

# HOW NEIGHBOURHOODS ARE CHANGING

A Neighbourhood Change Typology for Eight Canadian Metropolitan Areas, 1981–2006

BY ROBERT MURDIE, RICHARD MAARANEN, AND JENNIFER LOGAN



## THE NEIGHBOURHOOD CHANGE RESEARCH PARTNERSHIP

This report is a summary of a research paper by Robert Murdie, Richard Maaranen, and Jennifer Logan, *Eight Canadian Metropolitan Areas: Spatial Patterns of Neighbourhood Change, 1981–2006. A Typology Based on a Combined Statistical Analysis of Census Tract Data* (Research Paper 234, Cities Centre, University of Toronto, October 2014, 85 pages. ISSN 0316-0068; ISBN 978-0-7727-9117-7). The full report is available as a PDF at [www.NeighbourhoodChange.ca](http://www.NeighbourhoodChange.ca)

This research identified neighbourhood change trends over a twenty-five year period. It complements a related paper that identified a neighbourhood typology for the same eight Canadian CMAs, using a similar joint analysis of 2006 census tract data (the last available long-form census): *Eight Canadian Metropolitan Areas: Who Lived Where in 2006?* (Research Paper 229, Cities Centre, University of Toronto, September 2013, 44 pages. ISSN 0316-0068; ISBN 978-0-7727-1492-3). This full report and its summary report are also available as PDFs at [www.NeighbourhoodChange.ca](http://www.NeighbourhoodChange.ca)

The research and its publication is funded by a multi-year grant from the Social Sciences and Humanities Research Council of Canada. The research initiative, titled *Neighbourhood Inequality, Diversity and Change: Trends, Processes, Consequences and Policy Options for Canada's Large Metropolitan Areas*, is based at the Factor-Inwentash Faculty of Social Work, University of Toronto (J David Hulchanski, Principal Investigator). [www.NeighbourhoodChange.ca](http://www.NeighbourhoodChange.ca)

**The Neighbourhood Change Research Partnership** is examining inequality, diversity, and change at the neighbourhood level in urban Canada with a focus on better understanding the connection between inequality and socio-spatial exclusion. As a key part of the research agenda, we seek to identify similarities and differences among major metropolitan areas.

**Robert Murdie** is a member of the research team of the Neighbourhood Change Research Partnership. He is Professor Emeritus of Geography at York University. His primary research interests include the changing social geography of Canadian cities and the housing experiences of recent immigrants, especially in Toronto.

**Richard Maaranen** is a Research Associate and Data Analyst with the Neighbourhood Change Research Partnership. He completed his master's degree in Spatial Analysis in 2001, a unique joint program between the University of Toronto and Ryerson University. He has provided geographic data analysis and cartography support on a wide range of research topics such as gentrification, income inequality, and immigrant settlement patterns in Canada's largest cities.

**Jennifer Logan** completed her master's degree in Geography at York University in 2010. She was a research assistant with the Neighbourhood Change Research Partnership from December 2012 to June 2013. Until her untimely death in January 2015 she maintained an interest in the settlement experiences of new immigrants, their evaluation of "home," and the role of housing in immigrant integration. Jennifer was a valued member of the Neighbourhood Change team and contributed substantially to various publications of the project.

Cover illustration by Andrew Alfred Duggan; Matthew Blackett and Julie Fish of Spacing Media provided design and art direction; Philippa Campsie of Hammersmith Communications edited the text. Richard Maaranen prepared the maps.



Social Sciences and Humanities  
Research Council of Canada

Conseil de recherches en  
sciences humaines du Canada

Canada



March, 2015

© Neighbourhood Change Research Partnership, University of Toronto, 2015. ISBN 978-0-7727-9119-1



The authors' moral rights are protected with a Creative Commons license that allows users to quote from, link to, copy, transmit and distribute this report for non-commercial purposes, provided they attribute it to the author and publisher. The license does not allow users to alter, transform, or build upon the report. More details about this Creative Commons license can be viewed at [www.creativecommons.org/licenses/by-nc-nd/2.5/ca](http://www.creativecommons.org/licenses/by-nc-nd/2.5/ca)



# OVERVIEW OF NEIGHBOURHOOD TYPOLOGIES

As part of a research project on neighbourhood change in cities across Canada, we developed a typology of neighbourhood change for eight Canadian Census Metropolitan Areas (CMAs): Halifax, Montréal, Ottawa, Toronto, Hamilton, Winnipeg, Calgary, and Vancouver.

We created this typology using 1981 and 2006 census data and a measure of change between these years for 2,987 census tracts in the eight CMAs. These included (a) tracts that retained the same boundaries between 1981 and 2006 and (b) tracts that had been subdivided by 2006 and were estimated from 1981 “parents.” We focused on 24 census variables related to economic status, family status, immigrant and ethnic status, migrant status, and housing status. Change was measured by subtracting the percentage value of a variable for 1981 from that for 2006. A value of zero indicates no change; positive values indicate an increase; negative values indicate a decrease.

By analysing the relationships among these variables using principal component analysis and undertaking a cluster analysis of the component scores, we were able to identify 17 clusters of census tracts that represent distinct types of urban neighbourhoods.

We organized these 17 clusters into six larger groups, which we have called Aging in Place, Immigrant Minorities Lagging Behind, Increased Socioeconomic Status, Embedded Economic Status, Increased Asian Presence, and Increased South Asian Presence.

Not all clusters appear in all CMAs. Toronto and Vancouver contain all 17 clusters while Halifax (the smallest city in the study) has only

nine. Larger and more socially complex CMAs exhibit the largest number of clusters. When we mapped the groups and associated clusters for each CMA, we noticed some common patterns, especially for the six larger groups:

- The “Aging in Place” group is represented in the suburbs of all eight CMAs, but with a higher proportion in smaller CMAs such as Calgary, Halifax, Ottawa, and Winnipeg. There is a spatial gradation by age of residents from an increased representation of adults 65 years and over in the inner suburbs to an increasing number of adults aged 50-64 in the outer suburbs.
- The “Immigrant Minorities Lagging Behind” group includes not only traditional central-city immigrant reception areas that continue to receive lower-status newcomers, but also newer areas of the CMAs that attract a younger immigrant population and second-generation immigrants, many of whom continue to struggle economically
- Tracts in the “Increased Socioeconomic Status” group are characterized by a

dramatic increase in educational attainment, occupational status, and income between 1981 and 2006. These are older central-city areas where young urban professionals have replaced immigrant families or outer suburban areas where second-generation, relatively high-income families of European background are relocating.

- Tracts in the “Embedded Economic Status” group remained relatively stable in educational attainment, occupational status and income between 1981 and 2006.
- The “Increased Asian” and “Increased South Asian” groups are strongly differentiated from the other groups by a substantial increase in immigrants from various Asian countries. These groups are especially prominent in Vancouver and Toronto. This increase corresponds with a major shift in Canadian immigration policy in the 1970s that removed restrictions to entry based on race and national origins and placed more emphasis on education and employment skills.

