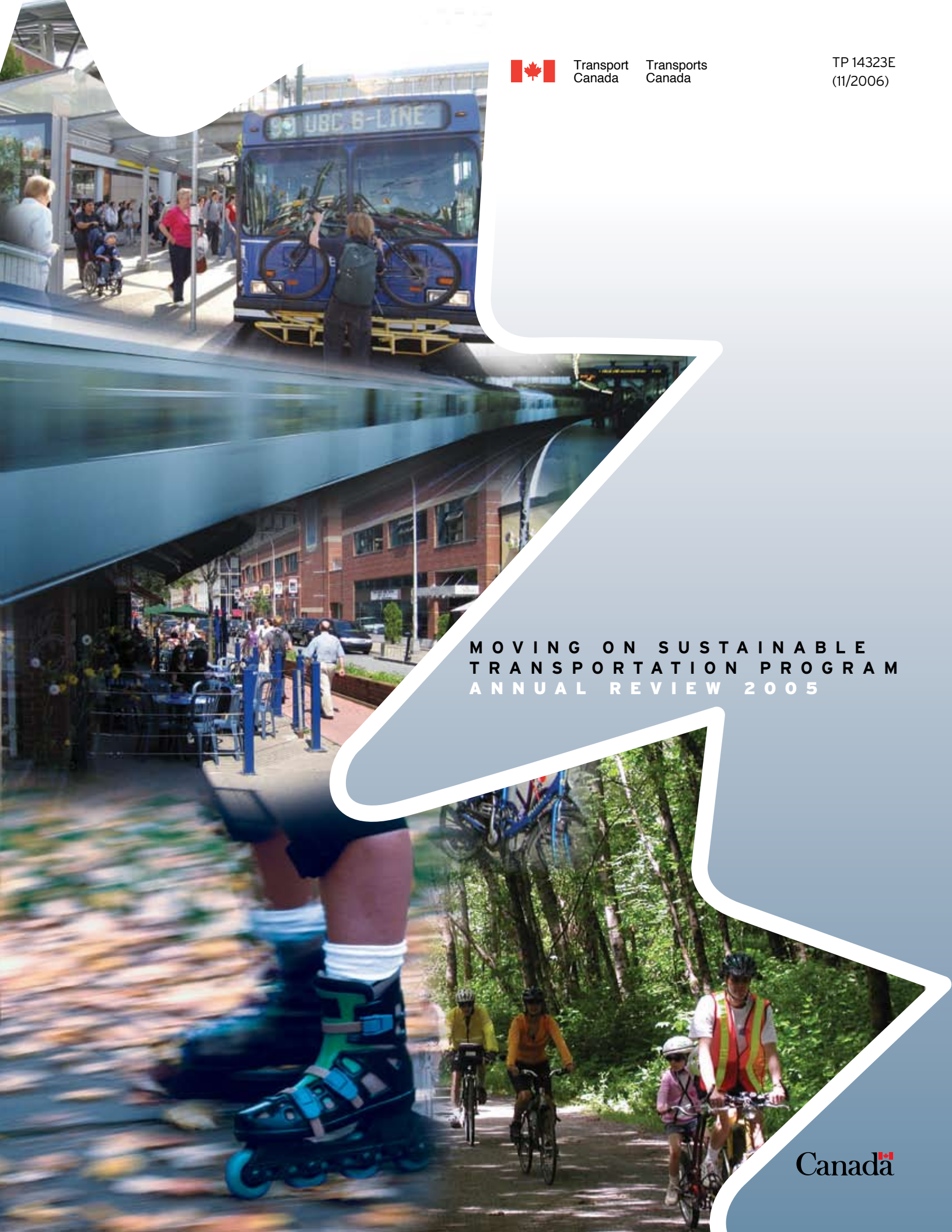

Transport Canada Transports Canada

TP 14323E
(11/2006)

MOVING ON SUSTAINABLE TRANSPORTATION PROGRAM
ANNUAL REVIEW 2005

Canada

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INTRODUCTION

This document is the third annual review of Moving On Sustainable Transportation (MOST) projects. It details the results of projects that completed final reporting during 2005, and gives an overview of other ongoing projects. It shares information from MOST participants about the impacts of their projects, and about the lessons they have learned—reflecting what worked well, and what they would do differently next time. It also identifies websites that offer more detailed information on each project.

Transport Canada commends the leadership and commitment to sustainable transportation demonstrated by all MOST project partners—non-profit and community groups, municipal, provincial and territorial governments, private businesses and foundations, academic institutions and others. Transport Canada also recognizes the important contribution of the program's external Advisory Committee. Its members have reviewed and evaluated over 200 projects, made suggestions on how selected projects might improve results, and provided valuable advice on overall program direction. We are grateful for their ongoing efforts.

Readers are encouraged to obtain more information from the MOST website at www.tc.gc.ca/most and to send feedback on any aspect of the program to the address on the opposite page.

PROGRAM SUMMARY

PURPOSE AND HISTORY

Transport Canada's MOST program works to increase sustainable transportation options for Canadians. The program fulfils a commitment made by Transport Canada's first *Sustainable Development Strategy* in 1997. MOST has three major goals:

- To offer Canadians practical information and tools to better understand sustainable transportation
- To encourage the creation of innovative ways to promote sustainable transportation
- To achieve quantifiable environmental and sustainable development benefits

Transport Canada launched MOST in 1999 with a budget of $1 million over three years. The program was then extended to 2007 with an additional $2.5 million in funding to meet demand.

By the end of 2005, MOST had committed nearly $3.5 million to 97 innovative projects across Canada involving more than 500 environmental groups, community associations, academic institutions, business groups and professional associations. With financial support from MOST, these organizations are promoting education and awareness, conducting important research, testing new approaches, and developing needed tools. Some larger projects have a national scope, while many smaller projects address local challenges in regions across the country. Collectively, they are improving the sustainability of Canada's transportation systems, educating communities about personal transportation options, and helping schools, businesses and other community champions lead the way toward healthier, safer and more sustainable transportation systems.

PROPOSAL ELIGIBILITY AND EVALUATION

To be considered for MOST funding, proposed projects must:

- Address at least one of five project categories (see box for details)
- Target the Canadian public, including the transportation sector, municipalities, educators, First Nations and Aboriginal peoples, youth and other citizens
- Demonstrate shared funding through partnerships, with sources other than the Government of Canada contributing cash and/or in-kind resources equivalent to at least 50% of eligible costs
- Commit to demonstrating quantifiable results, using sustainable transportation targets and performance indicators to measure and report on the project's impacts
- Commit to sharing results and program materials, supporting the program's objective of developing information and tools that Canadians need to make sustainable transportation part of their daily lives

Project proposals that meet these initial requirements are reviewed by an independent advisory committee using additional evaluation criteria:

- Effectiveness in directly improving the environment through greater understanding and practical applications of sustainable transportation principles
- Degree of innovation
- Ease of transfer and replication within Canada
- Proponent experience and competence

The advisory committee forwards its recommendations to Transport Canada's Director General, Office of Environmental Affairs, who has final decision-making authority. Individual projects may receive up to a maximum of $100,000 over two years.

