Smart Commute Initiative

Establishment of a Multijurisdictional Workplace-based Transportation Demand
Management Program Serving the Greater Toronto Area and Hamilton

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Abstract

The amount of vehicular traffic in the Greater Toronto Area and Hamilton has been
increasing for decades, with demand increases outpacing additional supply. As a
result, traffic congestion has been swelling, and gridlock is projected to worsen by 45%
over the next 30 years. In addition to increasing travel times, the additional congestion
is already costing the regional economy $1.8 billion per year.

Governments in the area do not have the financial resources available to add additional
vehicular capacity, and the problem crosses numerous jurisdictions – provincial,
regional and local. Shifting priorities for funding are also focusing more on public
transit, which has a significant lag time for meeting current needs. In response,
alternatives to increases in supply that can be implemented more easily have been
sought.

The Smart Commute Initiative was a multijurisdictional workplace-based transportation
demand management program serving the commuting population of the Greater
Toronto Area and Hamilton. Established in 2004, the Initiative formed and enhanced
eight transportation management associations (TMAs) across the region, based on the
successful experience of Ontario's first TMA, Smart Commute Black Creek. A central
coordinating body, the Smart Commute Association, was also established, thereby
separating demand management functions into two tiers of program delivery.

Smart Commute's programming focused on enhancing the attractiveness of existing
commuting alternatives, eliminating or reducing travel demand, and facilitating new
transportation options for the GTA and Hamilton. Core services included commuter
ridematching, an emergency ride home program, shuttle services, enhancing trip-end
facilities for cyclists and carpoolers and assisting with the establishment of more flexible
work arrangements such as telework and compressed work weeks. Marketing, media
relations and special events complemented these improvements to transportation
alternatives. Services were regionally standardized, with the flexibility to allow for local
customization.

Through careful monitoring at the workplace and regional levels, the impact of Smart
Commute was measured before and after implementation, from May 2005 to March
2007. Changes in commuter awareness levels, modal shift, single occupant vehicle
trips, vehicle kilometres travelled and environmental impacts were evident, and various
forms of evaluation took place to investigate effectiveness of service delivery
mechanisms.

Introduction

The Greater Toronto Area (GTA) and Hamilton has experienced significant population growth and economic prosperity for decades. At the turn of the millennium, the area had a population nearing six million inhabitants, with close to three million jobs. New residents were flocking to the GTA by nearly 100,000 per year.

With such explosive population growth, particularly in the region's suburban areas, urban sprawl continued relatively unabated. Both jobs and residents were moving away from the urban cores to automobile-oriented areas in the outer regions. Between 1976 and 2001, more than 600 square kilometres of land on the fringe of the cities was urbanized (1).

As the area grew and suburbanized, more drivers took to the streets, trip lengths increased and traffic congestion ensued. Over 70% of major highways were congested during peak periods, with others experiencing stop-and-go outside of regular commuting hours (2). Gridlock was further predicted to worsen, by as much as 45% over the coming decades (3), costing the local economy $3.0 billion per year or 1.3% of regional gross domestic product by 2021 (2). By 2003 that number was already recorded at $1.8 billion (4).

At the same time, senior levels of government were reducing their funding for municipal infrastructure, and revenues from property taxes were not keeping pace with growth. Even if resources were available to build additional capacity, some areas of the GTA did not have the physical space – or political will – to widen roads or build new ones. Without major investments in public transit, usage rates only remained steady or declined across the region. Alternatives to adding supply for personal vehicles, such as demand management, were being considered.

The challenge of targeting transportation demand in a region such as the Greater Toronto Area and Hamilton is that transportation behaviour does not follow political boundaries. Commuters regularly travel between the 30 municipalities of the GTA and Hamilton, as well as beyond. Still more drive into the region from neighbouring cities, towns and villages. No single government is responsible for these trips, yet almost all are concerned with the strain imposed on local roads and expressways.

A partial solution, however, was successfully explored through the establishment of a multijurisdictional workplace-based transportation demand management initiative. By establishing a two-tiered delivery mechanism and solidifying municipal and private sector partnerships, concrete action was taken to reduce travel demand in select areas, at a fraction of the cost of creating additional supply.

Smart Commute Initiative

The Smart Commute Initiative (SCI) was conceived as a pan-GTA and Hamilton effort to reduce traffic congestion and the environmental impacts of single occupant vehicles

through the implementation of transportation demand management strategies targeting regular commuters. Objectives of the SCI included reductions in vehicle kilometres travelled, greenhouse gas emissions and air pollutants from transportation, as well as the proportion of travel undertaken by single occupant vehicle drivers.

Established as a partnership between the Regions of Halton, Peel, York and Durham, as well as the Cities of Toronto, Hamilton and Mississauga, the members of the Initiative recognized that an effective solution needed to address travel behaviour beyond municipal borders. At the same time, a more localized approach was required to develop the necessary relationships and for sufficient political buy-in. In response, a two-tiered delivery structure was envisioned, with a regional coordinating body supporting up to ten new and existing transportation management associations (see Figure 1)

Local and regional resources, however, were insufficient for effective program delivery. Municipal partners then looked to the federal government for assistance, and were granted $2.5 million in supportive financing under Transport Canada's Urban Transportation Showcase Program. The Program would allow for a three-year demonstration project beginning in May 2004 and ending by March 2007. A key factor of the funding was the establishment of lessons learned from the implementation of a regionwide and multijurisdictional transportation demand management program.