## Neighbourhood Change, Groups and Clusters, 1981-2006 Change Analysis

### U: Aging in Place

- U1 Increase in Disadvantaged Adults 65 Plus
- U2 Increase in Disadvantaged Adults 50 Plus
- U3 Increase in Higher Status Older Adults

### V: Immigrant Minorities Lagging Behind

- V1 Older Central City Immigrant
- V2 Younger Suburban Immigrant

### W: Increased Socioeconomic Status

- W1 Emerging Middle Class
- W2 Emerging Young Professionals
- W3 Emerging New Elite

### X: Embedded Economic Status

- X1 Middle Status in the Outer Suburbs
- X2 Middle Status in the Central City
- X3 Central City Elite Reinforcement
- X4 Declining Rental Housing

### Y: Increased Asian Presence

- Y1 New Asian High-Rise
- Y2 Asian Diversification
- Y3 East Asian Succession

### Z: Increased South Asian Presence

- Z1 Emerging South Asian
- Z2 South Asian Succession

# UNDERSTANDING THE GROUPS AND THE CLUSTERS

## Group U: Aging in Place

These neighbourhoods are characterized by an increase in older populations, single-person and single-parent households, persons of European and Aboriginal ethnic origins, and poorer quality housing conditions. Although the three clusters are mainly found in suburban locations, they are differentiated by age and type of housing stock. Almost 30 percent of the census tracts fall into this group, with a higher representation in Calgary, Halifax, Ottawa, and Winnipeg. Cluster U1 has the largest percentage of census tracts (14.8 percent) followed by Cluster U3 (8.9 percent) and Cluster U2 (5.0 percent). In general, there is a spatial gradation of Clusters U1, U2, and U3 outwards from the older inner suburbs to newer outer suburbs with a higher proportion of Cluster U1 tracts in the inner suburbs and a higher proportion of U3 tracts in the outer suburbs.

**Cluster U1 (Increase in Disadvantaged Adults 65 and Over)** is characterized by the largest percentage of persons 65 and over and the greatest increase in this age group over the study period. The cluster is also distinguished by an increase in one-person and single-parent households and a decrease in high-income households. The proportion of low-rise and high-rise multi-family dwellings also increased substantially.

**Cluster U2 (Increase in Disadvantaged Adults 50 and Over)** is similar to Cluster U1, but with a greater increase in the older adult population aged 50–64 and a greater decline in

the proportion of children and young adults.

**Cluster U3 (Increase in Higher Status Older Adults)** is distinguished from the other two clusters in this group by higher incomes and educational levels, fewer multiple-unit dwellings, and a greater increase in incomes and educational achievement. Almost two-thirds of the housing stock in these more suburban areas dates from the 1970s.

## Group V: Immigrant Minorities Lagging Behind

This group is similar to Group U in that it is characterized by an increase in older adults and a decrease in children and young adults. It differs, however, by its higher incidence and greater increase in immigrant minorities, including Latin Americans/Caribbeans, Africans, South Asians, and Southern Europeans. Housing affordability, worsening housing conditions, and unemployment became major problems in these tracts between 1981 and 2006. Almost 11 percent of the census tracts are in this group. The Toronto CMA has the largest proportion (21.4 percent), followed by the CMAs of Montréal (8.3 percent), Calgary (7.7 percent), and Vancouver (5.2 percent). The importance of the Toronto CMA in this group reflects its significance as a leading immigrant reception area for a wide variety of ethnic groups.

**Cluster V1 (Older Central City Immigrant)** is distinguished by an increase in the proportion of persons 65 and older and one-person and single-parent households between

1981 and 2006. Unemployment increased and by 2006 was the highest for all clusters. Persons in sales and service occupations increased more than in any other cluster. This cluster had the highest representation of Southern Europeans in both 1981 and 2006; the proportion of Southern Europeans almost doubled from 14.6 to 24.3 percent over the period. As well, the proportion of other immigrant groups, including persons of Latin American and African origins, increased dramatically from 2.3 percent to 13.8 percent. The majority of these tracts are in older areas of the Toronto and Montréal CMAs, traditional centres of post–Second World War Southern European settlement.

**Cluster V2 (Younger Suburban Immigrant)** is characterized by a decline in the proportion of children and young adults and an increase in the proportion of adults aged 50–64. However, the proportion of one-person households was substantially lower than in Cluster V1. The proportion of low-income families increased substantially, as did immigrants, especially persons of South Asian origin. Compared with Cluster V1, the tracts in this cluster are in newer areas of the city, and are especially found in the Toronto, Calgary, and Vancouver CMAs.

## Group W: Increased Socioeconomic Status

The tracts in this group (15.6 percent of the census tracts in the analysis), experienced a considerable increase in educational achievement, occupation status, and income between 1981 and 2006. The majority of census tracts in this group went from bottom ranked in socio-economic status in 1981 to mid-level rank in 2006. This group is characterized by a wide spectrum of age groups and little change in age structure between 1981 and 2006. There was, however, a considerable increase in single-person households between the two years. Immigration was not an important contributor to the changes observed, although the proportion of persons of French background decreased dramatically. About one-quarter of the tracts in the Halifax and Montréal CMAs, one-fifth in the Ottawa, Hamilton, and Toronto CMAs, but only about 5 percent of the tracts in the Winnipeg, Calgary, and Vancouver CMAs are in this group. Thus the proportion of tracts in this group decline from east to west across Canada. The three clusters in this group are differentiated by change in educational achievement and age of dwellings.

**Cluster W1 (Emerging Middle Class)** shifted from predominantly lower-status “blue-collar” in 1981 to a mix of “blue-collar” and middle class in 2006. These areas of primarily single detached dwellings date mainly from the 1970s and are primarily located in the Halifax, Hamilton, Montréal, and Ottawa CMAs.

**Cluster W2 (Emerging Young Professionals)** is characterized by an increase in highly educated professionals, young adults (aged 25-34), and single-person households. Areas occupied by this cluster are also identified by an increase in recently constructed multi-family housing, both low-rise and high-rise. Census tracts in this cluster are located primarily in the central cities of Toronto and Montréal, areas initially occupied in the postwar period by Southern European immigrants whose families have since moved to more suburban locations. Younger urban professionals are often attracted to areas such as these that have not fully gentrified and are relatively affordable.

**Cluster W3 (Emerging New Elite)** is identified by a greater increase than the other two clusters in persons with a university degree and managerial occupations, persons of European origins, and high-income households. The census tracts in this cluster are evenly spread across all CMAs, except for Winnipeg, which does not have any tracts in this cluster. These tracts are located primarily in the suburbs.

## Group X: Embedded Economic Status

This group is characterized by the relative stability of its economic status characteristics, especially educational achievement and occupational status. Income, while not the highest of the groups, increased between 1981 and 2006. However, the economic status of the residents varies considerably among its four

clusters, especially in terms of income. The residents of Group X tended to be older than those of other groups in both 1981 and 2006. This group also had the highest percentage of persons of Western and Southern European origins and the greatest increase in these origins. The housing stock remained a mix of single detached, low-rise, and high-rise during this period. This group accounts for 29.2 percent of all census tracts in the analysis, but the Winnipeg (53.2 percent) and Hamilton (46.6 percent) CMAs stand out as having higher proportions of clusters in this group.

