Smart Mobility Framework

Phase I Report (Revised)

Definition and Principles Workshop Summary

January 9, 2009

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Definition and Principles

Workshop Summary

January 9, 2009

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1. Introduction

This report compiles the results of a two-day workshop on “Smart Mobility” sponsored by Caltrans and the U.S. Environmental Protection Agency Development, Community and Environment Division (EPA DCED). The workshop, held on September 17 and 18, 2008, was a critical launching point for a collaborative initiative between Caltrans and the EPA Smart Growth Program led by the DCED. The initiative began with EPA’s selection of Caltrans as the recipient of technical assistance to develop a “Smart Mobility Framework” to assist with implementation of multi-modal and sustainable transportation strategies in California. The first phase of the effort, now completed, was supported by EPA and resulted in a preliminary proposed set of Smart Mobility principles, along with supplemental material prepared in advance of the workshop. A second, more extensive phase now underway, is using Caltrans State Planning & Research funds to create additional tools to assist Caltrans and partner agencies in developing and evaluating plans, programs, and projects to support smart mobility objectives ranging from improved transportation choices to reducing the transportation sector’s impacts on climate change.

The remainder of this report is organized into two main sections:

Section 2 – Smart Mobility Definition and Principles: This material presents a basic definition of Smart Mobility with related principles. Workshop attendees will notice significant expansion and revision of the preliminary principles. These changes are based largely on the contributions and suggestions of workshop attendees and members of the project’s Technical Advisory Committee (TAC). The revised material will be subject to further review before being used as the basis for subsequent steps in the Smart Mobility Framework project. Many of the comments and topics raised during the workshops that are not reflected in the material included here will be addressed in subsequent project phases.

Section 3 – Workshop Notes: For each of the workshop sessions, this section provides notes on participant comments and facilitator wrap-up comments. An overall synthesis is provided in the reprint of the consulting team’s summary PowerPoint slides created for the TAC meeting at the conclusion of the workshop.

Additional workshop documentation is provided in appendices A through E.

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2. Smart Mobility Definition and Principles

What is Smart Mobility?

Smart Mobility is meeting the transportation needs of people and freight, while enhancing California's economic, environmental, and human resources.

Smart Mobility is an overarching basis for policy formation and action that coordinates and integrates many of Caltrans' existing activities and the activities of other public and private organizations. Smart Mobility rests on strong relationships between Caltrans and other State agencies as well as regional and local organizations. To be successful in attaining a Smart Mobility future that offers the benefits described here, smart mobility principles must be applied to:

- Land use and transportation planning activities
- Transportation programming by all levels of government
- Evaluation and screening tools for plans, programs, and projects
- Local government development review, and activities such as Caltrans' Intergovernmental Review Program that focus on improving coordination and collaboration between agencies
- Public-private partnerships for investments in infrastructure and land development projects
- Community engagement that determines how Smart Mobility can be implemented throughout the state in ways that are responsive to local values, priorities, and conditions.

Why Smart Mobility?

As California confronts robust population growth in a competitive global economy, there is an urgent need for a positive and integrated approach to the State's transportation future. This urgency is reflected in the State's pioneering legislation, the California Global Warming Solutions Act of 2006 and Senate Bill 375 of 2008. Successful implementation of both statutes will require action at all levels of government as well as by the private sector.

A national panel of experts convened by the American Association of State Highway and Transportation Officials (AASHTO) described this need as follows: "the transportation system … faces the challenges of congestion, physical deterioration, energy supply, global warming, environmental impacts, and suburban sprawl that undermine the economic, social, and environmental future of the nation."[1] California can be a national leader in facing these challenges.

[1] "Sustainable Transportation for America," AASHTO Sustainable Transportation Panel, 2007.

What does a Smart Mobility future look like?

The State's most populous regions have begun to answer this question through the Regional Blueprint Planning programs supported by Caltrans (see Exhibit 1). The California Transportation Plan (CTP) also provides a basis for smart mobility, envisioning a balanced transportation system that promotes sustainability, defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Features envisioned by both the CTP and the Regional Blueprint Planning visions are:

- A transportation system with facilities and services that offer **meaningful travel choices** using highly-connected networks with complete streets and quality transit services.
- Development and urban design characteristics that create **communities where walking, bicycling, and transit use are common choices** – and where these choices contribute to compact development patterns and active lifestyles.
- A supply of **housing that allows people of all incomes and abilities to live within reasonable distance of jobs**, schools, and other important destinations, so travel doesn't take too big a bite out of household budgets.
- **Projects for all modes that are designed and operated to enhance their surroundings,** and support economic development by creating favorable settings for investment in development and revitalization.
- Sensitive **environmental areas and resources protected from adverse impacts** of transportation and development.
- An **inter-regional network for longer-distance travel and freight movement**, connecting the State's towns, cities, and regions to each other, to major intermodal freight transfer points, and to national and international destination reached via air and ground transport.
- **Distinctive communities and places** that reflect their own histories, contexts, and economic foundations, and that use Smart Mobility principles in ways that are appropriate to their development and population characteristics.

Exhibit 1: Future Visions from the Blueprint Planning Programs

In Southern California, SCAG's Compass Blueprint Growth Vision encourages:

- Focusing growth in existing and emerging centers and along major transportation corridors
- Creating significant areas of mixed-use development and walkable communities
- Targeting growth around existing and planned transit stations
- Preserving existing open space and stable residential areas

See: www.compassblueprint.org/about

In the Sacramento Region, SACOG's Growth Principles are:

- Transportation choices
- Mixed-use developments
- Compact development
- Housing choice and diversity
- Use of existing assets
- Quality design
- Natural resources conservation

See: www.sacregionblueprint.org

Creating this Smart Mobility future for California will require shared goals and cooperative efforts by State, local, and regional agencies, including Caltrans and the California Transportation Commission (CTC), the State Department of Housing and Community Development (HCD), the Governor's Office of Planning and Research (OPR), California Air Resources Board (CARB), and other State agencies and departments. Regional transportation planning agencies and

metropolitan planning organizations (RTPAs, MPOs), county congestion management agencies, and regional and local transit agencies must be included. Local governments play an essential role because they hold authority for land use and development decisions that must lead the way in building the smart mobility future. The basis for this type of shared commitment has gained considerable strength recently as a result of programs such as regional blueprint planning grants and legislative mandates contained in AB 32, California's Global Warming Solutions Act, and SB 375.

What are Smart Mobility's benefits?

Improved accessibility will make it convenient for people to reach the goods, services, and activities they need. Accessibility can improve even when traffic congestion is a problem. Improvements in accessibility can be made when housing, jobs, and shopping become closer together, when non-driving modes are more efficient, or when both types of changes occur. Studies of location efficiency in California show that households in central, accessible locations drive 50% less than households in peripheral locations.[2]

Greener mobility reduces the environmental impacts of travel by reducing vehicle miles traveled (VMT) as a result of improved accessibility and increased use of lower-polluting modes and vehicles.

Greener transportation facilities and operations will reduce direct environmental impacts such as habitat destruction, stormwater pollution, and greenhouse gas emissions, as well as avoiding indirect impacts on land development patterns, such as fostering sprawl.

Improved public health will result from fewer serious crashes, fewer pollutant emissions, and more physically active travel among all population groups.

Reduced energy costs and vulnerability to price escalation will be achieved as access and travel become less dependent on petroleum consumption.

Exhibit 2: Smart Mobility and Smart Growth: Ideas, Examples, and Inspiration

Helping to shape visions of smart mobility are ideas and practices from smart growth, new urbanism, and transit oriented development.

The New York State Department of Transportation defines Smart Growth as: "sensible, planned, efficient growth that integrates economic development and job creation with community quality-of-life by preserving and enhancing the built and natural environments." See: www.nysdot.gov/programs/smart-planning

The New Jersey and Pennsylvania DOTs offer ten themes of Smart Transportation including "Build Towns Not Sprawl." See the rest, and case study examples, at: www.smart-transportation.com/themes.html

The U.S. EPA's 10 Smart Growth Principles are online at: www.epa.gov/dced/about_sg.htm

For additional information on smart growth, see: www.smartgrowth.org

The principles of New Urbanism are online at: www.cnu.org/charter

The Ahwahnee Principles are available at: www.lgc.org/ahwahnee/principles.html

The transportation system will become increasingly efficient over time as transportation options, land use patterns, and household and business choices evolve consistent with smart mobility.

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[2] "Location Efficiency: Neighborhood and Socio-Economic Characteristics Determine Auto Ownership and Use - Studies in Chicago, Los Angeles and San Francisco," John Holtzclaw, et al, 2002.

The State will create the right conditions for **reducing the average length and number of vehicle trips** that Californians make, thereby reducing energy consumption and greenhouse gas emissions as called for by AB 32, the State's Global Warming Solutions Act, and SB 375.

Social equity will be supported by ensuring that historically underserved communities receive a fair share of the benefits of transportation system improvements.

Economic development will be achieved by minimizing the distance between housing and job centers, revitalizing distressed urban and suburban communities, limiting public infrastructure expenditures to serve far-flung developments, and creating attractive communities that draw and retain talented workers as well as tourists.

