

# Transportation Demand Management (TDM)

## Greenfield Tool Box

DESIGN

PROCESS

✓ IMPLEMENTATION..... Transportation



Credit | Creative Commons | Hugger Industries



Credit | Brown University



### TOOL DESCRIPTION

Transportation Demand Management (TDM) is a general term used for strategies that result in the more efficient use of transportation resources. It gives priority to more efficient modes of transportation such as walking, cycling, car and bike sharing, and public transit, and works to improve the efficiency of all modes of transportation. By managing the demand for transportation, local governments can reduce the need for new or widened roads, diminish the social costs of car use, and increase the return on their investments in transit, walking, and cycling facilities.

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The main types of TDM are divided into 2 categories:

- › Education, promotion and outreach
- › Incentives and disincentives

Combined with supportive land use practices and sustainable travel options, these measures represent an integrated approach to mobility management.

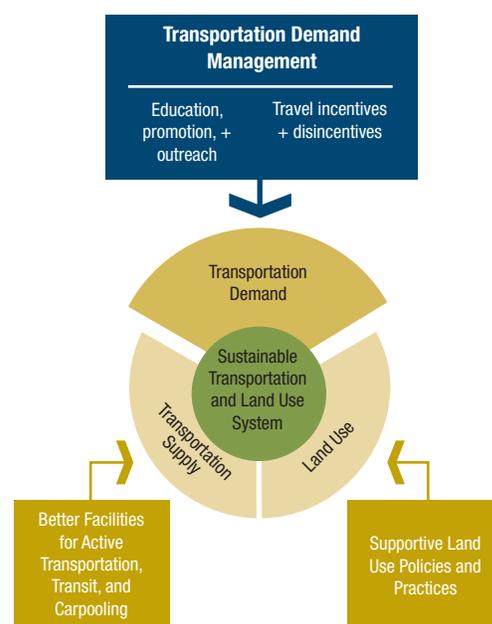
#### Education, promotion and outreach

Different measures can help to raise awareness, improve understanding, and build positive attitudes about sustainable transportation choices:

- › **Branding:** Branding and positioning measures shape social and individual perceptions of different travel modes, and remove biases against more sustainable choices.
- › **Information and education:** Information and education measures enhance the understanding of different travel choices, and the positive or negative effects of travel decisions.
- › **Targeted marketing:** Targeted marketing measures help individuals or groups to understand their personal options and offer incentives for more sustainable travel.
- › **Special events:** Special events raise the awareness of travel options and encourage people to try them (e.g. commuter challenges, transportation fairs, bike to work days, or two-for-one transit fare days).
- › **Recognition and rewards:** Recognition and rewards promote and encourage continued TDM leadership and program successes by employers, institutions, and interest groups.

### Tool Intent

To ensure a more efficient use of transportation resources by influencing people's travel choices.



### USERS

- ✓ Municipal Officials
- ✓ Municipal Planning Staff
- ✓ Planning + Design Professionals
- ✓ Engineers
- Land Developers
- Landowners
- Community Members

# Transportation Demand Management (TDM)

## Incentives and disincentives

Measures which provide incentives or disincentives include:

- › **Personal services:** Personal services could include ride-matching, guaranteed ride home programs, and traveller information services.
- › **Transit pricing:** Transit pricing measures can make transit more affordable. Examples include reduced fares for seniors, discounted monthly passes, time-based transfers, and free transit in downtown cores.
- › **Workplace-based measures:** Workplace-based measures make commuting less costly and stressful. Examples include payroll-deduction transit passes, preferential carpool parking, flexible working hours, and telecommuting.
- › **School-based measures:** School-based measures encourage students and their parents to travel to school using alternative modes of travel. Examples include universal transit passes for post-secondary students, active and safe routes to school programs, and walking school buses.

## Sustainable travel options

Measures that can complement TDM by improving the supply of travel options include:

- › **Innovative travel services:** Innovative travel services could include car and bike sharing programs, and carpooling (see Car and Bike Sharing Programs Tool p.137).
- › **Transit service improvements:** Improvements on transit services that increase the speed, comfort, and convenience of transit services such as new or extended routes, express or limited-stop services, and more frequent service.
- › **Infrastructure improvements:** Improvements of existing infrastructure could include bike racks on buses, secured bike racks, new on-road or off-road cycling routes, and park-and-ride lots.

## Supportive land use practices

Land use practices complement and support TDM. All measures that promote a more compact urban form will have a positive impact on the transportation demand by minimizing travel demand, reducing trip lengths, improving transit service, and making walking and cycling more attractive.

