

September 23, 2025

Department of Urban Planning and Business Services
Saint-Laurent
777 boulevard Marcel-Laurin
Saint-Laurent, QC H4M 2M7

Dear Kenza Diboune and Shahid Hussain,

The Vector team is pleased to submit a proposal to Saint-Laurent to examine the potential implications of hosting a high-speed rail corridor and station as part of Alto's recently announced mega-infrastructure project. We believe that Vector is uniquely positioned to provide an innovative response to Saint-Laurent's needs, as outlined in the Terms of Reference received on August 28th, 2025.

Members of our team have previous experience in economic analysis, urban research and design, geospatial modelling, and land-use transportation, which are essential aspects of the mandate for this project. These experiences have provided us with an excellent toolset to analyze the high-speed rail project and will enable us to provide adequate consulting services to Saint-Laurent.

To determine whether a rail station and corridor is both feasible and desirable in Saint-Laurent's territory, we will conduct in-depth analyses of the potential implementation and integration considerations, as well as the environmental, social, and economic impacts of the project. This holistic research process will inform potential development scenarios and recommendations designed to maximize the benefits of the project for Saint-Laurent.

We are confident that Vector has the knowledge, technical capabilities, and analytical tools to best serve Saint-Laurent and its current needs. The following proposal includes our team's understanding of the mandate, our theoretical and practical approach, and our methodology.

We look forward to collaborating with and supporting your organization,

The Vector Team

Kennedy Magee | Sara Poppel | Shadé Chrun-Tremblay | Yao Fu

Project Proposal: Exploring High Speed Rail in Saint-Laurent



Source: Alto

Prepared for Saint-Laurent

September 2025

Vector works on the traditional and unceded territory of the Kanien'kehá:ka (Mohawk) Nation. Tiohtiá:ke (Montreal) has long served as a meeting place for many First Nations, including the Anishinaabe and Huron-Wendat peoples. We acknowledge the Kanien'kehá:ka as the traditional stewards of the lands and waters on which we live and work.

The proposed high-speed rail corridor spans a vast area from Quebec City to Toronto, crossing the traditional territories of many Indigenous Nations on both Treaty and non-Treaty lands. Access to these lands is only possible through the ongoing processes of colonization. We recognize that transportation infrastructure, by its very nature of connecting distant places, intersects with multiple Indigenous territories and governance systems. Urban and transportation planning has historically played a key role in colonial processes and continues to shape relationships to land, power, and access across these interconnected territories today.

This acknowledgment is offered as a reminder of the broader contexts in which our work takes place.

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Team Profile

Vector is a skilled group of consultants committed to helping communities through thoughtful infrastructure planning. The strength of our team lies in our diversity of backgrounds, skill sets, and interests that coalesce into a highly adaptable tool set ready to meet a wide range of needs. Our team crafts solutions grounded in thorough quantitative and qualitative analysis and situates that analysis in best practices so that our solutions are robust and closely fit the needs of our clients. Our team is guided by the following principles:

- 1. Equity:** We place significant emphasis on analyzing where and who our projects will impact.
- 2. Connectivity:** We strive to increase potential of interaction (accessibility) across abilities and modes.
- 3. Resilience:** We are committed to solutions that help communities adapt to and mitigate the impacts of climate change.

Each member of our team has had the opportunity to work on planning projects providing a diverse range of experiences in neighbourhood development, urban design, geospatial research, and transportation planning. Some of these projects include:

- **Western Hochelaga 25-year Community Plan** designed to strengthen community ties, create physical connections, improve housing availability, ensure environmental resilience, and improve neighbourhood equity.
- **Lasalle Masterplan and Site Design** at the intersection of Avenue Dollard & Boulevard Newman with a focus on reallocating underutilized areas for the community, preserving existing gathering spaces, and increasing residential density.
- **South-Central Notre-Dame-de-Grâce 25-year Community Plan** designed to improve transportation networks, neighborhood permeability, social dynamics, health, and green infrastructure.



Project Understanding

Alto's proposed 1,000km high speed rail (HSR) corridor will serve approximately 18 million Canadians between Toronto and Québec City making it one of the country's largest infrastructure projects in history. While current communications from Alto and the Cadence consortium indicate that the corridor will also have stations in Peterborough, Ottawa, Laval, Montréal, and Trois-Rivières, the final rail alignment and station locations have not yet been publicly released and have the potential to change given the project's preliminary stages of planning.

