

# ERASING THE INVISIBLE LINE

Integrating the Toronto  
Region's Transit Networks

November 2020



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# Executive Summary

**A** few minutes saved by a transit user each day can translate to millions of minutes across a whole system daily. These gains multiply over weeks, months, years and decades. It is with this in mind that we understand the impetus to make our system as efficient as possible now, without delay.

The Toronto Region has long suffered from a fragmented regional transit system, and the recent upheaval to transit's traditional revenue structure has presented a unique opportunity for reform. The current system hinders access to employment and services for thousands of residents, particularly those of the disproportionately equity-seeking communities on the outer edges of the City of Toronto. They are hampered from crossing the municipal boundaries by punitive double fares and poorly coordinated routes. The lack of integration between GO and TTC translates into much longer rides for many people, less efficient utilization of GO's infrastructure and unnecessary crowding on the TTC.

Drawing from a study of global best practices, this proposal aims to resolve these problems without requiring a wholesale reorganization of the region's transit system. It is designed to respect municipal autonomy and to ensure that no rider is worse-off than they are today, while making transit more equitable and easier to use. Our proposal is governed by four guiding principles: mode neutrality (meaning that every rider can use whatever mode gets them to their destination most efficiently without needing to pay extra), boundary invisibility, equity, and legibility.

This report presents an approach to achieve the aims of integration while addressing the need for local accountability. A 'Transit Federation' is a concept based on the German Verkehrsverbund concept. It is a collaborative approach to create a cooperative body, in which independent transit agencies collaborate on key areas for integration like fare policy, scheduling, public information, and the distribution of revenues. Their operations, employee relations, and other policy areas will remain entirely under local control. The Toronto Region Transit Federation would incorporate municipal agencies and GO Transit, but could also accommodate others—including new mobility operators.

This framework includes a bold and comprehensive proposal for integration that is designed to be as simple as possible, ensuring that nobody pays a higher fare than they do today, eliminating unreasonable double fares when riders transfer between agencies, while keeping overall revenue loss as low as possible. The overall cost, estimated at roughly \$165 million per year, is very affordable in the context of overall Toronto Region transit spending. The transit federation and integrated fare structure are a package of reforms that are both transformational and achievable on a very short time scale.



# Introduction

**F**or decades, transit policymakers and riders alike have lamented the fragmentation of the region's transit system. The Toronto-Hamilton-Waterloo Region has eleven separate transit agencies, including the regional GO Transit system, with each maintaining its own separate fare system and service. Drivers travelling on the region's highways must look at signs to realize when they have crossed from one municipality into another. For transit riders, however, these boundaries present serious obstacles.

This report proposes a set of reforms that can be implemented quickly and at comparatively low cost. They can eliminate these boundaries between agencies resulting in the creation of a truly integrated regional transit system. A transit federation—a cooperative, locally engaged approach to integrating the transit system while maintaining municipal control of local transit—will make city limits as invisible to transit riders as to drivers. A universal fare structure, including GO Transit, will promote equity and fairness, increase value derived from infrastructure investment, and improve people's lives by reducing the time they need to spend commuting.

## **Current fare policy makes crossing municipal boundaries an insurmountable barrier**

Today's fragmented transit system means that a person commuting fifteen kilometres from North York Centre to the Financial District will pay \$3.25. Meanwhile, someone travelling only four kilometres from North York Centre to Thornhill will pay \$7.13. This is not only unfair—it is a serious economic distortion that harms workers' ability to find work and employers' ability to attract talent. The uncoordinated regional transit system also means that many municipal agencies' routes stop abruptly at the municipal border, forcing inconvenient transfers on riders and making transit less competitive. Important steps toward integration have been made in recent years, and this report proposes a final leap to achieve seamless regional transit.

## **GO has the opportunity to pivot to a more comprehensive system**

The COVID-19 pandemic risks completely upending GO's traditional business model of peak period commuting from the suburbs to downtown Toronto. GO Transit is the only transit system that serves the region as a whole, but right now it is not primarily geared to trips that do not begin or end in downtown Toronto, which comprise the vast majority of travel in the region. According to Deloitte research in Montreal, 13-18% of employees are anticipated to continue working remotely from home post-pandemic. This proportion is much higher in the downtown core (25-35%), which is GO Transit's core market. This shift suggests that GO should quickly pivot to expand its market by becoming part of a genuine anywhere-to-anywhere, anytime of day, fare-integrated transit system that will effectively serve the more dispersed travel patterns that can be expected during and after our region's recovery as work-from-home and other new types of work become increasingly prevalent.<sup>1</sup>



### **Integrating underutilized rail lines are the most efficient way to add capacity**

One of the Toronto Region's greatest infrastructure assets is the web of railway lines radiating from downtown Toronto now used by GO Transit. This network, built in the nineteenth century, is an extraordinarily valuable asset: it would cost tens of billions of dollars if it were built today. It is currently woefully underused, especially outside rush hour. Within the City of Toronto, GO's comparatively high fares and lack of integration with the TTC mean that most riders avoid the GO Trains in favour of packing onto the overcrowded subways. If GO Transit's corridors were to be effectively added to the existing subway map reform by providing free transfers to TTC routes, along with planned GO service improvements, Toronto's transit map would finally rival those of the world's leading mass transit systems.

#### **A Unique Opportunity**

This study builds on previous work by the Toronto Region Board of Trade, including "Superlinx", which proposed a unification and provincial upload of the region's transit network. While this proposal also aims to achieve regional transit integration, it does not suggest an upload or merger of the region's transit systems. It is instead intended as a locally driven, cooperative approach to achieving

integration while responding to the concerns that were raised about issues including local control. It also emerges from the recently released "Shaping Our Future" recovery playbook developed by the Board's Economic Blueprint Institute and emerging from the Board's Reimagining Recovery Framework. Through deep-data analysis and extensive consultation with government, community and business leaders across the region, the Playbook determined that development of a regionally integrated transit system would be key to propelling the region's recovery.

The current situation has presented a once-in-a-lifetime opportunity. Since fare revenues have already been severely disrupted by the pandemic and increased government subsidies to transit are inevitable, it is possible to rethink the way the transit system operates. Metrolinx has long been engaged in this area, and the TTC is currently undertaking a five-year fare policy review with an eye to regional integration. The provincial and federal governments have the ability to use the fiscal stimulus they are providing as a result of the pandemic to produce the kinds of long-term change that the region needs. The Toronto Region can build for the recovery and for the future at the same time. Transit is our infrastructure backbone and it is time to take the next leap towards an integrated Toronto Region.



Streetcars  
Operations

4533

ENR. 4533  
W10 Downtown Ctr

DO NOT PASS  
OPEN DOORS

NO  
STANDING  
4 TRUCKS  
NO  
PARKING  
LOADING  
UNLOADING

# Guiding Principles for an Effective Transit Network



## Mode Neutrality

The seamless integration of buses, subways, and streetcars is at the heart of the TTC's success, and this principle should be maintained and expanded to include regional rail like GO Transit. A transfer is an inconvenience—riders should not be forced to pay extra for it. Successful transit is a network, involving all different modes, so they cannot be separated from one another by requiring extra charges when people switch from bus to train. It is not equitable to have a system where more affluent riders can pay a premium to ride trains and subways while poorer riders are relegated to relying exclusively on the local bus. By integrating all modes into a single system, economic distortions are eliminated, riders can take the optimal route to their destination, and the utilization of all infrastructure can be maximized.



## Boundary Invisibility

The Toronto Region is a single economic unit, so the transit system must allow people to travel between municipalities as easily as they may within them. Routes should not end arbitrarily at a municipal boundary, and connections should be seamless between agencies. Fares should rise gradually as boundaries are crossed, rather than doubling. Transit should not prevent a Pickering resident from seeking a better job across the line in Toronto.



