Housing Assessment Resource Tools (HART)

Federal Housing Needs Assessment Template

Methodology Guide

Last updated March 14, 2025

Sample Interpretation:

This Housing Needs Assessment (HNA) Template is intended to supply some data that is not available in the pre-populated HNA template provided by Housing, Infrastructure and Communities Canada (HICC). A sample of that pre-populated template can be found on HICC's website.[1] The data has been named to align with the data fields in the HICC template along with a reference to the section in the template that the data addresses.

The data on HART's Template represents a mixture of data gathered from the census, along with data from publications released by the Canada Mortgage and Housing Corporation (CMHC). A variety of sources were used to estimate the number of households close to a rail station. For each data element, the source(s) will be listed.

Due to these different data sources, the geographic coverage of the Template will be different for each data element. As a minimum, the Template should be complete for every census subdivision (CSD) in Canada, excluding Quebec and BC, that has a population of over 30,000 people as of the 2021 census.[2] We still included as many CSDs as possible, including those in Quebec & BC, and those CSDs with fewer than 30,000 people, where possible. The data is both useful and insightful for communities.

The tool first went live on February 14, 2025, with nine of the 12 data elements. The other three data elements were added March 14, 2025. These three elements are identified below as "Part 2" and this document has been updated now that those data have been released.

This document will detail the methodology and data sources used to create the data elements.

Data elements:

1. Counts and percentages of households within 800m and 200m of rail/light-rail transit station (applies only to municipalities with 2021 population of 30,000+, excluding BC and Quebec)
    - HICC Section 3.1.1
2. Changes to headship rates 2016-2021 & Household Suppression by age of Primary household maintainer following the Province of British Columbia's HNR methodology
    - HICC Section 3.3
3. *(Part 2, March 14)* Provide priority groups by core housing need status (Youth age 18-29, 2SLGBTQ+, People dealing with mental health and addictions issues, Veterans)
    - HICC Section 4.1
4. Number of secondary rental units
    - HICC Section 5.2.1
5. *(Part 2, March 14)* The number of affordable rental units for low and very low-income households built, and the number lost
    - HICC Section 5.3
6. Change in Average rents
    - HICC Section 5.4
7. Change in Vacancy rates
    - HICC Section 5.5
8. Changes in core housing need over time in both tenant and owner-occupied households
    - HICC Section 5.6
9. Number of housing units that are subsidized
    - HICC Section 5.7.1
10. Number of housing units that are below market rent in the private market
    - HICC Section 5.7.1
11. *(Part 2, March 14th)* Number of co-operative housing units
    - HICC Section 5.7.1
12. Housing starts by structural type and tenure
    - HICC Section 5.9.2

1. Counts and percentages of households within 800m and 200m of rail/light-rail transit station

Data source:

- Open street map and various open data sources to identify locations of existing and under-construction high-order transit stations, as of December 2024.
- Statistics Canada 2021 Census Boundary files for dissemination areas https://www12.statcan.gc.ca/census-recensement/2021/geo/sip-pis/boundary-limites/index2021-eng.cfm?year=21
- Statistics Canada 2021 Census of Population Census Profile Comprehensive download files for dissemination areas, https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/download-telecharger.cfm?Lang=E

Methodology:

1. Download geospatial point data for location of rail/light-rail transit stations in census subdivisions (CSD).
2. Apply a 200m and 800m buffer to each point.
3. Overlay the buffers with dissemination area (DA) geospatial data for households in the 2021 census.
4. Apply two binary 1/0 variables to each DA, where 1 indicates that the DA centroid (centre point) is within 200m or 800m depending on the variable.
5. For each applicable CSD, sum the number of households in each DA with a 1 for the 200m and/or 800m distance from a station.
6. Perform the calculation for existing stations as well as existing plus stations that were under construction as of December 31, 2024.
7. Report the sum of households within 200m and 800m of rail/light-rail transit station
8. for each CSD.
9. Divide the sum of households within 200m and 800m of rail/light-rail transit stations for each CSD by the total number of households in the CSD.
10. Report the percentage of households in a CSD which are within 200m and 800m of rail/light-rail transit stations, as well as the percentage.

2. Changes to headship rates between 2016 to 2021 & household suppression by age of primary household maintainer*

**** following the Province of British Columbia's HNR methodology[1]***

Data Source:

- Population by age group and Primary Household Maintainers by age group from Census 2006, 2016, and 2021 data.

