LONDON TRANSIT FIVE YEAR RIDERSHIP GROWTH STRATEGY

Interim Report

November 2018

Contents

1. Introduction

From 2009-2012, the London Transit Commission (LTC) experienced rapid ridership growth of approximately 5% annually. Since 2012, LTC has experienced an average of 1% annual ridership growth, excluding a drop in ridership from 2014-15 that was the result of a change to the Ontario Works transportation benefit.

LTC retained Left Turn Right Turn (LTRT) to develop a Ridership Growth Strategy to develop and grow overall ridership in alignment with the other strategic objectives of the organization. The purpose of this report is to present the results from the first phase of the LTRT study: a shortlist of ridership growth initiatives to be analyzed for consideration for LTC's Ridership Growth Strategy. The report is structured as follows:

- Review of the current state of ridership and recent LTC and City of London initiatives (Chapter 2);
- Current and projected demographics in the City of London as they relate to transit usage (Chapter 3);
- Summary of the best practice scan, including interviews undertaken with peer agencies and literature review (Chapter 4);
- Introduction of the long list of growth initiatives to be considered and summary of the analysis (Chapter 5);
- Description of the screening process and the suggested initiatives to be evaluated in more detail in Phase 2 of the project (Chapter 6); and
- Summary of next steps (Chapter 7).

The results of the Ridership Growth Strategy, once finalized, will be integrated in to the overall Five-Year Business Plan being developed by LTC for 2020-2025.

2.   Current State and Recent Initiatives

This section provides an overview of the current state of ridership and describes the most recent planning, service, and policy initiatives of LTC and the City of London.

2.1   Current State of Ridership

Averaging over 2M riders per month during the peak seasons, the LTC route network aims to provide service linking key destinations across the city. LTC's annual ridership volumes are closely linked to the seasonal post-secondary school population. Over 1M rides per month are generated by post-secondary students at Western University and Fanshawe College between September and April. Conversely, LTC experiences a decline in ridership between May and August.
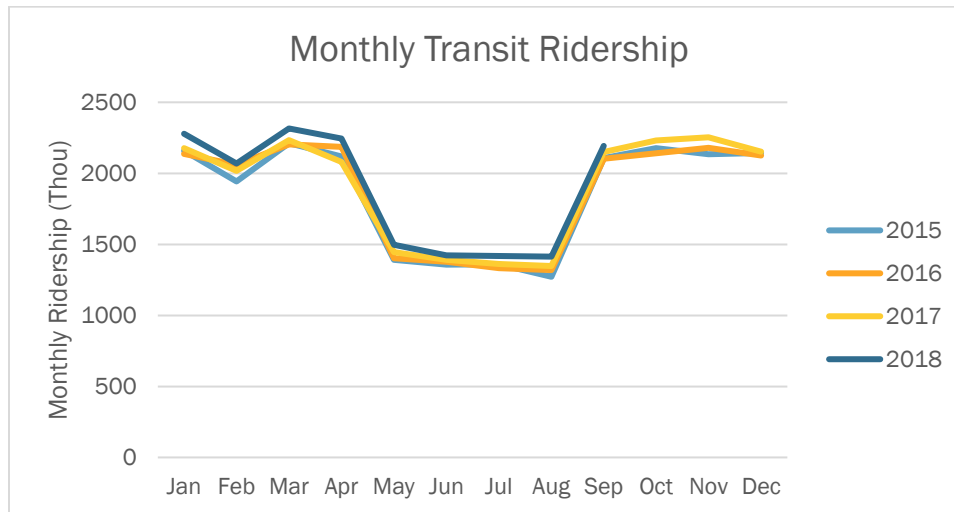
Figure 1: London Transit ridership by month. Note the sharp decline in riders between May and August, coinciding with a decline in the post-secondary student population. Ridership data provided by London Transit Commission.

In 2015, the City of London adjusted how the Ontario Works transportation benefit was distributed to recipients, moving away from a complimentary Monthly Transit Pass to a monthly stipend. At the same time, the city experienced a moderate decline in population. These impacts resulted in nearly a 6% decrease in riders between 2014 and 2015. While London Transit continues to experience growth in its ridership, it has not yet managed to best its peak annual ridership in 2014.
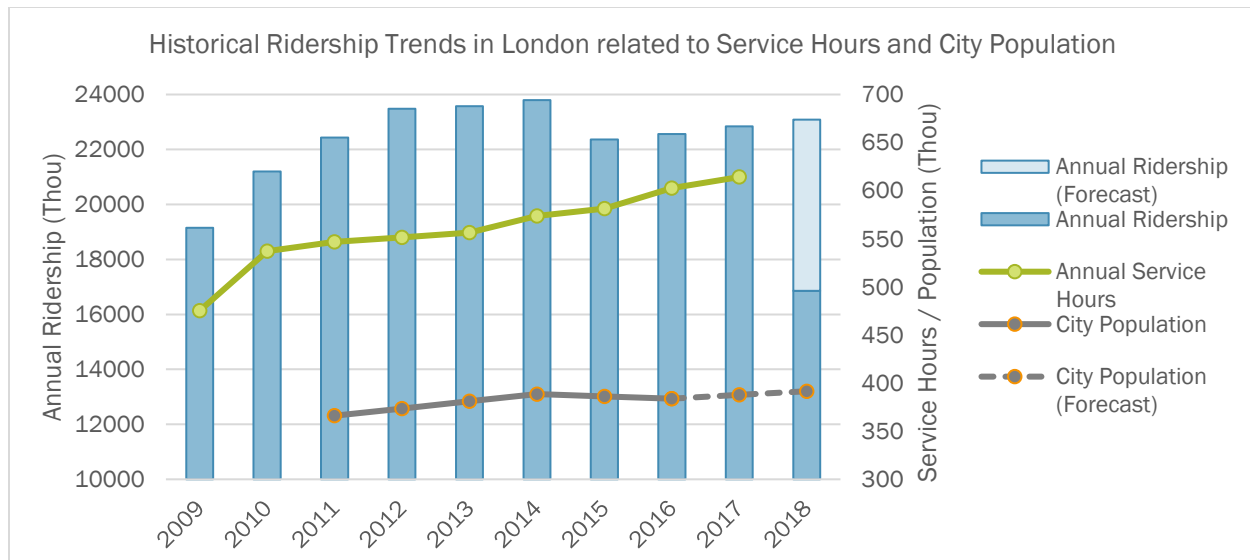
Figure 2: Historical ridership trends at London Transit as they relate to annual service hours and the total population in the city. The dotted line indicates the general trend in ridership, which continues to grow despite a sharp decrease in 2015. Ridership and Service Hour data provided by London Transit Commission. Population information provided by StatsCan and City of London.

After the ridership decline in 2015, London Transit has experienced, on average, a 1% annual increase in ridership, and has increased service by over 17,000 hours per year. Much of the service increases were guided by a Route Structure and Service Guideline Review, completed in 2015 and discussed in the following section.

2.2   The London Plan – City of London Official Plan

After completing the *Rethink London* program over two years of consultation *The London Plan* was adopted by Council in 2016 as the City's Official Plan to 2035. *The London Plan* is driven by the following overarching vision statement: *"London 2035: exciting, exceptional, connected."*
From this vision are eight key directions:
- Plan strategically for a prosperous city;
- Connect London to the surrounding region;
- Celebrate and support London as a culturally rich, creative and diverse city;
- Become one of the greenest cities in Canada;
- Build a mixed-use compact city;
- Place new emphasis on creative attractive mobility choices;
- Build strong, healthy and attractive neighbourhoods for everyone; and
- Make wise planning decisions.

The London Plan establishes targets for intensification within the city, namely a goal for directing 45% of new construction to the existing built area boundary. This will be accomplished through guided development in three key areas: downtown, transit villages, and rapid transit corridors. These key development areas will contain 75% of the new construction planned within the 45% target.

The downtown, bounded by Oxford Street, Adelaide Street and the Thames River, and at the intersection of two proposed rapid transit lines, will have the best transit access in the city. Additionally, the planned built form focuses on building tall mixed-use communities, particularly along key corridors, and intensifying uses by redeveloping surface parking lots.

Transit villages are defined in the plan as key nodes throughout the city that will receive high-order transit improvements and serve as key drivers of transit ridership. These areas have similar goals of intensification into mixed-use communities and are located near core institutions (e.g. post-secondary campuses and health centres) and large retail centres. The long-term plan is to structure transit expansion between these villages, particularly through new rapid transit lines. Rapid transit corridors are major thoroughfares where traffic will be focused on moving transit vehicles and encouraging active transportation in the built form. Rapid transit corridors are identified along future rapid transit routes that connect transit villages with one-another and the downtown area.

2.3   Smart Moves 2030 – City of London Transportation Master Plan

In 2013, the City of London released its *Smart Moves 2030* Transportation Master Plan. The Plan details five guiding principles to ensure that the city's transportation infrastructure is able to handle the city's projected growth to 2030 in a sustainable and fiscally responsible way. These *"Smart Moves"* are:

- Rethinking growth to support the Transportation Master Plan;
- Taking transit to the next level;
- Actively managing transportation demand;
- Greater investment in cycling and walking infrastructure; and
- More strategic program of road network improvements.

The *Smart Moves 2030* plan considers growth scenarios to drive transit usage with an end goal of moving toward a 20% transit mode share. These growth scenarios assume a steady 1% annual growth rate and a more aggressive 2% rate, while maintaining a 40% intensification target (note that this is less than the more recent *London Plan*). The intensified development will be transit oriented in nature and include higher density mixed-use communities with a greater focus on pedestrian, cycling, and transit travel modes.

Transit improvements are guided by the incremental introduction of a Bus Rapid Transit (BRT) system that is integrated with existing and modified LTC services, albeit with unique branding and service standards. The initial stage includes a limited roll-out of express bus services, advancing into a network of BRT corridors with frequent all-day service on dedicated rights of way.
The plan also emphasizes the importance of actively managing transportation demand through parking management strategies. The plan recognizes that a monthly parking pass downtown is cheaper than a monthly transit pass, and stresses that a new parking strategy is vital to reducing vehicular traffic demand and improving transit ridership. Specifically, the plan suggests that rather than the cost of a transit pass being too high, it is the cost of parking that is artificially low. Through greater investment in cycling and walking infrastructure, coupled with a more strategic program of road network improvements, the *Smart Moves 2030* plan hopes to encourage the concept of "Complete Streets".

2.4   London Rapid Transit Master Plan

The London Rapid Transit Master Plan (RTMP) was finalized in 2017 as the most up-to-date strategic plan for London's BRT program. The RTMP outlines how the proposed BRT system will be

structured. Additionally, it provides a framework for developing a Multi-modal Transportation Network that complements the London Plan with a strategy for the pedestrian and cycling networks as well as an analysis of potential vehicular traffic impacts.

