

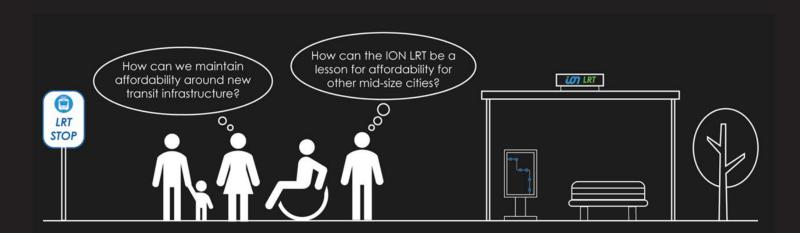




As a group of students who have all lived in the Region of Waterloo, we have witnessed and/or experienced some of the major changes brought on by the introduction of the ION light rail transit (LRT) project. These changes are beyond that of the urban form, as the ION has induced substantial economic, political and social change. The two planning students are emerging experts in gentrification, whose research focuses on transit-induced gentrification. As we began to see patterns of transit-induced gentrification occurring in our own backyard, we were motivated to form a group with another student who has a systems-mapping background, to further explore this issue.

Map the System offers the opportunity to address a complex issue happening in a city that we've all called home, and that the planning discipline frequently refers to as "messy" due to its complexity and lack of a "one size fits all" solution. Through this project, we address the following questions:

1) how do we maintain affordability around new transit infrastructure? and 2) how can the ION LRT be a lesson for affordability for other mid-size cities?





Methodology

We conducted an in-depth analysis of secondary data, including media articles and academic literature, to gain necessary background information and to develop an understanding of the impacts of transit-induced gentrification in other North American cities. We also performed a policy and media analysis to flush out key stakeholders and potential policy change avenues.

We are privileged to have team members in the School of Planning at the University of Waterloo, as they are surrounded by knowledgeable students and faculty members who are researching the LRT, the Waterloo Region, and gentrification. Through these relationships, we obtained both data and professional insights about the subject, which were integrated into this project.

Potential Limitations

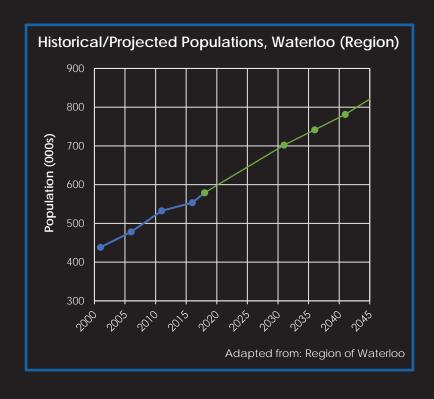
As with all secondary data analysis, there is the potential for human error carried out by the primary researcher.

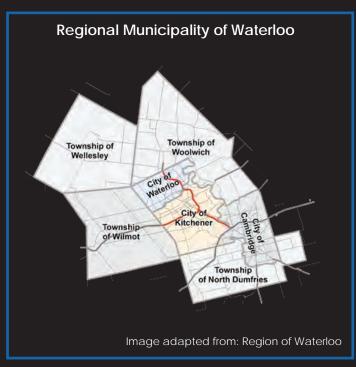


Introduction

Waterloo Region

The Region of Waterloo is a mid-size municipality in Southwestern Ontario, and comprises seven lower-tier municipalities: the cities of Cambridge, Kitchener and Waterloo, and the townships of North Dumfries, Wellesley, Wilmont and Woolwich. Altogether, the Region's population in 2016 was 535,154, with almost 90 percent of residents located in the "tri-cities" of Kitchener, Cambridge and Waterloo (Statistics Canada, 2017a; 2017b). The Kitchener-Cambridge-Waterloo Census Metropolitan Area (CMA) is the fastest-growing urban area in Canada (Statistics Canada, 2020), and is on track to meet its provincially-set growth target of 742,000 by 2031 (Province of Ontario, 2019). This growth has occurred alongside considerable changes to the Region's economy - many of which can be attributed to Kitchener's booming technology sector.





