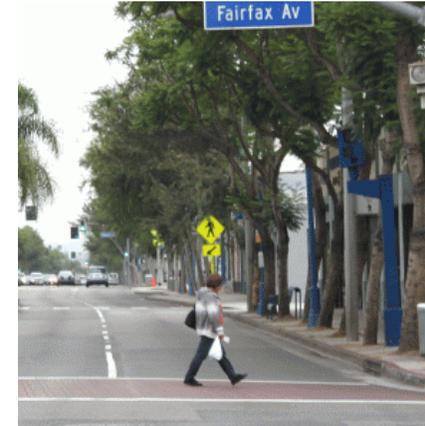


Measuring Land Use Performance: Policy, Plan, and Outcome



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Overview

- Why land use? The current policy context.
- Review of existing research:
 1. Effectiveness of policy efforts to influence land use
 2. Approaches to evaluating land use plans & policy
 3. Data & indicators to aid in measurement
- Discussion & conclusions

Why land use?



access



density

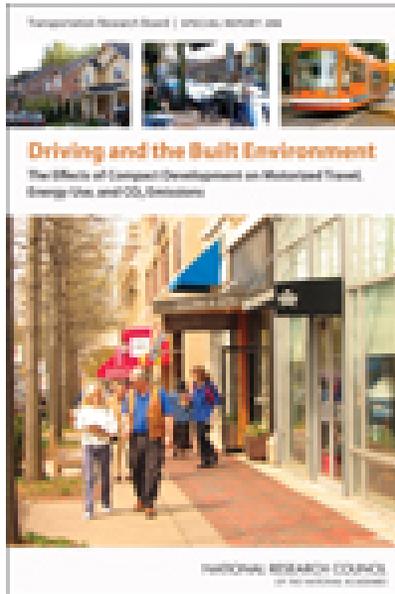


alternatives



sustainability

Land use–travel behavior linkage is well studied



National Research Council (2009)

Ewing & Cervero (2001, 2010)

Salon et al. (2012)

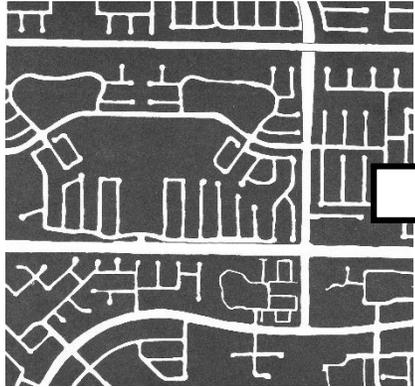
Increases in key land use attributes can reduce VMT

Salon et al. (2012)

VARIABLE	VMT EFFECT
1. Regional accessibility	- (-0.13 to -0.25)
2. Jobs-housing balance	- (-.06 to -0.32)
3. Density (most rigorous studies)	- (~ -0.1)
4. Network connectivity	- (modest)
5. Land use mix	- (small)

SB 375:

Sustainable Communities & Climate Protection Act (2008)