## Equity

At the most basic level, an equitable transit system means that one type of rider does not have to pay more to make a similar trip than another type of rider. But there are further elements that must be taken into consideration. In Toronto, equity-seeking communities are frequently located on the edge of the City of Toronto because of the high cost of housing. They are forced to endure long commutes to get to work and often have to take a slower and less efficient route to save on their fare. A fare system should not add to their burden. Instead, the fare system should have additional elements that specifically target support to those who most need it. These can include discounts for low-income people, for students, for people with disabilities, and for others whose access to the opportunities and services in their community would be hindered by being required to pay a full transit fare.



## Legibility

Transit fares and public information should be designed in a way that is as easy to use and as simple to understand as possible. Riders should be able to determine the fare they will have to pay before they ride. Information should be easily accessible in a centralized location, with a common approach to wayfinding so that passengers do not become disoriented when they transfer from one agency to another.



# Transportation Challenges in the Toronto Region

**T**he Toronto Region currently suffers from a transit system that is fragmented, and a fare structure that punishes riders who cross arbitrary municipal boundaries or who transfer between agencies. The current system incentivizes riders to use as few agencies as possible over the course of a trip, leading to slow and less efficient journeys. This also results in network-level ridership imbalances, with some infrastructure, like the subway, experiencing severe overcrowding, while other infrastructure, like the GO rail corridors are underused.

## **Some riders unfairly pay more because of municipal boundaries**

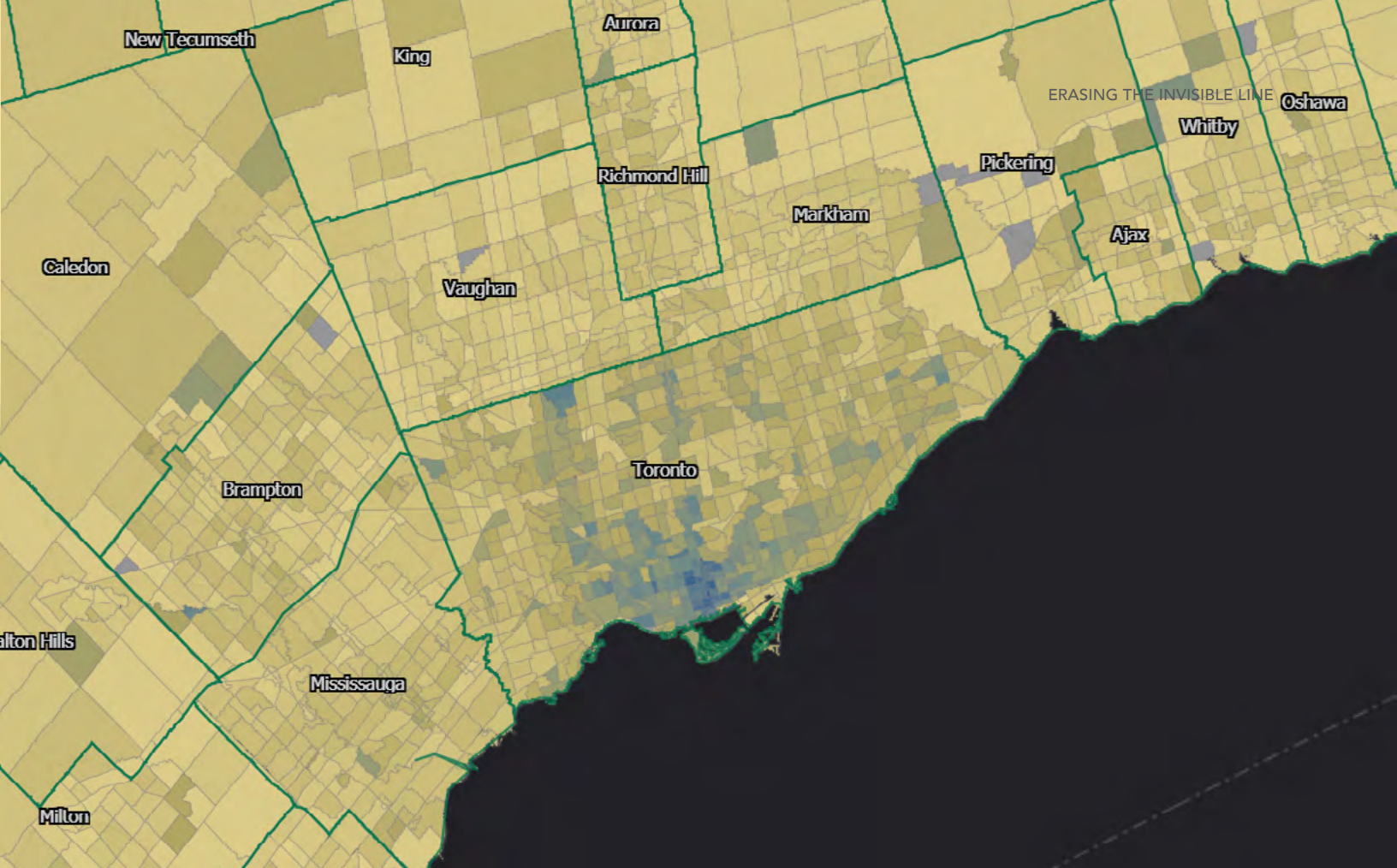
The proportion of people who use transit, as opposed to cars and other modes of transportation, is far lower in the 905 region than in the City of Toronto. This is true even when controlling for income and for population density.<sup>2</sup> In part, this is due to different levels of transit service. However, fare systems also play an important role. Riders crossing Steeles Avenue or Etobicoke Creek, for example, have to pay twice as much as riders staying within their own municipality, even if the former are travelling a far shorter distance.

## **Equity-seeking communities disproportionately face punitive fare boundaries**

What's worse, the people hardest hit by many of these policies are equity-seeking communities, many of whom are pushed to the edges of the City of Toronto, away from subway lines, by the high cost of housing.<sup>3</sup>

**Riders crossing Steeles Avenue or Etobicoke Creek, for example, have to pay twice as much as riders staying within their own municipality, even if they're travelling a far shorter distance.**

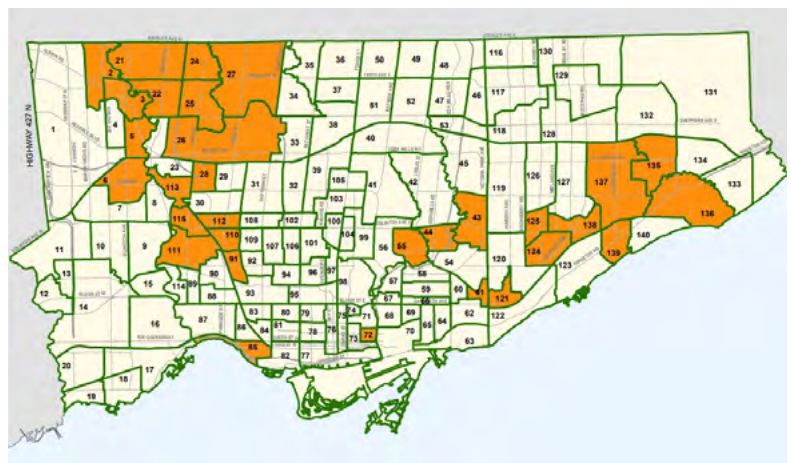




This is a map of how many trips originating in neighbourhoods throughout the region are taken by transit instead of by car. As can be seen, mode share is high in many parts of the City of Toronto near the municipal boundary. These riders are particularly disadvantaged by punitive fare structure. While many riders in surrounding “905” municipalities also use transit, the rate is considerably lower—in part as a result of fare boundaries. (Mapping by Esri Canada)

A resident of North Etobicoke or eastern Scarborough—communities with high concentrations of the city’s designated neighbourhood improvement areas facing equity challenges—will experience difficulty accessing employment on the other side of the municipal boundary because of the punitively high cost of transit to those jobs.