The business case and RTMP development process identified a net lifecycle benefit of $224M forecast to 2050. Additionally, the BRT network helps to satisfy the eight key directions outlined in the London Plan.
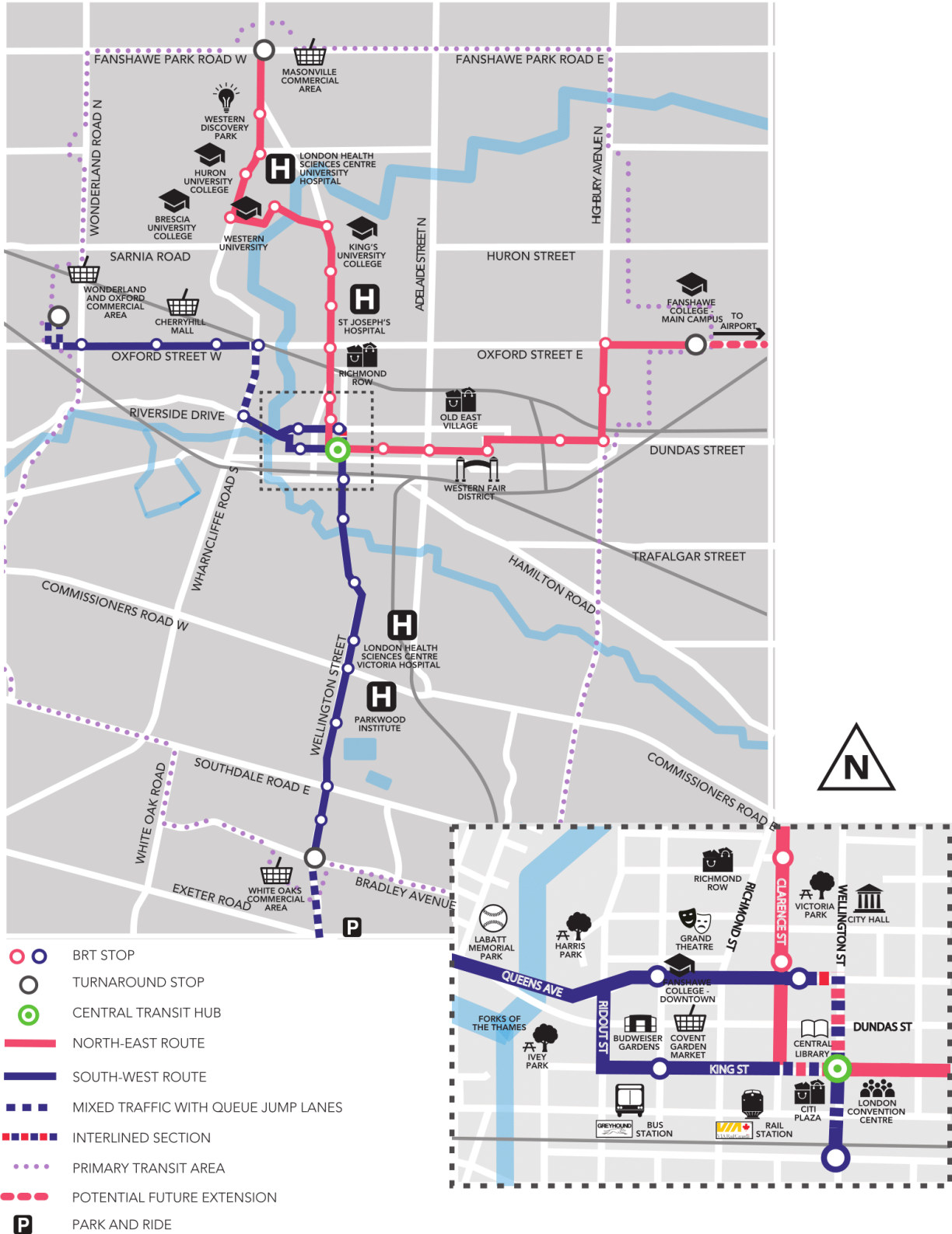

Figure 3: Approved BRT corridors as per the *Shift* London *BRT Transportation Project Assessment Process (2017)*

The initial BRT network includes two key corridors that intersect in downtown London at a central transit hub. The North-East corridor links Masonville Mall and Western University in the North with Fanshawe College in the East. The South-West corridor links White Oaks mall and a potential Park and Ride facility in the South with a proposed transit village at Wonderland and Oxford.

The network will include over 22km of dedicated rapid transit right of way, 38 rapid transit stations, improvements to the pedestrian realm, and enhanced cycling infrastructure along the route. Service will be provided at least every 10 minutes (and as frequently as every 5 minutes) by 28 uniquely-branded articulated vehicles providing capacity of up to 1300 people per hour per direction. The previous figure Figure 3 illustrates the proposed corridors that make up the initial BRT network.

The RTMP acknowledges the important role of city planning and effective urban development policy on ensuring that the BRT program is a success. As a result, the RTMP stresses components of the London Plan including support for defined urban typologies in the downtown, transit villages, and along rapid transit corridors.

2.5   Route Structure and Service Guideline Review

In 2015, Dillon Consulting created a report providing LTC with an assessment of its service and included a series of initiatives to improve the productivity and ridership on its services. The result was a five-year implementation strategy with specific route-level and system-wide recommendations for improving route structure, service frequency and reliability. Dillon Consulting recommended approximately 190 initiatives, staged between 2015 and 2019. To date, LTC has completed over 140, some of them ahead of schedule. However, LTC has identified 25 initiatives that will not be implemented due to changes in demand as a result of other improvements. Additionally, some of the proposed changes are under review or deferred due to operational limitations such as road networks not completed in new growth areas.
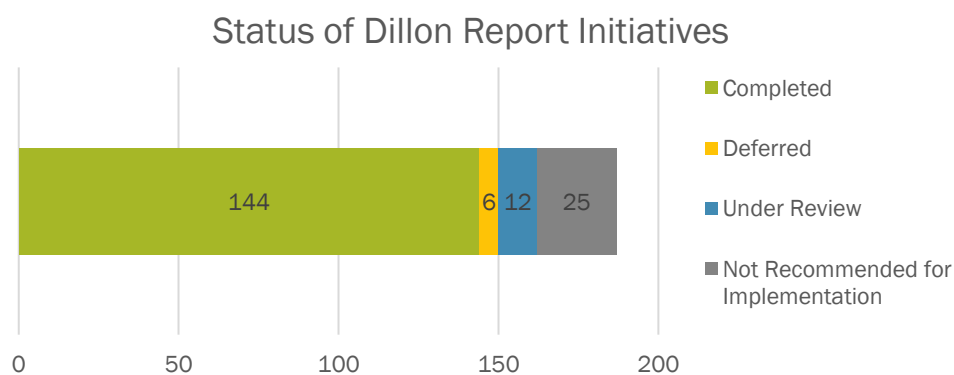
Figure 4: Illustration of the implementation status of the initiatives proposed in the 2015 Dillion Consulting report for London Transit, "Route Structure and Service Guideline Review", based on information provided by London Transit Commission.

2.6   Rapid Transit Integration Framework

Dillon Consulting completed a second report in 2016 discussing the changes to the route network and service levels necessary to effectively support LTC's Rapid Transit program. This Framework was updated in 2018 to reflect changes that had been incorporated into the Rapid Transit Master Plan with respect to operating conditions and corridors of travel. The report projects service levels

and ridership growth as a result of the staged implementation of the BRT network and the adjustments to the base LTC network into 2035. The resulting ridership growth projected in the Dillon Report is outlined below.

	2035
LTC Routes (Local and ASD)	24,474,373
RT Routes	7,287,697
Total	**31,762,070**

Figure 5: Summary of Ridership Growth Projections from Table 8 of the Rapid Transit Integration Framework *(2018) by Dillon Consulting*

The ridership projected by Dillon is scaled from projections generated to support the Smart Moves 2030 Transportation Master Plan, taking into consideration the staged implementation of the BRT services and the additional service changes to LTC routes recommended in the report. This Framework will form the basis of the next 5-Year Service Strategy, scheduled to be presented to the Commission for consideration in February 2019.

3. Demographics and Growth Projections

London Transit operates entirely within the City of London, with its services focused on what is referred to in the *London Plan* as the "Primary Transit Area". The primary area of service covers a diverse population with specific characteristics and travel patterns. The following sections explore the demographic context that London Transit operates in and attempts to identify with greater clarity who its customers are.

3.1   Overview of the City

The City of London has a resident population of approximately 384,000 (as of the 2016 Canadian Census) within the broader population of 475,000 of the London Census Metropolitan Area (CMA). Since the 2011 National Household Survey, the city has grown by approximately one percent per year, and the population is forecast to grow as it has for the next twenty years, adding approximately 77,000 residents by 2035.

In 2015, London hosted nearly 198,000 jobs, but the City continues to struggle with the challenges of low-cost offshore manufacturing and consolidation in the finance, insurance and real estate industries. London's location along Highways 401 and 402 provides great accessibility for goods transport and international trade across the eastern North American market. In the years to come, the City hopes to capitalize on this accessibility to grow its commercial and industrial sectors by 10-20% (gross floor area) and 43,000 new employment opportunities by 2035.

Figure 6: Employment in the City of London by industry. Data available from the Statistics Canada 2016 Census

3.2   Demographic Profiles

In order to create a more complete picture of who London Transit's users are, we have identified seven key demographic groups and created profiles of key characteristics and travel habits. The profiles described here are by no means exhaustive, nor are they mutually exclusive. They serve as a template to understand potential users of London Transit services and how to better target

them with various growth strategies. Where possible, we will attempt to associate these demographic groups with specific fare categories and other available data to get a sense of actual ridership and transit mode share within these demographic groups.

