TORONTO TRANSIT COMMISSION
REPORT NO.

MEETING DATE: September 30, 2010

SUBJECT: TTC CHAIR REPORT

INFORMATION ITEM

RECOMMENDATION

It is recommended that the attached Chair's report be received by the Commission for information.

FUNDING

No funding implications.

JUSTIFICATION

This report is put forward at the request of the Chair.

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September 24, 2010
01-01
Attachment: Chair's report

CHALLENGE

Public transit is expensive and the costs are increasing. TTC riders already pay their fair share of the TTC's operating costs and they cannot be expected to bear these costs disproportionately. The TTC's cost recovery ratio, currently 68%, is one of the highest in the developed world and approximately double the North American average. The Provincial and Federal Governments need to do their part to support public transit in Toronto.

Recommendations

The TTC Should:

- Advocate for the Provincial Government to commit to funding transit operating costs at the traditional "Davis/Peterson/Rae" funding formula[3] level, i.e. with 68%[4] coming from fare and non-fare revenues and 32%[5] coming from government.
- Encourage all three levels of government to pursue new revenue sources to cover increasing capital costs for both expansion and State-of-Good-Repair, such as increasing the gas tax, increasing the sales tax by 1%, instituting road tolls, etc.
- Continue to support State-of-Good-Repair as the highest spending priority to ensure the TTC remains a safe and structurally sound system. Starting with base increases in State-of-Good-Repair budget, this will begin to address the current backlog of non-structural repairs. Currently $2 billion of the TTC's projected State-of-Good-Repair budget needs over the next 10 years is unfunded.
- Continue to look at ways to increase the TTC's non-fare revenues, such as advertising, commuter parking, property rentals and charter operations.
- Work with the Province and the City to set binding five-year budgets that include specific performance measures. In addition, ensure the rate of government subsidy is set and known well in advance, which will aid in the development of an accurate, multi-year budget plan.
- Consider capital improvements like station modernization and new vehicles as important elements of the capital program.
- Advocate for a National Transit Strategy as described by the Federation of Canadian Municipalities in the form of a $2 billion per year national program.

3 The Davis/Peterson/Rae formula is named after these three former Ontario Premiers, all of whom supported a funding formula where the transit operator paid 68% of operating costs and the City and Province split the remaining 32%, at 16% each.
4 The TTC is currently at this 68% target, with 64% coming from fares and the remaining 4% from non-fare revenues like advertising, commuter parking, leases and bus charters.
5 Currently, this 32% operating subsidy is being born entirely by the City, since Provincial Gas Tax revenues and other one-time funding programs are all being directed towards the TTC's capital budget. Under the Davis/Peterson/Rae formula, the Province would once again contribute 16% of the TTC's operating costs.

With constant upward pressure on both the TTC's costs and on passenger fares, its riders expect and deserve good value for their money. Greater attention must be given to improving the reliability and efficiency of the TTC's surface route network. It is no secret that the TTC's surface network experiences an unacceptably high amount of delays and gaps in service. Unfortunately, it is common to see several bunched up vehicles pass by any given stop, followed by a long delay before another vehicle comes along. This is a constant irritant to TTC customers and reduces the overall efficiency of the system.

Problems with surface route reliability are particularly frustrating given how essential the surface network is to the TTC's system. Toronto is spread out geographically which has forced the TTC to rely on using many of its surface routes as a feeder network for its subways. The subway lines rely on this influx of passengers to generate the number of daily rides needed to operate cost-effectively. The subways, in turn, serve as trunk lines for fast, reliable travel across large distances. Approximately 70% of the TTC's subway passengers will connect to at least one surface route during their trip. As a result, over 700,000 rides are taken on the TTC's surface routes each and every day, or over 360 million rides per year.

The recommendations below, if implemented, will make a dramatic difference in improving the reliability and efficiency of the TTC's surface routes as well as the daily experience of customers who rely on them. The TTC should work with the City and other partners to implement these recommendations on a targeted, prioritized basis in the locations where they will have the most impact. In cases where the recommendations involve changes to traffic regulations, the TTC will need to work with the City to do detailed studies of left-hand turns, intersection volumes, traffic patterns, parking impacts, and other data to help support the case for making these changes on a targeted basis.

Improving Route Management

The TTC should hire 60 more on-street route supervisors by 2013 to aggressively manage the spacing between vehicles in order to improve the consistency and reliability of service on its busiest routes. This will cost approximately $5.2 million annually once fully implemented.

Route supervisors need to be trained and empowered to identify problems when they occur and to quickly implement possible fixes. They should focus on meeting the service expectations of TTC customers by aggressively managing headways i.e. the distance and/or time between vehicles instead of vehicle schedules.

TTC passengers want vehicles that arrive regularly. The TTC needs to ensure that improving the reliability and consistency of its service is a high priority. On busier routes, the TTC should move aggressively to manage the spacing, or headways, between vehicles to ensure that vehicles are evenly spaced, rather than using a schedule-based approach.

Many factors combine to cause surface route delays, gaps in service, or bunching of vehicles. Problems are not confined just to traffic operations, but also include excessive layovers at terminals, improper short turns and "soaking" caused by chronic operation close to the preceding vehicle.

Effective route supervision is fundamental to improving the consistency, reliability and overall quality of TTC service. On-street supervisors improve service through direct face-to-face communications with operators and by using in-field GPS monitoring devices to track vehicle locations and make targeted adjustments, such as directing operators to short-turn or to hold at an intersection in order to improve vehicle spacing. In addition, on-street supervisors interact with customers and are an important part of TTC's customer service and communications interface.

The TTC has a wealth of information about route operations that is available for analysis, and that information is particularly improved now that GPS is being installed on all vehicles. The TTC needs to use this information to improve route reliability and better ensure that headways between vehicles are maintained. In addition, route reliability information should be routinely published as part of the service standards analysis, including a breakdown of the data by time of day and day of the week so that periodic problems can more easily be identified and addressed.

While computers and GPS allow for optimization of supervisory resources, the TTC simply does not have enough supervisors to manage all routes effectively. This is the result of a reduction in the number of supervisors that occurred in the 1990s due to budget cuts. While more efficient use of existing supervisors has occurred and new ways of maximizing limited resources should be implemented, the amount of service and number of riders continues to increase and therefore more supervisors are needed. Route supervisors need to be trained and empowered to identify problems when they occur and quickly implement possible fixes. They should focus on meeting the service expectations of TTC customers by aggressively managing headways between vehicles instead of vehicle schedules.

The TTC has already started making important investments in the last few years in the number of route supervisors as well as in better use of handheld GPS technology. These investments are already beginning to improve service quality. For example, six supervisors were added to the Queen route as part of a recent pilot project, which resulted directly in a reduction to short-turns, bunching and gapping[12] along this route.

The TTC needs to continue to increase the number of on-street route supervisors at a rate of 20 per year between 2011 and 2013, for a total of 60 additional supervisors. The total cost, once all supervisors are in place, will be approximately $5.2 million annually. In addition, the TTC needs to perform ongoing analysis of its GPS vehicle monitoring data to determine where there are chronic operational problems. This would be followed up with on-street observations to document problems and implement possible solutions.

On-street Supervisors Provide Good Customer Service by:

- **Coordinating emergency responses and responding to on-street emergencies.**
- **Monitoring/adjusting service on several routes simultaneously using GPS.**
- **Responding to on-street customer service issues and allowing for immediate face-to-face assistance and resolution.**
- **Allowing direct observation of whether operators are keeping to schedule and being courteous to customers.**
- **Managing the flow of vehicles and ensuring proper spacing between vehicles by holding or allowing vehicles to proceed at strategic points.**
- **Directly observing crowding, scheduling issues, and trends to develop long-term solutions to systemic problems.**

12 Short-turns are when a vehicle is ordered to reverse direction before completing their entire route in order to better space out the vehicles travelling along that route. Bunching is when two or more vehicles begin travelling too close to each other. Gapping is when there is a large gap between one vehicle and the next.

Implement Transit Signal Priority at Over 1,000 New Intersections

To reduce delays at busy intersections, the TTC should install Transit Signal Priority at 1,150 intersections around the city by 2014 at a cost of $17.1 million.

Transit Signal Priority (TSP) reduces delays resulting from stops at traffic signals and will improve customer travel time. Buses and streetcars equipped with TSP emit radio signals that are detected when approaching a signal priority equipped intersection. The system will then adjust the lights to either hold them on green until the vehicle travels through the intersection, or shorten the green signal on the cross street so the approaching vehicle gets a green signal sooner.

TSP allows vehicles to complete their trips faster, leading to more daily trips, improved schedule reliability, and less bunching of vehicles. Currently, TSP is in place on most of the streetcar system as well as at 350 intersections along the busiest bus routes, including 29 Dufferin, 7 Bathurst, 35 Jane, 75 Sherbourne and 36 Finch West.

Over the next five years, the TTC plans to install TSP at an additional 1,150 locations. This includes 450 intersections along *Transit City Bus Plan* routes, 500 locations on bus routes carrying over 7,000 riders per day, and 200 selected intersections in the city where buses encounter left-turn and other delays. Full installation will create the equivalent capacity of 46 additional morning peak buses, 39 midday buses and 53 afternoon peak buses by allowing buses to complete their route faster. The total net cost to install TSP at 1,150 locations between 2010 and 2014 will be $17.1 million. In addition, the City and TTC should review intersections where TSP has already been implemented to assess how delays can be further reduced.

Implement Queue-Jump Lanes at Busy Intersections along Major Bus Route

The TTC should invest $1 million annually to design and install two to three queue-jump lanes per year, prioritizing the intersections where they will cause the most improvement to local service.

Another tool used to improve the speed of buses passing through intersections is the creation and use of Queue-Jump lanes. These lanes are created by lengthening existing right-turn lanes, or by creating a new lane. Buses are able to bypass a queue of cars in the adjacent through-lanes, and then merge back into through-traffic as they travel through the intersection. Currently, there are a limited number of Queue-Jump lanes in Toronto, located in areas of high bus density.

On routes where service levels are already high, using Queue-Jump lanes to improve the productivity and reliability of bus operations through congested intersections will mean not only a faster trip for TTC passengers, but also lower operating costs for the TTC. In 2007, Toronto City Council approved a review of opportunities to introduce transit Queue-Jump lanes at heavily congested intersections where buses experience significant delays. Traffic surveys were completed and traffic engineers were able to calculate the expected time savings from potential Queue-Jump lanes. The results of this analysis showed that theses lanes would have a significant impact on reducing delays at congested intersections, saving up to 30 seconds on average per intersection, which can quickly add up as a vehicle travels its route.

If Queue-Jump lanes were implemented at the busiest intersections along all major routes, each bus would be able to make more daily trips, service would be much more reliable, and bunching of buses would occur less frequently. Improving the efficiency of these routes by reducing the amount of time it takes to travel them would also help reduce the TTC's operating costs because the buses currently in service on each route would be able to carry more passengers each day. Adding more buses into service on a route to achieve the same effect would have a significant cost impact.

The TTC, in partnership with the City, should invest $1 million per year to design and install two Queue-Jump lanes per year, beginning with the westbound route on Finch Ave. at Don Mills Rd. and the eastbound route on Finch Ave. at Victoria Park Ave. The TTC should work with the City to continue to identify congested intersections where Queue-Jump lanes would be both feasible and result in the greatest improvements to local service.

Increase the Number of Bus-Only Lanes on Major Routes and Improve Lane Enforcement

The TTC should work with the City to increase the number of Bus-Only lanes on major routes and improve lane enforcement, including by painting coloured lane markings to better identify them and using new video camera technology to help with enforcement.

There are many bus routes in the city that carry upwards of 25,000 riders a day that would benefit significantly from Bus-Only lanes, particularly during rush hour. To date there are only a few Bus-Only lanes in place on routes like Bay and Eglinton.

In the past, the expansion of Bus-Only lanes has not been supported by the TTC because they are widely ignored by drivers and the police do not have the resources to enforce them consistently. However, new video camera technology is now available that would allow automated enforcement of these lanes.

Previously, simple cameras did not have the ability to track movement in and out of the lanes. This is critical since cars are allowed temporarily in the lanes for reasons such as passing a left turning vehicle or making a right hand turn. Video camera technology can now track and evaluate permitted versus prohibited lane entries. This technology is currently being used in Seoul, Korea and Paris. New York City has just begun a pilot project to test similar technology. The TTC should work with the City to pilot this new camera technology for use in Toronto and ask the Province to grant permissive legislation.

In addition, these lanes are currently not physically separated from traffic but instead rely on signs and limited pavement markers to denote their Bus-Only status. In other cities, a common practice is to use coloured pavement and rumble strips to clearly denote Bus-Only lanes. An easy step that could be taken to improve operation of these lanes is to use different coloured pavement markings to make the lanes more distinctive and easier for motorists to identify. New York City reported a 30% increase in compliance with Bus-Only lane regulations when they switched to coloured pavement markings.

Such technology and techniques, if implemented, would be a cost effective way of moving buses more efficiently around the city. The TTC should work with the City to create a prioritized list of routes for Bus-Only lanes, supported with studies of the traffic and parking impacts to ensure the feasibility of implementing these changes.

Speed up Implementation of the Integrated Transportation Plan

In 2009, Toronto City Council adopted the Integrated Transportation Plan (ITP), which called on the City to take a series of actions to reduce delays to transit service. To date, many of these initiatives have not been acted upon even though they are some of the most cost-effective ways that the City could help speed up transit vehicles, especially streetcars. The TTC needs to actively work with the City to help implement the

ITP recommendations at targeted locations, including:

Prohibiting More Left-Hand Turns Along Streetcar Routes

The TTC should work with the City to implement left-hand turn restrictions on a targeted basis along streetcar routes, prioritizing locations where these restrictions will have the greatest impact on reducing delays.

Obviously some left-hand turns are necessary, but a frequent sight around the city is a line-up of vehicles trapped for several minutes behind one car trying to turn left. Streetcars carrying upwards of 80 people are especially vulnerable to these types of delays. Imagine this same problem occurring over and over again along any given route. It becomes clear the kind of impact this sort of delay can cause. Not only is this inconvenient, but it ends up costing the TTC millions of dollars per year because many more vehicles are required to carry the volumes of passengers on these busy routes.

Although increasing the amount of left-hand turn restrictions would force cars and trucks to detour around the block to get to their destinations, in most cases the extra time would be offset by the faster movement of all vehicles through these intersections. In other words, there would not be a significant increase in travel times for motorists due to these changes.

The TTC should work with the City to document and quantify the delays occurring due to left-hand turns at busy intersections along streetcar routes and any bus routes where left-hand turns may also be an issue. Based on this information, the TTC should advocate for new or extended left-hand turn prohibitions on an intersection-by-intersection basis, where supported by the evidence. These restrictions have the potential to realize large savings in both time and money.

Shifting Parking from On-Street Spots to Off-Street Lots Along Busy Transit Routes

In order to reduce congestion along busy arteries, the TTC should work with the City and the Toronto Parking Authority to investigate the feasibility of shifting on-street parking into off-street parking lots.

The creation of vibrant city neighbourhoods, with viable commercial strips, requires the easy influx of people. Street parking is frequently cited as one component of this. However, in Toronto, there are frequently very narrow right-of-way roads, often no more than four lanes wide. With parking on one side or both sides, traffic is often forced into one lane in each direction, causing major delays to both transit vehicles and all other motorists.

Traditionally Toronto has addressed this issue with rush-hour parking prohibitions. However, on many streets today, high-volume, peak travel conditions are occurring during much longer periods of the day than they used to. On roads like these, current rush hour parking restrictions are not long enough to handle existing traffic conditions. The TTC should work with the City to advocate for extending rush hour parking restrictions on congested major roads.

Local commerce is important to our neighbourhood and to the vibrancy of our city and these changes will need to be evaluated on a case by case basis. Detailed studies of each location will need to be conducted in consultation with the local community. Consultation with

neighbourhood interests is important before and during the process of changing parking allocations in order to mitigate negative impacts on commercial properties and residents. The TTC should actively support this process.