Eligible Project Categories

Studies and analyses: Projects that research or evaluate transportation in a community, such as by examining what transportation strategies can help manage future growth

Tools and practices: Projects that lead to new sustainable transportation tools and practices, and that give the public an opportunity to learn about and use less-polluting transportation options

Demonstration pilot projects: Projects that test new sustainable transportation alternatives or approaches

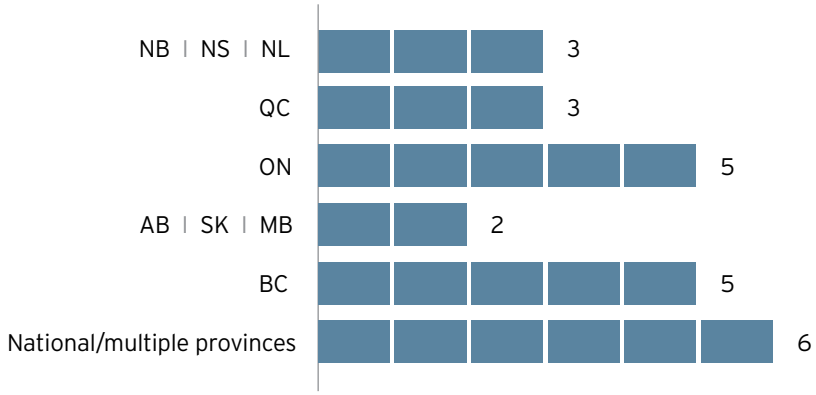
Workshops and conferences: Information sessions that support and highlight new ideas or approaches to sustainable transportation, or that showcase contributions by stakeholders

Education and outreach programs: Projects that inform the Canadian public about sustainable transportation

2005 IN REVIEW

At the start of 2005, 23 MOST projects were underway. During the year, 13 projects were completed and 24 new projects were awarded contributions, leaving 34 projects active at the start of 2006.

MOST has been successful in attracting proposals from across Canada. The regional distribution of projects approved in 2005 is shown in the accompanying chart.



The 13 projects completed in 2005 received a total of $473,000 in MOST contributions. They involved 170 partners including provincial and municipal levels of government, foundations, the private sector, non-profit organizations and academic institutions. Together, these partners provided $915,000 in additional cash funding as well as in-kind assistance valued at $395,000.

ONGOING PROJECTS

This section identifies the 34 MOST projects that were active at the end of 2005. Additional information is available at www.tc.gc.ca/most.

Promoting Sustainable Urban Transportation through Site Design

To develop a guide on improving sustainable transportation opportunities through better design of urban developments

Lead organization: Canadian Institute of Transportation Engineers
MOST contribution: $20,000

2006 International Youth Summit on Sustainable Urban Transportation

To host a third Youth Summit event in Montreal that will raise awareness and knowledge of sustainable transportation and land use planning among youth, and promote individual action

Lead organization: Canadian Urban Transit Association
MOST contribution: $30,000

Planning Active Transportation Communities

To conduct up to eight active transportation education/planning sessions in small to medium-sized communities, and to develop 10-point action plans to evaluate community progress

Lead organization: Go for Green
MOST contribution: $25,000

Step It Out!

To increase school and student participation in Active and Safe Routes to School programs

Lead organization: Green Communities Canada
MOST contribution: $98,115

School Travel Plans

To conduct a three-phase project involving research into school travel plans, implementation of pilot projects, and production of a cohesive national plan that can be tailored to regional frameworks

Lead organization: Green Communities Canada
MOST contribution: $20,000

CAN-BIKE Cycling Development Project

To encourage cycling across Canada by building capacity for CAN-BIKE training through more instructors, tailored curricula, electronic communication tools, and stronger marketing and branding

Lead organization: Canadian Cycling Association
MOST contribution: $65,000

Clean Air Achievers II

To deliver a curriculum-linked, web-based sustainable transportation program involving elite-level athletes and students in grades eight and nine

Lead organization: Clean Air Champions

MOST contribution: $59,000

The Off-Highway Vehicle (OHV) Project

To educate the public about environmental impacts of off-highway vehicles (e.g. personal watercraft, all-terrain vehicles) and work with stakeholders to develop a common vision and policies for sustainable off-highway vehicle use

Lead organization: Nature Canada
MOST contribution: $50,000

Off-Highway Forestry Haul Feasibility Study

To evaluate the potential for greenhouse gas emission reductions and cost savings by increasing the use of private off-highway forestry routes

Lead organization: Forest Engineering Research Institute of Canada
MOST contribution: $79,170

Best Practices, Better Policies

To research best practices in sustainable transportation (e.g. urban planning and design, programs to encourage walking, cycling and transit) and highlight policies that successfully contribute to sustainable transportation in Canadian cities

Lead organization: Better Environmentally Sound Transportation
MOST contribution: $50,000

Lower Mainland Cycling Guide

To produce a comprehensive regional cycling guide and distribute it to households in Greater Vancouver

Lead organization: Better Environmentally Sound Transportation
MOST contribution: $58,000

Cycling in Cities: Understanding People, Neighbourhoods and Infrastructure

To study cycling infrastructure and behaviour in the Greater Vancouver region to support the development of policies that increase cycling

Lead organization: University of British Columbia, Department of Health Care and Epidemiology
MOST contribution: $50,000

On the Move: Transportation and You!

