



## Study Approach

Metrolinx supports a mission to champion and deliver mobility solutions for the GTHA through its operating divisions and transit initiative partnerships. This study, which looks at mode choice behaviour of cross-regional commuters in the GTHA, was conducted in collaboration with the University of Toronto Transportation Research Institute (*UTTRI*). The study evaluates the effectiveness of different transportation policies that aim at improving transit services with more emphasis placed on transit modal integration across the region. Therefore, a policy-sensitive evaluation framework was developed. The framework allows for quantifying the effects of changes in level-of-service attributes (such as travel time and cost) on commuters' mode choice.

The Survey of Cross-Regional Intermodal Passenger Travel (*SCRIPT*) was designed and conducted adopting the state-of-the-art survey methods. The survey features an innovative multimodal trip planner tool that generates feasible travel options including intermodal options such as park-and-ride. For each respondent, the travel options are customized based on his/her household and workplace locations, car availability, proximity to transit, work start time, and total travel time from home to work. The tool provides detailed information on travel times, fares, and parking costs.

A sample of commuters in the GTHA was surveyed; data on their current commuting trips as well as stated mode choice in response to hypothetical changes in the current mode attributes were collected. The gathered data was used to develop and validate a set of econometric choice models that can explain the changes in individuals' probabilistic responses as a result of introducing new policies. The models provide an extensive understanding of cross-regional commuters' mode choice behaviour. As such,

*IMPACT*, an Interactive Model for Policy Analysis of Cross-Regional Travel, was developed to predict corresponding changes in aggregate modal shares in response to the policy initiatives under consideration.

That is, the effectiveness of policies such as the reduction of transit co-fares, the introduction of pay parking at park-and-ride stations, the provision of new transit features, and the reduction of transfer and waiting times can be evaluated. For example, the introduction of Wi-Fi service on GO Transit may result in an increase of 1.4% in the modal share of GO Transit with an associated decrease of 1.1% in the driving modal shares. In contrast, the introduction of \$3 parking fee at GO Transit park-and-ride stations may result in a decrease of approximately 1.8% of the modal share of GO Transit park-and-ride.