Request for Proposals

Discussion Paper: Artificial Intelligence and Transportation in Canada

1. Introduction

Across Canada's road, highway and urban transportation sector there are effective applications of artificial intelligence (AI) in planning, traffic engineering, road safety and asset management. These successes show AI's potential to improve data collection, analysis, operations and decision making in a way that augments engineering judgement and practice.

Due to the rapid advancement of AI and the generic yet highly technical nature of much AI-related information, many transportation stakeholders experience significant gaps in their understanding of AI and its implications for their organizations, and for themselves as practitioners. To bridge those gaps, the Transportation Association of Canada (TAC) is seeking the services of a consultant to prepare a discussion paper on AI and transportation in Canada that will enable TAC's stakeholders to understand and capitalize on major opportunities related to AI, while helping them mitigate major challenges, risks and uncertainties.

2. Objectives and deliverables

The main project deliverable will be a report 40 to 50 pages long that is accessible to professionals and decision makers from a variety of backgrounds, and that has been professionally edited. The consultant will also deliver a 20- to 30-minute presentation as part of a national webinar.

The objectives of the discussion paper and webinar will be to:

- Briefly define the major types and uses of AI.

- Identify current and potential future applications of AI for roads, highways and urban transportation within TAC's six focus areas: (1) infrastructure and asset management; (2) safety, design and operations; (3) environment and climate change; (4) mobility; (5) technology; and (6) workforce development.

- Identify current and potential future applications of AI for administrative purposes that may be of particular interest to governments and businesses in the road, highway and urban transportation sector.

- Identify and explain current and potential future challenges, uncertainties and risks that AI poses (e.g. governance, data needs, privacy, security) for TAC stakeholders in various contexts (e.g. provincial vs. municipal governments, urban vs. rural environments, capital project delivery vs. operations).

- Offer short profiles/case studies from Canada and elsewhere that illustrate successful applications and important issues.

- Recommend key strategic and operational directions for TAC stakeholders in government and business environments.

- Suggest possible areas of endeavour for TAC's volunteer councils and committees.

The successful consultant will be supported by an advisory committee of several volunteers from TAC's network who will review and comment on key deliverables (i.e. annotated outline, 50% draft, 100% draft, webinar presentation deck). The consultant will be expected to participate in online meetings of the advisory committee to discuss members' input, and to incorporate helpful feedback.

3. Schedule

Proposals should include a project schedule that enables high-quality deliverables and ideally reflects the following milestones – although differences with an explanation are welcome:

- Contract award & project kickoff meeting ....January 2025
- Submission of annotated outline & advisory committee meeting..March 2025
- Submission of 50% draft report & advisory committee meeting .... May 2025
- Submission of 100% draft report & advisory committee meeting .... July 2025
- Submission of final report...September 2025
- Delivery of TAC webinar.. November 2025

4. Budget

This project's maximum budget is $50,000 for all fees and expenses, not including applicable taxes. Proposals exceeding this budget will be disqualified, and TAC will not accept invoices for cost overruns (fees or expenses) associated with the original scope of work.

Proposals are expected to be fixed-price with a detailed cost breakdown, and price will not be a factor in their evaluation. Invoices must link billing amounts to the partial or full completion of major tasks; to support TAC's year-end protocols, all work to March 31, 2025 must be billed by that date.

5. Proposal Requirements

Proposals should provide the following information:

- **Project understanding.** Demonstrate a clear understanding of the project's scope and objectives, and suggest priority topics to be addressed in the report. Describe any challenges that might be encountered in its execution, and propose measures to overcome them.

- **Consulting team.** Identify a project leader and individual team members, including a designated writer/editor. Describe the qualifications and proposed role of each person, including any experience in developing communication materials for non-experts on specialized transportation topics.

- **Approach.** Describe the proposed major tasks (e.g. research, consultation, analysis) to meet the objectives discussed in Section 2, and propose hours and fees for each team member by task. Propose a schedule with key milestones.

- **References.** Identify up to three organizations for which senior members of the consulting team have conducted relevant projects. For each organization, provide the name and contact information of the individual responsible for project oversight. TAC reserves the right to request additional references.

- **Conflicts of interest.** Disclose any financial or organizational conflicts of interest in conducting the project; for example, the proponent's ownership, relationships or proprietary rights and interests could be perceived as jeopardizing its objectivity. Identify mitigating strategies for any conflicts.

Permitted proposal contents include:

- A covering letter not more than two pages long

- A table of contents

- A main body not more than 10 pages long (using 12-point, single-spaced text and one-inch margins)

- Additional pages for:
  o Project cost breakdown (one page)
  o Project schedule, if desired (one page)
  o Project team organization chart, if desired (one page)
  o References
  o Conflict of interest declaration

- Team member résumés (each not more than four pages long)

Note that any material exceeding these scope and length parameters will not be evaluated.

TAC's Project Manager (see Section 7, below) must receive a PDF version of the proposal by email **no later than 13:00 ET on January 15, 2025.**

Email any questions regarding this Request for Proposals to TAC's Project Manager **by December 11, 2024.** Addenda with responses will be posted to the RFP page on TAC's website as soon as possible, but **not later than December 18, 2024.** Note that proponents are responsible to check TAC's website for addenda.

6.   Evaluation

Proposals will be evaluated using the criteria listed below. TAC may invite selected proponents to participate in a virtual interview.

Evaluation Criteria	Weight
Understanding of the project's scope, objectives & deliverables	20
General approach, methodology & work plan	20
Demonstrated qualifications, experience & competence of project leader	20
Demonstrated qualifications, experience & competence of other team members	15
Proven ability to write & edit communication materials for non-experts on specialized topics in transportation	20
TAC involvement & experience of team members (e.g. technical projects, volunteer activities)	5

TOTAL >   100

7.   Project Administration

- A contract for consulting services will be established before work can begin.
- TAC's Project Manager will be the liaison between the consultant and the volunteer advisory committee.
- The working language for this project is English.
- TAC will record and distribute meeting minutes.
- TAC will provide a secure online platform for sharing documents.

For more information, contact Romaine Morrison, Program Manager at rmorrison@tac-atc.ca.