

Written Submission to Alto High Speed Rail Public Consultation

By: Environmental Defence Canada

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About Environmental Defence Canada

Environmental Defence Canada is a leading Canadian environmental advocacy organization that works with government, industry and individuals to defend clean water, a safe climate and healthy communities.

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Executive Summary

The proposed high-speed rail (HSR) corridor has the potential to significantly reshape intercity travel in Canada as the only G7 country without a high-speed rail train system. It offers an opportunity to improve mobility, strengthen regional connections, and support emissions reductions. Realizing these benefits, however, will depend on a range of decisions related to system design, network integration, and overall project implementation.

This submission outlines key considerations to ensure that HSR delivers on its potential while minimizing risks and negative impacts.

First, HSR must be developed as part of a larger, integrated national transportation and transit strategy. Its effectiveness depends on strong integration with local transit, regional rail, and intercity bus services. The choice is not between high-speed rail and improved local or regional transportation. It is possible, and necessary, to pursue both. A focus on door-to-door travel time, station accessibility, and well-located transit hubs is essential to maximizing ridership and ensuring the system is competitive with other, more energy intensive modes like car and air travel.

Second, minimizing impacts on agricultural land, biodiversity, and natural ecosystems is critical. Routing decisions should prioritize avoidance of sensitive areas, including protected landscapes and ecological corridors. Where impacts cannot be avoided, design-based mitigation measures and strong environmental management practices should be implemented to reduce fragmentation and long-term harm.

Third, ensuring equitable access requires deliberate policy choices. Without intervention, HSR risks becoming a premium service as it has in some other jurisdictions, primarily used by higher-income travelers. Measures such as affordable fare structures, improved first and last-mile connections, and inclusive network design that takes into account connectivity with more disparate regions are necessary to broaden access and distribute benefits more widely.

Lastly, the project must be supported by strong governance, transparency, and meaningful consultation. Adequate time for engagement with communities, Indigenous nations, and stakeholders is essential to reducing risks and building public trust. Transparent financial reporting and clear accountability mechanisms are also critical, particularly given the complexity of the project, project team, and scale of the investment.

Taken together, these considerations highlight the importance of a balanced and integrated approach, one that preserves the core advantages of high-speed rail while ensuring it is accessible, environmentally responsible, and well-connected to the broader transportation system.

1. Integrating High Speed Rail (HSR) as part of a larger transit and transportation strategy

For high speed rail to be successful in Canada it cannot be a standalone project, it must be integrated as part of a larger, national transportation network that includes integrations into local, regional and intercity networks that enables seamless travel across a transit user's entire journey.

This is particularly important in the Canadian context, where transportation systems are often fragmented across jurisdictions leaving many people heavily reliant on private vehicles. Without strong integration, HSR risks functioning as an isolated service that primarily benefits a limited set of users, rather than as a backbone of a broader, accessible transportation network. When embedded within a more comprehensive system, HSR can extend its reach beyond major urban centres, improve accessibility for a wider range of communities, and support meaningful reductions in congestion and greenhouse gas emissions.

As such, planning for HSR should be approached not only as a major infrastructure investment, but as a component of and an opportunity to strengthen the overall transportation system.

1.1 Consider door-to-door travel time and accessibility

The success of HSR depends on minimizing total door-to-door travel time, rather than focusing solely on how fast it takes to get from station-to-station. This includes not only time spent on the train, but also access to stations, wait times, transfers, and final destination travel. Reducing these times is essential to ensuring HSR can compete with other forms of travel like driving and short-haul flights.

Examples from Europe show that travellers do, in fact, make choices based on total journey time. On rail corridors where total time of the journey falls below three hours, HSR has been successful in becoming the main alternative to air travel. This is true on the Paris to Lyon and Barcelona to Madrid routes where HSR is the preferred choice for 60% to 80% of travelers.¹ These outcomes though depend heavily on efficient first and last mile connections and a well-integrated system that minimizes time between transfers.