Methodology:

1. Changes in headship rates of Primary Household Maintainer by age between 2016 and 2021
2. Gather Population and Number of Primary Household Maintainers (PHM) in **2016** and 2021 by the following age groups:
    - Under 25 (i.e. 15-24)
    - 25 to 34
    - 35 to 44
    - 45 to 54
    - 55 to 64
    - 65 to 74
    - **75 to 84**
    - **85 years and over**
3. For each year (**2016**, 2021), calculate the Headship Rate for each age group, where Headship Rate equals Number of PHMs divided by the Population. In cases where an age group has more PHMs than people (due to random rounding in the census data), set the headship rate equal to 100%.
4. Calculate the Change in Headship Rate for each age group, equal to the headship rate in 2021 minus the headship rate in 2016.
5. Household Suppression by age of Primary household maintainer - following BC HNR methodology
6. Gather Population and Number of Primary Household Maintainers (PHM) in **2006** and 2021 by the following age groups:
    - Under 25 (i.e. 15-24)
    - 25 to 34
    - 35 to 44
    - 45 to 54

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[1]https://www2.gov.bc.ca/assets/gov/housing-and-tenancy/tools-for-government/uploads/hnr_method_technical_guidelines.pdf

- 55 to 64
- 65 to 74
- **75 years and over****

  **Note that the "75 and older" category is used here because data from 2006 uses these categories and does not have an "85 and older" category. For 2021, this category represents the sum of categories "75 to 84" and "85 and older".

7. For each year (**2006**, 2021), calculate the Headship Rate for each age group, where Headship Rate equals Number of PHMs divided by the Population. Headship rate is not to exceed 1.000.
8. Calculate the Change in Headship Rate for each age group, equal to the headship rate in 2021 minus the headship rate in 2006.
9. Calculate Potential Households in 2021 for each age group, equal to the Headship Rate in 2006 multiplied by the Population in 2021.
10. Calculate the Number of Suppressed Households for each age group, equal to Potential Households in 2021 minus Actual Households in 2021. If the result for any age group is less than zero, set the result to zero.
11. Put otherwise, the Number of Suppressed Households for each age group equals the greater of {zero} or {Potential Households in 2021 minus Actual Households in 2021}.
12. Calculate the Total Number of Suppressed Households as the result of step 5 summed across all age groups.

3. *[Part 2, March 14]* Priority groups by core housing need status (Youth age 18-29, 2SLGBTQ+, People dealing with mental health and addictions issues, Veterans)

Data Source:

- Census 2021 (HART custom tabulation)[2]

Methodology:

1. Calculate Rate of Core Housing Need (CHN) for each of the priority groups as the Number of Households in CHN divided by the Number of Households Examined for CHN:
2. Youth-led household (i.e. primary household maintainer is age 18-29),
3. 2SLGBTQ+ households (*Exact definition TBD*)
4. People dealing with mental health and addictions issues (i.e. Households has at least one person who had an activity limitation reported for Question 18e only)
5. Veterans (i.e. Household includes a person who is currently serving member and/or veteran).

[2] https://borealisdata.ca/dataset.xhtml?persistentId=doi:10.5683/SP3/LCXVCR

4. Number of secondary rental units

Data sources:

- Census 2021 data to determine total number of renter households
- CMHC Rental Market Survey (October 2021) to determine number of primary (i.e. purpose-built) rental dwellings[3]

Methodology:

1. Calculate the Number of Secondary Rental Units in 2021 as equal to the Number of All Rental Households in 2021 (per the census) minus the Number of Primary Rental Households in 2021 (per CMHC).

5. *[Part 2, March 14]* The number of affordable rental units for low and very low-income households built, and the number lost

Data Sources:

- Census 2016 (HART custom tabulation)[4]
- Census 2021 (HART custom tabulation)[5]

Methodology:

1. The Number of affordable rental units for low and very low-income households built will be equal to the number of renter households in 2021 with a shelter cost affordable to 50% or less of Area Median Household Income (AMHI), using the AMHI of the geography (i.e. CSD. CD, or Province/Territory), whose dwelling was built between 2016 and 2021 according to the census variable Period of Construction.
2. The Number of affordable rental units for low and very low-income households lost will be equal to the number of renter households in 2016 with a shelter cost affordable to 50% or less of AMHI, using the AMHI of the geography, less the number of renter households in 2021 with a shelter cost affordable to 50% or less of AMHI, using the AMHI of the CSD, whose dwelling was built before 2016 according to census variable Period of Construction***.

****Census data on "Period of Construction" comes from the long-form census. The possible responses for this question were different in the 2016 census than the 2021 census, which leads to a discrepancy that can not be directly resolved. The 2016 census asks if the respondent's dwelling was built between "2011 and*

[3] https://www.cmhc-schl.gc.ca/professionals/housing-markets-data-and-research/housing-data/data-tables/rental-market/urban-rental-market-survey-data-number-units
[4] https://borealisdata.ca/dataset.xhtml?persistentId=doi:10.5683/SP3/QMNEON
[5] https://borealisdata.ca/dataset.xhtml?persistentId=doi:10.5683/SP3/LCXVCR

2016," etc., while the 2021 census asks if the dwelling was built in "2021," or between "2016 and 2020" or between "2011 and 2015," etc.

Accordingly, when we ask the 2016 census for dwellings built before 2016, it would include any dwelling that was built before census day: May 10, 2016. But when we ask the 2021 census for dwellings built before 2016, it only includes dwellings built before January 1, 2016.

Therefore, our methodology of calculating units that were lost between 2016 and 2021 will include any dwellings that were built between January 1 and May 10, 2016, thereby overestimating the number of units lost by the number of units built over these 130 days.