isolation



dispersion



automobility



impacts



access



density

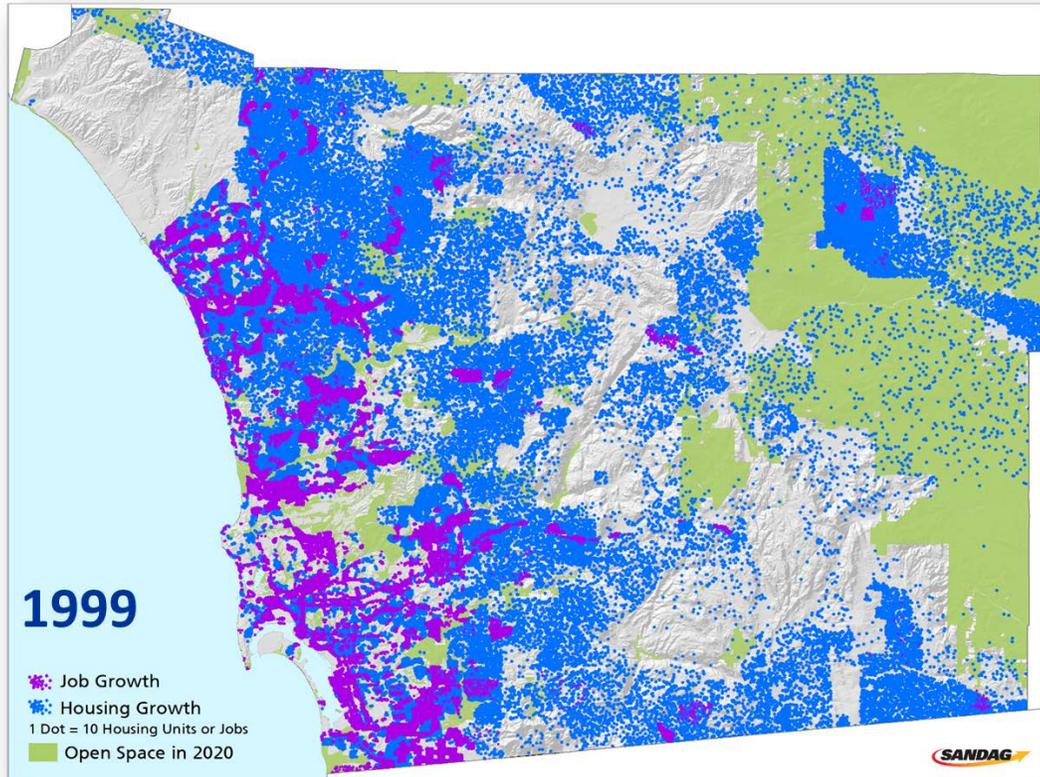


alternatives

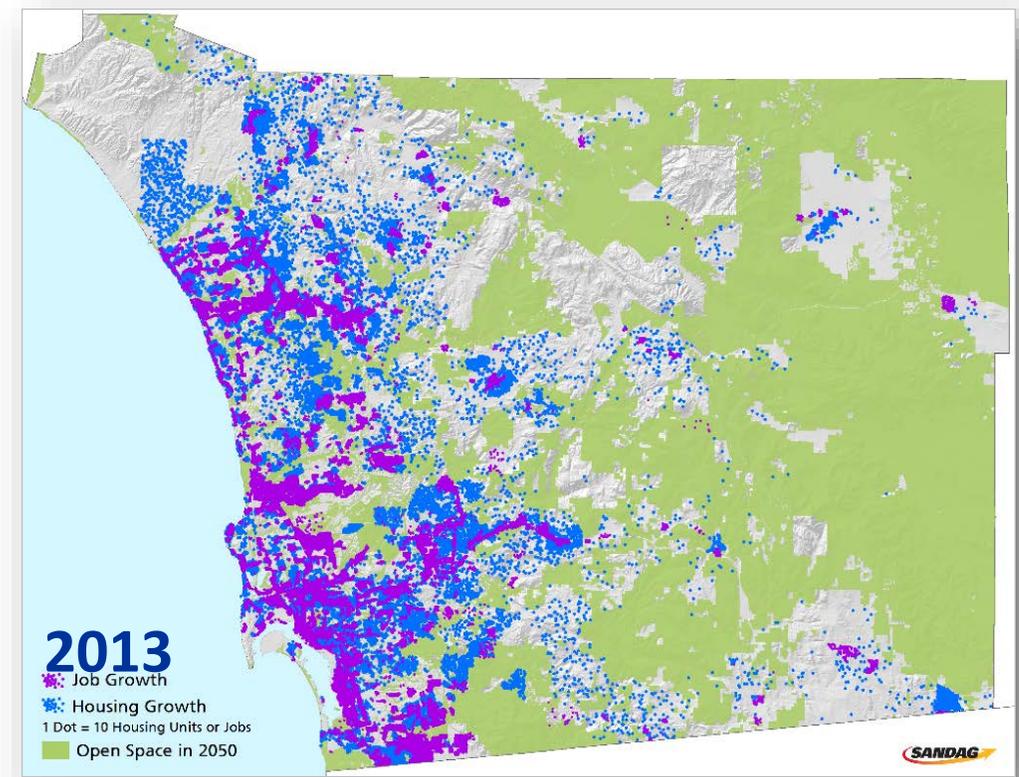


sustainability

SB375: Significant change, considerable challenge



Conventional vision for 2020



Post-SB375 vision for 2050

San Diego region



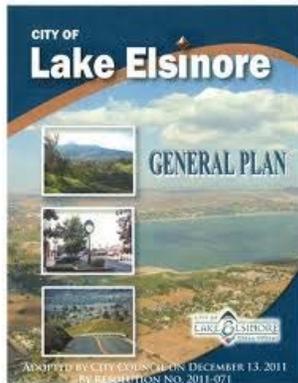
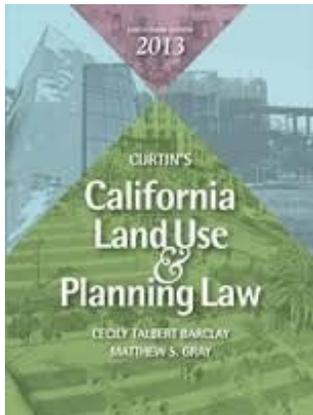
SB375 affirms local land use authority