Light Rail Transit

Waterloo Region began its journey with rapid transit in the mid-1970s, when the idea of a "transit corridor" was identified in the Official Plan. At the time, the Region's unique political structure - a

council of elected (rather than appointed) officials - allowed for a shared Regional vision, which emphasized limiting sprawl to protect the countryside, and improving transportation to facilitate future population growth. However, this idea did not materialize until the 2000s. response to the back-to-the-city movement and shift in planning policy towards models of recentralization (Filion, Kramer & Sands, 2016). Over the next decade, the Region worked to secure funding for the project, and chose LRT as the preferred transit option (Banger, 2019). In June 2011, the project stages and route were approved by Council. Our study examines Stage 1 of the project - the 19-kilometre LRT line that connects Kitchener and Waterloo - which was constructed between 2014 and 2018, and has been operational since June 21, 2019 (Banger, 2019).



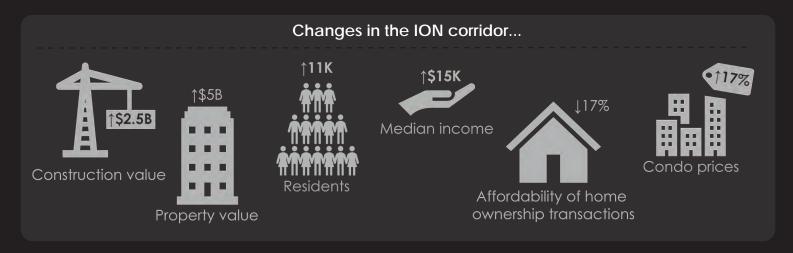
Land-Use Change

Since the project was approved, the land along the route - the central transit corridor (CTC) has changed dramatically. According to the Region's annual monitoring report for the year 2018 (2019), the CTC has seen more than \$2.5 billion in new construction value since 2011, and was anticipated to reach \$3.2 billion by the end of the year. This new construction value has materialized in the form of dozens of residential and commercial development and redevelopment projects, being constructed primarily in the cities' downtown cores.

Increased developer interest in the CTC is reflected in Tran (2016) and Antanitis' (2015) interviews with developers, planners and politicians, as respondents described the LRT as a symbol of municipal commitment to downtown revitalization, and because it will attract and retain new residents. Further, Cook's (2019) interviews with realtors found that primarily young professionals and older adults are buying new units in the CTC, and are willing to pay a premium to do so. Several studies have explored housing market change in the CTC using hedonic modelling, including Babin (2016), who found that homebuyers (of single- and semi-detached, duplexes, and townhomes) are willing to pay a premium when multiple intensification amenities (e.g. transit access, public open space access, walkability) are present. Increased demand for CTC-living is reflected in rental and condo purchase prices, as rental and purchasing premiums in the CTC are estimated at 7 percent (Pi, 2017) and 17.2 percent (Huang, 2019), respectively. As residential - primarily high-rise

condo - development projects continue to reach completion and new residents - primarily young professionals and retirees - continue to move in, the demographics of the area will continue to change, further gentrifying the CTC.

With the above in mind, it is important to understand that the process of gentrification is fueled by small "micro" decisions implemented by key stakeholders (Purpose Built Communities, 2019). What this means is that the process through which gentrification begins is often subtle, indicative of a wide range of potential small impacts in the system that can lead to larger changes (Purpose Built Communities, 2019). In the case of the CTC, gentrification was not an intended outcome. However, key oversights throughout LRT implementation have created the gentrified state of the CTC.



