

Name of Project: Development of Micromobility Adoption Plan for Canadian Cities

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## Project Description

Micromobility, referring to compact, lightweight vehicles with velocities lower than 30 km/h and driven personally by road users. It is a low-emission mode of transportation that offers benefits in the areas of health, time, cost, safety, congestion, air & noise pollution, and energy security. With their compactness and portability, they prove more efficient in short-distance urban commutes. The micromobility industry is quickly emerging, and bike share services have seen exponential growth of more than 15,000% from 2005 to 2019. Much of the market activity is based in Asia and Europe, with North America beginning to experience growth but still significantly smaller in size. Service providers include Lime and Bird, international companies operating all-across Europe, in Australia & New Zealand, a few locations in the Middle East and Latin America, as well as operations here in Canada.

Our project looks to analyse currently implemented micromobility systems both across Canada and internationally, gathering data from key and emerging firms in the industry, investigating usage data and rider behaviour, while also exploring successes in the advancement of sustainability goals as well as the challenges and barriers faced by current players in the market. The goal of our project is to design a generic template for the adoption of micromobility solutions in urban cities aimed at use in Canada. The aim is for our template to serve as a guideline and recommendations to cities in creating an environment for and encouraging the adoption of sustainable and efficient alternative transport options. We believe micromobility can be used to create an alternative/complement to current public transport systems through shared mobility, Mobility-as-a-Service(MaaS), and that technologies like connected e-bikes could pave the way to developing smart cities. We will look to work together with the governing regulatory bodies alongside the market firms in these cities to collect our data. Together we will conduct an historical analysis of the regulation changes and additions, as well as the city planning process in respect to the infrastructure development necessitated by the adoption of micromobility modalities.

Our project encompasses the study of an emerging market in the field of transportation as well as housing enormous potential for the development of sustainability practices. It provides an opportunity for study by students in the areas of environmental science, business, finance, economics, engineering, social studies as well as areas like city planning and sustainable development, also with potential for exploration by many other fields of study. It serves as a

unique opportunity to study the emergence of a new urban market, giving us the chance to examine its effects both economic and social by looking at its establishment, drivers of growth and its hinderances.

Our plans align with the initiatives of our local government (The City of Kamloops) with their encouragement of Electric Bikes and Vehicles, as well as our university's Campus Strategic Sustainability Plan. It relates to Priorities 1, 5 & 6 of the plan. Creating an environment suitable for the introduction and use of low-emission, low pollution e-mobility options will advance the sustainability performance of the campus environment as well as taking the university a step closer to its goal of a carbon neutral and net-zero campus making use of sustainable transport options. In gathering our data, we will also be connecting with other universities that have successfully implemented such systems, such as the University of Fraser Valley (UFV) and the University of Southampton, to gather their insights and perspectives on the field. This collaboration will establish our university as a global sustainability leader through inter-campus collaboration.

Our team is still in formation and currently comprised of a UK based robotics specialist, Dennis Majoe, a professor at UFV, Afia Raja, a TRU Finance professor, Zubair Raja, an alumni member (TRU), Taona Gadzikwa and myself. We currently have yet to select the cities we will be travelling to conduct the research and the methodologies we will make use of and as such are still in the process of constructing our budget. We aim to conduct our research and construct a template document over the course of a year. Following the creation of the document, through close collaboration with the local government, we wish to use it to implement a pilot project in the City of Kamloops and analyse its progress over the course of another year. The basic structure of our guideline documents will include the elements below:

#### Project Plan Template Details

- City Scan/ Layout planning
  - Type of micromobility model
- Infrastructure
- Regulations
  - Creation &/
  - Deregulation
- Awareness Campaigns
  - Ridership perception
- Implementation plan
  - Staged Introduction
    - By City Zones/districts
    - By vehicle type