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TRANSPORTATION DEMAND MANAGEMENT

for CANADIAN COMMUNITIES



A GUIDE TO UNDERSTANDING, PLANNING
AND DELIVERING TDM PROGRAMS

Transportation Demand Management for Canadian Communities:

A Guide to Understanding, Planning
and Delivering TDM Programs

Prepared for

Transport Canada

by

Noxon Associates Limited

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Please direct comments and inquiries to:

Transport Canada

Environmental Initiatives Group
330 Sparks Street
Ottawa, ON Canada K1A 0N5
ecoMobility-ecoMobilite@tc.gc.ca
www.tc.gc.ca/urban

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Un guide pour comprendre, planifier et exécuter les programmes de GDT

Table of contents

Welcome to readers	v
About this guide.....	v
Acknowledgments	vi
Glossary of key terms	vi
Chapter 1: Understanding TDM.....	1
1.1 The basics of TDM.....	1
1.1.1 Communities and sustainable transportation systems.....	1
1.1.2 Definition of TDM.....	2
1.1.3 Rationale for TDM	2
1.1.4 Types of TDM measures	3
1.2 TDM in the municipal context.....	4
1.2.1 Integrating TDM with other municipal activities.....	4
1.2.2 Challenges facing TDM	5
1.2.3 Keys to success.....	5
Chapter 2: Planning TDM programs	7
2.1 Step one: Gather information	8
2.1.1 Scan of municipal activities.....	8
2.1.2 Scan of stakeholder interests	8
2.1.3 Market research	9
2.2 Step two: Set direction.....	11
2.2.1 Vision, goals and objectives	11
2.2.2 Opportunities and challenges.....	13
2.3 Step three: Assess options	14
2.4 Step four: Identify actions	17
2.5 Summary	19

Chapter 3: Delivering TDM programs	20
3.1 Building capacity	20
3.1.1 Executive leadership	20
3.1.2 Policy support	21
3.1.3 Staffing.....	21
3.1.4 Funding	23
3.2 Working collaboratively	24
3.2.1 Internal coordination	24
3.2.2 External partnerships.....	25
3.2.3 Alternative service delivery	25
3.3 Engaging audiences.....	27
3.3.1 Messaging.....	27
3.3.2 Identity and branding.....	27
3.3.3 Internet use.....	28
3.3.4 Special events	29
3.3.5 Advertising	30
3.3.6 Recognition	30
3.3.7 Reporting on program results.....	31
3.3.8 Media relations.....	31
3.4 Summary	32
Appendix A: TDM measures	34
A.1 Modal measures: Improving travel options	34
A.1.1 Active transportation	34
A.1.2 Public transit.....	36
A.1.3 Ridesharing.....	36
A.1.4 Carsharing.....	36
A.1.5 Telework	37
A.1.6 Parking	37
A.1.7 Automobile use.....	37
A.2 Outreach measures: Reaching key audiences	38
A.2.1 Individuals and households.....	38
A.2.2 Workplaces	38
A.2.3 Post-secondary institutions	39
A.2.4 Schools.....	39
A.2.5 Other audiences	40
A.3 Leadership measures: Showing the way	40
A.3.1 Municipal travel plan.....	40
A.3.2 Zoning and development approvals.....	40



Welcome to readers

About this guide

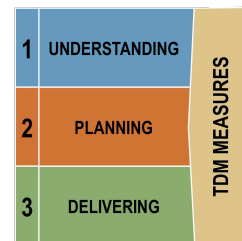
TRANSPORTATION DEMAND MANAGEMENT (TDM)

is one of the approaches that Canadian municipalities and regional transportation authorities are using to create cleaner, more efficient and reliable transportation systems.

Over the last decade, a growing number of communities have been integrating TDM into their transportation plans and operations. This guide represents a summary of the lessons they have learned, and offers advice to help other municipalities plan and implement their own TDM programs. It references real-world examples, as well as other documents that offer additional guidance in more specialized areas of TDM. It draws on collective experience to provide an overview of the entire process behind TDM program planning and delivery.

This guide is meant to be accessible to readers who are less familiar with TDM, including those in mid-sized or small communities. It addresses the practical concerns of its intended readers including *decision makers* (e.g. elected officials and senior managers) who provide staff with strategic direction and authorize resources, *managers* in municipal staff groups with direct or indirect responsibility for TDM, and *practitioners* involved in planning and delivering TDM measures.

The figure below illustrates the guide's structure, and will help readers navigate the main sections.



CHAPTER 1 – UNDERSTANDING TDM discusses the role of TDM, its relationship to other municipal activities, and challenges and keys to success.

CHAPTER 2 – PLANNING TDM PROGRAMS outlines a four-step process to planning new or expanded TDM programs.

CHAPTER 3 – DELIVERING TDM PROGRAMS discusses three keys to the effective delivery of TDM programs including internal capacity building, collaboration with partners, and communication with key audiences.

APPENDIX A – TDM MEASURES offers a descriptive inventory of common TDM approaches and tools that are broadly relevant to Chapters 1, 2 and 3.

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Glossary of key terms

ACTIVE AND SAFE ROUTES TO SCHOOL (ASRTS) PROGRAM. Comprehensive, community-based initiatives that encourage walking and cycling to school through education, training, promotion, safety improvements, and incentives. Also known as Safe Routes to School.

ACTIVE TRANSPORTATION (ACTIVE COMMUTING). Human-powered travel, primarily walking and cycling but also in-line skating, skateboarding, wheelchairs and other methods.

BIKE SHARING. Programs that offer free or low-cost bike rentals, intended for short periods of use and a large number of daily users per bicycle. Public bike sharing initiatives are open to all users, while private bike sharing initiatives are restricted to employees or clients of a particular business or institution.

CARSHARING. Services that offer short-term pay-per-use car rentals, typically open to the public and sometimes also to businesses as a complement or replacement to corporate fleet ownership.

COMMUTER SURVEY. An electronic, paper-based or face-to-face tool for gathering information about employee commuting habits and attitudes in a workplace.

CYCLING SKILLS COURSES. Training for individuals about safe bicycle operation, addressing subjects such as riding in traffic, darkness and inclement weather, and roadside bike repair. The Canadian Cycling Association's CAN-BIKE program includes courses for children, learner adults, women, rural cyclists and urban commuters.

EMERGENCY RIDE HOME. A service offered by an employer or third party that helps non-driving commuters get home quickly and conveniently in case of family emergency, unexpected overtime or other unforeseen event. Transportation is typically by free or reimbursable taxi or car rental. Also known as guaranteed ride home (GRH).

EMPLOYER TRANSIT PASS PROGRAM. The sale of transit passes to commuters at their workplace, with the employer either acting as a reseller, or forwarding payroll deductions to the transit operator. Payroll-deduction transit pass programs typically demand a minimum one-year subscription.

END-OF-TRIP FACILITIES. Bicycle parking, shower and change facilities in workplaces for use by cycling or walking commuters.

INDIVIDUALIZED MARKETING. Initiatives that use targeted, customized communication and incentives to motivate sustainable transportation choices by individuals who self-identify as being interested in adopting new behaviours. Individualized marketing is most commonly applied at a household level, but can also be used in workplaces.

MARKET SEGMENTATION. Division of a larger market into groups that possess common characteristics, as the basis for marketing activities that differ among groups.

OPEN STREET EVENTS. Special events that involve temporary closure one or more streets to motor vehicles, enabling use of the street space for walking, cycling, entertainment and other activities.

PUBLIC TRANSIT PASS PROGRAM. Sale of discounted transit passes to the general public by subscription, typically for a minimum term of one year.

RIDEMATCHING. A service to help commuters find partners for carpooling, typically through automated Internet-based services.

TELEWORK (TELECOMMUTING, MOBILE WORKING). An arrangement allowing workers to reduce their commuting by performing some or all of their work away from their normal workplace.

TRANSIT-ORIENTED DEVELOPMENT. Form of development offering a land use density, mix and design that makes transit use attractive and efficient; typically involves mixed-use, pedestrian-friendly developments around rapid transit stations and corridors.

TRANSPORTATION DEMAND MANAGEMENT (TDM). The use of policies, programs, services and products to influence whether, why, when, where and how people travel. TDM measures help shape the economic and social factors behind personal travel decisions.

TRANSPORTATION DEMAND MANAGEMENT (TDM) PROGRAM. A collection of TDM initiatives delivered through or in partnership with municipal government operations, typically with dedicated staff and financial resources. TDM programs are usually considered to be ongoing, long-term endeavours rather than short projects.

TRANSPORTATION FAIR. A special event at workplaces or educational institutions to build awareness of sustainable travel options by offering a range of information and services.

TRANSPORTATION MANAGEMENT ASSOCIATION (TMA). An organization that promotes and supports workplace travel plans among employers; may offer services such as commuter surveys, analysis, consultation, special events and carpool ridematching.

TRIP PLANNING. Internet-based, phone-based or face-to-face help for individuals to plan optimal routes for trips, usually by transit but sometimes by cycling or walking.

UNIVERSAL TRANSIT PASS (U-PASS) PROGRAM. Common initiative at post-secondary institutions, whereby all students or members of a sub-group (e.g. full-time undergraduates) pay a fee that gives them unlimited access to transit for the entire semester, school year or calendar year. U-Pass fees are typically much lower than the cost of buying regular passes or tickets, because the cost of transit fares is redistributed from a smaller group to a larger one.

WALKING SCHOOL BUS. An arrangement whereby a group of children walks to school with one or more adults, typically involving set meeting points, schedules and rotating volunteer schedules.

WORKPLACE TRAVEL PLAN. A package of coordinated initiatives to encourage efficient and sustainable commuting among employees

VANPOOLING. Shared use by multiple commuters of a van that is typically owned by a third party such as a non-profit organization, for-profit business or employer.

Chapter 1: Understanding TDM

This chapter introduces TDM and its benefits for Canadian communities, and helps readers to:

- understand how TDM supports sustainable transportation
- see how TDM is integrated with other municipal services
- explain and build support for TDM
- be aware of common challenges and keys to TDM success

After reading Chapter 1 readers will be better equipped to tackle Chapter 2, and start the process of planning a new or expanded TDM program.

1.1 The basics of TDM

1.1.1 Communities and sustainable transportation systems

The challenges posed by transportation systems to Canadian communities are growing. Increasingly, congestion is a fact of life but road expansion is no longer considered a solution. The environmental impacts of motorized travel are unacceptable. The costs of conventional mobility are unsupportable given today's fiscal constraints. Residents are demanding travel options that are convenient, reliable, healthy and safe. In response, virtually all new transportation plans emphasize the need for more sustainable transportation options—in other words, greater use of walking, cycling, transit, carpooling and telework.

By reshaping their transportation systems, Canadian communities are pursuing three key dimensions of sustainability:

- **QUALITY OF LIFE.** Sustainable transportation systems reduce travel delays that affect families and increase costs to business. They increase physical activity levels and reduce

the health impacts of air pollution. They improve safety by shifting travel from cars to transit, reducing travellers' risk of being involved in a collision. They increase opportunities for all people to participate in educational, recreational and social activities without the need to use a car.

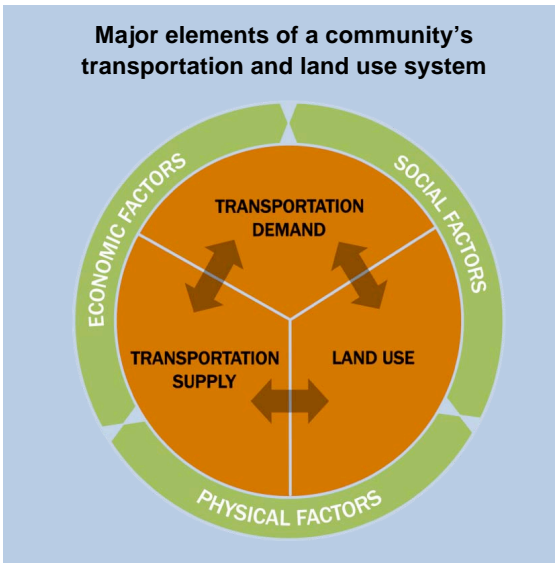
- **ENVIRONMENTAL HEALTH.** Sustainable transportation systems have lower emissions of greenhouse gases and smog-causing air pollutants, and help reduce intrusion into natural areas by urban development.
- **ECONOMIC GROWTH.** Sustainable transportation systems have lower long-term costs, including the costs of transportation infrastructure (e.g. new and wider roads), transportation operations (e.g. vehicle fuel, repair, insurance) and their health impacts (e.g. hospital care for collision victims and asthma patients). Car travel is expensive both for citizens and governments. Shifting travel demand from cars to more sustainable modes frees up public and private resources to invest in other priorities.