The largest cohorts of residents fall into the "Baby Boomer" generation (those born between 1946 and 1965) and the "Millennial" generation (loosely defined as those born between 1980 and 2000), both of which have distinct lifestyle characteristics and expectations of mobility and urban living.
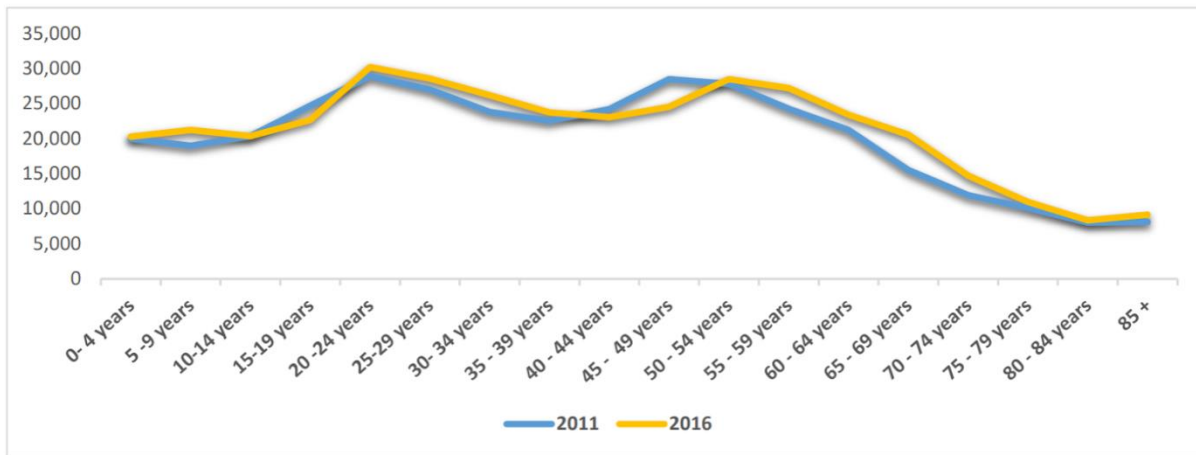
Figure 7: The population of London by age cohort according to data from Statistics Canada 2011 NHS and the 2016 Census

3.2.1   Post-Secondary Students

Central to the city are two large post-secondary institutions: Western University (Western) and Fanshawe College (Fanshawe). The enrollment of the two institutions is approximately 53,000 students, many of whom live in or around the city. These students generally fall between the ages of 18 and 25 and have the highest propensity for using London Transit services of all demographic groups (over 40% mode share).

As part of their tuition, each institution deducts a fee for an unlimited travel transit pass on LTC. As a result, over 11,400,000 rides (based on 2017 revenue reports) are taken by Post-Secondary Students from the two institutions each year, accounting for roughly half of all trips taken on London Transit.

3.2.2   Millennials

The millennial generation has garnered a great deal of interest for their propensity for bucking the trends of prior generations. Sometimes called "echo boomers", this group is generally between the ages of 20 and 40 years old and is characterized by an increased reliance on digital media and online communication. According to census data, there are approximately 108,000 Millennials in London making up roughly a quarter of London's population.

Many of the differences between millennials and prior generations are clear in their employment and transportation statistics. Millennials are significantly more likely to be unemployed or underemployed in the City of London and make, on average, less than Baby Boomers. Millennials

are also significantly more likely to use modes of transport other than a personal vehicle (5-25% greater than other generations) and 25% less likely to own a vehicle.

An important trend observed in the 2016 London Transportation Survey is a noticeable increase in transit usage in the 20 to 40-year-old age group since 2002. This appears to indicate that transit mode share is not decreasing with age as rapidly as it did sixteen years ago, which is a trend that will feed long-term ridership growth.

Exhibit 4.21: Mode Share Changes by Age, 2002 and 2016—City of London
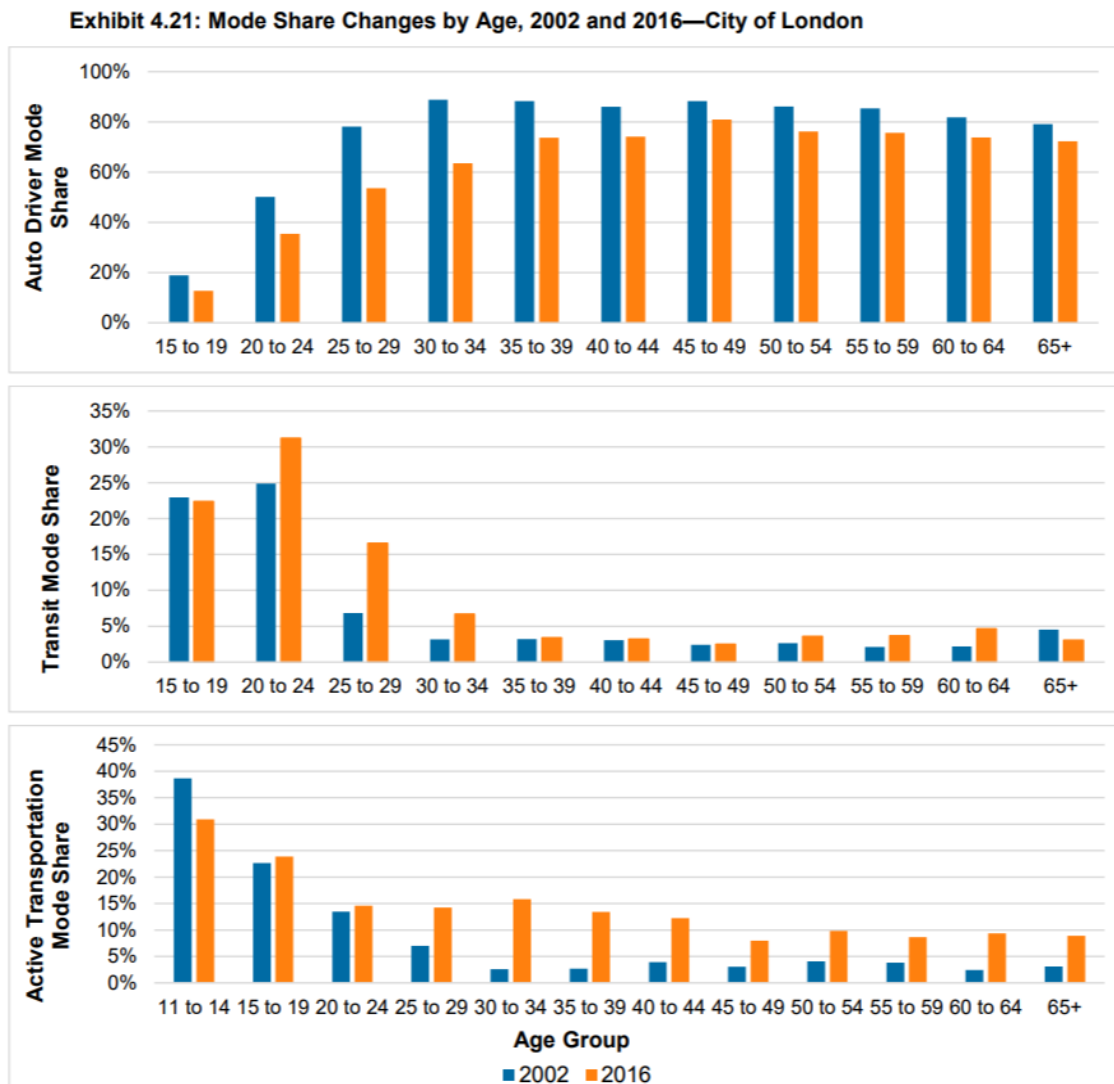
Figure 8: Mode Share Changes by Age, 2002 and 2016 - City of London. Extracted from Exhibit 4.21 *of the* 2016 Household Travel Survey Summary Report *(City of London, 2017). Note the differences in the 20 to 39 age groups relative to 2002.*

3.2.3   Children and Youth

Youth are generally characterized as individuals under the age of 20 years old, including all school-aged children and as those in their early years of post-secondary education. This demographic group includes approximately 85,000 residents in London. In 2017 Children aged 12 and under made roughly 130,000 ticketed trips while youth in middle and high school made 999,000 trips using tickets and their discounted summer pass.

Youth in London are mostly captive transportation riders, having few options besides their primary mode of choice. That said, only 12% of youth rely on a private vehicle when travelling to or from school (or work, if of age).

The youth demographic is a critical age group for targeted transit marketing, particularly in their teenage years. Maintaining their high transit and active transportation usage as they age is critical to long-term ridership growth.

3.2.4   Established Working Adults

This demographic group represents the single largest cohort of individuals in London at approximately 127,000 residents, but one of the smallest groups of transit users. This group is represented by Londoners between the ages of 40 and 64 years old. Most Londoners are employed in the sales and service or business and finance industries and boast a relatively low unemployment rate of 5%.

The majority of established working adults chose to travel by personal vehicle (76%), either as a driver or passenger. Only 5% of established working adults elect to take transit and 12% choose active modes. They boast a high rate of vehicle ownership and above all convenience, travel time, and parking availability are their key travel decision-making factors.

Growing ridership of this demographic group must focus on making transit travel options competitive relative to their key decision-making factors. As a result, established working adults are most likely to respond to improvements in service reliability, travel time, and the cost of parking.

3.2.5   Seniors and Retirees

The City of London has a somewhat higher proportion of seniors than the province with approximately 64,000 residents over the age of 65, making up 16.5% of the population (relative to 15.6% across Ontario). While the majority are out of the labour force, 25% of seniors remain employed, of which 30% are full-time.

The vast majority (74%) of seniors use a personal automobile, with 70% indicating that they own a vehicle. In 2016, only 3% of residents within this age group indicated that they were transit users for their primary travel. Despite the low mode split, seniors accounted for over 780,000 trips (ticketed and pass) in 2017 prior to the cancellation of these fare discounts.

Some retirement communities have worked with LTC to develop a successful Community Bus service that cater to their needs and interests. However, there is a broader senior and retirement population across the city who may be convinced to use transit if the service provided is comfortable, consistent, and reliable.

3.2.6   Newcomers

Between 2011 and 2016, Statistics Canada noted that approximately 11,600 new immigrants settled in the City of London, making up approximately 3% of the city's population. The London & Middlesex Local Immigration Partnership (LMLIP) is co-led by the City of London and supports

community groups throughout the City and neighbouring municipalities in efforts to provide services for and integration of new immigrants into the community. Since many newcomers arrive with limited understanding of the transportation options within the city, working with LMLIP and other agencies in supporting newcomers can be a mutually beneficial opportunity to improve their wellbeing and increase ridership.

3.2.7 Individuals Living with Disability

According to census data from Statistics Canada, there are approximately 73,000 residents in the city of London living with a self-identified disability. This represents approximately 21% of the population in the city, considerably greater than the 15% identified in the broader population across Ontario. These individuals living with a disability have a greater propensity to being unemployed (8.8% versus 5% of Established Working Adults) or underemployed (of the 35% who are employed, nearly half are part-time) and a great number of them are not in the labour force at all (56%). While these individuals span all age groups and demographics, it is important to note that of those in the labour force, 22% live with low income and individuals with a disability make $4,000 on average less than the general population.

The mobility challenges of living with disability vary depending on the individual, however they generally are responsive to convenient, flexible and reliable transportation options.

4.   Best Practices

To support the development of the Ridership Growth Strategy, a literature review was completed and peer transit agencies were interviewed to identify best practices to stimulate ridership growth and develop customers. The results and lessons learned will serve as input for consideration in determining and designing the initiatives to be included in the LTC's Ridership Growth Strategy.