The final route alignment will have significant environmental, economic and social impacts both along the rail corridor and in the immediate vicinity of stations. Although the station between Ottawa and Laval is currently expected to be built in downtown Montréal, Saint-Laurent is exploring the feasibility and desirability of locating the station within its own territory, along with potential benefits and impacts, given that the project's route.

Our team understands the importance of assessing the holistic impacts of HSR-related development on the Island of Montréal, including station integration and location planning. While specific details and technical aspects of the project remain confidential at this time, our team will draw on a place-based approach to transportation planning when evaluating potential station and corridor locations, and reference findings from other rail projects to evaluate Alto's social, economic and environmental outcomes in Saint-Laurent.

Meeting Saint-Laurent's Terms of Reference will require analytical, design, and research skills. Our team's approach will utilize all three competencies to deliver a report that will assist Saint-Laurent in considering the logistics and impacts of a high-speed rail station being developed in or nearby its territory.

The report will:

- Consider the development of a high-speed rail station planned in concert with Saint-Laurent by assessing station integration and corridor alignment as well as associated economic, environmental and social impacts.
- If high-speed rail development is found to not be feasible in Saint-Laurent, this report will instead consider the impacts of a downtown station location and corridor on Saint-Laurent, as outlined in Phase 1A: Contingency Plan

The following sections will describe our methodology and provide information on each team member's prior project experience.



Source: Alto

Planning Methodology

Our team will provide Saint-Laurent a detailed report in response to their current need to understand the impacts of Alto’s high-speed rail corridor and station on the Island of Montréal. We will maintain regular communication with representatives from Saint-Laurent throughout the project to ensure alignment on the final deliverable. The project will be developed iteratively over the following three phases:

Phase 1: Contextual Research

Phase 2: Charette

Phase 3: Impact Analysis

Phase 4: Final Report



Phase 1: Contextual Research

In the first phase of our work, we will establish the foundation of our analysis by developing a clear understanding of the Saint-Laurent's urban form, relevant planning policies and goals, and benchmarks from other high-speed rail projects around the globe. This research will be organized into four sub-phases:

1.1. Data Collection & Mapping (Geospatial Analysis)

Collect base map data such as transport & land-use, conservation areas, traffic flow and inventory data, census data (population), General Transit Feed Specification (GTFS) data, and contextual economic data. Digitize and visualize relevant spatial layers and create preliminary maps for potential station or corridor overlay. Review preliminary analysis and summarize holistic station location considerations. Prepare presentation materials and hand drawn corridor options.

1.2. Archival & Policy Research (Policy Analysis)

Analyze relevant policies (PUM, PPU, Alto strategy). Summarize key objectives and constraints. Develop a list of priorities to ensure policy and borough alignment.

1.3. Benchmarking & Precedents (Research Analysis)

Identify comparable high-speed rail projects worldwide. Collect data on typical impacts across existing projects (environmental, social, economic). Use these collected impact examples to estimate the impact in the Montréal context.

Deliverable:

Situational Report including high level options

Phase 1A: Contingency Plan

If the Situational Report concludes that a high speed rail corridor **cannot** be integrated into Saint-Laurent, the work plan will continue as follows:

- Phase 2: Charette, Phase 3: Impact Analysis & Phase 4: Findings will be proceed, with modifications, based on the assumption that the high-speed rail station is located **only** in downtown Montréal. The scope of this project will thus shift to instead consider what impacts a downtown station will have on Saint-Laurent.