To increase awareness of sustainable transportation issues through an interactive in-class education program for grades five to seven in West and North Vancouver

Lead organization: West Vancouver Museum & Archives
MOST contribution: $25,000

2010 Plus: Stakeholder Alliance for Advancing Sustainability

To develop a toolkit of publications, workshops and activities for use in a collaborative urban design charrette that will seek sustainable solutions for the Greater Vancouver region

Lead organization: UBC Design Centre for Sustainability
MOST contribution: $50,000

PEDAL Bike Depot

To encourage cycling in low-income neighbourhoods by providing residents with free or inexpensive recycled bicycles

Lead organization: Pedal Energy Development Alternatives (PEDAL)
MOST contribution: $38,000

The Biodiesel Project — Phase 2

To develop a mobile facility capable of processing waste vegetable oil into biodiesel fuel for use in small and isolated communities

Lead organization:
Environmental Youth Alliance
MOST contribution: $50,000

Sustainable Transportation in Calgary: Current and Future Contributions of Telework

To determine the current and potential level of telework in Calgary and its impacts on air pollution, road safety and traffic congestion

Lead organization: Haskayne School of Business, University of Calgary
MOST contribution: $45,000

School Pool

To encourage carpooling by students and parents through promotional activities and an online ridematching program, focusing mainly on elementary schools

Lead organization: Sierra Club, Prairie Chapter
MOST contribution: $25,000

Ross Industrial Park Baseline Study

To examine the current situation and recommend projects that help businesses improve their sustainability, profitability and competitiveness by cooperating to reduce their environmental impact

Lead organization: Regina Eco-Industrial Networking Association
MOST contribution: $30,000

Manitoba Student Transportation Network

To encourage environment-friendly commuting by secondary school students by holding events, preparing a resource toolkit and creating a student steering committee

Lead organization: Resource Conservation Manitoba
MOST contribution: $25,000

Moving to Sustainability: Car Sharing in Kitchener–Waterloo

To create multimodal hubs with car and bike sharing, and to reduce overall emissions by increasing the co-op's membership

Lead organization: The People's Car Co-operative Inc.
MOST contribution: $27,909

Barrie Telecommuting Project

To research the benefits and barriers related to developing a new telecommuting centre that will help individuals avoid long commutes by working closer to home

Lead organization: Environmental Action Barrie
MOST contribution: $50,000

Transit City

To engage the public in developing plans to improve transit service and increase ridership, by identifying community priorities to be presented to local government and transit authorities

Lead organization: Toronto Environmental Alliance
MOST contribution: $15,000

BikeRoots

To replace motorized vehicle delivery routes with a bicycle delivery service, reducing emissions and allowing sustainable transportation education and outreach

Lead organization: Greenest City
MOST contribution: $35,000

ByWard Market TMA Feasibility and Baseline Study

To study the feasibility of a transportation management association in Ottawa's ByWard Market to help employers and employees reduce car trips

Lead organization: EnviroCentre
MOST contribution: $20,000

On Two Wheels

To bring together 60 individuals as sustainable transportation role models who will cycle across Canada to visit largely rural communities and engage youth on sustainability issues

Lead organization: The Otesha Project
MOST contribution: $40,000

Réseau vélo-boulot

To encourage individuals to cycle to work using a 16-week commuting challenge campaign

Lead organization: Vélo-route trans-Québec for the Table de concertation vélo Outaouais
MOST contribution: $15,000

Vélo St-Lo

To present cycling to neighbourhood youth as fun, rewarding and beneficial through activities such as bike maintenance workshops and the Earn-a-Bike program

Lead organization: Carrefour Jeunesse Emploi Saint-Laurent
MOST contribution: $25,000

Mobili. T

To offer walking, cycling, carpooling and car sharing options to current and prospective participants in an employee transit pass program in Quebec City

Lead organization: Vivre en ville
MOST contribution: $30,000

Personalized Transportation Plans

To create personalized transportation plans tailored to individual travel patterns and needs

Lead organization: Équiterre
MOST contribution: $50,000

Guide to Establishing Transit Services in Small Urban Centres

To produce a guide to help small urban centres implement transit services and test public education programs that encourage ridership

Lead organization: Bathurst Sustainable Development
MOST contribution: $30,000

Regional Fleet Assessment for Transit Services in Northern New Brunswick

To study the feasibility of a new transit service linking several communities near Bathurst, N.B.

Lead organization: Bathurst Sustainable Development
MOST contribution: $25,000

Making Tracks

To research the barriers and benefits of implementing Active and Safe Routes to School programs in Halifax Regional Municipality, and to test the program at seven schools

Lead organization: Ecology Action Centre
MOST contribution: $50,000

Taking ADAPT On the Road

To increase awareness of the links between active transportation and health in three Nova Scotia communities, with help from medical professionals including the Association of Doctors for the Advancement of Physically Active Transportation

Lead organization: Ecology Action Centre
MOST contribution: $25,000

The 13 MOST projects that completed final reporting in 2005 are summarized on the following pages. They yielded numerous lessons about how to make a sustainable transportation project successful. Lessons that were identified in the final reports of two or more completed projects, or that otherwise have broader applicability, are identified in the following paragraphs.

Plan for the time and resources required to engage partners. Since engaging a broad range of project partners can help maximize available resources and reduce risk to the project, relationship building with stakeholders is extremely important. However, it can also be time-consuming. Multiple contacts with a single group may be needed to identify, inform and engage the persons most able to contribute. Large public-sector organizations may be slower to respond and may require more attention to truly engage. Dealing with private businesses can also be a challenge when the issue at hand is not seen as a business priority and the timeline for progress is flexible.

Plan for the time and resources required to collect essential data. Fact-finding, investigating sites, and preparing for and conducting interviews require considerable time, effort and cost. An effective interview may require preparatory dialogue, in-depth discussion and follow-up conversation to clarify or expand on information. Accessing and analyzing key data sets, especially those held by external agencies, can also be a significant undertaking—even when the issue appears to be straightforward.

Involve local stakeholders and advisors in planning stages. A local advisory committee is valuable for projects that involve any form of outreach or complex analysis, particularly when project activities are set in communities that the principal organizers do not know well. Such a group can provide a forum for testing messages and communication strategies, and for identifying and understanding contentious issues that may be raised either by advisory committee members or by others. A committee can help to establish the credibility of external agencies that may not be immediately familiar to key stakeholders or the general public. It also provides a foundation for follow-up and ongoing collaboration.

Use the valuable and cost-effective skills offered by post-secondary students. For projects with tight budgets, college and university students represent an invaluable source of knowledge and energy at a reasonable cost. Data collection, analysis, laboratory work and multimedia production are some areas in which local academic institutions may provide a source of enthusiastic and affordable help.

Recognize elementary and secondary school students as agents of change. School-aged children are very interested in environmental issues and tend to be more open than adults to new behaviours. They also can effectively transmit messages into the home environment. High school students are generally near the time in their lives when driving becomes a viable and attractive option for personal mobility. By improving their travel options and emphasizing the need to consider the impacts of their personal travel choices, young people may be persuaded to avoid or defer an increase in car use. In terms of involving youth as project partners, it is worth noting that their organizational abilities may be more limited than those of adults—a situation that should be carefully considered when making requests of young people or youth groups.

The Victoria Car Share Cooperative raised awareness about the potential of car sharing and created significant partnerships to reduce traffic congestion and greenhouse gas emissions. Community sectors targeted for education included the general public, housing developers and community leaders (including members of residents' associations, municipal planners and councillors).

