



# Transportation Demand Management Plan for Greater Sudbury



April 2018



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# 1.0 Introduction to Transportation Demand Management

## 1.1 Introduction

Greater Sudbury is completing this Transportation Demand Management (TDM) Plan to create a transportation system for the city that fits the goals and objectives of both the Transportation Master Plan (TMP), and the Official Plan (OP). The TDM Plan has been designed to meet the objectives outlined in the TSR.

The Greater Sudbury OP states that a TDM Plan may be required to create a safe, efficient, and convenient transportation system that can support expansion, and is justified by demand. To be sustainable, the system needs to promote all modes of travel and create programs that will promote sustainable transportation throughout the city.

## 1.2 What is TDM?

Transportation demand management is the application of programs, policies, and services to influence how, why, when, and where people travel. These services are designed to encourage the long-term use of sustainable travel options such as cycling, walking, transit, or carpooling. The focus of TDM services is to get residents out of single-occupancy vehicles and into more sustainable modes of transportation. This will allow residents in Greater Sudbury to better use transportation resources, and create a more even mode share between driving, carpooling, walking, cycling, and using transit.

TDM approaches transportation problems through both people and infrastructure-focused ways. Using programs and measures, residents can be guided towards more mobility options and educated on how to use more sustainable modes of transportation. Through an infrastructure-focused approach, new bike lanes, trails, security, and end-of-trip facilities such as bicycle parking can be provided to encourage commuters to use active and sustainable transportation options for daily travel.

TDM functions at two levels, short-term and long-term. In the short-term, TDM provides education and support for those who are interested in using sustainable modes of transportation, and creates infrastructure for those to travel. In the long-term TDM strategies can be used to encourage better community design, and create a city with mobility options for everyone. Long-term behaviour change is the goal of TDM. This will help to create a community that is more sustainable, connected, and healthier.

## 1.3 What is a TDM Plan?

A TDM Plan is created for a city to assist in controlling and managing the demand for travel and transportation infrastructure. Planning solely for an increase in car-based road users can be very costly as roads need to be widened, new bridges need to be constructed, and impacts on the environment and community health increase. A TDM Plan is a cost-effective alternative to

increasing road capacity by both working to better manage traffic volumes and transferring road users to different modes of travel. The TDM Plan is made up of strategies and policies that aim to reduce the demand for travel within an area and makes recommendations as to the best solutions for the community. In Greater Sudbury, the public was consulted through to understand the issues that residents have encountered and use this information to determine the best approach to travel management in the community.

A TDM Plan addresses not only transportation issues, but also the effects of increasing travel as well. The Plan for Greater Sudbury considered *why* the community has chosen its modes of travel and how to change years of behaviour and social norms. It is important to look for long-term solutions instead of short-term fixes for these types of problems. TDM Plans aim to change the behaviour of the community to that of a more sustainable one. With initiatives that promote and facilitate the use of alternative or sustainable modes of transportation, a TDM Plan can be a solution for cities that simultaneously addresses public health, environmental issues within the community and the city's general well-being as well. TDM policies link to that of many others and can create a stronger, more vibrant overall community.

## 1.4 Vision and Principles

### Vision

The vision is what guides the development of the plan. It is one that all residents, employees, students, and visitors can be proud of, and which represents the wants and needs of the City. TDM strategies are used to support the vision through policy, city wide programs, and collaborative efforts. The vision is one of a seamless and multi-modal city that accommodates the needs of all, no matter the age or level of mobility.

*Greater Sudbury is a community that embraces **sustainable** mobility through efficient use of the transportation network and services to ensure that all residents have equal and **equitable** access to the services they need, the destinations they want to go to and the people that they want to see.*

### Principles

The principles guide how Greater Sudbury will achieve this vision. Creating a framework that supports the vision and can guide the approach for delivery of TDM measures and transportation programs is the purpose of the principles. These are an important part of the TDM Plan, and are necessary to support a mobile Greater Sudbury.

**Safe** - Greater Sudbury will provide the residents and visitors within the community with sustainable transportation options that will help people feel safe and secure when they are moving around the City.

**Shift Travel Behaviour** – the City will create a set of programs and measures that will encourage residents to use sustainable travel modes throughout the year and over the long-term to develop a culture that embraces sustainable travel.

**Integrated** – The City will create a set of policies, programs and measures that will create a seamless sustainable transportation network to encourage the use of sustainable modes. It will also help interested parties to better define their role and assist in the delivery and promotion of sustainable transportation.

**Effective** – The programs, policies and measures developed must be reflective of the community and cost-effective. They must also lead to measurable results indicating that changes in travel behaviours are occurring.

**Inclusive** – a set of TDM-based programs and sustainable infrastructure which allows all visitors, residents and workers, regardless of age, gender or socio-economic background to travel throughout Greater Sudbury using any sustainable mode they choose. This will allow for greater access to sustainable travel modes without creating large economic or social barriers to accessing transportation services and infrastructure.

## 1.5 Why Does Greater Sudbury Need This?

TDM is important for Greater Sudbury as it provides a framework for using the transportation system more efficiently and utilizes scarce municipal transportation resources more effectively. As well, promoting the use of sustainable modes of travel will help to increase physical activity, reduce greenhouse gas emissions and improve quality of life.

Shifting to more sustainable modes of transportation can decrease the potential for environmental harm, increase the amount of time people spend being physically active, and take away the stress of commuting through congestion. Greater Sudbury is a community with transportation patterns that are based predominantly on the ownership and use of a private-vehicle. Although the downtown area boasts a transit terminal in the city centre, safety concerns, weather, and lack of infrastructure often deter people from using sustainable modes of transportation for getting around.

Greater Sudbury has a solid basis for the integration and promotion of sustainable modes of transportation. Almost 50% of the population lives within a 10-km radius of their workplace. This is considered a reasonable distance for commuting by bus, or active transportation with good infrastructure. With TDM measures and programs in place, those who live within that distance have the option to commute without the use of a single occupant vehicle.

A strong TDM plan will create a healthier, more sustainable community that can be proud of their transportation system. Using modes other than driving to work allows for more financial and personal freedom. If congestion can be moderated, then the community can feel safer at home and on the road, whether in a car, on a bike, or walking to their destination.

## 1.6 What are the Benefits?

There are many benefits to implementing TDM programs, measures, and services as a tool for transportation planning. TDM focuses on reducing the number of cars on the road and the amount of time spent in single occupant vehicles. TDM benefits everyone in the community, including residents, businesses, visitors, and students, regardless of preferred mode of travel.

### Individual Benefits

On an individual level, TDM can enhance the quality of life through active and sustainable transportation. Being more social in the community and getting more physical activity can help residents live a healthier lifestyle. With multiple travel options, there can be less time spent driving. This can take stress off an individual as they have more time for family or other activities. Using TDM measures to commute to work can also save individuals money as it costs less to carpool or take active modes for travel purposes.

### Community Benefits

At the community level, TDM measures can help to create a stronger, more cohesive community. Reduced greenhouse gas emissions create a healthier community through better air and water quality. With travel modes being more evenly distributed there can be a more efficient and effective use of the transportation network and resources. With a community being planned on a more human scale, the transportation system can adapt to become more vibrant and livable.

## What are the Benefits to Greater Sudbury?

### *Health and Safety*

- ▶ Increased health from use of active transportation and improved community cohesion
- ▶ Stress reduction from less time spent driving alone or in congestion

### *Transportation System*

- ▶ Reduced congestion and resulting time savings
- ▶ Multiple travel options
- ▶ More efficient and effective use of the transportation network

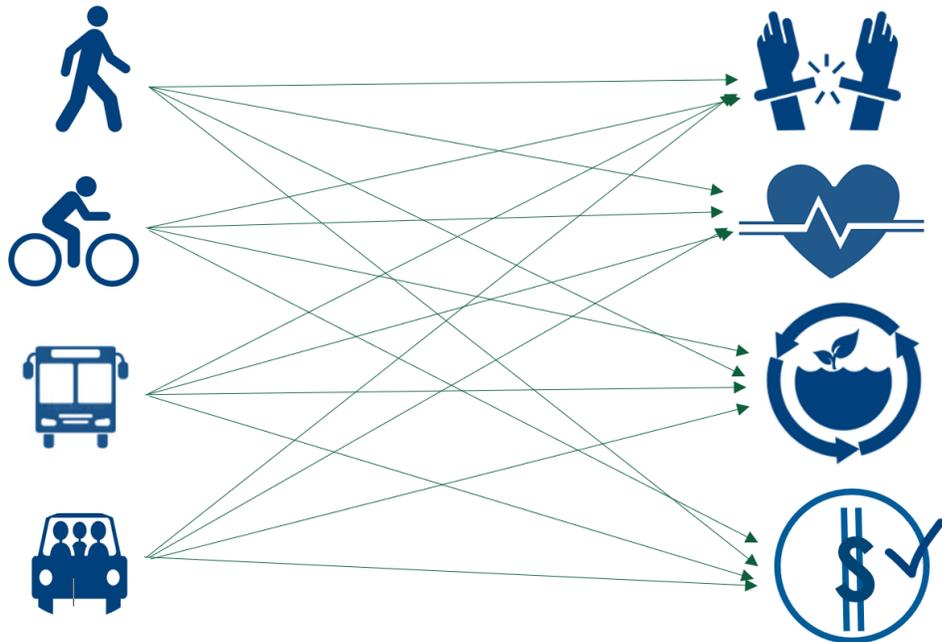
### *Financial*

- ▶ Reduced costs of car ownership and maintenance
- ▶ Better/more efficient use of municipal financial resources

### *Environmental*

- ▶ Improved air and water quality
- ▶ Reduced greenhouse gas emissions

The figure below shows how each form of sustainable transportation can generate a return in terms of greater sustainability, health benefits, more travel freedom, and financial savings.



For Greater Sudbury, the benefits for individuals will be lower travel costs and stress levels associated with getting around. Many people that work in the urban centre commute from the outskirts of the city. The availability of carpools in outer neighbourhoods will save residents money on commuting costs to their place of work. For those residents who use public transit within Greater Sudbury, they can save reduce their commuting costs as well, and have the potential to do other things while traveling to work. Active transportation provides many benefits to the user by providing physical activity, reduced costs and improvement to individual and community health through reduced greenhouse gas emissions.

On a community level, more people using sustainable modes will create a safer environment with more people on the street, decrease the amount of greenhouse gas emissions with less drivers on the road and create a more inclusive society through improved accessibility to transportation.

## 2.0 Background and Data

### 2.1 Introduction

A TDM Plan requires an understanding of the community, including demographics, modes of travel, current and proposed urban and rural development patterns and what is important to its residents. Without this information, the plan will not be reflective of the community. The success of a TDM Plan depends on understanding the underlying reasons behind a City's mobility trends, and the challenges residents face when travelling throughout the city.

While Greater Sudbury has many of the same issues, concerns, opportunities and challenges that other cities of a similar size have, the TDM Plan will be unique to Greater Sudbury and reflect its strategic goals, character, demographics and topography. Therefore, the analysis of the background information and data is an important component in the development of a plan that will encourage residents to shift their travel behaviours to more sustainable modes on a long-term basis.

### 2.2 Community Profile

#### Community Information

Greater Sudbury is the largest city in Northern Ontario, with a population of 165 000 people (Statistics Canada). It is a single tier municipality which was formed in 2001 after the merging of the unincorporated townships, cities and towns that comprised the former Regional Municipality of Greater Sudbury. Greater Sudbury has been recognized worldwide for its environmental efforts in reclamation since the 1970s, specifically the Region's success in greening and rehabilitating local lakes.

- ▶ Average Age: 42 Years
- ▶ Median Household Income: \$71,687
- ▶ Population Density: 50 people/sq km
- ▶ Average Household Size: 2.3 people
- ▶ 71% English speaking
- ▶ 25% French speaking
- ▶ 61 % live in single detached houses
- ▶ 66 % of population is of working age
- ▶ 18% of population is eligible for retirement
- ▶ 16% of the population is below the age of 15

#### Community Data Overview

The following provides an overview of the makeup of the population in Greater Sudbury:

##### *Travel Data*

Figure 1 shows the mode chosen in relation to the distance traveled within Greater Sudbury. From the data it is evident that the further a person travels, the more likely they will commute by automobile. Due to the high percentage of those driving, the average resident of Greater Sudbury spends more money on transportation than the average Ontarian. Of interest is that there are the same number people driving less than 2 kilometres to work as those walking the

same distance. Also, of note is that there is no one carpooling less than 6 kilometres from origin to destination.

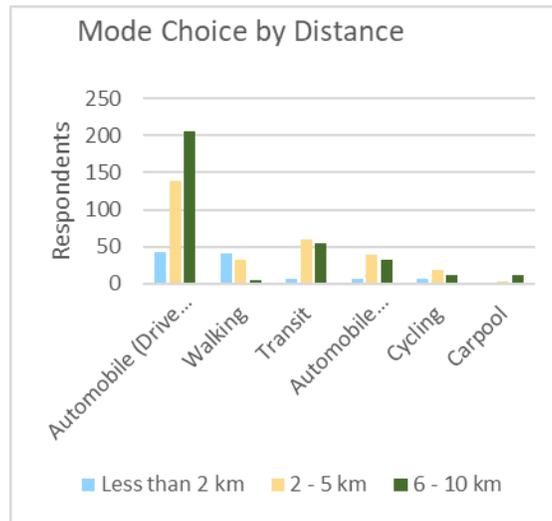


Figure 1: Mode Choice per Distance Travelled

### 2.3 Survey Analysis

In the spring of 2017 Greater Sudbury residents were invited to complete an online survey to provide the City with information on how, why, and where they travel. This was important for the development of the TDM Plan, as the City was considering new ways to move people, rather than vehicles, throughout Greater Sudbury. The survey was completed by nearly 1500 residents, providing solid data on how residents travel within the community. The response rate for the survey was 0.9% of the total population of the City of Greater Sudbury.

As noted in Figure 2, the results indicated that single occupancy ('drive alone') private motor vehicles are the most common mode (65%) of transportation for residents. However, the survey also provides a positive outlook for sustainable modes: 13% of residents carpool or travel as passengers, 13% take transit, 6% cycle, and 3% noted walking as their primary mode of transportation. Figure 2 also shows the three most common reasons for driving alone: convenience and flexibility, travel time, and lack of other options.