What principles should be the foundation for Smart Mobility?

Advancing progress towards State goals for economy, environment and social equity can best be achieved through the four Smart Mobility principles introduced below.

To achieve mobility as well as broader societal objectives, these principles must consistently be implemented with a focus on social equity. Social equity in transportation has two components. The first is to ensure that no group receives disproportional burdens or benefits from transportation investment decisions. The second is that the transportation system allows everyone "…to participate fully in society whether or not they own a car and regardless of age, ability, ethnicity, or income."[3] A transportation system designed to provide social equity ensures that low-income individuals, the young and elderly, persons with disabilities, and disadvantaged individuals in rural and urban areas have access to safe and reliable transportation.

1. Location Efficiency: to create an integrated land use and transportation system

Invest in transportation infrastructure and services that support land use patterns which enable high levels of non-motorized travel and transit use, reduced vehicle trip making, and shorter average trip length.

This principle means that Caltrans activities will focus on:

- Prioritizing system and service improvements that serve places with good regional accessibility, higher densities of population and jobs, and mixed land uses, or improvements that support evolution of these characteristics, while placing lower priority on expanding capacity by constructing additional lane-miles.
- Creating a more highly connected network to support land use and development patterns that promote Smart Mobility outcomes (recognizing that some parts of the state need a more highly-connected inter-regional network while others may need more connectivity at the local scale to provide walkability and choice of routes), and
- Diversifying travel choices in all locations with an emphasis on serving all users through Complete Streets and supportive land use and urban design features characterized by the 4Ds: destinations, density, diversity (land use mix), and design (street grid density, sidewalk presence, and route directness).

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[3] Caltrans' 2001 Director's Policy-21 on Environmental Justice establishes a commitment to incorporating Environmental Justice into its programs, policies, and activities "to ensure there are no disproportionate adverse impacts, particularly on minority and low-income populations."

2. Reliability: to manage, reduce, and avoid congestion through operational and strategic actions

Emphasize reliability for all modes in Caltrans' operational and planning activities. Operational strategies will focus on congestion avoidance and reduction through:

- Addressing non-recurring congestion through incident management and work zone planning.
- Implementing operational improvements (including ITS) across modes.
- Using pricing to help manage peak-period demand.

Strategic planning for long-term reliability will diversify and increase the flexibility of the system by:

- Offering walk, bike, and transit options that allow people to choose reliable travel modes, thereby opting out of congestion. A focus on complete streets facilities (formalized by Caltrans in Deputy Directive 64-R1: Complete Streets: Integrating the Transportation System, and in State statute through 2008 amendments to Sections 65040.2 and 65302 of the California Government Code), requires changes in the circulation network throughout the state to accommodate multimodal travel.
- Favoring transportation investments in locations with population and employment densities that allow smart mobility benefits to be realized.
- Establishing secure long term funding for transit capital and operating expenses so that investments and services can stimulate private sector investments in land development and revitalization.
- Prioritizing bus movements on state highway facilities to improve transit reliability, consistent with Caltrans Deputy Directive 98, Integrating Bus Rapid Transit into State Facilities.
- Improving the ability to respond and adapt to natural and human-made disasters and changes.

3. Health and Safety: to improve public health and reduce serious injuries

Health and safety groups bring together concerns from different but related parts of the health spectrum. Positive outcomes relating to multiple health concerns can be reached through various strategies, such as incorporating walk/bike access and pollutant exposure criteria into school siting decisions.

An emphasis on health and safety calls for the Department to:

- Promote travel by walking, bicycling, and transit to reap benefits to individual health as well as to system reliability. New focus on complete streets requires changes in the circulation network throughout the state to accommodate multimodal travel. Necessary complements to the creation of complete streets will be changes in land use and urban design character that increase the number of trips that can comfortably and conveniently be made by walking, bicycling, and transit.
- Design, manage, and operate the system to minimize fatalities and serious injuries through various methods, including speed and access management. These measures can work best in concert with a comprehensive set of traffic safety initiatives ranging from teen driver education to vehicle safety improvements to improvements in emergency services.

- Reduce public exposure to toxic pollutants generated by the transportation sector. The issue of exposure to diesel exhaust is of particular concern because of its serious health impacts and the rising volume of freight movement. Reducing public exposure will include approaches that consider vehicle technology and alternative fuels, siting of sensitive land uses (e.g., schools, hospitals, etc.), multimodal freight system management, and highway operations.

4. Stewardship: to protect and enhance all of California's resources

Three dimensions of stewardship reflect the different resources that the Department's activities should protect and enhance:

- **The State's transportation assets.** Smart mobility emphasizes asset management not just as prudent conservation of the state's infrastructure investments, but also as an important way of supporting smart growth policies that seek to attract re-investment in established urban and suburban areas.
- **California's built and natural environments.** State and federal environmental laws focus on avoiding and mitigating adverse environmental impacts. Smart mobility goes beyond statutory requirements to call for transportation investments and programs that add value to their surroundings, whether they are urban properties, active agriculture, or natural lands. The practice of Context Sensitive Solutions, institutionalized through Caltrans Director's Policy 22, is one component of realizing this broad approach to stewardship.
- **Climate and energy sustainability.** The October 2008 Climate Change Scoping Plan from the California Air Resources Board (ARB) identifies 38% of the State's total greenhouse gas emissions as attributable to the transportation sector, the single largest contribution of any sector. Smart mobility benefits are an essential part of implementing AB 32, the Global Warming Solutions Act of 2006, as has been recognized by the State Legislature and ARB. Legislative findings adopted as part of SB 375 note that "without improved land uses and transportation policy, California will not be able to achieve the goals of AB 32." Land use and pricing strategies are necessary components of the emissions reduction program called for in the adopted Scoping Plan as Measure T-3, Regional Transportation Related Greenhouse Gas Targets.

An expanded approach to stewardship can help Caltrans prioritize scarce resources by evaluating return on investment – not only in terms of transportation assets but also in terms of economic performance, natural resources, energy sustainability, and community measures.

How can Smart Mobility and its benefits become a reality?

Exhibit 3 provides examples of actions that support smart mobility outcomes, and show their connections to the four principles. Agencies with transportation and land use authority can create the benefits of Smart Mobility through ongoing coordinated actions that apply the principles to:

- Transportation programming at all levels of government
- Evaluation and screening tools for plans ranging from Regional Transportation Plans (RTPs) to local general plans), programs and projects
- Land use and transportation planning activities
- Local development review, coordination, and collaboration

- Public-private partnerships for investments in infrastructure and land development projects
- Data gathering to support smart mobility decision making and performance evaluation
- Funding and incentive programs directed at smart mobility aims
- Updated policies and procedures such as:
  - Transportation performance measures
  - CEQA and NEPA impact thresholds and mitigation requirements
  - City and County general plans
  - Land development regulations (zoning and subdivision codes) and street design standards
  - Parking standards
  - Pricing strategies
  - Design manual standards
  - Design exception process

Widespread endorsement and consistent application of the Smart Mobility principles to the full range of transportation and land use decisions by all levels of government will, over time, yield the benefits of Smart Mobility.

Exhibit 3: Smart Mobility – Examples of Potential Strategies and Participants

Strategies	Participants	Location Efficiency	Reliability	Health & Safety	Stewardship
Program-Level Strategies		**Check marks indicate strongest relationships**			
Funding criteria that reward agencies making land use decisions to promote compact development with pedestrian- and transit-friendly urban design features	Caltrans and CTC, MPOs/RTPAs	✓	✓	✓	
Creating dependable long-term funding sources for transit capital and operating programs to leverage private investment in land development and revitalization.	Legislature, sales tax authorities	✓	✓		✓
Revised STIP Guidelines	CTC, Caltrans	✓	✓	✓	✓
Revised RTP guidelines and procedures consistent with AB 32 and SB 375	CTC, MPOs/RTPAs	✓	✓	✓	✓
Standards and Guidelines					
Revised performance standards and evaluation procedures for plans, programs, and projects, including: multi-modal Level of Service (LOS), modeling applications, and 4D improvements to impact analysis methods	Caltrans, CTC, regional and local governments	✓	✓	✓	✓
Integration of context sensitive solutions and complete streets policies through adoption of related transect based standards	Caltrans		✓	✓	✓
Modifications to Highway Design manual standards and the design exception process	Caltrans	✓	✓	✓	✓
Revised criteria and scoring for housing and commercial development finance and incentive programs	HCD	✓			
Adoption of CEQA and NEPA impact thresholds and mitigation requirements for VMT and CO2 generation, consistent with AB 32 and SB 375	CARB, OPR, Caltrans	✓	✓	✓	✓
City and County general plan guidelines consistent with AB 32, SB 375, and AB 1358	OPR, Local Governments	✓	✓	✓	✓
Implementation					
Streamlined environmental review of location-efficient development with impact fees and mitigations sensitive to smart mobility benefits	OPR, all lead agencies, Caltrans	✓	✓	✓	✓
Access control on state highway facilities to limit low-density, freeway-oriented sprawl	Caltrans	✓	✓	✓	✓