Phase 2: Charette

Building on the context and research gathered in Phase 1, we will conduct a charette with Saint-Laurent representatives and planners to identify the feasibility and potential location of high-speed rail station locations along previously identified corridors. The charette will consider the following sub-phases:

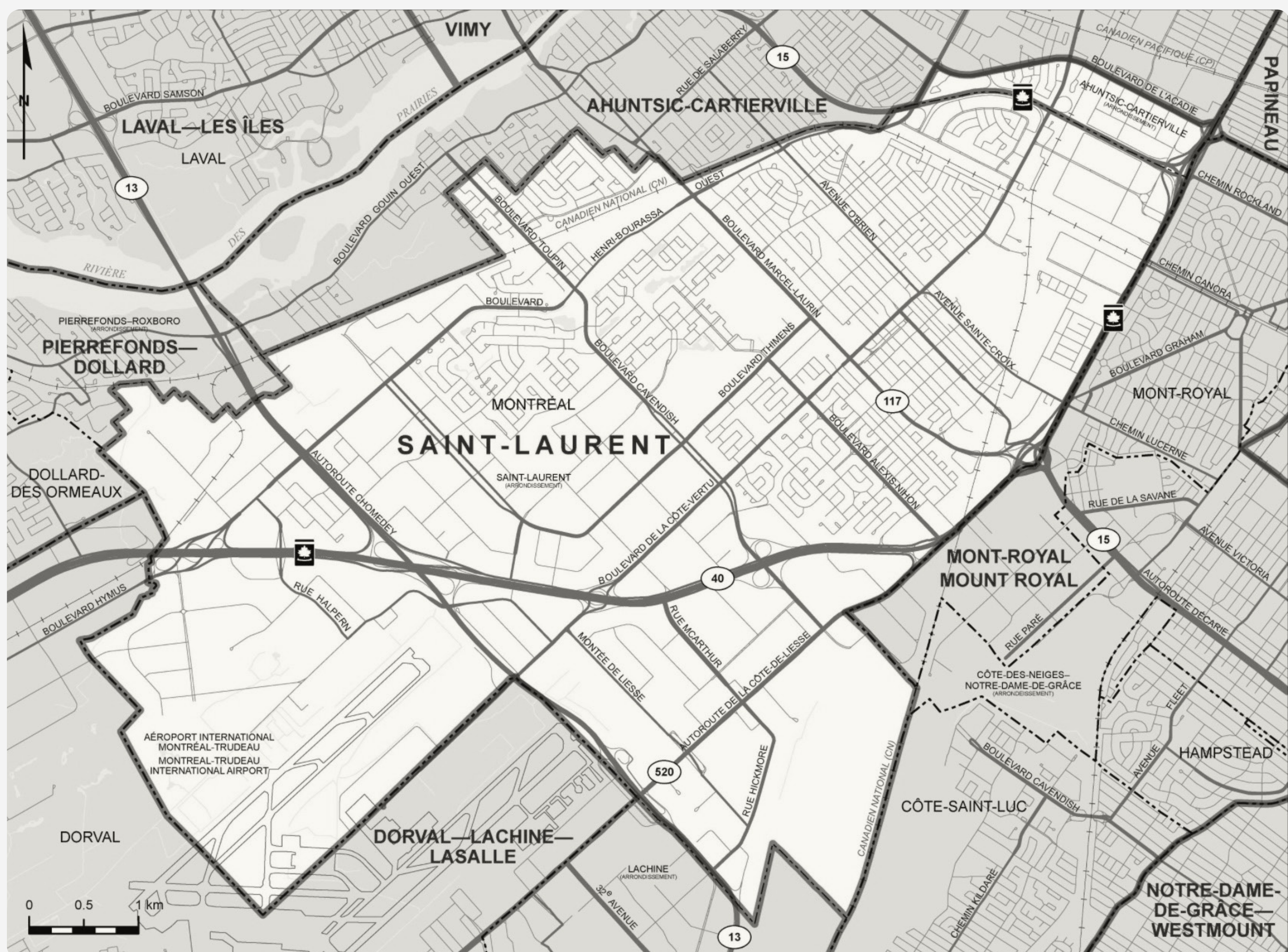
2.1. Facilitation & Stakeholder Engagement

Conduct workshop sessions with Saint-Laurent planners. Document stakeholder feedback.

2.2. Integration & Scenario Refinement

Compare stakeholder preferences with feasibility analysis. Adjust corridor or station options accordingly. Compilation and submission of scenarios memo to the client.

Deliverable:
Memo



Source: Elections Canada

Phase 3: Impact Analysis

The final phase of our work will evaluate the desirability and long-term implications of the chosen high-speed rail scenario identified in Phase 2. This will involve a holistic analysis of economic, social and environmental impacts, referencing both local data and international benchmarks identified in Phase 1. This impact analysis will be conducted over three sub-phases:

3.1. Environment considerations

Use data gathered in benchmarking analysis to explore potential noise and vibration impacts for those nearest the proposed route(s). Explore the impact on emissions of the construction and operation phases of the project. Assess the potential for habitat disruption or destruction from potential route alignment(s).

