

# ***Rotman***

## *The Rotman Roots Foundation*

A Non - Profit Organization

November 28, 2019 Prepared by Team #3



Rotman School of Management  
UNIVERSITY OF TORONTO

# ***Rotman***

## Agenda

- 1. Introduction to Rotman Roots Foundation*
- 2. The Main Challenge*
- 3. The Opportunity*
- 4. Results & Discussion*
- 5. Conclusion & Next Steps*

**Here's  
where it  
changes.**

# ***Rotman***

**Since disparities in wealth and persistent poverty have critical effects on child development and well-being, we intend to ...**

***“ Plant seeds for lifelong community growth, development, and prosperity ”***



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# REALITY CHECK !

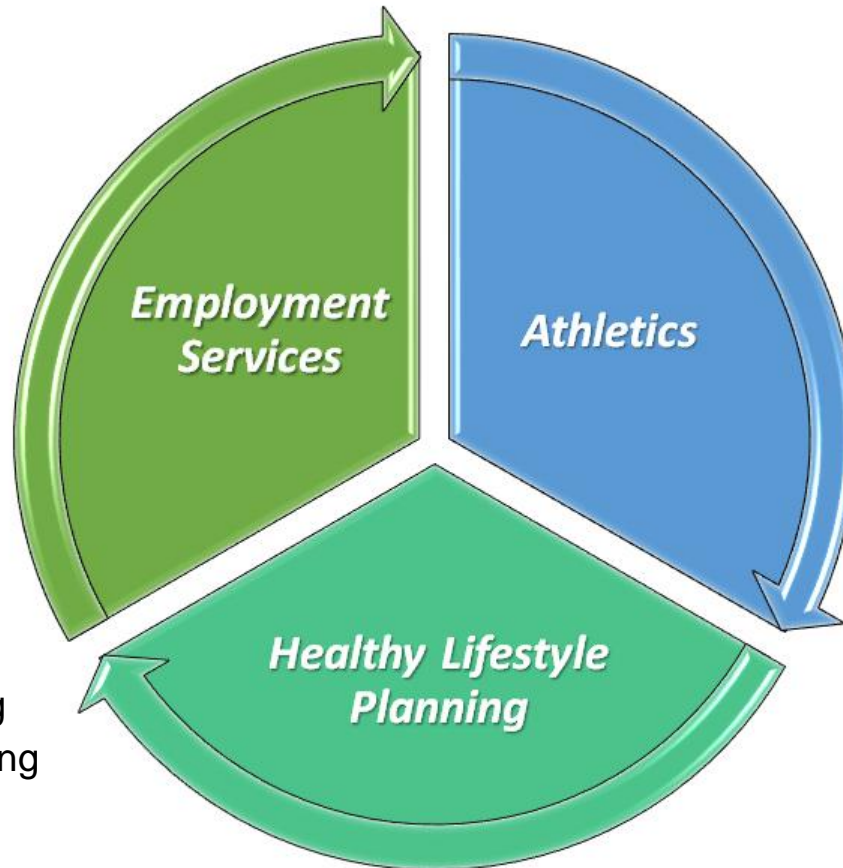
## Did you know...

- In 2010, 39% of individuals aged 15-64, who grew up in low-income areas *were not part of the labour force*
- 25% of Canadian children, aged 2-11, living in low income neighbourhoods are *overweight or obese*
- Children in the low income areas are more likely to experience:
  - a. *Emotional-disorder-anxiety* and
  - b. *Hyperactivity*

# HOW DOES ROTMAN ROOTS PLAN TO ADDRESS THESE ISSUES?

## *Initiatives towards striving Lifelong Community Growth and Development*

Provide mentorship opportunities and assist youth in getting jobs via resume and skill development workshops



Provide opportunities and financial support for youth to participate in organized sport

Help youth establish healthy eating and lifestyle habits, by offering cooking classes and nutrition workshops

# THE MAIN CHALLENGE

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- Recently, The Rotman Roots Foundation raised \$1 Million in funding to support its prior defined initiatives
- In alignment with Rotman Roots core mission, we, the Leadership team aspire to establish multi-faceted partnerships in the low-income communities across Canada
- However, we are unsure of:

***a. Where to set-up our community-based initiatives?***

***b. How must we allocate the resources***



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# THE SCALABLE OPPORTUNITY

## A Partnership in Action

- Rotman Roots partnered with *MMA Consulting* to gain insight on what low-income communities should be targeted
- ***Rotman Roots has requested a detailed analysis about the median income for different neighbourhoods***
- Further, we would like *MMA Consulting* to use *spatial analytics* in order to produce an updated version of the Average Individual Income graph, 2015.