Strategies	Participants	Location Efficiency	Reliability	Health & Safety	Stewardship
Implementation , continued					
Complete Streets implementation on local streets and State highways per Deputy Directive 64-R1, Complete Streets: Integrating the Transportation System	Caltrans, MPOs/ RTPAs, sales tax authorities, local gov't		✓	✓	
Intelligent Transportation System (ITS) implemented to support smart mobility principles	Caltrans, MPOs/ RTPAs, sales tax authorities, local governments	✓	✓	✓	✓
Incident and disaster response protocols	Caltrans, CHP		✓	✓	✓
Adoption of smart land development regulations including zoning and subdivision codes, urban design and street design standards, and airport land use compatibility plans	Local Governments	✓	✓		✓
Parking management: shared-parking standards, parking charges	Local Governments	✓	✓		
Travel and congestion pricing strategies	Caltrans	✓	✓		✓
Public support for freight rail infrastructure improvements and intermodal connections	Caltrans, MPOs/ RTPAs, sales tax authorities		✓	✓	✓
Speed management	Caltrans, local gov'ts		✓	✓	
Decision Support					
Data gathering, methodology development and competency building to support smart mobility decision making and performance evaluation	Caltrans, MPOs/ RTPAs	✓	✓	✓	✓
Smart Mobility performance measures consistently applied in transportation decision making and programming activities	Caltrans, MPOs/ RTPAs, CTC	✓	✓	✓	✓
Public education and community involvement to determine how the principles can be made most relevant and prioritized locally	Caltrans, MPOs/ RTPAs, Local Governments	✓	✓	✓	✓
Inter-agency consultation process for implementation of HCD criteria and scoring	HCD, Caltrans	✓			
Regional planning support, tailored to regional scale and region-specific issues	Caltrans, MPOs/ RTPAs	✓	✓	✓	✓
Use of Local Government Review and Intergovernmental Review programs to support Smart Mobility actions and funding	Caltrans	✓	✓	✓	✓
Multiple-objective investing criteria addressing all principles	Caltrans, CTC, Regional Agencies	✓	✓	✓	✓

3. Workshop Notes

This section presents notes from the six workshop sessions as well as the closing Technical Advisory Committee meeting. Each workshop session followed a similar format:

1. A slide presentation by the consultant team
2. A facilitated discussion
3. A summary review of the key discussion points

The full workshop agenda is included as Appendix A. Appendix C contains a list of workshop participants.

Opening Session: Executive Managers' Roundtable with Will Kempton

Wednesday, September 17, 2008
1:30 p.m. – 3:30 p.m.

Session Purpose: Engage managers and leaders in a focused discussion of the project principles and challenges.

Session Description: Following brief introductory comments from agency executives and a project overview from the US EPA Consulting Team, participants:

- Reacted to presentation of a preliminary definition of Smart Mobility for use across the Department's functional areas and by partner agencies.
- Identified challenges to mainstreaming smart mobility within the Department and partner agencies.

Session Notes: Questions and Comments on Project Process

- If want to start the implementation of Smart Mobility, we should be able to start employing it in the 2010 STIP, which begins in spring 2009.
- Incorporating principles into the STIP guidelines is important. The guidelines cover a 4-5 year period. How will this dovetail with AB 32 and SB 375, and OPR's new CEQA guidelines? We (CTC) would like to begin programming a different type of project—mobility projects—but don't quite know what they look like. Maybe transit or TOD. We need to create incentives for the Department and regional partners to experiment and do creative programming.
- We need to work the principles into planning, before we get to programming. What are the interim steps?
- This effort needs to dovetail with blueprint plans too. This tool should be analogous to the blueprint system. CTC is looking to "bring forward" non-traditional investments out of the Regional Blueprint Planning process.
- HCD programs have focused on guidelines for transit, funding places that have the infrastructure in place. Perhaps they should focus more on creating demand. Do you focus on places w/ good location efficiency, or try to change location efficiency in existing places? The HCD TOD bond grants are vastly oversubscribed.
- We need to define and establish common terminology.
- In order to succeed, we'll need to work across disciplines and across agencies.

Session Notes: Dialogue on Definition and Principles

- Are equity and accessibility supposed to be applied across the 4 principles? If they overlay with the principles, that needs to be made explicit.
- The definition and principles need to incorporate preferred vocabulary for California/Caltrans.
- We may find that some corridors can sustain more travel than they currently do, perhaps by shifting mode or shifting time of day. It's not necessarily about reducing VMT in individual corridors, but managing VMT. In some cases, we'd need to wait for a jobs-housing balance to see any VMT reduction. Need to turn the conversation towards person miles traveled, not VMT (i.e., be mode neutral).
- The focus initially needs to be on vehicle trip reduction, in order to ultimately reduce VMT. Be careful that the absolute reduction of VMT doesn't come at the expense of some good ideas.
- We need to focus more on per capita VMT than absolute VMT. Reducing per-capita VMT relates to helping households reduce their transportation costs.
- Is there a better term for location efficiency?
- Location efficiency is really about accessibility. But the term accessibility has been used to mean a number of other things, so can't use it here.
- We need a concept that incorporates appropriate supply of housing, not just local and urban design.
- We should add the word "access" – it's in SB 375, it's one of the 9 system performance measures for the state, and it could tie housing issues with transportation issues.
- Caltrans operates a transmission line – it is not empowered to affect location decisions. From Caltrans' standpoint, we need a term that gets at the mobility concept, but empowers the Department to interact with regional agencies on land use. The right term will help move the Department from reacting and providing capacity to rewarding good local land use decisions.
- 20 years ago, the electric utilities began focusing on demand management – trying to manage what goes through their transmission lines and minimize the need to expand capacity. Transportation agencies are in a similar position today of shifting into a new role that includes focusing on conservation because of limited ability to expand capacity.
- The definition should talk about "program" sustainability goals rather than "Department" sustainability goals. It's bigger than just Caltrans. Needs to apply to HCD, OPR, MPOs, etc.
- The Atlantic Steel project is a good example. Federal agencies used screening metrics, including location efficiency, to evaluate the proposed development and its impacts on the entire region. While it might have increased VMT and emissions in the immediate vicinity of the project, it reduced them for the region, compared to the alternatives.
- The principles should recognize the significant asset that is the existing transportation system. Can smart mobility be applied to the existing miles?
- Would like to see stewardship principle expanded. It's important to keep facilities (including sidewalks, bike paths, etc.) operational and usable, or people won't use them. Because maintenance is not an up front cost, it can easily be cut.
- How do we apply smart mobility to interregional transportation system (freeways)? 50% of VMT in California is on freeways. The principles need to address inter-regional connectivity.

- This tool shouldn't just focus on Caltrans. It should include all agencies involved in transportation, land use, and housing. It needs to focus on the state's entire transportation program. We won't influence anything if we don't get into programming.
- The tool should allow us to see the impacts of both intermediate and long-term steps. For example, a new "smart growth" mixed use housing development might increase regional VMT while jobs come on-line. So an investment might not improve mobility in the short term, but would lead to more efficient mobility in the long term.
- The definition and principles don't address airports. Would like to see airports incorporated in terms of (1) ground access and (2) incompatible land uses.
- Land use patterns and transportation choices shift over time. A Smart Mobility framework needs to be flexible so it can remain relevant.
- The framework should recognize the use of incentives to promote Smart Mobility outcomes.
- We need to decrease SOV usage.
- The framework needs to include measurement of the impacts of walking.

Session Notes: Wrap-Up Summary

- There's clearly a high degree of inter-agency cooperation here. That's unusual, and great to see.
- There is a willingness to talk about the programming process, to talk about new kinds of projects. That's sacred ground in many states.
- There's a concern about incorporating equity – it needs to be elevated in the definition and principles.
- There's concern about VMT as the only measure.
- There's concern that location efficiency might not be the right term, and that the public may not understand this term.
- It's important to integrate what we do with processes affecting housing decisions.
- The electric utilities have gone before us – is there something we can learn from that?
- We need to make sure the tool considers both short-term and long-term impacts.
- Maintenance is important. A well-maintained facility is an asset for smart mobility in the long term.

Mainstreaming Smart Mobility Part I: Integration Across Caltrans' Programs

Wednesday, September 17, 2008
3:45 p.m. – 5:30 p.m.

Session Purpose: Department managers built upon the results of the Executive Roundtable by adding their perspectives to project principles and challenges.

Session Description: The US EPA Consulting Team presented a project overview including proposed Smart Mobility Principles and a report on results of the Executive Roundtable. A one-hour dialogue session focused on opportunities and challenges for meaningful implementation of the framework.

