Executive Summary

Public transit systems in Canadian midsized cities frequently struggle with low ridership for a variety of reasons (Collins & Agarwal, 2015), including low population densities that do not support efficient transit services (Turcotte, 2011), as well as limited traffic congestion and ample parking in the central business district (Shoup, 2011). Despite these barriers, research suggests that improvements to transit services have the potential to encourage people to shift to public transit for their daily commutes (Shannon et al., 2006; Brown and Werner, 2007). Canadian mid-sized cities such as Kingston, Ontario are making substantial investments in improving their public transportation services, from $14.2 million in 2016 to $20.9 million in 2021 once all of the service recommendations are in place (Kingston Transit, 2016). Additionally, it was recently announced there is over 78$ million of federal and provincial funding available for local public transit projects in Kingston (City of Kingston, 2018). Kingston had the highest proportion of commuters using active transportation and public transit (30.4%) in its group of census metropolitan areas (Statistics Canada, 2017b). Thus, having a fulsome understanding of the factors that influence transit use can ensure that these investments are maximized to promote public transportation use in mid-sized cities.

Previous longitudinal research has shown that, since the introduction of express bus service in Kingston Ontario in 2013, a significant number (5% of the sample data) of Queen's employees have shifted to using public transit for their commute to work (MacFarlane, 2017). Yet, we have little insight as to why some employees have shifted their modes, while others have not.

This report addresses the following two questions:

1. *What factors have encouraged and deterred Queen's University employees to make the switch to public transit for their daily commute to work and why?*

2. *How are the commute modes and the transit-related attitudes of Queen's University employees spatially distributed in Kingston, particularly with respect to the location of Kingston Transit's express routes?*

To address these questions, a mixed method approach utilizing a concurrent triangulation design was employed (Creswell & Plano, 2007). Through focus groups, qualitative methods were employed to explore transit shifting among three groups of employees: those who have become year-round riders since 2013 (i.e., "full shifters"); those who have switched to transit on a seasonal basis since 2013 (i.e., "partial shifters"); and those who have not changed their level of transit use since 2013 (i.e., "non-shifters"). The focus group questions were designed to create discussion on the factors that promote or hinder employees' use of public transit for their regular commute to Queen's. Through GIS mapping, the spatial distribution of commute modes, shifter status, and attitudes towards transit was examined in relation to proximity to the express routes.

The findings from the focus group indicated that the three factors that were most influential at encouraging employees to switch to using Kingston Transit for their daily commute were: the introduction of the express routes; the implementation of the TransPass program; and the high cost of parking on and near to campus. Factors that discouraged employees from using Kingston Transit to commute to work, included parking policies, TransPass registration issues, preference for other travel modes, and having young children.

The spatial analysis results suggest that the implementation of express transit in Kingston has influenced and encouraged transit ridership among Queen's employees living within close proximity to the express routes. There were some clear patterns in the spatial distribution of commute mode. Employees who live within close proximity to campus primarily used active transportation, while exclusively passive commuters tended to live the furthest from campus. This trend was further highlighted by the spatial distribution of seasonal and year-round shifters: 91% of seasonal shifters and 86% of year-round shifters live within 800m of an express route bus stop.

To conclude this report makes four recommendations to offer guidance to Queen's University and Kingston Transit:

1. **Queen's University should develop occasional parking options**

Queen's current parking permit system does not encourage passive commuters to give up their parking permits. An occasional parking program for transit users would allow employees with a TransPass the ability to purchase a certain number of single use day passes, to provide assurance that they have an affordable parking option on the occasions that they need to drive to campus. This would address the eventualities of regular transit riders and enable drivers to give up their parking permits and switch to using Kingston Transit.

2. **Simplification of the TransPass Program registration**
   Queen's University and Kingston Transit should work together to create a sign up process that can be completed efficiently on campus. Furthermore, the TransPass program should continue to be marketed on a regular basis to improve awareness of the program and promote transit ridership.
3. **Marketing of Short Term Transit Passes**
   Passive commuters who are not ready to commit to the TransPass program should be encouraged to increase their use of Kingston Transit by selling short term bus passes on Queen's campus. This could be achieved with a permanent or temporary booth for Kingston Transit on campus. Parking pass holders could be targeted directly with this information by email through the Queen's parking office. Additionally, marketing short-term transit pass options should take place any time a marketing campaign is taking place on campus for the TransPass.
4. **Kingston Transit Service Improvements**
   Kingston Transit is continuing to improve service with significant funding and the addition of new express routes in accordance with Kingston Transits 2017 – 2021 *5 Year Business Plan*. The improved service of Kingston Transit implemented through the express routes was essential for increasing ridership and for shifting employees' opinions of public transit as a reliable commute mode. Frequent users' experience with public transit could always be improved, which is important for maintaining existing ridership levels. Increasing the frequency of service during busy commute times, extending the service time period, adding express route stops to the center of Queen's main campus, and improving connections to local services in the evening, were identified as key areas for improvement to current transit service in Kingston.