Implementation depends on local governments

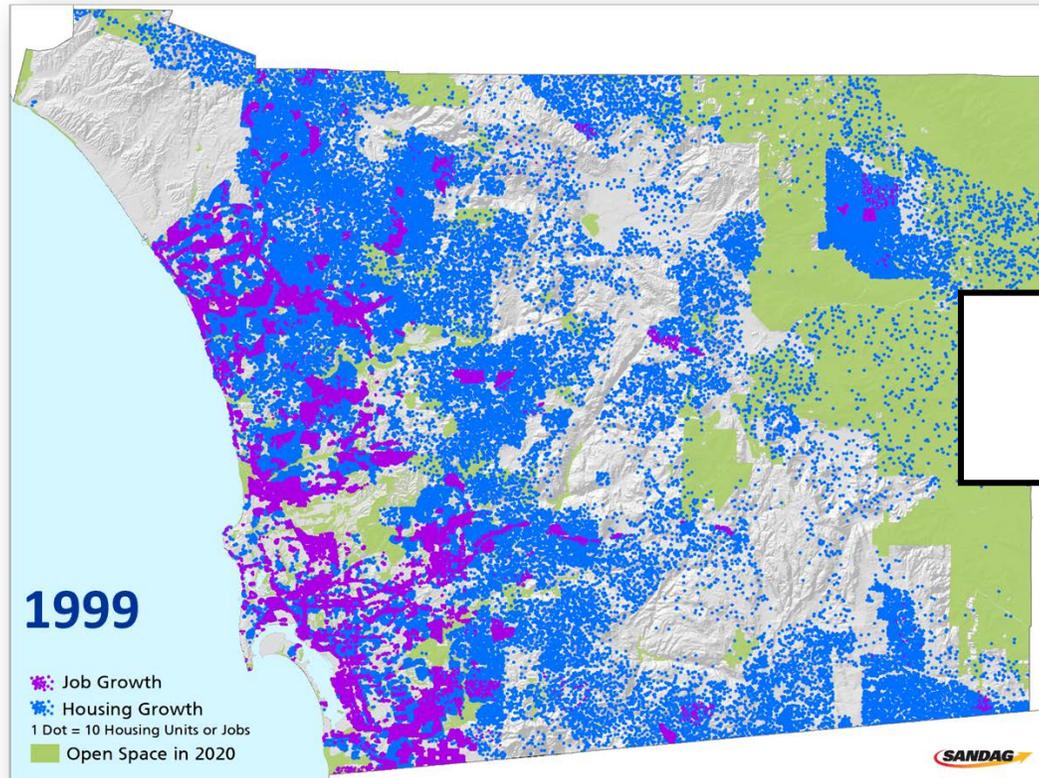
General plans in California

- Constitution for future development
- Required under state law
- Seven basic elements
- Zoning consistency requirement
- Updates not mandated, infrequent

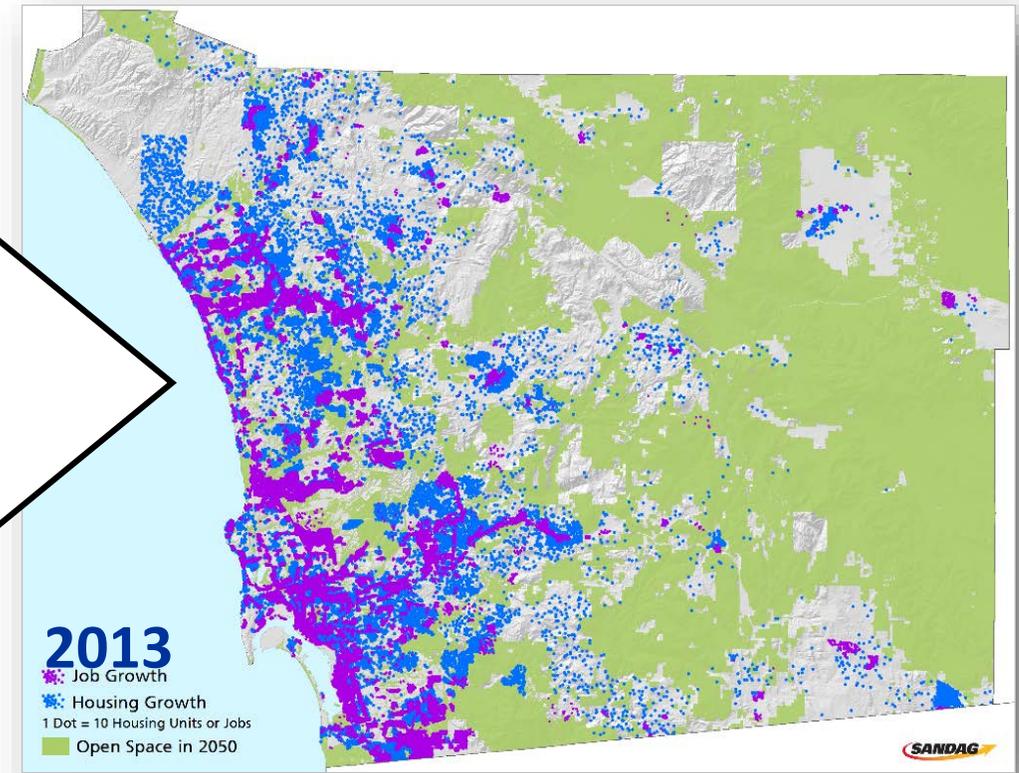
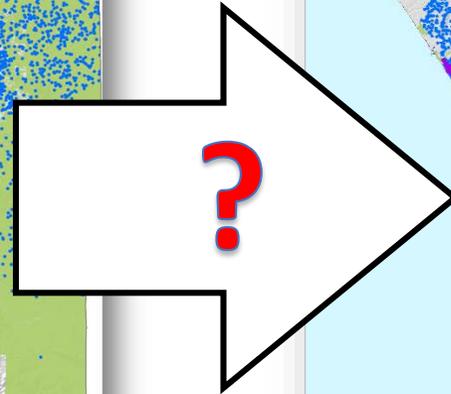
Land use
Circulation
Housing
Conservation
Open space
Noise
Safety



SB375: How to do it?

