

# **Dwelling Size and Occupancy Niagara Region**

## **Executive Summary**

**January 2022**

**CANADIAN CENTRE FOR  
ECONOMIC ANALYSIS**

# Objectives

## Basis for Development Charge Calculations

- Residential development charges are calculated on a person per unit basis dependent upon the type of dwelling
- The number of people in the dwelling is used as a measure of level of service required
- This is independent on the size (sq ft) of the dwelling. For example, 2 people living in a small single-detached house require the same infrastructure services as 2 people living in a large single-detached house

## Key Question

- Niagara council is interested in understanding if dwelling size (sq ft) correlates with servicing requirements (number of people)

# Key Results

## Dwellings Growing in Size

- Recent dwellings built in Niagara Region have been growing in size while the average number of people has not been changing as much

## No Stable Correlation

- There is no stable correlation between the dwelling size (sq ft), dwelling type, and servicing requirements (number of people) of a dwelling over time
- Average people per square foot is shifting due to larger dwelling sizes (singles and semis) but without a corresponding increase in number of people
- For some larger households in apartments, the average size (sq ft) per person is dropping

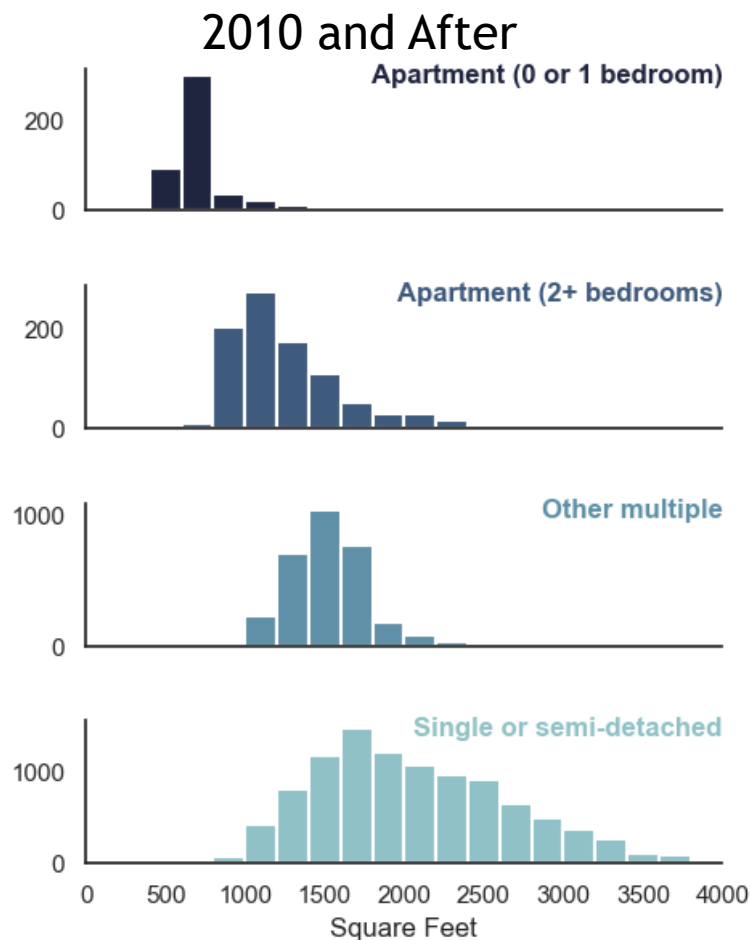
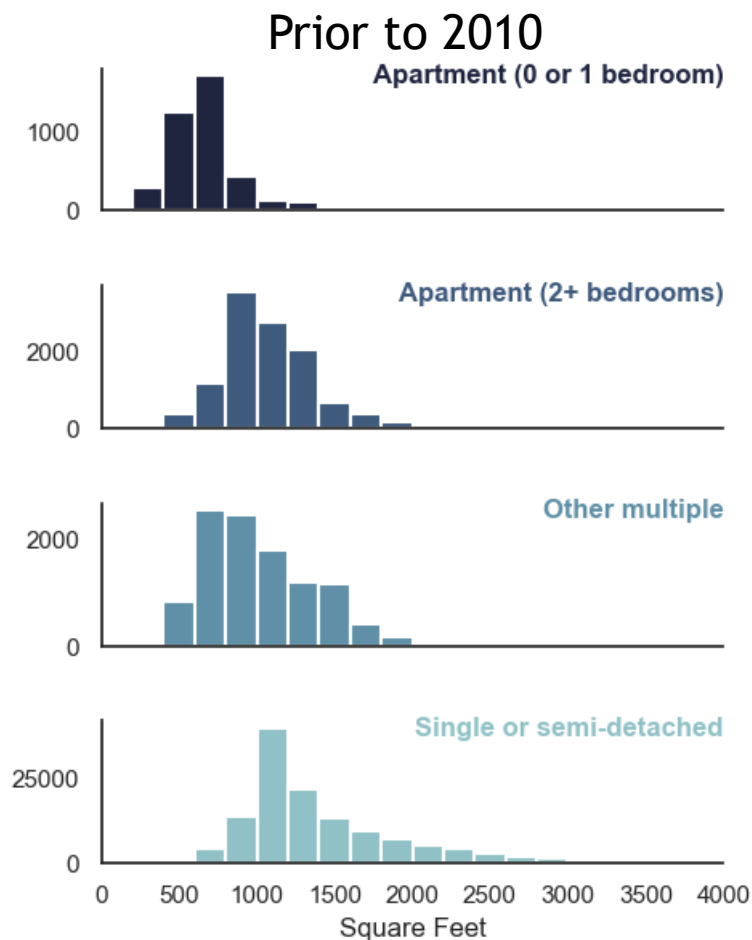
## Changing Households

