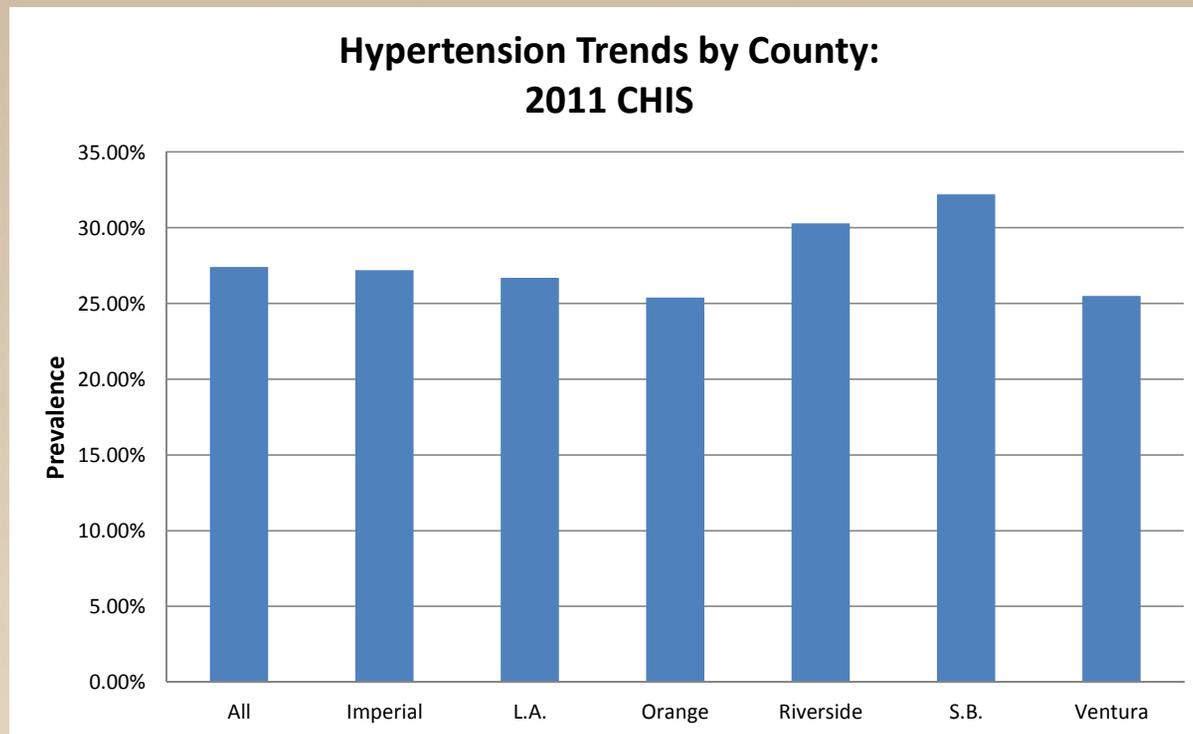
**Overweight and Obesity Trends by County:
2011 CHIS**