Session Notes: Dialogue on Project Process and Challenges

- Caltrans has found that less expensive projects improve capacity as much or more than more expensive projects, but the political process trends toward more prominent projects (i.e., ribbon-cutting ceremonies).
- The smart mobility team should review the process at MTC, which is giving money for housing development if it meets certain criteria.
- There should be a greater role for MPOs/RTPAs in developing the framework, given that they control 75% of the funds.
- The team should take into account the influence of preferences and marketing. In Sacramento, for example, light rail is not appealing to some residents, whereas in the Bay Area, BART is widely appealing.
- Caltrans has a problem with conflicting administration goals. For example, economic development may be in direct conflict with smart mobility. An example is the 40 new interchanges planned for the SACOG region to provide access from the state highway system to sites for new development. These facilitate local economic development, but are not helping the system overall and are not consistent with the regional land use vision.
- There is a lack of local arterial capacity in many areas. Local governments approve developments, and developers fund new interchanges as mitigation. There's no consideration of impacts on the entire system.

Session Notes: Dialogue on Definition and Principles

- Several things jumped out: (1) there doesn't seem to be attention paid to how business patterns and goods movement are changing, and what are the forces of change; (2) the economy and employment have to be included; (3) the word "satisfies" is used. Is that all we want to do? Can we also shape behavior? Should use more active words, like "driver"; (4)

when we talk about shorter or fewer car trips, we need to match that with variables that are affecting travel like changes in fuel prices.

- The current "definition" isn't really a definition. It should be a sentence, such as "Smart mobility is…." For example, "Smart mobility is getting there in a green manner."
- Are equity and accessibility supposed to be applied across the 4 principles? If they overlay with the principles, that needs to be made explicit.
- We could use a more sophisticated definition of the system. Not just physical systems, but behavioral systems, technological systems, and economic systems should be included.
- The Reliability principle is too narrow. Perhaps this principle should incorporate choices, flexibility.
- Quality of life, which ties into equity, should be incorporated.
- Education and enforcement should be incorporated.
- Incorporate environmental justice.
- Smart mobility is the result of decision making.
- Smart mobility is outcome driven and performance based.
- We want smart mobility strategies. Smart mobility is mobility without adverse environmental consequences.
- The word "choice" should be incorporated. For example, smart mobility should facilitate choice of housing types such as TOD.
- Interconnectivity is an important concept. For example, a new Amtrak/commuter rail station would complement Stockton's BRT.

Session Notes: Wrap-Up Summary

- There is a question of how to get other decision makers involved, given the decentralization of decision making.
- We need more information on how to institutionalize smart mobility.
- We need more information on successful MPO partnerships and leadership.
- We must pay attention to how this effort will be different from past planning efforts, because of the climate issue, AB 32 and SB 375.
- There's a lot of work to do on the definition. It should be affirmative and speak to the public. It needs to reflect theme of choices. Goods movement and interconnectivity also need to be incorporated.

Mainstreaming Smart Mobility Part II: Blueprint / Scenario / Regional Planning

Thursday, September 18, 2008
8:30 a.m. – 10:15 a.m.

Session Purpose: Learn from leaders of efforts to pursue smart mobility goals in the State's regions through Regional Blueprint Planning and other regional planning programs.

Session Description: Following an introductory presentation, the session focused on how Caltrans can support successful Regional Blueprint Planning implementation, and how the Smart Mobility project can incorporate lessons learned from the Regional Blueprint Planning efforts.

Session Notes: Dialogue on Project Process and Challenges

- Agencies that don't have expertise are trying to create their own expertise rather than collaborate. Perhaps the power of the tool could be establishing common standards across agencies.
- The private sector is also a partner. It's the private development proposed that resulted in Sacramento city and county approving all these future interchanges (40). Perhaps transit could have been part of the solution. Challenge is that the operating costs are not provided for.
- MTC has taken a different approach for their RTP. Instead of looking for funding for existing projects, asked where we want to be in 25 years. Performance targets were established for delay, GHGs, affordability. They found that they could build all kinds of infrastructure and still not reach their GHG reduction targets, even with Pavley standards, unless they implemented strong land use and pricing strategies.
- Regions have struggled with dealing with interregional commute trips. Regions haven't found a way to work with each other on these trips. Caltrans is setup along a regional model. Regions have no ability to do interregional planning. Is the Caltrans model putting too much emphasis on intra-regional planning and not enough on inter-regional?

Session Notes: Dialogue on Regional Blueprint Planning

- Caltrans role includes several steps: (1) Get MPOs to start doing blueprint planning, (2) measure the impact of the plans, (3) provide local planning assistance. We have to see if development is going to follow the prescribed patterns. The challenge is how the state can help to get land use and transportation to follow the plan. In the Bay Area, Henry Gardner (ABAG) has a philosophy of supporting affordable housing in order to support transit use.

- HCD has a tool that is supposed to analyze proposed housing development in terms of transportation infrastructure. The team should look at how funds are being influenced.
- Transportation investment strategy should be aimed at facilitating land use strategies. How do we measure vehicles miles traveled? A statistical process is needed. VMT should be subdivided by who, when, and why.
- Amador Co. has a blueprint grant. They are trying to integrate that with local planning departments. Have run into some problems: lack of GIS, amount of data available in small rural counties (they have spent a lot of time manufacturing data or shifting some of the work to "post-process" – i.e., showing agencies potential data), political problems. Constituents have a rural/small town perspective; they are not familiar with urban congestion.
- The first generation of CSMPs is a big paradigm shift. Caltrans wants to establish a land use connection within CSMPs, but that is a long way off. They are still figuring out how to bring together all the different decision making agencies.
- Original reasons for the blueprint: there were economic and lifestyle drivers, not just GHGs, and perception of loss of open space. Can lose broad support if we emphasize the GHG aspect too much.
- A challenge is to create a close relationship between blueprints and general plans, making it happen on the ground. also looking at decision making driven by CEQA. Both general plans and CEQA have more of a holistic approach.
- Regarding the blueprint effort, in San Joaquin Valley: revenue streams to local jurisdictions are a big issue. The state needs to come up with a way that local jurisdictions are not competing for sales tax dollars. need more reliable revenue streams

Session Notes: Dialogue on Definition and Principles

- The principles seem to be on the right track. The next step is implementing principles at a small scale that is measurable in projects. This is challenging. Some attention needs to be given to the data that needs to be collected, and a tool that can measure projects at a small enough scale. 4Ds helped blueprint project at a broad scale, but at a smaller scale they are more difficult to measure.
- There should be a really strong connection between land use, transportation, housing, and climate change in the definition and principles. The Health and Safety principle should include serving the public during extreme weather. Has there been any thought about forecasting sea level rise? The Stewardship principle establishes a connection between asset management and natural environments. Infrastructure should be linked to alternative purchasing options. Think about design in terms of encouraging infiltration. AB 32 has now positioned any agency to look beyond its boundary lines, and there is an expectation for increased collaboration
- Concerned that pricing is nowhere included. Not sure that "reliability" captures the potential impacts of pricing. We should think more about system efficiency.
- "Reliability" is supposed to be more relevant to users of the system.

Session Notes: Wrap-Up Summary

- There are specific suggestions for improving the Reliability and Health principles.
- Consistency with HCD and with housing efforts will be important.
- SACOG is interested in tools to measure the principles at project level.
- Some elements of smart mobility relate to specific strategies, such as pricing. What are the actual strategies and activities?
- How do we educate, collaborate with other agencies?
- It is important to engage private sector partners.
- How do we apply the principles in high and low growth places, and in areas with different incomes?
- There are broader network issues of interregional movement and freight movement.
- Will partners see this project as more of an opportunity or an imposition? We want to encourage regions to collaborate, take advantage of opportunities for support.
- It is worthwhile to jointly develop standards.
- We need to include cost of transit and transit based trip generation.
- We need to understand impacts of modal pricing.
- There are concerns regarding data availability, adequacy, and technical analysis.
- It is important to be multi-modal.
- There's a need for political realism.
- What are the measurement tools to assess achievement of goals?

Mainstreaming Smart Mobility Part III: Regional Planning in Southern California

Thursday, September 18, 2008
10:30 a.m. – 12:00 p.m.

Session Purpose: Focus on the particular challenges and accomplishments of the Southern California regions, and ensure substantial project input from Southern California agency personnel and partners.

Session Description: Following an introductory presentation, the session focused on project principles and how Caltrans can support new and ongoing Southern California initiatives consistent with Smart Mobility goals.

Session Notes: Dialogue on Definition and Principles

- The four principles are good, but the structure is different than the organization of most blueprint plans. The principles should be organized to make them consistent with the blueprint plans. Coordination of transportation and land use is at the top of blueprint plans, and supporting principles include environment, economic development, and equity. Other systems are interconnected to transportation and land use plans.
- The definition and principles should incorporate the terms "sustainable development" and "smart growth". It can't stop with mobility planning – needs to be broader than that to be successful. It's important to use terms that people know: housing, economic development, 4Ds, land use & urban form.
- It might be helpful to have a short definition (the "bumper sticker" version) and also a longer, more detailed definition.
- In the first part of the definition, would like to see the term "goods" not "businesses".
- In the second part of the definition, there's no need to distinguish between the State and the Department. They should be consistent.
- In the second part of the definition, does "sustainability" refer to the 3 e's? If so, this should be clarified. The definition should support the 3 e's.
- In the third part of the definition, might want to clarify that climate change falls under "built and natural environment". We might also want to distinguish between the physical environment and the economic environment.
- The term "smart mobility" sticks on people's minds, which is good. But we need to avoid the perception that smart mobility is the responsibility of people "down the hall". It applies to everyone. We also need to make sure the definition and principles are durable – that they still make sense in 10 years.
- How does this effort relate to SB 375? SB 375 will have a big effect on Caltrans regional planning and MPO RTPs. SB 375 calls on every MPO to develop a sustainable community

strategy. You need a definition in order to establish metrics and measure success. Ideally, our smart mobility tool could help MPOs do their SB 375 sustainable community strategies.