Experiences in France and Japan illustrate this principle. In France, HSR is integrated with regional rail networks and centrally located stations, ensuring that time savings are not offset by poor connectivity. In Japan, the Shinkansen system,

¹ ALG. (2024, June). *Modal competition and substitution: High-speed rail versus air transport*. <https://www.alg-global.com/sites/default/files/2024-06/HSRvsAir.pdf>

or bullet train, combines high frequency, reliability, and seamless integration with local transit, enabling efficient door-to-door travel across densely populated regions.²

As these examples show, speed alone is insufficient to drive ridership and a significant modal shift and reduction of greenhouse gas emissions. Poor integration could erode the time advantage of HSR and limit its ability to shift trips away from private vehicles and air travel.

To ensure HSR could compete with other modes of transport, clear metrics and benchmarks should be set for door-to-door performance such as, but not limited to, the ones below:

- Total travel time of up to 3 hours door-to-door makes it competitive with air travel³
- Access and egress time makes up 25%-30% of complete travel time⁴
- Aim for short transfer times between modes around 10-15 minutes

These benchmarks along with other core recommendations including improving first and last mile travel times and minimizing transfer penalties, provide a starting point for developing a practical framework to ensure that HSR delivers not only speed between stations but a meaningful improvement across total travel time and supports broader transportation and climate objectives.

1.2 Ensure easy and reliable access to stations

As mentioned in the previous section, in well-integrated systems, access and egress typically account for no more than 25–30% of total journey time. Poor access to stations can significantly reduce the appeal of rail to the average rider. Access time and waiting time between stations are often seen as the most burdensome, even more so than time spent on the train itself. Therefore, making sure that stations are easily accessible is very important to ensure the success of HSR.

France's HSR stations are closely connected and integrated with its regional rail service, TER (Transport Express Régional) as well as urban transit networks

² Davies, M., Thomas, R., & Roberts, C. (2024). *Global case studies on high-speed rail implementation*. Global Institute for Transportation Policy and Planning. https://www.researchgate.net/profile/Afeez-Adeyemo-3/publication/397415937_GLOBAL_CASE_STUDIES_ON_HIGH-SPEED_RAIL_IMPLEMENTATION.pdf

³ ALG, *Modal Competition and Substitution*

⁴ Moyano, A., Martínez, L. M., & Gutiérrez, J. (2018). *Access and egress times to high-speed rail stations: A spatiotemporal accessibility analysis*. *Journal of Transport Geography*, 73, 84–93. <https://doi.org/10.1016/j.jtrangeo.2018.10.020>

enabling smoother transfers and connection and integration that goes beyond major cities. At major hubs such as Lyon Part-Dieu and Lille Europe/Lille Flandres, regional and local services typically operate at 15–30 minute frequencies, with coordinated timetables that support relatively short transfer times—often in the range of 10–20 minutes. These stations function as intermodal hubs, where high-speed rail, regional trains, metro, tramway, and bus services are co-located within a single station or immediate vicinity, minimizing transfer distances and improving reliability.⁵

Japan’s bullet train stations are similarly integrated with local transit networks, with major interchanges at Tokyo Station, Shin-Osaka, and Nagoya. These stations combine HSR with extensive local and regional rail networks, subways, and bus services within unified station complexes. Transfers are short and there are usually very small delays with high service frequency.⁶

In both contexts, intermodal integration is complemented by good pedestrian access and clear station design, which help reduce barriers to movement between modes and improve the overall user experience. While the role of dense, centrally located stations is addressed further in Section 1.3, these examples highlight how co-locating modes and prioritizing seamless transfers can significantly improve accessibility and support higher ridership.

In the Canadian context, though there are some clear candidates for stations that already act as intermodal hubs like Union Station in Toronto and Gare Centrale in Montreal, it is not as obvious elsewhere throughout the route. Across some more suburban and peri-urban areas along the route, access to intercity transit and transportation still relies heavily on the car. As will be explored later, to ensure this project truly benefits as many people as it can, there must be more investment in transportation to connect all regions.

