

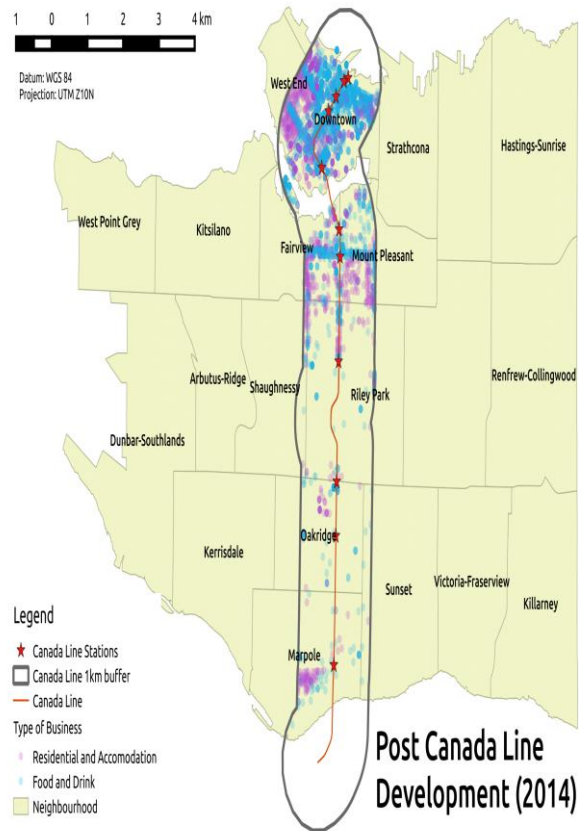
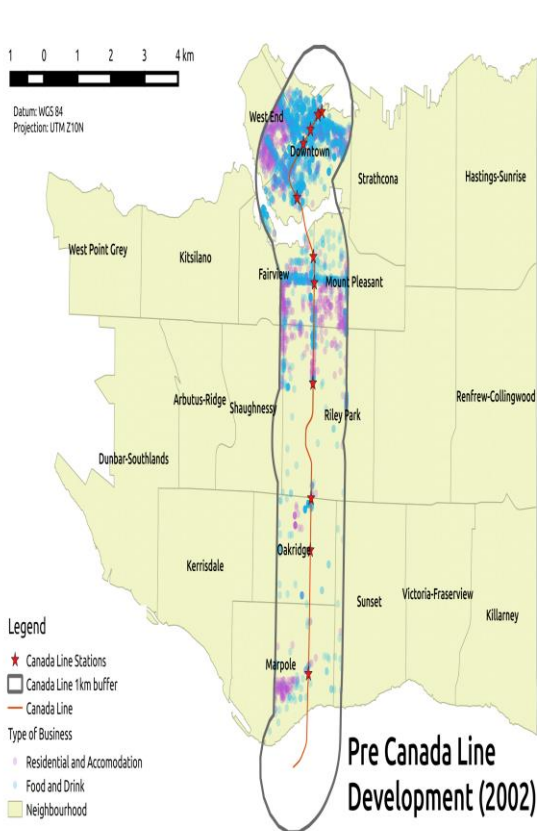
Effect of Canada Line on Businesses along the track in Vancouver