Parking restrictions in both directions from 7:00 to 10:00 A.M. and 3:00 to 7:00 P.M. on weekdays and Saturdays should be considered. On some streets with particularly high volumes, all-day parking restrictions may need to be examined, such as on King, Queen, Dundas, College, and Dufferin Streets.

In addition, the TTC should look at ways to partner with the Toronto Parking Authority (TPA) to shift some of the parking demand onto off-street lots where feasible to help maintain a consistent number of parking spaces in an area. These initiatives would require working with the City to extend on-street parking restrictions as well as working with the TPA to provide some form of financial support for creating new lots. In the end, this may actually be a more cost-effective solution to improving the reliability of service on congested routes when compared to the high cost of adding more vehicles. The TTC should conduct a business case analysis to determine whether this strategy may be feasible and cost-effective in some locations.

Improving Parking Enforcement in the Downtown Core and Studying Further Restrictions on Major Arteries

The TTC should work with the City and the Police to aggressively improve enforcement of laws related to illegal parking and stopping along busy routes in the downtown core. In addition, the TTC should consider securing paid-duty officers and towing services to improve enforcement further on the most congested routes.

Many major arteries in the downtown core experience extremely high levels of congestion throughout the day. Typically these streets are configured with four lanes for vehicular traffic, two in each direction. On-street parking along these routes reduces lane availability and left-hand turns create further delays. These delays are compounded by a large amount of vehicles, such as delivery trucks and taxi cabs that are illegally parked throughout the day.

These issues make it slow-going for **all** traffic, including TTC vehicles. Although many TTC routes can experience delays and other reliability issues while passing through the downtown core, its streetcar routes are particularly negatively affected. For example, the King streetcar, Toronto's busiest surface route carrying 54,000 people per day, is the subject of many customer complaints about delays and other reliability problems.

Current practices for enforcing illegal parking have not succeeded in providing sufficient relief for all this congestion. The TTC should work with the City and the Police to aggressively improve enforcement along these routes. To supplement the efforts by the Police, the TTC should consider paying for the cost of a paid-duty police officer and a TTC inspector to patrol the central core along King, Queen and other major routes in order to help keep the illegal stopping and parking to a minimum. Additional towing contracts may also need to be considered. This is especially true in the winter months, when cars have difficulty parking close to the curb and can sometimes obstruct the streetcar tracks, causing further delays.

Even small savings in travel times could easily result in the equivalent of adding another TTC vehicle to these routes. For example, on King Street, achieving travel time improvements equivalent to adding another streetcar into service would be equal to saving the TTC upwards of $650,000 per year. This is desperately needed as there are already not enough streetcars on King Street to accommodate existing demand and there are insufficient spare vehicles to increase service further without affecting other routes.

Even if enforcement is greatly improved, this may not be enough on its own. The TTC should continue to work with the City to collect parking and traffic data on these routes and study additional options, such as further parking restrictions, left hand turn restrictions, and expanding tow away zones. Should these actions also prove insufficient, restricting vehicular traffic entirely on some sections of streets like King or Queen may need to be considered.

Purchase New Articulated Buses for High-Volume Bus Routes

The TTC should purchase 75 to 150 articulated buses for the highest volume routes. In addition, all-door entry and a proof-of-payment policy could further reduce passenger loading times on some very busy routes.

Another way the TTC could improve the efficiency of its bus routes is by purchasing articulated buses as part of its fleet replacement plan. The TTC decommissioned the last of its articulated buses in the 1990s, before the end of their expected life, because they were not reliable or durable enough for the TTC's needs. Since that time, the TTC has been unable to find an articulated bus manufacturer that was willing to produce a bus to TTC specifications, in particular a bus that will last 18 to 20 years.[13]

The bus market is changing and there are now at least three articulated bus manufacturers (New Flyer, Orion and Nova) that have expressed an interest in working with TTC. In addition, some of their newer articulated bus models are now in service in New York and Montreal, which will provide a good indication of how well they will hold up over time.

Even with the construction of the *Transit City* LRT lines, certain routes, such as Dufferin and Finch East, could still benefit from articulated buses. Two articulated buses are able to carry more passengers than three regular buses. By carrying more people, articulated buses reduce bunching by limiting the number of vehicles. Over the next five years, the TTC should follow through on plans to procure 75-150 new articulated buses.

Implement All-Door Entry and a Proof-of-Payment Policy on Some of the Busiest Bus Routes

The TTC should implement all-door entry and a proof-of-payment policy on some of the busiest bus routes to reduce passenger loading times, reduce total travel times and reduce operating costs.

On some of the busiest bus routes, passenger loading and unloading can be slow. This can considerably increase total travel times. To help resolve this issue, the TTC should implement all-door entry and a proof-of-payment policy on key routes. This would help speed passenger loading times and reduce the total travel time for TTC passengers. Making these routes more efficient by reducing total travel times for each vehicle will also help reduce TTC operating costs by improving service and increasing the number of passengers each vehicle is able to carry each day.

13 Currently, the TTC spends around $25,000 more per bus in order to include more robust features (for example, a stainless steel frame) that allow a bus to be rebuilt in a cost-effective manner. These modifications help to ensure buses remain in service for 18 to 20 years, as opposed to the normal life expectancy of around 12 years.

CHALLENGE

Access to track level is too easy and as a result people suffer injuries and even death due to falling onto the track. In addition, both unauthorized access to the tracks and small fires caused by debris falling to track level cause subway delays.

Recommendation

The TTC should:

- Begin preparations for the installation of platform screen doors once Automated Train Control becomes operational on the Yonge-University-Spadina line. The Commission should develop a phased implementation plan and begin securing the estimated $700 million to $1 billion in needed capital funding.

An important and effective investment the TTC can make to improve safety is to install platform screen doors (PSDs) at its stations as quickly as possible. PSDs are an effective safety mechanism because they prevent accidental or intentional passenger access to track level. As a result, the potential for people falling to track level or for people illegally accessing the tunnels would be virtually eliminated.

Platform screen doors will also dramatically improve the reliability of the subway system. Not only do they increase passenger safety and prevent injuries, they also help reduce the number of subway delays. Currently, one of the most common causes of subway delays is due to accidental or unauthorized track access, which can cause delays of a half hour or more each time it happens.

Another third common source of delays is due to debris at track level that blows or falls down from the platforms. For example, a seemingly harmless newspaper can get blown down the tunnels and make contact with the electric rail, causing a small fire and smoke. On average, it takes 10-20 minutes for smoke to be checked out and debris to be cleared every time this happens.

Subway door jams are also another frequent cause of delays. A study the TTC conducted to evaluate PSDs concluded that they will help prevent door jams from occurring when passengers try to hold the doors open. By helping to reduce all these different types of delays, PSDs will allow the TTC to significantly improve the frequency and reliability of its subway service.

PSDs require Automated Train Control (ATC) to operate efficiently so that the trains can easily line up with the new doors. The current fleet of T-1 subway cars will need to be retrofitted in the years ahead to operate with the new ATC system. PSDs also increase the efficiency of ATC by allowing the trains to safely enter and exit the stations more quickly, thereby allowing trains to run more frequently. The entire Yonge-University-Spadina (YUS) line will have ATC in place by 2015 and by 2013 for the busy stretch from Union Station to Eglinton Station. The Bloor-Danforth line will have ATC in place by the early 2020s.

The TTC should budget $700 million to $1 billion over the next 10 to 12 years for the installation of PSDs along the YUS line as the ATC system becomes operational, starting with the busiest stations on the Yonge line. Ongoing maintenance costs for the PSDs will also need to be budgeted for once they are in place. Future TTC capital budgets should ensure that funding is in place to install platform screen doors on the Bloor-Danforth line as soon as the new ATC system comes online in the early 2020s.

IMPROVING TTC OPERATIONS

Ensuring Safety for Riders and Employees

Recommendation

The TTC should:

- Reinforce an internal safety culture and make strategic capital investments in safety by continuing to operate the "Work Safe Home Safe" Program as well as looking for ways to strengthen this initiative.

As a publicly funded transit provider, the TTC is entrusted with ensuring the safety of its riders, operators, and staff members. The work is never done in ensuring a safe work environment; it is important for the TTC to remain vigilant for potential safety hazards everyday and remember that there is always room for improvement. When there is a lapse in safety practices, the consequences can be grave. There are no "accidents" in TTC workplaces, only industrial tragedies. These may result in damaged capital, legal bills, lost work time, or even serious injuries costing lives.

Work Safe Home Safe Program

In 2008 the TTC began a safety program called "Work Safe Home Safe" which focuses on reducing lost time injuries through worker training and engagement. It is of vital importance that the TTC continues this program with full Commission support.

A cultural shift is in progress where all employees are being empowered to take ownership of safety issues and to take a more active role in ensuring the safety of their workplace for themselves, their colleagues, and members of the public. It is vital for TTC staff to know that their safety concerns will be taken seriously by management and the Commission. Staff and management should be equal partners in improving the safety and efficiency of their work environment, as well as in sharing an equal commitment to moving forward though regular reassessments of established methods and practices.

CHALLENGE

Safety is always a top priority for the TTC, but making a safe system even safer requires ongoing commitment, resources, and vigilance on the part of each and every employee.

CHALLENGE

The TTC should be a leader in customer service practices. Riders have clearly told the TTC that it is more important than ever for the TTC to continue to focus on improving customer service and to ensure that this focus is shared with the TTC management team and all employees.

IMPROVING THE RIDER EXPERIENCE

The TTC Customer Service Advisory Panel

Recommendation

The TTC should:

- Implement the 78 recommendations of the TTC Customer Service Advisory Panel.

The TTC has recognized the need to improve its customer service practices and created the Customer Service Advisory Panel (CSAP) in March 2010 to review all aspects of TTC operations and to provide the TTC with independent advice on how to improve customer service.

This 11-member panel issued their final report in August 2010.[14] Their report included 78 recommendations to improve customer service across eight broad areas, including:

1. A renewed focus on customer service.
2. Communicating with customers.
3. Customers communicating with the TTC.
4. Internal TTC communications.
5. TTC employees.
6. Fare media and payment systems.
7. TTC "spaces," volunteers, and communities.
8. Responsibilities of the TTC and its customers.

It now falls to the TTC to implement these recommendations as quickly as possible. Significant changes in customer service practices cannot happen overnight. It is an ongoing process of improvement and the service the TTC provides is always evolving. Some of the CSAP recommendations can be implemented quickly and inexpensively. Others require time and significant future budget commitments to achieve.

Many of the key ideas and recommendations of the Customer Service Advisory Panel are expanded on in more detail in the following sections of this report.

The Customer Service Advisory Panel's Scope of Work Included:

- **A review of operator, collector and other frontline employee initial and recertification training.**
- **A review of the commendation/complaint process.**
- **A review of the selection and hiring criteria for frontline employees.**
- **Introducing a customer Bill of Rights that would include employees' and customers' expectations.**
- **A review of current TTC plans to address customer service.**
- **Conducting public consultations/meetings/focus groups.**
- **Conducting employee consultations/meetings/focus groups.**
- **A public report on recommendations.**
- **Advising on expertise/resources needed to achieve success, e.g. external consultants, organizational changes that could include members of the Commission, members of management, as well as members of the public to address specific areas of interest.**

14 For more information on the Customer Service Advisory Panel and a full copy of their report, visit http://ttcpanel.ca

Recommendations

The TTC should:

- Hire a Director of Customer Service in charge of customer service for the entire organization.
- Create a Customer Service Sub-Committee of the Commission to ensure customer service improvement programs are initiated and followed through to completion.
- Develop a Customer Service Business Plan that addresses all areas of the customer service within the TTC.
- Revise the Customer Service Complaint Response System to ensure that every customer question or complaint is responded to.
- Create Customer Service Response Teams that can be deployed during emergencies or major delays.
- Provide all frontline employees with additional customer service training and ensure that customer service competencies are a key selection criteria for new employees hired for these roles.
- Establish clear metrics to measure the TTC's customer service performance so that it can be tracked and improved upon.

Customer service must be a high priority for the TTC. To achieve this, the TTC must move towards creating a culture of customer service. There is currently no clear definition of customer service at the TTC and no clear vision or strategy for what excellent customer service at the TTC would look like. This lack of a customer service focus creates challenges that have impacts throughout the organization.

The TTC should begin to address these issues by hiring a new Director of Customer Service, who will be a senior member of the management team and responsible for managing customer service delivery throughout the entire organization. In addition, the TTC should create a new Customer Service Sub-Committee of the Commission responsible for ensuring that customer service initiatives, such as the recommendations of the Customer Service Advisory Panel, are implemented and seen through to completion.

One of the first tasks of the new Director of Customer Service will be to work with the Chief General Manager and the Customer Service Sub-Committee to develop and implement a Customer Service Business Plan. This plan must address all areas of customer service within the TTC, set clear customer service delivery goals for every department in both the short-term and long-term and make sure that every department is working together to achieve these goals. Additionally, it should ensure that customer service expectations are clear to every employee and that all employees have the resources they need to achieve these objectives.

As part of this process, the TTC's Customer Service Complaint Response System will need to be revised to ensure that every customer question or complaint is responded to in a timely manner. A system will need to be in place to track every contact, categorize them appropriately for follow-up, and where appropriate, ensure the customer receives specific feedback on what actions were taken to address their concerns. Hours of operation of the Customer Service Centre and the information telephone lines should be extended to better meet customers' needs.

An additional step is to create Customer Service Response Teams that could respond quickly and effectively during emergencies or major delays. Customer service is often most criticized when there is a significant disruption to the system. These are the times when customers need help and support the most. These teams could ensure information about the disruption and the steps the passenger can take to reach their destination are clearly communicated to them, as well as assisting with any specific questions or concerns. Several transit systems throughout North America have adopted similar programs.

CHALLENGE

There is currently no clear definition at the TTC of what customer service is, nor is there an overall vision for providing customer service. This lack of a customer service focus brings challenges that impact many levels of the organization. In order to make customer service a high priority at the TTC, the overall mindset and culture of the entire organization needs to change.

All employees must have a clear understanding of what is expected from them in terms of delivering excellent customer service and they should be given the resources they need to meet the TTC's customer service objectives. The TTC should also ensure that all frontline employees are receiving additional customer service training to help improve their customer service performance, including periodic refresher training. In addition, the TTC should make sure that customer service competencies are a clear selection criteria when hiring new frontline employees such as collectors or operators.

Finally, the TTC must develop clear metrics so that customer service performance can be measured, tracked and improved. One possibility is to establish a regular customer service surveys to measure customer satisfaction in various areas. All metrics should be shared with TTC employees on an ongoing basis.

CHALLENGE

TTC riders want easy, convenient access to information to help them plan their trips. They want this information to be available in varying formats from multiple sources so that each individual can choose the best way to access information. When delays occur, passengers want information to be communicated in real-time so they can make quick decisions on how best to adjust their trip to get to their destination.

Recommendations

The TTC should:

- Continue rolling out the "Next Vehicle Arrival" system to all surface stops by 2011. Continue to add "Next Vehicle Arrival" screens at the busiest TTC stops so that 5% of all TTC surface stops have "Next Vehicle Arrival" screens.
- Add digital screens at station entrances to provide information like the overall status of the system and any delays affecting that particular station.
- The TTC e-alert system should include station information about out-of-order elevators and escalators, as well as making this information available online. E-alerts should also become customizable so that riders may select the routes or stations they are interested in, the type of delays, time periods (e.g. weekdays versus weekends), and individual station news.
- Share schedules and vehicle locations in an open-source format so individuals and the private sector can develop applications for computers and mobile devices and share historical data for those who wish to analyze it. This could include mobile version of the TTC website and trip planner, as well as partnerships with companies like Google.
- Quickly implement a cell phone network to allow cell phone reception on station platforms and inside subway trains.
- Implement a monthly e-newsletter to provide additional information to riders.

TTC riders want quick and easy access to information to help them plan their trips and to make travel route adjustments based on real-time information about TTC service. The TTC needs to serve its riders better by ensuring that they can easily access information at all times, whether they are at home on their computers, on a subway platform, or waiting for the bus.

Over the past few decades there have been very limited investments in new technology to improve communication with TTC riders. Struggling with limited resources, the TTC chose not to invest in these areas. Over the past four years, however, the TTC has begun to reverse this trend with investments in a new website, a trip planner, an e-alert system, subway platform information screens, and, starting this year, the roll-out of the largest text-message based "Next Vehicle Arrival" system in North America.