This is also a problem for employers. A fragmented transit system and high fares at boundaries reduces the talent pool upon which employers can draw. Workers exhaust themselves with unreasonably long commutes to avoid crossing municipal boundaries. All of this hampers the region’s global competitiveness.



City of Toronto map of designated Neighbourhood Improvement Areas, which are areas facing particular equity challenges.

**Celestino** is a senior citizen who lives in Vaughan. Most of his pension goes to pay for his retirement home, so he needs to stretch every dollar. Unfortunately, he needs to go to the hospital for dialysis three times per week. Even though he could make a shorter trip—under an hour—to Humber River Hospital, he instead takes an hour and twenty minutes each way to go to Brampton Civic Hospital. It is a tough trip for a senior citizen who is already suffering health problems, but it means he only has to pay \$4.00 for the round trip instead of \$9.30. That's because Brampton Transit and York Region Transit coordinate their fares, while TTC and York Region Transit do not have any coordination.



Why does Celestino have to travel further to pay less?

\*The vignette characters illustrate the struggles of commuters, and are formed based on real life examples

### **GO Transit's lack of integration with TTC means less value for infrastructure investment**

The foundation of the TTC's success at attracting suburban transit ridership is the close coordination between the bus and subway system. The vast majority of riders on the subway in suburban Toronto arrive by bus, which is why the Toronto subway has the highest ridership per kilometer of any subway system in Canada and the United States, even though much of its length is in relatively low density neighbourhoods. Riders can take the bus from their home straight to the subway, where they can go directly into the station without even needing to pass through a fare gate.

However, the region's current fare system means that GO Transit is isolated from the TTC's network of buses, leading to massive underuse of expensive infrastructure. GO's corridors, especially after their planned expansion, have the potential to serve effectively as much-needed additional subway lines throughout the City of Toronto. Realizing that potential will be impossible as long as bus riders are forced to pay both a TTC fare and GO fare to ride. Most riders will then stick to the TTC, even if it is much slower and more crowded.

Better service and full fare integration could lead to the GO corridors operating as the backbone of the transit system in 905-area municipalities. Just as for the subway

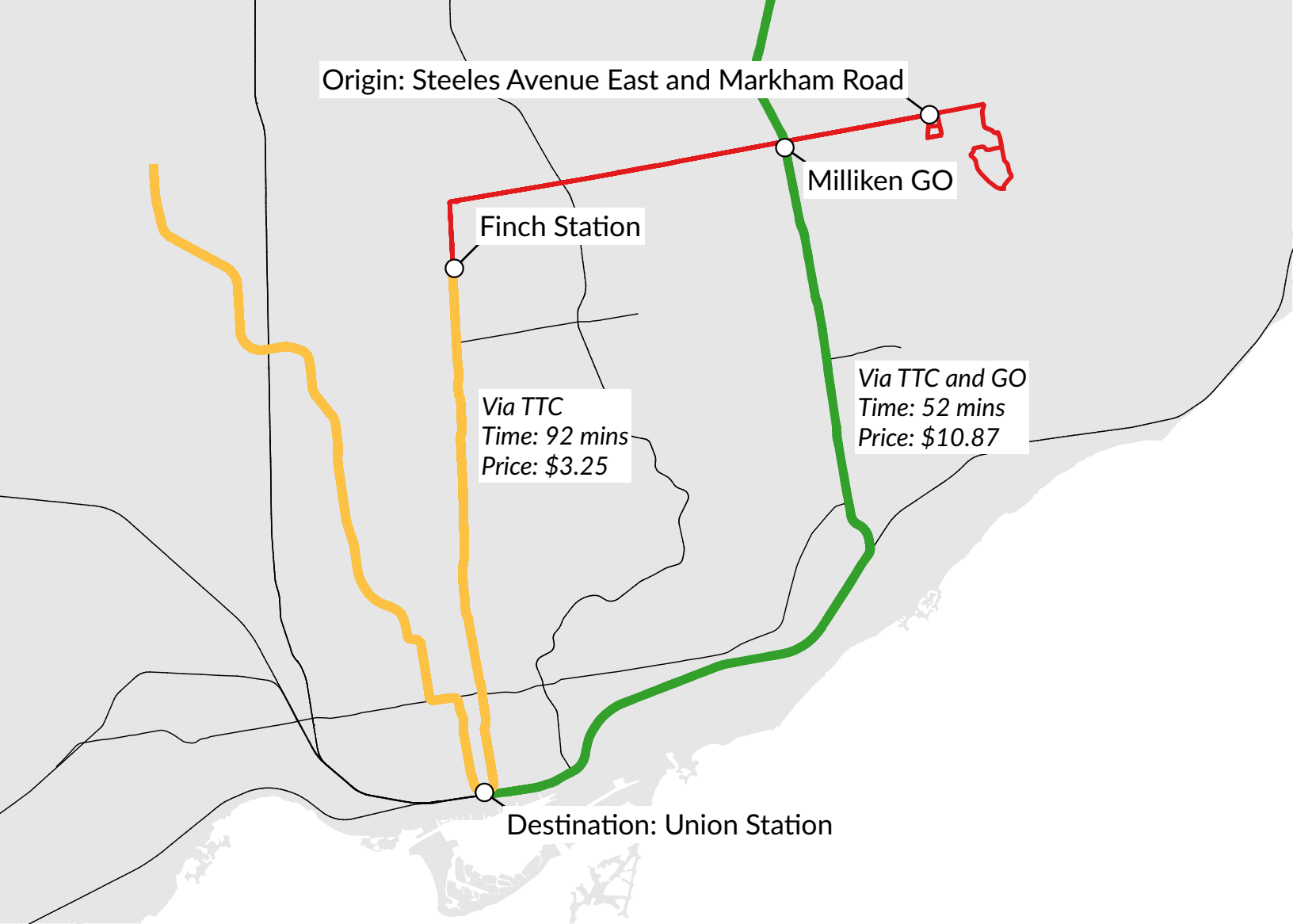


**Tanisha** lives in Rexdale and was recently laid off from her job in a restaurant due to the pandemic. She has been checking job postings, and there are many available in distribution centres just a short commute away in Vaughan. She is excited to apply until she discovers that her round-trip commute of only a few kilometres will cost her \$14.26 every single day. That is a big chunk of her pay cheque, so she decides to keep looking for a job within the City of Toronto. Why should Tanisha have to work an hour at minimum wage just to pay her transit fare when she is only traveling a short distance?

Why should Tanisha have to work an hour at minimum wage just to pay her transit fare when she is only traveling a short distance?