- The definition of smart mobility should show it contrasts with the old way – how is it different from what we've been doing? One example is with vehicle speeds. Under the conventional approach, increasing mobility is equated with increasing speed. Under a smart mobility approach, mobility might involve speed management.
- There's a need for flexibility in regulatory process and flexibility in implementation.
- We need to have a common understanding of terms with agreed meanings. We should use the same meanings for terms across disciplines.
- Smart Mobility definition needs to be clear enough to be measureable.
- The Smart Mobility definition should be clear, but not constraining.

Session Notes: What's Different about Southern California?

- Goods movement in Southern California is a mega-regional issue. It needs to be addressed at a different scale than passenger/commuter transport. For example, the SCAG and SANDAG need to work together on goods movement issues. The ports have impacts on all Southern California's highway infrastructure. Some use the term "meta-regions", which are bigger than "mega-regions."
- We need to understand what "smart freight mobility" is. Certainly it needs to address health impacts and the potential for disproportionate impacts. Smart freight mobility may be in conflict with speed control. Freight is all about throughput, which may be in conflict with the desire for densification of land uses.
- Another Southern California issue is the need to coordinate air and rail transport, sometimes across MPO lines. SCAG and SANDAG are working together on high speed rail, for example.
- The scale is much larger in Southern California. Counties are the size of states on the East Coast.
- Water is another key issue in Southern California that will affect both land development and transportation.
- The principles of Location Efficiency and Reliability align well with what SANDAG is doing. They just use different terminology.
- The Stewardship seems like a grab bag of sustainable principles. It should be reorganized under the 3 e's.
- We need to consider impacts of goods movement on health.
- It's important to include the private sector.
- We need to recognize that general public does not "see" jurisdictional or departmental boundaries.

Session Notes: Wrap-Up Summary

- In other sessions, we heard about the need to incorporate housing supply and interregional travel.

- In this session, we heard about the need to better align our messages with what others are doing. We need to pay careful attention to how we communicate the terms as well as the “durability” of the terms.
- We heard that we need to place the smart mobility definition in a more comprehensive context. It needs to rest on the 3 e’s. And it needs to address smart goods movement, which will be a challenge.
- We heard about the Southern California mega-region – the scale here is different.
- We heard about the importance of intermodal connectivity, particularly air and rail access.
- The size of the Southern California economy and its reliance on trade make it something of a bellwether. They experience issues first that the rest of the state and nation will later feel.
- We heard that some of the principles are too much of a grab bag and need to be better organized.

Performance Measures

Thursday, September 18, 2008
10:30 a.m. – 12:00 p.m.

Session Purpose: Start the transition from Smart Mobility principles to the creation of practical tools to be applied by Caltrans and partner agencies.

Session Description: Following an introductory presentation, the session focused on the "fit" between current system performance measurement and a Smart Mobility approach. The session highlighted best practices from California and elsewhere that provide data or models for Smart Mobility measures.

Session Notes: Dialogue on Performance Measures to Support Smart Mobility

- Where are the different kinds of trips being accommodated, including freight trips? There have been issues in major urban areas with network connectivity problems. Network not accommodating large freight vehicles.
- How do you balance performance measures related to different principles? Are there obvious conflicts between the different principles?
- Goods movement/economic development should be a basic concept. Different trip purposes must be recognized.
- How do you put performance measures in a platform that different decision makers can apply? How do we best give them the appropriate amount of information and define measures that hit the market segments right (i.e. personal vs commercial)?
- We want to avoid too many levels of categories/subcategories. There is a need for simplicity as well as technical accuracy
- Local jurisdictions will have to deal with the performance measures. Local governments will be looking at performance measures in terms of GHGs, in the process of incorporating climate change into general plans. We have to think how funding will be tied to GHGs. There is a need for reliable, available monitoring data, such as the PEMS dashboard.
- A mix of near- and long-term metrics needed.
- We need to raise the performance measures up to be broad enough so that they measure the ultimate objectives, not jump to strategies that limit near- and long-term flexibility.
- We may be missing an opportunity to promote the entire transportation network. We are currently breaking it into different systems. We should promote reliability of entire network. It's very difficult to determine weightings for different types of measures.
- Don't sum performance measures together. Present components clearly and objectively, but still let the decision makers determine how to weight each one to achieve the outcomes

- Can we expect all different agencies (local, regional) to use the same performance measures that Caltrans comes up with? For example, cities and counties care a lot about their public finances.
- Project level performance measures have constrained regional performance measures
- It's important to know what the current picture of GHG emissions is, so that decisions can be made based on that information
- If you impose a GHG cap on the San Joaquin Valley, strategies appropriate for the Bay Area will not work there.
- How will institutional process be changed to bring about smart mobility?
- Quantification can be difficult. There is a possibility of qualitative measures.
- What is the level of accuracy needed? What level of uncertainty in performance measures is allowable or useful?
- There are many co-benefits of carbon reduction, but there may also be cross purposes. The performance measures should not be rolled up in an opaque way. Measuring traffic became too easy a performance measure in the past and was over emphasized
- The Division of Mass Transit has been trying to get a measure of person mobility rather than vehicle mobility. Perhaps passenger counters could be integrated with loop detectors on the roadway. Traditionally measurement of transit passengers and carpool passengers has not been emphasized.
- Typically strong performance measures are created where there is the best data.
- RTPs have different adopted performance measures within each plan.

Session Notes: Dialogue on Definition and Principles

- Definition for the public: Smart mobility is transportation that improves CA's quality of life. Elements: green, efficient, flexible, safe, effective.
- Need to think about smart rural mobility too.

Session Notes: Wrap-Up Summary

- Think in terms of those who experience the travel performance measures, keep sight of freight trips, different travel purposes, market segments, environmental justice, and equity.
- How do you match performance with goals and criteria? Different markets will have different performance objectives
- Metrics should be able to organize the different dimensions and then report those to decision makers. Don't roll up multiple performance measures into one.
- Align performance measures with RTP guidelines, blueprint guidelines, climate action plans.
- Statewide improvement needed in VMT data collection

Defining Smart Mobility in All California Regions

Thursday, September 18, 2008
1:30 p.m. – 3:15 p.m.

Session Purpose: Address how the Smart Mobility principles can be applied appropriately across the full continuum of natural and built contexts from natural and rural areas to urban centers.

Session Description: Following an introductory presentation, the session focused on the variation in how Smart Mobility is achieved in different locations across California.

Session Notes: Dialogue on Definition and Principles

- Principles can be applied to rural areas to some degree. Rural growth can be guided. But there are some challenges. Rural counties are very different. Nevada Co. is borderline urban, but some rural counties have no growth. For Location Efficiency, the focus in rural areas has to be on mixed development. High density is not an option. The main development areas are outside of city boundaries (e.g. in Grass Valley). The best result would be to have mixed development there so residents don't have to travel elsewhere. Transit oriented growth is tough. Nevada County is currently having to cut bus service because of state funding cuts. They can't serve outlying areas.
- Transit systems can allow people to live in rural areas. With rising gas prices, life in rural communities might become too expensive otherwise. Transit service can be improved by increasing the frequency of service and availability of real time information for service users.
- Can we take the typologies and break down the concepts across the transect?
- We don't want policies that encourage sprawl, leapfrog development.
- ITS systems may not be accessible to people living in rural areas. Thus there is a social equity concern. Implementing ITS requires improved data collection and analysis.
- Definition is lacking a measure of criteria pollutants and air toxics. The Climate Action Plan requires that GHG strategies not degrade air quality. The Health principle needs to link to air pollutant emissions.
- The regional level has become the appropriate level for managing smart mobility, and tying together various governments and government levels.
- We cannot put in transit in new development areas initially because of lack of funding. The principles should highlight that problem.
- STIP Guidelines should incorporate the smart mobility framework. Then RTP guidelines can follow.
- HCD Prop 1C Guidelines for TOD require transit service to be in place.

- There is concern about applying performance measures to STIP. There may be good projects that do not score well.
- What are the characteristics of rural projects that are important? Interconnectivity, using existing assets, promoting safety, strategic/regional benefits, improves multimodal LOS, reward for innovation.
- We can maximize capacity while minimizing impacts using strategies such as signal timing and speed management.
- A sense of place is necessary in small places. There is little else to define smart mobility in those areas.
- We need to consider needs of children.
- We should consider the use of impact fees.
- It's important to build in flexibility; one size does not fit all.
- There's a need to resolve LAFCO issues.
- Overall, statewide leadership is important.