The TTC is working on a number of electronic initiatives which will help improve customer service and communications with riders. In addition to the e-alert system for subway service disruptions, e-alerts for station elevator and escalator outages have now been introduced and the system is being expanded to include comprehensive e-alerts for surface route delays. The "Next Vehicle Arrival" system data will also be made publicly available in an open-source format. In addition, new infrastructure will be put in place that will allow cell phone use in subway stations.

These e-initiatives need to be continued and accelerated to help bring the TTC into the 21st century. In particular, the TTC should focus on these areas:

Continue Rolling Out the "Next Vehicle Arrival" System to All Surface Stops by 2011

The TTC is currently in the process of rolling out the largest "Next Vehicle Arrival" system in North America. Once completed, riders will be able to get this information at all 11,000 TTC subway stations, streetcar, LRT and bus stops. TTC management needs to ensure this project is a priority and is completed on schedule.

On surface routes, SMS technology will be used to enable riders to use their cell phones to send a text message to the unique address provided at each stop. They will receive a message in return providing the next vehicle arrival times so that they can easily make a decision about whether to wait or to consider another route. The SMS "Next Vehicle Arrival" system is already operational on all streetcar stops and the system will be rolled out to over 10,000 bus stops by early 2011.

This information is also available on the TTC website and passengers are able to browse the next vehicle arrival time for any stop. The TTC should also introduce real-time maps for routes on the TTC's website. Displaying this information graphically on a map gives readers a quick and easy way to assess their travel options.

In addition, over 300 "Next Vehicle" LED screens are planned for installation at surface stops. This program should expand until 500 surface stops have LED "Next Vehicle" screens, with the busiest stops as the first priority.

SMS text messaging for all 800 streetcar stops was completed in 2010. Riders are able to obtain specific information for these stops on their mobile phone by texting the stop number to the "Next Vehicle Arrival" System. "Next Vehicle Arrival" information is also available on the TTC's website.

Add Digital Screens at Station Entrances to Provide Crucial Information Like the Overall Status of the System and Any Delays Affecting that Particular Station

The TTC recently added video screens to many subway platforms which display next vehicle arrival times, system alerts about delays in real-time, the latest news and other important information. By the end of 2010, all stations will have these screens.

New screens should also be added at station entrances so that riders can be notified of system delays in real-time before paying to enter. In the event of a delay, this allows passengers to decide whether or not they would rather re-route before entering a station.

The TTC e-Alert System Should Include Customizable Information About Every Aspect of TTC Service

Over the last few years the TTC has implemented a successful e-alert system that currently has approximately 30,000 subscribers and growing. The system alerts riders about subway delays as well as limited surface route delays. The e-alert system should be expanded to include comprehensive surface route messages as well as messages about issues at individual stations. Where possible, the alert system should be expanded to include text messages for those who want them, since SMS technology provides faster delivery in some cases.

In addition, many riders, particularly those with mobility challenges, arrive at a station only to discover that the elevator or escalator is out of service, making access difficult for them. The e-alert system should be expanded so that riders can choose to sign up to receive e-alerts that will notify them when elevators or escalators in a particular station are out of service. The TTC should move ahead with plans to develop software to communicate the operational status of elevators and escalators by 2011. Once developed, the TTC should accelerate its plans and complete the installation of this monitoring system at all Subway and SRT stations by the end of 2012.

TTC e-alerts should also be expanded to allow passengers to choose which types of e-alerts they would like to receive. Riders should be able to select which routes, types of delays, time periods, and subway stations they

would like to be notified about. A customizable e-alert system will further assist passengers in re-routing in the event of service disruptions. The TTC should continue to refine the systems customizability.

Just as routes have service pages on the TTC website where current alerts are displayed, there are also pages for each station where people can find out everything about the facility including escalator and elevator alerts, construction notices and any other important information. This makes it possible for someone to easily pull down all of the alerts for a specific route or station to which they don't normally subscribe. The TTC should continue to refine its website to make it even easier for people to find and access the information they are looking for.

Share Schedules and Vehicle Locations in an Open-Source Format

The TTC should share all of its system data in a public, open-source format as soon as possible. This will allow the public to access data on TTC schedules, routes, real-time vehicle locations and a host of other information in a standardized format. Individuals and organizations could use this data to develop applications for their computers, cell phones and other mobile devices. For example, Google has already expressed interest in the use of TTC data to develop a Google Transit Trip Planner and has begun work on its development, with implementation expected in late 2010. Other companies have expressed interest in developing mobile applications for smart phones as well. A small additional step is to make historical data is also available. This will be useful both for internal use and for external analysis of TTC's system by any interested parties.

Quickly Implement a Cell Phone Network on Station Platforms and Inside Subway Trains

Making it possible for riders to easily access real-time TTC information on their cell phones is currently not of much use to riders while they are travelling on the subway, since their devices cannot get a signal. Surveys of TTC riders indicate that over 80% of people want this capability. Smart phones and other mobile devices with wireless data capabilities have become extremely common in people's lives and they want to be able to use these devices wherever they go.

The TTC is currently in final discussions with cell phone service providers to develop and install the infrastructure needed to provide cell phone service within subway stations. The Commission will be able to implement this project rapidly over the next few years. The system could also be expanded in the future to make cell phone use on subway trains while they travel through the tunnels possible.

Implement a Monthly e-Newsletter to Provide Additional Information to Riders

The TTC can increase its effectiveness in communicating with riders by creating a monthly e-newsletter. This is a great way to keep passengers up-to-date on TTC news, upcoming projects, and planned service disruptions. The e-newsletter can provide an overview of what's happening at TTC with links to more information for those looking for greater detail on any specific topic. Once the monthly e-newsletter has been developed, the TTC should consider improving it to a weekly distribution to help keep customers even more informed and up to date.

IMPROVING THE RIDER EXPERIENCE

Bringing the Fare Payment System Into the 21st Century

Recommendations

The TTC should:

- Adopt a flexible electronic fare payment strategy using Open Standards technology and business principles that take advantage of proven, standardized, non-proprietary technology.
- Ensure that fare payment is not locked into a single technology and that the system is able to adapt when new technologies emerge.

The TTC's current fare payment system of Metropasses, tickets, tokens, day passes and weekly passes has worked well for the TTC for years. However, the TTC is now at a point where it should move towards the next generation of fare payment.

Fare payment technology has advanced quickly. Smart Cards are becoming last decade's preferred method of payment. Smart Cards are no longer the most advanced form of electronic payments for paying transit fares. The Province's Smart Card system, the PRESTO Card, is currently under development and may be implemented on the TTC. If implemented, the PRESTO Card will be just one component of the TTC's modernized electronic fare payment system. In addition to PRESTO, the TTC will need to adopt an approach that allows it to incorporate the latest technology.

Transit organizations in North America and around the world are moving to adopt what is known as Open Standards payments. This method builds on proven technology and processes of the payments industry to allow passengers to "tap" their contactless debit or credit card at the turnstile. It also allows the TTC to accept any contactless device, such as a prepaid card or even a cell phone with a "chip" in it that uses this technology. The necessary products and technology are available to ensure that all TTC riders have access to the advantages of paying transit fares with Smart Cards by giving them the choice of multiple payment devices and fare purchase options to meet their needs.

Open Standards Electronic Fare Payments

Open Standards electronic payments refer to standardized payment methods in use worldwide by the retail and banking sectors. Adopting these international standards has many advantages for the TTC. The technology needed is readily available through many affordable, non-proprietary off-the-shelf products. Back-end processing of payments is done by the banks, saving significant costs. In addition, any card or device, such as a cell phone, which meets the standards, will work with this new system, allowing much greater flexibility and giving customers the option of choosing whichever card or device they prefer.

This approach would be intuitive for TTC customers to use since virtually all adults are familiar with the retail shopping experience. In addition, this technology is compatible with fare integration for regional riders who travel on multiple systems and make cross-border

CHALLENGE

Paying fares with tokens, tickets, cash, and passes is outdated and complicated. Managing cash also creates security challenges for the TTC and its handling should be reduced.

trips. Moreover, passengers who subscribe to a monthly payment plan, or who prefer passes, would still get their discount since the system would recognize by their account number that they are authorized to get a preferred rate. An Open Standards card that is prepaid (like a gift card) or programmed with a special concession pricing will also be available for children and others who choose to use them.

Another advantage of this approach is it saves the TTC the time and cost of having to develop its own custom made cards, card readers and data processing system, which is a major component of the cost of traditional Smart Card technology. Instead, an Open Standards system would take advantage of standardized technology currently in use in the banking and retail sector around the world. Costs would be lower due to standardization. The risks and responsibilities of running this system would be shared with the private sector. For example, in cases of fraud or a lost credit card, the passenger would call their bank to have the issue addressed.

An Open Standards payment system would be much more flexible than the current pass and token system. For example, the TTC could no longer require customers to make decisions about their fare plan in advance (e.g. buying a specific type of pass) and instead bill customers based on the most advantageous rate applicable to their system usage. Under this approach, if a passenger started using their credit card to access the system, the system would note that the card has funds available but would not calculate the fare chargeable until the end of the month, for example, when it would determine if they had used the system enough to qualify for a "Metropass" discount or weekly pass pricing during certain weeks, and so on. The only pre-registration necessary would be for information not typically carried on their bank cards, such as a customer's eligibility for senior or student discounts.

A special case that would need to be considered is that of shared passes, such as the transferable Metropass and the Family Pass, because they allow more than one person entry to the system with a single pass. Prepaid cards may need to be purchased in these cases. Another issue that will need to be assessed is the implications for the Federal Transit Tax Credit, which currently is only available to those who purchase monthly passes. The TTC will need to work with the Federal Government to address this issue.

Open Standards payments could also make paper transfers a thing of the past. For example, by using just one card customers would be able to tap or swipe their way through the system at each transfer point as long as they reach the next transfer within a set amount of time. The system would be flexible enough to allow for the TTC to quickly extend people's transfer window in the case of a major delay.

The TTC should commit to being a world leader in adopting these latest advances in fare payments. It is important to "future-proof" the TTC's fare payment system by ensuring it is flexible enough to quickly adapt to new technologies so as to help prevent the fare payment system from falling behind again. Otherwise, the TTC may end up with only a traditional, custom-built Smart Card system that will rapidly become outdated due to new payment technologies. By using the same technology as every bank, business and retailer, the TTC can be assured that its fare system will have the highest level of security and will never be obsolete. This approach also aims to maximize the convenience and ease of use of the fare system for TTC customers. Visitors from across Canada and around the world will be able to tap and go without having to figure out how to buy a fare.

CHALLENGE

As the new electronic fare payment system is being developed, the TTC should use this opportunity to review its fare structure policies and ensure they are compatible with this new technology. In addition, the TTC should review whether the current fare structures are meeting passenger's needs and expectations. This debate needs to begin now so that a plan is in place on time for the new electronic payment system.

Recommendations

The TTC should:

- Begin a review to examine fare structures and route transfer policies to ensure they are compatible with the new electronic payment system and that they are meeting passengers' needs and expectations. This should include looking at options like distance-based fares and time-based transfers.
- Consider implementing a low income pass that would reduce the burden of increasing costs on those least able to afford it. For example, this pass could be set at 60% of the regular Metropass price. Ensuring public transit remains affordable for low-income Torontonians would help improve Toronto's social inclusiveness and social cohesion.

In order to ensure the TTC is prepared once the new electronic payment system is ready to be implemented, the TTC needs to begin a review of its fare structures and transfer policies in parallel to the development of the new payment system. The TTC needs to begin to have this debate now, while the new fare payment system is still being developed. At the same time, the TTC should take this opportunity to consider what fare and transfer policies would best meet its customers' needs and expectations.

An electronic payment system will be much more flexible than the current tokens, tickets and passes. It will potentially allow the TTC to develop some new and innovative fare policies that are not practical using traditional payment methods. For example, one option that should be considered is a distance-based payment system, such as a zone-fare system. This analysis needs to begin now to determine what a system like that would look like on the TTC, in terms of revenue generation, meeting passengers' needs for convenient and affordable payment options, and ensuring the system remains fair and equitable.

Similarly, electronic fare payment technology will quickly make paper transfers a thing of the past. The TTC needs to begin thinking about alternative ways to handle transfers. For example, one option is to switch to time-based transfers, such as a two-hour transfer window, but impose a limit on the maximum number of transfers within that window to reduce the loss of fare revenue. From a customer service perspective, this approach would be more flexible and user-friendly. Customers would no longer need to carry paper transfers with them and could make short stops to run errands during their trip without penalty. The TTC will need to do a detailed assessment to determine what impacts changes like this will have on the system.

Toronto is a wealthy city and the TTC moves many of its workers and residents each day. With transit fares rising due to increasing operating costs, it is time to consider the implementation of a low-income pass to help ensure that public transit remains affordable for low-income Torontonians. A low-income pass would help improve Toronto's social inclusiveness and cohesion by improving mobility and helping to ensure low-income residents have access to services that in many cases are not within walking distance.

This new pass could easily be implemented under an Open Standards payments system through a pre-registration process. Eligible customers could pre-register their card or other device that they intend to use for fare payment to ensure they get charged the correct rate.

In order to have a meaningful impact, the low-income pass would need to be set at a rate of around 60% of the cost of a regular Metropass. The fiscal impact would obviously be substantial and once the full costs are determined an informed debate can take place. Funding for such a pass would also need to be secured from a non-TTC source[15] and would likely need to be funded by the Province since social assistance and income redistribution is one of their primary responsibilities.

15 In addition to identifying a funding source, an income testing process would need to be established in order to determine eligibility for this pass. A possible model is the City of Toronto's Welcome Policy, which is used to provide reduced rates to low-income residents for City programs.

IMPROVING THE RIDER EXPERIENCE

Station Managers

Recommendation

The TTC should:

- Ensure Station Managers are in place that are responsible for each station and the issues that arise in them on a daily basis. The Station Managers can respond directly to customer concerns and ensure there is proper follow-up.

The TTC's subway stations are hubs for travel and are the focus of many of the concerns and complaints raised by customers. These include issues such as accessibility, elevator and escalator functionality, general cleanliness, communication and signage, and customer assistance with the day to day issues of navigating the transit system.

Station Managers should be put in place to ensure someone has overall responsibility at each station to address these sorts of issues and ensure that customer expectations are being met. Station Managers can interact directly with customers to answer their questions and address their concerns, as well as ensure there is proper follow up on the issues that they bring to the TTC's attention. By taking ownership of the stations on a day-to-day basis, the Station Managers will improve the quality and level of customer service provided and will proactively reduce a large number of customer complaints.

In September 2010, the TTC implemented the first phase of the Station Manager program by hiring nine Station Managers responsible for eight of the busiest stations in the downtown core. The TTC should continue to expand this program to ensure that every single station is under the jurisdiction of a Station Manager by the end of 2011.

CHALLENGE

Many customer comments and complaints are tied to their interactions with TTC subway stations, such as issues like accessibility, elevators and escalators, cleanliness, communication, and general customer assistance.

CHALLENGE

TTC directional and information signs currently use a variety of styles, fonts and icons, making the system harder to navigate than necessary. Opportunities exist to improve the layout and design of TTC facilities to make them easier to use and to improve the overall customer experience.

Recommendations

The TTC should:

- Review design standards and adopt a five-year program to modernize and standardize all TTC directional signs, information signs, maps, and other signage to ensure the signs use consistent fonts and styles and are easy to read and understand for everyone, including non-English speakers.
- Develop a strategy for a consistent design approach to all new and renovated TTC facilities to make them easier to use and to improve the overall customer experience.

Currently, TTC directional signs, information signs, maps and other signage all use a variety of fonts, styles and icons developed over the decades. The result is that navigating the TTC and finding information can be difficult for people not familiar with the system or for whom English is not their first language.

The last time the TTC conducted a review of its signage was in 1992-1993, which led to a pilot project at St. George station that was ultimately abandoned. The TTC should make it a priority to review all of its existing signage and develop new signs using consistent styles, fonts and icons.