## TRAVEL MODE

**What vehicle do people use to travel in Greater Sudbury?**

**Why do most people drive alone?**

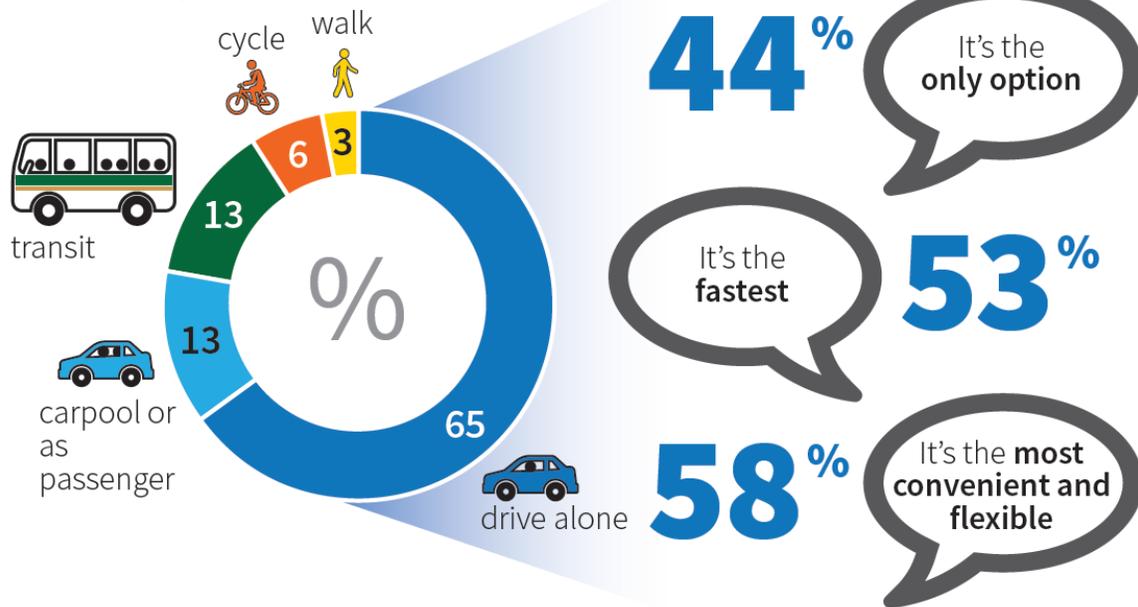
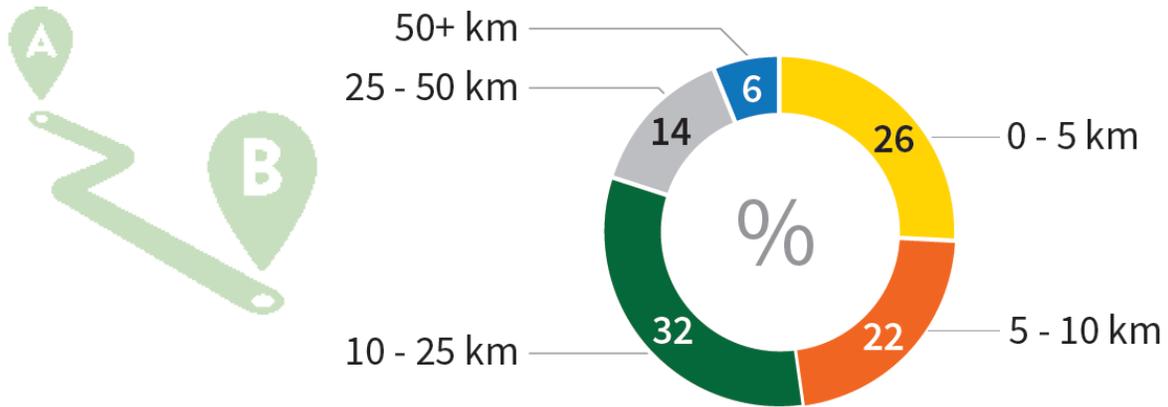


Figure 2: Survey Results – Modal Share and Reasons for Driving

Of those who commute for work on a daily basis in Greater Sudbury, almost half live within 10 km of their workplace (Figure 3). This is considered a reasonable distance to commute by transit, and can be an area of opportunity for the City to encourage residents to use transit more often. Along with shorter commute distances, over half of respondents noted that their commute is 15 to 30 minutes.

## TRAVEL DISTANCE

### How far do people travel in Greater Sudbury?



**54%** of survey respondents have a commute of **15 to 30 minutes**

Figure 3: Survey Results – Distance Travelled

When asked specific questions about different modes of transportation, there was a very positive response to **carpooling** within the City. Of those who responded to the survey, **64% did not have access** to a carpooling program at work, but **57%** said they would be willing to carpool with a colleague **if the service was available**. An **expansion of the active transportation** network would increase interest in using active transportation to get to work by **52%**.

At the time the survey was conducted, there was a limited amount of active transportation infrastructure within Greater Sudbury. The survey asked how comfortable residents were with using each mode of active transportation, as shown in Tables 1 and 2 below.

Table 1 – Pedestrian Comfort in Greater Sudbury

	Not at all comfortable	Somewhat uncomfortable	Neutral	Somewhat comfortable	Very comfortable
English	5%	13%	16%	35%	31%
French	5%	13%	14%	31%	38%
Blended	5%	13%	15%	35%	32%

Table 2 – Cyclist Comfort in Greater Sudbury

	Not at all comfortable	Somewhat uncomfortable	Neutral	Somewhat comfortable	Very comfortable
English	50%	29%	9%	10%	3%
French	33%	37%	11%	11%	8%
Blended	47%	30%	9%	10%	4%

Questions about Greater Sudbury’s transit system indicated that 78% of respondents did not use transit at all. These statistics give insight into the current state of Greater Sudbury’s transportation system, and where there are opportunities for improvement. The full survey results are contained within Appendix B.

### 2.4 Best Practices Review

To create a TDM plan that will be successful in Greater Sudbury, a review of other plans was undertaken to assist in creating this plan. The best practice review considered the TDM Plans within BC, Halifax, Ajax, Waterloo, Whitehorse, Thunder Bay, and Kitchener to provide insight into successful strategies that Greater Sudbury could implement in order to have a more successful and healthier transportation system. Best practices have been identified and discussed in more detail within Appendix A.

#### Performance Measures

Performance Measures are commonly used to monitor the outcomes of a given TDM program. Halifax is a notable example as its measure of success is simply measured in terms of the number of users associated with each TDM measure. This can provide a simple and transparent way to understand the success of the program and who is participating.

#### Northern Communities

Northern communities often have different considerations regarding TDM Plans, infrastructure, weather, and lower densities play major roles in how people travel in these communities.

The Thunder Bay TDM Plan discusses the need for efficiency, and opportunity to broaden access to the downtown through the removal of travel barriers. The City is looking to increase mobility for the aging population, increase the availability of active transportation routes, and thus decrease the need and cost of vehicle ownership. The City’s overall focus is to promote a program that will result in a community that is healthy and vibrant, and can create opportunities from the transportation challenges they face today.

The City of Whitehorse created a TDM Plan in 2014 as they noted that maintaining a vehicle-oriented city could need a significant increase in public investment for new infrastructure. The TDM Plan addressed the issues of public health, greenhouse gas emissions, the increased demand for downtown parking, and the aging population as more people retire in the community.

## Policy Goals

Some regional municipalities pursue technical transportation network performance objectives while others are focused more on ensuring greater consistency between TDM objectives and existing policy. The Town of Ajax's TDM objectives integrate with other strategic policies and goals. Using simple policy goals allows for the public to understand how the plan works and is measured.

Thunder Bay has also set a precedent in their TDM Plan policies. Focusing on what infrastructure is currently available, the plan set forth to capitalize on what already exists, and promote what is already available to the public. This strategy cuts down on infrastructure costs, and results in more efficient use of current resources. As well, the City has created a program to increase the supply of bicycle parking within the community.

## Strategic Development Process

Developing a process to incorporate TDM into the development process can ensure that the use of sustainable transportation is a priority. The Halifax Regional Municipality incorporated TDM policies into the development process as it was *recommended* in the TDM Functional Plan that a developer should work with the municipality to contribute towards TDM programs or infrastructure in return for higher density, extra parking, and so on within the site.

## 2.5 Policy Analysis

Several federal, provincial, and city policies support the recommendations proposed for Greater Sudbury's new TDM Plan.

The overarching goal of these policies is to create a community that can meet all the needs of the residents regardless of income, culture, or religious beliefs. By creating more travel choices, the City can create an environment that is accessible for everyone, with safe and convenient travel choices. The framework upon which the TDM Plan was written was developed with the support of the City's Official Plan and other supporting policy documents. The detailed policy analysis can be found in Appendix B.

## Transit

Policies are included in the Greater Sudbury Official Plan to continue to grow the transit network. Greater Sudbury's focus is on increasing capacity and attractiveness of the system through programs and activities. These policies will help to increase ridership and allow transit to become more accessible.

## Community Development

The City of Greater Sudbury will focus intensification within existing urban areas. To support intensification, Sudbury will develop a multimodal transportation system that will increase connectivity and mobility from different communities. The improvement of connectivity between neighbourhoods will enable more people to use the sustainable transportation facilities provided in the city.

## Network Connectivity

The Downtown Master Plan focuses on an accessible and connected downtown core that can encourage growth and become a hub for all modes of transportation. The City needs to be accessible to those who need access to vital services. This is especially important for those who cannot drive such as children, students, and seniors.

## Sustainability

The *Places to Grow in Northern Ontario Act* suggests that intensification and investment in transportation systems are critical to accommodate a sustainable environment and encourage economic development within the Greater Sudbury Area. A strong transportation system will continue to encourage residents to use sustainable modes to travel rather than single occupant vehicles.

## 2.6 Consultation

Consultation on the TDM plan took place on Wednesday, September 13 and Thursday September 14, 2017. The purpose of the meetings was to show the public and stakeholders draft concepts that could be incorporated into the TDM Plan and receive feedback on these ideas. The goals of the consultation sessions were: to understand the barriers and issues encountered by the community regarding ease of mobility within the city; to understand why mobility choices are being made; to determine opportunities to increase the use of sustainable modes and to determine the level of support for the encouragement of sustainable travel options. There were three separate meetings: one for stakeholders, one for the Sustainable Mobility Advisory Panel, and one for the public. A detailed report of the consultation process can be found in Appendix C.

## Stakeholders

The stakeholder session was held on afternoon of September 14 and consisted of City staff, workplaces and organizations within the community with interests in how people travel and how to shift travel behaviours.

The stakeholders group was given a presentation on current ideas and objectives for the programs and were asked to discuss two questions in smaller groups: (1) Which programs should be recommended for Greater Sudbury, and (2) how their organizations could help implement these programs.

When considering which programs should be available in Greater Sudbury, participants placed focus on transit, active transportation infrastructure, and accessibility, parking, and TDM programs. It was suggested that to promote transit, there should be more incentives to try the service and increasing awareness about the benefit of transit.

Active transportation infrastructure was also an important topic as Greater Sudbury is currently initiating an active transportation network. Stakeholders suggested increased infrastructure such

as bike lanes, more crossings, better connections to destinations, end-of-trip facilities, and bikeshare for those who do not own or cannot own a bike.

Stakeholders also discussed park and ride facilities, carpool parking lots, and priced parking to encourage more people to use sustainable modes rather than drive to destinations alone.

Improving accessibility and developing educational programs were also considered to be important to the TDM Plan by the stakeholder group. With an aging population, it was discussed that a more accessible transportation system would make it easier for seniors and those with mobility challenges to travel without having to drive on their own. The stakeholders also indicated that education programs for students, workers, and residents about the modes of travel available, benefits and incentives should be developed. Programs for work day travel and school age children were thought to be the main groups to focus the education program on.

### Sustainable Mobility Advisory Panel (SMAP)

The Sustainable Mobility Advisory Panel is a citizen advisory panel consisting of representatives from local organizations and staff from the City of Greater Sudbury. Their mandate is to “assist staff and council in implementing a vision for a holistic approach to a multi-model transportation system where citizens can walk, cycle, and use public transit efficiently and safely to get to their destinations” (Greater Sudbury Sustainability Mobility Advisory Panel).

During the consultation session, which was held on the evening of September 14, 2017, the organization’s members were given personas which represent different demographic groups and were asked to describe what they believed would be their transportation challenges and needs. This exercise was important to understanding the programs and facilities could best help each demographic group, while still meeting the needs of individuals within the community.

There were many important themes which emerged from the discussion. It was mentioned that more infrastructure is needed to encourage residents to use active transportation options, as these modes are considered affordable for students, young adults and seniors, Secure bike parking and end-of-trip facilities were also discussed to help encourage more cycling in the community. It was also discussed that there needs to be more direct transit routes to destinations, such as the post-secondary institutions, health care and seniors’ facilities, and major commercial and retail areas. It was also mentioned that during festivals there should be increased service to help more people travel there via transit. For those with families it was discussed that time and money was a priority, and having a transportation system that could decrease the time spent travelling would be appealing to those working in Greater Sudbury. However, it was also mentioned that many people live outside of the city core, and thus, most are inclined to drive.

### The Public

Thirteen members of the public attended the meeting on the evening of Wednesday September 13, 2017 (Figure 4). Several display boards were available for participants to review which presented draft ideas for Greater Sudbury’s TDM Plan. The members of the public were asked

for feedback on the ideas presented and if there was anything that should be added to the TDM Plan.

The public was also asked for feedback on their vision for TDM in Greater Sudbury, and what they thought could best improve transportation options in the area. Recurring themes were improvements to transit, infrastructure, education, and community partnerships.

The meeting was advertised on the City's website, along with posters throughout the community, and promoted on social media. Where the stakeholder and SMAP meetings were held during the day, the Public Consultation Session was held in the evening to be more accessible to the working population, and was in the downtown core, near City Hall in a central location. Efforts were made to ensure that meeting was made accessible to all, with comment sheets available for those who did not wish to speak at the consultation session, and a project email was made available to those who were unavailable to attend.



*Figure 4: Members of the public and stakeholders participate in TDM Plan events*

The need for an expanded transit system was apparent as many comments and suggestions indicated that changes and improvements to the transit system would be of great benefit. A widespread network with express buses from outer communities was also suggested as it would encourage more people to use the service to commute directly to the city rather than driving to a park and ride lot to take transit. Expanding the infrastructure for the active transportation network was also considered a priority for those in attendance. An increase in sidewalks, bike lanes, secure bicycle storage, and connections for destination travel would benefit the public as they travel within the city. Also, with an increase in infrastructure the public noted that education on how to use these systems would be important, along with community partnerships to help promote the programs.

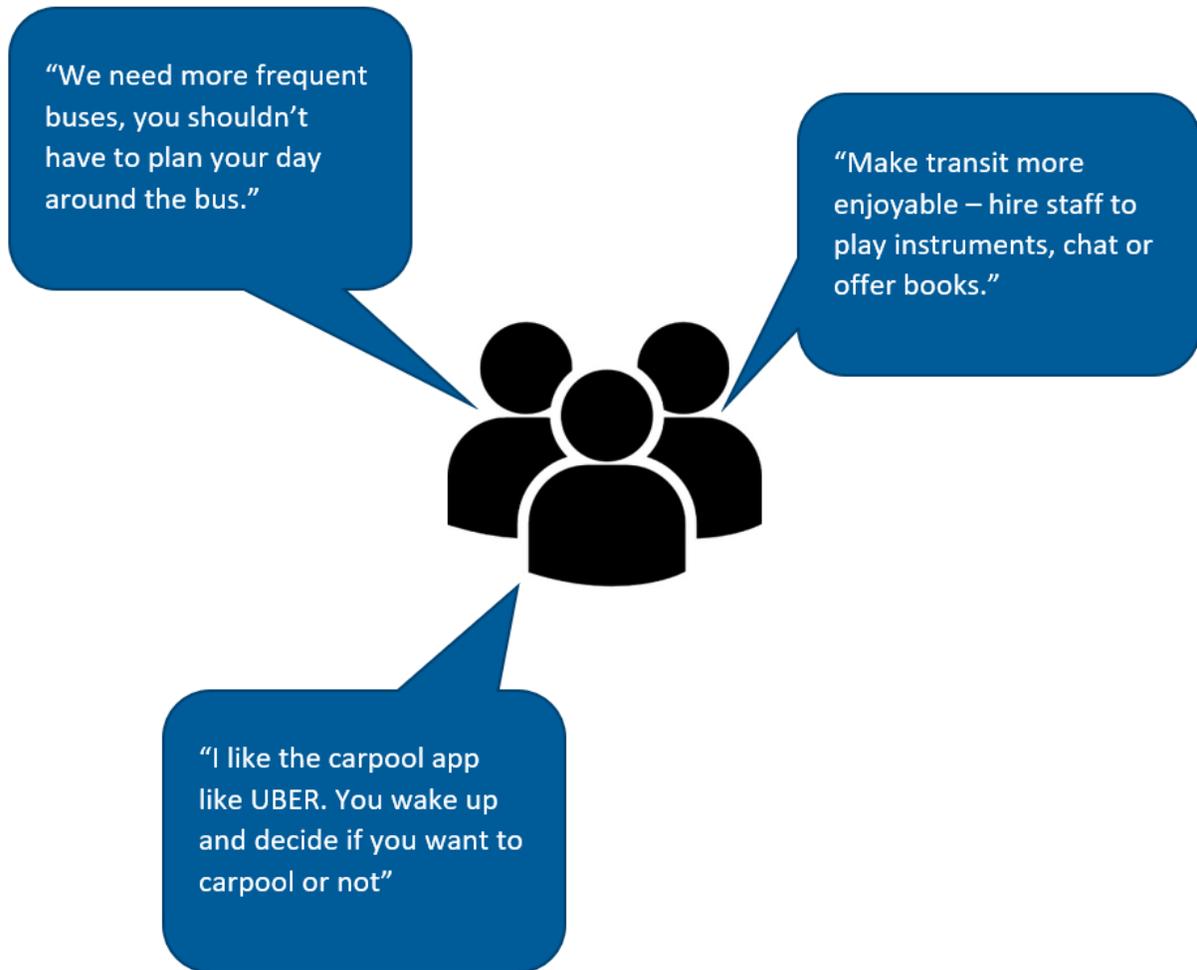


Figure 5: Feedback received from survey respondents

## General Themes from Consultation Sessions in September 2017

### ***Transit***

The transit system needs to be safe and efficient, with more frequent service. An app with real time updates will encourage more people to take transit as this makes it easier to plan their day.