1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

1.1.2 Definition of TDM

In any community, the transportation and land use system includes *three major elements* that represent the physical, economic and social factors behind travel behaviour (see figure, below):

- *transportation demand*—the needs and desires of individual people
- *transportation supply*—the infrastructure and services that move people
- *land use*—the places people travel to and from



Sustainable transportation measures work by addressing one or more of these three key elements. Policies, programs, services or products that address transportation demand are grouped under the term **TRANSPORTATION DEMAND MANAGEMENT** or **TDM**. By influencing *whether, why, when, where* and *how* people travel, TDM measures can cause the following changes in travel behaviour:

- *modal shift*—more people choosing to walk, cycle, take transit, carpool, vanpool or telework
- *trip reductions*—more people choosing to telework, shop online or conduct personal business by telephone

- *driving reductions*—more drivers making fewer trips by car and to closer destinations
- *time and route shifting*—more drivers changing the time or route of their driving trip to avoid traffic congestion

1.1.3 Rationale for TDM

TDM offers communities the same benefits as other sustainable transportation measures that change transportation supply or land use. It can reduce air emissions, congestion, delay, automobile user costs, and public costs incurred for health care, emergency response, and road and parking infrastructure. It can also improve access to opportunity, public health, road safety, employee morale and productivity, and environmental health.

Three key attributes of TDM make it a valuable addition to a community's sustainable transportation "toolbox":

- **FLEXIBILITY.** TDM measures are readily customized for specific user groups (e.g. seniors, youth, cyclists, transit riders), travel purposes (e.g. shopping, commuting), travel destinations (e.g. a single hospital, business park or neighbourhood), or timeframes (e.g. weekdays, sporting events, an entire smog season). By comparison, transportation supply and land use measures are much less customizable by user group, purpose, place or time.
- **SPEED.** TDM measures can be planned and delivered in days, weeks or months. Transportation supply and land use measures can take years, or even decades.
- **AFFORDABILITY.** TDM measures can be scoped and scaled to match available resources. While the most effective approaches to TDM are not inexpensive, municipalities can tailor a TDM program to make effective and creative use of existing staff and budgets. Even relatively costly TDM measures tend to be far less expensive than most transportation infrastructure projects.

TDM measures do not *replace* transportation supply measures (such as new transit lines and bicycle lanes) or land use measures (such as urban design standards and mixed-use developments). However, they *complement* these other measures in a very powerful and cost-effective manner. In fact, TDM is an excellent way to maximize the efficient operation of existing land use and transportation systems.

Assessing the benefits of TDM measures

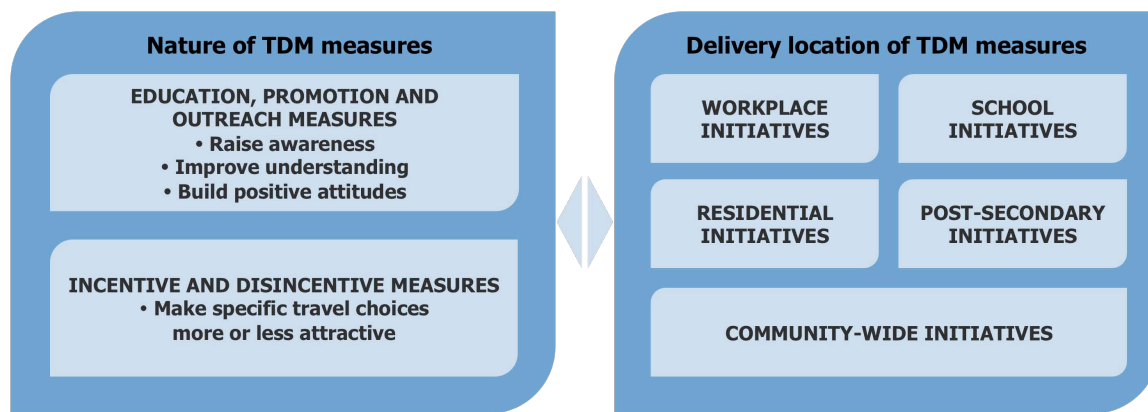
By focusing on social and economic factors and avoiding expensive physical changes, TDM measures can have very high benefit-cost ratios. One study for the UK Department for Transport estimated that the congestion-reduction effects of TDM measures could have a ten-to-one ratio of benefits to costs—and this excluded powerful but controversial measures like road pricing. [S. Cairns et al., *Smarter Choices: Changing the Way We Travel*, 2004]

A compilation of this and other evidence on the effectiveness of TDM measures is available in *The Case for TDM in Canada: Transportation Demand Management Initiatives and Their Benefits*, available at www.actcanada.com. That guide is a recommended tool to help practitioners understand their key audiences and build support for TDM initiatives.

1.1.4 Types of TDM measures

TDM MEASURES CAN TAKE DIFFERENT FORMS (see the figure below, as well as the more detailed list in Appendix A), and are generally divided into two categories. *Education, promotion and outreach measures* raise awareness, improve understanding, and build positive attitudes about sustainable transportation choices—for example, special events or cycling skills training. *Incentive and disincentive measures* make specific travel choices more or less attractive through convenience improvements, cost changes or rewards—for example, ridematching services or transit pass discounts.

TDM MEASURES CAN ALSO BE DELIVERED IN DIFFERENT LOCATIONS. *Workplace initiatives* can involve carpool ridematching services, subsidized transit passes, telework promotion or flexible work hour programs. *School initiatives* can involve walking school buses or ridematching services. *Post-secondary initiatives* can involve universal transit passes, active transportation promotion, ridematching services and parking management. *Residential initiatives* are aimed at households, usually within a specific neighbourhood, and can involve individualized marketing or carsharing. *Community-wide initiatives* are not targeted at a particular market, and include public carpool ridematching, high-level messaging campaigns and special events.



1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

1.2 TDM in the municipal context

1.2.1 Integrating TDM with other municipal activities

TDM can provide support to many activities that municipalities may be involved in.

PUBLIC TRANSIT. Marketing activities by transit systems are a form of TDM. Transit systems also conduct special events to encourage individuals to try transit, and offer fare incentives such as discounts to encourage individuals to buy transit passes or travel outside rush hours.

ACTIVE TRANSPORTATION. Cycling and walking maps, special events like Bike to Work Week, cycling skills courses, better bike parking, promotion of public bike sharing systems, and celebrations of new trails or bike lanes are all TDM initiatives.

CARPOOL LANES AND CARPOOL LOTS. These supply-side measures depend on effective promotion and the facilitation of carpool formation through ridematching services, a staple of TDM programs.

LAND USE INTENSIFICATION. Urban boundaries that contain growth and zoning by-laws that encourage infill development both concentrate transportation activity in existing developed areas. TDM programs can ease the transition to intensification by encouraging residents and employees of infill projects to travel sustainably. In areas with limited parking capacity, TDM programs can also make vacant land more attractive to developers.

TRANSIT-ORIENTED DEVELOPMENT (TOD). Many municipalities are working to intensify mixed-use, pedestrian-friendly developments around transit stations and corridors. The power of good design to maximize transit use can be amplified by effective education, promotion and incentives—particularly when new residents and employees are relocating from more car-dependent locations.

AIR QUALITY IMPROVEMENT AND GREENHOUSE GAS EMISSION REDUCTIONS. Motorized travel generates a substantial portion of total greenhouse gas emissions and other air pollutants in most communities. Virtually all municipal air quality and greenhouse gas emissions reduction strategies aim to reduce driving, and TDM measures can help accelerate shifts to more sustainable travel.

ECONOMIC COMPETITIVENESS. Municipalities compete to attract investment that creates and retain jobs, and to attract new residents. Telework and other TDM programs that improve commuting options can make workplaces more attractive and increase their reach into the labour market. They can also make the image of a community's lifestyle more attractive to young families and the "creative class" of knowledge workers.

ACTIVE LIVING PROMOTION. Municipal health departments and district health units promote the health benefits of improved fitness through active living. TDM programs that encourage active transportation, such as for daily trips to work or school, are good complements to active living programs.

CHILD AND YOUTH DEVELOPMENT. The healthy development of young people is a primary concern of our education, public health and social service systems. TDM measures such as cycling skills education courses or Active and Safe Routes to School programs can increase physical activity among children and youth while also building their confidence and independence.

1.2.2 Challenges facing TDM

Most major Canadian municipalities have created TDM policies and programs, but few have successfully implemented broad and effective TDM measures. Several recurring challenges have contributed to this situation.

TDM NEEDS STRONGER BACKING BY ELECTED OFFICIALS. TDM is a broad subject that tends not to offer simple solutions. Its wide scope and subtle variations make it challenging for decision makers to champion. It can also be difficult to “see” TDM initiatives and measure their short-term impacts, which adds to the challenge of building political and public support.

TDM DOES NOT FIT THE USUAL STRUCTURE OF MUNICIPALITIES. TDM planning and delivery functions lack a natural home in municipal administrations—rather, they tend to bridge diverse areas including transportation engineering, development planning and approvals, transit service, health promotion, social services, economic development, and communications. TDM requires the commitment and assistance of engineers, planners, economists, behavioural psychologists, social workers, communicators and elected officials.

TDM STAFF MAY BE ASKED TO BEAR ADDITIONAL RESPONSIBILITIES. TDM programs can become “catch-alls” for activities that do not fit neatly within traditional traffic and transit programs. For example, TDM staff are commonly asked to take responsibility for cycling network planning, sidewalk replacement projects and other sustainable transportation initiatives. This is not necessarily a bad thing, but the day-to-day demands of these projects can easily divert time and attention from TDM.

INFRASTRUCTURE AND LAND USE ISSUES ARE SEEN AS MORE IMPORTANT. In municipal organizations with limited resources, land use and transportation infrastructure concerns can control the agenda and marginalize TDM initiatives. However, it is important that municipalities work on land use, transportation supply and transportation demand at the same

time—TDM is an inexpensive way to boost the effectiveness and speed of development and transport infrastructure strategies.

1.2.3 Keys to success

The TDM experiences of Canadian municipalities have revealed several basic approaches that can maximize the effectiveness and return on investment of TDM initiatives.

DEVELOP AND FOLLOW A PLAN. A TDM program is a long-term commitment that can involve many stakeholders and a wide range of measures. A TDM plan can help a municipality attract support, provide direction and coordinate action over time. This issue is the subject of Chapter 2.

REMAIN ALERT TO OTHER OPPORTUNITIES. While a TDM plan is very helpful, it is important to watch for opportunities (both internal and external) that the plan does not foresee. A sense of adaptability and a willingness to consider new ideas will ensure that open doors are not passed without consideration.

BUILD PARTNERSHIPS. TDM thrives on strong partnerships and cannot be undertaken successfully by a single group. Municipal governments have limited ability to make TDM initiatives work without help from institutional, private sector and other community partners that offer resources, extend the reach of TDM measures, and enhance the credibility of messages originating within government. For municipal staff groups, learning the art and value of successful partnerships can be vital. This issue is discussed further in Chapter 3.

PROVIDE ADEQUATE RESOURCES. TDM is not about plans and policies—rather, it is about working with individuals and community organizations. These activities require time, energy and money. A municipality without a dedicated TDM practitioner on staff is likely to accomplish little, and many more staff may be warranted. Likewise, budget is required to develop and deliver the tools, resources and

1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

incentives that can influence behaviour. This issue is discussed further in Chapter 3.

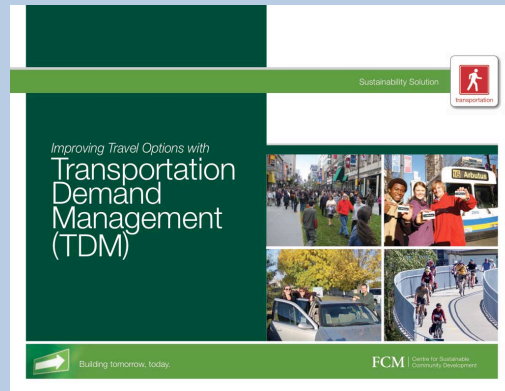
COMMUNICATE CLEARLY. Communication may serve diverse purposes and take many forms, but it is an essential part of most TDM measures, and is also fundamental to the success of an overall TDM program. It cannot be an afterthought. This issue is discussed further in Chapter 3.

LEAD BY EXAMPLE. TDM measures invite institutions, businesses and individuals to behave differently—so to build goodwill, municipalities must put their own house in order first. This is especially true when working with other levels of government and private-sector employers. Developing a travel plan for its own workplaces allows a municipality to learn about TDM, and to develop and test new tools and resources before offering them to other workplaces.

EMBRACE INNOVATION. “Doing things differently” requires both an appetite for innovation, and a willingness to treat failure as a learning experience. Strong leadership can help foster innovation. Small-scale demonstrations or pilot projects can encourage municipal decision makers and the general public to be more accepting of setbacks when they occur.

Helpful resources

The Federation of Canadian Municipalities offers a brochure, entitled *Improve Travel Options with Transportation Demand Management (TDM)*, and a customizable PowerPoint presentation to build understanding of TDM among key audiences in a range of communities. These resources were designed to address the questions and concerns of elected officials and other municipal decision makers. Both are available for free as downloads from www.gmf.fcm.ca.