The TTC already has its own unique font that should be recognized and used regularly. Issues like language-barriers and poor-eyesight will need to be taken into account while developing these new signs to ensure they are clear, accessible and easy to understand. Once this review is complete, the TTC should develop a five-year plan and begin to implement the new signage.

This work will likely cost in the range of $100,000 per station, or about $7 million for all 69 stations.

Likewise, opportunities exist to improve the layout, functionality and overall customer experience of using TTC facilities. Modern design practices take a holistic approach, observing how people are actually using and interacting with the system and seeking direct input from customers. Using this information, new ways of reconfiguring facilities can be identified to improve their ease of use and the overall customer experience while still making efficient use of limited resources.

The TTC should develop a system wide design strategy and apply it consistently whenever building new facilities or renovating existing ones.

IMPROVING THE RIDER EXPERIENCE

Recommendation

The TTC should:

- Set a performance target of reaching a cleanliness level of 80%. This can be achieved with a $9 million plan to:
  - Hire an additional 90 cleaners for station cleaning.
  - Hire an additional 50 cleaners for surface vehicle cleaning.
  - Hire an additional 12 people for end of line daytime trash removal from subway cars.

TTC riders have clearly expressed that vehicle and station cleanliness should be a high priority. Concerns about cleanliness are one of the most common complaints received by the TTC. Daily commuters immediately notice a lack of cleanliness in TTC washrooms, on platforms and in vehicles. Additionally, many station wall and floor finishes, escalators and other surfaces have deteriorated.

The TTC should commit to ensuring a high level of cleanliness for its riders. An initial cleanliness audit in 2007 measured the TTC's performance on a percentage scale, with 100% representing maximum possible cleanliness, and determined that TTC stations were on average only 59% clean at that time.

The TTC has made steady improvements since then by taking action to research and implement new, more efficient cleaning procedures and policies. For example, the TTC made revisions to all cleaning assignments and shifts, filled vacancies, as well as improved employees' training on equipment, procedures, and cleaning products. The most recent audit, in May 2010, showed that the TTC had reached a 67%

CHALLENGE

TTC riders want cleaner stations, subway trains and surface vehicles. An initial cleanliness audit in 2007 rated TTC stations as being, on average, 59% clean[16]. The TTC has already begun to improve its performance, reaching 67% in May 2010. However, further improvement is needed.

16 Estimates for additional cleaning staff throughout this section assume an average cost of $59,000 per year for each cleaner, including 30% in benefits.

cleanliness level. The TTC's target for the end 2010 is to reach 69%.

TTC customers value cleanliness and the TTC should commit to reaching a cleanliness performance level of 80% by 2015. This can be achieved by investing $9 million per year to hire an additional 152 cleaning staff.

To reach this goal, 90 additional cleaners are needed to improve station cleanliness at a cost of approximately $5.3 million per year.[17] The responsibilities of these staff would include general waste and recycling removal, cleaning washrooms and any spills, floor sweeping, graffiti and gum removal, cleaning station exteriors and cleaning all surfaces.

In addition to these basic cleaning tasks, another area in need of attention is station finishes, many of which are deteriorating due to their age. In 2009, the TTC launched a five-year plan to address this issue by allocating additional staff to refurbishing all the wall tiles, terrazzo floors and ceiling slats. Likewise, another area in need of attention is the surfaces over track level, including ceilings, truck level walls and yellow platform edge tiles, which requires the TTC to purchase specialized new cleaning equipment and scaffolding and to schedule this work to take place overnight when the subway is not operational.

Another area that needs to be addressed is the cleanliness of surface vehicles. Buses currently receive a heavy cleaning every 6 weeks and this should be reduced to every 3 weeks. To achieve this, the TTC should work to improve the efficiency of its vehicle cleaning procedures as well as hire an additional 50 over night vehicle cleaners at a cost of approximately $3 million per year.

In order to address cleanliness on subway trains an additional 12 daytime cleaning staff, at a cost of approximately $700,000 per year, are needed to clean subway cars and remove trash when they reach the end of each subway line. While the subway cars are cleaned thoroughly overnight, a surprisingly large amount of garbage builds up over the course of each trip down the line, despite the addition of numerous garbage and recycling receptacles throughout TTC facilities. These staff would be responsible for removing as much as possible from the cars when they reach then end of the line so that less garbage accumulates in them during the busy day-time hours. The TTC has just launched a pilot program to clean cars at the end of the line at Downsview and Kennedy Stations. This program should be expanded to all the end of line stations as soon as possible.

Cleanliness and cosmetic repairs are often the first area of operations to be cut when budgets are tight. The TTC needs to show its riders that it has been listening and that it is committed to improving the quality of the environment they travel in daily. By following this $9 million plan, phased in over several years if necessary, the target cleanliness level of 80% can be reached, resulting in a significantly improved travel environment for TTC riders.

17 This audit sought to quantify and measure station cleanliness and developed a percentage scale, with 100% representing the maximum possible level of cleanliness.

CHALLENGE

The TTC's aging stations are crowded and the finishes are deteriorating. Subway stations need major renovations to improve passenger accessibility and flow, improve amenities like washrooms, to add elevators, as well as to generally improve their appearance with modern, but low-maintenance finishes.

Recommendation

The TTC should:

- Continue to undertake complete station renovations at the pace of at least two stations per year. This is a key component of the TTC's modernization plan and is a tangible demonstration of the TTC's commitment to maintaining the aesthetics of its properties and improving their functionality. Fully renovating two stations per year would cost approximately renovating two stations per year would cost approximately $10 million, and would represent a 35 year renewal cycle, the same standard as many U.S. cities have adopted.

The Station Modernization Program was created to begin renovating aging stations along the Bloor-Danforth line. The scope of the program includes both indoor and outdoor public spaces. Each station will be made accessible, easily maintainable, visually modern and more identifiable as a TTC transit facility. For example, signage will be improved to make it easier to navigate stations, ceiling slats will be replaced, floors redone, and tiles repaired. The highest priority upgrade is washrooms and elevators in stations that currently have none.

As part of this program, Pape, Dufferin and Victoria Park Stations are currently being renovated. An assessment study was conducted in 2009 to determine the next priority stations for the Modernization Program once these three stations are completed. Other stations that have been identified as needing modernization include Islington, Kipling, Warden and Kennedy. Bloor-Yonge Station was also one of the original stations slated for improvement. However, this project was deferred because more work is needed to determine how these renovations can best address the capacity issues at that station. This includes issues like platform widths and the vertical flow of passengers from one level to another, which is currently constricted.

At several stations, modernization initiatives are being combined with other TTC programs, such as barrier-free design and elevators, second exits, fire alarm upgrades and roofing rehabilitation. The program also includes urban design upgrades of station sidewalk entrances at Museum, St. Patrick, Osgoode, Finch, Lawrence, Kennedy and Lawrence East stations.[18]

However, much of this work has been deferred due to insufficient funding. Once Pape, Dufferin and Victoria Park stations are completed, the available funding for this program will have been exhausted. The TTC should make it a priority to secure and allocate funding to continue this program at the pace of two stations per year. Since there are 69 stations in total, at this rate it will take 35 years to complete, the same rate as many U.S. cities have adopted. Renovating two stations per year will cost approximately $10 million annually. Further deferral of these renovations will only lead to even higher costs to complete the needed renovations in the future.

18 The estimated cost of these urban design station upgrades is $1.6 million.

The Station Modernization Program includes:

- Improvements to finishes including walls, floors and ceilings.
- Improved lighting.
- Improved station identification and way finding signs.
- Public art integrated into finishes.
- Improved streetscaping and landscaping.

Next 10 Priority Stations for Modernization:

- Woodbine
- Chester
- Ossington
- Donlands
- Coxwell
- Castle Frank
- Dundas West
- Sherbourne
- Runnymede
- Greenwood

IMPROVING THE RIDER EXPERIENCE

Making the System More Accessible

Recommendation

The TTC should:

- Prioritize the recommendations from the Easier Access Program Acceleration Report as part of its Accessible Transit Services Plan. With proper funding, it is possible to make the entire system fully accessible ahead of schedule, by 2020. Specific measures include:
    - Make all 40 remaining subway/RT stations accessible, including elevators and other accessibility features. This would cost approximately $8-10 million per station, or about $350 million total.
- Follow-through on the purchase of 198 new Wheel-Trans accessible buses.
- Reduce the amount of Wheel-Trans trips that cannot be accommodated from the current 2% to 0.5% by 2012.
- Review the criteria for Wheel-Trans eligibility to make sure they are appropriate and sustainable.
- Continue replacing all streetcars with modern, accessible low-floor light rail vehicles starting in 2012, with complete replacement scheduled for 2018, to make the TTC's regular routes accessible.
- Ensure all new buildings, stations, and vehicles built or purchased have a high standard of accessibility.
- Continue to undertake public consultation and community meetings regarding accessibility issues on the TTC.

CHALLENGE

The TTC needs to ensure all of its services and facilities are fully accessible for all riders. Not only is ensuring that riders with mobility challenges can move more freely on the TTC the right thing to do, but it is necessary in order for the TTC to be ready to support the evolving needs of an aging population.

Most TTC riders benefit from accessibility features being implemented on conventional services, including accessible low-floor vehicles, elevators, escalators and automated doors. For those who have limited mobility, strength, and balance, however, these features are essential for taking public transit. In addition, provincial legislation requires that all aspects of TTC service be fully accessible by 2025, although provincial funding for this program is limited. Nonetheless, the demographic reality is that the general population is aging rapidly and the need for accessible services is increasing. Even though planning for improved accessibility usually focuses on overcoming barriers to travel by people with disabilities and seniors, all TTC customers benefit from improved system accessibility.

With the advice and assistance of the Advisory Committee on Accessible Transportation, the TTC has been implementing a staged program to make its services fully accessible. This includes the provision of a comprehensive specialized service with its Wheel-Trans door-to-door operation. In addition, the TTC is installing elevators and other accessible features in 29 subway stations at the rate of 2 to 4 stations per year. With proper funding it will be possible to ensure all stations are accessible by 2020, five years ahead of the Provincial deadline. The TTC also plans to have its bus fleet fully accessible by 2012. Streetcar services will be made accessible through the replacement of the current fleet with modern, accessible light-rail vehicles, beginning in 2012. In addition, all stations and vehicles on the planned *Transit City* light rail lines will be fully accessible.

While the TTC strongly supports the creation of a truly accessible transit system, achieving this goal within a reasonable timeline is largely dependent on funding. The $2 billion total capital shortfall over the next 10 years means that planned projects to make TTC fully accessible may be delayed until new funding is provided. Additional funding from senior levels of government or Metrolinx would be needed to fully comply with the provincial *Accessibility for Ontarians with Disabilities Act*. However, the provincial government has indicated that it will not fund any additional costs to transit systems resulting from making required changes to improve accessibility.

Despite these funding challenges, the Commission should continue to prioritize and implement the accelerated Accessible Transit Services Plan. Although full compliance is required by 2025, with ongoing Commission support and proper government funding it is possible to accelerate and accomplish these goals by 2020.

CHALLENGE

Toronto is one of the most diverse cities in the world. The TTC should increase the representation of women, racial minorities, LGBT-identified persons, Aboriginals, and persons with disabilities in its workforce to reflect Toronto's diversity. By committing to a diverse workforce, from front-line staff to senior management, the TTC can become a leader in cultural change.

Recommendation

The TTC should:

- Ensure its Diversity Plan is a strategic priority.
  - Ensure that the TTC's workforce reflects the population of the City of Toronto within the next 10 years.
  - Engage senior management to support and commit to diversity.
  - Communicate diversity as a core value of the TTC to employees and the public.
  - Recruit, retain and develop a diverse workforce to ensure equal access and opportunities for employment, appropriate levels of compensation, and opportunities for transfers and promotions.
  - Create a systematic approach to succession planning to promote changes to workforce demographics, including the setting of goals, the tracking of hiring, promotions, departures and turnover for all demographic groups.
  - Make achieving the goals of the Diversity Plan part of performance reviews.
  - Create a plan to accelerate the proportion of diverse groups represented in management positions.

Toronto is one of the most multicultural and diverse cities in the world. Among its close to three million residents are people from a variety of backgrounds and experiences, including women, racial minorities, LGBT-identified persons, Aboriginals and persons with disabilities.

Since approving a Diversity Plan in September 2008, the TTC has started a number of initiatives to increase the diversity of its workforce. The top priorities of the plan include ensuring the TTC's workforce mirrors the diversity of the City of Toronto over the next 10 years; identifying diversity as part of TTC's organizational foundation; ensuring support and commitment to diversity by senior management; communicating diversity as a TTC core value to employees and riders; ensuring equal opportunities for all communities in the hiring process, as well as employee retention and promotion; and creating a system to track and promote TTC's diversity objectives.

Since many TTC employees typically choose to remain at the TTC throughout their careers, many of the immediate opportunities to increase diversity in the TTC's workforce are with front-line positions. Currently, for example, the majority of job postings are for transit operators, skilled trade workers and other manual labour positions. Successes in diversity achieved from these front line hires will eventually translate into increased diversity at the supervisory level once employees retire from midlevel and senior management. However, the TTC must strive to do a better job of shattering existing glass ceilings and should commit to a plan to accelerate the inclusion of more diverse groups among mid-level and senior management positions.

Supported by the Board of the Commission, the TTC should continue its diversity initiatives not only through outreach, recruitment, communications, training and retention, but also should look towards starting new activities which enhance and complement its current practices. One priority is to conduct a self-identification survey of employees to help assess the TTC's progress in achieving its diversity goals. The last survey was conducted in 2006 and approximately 40% of current employees participated. The TTC should conduct an employee diversity survey once every two years and aim to receive a 75% response rate.

In addition to the employee surveys, the TTC should analyze employee data to develop departmental and occupation-specific hiring goals, and report annually on progress towards these targets. Policies should be reviewed regularly to ensure that TTC practices are fair to all demographic groups and that there is clarity, transparency and sensitivity for all stakeholders in how the TTC goes about achieving these goals. Finally, the TTC should ensure mechanisms are in place to measure its progress towards achieving these diversity goals.

IMPROVING THE RIDER EXPERIENCE

Community Participation and Partnerships

Recommendations

The TTC should:

- Participate directly, in partnership with TTC employees, in large cultural events like Pride and Caribana.
- Expand the TTC Ambassadors program to increase the TTC's participation in various festivals and events around the city.
- Offer regular school-tours of TTC facilities to increase young people's knowledge of TTC operations and appreciation of the role of public transit.

The TTC is one of Toronto's largest employers and also plays a significant part in the daily life of the many Torontonians. The TTC should reflect Toronto's cultural mosaic and play a larger role in the city's community festivals and cultural events. This can be achieved by increasing the TTC's participation, in partnership with TTC employees, in major cultural events like Pride and Caribana. The TTC should also expand the TTC Ambassadors program in order to increase TTC participation in festivals and events around the city. In addition, the TTC should increase the amount of school-tours offered of TTC facilities in order to help increase young people's knowledge of TTC operations and their appreciation of the role of public transit in their city.

Already the TTC has begun to increase its participation in Toronto's major cultural events. In recent years the TTC participated directly in Pride and Caribana, two of the largest annual events in Toronto, where TTC management and employees marched together using a decorated TTC bus as their float. The TTC has also been a regular participant in Toronto's annual Nuit Blanche all-night arts celebration by offering enhanced TTC service throughout the event. The TTC has also worked with sponsors in recent years to offer free trips on New Year's Eve, from midnight to 4:00 A.M, to do its part to help Torontonians celebrate this annual event safely.

The TTC Ambassadors program also provides outreach and information to smaller events and festivals around the City. This program needs to be expanded in order to ensure that the TTC is participating directly in as many of these events as possible. This program is a positive way for the TTC to participate in Toronto's community life, to provide information about TTC services and projects to residents, and for residents to give the TTC their feedback.

The TTC should also begin offering regular school-tours of TTC facilities. This program would help make the TTC more accessible to Toronto's younger residents, help them learn more about TTC operations, and encourage them to choose the TTC as their preferred transportation option.

In addition to the above approaches, the TTC should continue to identify other opportunities to increase its participation in the cultural and community events that make up the life of Toronto. Participation is Toronto's daily life is an important part of corporate responsibility and will help the TTC to strengthen its relationship with its riders and with all Torontonians.