### ***Infrastructure***

There is a need for an increase in active transportation infrastructure in Greater Sudbury. From sidewalks, bike lanes, trails, connections to destinations and end-of-trip facilities, residents believe that investment in more infrastructure will give more people the opportunity to be more active.

### ***Community Partnerships***

There is a need in Greater Sudbury to have organizations and the municipality partner in the pursuit of a more sustainable community. Keeping the community up to date with new facilities and trails can act as advertisements for active transportation, integrating rideshare programs or

an uber-like service into the public transit system could also encourage more people to use the system.

### ***Education***

More awareness of programs available and education on how to use facilities in Greater Sudbury is necessary. From purchasing tickets to taking bicycles on the bus and how to transfer from one line to the other, education is key in getting residents on the move. More education programs should be available through promotional events.

### ***Accessibility***

Accessibility was a major concern for those in the stakeholder group. There are many seniors in Greater Sudbury that rely on the transit system for travel and without accessible platforms and service they are unable to travel. Transit drivers and students should be trained in how to help the elderly or people with disabilities to board a bus, while seniors should be educated on their travel options.

### ***Parking***

It was suggested that parking measures could be put in place to encourage residents to take more sustainable modes of transportation to work. Having park and ride facilities, priority parking for carpoolers, and a carbon tax for those who do drive could deter those who do not have to drive to do so.

## 3.0 Overview of TDM Programs

### 3.1 What are TDM Programs?

TDM programs are tools that municipalities use to promote sustainable modes of transportation to residents and workers, and educate them on the benefits to themselves, the environment, and their community. These programs will encourage more residents within the City of Greater Sudbury to drive less, and instead take alternative modes of transportation. This will result in less wear on roads and lower congestion levels within the downtown core and in high traffic suburban areas.

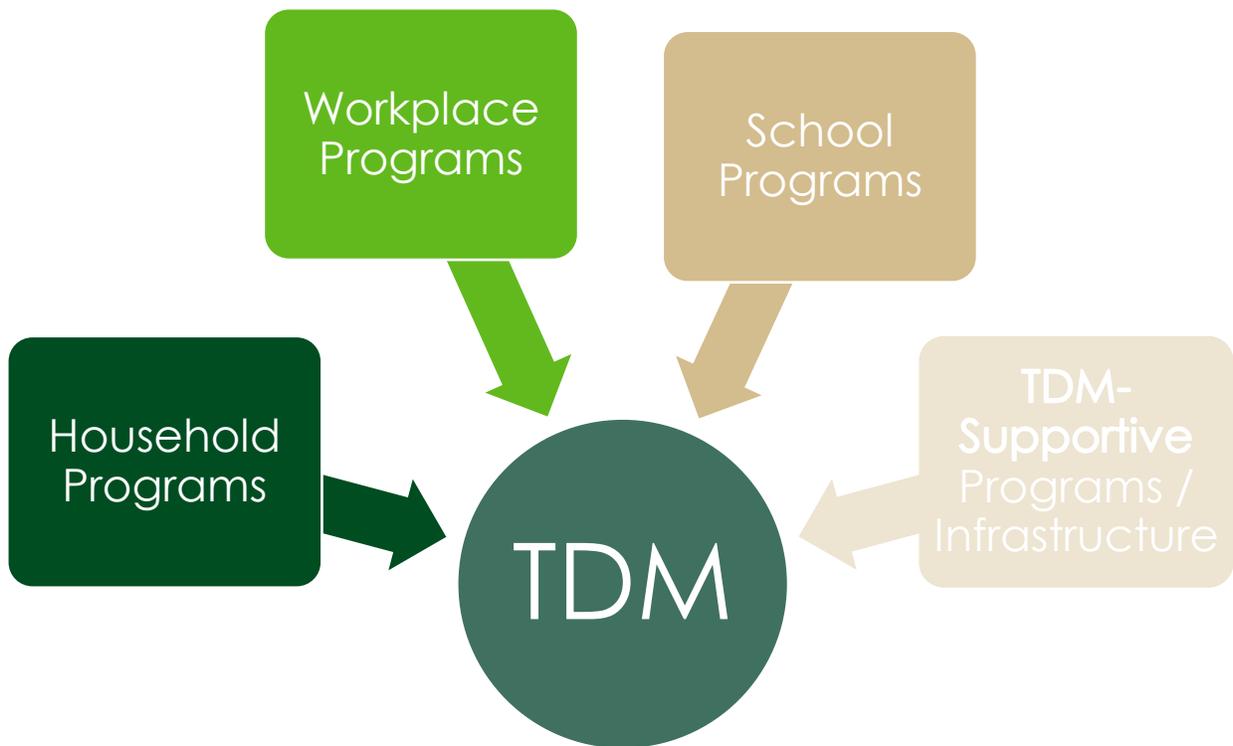


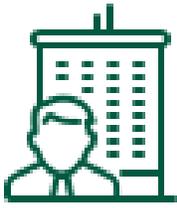
Figure 6: Various TDM Programs

#### Household



Programs that are directed at households encourage members to use sustainable modes of transportation can decrease travel demand during peak periods. The focus is on taking transit, carpooling, and using active transportation modes. Household travel programs focus on getting the family where they need to go. Using modes other than the car for transportation will encourage children to continue this habit as they grow up.

## Workplace



At the business level, TDM benefits both the employer and the employees. Financially, as more people use sustainable modes of transportation to travel, the company will be able to decrease spending on parking infrastructure and support the community through active transportation infrastructure instead. Workplace travel programs focus on encouraging more people to travel to work by other means than the single occupant vehicle (SOV). These programs provide incentives to use carpooling, transit, walking and cycling, and provide disincentives to driving such as higher priced parking spaces.

While many work places have introduced flexibility in the work day, it is not yet universal. Ideally, if workers can meet their obligations and can be more productive with their work day fitting into their life rather than the other way around, it should be studied and explored by human resources departments, business owners and managers to determine the overall benefit to the workplace and the workers. It is acknowledged that not all workplaces or types of jobs can have flexible work hours.

## School / Institutional



School travel planning focuses on getting more children to travel to school via sustainable and active modes. A decrease in car traffic around schools will create safer school zones and a healthier environment. Encouraging the use of walking and biking to school over being driven makes school zones safer and less congested. Supplying university students with transit passes will encourage more to take the bus and less to drive.

School-based programs can be provided by several agencies, such as the school boards, non-governmental organizations and local health units, with transportation and sustainable mobility staff acting in a supporting role. The City should be a partner in the development of school travel plans and develop safety initiatives. The support of an Active Transportation Coordinator and other City staff members in the delivery of school-based travel planning programs will help reduce the overall number of trips by motor vehicle and increase the number of sustainable and active trips to and from school. The use of sustainable modes can lead to several benefits including improving the health of children and the community through increased physical activity and reduction in air pollutants; reducing traffic around schools and increased safety so that more children can use active modes.

As has been noted, that the City of Greater Sudbury should increase the level of engagement in schools regarding sustainable transportation options, working with selected partners to increase education about cycling and developing School Travel Plans.

## TDM Supportive Programs / Infrastructure

TDM measures cannot be entirely successful in isolation. Not only are complementary measures initiated together, so too are the infrastructure, programs and policies that are needed to achieve modal share targets, increase the health of a community, reduce greenhouse gas

emissions and improve overall quality of life. In fact, the integration of supportive programs, policies and infrastructure with TDM programs is one of the most important components of implementing a TDM plan. For example, if an employer supports their staff in using transit to commute to and from work, the corresponding services and infrastructure are needed at both the origin and the destination. If an employee is unable to access transit services at either end of their trip, then providing a subsidized pass will not increase the use of transit. The same is true for other services such as carpooling. Providing incentives to carpool work best when there is a complementary ridematching program available to employees.

It is important that the partnerships between agencies, employers and other groups develop and grow so that the integration of the various services, infrastructure and programs all come together so that more people can and want to use sustainable travel options more frequently.

### ***Municipally-Delivered Programs***

Municipal governments should take a lead role in the delivery of TDM programs. In many cases, the programs are best delivered by municipalities. In Ontario, there is no legislative support for developers to provide any type of TDM program and if they do, municipalities have little ability to follow up and monitor the effectiveness of the program. Therefore, to understand how programs impact travel behaviour and if the behaviour continues for the long-term, the City of Greater Sudbury should undertake some pilot programs, and where appropriate find partners to assist in the delivery and follow-up. Some programs are also most effective when they are included in the implementation of a new transit service, coincide with the opening of an active transportation facility or the introduction of a carshare service. Programs that promote these initiatives are often not provided by private sector employers or property owners and often rely on some level of public sector support, particularly for marketing and awareness purposes.

The measures identified below are best provided by the City. For example, the use of community-based social marketing and individualized travel planning requires that there be services and infrastructure available for people to change their travel behaviours. When a travel planning program is introduced, the appropriate modes need to be promoted. For example, a community that lacks or has limited transit service should be encouraged to use a ridematching system as an alternative to travelling by single occupant vehicles. A second example of a municipal-led program is the promotion of a new bicycle lane, that when it is built, should be promoted to residents with relevant information from the City about the new facility.

## **3.2 TDM Measures**

The programs listed above are the overarching areas in which TDM measures can be delivered. The TDM measures that will be outlined below can be applied to all the programs, or just one. The diagram below provides an overview of the measures that are recommended to be implemented within Greater Sudbury, with greater detail provided in the descriptions of the measures. While most are applicable to the programs outlined above, a few such as active transportation facilities and integration of travel modes will need to be led by the City and supported by complementary TDM measures and programs.

### 3.3 Tool Kit

The programs and measures that have been identified above are further explained in the Tool Kit that has been developed. The Tool Kit can be found on the following pages, providing an overview of the types of measures that can be implemented in Greater Sudbury. The tables provide direction on how the measures can be delivered, who will be primarily responsible for delivering each measure, why the measure is needed, the benefits and which of the three programs (Household, Workplace and School) each measure falls within. It should be noted that several of the measures form part of at least two of the programs. Figure 7 outlines some of the more common measures that should be considered for implementation by the City of Greater Sudbury.

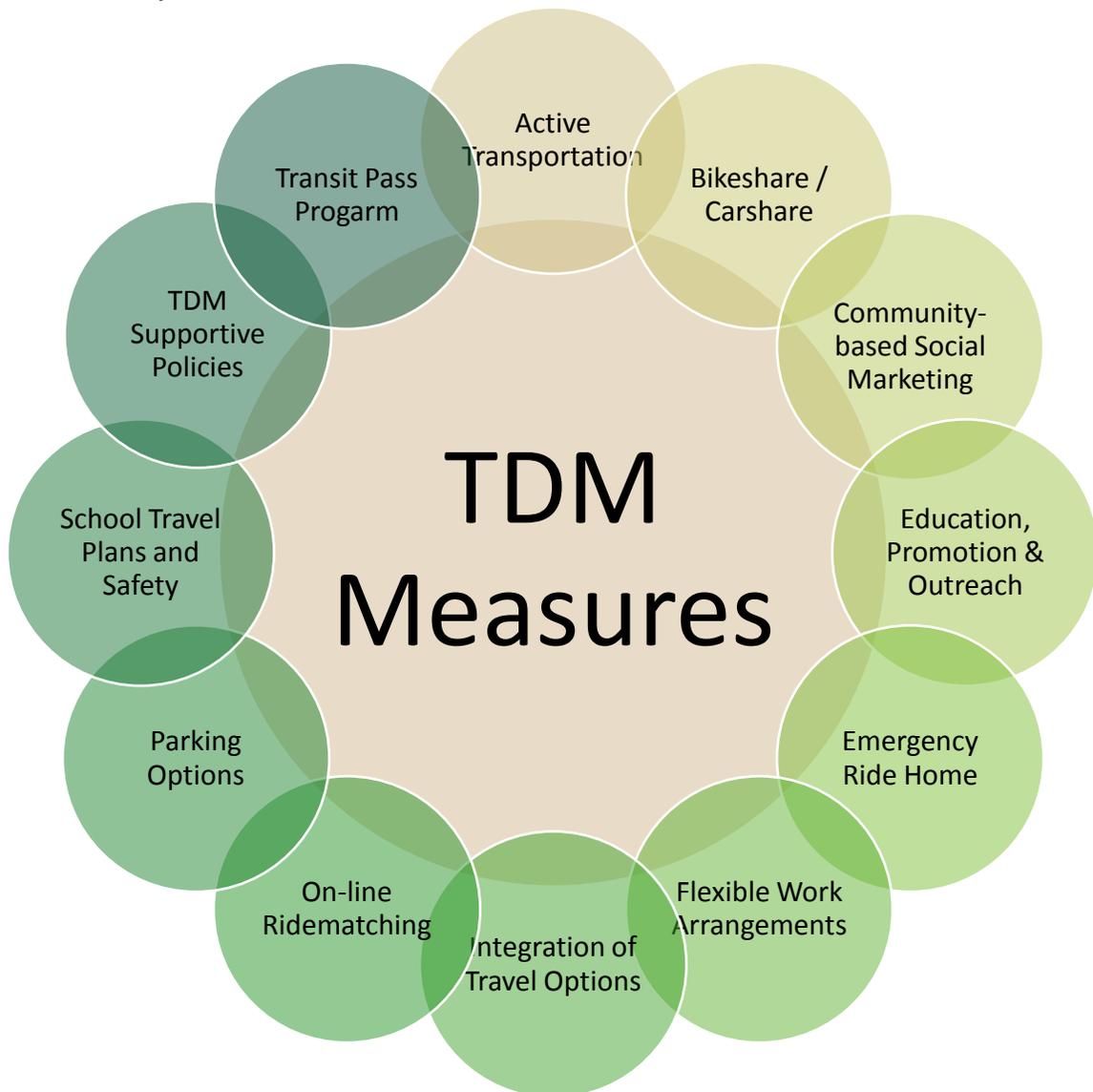


Figure 7: Potential TDM Measures for Greater Sudbury

M.1

## Flexible Work Hours



<b>Description:</b>	This program allows workers the option to start and end their work day at different times and travel at off-peak hours.
<b>How will it be delivered?</b>	Organizational policies established within Human Resources and department managers.
<b>Who will deliver it?</b>	Both public and private sector employers.
<b>Why is it needed?</b>	<ul style="list-style-type: none"><li>▶ Flexible work hours allow for a more even spread of peak hour traffic congestion</li><li>▶ It can reduce the need for additional investment in infrastructure as current systems are frequently exceeding capacity</li></ul>
<b>Benefits / Intent:</b>	<ul style="list-style-type: none"><li>▶ Benefits include supporting employee individual needs and lifestyles which can lead to increased retention and effectiveness</li><li>▶ Intent is to reduce the peak travel demand and to lessen the impact of parking in a given area</li></ul>

*Flexible work hours reduce both peak hour travel demand on the transportation network and lessen the impact of parking in a given area.*



# Telecommute / Telework



**Description:** This program allows workers the option to work from home all or part of the time.

**How will it be delivered?**

- ▶ Organizational policies established within Human Resources and department managers.