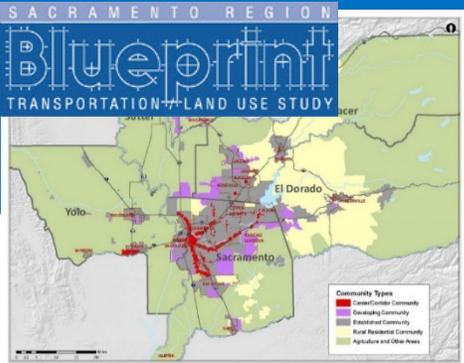


Conventional vision for 2020



Post-SB375 vision for 2050

San Diego region



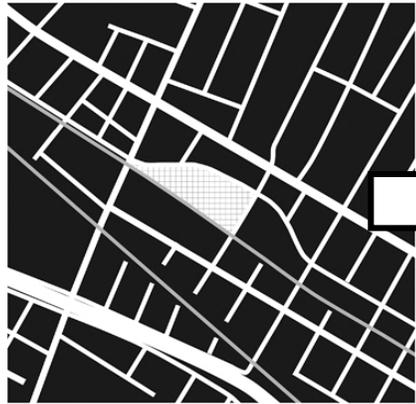
SB375 Framework

4 key assumptions

- Regional SCS plans will influence local plans and policies
- Locally adopted plans and policies will reflect VMT and GHG reduction goals
- Local plans and policies will be implemented
- Implementation actions will have the desired impact.



What we know well



access



density



alternatives



sustainability

What we know less well



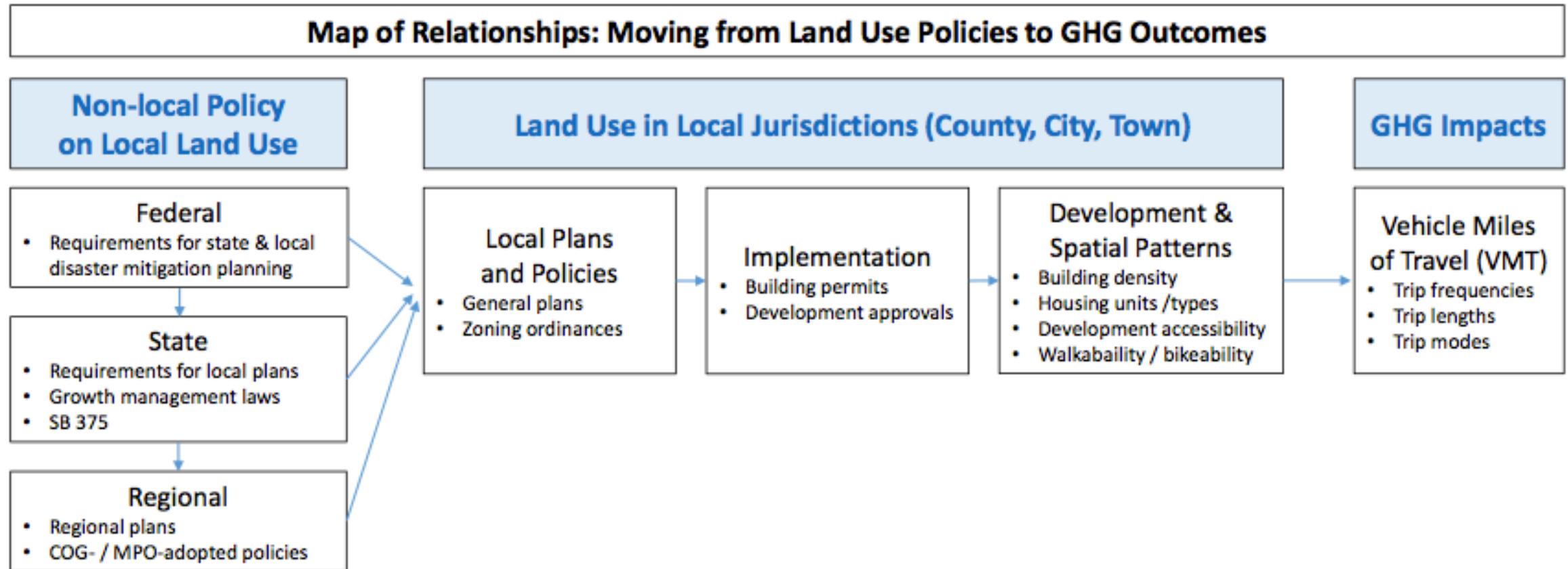
How do we understand the upstream linkages?