Chapter 2: Planning TDM programs

TDM programs can target numerous audiences with multiple activities over several years, and are more likely to succeed when they are based on a thoughtful and realistic plan. This chapter outlines a four-step process to help a municipality plan a new or expanded TDM program with measures (see Appendix A) that support the community's transportation goals:

- **Step one: Gather information**—Develop knowledge to enable good decisions by conducting a scan of current activities, talking with stakeholders, and researching key markets.
- **Step two: Set direction**—Articulate the community's TDM vision, goals and objectives, and identify its most important opportunities and challenges.
- **Step three: Assess options**—Consider how different TDM measures could help the community achieve its goals by using a range of criteria to evaluate them.
- **Step four: Identify actions**—Build a plan of action that explains what TDM measures will be implemented and how the TDM program will strengthen over time.

These steps are summarized in the flowchart below, and the key questions to be asked at each step are summarized in Section 2.5.

By following the ideas in Chapter 2, a municipality can develop a plan for a TDM program that is appropriate for the community's context, objectives and challenges. Delivering that TDM program successfully is the subject of Chapter 3.



2.1 Step one: Gather information

TDM plans are like business plans—they should be based on a solid understanding of key markets and competing interests.

The first step in building a TDM plan is to gather information that will enable a solid understanding of the existing situation, and lay the groundwork for identifying the TDM plan’s major directions and recommended actions (as discussed in later sections of this chapter).



2.1.1 Scan of municipal activities

Compile a list of municipal challenges, plans, policies, programs, projects and partnerships that are relevant to possible TDM actions. Areas to investigate include public transit, active transportation, parking, development planning and approvals, public health, environmental management (water and energy conservation, air quality, climate change), parks and recreation, communications, economic development and tourism. Note that some of these areas may be the responsibility of external organizations like regional governments, district health units or arm’s-length commissions, and are addressed in the next section.

It is important to know what TDM-related initiatives each branch of the municipal government has tried before, is doing now, or is planning for the future. Integrating this knowledge into the TDM plan will help identify opportunities, dodge pitfalls and generally avoid “reinventing the wheel.”

2.1.2 Scan of stakeholder interests

It is also helpful to scan the challenges, interests and activities of external TDM stakeholders and potential partners to identify their related objectives and past, present or future actions. This scan may involve the review of strategic plans, status reports, media releases and other documents. It may also involve discussions with representatives of relevant organizations.

STAKEHOLDERS TO INCLUDE. The broad range of possible stakeholders includes chambers of commerce and economic development organizations, school boards, university and college administrations and student associations, large employers (e.g. hospitals), major developers and property managers, adjacent municipalities and senior levels of government, social service agencies (e.g. for seniors, youth, immigrants, persons with low incomes or disabilities), festival organizers and local non-profit organizations active in environment or transportation.

This list of stakeholders may be lengthened if any of the activities identified in the previous section are the responsibility of external organizations, rather than the municipality. It may also be shortened to suit the time and resources available for the scan.

ISSUES TO ADDRESS. Key questions to ask when gathering information include:

- What *challenges* faced by stakeholders’ organizations, employees or customers could be overcome by improving travel options or shifting travel demand? These may be known,

high-profile challenges that contributed to the need for a TDM plan in the first place, or they could be more subtle issues that are only revealed through conversation.

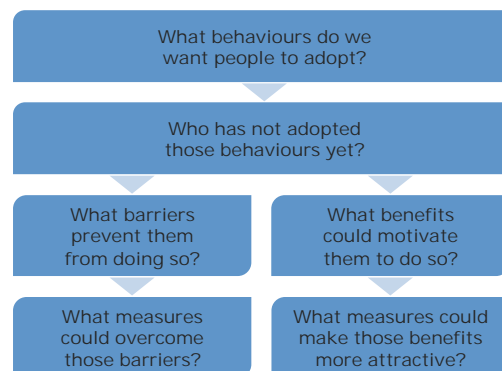
- What *TDM-related initiatives* (i.e. facilities or services) have stakeholders undertaken in the past? Are they planning any in the future?
- What *possible TDM services or activities* might interest stakeholders as partners, clients or participants?

HOW TO GATHER INFORMATION. Stakeholders can be consulted by email or a written questionnaire, but talking to them by telephone or in person may spur them to be more forthcoming. In some cases, a workshop with multiple stakeholders can spark a creative, collegial atmosphere that leads to new possibilities being identified. Another step that could identify potential partners and other stakeholders in the municipal TDM planning process is to issue a public call for submissions through website notices, articles or advertisements in community newspapers, and announcements at committee or council meetings. To keep them on topic and maximize the value of their input, consider asking respondents to address a small number of focus questions, like those suggested above, and to limit the length of their submissions.

2.1.3 Market research

The strategies commercial marketers use to sell us soap and soft drinks are based on a thorough understanding of the overall market and key segments within it. Marketers want to know what products consumers prefer and why, and what advantages of a different product might entice them to change their behaviour.

A similar approach is taken by *social marketers*, including TDM practitioners, who try to influence individual behaviours for social benefit rather than corporate profit. Their thought process, known as *market segmentation*, identifies and analyzes groups of people with common characteristics. It is summarized in the following figure.



BENEFITS. TDM planners and practitioners can use market research to build their understanding of how people travel, why they do so, and what measures might get them to travel differently. Market research can identify groups that are most likely to adopt new behaviours, as well as those that are most likely to resist.

Another benefit of market research is that it can create a *baseline* for evaluation. The success of a TDM initiative can be determined by comparing, for example, the future number of bicycle commuters to a baseline measurement conducted before the initiative was conducted.

INFORMATION SOURCES. While the principle of using market segmentation to support TDM planning is strong, many municipalities collect very little helpful information. Knowledge about individual travel circumstances, preferences and decisions is rare. One possible source of market research relevant to TDM is a customer survey undertaken by the local transit system to identify ridership growth opportunities and challenges. Another source could be a public opinion survey conducted as part of an active transportation planning process. Several other good Canadian examples of TDM market research are summarized in the following box.

While market research does cost money to undertake, it can add great value to future investments in TDM programs and services. The key to effective market research is to not waste resources on questions that provide little direction. The activity scan and stakeholder consultation activities described above can help

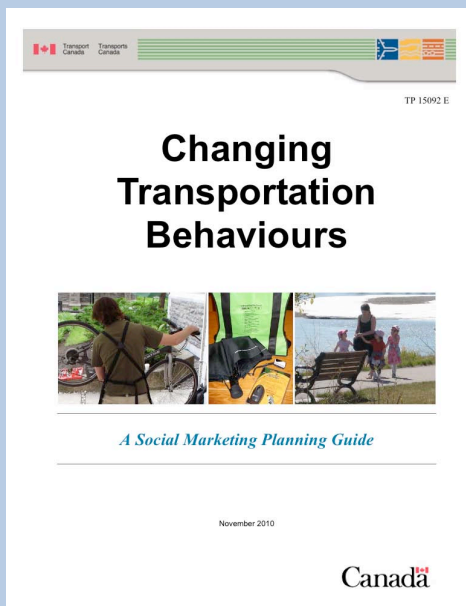
1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

identify important questions about key travel market segments. One way to maximize the return on market research is to focus on known problem areas: if congestion in a single corridor is driving interest in TDM, surveys could help identify who is driving through that area, why, and what might motivate them to take a different route or change travel modes.

Helpful resources

Transport Canada offers two publications that can help with the information-gathering step of a TDM plan. Both are available at www.tc.gc.ca/urban.

- *Changing Transportation Behaviours: A Social Marketing Planning Guide* provides detailed advice on gathering information to support TDM initiatives.
- *Compendium of Canadian Survey Research on Consumer Attitudes and Behavioural Influences Affecting Sustainable Transportation Options* lists findings about key travel-related attitudes, perceptions and misperceptions of various parts of the Canadian population.



Examples of TDM market research in Canada

The City of Ottawa's *Commuter Travel Behaviour and Attitude Survey* in 2002 used a telephone survey of 1,000 adults to gather information on current commuter travel behaviours and the underlying reasons, the potential for shifting travel demand from cars to walking, cycling and transit; and residents' awareness of and participation in certain programs.

The Smart Commute program of Metrolinx has conducted three commuter attitude surveys, the latest in 2008, to better understand the travel choices of commuters in the Greater Toronto and Hamilton Area, the reasons for those choices, and commuters' awareness of Smart Commute. It has also conducted a comprehensive School Travel Household Survey to help develop effective school-based TDM programs.

The Central Okanagan Region's market research for its TDM-focused *Social Marketing Strategy* in 2004 included six focus groups and a random telephone survey of 823 Kelowna area residents.

The Vélo Québec Association conducted an opinion survey in 2005 (*L'état du vélo au Québec*) to measure cycling activity among adults, their interest in cycling more, motivators to do so, barriers that kept them from doing so, and support for various government policies and actions to improve cycling.

Major metropolitan areas (e.g. Montreal, Ottawa, Toronto, Calgary, Edmonton, Vancouver) conduct periodic origin-destination studies of their entire populations. These random-sample surveys attempt to capture all local travel by residents (but excluding children, in most cases), and provide valuable material for social marketers who can link current choices to individual age and sex, family size and structure, work and home location, and so on. However, origin-destination studies do not capture other valuable information concerning values, attitudes and preferences that have a major impact travel behaviours.

2.2 Step two: Set direction

The second step in building an effective TDM plan is to use the information gathered in the first step to create a *strategic framework* that sets the plan’s major directions. This framework, which includes a TDM vision, goals and objectives (see Section 2.2.1), articulates what the municipality hopes to achieve through the use of TDM. It provides a basis for identifying strategic opportunities and challenges (see Section 2.2.2) and is also useful in evaluating possible TDM initiatives, as discussed in Section 2.3.



2.2.1 Vision, goals and objectives

The work discussed in Section 2.1 results in a good understanding of the context for a TDM program in the community, including municipal activities, stakeholder interests and market conditions. The next task is to articulate what a TDM program can do for the community, why it is important, and who will benefit from it.

VISION STATEMENT. A vision describes an optimal future. The benefit of a compelling TDM vision lies in its ability to clearly communicate to stakeholders *why* TDM is important by clearly describing *what* it can accomplish in a tangible way.

One approach to building a TDM vision is to describe how the community will look when TDM initiatives have had their fullest effect—in other words, what travel outcomes (i.e. changes to attitudes and behaviours) might be realized, and what effects those changes might have on the lives of residents. One example of this kind of TDM vision is shown in the accompanying box.

Another approach to building a TDM vision is to structure it around important community values such as quality of life, environmental health and economic growth—core values that a municipality may already have identified in a general community vision, official plan or transportation master plan. Linking TDM directly to the community’s loftiest desires and intentions is a powerful way to express why TDM is important. One example of a TDM vision that is structured in this way is given in the upper box on the following page.

GOALS. While a TDM vision can explain the importance of TDM at a high level, more specific goals and objectives are required as the basis for evaluating and planning actual TDM initiatives. Goals highlight the priorities of a TDM program by identifying the outcomes that warrant the greatest attention, and the activities that warrant the greatest resources. Goals can be expressed in many ways—they may focus on community outcomes, specific major program delivery components, the application of specific TDM activities or tools, or the delivery of activities through or to key stakeholders. The lower box on the following page shows examples of each of these.

1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

A TDM vision based on travel outcomes

In the future, Calgary residents will rely less on driving cars and more on walking, cycling, transit, carpooling, and telework. Those who drive will choose destinations, routes, and times that reduce their travel impacts. Trips to reach employment, education, and personal services will be shorter and more convenient. Traffic congestion and air pollution will be reduced, individuals will be safer and more physically active, and businesses will be more accessible to employees and customers. Transportation infrastructure requirements will be reduced on a per capita basis.

The City of Calgary's TDM initiatives will contribute to this future state by improving awareness and understanding of the travel options available to the public, providing incentives to make sustainable options more attractive, and using partnerships to build stakeholder interest and commitment. Through leadership The City will demonstrate its commitment and build strong connections among its related services, and through outreach it will actively engage individuals and other organizations in efforts to help residents make more sustainable travel choices.