- ▶ Support from others who have undertaken the program and seen positive results. A pilot could be undertaken to study if there are any positive results in select workplaces that permit employees to work at home.

**Who will deliver it?** Both public and private sector employers.

**Why is it needed?** Telecommuting can be a solution that avoids the need for all employees to commute and thus reduces the number of cars on the road, as well as costs to employers and workers.

**Benefits / Intent:**

- ▶ Supporting the employees' individual needs and lifestyles which can lead to increased retention, effectiveness and recruitment
- ▶ Office space reduction may also be a consideration
- ▶ Intent includes reducing the demand for travel and lessening parking needs

*Telecommute reduces demand for travel and lessens parking needs.*



# Compressed Work Week



**Description:** A compressed work week allows an employee to work more hours each day which in turn allows for a day off, or reducing their work hours to either 80% or 90%.

**How will it be delivered?** Organizational policies established within Human Resources and department managers.

**Who will deliver it?** Both public and private sector employers.

- Why is it needed?**
- ▶ Peak loads on the transportation network can frequently exceed capacity.
  - ▶ Compressing the work week reduces travel during peak periods and avoids the need to travel on non-work days.
  - ▶ Support employee needs.
  - ▶ Shift travel away from peak periods.
  - ▶ Encourage distribution of travel throughout the day, including boosting the use of transit during non-peak travel times.

*Compressed work week reduce travel demand during peak hours.*

- Benefits / Intent:**
- ▶ Supporting the employees' individual needs and lifestyles which can lead to increased retention, effectiveness and recruitment
  - ▶ Office space reduction may also be a consideration
  - ▶ Intent includes reducing travel demand during peak hours and lessening the need for parking



# Ridematching



**Description:** Ridematching enables people to travel together to a common destination, increases vehicle occupancy and reduces the number of vehicles on the road. Ridematching not only matches carpool partners but also transit, walking and cycling buddies to assist those new to using these modes.

**How will it be delivered?** Ideally, an online tool should be developed that allows participants to create a profile and find suitable matches. It can be promoted through workplaces, online and through partners or community agencies.

**Who will deliver it?**

- ▶ Public and private sector employers through an online portal that will be developed by the City and partners.
- ▶ EarthCare Sudbury has in the past provided support for an online carpool program. Their continued interest in ridematching indicates that they could be a good partner to once again provide an online program. The introduction of a new online ridematching program can be a portal to an integrated sustainable travel network in Greater Sudbury.

**Why is it needed?** Increased vehicular occupancy leads to more efficient use of the transportation system.

**Benefits / Intent:**

- ▶ Reduces the number of required parking spaces, therefore reducing costs to employers to supply them and reducing all costs associated with commuting.

*Ridematching reduces commuting costs and demand for parking spaces.*



M.5

## Guaranteed (or Emergency) Ride Home Program (ERH)



**Description:** This is an insurance policy that provides regular users of sustainable transportation the ability to get home in an emergency, when their carpool partner is unavailable, or they have been asked to work unscheduled overtime.

**How will it be delivered?** This measure should be delivered through an overall workplace commuter program provided by the employer or mobility management team.

**Who will deliver it?** A guaranteed ride home program could be incorporated into the overall ridematching program and be provided by public and private sector employers.

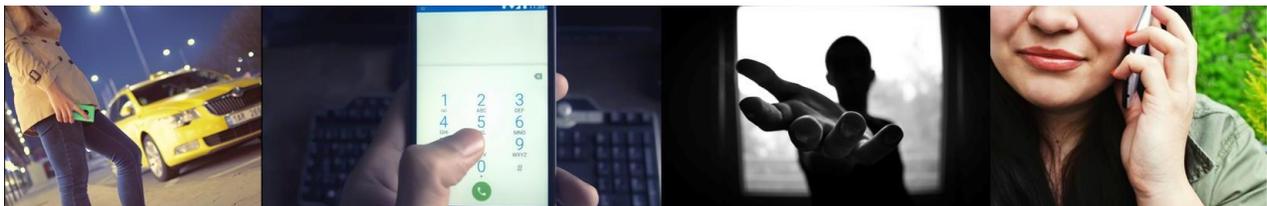
**Why is it needed?**

- ▶ A major barrier to alternative modes of transportation is the uncertainty of getting home in the event of an emergency.
- ▶ ERH programs give these people an 'insurance policy' that there will be a guaranteed ride home in case of any emergencies.

**Benefits / Intent:**

- ▶ Increase in sustainable modes of commuters so that they have more transportation security, eliminating the need for a personal vehicle to commute to work
- ▶ Intent is to lessen the peak transportation network load as more people choose alternative methods of travel

*ERH provides transportation security, eliminating the need for a vehicle to commute to work.*



# Transit Subsidy



**Description:** Transit pass subsidies are often provided by employers or institutions such as universities and colleges to encourage the use of transit through a reduced rate. The difference between the face value of the pass and the cost passed onto the user may be absorbed by the employer or institution.

**How will it be delivered?** These passes would be delivered by the employer to subsidize employee's passes with assistance through a mobility management program.

- Who will deliver it?**
- ▶ Infrastructure Capital Planning Services and Greater Sudbury Transit staff
  - ▶ Partners including EarthCare Sudbury and other community agencies should also be involved if they assist in the delivery of the passes
  - ▶ They can also be provided by employers who wish to subsidize passes for workers at major employers and institutions

**Why is it needed?**

- ▶ Discounted transit passes make transit use more attractive, especially compared to driving and the associated cost of gas, parking, insurance and maintenance
- ▶ Support transportation needs of students

**Benefits / Intent:**

- ▶ Transit pass subsidy increases transit use and ridership and reduces costs associated with commuting.
- ▶ Intent is to have a greater mode shift where sustainable modes already exist.

*Transit Pass subsidy increases transit use and ridership, and reduces costs associated with commuting.*



# Bicycle Parking



**Description:** Bicycle parking provides secure short term (bicycle racks) or long-term (bicycle rooms, lockers, etc) bicycle storage for residents, workers, students and visitors to encourage cycling.

**How will it be delivered?** Bicycle parking will be provided as required through the City’s zoning by-law requirements. The City will also be developing bicycle parking guidelines for developments / businesses. A bicycle parking program aimed at providing racks where they are needed such as at City facilities and businesses is also planned.

- Who will deliver it?**
- ▶ Greater Sudbury staff
  - ▶ Racks to be installed by developers to meet zoning requirements in residential areas, commercial and institutional developments
  - ▶ Bicycle parking is a space saving, cost-effective and environmentally friendly alternative to car parking.

**Why is it needed?**

- ▶ To ensure that there is bicycle parking available at city facilities, workplaces, and within the right-of-way

- Benefits / Intent:**
- ▶ Benefits are safe and secure parking for commuters who cycle to work, or for any other trip purpose
  - ▶ Bike parking can also increase physical activity and reduce the need for motor vehicle parking
  - ▶ Intent is to shift some of the mode share from single occupant vehicles to cycling

*Bicycle parking promotes safe and secure parking for commuters who cycle to work, or for any other trip purpose.*



# Priced Parking



<b>Description:</b>	Priced parking can be used as a catalyst for encouraging people to use sustainable modes particularly when it costs more than transit. The monthly parking rates need to exceed the cost of a monthly transit pass to encourage the use of transit over driving.
<b>How will it be delivered?</b>	Parking policy that is developed by service providers to set rates for parking in off-street lots and structures (for city-owned parking facilities)
<b>Who will deliver it?</b>	<ul style="list-style-type: none"> <li>▶ Property owners</li> <li>▶ Greater Sudbury Parking Services</li> <li>▶ Parking is typically highly subsidized leading to overuse and oversupply</li> </ul>
<b>Why is it needed?</b>	<ul style="list-style-type: none"> <li>▶ This affects urban efficiency, land values and can create environmental issues</li> <li>▶ Priced parking helps to reflect the true economic and financial costs of providing parking and creates more rational travel choices.</li> </ul>
<b>Benefits / Intent:</b>	<ul style="list-style-type: none"> <li>▶ Benefits include reducing costs to building and employers for parking</li> <li>▶ Intent is to create a mode shift, and reduce parking demand as paid parking can often shift people to use more sustainable modes of transportation, especially when pricing is coupled with incentives to use other modes</li> </ul>

*Priced parking aims to create a mode shift, and reduce parking demand as paid parking can shift people to use more sustainable transportation modes.*



## End of Trip Facilities



**Description:** These are facilities that provide users of active transportation modes in particular the facilities they require such as showers and change rooms. Other facilities may include benches, water fountains, etc.

**How will it be delivered?** As required by zoning by-laws and discussions with developers to provide facilities to meet the needs of commercial or residential tenants.

**Who will deliver it?**

- ▶ Planning Services
- ▶ Infrastructure Capital Planning Services

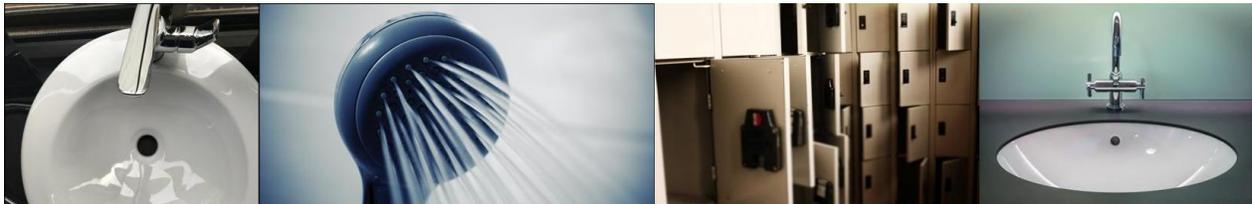
**Why is it needed?**

- ▶ TDM supportive infrastructure that supports more mode shift to cycling at relatively low cost.

**Benefits / Intent:**

- ▶ Benefits are that it increases sustainable transportation modes by ensuring that commuters who use active transportation are able to change and clean up before work.
- ▶ Intent is to create a mode shift where reasonable alternatives are available.

*End-of-trip facilities increase sustainable transportation modes by ensuring commuters can change and clean up before work.*



## Park and Ride Facilities



<b>Description:</b>	Parking areas that either provide access to transit services for residents who may not have access to service or areas where people can meet up to share rides into their workplace or other destinations.
<b>How will it be delivered?</b>	As part of Greater Sudbury Transit service plans to optimize and expand the transit network through the Transit Action Plan.
<b>Who will deliver it?</b>	<ul style="list-style-type: none"> <li>▶ Greater Sudbury Transit Services</li> <li>▶ Support can be provided by EarthCare Sudbury and other community agencies</li> </ul>
<b>Why is it needed?</b>	<ul style="list-style-type: none"> <li>▶ Intended as a feeder to transit to encourage multimodal travel</li> <li>▶ Research has shown it is consistently popular but requires a high capital cost per additional ride generated.</li> <li>▶ There is also an impact on transit oriented development land use and ridership</li> </ul>
<b>Benefits / Intent:</b>	<ul style="list-style-type: none"> <li>▶ Benefits include encouraging more people to use transit if there is a way they can get to these facilities.</li> <li>▶ Intent is to shift travel from single occupant vehicles to other sustainable alternatives</li> </ul>

*Park and Ride facilities encourage more people to use transit if there is a convenient and affordable way they can get to these facilities.*



M.11

## Carpool Parking



**Description:** Identify parking spaces for carpools that are located in preferential areas (such as near entrances or underground). As well, where there is paid parking, consider discounted parking rates.

**How will it be delivered?** The City of Greater Sudbury will determine suitable locations and land in neighbouring communities to provide the service.

**Who will deliver it?** Both public and private sector employers.

**Why is it needed?** In order to allow those coming from further away, that may not have access to reliable transit or other forms of transportation. They can park in a common area and encourage carpooling amongst coworkers from that area of the community.

**Benefits / Intent:**

- ▶ Benefits are encouraging more people to carpool together that would normally drive on their own.
- ▶ Intent is shift the mode share of people driving far distance to a larger mode share of carpoolers

*Carpool parking encourages more people to carpool together to common locations.*



# Parking Supply Adjustments



**Description:** Changing the amount of parking required for new developments or redevelopments can affect the use of sustainable travel options.

**How will it be delivered?** The changes in how parking is provided will be part of the review of parking in the City and will be incorporated into city policy and by-laws where appropriate.

**Who will deliver it?** Planning Services

**Why is it needed?** Reduces the amount of land needed for parking and mitigates traffic from developments. Allowing more on-street parking can enhance safety for pedestrians but may be negative for cyclists, depending upon the road cross section.

- Benefits / Intent:**
- ▶ Reductions in the capital and operating costs of providing parking
  - ▶ Intent is to reduce parking supply and increase a mode shift to sustainable options

*Changing the parking supply affects the demand for parking. When implemented simultaneously with other travel options, it can be a powerful tool for changing behaviour.*



M.13

## Carshare / Bikeshare



**Description:** Both carshare and bikeshare programs allow residents, workers and visitors to access cars or bicycles on a short-term basis.

**How will it be delivered?**

- ▶ A pilot can be created through a booking system, travel logs or key distribution
- ▶ It is more convenient for a third party to deliver the program, however the employer can choose which type of program will fit their workplace the best

**Who will deliver it?**

- ▶ Property managers
- ▶ EarthCare Sudbury / Planning Services
- ▶ Carshare and bikeshare companies

**Why is it needed?**

- ▶ Single occupant vehicles have a very low utilization rate as they sit in parking lots for long periods of time
- ▶ Using shared vehicles will allow that utilization rate to go up and reduce parking demand

**Benefits / Intent:**

- ▶ Benefits include reductions in the amount of single occupant vehicle trips which are needed for workday travel (because they can pick up a shared vehicle during work), greenhouse gas emissions which continues the work undertaken by the City to bring back the natural environment surrounding the urban area. This will also reduce travel and parking costs.

*Carshare / Bikeshare reduces amount of single occupant vehicle trips which are needed for workday travel. It also reduces travel and parking costs.*



# Pedestrian Connections and Amenities



**Description:** Pedestrian facilities are important to encouraging walking and the “first / last mile” connections to transit. Any support for pedestrians such as crosswalks and crossovers, benches, shade, even surfaces, smooth transitions, etc. can be included and will increase the use of active modes.

**How will it be delivered?** Policies created by the City that request direct, convenient and accessible connections between buildings and a number of destinations including transit will be delivered through the planning approvals process.

**Who will deliver it?**

- ▶ City of Greater Sudbury
- ▶ Private landowners

**Why is it needed?** Making facilities such as sidewalks, pathways and walkways accessible to all members of the community increases independence, health, social and employment opportunities and community safety. This will also ensure that AODA compliance is met.

**Benefits / Intent:**

- ▶ Benefits are having direct and well-thought out connections to destinations, transit and other areas that will increase pedestrian use
- ▶ Intent is to create a modal shift to active modes of transportation

*Enhanced pedestrian and cycling connections can help encourage more active living and reduced transportation costs.*



M.15

## On-Road Active Transportation Infrastructure



**Description:** This is any infrastructure within the right-of-way that is designated for the users of sustainable travel options. This includes: sidewalks, multi-use trails, bicycle lanes, cycle tracks, etc.