3.2. Economic considerations

Assess the high-speed rail's potential short- and long-term contribution to economic activity in Saint-Laurent. Draw on benchmarking analysis to assess potential risks of business disruption. Consider potential implications for property values, informed by comparable cases. Weigh in on a cost-benefit analysis.

3.3. Social considerations

Analyze the distribution of benefits and burdens across socio-demographic groups. Identify socio-demographic groups that have new vulnerabilities introduced by the project. Assess impacts of the proposed station(s) and route(s) on the urban form and landscape design of Saint-Laurent.

3.4. Integration considerations

Assess the impact of the potential station(s) on accessibility to key nodes in the community and identify potential barriers. Draw on benchmarking analysis to identify potential land use trends in the station catchment area. Assess the potential for integration into existing transit nodes. Explore possible implications for congestion and parking demand .

Deliverable:

Impact Assessment report and presentation of findings

Phase 4: Findings

The final phase of our work will use the analysis conducted in Phase 3 to develop a series of findings and recommendations for Saint-Laurent. This phase will be conducted over two sub-phases:

4.1. Develop recommendations

Combine results from environmental, economic, and social analyses into a coherent set of findings and recommendations for Saint-Laurent planners.

4.2. Prepare visuals and figures

Prepare visualization of station configurations, maps & figures. Prepare client presentation outline and materials.

Deliverable:

Presentation

4.3 Integrate feedback from presentation

Integrate feedback from client into final report.