— City of Calgary's *TDM Master Plan* (2008)

A TDM vision based on community values

TDM will help the municipality to:

BUILD A STRONG, DIVERSIFIED ECONOMY

- Broaden access to shops and services for all residents, especially those who do not drive
- Remove travel barriers that can limit access to jobs for potential employees
- Reduce the cost of transportation infrastructure needed to serve the average resident

SUPPORT A HEALTHY ENVIRONMENT

- Reduce emissions from motor vehicle travel, especially in congested times and locations
- Limit the use of greenspace for roads
- Build pride in the city as an environmental leader

ENSURE A HIGH QUALITY OF LIFE

- Expand and improve travel options for residents as they meet their daily needs
- Increase the number of residents using healthy, active travel choices such as walking and cycling
- Reduce delays caused by traffic congestion

BE A RESPONSIVE AND ACCOUNTABLE LEADER

- Be a role model for other community employers by implementing workplace TDM measures
- Maximize return on investment by creating strong partnerships and leveraging stakeholder actions
- Measure performance of the TDM program

Possible approaches to identifying and structuring TDM program goals

FOCUS ON COMMUNITY OUTCOMES SUCH AS:

- better public health
- reduced congestion and delay
- improved equity
- reduced emissions
- enhanced safety

FOCUS ON MAJOR PROGRAM DELIVERY COMPONENTS SUCH AS:

- outreach
- marketing
- performance measurement
- innovation (research and development)
- cost-effectiveness

FOCUS ON THE APPLICATION OF SPECIFIC TDM ACTIVITIES OR TOOLS SUCH AS:

- guidelines for new developments
- promoting transit
- promoting active transportation
- promoting carpooling
- managing parking

FOCUS ON ACTIVITIES DELIVERED TO OR THROUGH KEY STAKEHOLDERS SUCH AS:

- employers and property managers
- developers
- schools and post-secondary institutions
- families
- youth
- seniors
- special events and festivals

OBJECTIVES. Individual goals are usually broken into objectives that are either qualitative (i.e. descriptive) or quantitative (i.e. measurable). Quantitative objectives include *targets* as the basis for future performance measurement, evaluation and reporting. Setting effective targets requires a “baseline measurement” (as discussed in Section 2.1.3) that describes existing conditions. *Directional targets* represent either a simple increase or decrease from the baseline (e.g. more people buying transit passes, fewer single-occupant vehicles parking in municipal lots). *Specific targets* represent a more precise change from the baseline (e.g. number of employers to engage, number of residents to be involved in special events).

An example TDM goal and component objectives

GOAL: To use *marketing strategies* that build public support for sustainable travel options, improve public awareness of their benefits, and encourage their use

OBJECTIVES:

- Create a TDM program identity and use it to link and strengthen TDM messages
- Develop a social media campaign that engages individuals and enables personal communication (target: attract 300 “friends” to the program’s Facebook page in one year)
- Support events that build public awareness and encourage people to try sustainable travel options (target: double the number of special event participants over three years)

2.2.2 Opportunities and challenges

After setting major directions for the TDM program, it is advisable to assess the factors that both support and oppose success. Having a good sense of the opportunities and challenges facing TDM initiatives is key to developing a plan that is strategic in nature.

Opportunities and challenges should be considered and identified for several dimensions of the TDM program. For each dimension, ask the following questions:

- *What are the ideal conditions?* Identify factors or conditions that would maximize success.
- *What opportunities exist?* Identify real factors or conditions that meet or approach any of the ideal conditions.
- *What challenges exist?* Identify real factors or conditions that obstruct or oppose any of the ideal conditions.
- *What future directions are needed?* Identify the most attractive opportunities and threatening challenges that will shape future actions.

ASSESSING PROGRAM VIABILITY. The first dimension to ask these four questions about is the basic viability of the TDM program as a municipal endeavour. One aspect of viability is *authority and accountability*, for which the ideal conditions include:

- a clear mandate for staff to implement TDM initiatives within the organization and out in the community
- a supportive TDM policy framework
- endorsement and encouragement of TDM initiatives by senior management and elected officials
- a clear TDM “figurehead” (either an individual or staff group) who is associated with the program’s objectives, communications and activities
- performance targets, and measurement and reporting protocols

1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

The other aspect of TDM program viability is *internal and external resources*, for which the ideal conditions include:

- sufficient staff and budget to enable strategic actions
- a prioritized, affordable and feasible action plan
- committed internal partners who act as champions, share an interest in key outcomes, and actively participate in coordination and implementation
- external partners who could act as champions, share an interest in key outcomes, and actively participate in (or deliver) TDM initiatives
- an intention to recognize and reward the successes of internal and external partners

ASSESSING GOALS AND OBJECTIVES. After using the four previous questions to assess overall program viability, they can also be used to assess individual TDM goals and objectives. Consider and document the ideal conditions, opportunities, challenges and future directions for each goal and its component objectives. Especially when conducted by a group like a TDM steering committee (see Section 3.2.1) this exercise can greatly enhance a municipality's collective understanding of how individual measures could contribute to a longer-term vision for TDM.

2.3 Step three: Assess options

After the direction-setting work discussed in Section 2.2, the next step is to identify the most appropriate TDM measures to include in the municipal program. This section discusses criteria that can help evaluate different TDM measures (including those in Appendix A).



IMPACT. Understanding the potential impact of a measure in key areas is always important. A commonly assessed impact is the expected degree of change in individual travel behaviours—for example, how many people might be motivated by a particular project to switch from driving alone to walking, cycling, transit or carpooling. This is a very challenging question to answer, as human responses to change are always somewhat unpredictable.

Some modelling tools do exist that could help predict the impacts of TDM measures on travel behaviour (see the box on the following page). However, local knowledge and experience are probably the most reliable tools for estimating behavioural change. Questionnaires that ask people about the likelihood of changing behaviour in response to a given measure can give a rough picture, but are notoriously unreliable. How people say they would react hypothetically is often very different from how they do react when faced with reality.

Models that can help predict travel behaviour impacts of TDM measures

Transportation models (e.g. EMME) are maintained by larger municipalities and can reflect the impacts of changes in travel time, out-of-pocket costs, transit service quality and car ownership. However, they do not address active transportation well and cannot consider less tangible factors such as the relative comfort and security of travel options.

Economic models use elasticities to assess the different choices that may result from price changes.

Choice models that simulate consumers' rational trade-offs are very flexible but must be customized using market-specific data (e.g. stated preference surveys).

Integrated land use and transportation models can consider the effects of land use mix and density, but are complex and costly.

Program models to evaluate specific TDM measures, such as TRIMMS (Trip Reduction Impacts for Mobility Management Strategies), a sketch-planning tool calibrated using American data.

Helpful resource

For those seeking a compilation of measured TDM impacts in a variety of areas, ACT Canada's report *The Case for TDM in Canada: Transportation Demand Management Initiatives and Their Benefits* is a reliable source (available at www.actcanada.com).



Other tools to estimate TDM outcomes

Transport Canada's *Urban Transportation Emissions Calculator (UTEC)* is an online tool to estimate emissions from personal, commercial and public transit vehicles (see www.tc.gc.ca/utec). Key information from UTEC for different Canadian regions has been summarized in Section 3.2.5 of *Workplace Travel Plans: Guidance for Canadian Employers*, (see www.tc.gc.ca/urban).

The Canadian Automobile Association's *Driving Costs* brochure (www.caa.ca/drivingcosts) can help estimate the costs of car ownership and operation. Other travel costs related to parking, tolls and transit fares depend on local conditions. The costs of delay due to congestion are difficult to estimate, as are the social costs of transportation activities (e.g. construction, maintenance, pollution, noise) arising from an average trip.

Cost. Nominally similar TDM measures can have widely varying costs. For example, promotions using social media like Facebook and Twitter will cost less than those using television and radio ads; similarly, incentives can range from inexpensive giveaways to substantial discounts or rewards. This flexibility to plan measures to fit an available budget is one of the advantages of TDM over conventional infrastructure. However, when evaluating the costs of individual initiatives or the achievement of certain objectives, it is necessary to consider what will be done by whom, and how. Cost estimates can be more illuminating when direct costs (those borne by the municipality) are accompanied by leveraged costs (those borne by partners). Two projects with similar direct costs but different leveraging potential are likely to be viewed differently; greater leverage likely means greater impact.

1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

FEASIBILITY. There are many dimensions to the feasibility of a possible TDM measure. Whether it is likely to be easier or more challenging depends on the requirement for staff time and budget, and the difficulty of acquiring or developing needed tools and resources. It is quite possible for some measures to have short-term windows of heightened feasibility, due to financial or political opportunities, that will pass if not acted on. For TDM measures that involve partnerships, it is important to assess the engagement of key partners and stakeholders, and the difficulty of coordinating heightened levels of involvement. Finally, legal or regulatory barriers may impact on the feasibility of certain measures.

IMMEDIACY. This criterion reflects the time it will take to implement a measure and reap the benefits. Some measures can be undertaken quickly but take years to show results; others may take years to implement but show rapid results. It is important to be realistic and avoid underestimating the time needed to implement measures and see results. TDM programs can involve many concurrent measures that compete for staff time, and the competition for attention and effort of partners can also be fierce (especially when the project is outside partners' core interests, as with school or workplace travel plans). There are many stories of TDM projects being delayed for months or even years because of turnover in a single staff position. Results also tend to be slow because masses of people rarely change behaviours suddenly; rather, individuals tend to change travel behaviour when other life changes occur (e.g. a new job or family member, improvement or decline in health or financial circumstances, and so on).

VALUE. Value is the balance of costs against benefits. A TDM initiative that achieves moderate gains at a moderate cost will offer less value than another offering greater gains at a lower cost. Applying a value scale to compare different TDM measures is one way to highlight key differences among them, and can also help to make the business case for measures that end up being recommended.

RISK. Risk considers confidence in a measure's impact and cost estimates, as well as its feasibility and immediacy of results. Comparing options on the basis of risk can highlight those that are *quick wins* (immediate, feasible, high confidence) as opposed to long shots (slower, less feasible, lower confidence). Particularly when starting a new TDM program, lower-risk measures are a more attractive starting point. Early success is a good way to build momentum and validate TDM approaches; it also might not be advisable to begin a new program with measures that face technical obstacles, require years to work, and are subject to substantial cost overruns.

ROLE. Within a TDM program, some measures act as important precursors or foundation elements that enable and strengthen others. For example, it may be hard to persuade employers to develop workplace travel plans before the municipality has a "value proposition"—i.e. a group of services and programs (e.g. a carpool ridematching service or discounted transit pass program) that it can offer as an incentive for employers to become engaged.

STRATEGIC IMPORTANCE. A final criterion to assess possible TDM measures is the extent to which each measure will contribute to the TDM plan's goals and objectives. Even a simple approach to gauging a measure's impact on each objective (e.g. a low, moderate or high rating) can help identify the relative importance of each option within the strategic framework. Knowing that a particular measure is strategically important may compensate for low ratings in other areas. For example, a highly strategic measure may be considered a priority despite weak value or risk ratings; likewise, a low-risk, high-value measure may be delayed if its impacts are in an area of low importance.

2.4 Step four: Identify actions

The final step in developing a TDM plan is the identification of actions to be undertaken. Ideally, this is more than a list of tasks or measures drawn from those in Appendix A—it should be the story of how those tasks will accomplish the TDM program’s goals and objectives.



AUDIENCES. The action plan component of a TDM plan has several audiences. These include decision makers, who want to know the rationale for each action as well as its expected outcomes and costs. Managers also want to know what resources are needed to deliver the program, who needs to be involved, what risks to watch for, and how to evaluate performance. TDM staff want to know what they are expected to deliver, how and by when. Finally, stakeholders and partners—both inside and outside the municipal organization—need to know their roles and responsibilities, and the importance of the part they will play.

CONTENTS. A well-rounded action plan will include the following information:

- *action descriptions*, including major TDM program elements, their component tasks and key deliverables
- *high priority tasks* such as key foundation elements or quick wins
- *roles and responsibilities* for each task, and a roll-up for each key stakeholder including TDM staff, internal partners and external partners
- *expected timelines* for individual tasks, and a roll-up for each calendar year (or other time periods as needed, e.g. by quarter or fiscal year)
- *costs and funding sources* for the entire program, key elements and individual tasks, and a roll-up by quarter or year
- *desired outcomes* for key program elements and individual tasks, and a roll-up by market segment or other theme as appropriate
- *performance measurement* indicators and targets, and monitoring and evaluation activities for the overall program and for key elements and tasks
- *a communications strategy* that addresses key messages and channels, public engagement approaches including outreach and social media, and program reporting
- *a continuous improvement process*, including timelines for revisiting and updating the TDM plan as needed

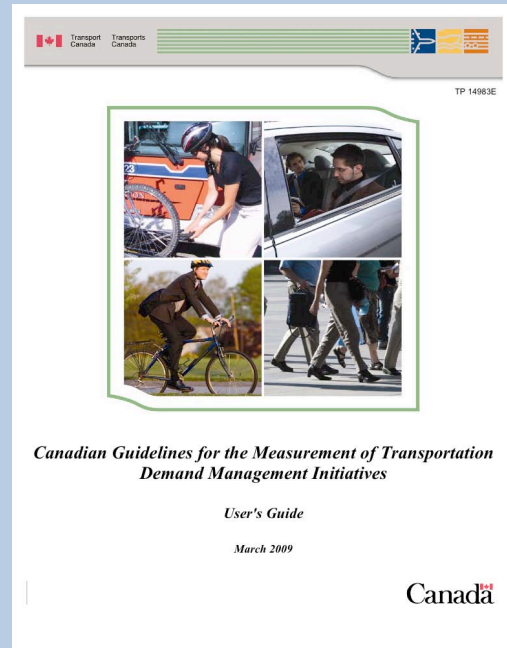
Despite this long list of desirable elements, it is not always possible or necessary to develop a detailed multi-year action plan right away; it may simply be beyond the short-term capacity of involved staff. Instead, a municipality’s first action plan may well be more strategic. For example, it could identify goals and objectives, key market segments, and an approach to identifying a detailed stand-alone action plan for each priority area. This approach could lead to

1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

the subsequent development of one action plan for workplace partnerships, another for school outreach, and a third for internal municipal programs. One advantage of this approach (other than its respect for capacity constraints) is that key stakeholders (e.g. elected officials) will be able to endorse a “big picture” document without having to absorb a large amount of detail or needing to approve actions they are not yet fully comfortable with. A preliminary action plan can also specify general frameworks for resource needs and expected outcomes, leaving future action plans to flesh out the details.