Transit-Induced Gentrification

The integration of the term "transit-induced gentrification" into the greater discussion of gentrification is new, and brings together definitions of gentrification that focus on economic change into discussions of transit planning. Over the past decade, metropolitan areas and increasingly second-tier cities have positioned transportation as a tool for economic growth (McLellan & Collins, 2014). Areas previously considered "undesirable" are facing sudden influxes of capital for their proximity to transit or their potential to join existing transit routes (Deka, 2017; Dong, 2017). Further, research is beginning to connect public transit infrastructure to neoliberal planning approaches that market new transit as an amenity aimed to attract inward investment, rather than a necessary public good (Culver, 2017; Danlyuk & Ley, 2007). This approach implies that rather than addressing lower-income neighbourhoods without accessible or affordable transportation, new infrastructure is being installed in neighbourhoods that already have viable transit (Culver, 2017). This literature has also drawn attention to the growing inequality between types of public transit, as these planning approaches focus on more "trendy" modes like streetcars or LRT (Deka, 2017) and largely ignore buses, since they are viewed as travel for lower-income individuals (Glaeser et al., 2008; Pucher & Renner, 2003).

Moving forward, it is necessary to provide two definitions. The first is of gentrification itself. The definition we ascribe to is from Davidson and Lees (2005), who position gentrification as the mutual occurrence of four key aspects, "1. Reinvestment of capital 2. Social upgrading of locale by incoming high-income groups 3. Landscape change. 4. Direct or indirect displacement of low-income groups" (p.1170). With this in mind, transit-induced gentrification can be understood as the process described by Davidson and Lees (2005), but with direct connections to transit investment. In cases of transit-induced gentrification, the catalyst for gentrification is a change in access to or investment in, transportation (Dawkins & Moeckel, 2016; Dong, 2017).



Problem Landscape

The ION LRT system was founded on the goals of improving transit accessibility and intensifying land use (Grand River Transit, n.d.). While the project has been successful in attracting new investment to the CTC, this growth is not necessarily occurring equitably, and signs of gentrification are increasingly evident (Kreutzberg, 2018). Properties purchased by developers are often occupied by ground floor "mom-and-pop" shops and upper-floor affordable apartment units, and occupants are displaced through the building's demolition or renovation. Residential and commercial units created through this process hold higher price tags and are therefore only affordable to higher-income residents and businesses (Vrbanac, 2018). New residential units are also smaller, leading to the exclusion and potential displacement of larger households. Access to transit is essential for many low-income and middle-class residents, and ironically, was very strong, specifically for downtown employment, before ION through the Regional bus service (Neudorf, 2014). This illustrates Culver's (2017) concern that as transit grows as an economic tool, its primary purpose is not to provide transit options to disconnected areas but rather to attract higher-income classes to already connected neighbourhoods. As developments like this continue to occur and the area continues to gentrify, the cost of housing, goods, and services in the CTC will become unaffordable for residents who rely on transit the most. Therefore, through this project, our goal is to propose solutions to help the Region achieve their goal of improving transit access, by ensuring it is accessible for all.

Stakeholder Perspectives

The complexity of this issue stems largely from the diversity of its stakeholders. As is evident through the discussion of transit-induced gentrification, and the Region's push for continued LRT expansion, perspectives on this issue vary significantly. At one end, the municipality is simultaneously responsible for supporting continued economic growth, while addressing issues of affordability (Nielsen, 2020). The policies they implement dictate how developers, realtors and investors can benefit from proximity to the LRT. Currently, growth is being prioritized. This prioritization has allowed widespread development in the CTC, a growing real estate market, and an influx of investors. Playing a sort of "middle man", those who fuel the housing market do not feel responsible for answering questions surrounding affordability for low-income individuals due to a lack of policy requirements or incentives to create affordable housing (Thompson, 2018), and thus continue to promote gentrifying action.

At the other end, are low income and marginalized groups, who often hold the least power, but face the most impact from transit-induced gentrification (Allen & Farber, 2019). Community outreach and engagement efforts attempt to advocate for these groups but are limited by the programs and policies present in the municipality. However, current perspectives are constantly changing, and as prices begin to soar beyond even middle-class affordability, concerns for who can live where and why are slowly resonating across the Region (Jackson, 2019).

"Everyone's paying for this LRT. You can't have everyone in the Region being able to walk to a stop to use it, but you can increase the diversity of people that benefit from it by ensuring there's a mix of housing along that corridor."