CHALLENGE

The TTC is one of Toronto's largest employers and should play a larger role in the cultural and community life of the city.

IMPROVING THE RIDER EXPERIENCE

Improved Customer Loyalty and Rewards Programs

CHALLENGE

Increasing the overall value of the Metropass through customer loyalty and rewards programs helps encourage ridership at little cost to the TTC. Loyalty and rewards programs help to increase annual Metropass sales and to increase the percentage of TTC riders who are Metropass holders.[19]

19 TTC experience shows that when customers switch to the Metropass, their usage of the TTC tends to increase by on average 20 to 30 rides per month, primarily outside of rush hour when the system has excess capacity.

Recommendations

The TTC should:

- Improve and increase participation in the Metropass Affinity Program by adding new partners in the retail sales and food sectors to the program.
- Partner with existing large customer loyalty reward programs like Air Miles to encourage more Metropass sales.

The TTC has recently begun improving its customer loyalty and rewards programs. These sorts of programs have been demonstrated in many industries to encourage increased loyalty from customers and to encourage higher sales.

Most TTC customers purchase passes based on financial incentives. If the overall value of the pass can be increased in ways other than lowering the fare, this will encourage more people to make the switch from purchasing tokens or tickets to purchasing a monthly Metropass instead.

This can be achieved by offering discounts at retail outlets and local attractions in order to give Metropass users additional benefits besides unlimited travel. The TTC recently launched the Metropass Affinity Program in order to enhance the value of the Metropass by offering subscribers discounts for everything from food to tourist attractions to car-sharing programs like Zipcar. The TTC should increase the number of companies participating in this program to further enhance the value of the Metropass.

In addition, the existing Metropass Discount Plan offers further value to customers who commit to purchasing a year of Metropasses by offering them a reduced fare rate. These reduced rates are a good way to thank customers for their loyalty and regular use of the TTC. In combination with the discounts available through the Metropass Affinity Plan, the Metropass Discount Plan allows TTC customers to maximize the overall value of their Metropass purchases. The TTC should do more to encourage customers to subscribe to this program, or to upgrade their monthly Metropass purchases to this annual plan instead.

Another way to further enhance the value of the annual Metropass Discount Plan is to form partnerships with existing large customer loyalty reward programs like Air Miles. Over 80% of Torontonians participate in the Air Miles program. These customers see real value in the Air Miles program and will often go out of their way to collect Air Miles points. A partnership with Air Miles would provide a strong incentive for people to consider committing to the yearly Metropass program. Many other North American transit organizations have partnered with Air Miles and found that it resulted in a significant increase in customer participation in their pass programs.

Opening Day of the Yonge Subway

Another underused program is the Metropass Volume Incentive Program (VIP). This program offers a discounted rate to organizations or institutions that buy Metropasses in bulk. It is becoming popular with some employers who choose to provide Metropasses to their employees. For example, 13 hotels in Toronto now purchase Metropasses for their employees through the VIP program. The TTC should work to further increase participation in this program.

All three of these customer loyalty and rewards programs are a cost effective way for the TTC to enhance the value of its Metropass. By encouraging more people to switch to the Metropass, the TTC will increase the overall ridership on its system.

Recommendation

The TTC should:

- Work to ensure completion of all eight planned *Transit City* Light Rail Transit lines as quickly as possible by working with its Municipal, Provincial and Federal partners to secure the necessary funding. Not only is the *Transit City* plan cost effective, but it is a plan that can quickly reverse decades of neglect by bringing a network of rapid transit to all corners of the city.

The *Transit City* plan is a remarkable achievement of the last four years. It represents an opportunity to reverse decades of public transit neglect. It can bring fast, rapid transit to every corner of Toronto in a cost-effective manner and with relatively fast construction timeframes. Surface Light Rail Transit (LRT) lines can be built at roughly double the speed and a fifth of the cost of a new subway line. Construction of the first of *Transit City*'s eight new LRT lines began in late 2009 on Sheppard Avenue and is expected to start in early 2011 on Eglinton.

Much of the *Transit City* plan focuses on bringing rapid transit to the former suburbs of Scarborough, North York and Etobicoke. Many of these areas are currently only served by bus, leading to long public transit travel times for these residents. Furthermore, many of the neighbourhoods along these routes face challenges with poverty and include many economically and socially marginalized residents. Providing convenient access to fast, reliable public transit will go a long way in ensuring all residents of Toronto have equal access to affordable transportation and to opportunities for economic prosperity.

A common misconception about *Transit City* is that LRT technology is the same as the streetcars people are familiar with downtown, particularly those in dedicated rights-of-way lanes, such as on Spadina and St. Clair. This is not the case. Light Rail Vehicles (LRVs) are approximately double the size of traditional streetcars and have numerous other advantages. Stops on LRT routes will be spaced much farther apart than on streetcar routes. LRT stops will be approximately 400-500 metres apart, compared with 100-200 metres on streetcar routes. As a result, LRVs travelling in their own dedicated right-of-way will be able to achieve higher average speeds than a streetcar while also carrying a higher volume of passengers. For example, the projected average speed for the Sheppard LRT is 22-23 km/hr, whereas, the average speed on the 510 Spadina streetcar is 14 km/hr, and the 504 King streetcar 12 km/hr. LRT technology has been used successfully in diverse cities around the world, from Phoenix to Paris.

It is clear that Toronto faces a big challenge with traffic congestion, and the problem is only getting worse. A recent OECD report estimated that Toronto faces a loss of approximately $6 billion annually in lost productivity due to congestion on Toronto's roads and long commute times. The *Transit City* plan can make a major contribution to reversing this trend by attracting new riders to public transit. Projections for the full *Transit City* plan suggest that it will replace the equivalent of 53 million car trips per year due to the number of new riders that will be attracted to public transit. By building an LRT network around the city,

CHALLENGE

Toronto has had little investment in rapid transit expansion for several decades. Many communities in the former suburbs of Scarborough, North York and Etobicoke are particularly underserved. It is no coincidence that these areas include many of Toronto's poorest neighbourhoods and most marginalized residents. These residents require access to reliable rapid transit to better link them with the economic and social fabric of our city.

residents in Etobicoke, Scarborough and North York, who currently have few transit options will finally have access to convenient, fast and affordable rapid transit.

The TTC will need to work closely with the City to continue to push for all eight of the *Transit City* lines to be constructed as quickly as possible. Many people were disappointed when the Province reneged on its promises by deferring $4 billion in *Transit City* funding over the next five years. Although construction on Sheppard and Eglinton can still move forward, Metrolinx recently announced that as a result of this provincial decision, the start date for construction of the Scarborough RT replacement LRT line as well as of the Finch West LRT will be postponed until 2015. There has also been no funding commitment for the Scarborough-Malvern, Don Mills, Jane and Waterfront West lines.

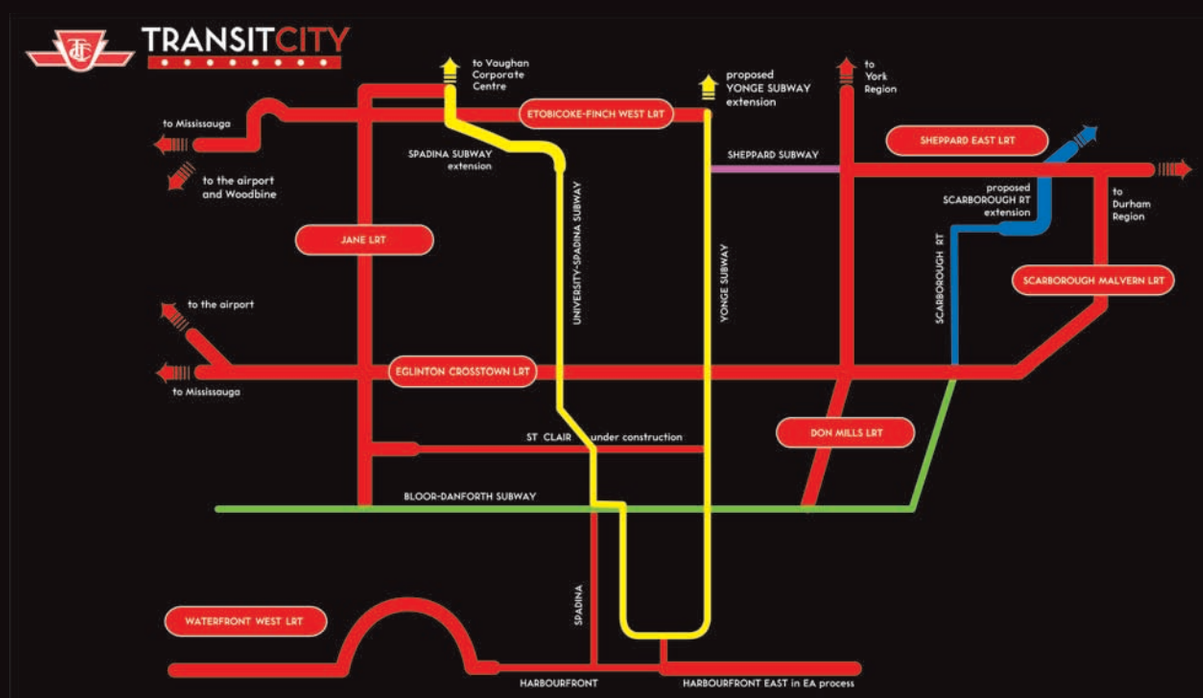
The recent Provincial decision to defer committed funding for *Transit City* further illustrates that one-off project-based funding is not effective. The TTC needs access to more stable, predictable and long-term capital funding so that expansion of the system can proceed at a steady pace. Toronto is already decades behind the rest of world on transit expansion and cannot afford to sit back and accept this slow pace of growth. The TTC needs to continue to advocate vigorously for its Provincial and Federal partners to commit to funding these projects so they can move forward as quickly as possible.

What is LRT?

With higher speed and capacity than the streetcar system, modern electricity-powered Light Rail Vehicles (LRV) will carry passengers in reserved transit lanes separated from traffic congestion. Because stops are spaced further apart, vehicles can reach higher average speeds than typical downtown streetcar routes. Vehicles will also have no local emissions. Each vehicle will have low floor entrances and will be accessible to customers of all mobility levels.

Projected service commencement dates for upcoming LRT lines after Provincial funding deferral decision:

Sheppard East LRT: 2014 (previously 2013)
Finch West LRT: 2019 (previously 2015)
Scarborough Rapid Transit LRT: 2020 (previously 2016)
Eglinton Crosstown LRT: 2020 (previously 2018)



Chair Giambrone and Mayor Miller at the launch of the Lovat Inc. tunnel boring contract. These machines will begin digging the tunnel for the Eglinton Crosstown LRT in 2011

CHALLENGE

Toronto's waterfront is being rapidly developed throughout the downtown core. This area will need much better transit service than that which currently exists.

Recommendation

The TTC should:

- Prioritize construction of a new Waterfront East LRT[20] line from Union Station to Parliament Street, and also the Bremner LRT line, from Union Station to Exhibition Place, in order to ensure service is in place to accommodate new property development.

For many years, the City has made waterfront redevelopment a priority. This area of the city includes many former industrial lands, vacant sites and brownfields that present a significant opportunity for investment. Waterfront Toronto is the agency charged with developing and implementing a vision for waterfront renewal.

As part of this process, City Council has adopted a policy of ensuring that transit projects are included in the early stages of redevelopment in order to help encourage non-auto-based travel patterns from the outset. New property development is proceeding rapidly along the waterfront throughout the downtown core, leaving the city at risk of falling behind on needed transit due to funding uncertainty.

One area of particular focus for Waterfront Toronto over the past few years is the East Bayfront Development Area, located generally along the waterfront between lower Jarvis and Parliament Street. This area is about to undergo a transformation from brownfields to higher density residential and commercial uses. Once redeveloped, this area will have 6,600 housing units, 186,000 square meters of non-residential development, and a George Brown College campus with 4,200 students. These new East Bayfront property developments are expected to generate an additional four million riders per year for the TTC.

The TTC has now completed an Environmental Assessment (EA) for a new Waterfront East LRT line to serve the East Bayfront Area, running from Union Station along Queens Quay to Parliament Street. This line could ultimately be extended to connect to Cherry Street and the Portlands. With the EA now complete, the project is expected to receive approval from the Ministry of the Environment later this year. In the interim, TTC staff have begun detailed design work for the project and it is expected that this project would cost around $300 million.

Waterfront Toronto has indicated that it will fund the first phase of this project, from Union Station to Parliament Street, as part of their mandate, although this funding has yet to be confirmed. The TTC should continue to work with Waterfront Toronto, the City and any other relevant partners to secure funding for this project as soon as possible. If funding is approved in 2010, this line could be operational as soon as 2014.

20 No name has yet been officially chosen for this line. The Waterfront East LRT line is the working name for this proposed light rail line.

Similarly, there are already many new waterfront condominium towers to the west of Union Station and even more are in the planning stages. These new residents will need improved transit service quickly. The TTC should prioritize construction of the Bremner LRT line proceeding from Union Station along Bremner Boulevard, Fort York Boulevard, under the Gardiner Expressway and out to Exhibition Place. When Metrolinx is ready to build the Waterfront West LRT line, the Bremner line could serve as the first section of that route. The TTC will need to work closely with all government funding partners to secure funding for this line in the near future.

Recommendations

The TTC should:

- Complete the Downtown Rapid Transit Expansion Study to look at options for addressing capacity issues in the downtown core where there is currently the most transit congestion, including the option of building the proposed Downtown Relief Line.
- Create a plan to address capacity issues at Bloor-Yonge Subway Station if another line is not in place quickly enough to relieve the congestion.
- Work with the City of Toronto on policies to encourage densification along subway corridors where consistent with the City's Official Plan.
- Work with Metrolinx to ensure there are better connections to GO service from TTC stations, including addressing the issue of fare integration.
- Accept the principle that new Light Rail Transit (LRT) lines serve an intermediary role for routes that need to be upgraded, but that don't have sufficient ridership to justify a subway.

Currently Funded and Planned Subway Expansion Projects

Torontonians are very supportive of subway expansion, although many recognize that the high cost of these projects makes them difficult to pursue without greater funding support from other levels of government. On average, new subway lines cost five times as much as new LRT lines and take twice as long to build.[21] As a result, the TTC needs to be strategic about where to support new subway construction in order to ensure good value for limited dollars. LRT is a good way to build capacity and ridership in advance of subways, which should only be built once the demand for higher passenger volumes exists — in excess of 15,000 people per peak hour in each direction.

Currently the only funded subway expansion underway at the TTC is the Toronto-York-Spadina Subway Extension (TYSSE). This $2.6 billion dollar project will extend the University line from Downsview Station north to York University and then to Vaughan City Centre. The extension will be 8.4 km long, will have six new stations and will be the first TTC subway line to cross the City of Toronto municipal boundary. The line is expected to open for service in 2015.

The Province and Metrolinx have also identified the Yonge Subway Extension as a priority under the Metrolinx Regional Transportation Plan. Although this project currently is not funded, if built it would extend the Yonge line north by 6.8 km to Richmond Hill and include six new stations. Toronto City Council approved the participation of both the City of Toronto and the TTC as co-proponents of this project in a late 2008 Council decision.

Capacity Issues on the Yonge line and at Bloor-Yonge Station

Both the TYSSE and the Yonge Subway Extension will improve regional travel options in the GTA. However, a challenge faced by both these projects is that the areas of the city these new lines will service are not dense enough to generate the passengers needed to make these projects fiscally sustainable. Even accounting for property development along the corridor the lines will not generate enough fare revenues to cover their operating costs for quite some time. Additional operating subsidies will therefore be required.

21 Surface LRT construction currently costs on average $60 million per kilometre, whereas a new subway line currently costs on average $300 million per kilometre.

CHALLENGE

Everyone loves subways, but subways are extremely expensive and take a long time to build. The TTC needs to ensure new subways are built strategically, where there is the demand to support the large cost of construction, so as to make the most out of its limited expansion dollars.