To address challenges in Canada of reliability and access to stations, planning in the corridor should prioritize:

- Strengthening regional transit and commuter rail connections to HSR stations, particularly beyond urban cores
- Expanding and integrating intercity bus networks to serve communities not directly connected to rail

⁵Cech, L. (2025, April 11). *Lyon Metropolitan Express Service: Framework for multimodal passenger transport*. Rail Market. <https://railmarket.com/news/passenger-rail/32041-lyon-metropolitan-express-service-framework-for-multimodal-passenger-transport>

⁶ High Speed Rail Alliance. (n.d.). *The Shinkansen: How high-speed rail transformed a nation*. <https://www.hsrail.org/blog/the-shinkansen-how-high-speed-rail-transformed-a-nation/>

- Improving the frequency, reliability, and coverage of local transit services connecting to stations
- Investing in active transportation infrastructure, including safe walking and cycling access
- Coordinating fares, schedules, and service planning across agencies (e.g., GO Transit, OC Transpo, Exo) to enable seamless travel
- Reducing reliance on car-based access and park-and-ride models, particularly in major urban centres

1.3 Prioritize stations in downtown or dense areas that have connections as opposed to isolated stations that are difficult to access

Station location is one of the most important factors to ensure the success of HSR and its accessibility. Successful HSR systems have stations that are in dense neighbourhoods, centrally located and have strong transit connections as alluded to in Section 1.2. While peripheral or isolated stations that can be located in greenfields are sometimes proposed to reduce construction costs and strain from construction on urban communities, evidence consistently suggests that these locations can contribute to a significant downturn in ridership, increase travel times and may require investments in additional infrastructure to remain viable.

Stations located centrally and in denser areas maximize accessibility and reduce door-to-door travel time. They can also lead to an increased opportunity for more transit-oriented development. In both France and Japan, most passenger access stations are centrally located and easily accessible by regional or local transit. This not only supports higher ridership, but also reduces congestion and environmental impacts associated with station access.

Union Station, again, is a clear example that illustrates this with a centrally located hub, with extensive connections to GO Transit, TTC subway and streetcar lines, regional bus services, and a connection to the airport.

By contrast, proposals to locate stations in peripheral or greenfield areas, such as the Pickering lands or other low-density sites along Highway 401, are suboptimal. These locations lack strong existing transit connections, are difficult to access without a car, and would likely require substantial new infrastructure investment to function effectively. As a result, they would likely become park-and-ride-oriented stations, which constrains ridership, increases congestion, and undermines the broader goals of HSR.

A concrete and current example of this can be seen with the discussion of the placement of the station in Trois-Rivieres where planning has largely focused on the

industrial area near the Saint-Maurice River.⁷ While the station may present some advantages as far as more ease in alignment and less disruptive construction, it raises risks and concerns with regards to accessibility. A station in this area would be less connected to the city's main population and activity centres and more difficult to access by transit or on foot, weakening its utility as a regional hub.

More broadly, station planning should reflect population density and transit connectivity rather than focusing on minimizing construction costs or aligning with highway corridors. That means prioritizing:

- Major urban centres and established transit hubs
- Mid-sized cities where stations can be integrated into the existing urban fabric
- Avoiding low-density or greenfield locations that lack connectivity and require car access

1.4 Maintain and expand investment in existing transportation services including rail, intercity bus and local and regional public transit networks as part of this larger strategy

As has been made clear throughout this entire section, international experience shows that HSR's success is only possible through embedding and integrating it within a broader transportation ecosystem.

Its accessibility, reliability and ridership depends on the functionality of the transit and transportation networks that surround it. If the project is treated as a standalone project that is primarily meant to serve urban dwellers and minimizes construction costs, Alto will not fulfil its potential for improving travel time, reducing greenhouse gas emissions and driving significant mode shifts from car and air travel.

This is why in the interim, while HSR is being built, Canada must, alongside its multi-billion dollar investment in Alto, invest heavily in not just maintaining but improving and expanding intercity, regional and local transit networks where significant gaps continue to exist.

Without these investments, HSR risks becoming a node-to-node service with limited catchment areas, rather than a backbone of a broader transportation network.