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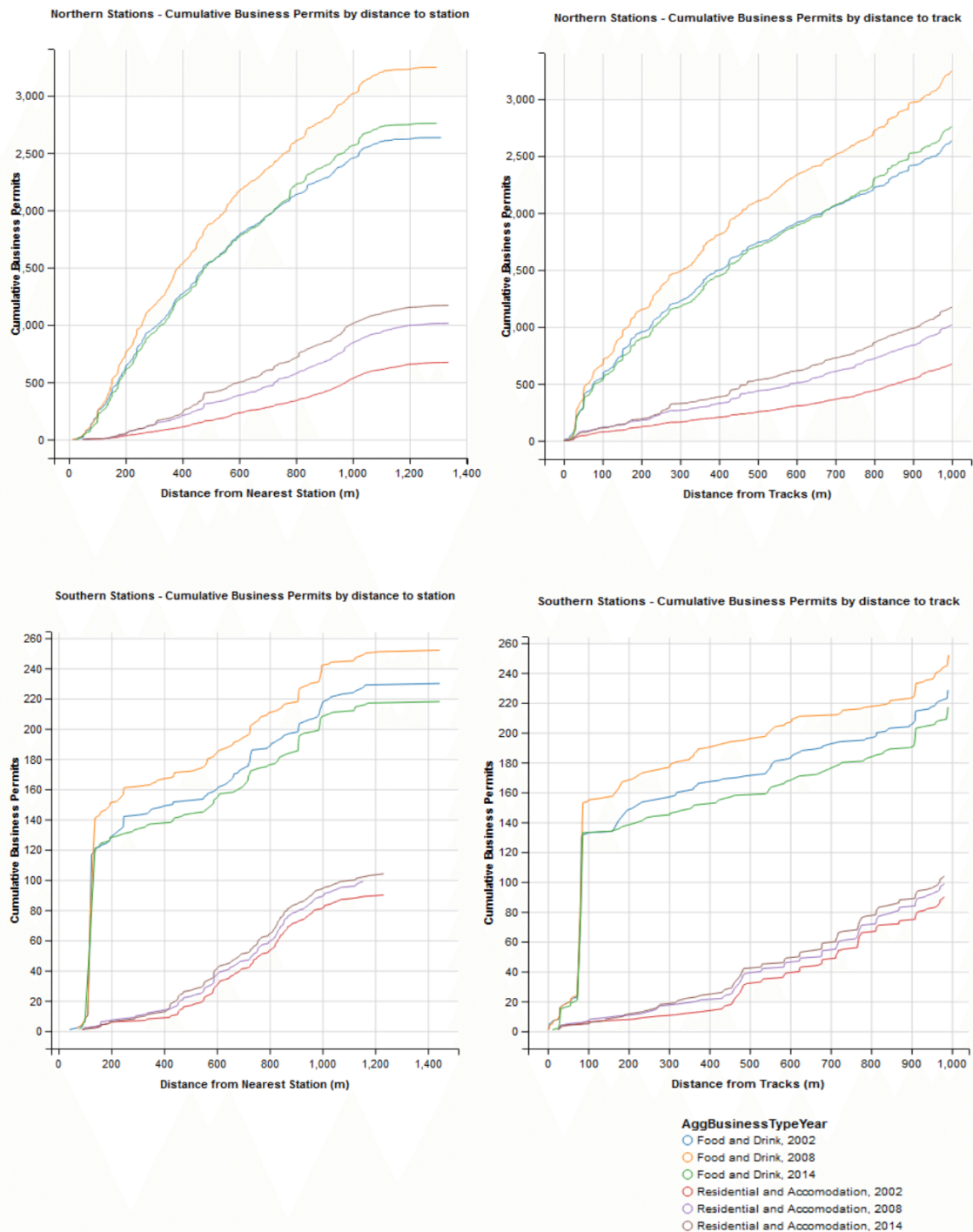
We chose to look at how construction of the Canada Line has impacted the distribution of businesses in Vancouver. With construction of the Canada Line, residents living in areas along the new Skytrain line benefit from having access to the rapid transit system. We hypothesised that the increase in public transportation for these relatively more difficult to reach areas should stimulate the creation of more residential type businesses, as well as restaurants, bars, and food retailers that serve a local population.

We find that the construction of a new Skytrain line makes the surrounding area more attractive for investment, which initially stimulates a rush of new residential, and food/drink business investment in the surrounding area. However, due to the very different nature of the residential and food/drink market in Vancouver, the market forces dictate very different outcomes for the two types of businesses after the line is built.

For our exploratory analysis, we used Google Map API to geocode observations so we can find ones that are close to the train line. Because this is very time intensive, we selected only 2002, 2008, and 2014 to get a snapshot of the business distribution before, during, and after the line announcement/construction. We separated all the businesses into 3 groups, which are Residential and Accommodation (Res), Food and Drink (Food), and others.



We notice a significant increase Res businesses in the area north of King Edward Station. To look this in more details, we included graphs that gives the cumulative number of Res and Food businesses that are a function of their distance to the nearest station, and track. Northern stations are ones North of Oakridge 41st, and Southern are the most southern 3 stations.



We compare our results against all other businesses type in Vancouver to put them in context of the macro-economy during the period.

We compare the 6 year percentage changes in the 3 business categories, for businesses close to a station and those that are not. The table below marks businesses that are close to a station with S, and those that are not with N.

Delta Year	Drink S	Drink N	Res S	Res N	Other S	Other N
02 -> 08	0.22	0.16	0.46	0.056	0.05	0.06
08 -> 14	-0.15	-0.15	0.14	0.016	0.12	0.16

We see that the highest business growth comes from Res businesses near the station, which are much higher than Res growth in rest of Vancouver. In fact, Res growth in rest of Vancouver is on par with business growth in general in most of Vancouver. Food businesses seems to have contracted during the period of 2008 to 2014, while most other business grew by more than 10 percent.

The data suggests the residential market, like housing, is looking for any new opportunities for investment. The 02 to 08 growth mirrors the housing bubble, as population growth was only around 6% during the period. Even after the crash, new Res are still seen as good investment. As for Food, the restaurant market is near perfectly competitive, and the initial rush for new investment at perceived prime location gives away to survival of the fittest.