4.1   Summary of Interviews

Agencies were interviewed based on similarity to LTC in the following ways:
- Size/scale of services
- Operating environment
- Ridership trends over the past 5 years
- Ridership growth strategy or related document developed in the recent past

The following represents summaries of each interview. The detailed summaries are included in Appendix A.

4.1.1   York Region Transit

York Region Transit (YRT) provides transit services using a fleet operated by multiple third-party service delivery contractors. YRT operates various service modes:
- York Region Transit – conventional transit service operated on a grid network;
- Viva Bus Rapid Transit – express service, in some areas on dedicated busways; and
- Mobility Plus – specialized service for eligible customers.

The major successes for YRT ridership have come as a result of major capital investments and service expansion. Most notably, YRT anticipates 20-40% growth when it launches its dedicated BRT lanes. This is in line with what it experienced during the launch of its other BRT services as well as the subway extension into the region. Marketing and branding are critical components to this venture, ensuring that customers understand the convenience and speed through which their travel needs can be met.

YRT attempts to innovate the offerings to its customers. Currently, it is piloting advanced information options on buses in the form of LCD screens, technologies to improve customer and pedestrian safety, and a new 'on-demand' service delivery model for sparsely populated areas of the region. Under this new model, customers can request a pick-up to their door using an application or phone, and they will be brought to a main YRT corridor to continue their trip.

4.1.2   Brampton Transit

Brampton Transit (BT) provides conventional transit service in the City of Brampton. Over the past decade the agency has launched its 'BRT-lite' Zum service which has helped dramatically grow the ridership of the service. Much like YRT, Zum's success is attributed to a strong brand and attractive service offering to customers.
BT has effectively developed a reliable base grid system through substantial investment that offers 10-minute peak service on major corridors. This type of frequent service is valuable to commuters and students.

Brampton Transit has also made a concerted effort to expand its outreach and communications efforts. It holds hundreds of outreach events and public meetings a year which help educate customers and promote the services offered. This is particularly important in the City of Brampton where there is a high proportion of newcomers and immigrants, who may be accustomed to using transit.

4.1.3 Kingston Transit

Kingston Transit (KT) has experienced tremendous growth in ridership over the past five years. Much of this growth can be attributable to a shift in service delivery model and fare strategies offered by the agency. First, KT has focused its service delivery around express corridors with frequent service intended to target commuters. In some cases, local services were reduced or eliminated to further intensify service on the express corridors. Customers have been engaged and bought into the new model whereby walking distances may be greater but service frequency, reliability and speeds on the corridors are increased.

Kingston Transit has also introduced many fare strategies to bring in different customer demographics. Notably, KT created a first-of-its-kind program to provide high school students with free passes (subsidized by the school board). Academic research has since validated that these students go on to become regular transit users after they finish high school. KT also has implemented successful employer-pass programs and ODSP-pass programs.

Finally, KT has had success addressing challenges related to parking in its downtown. The City of Kingston introduced various policies and by-laws to eliminate free street parking as well as increase the cost of city-owned parking lots to increase the financial competitiveness of transit pass options. Private lots have followed suit and it is now more expensive to drive-and-park on a regular basis than it is to take transit.

4.2 Literature Review

The following publications were considered in identifying potential growth initiatives as well as guiding the analysis of their potential impact. Document references are provided in Appendix B. Documents are listed in reverse chronological order.

4.2.1 Canadian Transit Ridership Trends Study (CUTA, 2019)

The University of Toronto was commissioned by the Canadian Urban Transit Association to undertake a comprehensive review of Canadian Transit Ridership Trends. The study included an exhaustive literature review which examined over 300 potential publications and reports – the focus being to consider recent ridership prediction models and to identify the "significance of various transit ridership factors including the built environment, socioeconomic, transit service and other external and contextual variables." Secondly, the study team surveyed all CUTA transit agency members regarding their ridership prediction practices, data sources and quality, and areas of improvement. Based on the above results and an expanded view of supporting data, the University of Toronto researchers developed a ridership model considering a comprehensive set of

indicators including built environment attributes, socioeconomic factors, transit service factors, and other external/contextual factors.

4.2.2   Impact of Free Transit Passes on Youth Travel Behaviour (University of Waterloo, 2017)

This Master of Applied Science thesis from Waterloo analyzed Kingston Transit's transit pass program for high school students. The researchers undertook surveys with students and parents to determine if individual and household travel patterns changed as a result of the pilot. The study supported Kingston Transit's anecdotal experience that student travel patterns were being shaped in favor of transit; that the complimentary transit pass was an "important stimulant for travel independence" for high school students; and that other mid-sized North American transit agencies should consider adopting similar programs.

4.2.3   Transit-Supportive Guidelines (Ministry of Transportation Ontario, 2016)

The Province of Ontario updated its Transit-Supportive Guidelines in 2016. The document presents a valuable collection of best practices related to land-use planning, urban design, and operations, drawing on experience both within the province and outside. The Guidelines includes specific sections related to ridership strategies, which it breaks down to fare strategies, adapting to meet changing demographics, establishing partnerships (e.g. employers, universities, events), promotion and education, and transportation demand management (i.e. policies that encourage the use of transit). The Guidelines also speak to other areas of best-practice (e.g. system optimization, performance monitoring, passenger accommodations) that, if improved, could also yield indirect ridership growth.

4.2.4   Improving the Customer Experience (White paper at Transit Leadership Summit, 2015)

This white paper presented customer experience initiatives in seven cities internationally that are much larger than London, Ontario. The authors explored and presented features and initiatives intended to improve agency communication (e.g. trip planning, websites, mobile apps, real-time information), stations (e.g. design and wayfinding, Wi-Fi, public art), vehicles (e.g. ultra-low-floor, cleanliness, climate control features), and accessibility (e.g. audible warning signals, large-print and tactile-braille signs, targeted apps and information options).

4.2.5   Common-sense Approaches for Improving Transit Bus Speeds (TCRP Synthesis 110, 2013)

This Transit Cooperative Research Project synthesis report summarizes efforts undertaken by transit agencies in North America to improve average bus speeds. The two most common measures highlighted in the report were: collaboration with city traffic department to expedite flow using signal priority, queue jump lanes, changes to signal timing, and bus-only lanes; and consolidating redundant or under-utilized stops.

### 4.2.6	Elements Needed to Create High Ridership Transit Systems (TCRP Report 111, 2007)

The purpose of this Transit Cooperative Research Project Guidebook was to identify a full range of initiatives that can increase ridership and supporting examples for their effective usage and impacts. The Guidebook synthesizes its recommendations according to the following categories of initiatives: Operating/Service Adjustments; Partnerships/Coordination; Marketing/Promotional and Information Initiatives; Fare Collection/Fare Structure Initiatives.

### 4.2.7	Implementation and Outcomes of Fare-Free Transit Systems (TCRP Synthesis 101, 2012)

This Transit Cooperative Research Project synthesizes the experiences of transit agencies that have implemented fare-free systems. At time of publication, 39 agencies in the US were identified as operating fare-free. The largest jurisdictions, Indian River County, Florida, and the island of Hawaii, have approximately half the population of the City of London. Furthermore, the agencies operated with very low farebox recovery ratios, making the financial impact of going fare-free negligible once the cost of collecting and accounting for fares and media was considered. With regards to ridership impact, the synthesis reports that introduction to a fare-free system can result in increases of 20-60% within a few months. In some cases, agencies also reported being overwhelmed by the sudden ridership increases. Finally, the report cites previous studies that approximately 5-30% of the new trips comes from automobile trips, while the remainder comes from active transport trips or trips that would otherwise not have been completed.

### 4.2.8	A Guide to Preparing A Transit Ridership Growth Plan (Province of Ontario, 2005)

The Province of Ontario, in conjunction with CUTA, the Ontario Community Transportation Association (OCTA), the Association of Municipalities of Ontario (AMO), Transport Canada, representatives of municipal transit systems, and representatives of municipal planning, developed a guide to support agencies in developing Ridership Growth Plans.

### 4.2.9	The Role of Transit Amenities and Vehicle Characteristics in Building Transit Ridership (TCRP Report 46, 1999)

For this Transit Cooperative Research Project Report, the researchers sought to examine the value of transit amenities and design features in building transit ridership. The research involved a literature review, interviews, and a closer look at five case studies in the United States. The key results of the study were that customers react positively to amenities and for 'choice' riders, amenities influence the likelihood that they will take transit.

5.   Opportunities for Ridership Growth

Ridership growth initiatives can be broadly characterized as improvements in one of five areas:
- System Capacity and Efficiency
- Service Quality and Customer Convenience
- Fare and Pricing
- Marketing and Education
- Urban Design and Growth Management

These are described in the subsequent sections and some examples provided.

5.1   System Capacity and Efficiency

Initiatives that address system capacity and efficiency are those most often associated with service increases and improvements. Transit capacity is defined by the number of vehicles serving a particular area or corridor over a given period of time. As such, opportunities to improve system capacity rely on increasing the number of vehicles available, increasing the speed at which vehicles can complete a round trip, or by expanding the span of service through the area. Other opportunities can relate to manipulating when or how capacity is utilized by providing incentives to change travel habits. Some examples of initiatives that fall into this category include:
- Implementing transit priority measures such as dedicated rights of way along corridors and transit signal priority at intersections to improve transit vehicle speed and throughput;
- Improving vehicle characteristics such as reliability, boarding and alighting time, and performance to reduce dwell times and service interruptions; and
- Modifying or improving services using various enhancements such as demand-responsive scheduling, express routes along local corridors, and route network rationalization.

Initiatives that address system capacity and efficiency frequently require capital investment in fleet, technology and/or infrastructure. However, certain policy-based approaches can also provide additional capacity while minimizing implementation costs, such as promoting pre-paid fare media to reduce dwell times.

5.2   Service Quality and Customer Convenience

Many riders depend on reliable, convenient services in order to support their choice to travel on transit. By improving service quality and convenience for customers, transit agencies can support these qualities that attract and retain choice riders. Opportunities to improve service quality and customer convenience tend to address:
- Transit reliability, such as schedule adherence and consistent travel time;
- Information availability, including real-time service changes, next vehicle arrival times and future service updates, by various forms of media; and
- Comfort and amenities throughout the customer's journey.

Initiatives that address service quality and customer convenience range in cost and complexity, but many leverage new technologies and amenities to improve the customer experience or improved resource management to ensure that services are adhering to their schedule.