Session Notes: Dialogue on Other Topics

- Have rural areas considered ITS for transit to make it more viable in rural areas? With this approach you can have longer headways but better information about arrival times.
- Similar systems can be applied in cars, providing information about optimal speeds on dashboards.
- Funding is a real constraint, especially in rural areas where there tend not to be sales taxes.
- Maybe the benefits of other activities in rural areas could be leveraged for funding (e.g. sequestration credits).
- If you want to increase transit service over time, you cannot have funds that can be raided for other purposes. With AB 32, projects already planned through 2035 will not be reexamined. That's about 90% of projects—so how can we achieve AB 32 goals in the short term?

Session Notes: Wrap-Up Summary

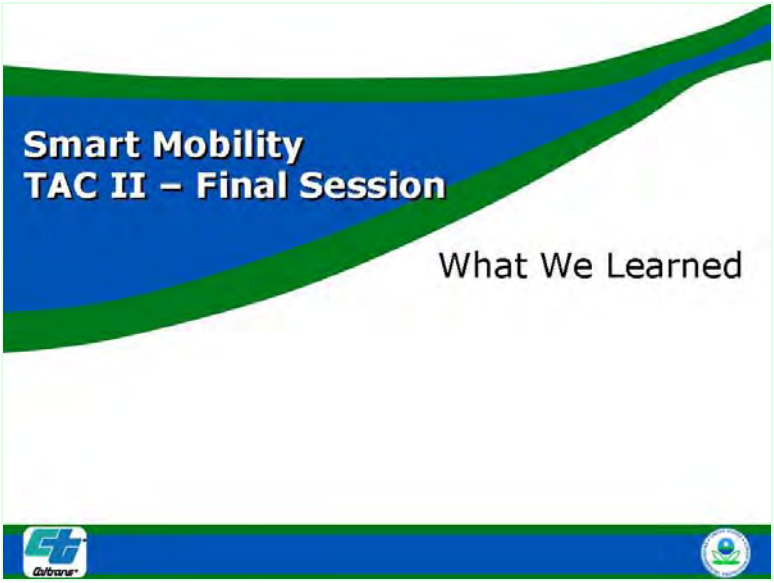
- The organizing principles of the framework should cover differences in:
  - Urban form: urban, suburban, rural
  - Jurisdictions: community, regional, interregional, Statewide
  - User groups: goods movement, "EJ groups", travel market segments and trip purposes,
  - Life cycles: evolution of facility function from rural to suburban to urban
- We need to be able to make funding decisions in those different contexts.

Technical Advisory Committee Meeting: Closing Session

Thursday, September 18, 2008
3:30 p.m. – 5:00 p.m.

Session Purpose: Refine Smart Mobility Principles based on feedback received in the course of the workshop.

Meeting Presentation



Review: Smart Mobility Workshop Objectives

- Establish shared understanding of the Smart Mobility Project
- Reach preliminary agreement on definitions and principles
- Focus on mainstreaming Smart Mobility
- Engage Caltrans and partners for continued participation

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Smart Mobility Workshop Events

- Wednesday, September 16
  - Executive Managers' Roundtable with Will Kempton
  - Mainstreaming Part 1: Integration Across Caltrans' Programs
- Thursday, September 17
  - Mainstreaming Part 2: Regional Planning
  - Mainstreaming Part 3: Southern California
  - Focused Session: Performance Measures
  - Focused Session: Defining Smart Mobility in all California's regions
- Project Management and TAC meetings

3

Format – Broad Themes

a) Summarize "what we heard"
b) Derive "implications" – aha's
c) Rewrite definition & principles

today

Broad Themes

1. Relationships
2. Communication
3. Information
4. Investment
5. Incremental Steps
6. Connectivity

Connectivity

- Intermodal connectivity
- Rural areas – surface streets
- Connecting towns and cities

6

1. Relationships – What We Heard

- Intergovernmental Coordination
- Public & Private Collaboration
- Housing & Transportation
- Blueprint Planning Process
- Interregional Travel
- Frame More Broadly than Caltrans

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Relationships – Implications

- Commitment to interagency coordination
- Directly linking housing & transportation
- Facilitating continued transition at Caltrans
- But Caltrans is not the only frame – statewide, multi-agency, diffuse decision-making
- Mega-regions & interregional travel – scale of the issue
- Urban & rural
- Transect approach to smart mobility

8

2. Communication – What We Heard

- "Smart Mobility" in a Nutshell
- Positive Message
- Over-Reliance on "VMT"
- Location Efficiency
- Equity
- Freight

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Communication – Implications

- Compelling, concise statement of "smart mobility"
- Terminology: "mobility" – "accessibility"
- Positive message ≠ constraints & limits
- Emphasize choice & flexibility
- Avoid presenting VMT as the single, relevant measure
- Can we use "location efficiency?" (yes)
- What is "smart freight movement?"
- Is "equity" an overlay; embedded?
- Avoid talking about "the department"
- But continued change at the department is important, too – design exceptions, etc.
- Comprehensive plans/Blueprint words

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3. Information – What We Heard

- Data
- Causes & Effects
- Performance Measurement

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Information – Implications

- Transportation Data
  - VMT
  - Interregional trends
- More than just transportation data
- Direct tie to legislation & policies, e.g. GHG
- Disaster preparedness, resiliency
- Transportation data for housing decisions
- Consistent measures, but local weighting
- Do we rate transportation or development?

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4. Investment – What We Heard

- Project Programming Process
- Investing in Housing
- Pricing
- Political Spending Choices
- Rich Counties, Poor Counties

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Investments - Implications

- Supporting & enabling multiple objective investing
  - Constrained funding
  - Transportation – housing – economics – quality of life – environmental protection
- Incenting "location efficient" development
- Timing of this project re. STIP update
- Integrating investment decisions across departments & functions

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Smart Mobility Workshop

Wrap Up

Discussion Questions

1. Did we get it right?
   a) Summary points
   b) Implications
2. Do we have the "big picture?"
   a) What's missing?
   b) New observations
3. Other discussion

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Smart Mobility

Next Steps

Session Notes: Closing Comments on Workshop and Summary Presentation

- There's a fear of biting off too much. If we're too ambitious, we'll fail. We need to take incremental steps.
- We've been remiss in not calling out local and regional agencies. If you want smart mobility, you must go to where the power lies.
- We need to figure out how to make this work for rural areas. Rural areas face many of the same issues. We need to look across the transect.
- There are new, alternative types of vehicles using the roads – scooters, neighborhood electric vehicles, smart cars. We need to account for this.
- The ideas of connectivity and choices need to appear somewhere in the definition and principles. But note that connectivity can have negative implications too. For example, Davis is becoming a commuter suburb for the Bay Area, which is driving up housing prices.
- We first talked about applying the tool to CSMPs and PIDs. Now we're talking about a regional-level analysis and performance measures, which is cause for concern. We need to make sure what we do will affect Caltrans Departmental activities. For example, planners have been fighting to get a fourth crosswalk near BART, but Caltrans operations won't approve it because their criteria only consider traffic volume. In order to change this, our efforts need to do more than sit on a shelf as a report.
- How is the Massachusetts scorecard similar to what we're doing? The scorecard was used to make decisions about applying a discretionary funding program that provided grants to local governments. The Massachusetts DOT wanted to (1) make sure that funding choices are consistent with the state's smart growth policies, and (2) have some influence beyond state facilities.
- Like Massachusetts, other state DOTs have found that they've needed to focus on small programs first, not tackle the big programming process.
- Caltrans Design believes in complete streets. But they are designing facilities for cars, trucks, and buses. Efforts like this tend to sit on a shelf because they do not make specific reference to Caltrans documents and procedures.
- What about permeable pavements and other green strategies?
- If this is just about transportation, it will be hard for OPR to integrate into efforts focused on broader State objectives.
- Communities in California have been implementing smart growth for many years. And progressive MPOs have been pushing this. But many local governments are not on board. We need incentives – carrots and sticks – to change behavior at the local level.
- Politics will overturn good decisions. We need to make sure that implementation is carried through up and down the chain of command.

Session Notes: Wrap-Up Summary

- We heard the need to make sure our efforts are incremental and hooked to existing Caltrans procedures.
- We heard the need to make sure our product is useful to cities and counties, but not to lose sight of the focus on Caltrans. We need to look for early opportunities for success.

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Appendix A: Workshop Agenda

Day 1 – Wednesday, September 17, 2008

1:30 p.m. – 5:30 p.m.

Note: All meetings will be held at Caltrans Headquarters, 1120 N Street, Sacramento, CA. Non-Caltrans staff should enter the building through either entrance and check in at the guard desk to get your visitor pass. A Caltrans staff person will be waiting to take you to your meeting room.

In addition to the sessions described below, the US EPA team will be scheduling one-on-one interviews with some workshop participants.