Governance

Due to the large number of partners in the Smart Commute Initiative, a governance structure was established to ensure equal accountability, liability and responsibility. Administratively, York Region is the lead municipality of the SCI, and signatory of the contribution agreement with Transport Canada. In order to share this obligation equally with the other participating municipalities, a memorandum of understanding (MOU) was signed (see Figure 2).

The MOU also outlined three major committees to oversee the Initiative (see Figure 2). Each of these groups is connected through the Smart Commute Association (SCA), which acted as the project manager for the Initiative. As such, the SCA was the central point of contact and coordinating body for all committees, liaised with and facilitated communication between transportation management associations, and managed the reporting process to relay progress and results to Transport Canada and municipal funders.

The first group, the Steering Committee, was responsible for overseeing the direction, development and financial management of Smart Commute. The management of the Smart Commute Association was also a major responsibility. This Committee consisted of one representative from every one of the partner municipalities, and made most decisions by consensus. Each member also linked the efforts and accountability of their respective transportation management associations to the overall project governance (see Figure 3).

The second group outlined in the MOU is the Technical Committee. Similar to the Steering Committee, this body is also made up of representatives from partner municipalities, in addition to TMA staff and other municipal engineers and planners from the GTA who share their expertise at this level. The Technical Committee serves to direct Smart Commute programming and services, and provides an opportunity for communication and sharing of best practices between TMAs and municipal TDM efforts.

Finally, an Advisory Committee of community representatives was established through the memorandum. This included members from local transit providers, academics, environmental organizations and other stakeholders. The Committee met twice per year to discuss the overall role of Smart Commute and to provide additional expertise on program implementation.

Two-tiered Operations

Smart Commute was envisioned to operate as a two-tiered structure offering services at both the local and regional levels. Locally, transportation management associations would be established in areas with significant levels of employment. Up to 10 TMAs were to be created, with at least one within the boundaries of each partner municipality. In areas with a larger employment base or various clusters, more than one association was proposed. Each TMA would then work closely with employers in its service area, allowing for significant relationships to foster, and solutions to be customized to the local context. By the end of the Initiative, eight associations were established and two remained as proposed.

This model of establishing a transportation management association was based on the successfully implementation of Ontario's first TMA, then known as Smart Commute Black Creek. Black Creek was born from a partnership between the City of Toronto and the Toronto Board of Trade in 1999, and had worked with York University and surrounding businesses since 2001. Early results showed that the TMA, in conjunction with other campus initiatives, had significantly reduced the number of single occupant vehicles destined for the York campus – from 70% to 60% of all trips by 2002. The University was then able to defer the construction of two parking structures, saving more than $30 million.

Regional services of the Smart Commute Initiative would be offered by a new organization – the Smart Commute Association (SCA). In addition to its role as the project manager and coordinator, the SCA would serve to provide more broad-based outreach and awareness of Smart Commute through advertising and media campaigns, while also taking advantage of economies of scale and centralizing some services. This included research and development of Smart Commute programming, such as a fully automated, online ridematching service and program modules supporting various modes of sustainable transportation like public transit, vanpooling as well as cycling and walking. Table 1 below provides a further distinction between the local and regional functions of Smart Commute.

Table 1: Regional and Local Smart Commute Functions

Activities	SCA (Regional Tier)	TMA (Local Tier)
Marketing and Education	• Regional marketing, media and events	• Local and workplace marketing, media and events
Commuter Services	• Centralized services • Module development	• Use of services • Customized modules
Monitoring and Evaluation	• Standards and tools • Regional commuter surveys • Compilation of data	• Employee surveys • Data collection • Data presentation to members and partners
Research and Development	• Innovation and best practices	• Pilot projects • Steer research

Programming

At the core of the Smart Commute Initiative is the ability to enhance the attractiveness of alternatives to the single occupant vehicle. In many instances, options such as cycling, carpooling or taking transit to work may be viable, but the allure and convenience of driving alone reinforces commuter behaviour. By working with employers and educational institutions, Smart Commute attempted to improve the desirability of these more sustainable modes of transportation, by reducing barriers and improving benefits that arise from their use.

In other cases, efforts were made to shift commuter travel times outside of the traditional peaks or 'rush hours' by working with employers to increase the flexibility of start and finish times. Additional work arrangements might include compressed work weeks or teleworking, leading to outright trip elimination. Table 2 provides a list of the various tools and services used to encourage commuter behaviour change at the workplace.