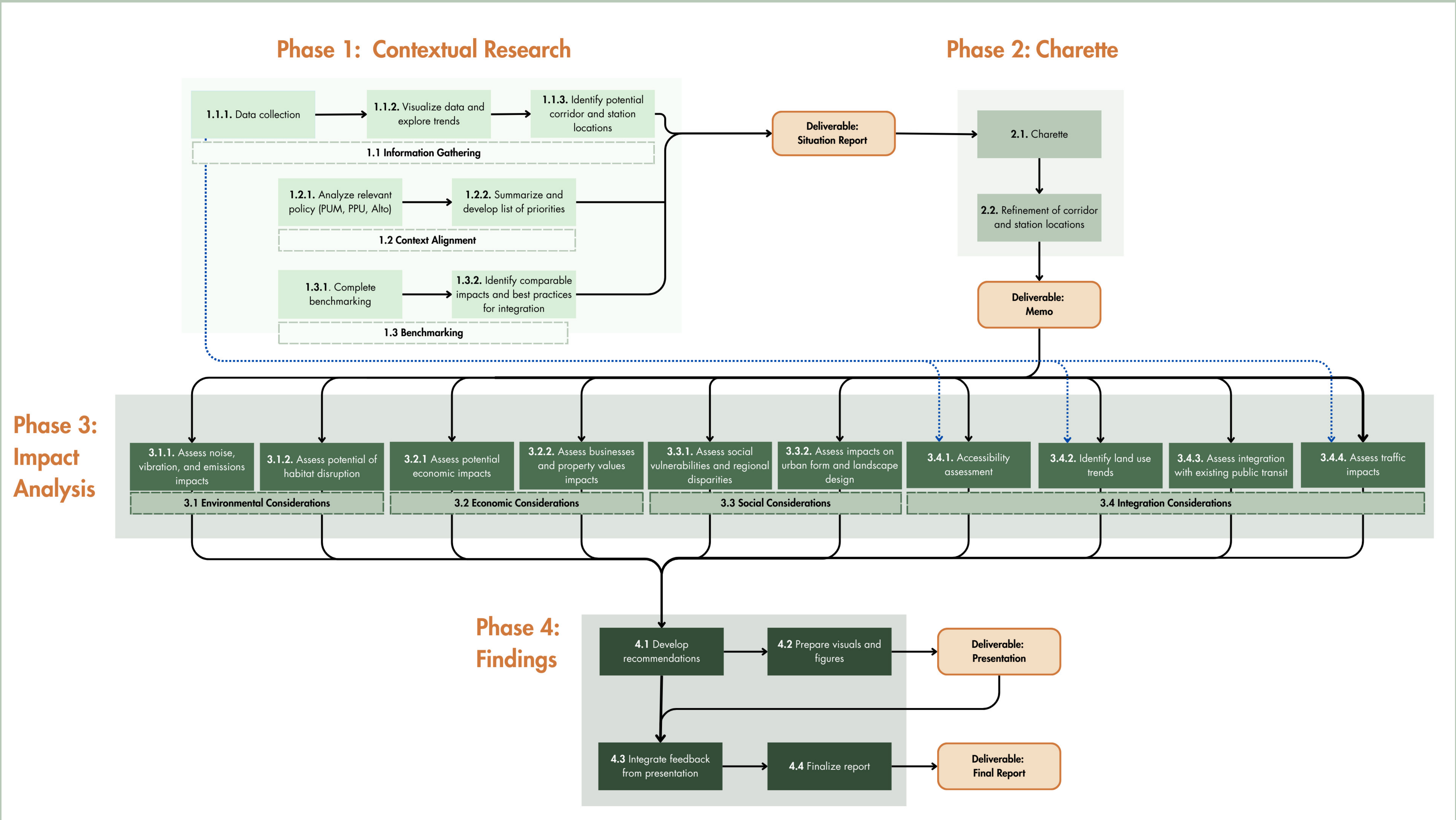
4.3 Finalize report

Prepare and submit final report to the client.

Deliverable:

Final Report

Work Flow



Time Budget

Work Flow			Hours					Deliverable
			Kennedy	Sara	Shade	Yao	Total	
Phase 1: Contextual Research								
1.1 Information Gathering	1.1.1	Data collection	5	5	5	5	20	Situational Report
	1.1.2	Visualize data and explore trends	5	5	5	5	20	
	1.1.3	Identify potential corridor and station locations	4	4	4	4	16	
1.2 Context Alignment	1.2.1	Analyze relevant policy (PUM, PPU, Alto)	5	5	10	5	30	
	1.2.2	Summarize and develop list of priorities	5	5	5	7	22	
1.3 Benchmarking	1.3.1	Complete benchmarking	5	15	5	8	33	
	1.3.2	Identify comparable impacts and best practices for integration	15	5	5	10	35	
Phase 2: Charette								
	2.1	Conduct charette	10	10	10	10	20	Memo
	2.2	Refinement of corridor and station locations	3	3	3	3	12	
Phase 3: Impact Analysis								
3.1 Environmental Considerations	3.1.1	Assess noise, vibration, and emissions impacts	0	3	15	0	18	Findings will be integrated into Phase 4
	3.1.2	Assess potential of habitat disruption	5	7	15	5	32	
3.2 Economic Considers	3.2.1	Assess potential economic impacts	20	35	5	5	75	
	3.2.2	Assess businesses and property values impacts	15	10	15	15	55	
3.3 Social Considerations	3.3.1	Assess social vulnerabilities and regional disparities	5	15	20	20	65	
	3.3.2	Assess impacts on urban form and landscape design	15	5	5	30	55	
3.4 Integration Considerations	3.4.1	Accessibility assessment	20	5	5	5	35	
	3.4.2	Identify land use trends	15	20	10	10	55	
	3.4.3	Assess integration with existing public transit	10	5	10	5	30	
	3.4.4	Assess traffic impacts	5	5	15	15	40	
Phase 4: Findings								
	4.1	Develop recommendations	5	5	5	5	20	Presentation
	4.2	Prepare visuals and figures	8	8	8	8	32	
	4.3	Integrate feedback from presentation	15	15	15	15	60	Final Report
	4.4	Finalize report	25	25	25	25	100	
Total			220	220	220	220	880	