Helpful resource

Performance measurement for TDM is key to demonstrating success and building buy-in, but it can be very challenging. Transport Canada’s *Canadian Guidelines for the Measurement of Transportation Demand Management Initiatives—User’s Guide* can help (see www.tc.gc.ca/urban). The guidelines are applicable to a range of TDM initiatives and offer a step-by-step framework for practitioners to choose impact measurement techniques that suit their application and local context.



2.5 Summary

Planning TDM programs		
STEP ONE: GATHER INFORMATION (SECTION 2.1)		
SCAN OF MUNICIPAL ACTIVITIES (SECTION 2.1.1)	Identify municipal activities that are relevant to TDM, and research and/or consult with relevant staff about past, present or future TDM-related initiatives	Notes:
SCAN OF STAKEHOLDER INTERESTS (SECTION 2.1.2)	Identify external TDM stakeholders and consult with them to identify their interests in TDM and any relevant activities	Notes:
MARKET RESEARCH (SECTION 2.1.3)	Identify and examine information sources that can explain local travel patterns and attitudes	Notes:
	Identify new market research that could help	Notes:
STEP TWO: SET DIRECTION (SECTION 2.2)		
VISION, GOALS AND OBJECTIVES (SECTION 2.2.1)	Create a meaningful TDM vision statement, goals and objectives to guide the selection and implementation of actions	Notes:
OPPORTUNITIES AND CHALLENGES (SECTION 2.2.2)	Assess the TDM program's overall viability and its goals and objectives by considering the ideal conditions, opportunities, challenges and future directions for each	Notes:
STEP THREE: ASSESS OPTIONS (SECTION 2.3)		
	Identify possible TDM measures and apply key criteria to evaluate their potential contribution to the achievement of goals and objectives	Notes:
STEP FOUR: IDENTIFY ACTIONS (SECTION 2.4)		
	Develop an action plan that addresses key audience interests and describes how actions will unfold over time	Notes:

1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

Chapter 3: Delivering TDM programs

After working through Chapter 2 and completing a plan for the municipality's TDM program, the process of implementation begins. The wide range of possible TDM measures (see Appendix A) means that this guide cannot address the delivery of specific initiatives—a subject better addressed by more specialized guides. However, Chapter 3 does discuss three keys to enabling the successful delivery of TDM programs that might involve any number of measures:

- **Building capacity**—Provide strong leadership, develop supportive policies, and ensure adequate levels of staffing and funding.
- **Working collaboratively**—Coordinate the actions of internal stakeholders, build external partnerships, and take advantage of opportunities for alternative service delivery.
- **Engaging audiences**—Use messaging, branding, Internet communications, special events, recognition, reporting and media relations to build dialogue with TDM stakeholders and customers.

This chapter will help build a stronger foundation for the municipality's TDM program, and enable effective delivery of the TDM plan developed in Chapter 2.

3.1 Building capacity

The capacity of a TDM program to achieve success can be elevated through strong leadership (Section 3.1.1), supporting policy (Section 3.1.2), and adequate staffing (Section 3.1.3) and funding (Section 3.1.4).

3.1.1 Executive leadership

BENEFITS. Leadership among elected officials and senior managers is critical to the success of a municipal TDM program. Ideally, a *TDM champion* will emerge who can be a role model for staff and the public, an ally in public debate, a spokesperson to the public and media, a sponsor for new initiatives, and a mentor for additional champions over time.

FOSTERING LEADERSHIP. As discussed in Section 1.2.2, TDM suffers from limited attractiveness as a political issue—and for this reason, a high-level TDM champion may not emerge naturally. It may be more practical to seek champions on an issue-by-issue basis, by positioning TDM's varied benefits in a way that reflects the specific interests of potential leaders: for example, a municipal councillor who cares about improving child safety around schools or making neighbourhood businesses more prosperous; a medical officer of health who sees walking and cycling as a public health measure; or the director of a social planning council who wants new immigrants to be more comfortable using public transit to reach employment and education.

On an issue-by-issue basis, these supporters can be critical to building support for individual TDM initiatives. Over time, the TDM program will build its own political capital and attract champions who see TDM as a flexible approach to meeting a wide range of community goals.

3.1.2 Policy support

Policies remind decision makers about what to do (or not do) in certain circumstances. A strong framework of supporting policies can help ensure that future decisions are consistent with a TDM plan, and support its delivery.

An effective TDM policy framework can involve plans in many other areas (land use, transportation, municipal facilities, environmental management, public health) that touch on issues related to TDM. These connections remind decision makers that TDM is not a straightforward transportation service like snow clearance or vehicle licensing—rather, it is an interdepartmental approach to meeting community goals by influencing the daily travel decisions of residents.

TDM-supportive policies are crucial to the effective delivery of many TDM measures. For example, it can be difficult to promote bicycle commuting if workplaces do not offer bicycle parking, showers and change rooms. However, those features add to the costs of commercial development and, unless zoning by-laws require them, they are likely to be resisted by many developers.

Many municipal policy documents should be reviewed to maximize policy support for TDM, including: land use plans (from official plans to neighbourhood plans), zoning by-laws, transportation plans (including transit, active transportation and parking plans), and public health, recreation and environmental management plans.

It is helpful that municipal policies can “trickle down” from one plan or statement to another. For example, official plan policies will guide the creation of a transportation master plan, and

transportation plan policies will guide the creation of a TDM plan. Policies can also “trickle up” from one plan or statement to another—and this is a real opportunity for TDM practitioners to broaden the effect of their work. For example, TDM plans could identify deficiencies in transportation plans or land use plans that need to be fixed when those plans are updated in the future.

3.1.3 Staffing

NEED FOR TDM STAFF. At their most effective, TDM programs create a cultural shift within governments and across communities. This kind of change requires many eyes to spot opportunities, many minds to build partnerships, and many hands to deliver initiatives. Developing TDM tools, processes and relationships is labour-intensive work, and tackling serious transportation challenges through TDM demands serious resources.

Having sufficient TDM staff within a municipal government and its partner organizations is essential to success. However, TDM is a discipline that lacks resource-based benchmarks or standards for municipalities, and it tends to struggle to compete with the staffing needs of more established municipal services.

ROLE OF A TDM COORDINATOR. It is increasingly common for municipalities to hire a single “TDM coordinator” to plan and deliver TDM initiatives. This person may be located in one of many municipal departments—usually in planning or engineering, but possibly in transit, health, social services, or elsewhere. He or she typically works closely with colleagues in all of these areas, playing a central coordinating and facilitating role with planning, monitoring and reporting responsibilities.

Over time, individual TDM coordinators can build momentum and achieve some success, but they cannot single-handedly influence the travel decisions of tens or hundreds of thousands of other people. It is simply not realistic to expect one or two practitioners to make significant



progress in overcoming the transportation challenges facing a typical medium or large municipality. A shortage of staff cannot be counterbalanced with budgets for contractors and consultants, because of the time and energy required to responsibly manage those expenditures.

NUMBER OF STAFF. So, while it is relatively easy to say that one or two TDM practitioners are needed to enable any kind of effective delivery, it is more difficult to identify an optimal number. In fact, no Canadian community has reached an optimal level of TDM service delivery—and most communities with approved TDM policies and plans are far short of the staffing levels they would need to deliver them (even the Greater Toronto and Hamilton Area, where governments and their partners employ at least 30 full-time TDM practitioners in 2010, could make effective use of many more).

Any community of at least 20,000 people that wishes to develop a TDM program could benefit from having at least one full-time TDM staff person. Based on Canadian experience, it is suggested that a minimum of one full-time TDM practitioner for every 100,000 to 200,000 residents would enable a meaningful impact on larger communities. These practitioners may be distributed among government agencies, or employed by NGOs that deliver services on behalf of a municipality.

As noted above, the optimal staffing level for TDM programs will depend on the nature and desired outcomes of the services being delivered. An analogous issue is illness prevention—i.e. how many people should be working to prevent illness in a community? Clearly, there is no straightforward answer—it will depend on the illnesses being targeted, the nature of the audiences, and the measures being delivered. For TDM programs, a prudent approach is to start small but continually build human resources over time, as they are needed to deliver promising initiatives.

SKILLS TO LOOK FOR WHEN HIRING. TDM is a demanding discipline. Practitioners do not require transportation experience, but they do need an interest in transportation issues and a willingness to learn more about them. The following attributes would be very helpful to any person playing a TDM coordination role:

- *municipal experience*—how decisions are made, how to navigate a bureaucracy
- *business experience*—what interests the private sector, how decisions are made
- *marketing and customer service experience*—understanding consumer behaviour, focusing on client needs
- *volunteer experience*—what motivates volunteers, how to build and leverage capacity
- *communication skills*—speaking with energy, writing clearly and accessibly
- *quantitative skills*—understanding and expressing travel data, creating spreadsheets and charts
- *people skills*—listening, enthusiasm for building relationships, desire to help others
- *pragmatism*—ability to recognize and pursue what works, good judgment in weighing practice versus theory
- *drive and determination*—love of challenge, willingness to take risks, ability to learn from failure
- *passion*—for cities, for people, for change

It is worth noting that these skills are not linked with any one academic curriculum or professional certification. Job applicants are best judged on individual merit and experience.

IMPROVING SKILLS. Because TDM practitioners are unlikely to have all the skills listed above, ongoing professional development opportunities are vital. Training in areas including leadership skills, project management, media relations and public speaking is particularly valuable.

Practitioners also need to keep track of how TDM is working and evolving in other Canadian communities and internationally. Conferences, webinars and workshops allow them to meet and learn directly from their peers, and to build relationships that enable ongoing communication and advice.

Helpful networking resources

ACT Canada is the country's only national organization devoted to sustainable mobility (see illustration below), and has focused on TDM for almost a decade. It holds annual conferences featuring international speakers and the results of Canadian experiences. See www.actcanada.com for more information.



The *TRANSP-TDM listserv* is operated by the Center for Urban Transportation Research at the University of South Florida. It is an active forum for information exchange and maintains an extensive archive with years of postings. See www.cutr.usf.edu/tdm for more information.

3.1.4 Funding

FUNDING AMOUNTS. Having adequate TDM staff and supportive internal partners will help a municipality to achieve some success, even with limited financial resources. Creative practitioners and their partners have been known to fund TDM measures by drawing on municipal budgets for public transit, active transportation, traffic

management, health, recreation and environmental management. However, it is likely that transparency and accountability will eventually require the availability of TDM operating funds.

As with staffing, TDM funding can grow over time as plans are implemented and services expand. However, Canadian experience indicates that a rough annual budget of \$0.50 or more per capita (excluding staff salaries) would allow delivery of basic TDM functions. Again, this amount will not enable substantial success against real challenges—but it does represent a starting point.

FUNDING SOURCES. While a few regional transportation authorities are funded by fuel taxes or vehicle registration fees, most of Canada's municipalities rely on property taxes to fund public services such as TDM programs. Several other sources of TDM funding may be available, depending on local circumstances:

- *Fee-for-service arrangements* for some TDM programs, such as assistance to employers, can generate revenues that offset some costs. Experience has shown that only larger metropolitan areas are likely to offer market conditions that support such arrangements.
- *Partners* including school boards, business associations, festival groups and event sponsors may contribute financially to TDM initiatives that benefit them.
- *Development charges*, which are levied to pay for growth-related capital projects (e.g. new roads, libraries and community centres). Depending on legislative and regulatory frameworks, development charges can raise revenues for TDM programs that are expected to reduce the capital cost impacts of new development. As an example, the Town of Markham, Ontario funds its entire TDM program through the community-wide development charges assessed on new homes and commercial developments.
- *Parking fees* from off-street municipal lots and on-street spaces are often returned to general municipal revenues, but a portion of them



could be redirected to TDM programs. As an example, in Ontario the City of Mississauga’s parking program funds both a municipal TDM staff position and the Smart Commute Mississauga organization. This idea of using parking fees paid by drivers to improve transportation options for everyone can be politically palatable (it helped win public support for the congestion charging scheme in London, England) and also provides a degree of funding security.