Table 2: Smart Commute Programming

Target Mode or Behaviour	Tools and Services
Carpooling	• Online ridematching service (Carpool Zone) • Preferential parking • Cash incentives • Emergency Ride Home or commuter insurance
Vanpooling	• Assistance with employer-provided vanpools • Preferential parking • Emergency Ride Home or commuter insurance
Transit	• Volume incentive programs • Route-planning assistance • Shuttles to/from rapid transit • Emergency Ride Home or commuter insurance
Cycling	• Improved bicycle parking • Showers and change rooms • Flexible dress codes • Education and skills training
Travel time shift	• Flexible start and finish times • Compressed work weeks
Trip elimination	• Full- and part-time telework • Compressed work weeks

Three key services offered by Smart Commute are of particular note. The first, an online ridematching service known as the Carpool Zone, was a signature offering to local commuters. Previously, a number of smaller ridematching services existed in the GTA and Hamilton, each serving the population of a few employers or one to two municipalities. With the introduction of the Carpool Zone, significant effort was made to coordinate ridematching activities in this central location, creating an economy of scale that would result in a greater chance of linking carpoolers together. The service was offered free to the general public, with enhanced features available to participating employers and institutions. After 16 months of operation, more than 6,000 commuters had signed on with the service, forming more than 500 carpools.

The second service offered by Smart Commute was the Emergency Ride Home (ERH) program. Available online to member or partner workplaces, ERH acts like commuter insurance. When an employee chooses to commute by carpool, transit or other modes and needs to leave work suddenly for an emergency, a free taxi ride (or possible car rental) is provided by the program. Unanticipated overtime or other situations that might leave an employee without the means to return home are also eligible, providing peace of mind that transportation is available even when their car is left at home.

Finally, another key reason many employees choose to drive alone to work is so that they have the flexibility to leave the office at lunch time. In areas where few services

are directly accessible on foot, a lunch-time shuttle provides the mobility desired to get to local restaurants and shopping destinations. Shuttle services can also support other modes such as bridging the gap between a rapid transit station and an employer's worksite.

Further supports to Smart Commute programming include a great deal of outreach to local commuters through marketing, communications and special events. Printed materials such as brochures helped to raise awareness of Smart Commute and commuter options, as do employer e-mail bulletins and posters. More importantly, special events and contests, such as the Clean Air Commute and the Commuter Challenge, successfully engaged employees in considering, and even testing, sustainable ways of getting to work.

Through the Smart Commute Association and the Technical Committee, most programming was developed as a package and distributed through a collection of modules known as the TMA Toolkit. This resource was developed by standardizing the programming already created by TMAs in the Greater Toronto Area such as Smart Commute Black Creek, and by learning from best practices across North America. Each local Smart Commute could then adjust the toolkit to fit the unique needs of the community and workplace, customizing service delivery where necessary.

The Toolkit includes tools and techniques for operating a transportation management association from planning to evaluation. A feasibility and planning study template allowed for a consistent approach to evaluating TMAs, along with development supports such as assistance with business planning, and branding tools that created a common look-and-feel. Examples of recruiting techniques are included, as well as case studies, facts and quotations to assist with building a business case. In addition to the tools and services that facilitate modal shift mentioned above, the Toolkit also comprises standards and techniques for monitoring and evaluating program impacts.

Delivery and Partnerships

Establishing eight entirely new organizations to implement transportation demand management solutions across the Greater Toronto Area and Hamilton was no easy feat, and required the input and involvement of a number of stakeholders. First and foremost the partnership between municipalities and Smart Commute Black Creek provided an important support network that allowed the lessons of the past to be shared, and new learnings to be passed on.

Municipal government involvement was often deeper, as many of the towns, cities and regions served as incubators for their local transportation management associations. Efforts began with urban planners and engineers working with local businesses to facilitate discussion, generate interest and attain a certain level of commitment to working together. From there, some TMAs spun out of local governments to local boards of trade, chambers of commerce or new non-profit organizations. Table 3 provides a summary of the delivery models used across the GTA and Hamilton.

Table 3: Local Smart Commute Delivery Models

Local Smart Commute	Delivery Agency
Hamilton	Municipal initiative – City of Hamilton
Halton	Municipal initiative – Halton Region
Mississauga	New incorporated non-profit
Brampton-Caledon	New incorporated non-profit
North Toronto, Vaughan	Existing incorporated non-profit (formerly Black Creek)
Northeast Toronto	Delivered by North Toronto, Vaughan
404-7	Richmond Hill Chamber of Commerce and Markham Board of Trade
Central York	Newmarket Chamber of Commerce

With varying delivery models in existence, the Smart Commute Initiative was able to take a preliminary investigation into the advantages and disadvantages of each method of implementation. Like other aspects of Smart Commute, local context is the most important factor in choosing between the options. The presence of a strong chamber of commerce or board of trade that matches the service area provides an existing audience of businesses that may already be concerned about traffic congestion. A non-profit organization, however, can be established for any area, including those that span political boundaries, and allows for focused service delivery. Municipal governments, on the other hand, can provide stability and security to a program with access to community leaders and the development approvals process. For longer-term benefits of each model, further experience and research is required.

The Smart Commute Association, like many of the local Smart Commutes, was also a creation of the Initiative. Similarly, it was incubated within the municipalities – financially a part of York Region, housed by the City of Toronto, and supported with services from Peel, Durham and Halton Regions with the Cities of Hamilton and Mississauga. The original vision for the Association was that it, too, would become an incorporated non-profit. Recent opportunities in the GTA and Hamilton, however, have created other possibilities for the organization.

Of all the partnerships formed within the Smart Commute Initiative, the most significant were those created between TMAs and their member or partner employers. Without the creation of strong relationships and the support of employers, program delivery at local workplaces would be extremely difficult. In most cases, employers not only paid a fee to Smart Commute, but they were also significantly involved in implementation.