5.3   Fare and Pricing

Pricing and fare strategies have a substantial impact on travel behaviour. While many passengers are willing to pay for convenience and comfort, others are critically dependent on the accessibility and reliability of transit. Fare and pricing of transit services cannot be considered in isolation of other transportation alternatives, either. As such, pricing strategies must reflect the state of other alternatives in the market, such as parking and ride sharing, in order to remain competitive.

Initiatives that fall into this category include:
- Targeted fare categories specific to certain demographics, such as students, seniors, and individuals with low income;
- Partnerships with other agencies, events, and/or parking authorities; and
- Fare structures and transfer policies that incentivize more frequent rides.

Fare and pricing strategies that increase ridership tend to result in a decrease in the customer's cost per trip. However, certain strategies can prove to be at or near net-neutral depending on various subsidy agreements between the transit agency and their partners.

5.4   Marketing and Education

Marketing and education aims to increase awareness of the services offered by transit in an effort to encourage more people to try it. Through various marketing and education campaigns, transit agencies can reach out to their target customers and provide tailored services to various groups and demographics to improve transit's visibility. Some examples of marketing and education initiatives include:
- Themed or targeted orientation and travel training on transit services;
- Enhanced marketing campaigns in support of new services and transit improvements; and
- Partnerships with businesses to provide further awareness and incentive to use transit.

Marketing and education are most successful when combined with initiatives in the other categories as a means of showcasing changes and improvements to the service.

5.5   Urban Design and Growth Management

Efficient transit services are dependent on effective design and management of urban growth. Zoning, land use and growth patterns have a significant effect on the cost-effectiveness of providing transit services. Opportunities that can be categorized as Urban Design and Growth Management initiatives focus on directing growth and urban design in a format that is conducive to providing effective transit.

Many initiatives that could be considered as part of this category are part of longer-term city-building programs and official plans. However, some examples of strategies that can be effective in the short to medium term include:
- Improving bicycle parking along transit corridors;
- Implementing new parking management measures; and
- Identifying and completing gaps in pedestrian network connections to transit stops.

These types of initiatives are generally guided by municipalities or other agencies of government and therefore require a great deal of coordination between these agencies and transit operators to implement and maintain.

6.   Preliminary Screening

During two days of workshops, LTRT worked with London Transit Commission staff to identify and assess potential opportunities to develop transit ridership in London. Each of the identified initiatives was categorized based on one of the five areas of impact discussed in Chapter 5. The result was a long list of 60 initiatives which underwent analysis to determine high-level ridership growth potential, capital/operating costs, and their ability to address the organization's strategic objectives.

6.1   Analysis and Scoring Methods

In order to provide a metric by which to screen the developed initiatives, each was evaluated on a five-point scale relative to the potential to grow ridership, five strategic objectives, and the ease of implementation. These elements were scored and weighted to produce an Initial Initiative Screening Score to help identify the initiatives that warrant further consideration for growing transit ridership.

Potential ridership growth for each initiative was evaluated at a high level based on historical ridership and demographic trends seen in London and the effectiveness as identified through the peer agency interviews and literature review. Each initiative was then assigned a score from between zero and four to indicate the magnitude of ridership growth potential based on the following ridership criteria.

Table 1: Ridership Growth Ability and Scoring Criteria

Ability to grow ridership	Approximate number of new annual rides			Ridership Impact
Low	0	to	25,000	◯
Some	25,000	to	100,000	◔
Moderate	100,000	to	250,000	◑
Good	250,000	to	1,000,000	◕
Strong	>1,000,000			●

The score assigned to the Ridership Impact had the highest impact to the Initiative Screening Score.

Alignment to the strategic objectives help to identify which initiatives will have a positive effect on transit and the community. LTC identified five strategic objectives for evaluation:
- **Environmental sustainability**: reducing green-house gas emissions, fuel consumption, etc.
- **Economic growth and development**: supporting local business, reducing congestion, improving general traffic flows, invigorating downtown and other destinations.
- **Poverty reduction**: providing direct benefit to residents living below the poverty line.
- **Improving access to transit**: increasing the geographic coverage and interface options with London Transit.
- **Accessibility**: providing direct benefit to customers with disabilities.

Each initiative was given a score from zero to four based on a qualitative assessment of their ability to positively contribute to each of these initiatives.

To evaluate the ease of implementation, each initiative was assigned a score from zero to four based on a qualitative assessment of the following criteria:
- Availability of funding opportunities and level of investment required to implement, operate and maintain the initiative;
- Effort involved in developing, implementing and operating the initiative;
- The complexity of the procurement and implementation process;
- Potential political interest to support the initiative; and
- The potential number of interested stakeholders.

The scores are presented as "Harvey Balls" (equating to values from 0-4), weighted and contributed to the total Initiative Screening Score.

A preliminary evaluation of the capital and operating costs was conducted in order to score each initiative between zero (low cost) and four (high cost) based on the following criteria. The benefits and revenues were not included.

Table 2: Approximate Early (5-year) Lifecycle Costs and Scoring Criteria

Magnitude of costs	Approximate total cost over five years			Score
Minimal	0	to	$0.5M	-
Some	$0.5M	to	$2.5M	$
Moderate	$2.5M	to	$10M	$$
High	$10M	to	$100M	$$$
Highest	>$100M			$$$$

The Five-year Cost Impact score is presented separate from the Initiative Screening Score for comparison purposes.

6.2   Summary of Initiatives

The following subsections summarize the scores of each initiative against the identified criteria. These initiatives are sorted based on the five areas of impact as previously discussed.

6.2.1   System Capacity and Efficiency Initiatives

ID	Initiative Title	Sustainability	Economic Growth	Poverty Reduction	Access to Transit	Accessibility	Ease of Implementation	Ridership Impact	Initiative Screening	Five-year Cost Impact
C.01	Expand integration between specialized and conventional services	◕	○	◑	●	●	◔	○	0.58	$
C.02	Convert to on-demand service in low-density areas	◕	◔	◑	●	◕	◔	◑	1.68	$$

ID	Initiative Title	Sustainability	Economic Growth	Poverty Reduction	Access to Transit	Accessibility	Ease of Implementation	Ridership Impact	Initiative Screening	Five-year Cost Impact
C.03	Increase Transit Signal Priority usage/weighting to favour transit	●	●	◔	◔	○	◔	◑	1.53	$$
C.04	Adjust signal timing on corridors to benefit transit	◕	◕	◔	◔	○	◔	◔	0.95	$
C.05	Implement turn restrictions at key intersections for non-transit vehicles	◑	◑	◔	◔	○	◑	◔	0.85	$
C.06	Review stop locations and relocate to reduce dwell times	◑	◑	◔	◔	○	●	◑	1.4	$
C.07	Remove/consolidate stops to expedite key routes	◑	◑	◔	○	○	◕	◕	1.83	$
C.08	Implement queue jump lanes at congested intersections	●	◕	◔	◔	○	◔	◔	0.98	$
C.09	Implement high-occupancy vehicle lanes along key corridors	●	●	◔	◔	○	◔	◕	2.03	$$$
C.10	Discount pre-paid fare media to encourage usage and reduce dwell times	◔	◑	○	◔	○	◕	◔	0.78	$
C.11	Implement all-door boarding on key routes/key stops	◑	◑	○	◔	◕	◔	◔	0.83	$$
C.12	Provide all student trips (i.e. replace yellow bus service)	○	○	○	○	○	◔	●	2.03	$$$$
C.13	Expand service to school routes (i.e. high-school tripper bus services)	◑	◔	◑	●	◑	◔	●	2.63	$$$
C.14	Implement express service on heavily-utilized corridors	●	●	◔	◔	○	●	◕	2.1	$$$
C.15	Move away from clock-face scheduling to frequent headways as determined by capacity	◑	◑	◔	◔	○	●	◕	1.9	$$
C.16	Implement rear-facing mobility device securing	◑	◑	◔	◔	◑	◑	◔	0.95	$
C.17	Expand hours of service	◕	◔	◕	◕	◔	●	◕	2.15	$$
C.18	Expansion of Community Bus Service	◑	◔	◕	◕	●	●	◑	1.75	$$
C.19	Implement dedicated Rights of Way for transit vehicles along key corridors	●	●	◔	◔	◔	◔	●	2.58	$$$$

6.2.2 Service Quality and Customer Convenience Initiatives

ID	Initiative Title	Sustainablity	Economic Growth	Poverty Reduction	Access to Transit	Accessiblity	Ease of Implementation	Ridership Impact	Initiative Screening	Five-year Cost Impact
Q.20	Introduce headway-based schedules on key routes	◔	◔	◔	◔	○	◑	◔	0.75	$
Q.21	Improve bus stop amenities	◔	◑	◔	◑	◑	◑	◑	1.45	$$
Q.22	Improve real-time information at stops	◔	◑	◔	◔	◕	◑	◑	1.48	$$
Q.23	Provide on-board Wi-Fi	○	○	○	○	○	◑	○	0.05	$$$$
Q.24	Deploy on-board infotainment	◔	◕	○	◔	◕	◑	◔	0.88	$$
Q.25	Provide expanded customer service through social media e.g. facebook and twitter	◔	◔	○	◑	◕	●	○	0.45	-
Q.26	Increase supervision of routes to improve route performance	◔	◔	◔	◔	◑	◑	◔	0.88	-

6.2.3 Fare and Pricing Initiatives

ID	Initiative Title	Sustainablity	Economic Growth	Poverty Reduction	Access to Transit	Accessiblity	Ease of Implementation	Ridership Impact	Initiative Screening	Five-year Cost Impact
F.40	Provide free transit to all customers	◑	◔	●	◑	◑	◑	●	2.75	$$$$
F.41	Implement an employer partner program	◑	◔	○	○	○	◑	◑	1.3	$$
F.42	Provide high school students with complimentary transit passes	◑	○	●	◕	○	◔	●	2.53	$$$$
F.43	Provide Ontario Works recipients with complimentary transit passes	◑	◔	●	◕	○	◑	●	2.55	$$$
F.44	Implement a discounted off-peak fare strategy	◑	◔	◔	◑	◕	◔	◑	1.28	$$
F.45	Implement period fare caps on Smart Card accounts	◑	◔	◔	○	○	◑	◕	0.8	$
F.46	Provide free transit on smog days	●	○	○	○	○	◔	◔	0.73	$
F.47	Implement a fare-by-distance fare policy	◑	◔	◔	○	○	◑	◔	0.73	$
F.48	Provide free transit within downtown London	◑	◑	◑	○	◑	◑	◔	0.95	$

ID	Initiative Title	Sustainability	Economic Growth	Poverty Reduction	Access to Transit	Accessibility	Ease of Implementation	Ridership Impact	Initiative Screening	Five-year Cost Impact
F.49	Provide event partnerships with complimentary transit	◑	◑	○	○	○	◑	◔	0.75	$$
F.50	Two-hour Transfer	◑	◑	◑	○	○	◕	○	0.38	-
F.51	Re-introduce seniors discounts	◑	○	◔	◑	◔	◕	◕	1.83	$$$