That means that to support HSR, we must prioritize:

⁷ Alto. (2024). *Projet de train à grande vitesse Québec-Toronto: Information sur le tracé et les stations*. <https://altotrain.ca>

- Sustained investment in conventional rail services like Via and other regional rail like Northlander
- Improving Via service by pushing for the prioritization of passenger rail over freight
- Expansion and coordination of a national, publicly-owned connected and integrated intercity bus network unlike the patchwork system of private operators that currently exists.
- Increasing funding to local and regional transit systems through funds like the Canada Public Transit Fund (CPTF) and expanding the fund to include not just capital funding but operational funding as well
- Development of clear, measurable ridership and mode-shift targets aligned with climate and mobility goals

2. Minimizing the Impact on Agricultural Land and Farm Operations

High-speed rail infrastructure will inevitably intersect with agricultural lands along the corridor, making it essential to carefully manage impacts to both farmland and farm operations. While some level of disruption is inevitable, experience from several countries demonstrate that these impacts can be significantly reduced through thoughtful planning, strong engagement with the agricultural sector, and well-designed mitigation and compensation measures.

This work is also crucial to ensure that the project avoids long delays and gets the social license it needs from the communities most affected by the project.

2.1 Prioritizing design-based mitigation

International best practice emphasizes that the best way to mitigate the impacts to farmland where they cannot be avoided is through project design rather than compensation after the fact. Design-based measures like optimizing route alignment and maintaining access between parcels also help reduce compensation costs, limit the possibility of conflict and lowers the risk of delay.⁸

Examples from several countries show clearly how and why this is the best way forward. France has integrated several different methods early on in their high-speed rail projects to avoid issues such as: systematic grade separations, drainage restoration and land consolidation, or what they call “remembrement” which could look like connecting two separate parcels of land or land swaps to reduce fragmentation or make up for the loss of land.⁹

In Japan, Shinkansen lines are routinely designed to minimize disruption to agricultural land. This includes the use of frequent underpasses and overpasses, and rights-of-way that are typically kept as narrow and compact as feasible, reducing overall land take and limiting the loss of productive farmland. In rural areas, alignments are carefully selected and spaced to reflect local farming patterns and equipment needs.¹⁰

Both cases in Japan and France show that key considerations to include when thinking about design-based mitigation strategies are mainly:

⁸ World Bank. (2024). *Compulsory acquisition of land and compensation in infrastructure projects*. <https://ppp.worldbank.org/sites/default/files/2024-09/Compulsory%20Acquisition%20of%20Land%20and%20Compensation%20in%20Infrastructure%20Projects.pdf>

⁹ SNCF Réseau. (2021). *Rail infrastructure and agricultural land management practices in France*. <https://www.sncf-reseau.com>

¹⁰ Ono, H. (1998). *Regional economic impact analysis of high-speed rail*. Massachusetts Institute of Technology. <https://dspace.mit.edu/bitstream/handle/1721.1/81637/859404663-MIT.pdf>

- Ensuring adequate spacing, sizing, and placement of crossings (overpasses or underpasses) to accommodate modern agricultural equipment and reduce inefficiencies associated with fragmented land parcels
- Maintaining continuous access between farm parcels, avoiding unnecessary increases in travel time and operational complexity
- Preserving and restoring agricultural drainage systems

2.2 Construction and Operational Considerations

Construction as well as the ongoing operations of high speed rail may likely introduce a number of impacts on adjacent agricultural land that must be managed appropriately.

We recommend:

- Clear standards for vegetation management¹¹ that places an emphasis on minimizing the use of herbicides near agricultural lands or water systems
- Prioritizing the use of non-toxic or low-impact de-icing and maintenance materials to avoid chemical residue seeping into drainage systems and the surrounding soil, which is a major concern for farmers.¹²
- Security fencing that ensures operational safety while maintaining farm access and mitigating disruptions to wildlife corridors.
- Proper management of topsoil during construction.

2.3 Ensuring Proper Engagement with the Agricultural Community

In order to ensure proper engagement with the agricultural sector, stakeholders and stakeholder groups must be consistently and adequately consulted with.

To that end we recommend the establishment of an *Agricultural Advisory Council* that includes representation from key agricultural organizations and stakeholders that should be engaged throughout all phases.

Early and meaningful engagement will be critical to reducing the risk of project delays and ensuring as much alignment as possible with those impacted.