Access to employee communication channels was almost always controlled by company management, and their approval was required before surveying commuters or marketing Smart Commute. With some workplaces, involvement in the Initiative went beyond the worksite to the management of the TMA. Employers such as Enbridge Gas Distribution, University of Toronto at Mississauga, Canadian Automobile Association,

Husky Injection Molding Systems and Knoll each sits on their respective Smart Commute Boards of Directors or Steering Committees and actively makes decisions to guide the direction of the transportation management association.

Monitoring and Evaluation

Transportation demand management initiatives are still relatively new and unproven in Canada, so a key element of the Smart Commute Initiative was to monitor the implementation of the program and to evaluate results. A detailed framework was established to review program impacts at both the employer and regional levels. For each employer, the following process was used to assess the performance of Smart Commute. A minimum of one year between baseline and follow-up measurements is considered ideal for ensuring true program impacts:

1. Establish baseline conditions by conducting the following:
   a. Employee commuting survey
   b. Site assessment
   c. Vehicle and occupancy count (more than 1,000 employees only)

2. Track outreach mechanisms such as the list below:
   a. Brochure distribution
   b. Incentive distribution
   c. Communications
   d. Events

3. Measure change from baseline conditions by conducting the following:
   a. Follow-up employee commuting survey
   b. Follow-up site assessment
   c. Follow-up vehicle and occupancy count (if applicable)

At the regional level, a similar strategy of establishing baseline conditions and measuring follow-up results against them was established. Results were to be monitored in two areas – observed behaviour change, and reported behaviour and attitudinal change.

Observed behaviour change would be tracked through changes measured between a regionwide travel behaviour study called the Transportation Tomorrow Survey (TTS). Conducted once every five years, the TTS is considered by local planners and engineers to be the most accurate reporting of modal split and transportation behaviour. Unfortunately, the schedule of the survey would not accurately capture the effects of Smart Commute. The 2001 TTS survey would have to form the baseline results, which were taken long before implementation began in 2004. The follow-up TTS survey, conducted in 2006, would not include the peak of the program's delivery through late 2006 and into 2007.

Another mechanism for capturing observed behaviour change, the Cordon Count Program, also followed a schedule that did not accurately encapsulate Smart Commute's implementation timeline. Since most TMAs in the Smart Commute Initiative did not launch until 2005 or 2006, it would be premature to determine impacts from screenline counts. While cordon count data can show auto occupancy, transit modal share and vehicle counts over a 14-hour period at selected screenlines in the GTA, there is no data available for Hamilton. Cordon counts typically do not capture active modes or local trips, either, as these may occur entirely between screenlines.

In addition, a Commuter Attitudes Study was conducted in May 2005 to establish the primary mode of transportation reported by GTA and Hamilton commuters, as well as their attitudes and opinions toward Smart Commute and sustainable means of getting to work or school. A follow-up survey was conducted in November 2006 with 1,000 local commuters, but with only 18 months between surveys little change was recorded outside of the margin of error. One notable exception, however, was that the use of carpooling as a primary mode of transportation increased by five percent. Concurrently, commuter awareness of the Carpool Zone, Smart Commute's flagship service, registered at 17%.

Finally, the results of Smart Commute service use are measured directly from the user base in the Carpool Zone. At monthly intervals, all users who are registered in a carpool on the system are sent a short 'three-click survey' by electronic mail. This survey verifies if the user did indeed carpool, how many passengers were in the vehicle, and how many days per month the carpool operation. The online system then calculates reductions in commuter trips, greenhouse gas emissions, air pollutants and vehicle kilometres travelled based on the user's home and work locations.

Impacts

Smart Commute Initiative efforts to shift commuter behaviour have successfully reduced the environmental impacts from single occupant vehicle use in the Greater Toronto Area and Hamilton commutershed by an estimated 14,500 tonnes of greenhouse gas emissions for 2006-07, and 17,400 tonnes between 2004 and 2007. More than 100 tonnes of air pollutant emissions were also prevented. Impacts on the transportation system were reduced by nearly 62,800,000 vehicle-kilometres travelled in the final year of the Smart Commute Initiative, and 75,750,000 since May 2004. These reductions resulted from the elimination of 1.19 million single occupant vehicle trips in 2006-07, and 1.27 million trips overall.

Results from Smart Commute are concentrated within specific areas or worksites of the GTA and Hamilton. For reasons stated above, overall system impacts are not yet measurable. Reductions in transportation demand achieved through the Initiative may also have been offset by increases in commuting distances or modal shift to driving alone in other areas. Furthermore, since many employer programs did not begin until 2006, results from after surveys have not yet been tabulated.

Lessons Learned

As part of Transport Canada's Urban Transportation Showcase Program, learning from the experience of establishing a multijurisdictional TDM program is a major component of the Smart Commute Initiative. Lessons of notation were recorded at both the local and regional levels, on specific items and for overall implementation. The following sections describe the insights obtained concerning time, commitment, communication and cooperation, customization versus consistency, and monitoring and evaluation.