-Professor
(from Thompson, 2018)

"The thing that probably keeps me up the most at night, which is the situation ... of our homeless and those ... with mental health and addiction issues ... How do ... we tackle that ... in a real and meaningful way? Because I do believe that ...we can do better, but we have to do better."

-Mayor of Kitchener

"They're building these condos everywhere and they're mowing down places that used to be rooming houses."
-Homeless resident

WHAT ARE STAKEHOLDERS SAYING?

"We really need ...
to compete on
the global stage."
-Mayor of Waterloo

"The [commercial rent] rates have gone up because more people want to be in the area and that drives more residential production, which increases the demand for goods and services, so those get built."

-Chair, UpTown Waterloo BIA (Jackson, 2018) "We've had numerous units sell within a day or two, and multiple offers — sometimes before they even hit the market. There's such demand that people are willing to step up and pay full price before it hits the market."

-Realtor (Thompson, 2018)



Solutions Landscape

The best approach to mitigating the impact of transit-induced gentrification on neighbourhoods in the CTC appears to be a combination of policies, incentives, and partnership. These solutions work in tandem against gentrification and can work to protect vulnerable residents living in the CTC. They also serve to regulate a number of feedback loops present in the process of gentrification, and contribute to the diversity of housing required for healthy urban areas.

Although impactful change can still be made in the Waterloo Region, the best defense against transit-induced gentrification is one that occurs alongside the implementation of transit infrastructure, rather than a series of actions aimed at lessening the impact of avoidable issues. With this in mind, our proposed solutions have been labelled "for all", meaning for both Waterloo and other municipalities; for "for others", meaning applicable for other municipalities; and "happening in Waterloo", which highlights actions taken or underway in the Region.

1) Prospective Policy...

...FOR ALL: Rental relief programs such as the Canada-Ontario Housing Benefit (CMHC, 2019) and rent caps could be paired to alleviate the burden of higher residential prices in CTC neighbourhoods. Municipalities should explore similar housing benefits that can be implemented at a local level. Additionally, municipalities should explore alternative building designations to preserve and protect existing buildings from price increases. An example of this is the "Cultural/Creative Hub" designation used in Toronto, which gives tenants (in this case, commercial tenants) a property tax reduction (Pender, 2019).

...FOR OTHERS: Ensuring LRT systems connect both impoverished and affluent areas could outweigh the disruptions associated with its implementation. For example, Washington, DC's "Purple Line", purposely connects the City's wealthiest and poorest neighbourhoods, and is also a good example of a collaborative endeavor between stakeholder groups (Lung-Amam, Pendall & Knaap, 2019). This can offset some problems associated with LRT implementation, such as loss of services and labour for marginalized populations.

...HAPPENING IN WATERLOO: The cities of Kitchener and Waterloo own several parcels of land and properties in the CTC, and municipal staff are exploring ways to use the land for affordable housing initiatives (e.g. Thompson, 2019; 2020).

2) Social Outreach...

...FOR ALL: Greater interactivity between stakeholders, specifically community organizations, is required to ensure that the needs of the most marginalized are being heard and subsequently addressed.

...FOR OTHERS: Evaluation of LRT's impact using a mixed-methods approach (i.e. qualitative and quantitative data collection) can help paint a more holistic picture of affected populations at different stages of the implementation process and motivate residents and policymakers towards greater support for communities in the CTC. The Region has a comprehensive CTC-monitoring program, which includes annual reports of key indicators such as affordability and building activity, but overall would be enhanced by integrating qualitative methods.

...HAPPENING IN WATERLOO: A local charity organization is currently transforming an underused church into affordable housing units (Clark, 2020). Additionally, in April 2020, the Region voted in favour of a housing lottery, the first of its kind, which will provide three affordable housing properties to non-profit organizations (Thompson, 2020). Partnerships with community organizations that advocate for marginalized groups should be leveraged by municipalities to improve affordability.

3) Developer Incentives...