**How will it be delivered?** The City will identify the locations and types of facilities to be developed to serve the needs of the public.

**Who will deliver it?** Infrastructure Capital Planning Services  
Engineering Services  
Planning Services

**Why is it needed?** Considered a prerequisite for creating safe alternatives to driving especially when considering from the perspective of cyclist user groups.

**Benefits / Intent:**

- ▶ Benefits are safer areas for pedestrians and cyclists to participate in active travel. Will also increase safety and comfort leading to more users of these facilities.
- ▶ Intent is a modal shift to more active transportation modes.

*On-road active transportation infrastructure helps to legitimize cycling as a mainstream mode of transportation.*



M.16

## Transit Facilities and Routes



**Description:** Any stop, shelter, station, terminal, route, information booth, etc. that provides the ability to access transit services and information

**How will it be delivered?** As part of Greater Sudbury Transit service plans to optimize the transit network through the Transit Action Plan.

**Who will deliver it?** Greater Sudbury Transit Services

**Why is it needed?** Having more transit infrastructure and facilities will make transit more attractive, easier to use and encourage more people to use the mode for commuter purposes.

**Benefits / Intent:**

- ▶ With more people taking transit there will be fewer cars on the road and higher mode share for alternative modes of travel.
- ▶ Intent is to encourage those who have other forms of travel to use transit instead, thus raising mode share.

*The quality and availability of Transit facilities and routes are key decision factors that are used by residents and visitors to decide how to get around.*



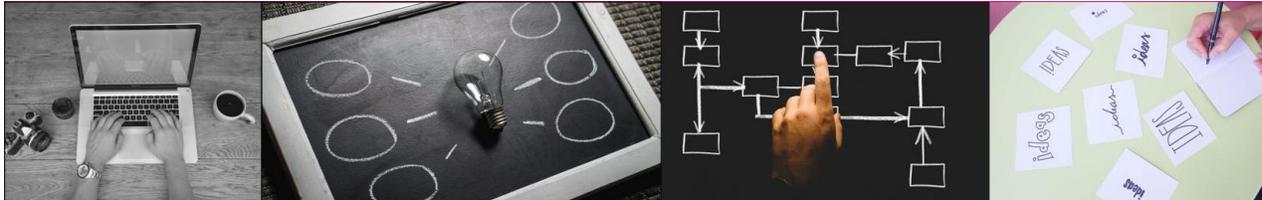
M.17

## Individualized / Community-based Social Marketing and Travel Planning Programs



<b>Description:</b>	Community-based social marketing uses a set of “tools” which have been identified as being particularly effective in fostering travel behavior change. The tools are most effective when used together.
<b>How will it be delivered?</b>	Programs are typically provided by the City and partners directly to residents. These programs can be delivered door-to-door, at neighbourhood events where people can talk to someone directly or through social media.
<b>Who will deliver it?</b>	<ul style="list-style-type: none"><li>▶ Infrastructure Capital Planning Services</li><li>▶ Corporate Communications and Community Engagement</li><li>▶ This program would be appropriate to be delivered in partnership with another community organization</li></ul>
<b>Why is it needed?</b>	Engagement and education about sustainable transportation options at the household level can lead to a higher probability of long term success.
<b>Benefits / Intent:</b>	<ul style="list-style-type: none"><li>▶ Benefits are more options provided to households and individuals for daily commuting and supports the lifestyle that the individual wants and needs.</li><li>▶ Intent is to increase individualized information of travel alternatives to the households and change travel behaviour.</li></ul>

*Community-based social marketing emphasizes direct contact among community members and the removal of structural barriers, since research suggests that such approaches are often more likely to bring about behavior change.*



M.18

## Community Events



**Description:** Any opportunity, such as festivals, farmers' markets, school events, etc. where the information about the use of sustainable travel options can be delivered where residents are already congregating.

**How will it be delivered?** Staff from the City or community organization can be present at events to provide information about sustainable travel modes and TDM programs. This would reduce the need for specific transportation events to be held which may not have the same response rate.

**Who will deliver it?**

- ▶ City of Greater Sudbury
- ▶ Community Organizations

**Why is it needed?** Community events bring TDM to the people and create opportunities to engage directly.

**Benefits / Intent:**

- ▶ Benefits are providing information in one place which saves time and money for providers and allows individuals to see options.
- ▶ Intent is to increase information of travel alternatives, and create a mode shift from SOV to alternative modes of transportation.

*Community events provide unique opportunities to engage both one-on-one with residents as well as communicate to large audiences.*



M.19

## Community App for Transportation Support



<b>Description:</b>	A smart phone app that can be used to find out any information about sustainable transportation options and provide the information on one site.
<b>How will it be delivered?</b>	The app can be available through developers for the use of sustainable travel such as transit schedules, carpooling, and others
<b>Who will deliver it?</b>	<ul style="list-style-type: none"><li>▶ Corporate Communications and Community Engagement</li><li>▶ Information Technology Services</li><li>▶ App Developers</li></ul>
<b>Why is it needed?</b>	Apps create easily accessible 'in your pocket' information for travel options. There is also the option to combine with live information such as parking availability, and downtown congestion.
<b>Benefits / Intent:</b>	<ul style="list-style-type: none"><li>▶ Benefits are provisions of information in a platform that is easily accessible and can enable the user to choose the most efficient mode of transportation for themselves.</li></ul>

*Community apps provide a virtual 'one-stop-shop' community information and services, including transportation.*



# Education Programs



**Description:** Any program whether it is in written form, on a website or through hands-on opportunity or presentation that provides information on the use of sustainable travel. These can include how to fix a bicycle, how to ride a bicycle in traffic, how to use transit, the use of on-line programs and so on.

**How will it be delivered?** Education about active and sustainable modes can be delivered through printed materials (activity books, brochures), hands-on activities such as training courses and bicycle rodeos, and online through interactive websites.

**Who will deliver it?**

- ▶ City of Greater Sudbury
- ▶ Community Groups
- ▶ Other Levels of Government

**Why is it needed?** Similar to other information programs, these create awareness of travel options, educate people and reduce barriers to TDM.

**Benefits / Intent:**

- ▶ Benefits are that education and training can increase confidence using sustainable modes and result in an overall increase in use.
- ▶ Intent is to increase information of travel alternatives and educate about how to use them.

*Education programs help to better inform residents about their own travel options and also harness the power of word-of-mouth marketing.*



M.21

## Promotional and Awareness Programs



**Description:** Programs in which the users are provided information directly as individuals or part of a larger group to encourage them to use sustainable modes. The programs can include incentives, personalized travel plans and other initiatives that are designed to change travel behaviours over the long term.

**How will it be delivered?** Programs and materials can be provided through a number of means including many that have been identified such as transportation fairs, or online services such as ridematching.

- Who will deliver it?**
- ▶ City Website
  - ▶ City of Greater Sudbury
  - ▶ Community Organizations

**Why is it needed?** Similar to other information programs, these create awareness of travel options, educate people and reduce information barriers to TDM.

- Benefits / Intent:**
- ▶ Benefits are an increased awareness of the programs and modes available.
  - ▶ Intent is to increase information and awareness in the community of alternative travel options.

*Promotional programs are an ideal forum to provide information about transportation programs to larger groups.*



# Land Use Planning



**Description:** Policies that support the use of sustainable modes such as mixed use development, compact communities and higher densities.

**How will it be delivered?** Amendments and updates to planning policy documents and master plans to reflect the integration of land use and sustainable transportation planning. The increase in a mix of uses, intensification and developing clear policies around transit-oriented developments and pedestrian-focused communities will help integrate TDM into the planning policies of the city.

**Who will deliver it?** ► Planning Services

**Why is it needed?** The model that has been used for several decades can no longer be supported and it is therefore necessary to look at other built environment planning options to make the use of the land more efficient and to ensure that our transportation systems are sustainable and effective. Therefore, in order to support the use of sustainable modes, changes are needed that no longer cater to only the automobile.

**Benefits / Intent:** ► Benefits are communities that are not reliant upon the car and are more focused on people and mobility. Innovative policies can place Sudbury in a leadership role.

*'The best transportation plan is a good land use plan.'*



# School Travel Planning and Support



**Description:** These are plans that are developed for individual schools and based on the needs specific to the community. They can also come out of larger policies to encourage the use of sustainable travel within a community to schools. These programs are designed to provide information, education and potential limits on access by private vehicles to school properties through developing safe drop off zones, better AT routes, etc.

**How will it be delivered?** The school travel plans are implemented on a school by school basis using the format established through Green Communities Canada. The support for the plans is provided by other groups such as school boards, city staff and regional staff.

- Who will deliver it?**
- ▶ School Boards
  - ▶ City of Greater Sudbury
  - ▶ Sudbury and District Health Unit
  - ▶ Community organizations

**Why is it needed?** Schools have peak trip generation (AM and PM peak). Engagement at the school level helps reduce demand for car trips and allows safe alternatives to promote walking and cycling. The City should ensure that they are taking an active role in continuing development of school travel planning programs.

**Benefits / Intent:** ▶ Benefits are less pollution, increased physical activity, increased levels of safety.

*School travel planning helps to reduce car use and keep children fit and healthy.*



## 4.0 TDM Promotion, Engagement and Development Tool Kit

### 4.1 Promotion and Engagement

Any TDM program involves promoting the use of sustainable travel options that goes beyond just informing the public about a new activity, infrastructure or a new program. Promotion of TDM measures involves using methods that will encourage long-term and sustained behaviour change and includes working with the public to determine what their needs are, what they are willing to try and how often. The sections below outline various techniques which can be used to encourage residents of Greater Sudbury to shift travel behaviour over the long-term.

#### Promotion and Engagement Tool Kit

A tool kit is a guide, collection of components, and a source of information that can be used to support the implementation of a program or activity, as well as the completion of new sustainable transportation infrastructure or services. To deliver a program which promotes the use of sustainable transportation and the implementation of a TDM program, the tool kit will need to be flexible and designed in such a way that each component can be used on its own or as part of a larger plan that will include many TDM measures. The tool kit can take on many forms and incorporate any number of components which can be used to:

1. Promote new TDM-supportive infrastructure such as bicycle lanes, bicycle parking, pathways and multi-use trails, amenities, etc.;
2. Promote the use of new sustainable transportation services, such as a new transit route;
3. Educate residents about TDM measures, programs and activities; and
4. Work directly with residents to encourage changes in travel behaviour and provide incentives and an understanding of the benefits of sustainable travel modes.

To look for inspiration as to what could be accomplished in Sudbury over time, Denmark provides a great example of how to change travel behaviours in both the city and regional context. The Danes have been successful in shifting travel behaviour from the car to cycling for a range of trip distances and purposes, though this has occurred over several years. As a small country with a small population (5.7 million, much less than half Ontario's population of 13.6 million), it is not unreasonable to look at some of the programs, policies and cultural changes that occurred to encourage walking and cycling. Many of the ideas can be applied to other sustainable modes such as transit and carpooling.

The country has not always been a sustainable transportation haven. In fact, in the 1960s and 1970s, cycling was battling against the growth in automobile traffic. Like Canada, it was a predominately car-based culture, but the 1970s oil crisis and increased interest in environmental causes led to a shift back to cycling as a means of transportation. Today, sustainable transportation is not only popular, it is widely considered the "norm". The Danish experiment to shift travel behaviours is rooted in a three-pronged action plan, accomplished

through the development of infrastructure, promotion of active modes (all sustainable modes can be promoted in a similar way) and a “normalizing” of the use of sustainable modes through legislation. Table 3 outlines a few key components of travel behaviour change used successfully in Denmark. It should be noted that though these programs were directed specifically at cyclists, some of the activities could be applied to other sustainable modes, such as transit as indicated in the first program in the table below.

Table 3 –Denmark’s Promotional Activities

Infrastructure	Normalization	Promotion
Gradual and continuous expansion of separated bicycling facilities (cycle tracks and pedestrian amenities)	Pedestrian and public transports are always given priority. <b>Motorists must always yield</b> to pedestrians, people on bicycles and mopeds.	Umbrella organization that coordinates efforts within public and private sectors; Cycling Embassy of Denmark
Excellent year-round maintenance programs		Several programs have been developed over the years to encourage the use of sustainable modes. A few are outlined below.
High fuel costs		<b>Bike to Work Month:</b> This campaign has been running for over 18 years and has been tremendously successful. It takes place during the entire month of May and is centered on workplaces. A central website teams to view their own page and to see the progress of other teams. Many local municipalities build upon the momentum by offering incentives. The purpose is to motivate more people to cycle and support those already doing so.
Strict rules and laws for pedestrian and cyclists	Pedestrians and cyclists can also be fined for not obeying laws. Typically, fines are 1000-1500 DKK (\$200-300 CAD) for offences not involving collisions.	

While some ideas are not necessarily easily accomplished at the local level in Canada, many ideas from Denmark can provide a solid basis for an action plan to shift travel to more sustainable modes in Greater Sudbury (see Section 5.0).

## Why Promote Sustainable Modes?

Sustainable travel modes are an important part of the transportation system, but they are not typically promoted the way we promote and market the automobile at present. The car is marketed as a status symbol, to be free to go where you want to go and as a direct means to travel to a destination.

Except for programs and technology that promotes the use of carpools and transit, little else is done to routinely promote sustainable travel in Canada. As Greater Sudbury begins its TDM journey, it is important to ensure that all sustainable travel options are promoted, marketed and encouraged to all the city's residents. We cannot assume that if we build it or if we provide it, the community will use it. Therefore, we need to be proactive and innovative through exciting and fun programs.

Just like the opening of a new business, the opening of a trail, bike lane or the start of a new transit or carpooling service is an important opportunity to promote sustainable travel options – for all trips. Cars are seen as a status symbol and represent freedom of movement – the question must therefore be asked: why can't sustainable modes be seen this way? Rather than the latest and greatest car, we can market: how cycling and walking can make you healthier without having to pay high annual fees for gym memberships; how taking transit can reduce stress and enable workers to catch up on emails while traveling; how using a car less can provide you with more money that can be put toward a dream vacation; and how pollution can be lowered around schools when more parents choose to walk their children to school. Connecting the benefits of using sustainable travel and the infrastructure that supports it can help encourage their use and lead to the normalizing of sustainable travel behaviours.

## 4.2 Tool Kit for Promoting and Encouraging the Use of Sustainable Travel Modes

The 2016 Transportation Master Plan emphasized the need for a TDM plan that meets the needs of the community. A 'Tool Kit' that contains a range of TDM measures that the City can choose from to implement over time, is considered an effective approach to TDM for City. The Tool Kit contains two main benefits: one is a broad overview of the wide range of TDM programs and initiatives that are available to the City, along with some commentary on their relevant costs benefits, and the other benefit is a level of flexibility to implement these TDM measures in accordance with the City's own priorities. The Tool Kit includes the following four categories of measures:

### 1. Promotional information and materials to encourage the use of sustainable travel options

- a. Emphasis on the fun, enjoyable and social aspects of alternatives to single occupant vehicle travel: marketing strategies that make travel options like carpooling and transit exciting.

- b. Tackling attitudes around people feeling safe and independent – show residents and visitors how to move through the community using clearly signposted, direct routes and modes
- c. Avoiding marketing messages that make people feel obliged or guilty – develop messaging / programs with a subtler aim to change behaviours. Design messages in a way that help to overcome taking part in the programs and using sustainable travel modes.
- d. Promote the use of sustainable modes so that people can see themselves using different modes at different times in their lives. Also, include supporting measures and incentives that can make using sustainable travel options more realistic
- e. Hold focus groups to learn what a community needs and determine if the approach being taken by the City is the appropriate one.
- f. Engage members of the community to act as Ambassadors to provide information about cycling, road safety, transit and generally be a “cheerleader” to encourage the use of sustainable travel options.