6.2.4   Marketing and Education Initiatives

ID	Initiative Title	Sustainability	Economic Growth	Poverty Reduction	Access to Transit	Accessibility	Ease of Implementation	Ridership Impact	Initiative Screening Score	Five-year Cost Impact
M.60	Develop a transit orientation program for high school students	◔	○	◔	◑	○	●	○	0.3	-
M.61	Provide travel training for Ontario Works recipients / case managers	◔	○	◑	◑	○	●	○	0.35	-
M.62	Partner with a loyalty program	◔	◕	○	○	○	◔	◔	0.73	-
M.63	Provide customer information in different languages	◔	○	◔	◑	○	◔	○	0.23	$
M.64	Develop a transit orientation program for newcomers throughout London	◑	◔	◔	◑	○	◕	○	0.38	-
M.65	Create comprehensive, targeted marketing campaigns	◑	◑	○	○	◔	●	◔	0.85	$
M.66	Implement travel training for seniors	◑	◔	◔	◑	◑	◕	◑	1.48	$
M.67	Reinstate the "Get On Board" Program	◑	○	◔	◑	◔	◕	◑	1.38	$$

6.2.5   Urban Design and Growth Management Initiatives

ID	Initiative Title	Sustainability	Economic Growth	Poverty Reduction	Access to Transit	Accessibility	Ease of Implementation	Ridership Impact	Initiative Screening Score	Five-year Cost Impact
U.70	Increase the cost of parking in downtown London	◕	◔	○	○	○	◔	●	2.23	$$$$
U.71	Provide bicycle parking facilities at transit stops	◔	◔	◔	◑	○	◑	○	0.3	-

ID	Initiative Title	Sustainability	Economic Growth	Poverty Reduction	Access to Transit	Accessibility	Ease of Implementation	Ridership Impact	Initiative Screening Score	Five-year Cost Impact
U.72	Implement bikeshare program rollout with targeted positioning of stations to facilitate first / last mile connections	◑	◑	◑	◑	○	◑	◔	0.95	$$
U.73	Partner with Transportation Network Companies (TNC) providers to provide microtransit alternatives	◑	◑	○	●	◔	◑	◑	1.6	$$
U.74	Ensure that stops are connected to the pedestrian and cycling network	◔	○	◔	◕	◕	◑	○	0.45	$$
U.75	Implement a Park-n-Ride program in outlying areas.	◑	◔	○	◕	◑	◑	◑	1.45	$$$
U.76	Event-based park-n-ride program to reduce parking demand and congestion downtown	◔	◔	○	◑	○	◕	◕	1.78	-

7. Next Steps

This report presented the results of the first phase of a study to develop a Ridership Growth Strategy for London Transit. An analysis of previous work, an industry scan, and stakeholder interviews yielded a comprehensive list of potential ridership growth initiatives. The growth potential for each initiative was assessed at a high-level considering current and projected demographics and the effectiveness of the initiative to encourage repeat rides, develop new customers, and increase overall transit mode share. An initiative screening score was developed for each potential initiative that accounted for the ridership growth potential, feasibility, cost, and its ability to meet secondary strategic objectives (access to transit; accessibility; economic growth; poverty reduction; and sustainability). The initiative screening score serves as the guide for which initiatives warrant further exploration. The following table presents the top 20 initiatives:

ID	Initiative Title	Sustainability	Economic Growth	Poverty Reduction	Access to Transit	Accessibility	Ease of Implementation	Ridership Impact	Initiative Screening Score	Five-year Cost Impact
F.40	Provide free transit to all customers	◐	◔	●	◑	◑	◑	●	2.75	$$$$
C.13	Expand service to school routes (i.e. high-school tripper bus services)	◑	◔	◔	●	◑	◕	●	2.63	$$$
C.19	Implement dedicated Rights of Way for transit vehicles along key corridors	●	●	◔	◔	◔	◕	●	2.58	$$$$
F.43	Provide Ontario Works recipients with complimentary transit passes	◑	◔	●	◐	○	◑	●	2.55	$$$
F.42	Provide high school students with complimentary transit passes	◐	○	●	◐	○	◕	●	2.53	$$$$
U.70	Increase the cost of parking in downtown London	◐	◔	○	○	○	◕	●	2.23	$$$$
C.17	Expand hours of service	◐	◔	◔	◐	◕	●	◕	2.15	$$
C.14	Implement express service on heavily-utilized corridors	●	●	◔	◔	○	●	◕	2.1	$$$
C.09	Implement high-occupancy vehicle lanes along key corridors	●	●	◔	◔	○	◔	◕	2.03	$$$
C.12	Provide all student trips (i.e. replace yellow bus service)	○	○	○	○	○	◔	●	2.03	$$$$
C.15	Move away from clock-face scheduling to frequent headways as determined by capacity	◑	◑	◔	◔	○	●	◕	1.9	$$
C.07	Remove/consolidate stops to expedite key routes	◑	◑	◔	○	○	◕	◕	1.83	$
F.51	Re-introduce seniors discounts	◑	○	◔	◔	◔	◕	◕	1.83	$$$

ID	Initiative Title	Sustainability	Economic Growth	Poverty Reduction	Access to Transit	Accessibility	Ease of Implementation	Ridership Impact	Initiative Screening Score	Five-year Cost Impact
U.76	Event-based park-n-ride program to reduce parking demand and congestion downtown	◕	◔	○	◑	○	◕	◕	1.78	-
C.18	Expansion of Community Bus Service	◑	◔	◕	◕	●	●	◑	1.75	$$
C.02	Convert to on-demand service in low-density areas	◕	◔	◑	●	◕	◔	◑	1.68	$$
U.73	Partner with Transportation Network Companies (TNC) providers to provide microtransit alternatives	◑	◑	○	●	◕	◑	◑	1.6	$$
C.03	Increase Transit Signal Priority usage/weighting to favour transit	●	●	◔	◔	○	◔	◑	1.53	$$
Q.22	Improve real-time information at stops	◔	◑	◔	◔	◕	◕	◑	1.48	$$
M.66	Implement travel training for seniors	◑	◔	◔	◑	◑	◕	◑	1.48	$

Figure 9: Top 20 initiatives based on the Initiative Screening Score

Phase Two of the Ridership Growth Strategy will focus on undertaking more detailed modeling of the above subset of initiatives to develop more specific ridership growth forecasts. All aspects of the potential initiatives will be further defined to help with final selection.

The study team recognizes that certain initiatives naturally fit together and may reinforce each other in important ways. For example, there are both potential service changes and fare incentives targeting high school students among the short list of initiatives. Both are supported by marketing and communication targeting that demographic, in the form of high-school visits. We will analyze different scenarios where initiatives are bundled to determine if 'the whole is greater than the sum of the parts.'

Once the final set of initiatives is selected, they will be laid out against a 5-year time horizon based on resource requirements, funding/costs, project interdependencies, and implementation considerations.

The Final Report will present a cohesive Ridership Growth Strategy consisting of a series of coordinated projects and initiatives to be captured in LTC's upcoming 2020-2024 Business Plan. Each project will be profiled using the following sample structure:

C.03 - Increase TSP usage/weighting to transit

| Capacity & Efficiency | Serv. Quality & Convenience | Fare & Pricing | Marketing & Education | Urban Design & Growth Mgmt |

Project Description
Deploy Transit Signal Priority measures to give preferential treatment to transit at signalized intersections, particularly in the downtown London core and other congested areas.

Focus deployment along high-volume corridors and in downtown London
Ensure that existing Traffic Control System is capable of/can be upgraded for supporting TSP
May require procurement of a new Traffic Control System if existing system is unable to support for TSP
Rollout can be staged along corridors/at specific intersections as conditions warrant.

2020 › 2021 › 2022 › 2023 › 2024

Impacts

+ 780,000 Annual Trips	Sustainability	◑	Access to Transit	◑
	Economic Growth	◑	Accessibility	◑
	Poverty Reduction	○		

Stakeholders

| LTC | City of London – Transportation Services | Downtown London BIA |

Peer Examples / Industry Research

Brampton Transit, York Region Transit, TTC

Ridership Potential | Implement'n Cost | Ease to Implement | Timeframe

Lifecycle Costs (Savings)

Implementation	Operation	Revenue	Net Cost/Trip
$ 1,500K	$ 25K / year (15yrs)	$ 1,200K / year	$ 0.25

Demographics

Workforce	(110,000)	+ 300,000 annual trips
Millennials	(86,000)	+ 330,000
Post-Secondary	(42,000)	+ 150,000

Figure 10: Sample of the proposed project summary sheet detailing each proposed initiative as part of the Ridership Growth Strategy. Information and data presented here is for illustrative purposes only.

The project sheets will include important elements to facilitate the shift from planning to implementation when ready. This includes identification of stakeholders, risks, opportunities, high-level implementation steps, and capital and operating costs.

The Final Report is anticipated to be completed in the first quarter of 2019.

Appendix A
Peer Interviews

Meeting:	Interview with York Region Transit (YRT) for LTC Ridership Growth
Date:	2018-11-01
Recorded by:	Yuval Grinspun, LTRT
Attendees:	Adrian Kawun, Manager of Service Planning
	Fabrizio Guzzo, Director of Operations
	Matt Lattavo, LTRT

1. Introductions

Yuval Grinspun and Matt Lattavo provided an overview of the project being undertaken for London Transit Commission (LTC).

2. General Approach by Agency

YRT has the following guiding documents in order of hierarchy to drive business strategy:

- VISION '51
- Transportation Master Plan
- 5-Year Strategic Plan (i.e. Business Plan)
- Annual Service Plans
- Ridership Growth Strategy
  - This includes other component documents: Fare Strategy, Marketing Strategy, Customer Service Strategy

The Ridership Growth Strategy includes overview of all potential activities. The decisions around which ridership growth strategy initiatives to include make their way into the annual service plans.

YRT is facing a decline in ridership in 2018 due to massive construction on Yonge and Highway 7 in west. Expected to rebound next year once construction ends.

3. Commentary on Specific Initiatives – System Capacity & Efficiency

Big capital investments are major catalysts for change – for YRT, these were the introduction of Viva BRT and more recently, the subway extension into the region.

YRT anticipates a 20-40% in ridership growth forecast for new transit lanes (e.g. Yonge bus lanes) and it takes about a year to materialize. This is based on the experience with Viva.

YRT discussed how running in rapid ways is very different service operating model then general purpose lanes. You can expect it to improve your reliability, but it will not necessarily achieve improve run times if compared to enforced HOV lanes.

