

G2275 Project Consultants' Report
A Home For Everyone: The Densifiers

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Executive Summary:

“A Home For Everyone - The Densifiers” was created with the aim of contributing to the goals under “A Home For Everyone” in the City of Vancouver’s Healthy City Strategy. Our goal is to address the prevalence of NIMBYism in Vancouver neighbourhoods regarding proposals for increased density developments, with the hope of streamlining the application process. We utilized mental mapping to learn how a recent large scale development, Marine Gateway, is perceived among residents of the surrounding community and new tower residents. By designing a simple mapping exercise, we were able to determine whether residents of the low density periphery neighbourhoods: Marpole and Sunset, considered Marine Gateway as a part of their neighbourhood, and whether residents of Marine Gateway differed in their perceptions of the neighbourhood. Our results found that residents’ perceptions did not reflect consultants’ expectations. This indicates that planners and developers may not be able to accurately predict the needs of communities they work in. Further, mental mapping as a tool in community planning and development can provide information about neighbourhoods that may not be easily obtained using other methods. Our work could easily be reproduced and improved upon, potentially in an electronic form such as a website or mobile app; results could be analyzed using GIS to create neighbourhood profiles with virtually any area of focus.

Background:

The City of Vancouver (The City) is facing an affordability crisis, with property values and rental rates soaring as the population continues to grow. According to Patrick M. Condon: “In the ten years between 1990 and 2000, the population of the downtown peninsula increased from forty thousand to eighty thousand.” (Condon, 13) and new housing developments are needed to accommodate this growth. Due to a series of unique geographic limitations: mountains to the north, ocean to the west and the US border to the south; much of Metro Vancouver’s growth is expected to occur through the densification of existing neighbourhoods instead of suburban sprawl.

Despite the need for neighbourhood intensification, proposals for increased density are often met by public outcry and NIMBYism. Public pressure slows down the development process and further exacerbates housing unit shortages in Vancouver. It is possible that new developments could achieve greater social capital without sacrificing units, as “Vancouver architects and city planners learned that residents do not object to added density so much as the *feel* and *appearance* of density.” (Condon 103) In order to reach common ground with existing residents, the City and developers could create projects that fit well into neighbourhoods, offer increased amenities and add social value to communities.

Research shows that residents generally perceive benefits to living in their high density neighbourhoods, particularly if the neighbourhood promotes social interaction or provides easy access to amenities. (Mitrany, 135.) Marine Gateway would appear to fit these criteria, as there are a number of shops and services at the base of the towers, the project is attached to a skytrain line and there are parks and schools within walking distance. The base also features a large open plaza with seating areas providing gathering places for residents. It is for these reasons Marine Gateway was chosen as an example of a high density development that should be perceived positively by residents.

While development in Vancouver is often met with overwhelmingly negative neighbourhood response, one study has shown that the potential for improving public perception of density exists in how proposals are framed. Doberstein, Hickey and Li found that prefacing questions about a new development with a message about the public benefits of density (eg. better for the environment, better transit service) made residents four times more likely to approve of modest density increases on their street. This illustrates that the City and developers could decrease backlash against upcoming projects in existing neighbourhoods by focusing on benefits to the community. Engagement with residents prior to and during the development process would provide an indication of what types of benefits would most impact the community, as well as what types of development are more likely to be viewed as modest density increases.

We chose mental mapping as a tool to engage with residents in our area of focus, a technique where participants create a visual representation of their perception of an area. A mental map is a selective representation of an individual's own city in terms of how familiar the city artifacts or locations are and in terms of the individual's cultural and historical background. A mental map is closely related to one's daily life and business. (Jiang.) Traditionally, mental mapping is done by asking participants to draw their map on a blank paper and allowing them to choose which features are included and at what scale.

Purpose:

The City has identified the creation of 2,900 new supportive housing units and 5,000 new social housing units as a target to the goal of making housing in Vancouver more affordable. (The City of Vancouver.) Many of these units will necessarily be built as part of new developments. Public support for these projects will allow applications to be processed more quickly, expediting the creation of new housing. Beyond the City's specific aim, more high density developments in a variety of neighbourhoods should contribute to market affordability. This project aims to both gauge the public desire for, and response to increased density, as well as determine if the technique of mental mapping could play a meaningful role in engaging residents about planning and development in their neighbourhoods.