**Cluster X1 (Middle Status in the Outer Suburbs)** is distinguished by its continued middle economic status between 1981 and 2006 and its location primarily in the outer suburbs of most CMAs. Persons of European origin increased substantially. The percentage of recent immigrants, however, is quite low, suggesting that these groups likely moved from more central locations to newer single detached housing in the outer suburbs, especially housing built in and after the 1970s. The proportions of tracts in this cluster are higher in the Hamilton, Vancouver, Ottawa, Calgary and Winnipeg CMAs. Aside from the Vancouver CMA, these are all CMAs that experienced considerable European migration in the early post-Second World War period.

**Cluster X2 (Middle Status in the Central City)** is characterized by continued middle economic status but with a substantial increase in the Aboriginal population and persons of

European origin. The census tracts in this cluster are particularly noticeable in the central areas of Winnipeg and Hamilton.

**Cluster X3 (Central City Elite Reinforcement)** is characterized in both 1981 and 2006 by individuals with a high educational achievement employed in managerial or professional occupations and earning relatively high incomes. The age distribution was mixed in both years and the percentage of Western, Northern, and Eastern Europeans increased between 1981 and 2006. Calgary, Vancouver, Toronto, and Ottawa, cities offering a range of employment opportunities for professionals, had the highest representation, primarily in the central areas of these CMAs.

**Cluster X4 (Declining Rental Housing)** consists primarily of high- and low-rise rental housing in both 1981 and 2006. However, the economic and ethnic status of residents in this cluster changed dramatically. Educational status was relatively high in both years, but occupational status became more varied, unemployment increased, and incomes declined. These areas are the new foci of recently arrived lower-income immigrants, replacing Canadian-born residents who lived in these developments when they were relatively new but have since moved to homes in the suburbs. Older eastern CMAs such as Montréal and Toronto that experienced considerable public and private rental housing development in the 1960s and 1970s, often as a result of urban renewal programs, predominate.

## Group Y: Increased Asian Presence

Group Y comprises persons with a high level of educational achievement but low incomes. The percentage of low-income households and the unemployment rate for these persons increased substantially between 1981 and 2006. The age structure of residents and other demographic characteristics remained about the same for both years. In contrast, the ethnic structure changed dramatically. The major Asian groups, both strongly represented in 1981 and 2006, experienced a substantial increase in numbers between the two years. The percentage of single detached dwellings declined dramatically, while the percentage of high-rise units increased more than in any other group. This group accounts for 11.2 percent of the census tracts in the analysis, with higher proportions in the Vancouver (35.4 percent) and Toronto (17.4 percent) CMAs, the two major centres of recent Asian migration to Canada.

**Cluster Y1 (New Asian High-Rise)** exhibits a substantial increase in immigrant population and corresponding changes in ethnic status, including a decrease in the percentage of persons of British and European origins and an increase in East Asian and Arab/West Asian groups. The percentage of low-income persons increased more than any other cluster, but the percentage of high-income households remained about the same, suggesting that a relatively large number of low-income employees were contributing to overall household income. As with the group as a whole, the housing stock

changed dramatically. An increase in high-rise units accompanied by a decrease in the percentage of rental units suggests that many of the newly built units were high-rise condominiums. The tracts in this cluster are concentrated in the Vancouver CMA (almost 10 percent of Vancouver's tracts), followed by the Toronto and Ottawa CMAs. In Vancouver, census tracts in this cluster are located in parts of the City of Vancouver and in Richmond, while in Toronto, the majority of tracts are located at the termini of the Yonge/Spadina and Sheppard subways and the Scarborough LRT.

**Clusters Y2 (Asian Diversification) and Y3 (East Asian Succession)** are characterized by a substantial increase in Asian immigrants between 1981 and 2006 but differ in terms of the source regions of their immigrant population. Cluster Y2 has a greater diversity of ethnic origins, including persons of East, South, and Southeast Asian origins, all of which increased their representation in this cluster, while in Cluster Y3 the proportion of East Asians increased dramatically. Both clusters, but especially Cluster Y3, had a higher-than-average increase in low-income and unemployed persons. Both clusters had an average percentage of residents in all age groups in 2006, but the older age groups and the percentage of one-person households and single-parent families increased considerably in Cluster Y3. The housing stock in Cluster Y2 is older and more units are rented than in Cluster Y3. Most census tracts are in Vancouver and Toronto, although there is a substantial difference

between the two cities. For example, almost one-fifth of Vancouver's tracts are in Cluster Y2, compared with less than one-tenth of Toronto's tracts. In Vancouver, Cluster Y2 includes much of Burnaby and the eastern portion of Richmond, while in Toronto Cluster Y2 includes older parts of Scarborough and North York. In the Vancouver CMA, Cluster Y3 includes areas of Surrey and southwest Richmond, while in the Toronto CMA, Cluster Y3 covers newer areas of Scarborough and North York and parts of Markham and Richmond Hill.

## Group Z: Increased South Asian Presence

In 1981 the census tracts in this group housed primarily persons of British and Western/Eastern European origin, but by 2006 South Asians had become the dominant group. The number of immigrants and recent immigrants increased more than in the other five groups. Persons per household increased markedly compared with the other groups. Educational achievement and occupational status are in the middle range, but household incomes are relatively high, presumably due to the large number of employed persons in the household. This group accounts for 4.8 percent of the census tracts in the analysis. Most of Canada's South Asians live in Toronto or Vancouver; therefore it is not surprising that these two CMAs have the largest representation of tracts (12.7 percent of Toronto's tracts and 5.4 percent of Vancouver's tracts).

**Clusters Z1 (Emerging South Asian) and Z2 (South Asian Succession)** both experienced a substantial increase in South Asian immigrant population: by 21 percentage points in Cluster Z1 and by 45 percentage points in Cluster Z2. The flow of recent immigrants was also higher in Cluster Z2 than in any other cluster. In contrast to Cluster Z2, Cluster Z1 experienced a greater increase in the proportion of East Asian and European residents. Cluster Z1 also improved considerably in economic status compared with Cluster Z2. The residents of both clusters, however, experienced more affordability problems than those in all other clusters, increasing from less than 20 percent of households in 1981 to 49.1 percent for Cluster Z1 and 57.7 percent for Cluster Z2 in 2006. In both the Toronto and Vancouver CMAs, these census tracts are located primarily in the outer suburbs, Mississauga and Brampton in the Toronto CMA and parts of Surrey in the Vancouver CMA.