- Fewer children per family, greater numbers of retirees (empty nesters), and building preferences for larger size of dwellings all act to frustrate any correlation between dwelling size (sq ft) and number of people

# 1. Background: CANCEA's Analytics Platform

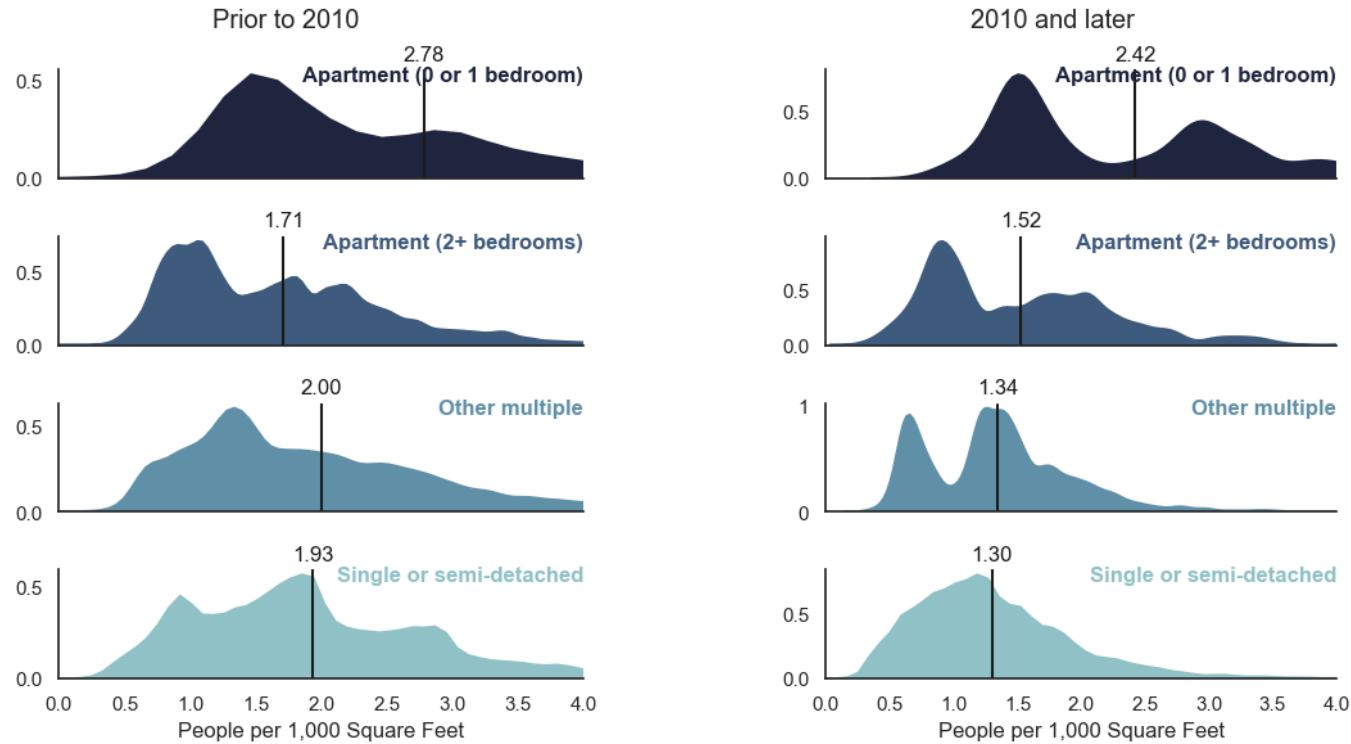
- CANCEA's Analytics Platform combines data from public and proprietary sources to build an detailed integrated view of households across Canada
- Sources include:
  - Statistics Canada datasets, including their new Housing survey results
  - Census datasets from over the last 20 years
  - CMHC construction rates, building stock, and vacancy rates
  - Municipal datasets
  - Provincial and local growth plans
- Detailed dynamics allow forward modelling out to 2051
  - Assumptions align with Niagara Region growth targets and A Place To Grow

