

Summer 2022 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Initiative (USI) is pleased to offer current UBC graduate students the opportunity to work on funded sustainability internship projects. Successful candidates work under the mentorship of a partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing sustainability across the region.

- Visit the [Sustainability Scholars Program website](#) to learn [how the program works](#) and to [apply](#).
- Be sure to review the [application guide](#) to confirm your eligibility before applying.

Applications close at midnight on Sunday January 30, 2022.

Project title: Understanding the Impacts of Urban and Invisible Freight

Project Background & Overview:

Goods movement remains an essential part of life in Metro Vancouver that connects people to goods and services on the local, regional, and global scale. Over the course of the pandemic, urban freight deliveries in the Metro Vancouver region have grown rapidly. This sector includes both traditional logistics companies (such as DHL and Canada Post), which have benefitted from growing reliance on e-commerce, as well as the invisible urban freight sector, which can be gig-based and operate out of unmarked passenger vehicles or vans (e.g., Skipthedishes, Amazon Flex and UberConnect deliveries).

As these deliveries may not require a business license, may be ineligible for Commercial Loading Zone permits, and are difficult to discern from passenger movements, there is a lack of data on who conducts these deliveries, by what mode, and where and when these occur. The cumulative impacts of this “invisible freight” sector on congestion, emissions, and safety pose a challenge for evaluating, managing, or pro-actively responding to issues.

Municipalities currently have little to no visibility on this sector. Municipalities lack information about where vehicles are going, including vehicles operating across municipal boundaries, how many vehicles are operating, typical operational practices (hours, how long deliveries take, etc.), types of vehicles being used for deliveries (e.g., personal cars, micromobility, electric vehicles) and level of demand on curbspace, among other data of interest to municipalities and regional agencies for planning purposes.

This lack of data and the multijurisdictional nature of goods movement limits the ability of municipalities to effectively plan and manage this sector, including to incentivize lower emissions deliveries, prioritize curbspace and road space access, develop infrastructure to support safer and more efficient loading and unloading, and recover costs to the municipality.

With continued growth of this sector, understanding the impacts of urban freight on curbspace, congestion and emissions will help inform potential interventions to manage these impacts in ways that help achieve local and regional objectives.

Project description

This project aims to gain an initial understanding of the urban freight sector and its impacts from a local government transportation perspective. The key research questions of this project are:

1. Who are the entities that are responsible for urban and invisible freight movement in urban centres?
2. What modes do they rely on and in what urban contexts are more sustainable modes deployed?
3. What impacts do they have on other road users, including drivers, transit vehicles, cyclists, pedestrians?

Project scope

This project will involve both desktop research as well as collection of primary data to understand how urban freight operates in our region and the associated impacts. The tasks associated with this role include:

- **Research into urban freight and invisible freight:** Conduct desktop research to understand how urban and invisible freight have impacted other major cities.
- **Stakeholder identification:** Conduct desktop research to understand which companies are known to be operating in the urban freight sector in this region and what is known about their operations both locally and internationally. Develop an inventory of these businesses by type of service and operations.
- **Study Design:** Design an observational study to understand freight vehicle behavior in 3 to 6 urban centre locations across the region. The study will include everywhere along the curb as well as the parking activities of all vehicles (including passenger vehicles) in commercial vehicle loading zones. The study will document:
 1. Number of pick-ups and drop-offs
 2. Vehicle type (size, mode, fuel type, marked or unmarked)
 3. Company
 4. Stopping location (e.g., at legal curbs, metered parking, passenger loading zones, etc.) and duration
 5. Type of goods delivered (meal, package, groceries, etc.)
 6. Types of vehicles parked in commercial loading zones and duration

Designing the study will include:

- Reviewing the research framework developed by the University of Washington's Urban Freight Lab (UFL) which has recently completed similar studies, to gather lessons from their experience in Seattle¹. Meet with the UFL team to seek guidance and advice on this initiative.
- Working with mentors to develop site selection criteria.
- Meeting with municipal staff to review and assess proposed sites.
- Applying statistical methods and lessons from past research to determine observational times and methods (video versus human).
- Preparing maps and data collection forms and procuring equipment as needed (a budget will be provided by TransLink).

¹ [Final-50-Foot-Tracking-Curb-Use-in-Seattle.pdf \(washington.edu\)](#)

SUSTAINABILITY SCHOLARS PROGRAM

- **Conducting the study:** Conduct the observational study, based on the design, either in person or using cameras. Although duration is to be determined, the Seattle project observed 5 locations for 3 days each. It is estimated that the observational work, if conducted in person, will comprise between 70-100 hours per scholar (20%-30%).
- **Analysis of results:** This step involves digitizing and cleaning the data, developing summary statistics of the results, identifying data gaps, and creating a set of recommended next steps for further research.

Deliverables

- Excel spreadsheet with tabulated data and data summary tables.
- A final report containing a summary of the work completed.
- A final report for the online public-facing Scholars Project Library.

Time Commitment

- This project seeks **two** scholars for **350** hours each.
- This project must be completed between **May 2 and August 12**.
- The scholar is to complete hours between **8:30 AM – 4:30 PM** approximately **30** hours per week.
- If applicable, list dates of any mandatory meetings, etc.

Required/preferred Skills and Background

- Excellent research and writing skills
- Demonstrated interest in sustainability
- Experience conducting stakeholder engagement events, including facilitation skills, is an asset
- Familiarity with research methodologies and survey techniques
- Statistical analysis
- Community engagement experience
- Strong analytical skills
- Ability to work independently
- Deadline oriented
- Project management and organizational skills
- Strong technical and drafting skills
- Comfortable interacting with strangers to conduct public/in person surveys
- Successful candidates must be able to travel to transit accessible locations for data collection

Applications close **midnight Sunday January 30, 2022**

Apply here: [Click here to apply](#)

Contact Karen Taylor at sustainability.scholars@ubc.ca if you have questions

Useful Resources

We are holding a special **resume preparation workshop for prospective Scholars** on January 19. [Click here for details and to register.](#)

Below are some links to useful resources to help you with your resume and cover letter (there are many more online). Some of these resources also provide information on preparing for your interview.

<https://students.ubc.ca/career/career-resources/resumes-cover-letters-curricula-vitae>

<https://www.grad.ubc.ca/current-students/graduate-pathways-success>

<https://www.grad.ubc.ca/cover-letter-cv-resume-templates-ubc-career-services>