In addition, these extensions will increase passenger volume further south because many people will use them to make a long distance trip to the downtown core. Although the University-Spadina line currently has excess capacity, the increased passenger volumes will be challenging for the Yonge line since it is already operating near capacity south of Eglinton during peak periods, carrying around 34,000 people per peak hour.

The arrival of new subway cars later this year, as well as the Automated Train Control signalling system in 2015, will both help increase capacity on the Yonge line. However, even with these improvements, the crowding problem is expected to be severe by the end of this decade.

Yonge-Bloor station also has capacity issues, as well as a layout that makes the vertical flow of passengers from the Yonge line to the Bloor line difficult during peak hours. In addition, a recent study on rail yard needs determined that a new subway maintenance and storage facility will be needed in order to accommodate the projected growth of the subway car fleet for the Yonge-University-Spadina (YUS) line through to 2030. The TTC has recently authorized staff to identify a suitable property that could be purchased within the next 10 years for this new yard.

The Downtown Rapid Transit Expansion Study

To help address these capacity issues, the TTC needs to continue with the Downtown Rapid Transit Expansion Study that was recently initiated. This study is expected to be completed by the end of 2011 and it will comprehensively assess the need for additional transit capacity in the downtown core given service improvements already planned by the TTC and GO Transit as well as projected land use and ridership scenarios. In addition, the study will assess alternative strategies to accommodate this forecast demand and will include a public consultation process to get feedback on various options.

One option that will be examined in detail is the previously-proposed Downtown Rapid Transit Line, often referred to as the Downtown Relief Line (DRL). The study will look at possible alignments, technology options (such as whether it should be an underground LRT line or a full subway and the estimated costs of the project). Although exact routing is still to be determined, the DRL would likely move east from Union Station under the Queen Street corridor and then curve north to meet the Danforth line near Pape Station. In the west, the line would also follow Queen before curving north to meet the Bloor line around Dundas West Station. Another possibility is to extend the line past Bloor/Danforth up to Eglinton.

With the information from this study in hand, the TTC will be in a position to move directly into an Environmental Assessment for this project and begin working with its fiscal partners to secure funding for this line.[22] Due to the capacity challenges on the Yonge line it is likely that the study will conclude that the DRL is needed. If so, the Commission should commit to making sure that the DRL is a high priority for funding along with the *Transit City* lines. It should also be noted that the DRL is already listed as part of Metrolinx's 25-year plan. Once both legs of the DRL are built it will create two more transfer points from Union Station to the Bloor-Danforth line, which should dramatically ease congestion on the Yonge line and result in a more even distribution of passengers among all subway lines. As an additional benefit, it should help reduce congestion on the busy King and Queen streetcar lines.

22 If the DRL becomes an LRT line instead of a full subway it will only need the six-month Transit EA, like the Eglinton LRT; whereas if it is a subway line it will need a full EA, which could take several years.

Renovating Bloor-Yonge Station

Further action may be needed to relieve the pressure on both the Yonge line and at Bloor-Yonge Station. This depends in part on how long it takes for the DRL to be built. As a first step, the TTC should examine options for renovating and expanding Bloor-Yonge station. In particular, the renovation plan needs to address the vertical flow of the station by reducing the current pinch-points for passengers transferring from the north-south to east-west platforms. It may be possible to identify relatively simple changes to the station to address some of the capacity issues until the DRL is in service. In addition, other measures that can divert demand from the Yonge line should be examined. Further growth in demand on the Yonge line will require a larger subway fleet and closer headways between trains, which will have significant cost implications.

Increasing Population Density Along Subway Corridors

The TTC should work with the City to ensure policies are in place that will encourage higher density development along subway corridors. Tall buildings are sometimes controversial, but the reality is that another million people are expected to arrive in this city over the next decade and they will all need places to live and work. There is no place more suitable to accommodate these higher density buildings than along subway corridors. For the TTC, this increased density is essential to ensuring that all of its subway lines are carrying the passenger volumes needed for them to operate efficiently and cost-effectively.

Improving Regional Transit Integration

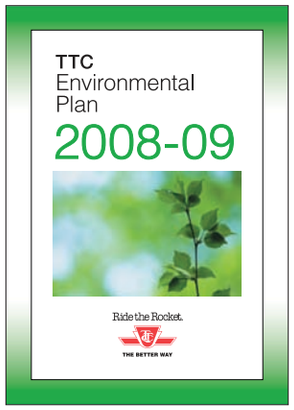
Transit planning should ignore political boundaries — a trip from north Scarborough to south Etobicoke is effectively a long-range, regional trip, even though it is entirely within one municipality. Similarly, the TTC needs to give some thought to how it understands its role as part of a regional network. Another strategy the TTC should pursue to increase the number of passengers on underused sections of the subway is to work with Metrolinx to increase the amount of GO Transit buses that connect with TTC stations. This will be particularly important for the Spadina Extension and proposed Yonge Extension. This strategy is particularly suitable for passengers making short and medium-range trips. For those making long-range trips, for example from the suburbs to downtown Toronto, it is preferable for them to ride the GO commuter rail network and connect at Union Station, helping to avoid further congestion on the TTC subway system in the downtown core.

The original *Transit City* LRT plan included numerous inter-regional connections, but these were cut by the Provincial Government and Metrolinx. Additionally, the region needs fare integration for transit to be more effective. This is possible today with a Provincial operating subsidy. Much more support from both the Provincial and Federal Governments will be needed to make an effective regional transit network in the GTA a reality. GO Transit and Metrolinx need to adapt to carrying more longer-distance trips within the City of Toronto.

Recommendations

The TTC should:

- Increase the TTC's use of certified renewable energy from 10% in 2010 to 35% by 2015 and to over 60% by 2020.
- Installing photovoltaic panels on every viable roof on TTC property.
- Invest $3 million per year in energy efficiency projects that have payback periods of 7-10 years.[23]



The TTC has made many strides in improving its environmental policies and management of environmental issues. The public expects the TTC to be an environmental leader and it needs to continue to move forward aggressively to pursue environmental protection. Public transit is already a more environmentally friendly choice than travelling by private automobile in terms of per capita energy use and emissions. However, there are still many inexpensive advances that can be made to improve the TTC's environmental performance.

Improving the TTC's environmental performance may require some initial investment. However, it is a goal that the TTC should support. This section looks at policies and initiatives that can help the TTC achieve these objectives.

Increase the TTC's use of Certified Renewable Energy to 35% by 2015 and Over 60% by 2020

The TTC is Toronto's second largest consumer of electricity. While it is an advantage overall that its streetcars and subways are electric-powered, the environmental benefits are limited when that electricity is generated by coal or gas-fired power plants.

With the new provincial *Green Energy Act* (GEA), it is expected that a great deal of renewable energy generation capacity will come on the market over the next decade. For example, several companies now specialize in providing Environmental Choice Ecologo Certified Renewable Power to their clients. The GEA also helps ensure price stability for the renewable energy market so that the TTC can have reasonable expectations of these costs and budget for them accordingly.

The TTC has already begun purchasing a portion of its electricity from renewable sources. The TTC should continue to increase the amount of renewable power it consumes by at least 5% per year, so that it reaches a target of 35% renewable power by 2015 and over 60% by 2020.

By increasing the amount of renewable power it uses, the TTC will reduce the per capita emissions generated by those who choose to take public transit and will make a significant contribution to reducing smog and fighting climate change. This can be achieved with only a moderate fiscal impact.

23 Funding is currently only in place until 2011.

CHALLENGE

The TTC is Toronto's second largest electricity user. For this reason, the TTC needs to be a leader in reducing energy consumption and obtaining energy from renewable sources. Doing so will reduce both the TTC's operating costs and its environmental footprint.

Targeted percentage of energy from renewable sources

	2009	2010	2011	2012	2013	2014	2015	2020
Renewable Energy Target	5%	10%	15%	20%	25%	30%	35%	60%

Install Photovoltaic Panels on Every Viable Roof on TTC Property

The TTC should also take advantage of the emerging market for micro-generation of renewable energy on TTC properties. In particular, the TTC has many buildings with a large, flat, unobstructed roof surfaces suitable for solar power generation. These opportunities represent a relatively small capital investment that would quickly pay for itself with the help of new feed-in tariff rates set by the Provincial Government under the new *Green Energy Act*.

For example, one proposal the TTC has been working on with Toronto Hydro is to install a large scale solar panel system on the roof of the Mount Dennis Bus Garage. Engineers estimate this facility could have a 250 kW generating capacity.

Invest $3 million per Year in Energy Efficiency Projects that have Payback Periods of 7-10 Years

Not only does the TTC need to improve the sustainability of its electricity supply, but there are also significant advances to be made by reducing its electricity demand through conservation and efficiency measures. Recent energy audits have shown that there are several potential projects that would generate enough electricity savings to pay for themselves over a short seven to ten-year period through reduced operating costs.

The TTC should commit to investing $3 million per year in these sorts of projects to continue to reduce both its electricity consumption and its operating expenses. Examples of the sorts of projects that have been identified include automated HVAC controls at Greenwood Shop; smart electricity meters at TTC substations, subway yards and bus garages; and replacing lighting with LEDs or other energy efficient lighting technologies.

Current TTC Initiatives in Sustainable Energy Generation:

- Solar photovoltaic panels to power microwave transmitters.
- Piloting solar LED signage for the "Next Vehicle Arrival" System.
- With Toronto Hydro, install a 250 kW large-scale solar panel system on the roof of Mount Dennis bus garage.

Current TTC initiatives in Energy Conservation and Efficiency:

- Completion of Toronto Hydro's facility lighting audits in late 2010, which will assist TTC in adding energy efficient lighting, motion sensors and timers to reduce electricity use system-wide.
- Automated Heating, Ventilation and Air-Conditioning controls at Greenwood Shop to reduce the amount of energy used and ensure more efficient operations.
- Smart electricity meters at substations, subway yards, and bus garages to allow the TTC to better monitor its energy use.

CHALLENGE

The TTC is one of Toronto's largest landholders with facilities all over the city. Many of the TTC's facilities are aging and have high maintenance costs. Many of these facilities will need to be renovated over the next decade and several other new facilities need to be constructed.

BEING AN ENVIRONMENTAL LEADER

Recommendation

The TTC should:

- Commit to making sure all new buildings or any major renovations are certified as meeting the LEED Silver or Gold standard (or equivalent) for sustainable building design. This investment will pay for itself over time through reduced maintenance and operating costs.

Toronto's buildings are responsible for 30-40% of electricity use, approximately 30% of Toronto's greenhouse gas emission as well as for much of the 1.23 billion litres of water Toronto consumes every day. Green development standards are about designing more environmentally friendly sites and buildings that will result in measurable improvements in air and water quality, improved energy and water efficiency, increased solid waste diversion rates and reduced greenhouse gas emissions.

The TTC is one of Toronto's largest landholders and has many aging, high maintenance facilities. Over the next decade, many of these buildings will need major renovations. In addition, the TTC will be building several new facilities, such as the new streetcar yard at Ashbridges Bay, and the proposed new subway yard as part of the Yonge-University-Spadina line.

The TTC should commit to meeting green building standards, such as the LEED Silver or Gold standards, for all new facilities or any existing facility undergoing a major retrofit.

Actions needed to meet these standards include:

- Significant recycling of demolition debris.
- Use re-used or recycled building materials.
- Soil erosion and sediment controls during construction.
- Significant measures to improve the building's energy efficiency.
- Energy-efficient lighting and external lighting shielded to point downwards.
- Significant water efficiency measures to reduce water use through efficient fixtures and appliances.
- Storm-water retention and quality measures to reduce harmful water run-off.
- A green-roof or high-albedo roof to reduce HVAC use and reduce the urban heat-island effect.
- An increased tree canopy of native species to provide shade and reduce the urban heat-island effect.
- Additional cycling and pedestrian infrastructure.

Implementing green building standards for new or renovated facilities is the right thing to do to help reduce the TTC's environmental footprint and tackle tough issues like climate change. This initiative will also result in operational savings through reduced consumption of energy, water and other resources, and through reduced maintenance costs.

The new TTC headquarters and Transit Museum & Visitor's Centre at York Mills and Yonge will be a LEED Gold certified building.

Recommendation

The TTC should:

- Continue implementing the Green Procurement Policy to ensure environmental considerations and full product life cycles are integrated into all purchasing decisions while still maintaining the best value for the Commission.

The TTC is major purchaser of goods and services each year and its procurement decisions can have a significant impact on the environment. The TTC's purchases each year include everything from new vehicles to construction materials to office supplies.

In 2008, the TTC launched a new Green Procurement Policy that commits to purchasing environmentally preferable products and services in all of its operations. This is one of the largest Green Procurement programs in North America and perhaps the largest in the transit industry. This policy is helping to change the TTC's corporate culture to take into account environmental considerations and full product life cycles in every purchasing decision. The TTC wants to ensure that it considers products and services that use less energy and water, create less waste, reduce emissions, and contribute to a safe and healthy workplace. At the same time, the TTC needs to continue to get the best value for its purchasing dollar.

Under this new policy, environmental performance criteria are included in the decision-making process for every purchase. Already this program is having an impact through new training of TTC staff across all departments, the creation of a new total cost of ownership tool to help evaluate purchases, incorporating environmental considerations into ten major system contracts and engaging key vendors and other stakeholders in working with the TTC to implement this new policy.

Examples of early successes of the Green Procurement Program include:

- **The replacement of conventional flashlights with LED flashlights, which has eliminated about 7,400 kg of waste per year while also generating an annual cost savings of approximately $550,000 to $750,000 annually.**
- **The TTC now recovers and re-refines 1.8 million litres of used lubricants and reuses them as engine oil for its fleet. This initiative has reduced the TTC's annual fleet greenhouse gas emissions by 3,900 metric tonnes annually.**
- **15 TTC departments are collectively on track to reduce their paper consumption by about 20% this year. This initiative is conserving trees, reducing water consumption, reducing the TTC's solid waste output and saving the TTC money.**

Experience has shown that it is possible to lower the TTC's environmental impact while still looking out for the bottom line, but more needs to be done. In particular, the TTC should explore enhancements to the Green Procurement policy, such as the purchase of new environmentally preferable products, increased purchase of eco-labelled products, the development and adoption of innovative new environmental standards, specifications and contracts and further development of partnerships with suppliers to reduce environmental impacts and costs.

CHALLENGE

The TTC is a major purchaser of goods and services each year and its procurement decisions can have a significant impact on the environment.

CHALLENGE

In 2009, the TTC generated 12,560 metric tonnes of internal waste, of which 79%, or 9,979 metric tonnes, was diverted from landfill. The TTC could increase its waste diversion rate further.