## Conclusion

The groups and clusters identified in this analysis mirror findings by Marcuse and van Kempen (*Globalizing Cities: A New Spatial Order?* 2000: 249) about three general areas of change. These include (1) strengthened structural spatial divisions with increased inequality among them, (2) new socio-spatial formations within these structural divisions, and (3) a set of "soft" locations in which change is taking place. The latter include waterfronts, centrally located manufacturing areas, brownfield sites, and concentrations of social housing. Marcuse

and van Kempen further identify seven "new socio-spatial formations within the divisions."

Based on our analysis we have identified three new socio-spatial formations that are particularly important for understanding change in the social structure of Canadian CMAs. These include (1) gentrification, whereby former central city working-class areas are upgraded physically and socio-economically; (2) exclusionary enclaves, including elite areas that have benefited from processes of globalization and low-income areas that have not benefited from these processes, and (3) the formation of new ethnic enclaves, especially in the suburbs. Not all of these changes, however, have occurred in each CMA or to the same degree in individual CMAs. In this regard there is a danger of overgeneralization. Nonetheless, these changes further enhance structural and spatial divisions within Canadian CMAs and have important implications, especially for "winners and losers" and for the lives of people living within these CMAs.

More specifically, researchers studying neighbourhood differentiation and change in each of the CMAs can use this information to draw comparisons between their CMA and the other seven CMAs and undertake local case studies that will enhance an understanding of the changes that have been identified, both generally and for their CMA. In particular, we hope this analysis not only provides a meaningful way to classify and compare neighbourhood change among the eight CMAs but also prompts consideration of the processes that have resulted in these changes and the implications of the changes for economic inequality and social polarization within Canadian CMAs.



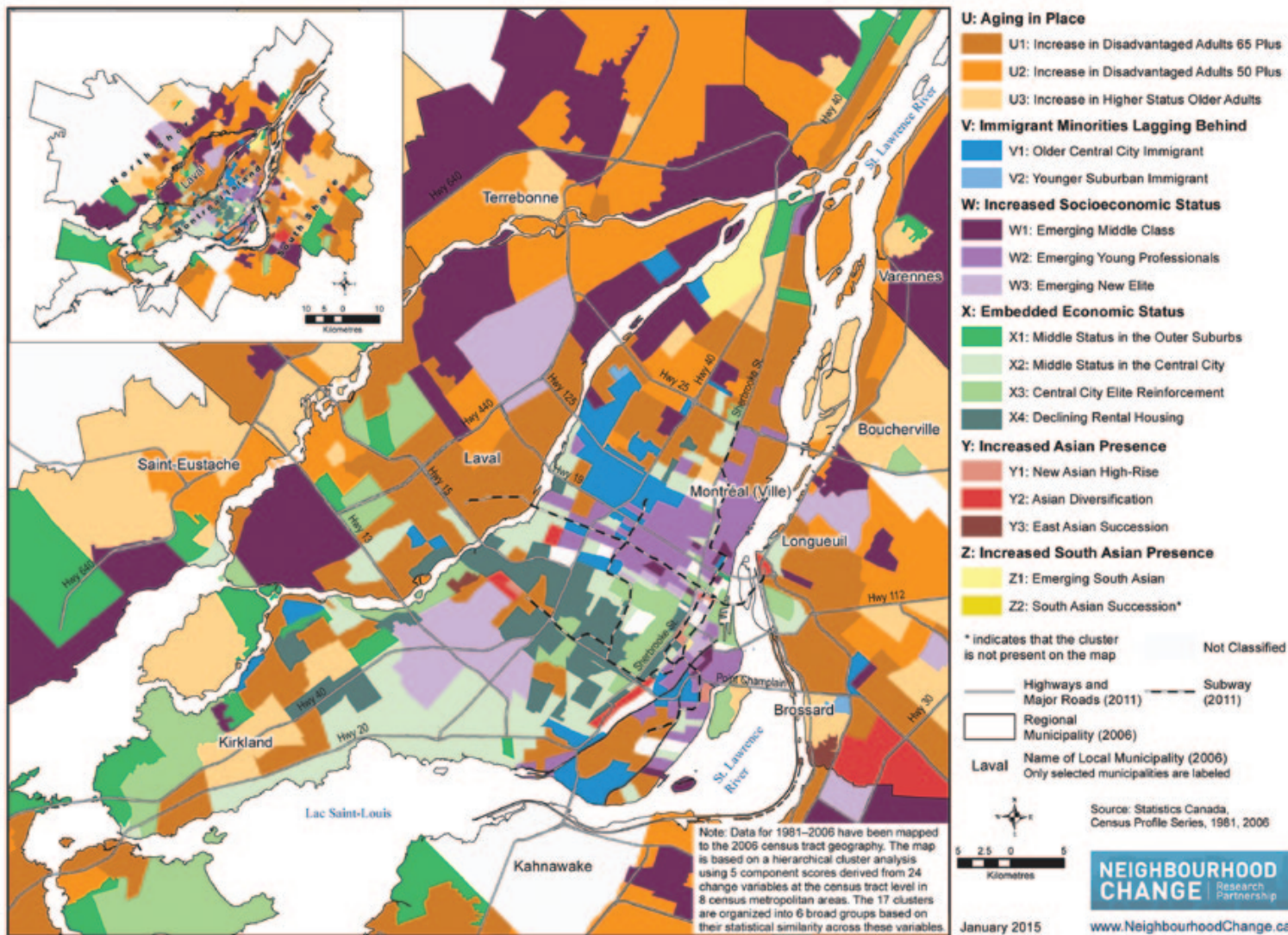
Note: Data for 1981–2006 have been mapped to the 2006 census tract geography. The map is based on a hierarchical cluster analysis using 24 component scores derived from 24 change variables at the census tract level in 8 census metropolitan areas. The 17 clusters are organized into 6 broad groups based on their statistical similarity across these variables.