Policy -- plan -- outcome

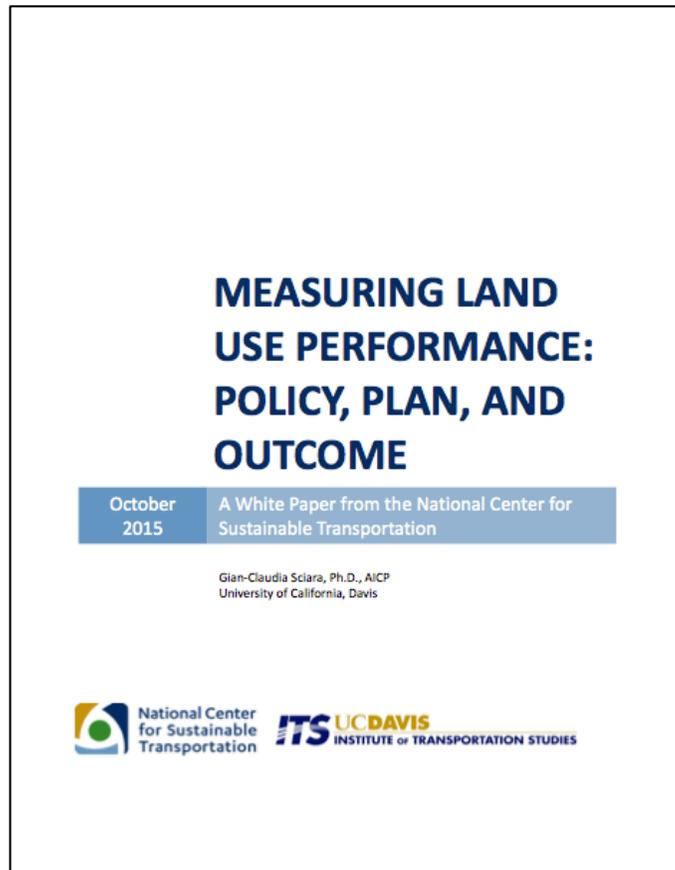
Outcomes



Looking upstream



Assessing the evidence



1. How effective are state, regional, and local efforts to influence land use?
2. What analytical frameworks can be used to evaluate land use planning and policy?
3. What data and indicators should be used to monitor changes in local land use and development over time and evaluate SB375 implementation?

Assessing the evidence

1. Do state, regional, and local land use plans and policies effectively influence local land use and development?

Evidence is mixed that state, regional, and local policies have a discernible and positive impact on land use.

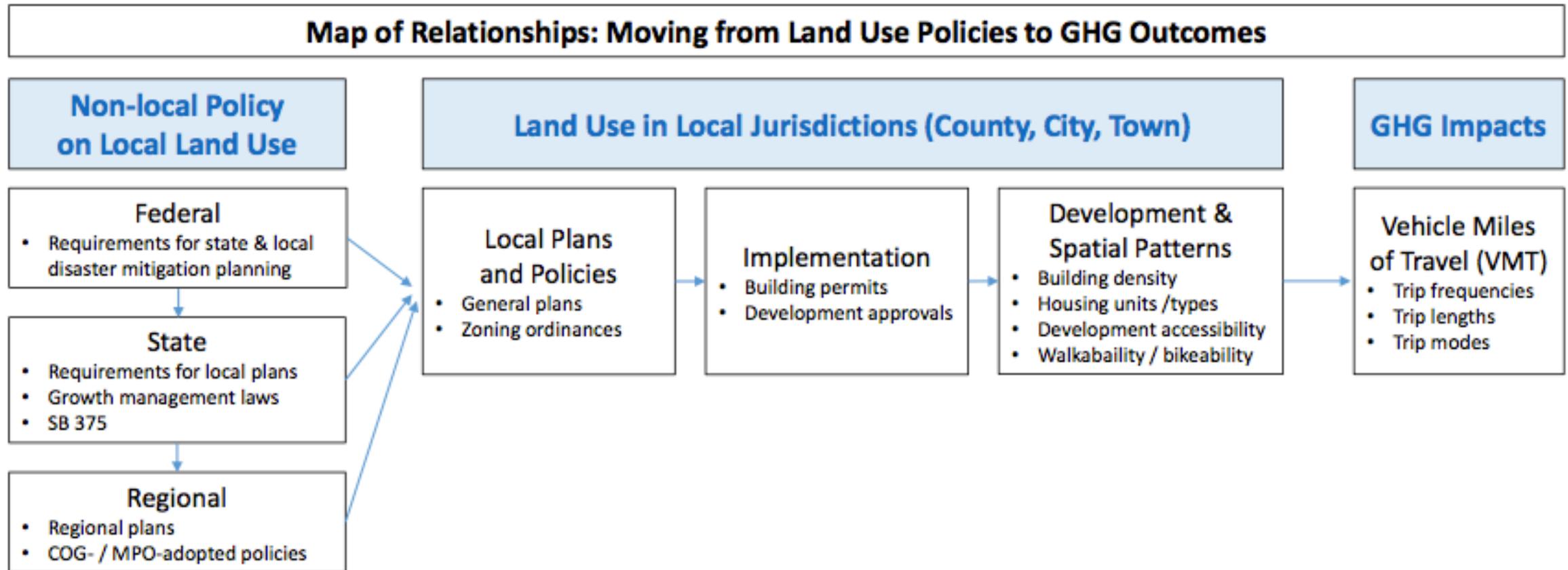
2. Do local plans and policies reflect these upstream policies? How we assess the effectiveness of local plans and policies, especially regarding SB375?

Assessments of land use and land use planning emphasize planning process and plan policies, rather than implementation based frameworks.

3. What data and indicators should we use to monitor actual changes in local land use and development over time and evaluate SB375 implementation?

Existing research suggests models for evaluating land use and planning outcomes, but more work is needed to identify which data could do it best.

1. State, regional, local efforts to influence land use: Are they effective?



1.A State Efforts

Overall evidence on the effectiveness of state policies in reducing sprawl is mixed.

Evidence is inconclusive about which state policy mechanisms are most effective.

- Growth Management
- Incentive-based Approaches to Smart Growth
- State Mandates for Local Planning
- Consistency Requirements in State Approaches to Smart Growth

State Growth Management Strategies

Neither state growth management policy nor the length of time in effect significantly impact urban population density (Anthony, 2004)

“More highly regulated regions and stronger planning states have lower marginal land consumption rates, while regional containment policies...do not appear to reduce the size of urban areas” (Paulsen, 2013)



State Incentive-Based Approaches



Designating targeted development zones seems to make development somewhat more likely in such areas; yet, development is not prevented from occurring in other areas.