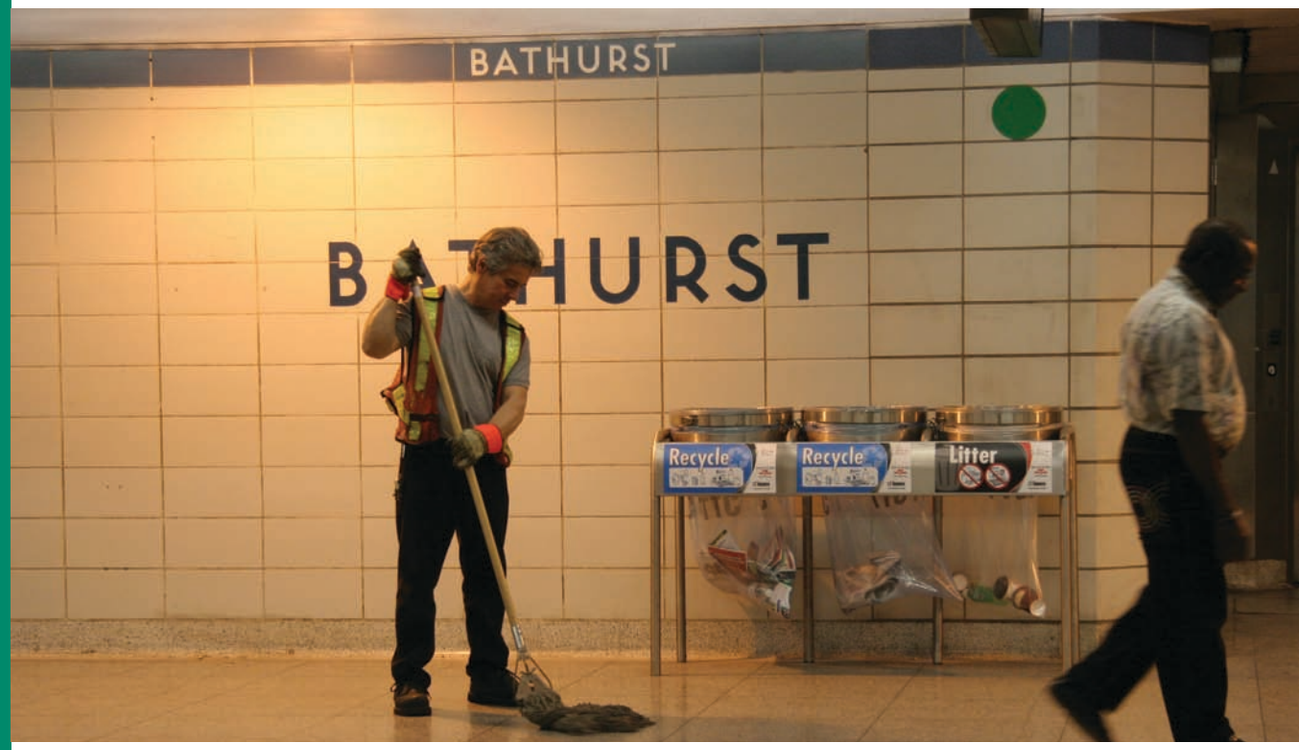
Recommendations

The TTC should:

- Commit to diverting 90% or more of its waste from landfill by 2015 through reduced consumption, improved recycling and organics programs.
- Take advantage of green procurement practices to reduce consumption of products as well as reduce the amount of products in use that cannot be recycled.
- Increase waste sorting at all workplaces.
- Introduce an organics program in the workplace.

The TTC currently generates a large volume of waste each year. Although 79% of this waste is currently being diverted from landfill, the TTC should commit to diverting 90% or more of its waste by 2015. Currently, a large portion of the TTC's waste going to landfill is made up of organics. This waste could be diverted from landfill by the full introduction of an organics program at all TTC work locations to capture this waste and ensure it is properly composted.

In addition, the TTC should increase the amount of waste sorting that takes place at every work location to ensure that products that can be recycled are not mistakenly being thrown in the garbage. Green Procurement practices will also help reduce unnecessary waste, as well as reduce the use of products that cannot be recycled. For example, in 2010 the TTC launched an inter-departmental paper reduction program that has already reduced its paper consumption by nearly 20% for the year. By taking a series of small steps, the TTC will be able to reduce its overall production of garbage and increase its waste diversion rate.



Recommendations

The TTC should:

- Work with the City of Toronto to install bike-rental stations on or near as many TTC stations and stops as possible and as a part of the City's new "Bixi" bicycle-sharing program.
- Install secure bicycle parking units at two subway stations per year.
- Work with the City to create additional bike lane connections to TTC subway stations, where feasible, as part of the City's Bike Plan.
- Reserve space at TTC commuter-parking lots for car-sharing companies.
- Look at ways to cross-promote car-sharing, bike-sharing and the TTC through reward programs or other methods.

The TTC is part of a suite of alternative transportation options that includes walking, cycling and car-sharing. The TTC should work to better integrate with all these alternate forms of transportation so that individuals can easily and conveniently switch from one mode to another.

The TTC has already made some improvements to its cycling infrastructure. For example, all buses will be equipped with bicycle racks by the end of this year and the new Light Rail Vehicles will have room for storing two bicycles during off-peak hours. The Station Modernization project at Victoria Park Station includes an enclosed, secure bicycle parking unit, and the Dufferin Station modernization will also include all new or rebuilt staircases with a bicycle stair channel to make it much easier for cyclists to enter and exit the station.

The TTC should expand on these initiatives by installing secure bicycle parking units at two stations per year. The TTC should also work with the City of Toronto to identify locations at TTC stations and other TTC facilities that would be suitable for bike-rental stations as part of the City's new "Bixi" bicycle-sharing program. Where feasible, the bike-rental areas could also include equipment for cyclists to make tune-ups, add air to their tires and make minor repairs, as well as bicycle storage units.

CHALLENGE

The TTC is part of a mix of transportation options and needs to find ways to further integrate its system with alternative methods of transportation, such as cycling, car-sharing and walking.

The TTC should also work with the City to ensure the Toronto Bike Plan includes easy access to bike lanes from TTC subway stations wherever possible. The City should ensure there is sufficient bicycle parking near subway stations and major stops on the TTC's surface routes. Other opportunities include bike trails that can connect to major TTC routes, such as through underused Hydro corridors.

Car-sharing is also becoming more popular among Torontonians. The TTC has just announced that Zipcar will be participating in the TTC's Metropass Affinity Program to offer TTC Metropass holders a reduced rate for their services. This is a great way to promote synergies among these two forms of travel. The TTC should also look at potential partnerships with car-sharing companies to reserve space for them in TTC commuter parking lots.

In addition, the TTC should continue to look at ways of working with the bike-sharing and car-sharing companies to further cross-promote these forms of travel. One possibility is to look at further discounts or other incentives as part of the new Metropass rewards program. These types of partnerships would help make it easy and convenient for Metropass subscribers to hop on the TTC, rent a bike, or rent a car, depending on which mode best suits their particular travel needs for any given trip.

By being mindful of various other modes of transportation, the TTC can better work with riders in finding alternative methods of travel. This in turn will help ensure the TTC is a convenient option for passengers.

TTC Projects & Accomplishments 2003 - 2010

Appendix of Additional Information & Resources

Fare Initiatives

Adult Transferable Pass
The transferable adult Metropass was introduced in 2005. The pass, which no longer requires photo identification, can be used by another rider once the first rider has completed his/her trip. This change in the adult Metropass has led to a large increase in off-peak ridership.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2005/Dec_14_2005/Other/Weekly_Pass_Distribu.jsp.

Weekly Pass
The transferable Weekly Pass was introduced in 2005 as an affordable fare alternative between the ticket/token and the monthly Metropass. The Weekly Pass is valid for travel in a given week from Monday to Sunday. It does not require photo identification and is transferable to another rider.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2004/Oct_20_2004/Other/Review_Of_Weekly_Pas.pdf.

Post-Secondary Student Metropass
The Post-Secondary Student Metropass was approved by the Commission in November 2009. It enables college and university students to purchase the Student Metropass at the reduced price that high school students currently pay, starting in September 2010. The introduction of this new pass is expected to contribute to an increase in young people using public transit for their day to day activities in addition to their commutes to and from school.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2009/December_16_2009/Minutes/1914M_November_17_09.pdf.

Adult Ticket Elimination
Adult tickets were eliminated in 2008 to reduce fare revenue losses which resulted from from counterfeiting. The elimination of the tickets saves the TTC $3 to 4 million annually.

For more information see: http://www.ttc.ca/postings/gso-comrpt/documents/report/f3582/Elimination_of_Adult_Tickets.pdf.

Capital Projects

Service Increases
In 2008, a total of 180 service increases were made on 46 TTC bus and streetcar routes in response to continuing growth in ridership. These increases resulted in approximately 4500 additional hours of service, reduced overcrowding, and shortened waiting times for approximately 3.5 million customer trips.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2008/Apr_23_2008/Reports/Service_Improvements.pdf
and http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2008/Feb_27_2008/Other/Service_Increases_to.pdf.

Ashbridges Bay Carhouse
In 2009, TTC procured 204 new light rail vehicles to replace the current fleet of streetcars. The TTC Streetcar Maintenance and Storage Facility Master Plan recommends the construction of a new LRV Maintenance and Storage Facility with a maintenance capacity of 210 vehicles and a storage capacity of 100 replacement fleet LRV vehicles. The site at Leslie Street and Lake Shore Boulevard East was chosen and is scheduled to be completed in 2012.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2009/December_16_2009/Reports/Replacement_fleet_ma.pdf.

York University Busway
The York University Busway opened for operation in 2009. It is a six kilometre reserved right of way for buses running between Downsview Station and York University. The Busway provides faster and more reliable service for the 22,000 daily trips on the 196 York University Rocket.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2009/Apr_27_2009/Supplementary_Reports/York_University_Busw.pdf.

Spadina Subway Extension
Construction of the Toronto-York-Spadina Subway Extension began in 2010. The 8.6 kilometre extension will have six stations (Sheppard West, Finch West, York University, Steeles West, Highway 407, and Vaughan Corporate Centre) and cross into the City of Vaughan. Full funding is in place for the $2.6 billion project, with the opening of the extension planned for 2015.

For more information see: http://www3.ttc.ca/PDF/About_the_TTC/SubwayExtension_09_05_07.pdf.

Yonge Subway Extension Study
In 2009, a study was completed on an extension of the Yonge Subway line. This study also examined changes to Bloor-Yonge Station, expansion of the subway fleet, second entrances to stations south of Bloor, a downtown relief line from Pape station to downtown, subway yard costs, and an extension of the Sheppard subway line west to Downsview.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2009/Jan_21_2009/Reports/Yonge_Subway_Extensi1.pdf.

Downtown Rapid Transit Expansion Study
In 2010, the Downtown Rapid Transit Expansion Study was approved by the Commission. This study will assess the need for additional transit capacity in the downtown core. One option to be examined is a Downtown Rapid Transit line, commonly referred to as the Downtown Relief Line. The study is expected to be completed at the end of 2011, with an Environmental Assessment to follow.

For more information see: http://www3.ttc.ca/About_the_TTC/Projects_and_initiatives/Downtown_Rapid_Transit_Expansion_Study/index.jsp.

Station Modernization Program
The Station Modernization Program was created in 2008 to begin renovating aging stations along the Bloor-

Danforth line. The scope of the program includes both indoor and outdoor public spaces at the stations. It aims to ensure that they are brought up to a state of good repair, kept safe, are easily maintainable, easily navigated, visually modern, and are more identifiable as a TTC transit facility. The highest priority upgrade is to install washrooms, elevators and escalators in stations that currently have none.

For more information see: http://www.ttc.ca/postings/gso-comrpt/documents/minute/f212/1895M-March_26-08.pdf
and http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2009/December_16_2009/Supplementary_Reports/Station_Modernizatio.pdf.

Station Renaissance Program
In 2008, the TTC unveiled the Museum Station renovations and makeover. The platform treatment was developed by capturing the cultural influences of the Royal Ontario Museum and the Gardiner Museum of Ceramic Art located above the station. The station's most dramatic features are the five sets of paired columns representing First Nations of Canada, Ancient Egypt, Mexico's Toltec Culture, China's traditional culture and the Parthenon of Ancient Greece. Other stations to be included in this program in the future are Osgoode and St. Patrick.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2008/March_26_2008/Reports/Design_Approach_-_St.pdf.

Mount Dennis Bus Garage
In 2004 the Commission approved the concept of an indoor storage facility for the Mount Dennis Bus Garage. Officially opened in 2008, Mount Dennis is 23,575 square metres in size, and is designed to service and store more than 250 buses serving 30 bus routes.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2004/Dec_15_2004/Other/Mount_Dennis_Bus_Gar.pdf.

New Vehicle Fleet
The TTC bus fleet has been almost entirely renewed with 1400 new buses procured since 2004. As of 2010, 40% of the fleet was comprised of hybrid buses, making it one of the largest hybrid fleets in North America.

Additionally, over 300 new subway cars have been purchased and are scheduled to begin to arrive in late 2010. 204 new low-floor streetcars have also been ordered.

New TTC Head Office
The current TTC head office is located at 1900 Yonge Street. This building was built in 1956 and requires a capital investment in the next five years of $30 million. In addition, the TTC leases office space in seven separate facilities across the city at an annual cost of approximately $8.6 million.

This year, the Commission authorized TTC staff to begin work on a framework for a long-term lease of office space in a building owned by Build Toronto at 4050 Yonge Street. Construction will begin in 2011, with occupancy in 2014. The office at 1900 Yonge Street would then be turned over to Build Toronto for future development opportunities.

For more information see: http://www3.ttc.ca/News/2010/May/News_Release_TTC_board_authorizes_staff.jsp.

State-of-Good-Repair Investments
Since 1996 the TTC has made investing in the State-of-Good-Repair program a high priority to keep all assets in a safe and reliable state. Over the last seven years, $4 billion has been invested to keep the tunnels, stations, and vehicles in good working order.

Transit City

Transit City is an initiative to build eight new Light Rail Transit (LRT) lines to neighbourhoods and areas currently not served by rapid public transit. These routes will reinforce the public transit focus of the City of Toronto's Official Plan. Electrically-powered Light Rail Vehicles (LRVs) will travel in reserved lanes providing a smooth, fast and comfortable transit experience. *Transit City* routes will be accessible to customers with all levels of mobility and provide transit users with a high level of comfort and customer service. Once implemented, the *Transit City* LRT lines will support local economic development and reduce greenhouse gas emissions by allowing people to choose public transit as a convenient alternative to the private automobile. Each line will provide seamless connections with the existing TTC subway system, GO Transit, other *Transit City* LRT routes and regional public transit networks.

For more information see: https://www3.ttc.ca/About_the_TTC/Projects_and_initiatives/Transit_city/index.jsp
and http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2007/Mar_21_2007/Other/Toronto_Transit_City.pdf.

Sheppard LRT

This route will operate between Don Mills subway station and Meadowvale Road in northeast Scarborough and will intersect with the Sheppard subway line, the GO Transit Stouffville line, Don Mills LRT and the Scarborough-Malvern LRT. This line will be 14 kilometres in length, with 30 stops. Construction started in 2009 and service is scheduled to begin in 2013.

For more information see: https://www3.ttc.ca/About_the_TTC/Projects_and_initiatives/Transit_city/index.jsp
and http://www.ttc.ca/postings/gso-comrpt/documents/report/f3597/Request_for__Approval_of_the_Sheppard_East_LRT_Environmental_Assessment_Study_-__11520_CR.pdf.

Eglinton Crosstown LRT

This route will link Kennedy Station with Pearson Airport and the Mississauga Transitway. It will operate underground for approximately 10 km from Laird Drive in the east end to Keele Street in the west end. Customers will be able to connect with the Bloor-Danforth subway line, Yonge-University-Spadina subway line and both the Don Mills LRT and Jane LRT. This line will be 33 kilometres in length with 42 stops. The first phase of construction is scheduled to begin in 2011.

For more information see: https://www3.ttc.ca/About_the_TTC/Projects_and_initiatives/Transit_city/Current_Projects/index.jsp.

Finch LRT

The Finch LRT will commence at Finch station, connect to the extension of the Spadina subway, the Jane LRT and service Humber College's North Campus. It will run for 17 km with 30 stops. Construction is expected to begin in 2015.

Scarborough Rapid Transit LRT
The Scarborough Rapid Transit LRT will redevelop the existing Scarborough RT line into a new LRT line. The line will extend from its current end at McCowan station north to Sheppard Avenue. This line will be 12 km long, have 12 stops, and is expected to begin construction in 2015.

Sheppard LRV Yard
In May 2010, after three formal public consultation meetings, the Commission recommended that the Sheppard Maintenance and Storage Facility be housed at 8304 Sheppard Avenue East. This building, which will adhere to Toronto Green Standards, is anticipated to employ approximately 350 employees over three shifts.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2010/May_6_2010/Reports/Request_for_Approval.pdf.

Transit City Bus Plan
The *Transit City Bus Plan* is a long-term plan to improve bus service, with implementation continuing over the next five years and beyond. The plan will add 8 million passenger trips per year. The plan calls for a capital investment with the City of $77 million between 2010 and 2014. It also calls for an increase in operational expenses of $52 million by 2015 in order to help ensure TTC customers have reliable transit service, regardless of where they live in Toronto.

For more information see: http://www3.ttc.ca/News/2009/August/TTC_proposes_ten_minute_service_all_day_every_day_for_key_bu.jsp.

Additional LRT Environmental Assessments
Environmental Assessments have been completed or are underway to study additional light rail lines along the waterfront, Jane Street, Don Mills Road, and in Scarborough-Malvern.