## **2. Funding and promotion of new TDM-supportive infrastructure**

- a. When new infrastructure is completed and available to the public, it should be promoted and celebrated to allow people in the surrounding neighbourhoods to discover it, use it and determine its value to them. Opening events with municipal staff, elected officials and the public provide the unique opportunity to provide residents with timely and relevant information about the new infrastructure. This can also be used as an opportunity to promote the City’s sustainable transportation goals and educate potential users.
- b. Set up a process to generate stimulating and interesting media releases and harness the City’s existing relationship with media outlets to promote TDM-supportive infrastructure in a cost-effective and informative manner. The news releases can raise the profile of these projects
- c. For larger projects or new developments, use CBSM-based travel planning programs to provide local residents with information and support as to how to best utilize travel options on a long-term basis. Combining CBSM-based travel planning programs with new infrastructure or developments has the potential to increase the use of the sustainable travel option(s) due to direct contact, on-going support. This can increase the likelihood that using active modes can lead to sustained changes in travel behaviour. Developing individual travel plans, providing a direct email / phone line for support and regularly taking part in community events will help to keep sustainable travel options at the forefront.

## **3. Reprioritizing the City’s long-term transportation and land use objectives to in a set of comprehensive updates to the Official Plan, as well as tracking progress and achievements**

- a. As the City implements the TDM plan, progress towards milestones should be tracked and celebrated

- b. The City should also promote upcoming programs to ensure that residents understand the long-term planning for implementing TDM within the City and how they will coordinate with other groups and develop partnerships
- c. Develop an award program for both employers and residents / employees to encourage them to use sustainable options.
- d. Establish a reward program in which local businesses donate rewards for those using sustainable modes.
- e. The Official Plan currently contains the objectives to ‘support the expansion of the transportation network as demand justifies’ as well as ‘promote[ion] of all travel modes’ (see Official Plan, section 11.1). As the TDM Plan gains more prominence and resources are reprioritized, consider a shift to sustainable transportation principles and policies that prioritize making better use of existing infrastructure and deliberately targeting the growth in non-sustainable modes to reduce the environmental footprint of the City over time.

#### **4. Implementation of programs that support TDM**

- a. Table 4 below provides an overview of promotional programs that support TDM:
- b. The use and promotion of sustainable modes of travel for special events and entertainment areas.

There have been several communities that have incorporated sustainable travel within the development of a special event space, such as Winnipeg, Ottawa and Moncton. Parking is important to attracting people to a site but it can also lead to issues such as congestion and delays. Not only is this a time issue, it also contributes to air pollution and dominance of motor vehicles in each area and can also lead to stress and frustration.

Special event hosts / venues should include promotion of sustainable travel modes when a show, game or event is scheduled. Simplifying the process by including transit fares, shuttle bus services to off-site parking and valet bicycle parking in the cost of a ticket will encourage people to leave their car at home.

Early discussions about the proposed Kingsway Entertainment District indicated that prioritizing modes other than the car will be part of the plan going forward. This is important to the implementation of the TDM plan. At the time of the writing of this report, the development of the initial plans and early discussions were still ongoing but nonetheless, the inclusion of sustainable transportation options is important. However, it is not possible to promote the use of sustainable modes where there is a considerable amount of parking associated with a site.

An example of the power of land use policies and guidelines that reduced parking and allowed for a mixed-use site is Lansdowne Park (TD Place) in Ottawa. As time goes on, it should be looked at as an example of a successful site with limited parking available for events.

Table 4: Promotion Programs

TDM Promotion Tool	Description	Comments
<p><b>Community-based social marketing</b></p>	<p>Community-based social marketing (CBSM) can be applied to assessing and defining the audiences within a community and developing an approach to the delivery of communications and promotional materials. CBSM involves the use of a variety of tools to encourage changes in behaviour through personal contact and individualized programs. It encourages the removal of barriers to a potential “new” behaviour using tools such as prompts, commitments, norms and communications. These tools allow for the:</p> <ul style="list-style-type: none"> <li>▶ Segmentation of audience to attract those who are willing to change their behaviour;</li> <li>▶ Identification of the barriers to a behaviour;</li> <li>▶ Development and piloting of a program to overcome these barriers;</li> <li>▶ Implementation of the program across a community; and</li> </ul> <p>Evaluation of the effectiveness of the program.</p>	<p>It is therefore important to use the principles of CBSM as well as other innovative approaches to the encouragement of behaviour change to achieve the goals set out in the TDM Plan.</p>
<p><b>Campaigns and Events</b></p>	<p>Campaigns and events are opportunities to promote, encourage and educate. Campaigns tend to be longer in duration while events may be one-offs, annual or monthly opportunities to promote the use of sustainable travel options. To attract and inform more people, hosting or attending events is important as going to where the residents are is often more</p>	<p>The longer something lasts and the more it is in the public eye, the more likely it will have an impact on the way residents travel. It has been shown that when campaigns last longer or events are repeated on a regular basis, the result is that more people will stick with the sustainable option than if they were shorter or not as frequent.</p>

TDM Promotion Tool	Description	Comments
	<p>productive than when invited to an event.</p> <p>Examples of campaigns and events:</p> <ul style="list-style-type: none"> <li>▶ Bike month or Bike Season (i.e. Summer months)</li> <li>▶ Bike lending campaign (like in Denmark – see appendix)</li> <li>▶ Regular competitions between workplaces</li> <li>▶ Home shows and other public expos</li> <li>▶ Walk to School Day</li> <li>▶ Winter Bike to Work Day</li> <li>▶ Carpool Week</li> <li>▶ Telework Week</li> </ul>	<p>Campaigns and events are excellent opportunities to develop partnerships with community organizations.</p>
<p><b>Interactive Tools and Workshops</b></p>	<p>Interactive tools allow for residents to take a hands-on approach to understanding and learning about sustainable travel. They also enable those providing a service or program to encourage people to use sustainable travel options for the long-term.</p> <p>Workshops can include learn to ride a bike programs, how to use the bus, increasing confidence for using active modes etc.</p> <p>Interactive tools can include – online ridematching and buddy programs; maps that show routes, distances and times; schedules for public transit and how to find the right mode for a trip (Mobility as a Service – see below).</p>	<p>Interactive tools can provide support, education and encouragement to use sustainable modes. They can be used to provide hands-on learning opportunities as well as encourage a behavioural shift in how people travel.</p>
<p><b>Website and Clearinghouse</b></p>	<p>A website provides information about, and links to all sustainable travel options and ensure that when residents, employers, and visitors are</p>	<p>A “one-stop-shop” can provide the necessary information to support the use of sustainable travel options. If there are several sites dedicated to TDM</p>

TDM Promotion Tool	Description	Comments
	<p>looking for sustainable, affordable and convenient modes of travel, it is available on one site.</p> <p>The clearinghouse will provide all related documents in one place to ensure that the information needed is available. If interactive tools are available, the links should also be included on the website.</p>	<p>initiatives, it will make it more difficult and potentially confusing for people to navigate and find the information they are looking for.</p>
<b>Safety</b>	<p>Safety and awareness campaigns should be used to promote visibility of cyclists, safe practices, buddy systems, etc. Any safety program and the related changes to the infrastructure and services will increase use.</p>	<p>Safety can be incorporated into any of the tools outlined in this table, however, it should be noted separately to ensure that it is an important component of the TDM program.</p>
<b>Collateral</b>	<p>Any materials developed to be distributed to the public to promote the use of sustainable travel options.</p>	<p>These can be effective in promoting events and campaigns and letting the public know about new programs, infrastructure and services. They should not be used on their own but as part of a larger program.</p>
<b>Media – Traditional and Social</b>	<p>Media is changing – the focus is moving from print forms to online news services and social media posts on platforms such as Twitter and Facebook.</p> <p>Developing relationships with media can also provide opportunities for “free” advertising and methods of getting information out in a timely manner.</p>	<p>The use of these platforms is now considered essential to getting the message out, providing support, assistance and feedback and reaching the younger generations such as the Millennials.</p>
<b>Individual Travel Planning</b>	<p>This program provides opportunities to work directly with individuals and groups (generally households) to develop specific travel plans to</p>	<p>Working directly with people has proven to be effective in encouraging changes in travel behaviour. This program can be delivered to households,</p>

TDM Promotion Tool	Description	Comments
	meet their daily transportation needs.	workplaces, post-secondary institutions.
<b>Promote Destinations and How to Get There</b>	Promote getting to destinations such as shopping, workplaces, medical offices, schools, and other places that people need to get to daily. As well, showing routes to common destinations will help people travel around more sustainably.	A lot can be done in partnership with businesses and employers to encourage the use of sustainable transportation to their sites.

## Emerging Opportunities to Increase Sustainable Mobility Modal Shares

### *Mobility Management*

Mobility Management is often another term used for TDM, but in many ways, it is more comprehensive and can be used to complement the softer transportation measures that make up TDM measures and programs. Building upon the work undertaken in the community-based social marketing programs outlined above, Mobility Management considers the need to understand the users of the transportation system to further depict the reasons why they use a specific mode.

This enables not only the creation of an effective promotional and communications campaign, but provides the types of services and infrastructure needed to make the journey more in line with the needs of individuals, households, workers and visitors. This is not about the transportation infrastructure or services available; it is about the users and understanding their needs, fears, motivations and experiences; about knowing where they go, when they travel and the purpose of the trip; and that transportation can be a facilitator for an individual's lifestyle. When the travel needs of individuals are balanced with strategic objectives and existing infrastructure and services, this results in a win-win opportunity for all.

Therefore, it is important to undertake the development of a program that closely matches and reflects user needs. Looking specifically at individuals can lead to considerable work and little to show for it, however using the idea of personas or user groups can lead to a higher level of success and achieve the goals of this plan and the City.

### *Mobility as a Service*

This is an emerging personalized service approach to transportation that adapts the mobility needs of individuals to a suite of on-demand travel services, usually with the help of technology such as smartphones. Currently, there are few providers with a comprehensive program in place in Canada. Finland is currently leading the way, select US examples exist such as WeDriveU (Texas) and Via real-time ridesharing (Washington DC, Chicago and New York City). The reality is that this will continue to be a field that the City should monitor and learn about and develop systems in which residents, workers and visitors can find the best transportation option

for their travel needs. By promoting the use of such services, the use of sustainable travel is expected to increase over time.

**Mobility as a Service (MaaS)** is the integration of various forms of transport services into a single mobility service accessible on demand. To meet a customer's request, a MaaS operator facilitates a diverse menu of transport options, be they public transport, ride-, car- or bike-sharing, taxi or car rental/lease, or a combination thereof. For the user, MaaS can offer added value through use of a **single application to provide access to mobility**, with a single payment channel instead of multiple ticketing and payment operations. For its users, MaaS should be the **best value proposition**, by helping them meet their mobility needs and solve the inconvenient parts of individual journeys as well as the entire system of mobility services.

The aim of MaaS is to provide an **alternative to the use of the private car** that may be as convenient, more sustainable, help to reduce congestion and constraints in transport capacity, and can be even cheaper. (From: <https://maas-alliance.eu/homepage/what-is-maas/>)

### ***Transit Master Plan***

The TDM Plan is also the ideal opportunity to respond to several suggestions arising from the Greater Sudbury Transit Action Plan, currently underway. Community Action Network and Transit Stakeholder workshop participants in the phase 1 public engagement responded that improvements to amenities and technology would be welcome to improve the customer experience. The TDM Plan is the ideal opportunity to prioritize the installation of more shelters, benches, charging stations for personal electronic mobile devices, music and art to help promote a shift to sustainable modes. The members of SMAP also reported cycling infrastructure improvements such as bicycle parking in proximity to transit would help to increase more multi-modal travel behaviour across the municipality and assist with last mile journeys.

## **4.3 Partnerships**

There is the potential within Greater Sudbury to coordinate the delivery of TDM programs with partner organizations. This not only provides support and increased outreach opportunities; it also ensures that TDM programs are community-based. With only one staff member (the Active Transportation Coordinator) with the mandate to deliver sustainable transportation programs, infrastructure and services, the inclusion of partners in the development and delivery of TDM programs will benefit the community and ensure that the programs are implemented.

Most successful TDM programs are implemented with through the cooperation of both the municipal officials (including EarthCare Sudbury) and other community-based organizations. The assistance of groups such as reThink Green will be needed to deliver the TDM programs to workplaces and households.

The local school boards and the Sudbury and District Health Unit will be important partners to assist in delivering the programs to schools in Sudbury. They have the knowledge of school programs and the needs of the students to deliver the types of educational and informative programs required to encourage students to travel by sustainable modes.

During the stakeholder consultation session, reThink Green suggested that they take the lead on the delivery of a workplace travel program. There are many ideas listed in Chapter 3 that both reThink Green and the City can work on collaboratively to deliver the workplace program. This should be a short to medium term priority for both.

Other partnerships can evolve over time as the TDM program matures and more groups become aware of the benefits of TDM within Greater Sudbury.

#### 4.4 TIS Guidelines

Greater Sudbury is currently updating its Traffic Impact Study Guidelines (TIS). The updated TIS guidelines include non-auto modes, transit, pedestrians and bicycles. They do not however include the provisions to incorporate infrastructure into new developments to increase the use of sustainable travel options.

This section should include the following to reduce the number of auto-based trips to and from a new development:

1. Provision of bicycle racks and lockers on site (new provisions to be incorporated into the zoning bylaw). These facilities should be located near the main entrances of all buildings (site plan) in well-lit and accessible locations (within 10 to 15 metres of the entrances)
2. Provision of walkways and paths to connect building entrances to transit stops and sidewalks within the right-of-way to encourage the use of cycling, walking and transit (also part of the first / last mile connection)
3. Sidewalks, walkways, paths and trails in subdivisions to ensure that there are options for people to use active modes of travel (guidelines will need to be followed to receive all lines of credit)
4. Bicycle infrastructure to improve commuting within the city, particularly to / from and within new developments
5. Priority parking spaces for carpools should be included within parking lots to encourage the use of carpools and online services
6. Add a TDM Plan to *Documentation and Reporting* section and to Appendix B when required for large scale individual site plans and plans of subdivision.

#### 4.5 TDM and Land Use Planning

The link between land use and transportation planning is well documented. To encourage the use of sustainable travel, not only are programs and promotion needed but the built form of our communities needs to support sustainable transportation initiatives as well. Below are the policies from Greater Sudbury's Official Plan. These policies provide a basis from which to grow

and strengthen the link between supportive land use policies and the promotion of sustainable transportation modes.

#### **Policies from Greater Sudbury's Official Plan:**

The following sections within the Official Plan **should be updated** to include increased support for TDM programs and opportunities with the goal of increasing the use of sustainable travel options with Greater Sudbury through compatible land use policies.

##### Section 11.1 Objectives:

Add an objective that states: Develop a robust TDM program that will shift modal shares to sustainable travel options and encourage long-term travel behaviour change.

##### Section 11.3 Public Transit

Add a policy to include the first / last kilometre in planning for new communities:

Ensure that all new developments incorporate active transportation infrastructure or connections to infrastructure and services to provide the opportunity for increased use of transit and reduce the dependence upon the private automobile.

Is there a policy on equity – we could use a sustainable transportation network where there are good connections via walking and cycling to transit stops and terminals which will increase the ability of lower wage earners to access employment, school, social activities and shopping, etc.

Section 11.9 – change to a TDM Programs and Transportation Sustainability Section – it will help to highlight the TDM Plan and provide policy to support incorporating TDM into developments

## 5.0 Action Plan

This chapter builds on the key programs, tools and community profile from earlier in the report to develop the action plan that will implement Greater Sudbury's TDM Plan.