- *Transit fare revenues* support transit operations, including conventional marketing activities. A portion of fare revenues could be used to support TDM programs that contribute to the achievement of transit ridership objectives.

- *Philanthropic foundations* may be willing to support TDM projects that are focused on improving a community’s social, public health or environmental outcomes.
- *Provincial and/or federal government programs* may offer support for projects related to sustainable transportation, health or the environment, but the specifics of such programs vary by jurisdiction.
- *The Green Municipal Fund* of the Federation of Canadian Municipalities offers support for a variety of projects, including grants for up to 50% of the cost of sustainable transportation feasibility studies and field tests (maximum \$350,000). See www.gmf.fcm.ca for more information.

3.2 Working collaboratively

As mentioned in Section 1.2.3, working with others is a key to TDM success—it can maximize resources, increase reach to key audiences, and propagate social and organizational change. For this reason, most municipal TDM staff act as the “hub” in a wheel with many spokes—they wield influence, rather than control. It is worth noting that this culture of collaboration may be more natural to outreach-focused community planning, social service and public health departments than it is to more technical engineering groups.

3.2.1 Internal coordination

STEERING COMMITTEE. Coordination of TDM initiatives within a municipality is essential because of the many linkages among services. Formation of a steering or advisory committee can help stakeholders to stay informed of plans and actions, and to maximize synergies while minimizing conflicts.

Such a committee may include representatives of engineering, planning, health, recreation, environment, communications, social and economic development services. Local transit

and parking operations are particularly critical members. Regular meetings can help cement personal relationships and encourage informal discussion in a way that email and phone conversations cannot. By emphasizing the cooperative nature of TDM programs, the committee can also become a forum for sharing staff and financial resources.

STAKEHOLDER EDUCATION. More broadly speaking, internal education is advisable to build awareness of the TDM program, its methods and objectives among municipal staff, managers and elected officials. It can prevent the inadvertent introduction of new obstacles to TDM measures. Municipal staff in diverse departments, and particularly those responsible for planning and engineering, should understand sustainable transportation and TDM sufficiently to know how they can contribute to the solution, rather than be part of the problem. One path to improving their knowledge is through participation in webinars or other educational opportunities provided by outside organizations.

Municipal staff who have a close relationship to TDM services can benefit from extra learning or training opportunities. For example, development approvals staff require a clear understanding of the features that make new development TDM-supportive, and of the importance of working with developers to integrate those features. Tools that can help development approvals officers fulfill their role include checklists, guidelines and constructive critiques of previously approved developments that highlight both positive and negative features.

3.2.2 External partnerships

As discussed in Section 1.2.3, municipalities need institutions, businesses and community organizations to be actively involved in their TDM programs. In each case, these relationships are based on common interests and shared objectives. Many of the TDM measures identified in Appendix A exhibit the need for partnerships (ranging from informal collaboration to formal agreements) with workplaces, schools, post-secondary institutions and community groups.

BENEFITS. The benefits of partnerships include:

- *gaining support*—by demonstrating the broad interest and involvement that can convince decision makers of a TDM program’s value
- *leveraging resources*—by motivating external partners to invest in areas that interest them (e.g. investment by an employer in its own workplace, by a school board in its schools, or by an environmental group in TDM programs that raise awareness of climate change)
- *extending reach*—by opening up service delivery channels to access new markets, such as through a partner’s website, newsletters, meetings or events
- *enhancing credibility*—by ensuring that TDM messages come from independent sources, as well as from government
- *reducing risk*—by reducing the overall risks to the program of any one partner withdrawing its resources or participation

FOSTERING PARTNERSHIPS. In addition to specific project opportunities, there are other ways of building relationships with prospective partners. These include the creation of an external advisory committee, council or round table that engages key potential partners and involves them in shaping the municipality’s TDM program. They also include presentations to service clubs or chambers of commerce, or special events such as an annual conference of TDM stakeholders to update them on municipal activities and solicit suggestions or assistance.

3.2.3 Alternative service delivery

Contracting with private or non-profit organizations to deliver specific TDM services can be a realistic option for municipalities. Transit authorities, where they are separate from the municipality, are another alternative.

SERVICE TYPES. External providers can deliver a number of services such as special event promotion and management (e.g. Bike to Work Weeks), school outreach (e.g. Active and Safe Routes to School programs, youth engagement and skills training), employer outreach (e.g. commuter surveys and other travel planning assistance, employee engagement, transportation fairs and other workplace events), and cycling skills courses available to the general public, workplaces or other targeted audiences.

BENEFITS. External service providers can offer several potential benefits:

- They can offer pre-existing relationships with key stakeholders (for example, a chamber of commerce might effectively deliver TDM services to employers). When dealing with those stakeholders, they do not bring with them the weight of municipal government (which could be either positive or negative depending on the stakeholder, service provider and government in question).
- They can have lower operating costs for accommodations, salaries and benefits. They can also leverage revenues from third parties that may be unavailable to municipal



governments (e.g. from private-sector sponsors or senior government programs).

- They have less challenging approval processes for communications and purchasing. They also have less burdensome staff hiring processes, and greater flexibility in hiring term or part-time workers.
- They can operate without the disruption of labour stoppages, councillor inquiries, and (with longer-term contracts) election years and annual budget uncertainties.

KEY ISSUES. Following good contracting procedure, TDM service agreements must be based on a clearly defined scope, deliverables, timelines, quality expectations and performance measurement criteria. It is also important to define communication protocols early in the process: Should messages to clients and the general public be seen as coming from the service provider and/or the municipality? Should branded programs carry the identity of the service provider and/or the local government? Who should handle media inquiries?

It is important to emphasize that TDM programs cannot be completely outsourced—municipalities must preserve critical policy, leadership and program development functions. Outsourcing arrangements also need to avoid creating a dependency on any single service provider, which can lead to future terms and conditions that are less than competitive.

TRANSPORTATION MANAGEMENT ASSOCIATIONS (TMAs). TMAs are one way to offer TDM services to employers. They can take different forms:

- The Greater Toronto and Hamilton Area has a network of eleven local Smart Commute organizations in 2010—some are independent non-profit organizations, some are programs delivered by local chambers of commerce or boards of trade (which can leverage

established employer relationships), and others are municipal government services. All rely primarily on government funding to stay in operation (see www.smartcommute.ca for more information).

- In Quebec, several *Centres de gestion des déplacements* (CGDs, the French equivalent of TMAs) exist in the province’s largest cities. All are non-profit organizations, and rely significantly on government subsidies received by their clients (for more information see www.acgdq.com).
- In Vancouver, groups of employers in shared geographic areas work together under the banner of a TMA, with help from TransLink but without any formal organizational basis.

TMAs have the potential to be dynamic, efficient organizations. Like Quebec’s CGDs, they can generate revenue by providing valued services to workplaces—however, they are very unlikely to be financially independent. In Quebec, CGD revenues from employer fees are largely subsidized by the provincial government; in Toronto, the rates of cost-recovery by TMAs are less than 20%. TMAs can also be susceptible to poor performance if they lack the motivation of close government ties or funding conditions tied to outcomes. In short, the viability of independent TMAs in Canada is far from proven.

A more practical and controllable approach to alternative service delivery for employer-facing programs might be a straightforward service contract with a local non-profit organization. Another option would be to retain a for-profit business to deliver services in the manner of a TMA using a pay-for-performance contract. This model is being applied by Smart Commute Brampton-Caledon in Ontario, which has hired consultants to deliver services, but is otherwise untested in Canada. It is more common in the United States.

3.3 Engaging audiences

3.3.1 Messaging

BENEFITS. TDM programs are a chance for municipalities to talk with residents about options for getting around, and how to take advantage of them. The messages they deliver can support behaviour change by shifting the competitive position of different travel choices, and by “detaching” the desire for personal mobility from the assumption of car use. The culture of many communities holds that driving is the natural travel choice for most people, and that transit, carpooling, cycling and walking are most appropriate for low-income or athletic individuals. To change this culture, those communities must work to make the public image of sustainable travel choices more mainstream and attractive, with greater perceived benefits for users (e.g. fitness, cost savings, time savings) and the general public (e.g. congestion reduction, pollution reduction, lower public expenditures).

KEY ISSUES. It is important to not oversell sustainable travel choices by claiming benefits that are unlikely to be realized. Equally, it is important to not promote choices that people feel are remote or unavailable—for instance, promoting cycling in a neighbourhood where on-road safety is an acknowledged issue, or where promised cycling facility improvements are yet to be built.

It is also advisable to avoid positioning car use as “undesirable.” Many people reasonably feel that driving is their only choice to meet day-to-day obligations. TDM messages that criticize their travel decisions may only create hostility. Instead, messages about how people can drive efficiently, when they must drive, are both inclusive and constructive.

3.3.2 Identity and branding

BENEFITS. A memorable identity can help a TDM program build a long-term relationship with residents. At their best, program identities become brands—and successful brands enjoy customer confidence and loyalty, as shown by commercial examples like Apple Computer or Walmart. However, strong brands are based on consistent, positive customer experiences—that is, they require long-term commitment and they are earned rather than manufactured.

TDM program identities can help consumers and program partners to “connect the dots” by linking different products and services together (e.g. carpool programs, cycling skills courses, telework training, discounted transit pass programs). They position sustainable travel options as a mutually supportive suite of choices that offer more flexibility and convenience as a group than they do individually.

KEY ISSUES. One issue to tackle when developing a TDM program identity is to determine how it relates to other sustainable transportation services and programs that may have their own identities, such as public transit and carpool ridesharing services. Overlapping or conflicting identities can confuse individuals who are looking for information or assistance. Another issue to consider is how a TDM identity relates to the identity of its parent organization. Government agencies typically have protocols that limit the scope and use of program identities; only in occasional cases (such as Metrolinx’s Smart Commute and the Central Okanagan’s i-Go!) will a TDM program identity likely gain its own meaning independent of its parent organization(s).

1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

Local or regional TDM program identities in Canada

In Vancouver, TransLink’s TravelSmart program began as an individualized marketing pilot project and has now become the organization’s umbrella identity for promoting multimodal travel options (see www.travelsmart.ca for more information).



The City of Ottawa’s TravelWise program identity has been in use for a decade, and the name and logo have been shared with the Region of Waterloo (see www.ottawa.ca/travelwise and www.region.waterloo.on.ca/travelwise for more information).



The i-Go! program is supported by the City of Kelowna, West Kelowna and Westbank First Nation (see www.i-go.ca for more information).



In the Greater Toronto and Hamilton Area, the Smart Commute program identity developed by Metrolinx encompasses eleven local Smart Commute organizations that deliver TDM services (see www.smartcommute.ca for more information).



In the Montréal metropolitan area, the Agence métropolitaine de transport (AMT) has created the allégo program identity as an umbrella for its TDM services (see www.allego.amt.qc.ca for more information).



3.3.3 Internet use

BENEFITS. It is essential for TDM programs to have a strong Internet presence. The Web, email and social media greatly reduce the cost of program communications, increase convenience for users, and create new marketing channels for reach key audiences.

KEY ISSUES: WEB SITES. TDM programs commonly offer a central Web site as a clearinghouse for information on individual travel choices and TDM program initiatives. This site is usually located within a local or regional government’s Web site, unless an independent program identity has been established. An accessible and effective Web site can substantially reduce the amount of time that TDM staff members must spend answering questions or mailing out flyers and application forms. Web-based information technology also allows a Web site to act as an automated hub for sending out newsletters and other communications to interested individuals.

TDM program Web sites can evolve into portals that offer features such as multimodal travel planners, live traffic cameras, weather and collision reports, road construction notices, efficient driving tips, and links to air, rail and intercity bus carriers. Even though broadening a Web site’s scope in this way can dilute the core TDM message, there is definite public benefit in centralizing travel information. There is also a valuable opportunity to greatly increase the number of people who are exposed to the TDM program’s messages and services when they visit the site for other reasons such as traffic reports.

KEY ISSUES: SOCIAL MEDIA. One of the keys to effective marketing is to place products where people happen to be looking. Today, that means social media—the most important of which are Facebook, Twitter and YouTube (although the pace of change is dramatic).

TDM program Web sites in Canada

www.travelsmart.ca (TransLink, Metro Vancouver, BC)

www.i-go.ca (Kelowna, BC)

www.regionofwaterloo.ca/travelwise (Region of Waterloo, ON)

www.guelph.ca/tdm (Guelph, ON)

www.smartcommute.ca (Metrolinx, Greater Toronto and Hamilton Area, ON; includes links to the Web sites of local Smart Commute organizations)

www.peterboroughmoves.com (Peterborough, ON)

www.ottawa.ca/travelwise (Ottawa, ON)

www.voyagezfute.ca, www.mobiligo.ca, www.destl.ca, (Greater Montréal, QC)

www.virevert.ca (follow link to Roulons VERT; Trois-Rivières, QC)

www.mobili-t.com (Quebec City, QC)

www.cadus.ca (Saguenay, QC)

www.halifax.ca/tdm (Halifax Regional Municipality, NS)

Example of social media applications

The Smart Commute program of Metrolinx makes broad use of social media in its communications initiatives, including Facebook, Twitter, YouTube, LinkedIn, SlideShare and WordPress. See www.smartcommute.ca for more information.