# 2. Results: Size of Construction



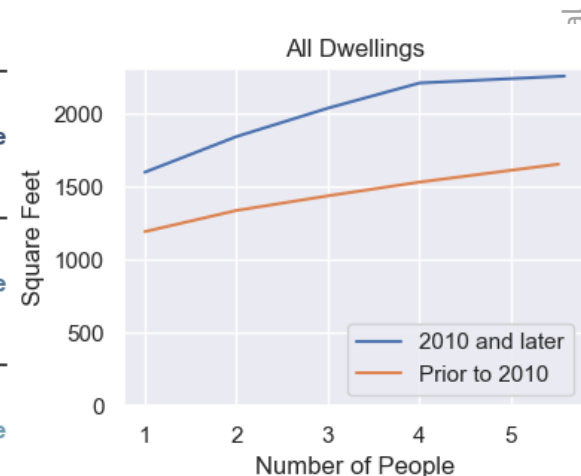
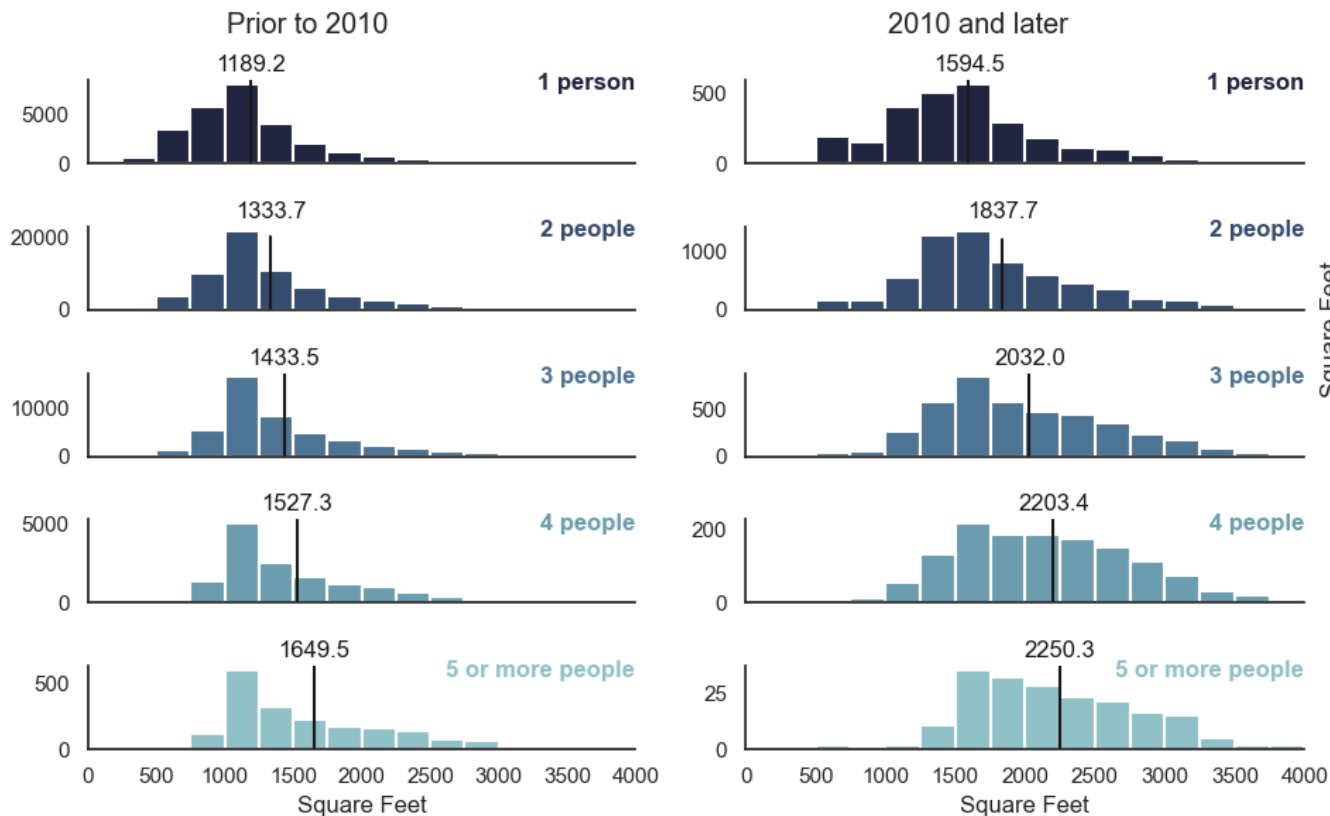
- Estimated distribution of sizes of by dwelling type
- More recent singles and semis are much larger than earlier built houses
- Despite larger average size of singles and semis, the average number of bedrooms has not increased