Maryland: Incentive-based Approach to Smart Growth

1997 Priority Funding Areas Act

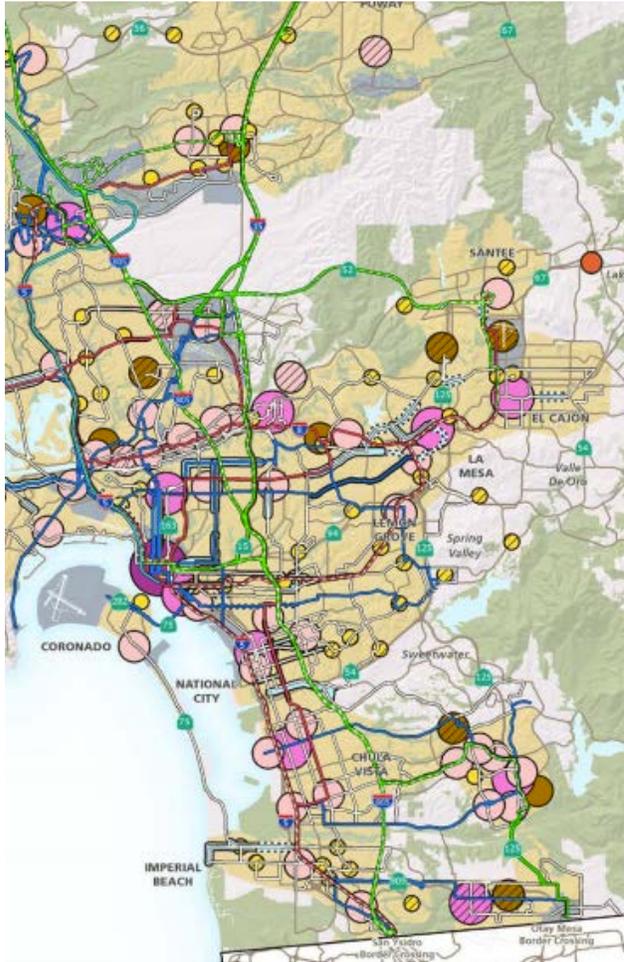
- Aims to steer development to FPAs meeting density criteria or targeted for economic revitalization
- State incentives for FPA developments
 - i.e.- funds for supportive infrastructure and brownfield cleanup, business tax credits, homebuyer assistance, others.
- Complementary “rural legacy” fund conserving local natural lands
- 2009, additional legislation encourages local alignment of zoning, subdivision regulations, and comprehensive plans with state smart growth principles.

State Mandates and Consistency Requirements

State mandates can influence local land use for the better:

- States with stronger planning mandates = local governments more likely to restrict development in hazardous areas (Burby & Dalton, 1994)
- State mandates for local planning yielded better plan quality (Berke & French, 1994), as did mandates for local plan consistency with state goals (Jun & Conroy, 2013, 2014)
- However, neither approach necessarily reduces sprawl.

1.B Regional Efforts



Impacts of regional efforts are:

- Often tied to funding incentives through growth management strategies
- Less common and not well studied.
- Evidence is limited, largely indirect, and suggests limited impacts on improving smart growth.
- Little evidence of containing urban sprawl

MPO-driven smart growth initiatives in CA

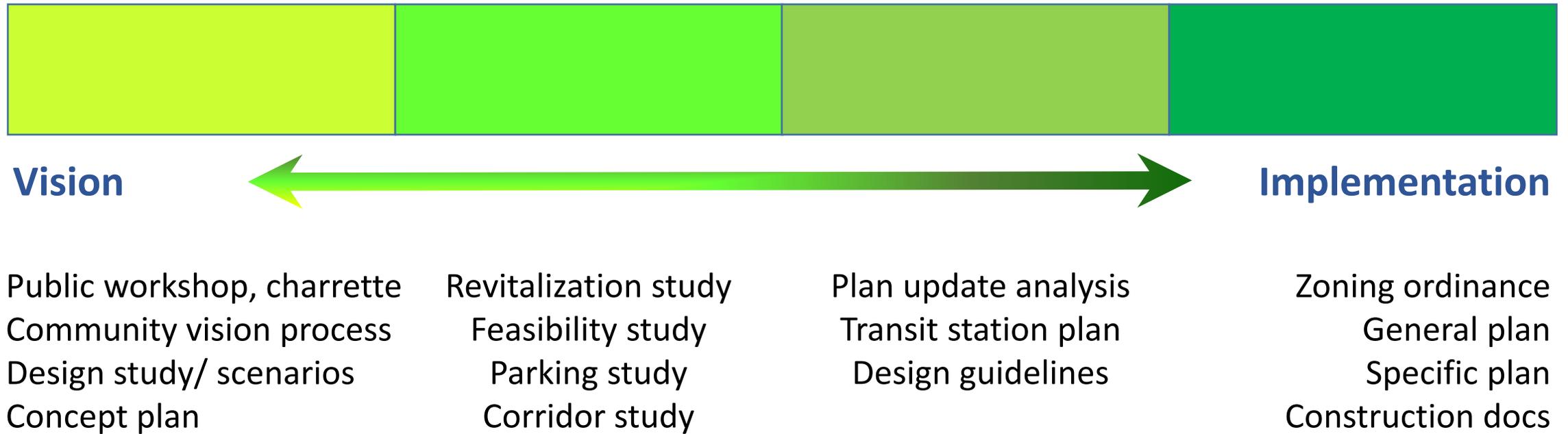
MPO Region	Program	Est.
S.F Bay Area	Transportation for Livable Communities Program	1997
Sacramento	Community Design Program	2005
San Diego	Pilot Smart Growth Incentive Program	2005
Southern California	Compass/Blueprint Demonstration Grant & Green Incentive Programs	2005