3.3.4 Special events

BENEFITS. Special events serve many purposes within a TDM program. First, they validate and build awareness of sustainable travel choices by promoting them through media coverage, political endorsements and celebrity involvement. By encouraging visible displays of sustainable travel (e.g. a temporary increase in cyclist volumes) they shift social norms and build public acceptance of those options. They encourage people to try a new way of getting around, even for just one day, and provide positive reinforcement for people who already make regular use of sustainable travel options. Finally, they attract sponsors and partners who may then become more involved in other aspects of a TDM program.

KEY ISSUES. TDM practitioners can easily underestimate the resources required to successfully organize, promote and deliver a special event. Engaging individuals, business, community organizations and media is a time- and energy-consuming activity. When in doubt, a good strategy is to launch a new event by setting manageable objectives for participation, possibly by limiting the initial scope. Delivering a small but successful event is a good way to build momentum for subsequent years.

TDM-related special events across Canada

Many municipalities and non-governmental organizations conduct or sponsor special events that are consistent with TDM objectives, including:

- Bike (and Bike to Work) Day, Week or Month
- Commuter Challenge events
- International Car Free Day and In Town Without My Car Day
- International Walk to School Day or Month
- RideShare Week

Variations on these events are too numerous to list, and change frequently. Readers are encouraged to search the Internet for more information.

1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

3.3.5 Advertising

BENEFITS. The publicity gained through advertising can play several important roles in a TDM program. First, it can *build understanding* of key issues and help influence attitudes, such as through an active transportation messaging campaign using bus boards, shelter ads or community newspapers. It can *raise awareness of opportunities to participate* in TDM initiatives, such as using local business publications to reach employers. It can also *raise awareness about special events*, such as promotion of Bike to Work Week through radio spots, or of employer recognition awards through print ads in business tabloids. Finally, it can *provide clear and timely public information*, such as notices of new services, application deadlines, or public review periods for reports.

KEY ISSUES. For community-oriented information, weekly or monthly community papers can offer greater effectiveness and value than daily newspapers, particularly in larger markets. Electronic media can also be useful in reaching large numbers of people with a focused message. Although television ads are expensive, radio spots can be more economical or even virtually cost-free if they are positioned as public service announcements.

3.3.6 Recognition

BENEFITS. Positive reinforcement is helpful in encouraging and reinforcing any form of behaviour change. Public recognition of stakeholder efforts and successes is a valuable component of any TDM program.

KEY ISSUES: AWARDS. The TDM-related awards used in Canadian communities include *employer awards* that recognize workplaces (and the people within them) that have made substantial travel planning efforts, and *cycling-friendly business awards* that recognize workplaces or merchants that have improved and promoted bicycle commuting and/or made cycling more attractive for customers. They also include *individual awards* for citizens who have played

significant leadership roles in TDM programs or the pursuit of sustainable transportation, and *special event awards* that recognize organizations achieving high rates of participation among employee or student populations.

KEY ISSUES: OTHER FORMS OF RECOGNITION. Of course, recognition need not take the form of awards. It can also include public identification (e.g. through newspaper ads or a municipal Web site) of workplace or school partners, advisory committee members, special event participants or others who have supported TDM initiatives. Holding an event dedicated to recognition gives elected officials and other champions an opportunity to enhance their visibility on the issue, and for TDM stakeholders to meet each other and celebrate their successes together.

Examples of TDM program awards

The Smart Commute program of Metrolinx gives out several Employer of the Year awards, and a Champion Award for outstanding contributions by other individuals or organizations.

The City of Ottawa's Bruce Timmermans Cycling Awards recognize annual contributions by individuals and organizations. They also offer cycling-friendly designations to business, organizations and other destinations that offer facilities and services to make cycling more attractive.



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3.3.7 Reporting on program results

BENEFITS. Regular publication of reports on the status of the TDM program and individual initiatives, including measured results and individual stories or testimonials, serves a number of purposes. Reporting is part of program accountability and building the case for continued investment; it offers a chance to recognize contributors; it is an opportunity to validate TDM concepts and build understanding of their potential among the general public; and it can leverage media coverage to provide broad program exposure.

KEY ISSUES. As discussed in Section 2.4, a TDM program’s performance measurement activities will provide much of the key material for program reports. This information is vital, as it can help justify the continuation or expansion of program resources. However, many Canadian TDM programs have struggled with program reporting due to difficulties with performance measurement, often springing from a lack of technical knowledge and inadequate staff and funds to undertake needed surveys and observations. Remaining aware of this pitfall and seeking ways around it will increase the odds that a TDM program report will contain tangible evidence of success.

3.3.8 Media relations

BENEFITS. Media attention for TDM programs and initiatives can be much more than free publicity. It can validate the existence of a TDM program, and strengthen social norms around sustainable transportation choices. Positive “buzz” is also noted by elected officials and community partners, who may see an opportunity to lend their support and share the limelight.

KEY ISSUES: CHALLENGES. Fostering positive media relations around TDM programs can be a challenge. While media are generally supportive of the notions of outcomes like congestion or pollution reduction, reporters and editors can find more news value in critiques of government initiatives as inadequate or wasteful. The longer-term nature of TDM initiatives distinguishes them from more conventional transportation projects and their “ribbon cutting” opportunities. Their real news value lies not in a top-down narrative, but in the stories of individuals, businesses and institutions that benefit from them.

KEY ISSUES: SUGGESTED APPROACHES.

Promotional measures around special events or new services can identify “good news” stories for media use. Actions by residents, businesses and schools (not governments) offer human interest and encourage stories about outcomes rather than process. An added benefit of such stories is that they support the goal of shifting social norms by publicizing people who have changed their travel behaviour and benefited by it.

Because many TDM activities focus on the participation of local individuals, schools and businesses, community newspapers can make strong allies. It can help to have program partners make their own media contacts; this reduces municipal influence over the resulting story, but can make the story itself more attractive.

Generally, a successful media relations program must be based on more than a defensive approach of identifying sensitive issues and preparing question responses. It must proactively educate key editors and reporters about the scope of the challenge and the response, and provide media-friendly story opportunities. It is wise to respond quickly to media requests, and to have people ready to discuss their stories. On the whole, it is far better to engender a collegial relationship rather than to have an adversarial one develop by chance.

3.4 Summary

Delivering TDM programs		
BUILDING CAPACITY (SECTION 3.1)		
EXECUTIVE LEADERSHIP (SECTION 3.1.1)	Identify likely TDM champions and their core concerns, and consider how they might be motivated to be more supportive	Notes:
POLICY SUPPORT (SECTION 3.1.2)	Review existing municipal policy documents to identify how they support the TDM program, or how they might be improved	Notes:
STAFFING (SECTION 3.1.3)	Assign TDM accountability to a staff group or individual	Notes:
	Designate or hire an appropriate number of skilled staff members to plan, coordinate, implement and monitor TDM initiatives	Notes:
	Provide professional development opportunities to TDM practitioners	Notes:
FUNDING (SECTION 3.1.4)	Explore potential TDM funding sources, and identify and assign adequate operating funds	Notes:
WORKING COLLABORATIVELY (SECTION 3.2)		
INTERNAL COORDINATION (SECTION 3.2.1)	Establish a steering committee or other forum for ongoing coordination among municipal stakeholders	Notes:
	Consider opportunities to educate staff, managers and elected officials about how they can support the TDM program	Notes:
EXTERNAL PARTNERSHIPS (SECTION 3.2.2)	Identify and pursue promising partnerships with outside institutions, businesses and community organizations	Notes:
ALTERNATIVE SERVICE DELIVERY (SECTION 3.2.3)	Consider opportunities to work with external service providers in delivering elements of the TDM program, and how to maximize the benefits of doing so while managing the risks	Notes:

Delivering TDM programs

ENGAGING AUDIENCES (SECTION 3.3)

MESSAGING (SECTION 3.3.1)	Identify the key messages to be delivered through TDM initiatives	Notes:
IDENTITY AND BRANDING (SECTION 3.3.2)	Consider the need for a TDM program identity, and any related opportunities and constraints	Notes:
INTERNET USE (SECTION 3.3.3)	Capitalize on the power of the Internet and social media to support TDM initiatives	Notes:
SPECIAL EVENTS (SECTION 3.3.4)	Consider how the TDM program can benefit by coordinating or supporting special events	Notes:
ADVERTISING (SECTION 3.3.5)	Consider the role and most effective forms of advertising in TDM initiatives	Notes:
RECOGNITION (SECTION 3.3.6)	Consider how the TDM program can benefit by recognizing the contributions of stakeholders and participants	Notes:
REPORTING ON PROGRAM RESULTS (SECTION 3.3.7)	Establish a framework for reporting on TDM program activities and results	Notes:
MEDIA RELATIONS (SECTION 3.3.8)	Identify an approach to managing media relations in a way that boosts the benefits of coverage while minimizing risks	Notes:

Appendix A: TDM measures

This Appendix provides a concise scan of measures that could be delivered through a community TDM program. These are presented in three sections:

- *modal measures* that make sustainable travel options more competitive to driving alone, by improving their profile and making them more accessible, comfortable, convenient, affordable or safe
- *outreach measures* that allow municipal governments to reach out and engage organizations and individuals, both to create delivery channels for municipal measures and to motivate independent action by partners
- *leadership measures* that municipalities can undertake within their own operations to further TDM objectives directly, and to act as role models for other organizations

Consistent with the discussion in Section 1 of this guide, most of these measures in this Appendix address the social and economic factors behind the travel choices that individuals make. However, some measures that target physical factors are included because they have strong links to the delivery of other TDM measures. For example, physical improvements to bicycle parking are included because they are often delivered as part of workplace or school travel plans, or within municipal leadership initiatives. Otherwise, this Appendix does not address major transportation infrastructure or land use measures such as public transit services or facilities, bicycle lanes or trails, high-occupancy vehicle lanes on freeways or arterial roads, or transit-oriented development.

A.1 Modal measures: Improving travel options

A.1.1 Active transportation

PROMOTE A CULTURE OF ACTIVE TRANSPORTATION

- Messaging campaigns to advance active transportation’s competitive position
- Special events to promote walking and/or cycling at a community-wide or neighbourhood scale
- Awards to recognize corporate, community or individual contributions to active transportation

INCREASE TRIAL OF ACTIVE TRANSPORTATION OPTIONS

- Special events to promote walking and/or cycling at a community-wide or neighbourhood scale
- “Open street” events (e.g. ciclovias) to encourage fun, family-oriented trial of active transportation
- Promotion of bike sharing services (e.g. BIXI service in Montréal, QC)

IMPROVE CYCLIST CONVENIENCE, CONFIDENCE AND SAFETY

- Maps that illustrate active transportation facilities and recommended routes
- Trip planning (online or in-person) to help individuals plan appropriate routes
- Wayfinding signage to help active transportation users find their way to major destinations
- Cycling skills courses for adults, youth and children, provided at various levels of detail and in various locations

INTEGRATE WALKING, CYCLING AND TRANSIT

- Minor enhancements to walking routes that link key destinations to transit stops and stations
- Bike parking at transit stops and stations
- Bike racks on buses
- Bike-friendly policies and storage areas on rail transit vehicles

Helpful resource

Transport Canada's *Bike Sharing Guide* helps planners and decision makers determine if public bicycle sharing is viable in their community and, if so, how to design, implement, and operate a successful system. Material in the guide is drawn primarily from European experiences and has been assessed for relevance to the Canadian context. See www.tc.gc.ca/urban for more information.



MAKE BICYCLING PARKING MORE VISIBLE, SECURE AND CONVENIENT

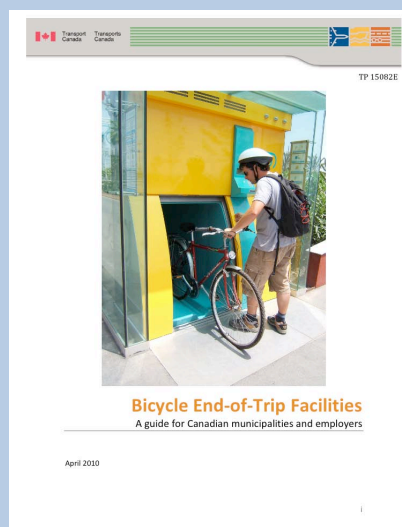
- Relocated, expanded, signed and better lit bike racks in public locations and at major destinations
- Guidelines and assistance for workplaces and other destinations in purchasing and locating bike racks
- Provision of discounted bike racks to institutions and workplaces, or free bike racks to be returned or paid for after a trial period

ENCOURAGE BETTER SHOWER AND CHANGE FACILITIES AT DESTINATIONS

- Work with employers, property managers and institutions to improve employee shower and change facilities

Helpful resource

Transport Canada's *Bicycle End-of-Trip Facilities: A Guide for Canadian Municipalities and Employers* can help municipal agencies and employers create attractive bicycle parking and related facilities to encourage bicycle use. The guide provides guidance on how to determine where, how much, and what type of bicycle parking and related facilities to provide, and how to design them. See www.tc.gc.ca/urban for more information.