Lead organization: **Victoria Car Share Cooperative**
MOST contribution: **$25,680**
Project website: **www.victoriacarshare.ca**

The Victoria Car Share Cooperative launched its first shared car in 1997, and now offers a fleet of nine vehicles at sites around the British Columbia capital. Members pay a refundable, one-time $500 fee to buy a share in the Cooperative, plus a monthly administration fee of about $10. They are invoiced every month for the time and distance of all their trips.

This project exposed people to car sharing through advertising, publicity about events and milestones, presentations, mass mailings, information booths and attending parades. The Education and Outreach Strategy encouraged 64 new members to join the Coop, bringing membership to 125. Arrangements with property developers and the University of Victoria will have the potential to more than double membership again by the end of 2006.

A number of local municipalities actively embrace car sharing as a trip reduction tool, and parking or zoning variances have led developers to be increasingly eager participants. Both Central Saanich and Saanich implemented development regulations and practices that encourage car sharing. Victoria has no formal processes, but councillors and staff have begun to refer developers to the Coop to initiate partnerships. Staff in the town of Colwood has also begun to make referrals to the Coop, and the town of Sidney has provided a small grant to produce locally relevant brochures and posters.

REACH

- *About 290,000 people were exposed to the education and outreach strategy, with 188,000 people receiving detailed information about car sharing.*
- *About 10,000 people received a personal, group or mailed presentation of information tailored to their particular interests and situation.*
- *A wide variety of media outlets covered the story.*

INCREASED AWARENESS

- *After almost 12 months of education and outreach, 60% of surveyed residents had heard something about the Coop—a significant increase from 10% before the project.*
- *Information requests increased from about 10 per month to about 30 per month after the project was launched.*

PARTNERSHIP LEGACY

- *New partners attracted over the course of the project included BC Ferries, Robbins Parking and BC Transit. Other existing partnerships deepened substantially, such as one with the University of Victoria.*
- *Partners provided financial and promotional support, as well as space to park cars.*

INNOVATIVE TOOLS AND PRACTICES

- *Cross-promotional giveaways were used, where transit riders won car share memberships and Coop members won transit passes.*

QUANTIFIABLE IMPACTS

- *11 new members sold their personal vehicles after joining the Coop.*
- *Analysis of driving by new Coop members who got rid of their cars showed a saving of 64,100 vehicle-kilometres that exceeded the project target of 50,000 vehicle-kilometres.*
- *Based on a survey of 50% of new members, greenhouse gas emissions were reduced by at least 14.5 tonnes and likely even more.*

The Squamish charrette team

(courtesy Design Centre for Sustainability at the University of British Columbia)

This project used a multi-stakeholder process to develop a sustainable concept plan for downtown Squamish. Public education workshops, research and a design charrette were successfully used to create a concept plan that was adopted by local elected officials.

Lead organization: **Smart Growth BC**
MOST contribution: **$50,000**
Project website: **www.sgog.bc.ca/squamish**

Smart Growth BC, a non-governmental organization, uses citizen engagement strategies to promote sustainable transportation, compact communities, affordable housing, greenspace preservation and efficient infrastructure use. It takes a team approach to designing neighbourhood concepts and facilitating the adoption of by-laws, creation of servicing plans, and monitoring of construction. In this project, the organization worked with the University of British Columbia's Design Centre for Sustainability, the Real Estate Institute of British Columbia, the District of Squamish and other groups.

Smart Growth BC and its partners created a new plan for the downtown waterfront area in the District of Squamish, a community of about 15,000 people located north of Greater Vancouver. The project's key elements included a series of 14 public workshops and a design charrette—an intensive, multi-stakeholder design event involving facilitators and local representatives. The process brought together residents, governments, property owners and developers to find common solutions despite their competing interests.

The project addressed transportation sustainability through principles of connectivity, mode choice and route choice. Recommended actions included efforts to increase opportunities for living, working, learning and playing in the downtown area, the creation of a multimodal downtown transit hub, the development of an integrated trail network, the establishment of a "green" rail and truck corridor to move freight from the Squamish port to the business park, and road and laneway design to encourage natural drainage.

The process generated very favourable public reaction, and the District of Squamish Council adopted the plan with the intention of undertaking a number of initiatives that will reduce greenhouse gas emissions.

REACH

- *300 individuals attended project events in Squamish, and presentations were given at other events with dozens of attendees.*
- *Four-page newspaper inserts were twice distributed to more than 6,000 Squamish homes and businesses. All events were advertised in the same newspaper, which also ran several articles.*
- *Periodic updates were sent to the almost 800 subscribers of the Smart Growth BC listserv. The website receives 1,200 to 1,600 visitors per month.*

INCREASED AWARENESS

- *Direct involvement of stakeholders in workshops both built and demonstrated their awareness of sustainable transportation challenges and strategies*
- *Several outside agencies contacted project organizers to initiate related research or activities.*

PARTNERSHIP LEGACY

- *Various partner organizations will continue to promote the charrette results and work toward plan implementation.*

INNOVATIVE TOOLS AND PRACTICES

- *Intensive stakeholder involvement through workshops and the design charrette effectively resolved issues that involved multiple interests and perspectives.*

QUANTIFIABLE IMPACTS

- *Project recommendations will reduce greenhouse gas emissions from transportation by making sustainable transportation options more viable and attractive.*

Charrette team members developing a vision for Maple Ridge

(courtesy Design Centre for Sustainability at the University of British Columbia)

This project used a multi-stakeholder process to develop a sustainable concept plan for the town centre of Maple Ridge. Stakeholder workshops, public consultation and a design charrette were successfully used to create a plan that was ultimately adopted by local elected officials.

Lead organization: **Smart Growth BC**
MOST contribution: **$75,000**
Project website: **www.sgog.bc.ca/mapleridge**

Smart Growth BC, a non-governmental organization, uses citizen engagement strategies to promote sustainable transportation, compact communities, affordable housing, greenspace preservation and efficient infrastructure use. It takes a team approach to designing neighbourhood concepts and facilitating the adoption of by-laws, creation of servicing plans, and monitoring of construction. In this project, the organization worked with the University of British Columbia's Design Centre for Sustainability, the Real Estate Institute of British Columbia, the District of Maple Ridge and other groups.

Smart Growth BC and its partners created a new plan for the town centre of the District of Maple Ridge, a community of more than 70,000 people in Greater Vancouver. The project's key elements included a series of public workshops and a design charrette—an intensive, multi-stakeholder design event involving facilitators and local representatives. The process brought together residents, governments, property owners and developers to find common solutions despite their competing interests.