Average Individual Income, City of Toronto, 2015

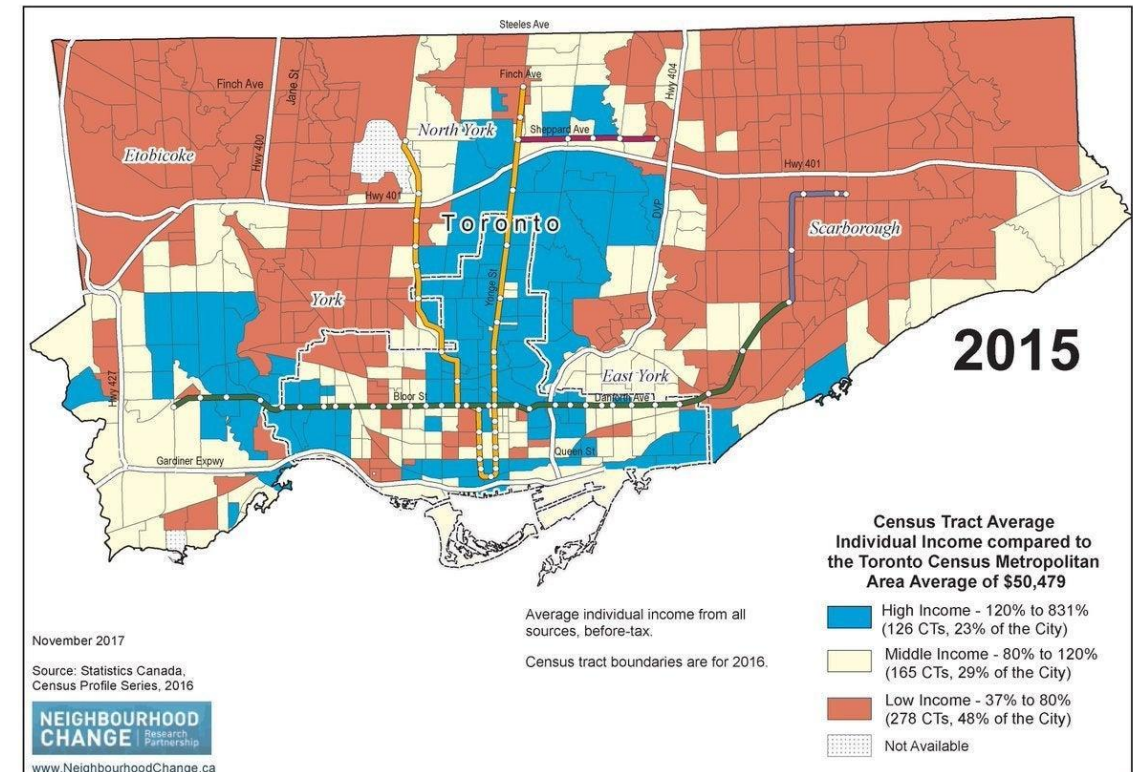


Image ref: <http://neighbourhoodchange.ca/>





**One  
Eternity  
Later**

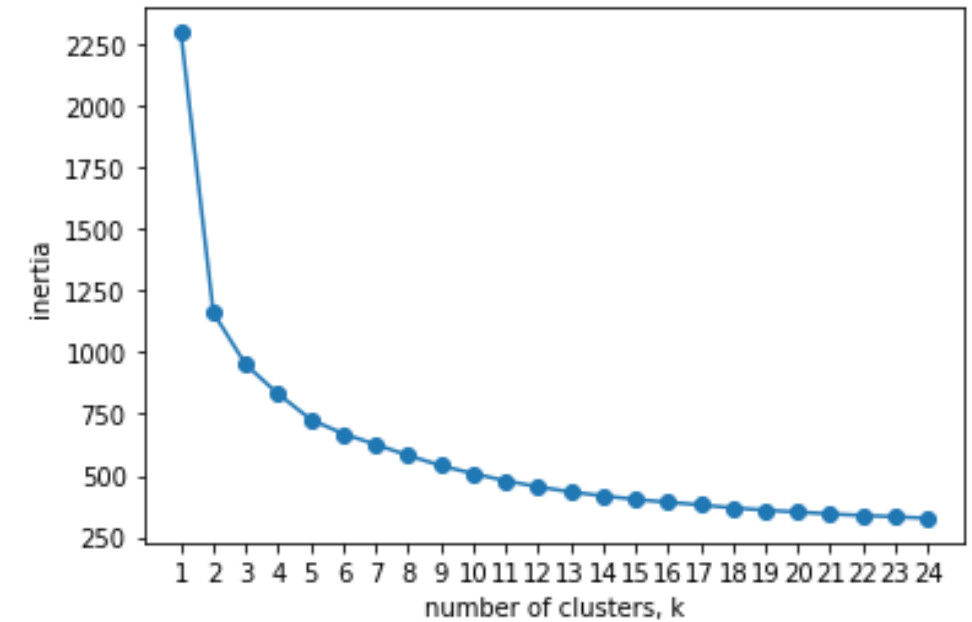


# EXPLORATORY DATA ANALYSIS (EDA) - Statistics Summary

	Total Households	Median Household Income (Current Year \$)	Proportion of Households For Period Of Construction Built Before 1961	Proportion of Households For Period Of Construction Built Between 1961 And 1980	Proportion of Households For Period Of Construction Built Between 1981 And 190	Proportion of Households For Period Of Construction Built Between 1991 And 2000	Proportion of Households For Period Of Construction Built Between 2001 And 2005	Proportion of Households For Structure Type Houses	Proportion of Households For Structure Type Apartment, Building Low And High Rise
count	4980.00	4980.00	4980.00	4980.00	4980.00	4980.00	4980.00	4980.00	4980.00
mean	1935.52	77551.28	0.22	0.30	0.14	0.12	0.07	0.62	0.37
std	969.06	33076.78	0.23	0.20	0.13	0.13	0.10	0.31	0.31
min	1.00	11334.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25%	1341.00	53201.36	0.03	0.15	0.05	0.04	0.01	0.39	0.10
50%	1827.00	76328.30	0.14	0.27	0.10	0.08	0.03	0.70	0.28
75%	2433.00	95554.43	0.36	0.42	0.18	0.16	0.08	0.89	0.61