Lessons Learned: Time

A number of lessons have been learned about the amount of time required to properly assess, develop and implement a transportation management association, as well as the time required to effectively monitor change. The timing of implementing a two-tier structure for program delivery also provided some insights into how modules and services may have been delivered more effectively.

Based upon experiences across the GTA and Hamilton, the investment required for developing a TMA is much greater than was originally anticipated – a minimum of 16 months is required. The timeline below outlines the amount of time for each stage of development:

- 6-12 months: Municipal approval or endorsement to investigate TMA feasibility
- 4-16 months: Investigation of TMA feasibility, including stakeholder engagement
- 6-9 months: Agreement with host organization or non-profit incorporation (may be undertaken parallel to launch planning)
- 6-12 months: Stakeholder commitment and initial planning to public TMA launch

The timeline for implementing a Smart Commute program with an employer is separate from TMA development, but may be conducted concurrently. A minimum of 10 months is required to recruit a new employer, set a baseline and offer services to commuters; in some cases, an employer will choose to not move forward beyond a baseline survey. In other instances, where an employer has approached a TMA and is ambitious to move forward, this timeline can be compressed:

- 2-9 months: Recruitment of new employer
- 2-9 months: Commitment of new employer and planning for baseline measurements
- 3-12 months: Measurement of baseline, analysis of results and approval
- 3-6 months: Planning and initial launch of new services such as Carpool Zone
- On-going: Implementation of new services, improvements and continued promotion

Because the formation and implementation phases of the Smart Commute Initiative required more time than anticipated, the process of monitoring impacts has been premature. Where some follow-up surveys have been conducted, results have shown little change, or only represent an initial impact from the program launch. Proper assessment of transportation demand management initiatives requires a longer timeframe of sustained implementation to assess effectiveness – at least two years. This would allow sufficient time for the program to integrate into normal business operations, and provide better insight into whether Smart Commute has been able to effect sustainable change.

Since the development timing of the Smart Commute Initiative was inconsistent across the Greater Toronto Area and Hamilton, supporting initiatives such as program modules and services were not always developed at the most effective time. For example, two TMAs existed prior to the Smart Commute Association, and therefore had developed their own suite of services and program branding. While the SCA worked to integrate existing materials into transferable tools for new and developing TMAs, this was not always possible due to inconsistency between the established Smart Commutes, or inapplicability of what was already created. While the SCA caught up to existing TMAs, they often felt that their needs were not being fulfilled at the regional scale. For more effective two-tier service delivery, establishment of the regional tier and supports for TMAs is essential prior to development of multiple TMAs.

Lessons Learned: Commitment

As a multijurisdictional initiative, Smart Commute required commitment from various municipalities at a level that was nearly unprecedented in the GTA and Hamilton. This commitment was secured via a memorandum of understanding that successfully outlined the roles and responsibilities of the partner municipalities. This MOU worked very well to create a framework for overall Smart Commute Initiative governance and management.

For TMAs that were operated by an organization outside of the municipality, commitments were established through MOUs, previous agreements, and partnerships. Roles and responsibilities, including funding, were generally outlined in these arrangements. Commitment to implementation methods was generally not included, leaving a patchwork of service delivery. For example, not all TMAs committed to the Smart Commute branding, providing various brand images. Furthermore, not all worksites were established on the Carpool Zone, leaving two ridematching services in operation throughout the Initiative. Finally, requirements for monitoring and reporting were not always identified with TMAs, leaving room for negotiation on the details, accuracy and timing of reports.

Lessons Learned: Communication and Cooperation

The last issue involving commitment was addressed largely through communication and cooperation. Over time, much of the inconsistency amongst the various TMA

operations was recognized and addressed through discussion and negotiation, and good will amongst all partners. Much of this was facilitated by the Smart Commute Association and the Technical Committee, through either group meetings or one-on-one discussions. Early in the implementation of the Smart Commute Initiative, communication gaps were identified and the SCA played a role in keeping partners as up-to-date as possible on items such as reporting requirements and processes for acquiring Transport Canada funding.

Further improvements in communication were still possible, largely with additional time and resources for one-on-one consultation and engagement, as well as more formal channels such as a Smart Commute Initiative newsletter and facilitated sessions. A closer working relationship between the SCA and TMAs on program modules may have also been beneficial. A balance, however, is always required as some partners felt overburdened by regional activities at many times.

Lessons Learned: Customization versus Consistency

The challenge with delivering a regional initiative in an area of more than six million people is that a one-size-fits-all model will not work across the varied municipalities and urban areas. While local customization is necessary, an overall consistency must be maintained to provide cohesion to the Smart Commute program as a whole. While services may have been delivered through various operating models that differed from TMA to TMA, they largely appeared coordinated and synchronized to the general commuting public.

Each transportation management association was assessed, planned and implemented independently, resulting in different organization models across the GTA and Hamilton. TMAs were launched as municipal initiatives, through incorporated non-profits, and as services offered by a local board of trade or chamber of commerce. While early in the development of the TMAs, no clear model had emerged to fit all areas of the Smart Commute Initiative. Considering the local context, including relevant stakeholders and the benefits they could bring to the project, and then choosing the appropriate model remained the best approach.