# 2. Results: People per Square Foot



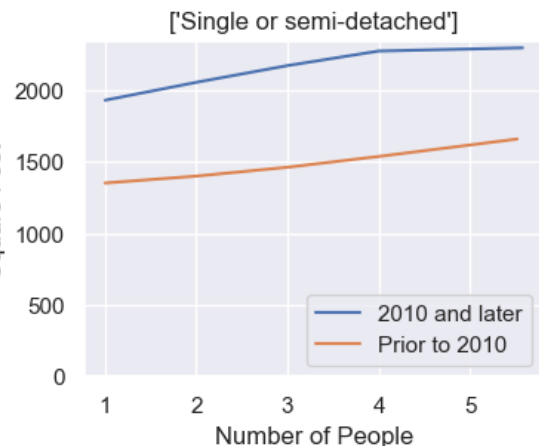
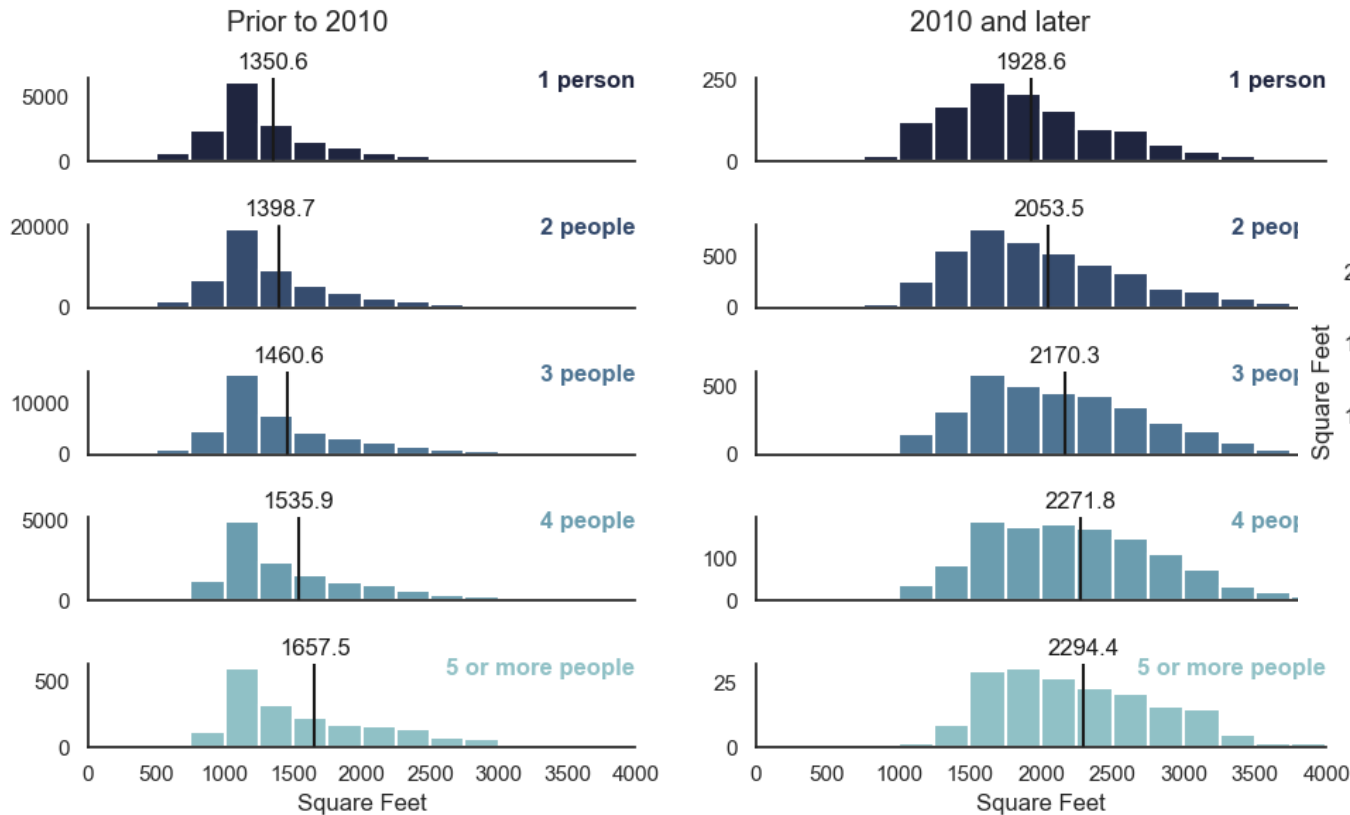
- People per sq ft has been falling significantly in larger build forms
  - Singles and semis are getting larger, but not seeing a corresponding increase in people
  - Number of bedrooms has not increased on average

# 2. Correlation Between People and Square Feet



- Across all dwelling types, there is a weak dependence between square feet and the number of people in the dwelling
  - The relationship shifts considerably over time. Sizes that corresponded to many people prior to 2010 now correspond to fewer
- The larger units are not resulting in more people living in them

