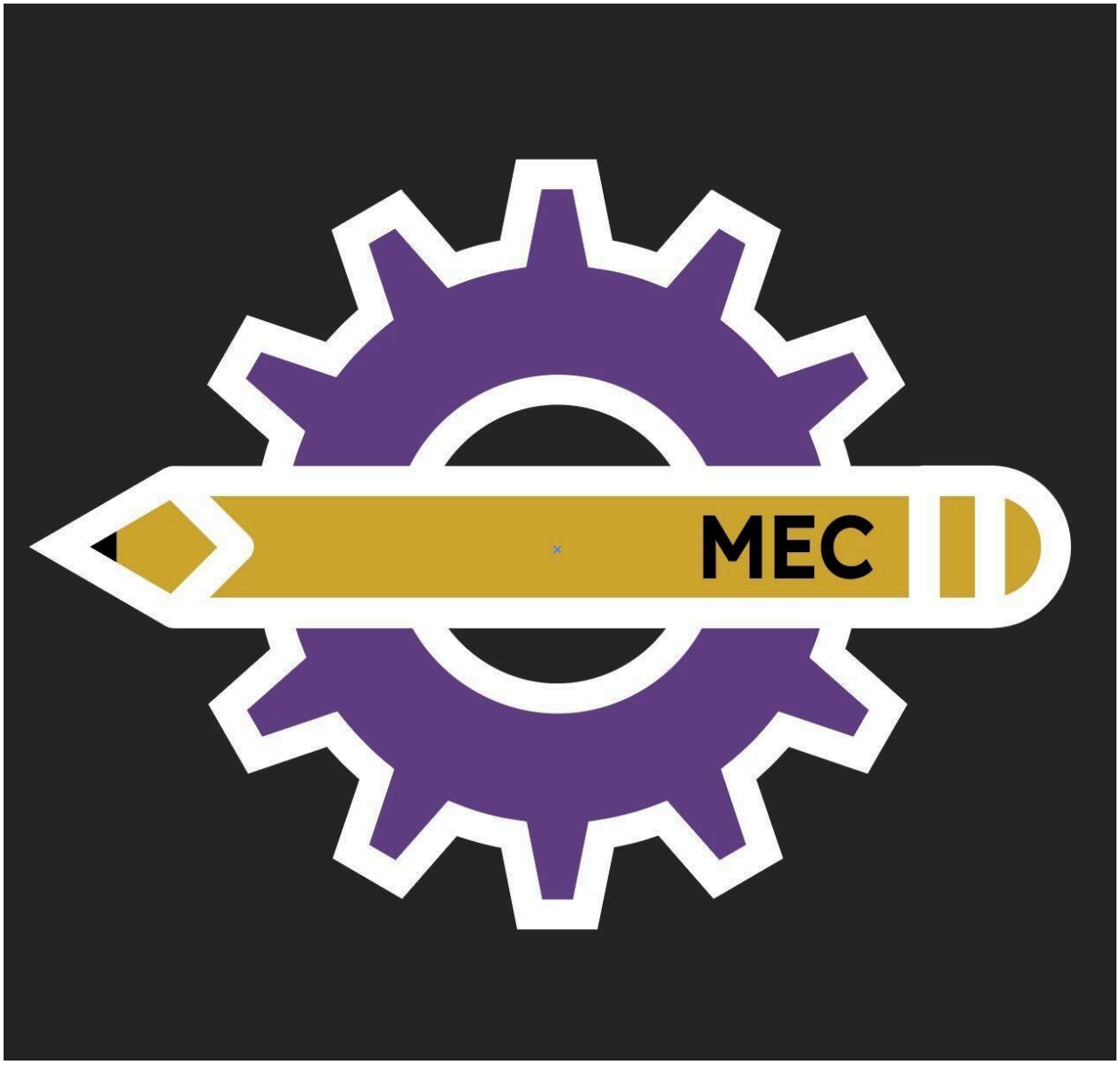

Toronto Metropolitan University Consulting Competition 2024: Fall

Abstract

Background:

Urban transportation systems in growing cities like Toronto face ongoing challenges with traffic congestion, safety concerns, and environmental impacts. Efficient management of urban transportation is critical to reducing greenhouse gas emissions, improving public safety, and ensuring reliable commutes for city dwellers. Addressing these issues requires innovative, data-driven solutions that leverage modern technologies to create sustainable, safe, and efficient urban mobility systems.

This competition focuses on developing a smart traffic management system that can dynamically adjust to real-time traffic conditions, reduce congestion, and minimize environmental impact. The proposed solution should prioritize sustainability by encouraging eco-friendly travel behaviors, promote safety for all road users, and enhance the reliability of urban transportation. Additionally, the system must consider its social and economic impacts, ensuring that it is accessible, equitable, and scalable across different urban environments.

Challenge:

Design a smart traffic management system that improves urban transportation by optimizing traffic flow, reducing congestion, and enhancing safety. Your solution should integrate eco-friendly practices, such as prioritizing low-emission vehicles and promoting public transportation and non-motorized travel. The system must leverage real-time data (e.g., IoT sensors, GPS, and traffic cameras) to dynamically adjust traffic signals, reroute vehicles, and ensure reliable travel times, especially during peak hours. Ensure that your solution considers social equity by addressing underserved communities and provides a scalable approach that can be adapted to different cities.

Layout & Requirements:

1. A presentation (maximum 20 minutes, followed by a maximum 10 minutes question period by judges)
2. A report (less than 10 pages) explaining and justifying the solution with proper referencing (APA Format).

Judging Matrix		
Introduction to Topic	Topic and Background Clearly Presented	/10
	Understandable Language	/5
	Interest Elicited by Topic	/5
	Accuracy of Explanation	/5
		/25
Critical Analysis	Environmental, Social and Economic Analysis	/15
	Quality of Arguments	/15
		/30
Presentation	Voice, Articulation and Timing	/10
	Visual Aids	/10
	Response to Questions	/10
		/30
Written Abstract	Content Quality	/5
	Contains all key presentation information	/10
		/15
Deduction Total		
Total	/100	

Point Penalties	
Plagiarism	Elimination
Insufficient Citation	-50
Documents Received After Deadline	-50
Absent Team Member	-25
Under-use of time greater than 3 minutes	-5/minute
Abstract Specifications not followed	-10
Total	