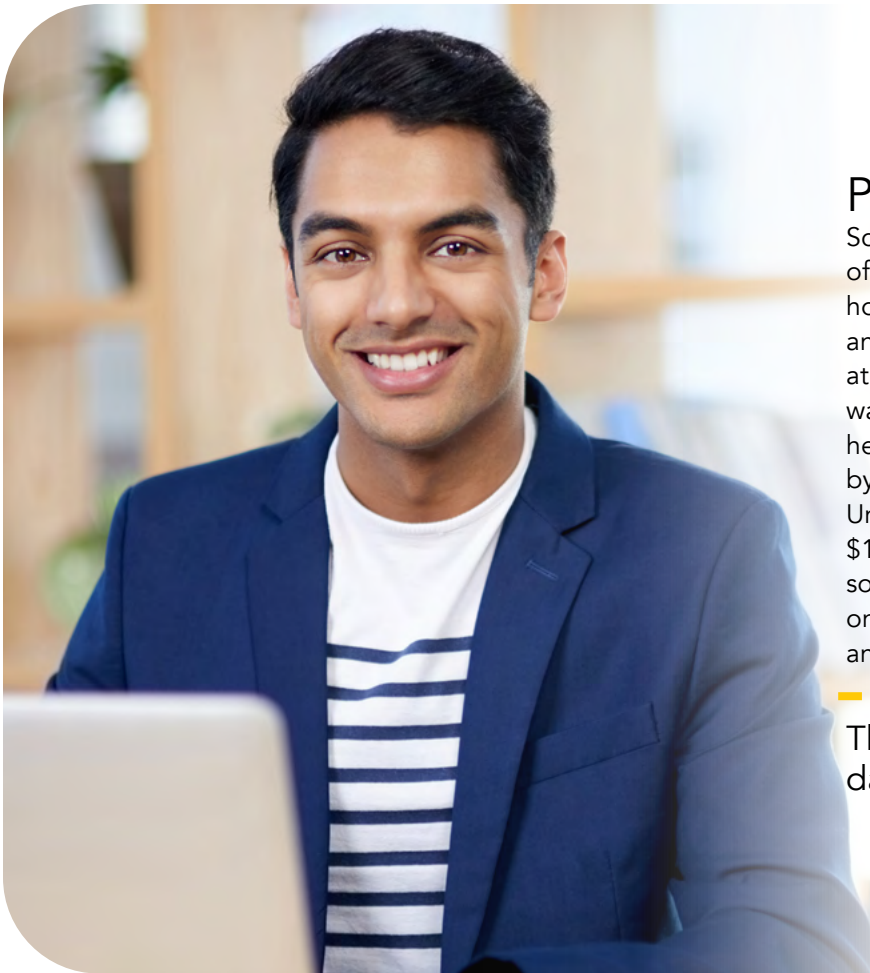
in Toronto, buses could be used for “last mile” access to rail stations and for other intra-neighbourhood trips. The province has long explored approaches to coordinate between GO and local transit agencies. The province subsidizes “co-fares” between GO and 905-area transit agencies, so that riders pay a discounted transfer rate. It is, however, still not the free, seamless transfer between bus and subway that has made the TTC so successful. Charging between \$0.80 and \$1.00 to riders who do the right thing and take transit to the station, while dedicating acres of valuable developable land around stations to free parking, sends the wrong message.

The province previously experimented with a similar, \$1.50 co-fare arrangement between GO and the TTC. This was an important, but temporary first step that considerably exceeded expectations, revealing the latent demand for integrated GO-TTC trips with a more favourable fare. When the arrangement expired, the province indicated that it favoured a more comprehensive reform. Metrolinx has cut GO fares within the City of Toronto for short distance rides, and has discussed cutting fares across the city to match TTC fares. This would still fail to make GO an integrated part of the local transit system as riders would continue to pay a double fare to transfer. The beneficiaries would largely be those who happen to live within walking distance of a GO station, or who can afford to drive to a station parking lot.



The real-world example of the TTC's Steeles East bus provides a clear example of this problem. The bus connects with both the Yonge subway at Finch Station and with the Stouffville GO corridor at Milliken Station. While nearly 5,500 of its riders crowd onto the Yonge subway at Finch, fewer than 50 transfer between bus and GO Train, even though it offers a very quick and easy trip downtown.<sup>4</sup>

Lack of integration limits the utilization and realized value of the province's planned multibillion-dollar investment in GO Transit. It will never achieve anywhere near the ridership of the subway system if it is not fed seamlessly by the bus network in both Toronto and the surrounding region. Park-and-ride cannot fill new midday trains, as lots fill up early in the morning. This will be a costly flaw, as underused GO trains will fail to relieve overcrowding on the TTC's subways, forcing governments to spend billions on subway capacity improvements that might not otherwise be necessary. For example, there are billions of dollars in planned infrastructure works to increase capacity on the Yonge subway, with many of its riders coming from as far as eastern Scarborough. Meanwhile, the Stouffville GO corridor has abundant excess capacity—particularly during off-peak hours—which goes unused. In addition, the lack of seamless bus access to GO trains means that hundreds of acres of valuable land around stations will need to remain dedicated to parking, since that will continue to be the main means of access.



**Purdeep** lives in North Scarborough and has always dreamed of becoming a manager at a famous hotel. That's why he is taking the Tourism and Hospitality Management program at George Brown College. When he was starting school, he discovered that he could get to school in 50 minutes by taking his local bus to the GO Train. Unfortunately, that would mean paying \$18.40 round trip. OSAP only goes so far, so he has to do the trip by TTC alone. It only costs \$6.50 but takes over an hour and a half each way.

That's a lot of extra time every day that he could be studying.

### **A lack of schedule coordination causes confusion and inefficiency**

There are other aspects of the transit system that could also benefit from better coordination. Today, while there are some apps that consolidate information, each transit agency maintains its own separate maps, schedules, and wayfinding systems. This can cause confusion for riders when they are traveling on an unfamiliar system. Behind the scenes, schedules are coordinated in an ad hoc fashion, meaning that when one agency changes its schedules, others must scramble to change theirs to maintain timed connections. Sometimes that isn't possible given the short timelines produced by the lack of coordination.

Bus routes themselves are also not always designed to connect seamlessly between agencies. Some routes end abruptly at a boundary, forcing riders to get off and switch to another route to continue along the same street. In several places, 905 routes run to a terminal in Toronto, but they cannot pick up or drop off passengers

along the way when they pass through the city. TTC routes and schedules are not closely coordinated to facilitate GO-TTC transfers within the city. The airport employment area, which spreads across three municipalities and transit agency service areas, plus GO Transit, is an important case study of fragmented routes and schedules. This is the second-largest employment area in the region, and its transit accessibility is significantly hampered by transit system divisions.

The Presto system has faced considerable implementation challenges, in no small part because of the extraordinary complexity of the Toronto Region's fragmented fare system. Significant progress has recently been made but even more can be done to harmonize everything from passes to discounted fares. When policies differ between agencies, each variation has to be programmed into Presto at considerable cost. A single, fully harmonized system would greatly improve the efficiency of Presto while making transit much simpler for riders.



26 W BURNHAMTHORPE

# The Transit Federation

## Integration combined with local autonomy offers the best of both worlds

There have been many solutions proposed to bring about a genuinely integrated regional transit system. One approach is for the province to take over the entire system and combine it into a single agency. This would solve the problems of integration, but communities have not been able to reach a consensus on such a measure. The Toronto Region is not alone in facing these challenges, however. By studying global best practices, a solution emerges that allows regional integration while preserving valuable local autonomy and accountability.

In many German cities, transit has long been administered by a *Verkehrsverbund*, or “transit federation.” This is an innovative, cooperative approach to managing a region’s transportation. Cities within a metropolitan area build, fund, and administer their own transit systems while coordinating key aspects of their systems at a regional level. This includes combining fare structures with integrated public information and scheduling. Rather than each system maintaining a separate fare system with different rules and double fares at the boundary, the transit federation maintains a seamless, equitable, and easy-to-understand fare system while distributing farebox revenues among members according to their ridership. They also coordinate schedules, planning, and public information. The structure of the federation as a cooperative could help to build greater trust into the mobility system. If transit agencies and policymakers have shared goals as part of the cooperative, trust can be built in riders who will understand the common objectives.

**This framework makes two key proposals:**

1. The development of a Transit Federation for the Toronto Region that can coordinate municipal transit agencies, GO Transit, and potentially additional mobility providers.
2. The development of a fare structure that maintains simplicity of use and of administration, eliminates punitive double fares when boundaries are crossed, improves equity, and ensures that riders do not end up paying fares higher than they do today.