...FOR ALL: Through interviews with low-income residents in Kitchener-Waterloo (Doucet, 2019), it was revealed that when buildings with affordable units are demolished, the units are not being replaced, which causes displacement. To reduce or prevent this from happening, municipalities could consider enacting "replacement theory-type" policies or incentives for developers. Through these measures, developers would be required to or benefit from incorporating affordable units in their projects.

...FOR OTHERS: Policies such as California's Senate Bill 50 - which, although failed, aimed to change zoning around the transit line to allow for denser development - could be implemented to reduce the "red tape" developers often cite (Smolens, 2020). By doing this, developers will not need to apply for amendments when proposing a development in a transit corridor, and can save time and money while adding more units to the housing pool, and reducing price increases associated with limited supply.

...HAPPENING IN WATERLOO: During ION development, Kitchener and Waterloo implemented development charge exemptions to attract investors to the CTC, and re-zoned the CTC to allow for higher densities. The Region is also updating their affordability strategy and should consider similar incentives for developers who reach different targets of affordable units. This could be even more impactful for other cities who are still able to create affordable housing incentives prior to attracting greater development via a new transportation infrastructure.



Gaps & Levers of Change

Gaps

- 1) Lack of resources for transit-stop communities to maintain traditional places of residence.
- 2) Lack of future-planning policy to protect communities.
 - A dynamic exists of community displacement, reduced access to services (including social services) and labour, manifesting in a reduction in non-housing income, contributing to reduced housing affordability (see social feedback loop).
- 3) Paradoxical priorities for LRT implementation.

Levers

- Prospective policy which helps communities leverage their existing resources to maintain their residence within a new neighbourhood.
 - Future planning via incorporating local infrastructure development into LRT contracts and banking land for future affordable housing development can help address this gap.
- 2) Banking land before LRT implementation for future development can help mitigate the loss of affordable housing in the CTC. In the case of the Bay-Area Rapid Transit (BART) authority, a collaboration between them, BRIDGE (a housing non-profit) and the San Leanardo municipality used land to construct 85 affordable housing units for seniors. Other mid-size cities should bank land well in advance of an LRT opening, and develop that land to manage affordable housing shortages caused by transit oriented development.

- 3) Incorporating qualitative research into LRT implementation can provide a more holistic picture of the overall effect that an LRT could have on communities as a whole, outside of simply eval uating economic indicators.
 - Ultimately, keeping a marginalized community in their neighbourhood with better access
 to transit will cost the overall system less than developing the urban core and moving
 them to the suburbs or housing projects. Convincing policy-makers to introduce incentives
 for developing affordable housing will require a mixed-methods approach.
- 4) Introducing rent caps, subsidies, or other monetary relief for traditional neighbourhoods can help residents cope with the rising land value associated with LRT stops in their neighbourhood.
 - Economic solutions highlight the nature of complex adaptive systems. LRT is seen as primarily a development instrument, with transit a secondary outcome. Within complex systems, unintended consequences of interventions abound. In this respect, the development which is valued by policy-makers as being prioritized does not necessarily mean the removal of the incumbent community or neighbourhood along an LRT line.



Lessons Learned

Overall, our map has functioned to flush out the complexity that surrounds new transit infrastructure, and how this system needs to be restructured to better address issues of gentrification, unaffordability and displacement. The Waterloo Region has begun to acknowledge the extent of this issue, and has slowly started to integrate innovative planning and zoning policies as well as comprehensive affordability strategies to address the needs of the most affected by ION-induced gentrification.

However, some of the issues faced by the Region of Waterloo are entirely avoidable if important plans and safeguards are rooted in LRT projects from the start. Affordable housing regulations and incentives need to be in place prior to the LRT-induced construction surge. Because of this, the Waterloo Region functions as a learning opportunity as other cities consider integrating a LRT system or similar new modes of travel. The gaps and levers of change that were identified are the product of this disjointed process. For cities that are currently in the planning and implementation stages, addressing the gaps and oversights that we noted in Waterloo early, could potentially limit the gentrifying impact that new transportation infrastructure can create.