The project addressed transportation sustainability directly through related infrastructure and services, and also indirectly through land use issues that influence transportation. The resulting design recommendations for Maple Ridge's town centre included higher-density, mixed-use residential and commercial development, greater street connectivity to serve a range of modes, and innovative road design to encourage water infiltration and improve water quality.

The process generated extensive and very favourable public reaction. District Council adopted the plan, intending to undertake a number of initiatives that will reduce greenhouse gas emissions.

REACH

- *220 individuals attended project events in Maple Ridge, and dozens attended other presentations.*
- *Four-page flyers were distributed to 6,000 homes and businesses twice, all events were advertised in local print media with over 55,000 in circulation, and articles appeared in local newspapers.*
- *A special issue of the Real Estate Institute of BC's* Input *magazine was sent to about 1,300 members.*
- *Periodic updates were sent to 500 subscribers of the Smart Growth BC listserv. The website receives nearly 1,200 visitors per month.*

INCREASED AWARENESS

- *Direct involvement of stakeholders in workshops both built and demonstrated their awareness of sustainable transportation challenges and strategies.*
- *Project activities led to dozens of unsolicited contacts from a variety of outside agencies offering to assist or participate in this and future projects.*

PARTNERSHIP LEGACY

- *Various partner organizations will continue to promote the charrette results, conduct research, and work toward plan implementation.*

INNOVATIVE TOOLS AND PRACTICES

- *Intensive stakeholder involvement through workshops and the design charrette effectively resolved issues where competing interests were at stake.*

QUANTIFIABLE IMPACTS

- *Project recommendations will reduce greenhouse gas emissions from transportation through land use and infrastructure changes.*

BIODIESEL PROJECT

B.C.'s Environmental Youth Alliance runs a community-based, non-profit biodiesel facility that recycles used restaurant cooking oil to produce a sustainable alternative to diesel fuel. MOST provided funding between August 2003 and April 2005 to help establish the facility—the first in B.C. More than 27,000 litres of biodiesel were produced.

Lead organization: **Environmental Youth Alliance**
MOST contribution: **$50,000**
Project website: **www.eya.ca/biodiesel**

The Environmental Youth Alliance is a non-profit organization that works for social and environmental sustainability through hands-on, youth-driven projects. In 2002, the Alliance joined forces with the University of British Columbia and several other partners to design, build and test a community-scale biodiesel processing facility that was financially sustainable and able to supply biodiesel at a competitive price. A life-cycle analysis of the project's biodiesel found that it reduced greenhouse gas emissions by an average of 80% compared with regular petroleum diesel.

Since the project was launched, several biodiesel retailers have opened, a biodiesel coop has been established, and a major rendering company has started to build a biodiesel plant. Several British Columbia municipalities have issued requests for proposals to produce biodiesel, and a biodiesel working group has been formed with representation from all levels of government. The project partners are also working on technology to help small-scale biodiesel producers (those making less than 1,000 litres of biodiesel per day) produce fuel that meets industry standards set by the American Society for Testing and Materials.

The project involved training several student teams so that the facility could always operate at full capacity. Involving and training youth had a direct impact on the viability of the project, and a reliable supply of student labour saw the project accomplish much with limited resources.

REACH

- *More than 240,000 people were exposed to the project through a variety of channels including media stories, website visits, facility tours and workshops.*

INCREASED AWARENESS

- *Website activity increased steadily during the project, with over 1,000 downloads, 43,400 visits and 8,300 unique visitors.*

PARTNERSHIP LEGACY

- *14 partnerships with businesses, local governments and non-governmental organizations were created.*
- *Partners provided financial and promotional support, offered technical expertise, and helped develop business cases.*
- *The Environmental Youth Alliance is maintaining relationships with 10 of the original project partners.*

INNOVATIVE TOOLS AND PRACTICES

- *Facility tours, workshops and demonstrations educated potential consumers and producers about biodiesel.*

QUANTIFIABLE IMPACTS

- *The project led to the diversion of 2.7 tonnes of waste vegetable oil, and a reduction of 5.8 tonnes of greenhouse gas emissions.*

OFF RAMP MANITOBA

Young Manitobans at a hands-on bicycle maintenance workshop

(courtesy Resource Conservation Manitoba)

Off Ramp Manitoba was a student-led trip reduction program targeted at Manitoba high school students. In the 2004–2005 school year, the project raised students' awareness about the climate change impacts of individual automobile use, and promoted environment-friendly alternatives such as walking, cycling, carpooling and public transit.

Lead organization: **Resource Conservation Manitoba**
MOST contribution: **$20,000**
Project website: **www.resourceconservation.mb.ca/gci/MSTN**

Resource Conservation Manitoba is a non-governmental centre for environmental education and applied sustainability. If offers practical information on active transportation, composting and waste reduction to families, workplaces, schools and communities. Through the Off Ramp Manitoba program, the organization and its four partners helped secondary schools run idle-free campaigns, lobby for more fuel-efficient vehicles and make their communities safer for students who want to cycle.

To help students deliver results, the project coordinator developed and distributed materials, contacted schools, made presentations, helped students at two schools organize bike rallies, and supported student efforts to raise awareness and encourage action among their peers. Students attended motivational presentations by Olympic athletes as part of the Champions for the One-Tonne Challenge program, and produced videos on sustainable transportation after taking climate change workshops run by Resource Conservation Manitoba.

By the end of the 2004–2005 school year, although the program had reached virtually all its goals, a need was recognized for a more hands-on, proactive and event-oriented approach. This will involve organizing events for schools that do not have an established student environmental group, and helping schools that do have active groups with their own programs and initiatives. As part of this new strategy, the Off Ramp program was renamed the Manitoba Student Transportation Network.

REACH

- *100 schools were contacted, 20 responded, and 11 implemented aspects of the program with 75 students actively participating.*
- *13 events had combined attendance of 500 students.*

INCREASED AWARENESS

- *90% of students who participated in project activities said they were more informed about sustainable transportation.*

PARTNERSHIP LEGACY

- *Three of the four active partnerships developed during the project will continue in future phases. These will yield financial support, workshops with Olympic athletes and a kit to help students create videos with an environmental theme.*

INNOVATIVE TOOLS AND PRACTICES

- *A multimedia presentation with a sustainable transportation theme was made at two high schools.*
- *Students at six schools produced videos on the theme of transforming travel.*

QUANTIFIABLE IMPACTS

- *52% of surveyed students reported a short-term influence on their transportation choices.*
- *38% of surveyed students predicted a longer-term influence on their transportation choices.*

Speaker Series event advertisement
(courtesy Community Bicycle Network)

Toronto's Community Bicycle Network ran a free, 10-part Speaker Series in 2004–2005. Canadian and internationally renowned speakers helped participants improve their understanding of sustainable development. Audiences averaged more than 100 people per event.