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# Vision for Toronto Transit

## The Toronto Region Transit Federation

**Today's largely uncoordinated system means that schedule changes are made at different times by each agency. This can disrupt connections where vehicles are timed to arrive at the same time.**

Integration of transit throughout the region without a wholesale takeover and merger of all agencies is possible, with the transit federation model. This proposal was developed based on an extensive review of global best practices in transit integration (see Appendix). Inspired by the *Verkehrsverbunde* prevalent in the German-speaking world, the Toronto Region Transit Federation would operate as a kind of cooperative. Each agency would retain its own administration, accountability, and autonomy. Municipal governments who best understand the needs of their constituents will still set the policy direction of their own transit systems. Each agency would be an independent member of the Transit Federation, rather than being subordinated to other agencies or levels of government. Employees of municipal transit systems will continue to maintain their existing jobs unchanged. The only changes will directly address the key areas where regional coordination is needed. For riders whose trips keep them within the service areas of existing transit, the difference will be minimal.

The key to success is that membership in the Transit Federation will include all municipal agencies in the Toronto Region and the rest of the Innovation Corridor, in addition to GO Transit. The flexibility of the cooperative Transit Federation model will allow for easy expansion to accommodate additional members. This expansion could be geographic in scope, incorporating other nearby agencies into the coordinated system. It could also include other types of operators outside the conventional local transit realm, potentially including new mobility providers and new technology approaches, presenting the possibility of true mobility-as-a-service throughout the region. The flexibility of the Transit Federation model means that members can participate in some aspects of coordination, such as coordinated public information and scheduling, while remaining outside other aspects the system. It can also facilitate the sharing and adoption of new technology throughout the transit system, including around the provision of health and safety information to riders.





The Transit Federation could also coordinate other key functions, like scheduling, which is currently carried out in a fragmented fashion that can make inter-agency travel disjointed. Coordinating public information across the region could also ensure that riders do not need to consult multiple websites or maps to figure out the best way to make their journeys. It can facilitate the adoption of seamless wayfinding systems, as well as the sharing of technology across the region.

With comparatively little physical infrastructure required, this is a transformational transit improvement that won't take a decade or more to implement. It is a matter of sitting down and working out an agreement on cooperation among the region's various transit agencies, including a modernized and equitable fare structure, and implementing minor changes to the fare collection system. Montreal recently announced a fare integration plan, and its implementation is already expected to be complete by 2021. Transit riders across the region could experience a dramatic improvement in their day-to-day lives in the space of a couple years, and the region's economy could experience a rapid boost to support recovery.

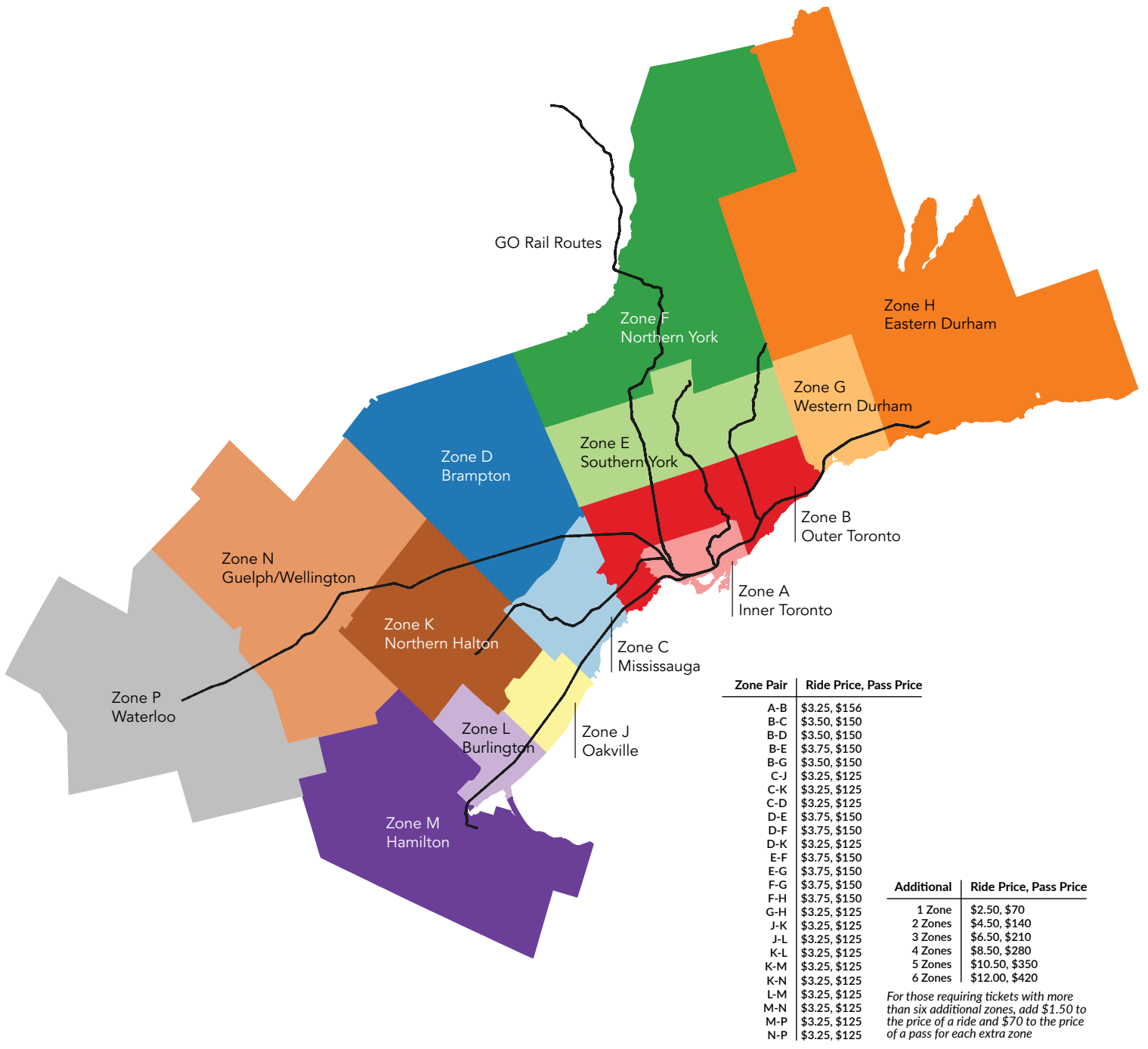
### **Integrated Schedules**

A transit agency schedule is extremely complex, and changes have a significant impact on the lives of both riders and transit agency employees. Every change has knock-on effects on other routes throughout the network. That is why it takes months to design and implement a

schedule change. Behind the scenes today, schedule changes are not always coordinated, meaning that when one agency changes its schedules, others sometimes lack the time needed to change their own to maintain connectivity. This can disrupt connections where vehicles are timed to arrive at the same time, which are particularly important on less frequent suburban routes where waiting time would otherwise be unreasonable. The Transit Federation would coordinate board period change dates to ensure that every transit agency makes schedule changes at the same time and that they are designed to facilitate interagency transfers.

### **Integrated Planning**

While Metrolinx and the provincial government have long played an overall planning role for the regional transit system, each municipal agency has often designed and pursued its own plans. This lack of coordination has contributed to the frequent conflicts and debates over transit project routes and technologies, which cause delays and budget overruns. The Transit Federation can be a forum for each agency to collaborate on an equal basis with each other and with the provincial government, so that the region can benefit from genuinely integrated planning. The planning role is not only about large-scale infrastructure—the transit federation can also facilitate collaboration on bus routes, so that buses do not turn around when they reach a municipal boundary, forcing riders to make an unnecessary transfer.