The agency is presently in the process of improving service frequency on the conventional network:

- 10 min rush hour & 15 in off-peak as targets on major corridors for when RER arrives
- Strategically identified routes in annual plan to get priority extra hours to build toward FTN

YRT is in the process of rolling out on-demand service to parts of the region where local service would be cost-prohibitive. Some considerations include:

- Presently providing 2000 trips/month as on-demand. These were areas were without transit or with very infrequent service. The on-demand service itself is also expensive to offer, although costs are controlled by basing vehicles in zones
- Customers like receiving Lyft/Uber-type services; Customers use RouteMatch app or phone to book it
- The service is operated direct through Mobility Plus
- The focus of the service is to bring customers to the corridor
- Service has been in testing now for ~18 months. A month ago, new service contracts were signed for a provider to specifically provide on-demand service
- Expecting to expand the on-demand service offering over a 4-year budget cycle; it is hard to define who/where to unlock; places where there is density are unlikely to receive the service

YRT is looking at the possibility of implementing on-demand shuttles to go from sub-divisions to GO stations.

4. Commentary on Specific Initiatives – Service Quality & Customer Convenience

YRT uses public meetings, customer satisfaction surveys, and customer contact points to understand customers' needs and desires. These touchpoints also provide insight if customer initiatives are successful or not. Customer service staff are engaged in developing annual service plans.

Technology plays an important role related to satisfying customers:

- People want access to real-time information everywhere
- YRT has deployed WiFi at terminals, and some routes have WiFi on vehicles
- Customer service can accessed online
- Testing LCD on Viva buses with next three buses and transfers

YRT employs the following techniques to improve service reliability:

- Operational adjustments – ensure proper run time is allocated; add buffer time between trips; spread the headways and adjust posted schedules; in some cases, add a vehicle to allow above changes
- Spent a few weeks retraining on-street and contracted supervisors – give them more tools in toolbox to make decision on street and in real-time
- Bus turning is a big taboo in transit – but need to understand that there is a time and a place for it – developed internal training matrix to support it; what paperwork; who to notify; etc.

YRT commented on the need to always be working to improve the safety of the service:

- Allows the agency to say 'when you are on a YRT bus that YRT does what they can to make you safe'
- Examples of initiatives they have undertaken or are undertaking: on-board cameras, turn signal awareness, pedestrian awareness, hard-braking sensing, etc.

5. Commentary on Specific Initiatives – Fare and Pricing

YRT brings forward a fare structure proposal to council every three years to agree on, including fare increases for subsequent years. Considerations raised by YRT around this approach are:

- There is a risk to revenues if the fare increase doesn't meet the CPI
- Most success was found implementing fare increases in the summer
- YRT had minimal complaints related to fare increases in the 2nd/3rd year of the plan
- Need to look at system and demographics to plan fares to promote concessions
- Cash fares were held constant (that's the fare with greatest visibility to the public) while concession values were increased

YRT looked at getting rid of all concessions as it would allow it to bring the overall fare down. Ultimately decided against this move – agency needs to consider who uses transit and who doesn't.

The fare strategy for YRT is somewhat constrained by what can and can't be done with PRESTO. For example, agency would love to look at fare-by-distance – during the most recent strike YRT experienced increase in trips and the bulk were on short trips.

YRT recently implemented a fare subsidy program for low-income riders. The program is implemented through partner agency – Community Health Services.

YRT has attempted to have employer programs in the past although with limited success. They discussed the potential value of such arrangements, and the desire to increase this type of arrangement as it provides sources of guaranteed income for agencies. Also, YRT indicated similar agreements could be established with other groups, and that it doesn't have to be a single company (e.g. it could be a group with share economic or non-economic interests).

6. Commentary on Specific Initiatives – Marketing & Education

YRT affirmed that branding is a vital element of a successful BRT program, and generally for transit success.

The agency does a fair but of work to build education and awareness, including public consultations, meetings, etc. That said, there is always more to be done:

- Still hear people ask "what's viva"
- Hear people who are confused, intimidated, scared, etc.
- Don't go to high schools for education sessions

Part of the education needs to be around helping customers understand that there is a trade-off between walking distance and service frequency: if you walk a bit more means you get better service where you need it (e.g. instead of every 20 min it will be 10 min)

7. Commentary on Specific Initiatives – Urban Design & Growth Management

Particular challenge in York Region is the lack of destinations in the region. There are no Universities or major hubs. Region needs to develop anchors and density to increase transit modal share long term.

Transportation Demand Management is an important element to achieving transit success. You need to consider the urban connection – "There are so many other factors that influence customers' decision to use transit". Also, it's no longer just a choice between transit and cars – active transportation can and should be a viable option:

- Bike racks on bus
- Bus pads for off-boarding
- Amenities and shelters
- Sidewalk connections

Park and rides are considered important options in the region to connect to major corridors – not all customers want to take a local service to connect to the major corridor transit corridor.

Meeting:	Interview with Brampton Transit (BT) for LTC Ridership Growth
Date:	2018-10-31
Recorded by:	Yuval Grinspun, LTRT
Attendees:	Alex Milojevic, General Manager
	Vince Rodo, Director of Transit
	Doug Rieger, Senior Manager – Service Development
	Matt Lattavo, LTRT

1. Introductions

Yuval Grinspun and Matt Lattavo provided an overview of the project being undertaken for London Transit Commission (LTC).

2. General Approach by Agency

BT's ridership growth strategy is embedded in the business plan. Starting in 2013 BT developed their first business plan document with ridership growth strategy embedded, along with other elements. It also talks about the service strategy; accessibility; customer service; marketing; innovation. Performance is connected into the financial plan.

There is a complex spreadsheet that takes various factors and providers ridership growth numbers. The factors include:
- Annual service strategy
- what's being done each year according to Transportation Master Plan (TMP)
- what growth is planned/expected based on historical patterns
- what corridors are expected to have more or less growth

Other considerations related to where strategy are developed/focused:
- Fare strategy is part of financial plan
- Customer service strategy talks about what direction agency will focus on improve customer service
- Marketing strategy talks about how to increase awareness
- Business Plan doesn't go into parking strategy; defer that to TMP
- Business Plan does discuss support for active transportation since nearly all transit trips start with active.

City presently going through process to update the TMP.

Current business plan was endorsed last year – BT was forecasting growth of 5-6% growth (which is higher than the population growth). The agency is experiencing three times the forecast growth.

The following characteristics were provided related to the City of Brampton's demographics:

- young average age compared to other Canadian and Ontario municipalities
- diverse community –many immigrants from other countries where transit is their primary mode of transportation
- many students, including foreign students, going to post-secondary – and experiencing significant growth of students going to York University

The agency has limited insight into choice vs. captive riders:

- Have used customer satisfaction surveys in past which allows some insight to choice - original was in 2014, last one was 2016, looking at another one next year
- Expecting to see noticeable shift in upcoming survey based on:
    o Size of household
    o Average income
    o Expecting to see more choice riders

The TMP sets the mode share target:
- Official actual numbers come every five years from TTS
- Agency developed a method to track mode share on an annual basis based on rides per capita
- Did a lot of tracking from 2009 onwards to track Zum success
- Riders per capita have doubled since 2009, and a similar growth has been seen in the TTS

3. Commentary on Specific Initiatives – System Capacity & Efficiency

Over last two Business Plans launched five Zum ("BRT lite") lines. The launch of those services has been a major contributor to ridership growth since 2010. The agency is looking to build on that success, including moving forward with planning a new Zum line under the current Business Plan.

A business case was developed to fund and launch Zum. It included where the routes should go; the technology that was required (CADAVL); the need for customers to have real-time info; marketing for services; and also it spoke to the need for support corridors to be built up.

In support of that, there has also been a focus to boost the basic grid on the arterials. The agency converted from a hub-spoke system to grid system in mid 2000s. Over past 10 years there has been a concerted effort to expand frequency and level of service on the base grid and has achieved 10-min peak service on key corridors. Agency is actively making adjustments to service on those routes based on demand. Eg. Building service on corridors that warrant it until they warrant switching to Zum.

BT is continually looking to boost service levels on Zum corridors as demand warrants:
- Expect demand and service to increase to subway, Finch W LRT, Hurontario LRT, etc.
- Regional Express Railway (RER) is coming to Brampton in 2024 and BT is looking to build demand toward that to be ready.
- Experiencing growth in some of the GO services – need to connect into them.
- Trying to get money to extend service down Fort Rd into Pearson.

4. Commentary on Specific Initiatives – Service Quality & Customer Convenience

Brampton Transit's customer service strategy is based on the concept of 'getting quality information into customers hands'". The agency has developed it's customer service offering substantially.

The agency has made a concerted effort to expand its social media offerings:

- In 2010 Brampton Transit was just pushing info out via social media
- In last business plan, the agency planned to expand that – in twitter they now do two-way communications with customers
- Agency is trying to keep pace with how customers are communicating

One of the key initiatives for current business plan was to introduce a customer charter. They plan to do a new one each year.

Brampton Transit is looking to see how to leverage emerging technologies to improve the customer experience:
- Next year looking to do study on Transportation Network Companies (TNCs) and other mobility providers
- Looking at opportunities to do ridesharing in off hours to augment services etc.

5. Commentary on Specific Initiatives – Fare and Pricing

Business plan took the strategy to shift customers from cash to e-purse and passes. Sensitivity analysis was done to fares and changes made that resulted in 90% of fares being paid through Presto. Strategies employed to shift usage to Presto:

- Agency no longer sells tickets to encourage Presto usage
- Gave free cards for number of weeks
- Distribute literature to support
- Strong promotion

When developed Zum considered off-board fare payment but decided to leverage Presto and stuck with on-board.

Agency will be assessing going cashless in at some point in the next five years (before fareboxes need to be replaced) – goal is to be cashless but this will not occur before Presto is open payment. A challenge will be finding a way to get the final 6% of people that don't have bank or phone account access to transit, perhaps through a social card distributed by the City.

Specific fare initiatives implemented recently:
- Reduced children's fare last December to the GTA average
- Affordable Transit Pass issued by region for BT, MiWay, Region of Peel
  o Customer pays reduced; region pays BT the second half of that fare
- Seniors fare implemented 5-6 years ago

There is an employer pass that BT partners with employers on but it has not been as successful as desired. BT continues to explore ways to improve the offering.
- Its only 10% off monthly pass due to bylaws
- Employer is expected to subsidize it more and it becomes a taxable benefit

- Early on there were issues around Presto
- Employers want the service but not as willing to partner with City
- It requires employers to do a little more of administrative work

6. Commentary on Specific Initiatives – Marketing & Education

Brampton Transit has ramped up outreach dramatically over past 10 years

- Used to do one public session for each annual service plan – the agency now does multiple different outreaches at various locations
- Customer and marketing teams go to high schools, farmers markets, community events, newcomer/immigrant welcome events, – over a 100 of event a year to promote service and provide customer service
    - There is someone dedicated to this and then they also pull in others

The City of Brampton has a very diverse community – over 50% of customers are non-native English speakers
- BT emphasizes outreach to communities
- Agency provides information in other languages as needed, but typically finds that English is good enough
- Publish 5-10 different languages – rest are usually by request
- A lot of staff can communicate in some of the languages of the customers

The agency has a marketing strategy in place that includes plans for a new three-phase marketing campaign.

