HOW KINGSTON DOUBLED ITS TRANSIT RIDERSHIP WITHIN 10 YEARS

By Preston L. Schiller, Ph.D.

SUMMARY
The City of Kingston (ON) has witnessed a dramatic transformation of its transit system over the past decade. Ridership has doubled, four new express routes have proven to be immensely popular and the marketing of its service, especially around transit pass programs, has greatly expanded. Its double-digit annual ridership growth is far outpacing its modest population growth; an indication of a trend towards transportation sustainability. This article presents data about its ridership growth, comparison with peer systems also hosting universities, and background about the multiple factors that have influenced this transformation.

INTRODUCTION
Following a period of ridership growth, the past few years have seen most North American transit services, large and small, either losing riders or stagnant in their ridership performance—with the exception of Vancouver (BC), Montreal (QC) and a small number of US cities (Schmitt 2018, Miller et al 2018). Even where ridership is increasing it is rarely keeping pace with or getting ahead of population growth. During this period of stagnation and decline, the success of Kingston Transit (KT) in dramatically increasing ridership, far outpacing its population growth appears to have been largely overlooked.

Changes and innovations that can help increase ridership are especially challenging for small and medium-sized cities. Often, such cities feel they lack the fiscal base, population size, or density needed to support transit, or the traffic congestion that would push commuters and other local travelers to choose transit. Cities of these sizes may also be targeting the ‘transit-dependent,’ while those who own cars and drive. Some cities may also be politically or geographically isolated from current thinking about the multi-dimensional role of public transit in addressing mobility, environmental, and social equity concerns. Increasing transit ridership is an important goal for cities of all sizes since it is a major feature of sustainable transportation. (Schiller and Kenworthy, 2017) This article will examine the dramatic growth of Kingston Transit (KT) ridership in recent years, exploring the numerous factors leading to its success.

LOCATION AND POPULATION
Kingston is a southeastern Ontario city of approximately 125,000 people and the centre of a Census Metropolitan Area (CMA) of approximately 160,000. Home to Queen’s University (QU), St. Lawrence College (SLC), the Royal Military College (RMC), and a large Canadian Forces Base, it is also an important regional medical centre with Kingston General and Hotel Dieu Hospitals, affiliated with and supported by Queen’s University’s School of Medicine. The age pyramid of Kingston’s population generally conforms to that of the Province of Ontario except for the 20 to 29 and 65 and over age brackets, in which it exceeds provincial levels by 1% and 2.4% respectively. These relatively small differences are probably due to the many students as well as the many retirees that Kingston attracts, but they do not overly bias transit ridership in its favor. (Statistics Canada, 2016)

KINGSTON TRANSIT BEFORE 2008
Before 2008 Kingston Transit (KT) was a rather lackluster system, with a mostly static year-to-year ridership of a little less than 3.5 million. Marching orders from the City were to keep costs down and maximize operational efficiencies. Sheila Kidd, appointed to manage Kingston Transit in 2008, explained in a CBC interview that "[P]rior to the (2009) revamp, it sometimes seemed like the city didn’t even have a transit system... The buses would meander through neighbourhoods and there were no sufficient express routes... [Our previous service] was a service that served a few members of our community." (CBC News, 2018) The bus fleet was a motley mix of vehicle sizes, types, and manufacturers creating challenges for maintenance personnel. Its service facility was small, inadequate, and unable to effectively clean and maintain the buses during the winter. Insufficient attention was paid to rider amenities such as shelters or clearing snow from sidewalks around bus stops, even along the two intersecting streets where most of the routes pulsed in a timed-transfer at the centre of downtown.

A TIME FOR TRANSFORMATION
In the spring of 2008 a small group of civic-minded residents met informally with several city councillors to question whether it was
time for KT to change its course. One of these residents, a newcomer with some expertise in transit planning, explained how the system’s dependence on its downtown bus pulse, as well as bus pulsing at sub-centres, appeared to impose service limitations that hindered ridership growth. The councillors arranged a follow-up meeting with Kingston’s Chief Administrative Officer (CAO) for a more detailed exploration of Kingston Transit’s shortcomings and options for improvement.

The new KT manager invited two transit experts, Professor Jeff Casello from the University of Waterloo [ON] and consultant Eric Bruun, to do a quick appraisal of the agency. Their visit in March, 2009, including a public reporting session attended by several councillors and interested citizens, led to a number of suggestions about how service planning and operations, including the bus fleet itself, could be improved. This visit led to a longer-term consulting and research relationship with Casello and several of his students at the Waterloo Public Transportation Initiative [WPTI].