For more information see:
https://www3.ttc.ca/About_the_TTC/Projects_and_initiatives/Transit_city/Future_Projects/index.jsp.

Service Improvements

Service on All Routes, 6:00 A.M. to 1:00 A.M.
In 2003, a Ridership Growth Strategy was proposed that included the provision of 19 hours of service each day for all routes in the system. This proposal was implemented in 2008, providing riders with service on all routes from at least 6:00 A.M. to 1:00 A.M. everyday.

For more information see: http://www3.ttc.ca/PDF/Transit_Planning/ridership_growth_strategy_2003.pdf.

Peak and Off-Peak Loads
TTC reduced its loading standards by 10% across the board to reduce overcrowding on vehicles. In addition, more off-peak service was added so that more people commuting outside of rush hours could have a seat.

Superior On-Street Supervision
Effective supervision is fundamental to the provision of good service. Route supervisors undertake a number of very important tasks, such as coordinating emergency responses, and monitoring and adjusting service levels. They are also key to improving customer service because they are often able to talk to riders directly. Between 2010 and 2013, the TTC plans to hire an additional 60 Route Supervisors for on-street duties.

For more information see: http://www3.ttc.ca/PDF/About_the_TTC/Transit_City_Bus_Plan.pdf.

Additional Cleaning Staff
Cleanliness audits in 2007, 2008 and 2009 show a steady increase in the year end rate of cleanliness in our stations. TTC's cleanliness ratings have increased from 59% in 2007, to 64% in 2008, and to 68% in 2009. In order to maintain this upward curve of improvement, the TTC will need to hire additional cleaning staff.

For more information see: http://www.ttc.ca/postings/gso-comrpt/documents/report/f3873/Cleanliness_Audit_-_Apr3-09_Final-(1).pdf.

Emergency Medical Services Partnership
The TTC and Emergency Medical Services (EMS) commenced a pilot project in 2008 to assist with medical emergencies on the subway lines during the morning and evening peak periods. This pilot aimed to reduce delays associated with medical emergencies. The EMS team was able to attend to 80% of all medical emergencies more quickly, and the project was made permanent in 2009.

For more information see: http://www.ttc.ca/postings/gso-comrpt/documents/report/f3755/EMS_Pilot_Project_Information_CR.pdf.

Crowd Control at Bloor-Yonge Station
In November 2009, the TTC experimented with crowd control measures at Bloor-Yonge station. These measures included use of door attendants and barriers to reduce the dwell time of the trains in the station. The pilot project increased train throughput by 1-4 trains in the peak A.M. rush hours and also improved "on time" performance. These improvements allowed trains to move more frequently through the station, adding 5-10% to line capacity. Door attendants staffed the station by helping to separate riders leaving trains from riders who were boarding. Staff also encouraged patrons to fill up the entire length of the platform while waiting for the next train, and prevented passengers from running to board the trains, and thus forcing the doors to stay open. The pilot project was made permanent in December 2009.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2009/December_16_2009/Supplementary_Reports/Bloor_Yonge_Stn_Pass1.pdf.

Expanded Night Bus Service
In 2005, a number of new services were proposed to provide overnight access to transit service in areas which are currently beyond a 15-minute walk of overnight service routes. $1 million of service was added to the Blue Night network to expand it to main streets outside of downtown.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2005/Jan_12_2005/Other/Review_Of_Overnight_.jsp.

New e-Initiatives

e-Alerts
With the e-Alert subscription service, TTC customers receive subway/RT service disruption notifications by email. Subscription to this free service is available from the TTC's website. Service delay information is also available on the TTC website and on display screens located on subway station platforms. The notifications are sent out if the subway/RT is delayed and if shuttle bus service is in operation, which generally includes delays of more than 15 minutes. Notification for service delays on bus and streetcar routes is currently in the development stage.

For more information see:
http://www3.ttc.ca/News/2009/January/TTC_launches_e-Alert_subscription_service.jsp.

"Next Train Arrival" System
The TTC's "Next Train Arrival" Notification pilot was launched in September 2008. With this system, customers can find out how many minutes until the next subway train arrives at the station. "Next Train Arrival" was developed by the TTC's Information Technology Services Department, and uses existing signaling and control systems as input.

For more information see:
http://www3.ttc.ca/PDF/About_the_TTC/TTC_Annual_Report_2008.pdf.

"Next Vehicle Arrival" System
The "Next Vehicle Arrival" System began in 2008 to develop and implement a system to provide TTC riders with vehicle locations, vehicle arrival times, and other transit related information. The system uses GPS satellite technology to determine the location of a vehicle and its next stop. Vehicle arrival times are displayed online and can be sent to wireless devices. This will expand to bus stops by the end of 2011.

For more information see:http://www.ttc.ca/postings/gso-comrpt/documents/report/f3644/PA_-_Acquisition_of__Next_Vehicle_Arrival_System.pdf.

Online Trip Planner
The TTC's Online Trip planner allows customers to enter destination information in "from" and "to" fields. Using the TTC's schedules, the trip planner calculates the length of time the trip will take and suggests the quickest route to get there. Designed for accessibility, which included testing with volunteers and members of the Advisory Committee on Accessible Transportation, TTC riders can select all modes of transit, or a specific combination, such as subway, bus and/or streetcar. The trip planner can also filter for routes that run accessible buses, subway stations that have elevators, and routes where bike racks are available on buses. The trip planner also features walking-only trips under 2 km, as well as trip plans to over 1,500 points of interest.

For more information see:
http://www3.ttc.ca/News/2010/February/02_02_Trip_Planner.jsp.

New TTC Website
In 2007, the TTC issued an RFP for its website to be redesigned. The website had been virtually unchanged since its initial launch in 1998. The new website incorporated features suggested from public consultations, including more information, and a functionally intuitive and more user-friendly design.

For more information see:
http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2007/Jan_31_2007/Other/TTC_Website_Redesign.jsp.

Stop Announcements
In 2003, the Commission approved a $2 million program to have computerized stop announcements on trains. The system was fully implemented on the entire TTC fleet of streetcars, buses and subways at the end of 2007.

For more information see:
http://www3.ttc.ca/PDF/Transit_Planning/ttc_accessible_services_progress_and_challenges_2008.pdf.

Open-Source Data Project
The TTC is moving toward sharing all of its system information in an open-source data format. This information will be available to companies that wish to create applications for computers and mobile devices. Those applications will then enable riders to view schedules, routes, real-time vehicle locations and other information in a standardized format. Google, for example, will be implementing a Google Transit Trip Planner in late 2010.

Cell Phone Service in Subways
In 2008, the TTC issued a Request for Expression of Interest (REOI) to determine the interest of cellular phone carriers in providing cellular coverage in subway stations at their expense, and to estimate the potential revenue stream for the TTC. The TTC is currently in final negotiations with the cell phone carriers for this service, and implementation will begin in late 2010.

For more information see:
http://www.ttc.ca/postings/gso-comrpt/documents/report/f3488/CELLULAR_PHONE_AND_WI-FI_IN_THE_SUBWAY_CRF1.pdf.

Platform and Station Video Screens
In 2005 the TTC partnered with OneStop to install Platform Video Screens as a replacement for the aging Metron signs. In 2008, OneStop's contract with the TTC was extended to 2018 and included the installation of 149 LCD screens for subway stations.

For more information see:
http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2010/June_2_2010/Supplementary_Reports/Customer_Service_Inf.pdf.

Use of Twitter, Facebook and Blogs
Through its Corporate Communications department, the TTC launched a number of Twitter feeds in 2009 to alert customers of updates, notices, and disruptions to services as a tool for riders in addition to e-alerts. The TTC also has a Facebook page and provides regular articles to Toronto's four major blog sites.

TTC information and updates are currently communicated through Twitter under the following usernames:
http://twitter.com/bradttc
http://twitter.com/ttcupdates
http://twitter.com/ttcalerts
http://twitter.com/TTCnotices

Other Miscellaneous TTC Initiatives

Contracting-In of Legal, Engineering and IT Staff
Efficiency has been improved by moving legal, IT and engineering in-house. Previously, TTC had many

consultants in these areas. In 2006 and 2007, these new in-house staff were hired because it was more cost effective than paying consultant fees.

Record Ridership Growth
Ridership on the TTC continues to increase rapidly each year. Between May 2008 and May 2009, a record 470,883,000 rides were taken on the TTC. In 2009, the TTC recorded 471,233,000 passenger trips. In 2010 TTC record another record year with an estimated 476 million rides.

For more information see: http://www3.ttc.ca/About_the_TTC/Operating_Statistics/2009.jsp.

Nova Membership
NOVA is an international urban rail benchmarking group that designs ways to evaluate, share knowledge and develop best practices for subway systems. The TTC is currently a member and the TTC's subway performance is measured regularly and compared with other systems worldwide.

For more information see:
http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2010/June_2_2010/Reports/_NOVA_Presentation_T.pdf.

Transit Museum and Visitor's Centre
The Transit Museum and Visitor's Centre project was approved by the TTC in 2010. The centre will have a small, representative TTC vehicle collection and will focus on the past, present and future of public transit in Toronto. The centre will be housed in the new head office building, slated to open in 2014.

For more information see: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2010/Feb_17_2010/Reports/Transit_Visitor_Cent.pdf.

Cycling Initiatives
The TTC has started a number of new bicycle initiatives over the past three years. In 2007, bicycle racks began to be installed on new buses which are now all fully equipped. The TTC is ahead of schedule in retrofitting 985 older buses with the bicycle racks. The TTC has also started a secure bicycle parking program which would offer a fully sheltered more secure option to the usual post-and-ring bicycle parking provided.

More information on TTC's cycling initiatives: http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2009/May_28_2009/Other/Bicycle_Initiatives_.pdf.

More information TTC's bicycle kiosks:
http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2007/Sept_19_2007/Other/Bicycle_Kiosks_Victo.pdf.

More information on TTC's bicycle stair channels:
http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2008/Feb_27_2008/Other/Bicycle_Stair_Channe.pdf.

New TTC By-Law
At the beginning of 2009, the TTC amended TTC By-Law Number One, which had previously not been changed since 1990. One key change to the By-Law clearly stated that improper use of a transfer is an offence. Section 2.14 has also been amended to restrict the sale of fare media to TTC property.

For more information see:
http://www.ttc.ca/postings/gso-comrpt/documents/minute/f217/1900M-August_27-08.pdf
and
http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2009/Jan_21_2009/Supplementary_Reports/By-Law_No.1-Upd.pdf.

Fitness for Duty policy
In 2008, the TTC created a Fitness for Duty policy that includes assistance programs, prevention measures, and investigation tools, including alcohol and drug testing to deter employees from coming to work while impaired.

For more information see: http://www.ttc.ca/postings/gso-comrpt/documents/report/f3699/Fitness_for_Duty_Policy.pdf.

Security Cameras

In 2006, the TTC accepted the proposal submitted by Hart-Well Electrical Co. Ltd. to install CCTV infrastructure in various stations and TTC facilities. The work included the supply and installation of camera housings, conduit, and fiber-optic cable — over 3000 cameras were installed. A further 11,000 cameras were installed on all surface vehicles.

For more information see:
http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2006/Aug_30_2006/Other/Installation_Of_CCTV.pdf.

Special Events at Bay Lower Station
In 2007, the TTC held several special events at its Bay Lower facility including Doors Open Toronto, a Nuit Blanche art installation, and a Toronto International Film Festival Party hosted by the Italian Trade Commission. Due to the increasing number of requests for event space at Bay Lower, the TTC established guidelines to assist in the selection and implementation of special event requests to be held at the facility.

For more information see:
http://www.ttc.ca/postings/gso-comrpt/documents/report/f3456/01_-_Bay_Lower_CR5.pdf
and http://www.ttc.ca/postings/gso-comrpt/documents/report/f3875/Corporate_Policy_-_Visitors_and_Tours.pdf.

Pride & Caribana Participation — TTC Ambassadors Program
The TTC is committed to the communities it serves. This includes being active participants in community events. For several years now, the TTC has participated in the annual Pride Day Parade with a decorated bus as the TTC's float for the event. The float is accompanied by TTC workers who march alongside family and friends. In 2009, the TTC also set up a booth at the event which was attended by Transit Ambassadors.

The TTC is also a strong supporter of the Caribana festival. In 2008 the TTC produced a special Caribana commemorative pass that was valid for two days. Discussions are under way for such a pass to be produced for the 2010 Caribana festival. This event is also attended by Transit Ambassadors, found in the TTC's booth. Both of these events are included in the See It Your Way promotional brochure put out by the TTC.

New Customer Service Initiatives
In 2010, the TTC introduced a number of new customer service initiatives to improve its relationships with customers and restore public confidence. The Customer Service Advisory Panel was created and issued 78 recommendations on how the TTC can improve its customer service, now being implemented.

For more information see:
http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2010/Feb_17_2010/Supplementary_Reports/Customer_Service_CR.pdf
and http://ttcpanel.ca/wordpress/wp-content/uploads/report.pdf.

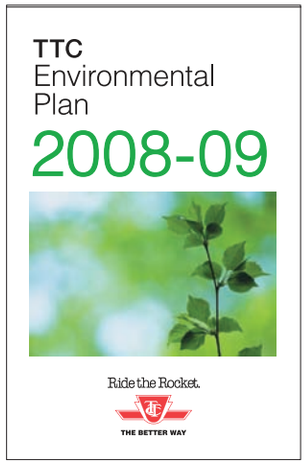
Diversity Plan
In 2008, the Commission approved a Diversity Plan for the TTC. This plan included a number of goals and objectives, including having the employee demographics reflect the diversity of Toronto within 10 years, recruitment and outreach to individuals from diverse backgrounds, creating a Diversity Task Force, and training and development of current employees.

For more information see:
http://www.ttc.ca/postings/gso-comrpt/documents/report/f3711/Diversity_Presentation_August_27,_2008.pdf
and http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2009/October_29_2009/Reports/2008_2009_Diversity_.pdf.

Energy Efficiencies and Solar Panels
Prototype 40W solar panels have been installed in 18 locations throughout the City as of 2007. These panels supply electrical energy to the TTC's remote Communication Information System (CIS) microwave transmitters. In 2009 the Commission authorized the Pape Station modernization project to be reopened for the inclusion of rooftop solar panels in the station's design.

For more information see:
http://www.ttc.ca/postings/gso-comrpt/documents/minute/f224/1905M-January_21-09.pdf.

Green Plan



The TTC's Green Plan includes environmental initiatives like petroleum conservation; the use of alternative fuels and renewable energy; energy efficiency; hazardous materials reduction; environmentally responsible procurement; pollution prevention, waste reduction and recycling; and building and facility performance. The TTC has a Corporate Environmental Policy that commits to reduce the environmental impact from all its facilities and vehicle operations.

For more information see:
http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2007/Dec_6_2007/Other/TTC_Environmental_Pl.pdf.

Green Procurement Plan
The TTC is supporting a growing movement within business and society towards more sustainable forms of production and consumption. Through the approval of its Green Procurement Policy in July of 2008, the TTC committed itself to purchasing environmentally preferable products and services in all of its operations where appropriate.

For more information see:
http://www.ttc.ca/postings/gso-comrpt/documents/report/f3612/TTC_-_Green_Procurement.pdf
and http://www3.ttc.ca/TTC_Business/Materials_and_procurement/Green_Procurement/index.jsp.

Station Managers
In September 2010, the TTC implemented the first phase of the Station Manager Program, placing 9 Station Managers in charge of Union Station, King Station and Queen Station, and St. Andrew to Museum stations. The Station Managers will monitor each station for cleanliness, maintenance, and customer service. This program will expand through 2011.

For more information see:
http://www3.ttc.ca/News/2010/September/NR_TTC_Station_Manager.jsp.

Metropass Affinity Plan
The Metropass Affinity Plan began in 2009. It offers discounts to Metropass purchasers from a number of participating local attractions, including Ontario Place, Toronto Zoo, CN Tower, Ontario Science Centre, and Casa Loma. Zipcar also joined the program recently and it is being expanded to include more corporate partners.

For more information see:
http://www3.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2009/May_28_2009/Reports/Implementation_of_th.pdf.

TORONTO TRANSIT COMMISSION