max	15388.00	669559.56	1.00	1.00	0.89	1.00	0.86	1.00	1.00

# INITIAL ANALYSIS WITH K MEANS

- Optimal Clusters -> 2
- K-means to obtain cluster medoids for important variables

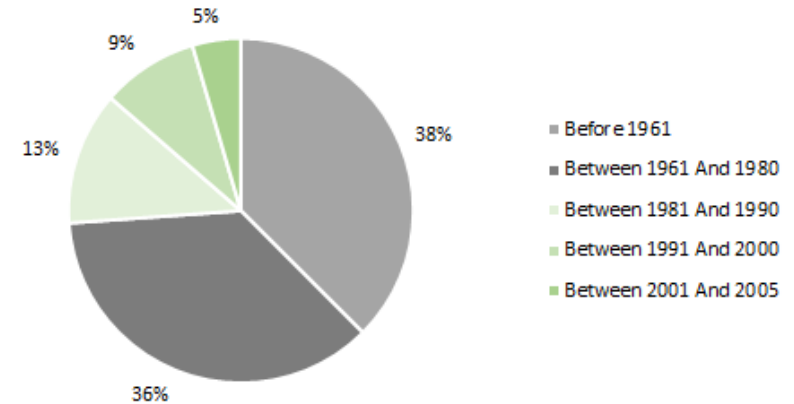


	Total Households	Median Household Income (Current Year \$)	Proportion of Households For Period Of Construction Built Before 1961	Proportion of Households For Period Of Construction Built Between 1961 And 1980	Proportion of Households For Period Of Construction Built Between 1981 And 190	Proportion of Households For Period Of Construction Built Between 1991 And 2000	Proportion of Households For Period Of Construction Built Between 2001 And 2005	Proportion of Households For Structure Type Houses	Proportion of Households For Structure Type Apartment, Building Low And High Rise	Proportion of Households For Structure Type Other Dwelling Types	Proportion of Households For Tenure
0	2109.11	53422.55	0.33	0.32	0.11	0.08	0.04	0.26	0.74	6.25e-03	0.94
1	1840.05	90820.95	0.16	0.29	0.15	0.15	0.08	0.82	0.17	1.33e-02	0.94

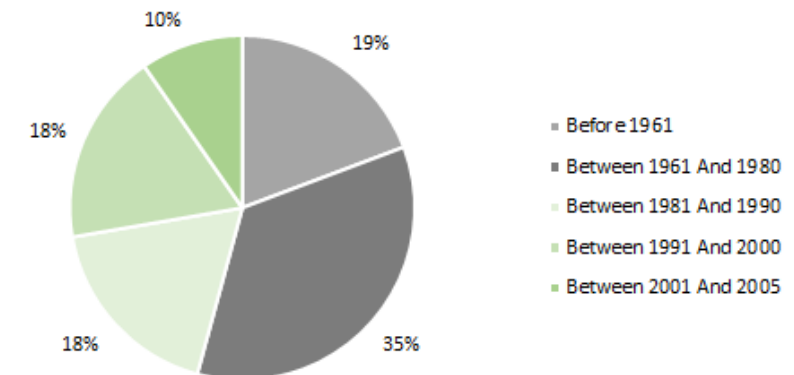
- Distribution of average current household incomes in both the clusters
- A striking difference in both the values
- Future analysis will include dwelling deeper into current findings