¹¹ International Union of Railways. (n.d.). *Future vegetation control of European railways*. https://uic.org/IMG/pdf/uic_future_vegetation_control_of_european_railways.pdf

¹² Ontario Federation of Agriculture. (n.d.). *High-speed rail*. <https://ofa.on.ca/issues/high-speed-rail/>

2.4 Adequate Compensation for Impact on Farmlands

Wherever possible, negotiations and design-based mitigation should be prioritized. Where those methods are not possible, compensation must reflect not only land value but also business disruption, operational impacts, and long-term effects on farm viability.

Compensation should be guided by a standardized framework developed in consultation with agricultural stakeholders. Establishing clear, consistent, and transparent compensation principles early in the project will support fair outcomes and mitigate the risk of delays or disputes.

Best practices internationally show several different methods that could be used to meet this framework and criteria. Two specific examples include direct financial compensation and land-based approaches like land swaps or consolidation.

Direct financial compensation should include land value, crop loss, and capital impacts, while also incorporating multi-year or ongoing payments as necessary. Compensation based solely on land value often underestimates long-term losses and can lead to unfair outcomes.¹³

Land-based approaches like swaps or consolidation are good methods to reduce fragmentation and maintain farm operations. Research from the OECD has shown that these approaches can reduce impacts on farms and increase long-term productivity.¹⁴

Weak or poorly structured compensation regimes in Canada have historically led to long-term economic harm and loss of trust, underscoring the importance of robust, transparent frameworks.¹⁵

¹³ Sun, H. (2023, March 29). Realizing Benefit Sharing through Reasonable Land Compensation in the Sustainable Development of Water Resources: Two Case Studies in China. *Sustainability*, 10(15). MDPI. <https://www.mdpi.com/2071-1050/15/10/8366?>

¹⁴ OECD (Ed.). (2025, May). *Agricultural Support, Farm Land Values and Sectoral Adjustment THE IMPLICATIONS FOR POLICY REFORM*. https://www.oecd.org/content/dam/oecd/en/publications/reports/2008/04/agricultural-support-farm-l-and-values-and-sectoral-adjustment_g1gh8f4a/9789264031739-en.pdf?

¹⁵ Senate of Canada. (n.d.). When the Project Never Comes: Canadian Infrastructure Expropriations for Cancelled or Failed Projects. https://sencanada.ca/Content/Sen/Committee/451/NFFN/briefs/NFFN_C-15_Brief_KristinMuller_e.pdf?utm

3. Minimizing the Impact on the Environment and Biodiversity

High-speed rail offers significant climate and transportation benefits, but must be delivered in a way that protects ecosystems and biodiversity. Careful planning and design are essential to avoid unnecessary impacts on sensitive natural areas and ecological systems.

This section outlines key approaches to minimizing environmental harm, including prioritizing avoidance, maintaining ecological connectivity, and ensuring strong management of construction and operational impacts.

3.1 Protection of Key Biodiversity Areas (KBAs)

Key Biodiversity Areas (KBAs) are places that are especially important for protecting wildlife and ecosystems. They can be on land, in freshwater, or in the ocean, and they often support rare or threatened species or important natural processes.

KBAs can be small or very large, and they are identified using clear scientific criteria. They can include both private and public land, and sometimes overlap with existing protected areas.¹⁶

Protecting these areas should be a prime factor in determining route selection.

In Ontario, these considerations are particularly relevant given the presence of high-value protected landscapes and fragmented ecological systems along the corridor. For example, portions of the Greenbelt in the GTA and in Ottawa's Greenbelt serve as critical ecological buffers. Similarly, the Pickering lands in Durham Region and certain lands in the Frontenac arch biosphere play an important role in maintaining ecological connectivity and supporting agricultural uses. Routing decisions that put these areas at risk undermine long-standing land protection objectives.