### Single Rides

To calculate your fare, find the zones through which your trip will pass. If you are travelling through two or fewer zones, look up zone pairings at right to find your fare. If you are traveling through more than two zones, look up your base fare at right, and add additional zones per the second table at right. Use the most expensive pair of base zones as your base price.

### Monthly Passes

To calculate your fare, find the zones through which your trip will pass. If you are travelling through two or fewer zones, look up zone pairings at right to find your fare. If you are traveling through more than two zones, look up your base fare at right, and add additional zones per the second table at right. Use the most expensive pair of base zones as your base price.

### **Integrated GO-TTC Service**

Mayor John Tory introduced the SmartTrack proposal to incorporate two key GO Transit routes into the TTC transit network. This is a laudable aspiration, potentially bringing fast and frequent subway-like rail service to some of the most underserved parts of the city at far lower cost than new subways. However, there have long been difficulties in coordinating its implementation. The Transit Federation is a perfect venue to manage coordination between GO and TTC as equals on SmartTrack and other GO routes, enabling GO Transit to grow from being a primarily commuter system into an integrated part of the regional transit network. This will be the subject of the next Toronto Region Board of Trade Transportation Framework Study.

### **Integrated Fares**

A key role of the Transit Federation is the establishment of a unified fare system that will allow for seamless travel across the region, while improving equity among riders. This proposed system is intended to provide a concept for discussion.

After reviewing global practices (see Appendix), this proposal seeks to adopt the best and most innovative components of each foreign model in proposing a new fare system for Toronto. Key innovations that we have identified from each city are:

1. Zone fares based on a grid of zones, from ZVV's fare system in Zurich.
2. Mode neutral fares, as seen in Paris, Berlin, Zurich, Montreal and Seoul.
3. Fare capping, as seen in London.
4. A robust system of social fares, as seen in Paris.

It is not practical to adopt a single flat fare for the entire region, as this would result either in unacceptable financial cost to governments or unacceptably high fares for short trips. We therefore propose a simple, easy to understand zone fare system based largely on existing municipal agency boundaries.

Our proposal, however, is different from traditional zone fare models. The key principle underlying the difference is that every fare enables travel in at least two zones. This means that nobody traveling a short distance over a boundary faces a jump in fares, as would be the case if the base fare allowed travel only in a single zone. It also means that, since the City of Toronto would be divided into two zones, everybody riding on the TTC within the city would face absolutely no change from what they pay today.

Under our proposed system, each municipality (see figure) will form at least one zone. The largest municipalities, including Toronto, will be divided into two zones, drawing on best practices from places like Berlin and Zurich. This achieves several key objectives. Firstly, it avoids excessive revenue loss by ensuring that riders undertaking long trips, like commutes from Markham or Oakville to Union Station, will pay a fare similar to today's fare. The major beneficiaries are the disproportionately low-income riders making short, cross boundary trips between Toronto's outer suburbs and the inner 905 areas. Instead of being forced to pay a punitive double fare, they will pay a two-zone fare similar to what they would pay to ride a similar distance in the opposite direction to downtown Toronto. The other important group of beneficiaries are those who ride local transit to get on GO, rather than filling up the park-and-ride lots.



## A host of new job opportunities are open to Tanisha thanks to the integrated transit system.

Since the fare to a job in Vaughan from her home in Rexdale is now only \$3.75—not much different than the \$3.25 fare to a job within the City of Toronto—there are many more jobs that she can consider. She is even looking further afield to jobs around the airport in Mississauga, since that is also only a \$3.50 fare. **Transit is no longer limiting where Tanisha can look for work.**

The design of the zones is intended to facilitate access to important destinations. The boundary between Zones A (Central Toronto) and B (Outer Toronto) will be located at Victoria Park Avenue, Humber River, and Eglinton Avenue. The Eglinton Crosstown LRT will therefore be in Zone B, so that riders travelling from outside Toronto may use it without paying an additional Zone A fare. Pearson Airport can also be located in both Zones B and C (Mississauga), to facilitate access to that critically important regional employment centre. The system as designed incorporates the entire Innovation Corridor, including Guelph and Waterloo Region, but it can easily be extended beyond to incorporate other areas such as Barrie and Niagara.

Critically, the fare system includes all modes of transit operating within each zone, including TTC, GO Transit, UP Express, and other municipal transit agencies. Riders will be able to transfer seamlessly from one mode to another, taking their local bus to the GO Train, riding the GO Train downtown, and then getting on the streetcar to their final destination. Riders would finally be able to take the most efficient route to their destination without worrying about whether it will involve multiple agencies.

To take one example alone, the Finch East bus is one of the busiest bus routes on the continent. Many of its

54,000 riders per day travel all the way to the subway from Scarborough so that they can go downtown or elsewhere in the region. Along the way, they pass the GO Stouffville corridor, where a GO station is now being considered that could get them downtown in a fraction of the time they now need. With an integrated system, thousands of those riders could switch to the Stouffville line, saving themselves time every day, maximizing the value of the province's GO infrastructure investment, and directly decongesting the overcrowded Yonge subway.

This system resolves the cross-boundary problem while largely maintaining existing fare geography based on municipalities and limiting fare revenue loss, particularly among municipal transit agencies. For the 93% of TTC riders who ride exclusively on the TTC within the City of Toronto, there would be no fare impact. For long distance cross-boundary travelers, fares would remain similar to what they are today, so the revenue would simply be divided between the municipal transit agencies on which the rider is traveling. The only significant revenue impact on municipal agencies will come on short-distance cross boundary rides. This number of riders is currently relatively small, however (about 60,000 on an average weekday)<sup>5</sup>, and the cost is worth bearing to achieve the important ridership network and equity benefits.



In an integrated transit system, Celestino no longer has to decide which hospital to use based on the transit fare.

Whether he travels from Vaughan to Brampton Civic Hospital or to Humber River Hospital in Toronto, his fare is the same. He can now enjoy a shorter, easier ride to the closer hospital to his home. It's even quicker than before, too, since the buses no longer turn around at Steeles, forcing him to make a transfer. **He can ride the same bus right from his home in Vaughan to the hospital in Toronto.**

**For the 93% of TTC riders who ride exclusively on the TTC within the City of Toronto, there would be no fare impact. For long distance cross-boundary travelers, fares would remain similar to what they are today. For disproportionately low-income short-distance cross-boundary travellers, the reform will dramatically lower their fares.**

Purdeep is now able to take the GO Train downtown for the same fare as the subway for his last year of study at George Brown.

Instead of riding the bus all the way to Yonge Street and packing onto the subway, he rides a short distance to Agincourt Station and then gets on GO. **He's now saving over an hour and a half every day on his commute, which makes him feel so much less exhausted after a long day at school.**





### **The Transit Federation can facilitate fare revenue allocation**

A key role of the Transit Federation would be to assign revenues to each agency either based on their ridership counts, or on a more precise determination of each individual trip. Both approaches are feasible, given limited modification to existing fare technology, but the first approach is likely to be easier and cheaper to administer. It is the approach most frequently used in global peer cities, such as in Germany, as well as closer to home in Montreal.

The flexibility of the Transit Federation and of this fare system's design could even allow municipalities to collaborate bilaterally to determine the cross-boundary fares between their jurisdictions. For example, the fare paid by a Zone A-B-C rider could be determined bilaterally between Toronto and Mississauga. Most 905-area systems already cross-recognize transfers between their agencies, so for them the financial effect of these reforms would be minimal. For daily 905-area riders, this reform would enable them to buy passes for cross-boundary trips rather than needing to pay single-ride fares to take advantage of the cross-recognition.