6. Change in average rents

Data Source:

- CMHC's "Urban Rental Market Survey Data: Average Rents in Urban Centres" data publication.[6]

Methodology:

1. Find the Average Monthly Rent for years 2016-2023 inclusive.
2. Calculate the Change in Average Rent for each pair of adjacent years (i.e. 2016 & 2017, 2017 & 2018, etc. until 2022 & 2023) as the rent in the more recent year minus the rent of the other, less recent, year (i.e. Average rent in 2017 minus average rent in 2016).
3. Calculate the Percentage Change in Average Rent for each pair of adjacent years as the Change in Average Rent for a given pair of years divided by the Average Rent in the less recent year (i.e. Change between Average Rent in 2016 and 2017 divided by Average Rent in 2016).

7. Change in vacancy rates

Data source:

- Vacancy rates from CMHC "Urban Rental Market Survey Data: Vacancy Rates" data publication.[7]

Methodology:

1. Find the Vacancy Rate for years 2016-2023 inclusive.

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[6] https://www.cmhc-schl.gc.ca/professionals/housing-markets-data-and-research/housing-data/data-tables/rental-market/urban-rental-market-survey-data-average-rents-urban-centres
[7] https://www.cmhc-schl.gc.ca/professionals/housing-markets-data-and-research/housing-data/data-tables/rental-market/urban-rental-market-survey-data-vacancy-rates

2. Calculate the Change in Vacancy Rate for each pair of adjacent years (i.e. 2016 & 2017, 2017 & 2018, etc. until 2022 & 2023) as equal to the vacancy rate in the more recent year minus the vacancy rate of the other, less recent, year (i.e. Vacancy Rate in 2017 minus Vacancy Rate in 2016). Multiply this result by 100 in order to have the values as percentage points.

8. Changes in core housing need over time in both tenant and owner-occupied households

Data source:

- Vacancy rates from CMHC "Urban Rental Market Survey Data: Vacancy Rates" data publication.[8]

Methodology:

1. Find the Number of Owner & Renter HHs in CHN in 2016 & 2021.
2. Calculated the rate of CHN for owners and renters each in both years by dividing the Number of HHs in CHN by the Number of HHs Examined for CHN (for owners and renters separately in each 2016 and 2021)
3. Calculate the Change in Number of HHs in CHN (owners and renters separately) between 2016 and 2021 by subtracting the number of HHs in CHN in 2016 from those in 2021.
4. Calculate the Change in the Rate of CHN (owners and renters separately) between 2016 and 2021. Then multiply by 100 to get the result as a percentage point.

9. Number of housing units that are subsidized

Data sources:

- Census 2021 (HART custom tabulation).[8]

Methodology:

1. Find the Number of Subsidized Renter HHs in 2021 from HART census data.
2. Find the Number of Unsubsidized Renter HHs in 2021 from HART census data.

10. Number of housing units that are below market rent‡ in the private market

Data sources:

- Census 2021 (HART custom tabulation).[9]

Methodology:

1. Find the Number of Unsubsidized Renter HHs in 2021 paying a shelter cost that would be affordable to a household who earned 80% of AMHI (i.e. households with monthly shelter cost equal to or less than 2% of AMHI)
    - AMHI * 80% / 12 months * 30% affordability benchmark = AMHI * 2%

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[8] https://www.cmhc-schl.gc.ca/professionals/housing-markets-data-and-research/housing-data/data-tables/rental-market/urban-rental-market-survey-data-vacancy-rates
[9] https://borealisdata.ca/dataset.xhtml?persistentId=doi:10.5683/SP3/8PUZQA

2. Find the Total Number of Unsubsidized Renter HHs in 2021. Divide the number who are paying a shelter cost affordable on 80% of AMHI by the Total to get the percentage share.
3. Also calculate what that shelter cost was (i.e. 2021 AMHI multiplied by 80%, then divided by 12 months, then multiplied by 30% for affordability)

‡ Across Canada, median household income for renters in 2020 was only slightly over half (54%) that of median household income for homeowners. Therefore, it must be noted that a renter household making 80% of AMHI in 2020 should be considered a relatively high-income household. HART's income-based measure of market rent should not be viewed as a measure of rental housing affordability, but instead as a measure of the total number of dwellings being rented at rates which would be affordable to households making at least 80% of AMHI.

11. *[Part 2, March 14]* Number of co-operative housing units

Data sources:

- Data collected by Co-operative Housing Federation of Canada (CHF Canada) data on co-ops registered with them and provided to HART.

Methodology:

1. Find the Number of co-operative housing units whose address falls within the boundaries of a CSD based on data from CHF Canada.

12. Housing starts by structural type and tenure

Data source:

- Housing starts by structural type from CMHC's "Housing Starts: By Dwelling Type" data publication.[10]
- Housing starts by tenure from CMHC's "Housing Starts: By Intended Market" data publication.[11]

Methodology:

1. Find the data and report what was published.

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[10] https://www.cmhc-schl.gc.ca/professionals/housing-markets-data-and-research/housing-data/data-tables/housing-market-data/housing-starts-dwelling-type
[11] https://www.cmhc-schl.gc.ca/professionals/housing-markets-data-and-research/housing-data/data-tables/housing-market-data/housing-starts-intended-market