# MAP 2: MONTRÉAL CMA

## TYPOLGY OF NEIGHBOURHOODS BY CENSUS TRACTS

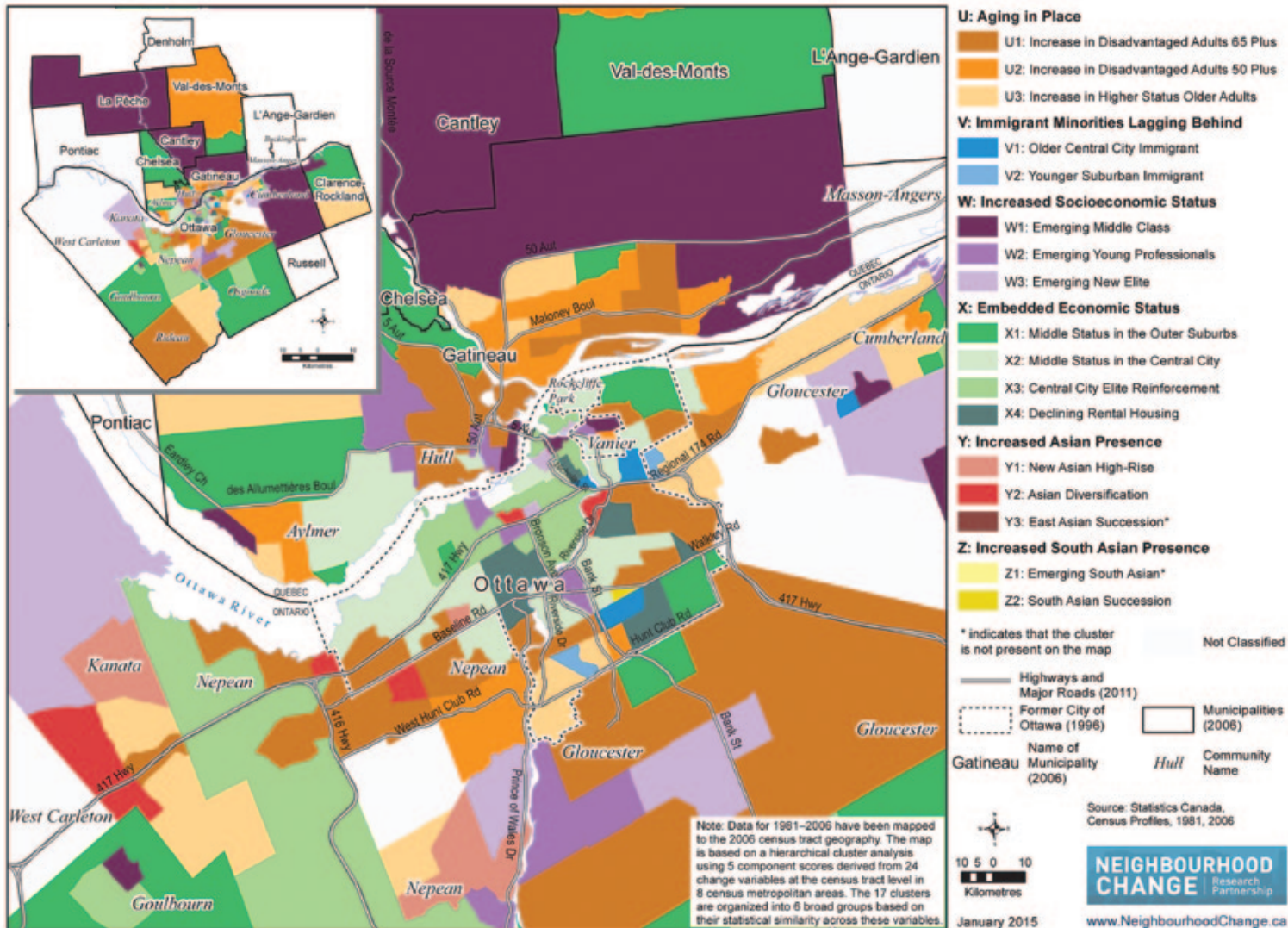
### BASED ON SIX GROUPS AND SEVENTEEN CLUSTERS, 1981–2006