### **GO can only reach its potential as part of an integrated fare structure**

GO's fare system was designed to facilitate long-distance commuting rather than short intra-municipal

trips. The GO expansion vision, however, intends to transform it into a genuine local and regional transit system. This promise can only be achieved—and the returns on the billions of dollars in capital investment maximized—if GO is fully integrated with local transit agencies. Riders should consider it to be as natural to take the TTC bus to the GO train as they do to take the bus to the subway today. This can only be possible if fares for GO are the same as for trips of the same distance on other transit agencies. Transfers between GO and the local transit providing the "last mile" of access to the station should be included in the fare.

### **Unified fare structures facilitate fare innovation**

The fare structure can easily incorporate innovative fare approaches, such as off-peak travel discounts, discounts for low-income riders and riders with disabilities, and reduced fares for high pollution days. To make the system easy to understand and to use, these special fare policies would be harmonized throughout the region. Passes could either be conventional 30-day passes (not limited to the calendar month) or they could use the approach of capping fares after a certain number of trips in a 30-day period. Riders with passes travelling outside their usual zones would simply pay the cost for an additional zone. Transfers can be provided on a time basis, as the TTC does today, although the time would need to be adjusted based on number of zones passed through.

**Riders should consider it to be as natural to take the bus to the GO train as they do to take the bus to the subway today. This can only be possible if fares for GO are the same as for trips of the same distance on other transit agencies.**

### **Implementing the Transit Federation**

The changes needed to achieve this plan are largely organizational, beginning with the creation of the Transit Federation body to implement integration. The region already has a universal fare card, Presto, that is interoperable between all agencies. It is capable, as demonstrated by its use on GO Transit, of accommodating a zone fare system and it should be possible to adapt it to this new model. Otherwise, it can be replaced with an updated fare collection system as the fare reform is implemented. Much of Presto's complexity and the problems with its implementation have come from the fragmented fare system in the region. Different agencies have different policies for everything from transfers to passes to youth and seniors fares. For example, Burlington Transit and GO Transit simply stop charging riders after they make a certain number of trips, instead of the conventional monthly passes used by TTC and Durham Region Transit. Harmonizing these policies with a single fare structure would reduce the cost to transit agencies of operating the Presto fare collection system and help to make it more reliable.

The main infrastructure change needed to implement this policy would be the need for riders to tap off at the end of their trip, in addition to the existing tap on at the beginning. This approach is already familiar to GO Transit riders, and many transit systems around the world operate that way. As riders disembark from a bus or streetcar, they would simply tap their fare card on the reader as they do when they board. Additional readers could be provided to ensure reliability and speed of service, and this infrastructure is an ideal target for stimulus funding. The TTC subway gates can be easily modified to accommodate tap off as well as tap on. Most importantly, the highest volume transfers between TTC surface routes and subway would still be able to be done seamlessly, without requiring riders to pass through any kind of gates.

Furthermore, the same kind of seamless bus-to-subway transfers that TTC riders currently enjoy could be extended to passengers of other systems, since the system could track their trip based on where they ultimately tap off. This would greatly improve convenience and reduce infrastructure costs at key regional transfer points like Finch, Kipling, and Vaughan Metropolitan Centre stations, where gates between the non-TTC bus terminal and the subway are currently required.

Adding the tap-off step would be an adjustment for riders, but it will not take long before it is as natural as tapping on. When tap-on, tap-off is universal, it will be much simpler for riders, who will never be in doubt about what they need to do.



### **The Transit Federation: Major Benefits at a Comparatively Minor Cost**

These policies are an easy win given that they could be implemented in a couple of years and would be transformational to the region. They do not require major new infrastructure; they do not require a single new tunnel or rail line. Nor do they require a wholesale administrative restructuring of the region's transit system. The transit federation is the lowest cost and most expeditious way to radically improve transit for millions of riders across the region.

Implementing the proposed Toronto Region fare reform will involve some fare adjustments that would reduce certain aspects of transit agency revenues. The largest elements of ridership, however, would not be affected. The TTC would see no change in revenue from the 93% of its riders who ride exclusively on that system. Likewise, there would be comparatively modest adjustments in fares for the over ninety percent of GO rail riders who commute from places like Oakville or Georgetown to Union Station. 905-area systems already reciprocally recognize each other's transfers, meaning that they will not face any additional costs for riders using multiple 905 systems. The following are order of magnitude estimates of costs based on existing (pre-COVID) ridership, but it is important to note that they do not include the significant additional revenue that can be expected from increased ridership as a result of lower fares and a simpler fare structure.



#### **Elimination of co-fare between GO Transit and 905 municipal transit systems: \$11 million**

Riders currently pay between \$.80 and \$1.00 to transfer between GO Transit and local transit agencies in the 905 region, while Metrolinx pays the difference between that fare and the average fare charged by the local transit agency. This fare reform would mean that transferring passengers would not pay an additional charge and the province will cover the remaining \$.80 to \$1.00.

#### **Reduction of fares on short cross-boundary trips between TTC and 905 municipal systems: \$34 million**

Under the proposed fare system, riders travelling shorter distances between Etobicoke, North York, and Scarborough and surrounding municipalities would pay roughly half what they do today. Riders travelling longer distances between the 905 region and downtown Toronto would receive a much more modest discount on today's double fare. This estimate is based on Transportation Tomorrow Survey data.

#### **Free transfer between GO Transit and TTC: \$45 million**

This estimate is based on the expenditures on the \$1.50 co-fare that was previously in place for transfers between GO and the TTC, the cost of which was covered by the provincial government.

#### **Reduction in GO Transit fares: \$75 million**

While the effect of this proposed reform on longer-distance GO trips would be comparatively small, there would be substantial reductions in GO fares on shorter-distance trips, such as between Oshawa and Pickering, between Burlington and Oakville, or between Etobicoke North and Brampton. The number of riders currently making these journeys, however, is minimal—largely due to the existing high fares. The projected revenue loss is therefore comparatively small, and could well be offset by substantial increases in ridership. The provincial government has recently begun cutting fares substantially within the City of Toronto, with many trips now costing only \$3.70. They have also suggested the aspiration of reducing them to replicate the TTC fare, which would match the cost of this proposal. This figure does not include the revenue gain from increased ridership as a result of lower fares.

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**Total order of magnitude cost estimate: \$165 million**



While \$165 million per year is a considerable sum, it is small when valuing the regional social and economic benefits of the plan, and within the context of existing spending on transit. Transforming and integrating the region's transit system will radically improve the lives of hundreds of thousands of daily riders, and is both affordable and essential. The provincial contribution to Metrolinx was \$590 million in 2019-20, up from \$478 million in 2018-19. In 2019, the TTC received an operating subsidy of \$661 million, up from \$577 million in 2018.

Most importantly, these projected costs do not take into account the tremendous growth in ridership and therefore revenue that can be anticipated with these reforms. As was seen with UP Express, a dramatic fare cut actually resulted in higher revenues as a result of increased ridership. The increased utilization of transit services, particularly in the 905 region and during the midday on GO Transit, will meaningfully improve the revenue performance of those agencies. The projected cost of the federation must also consider the opportunity for cost saving realized by the expected

growth in ridership, rationalization and consolidation of services and schedules, and minimizing operating costs of fare payment collection infrastructure.

The division of costs between municipalities and the provincial government is a matter for negotiation. If the province were to decide to cover the entire annual cost of the reform, it would be a way for the province to provide meaningful operating support to facilitate cross-municipal travel—an important provincial objective—without needing to provide direct subsidy to cover municipal agency deficits.

This short-term cost is a small price to pay for tremendous long-term gain. This fare structure would maximize the value of billions of dollars of infrastructure investment in GO Transit. It would also facilitate the lucrative redevelopment of GO station areas with transit-oriented development, since less real estate would need to be dedicated to parking. Furthermore, overcrowded municipal routes would be relieved by shifting riders onto expanded GO service, particularly midday GO Trains which currently operate far below capacity.