Lead organization: **Community Bicycle Network**
MOST contribution: **$20,000**
Project website: **www.communitybicyclenetwork.org/speakerseries**

The mission of the Community Bicycle Network (CBN) is to make environmentally sustainable, community-friendly transportation accessible to all. CBN promotes cycling as an efficient form of transportation that reduces greenhouse gases, combats climate change, supports local businesses, and improves social cohesion and community well-being.

The CBN Speaker Series brought individuals and groups together in a forum for discussion and networking. Its aim was to promote sustainability and inspire people to take more steps toward sustainability. During the inaugural season, a broad range of topics and speakers helped build interest in the monthly series. For example, audiences listened to presentations by Professor John Pucher of Rutgers University on sustainable transportation case studies from around the world, and by the City of Toronto's Chief Planner Paul Bedford on urban planning's key role in sustainability. Eight other speakers were drawn from diverse backgrounds including international sport, energy efficiency and politics.

Audience surveys consistently showed that the participants were very happy with the Speaker Series. A majority of participants also indicated they would reduce their number of solo car trips, and CBN planned to monitor future shifts in participant travel choices. A second season of the CBN Speaker Series began in 2005, enabled by ongoing financial and in-kind support from founding partners as well as new partners attracted during the first season.

REACH

- *Total attendance was 1,027 people at 10 events.*
- *More than 5,000 posters were distributed electronically per event.*
- *10 stories appeared in local media.*

INCREASED AWARENESS

- *79% of participants increased their knowledge of sustainable transportation.*
- *68% of participants improved their understanding of sustainable transportation's benefits and barriers.*

PARTNERSHIP LEGACY

- *23 partnerships were created with businesses, local governments and non-governmental organizations.*
- *Partners provided financial and promotional support, offered event venues, and helped attract speakers.*

INNOVATIVE TOOLS AND PRACTICES

- *The series is an effective model for improving public understanding of sustainable transportation.*

QUANTIFIABLE IMPACTS

- *74% of participants said they would use sustainable transportation more often.*
- *56% of participants said they would reduce their number of solo car trips*

CIRCULATION CITY: RESEARCH ON MOBILITY IN THE GREATER TORONTO AREA

An intermodal facility that was the subject of a case study analysis during the project

(courtesy Centre for Landscape Research/Pierre Bélanger)

This research project studied the composition of transportation systems in the Greater Toronto Area, and assessed multimodal solutions to relieve congestion on the region's roads.

Lead organization: **Centre for Landscape Research (University of Toronto)**
MOST contribution: **$30,000**
Project website: **www.clr.utoronto.ca**

The Centre for Landscape Research studies and interprets emerging conditions associated with transportation, urbanization and building construction. In this project, the Centre's researchers used case studies, interviews and analysis to examine current transportation systems in the Toronto–Montreal corridor and identify innovations that could help make regional transportation systems more sustainable.

The research involved analysis of 15 different intermodal nodes and systems, interviews with 20 transportation industry and association representatives, and the identification and assessment of 15 new congestion-relieving strategies. Findings were posted on the project's website and presented at the first annual Architecture Landscape and Design Conference entitled "Landscape Regionalism" in March 2005. Additional scholarly publications and presentations are pending.

Organizations that participated in the research included CommunAuto, Community Bicycle Network, Canadian Renewable Fuels Association, GO Transit, Air Ambulance, Ontario Food Terminal, City of Toronto Planning Department, Taxi Dispatcher's Association, Canadian Telework Association, Canadian American Transportation Systems, Toronto Port Authority and Carleton Farms Landfill.

The project had several key findings: first, many forces shaping transportation originate beyond a region's borders; second, the development of effective public transit services requires greater coordination and integration; and third, information on transit and other sustainable transportation choices must be seamless and accessible in multiple languages.

REACH

- *Regional and international awareness was raised through a website (averaging 350 monthly visitors over four months), two exhibitions (averaging 500 attendees each), two university courses (averaging 25 students each), four presentations (averaging 75 attendees each) and an article in* Green Living *magazine (50,000 readers, winter 2005 issue).*
- *Greater reach is expected through three forthcoming articles and the book* Circulation City *(expected in 2007).*

INCREASED AWARENESS

- *The project created an awareness of the centrality of transportation in urban development, and the potential for transportation systems to influence sustainable urban development.*

PARTNERSHIP LEGACY

- *Participating individuals and organizations continue to build relationships and share knowledge.*

INNOVATIVE TOOLS AND PRACTICES

- *The project demonstrated a case study approach to analyzing multimodal transportation nodes and systems.*
- *15 innovative sustainable transportation strategies were identified.*
- *The work led to a new course on mass mobility and urbanization at the University of Toronto.*

QUANTIFIABLE IMPACTS

- *Impacts of the research are expected to arise through the application of findings and additional research.*

ELECTRIC VEHICLE CONVERSION MANUAL AND PILOT PROJECT

The Electric Vehicle Society of Canada developed a workshop conversion manual to convert gasoline-powered vehicles to electric power. The conversion manual was tested in a successful pilot project at Georgetown District High School during the 2004–2005 school year.

Lead organization: **Electric Vehicle Society of Canada**
Funding provided: **$40,000**
Project website: **www.evsociety.ca**

Members of the Electric Vehicle Society of Canada include electric vehicle enthusiasts, engineers and environmentalists. Established in 1991, the organization provides a forum for members to discuss personal experiences building electric vehicles or converting traditional gasoline vehicles to electric power.

The project developed a workshop manual to help high schools and other interested groups convert gasoline-powered vehicles to battery power. The 100-page manual was used by a team of students, teachers and volunteers at Georgetown District High School in Halton, Ontario, to convert a Ford pickup truck to electric power.

The manual opens with an introduction to sustainable transportation principles and issues. It then outlines the physics, math and electronics that are involved in electric vehicle technology, and provides more details on motors and controllers. The manual's main section offers an illustrated step-by-step electric vehicle conversion program. It then discusses the benefits and potential projects open to an electric vehicle team, such as green vehicle rallies, environmental workshops and exhibitions, and school fundraising events.