# MAP 3: OTTAWA - GATINEAU CMA

## TYPOLGY OF NEIGHBOURHOODS BY CENSUS TRACTS

### BASED ON SIX GROUPS AND SEVENTEEN CLUSTERS, 1981-2006

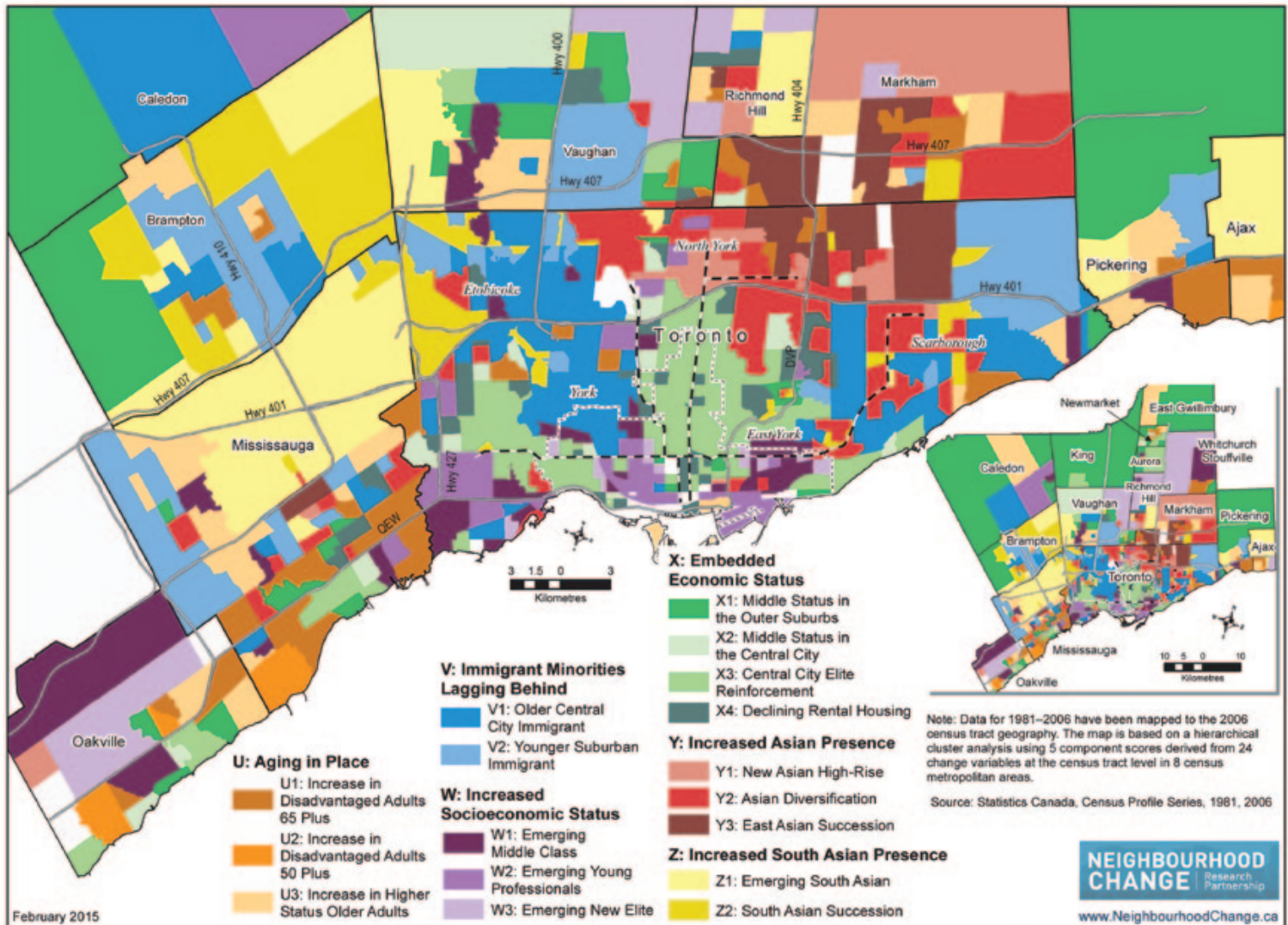




# MAP 4: TORONTO CMA

## TYPOLGY OF NEIGHBOURHOODS BY CENSUS TRACTS

### BASED ON SIX GROUPS AND SEVENTEEN CLUSTERS, 1981–2006

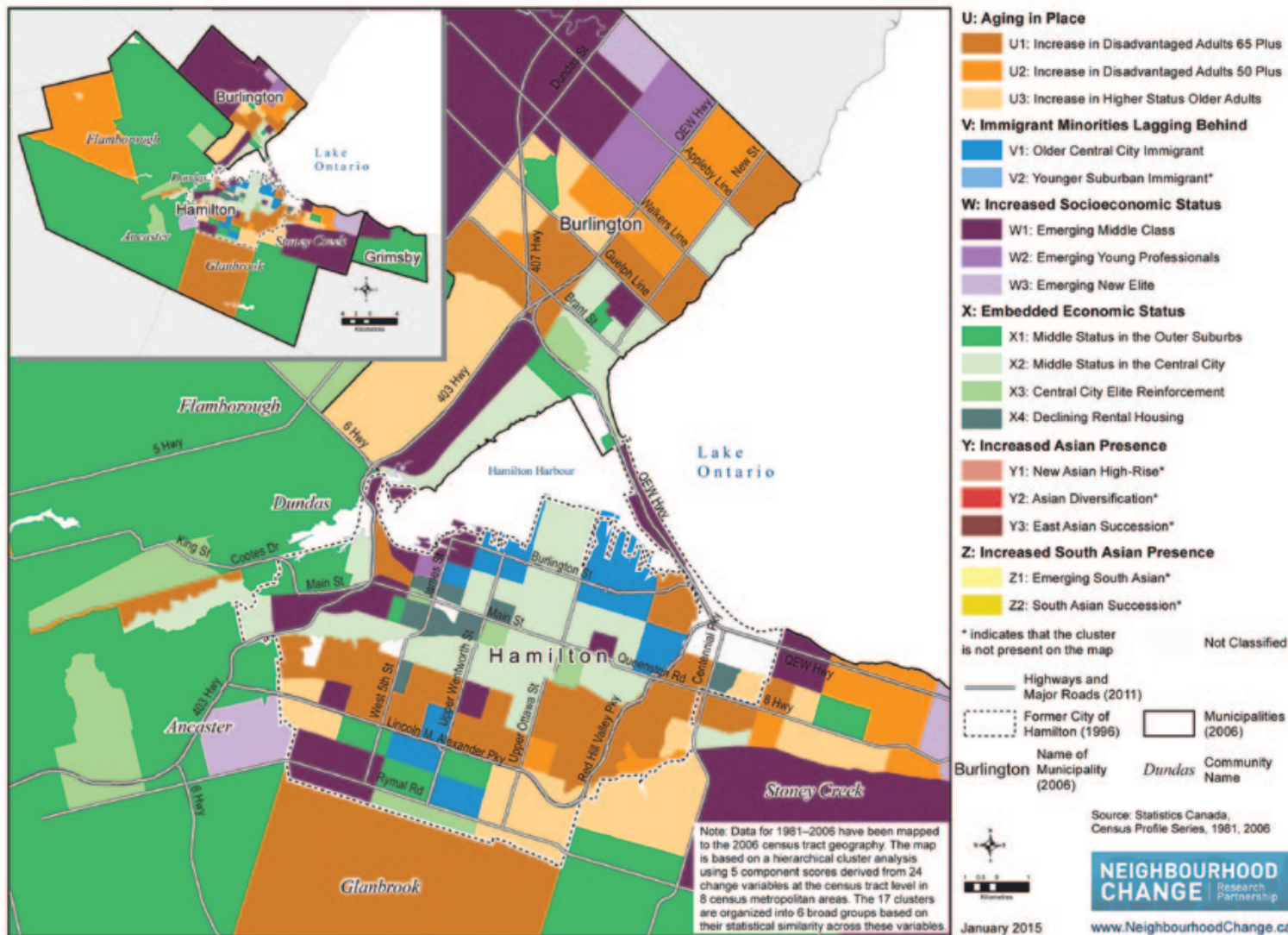




# MAP 5: HAMILTON CMA

## TYPOLGY OF NEIGHBOURHOODS BY CENSUS TRACTS

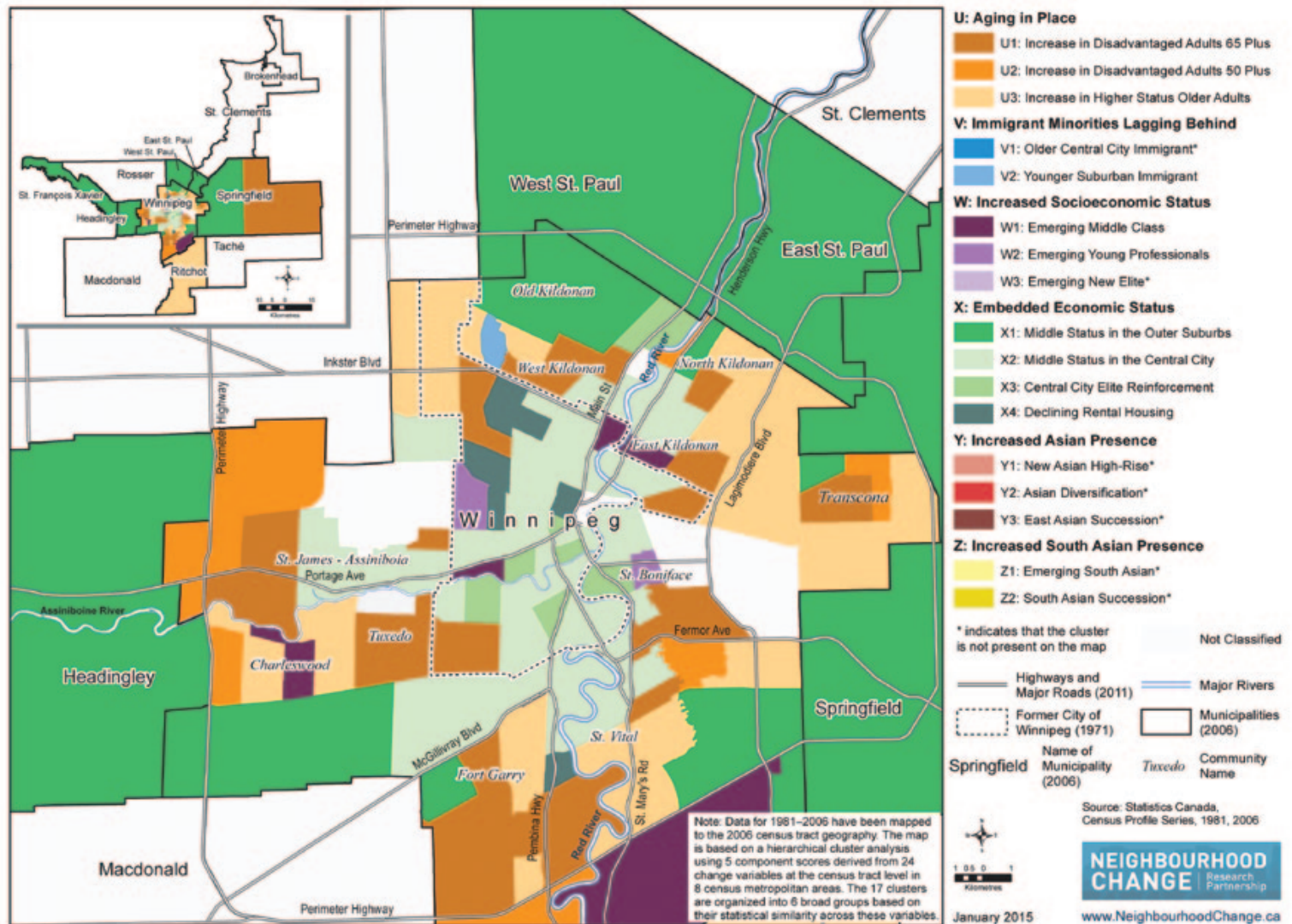