Key Features

	San Francisco	Los Angeles	San Diego	Los Angeles
Program	Transportation Corridor			Print Program
Year Started	1997			
Funding Source(s)	<ul style="list-style-type: none"> •STP •CMA •Transportation Enhancement 			ng grants Metro PL State Planning
Local Funding Source(s)	<ul style="list-style-type: none"> •Federal 			
Target Growth Areas	Prior			Strategy
Planning Projects				
Capital Projects	☑	☑	☑	☒

- Use federal \$ creatively to drive center-focused capital investment and planning.
- Used federal \$ to leveraged local \$.
- Federal-local swaps for planning & non-transport infrastructure.
- Favored target growth areas.

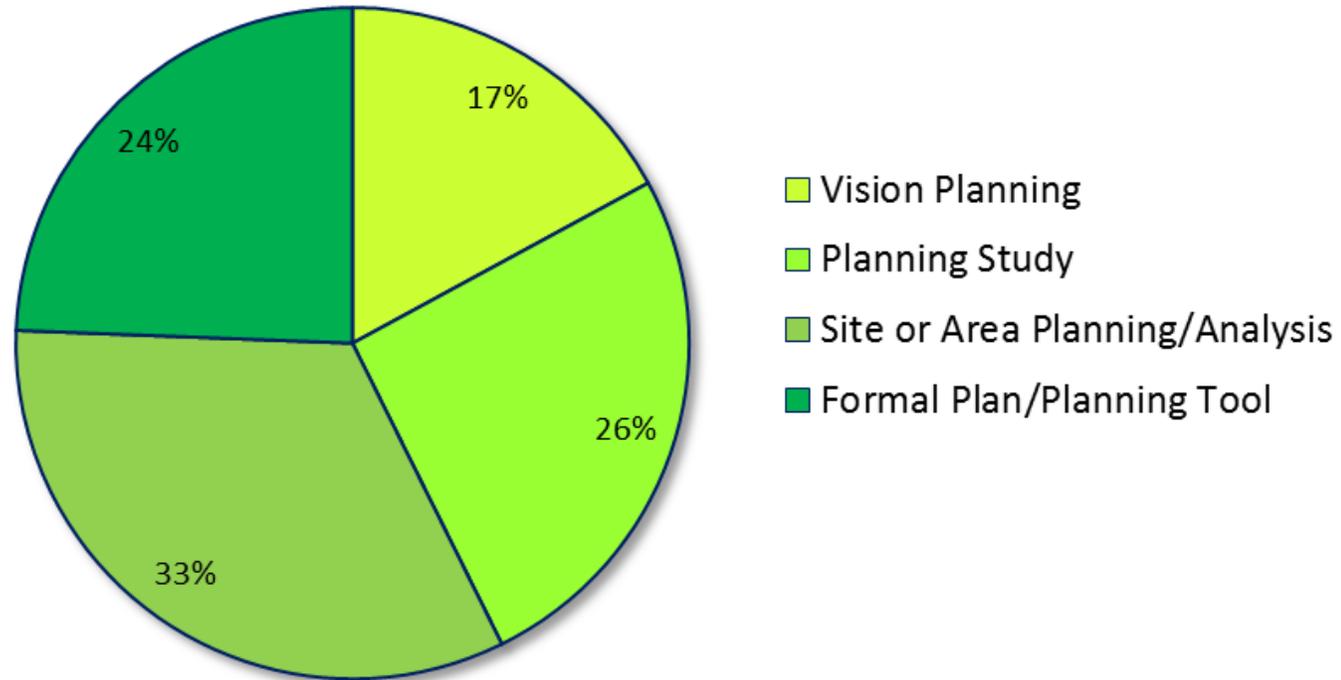
Majority of efforts fund late stage planning



Majority of efforts fund late stage planning

SCAG Compass Blueprint Demonstration Grants (Planning)

(Projects completed as of June 2012, Total=82)



1.C Local Government Efforts

Different local controls have different effects:

- Milder urban growth boundaries mostly redistribute growth.
- Zoning policies focused on urban form (strict maximum lot size; eliminate minimums and FARs) can curb sprawl.
- Urban containment policies become stronger when they are more restrictive and the longer they've been in place.