REACH

- *One teacher and six volunteers coordinated the efforts of several classes of grade 11 automotive students.*
- *More than 200 high schools with automotive classes received a project summary.*
- *One story appeared in a local newspaper.*

INCREASED AWARENESS

- *100% of participating students demonstrated an understanding of the importance of sustainable transportation choices.*
- *The manual and pilot project received positive reviews from more than 80% of participating students and staff.*

PARTNERSHIP LEGACY

- *Several project partners, including two corporations, provided financial support, technical support and training.*
- *Individuals from provincial and federal government departments as well as teachers from other schools volunteered for the project advisory board.*
- *The Electric Vehicle Society plans to expand the partnerships established during the pilot project.*

INNOVATIVE TOOLS AND PRACTICES

- *The manual is an effective tool for converting vehicles to electric power.*

QUANTIFIABLE IMPACTS

- *More than 50 schools are showing serious interest in duplicating the project.*

Children in Brantford celebrate new walking route signs

(courtesy Green Communities Canada)

The School Walking Routes pilot project promoted and helped institutionalize active travel to school. It took place in the Ontario communities of London, Brantford and Brampton during the 2004–2005 school year. Based on its initial success, the program was officially launched the following school year, and there are plans to expand to other communities.

Lead organization: **Green Communities Canada**
Funding provided: **$19,900**
Project website: **www.saferoutestoschool.ca**

Green Communities Canada is a national association of non-profit organizations that deliver innovative, practical environmental solutions to Canadian households and communities. The pilot project was part of Active and Safe Routes to School, a comprehensive community-based program that promotes active, efficient transportation to elementary schools—an initiative that addresses health and traffic safety issues while taking action on air pollution and climate change.

The project focused on seven schools in three communities. It encouraged families to walk to school using designated preferred walking routes. These routes were selected by local municipal staff and police as the best routes from the perspective of traffic and pedestrian safety, based on information developed through student surveys and technical work by university students. Special signs were installed along the designated routes. The use of Walking School Buses, where two or more families travel together, was another feature of the project.

The project educated the public about the need to increase safety around elementary schools, reduce pollution and address sustainable transportation challenges. In each community, the project has been linked to other efforts to reduce single-occupant vehicle trips and greenhouse gas emissions.

REACH

- *The project reached 3,370 students and their families, 70 parent school council representatives, 37 city councillors and 21 organizations.*
- *The project was publicized in* Green Communities Canada News *(circulation 850), through an Active and Safe Routes to School e-bulletin and newsletter (circulation 500), and in a case study on the Tools of Change website.*
- *Each participating community held media events during International Walk to School Week.*
- *The project was mentioned in a best practices guidebook on safe routes to school and on traffic calming around schools, published by the international Institute of Transportation Engineers.*

INCREASED AWARENESS

- *Safe Routes to School programs are gaining recognition from municipalities as a way to meet transportation demand management and traffic safety objectives.*

PARTNERSHIP LEGACY

- *19 partnerships with school boards, municipalities and non-governmental organizations are being maintained as part of a future growth strategy.*
- *Partners provided financial and promotional support to help attract participants.*

INNOVATIVE TOOLS AND PRACTICES

- *The use of the walking route sign was found to be an excellent tool to improve school traffic safety.*
- *Project staff deputized local champions to spearhead pilot efforts in each community.*

QUANTIFIABLE IMPACTS

- *Detailed evaluation is pending, but all participating communities reported an increase in participants walking to school, particularly during Walk to School events held throughout the year.*

Save Money and the Air by Reducing Trips (S-M-A-R-T) Movement is a workplace-based trip reduction program that helps large organizations reduce the number of employees driving alone to work. Pollution Probe published a program manual in 2002, and MOST funding supported the expansion of the program across the Greater Toronto Area.

Lead organization: **Pollution Probe**
MOST contribution: **$52,900**
Project website: **www.pollutionprobe.org/Reports/SMART.pdf**

Pollution Probe is a charitable organization that works to protect human health by promoting clean air, land and water. The organization works extensively on transportation-related issues. The primary goals of the S-M-A-R-T Movement program are to build the case for workplace trip reduction, implement initiatives at workplaces with more than 250 employees, and document the results.

S-M-A-R-T Movement is based on the principle that reducing car commuting can save money and time, reduce stress and absenteeism, increase productivity, and help address urban issues like traffic congestion, air quality and climate change. The program offers a framework to establish a business case for trip reductions by quantifying financial benefits such as lower employee parking costs. Reductions in emissions of greenhouse gases and other air pollutants are also tracked. The program aims not only to change behaviour among participants, but also to strengthen support for transportation demand management across Canada.

The funded efforts involved approaching candidate employers and recruiting them to join the program, conducting surveys, setting targets, assisting with the development and implementation of measures, and delivering outreach to employees at participating workplaces. A number of organizations were successfully brought into the program and started on the process of developing comprehensive commuter trip reduction measures.

REACH

- *14 new organizations were approached and 7 were recruited during this expansion phase, yielding a total of 12 participating employers with 16,000 staff.*
- *There was direct exposure to 1,400 employees through baseline and follow-up surveys.*
- *All employees of participating organizations were exposed to program e-mails, websites, posters and other materials.*
- *Radio, television and print media stories were done on the program.*

INCREASED AWARENESS

- *In a follow-up survey at one employer, 77% of respondents agreed that S-M-A-R-T was a good program for their company to participate in, and 57% agreed they were more aware of sustainable transportation benefits and issues.*

PARTNERSHIP LEGACY

- *Organizational partnerships and co-promotion efforts have been maintained or created with 11 organizations.*

INNOVATIVE TOOLS AND PRACTICES

- *The project developed formal letters of agreement with employers, employee surveys, communication tools and a draft business case framework.*

QUANTIFIABLE IMPACTS

- *Evaluation of initiatives will be conducted by participating employers.*
- *At one workplace, 21% of surveyed employees agreed they would try to leave their car at home more often for short trips.*

Cycling workshop in Gatineau, Quebec
(courtesy Vélo Québec Association)

Vélo Québec hosted 16 workshops to develop cycling infrastructure for municipalities across Canada. The workshops gave participants concrete tools to create useful cycling routes that encourage cycling and reduce greenhouse gas emissions from transportation. The first set of workshops, held between October 2003 and September 2004, was so successful that additional workshops were held in 2005 and 2006.

Lead organization: **Vélo Québec**
Funding provided: **$30,000**
Project website: **www.velo.qc.ca/bikewaydesign/index.lasso**

Vélo Québec is a not-for-profit group that supports cycling for commuting, recreation and tourism. In Quebec and across Canada, it promotes cycling to improve quality of life and reduce greenhouse gas emissions.

Based on the *Technical Handbook of Bikeway Design*, the workshops took into account the particular characteristics of each audience's region. Each workshop included municipal or regional background information, theoretical information and a practical field component. The workshops were attended by government planners and engineers, elected officials, decision-makers, opinion leaders and representatives of not-for-profit organizations and cycling associations.

The Technical Handbook of Bikeway Design contains information on paths, lanes, shared roadways, intersection design, multi-use trails and infrastructure maintenance. It explains concepts such as traffic calming, contra-flow bike lanes and bike boulevards.

