SUN

Sustainable Urban Networks

*MISSION STATEMENT*

Sustainability means making Vancouver great for everyone not just today, but for future generations. There are three important factors to consider for urban sustainability—social progress, economic development and climate awareness. Our proposed application will contribute to all three of the areas. For social progress, it is important to consider social inclusion and social exclusion. In essence, social exclusion refers to the fact that some group of people are isolated from urban services or opportunities. The most typical areas where social exclusion takes place are areas with the lowest income in the city. For low income families, they may not have the resources to own a vehicle. In order to alleviate or prevent social exclusion, various solutions can be used since it is caused by many different reasons. Among them, we are interested in preventing physical or spatial exclusion through this app. Physical exclusion means that some citizens are physically isolated from important urban facilities. Mobility within the city is a crucial factor for making sustainable communities. Without supplying proper transportation infrastructure, like roads and public transit, there will be citizens who are excluded. In a sustainable community, all citizens should be able to access important urban services, regardless of their age or socioeconomic status. Therefore, public transit has an important role and is the most suitable means of transportation for all citizens.

It is important to also consider the other two pillars of urban sustainability—economic development and environmental consciousness. If we can improve the way people access services and employment, we can also potentially improve productivity. Transportation of people and goods is a key economic factor in developed countries. Improving the transportation infrastructure will lead to improvements in the economy. In addition, we can isolate problematic areas for transportation and implement new policies to improve the situation. Reducing transit route times would lead to a reduction in traffic congestion and, thus, a reduction in emissions.

Our group would like to show the performance of regional public transit compared to private car use. We focused more on practical characteristics by using real travel time data instead of comparing the supply level of public transit facilities. We can compare the difference in accessibility on the real-time basis for the specific origin-destination. The more time differences there are between a specific origin and destination, the more unfavorable it is for an individual with no access to their own vehicle. We can also compare the area that can be reached within a specific time for each location by transportation mode. This allows us to confirm access to other areas from all origins. Finally, we can use this app to identify differences in access by means from all unit areas to a certain destination. For the application, we have used elementary school boundaries by downloading the files from Vancouver’s open data.

Our basic target is policymakers and city planners responsible for shaping the future of Vancouver. SUN can be used as a tool to determine spatial exclusion of people in certain neighbourhoods within the city limits. It can quickly pick out areas that make travelling from that neighbourhood to the rest of the city not feasible. They can take advantage of this app when considering the location of new public housing or additional transportation facilities. Since the app is built primarily on the GPS routing feature, ordinary users can also use it as a reference when searching for routes or deciding where to live.