2. How should we evaluate land use planning and policy?

Three Approaches in the Literature

Process-based Frameworks

Frameworks Using Policy Goals

Implementation Based Frameworks

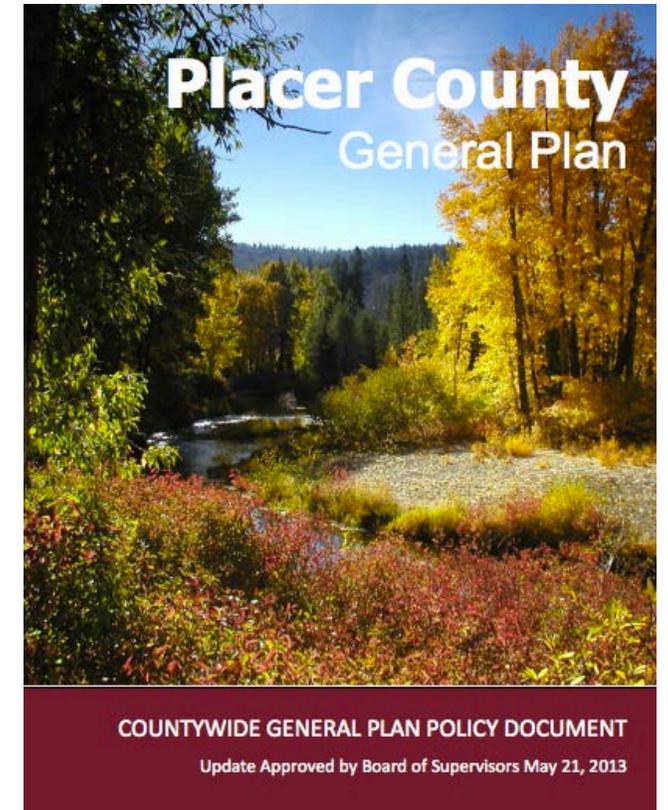


2.A Process-based evaluation of local plans

What makes a “good” plan or policy?

- Plan fact basis, goals, and policies
- Extent of stakeholder involvement
- Persuasiveness of plans
- Stringency of plans
- Content analysis

Higher Quality = more implementation/action oriented



2.B Policy goal frameworks for local plan evaluation



- Systematic measurement of policy-oriented plan content
- Measures plan alignment with desired policy goals
- Point system for articulating desired policies, for implementation-orientation

2.C Evaluating local plan and policy implementation

- Whether and how plans and policies are implemented or likely to be implemented
 - Measured as the ratio of proposed mitigation actions later implemented to proposed actions not implemented
 - Existing research using this framework show mixed evidence of “plan use” (Norton, 2005)
- Methodological Challenges

Implementation-based plan & policy evaluation

Implementation focused research still needs to ask (Talen, 1996b):

1. Are plans implemented? Do land use regulatory mechanisms and controls reflect plans?
2. Are those regulatory mechanisms being implemented or followed? What is their impact?
3. What is the gap between plans and impacts or outcomes?

3. Data and indicators: How to measure land use performance?



Synthesized how studies have measured land use change over time and whether change resulted from adopted or implemented land use policies

Data coverage, granularity, accuracy, regularity of updates, and cost of collection will vary.

Data and Indicators: Land use change measures

Indicator/Dimension Measured	Indicator Variables/Unit of Analysis
Land use change	Agricultural land conversion Change from “undeveloped” to “urban” designation Longitudinal analysis; census-based proxies
Land use change; proportion of development within target areas	Observed development via changes in land use map over time
Housing production	Relationship within a municipality of housing supply to housing demand
Land consumption relative to population growth	Changes in population density based on measurement of urbanized land
Land use mix	Actual land use mix Zoned land use mix

Data and Indicators: Urban Form Measures

Indicator/Dimension Measured	Indicator Variables/Unit of Analysis
Accessibility	<ul style="list-style-type: none"> Street Connectivity Median perimeter of blocks Dendritic street pattern Median length of cul-de-sacs Travel time (by mode; by network status) Travel Cost Distance (by mode)
Centrality	<ul style="list-style-type: none"> Mean distance to commercial zones Mean distance to K-12 schools Mean distance to nearest park
Density	<ul style="list-style-type: none"> Median single-family residential lot size Median number of rooms Housing density (units/sq km)
Neighborhood Mix	<ul style="list-style-type: none"> Land use contiguity Land use richness Population working outside city Renter-owner balance

Data and Indicators: Transportation Accessibility

Indicator/Dimension Measured	Indicator Variables/Unit of Analysis
Transit accessibility	Bus access
Pedestrian Accessibility	Pedestrian access to all commercial uses Pedestrian access to bus stops

Discussion and Conclusions

SB375 sets new expectation for land use performance

Local governments should support regional SCS to help meet state goals.

Longitudinal land use evaluation for SB 375 would illuminate land use policy-outcome relationships

Existing data gaps suggest the need for this monitoring effort, and its potential to help understand linkages between higher level policy, intermediate plans, and outcomes.

Discussion and Conclusions

Strategic evaluation of land use change over time is needed

Two main questions at regular intervals:

- 1) Whether upstream regional and local planning is changing*
- 2) Whether and how development patterns are changing*

Discussion and Conclusions

Existing research provides possible frameworks for evaluating land use planning and outcomes.

Policy oriented approaches may be more informative, but implementation based frameworks may be where planning research stand the most to gain.

Existing research suggests possible models for evaluating land use planning and outcomes.

What data are best and at what scale are they available? More research is needed.

Next steps

UCLA – UCD collaboration:

Identifying, Evaluating and Selecting Indicators, Indices & Data
for
Future Monitoring System of the Implementation of SCS

Acknowledgements

Funders

- National Center for Sustainable Transportation
- U.S. Department of Transportation
- Caltrans

Reviewers

- Caltrans
- Air Resources Board
- Institute for Local Government
- Southern California Association of Governments

Research Assistance

- Sarah Strand

Further reading

<http://its.ucdavis.edu>

→ Research

→ Publications

→ Sciara

http://its.ucdavis.edu/research/publications/publication-detail/?pub_id=2550