## WHEN IN THE PROCESS IT IS USED?

A local municipality may develop a TDM strategy and action plan with a multimodal view of challenges and solutions, which recommends specific policies, programs and projects to advance TDM inside and outside the organization. These programs and projects are more effective when integrated into municipal policy documents and transportation plans, and supported by land use bylaws. These measures should be available to be considered during the planning and design stage of a greenfield development, and approvals may require an assessment of whether a development properly addresses relevant areas in TDM.

## POLICY SUPPORT

### Calgary Transportation Plan

The Calgary Transportation Plan includes many policies related to TDM. One policy refers directly to TDM:

### Part 3 Transportation Policies

#### 3.6 Quality of service

*a. TDM strategies should be implemented first to reduce or eliminate the need for new links in the transportation system, and must be integrated into all municipal approval processes to promote more sustainable travel choices.*

## CASE STUDIES | BEST PRACTICES

### Travel Smart Kamloops, British Columbia



TravelSmart is a broad program developed by The City of Kamloops which integrates land use and transportation system planning management. The plan establishes direction for developing a multi-modal transportation system and guides the preferred growth management strategy for Kamloops' Official Community Plan to minimize demands on the municipal transportation system. Launched in January 1997, the program includes these ongoing TDM initiatives:

- › **Land use integration:** The plan recognizes the strong links between transportation and land use and favours a more compact form of development. It outlines initiatives for a neighbourhood level that manage demand for transportation, including the promotion of a mix of residential development types and densities, dispersed employment opportunities, and a well-connected grid network.
- › **Transit enhancements:** In partnership with the province of British Columbia, Kamloops performed a comprehensive review of its transit system. Some improvements that resulted from that study included increased frequency of service to outlying communities and the use of smaller buses that feed into the main system.
- › **Bicycle system enhancements:** The plan recommended developing a bicycle master plan which should include network routing, end-of-trip facilities, interaction of different modes of travel, and standards for bicycle routes.
- › **Alternative transportation promotional programs:** Different strategies were proposed to be carried out by businesses and other organizations in the community.

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## Town of Canmore Municipal Development Plan

### Transportation Policy:

(b) In order to respond appropriately to high growth in transportation demand, the Town shall prepare a Transportation Master Plan and review the Master Plan on an annual basis. The Transportation Master Plan will incorporate parking, trail system and public transit planning issues into the overall transportation plan [TP].

## Town of Cochrane Municipal Management Plan

### Transportation Network Policy:

(n) Travel Demand Management: The Town shall use appropriate travel demand management techniques to manage vehicle movement on Cochrane's road network.

## LOCAL APPLICATIONS

### Bow River Flow, Calgary



Festival of human-powered transportation that celebrates healthy and resilient communities.

Source | <http://bowriverflow.ca/>

### Cyclepalooza, Calgary



A week of cycling events in Calgary | Bike to the store event

Source | <http://cyclepalooza.ca/>

## RELATED TOOLS

**Parking Management and Policies**

**Car and Bike Sharing Programs**

**Traffic Calming**

**Walkability Audit**

**Bikeability Audit**

**Complete Streets**

## ADDITIONAL RESOURCES

Transport Canada – Transportation Demand Management (TDM) Resource Centre (<http://www.tc.gc.ca/eng/programs/environment-utsp-tdmresources-1051.htm>)

FMC | Green Municipal Fund – Improving Travel Options with Transportation Demand Management (TDM) ([http://gmf.fcm.ca/files/Capacity\\_Building\\_Transportation/TransportationDemandManagement-e.pdf](http://gmf.fcm.ca/files/Capacity_Building_Transportation/TransportationDemandManagement-e.pdf))

Victoria Transportation Policy Institute (<http://www.vtppi.org/tdm/>)

TravelSmart Plan City of Kamloops (<http://www.kamloops.ca/transportation/tp-travelsmart.shtml>)

Calgary Transportation Plan ([http://www.calgary.ca/docgallery/BU/trans\\_planning/CTP2009/calgary\\_transportation\\_plan\\_2009.pdf](http://www.calgary.ca/docgallery/BU/trans_planning/CTP2009/calgary_transportation_plan_2009.pdf))

Alberta's Active and Safe Routes to School Resource Manual ([http://www.saferoutesinfo.org/sites/default/files/resources/Shape\\_ASRTS\\_Manual.pdf](http://www.saferoutesinfo.org/sites/default/files/resources/Shape_ASRTS_Manual.pdf))

## CASE STUDIES | BEST PRACTICES

### Short Street Project, Saanich, British Columbia



Credit | Smart Growth BC

The District of Saanich worked with several partners to develop and implement TDM measures into the Short Street redevelopment project. The developer was allowed to reduce the parking requirement in exchange for providing new residents with a transit pass for one year, a car-share membership for each unit and a shared vehicle on-site, and secure underground bicycle storage.

Parking management and policies are important to consider in TDM. Therefore, TDM and parking management should be planned in consideration of each other to keep a desirable balance between parking supply and demand.