As discussed in Chapter 4, the delivery of tools that will meet the needs of the city to shift travel behaviours and make it an intrinsic part of the community will require a systematic yet flexible approach to the delivery of the TDM program. Each action identified within the Plan will include potential partners or providers, timeline for implementation and a monitoring program.

The TDM action plan includes “soft measures” (e.g. education and promotion) to encourage sustainable travel modes, which are designed to support the services, infrastructure and amenities required for the plan to succeed.

Three different implementation timelines are addressed: “quick win” actions in the first two years, followed by medium-term actions (years 3 through 5) and long-term actions (years 6 to 10).

The chapter concludes with recommendations on monitoring the program's delivery and impacts, and ultimately measuring its success in shifting travel behaviours over time.

### 5.1 Key Steps

A successful TDM Plan will include several steps that encourage collaboration, innovation and inclusion. The following provides an overview of the steps that should be undertaken.

#### Establish Partnerships

The success of this action plan will depend on the creation of strong partnerships for program delivery. This will require:

- ▶ The identification of partners who can be part of the delivery of specific programs and activities (see the profile of Arlington County's Commuter Services Bureau where employers partner with ACCS to establish in workplace consultations, information fairs and events and conduct individual travel surveys that collect data to show travel patterns).
- ▶ Working with organizations who have been or are willing to be involved in TDM to deliver programs.
- ▶ Improving social marketing through joint strategies designed to reach a range of audiences.
- ▶ Ensuring strong take-up of TDM measures where the ability to drive behaviour change resides with a partner organization.

Partnerships are about synergy and leverage—the notion that ‘the whole is greater than the sum of its parts’. Partnerships enable information and support to be provided by colleagues, neighbours and local organizations who know their communities and the people in them. They also permit the efficient distribution of information by using channels that connect to new potential user groups and interested persons.

## Community Partnerships

Partnerships are important to the implementation of the City's TDM Plan. Through the City's leadership community organizations, businesses and community groups will have significant roles in the delivery of programs and measures to shift travel behaviours.

Workplaces such as the Sudbury Canada Revenue Agency (CRA) office, Health Sciences North and the City of Greater Sudbury have all shown interest in supporting the implementation of TDM programs and measures. These workplaces, as well as others should be part of a program designed to support workplaces. A workplace program should be created to support, encourage and enable the use of sustainable travel options. Beyond the workplace, partnerships with community groups are vital to provide education, encouragement and support for households and individuals to shift travel to more sustainable modes for daily activities.

Student travel is unique. Children often do not have a choice for how they travel to school. Parents are often the ones who decide if their children will walk, cycle, be driven or take the bus. Travel decisions are often based on household schedules, weather, distance and the desire to ensure that children arrive at school safely. Many parents drive their children to school due to the perception that there are too many cars around schools and the areas are not safe. Partnering with schools and the school boards can help to ensure that parents understand school safety can improve if children can use active and sustainable modes to travel to school.

### Recommendations:

- ▶ The City should develop a working relationship with community groups working with community organizations to implement the measures and programs outlined in this plan to provide the support and encouragement needed to residents that will result in long-term changes in travel behaviour.
- ▶ The City should develop partnerships with the school boards within the city limits to develop and deliver programs that will support parents, children and staff in making sustainable travel decisions. The City should consider taking part in the Active and Safe Routes to School program as well as the School Travel Planning program in partnership with the school boards and Green Communities Canada. If the City wishes to apply to be a Silver level Bicycle Friendly Community, it should work with its partners to pilot a School Travel Planning program at a few of the schools within the City in the short-term.
- ▶ The City should continue to work with the community group to engage the community in reducing the use of single occupant vehicles for everyday travel.
- ▶ Community groups that have invested in supported sustainable transportation should continue to be supported and provided with information. These groups, such as the Friend of Sudbury Transit, Rainbow Routes Association and others have invested in providing residents with information, infrastructure and other supportive measures. The City should work with these groups to provide necessary support measures, allowing them to continue in their encouragement of sustainable transportation use.

## TDM Working Group

An effective TDM program cannot be managed and delivered by a single individual or staff group. Success will require active support from other city departments and their work programs.

For example, collaboration between transit staff and the City's Active Transportation Coordinator could help improve multimodal "first and last mile" connections to transit hubs.

Similarly, Engineering Project Managers for major infrastructure projects could work with the Active Transportation Coordinator to mitigate negative traffic impacts and improve travel choices for residents during disruptions. The formation of a working group, which includes representatives of several departments and meets regularly to exchange information and coordinate actions, can help facilitate these partnerships and support a more robust TDM program.

This working group would be complementary to the Sustainable Mobility Advisory Panel.

### Recommendations:

- ▶ The City should develop an internal TDM Working Group to, among other things, help integrate TDM and transit into major construction projects. The internal working group can assist in promoting the use of all sustainable transportation options and the linkages between transit and TDM.
- ▶ Both transit and transportation staff need to work collaboratively in the delivery of TDM programs. This will include promoting and marketing TDM and transit, encouraging the use of sustainable travel options and working with members of the community to shift travel behaviours.

### Staffing

The implementation of the TDM Plan will require an increase in staffing to allow for the delivery of programs and measures throughout Greater Sudbury. The additional staff will be able to coordinate activities, outreach, and promotion; work with other city departments; and develop partnerships with outside organizations.

For the delivery of the TDM Plan, there are two recommended positions. One is the transition of the Active Transportation Coordinator from a contract to a full-time position. The other position is the addition of a marketing and promotion expert who would be responsible for both transit and TDM. A staff member who specializes in marketing and promotion can provide the necessary materials and activities to encourage the use of sustainable transportation modes, coordinate work between transit and transportation and establish partnerships. These changes can lead to integration of sustainable modes, including the encouragement of more multi-modal transportation options such as the "first mile/last mile" connections between transit and origins or destinations.

Increasing the number of full-time staff as outlined above will help to increase the City's ability to encourage the use of sustainable travel modes, engage with residents and develop slogans and branding which will provide the City with increased modal shares towards sustainable travel. While the addition of staff will increase the operating budget, the ability to promote and encourage the use of sustainable travel options and implement the TDM Plan require this investment.

## Create outreach, marketing, and education programs

Social marketing programs and traditional media and communications outlets are important to the success of TDM measures. The success of each TDM measure needs to be supported through education about how and why sustainable transportation options should be part of daily activities. Without a substantial program to increase the awareness of sustainable transportation, the goal of increase mode share will not be reached. Developing a program that incorporates the uniqueness of Greater Sudbury, such as providing incentives to outlining communities. As well, utilizing more than one mode to travel to and from a destination should also be promoted, particularly in areas where the topography impedes travel by active modes. The inclusion of a marketing position will increase the ability of the City to successfully increase the use of sustainable travel options.

There are several ideas that the City could incorporate into a promotion, education and encouragement program. While many are aimed at cyclists, they can be adapted to encourage the use of all sustainable modes. These programs include educational programs that can be aimed at people of all ages, abilities and income. As well, the City and its partners should work on a safe roads campaign that will ensure the more vulnerable of road users feel safer along Greater Sudbury's road network.

### Recommendations:

- ▶ The City should evaluate the full list of municipally delivered programs outlined in Chapter 3 against the new objectives of the Transportation Master Plan to establish funding and policy priorities for future outreach, marketing and education programs. This will allow for strategic alignment between the City's Official Plan policy priorities, TMP and TDM objectives.
- ▶ To promote the use of sustainable modes, a position should be established to market the TDM programs. Sharing this position with transit would be appropriate as the transit system in Greater Sudbury will form the basis of a sustainable transportation network.
- ▶ The City should establish a promotional and education program as soon as the proposed Marketing and Communications position is filled.
- ▶ The City should establish ongoing funding for the implementation of the promotion and education campaign as well as for the proposed marketing and communications position. This should also be extended to making the Active Transportation Coordinator role permanent.

## Wayfinding

As Greater Sudbury is building its active transportation network, a wayfinding program should be introduced to provide residents, visitors and workers with directions to key destinations along the network. Wayfinding is another means to encourage the use of active modes by taking the "guess work" out of how to get to a destination in a safe and comfortable manner. Signage with direction arrows, distance and destinations will assist users in using the network and shifting to active and sustainable modes.

The wayfinding program should include the following:

- ▶ Consistency in branding
- ▶ Ease of use and accessibility
- ▶ Connected and continual

The images below are from Sydney, Australia. They provide direction and distance to destinations which enables newcomers to the area, tourists, visitors and residents with the ability to travel confidently around the city using active travel options.



As part of the wayfinding program, the City should also create a map showing the active transportation network and recommended routes to travel around the city. This map could show areas where there are steep grades and where it may not be a comfortable ride for those who are less experienced cyclists. The map can also provide more information such as links to organizations and information about using active travel, where to access transit information, key destinations, types of routes and information about signage and safe cycling. Below is an image of part of the cycling map for Halifax (HRM) as an example of the type of map that could be developed by Greater Sudbury. The full map can be found at:

<https://www.halifax.ca/sites/default/files/documents/transportation/cycling-walking/BikeMap2015finalJUNE2017.pdf>

#### Recommendation:

- ▶ The City of Greater Sudbury should develop a wayfinding program to indicate the routes that are recommended to travel to key destinations. This program should be introduced when a map is created for the community showing active transportation corridors, major transit terminals, key destinations, steep grades and other barriers. This program can significantly increase the level of cycling in the city whether it is for utilitarian or recreational purpose.

### Develop TDM Requirements for Developments

An important step for the City will be to integrate TDM more fully into the development application and approval process. Policies within the Official Plan should be enhanced to include support for sustainable transportation and TDM measures. The Official Plan, as it is updated, could also include policies that support mixed-use and more compact development. This type of development could be applied within the urban area as well as in outlying

communities to encourage the use of sustainable travel options and lead to a pedestrian-friendly style of development which supports the use of sustainable transportation.

#### Recommendations:

- ▶ The City should update the Official Plan to include policies related to the TDM programs and measures.

Add to the objectives in Section 11.1, including:

- 11.1 d. to include reference to compact, mixed-use developments that promote the use of sustainable travel options;
  - 11.1 e. in addition to promote all travel modes, expand to include incentives, encouragement and education;
  - 11.1 d. also include long-term shift in travel behaviour;
  - 11.1 e. add connections to transit via walking and cycling to develop a more comprehensive sustainable travel network.
- ▶ The City should further add to the new policy under 11.2.3 to include: “at the discretion of City staff, TDM programs and measures, as well as supportive infrastructure and services may be required within a traffic study.”
  - ▶ The transit policies in section 11.3.2 (6) be expanded to include bicycle lanes, cycle tracks and pathways to improve access to transit stops...
  - ▶ Programs listed under section 11.9 should be updated and strengthened to reflect the TDM plan. The Official Plan should include not only promoting the use of sustainable travel modes, but also include educating and encouraging the use of sustainable transportation, developing programs for schools, households and workplaces and developing partnerships with groups who could deliver the programs and measures.
  - ▶ The integration of transit with cycling and walking routes to ensure that the development of a sustainable transportation network is developed that will enable the use of more than one mode to travel to a destination or enable the use of one mode in one direction and then another sustainable mode in the opposite direction due to topography, changes in weather or time of day.

The City should work with developers to ensure that all new developments are supportive of sustainable transportation and provide options to meet the goals of reducing pollution from transportation, encouraging more active and healthy communities and improving the quality of life for all residents.

#### Recommendations:

- ▶ Develop a formalized process for incorporating:
- ▶ TDM soft and hard measures/TDM supportive infrastructure in the existing development applications process as part of a TDM Plan under existing legislation (Planning Act and City by-laws)
- ▶ TDM Statements, Short and Full TDM Plans into the development process

- ▶ Lobby the Province for amendments to the Planning Act that would allow municipalities to create enforceable undertakings that would require developers to:
- ▶ Provide several TDM hard measures in accordance with a new policy that would require a certain TDM standard to be met as part of the urban development process
- ▶ Provide, support and oversee the implementation and monitoring of TDM soft measures beyond the opening day of developments for a defined time-period

### Developing a Multi-modal Network

The use and promotion of sustainable transportation options should not be done in isolation. In other words, all sustainable modes should be incorporated into the TDM Plan and, how services and infrastructure can be integrated so that there is a seamless transportation system.

Connections to transit services have and continue to be a primary focus of the development of a seamless network. Active transportation routes that provide direct connections to transit stations, terminals and stops help to increase the use of transit within a community.

Another way to develop a multi-modal network is through providing more than one sustainable option for travel along a specific route. In Greater Sudbury, designated bicycle facilities have been located along major transit corridors. This could provide an option to travel by bicycle or transit along the same route or to split the mode used by taking the bus one way and cycling or walking the other. This can provide more options for people and reduce reliance upon the private automobile. As well, active transportation facilities should be developed that link neighbourhoods to transit.

### Recommendations:

- ▶ The City of Greater Sudbury should develop a network of integrated corridors to support and encourage the use of sustainable modes and ensure that there is a multi-modal sustainable transportation network within the City.
- ▶ Where possible, the City should continue to provide more than one sustainable option along major transportation corridors.

### Collaboration with other Northern Communities

Canada's northern communities have many challenges that those in the south do not. The weather can be harsher, the topography challenging and in many places, the population is aging. As well, congestion is often not a primary reason for developing a TDM plan. A review of two northern communities with TDM plans has provided support for the development of the TDM Plan for Greater Sudbury, which has similar challenges and opportunities to implement sustainable transportation programs, policies and services.

Both Thunder Bay, ON and Whitehorse, YK have developed TDM Plans. Rather than direct efforts at reducing congestion, both plans have focused on improved mobility for all and in particular for seniors, improving health through the encouragement of active modes of travel, reducing greenhouse gas emissions and overall cost savings for both the community and

individuals. These are the same areas that Greater Sudbury has identified as the primary reasons for the development and implementation of the TDM Plan.

Given that there are few northern communities with TDM plans, Greater Sudbury’s Active Transportation Coordinator may wish to collaborate with counterparts in Whitehorse and Thunder Bay to exchange information, ideas, programs and results as the City continues to move forward with promoting and encouraging the use of sustainable travel options, and shift residents’ travel behaviour.

**Recommendation:**

- ▶ The City of Greater Sudbury should work with other northern communities to share information, ideas, programs and results as they develop and implement TDM programs and measures within the city.

## 5.2 Action Plan

During the early stages of the action plan, it is worth focusing on “quick wins” that demonstrate success, attract partners, and build confidence in TDM among decision-makers and the public. As outlined in Table 5 below, the measures that should be implemented in the first few years include increasing the amount of sustainable infrastructure, initiating promotion of active transportation facilities, and initiate the hiring of a marketing and communications person who can promote both TDM programs and transit services.

Beyond year 2 of the plan, the programs and measures that will be promoted have been included in the table, however, as the first phase is implemented, it may be necessary to re-evaluate the recommended actions in the medium and long-terms. This could be due to potential funding opportunities, expressions of interest from partners and others to implement programs, and changes in the strategic directions from the next Council for the City of Greater Sudbury. As this plan is a dynamic document, changes are to be expected.