Methodology:

Our mental mapping exercise involved a map template consisting of a street grid with major roads indicated in the margins. We asked respondents to answer 5 questions on their maps:

- 1) Place An X on the map where you live
- 2) Draw the boundaries of your neighbourhood
- 3) Draw a path outlining your most recent transportation trip, indicate the mode of transport
- 4) Write the name of their neighbourhood
- 5) Indicate a neighbourhood in the city they would prefer to live in if not restricted by cost, commute etc.

We undertook a round of pre-testing and multiple rounds of surveying at Marine Gateway and the surrounding blocks. The majority of responses were obtained by approaching pedestrians, however some were obtained by networking for area residents on social media.

We tested our original map template and questions in order to ensure they were easily interpreted and understood by respondents, as well as to determine whether our method obtained meaningful results. Some elements of our original exercise were modified to improve responses. Boundaries for the included neighbourhoods were decided somewhat arbitrarily. Our initial boundaries were Knight St to the east, Granville St to the west, 49th Ave to the north and the Fraser River to the south. Pre-testing indicated that many of our participants lived west of Granville and were not included in our boundaries, so the template maps were adjusted accordingly. The initial maps did not have all major streets identified and some respondents had difficulty orienting themselves on the map. We increased the number of labelled streets and added major street names to the margins. We adjusted the wording of a few of our questions to improve clarity and accuracy of responses.

We visited Marine Gateway a number of times to survey residents. Days and times were chosen so that a wide demographic could be reached: weekdays and weekends at various time intervals from early morning through late afternoon. Some visits were not successful in gathering responses, particularly during morning and evening rush hours. As Marine Gateway is a transit hub, we found many people were passing through and did not wish to be interrupted. To increase response rate we developed a strategy of engaging people in regular conversations before asking them to complete our exercise. We had success with this method and found the reaction to be more positive. People do not seem to utilize the seating areas in the Marine Gateway complex, nor gather at the plaza making it difficult to find locations for public interaction. Language barriers were an obstacle, as many potential respondents did not have proficiency in English necessary to complete our exercise.

We utilized social media to reach out to potential participants. We arranged meetings with multiple residents of Marine Gateway and the surrounding neighbourhoods by reaching out to contacts in location-specific Facebook groups. (Either neighbourhood groups or groups where being a Vancouver or Metro Vancouver resident is required to join.) We had reasonable success with this method, with people connecting their friends and family to us as well as meeting us themselves. One drawback was a less diverse sample group.

Findings:

Valuable information about how people perceive their neighbourhood and move around the city was gained in our exercise. Specifically, we learned about the size and shape of residents' perceived communities, common destinations and routes taken by residents as well as how they identified their neighbourhood. We learned how mental mapping as a data collection tool can provide insight into public perceptions not easily be acquired by other means, although other methods can add depth to mental mapping results. While there are ways we would improve this exercise should it be repeated, mental mapping proved useful in learning about public perception of communities.

Many participants drew large areas to represent their neighbourhood, with the notable exception of residents of the Marine Gateway condominiums. We expected to find that residents of the low density "periphery" would feel less connected, be less likely to utilize public transit and would perceive their neighbourhoods as small. Our results showed that the "periphery" residents actually felt their neighbourhoods were large, significantly larger than residents of the Marine Gateway complex. There was no difference in either group's likelihood of choosing public transit. Our results differed from the assumptions we held about the neighbourhoods surveyed, showing that residents perceive their neighbourhoods differently than outsiders.

We also assumed that most residents would not include the industrial lots south of Marine Drive in their neighbourhood. We were surprised to find that many did include this area, a few reported this area exclusively as their neighbourhood. It is unlikely that this result accurately reflects these residents' perceptions, as the area is unfriendly to pedestrians, does not contain any amenities or services that residents are likely to utilize and is generally disconnected from the residential areas. It is possible that the river creates a more natural boundary, as it was used as a boundary by a large number of participants. Participants may also have had a difficult time interpreting our map, and may have mistaken this area for somewhere else.

The few follow-up questions we asked as well as casual conversation with participants gave us further insight into their perceptions of the area. Many Marine Gateway residents indicated that they were not aware a park existed off of the northwest corner of Cambie and Marine Drive. As the complex itself lacks green space, awareness of nearby parks and greenery could improve the quality

of life for residents. Many participants identified False Creek neighbourhoods (ie. Olympic Village, Kitsilano) as their “preferred neighbourhood.” Marine Gateway and Olympic Village are both new condominium complexes built in a similar style along the same skytrain line. Olympic Village may be more desirable because of its closer proximity to the city centre, its accessible waterfront, or its lack of adjacent major roadways and industrial space. The questions gave more depth to the information gained during our mapping exercise, illustrating how traditional methods of data collection can be used to build upon what is learned in mental mapping.