The partnership between Casello’s group and KT staff led to several changes, most notably the introduction of four express routes (501/502, 601/602, 701/702, and 801/802) between 2013 and 2018, placing much of the city’s population within one kilometer of an express route. These routes have helped spur sizeable and rapid ridership growth (Figure 1).

In the years after the managerial, marketing, and service orientation changes began, KT has made great improvements and has experienced ridership gains virtually unheard of in a mature transit service. Some changes built upon already existing arrangements, while others created new arrangements. The following sections provide details on the transit improvements as well as how and when these occurred and their results.

**TRANSFORMATION OUTCOMES**

There was some lag time before improvements could be measured (see Figure 2). Ridership started to increase slightly from 2009 to 2012, followed by a steep upward curve in 2013, with the combined effects of the introduction of the 501/502 express route and the Kingston General Hospital [KGH] transit pass program.

The double-digit annual growth that began at that time has continued annually through 2015-2018. Complete data for the first half of 2019 are not yet available, but it appears that the trend of double-digit ridership growth is continuing. (See Table 1.)

In 2011 Kingston’s ridership was average when compared with similar-sized Ontario cities that host universities and large student populations. Riders per capita for these cities ranged from 34 to 58. By 2016 Kingston Transit had caught up with the leading comparable Ontario cities and by 2017 it had pulled ahead of all. (ICUTA/MOT, 2011-2017). (See Table 2.)

**ELEMENTS OF TRANSFORMATION**

There usually is no one ‘silver bullet’ for transforming a transit system and rapidly increasing its ridership over several years. There are many factors which, combined, led to the transformation of Kingston Transit between 2009 and 2019. Here are a few of the most important, which others in the fields of planning, policy, and administration might consider as guides to successful change.
Collaboration between engaged citizens and policymakers can create the framework for change

Too often municipal change only occurs once a problem becomes highly serious or even disastrous. The virtuous KT changes were initiated by discussions between engaged citizens, Councillors, and the City's CAO before the problem of agency stasis reached crisis proportions. In 2008 the City began a series of policy-led changes encompassing new management, including administrative, marketing, and planning expertise, as well as consultants whose expertise fit well with the agency's needs. Some of the engaged citizens were affiliated with Queen's University, enabling the agency to tap into their resources and talents. Several students have done research papers addressing issues relevant to the agency, while others have been offered part-time employment.

More recently policymakers and engaged citizens, including the advocacy group Kingston Coalition for Active Transportation, have pushed transportation planning towards the goal of a 15% mode share for transit – currently around 9%, and a 20% mode share for walking and cycling – currently around 12%, by 2034 (KT Business Plan 2017 and City of Kingston 2018, pp 6, 21).

Operational improvements

The City also encouraged change by funding bus fleet improvements and expansions as well as a new 10 million dollar maintenance facility. New buses can be properly cleaned, inside and out, and maintained during the winter. Bicycle racks can be kept on buses all year. This state-of-the-art facility and the cleaner, better maintained buses have considerably increased employee morale and have probably attracted riders as well.

No Fear: Introducing new and innovative routes and eliminating others

In addition to introducing four express routes between 2013 and 2018, KT introduced a new "Train Station Circuit" [Route18], connecting the downtown transfer point, Queen’s University, St. Lawrence College, and the neighbourhoods along the way with the VIA rail and Coach Canada-Megabus stations. With no restrictions of having to meet a pulse or timed transfer with other routes, buses are able to idle for a few minutes at either station in order to meet a train or bus that is running a few minutes late. This has proven to be a very popular option for students and other residents. A few other routes were eliminated or modified due to low ridership or redundancy with the express routes. Rider amenities have improved considerably over the past decade as well. The number of shelters has increased by 80%, from 130 in 2009 to 234 in 2018. The ratio of bus shelters to bus stops has increased from 15% to approximately 29% in the same time frame.

Transit agencies should not fear introducing new and innovative routes or eliminating others, especially if done incrementally with sufficient time to involve the public and make adjustments when needed. Often there can be surprising, even dramatic, successes - as in the case of the KT express routes. Meanwhile, in Boulder (CO), the Go Boulder unit has been a leader in sustainable transportation for decades. Dissatisfied with

<table>
<thead>
<tr>
<th>Year-to-Year Increase</th>
<th>Per Cent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>+13.0%</td>
</tr>
<tr>
<td>2014-15</td>
<td>+11.3%</td>
</tr>
<tr>
<td>2015-16</td>
<td>+11.5%</td>
</tr>
<tr>
<td>2016-17</td>
<td>+18.3%</td>
</tr>
<tr>
<td>2017-18</td>
<td>+10.6%</td>
</tr>
</tbody>
</table>

