

Smart Mobility

Caltrans released *Smart Mobility 2010: A Call to Action for the New Decade* in February 2010, providing a new approach to integration of transportation and land use. The Smart Mobility Framework (SMF) was prepared in partnership with US Environmental Protection Agency, the Governor's Office of Planning and Research, and the California Department of Housing and Community Development to address both long-range challenges and short-term pragmatic actions to implement multi-modal and sustainable transportation strategies in California.

This planning framework can help guide and assess how well plans, programs, and projects meet a definition of "smart mobility". It can be used by both Caltrans and partner agencies in all geographic parts of the State to transform transportation decisions.

Smart Mobility 2010 provides tools and techniques that improve transportation by using the SMF principles to achieve sustainable outcomes. By considering land use place types and modified performance measures, the benefits of Smart Mobility can be realized, both now and in the future.

What is It?

Smart Mobility moves people and freight while enhancing California's economic, environmental, and human resources by emphasizing:

- Convenient and safe multimodal travel
- Speed suitability
- Accessibility
- Management of the circulation network
- Efficient use of land

Smart Mobility responds to the transportation needs of the State's people and businesses, addresses climate change, advances social equity and environmental justice, supports economic and community development, and reduces per capita vehicles miles travelled.

Highlight on Location Efficiency

Location efficiency describes the fit between a specific physical environment and its transportation system and services. Community Design and Regional Accessibility relate to the characteristics of the transportation system— modal characteristics, network features, and services, and also to development characteristics. Together, these factors contribute to reduce average vehicle trip length, reduced per capita vehicle trips, and greater mode share for trips by walk, bike, and transit.

Community Design — Characteristics of development use, form, and location that combine with the multimodal transportation system to support convenience, non-motorized travel, and efficient vehicle trips at the *neighborhood and area scale*.

Regional Accessibility — Characteristics of development use, form, and location that combine with the multi-modal transportation system to make destinations available through non-SOV travel and efficient vehicle trips at the *regional, interstate, and international scales*.

Six Smart Mobility Principles

1. Location Efficiency

Integrate transportation and land use in order to achieve high levels of non-motorized travel and transit use, reduced vehicle trip making, and shorter average trip length while providing a high level of accessibility.

2. Reliable Mobility

Manage, reduce, and avoid congestion by emphasizing multi-modal options and network management. Provide predictability and capacity increases focused on travel that supports economic activity.

3. Health and Safety

Design, operate, and manage the transportation system to reduce serious injuries and fatalities, promote active living, and lessen exposure to pollution.

4. Environmental Stewardship

Protect and enhance the State's transportation system and its built and natural environment. Act to reduce the transportation system's emission of Greenhouse Gases (GHGs) that contribute to global climate change.

5. Social Equity

Provide mobility for people who are economically, socially, or physically disadvantaged in order to support their full participation in society. Design and manage the transportation system in order to equitably distribute its benefits and burdens.

6. Robust Economy

Invest in transportation improvements that support the economic health of the State and local governments, the competitiveness of California's businesses, and the welfare of California residents.



What Does a Smart Mobility Future Look Like?

- Meaningful travel choices created by:
 - **highly-connected multi-modal networks** with complete streets
 - **communities where walking, bicycling, and transit use are common choices**
- A supply of **housing that allows people of all incomes and abilities to live within reasonable distance of destinations**
- **Facilities for all modes that are designed and operated to enhance their surroundings**
- Sensitive **environmental areas, with natural and agricultural resources protected from adverse impacts**
- An **inter-regional network for longer-distance travel and freight movement**
- **Distinctive communities and places** that reflect their own histories, contexts, and economic foundations

Place Types

The place types are a tool for general classification of towns, cities, and larger areas and can be used as a basis for making investment, planning, and management decisions. Place types identify: appropriate integrated transportation and land use planning activities, types of transportation projects and programs, types of land use, community development and conservation activities, and opportunities to increase location efficiency factors and Smart Mobility benefits. The place types are: *Urban Centers, Close-in Compact Communities, Compact Communities, Suburban Communities, Rural and Agricultural Lands, Protected Lands, and Special Use Areas.*

Place Type Transitions ►

To guide change and strategic investments



Anchored Places

Places in which the presence of location efficiency factors will increase over time, but where a single Smart Mobility place type will consistently apply. Investment decisions would be based on enhancing the presence of location efficiency factors, such as regional accessibility.



Transitional Places

These places will likely experience significant change, “evolving” over time to feature a significantly greater presence of location efficiency factors that will change the place type, such as from a suburban area to a close-in compact community center.

SMF Performance Measures

Transportation performance measures forecast, evaluate, and monitor the degree to which the transportation system accomplishes adopted public goals and mobility objectives. Smart Mobility Performance Measures (SMPMs) demonstrate the relationship between integrated transportation and land use decisions and the consequent effects on the full range of economic, social, and environmental conditions. SMPMs are intended for use in decision-making at both the planning and the project level to evaluate progress toward implementing the principles of Smart Mobility and attaining Smart Mobility benefits.

The Performance Measures

- ✓ Support for Sustainable Growth
- ✓ Transit Mode Share
- ✓ Accessibility and Connectivity
- ✓ Multi-Modal Travel Mobility
- ✓ Multi-Modal Reliability
- ✓ Multi-Modal Service Quality
- ✓ Multi-Modal Safety
- ✓ Design and Speed Suitability
- ✓ Pedestrian and Bicycle Mode Share
- ✓ Climate and Energy Conservation
- ✓ Emissions Reduction
- ✓ Equitable Distribution of Impacts
- ✓ Equitable Distribution of Access and Mobility
- ✓ Congestion Effects on Productivity
- ✓ Efficient Use of System Resources
- ✓ Network Performance Optimization
- ✓ Return on Investment



<http://www.dot.ca.gov/hq/tpp/offices/ocp/smf.html>



How Smart Mobility Can Work

Find your Place Type

Forecast Transportation Needs

Apply Smart Mobility Principles

Assess Smart Mobility Performance

Prioritize Transportation Investments

Achieve Smart Mobility

What's next?

Caltrans is conducting the following short-term implementation actions in addition to other steps already completed and underway.

Develop and test approaches for implementing Smart Mobility principles, concepts, and performance measures.

Apply concepts in two separate transportation planning efforts, north and south-

- A second generation Corridor System Management Plan (I-680)
- A set of potential future projects for a sub-regional long range transportation plan (LA Metro)

Document process, methodologies, and results. Produce a replicable process for incorporation into Department and partner agencies' work.

Project timeframe: April 2012 through February 2014.

Product will include a “How to” guide for implementation.



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