### BASED ON SIX GROUPS AND SEVENTEEN CLUSTERS, 1981–2006



# MAP 6: WINNIPEG CMA

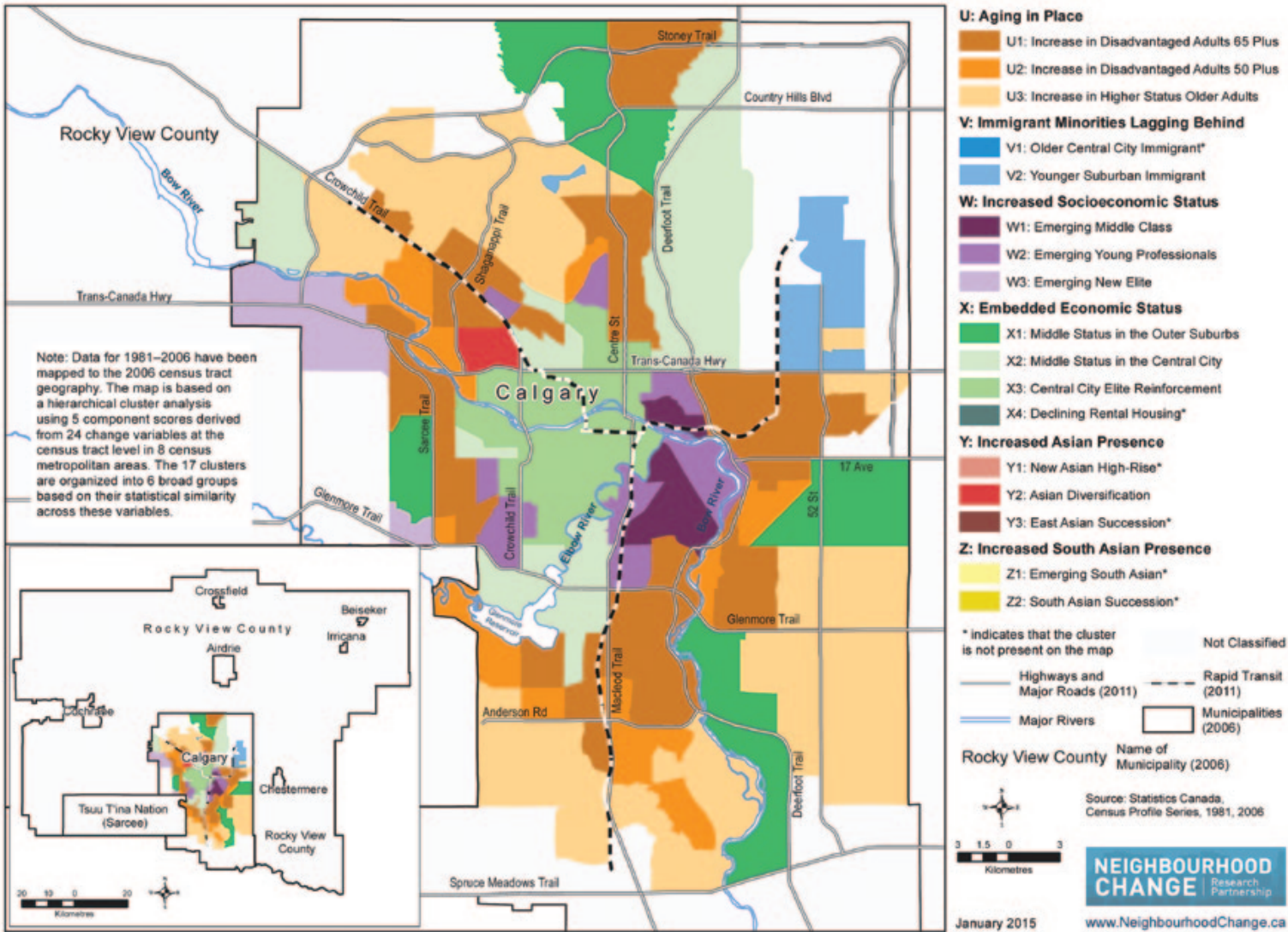
## TYPOLGY OF NEIGHBOURHOODS BY CENSUS TRACTS

### BASED ON SIX GROUPS AND SEVENTEEN CLUSTERS, 1981–2006





# **MAP 7: CALGARY CMA** **TYPOLGY OF NEIGHBOURHOODS BY CENSUS TRACTS** **BASED ON SIX GROUPS AND SEVENTEEN CLUSTERS, 1981–2006**