Timeline

Tasks			Calendar												
			Sept. 22 to 26	Oct. 29 to 3	Oct. 6 to 10	Oct. 13 to 17	Oct. 20 to 24	Oct. 27 to 31	Nov. 3 to 7	Nov. 10 to 14	Nov. 17 to 21	Nov. 24 to 28	Dec. 1 to 5	Dec. 8 to 12	Dec. 15 to 19
Phase 1: Contextual Research															
1.1 Information Gathering	1.1.1	Data collection													
	1.1.2	Visualize data and explore trends													
	1.1.3	Identify potential corridor and station locations					★								
1.2 Context Alignment	1.2.1	Analyze relevant policy (PUM, PPU, Alto)													
	1.2.2	Summarize and develop list of priorities													
1.3 Benchmarking	1.3.1	Complete benchmarking													
	1.3.2	Identify comparable impacts and best practices for integration													
Phase 2: Charette															
	2.1	Conduct charette					○								
	2.2	Refinement of corridor and station locations					★								
Phase 3: Impact Analysis															
3.1 Environmental Considerations	3.1.1	Assess noise, vibration, and emissions impacts													
	3.1.2	Assess potential of habitat disruption													
3.2 Economic Considers	3.2.1	Assess potential economic impacts													
	3.2.2	Assess businesses and property values impacts													
3.3 Social Considerations	3.3.1	Assess social vulnerabilities and regional disparities													
	3.3.2	Assess impacts on urban form and landscape design													
3.4 Integration Considerations	3.4.1	Accessibility assessment													
	3.4.2	Identify land use trends													
	3.4.3	Assess integration with existing public transit													
	3.4.4	Assess traffic impacts													
Phase 4: Findings															
	4.1	Develop recommendations													
	4.2	Prepare visuals and figures													
	4.3	Integrate feedback from presentation													
	4.4	Finalize report													★
Total															
Deliverables and presentations															
Situational report	★	October 20th													
Charette + memo	★	October 23rd*													
Report presentation	○	November 25th or 27th													
Final report	★	December 19th													
*date is subject to change based on Saint-Laurent availability															

Curricula Vitae

Kennedy Magee

(kennedy.magee@mail.mcgill.ca)



Profile

Graduate student in Urban Planning with a multidisciplinary academic background spanning planning, sport management, and kinesiology. Experienced in applying GIS and policy research to analyze zoning, transportation, and housing systems. Strong record of leadership and organizational skills developed through prior roles in logistics, research, and employee management. Demonstrated ability in designing urban spaces and developing high-quality visual representations for professional review settings. Brings a unique perspective on urban systems by combining practical operations expertise with data-driven research capabilities.

Education

- Master of Urban Planning, McGill University (2024–Present)
- M.A. Sport Management, Western University (2021–22)
- B.A. Kinesiology, Western University (2015–19)

Selected Experience

- Geospatial Research Intern, Curbcut (2025–Present) – Assisted in developing a nationwide zoning codification framework, digitizing maps, and analyzing urban development patterns across Canada’s largest metropolitan regions. Performed housing policy research and trained colleagues in advanced digitization techniques.
- Administrative Intern, USPORTS (2022) –Developed a bursary program to support Black student-athletes, conducted partnership research, supported brand alignment efforts, coordinated logistics for national athletic events, and contributed to strategic planning for e-sports initiatives.
- Account Manager, Scotlynn Commodities (2019–20) – Managed logistics for up to 40 daily freight loads, coordinating across clients and carriers. Negotiated contracts, optimized operations, and built customer relationships, demonstrating transferable skills in stakeholder management and complex coordination applicable to urban planning projects.

Technical Skills

QGIS, R, RStudio, Adobe Creative Suite, SketchUp, VRAY, Microsoft Office, Google Workspace

Sara Poppel

(sara.poppel@mail.mcgill.ca)



Profile

Graduate student in Urban Planning with a strong academic foundation in economics and applied policy analysis. Brings diverse professional experience across federal government, consulting, and research environments. Adept at analyzing large datasets, conducting cost-benefit evaluations, and drafting high-profile reports for decision-makers. Combines technical skills in GIS and data visualization with strong writing and communication abilities to support infrastructure planning and policy development.