Program delivery of the Smart Commute Initiative also required local customization. The TMA Toolkit, a collection of tools and services for TMA program development and implementation, was designed to be a menu that each TMA could customize. For example, the local Smart Commute could choose which program modules to offer to employers – cycling and walking, alternative work hours, shuttles, etc. – each module was created to stand alone. Within each module were a number of templates that could then be customized at the TMA or employer level, again offering an economy of scale and certain level of consistency, but also flexibility. A key lesson is that it is not enough for a regional body to create a module or tool, offer initial training, and then hand it off to TMAs. Direct assistance in customization must also be made available, since TMAs may have lacked the resources to do so, and the SCA needed to have more practical experience with and evaluation of modules and tools developed.

Of all tools and services developed in the TMA Toolkit, the most challenging was the set of branding tools created for local Smart Commutes. The initial Smart Commute wordmark was inherited from Smart Commute Black Creek, and enough had been invested that the logo could not be redesigned. Instead, a complete visual identity was built around it with only minor adjustments. Where a branding exercise such as this could take 12 months, development was condensed into three months without a full understanding of how the Smart Commute brand would be used. The result is that as some TMAs later neared program implementation they felt the brand did not exactly meet their needs. While an overhaul of the brand is not necessary, a review of the brand standards would have been useful to determine where increased flexibility could have been achieved, and a more solid commitment from all parties to the remaining elements solidified.

Lessons Learned: Monitoring and Evaluation

Finally, a number of important insights have been gained into the process of monitoring employer-based and region-wide transportation demand management programs, as well as the value of obtaining results.

In some cases, obtaining permission and buy-in from an employer to conduct a survey is a difficult process. While some employers immediately see the value of conducting an employee commuting survey, others feel that their employees are already oversurveyed, and another questionnaire is only an expensive use of employee time.

Standardizing data collection and review across the region was an important step for ensuring that results are comparable between various employers and TMAs. The need to customize, however, requires that standards be flexible; some employers enforced strict limits on questions or even changed wording. Ultimately, the employer has the final approval of the survey.

Beginning the Smart Commute Initiative with a mandated framework for evaluation greatly assisted in ensuring that this important aspect of the project was not lost, and that monitoring was a consideration for every aspect of implementation. Knowing upfront what indicators were required for reporting was especially useful for the Carpool Zone – it was possible to determine what information to ask of registrants and what reports to generate at the outset. Certain indicators, however, were vague and left to interpretation.

Measuring project activities, such as media impressions, events and surveys, was a fairly simple process, but time-consuming. Project benefits, however, were less easy to determine, and almost impossible to isolate to the Smart Commute Initiative outside of the Carpool Zone. Double counting may have also occurred with different forms of measurement. Fluctuations in gas prices, changing social and environmental concerns, media coverage and employee or workplace relocation are all significant factors that affect commuter behaviour, and could have assisted with Smart Commute efforts, or

made demand management activities more difficult. This challenge is not unique to the Smart Commute Initiative, but applies to transportation demand management programs across North America.

As outcomes were tabulated for the Smart Commute Initiative, it was immediately demonstrated that the project did indeed have an impact in the GTA and Hamilton. Reductions in greenhouse gas emissions and other pollutants could now be linked back to targets set in municipal environmental plans. Reductions in vehicle-kilometres travelled and trips reduced fed directly into the objectives of municipal transportation master plans. With quantitative results now available from Smart Commute, the value of the program became entrenched in the minds of many local politicians. As an effective – and now proven - means of fighting traffic congestion and reducing environmental emissions, the Smart Commute Initiative is well-positioned to become a sustained and necessary element of municipal and regional service delivery in the Greater Toronto Area and Hamilton.

Conclusions

The Smart Commute Initiative was a successful demonstration of the implementation of regional transportation demand management strategies to combat traffic congestion and environmental degradation. Key to the success of the Initiative was its ability to reach beyond municipal boundaries through partnerships between municipalities, and a two-tiered delivery mechanism that engaged regional stakeholders and allowed for economies of scale along with local customization.

Careful monitoring lead to the establishment of measured results showing that objectives of reducing single occupant vehicle use and vehicle kilometres travelled were achieved. The prevention of greenhouse gas emissions and air pollutants was also realized. Tools and services used to encourage carpooling, vanpooling, transit use, cycling and alternative work arrangements were effective in attaining these results, but isolating impacts achieved from Smart Commute irrespective of external factors was not possible.

Finally, participating employers and the business community also found value with Smart Commute. A survey of members and partners found that four out of every five employers rated services as excellent or very good. Furthermore, the transportation management association model of addressing traffic congestion has received wider buy-in from the Ontario Chamber of Commerce, who passed a motion in 2006 calling for provincial funding and involvement in programs like Smart Commute.

While the involvement of Transport Canada in the Smart Commute Initiative has come to a close, transportation demand management strategies continue to be implemented through the TMAs and SCA. Adjustments to the governance, delivery mechanisms and division of responsibilities will continue, as municipal partners and other stakeholders continue to learn from the establishment of Smart Commute.