Alto must, as much as possible, prioritize methods that avoid these sensitive ecosystems that exist along the rail corridor by:

- Prioritizing route alignment that avoids KBAs, Greenbelt lands, and connected ecological areas wherever feasible
- Using existing transportation corridors where it does not significantly affect the project
- Establish clear environmental constraints early on in the process

¹⁶ KBA Canada. (n.d.). *About*. <https://kbacanada.org/about/>

3.2 Minimizing Habitat Fragmentation, Wildlife Impacts, and Environmental Disturbance

One of the most significant risks concerning HSR is habitat fragmentation that can disrupt wildlife movement and increase hazards and danger for species that live along the corridor if not properly designed.

Maintaining connectivity between landscapes must then be a critical component of infrastructure planning for HSR. Connectivity allows species to access feeding, breeding, and seasonal habitats, and is increasingly important in the context of climate change, as species shift their ranges in response to changing environmental conditions.¹⁷

Examples internationally show that integrating design-based mitigations early on in the process can reduce these impacts just as they do when it comes to the protection of farmland. In both France and Japan, there is a good degree of incorporation of measures such as wildlife crossings, continuous fencing and habitat restoration measures after and during the project. Though experience shows that proactively implementing these measures is more effective and less costly than retrofitting mitigation measures after construction.¹⁸

Without proper management, significant environmental degradation can occur from construction that can affect drainage, soil, and water systems among other things.

To avoid such effects and impacts, Alto should:

- Incorporate wildlife crossings at key ecological corridors
- Use strategic fencing to guide wildlife
- Minimize corridor width as much as possible to reduce fragmentation
- Avoid as feasible, routing that creates new barriers to constrained ecological corridors

3.3 Avoiding Impacts to Endangered Species and Demonstrating Net Climate Benefits

Beyond KBAs and general ecological considerations, route selection and design must try as best as possible to avoid impacts to endangered species habitat and

¹⁷ Littlefield, C. E., Krosby, M., Michalak, J., & Lawler, J. J. (2019). *Connectivity for species on the move: Supporting climate-driven range shifts*. *Frontiers in Ecology and the Environment*, 17(5), 270–278. <https://doi.org/10.1002/fee.2043>

¹⁸ Davies, M., Thomas, R., & Roberts, C. (2024). *Global case studies on high-speed rail implementation*.

key national heritage features including wetlands, woodlands and other provincially and federally protected areas that support species at risk.

Alto must fully comply with all relevant federal environmental legislation, including the Species at Risk Act (SARA), the Fisheries Act, the Impact Assessment Act (IAA) and all others that are applicable. This requires early identification of species at risk and a clear commitment to avoidance as a primary mitigation strategy where impacts cannot be avoided.

Alto must also present a thorough, transparent and comprehensive assessment and review of the project's greenhouse gas impacts and overall climate benefits to the public. While HSR has huge potential when it comes to reducing emissions, it also depends heavily on route design and the placement of stations for example.

To ensure the project delivers real climate value, Alto should:

- Fully comply with all relevant federal environmental legislation
- Conduct a full GHG analysis of the entire lifecycle of the project that includes construction, operations and travel impacts and present it clearly to the public
- Optimize route alignment and station locations to maximize ridership and protect the natural environment

4. Accountability, Transparency and other considerations

4.1. Allow time for adequate consultation and avoid use of Bill C-15

Careful and meaningful consultation is crucial to the success of this project. Consultation must reflect the collective needs of multiple communities including Indigenous communities, agricultural organizations, local communities in both urban and rural communities and environmental stakeholders and organizations.

Accelerated processes, particularly those enabled through legislation such as Bill C-15, which expands federal powers to expedite project approvals, risk limiting opportunities for meaningful engagement and undermining public confidence in the project.

We are opposed to these new sweeping powers that could set aside laws Parliament has thoughtfully passed over decades, including critical protections for the environment, health, Indigenous rights, privacy, and public engagement, without meaningful parliamentary public transparency.¹⁹

Rushed consultation processes can lead to unnecessary conflict and legal challenges that risk further delaying the project and outweighs the cost of pushing ahead in a way that breaches trust.

Canadian experience demonstrates the risks of insufficient or rushed consultation. The development of the Mirabel Airport in Québec is a prominent example: large-scale land expropriations were carried out with limited engagement, displacing thousands of residents and farmers. The project ultimately failed to achieve its intended long-term role of being Montreal's main international airport, and the social and economic impacts of those early decisions persisted for decades.²⁰

4.2. Ensuring transparent financial reporting

Financial transparency and regular reporting are critical to maintaining public trust and support of large infrastructure projects like HSR.