1:30 p.m. – 3:30 p.m. Room 2116	**Opening Session** **Executive Managers' Roundtable with Will Kempton**
Dial-in: (888) 921-7713	***Purpose***: Engage managers and leaders in a focused discussion of the project principles and challenges. ***Description***: Following brief introductory comments from agency executives and a project overview from the US EPA Consulting Team, participants will: • Create a definition of Smart Mobility for use across the Department's functional areas and by partner agencies. A proposal from the EPA team will be used as a starting point. • Identify challenges to mainstreaming smart mobility within the Department.
3:45 p.m. – 5:30 p.m. Room 3442	**Mainstreaming Smart Mobility Part I:** **Integration Across Caltrans' Programs**
	Purpose: Department managers will build upon the results of the Executive Roundtable by adding their perspectives to project principles and challenges. ***Description***: The US EPA Consulting Team will present a project overview including proposed Smart Mobility Principles and a report on results of the Executive Roundtable. A one-hour dialogue session will focus on opportunities and challenges for meaningful implementation of the framework.

Day 2 – Thursday, September 18, 2008

8:30 a.m. – 5:00 p.m.

Each of the day's sessions will begin with a brief project overview presentation by the EPA Project Team. Facilitated discussion will follow as described below.

8:30 a.m. – 10:15 a.m. Room 3442	**Mainstreaming Smart Mobility Part II: Blueprint/Scenario/Regional Planning**
Dial-in: (888) 921-7713	***Purpose:*** Learn from leaders of efforts to pursue smart mobility goals in the State's regions through Blueprint and other regional planning programs. ***Discussion Focus:*** How Caltrans can support successful Blueprint implementation, and how the Smart Mobility project can incorporate lessons learned from the Blueprint efforts.
10:30 a.m. – 12:00 p.m. Room 5510	**Mainstreaming Smart Mobility Part III:** **Regional Planning in Southern California *(Concurrent Session)***
Dial-in: (888) 921-7713	***Purpose***: Focus on the particular challenges and accomplishments of the Southern California regions, and ensure substantial project input from Southern California agency personnel and partners. ***Discussion Focus:*** Project principles, and how Caltrans can support new and ongoing Southern California initiatives consistent with Smart Mobility goals.
10:30 a.m. – 12:00 p.m. Room 3442	**Performance Measures *(Concurrent Session)***
	Purpose: Start the transition from Smart Mobility principles to the creation of practical tools to be applied by Caltrans and partner agencies. ***Discussion Focus:*** "Fit" between current performance measurement system and Smart Mobility approach. Best practices from California and elsewhere that provide data or models for Smart Mobility measures.
1:30 p.m. – 3:15 p.m. Room 3442	**Defining Smart Mobility in All California Regions**
Dial-in: (888) 921-7713	***Purpose***: Address how the Smart Mobility principles can be applied appropriately across the full continuum of natural and built contexts from natural and rural areas to urban centers. ***Discussion Focus:*** Variation in how Smart Mobility is achieved in different locations.

Appendix B: Preliminary Smart Mobility Definition and Principles (presented at workshop)

Preliminary Definition of Smart Mobility

Smart Mobility is the product of a transportation system that:

1. Supports established State and Department goals for sustainability, mobility and climate change intervention.
2. Satisfies the movement needs of people and businesses with a financially and environmentally sound multimodal system.
3. Enhances the State's built and natural environments.

Preliminary Smart Mobility Principles

Smart Mobility Principles will:

- Support the high-level goals expressed in the Definition
- Form a basis for a Caltrans Smart Mobility Screening Tool
- Will direct the selection and application of performance measures to evaluate plans, programs and project proposals – first by the Department and then by Partner agencies.

Location Efficiency: Transportation investments and services operating in concert with supportive land use patterns that improve overall accessibility and result in shorter car trips, fewer car trips, and more walking, biking, and transit use. This principle means that Caltrans activities will focus on:

- Prioritizing system and service improvements that serve places with good regional accessibility, higher densities of population and jobs, and mixed uses or that establish a development framework that will support evolution of these characteristics;
- Creating a more highly connected network to support desired land use and development patterns (some parts of the state need a more highly-connected inter-regional network while others need more connectivity at the local scale to provide walkability and choice of routes), and
- Diversifying travel choices in all locations with an emphasis on non-motorized travel through Complete Streets and supportive land use and urban design features.

Reliability: Emphasize reliability for all modes through a strategic approach to congestion avoidance and reduction. This principle focuses the Department's congestion relief efforts on:

- Addressing non-recurring (incident-related) congestion and implementing operational improvements and ITS across modes.
- Offering walk, bike and transit options that allow people to opt out of congestion and choose reliable travel modes.
- Locations with greater population and employment density.

Health and Safety: **"**Health and safety" group together concerns from different parts of the health spectrum. An emphasis on health and safety calls for the Department to:

- Promote travel by walk, bike and transit.
- Manage and operate the system to minimize fatalities and serious injuries.
- Reduce public exposure to toxic pollutants.
- Serve the public during extreme weather occurrences and other catastrophic events.

Stewardship: Four dimensions of stewardship reflect the different resources which the Department's activities should protect and enhance:

- Asset management.
- Built Environment.
- Natural Environment.
- Economic Environment.

Appendix C: Workshop Participants

Opening Session: Executive Managers' Roundtable with Will Kempton

Wednesday, September 17, 2008

1:30 p.m. – 3:30 p.m.

Name	Organization	Division
Aileen Loe	Caltrans	District 5 – San Luis Obispo
Cathy Creswell	Department of Housing and Community Development	Housing Policy Development
Chris Ratekin	Caltrans	DOTP
Coco Briseno	Caltrans	Transportation System Information
Colette Armao	Caltrans	Aeronautics
Cynthia Bryant	Office of Planning and Research	
David Youmans	Caltrans	Project Management
Earl Seaberg	Caltrans	Local Assistance
Ellen Greenberg	EPA Team	
Frank Gallivan	EPA Team	
Gale Ogawa	Caltrans	Mass Transportation
Gregg Albright	Caltrans	Planning & Modal Programs
Jay Norvell	Caltrans	Environmental Analysis
Jeff Ang-Olson	EPA Team	
Jerry Walters	EPA Team	
Jim Bourgart	BTH	
Jim Charlier	EPA Team	
James McCarthy	Caltrans	District 7 – Los Angeles
Joan Sollenberger	Caltrans	Transportation Planning
Jody Jones	Caltrans	District 3 - Marysville
John Barna	California Transportation Commission	
John Thomas	USEPA	
Julia Lave Johnston	OPR	

Name	Organization	Division
Kome Ajise	Caltrans	District 10 - Stockton
Lam Nguyen	Caltrans	Rail
Lynn Jacobs	Department of Housing and Community Development	
Lynn Richards	US EPA	Development, Community, and Environment
Pedro Orso-Delgado	Caltrans	District 11 - San Diego
Richard Land	Caltrans	Project Delivery
Robert Copp	Caltrans	Traffic Operations
Ross Chittenden	Caltrans	Proposition 1B
Sharon Scherzinger	Caltrans	
Steve Burrington	EPA Team	
Steve Takigawa	Caltrans	Maintenance
Tim Craggs	Caltrans	Design
Tom Neumann	Caltrans	
Vince Mammano	FHWA	
Will Kempton	Caltrans	

Mainstreaming Smart Mobility Part I: Integration Across Caltrans' Programs

Wednesday, September 17, 2008

3:45 p.m. – 5:30 p.m.

Name	Organization	Division
Barry Leaming	Caltrans	Local Assistance
Chris Ratekin	Caltrans	DOTP
David Cordone	Caltrans	Project Management
Doris Alkebulan	Caltrans	Proposition 1B
Ed Philpot	Caltrans	OCP
Ellen Greenberg	EPA Team	
Frank Gallivan	EPA Team	
Greg King	Caltrans	Environmental
Jeff Ang-Olson	EPA Team	
Jerry Walters	EPA Team	
Jim Charlier	EPA Team	
Joan Sollenberger	Caltrans	Transportation Planning
John Thomas	USEPA	
Kelly Dunlap	Caltrans	Environmental Analysis
Kelly Eagan	Caltrans	System Planning
Ken Baxter	Caltrans	D10 Dep, Planning
Kurt Scherzinger	Caltrans	Programming
Lynn Richards	USEPA	
Matt Carpenter	SACOG	Transportation Planning
Maura Twomey	CTC	Deputy Director
Nancy Knofler	Caltrans	Traffic Operations
Nathan Smith	Caltrans	State Planning
Pat Merill	Caltrans	Rail
Pat Weston	Caltrans	System Planning
Reza Navai	Caltrans	Climate Change
Richard Nordahl	Caltrans	Goods Movement
Sharon Scherzinger	Caltrans	Plng Management Liaison
Steve Burrington	EPA Team	
Tom Neumann	Caltrans	Transportation Planning
Tim Craggs	Caltrans	Design
Tremain Downey	Caltrans	Transportation System Information
Wendy Johnsen	Caltrans	Mass Transportation

Mainstreaming Smart Mobility – Part II: Blueprint / Scenario / Regional Planning

Thursday, September 18, 2008

8:30 a.m. – 10:15 a.m.