Figure 1: Proposed and Operational Local Smart Commutes (TMAs)
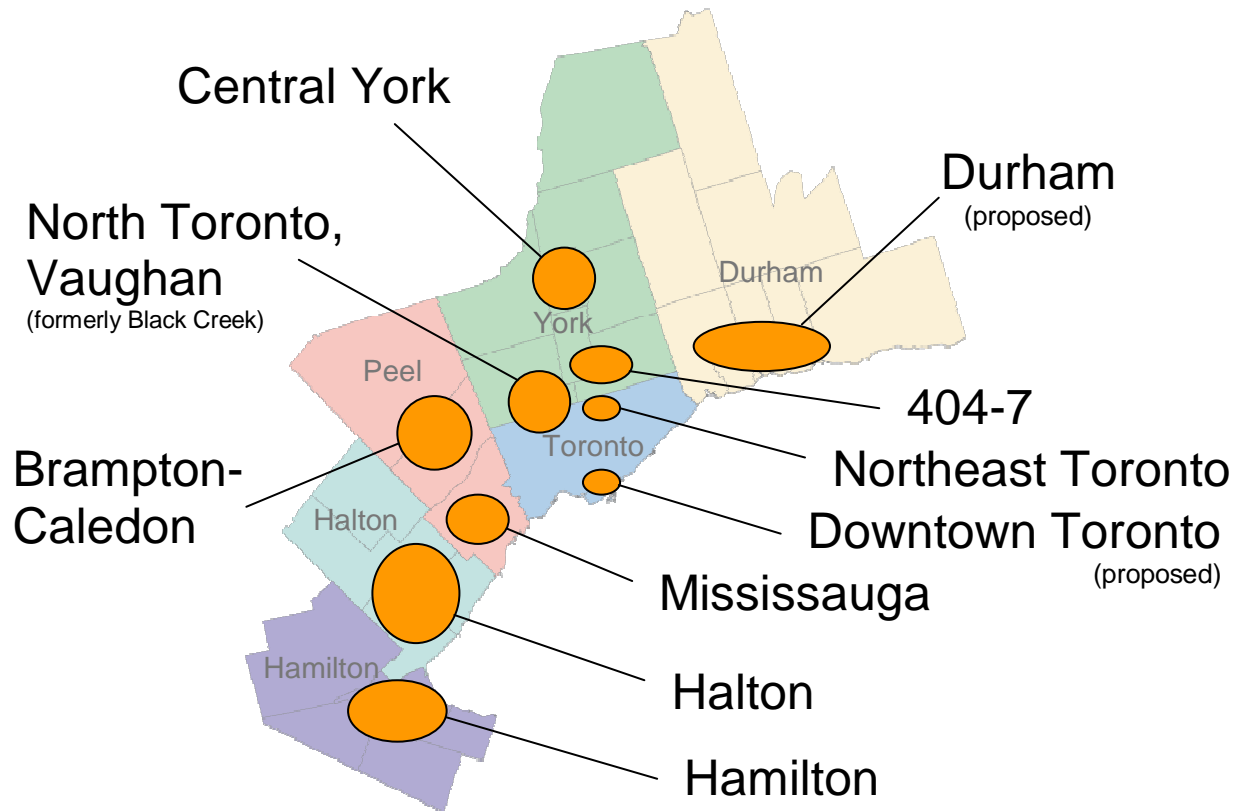

Central York

North Toronto, Vaughan
(formerly Black Creek)

Durham
(proposed)

Brampton-Caledon

404-7

Northeast Toronto

Downtown Toronto
(proposed)

Mississauga

Halton

Hamilton

Figure 2: Smart Commute Initiative Memorandum of Understanding Participating Municipalities

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                    │    Transport Canada       │
                    │  Contribution Agreement   │
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                        ┌─────────────┐
                        │ York Region │
                        └─────────────┘
                               │
              ┌────────────────────────────────────┐
              │  Memorandum of Understanding        │
              └────────────────────────────────────┘
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| City of Hamilton | Halton Region | Peel Region | City of Mississauga | City of Toronto | York Region | Durham Region |
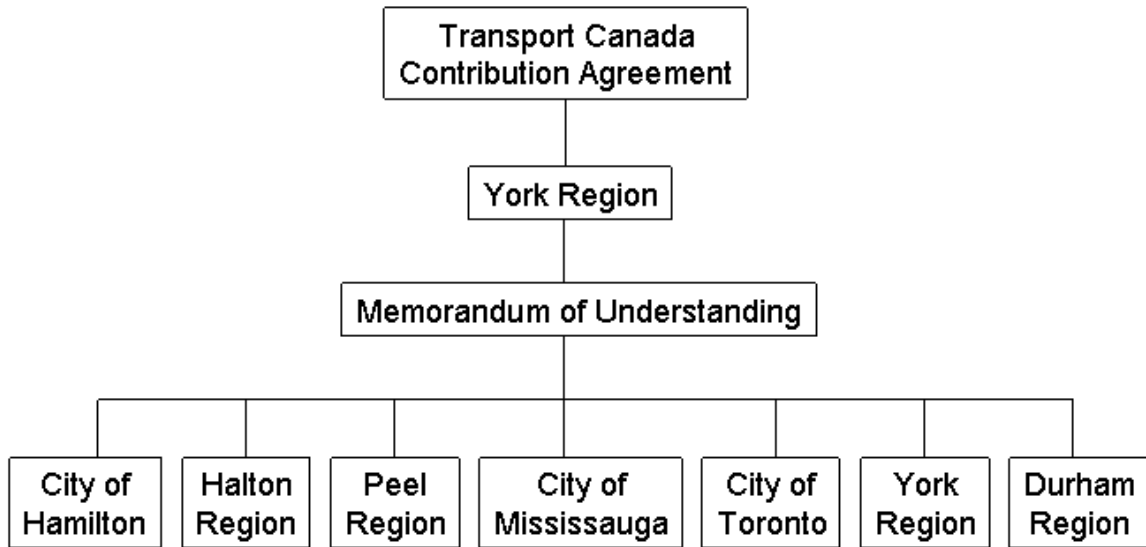
Figure 3: Governance of the Smart Commute Initiative

