Making a Compelling Case:
Using Performance Analysis to Guide Project Selection in the Bay Area

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• First regional plan to integrate transportation, land use, and housing *(Sustainable Communities Strategy)*
• Initiated by California Senate Bill 375
1. Establish Performance Targets
2. Scenario Performance Assessment
3. Project Performance Assessment
4. Define Preferred Scenario
5. Adopt Plan Bay Area

Bay Area Plan

MAY 2012
**ECONOMY**
- Increase gross regional product

**ENVIRONMENT**
- Reduce per-capita greenhouse gas emissions from cars and light-duty trucks
- Direct all non-agricultural development within the urban footprint
- Reduce premature deaths from exposure to particulate emissions
- Reduce injuries and fatalities from collisions
- Increase average daily time spent walking or biking

**EQUITY**
- House all of the region’s projected housing growth
- Decrease housing and transportation costs as a share of low-income household budgets

**TRANSPORTATION**
- Increase non-auto mode share
- Reduce VMT per capita
- Maintain the transportation system
Performance Assessment Framework

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<th>PERFORMANCE ASSESSMENT</th>
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- SCENARIO
- LAND USE PATTERN
- TRANSPORTATION PROJECTS
Two Elements of Performance Assessment

TARGETS ASSESSMENT

Determine impact on targets adopted by MTC and ABAG

Analyzed all 900 uncommitted projects

BENEFIT-COST ASSESSMENT

Compare benefits & costs

Analyzed most significant projects (approximately 100 in total)
Targets Assessment

Assessed qualitatively using target scores (max score of +10).

1. Climate Protection
2. Adequate Housing
3. Particulate Matter
4. Collisions
5. Active Transportation
6. Open Space
7. Equitable Access
8. Economic Vitality
9. Non-Auto Mode Share/VMT
10. State of Good Repair

Benefit-Cost Assessment

Assessed quantitatively using MTC Travel Model One.

**BENEFITS**
- Travel time (including recurring & non-recurring delay)
- Travel cost (auto operating/ownership, parking)
- Emissions (CO₂, PM₂.5, ROG, NOₓ)
- Collisions (fatalities, injuries, property damage)
- Health impacts due to active transport
- Noise

**COSTS**
- Capital costs
- Net operating and maintenance (O&M) costs
Plan Bay Area Performance Assessment

Key Findings

1. Focus on improving and maintaining existing assets, with emphasis on system management.

2. Provide significant regional funding to the most cost-effective projects.

3. Reconsider the inclusion of low-performing projects, due to cost-ineffectiveness or adverse impacts on performance targets.
Project Performance Assessment: Results by Project Type

Bubble size represents the total annual benefits for all projects of that type.

- Road Project
- Transit Project
- Regional Program
**Previous RTP (Adopted in 2009)**

- **Transportation 2035**
  - **5%** Expansion - Roads & Bridges
  - **30%** O&M - Roads & Bridges
  - **14%** Expansion - Transit
  - **51%** O&M - Transit

  **$218 Billion**

**Current RTP (To be adopted in 2013)**

- **Bay Area Plan**
  - **3%** Expansion - Roads & Bridges
  - **30%** O&M - Roads & Bridges
  - **9%** Expansion - Transit
  - **58%** O&M - Transit

  **$277 Billion**
Prioritizing Fix-It First

- Transit O&M
- Road and Bridge O&M

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<tr>
<th>Category</th>
<th>Transit O&amp;M</th>
<th>Road and Bridge O&amp;M</th>
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HIGH-PERFORMING PROJECTS
Prioritized for Regional Funding

BART Metro

Caltrain Electrification & Frequency Improvements

Bus Rapid Transit Systems in San Francisco and Oakland
HIGH-PERFORMING PROJECTS
Prioritized for Regional Funding

- San Francisco Congestion Pricing
- BART Extension to San Jose
- Freeway Performance Initiative
Low-performing projects – defined as having a benefit-cost ratio less than 1, or significant adverse impacts on the performance targets – were required to make a compelling case to policymakers.

This process led to a more efficient plan that better aligns with the region’s goals and targets.
Plan Bay Area Performance Assessment

Low-Performing Projects (32)

- Projects withdrawn by sponsors: 12
- Compelling cases approved:
  - (6) Communities of Concern
  - (1) Air quality
  - (1) Recreational trips
- Projects re-scoped:
  - (7) Environmental phase only
  - (3) Sponsor agreed to fully fund project locally
  - (1) Down-scoped to achieve B/C ratio greater than 1
- Case slated for rejection; "settled out of court"
LOW-PERFORMING PROJECTS

Impacts of Compelling Case Process

SMART Commuter Rail Extensions
scaled back to include only the most cost-effective segments

Dumbarton Rail
re-scoped to pursue only environmental studies

Freeway Widenings (US-101 & SR-239)
re-scoped to pursue only environmental studies
LOW-PERFORMING PROJECTS
Approved Compelling Cases: primarily based on support for low-income and minority communities

Lifeline Program

Suburban/Rural Bus Frequency Improvements

Capitol Expressway Light Rail Extension (in East San Jose)
• Given the limited budget for expansion projects, performance data is at a premium.
• Modeling capabilities are stretched thin for non-expansion projects.
• Performance results helped to advance good projects and weed out bad ones.
• Tread carefully when picking:
  (a) performance objectives
  (b) which projects to evaluate