Source: Kingston Transit

Table 1. KT Annual Ridership Per Cent Change Over Previous Year; 2013-2018

<table>
<thead>
<tr>
<th>City</th>
<th>Service Area Population 2017</th>
<th>Rides Per Capita 2015/16/17/18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Sudbury</td>
<td>150,000</td>
<td>31/30/27/*</td>
</tr>
<tr>
<td>Guelph</td>
<td>132,000</td>
<td>45/46/49/*</td>
</tr>
<tr>
<td>Kingston</td>
<td>121,000</td>
<td>41/43/51/56/*</td>
</tr>
<tr>
<td>Peterborough</td>
<td>81,000</td>
<td>42/43/48/*</td>
</tr>
<tr>
<td>St. Catharines</td>
<td>152,000</td>
<td>32/36/34/*</td>
</tr>
<tr>
<td>Thunder Bay</td>
<td>108,000</td>
<td>25/34/35/*</td>
</tr>
</tbody>
</table>

*Kingston’s per capita ridership for 2018 had grown to 56; comparable 2018 data for the other systems is not yet available.

Sources: CUTA/OMT 2015, 2016, 2017; Kingston Transit

Table 2. Transit Rides Per Capita: Ontario Selected Cities with Universities, 2015-2018

Figure 2
the standard lackuster routes furnished by Denver's Regional Transportation District (RTD), Boulder began designating its own Community Transit Network (CTN) with maximum citizen participation in the early 1990s. Over the course of a decade, 10 new fast and frequent routes spanning the city were introduced. All but one have been great successes. Accompanying this change were several pass programs targeted at students, employers, and employees, even neighborhoods. Having a transit pass became a badge of civic pride. At present approximately 80% of residents have passes and the city is considering ways of establishing a universal 'Boulder Pass' encompassing all residents. [Schiller & Kenworthy, Chapter 9 and personal communications with City of Boulder personnel]

Giving transit a good pass: The power of marketing and outreach

An extensive pass program with a variety of options tailored to the needs of distinct populations has been developed since 2009 (City of Kingston Transit Fares). In some cases specific service planning considerations were taken into account, as when the new frequent express route (501-502) serving Kingston General Hospital (KGH) was timed to arrive a little before and a little after shift changes. There are now over 800 employees of KGH and its downtown clinics at Hotel Dieu Hospital and over 400 employees at Queen’s University enrolled in the Transpass program. The "Employer Transpass" is now available through approximately 100 employers.

Creating a participation-tied discount pass – the City of Kingston Employer TransPass – gave larger employers an incentive to offer the pass to a large number of employees. In cases where a major employer was not willing to take on the responsibility of organizing an employee pass program, KT has attempted, with a little success, to identify an interested employee volunteer for this purpose.

In cases where a number of smaller employers are clustered in one locale, such as those of the Downtown Business Improvement Association (DBIA) or the Cataract Centre (a mall with a transit sub-center), employers are treated as one group so that they can receive the highest cost reduction possible for a monthly unlimited pass. KT has also introduced a 'loyalty program,' City of Kingston PassPerks, which provides riders who have monthly photo ID passes opportunities to save at a growing list of local stores and services. By making its services and amenities of greater value to commuters KT has been able to increase the number of pass holders considerably.

Better outreach to student populations has often led to rapid increases in ridership. Many Queen’s University students were unaware that for many years their student association had been disbursing a portion of student fees to Kingston Transit in exchange for all students’ ID cards serving as transit passes. Once this became more widely publicized student ridership climbed quickly. Students at St. Lawrence College, located along an express route, have also shown interest in a student pass program.

Learning the 'transit habit’ early on

'Transit habit' is the term given to the regular and enduring use of public transportation (Levy 2017). In 2012 a pilot program providing free transit passes to beginning grade 9 students was initiated. Supported with a small subsidy from the school district to KT, it proved to be a tremendous success. After careful evaluation, the program was expanded to all high school students. The pilot year effort led to 28,000 transit trips, with the latest year’s data reporting 600,000. Forms filled by students to obtain a pass are also used for identification purposes.

A special program invites groups of art students to decorate bus shelters after learning more about the surrounding neighborhood and its history. The students are especially motivated to decorate shelters near their respective schools. [FCM Guidebook, 2019; FCM Webinar 2019; Sullivan et al, 2018]. A specially decorated and outfitted bus is deployed to schools in order to teach students ridership and rider etiquette. In 2017 Kingston Transit, with approval from the Council, initiated a policy that all youth under the age of 14 could ride for free and did not need a pass or ID. The policy was intended to attract families with children to travel by transit but it does not require youths to be accompanied by adults. It appears to be attracting families with children as well as youths traveling solo. Because of this policy, coupled with the high school pass program, many young persons are learning the ‘transit habit’ earlier than they might have otherwise.