7. Commentary on Specific Initiatives – Urban Design & Growth Management

Brampton downtown is low density and parking is both cheap and abundant. There is little political appetite to raise parking costs.

Meeting:	Interview with Kingston Transit (KT) for LTC Ridership Growth
Date:	2018-10-24
Recorded by:	Yuval Grinspun, LTRT
Attendees:	Jeremy DaCosta, Director Transit & Fleet Services
	Matt Lattavo, LTRT

1. Introductions

Yuval Grinspun and Matt Lattavo provided an overview of the project being undertaken for London Transit Commission (LTC).

2. General Approach by Agency

The agency developed a Business Plan that included ridership growth strategies and program within. Everything in Kingston's plan to grow and develop ridership is captured in this business plan, and in specific, their fare strategy.

The agency is on its second generation Business Plan. The first one called "Kingston Transit Redevelopment Plan" started the agency in the direction of creating "a system that people choose to use", with a focus of getting people from "point a to b as quickly as possible". The objective was to create a system that delivers riders what they want, as opposed to delivering a minimal service to everyone

Prior to the original Business Plan, the system was geography specific and coverage-based. The fare structure reflect how customers wanted to use the system. The plan sought to redefine the network for commuters – focusing on moving people during AM and PM commutes. Coverage was secondary.

The genesis for the transformation was directive from council to achieve aspirational 15% modal split target (during PM Peak) in 2034. The pressures and expectations to move in this direction have continued with successive transit-supportive councils.

The agency is able to track ridership using its Smart Card farebox system (provides where, when, who, time, day, etc.). The system can provide boardings and ridership over the past 10 years. The fare structure is set up in terms of categories and cards are issued accordingly. Can track how many of each are sold/issued each month.

Also have APC on 30-40% of fleet (only since past year), but just starting to use the technology -- not heavily relying on that data as it's new.

Don't know what current % modal split as TMP hasn't been updated so surveys have not been completed. Can use census data in lieu of modal split using traditional means – can speculate that there are pockets where the split is 10% but most are 5-10%. When census released the data, Kingston

was highlighted due to substantial change of modal split change found in the census data.   They expected this as they can see that ridership has exploded – census change validated what they were expecting to see.

Need to have strong support from council, among other ingredients, to achieve success. Have not had any anti-transit (or anti-active transport) councilors.

3. Commentary on Specific Initiatives – System Capacity & Efficiency

Kingston's approach was to move away from infrequent coverage-based service to develop corridors with very frequent and express services. Some comments related to the approach:

- All of the corridors now have minimum 15-minute headway express service during peak in addition to local service. In addition, there are local services which further improve frequencies:
- Main, fundamental concept is to create a base network where you are guaranteed a bus every 15min during peak; every 30min off-peak; from 6am-midnight
- This change from coverage service with 60 min frequency (sometimes 30 min frequency), no acknowledgement that there are more trips during certain times of day…. to a commuter strategy with express/improved services on corridors
- There were areas where they reduced service hours to support new service, but 90% of improvement came from adding new buses and increasing capacity
- In some cases, efficiency was increased by redirecting local service to improve frequency on corridor
- Make service changes when weather is nice outside. Changes were never made in November or January. Only May or September. No bus stop movements, shelters, changes in cold weather.
- Kingston Transit does not have written service standards. Local routes have stops approximately every 400m; express routes average stops every 1-1.5km. These are land use specific.

Kingston Transit is presently looking to add articulated buses as there are have capacity issues on some of the routes that have 4-minute (unscheduled) headways. One issue is that the current maintenance facility was designed in the 1990s and wasn't designed to support articulated vehicles.

The agency has done preliminary work to develop BRT on express corridors over the next 10 years. It will require spurring development/intensification. There is a belief that they have squeezed out what you can from current density. The agency is awaiting funding announcements to support BRT. If announcements don't happen, will continue with incremental approach.

4. Commentary on Specific Initiatives – Service Quality & Customer Convenience

The primary mechanism through which the reliability of the express service is maintained is by ensuring there is ample recovery time built into the schedules.

Kingston Transit has also prioritized hiring operators with "innate customer service skills" – this has been supported with a change to the culture to be on that is much more customer-focused.

5. Commentary on Specific Initiatives – Fare and Pricing

Kingston Transit has undertaken multiple fare strategies to promote transit usage. All of the trips generated are eligible for provincial gas tax subsidies as they have alternative funding sources, with the exception of the free travel for children 14 and under.

The agency has developed a program to work with employers – this program provides a reduced cost employee pass depending on number of employees involved in the program. The program has been very successful. Some details regarding the program:
- This new program was implemented in 2013 along same time as express route launches – five years ago there were no employees in the old program
- The more employees you have involved the more substantial the discount. From $72 to $52 (valued at approx. twice a day during work days). The reduced cost is based on consideration that these customers are typically only traveling on weekdays.
- Kingston General Hospital – 600 employees of 4000 total involved
- Queens University – 500 out of 8000 employees total
- The passes reload automatically on smart card until customer cancels

Created affordable transit plan for low-income customers based on council approval:
- Reduced the cost to get a pass to 50% of regular cost
- This pass cost went down as other pass costs went up
- No special fund to fund these revenues

Do free transit on three days:
- Used to be done during specific times of day, but it was operationally challenging to do
- Decided to just do full day to avoid operational challenges

Introduced transit program for high school students:
- Initiative was catalyzed by the mayor – originally considered to do it for Grade 8 but shifted to Grade 9. Program expanded to Grades 10-12 based on the success of original pilot
- The objective is to get young people to take bus, gain independence, build comfort with transit and groom future riders
- Generates several hundred thousand trips that agency knows wouldn't exist
- School boards contribute some funds so that the program is still eligible for gas tax
- Transit agency goes in to all schedules and does orientation each year
- U of Waterloo did a study on the program and found that graduates continue to use transit after they finish high school
- The usage is skewed to off-peak, which "breathes life" into the system
- Kingston Transit strongly encourages LTC to consider this fare strategy

Ontario Works (OW) program
- All OW qualified residents in city receive a free transit pass whether they want it or not
- OW provides KT money annually to support program
- KT did orientation and travel training work with case managers from OW
- There has been a success in terms of ridership
- There was concern it would cannibalize revenues but it did not
- Every month OW issues a pass at OW building – that pass is reloaded each month based on pass numbers from OW (same as employer pass)
- OW clients generating 27,000 trips per month

- KT provides data/reports back to OW to demonstrate that the program works – May report: 2000 passes issued; 1300 passes used once; >200 used more than 40 times

Set up parallel program to OW with ODSP
- ODSP is paying monthly pass fare rate for pass
- Replaces the use of taxies for customers that qualify
- Previously ODSP would only pay for transportation related to program
- Transit pass lets customer use transit for everything so it's been popular with customers
- Program is only a few months in
- ODSP is expecting costs to go down
- Specialized provided by separate board which does not require them to have fare parity – customers haven't asked for passes for specialized services
- Had about 3000 rides/month on 200-250 cards (out of 2000 total clients)

Children 14 and younger
- Launched in 2017 – children 14 and under ride for free
- This is the only truly free traveler without revenue source – all other trips qualify for gas tax

6. Commentary on Specific Initiatives – Marketing & Education

A major focus of the marketing and education was related to implementation of the express service, and demonstrating to customers the benefit of walking further to receive a faster and more reliable service. Thus, the first change out of gate was to add service instead of taking away. That was important to getting customer trust before you start taking local service away. Later on, people seemed to be ok with the very direct tradeoff when you take off the bus from one route and add it to another (because it's been proven).

The express brand was developed to be distinctive, with dedicated buses to avoid brand confusion. Furthermore, every express stop has a distinctive shelter, accessible, etc. A lot of work has been done to upgrade infrastructure.

The agency does travel training for seniors once a month at the seniors center.

7. Commentary on Specific Initiatives – Urban Design & Growth Management

Kingston Transit expects ridership to plateau soon as they believe they have tapped out on low hanging fruit. At this point, they expect that densities and land use have to be managed to increase transit ridership and modal choice.

Specific to parking policy, the following approach was undertaken jointly between the City and Transit:
- Parking dept has adopted an on-street program to eliminate free parking
- Paid parking is now double transit pass by policy (must be at least 10% more than transit)
- Private lots/providers prices went up too as a results
- There were challenges to implement this - you need to have something you can point to when you implement the higher parking costs

Appendix B
Literature Review Links

Canadian Transit Ridership Trends Study (CUTA, 2019)
http://cutaactu.ca/sites/default/files/cuta_ridership_report_final_october_2018_en.pdf

Impact of Free Transit Passes on Youth Travel Behaviour (University of Waterloo, 2017)
https://uwspace.uwaterloo.ca/handle/10012/12199

Transit-Supportive Guidelines (Ministry of Transportation Ontario, 2016)
http://www.mto.gov.on.ca/english/transit/supportive-guideline/ridership-strategies.shtml

Improving the Customer Experience (White paper at Transit Leadership Summit, 2015)
https://transitleadership.org/docs/TLS-WP-Improving-the-Customer-Experience.pdf

Commonsense Approaches for Improving Transit Bus Speeds (TCRP Synthesis 110, 2013)
https://www.nap.edu/read/22421/chapter/5#21

Fare Collection and Fare Policies (White Paper for Transit Leadership Summit, 2013)
https://transitleadership.org/docs/TLS-WP-Fare-Collection-and-Fare-Policy.pdf

Elements Needed to Create High Ridership Transit Systems (TCRP Report 111, 2007)
https://www.nap.edu/read/23175/chapter/1

Implementation and Outcomes of Fare-Free Transit Systems (TCRP Synthesis 101, 2012)
https://www.nap.edu/read/22753/chapter/1

A Guide to Preparing A Transit Ridership Growth Plan (Province of Ontario, 2005)
https://ottawa.ca/calendar/ottawa/citycouncil/occ/2006/03-08/trc/ACS2006-PGM-POL-0016%20Document%201.htm

The Role of Transit Amenities and Vehicle Characteristics in Building Transit Ridership (TCRP Report 46, 1999)
http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_46-a.pdf