At the end of each workshop, participants had the tools they needed to create a favourable environment for increased bicycle use. They were also more aware of the importance of effective bikeway design in urban planning in general.

REACH

- *16 events attracted 245 participants from local governments, regional and provincial governments, as well as non-governmental organizations and consultants.*

INCREASED AWARENESS

- *Workshops were publicized on the Vélo Québec website, by fax and through targeted e-mail messages to engineers, urban planners and partners of Route verte, the network of cycling routes throughout Quebec.*

PARTNERSHIP LEGACY

- *Vélo Québec benefited from the support of a local or regional government in each city where a workshop was held.*
- *17 partnerships with local, regional and provincial governments as well as non-governmental organizations were created.*

INNOVATIVE TOOLS AND PRACTICES

- *Workshops were based on the* Technical Handbook of Bikeway Design, *which is available through www.velo.qc.ca. Needs expressed by the participants will be incorporated in the handbook's fourth edition.*

QUANTIFIABLE IMPACTS

- *Evaluation forms showed participants acquired the knowledge and tools they need to create better bikeways and boost bicycle use.*

EASY ON THE PEDAL!

Groupe Littoral et vie convinced people to adopt more sustainable driving practices by offering training sessions that featured a light-hearted play, and by educating school children who then influenced their parents.

Lead organization: **Groupe Littoral et vie, University of Moncton**
Funding provided: **$25,000**
Project website: **www.umoncton.ca/ecosage/indexp.html**

Groupe Littoral et vie has been working with New Brunswick coastal communities to engage residents in environmental action since 1996. As part of its Easy on the Pedal! project, Groupe Littoral et vie created three 90-minute training sessions to convince people to adopt more sustainable driving practices.

The first session started with a humorous play to get people thinking about ways to improve their driving practices by carpooling, limiting idling, reducing speeds and properly inflating tires. The second was a training session on climate change that taught people how to reduce greenhouse gas emissions. The third was a workshop to encourage participants to share the actions they are taking to fight climate change.

Between 2003 and 2005, Groupe Littoral et vie delivered sessions to groups of people from municipal government, a credit union, naturalist clubs, a senior citizen's group, a group of school bus drivers and a residents' association. Of the three types of sessions, the play was found to be the most popular and effective.

In the second year of the project, Groupe Littoral et vie focused on working with school children, who then passed on what they had learned to their parents and were able to influence their parents' behaviour. Groupe Littoral et vie developed a teaching guide with age-appropriate information and activities to help children from kindergarten to grade 8 discover how their behaviour contributes to climate change. The group worked with teachers at a school in Saint-Louis-de-Kent to deliver the program.

REACH

- *593 people attended an education session about ways to reduce greenhouse gas emissions.*
- *650 copies of the climate change teaching guide were distributed across four Atlantic provinces.*
- *Lessons learned from the project were included in "The Process of Change Experienced by Adults and Students When Trying Behaviours Respectful of the Climate," published in the journal* Applied Environmental Education and Communication.

INCREASED AWARENESS

- *Participants said their understanding of sustainable transportation was improved.*
- *After children in Saint-Louis-de-Kent learned ways to reduce their greenhouse gas emissions, a survey showed their parents were more aware of the subject because of what their children had told them.*

PARTNERSHIP LEGACY

- *Partnerships were created with teachers, charitable foundations, federal government departments and a network of national experts on climate change education.*
- *Teachers plan to continue to use the teaching guide on climate change.*

INNOVATIVE TOOLS AND PRACTICES

- *Theatre proved to be an engaging way to get participants to think about using vehicles more sustainably.*
- *A climate change teaching guide was developed for children from kindergarten to grade 8.*

QUANTIFIABLE IMPACTS

- *335 participants changed at least one driving behaviour after the play.*
- *About 230 students at one school reported changing at least one behaviour, such as walking, cycling or taking the bus to school instead of being driven there.*
- *A focus group of parents and other adults reported changing their behaviour by recycling garbage, using less electricity and not idling their cars.*

GENUINE PROGRESS INDICATORS OF SUSTAINABLE TRANSPORTATION FOR NOVA SCOTIA

In this research project, Nova Scotia's GPI*Atlantic* developed a new framework for measuring provincial progress toward sustainable transportation. The project leaders identified and quantified a comprehensive set of social, economic and environmental indicators. They also used full-cost accounting to analyze road passenger travel.

Lead organization: **GPI*Atlantic***
MOST contribution: **$35,000**
Project website: **www.gpiatlantic.org**

GPI*Atlantic* is a non-profit research and education organization dedicated to creating the Genuine Progress Index. The index will enable measurement of Nova Scotia's progress toward sustainable development in 22 social, economic and environmental areas. This project developed measures of progress in sustainable transportation, based on the objectives of preventing adverse effects on current and future generations and ensuring a sustainable use of resources by the transportation sector.

The project developed three categories of sustainability indicators for the province's transportation system: social, economic, and environment and human health. A total of 17 indicators were identified, each having up to 10 elements. Researchers quantified each indicator and element, and determined a trend line either toward or away from sustainability for each.

The project also involved a full-cost accounting analysis of road passenger travel in Nova Scotia. Data limitations precluded an intended analysis of all provincial transport. By assessing 13 cost categories—including vehicle ownership and operation, travel time, parking, energy consumption, crashes, noise and water pollution—GPI*Atlantic* estimated the full cost of Nova Scotia road passenger travel to be $17.4 billion to $18.5 billion in 2002. This cost is equivalent to 60% to 64% of the province's gross domestic product.

GPI*Atlantic* concluded that the provincial sustainable transportation indicators and full-cost accounting methods developed and applied during the project can overcome weaknesses in conventional accounting methods. The organization believes that these tools are vital to making progress toward sustainable transportation, and that they can enable a more informed dialogue among politicians, advocates, industry and the public.

REACH

- *Stakeholders were involved during the project through an advisory committee of experts, academics, and provincial and municipal officials.*
- *Results will be disseminated through briefings of government officials, a major press conference and a published summary of key findings.*

INCREASED AWARENESS

- *Through research, the project sheds new light on sustainable transportation issues and trends.*
- *Ongoing partnerships will increase awareness among the broader public.*

PARTNERSHIP LEGACY

- *Nine organizations acted as project partners.*
- *Results will be disseminated and applied with the help of partner organizations including Clean Nova Scotia, Ecology Action Centre and Halifax Regional Municipality.*

INNOVATIVE TOOLS AND PRACTICES

- *The set of sustainable transportation indicators developed for the project will enable ongoing monitoring and measurement of the effect of transportation policies and programs.*

QUANTIFIABLE IMPACTS

- *The adoption of project recommendations could substantially reduce greenhouse gas emissions from transportation.*