Name	Organization	Division
Annette Gilbertson	California Transportation Commission	
Carolyn Mulvihill	US EPA Region 9	
Chris Ratekin	Caltrans	DOTP
Charles Field	Amador CTC	
Ed Philpot	Caltrans	OCP
Ellen Greenberg	EPA Team	
Frank Gallivan	EPA Team	
Garth Hopkins	Caltrans	Regional and Interagency Planning
Gordon Garry	SACOG	
James Corless	MTC	
Jeff Ang-Olson	EPA Team	
Jerry Walters	EPA Team	
Jim Charlier	EPA Team	
Joan Sollenberger	Caltrans	Transportation Planning
John Thomas	US EPA	
Julia Lave Johnston	OPR	
Kelly Eagan	Caltrans	System Planning
Lynn Richards	US EPA	
Maggie Witt	US EPA Region 9	
Marjie Kim	MCAG	Deputy Exec Director
Marilee Mortenson	Caltrans	Regional and Interagency Planning
Michele Rodriguez	Michele Rodriguez Consulting	
Mike Woodman	Nevada Co. TC	
Nathan Smith	Caltrans	State Planning
Robert McCrary	SACOG	
Rusty Selix	CALCOG	
Steve Burrington	EPA Team	
Susan Harrington	Caltrans	Mass Transportation

Mainstreaming Smart Mobility – Part III: Regional Planning in Southern California

Thursday, September 18, 2008

10:30 a.m. – 12:00 p.m.

Name	Organization	Division
Bob Leiter	SANDAG	Land Use & Transportation Planning
Cathy Bechtel	RCTC	
Connery Cepeda	Caltrans	District 11
Ellen Greenberg	EPA Team	
Emily Burstein	Caltrans	Rail
Garth Hopkins	Caltrans	DOTP
James McCarthy	Caltrans	District 7 – Los Angeles
Jeffrey Ang-Olson	EPA Team	
Jim Charlier	EPA Team	
Jose Marquez	Caltrans	District 11
Lynn Richards	US EPA	
Maggie Witt	EPA Region 9	
Mark Catella	SCAG	
Matt Friedman	Caltrans	OCP
Maureen El Harake	Caltrans	District 12
Michele Fell-Casale	Caltrans	Office of Goods Movement
Sharon Scherzinger	Caltrans	Planning Modal
Wendy Johnsen	Caltrans	Mass Transit

Performance Measures
Thursday, September 18, 2008
10:30 a.m. – 12:00 p.m.

Name	Organization	Division
Annette Gilbertson	California Transportation Commission	
Carolynn Mulvihill	USEPA Region 9	
Chris Ratekin	Caltrans	DOTP
Ed Philpot	Caltrans	OCP
Ellen Greenberg	EPA Team	
Frank Gallivan	EPA Team	
Gordon Garry	SACOG	Research and Analysis
Jeff Ang-Olson	EPA Team	
Jerry Walters	EPA Team	
Jim Charlier	EPA Team	
Joan Sollenberger	Caltrans	Transportation Planning
John Thomas	USEPA	
Kelly Eagan	Caltrans	DOTP
Linda Wheaton	Department of Housing and Community Development	
Luree Stetson	Department of Conservation	
Lynn Richards	USEPA	
Michele Rodriguez	Michele Rodriguez Consulting	
Monica Kress	Caltrans	Environmental
Nancy Knofler	Caltrans	Traffic Operations
Nathan Smith	Caltrans	State Planning
Nick Compin	Caltrans	Traffic Operations
Pete Spaulding	Caltrans	Strategic Planning
Richard Nordahl	Caltrans	Goods Movement
Scott Sauer	Caltrans	DMT
Shaun Ng	Caltrans	Office of Strategic Planning/Performance Measurement
Steve Burrington	EPA Team	

Defining Smart Mobility in All California Regions

Thursday, September 18, 2008

1:30 p.m. – 3:15 p.m.

Name	Organization	Division
Alyssa Begley	Caltrans	D3
Anna Marie Young	OPR	
Brad Mettam	Caltrans	District 9 - Bishop
Brian Travis	Caltrans	DMT
Bruce de Terra	Caltrans	D3
Carolyn Mulvihill	USEPA Region 9	
Charles Field	Amador CTC	
Cheryl Willis	Caltrans	District 1 – Eureka
Chris Ratekin	Caltrans	DOTP
Dan Wayne	Shasta Co. RTPA	
Ed Philpot	Caltrans	OCP
Ellen Greenberg	EPA Team	
Frank Gallivan	EPA Team	
Jay Clark	Stantec Consulting	
Jeff Ang-Olson	EPA Team	
Jerry Walters	EPA Team	
Jim Charlier	EPA Team	
Joan Musillani	Caltrans	
John Thomas	USEPA	
Julia Lave Johnston	Office of Planning and Research	
Larry Greene	SMAQMD	
Linda Wheaton	Department of Housing and Community Development	
Lisa Cirill	Department of Public Health	Center for Physical Activity
Lynn Richards	USEPA	
Maggie Witt	USEPA Region 9	
Michele Rodriguez	Michele Rodriguez Consulting	
Mike Woodman	Rural Counties Task Force/ Nevada Co. Transportation Commission	
Robert McCrary	SACOG	
Sabrina Means	CA Transit Assoc.	
Steve Burrington	EPA Team	
Steve Lawton	City of Hercules	Community Development

Name	Organization	Division
Steve Sanders	ILG	
Wendy Alfsen	California Walks	

Appendix D: TAC Members

Affiliation	Member Name	Other Attendees/Contacts
Caltrans - Planning & Modal Programs		
Community Planning, DOTP	Chris Ratekin, Chair/Facilitator	Tom Neumann, Terry Parker, Eric Fredericks, Matthew Friedman
Community Planning, DOTP	Ed Philpot	
Policy, Analysis & Research, DOTP	Julia Vojtech	Vahid Nowshiravan
Regional & Interagency Plng, DOTP	Katie Benoaur	
Advanced System Plng, DOTP	Kelly Eagan	
Goods Movement, DOTP	Jeffrey Spencer	Michele Fell-Casale
State Plng, DOTP	Pam Korte	
Projects/Plan Coord, DOTP	Lima Huy	Juven Alvarez
Mass Transportation	Brian Travis	
Rail	Victoria Coulter	
Aeronautics	Colette Armao	Terry Barrie
Local Assistance--Bikes/Ped	Ken Mcguire	
System Information	Chris Herre	
Caltrans - Other Functional Programs—HQs		
Traffic Operations	Marc Birnbaum	Nancy Knofler
Design--Landscape Arch	Doug Brown	Carolyn Dudley
Design	Kevin Heritt	David Cordova
Environmental Analysis	Greg King	Richard Weaver, Kelly Dunlap
Research & Innovation	Nicole Longoria	
Strat Plng/Performance Measurement	Pete Spaulding	Vicki White
Programming	Carole Harris	
Project Management		David Youmans
Maintenance		
Caltrans – Districts		
D1	Rex Jackman	Jesse Robertson
D2		
D3	Gabriel Corley	
D4	Beth Thomas	

Affiliation	Member Name	Other
D5	David Kuperman	
D6	Heidi Andrade	Joanne Striebich
D7	Linda Taira	Frances Lee
D8	Dan Kopulsky	John Chiu
D9	Forest Beckett	Brad Mettam
D10	Tom Dumas	
D11	Connery Cepeda	Chris Schmidt, Jose Marquez
D12	Maureen El Harake	Barbara Gossett
External Agencies		
Governor's Office of Planning & Research	Julia Lave Johnston	Anna Marie Young
Housing & Community Development	Linda Wheaton	Janet Myles

Appendix E: List of Abbreviations and Acronyms

3e's: Equity, Environment and Economy, used to define sustainability

4D's: destinations, density, diversity and design

AASHTO: American Association of State Highway and Transportation Officials

AB 32: California Assembly Bill 32, Global Warming Solutions Act of 2006

AB 1358, California Assembly Bill 1358, the Complete Streets Act of 2008

BART: Bay Area Rapid Transit District

BRT: Bus Rapid Transit

Caltrans DD: Caltrans Deputy Directive

CARB: California Air Resources Board

CEQA: California Environmental Quality Act

CSMP: Corridor System Management Plan

CTC: California Transportation Commission

CTP: California Transportation Plan

EJ: Environmental Justice

EPA: United States Environmental Protection Agency

EPA DCED: United States Environmental Protection Agency Development, Community and Environment Division

GHGs: greenhouse gases

HCD: California Department of Housing and Community Development

ITS: Intelligent Transportation Systems

LAFCO: (county-level) Local Agency Formation Commission

MPOs: metropolitan planning organizations

MTC: San Francisco Bay Area Metropolitan Transportation Commission

NEPA: National Environmental Policy Act

OPR: California Governor's Office of Planning and Research

RTP: Regional Transportation Plan

RTPAs: Regional Transportation Planning Agencies

SACOG: Sacramento Area Council of Governments

SANDAG: San Diego Association of Governments

SB 375: California Senate Bill 375, (Chapter 728, Statutes of 2008)

SCAG: Southern California Association of Governments

SOV: single-occupant vehicle

STIP: State Transportation Improvement Program

TAC: Technical Advisory Committee

TOD: Transit Oriented Development

VMT: Vehicle miles traveled