# Conclusion

**T**hese reforms are more urgent than ever as the region recovers from the pandemic and the conventional sources of transit revenue have been dramatically disrupted. We have the opportunity to use these historic challenges as a the catalyst for long-discussed change, that results in more convenient transit for millions of people across the region. Transit networks will have better utilization of existing and new transit services and infrastructure, as users will not need to take longer and more circuitous journeys to pay a lower fare. It will finally mean fairness for people in areas like Rexdale, Malvern, Malton, and Pickering, who will no longer face punitive double fares to travel a short distance across a municipal boundary to major employment areas. People in places like Weston and Agincourt will no longer contribute to crowding on the subway, and can instead get downtown in half the time on GO.

The region faces a severe housing crisis, with homes near many important employment areas are increasingly unaffordable. Integrated regional transit can help residents of lower-cost areas maintain access to job opportunities throughout the region. As we struggle to avert a climate crisis, with automobiles being the single largest source of carbon emissions in the Toronto Region, integrated transit could get hundreds of thousands of drivers out of their cars and onto buses and trains. With the introduction of a Transit Federation and of a comprehensive, easy-to-use fare structure, the region will finally have the integrated transit system that it needs and deserves.

Now is the time. Let's take the opportunity for transit to rise through recovery as a driver of economic prosperity. We have an opportunity to reset funding, reset trust between our transit providers and policy makers, reset trust with our collective customers, and start on a strong path to recovery. With a collective vision in the Transit Federation, we will have a strong business case for provincial and federal funding and an opportunity to improve service and equity for transit riders across the region.

**As we struggle to avert a climate crisis, with automobiles being the single largest source of carbon emissions in the Toronto Region, integrated transit could get hundreds of thousands of drivers out of their cars and onto buses and trains.**

# Appendix

## Global Best Practices

- London
  - i. Greater London's transit network is entirely fare integrated under the auspices of Transport for London (TfL). Fares are mode-dependent, with different systems for rail and bus and tram fares.
  - ii. Rail fares — which apply to all rail services in Greater London including the Underground, Overground, and National Rail services — are calculated by distance, based on a set of nine concentric zones radiating outwards from downtown London. TfL also charges higher rail fares during peak hours.<sup>6</sup>
  - iii. Bus and tram fares are flat, and TfL provides 'hopper' fares allowing unlimited bus or tram trips within an hour of your initial tap. Though administered by a single regional entity, free transfers are not available between buses and trams on the one hand, and trains and the Underground on the other.<sup>7</sup>
  - iv. For frequent users of the transit system, TfL offers daily, weekly and monthly passes, and additionally caps daily and weekly fare expenditures. These passes and caps are also mode-dependent, with different rates for bus/tram and rail travel – though owners of rail travelcards may use all modes within the selected zones.<sup>8</sup>
  - v. The following discounts are available:
    1. Youth
    2. Student/Apprentice
    3. Unemployed
    4. Benefit recipient (for buses and trams only)
    5. Disabled passenger (for rail only)
- Paris<sup>9</sup>
  - i. Fares on the Ile-de-France's transit services fully integrated through Île-de-France Mobilités. Fares for all regional travel (which includes journeys on regional rail, the metro, buses and trams) are calculated based on five concentric zones though the entire metro system is contained within the central zone.
  - ii. Ile-de-France Mobilites offers single ride tickets, as well as five-day, weekly, monthly and annual passes. Many pass offerings have a two or three-zone minimum.
  - iii. Ile-de-France Mobilites also offers a special ticket for Paris's anti-pollution days, when certain auto travel is banned. These tickets allow the user essentially unlimited network access for a very low price.
  - iv. Discounts for the following groups are available:
    1. Youth
    2. Students
    3. Unemployed
    4. Welfare recipients
      - a. Certain welfare recipients may receive unlimited free passes
    5. Seniors
    6. Veterans
    7. Large families

- Montreal (proposed)<sup>10</sup>
  - i. The Autorité régionale de transport métropolitain (ARTM) rolled out a proposal this year to integrate transit fares across all modes in the Montreal region. The integration would rely on four concentric zones to calculate fares.
  - ii. A fully detailed outline of proposed fares and passes is not yet available, but the proposal mentioned monthly passes, as well as a zone 1-3 bus-only pass available at a reduced price.
  - iii. Discounts have not yet been identified. The ARTM proposal does highlight the potential for social fares, however.
- Berlin<sup>11</sup>
  - i. Verkehrsverbund Berlin-Brandenburg coordinates all transit fares in the Berlin region, and beyond. In the Berlin area, fares are calculated based on a 3-zone system, which applies to all modes (U-Bahn, S-Bahn, bus and tram). Except for short-haul tickets, VBB tickets and passes use a two-zone base fare, meaning that the cheapest tickets will allow for travel in two of the network's three zones.
  - ii. Single rides as well as daily, weekly, monthly and annual passes are available. A short-haul ticket is additionally offered, allowing passengers to travel through three stops on rail, or six stops on buses and trams for a reduced price. Multi-day passes targeted towards use by tourists are also available.
  - iii. Berlin offers a discounted off-peak only monthly pass, which allows the user unlimited travel on all modes after 10:00 on weekdays, and all day on weekends.
  - iv. Other discounts are available for:
    - 1. Students
    - 2. Groups
    - 3. Seniors
- Zurich<sup>12</sup>
  - i. Zürcher Verkehrsverbund (ZVV) administers transit fares in the Zurich region. Fares for all modes in the region are calculated based on a loose grid of 45 fare zones. Though Zurich and Winterthur both are contained within single fare zones, travel to or through those zones counts as double. ZVV also offers discounted fares for travel on select routes within zones outside of Zurich and Winterthur.
  - ii. ZVV offers single rides, as well as daily, weekly, and monthly passes. Like in Berlin, ZVV offers an off-peak only discount pass, with unlimited travel after 9:00 weekdays, and on weekends.
  - iii. ZVV offers multiple classes of service on its network: each of these fare options has first and second-class ticket prices.
  - iv. ZVV offers pre-packaged passes for tourist travel within the network
  - v. Discounts available for:
    - 1. Youth
    - 2. Seniors
- Seoul<sup>13</sup>
  - i. Transit fares in the Seoul metro area are integrated under the Metropolitan Unity Fare (MUF) system. MUF administers all fares for the Seoul metropolitan subway and the Seoul bus system, as well as regional rail operations and transit in Incheon. Rail fares are priced by distance. Travel under 10 kilometers priced with a flat fare, with incremental fare increases every 5km thereafter. Rail fares allow up to 5 transfers between rail and bus services. Flat, bus-only fares are also offered, and are priced differently by bus service class.
  - ii. MUF offers commutation tickets, allowing 60 rides in 30 days.
  - iii. MUF offers discounts for youth and students, and children.

City	Zone Fares	Mode Neutral Fares	Peak/Off-Peak Fares	Short Distance Fares	Capped Fares	Social Fares
London	Yes, for rail travel	No. Rail and bus fares separate	Yes, for rail travel	Yes, for bus travel	Yes	Yes
Paris	Yes	Yes	No	No	No	Yes
Montreal (proposed)	Yes	Yes, though reduced-price bus-only passes will be available	No	No	No	Unknown
Berlin	Yes	Yes	Yes, off-peak only passes available	Yes	No	Yes
Zurich	Yes	Yes	Yes, off-peak only passes available	No	No	No
Seoul	Yes	Yes, though reduced-price bus-only passes are available	No	No	No	No
TTC (existing)	No	No (neutral within the TTC, but not for TTC<>GO transfers)	No	No	No	No
Toronto Region (proposed)	Yes	Yes	Optional	No	Yes	Yes

## End Notes

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