¹⁹ Ecojustice. (n.d.). *Urgent: Tell your MP to oppose Part 5, Division 5 of Bill C-15.*

<https://ecojustice.ca/take-action/urgent-tell-your-mp-to-oppose-part-5-division-5-of-bill-c-15/>

²⁰ Rowan, M. (2012). *Citizens, the state and protest against federal airport expansion in Canada* (Doctoral dissertation, McMaster University). McMaster University Library.

<https://prod-ms-be.lib.mcmaster.ca/server/api/core/bitstreams/c2198e2e-5f27-44a4-87fe-34b5ddc025fe/content>

Past Canadian infrastructure projects have demonstrated that unclear or shifting cost estimates can erode public confidence and complicate decision-making, particularly where large public subsidies are involved.

The use of public-private partnerships (P3s) for this project through Cadence introduces additional challenges. While P3 models are often framed as a way to transfer risk and accelerate delivery, evidence in Canada suggests these benefits are not always realized in practice. P3s can involve higher financing costs, reduced public control over long-term decision-making, and limited transparency due to confidentiality agreements.²¹ In some cases, this has made it difficult to assess whether projects are delivering value for money or whether risks have genuinely been transferred to the private sector.

To ease public sentiment around the general opaqueness that exists around P3s, Cadence and Alto should be encouraged to clearly disclose the structure and terms of any P3 agreements, including risk allocation, financing costs, and expected returns.

Going above and beyond in financial reporting would benefit public sentiment around the project including through things like:

- Publishing regular, detailed financial updates, including capital costs, operating projections, and risk assessments
- Ensuring full transparency in procurement processes and contracts
- Provide transparent ridership forecasts and scenario analysis

4.3 Ensuring equitable access to HSR through affordable fares

HSR has the potential to improve mobility and access to economic opportunities, but these benefits are not guaranteed to be distributed equitably. Without intentional planning, HSR will primarily benefit higher-income travelers and major urban centres, while leaving behind lower-income communities or those without access to connecting transportation.

Ensuring equitable access to HSR requires a focus on accessibility and inclusive network design as has been discussed throughout this submission but also on affordability.

Though services in Japan and France are to be lauded for their higher ridership, integration with other systems and operational successes, fares can be quite high

²¹ Office of the Auditor General of Ontario. (2014). *2014 annual report of the Office of the Auditor General of Ontario*.
https://www.auditor.on.ca/en/content/annualreports/arreports/en14/2014AR_en_web.pdf

(though some discounted fares exist in France and regional service to connect to HSR is relatively cheap in Japan).

An example to follow for fare structure could be that of Spain, where low-cost high speed services were introduced through Avlo, run by Spain's state-owned rail company, Renfe. The service is a no-frills version of HSR in Spain, similar to a budget airline. In many cases, Avlo fares are 50% less expensive than conventional high-speed tickets, and in some instances can be closer to a quarter of the price depending on timing and availability.²² The introduction of low-cost services and competition in Spain has contributed to downward pressure on fares across the network, increasing ridership and broadening the user base especially among younger users and families.²³

It is clear how much of an effect this service has had, especially in cases when it was removed. When Avlo service was removed on the Madrid–Barcelona corridor, average ticket prices increased significantly by as much as 40–60% highlighting the role that low-cost options play in maintaining affordability and access.²⁴

A similar introduction of a lower-tier, no-frills service should be explored by Alto to increase accessibility to the service and expand it to riders who may not be able to afford the future price of an average HSR ticket.

4.4 Considerations on addition of other stations

Decisions around the number and location of stations have important trade-offs when it comes to performance of the system that should not be dismissed. Mainly, each additional station, while potentially improving regional access, contributes to reducing speed and reducing HSR's appeal and competitiveness with other, more energy intensive forms of transport like air or car travel.

Even small increases to travel times can have outsized impacts. Additional stops not only add dwell time at stations, but also require trains to decelerate and accelerate, compounding time losses across the route.

