

# Assessing the Impact of High-Speed Rail (HSR) on Job Accessibility in the Québec City – Toronto Corridor (QTC): A Comparative Analysis

The Alto HSR project for the QTC is expected to cut travel times and, in turn, increase intercity accessibility, i.e. the ease of reaching destinations. By shortening trips and widening access to jobs and services, higher accessibility enhances quality of life and supports economic growth. Accounting for local transit, we compare intercity job accessibility (a proxy for economic and service diversity) against current air and VIA Rail options under two scenarios: (1) the announced Alto HSR and (2) an enhanced HSR network that links local rail routes and uses spare HSR track capacity.

## Methodology

Intercity travel times between city-centre train stations were evaluated at 6 AM, 12 PM, and 4 PM using a 4.5-hour travel time (TT) threshold and the following modes and data sources:

- VIA Rail: Public GTFS schedules with a 30-minute boarding buffer
- Air travel: Flight schedules and durations, airport-to-city-centre transit TT, and a 90-minute check-in buffer
- HSR scenarios: Custom generated GTFS datasets based on Alto's plans and international schedules, including a 30-minute boarding buffer

To obtain 5-hour intercity job accessibility, the number of jobs reachable within 30 minutes by local public transit from each train station was calculated using GTFS schedules, street network data, and commute flows.

## (1) Announced Scenario



Average jobs reachable within 5 hours of travel time (x1,000)

City	Current Situation		(1) HSR
	VIA Rail	Air Travel	
Toronto	506**	1,052	1,124
Peterborough	27**	27**	1,195
Ottawa-Gatineau	349	981	1,195
Montréal	522	1,019	1,195
Laval*	110**	110**	1,195
Trois-Rivières	6**	6**	1,195
Québec	321	986	689

\*some jobs in Laval overlap with jobs in Montréal

## (2) Enhanced Scenario



Average jobs reachable within 5 hours of travel time (x1,000)

City	Current Situation		HSR & local rail	City	Current Situation		(2) HSR & local rail
	VIA Rail	Air Travel			VIA Rail	Air Travel	
Windsor	92	518	166	Kingston	715	6**	777
Chatham	84	32**	335	Brockville	388	7**	1,053
London	253	554	710	Ottawa-Gatineau	365	981	1,305
Kitchener	49**	49**	702	Montréal	531	1,019	1,276
Guelph	42	26**	702	Laval*	110**	110**	1,261
Niagara Falls	172	3**	737	Sorel-Tracy	11**	11**	709
Hamilton	41**	41**	786	Sherbrooke	26**	26**	727
Toronto	600	1,112	1,356	Drummondville	510	28**	730
Kawartha Lakes	17**	17**	1,024	Trois-Rivières	6**	6**	1,261
Peterborough	27**	27**	1,279	Québec	350	986	745
Belleville	681	3**	813				

\*\*Accessibility calculations include the jobs accessible within 30 mins TT by public transit in the origin city

## Conclusion

- (1) The announced Alto HSR significantly increases accessibility to jobs within 5 hours TT for all planned cities, especially compared to VIA Rail. In major cities such as Toronto, Ottawa, and Montréal, accessibility increases by an average of 712,000 jobs compared to VIA Rail.
- (2) Integrating local rail with HSR and using its spare track capacity extends accessibility benefits to newly connected cities by approximately 555,000 jobs within 5 hours relative to current available modes (train and/or plane).