*Table 5: TDM Plan Phasing*

Phase 1: Short Term / Quick Wins (Years 1 and 2)	Phase 2: Medium Term (Years 3 to 5)	Phase 3: Long Term (Years 6 to 10)
<ul style="list-style-type: none"> <li>✓ Identify sustainable, long-term staffing resources to implement TDM programs and measures</li> <li>✓ Identify potential financial and staff resources for marketing and promotion of TDM measures for active transportation and transit</li> <li>✓ Develop partnerships internally through the TDM Working Group</li> <li>✓ Develop partnerships</li> </ul>	<ul style="list-style-type: none"> <li>✓ Evaluate short-term projects to assess effectiveness and make improvements</li> <li>✓ Create a TDM outreach program based on work undertaken in first phase</li> <li>✓ Work with community groups to encourage long term behaviour changes</li> <li>✓ Update TIS Guidelines to include TDM-supportive infrastructure</li> <li>✓ Develop TDM recognition</li> </ul>	<ul style="list-style-type: none"> <li>✓ Update the TDM strategy and implementation plan to ensure it is up to date with current technology, programs and research</li> <li>✓ Evaluate change in TDM delivery and incorporate into updated strategy</li> <li>✓ Update outreach and education programs</li> <li>✓ Continue to deliver the programs established in earlier phases</li> </ul>

<p>externally to deliver TDM programs</p> <ul style="list-style-type: none"> <li>✓ Develop a proposal for a workplace program</li> <li>✓ Enhance Official Plan policies</li> <li>✓ Develop a TDM web page and clearinghouse to provide information to the public</li> <li>✓ Improve the use of social media to promote sustainable transportation within the community</li> <li>✓ Create TDM collateral targeting to different community groups (i.e. web content, brochures, handouts, bookmarks, etc.). These groups may include seniors, students and families</li> <li>✓ Continue to develop active transportation infrastructure</li> <li>✓ Promote existing and new Active Transportation facilities as they are being implemented within the City</li> <li>✓ Develop a pilot project to deliver School Travel Plans within the City in partnership with community organizations, the school boards and/or Public Health Sudbury and Districts</li> </ul>	<p>program for new and existing developments</p> <ul style="list-style-type: none"> <li>✓ Develop a workplace program that will be delivered to workplaces that have signed up for the program</li> </ul>	<ul style="list-style-type: none"> <li>✓ Review policies within the Official Plan and the Transportation Master Plan that support TDM programs and measures</li> </ul>
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**Recommendation:**

- ▶ The City should continue to further develop existing programs and work with the community to develop new initiatives that align with the City’s transportation priorities. The Transportation Master Plan should set the stage for identifying program priorities by analysing existing transportation patterns and the potential for TDM measures and tools to form the basis of new TDM strategies that make better use of existing infrastructure or provide equivalent levels of mobility and accessibility at a lower cost than large scale physical infrastructure.

**5.3 Financial Implications**

It is recommended that a projects budget be created of at least \$50,000 for the first phase. This will cover costs for early projects, programs, and other start-up costs. The funds are expected to come from a strategic initiative or from various departments within the city.

The delivery of a TDM program can be very cost-effective compared to other transportation programs. The short, medium and long-term financial resource implications of this TDM Plan have been estimated. The recommended timelines for delivery could be altered due to budgeting constraints, funding opportunities or changes in the direction provided by City Council.

Table 6: Financial Implications

Program	Delivery Agent	Duration	Estimated Cost	Level of Effort
<b>Short-Term</b>				
<b>City workplace promotion for sustainable travel</b>	Active Transportation Coordinator with Community Partner	Ongoing	\$2000.00 (printing and staff time)	Approximately 5 hours per week
<b>Promotional materials and incentive programs</b>	Active Transportation Coordinator	Ongoing	\$1500 - \$3,000 annually (e.g. for printing and staff time)	Approximately 10 hours per month
<b>Community events</b>	Active Transportation Coordinator, community groups, City departments, etc.	As needed	\$5,000 annually for advertising and staff time	Approximately 5 to 10 hours per month
<b>TDM/transit Promotion and Marketing Position</b>	City of Greater Sudbury	Full-time	\$95,000 annually (including benefits)	35 hours per week
<b>Website and Social Media</b>	Active Transportation Coordinator and marketing staff	On-going	\$5000	5 hours per week
<b>Workplace program development</b>	Active Transportation Coordinator and marketing staff	On-going	\$5000	10 hours per month
<b>Partnership development</b>	Marketing staff, Active Transportation Coordinator	On-going	\$2000	5 to 10 hours per month
<b>Policy development</b>	Active Transportation Coordinator and	As required	\$1000	2 to 5 hours per month

Program	Delivery Agent	Duration	Estimated Cost	Level of Effort
	planning staff			
<b>School Travel Plan Pilot Program</b>	Active Transportation Coordinator, School Boards, Community organizations, Sudbury staff, Sudbury and Region Public Health Unit	1 school years (planning to begin in June)	\$5000.00 – for materials, incentives and promotion. Staff time is assumed to be included in regular hours	5 to 10 hours per week (max)
<b>Medium to Long-Term</b>				
<b>TDM–supportive amenities (e.g. bike racks)</b>	Active Transportation Coordinator, marketing staff member community groups, property owners, etc.	Ongoing	\$2,000 to \$10,000 annually	5 to 10 hours per month
<b>Individual travel planning</b>	Active Transportation Coordinator and marketing staff member with community groups and consultants	One-year pilot program plus planning and evaluation periods	\$100,000 to \$300,000 (look for funding from outside sources) to hire consultant and for staff time	10 to 30 hours per month (including consultant and others)
<b>Develop new programs and continue implementation of existing programs</b>	Active Transportation Coordinator and marketing staff with community groups and consultants	On-going	\$5000	5 to 10 hours per week
<b>Monitor and evaluate programs</b>	Active Transportation Coordinator	Annually	\$2000	20 hours
<b>Review and update policies and strategies</b>	Active Transportation Coordinator and Planning Services Division	As required	\$2000	5 to 10 hours
<b>Sustainable, full-time staff</b>	City of Greater Sudbury	Upgrade the Active Transportation	\$105,000 annually (total compensation	35 hours per week

Program	Delivery Agent	Duration	Estimated Cost	Level of Effort
<b>resources</b>		Coordinator to a permanent position	including benefits)	
<b>Update TDM Plan after 5 years</b>	Active transportation Coordinator	Once every five years	\$10,000 (in-house); \$25,000 (consultant)	200 hours total

## 5.4 Monitoring

### Why monitor?

Monitoring the impacts of TDM initiatives is a key to their long-term success. The purpose of monitoring is to identify changes in transportation behaviour and progress over time. It is a continuous process that involves both quantitative and qualitative measurements, and requires baseline data that provides a starting point for measuring change.

Monitoring the success of past TDM measures supports the implementation of future measures by enabling adjustments when progress is insufficient. Regular monitoring updates on the TDM plan can also maintain accountability by giving residents information that shows how travel being influenced in their neighbourhoods and across the City.

Figure 8 illustrates the key elements of a monitoring program. It is recommended that the City develop a monitoring program with the following in mind (as shown in Figure 14 below).

A thorough monitoring program would include the following:

- ▶ Data to be collected by type and source.
- ▶ A timeline for data collection.
- ▶ General and/or specific program goals or targets.
- ▶ Collection of data as per the timeline established.
- ▶ Analysis of data with regards to program goals and targets.
- ▶ Planned interventions for programs that do not meet target expectations.

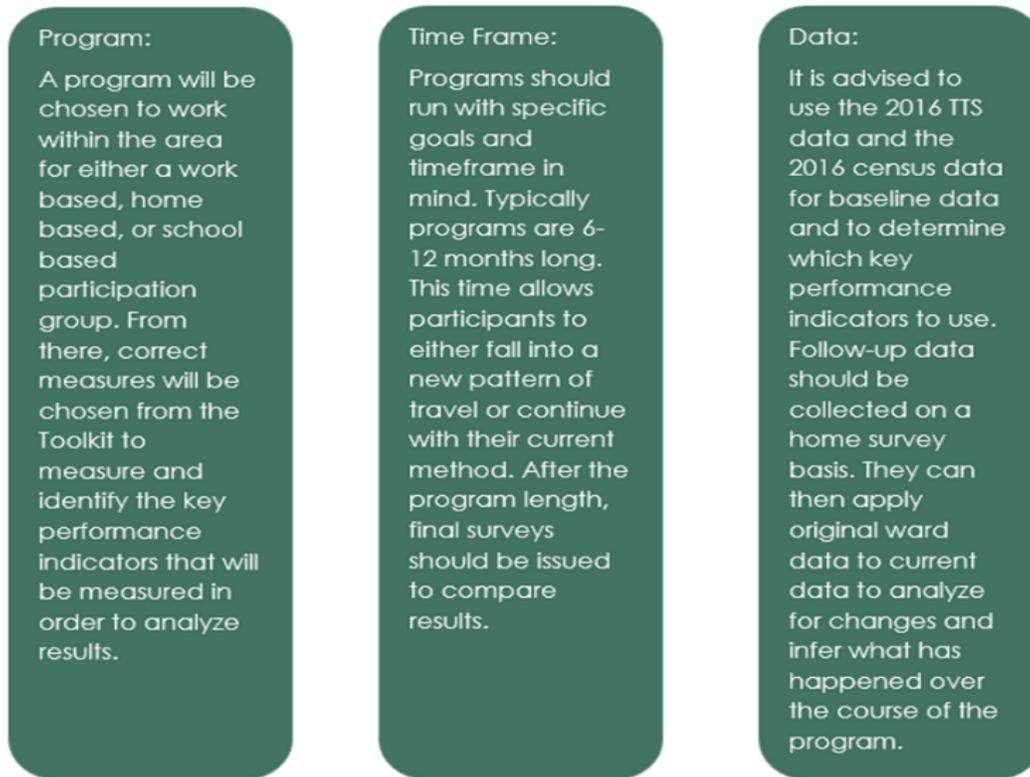


Figure 8: Monitoring Program Components

### What to monitor?

To achieve the above properties of a monitoring program there are several things to consider as shown in Figure 9, the data requirements, the methods of reporting and the analysis of the data in comparison to baseline information.

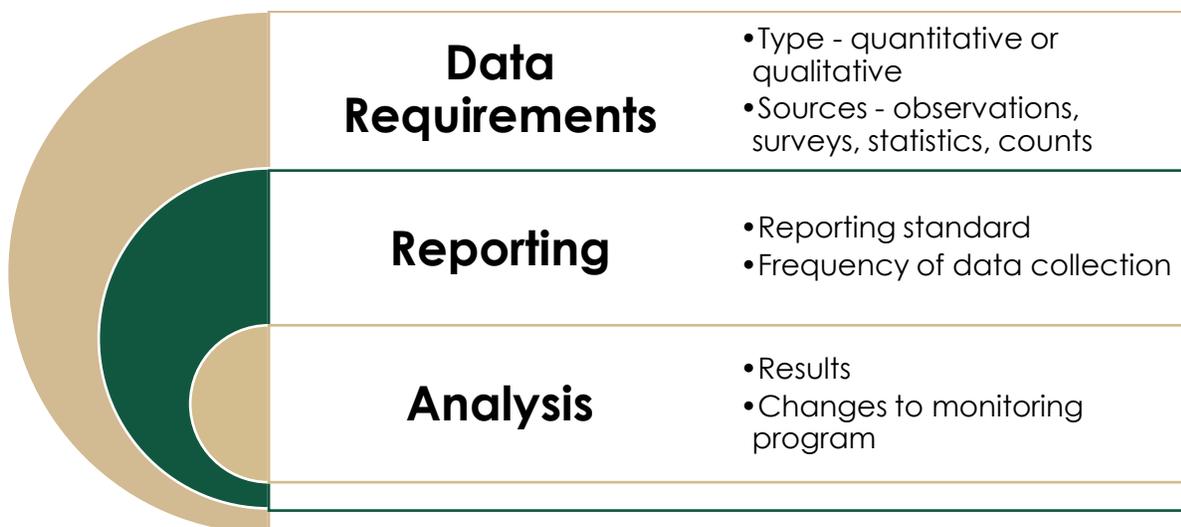


Figure 9: Factors of a Successful Monitoring Program

The features of a monitoring plan are best determined by the nature of the program being monitored, the program’s established goals and targets, and the types of available data.

A toolkit has been developed with measures for these programs that will identify where problems lie and where more attention needs to go to mitigate these areas of concern. Each component of the toolkit is discussed in the following pages and includes the following data:

- ▶ *Intersection turning movement counts*: to be undertaken at key times and peak periods at both times following the parameters of the City of Greater Sudbury
- ▶ *Vehicle classification and occupancy counts*: to be undertaken at key times and peak periods to determine the changes in vehicle use and occupancy. These counts will need to be conducted manually at key screenlines in the City.
- ▶ *Parking usage* (structured, lots, on-street): turnover rates and parking duration to determine short vs. long-term parking utilization
- ▶ *Use of transit*: to be undertaken in partnership with Greater Sudbury Transit to establish boarding trends
- ▶ *Use of bicycle parking facilities*: mid-morning, mid-day and mid-afternoon counts on pre-determined dates
- ▶ *Annual report*: develop an annual report outlining the monitoring programs and changes over time

The various monitoring activities are outlined in the following table, with details provided in subsequent sections. It is important that at least for the first few years the City follow the Monitoring Plan Activity Framework as outlined below and undertake counts on a regular basis to determine how successful the TDM programs are at shifting travel behaviour as they are being introduced. It should be noted that additional monitoring activities can be added as the programs evolve.

Table 7: Possible Monitoring Activities

Element	Application			
	What	Where	When	Who
<b>Intersection turning movement counts</b>	All turning movements	Intersections along perimeter and within development	March and October (same week each year)	City of Greater Sudbury
<b>Vehicle classification and occupancy counts (all modes)</b>	Classification of all modes and occupancy counts for all modes	At intersections to be determined depending upon the project	March and October (same week each year)	City of Greater Sudbury
<b>Off-street parking usage</b>	Parking occupancy	Parking garage and surface parking	Monthly – weekday, Saturday and Sunday	City of Greater Sudbury

Element	Application			
	What	Where	When	Who
On-street parking usage	Parking occupancy	On all streets within the site with on-street parking	March and October	City of Greater Sudbury
Transit usage (ridership)	Ridership on identified routes for Weekdays, Saturdays and Sundays  Transit passengers boarding and alighting	On identified routes	Each booking (APC)	City of Greater Sudbury
Transit service supply	Scheduled trips on specified routes	All stops adjacent to the site	Each booking (APC)	City of Greater Sudbury
Use of on-site bicycle racks	Number of cyclists traveling to a specified location	All surface permanent bicycle racks	Three times per year – May, July and September	City of Greater Sudbury
Survey	Users of a specific service or program	At location where implemented or City-wide	When program implemented and about 6 months later. If a pilot, a survey at the end will be required	Program provider and / Active Transportation Coordinator
Annual Report	Cover all aspects of TDM program	City of Greater Sudbury	Annually	Active Transportation Coordinator

### Recommendation:

- ▶ Greater Sudbury should develop and implement a monitoring program based on the above for TDM measures to ensure that the goals and objectives of this Plan are met and travel behaviours shift toward more sustainable modes.

## 5.5 Conclusions

The TDM Plan for Greater Sudbury will provide opportunities to increase the mobility of the residents, workers and visitors for daily travel and activities. As the city continues to evolve the design of streets to accommodate active modes of transportation; increases awareness of the need to be more physically active; works with partners to encourage the use of transit and

carpooling the result will be an overall shift in behaviour toward more sustainable transportation modes.

The implementation of the TDM Plan will evolve as well. It is not designed to be static and the priorities within the plan will change as the community changes, land use policies evolve and the community embraces sustainable travel options. Therefore, it is important to monitor the programs and measures provided and make changes as necessary to continue to meet the travel needs of the community. Greater Sudbury is a unique community and the plan is also unique. The residents are engaged and will play a role in the delivery of programs.

Finally, the City of Greater Sudbury has a unique opportunity to be a leader in the delivery of TDM and sustainable transportation infrastructure and services. Residents have expressed interest in furthering sustainable transportation opportunities. The survey results indicate that many feel sustainable transportation options may work for them provided incentives; support programs and alternatives are available. Therefore, implementing the programs and measures outlined in this report and, continual monitoring of their success will help lead to a more positive opinion of sustainable travel options and lead to increased utilization.