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                         ┌──────────────────────────┐
                         │ SCI Steering Committee    │
                         └──────────────────────────┘
                                      ▲
                                      │
┌──────────────────────┐   ┌────────────────────┐   ┌────────────────────────┐
│ SCI Advisory Committee│→ │  Smart Commute      │← │ SCI Technical Committee │
└──────────────────────┘   │   Association       │   └────────────────────────┘
                           └────────────────────┘
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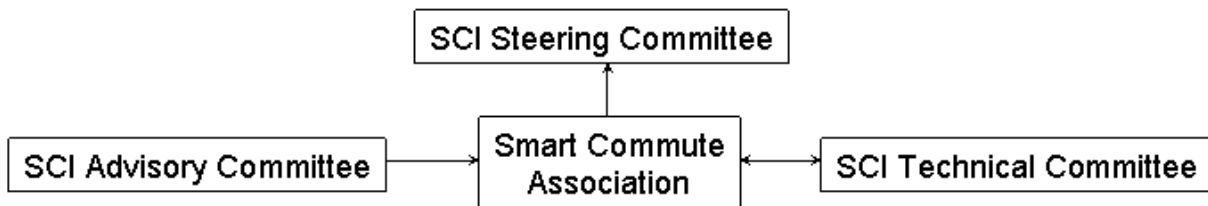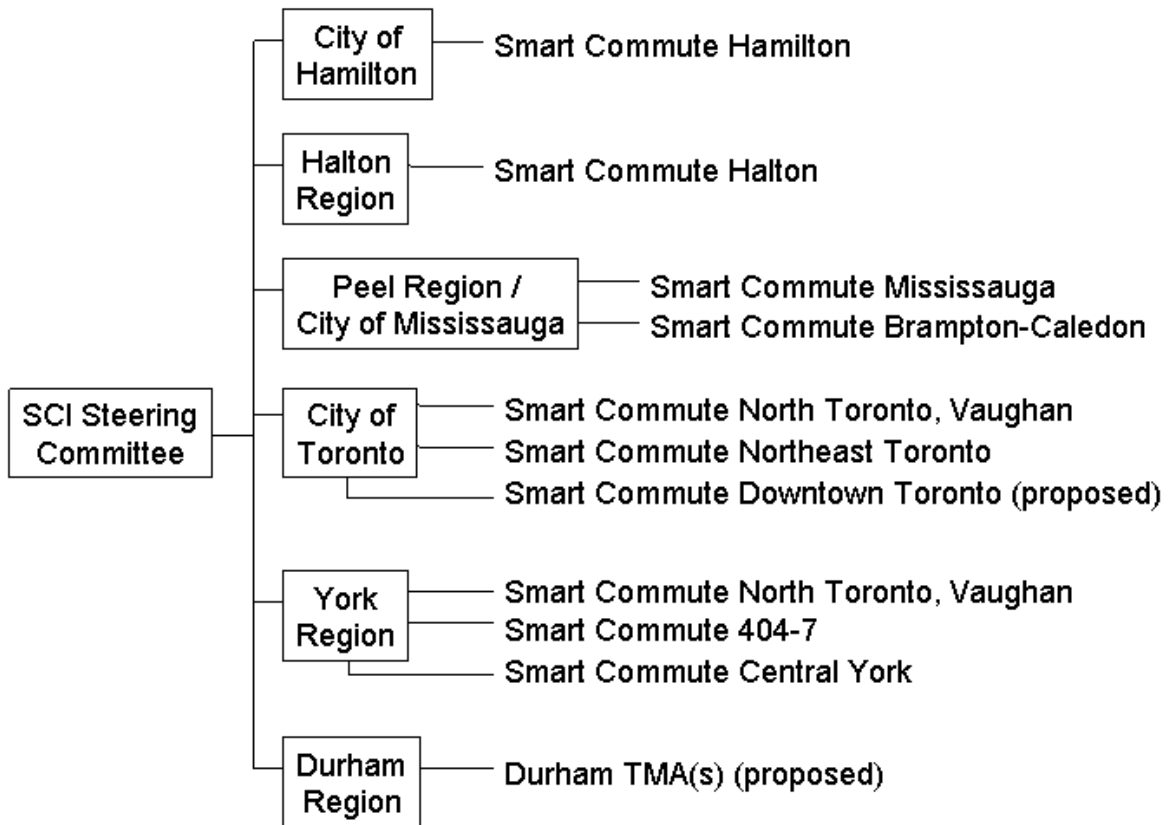
Figure 4: TMA Representation and Accountability

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