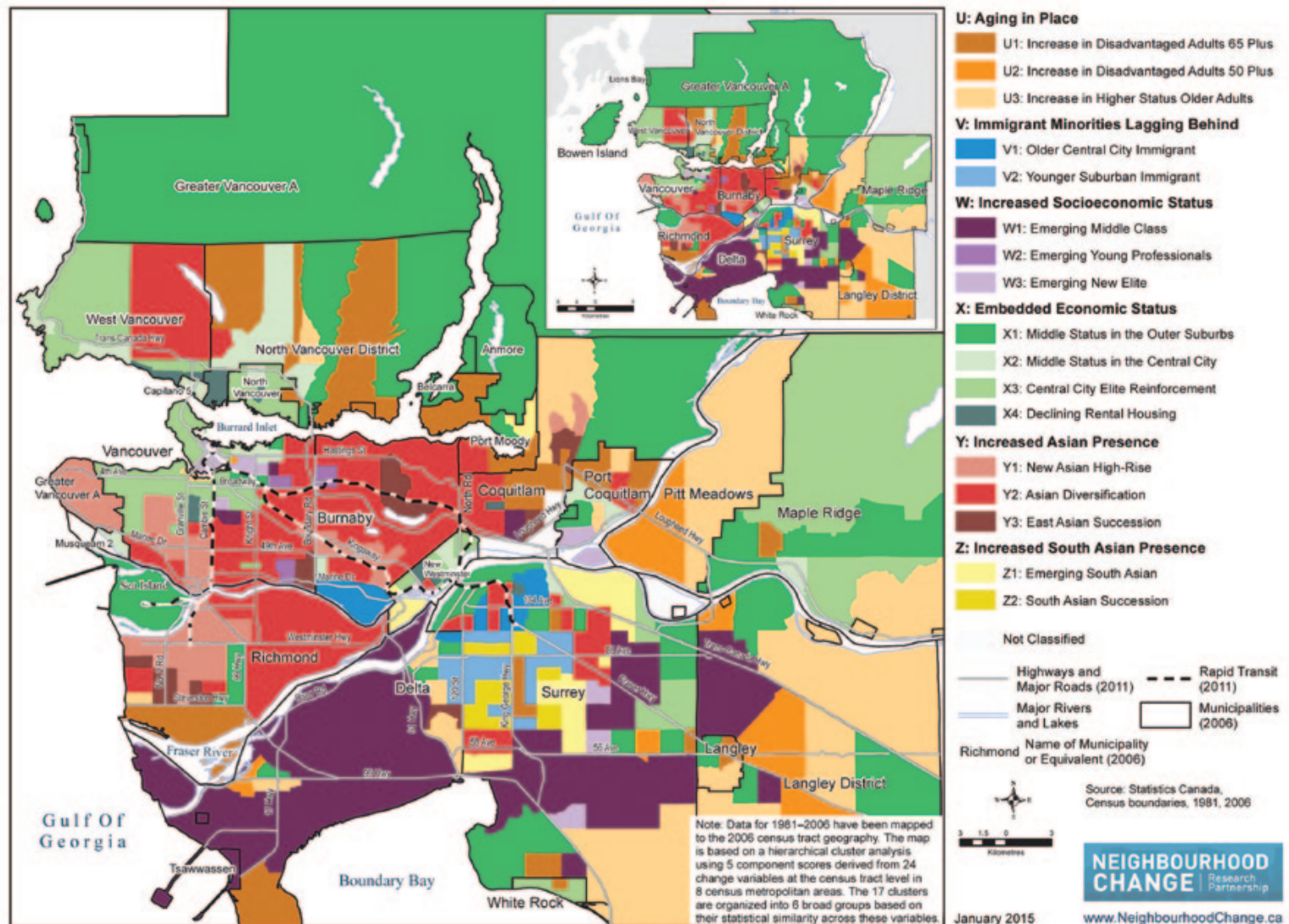




# MAP 8: VANCOUVER CMA

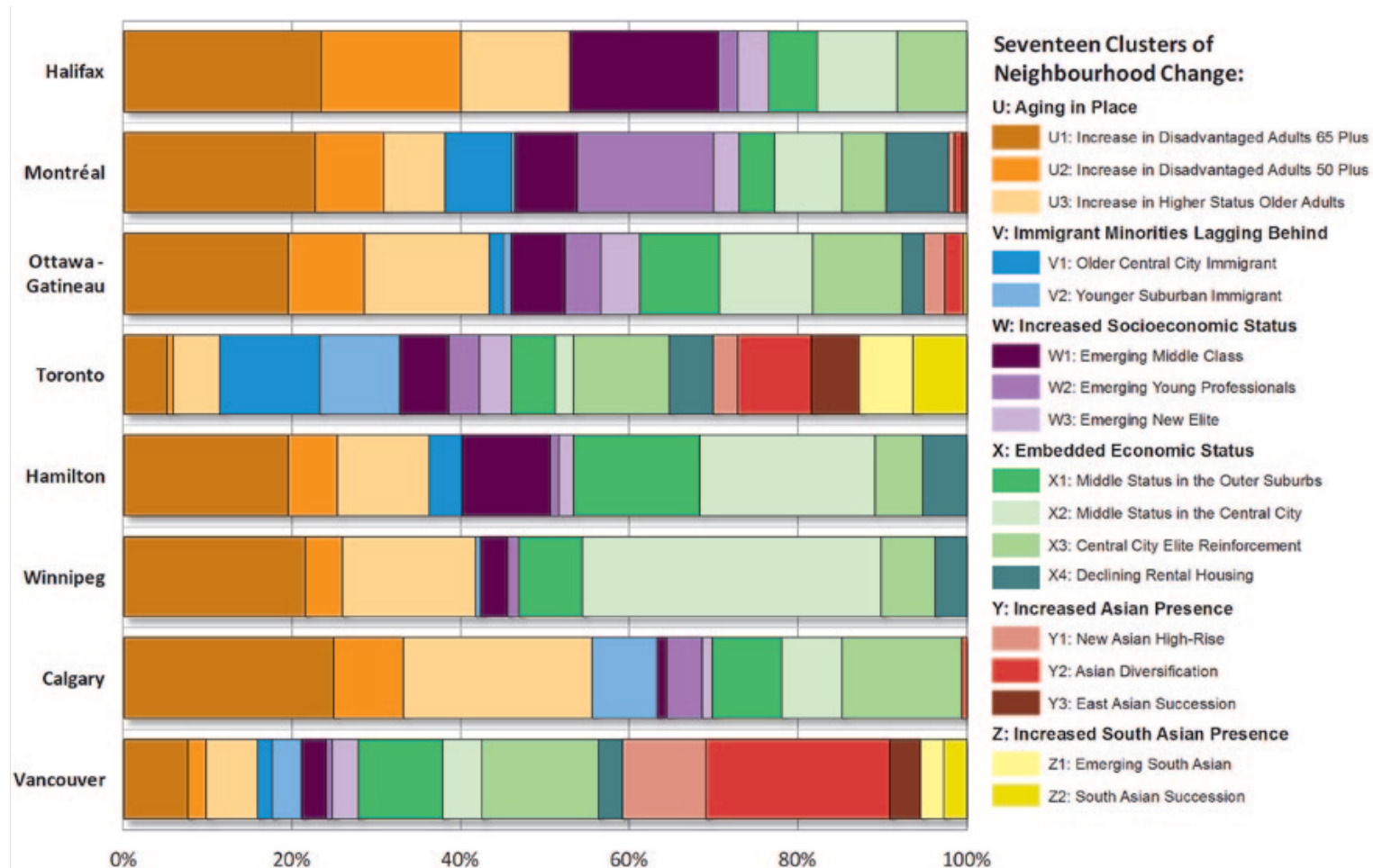
## TYPOLGY OF NEIGHBOURHOODS BY CENSUS TRACTS

### BASED ON SIX GROUPS AND SEVENTEEN CLUSTERS, 1981–2006



# EIGHT CANADIAN METROPOLITAN AREAS

A Typology of Neighbourhood Change by Census Tracts, 1981–2006



Social Sciences and Humanities  
Research Council of Canada

Conseil de recherches en  
sciences humaines du Canada

Canada



FACTOR-INWENTASH  
FACULTY OF SOCIAL WORK  
UNIVERSITY OF TORONTO

NEIGHBOURHOOD  
CHANGE | Research  
Partnership