These conclusions would have been difficult to reach without a method of data collection focused on spatial representation. Traditional methods for gathering information about people’s perceptions and opinions: surveys, for example, are inadequate for collecting spatial data. Asking participants to draw visual representations of their communities gives much more specific and nuanced detail. We were able to compare not only the sizes of neighbourhoods, but which specific areas were most likely to be included as well as common chosen boundaries.

We identified some ways this exercise could have been changed in order to improve upon the results. It’s possible that participants did not correctly interpret our map. Many drew their neighbourhood borders around areas we do not find plausible as accurate representations of perceived neighbourhood. We assume they believed they were including some other area. Our dataset lacked explanation for people’s choices. Further follow-up questions giving people the opportunity to explain their maps could have given our results more depth. The times of day and locations at which we collected our maps may have led to bias in the results.

While our project focused on a community’s reaction to a new development, this exercise could be repeated when large-scale developments are proposed or during the construction of neighbourhood plans. Participants generally found the mapping activity to be engaging and interesting, in general the public was happy to participate in this exercise and requested more information on our project and goals. Reaching out to residents outside of the formal public consultation process creates further opportunities for engagement that require very little time or monetary investment from participants.

Recommendations:

This exercise would be easy to scale up for use by the City of Vancouver or development firms. Questions could be chosen to fit a variety of aims at any stage of the planning and development process. It could be converted to an electronic form that would be easy to engage with and accessible to a large set of residents. Using a street-grid template and allowing participants to overlay their information allows for results to be easily analyzed with GIS software.

Our project focused on how residents perceive the size and shape of their neighbourhoods as well as how they identify and move through them. Altering the content of the maps by asking different or more specific questions would allow the same method to be used to gather a variety of types of data. Developers could use this exercise to determine the area for which their lot is perceived as “within my neighbourhood” by residents. This would allow them to address concerns and challenges from affected communities and design projects that better “fit” with existing neighbourhoods. Planners could use this method to determine sites that residents value and mark them for retention. They could also learn of sites or areas residents feel could support high density development. This method can be used in existing neighbourhoods to determine what amenities residents use, whether there are amenities missing in neighbourhoods, and what barriers to access may exist.

The city could develop a mobile app or website allowing residents to input their data onto a street grid map of their neighbourhood, which could then be compiled and analyzed using GIS. An electronic version would allow a large portion of the population to engage with the city in the planning process, and could be set up and attached to the City’s social media platforms similarly to “Talk Vancouver.” GIS analysts could create maps showing public perception of spaces at a community level vs. an individual level as well as compare this with real-world data. The utilization of GIS programs to analyze mental maps is made easy with by giving participants a template map, ensuring a uniform scale.

Mental mapping can be used to gauge public perception of space with almost any focus. It is useful at all stages of the planning and development process, is engaging and fun for participants and allows for the collection of information that is difficult to obtain with other methods. Our recommendation is the The City of Vancouver utilize this method in a digital form during community planning, rezoning and development permit applications to increase public engagement. The information gained with this method would improve the City’s ability to plan for density increases that could receive a more positive response from residents.

Sources:

Condon, Patrick M., and Robert D. Yaro. *Seven rules for sustainable communities: design strategies for the post-carbon world*. Washington, D.C.: Island Press, 2010. Print.

Doberstein, Carey, Ross Hickey, and Eric Li. "Nudging NIMBY: Do Positive Messages regarding the Benefits of Increased Housing Density Influence Resident Stated Housing Development Preferences?" *Land Use Policy* 54 (2016): 276-89. ScienceDirect. 27 Feb. 2016. Web. 27 Feb. 2017.

Jiang, Bin. "The Image of the City out of the Underlying Scaling of City Artifacts or Locations." *Annals of the Association of American Geographers* 103.6 (2013): 1552-566. Taylor & Francis Online. 29 Apr. 2013. Web. 15 Apr. 2017.

Mitrany, Michal. "High density neighborhoods: Who enjoys them?" *GeoJournal* 64.2 (2005): 131-40. Web. 06 Mar. 2017.

The City of Vancouver. *Healthy City Strategy: Our Goals*. N.p., n.d. Web. 15 Apr. 2017. <<http://vancouver.ca/people-programs/healthy-city-strategy.aspx>>.

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