Education

- Master of Urban Planning, McGill University (2024–Present)
- B.A. Economics (Advanced), University of Manitoba, (2018–2022)

Selected Experience

- Business Analyst, Employment and Social Development Canada (2022–Present) – Oversaw the request for proposals (RFP) process for new digital tools, ensuring alignment with organizational goals. Conducted detailed cost-benefit analyses to measure how digital products influence service delivery outcomes. Maintained and streamlined PowerBI dashboards consolidating data from seven databases, enabling executive reporting on service metrics.
- Economic Advisory Intern, Arup (May – August 2025) – Informed Alto’s high-speed rail procurement strategy by conducting in-depth economic research and drafting supporting commercial documents. Developed lifecycle capital expenditure models, prepared due diligence reports, and analyzed project risks. Contributed to bid responses for large-scale infrastructure projects, ensuring compliance with federal procurement requirements.
- Data & Program Analyst, Canada School of Public Service (2022) – Analyzed two years of participant feedback using Excel and Qualtrics to identify trends in course satisfaction. Produced actionable reports and slide decks for leadership, directly informing program improvements and enhancing user engagement.

Technical Skills

QGIS, R, RStudio, SketchUp, PowerBI, Adobe Creative Suite, Microsoft Office, Salesforce, MailChimp, Qualtrics, Canva, Miro

Shadé Chrun-Tremblay

(shade.chrun-tremblay@mail.mcgill.ca)



Profile

Graduate student in Urban Planning with professional and academic experience in urban forestry, zoning research, and equity-focused planning projects. Skilled communicator with demonstrated ability to engage communities, analyze spatial and policy data, and contribute to collaborative research and design initiatives. Dedicated to integrating sustainability, social inclusion, and data-driven analysis into urban planning practice.

Education

- Master of Urban Planning, McGill University (2024–Present)
- B.A. Honours Anthropology, Minor in Economics, McGill University (2019–23)

Selected Experience

- Professional Intern, Ville de Montréal (2025–Present) – Contributed to Montreal’s urban forestry initiatives by supporting emerald ash borer mitigation programs and promoting greening across the city. Coordinated with borough representatives, prepared thematic maps, and monitored progress on tree treatment and removal programs. Advanced efforts to strengthen the urban canopy and enhance climate resilience.
- NASH+ Research Intern, Curbcut (2025) – Supported development of a machine-learning predictive model for the federal government by compiling and standardizing zoning data across Canada’s ten largest CMAs. Processed and transformed spatial datasets using GIS and R. Conducted policy research and tested LLM tools to inform model assumptions, directly contributing to nationwide housing policy research.
- Research Assistant, Montreal Urban Ecology Center (2021–23) – Worked in a interdisciplinary team on ‘School Streets’ and ‘Play Streets’ projects to create safer, more inclusive public spaces for children. Conducted surveys, recruited families, performed data analysis, and co-authored a peer-reviewed article in the International Journal of Public Health.

Technical Skills

QGIS, R, RStudio, Adobe Creative Suite, SketchUp, Microsoft Office, Google Workspace

Yao Fu

(yao.fu@mail.mcgill.ca)



Profile

Graduate student in Urban Planning with a strong academic and professional foundation in transportation planning, housing policy, and GIS-based research. Experienced in delivering applied planning solutions through both academic and professional roles, with a focus on sustainable mobility, equitable housing, and policy evaluation. Skilled at combining technical spatial analysis with clear, well-structured deliverables, including reports, presentations, and teaching materials.

Education

- Master of Urban Planning, McGill University (2023–Present)
- B.A. Urban Studies & Planning, UC San Diego, (2018–22)

Selected Experience

- Planning Intern, McGill Campus Planning & Development (2025) – Supported institutional transportation planning by developing plans to integrate McGill campuses with the Réseau Express Métropolitain (REM). Researched the legality of parking facilities under city bylaws and created inventories of rainwater management and bicycle parking assets using GIS. Produced professional reports and presentations for internal stakeholders.
- Staff Research Associate, Homelessness Hub, UC San Diego (2021–23) – Conducted academic research on housing precarity and transportation access in San Diego County. Wrote and co-authored policy briefs and reports distributed to local decision-makers. Developed and maintained a registration database for eviction prevention programs and mapped housing and transportation assets using GIS.
- Research Assistant, Homelessness Challenges (UCSD) (2021) – Evaluated the effectiveness of a Safe Parking Program for individuals experiencing homelessness. Conducted statistical analysis of client data using R, producing findings that informed municipal housing strategies.

Technical Skills

ArcGIS Pro, QGIS, R, RStudio, Rhino3D, Adobe Creative Suite, Survey123, Microsoft Office, Google Workspace, Apple iWork,