1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

A.1.2 Public transit

PROMOTE A TRANSIT CULTURE

- Messaging campaigns to advance transit's competitive position
- Inclusion of transit directions in notices for public events (e.g. open houses, festivals)

MAKE TRANSIT EASIER TO USE

- Trip planning (online or in-person) to help individuals plan appropriate transit itineraries
- Provision of transit information kiosks at key destinations
- Real-time transit service information displays at key destinations, online and via wireless devices
- Online "how-to" video tutorials for new transit users
- Outreach communications and presentations (e.g. immigration centres, social service locations, seniors centres, secondary schools, workplaces)

MAKE TRANSIT FARE PAYMENT MORE CONVENIENT AND AFFORDABLE

- Employer transit pass programs via discounted payroll deduction or reselling through workplaces
- Universal transit pass (U-pass) programs at post-secondary institutions
- Public transit pass programs (e.g. discounted annual subscription passes)
- Electronic fare cards, possibly integrated with other transit systems, parking meters, libraries, recreation centres and other government services

ENCOURAGE TRIAL

- Promote transit use to reach special events (e.g. festivals, concerts, sporting events) by offering free or discounted transit fares (e.g. event ticket acts as game-day transit pass)

A.1.3 Ridesharing

ENABLE RIDEMATCHING

- Online ridematching services for the public, with special features for employees of participating workplaces

MAKE PASSENGER PICK-UP AND DROP-OFF MORE CONVENIENT

- Public carpool lots on community periphery, and/or arrangements with property owners (e.g. shopping malls) to permit on-site carpool parking

PROMOTE TRIAL

- Special events to promote carpooling

PROVIDE INCENTIVES

- Preferential carpool parking spaces at municipal facilities and public events
- Discounted parking fees for carpools at public events

VANPOOLING

- Promotion of public vanpooling services where they exist
- Promotion of corporate vanpooling as an initiative that major workplaces can offer
- Assistance with corporate vanpooling feasibility studies and plans in workplaces

A.1.4 Carsharing

SUPPORT CARSHARE OPERATIONS

- Lease of parking stalls to carshare services in public parking lots or on-street, where practical
- Favourable treatment of proposals to reduce on-site parking in new developments where carshare vehicles are provided

CROSS-PROMOTE WITH MUNICIPAL SERVICES

- Discounted transit passes for individual members of carshare organizations
- Discounted bike sharing memberships for individual members of carshare organizations

A.1.5 Telework

BUILD AWARENESS AND UNDERSTANDING

- Telework promotion and education aimed at governmental, institutional and corporate workplaces
- Assistance with corporate telework feasibility studies and plans in workplaces
- Special events to promote telework

A.1.6 Parking

INCREASE THE COST OF PARKING

- Monthly parking prices in areas with quality transit service no lower than the cost of a transit pass
- Daily, weekly and monthly rates in municipal parking lots that are in line with private parking operators
- Elimination of weekly or monthly discounts in municipal parking lots

A.1.7 Automobile use

BUILD EDUCATION AND AWARENESS

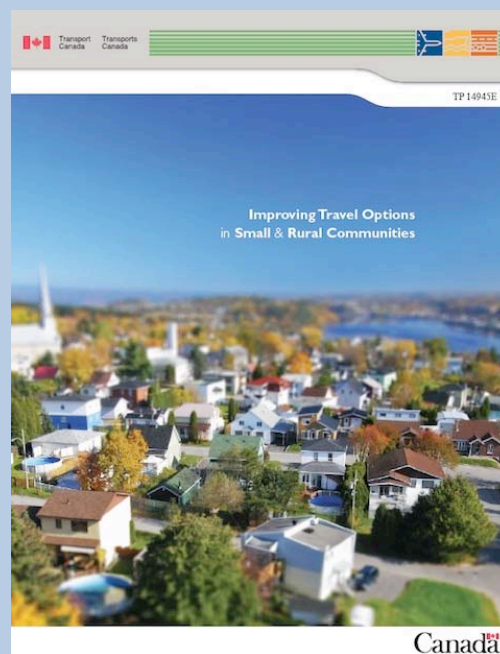
- Special events to promote alternatives to driving
- Online emission and driving cost calculators to build awareness of the benefits of not driving
- Workshops on fuel-efficient driving at neighbourhood destinations (e.g. libraries, community centres) and in workplaces

INCREASE THE COSTS OF AUTOMOBILE USE

- Vehicle registration levies, parking levies, road use charges—which generally face substantial legislative, political, public acceptance, social equity and technical challenges

Helpful resource

Transport Canada's *Improving Travel Options in Small and Rural Communities* guide can help practitioners—engineers, planners, health professionals, economic development officials and others—to improve travel options for residents of small and rural communities. This includes a range of actions that make personal transportation activities more sustainable—encouraging drivers to operate their cars more efficiently, or to leave their cars at home and walk, cycle, take transit or carpool instead. See www.tc.gc.ca/urban for more information.



1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

A.2 Outreach measures: Reaching key audiences

A.2.1 Individuals and households

BUILD AWARENESS AND UNDERSTANDING

- Messaging campaigns to advance the competitive position of sustainable travel options
- Development of a strong central TDM program brand
- TDM program Web site with multimodal travel information
- Social media campaigns to attract and retain key audiences
- Cross-promotion of TDM measures and other programs delivered by the municipality or its partners in the fields of emissions reduction, energy conservation, waste reduction, water conservation and public health

PROVIDE CUSTOMIZED ADVICE AND INCENTIVES

- Individualized marketing programs (also called residential travel plans) that offer customized information and advice on sustainable travel choices to interested individuals and families

A.2.2 Workplaces

BUILD PARTNERSHIPS

- Networking with business associations, property managers and corporate executives
- TMA formation to reach out to employers and employees in target areas
- Professional development opportunities (e.g. workplace travel planning workshops) for TDM contacts in local workplaces

PROVIDE VALUED SERVICES

- Employer transit pass programs
- Ridematching programs with special features for employees of participating workplaces
- Emergency ride home (ERH) subscription program, or assistance and advice in establishing workplace ERH programs

- Transportation fairs offering multimodal information and services at major workplaces
- Cycling skills courses at workplaces
- Provision of discounted or “try-then-buy” bike racks to institutions and workplaces
- Special events to promote sustainable commuting and challenges among workplaces

PROVIDE WORKPLACE TRAVEL PLAN ADVICE AND ASSISTANCE

- Workplace scans to assess opportunities and challenges related to sustainable commuting
- Assistance with development of travel plans
- Assistance with commuter surveys to assess baseline activities and attitudes, and to measure travel plan impacts

Helpful resource

Transport Canada's *Workplace Travel Plans: Guidance for Canadian Employers* is written for employers interested in helping their employees find more efficient and sustainable ways of commuting to work. It helps employers to define their own goals and objectives, then to develop a tailored travel plan that will give them a positive return on their investment.



A.2.3 Post-secondary institutions

BUILD PARTNERSHIPS

- Networking with administrators
- Professional development opportunities (e.g. travel planning workshops) for TDM contacts in post-secondary institutions

PROVIDE VALUED SERVICES

- Universal transit pass (U-pass) programs for students
- Employer transit pass programs for staff and faculty
- Ridematching programs
- Emergency ride home (ERH) subscription program, or assistance and advice in establishing workplace ERH programs
- Transportation fairs offering multimodal information and services
- Cycling skills courses
- Assistance and advice with bike parking improvements
- Special events to promote sustainable travel options

PROVIDE TRAVEL PLANNING ADVICE AND ASSISTANCE

- Campus scans to assess opportunities and challenges related to sustainable commuting
- Assistance with development of travel plans
- Assistance with commuter surveys to assess baseline activities and attitudes, and to measure travel plan impacts

Helpful resource

The Canadian Urban Transit Association's *U-Pass Toolkit: The Complete Guide to Universal Transit Pass Programs at Canadian Colleges and Universities* is a comprehensive guide to implementing universal transit pass programs. It is available from CUTA upon request. See www.cutaactu.ca for more information.



A.2.4 Schools

BUILD PARTNERSHIPS

- Communications and meetings with school board administrators, school principals and staff
- Professional development opportunities (e.g. school travel planning workshops) for TDM contacts in schools

PROVIDE VALUED SERVICES

- Traffic safety audits and improvements in the vicinity of schools
- Crossing guard programs
- Cycling skills courses for school staff and students
- Bike parking improvements
- Special events to promote sustainable commuting by school staff and students
- Curriculum resources

1	UNDERSTANDING	TDM MEASURES
2	PLANNING	
3	DELIVERING	

PROVIDE TRAVEL PLANNING ADVICE AND ASSISTANCE

- School scans to assess opportunities and challenges related to sustainable travel
- Assistance with development of travel plans
- Assistance with travel surveys to assess baseline activities and attitudes, and to measure school travel plan impacts

A.2.5 Other audiences

NEIGHBOURHOOD BUSINESS GROUPS

- Promotion of “shop locally” campaigns

FESTIVALS

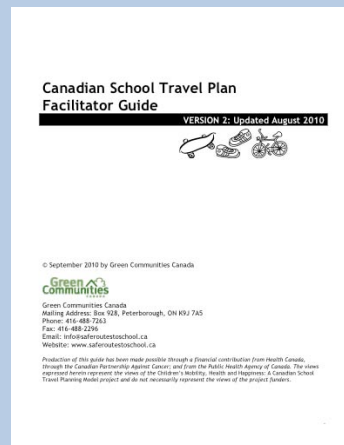
- Advice and assistance with integrating sustainable transportation principles and practices into festival planning and implementation (e.g. user information, valet bike parking, transit cross-promotions)

TOURISTS AND VISITORS

- Provision of local transit, cycling and walking information at hotels and major destinations, and through tour operators

Helpful resource

Green Communities Canada’s Active and Safe Routes to School program has developed a comprehensive set of School Travel Planning Tools that can help with the development and implementation of school travel plans. See www.saferoutestoschool.ca for more information.



A.3 Leadership measures: Showing the way

A.3.1 Municipal travel plan

IMPROVE AND PROMOTE SUSTAINABLE TRAVEL OPTIONS FOR EMPLOYEES

- Develop and implement a workplace travel plan for municipal facilities, addressing both employee commuting and local business travel

IMPROVE AND PROMOTE SUSTAINABLE OPTIONS FOR CLIENT AND VISITOR TRAVEL TO OR FROM MUNICIPAL FACILITIES

- Public bike parking improvements, preferential carpool parking, and sustainable transportation information provision at municipal facilities

- Inclusion of information on sustainable travel to municipal facilities in public meeting notices, event invitations and bulletins

A.3.2 Zoning and development approvals

REQUIRE OR ENCOURAGE TDM-SUPPORTIVE FEATURES IN NEW DEVELOPMENTS

- Zoning by-law changes to require bike parking, showers and change rooms
- Guidelines and checklists for inclusion of TDM-supportive features in new developments

- Training for development approvals staff on dealing with developers from initial consultation to final approval

REQUIRE TRAVEL PLANS FOR NEW DEVELOPMENTS

- Policy requiring development and implementation of a travel plan for new commercial and residential developments of a minimum size, parking capacity or traffic volume generation

ENCOURAGE INNOVATIVE DEVELOPMENT FEATURES

- Encourage the inclusion of proposals to include carshare memberships, public bike memberships and/or annual transit passes with the purchase of a new home or condominium

REDUCE PARKING SUPPLY REQUIREMENTS

- Zoning by-law changes to eliminate or reduce requirements for minimum parking capacity
- Zoning by-law changes to introduce or reduce limits for maximum parking capacity
- Cash-in-lieu-of-parking option for new developments to fund public parking facilities and services rather than build private on-site parking
- Favourable treatment of proposals to reduce on-site parking in new developments where carshare vehicles are provided

Helpful resources

ACT Canada's publication *TDM Supportive Guidelines for Development Approvals* addresses the use of development applications, site plan reviews and contact with developers, landowners and facility managers to enforce and implement TDM principles. See www.actcanada.com for more information and to download the free guidelines.



The Institute of Transportation Engineers publication *Promoting Sustainable Transportation Through Site Design: An ITE Recommended Practice* describes comprehensive site development practices to promote the use of sustainable travel to non-residential or mixed-use developments. See www.ite.org for more information on the document and how to purchase it.