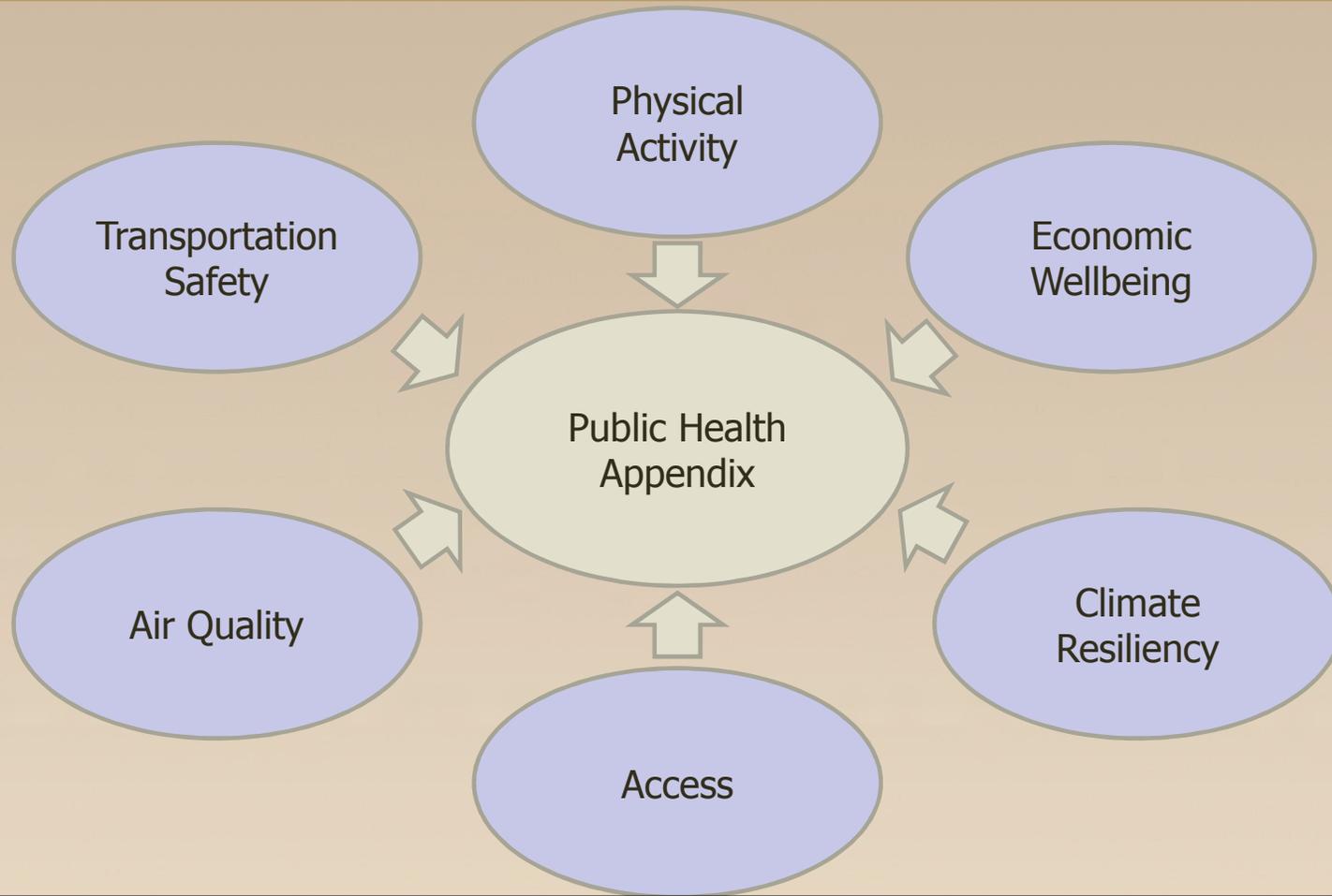
SCAG Region Public Health Outcomes



SCAG Region Public Health Outcomes



2016 RTP/SCS Health Appendix Focus Areas



2016 RTP/SCS Goals

Focus Areas and Plan Goals						
RTP Goals	Access to Essential Destinations	Air Quality	Climate Resiliency	Economic Wellbeing	Physical Activity	Transportation Safety
Align the plan investments and policies with improving regional economic development and competitiveness.	✓	✓		✓	✓	
Maximize mobility and accessibility for all people and goods in the region.	✓			✓	✓	✓
Ensure travel safety and reliability for all people and goods in the region.	✓					✓
Preserve and ensure a sustainable regional transportation system.		✓	✓	✓	✓	
Maximize the productivity of our transportation system.	✓			✓		
Protect the environment and health of our residents by improving air quality and encouraging active transportation.		✓	✓		✓	✓
Actively encourage and create incentives for energy efficiency, where possible.		✓	✓	✓		
Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	✓	✓	✓		✓	
Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.						✓