Presenting transit as a viable and cost-saving alternative to driving: parking vs. transit fees

For many years the City of Kingston has had control over most of the central business district (CBD) paid parking, both surface and structured. Encouraged by pro-transit Councillors, the transportation division has limited the total amount of parking available and raised parking pass fees to exceed the cost of a transit pass, thus encouraging daily car commuters to consider transit. Monthly transit pass fees range from the lower income eligible Affordable Monthly Pass at $98.25 for youth and $38 for adults, to a $56.50 pass for youths aged 15-24 and seniors over 65, to the weekdays only pass fee of $65.50 – all lower than the City’s monthly parking fees. Several of the City’s many CBD public parking lots offer time-limited parking only, while a few offer monthly fees ranging from $77 to $132.75 depending on the location and whether the lot is structured or surface. At present there are long waiting lists for all these monthly parking lots. Attendees at major events at the downtown event centre, including professional hockey games, are encouraged to ride the bus rather than drive, thanks to a fee of one dollar, a bargain compared to parking fees.

The bus lane ahead

Planning is underway to maintain the high quality of service that has been a key part of KT’s ridership growth story. The creation of segments of bus bypass lanes from existing underused and very long turning lanes, sometimes only serving a commercial area, is being examined, as is expanding transit signal priority and queue jumps at some crowded interchanges. Such measures will speed buses along their route and save money for the service. Some efficiency measures already introduced are expected to save KT a considerable sum. Between 2017 – 2021, an estimated $1 million reduction in capital expenditure has been identified as a result of reductions in fleet requirements gained through operational efficiencies created by including the real-time GPS tracking system, transit signal priority, and the installation of a new farebox system that reduces passenger boarding time. [Kingston Transit 2017, pp76-77.]

While Kingston Transit continues its dramatic gains in operational efficiencies and ridership there are still a number of
challenges that need to be noted about its current situation and future prospects for continued growth:

- Can the current rate of annual double-digit growth be maintained into the future so that a significant and enduring shift in mode choice is effected?
- Can the several large employers, some of them in the public sector, who are resisting its remarkable pass program offers be influenced to cooperate?
- How can the significant percentage of its population which is not within a reasonable walking distance from an express route be better served in the future. Can this 'first mile/last mile' dilemma be solved?

CONCLUSION

Kingston Transit has undergone a remarkable transformation in the past decade; from a lacklustre service whose growth was relatively stagnant to an exemplar with a rate of growth that is virtually unheard of in North America. Its success has encouraged the City to reorganize its transportation division and elevate the role of transit within it. This is the beginning of a movement towards integrated transportation planning and provision not found in many other municipalities. Kingston Transit's double-digit annual rate of growth is far out-pacing its annual population growth of less than 1%. Coupled with a new emphasis on road user safety and active transportation (walking and cycling), a significant shift in transportation mode choice towards sustainability appears to be underway.

ACKNOWLEDGMENTS

The author would like to thank Ian Semple, Jeremy DaCosta, and Andrew Morton of the City of Kingston for sharing information and materials about Kingston Transit.

ENDNOTES

1 Approximately because discrepancies exist between Statistics Canada [2016] and the City of Kingston's [2019] population studies and forecasts.
2 The benefit and drawback of timed-transfers/bus pulsing is a complex subject. When there are no challenges it can work well but when traffic congestion or weather conditions intrude the whole system can be seriously hindered. Kingston faces both inclement weather and growing traffic congestion peaks on several of its main transit routes. Cf. Walker 2009 and Bruun 2014.
3 An interdisciplinary research group at the University of Waterloo, under the School of Planning and the Department of Civil and Environmental Engineering.
4 Personal communication, Kingston Transit, June 2019.
5 Such is the case with some of the large government, institutional and shopping mall employers in Kingston, several of which are quite favorably located for transit and express route access.

REFERENCES


Canadian Urban Transit Association (CUTA) and The Ontario Ministry of Transportation (OMT). Ontario Urban Transit Fact Book/isl: 2011-2017 Operating Data, Toronto


Preston L. Schiller, Ph.D. is Visiting Lecturer, Department of Geography and Planning, Queen's University and Affiliate Instructor, Department of Civil and Environmental Engineering, Washington University. He is the principal co-author of An Introduction to Sustainable Transportation: Policy, Planning, and Implementation, 2nd Ed., Revised (Routledge 2017). preston.schiller@queensu.ca