## Household Income Clusters by Period of Construction

**Low Income Cluster (Mean Income = \$54,000)**

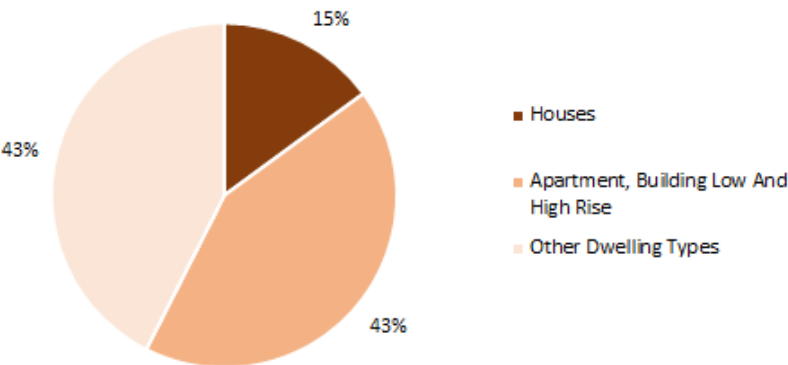


**High Income Cluster (Mean Income = \$91,000)**

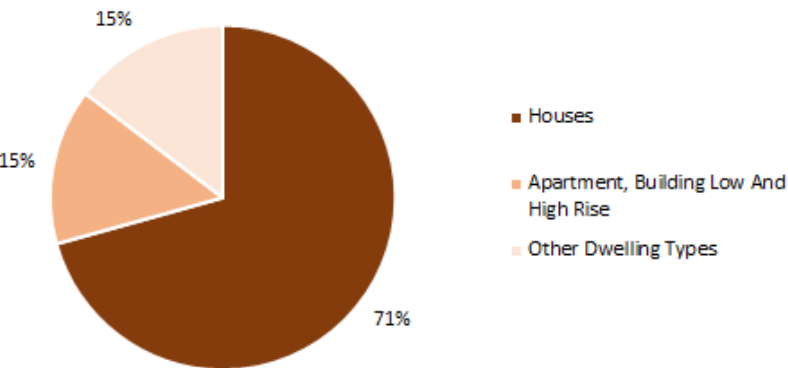


## Household Income Clusters by Structure Type

Low Income Cluster (Mean Income = \$54,000)

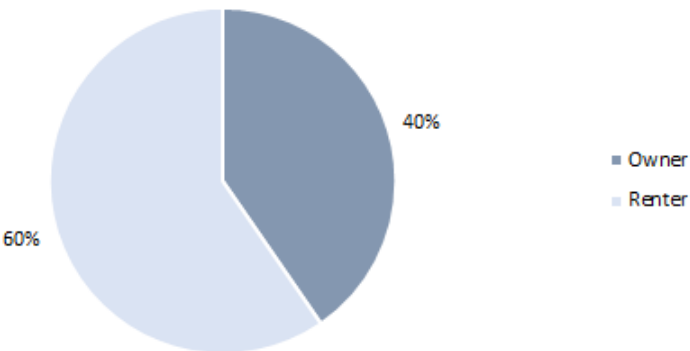


High Income Cluster (Mean Income = \$91,000)

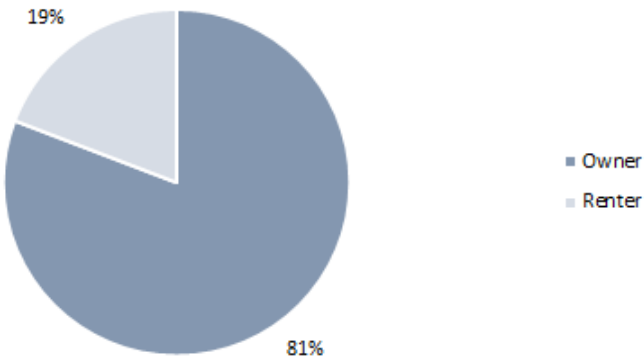


## Household Income Clusters by Dwelling Tenure Type

Low Income Cluster (Mean Income = \$54,000)



High Income Cluster (Mean Income = \$91,000)



# References:

Rita Paul-Sen Gupta, Margaret L de Wit, David McKeown, The impact of poverty on the current and future health status of children, *Paediatrics & Child Health*, Volume 12, Issue 8, October 2007, Pages 667–672, <https://doi.org/10.1093/pch/12.8.667>



**THANK YOU!**