Strategy and Action Development

- Public Health Subcommittee (2012-2013)
- Public Health Work Program (Fall 2014)
- Public Health Analysis Framework (Spring 2015)
- Public Health Working Group (Ongoing)
- Technical Working Group (Ongoing)
- Policy Committees (Ongoing)
- Stakeholder Meetings (Ongoing)

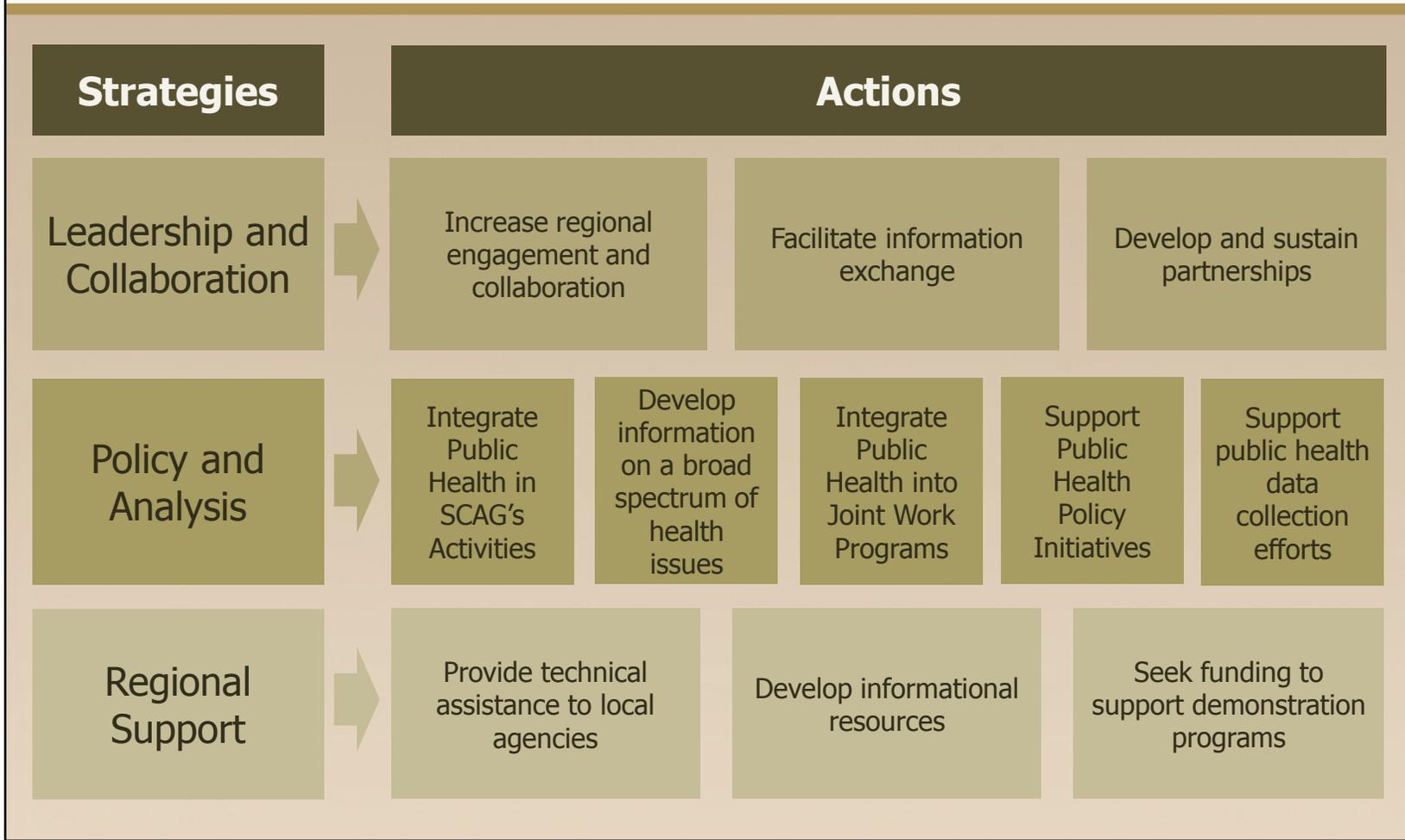
Benefits to the Region

- Improved interagency coordination
- Improved policy analysis due to expanded benefit modeling
- Regional readiness for future federal and state grants and other funding sources
- A sustainable and healthy region
- Improved regional economic outcomes from health care savings

