

Trip Reduction Impacts of Mobility Management Strategies



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PRESENTATION OUTLINE

- Why is relevant to evaluate transportation demand management strategies (TDM)?
- What TDM strategies can be evaluated?
- How can we quantify their potential benefits?

TDM Evaluation

- TDM programs struggle to prove a cost-effective means to address congestion
- There is a lack of standardized methods to quantify costs and benefits

About TRIMMS

It provides TDM cost-benefit analysis of:

- Strategies directly affecting cost of travel:
 - Pricing (subsidies, mile-based charges)
 - Travel Time
- Employer-based TDM support:
 - Telecommuting
 - Alternative work schedules
 - Program support strategies (e.g., guaranteed ride home)

Costs and Benefits Considered

- Program costs
- Annualized benefits
 - Air pollution (VOCs, CO, NO_x)
 - Added congestion
 - Excess fuel consumption
 - Global climate change (CO₂)
 - Health and safety
 - Noise pollution

Level of Analysis

- Regional
 - Evaluation of multiple worksite or industry sectors
- Employer-based
 - Worksite level for a single employer

Input and Parameters

- Mode shares and regional factors
 - Default values for 85 metropolitan statistical areas (MSAs) or
 - User supplied
- Elasticity parameters
 - Default or
 - User supplied

Output

- Predicted mode share and VMT changes
- Annualized benefits and costs
 - peak and off-peak
- Benefit to cost (B/C) ratio
- Changes in emission pollutants
 - VOCs, CO, CO₂, NO_x
 - daily metric tons
 - percent reduction over baseline

Sensitivity Analysis

- Estimates the probability of achieving a targeted benefit-to-cost ratio
- Results expressed in ranges
- Accounts for input parameters variability

Using the TRIMMS[©] Model



Running TRIMMS

Objectives: Gain an understanding of what TRIMMS does and how to interpret its output

- Provide an example application
 - Interpretation of results
 - Sensitivity analysis
- Guidance to customization
 - Change model global and regional parameters
 - Directions for future use

Example Application

Worksite evaluation of a single employer with:

- 250 full time employees
- Located in a major urban area
- Operating in the retail services sector

TDM strategies:

- Transit subsidy of \$0.50 out of \$2.50 round trip fare
- Telecommuting and flexible working schedule

Conclusions

TRIMMS provides a TDM evaluation approach

- A consistent B/C based evaluation method and cost effectiveness benchmarking
- Regional and employer-based assessment
- Default parameters for 85 MSAs
- Sensitivity analysis of results

Current Developments

- Evaluation of broader range of TDM and transit-based strategies
 - TRIMMS 3.0 under development

Introduction to TRIMMS Online Training

- Session 1: Monday, June 6 3:15 to 4:45pm (EDT) **Live broadcast from SEACT TDM Symposium in Charleston, SC*
- Session 2: Wednesday, June 15 12:00 to 1:15pm (EDT)

Visit www.commuterservices.com to register online today.

Questions

View TRIMMS reports and download the spreadsheet model:

<http://www.nctr.usf.edu/tag/trimms/>

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