²² MyTrainPal. (n.d.). *Differences between AVE and Avlo high-speed trains*.
<https://www.mytrainpal.com/train-company/ave-vs-avlo-differences>

²³ Renfe. (n.d.). *Avlo: Fares and services*.
<https://www.renfe.com/es/en/travel/prepare-your-trip/quiero-avlo/tarifas-y-servicios>

²⁴ Agència Catalana de Notícies. (2025, October 1). *Barcelona-Madrid high-speed rail journeys 40% more expensive after withdrawal of low-cost rates*. Catalan News.
<https://www.catalannews.com/business/item/barcelona-madrid-high-speed-rail-40-expensive-trainline-1-october-2025>

In Japan for example, some Shinkansen trains stop only at major cities, while others serve additional intermediate stations, allowing the system to maintain both high speeds and broad accessibility. Similarly, in France, not all TGV services stop at every station, and service patterns are structured to preserve fast end-to-end travel times on key corridors.

Pressure to include additional stations, particularly in low-density areas with poor accessibility to stations could undermine the main purpose of HSR, i.e. fast, reliable service between major cities.

Rather than addressing gaps in regional access by adding more HSR stations or altering the service model, a more effective approach is to strengthen the broader transportation network around HSR. This includes investing in frequent regional rail, intercity bus services, and local transit connections that link communities to major HSR hubs.

In this sense, it is not a binary choice between HSR and an improved country-wide transportation network - we can and should pursue both. Building HSR as the backbone of the system, while simultaneously investing in better-connected, more frequent, and more affordable transit services, allows for a more integrated network that delivers both speed and accessibility. This approach ensures that smaller communities benefit from improved connectivity, without undermining the core performance and competitiveness of the HSR system itself.

4.5 Considerations on Corridor Alignment

In addition to decisions about the number of stations, there are important considerations related to corridor alignment and which regions are directly served. For example, ongoing discussions around whether high-speed rail should follow a route through Peterborough or via the Kingston corridor reflect broader trade-offs between serving different population centres, maintaining direct travel times, and minimizing land-use impacts.

A Kingston-oriented alignment may offer advantages in terms of existing rail corridors and proximity to established urban areas, but could introduce challenges related to route directness and impacts on agricultural land. Conversely, a Peterborough alignment may better serve parts of central Ontario but raises its own considerations around connectivity, ridership potential, and integration with existing networks.

These choices illustrate that alignment decisions are not simply technical, but involve balancing speed, accessibility, environmental and agricultural impacts, and

long-term network performance. Ensuring that these trade-offs are evaluated transparently and based on clear criteria will be critical to achieving a balanced and effective outcome.

Conclusion

High-speed rail represents a significant opportunity to reshape intercity travel in Canada, with the potential to deliver meaningful benefits for mobility, the economy, and the environment. If delivered effectively, HSR can play a central role in reducing greenhouse gas emissions, improving mobility, and strengthening economic connections across regions. However, these outcomes are not guaranteed. The success of the project will depend not only on whether it is built, but on how it is planned, designed, and integrated into the broader transportation system.

HSR is most effective when it delivers fast, reliable, and competitive travel between major urban centres. Decisions that compromise these objectives risk undermining HSR's core benefits. At the same time, ensuring that HSR is accessible and benefits as many people as possible, including those outside of urban centres who live along the route, requires deliberate choices around fares, station connectivity, and network integration.

Minimizing impacts on agricultural land, ecosystems, and biodiversity is equally critical. Routing and design decisions must prioritize avoidance and mitigation to ensure the project delivers net environmental benefits and maintains and builds public support.

The process this project follows must also prioritize transparency and meaningful and thoughtful consultation. This will build trust and ensure fewer delays.

Lastly, HSR should be seen as part of a broader, integrated transportation network. Investments in regional rail, intercity bus, and local transit are key to expanding access and maximizing benefits. Rather than expecting HSR to serve every purpose, its success will depend on how well it works alongside other modes.

Canada has an opportunity to deliver an important generational transportation project. Getting these decisions right will determine whether the Alto HSR project becomes a transformative piece of infrastructure or another missed opportunity.