Public Health Strategies and Actions

- Provide umbrella direction for Supporting Public Health in Regional Planning
- Specific modal public health strategies are included in the appendices for each mode

2016 RTP/SCS Public Health Strategies and Actions



Strategy 1: Leadership and Collaboration

Provide leadership in collaboration with the county transportation commissions, the county departments of public health, subregional partners, health industry leaders, local cities, and other local stakeholder groups to measure and improve public health outcomes by **increasing awareness of the relationship between the social determinants of health and the built environment** throughout the region.

Strategy 1: Actions

- A. Increase regional engagement and collaboration on the issue of public health, as related to the built environment and SCAG core planning functions, by **raising awareness among policy leaders, agency staff, businesses, and the public.**

- B. Facilitate information exchange and region-wide collaboration through **SCAG Committees, health forums, and issue integration within other SCAG-led forums** (active transportation, poverty, economy, etc.)

- C. Develop and sustain partnerships with governmental agencies, local non-profit organizations, private foundations, and other stakeholder groups to **leverage existing activities and accelerate the adoption of policies that support public health considerations in day to day planning activities.**

Strategy 2: Policy and Analysis

Develop, support, and implement **balanced regional policies** using a Health in All Policies approach to drive positive health outcomes for all residents of the SCAG region related to accessibility, air quality, climate resiliency, economic wellbeing, physical activity, and transportation safety.

Strategy 2: Actions

- A. **Integrate public health considerations** throughout SCAG's decision making processes and future planning activities.
- B. Collaborate with regional partners to **develop information on a broad spectrum of health issues** through data/statistics collection, modeling enhancements, and research.
- C. Collaborate with interested County Transportation Commissions to **integrate public health related analysis and planning projects into the Joint Work Programs.**
- D. Support local and regional agencies in the **application of health, equity and sustainability considerations** in transportation and land use policy efforts and identify policies that may create barriers to improving public health outcomes.
- E. **Support grants and funding opportunities** for cooperative multiagency/multi-municipality data systems, data sharing and resource and data pooling.

Strategy 3: Regional Support

Provide support to regional and local initiatives, agencies, and partners, including the sharing of data, statistics, benchmarks, and analysis tools, to help local agencies integrate public health considerations into the multimodal transportation, economic development, job creation and land use planning processes.

Strategy 3: Actions

- A. Provide technical assistance to local agencies to support implementation of the 2016 RTP/SCS**, such as continued support through the Sustainability Program Grants for transportation, land-use, and sustainability planning focused on improved health outcomes.
- B. Develop resources such as fact sheets, documentation of best practices, policy templates, Toolbox Tuesday trainings, and website resources** to support local jurisdictions interested in incorporating public health considerations into their planning processes.
- C. Seek funding to support local planning efforts and consider implementing regional demonstration programs** aimed at integrating public health considerations into planning efforts and provide support and assistance to local agencies seeking grant funding for projects that align with the public health goals of the RTP/SCS.

Discussion and Questions

- Are there additional strategies and actions SCAG should include?
- How can SCAG better support local jurisdictions that are interested in integrating public health into your planning processes?

Public Comments

- Please provide public comments on the Strategies and Actions by July 31, 2015.
- Email them to Rye Baerg – baerg@scag.ca.gov

Next Steps

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

- Public Health Working Group
 - Next Meeting October/November

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