# 2. Single and Semi-Detached



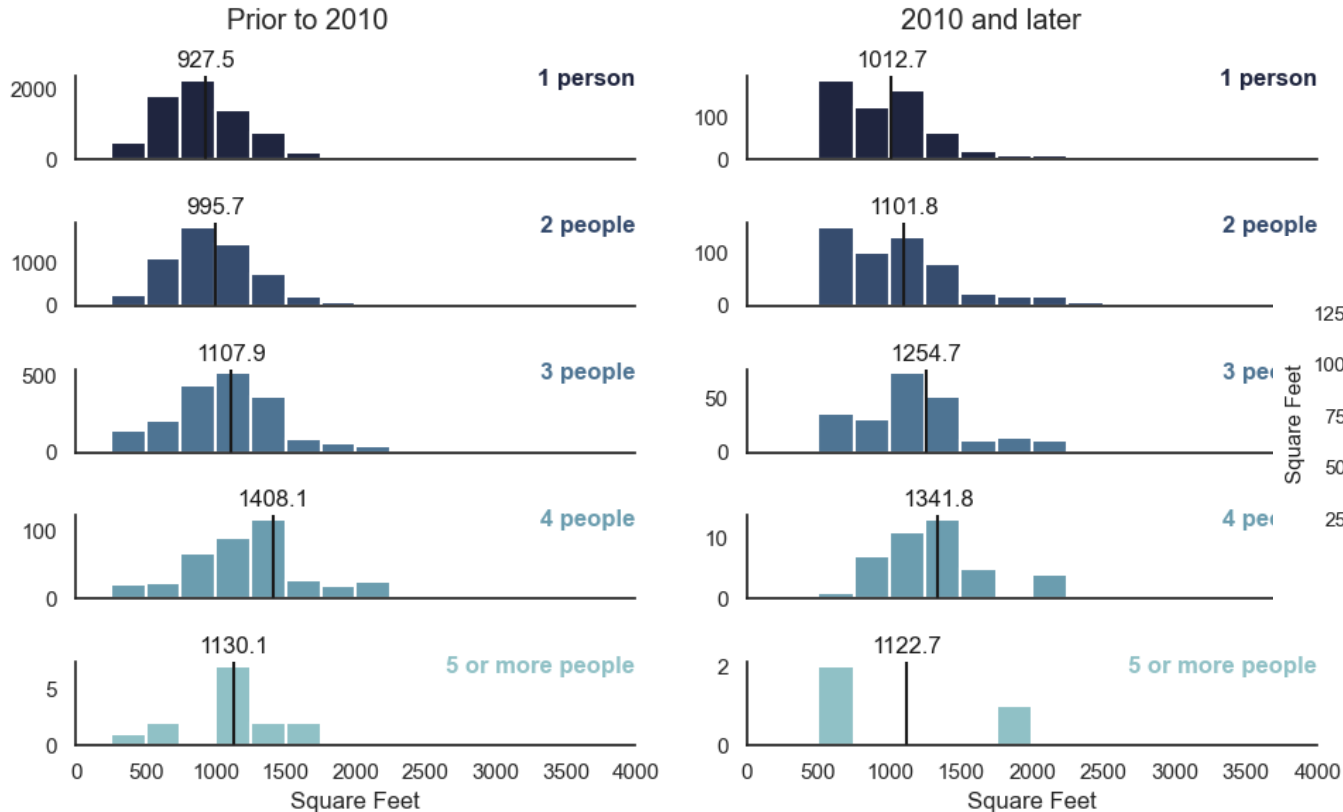
- Within single and semi-detached dwellings, there is less of a correlation recently for larger number of people
  - In recently built units, there is no dependence on the number of people and size of dwelling for larger households
  - Once a unit reaches a sufficient number of sq ft, there are fewer households with that number of people to fill it
- It is important to note that there is a wide range in the distribution of sizes across all household sizes highlighting the risks of using averages to characterize the relationships

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# 2. Apartments



- For apartments, there is no consistent correlation
  - Smaller apartments are more affordable and a key option for many larger families with lower incomes
- The difference between older and newer units is small compared to singles and semi-detached

## 2. Recent Trends

- Recently, built dwellings in Niagara have been increasing significantly in size (sq ft), particularly among singles and semi-detached homes
  - The number of bedrooms has also not increased in line with the increased square footage. Bedrooms are one of the factors which determine how many people can live in a dwelling
- There is no stable relationship between number of people and square footage in a given era
  - The sq ft that corresponded to given number of people 10 years ago doesn't necessarily correspond to current trends
- Due to the wide distributions observed in the past 10 years (large range of sizes, number of people, etc), the use of average relations:
  - Hide many of the underlying relationships
  - Becomes less reliable at best and misleading at worst
    - For example, the probability of the average occurring is less likely than other important levels in the distribution