Satisfaction Guaranteed?
The Influence of Travel Behaviour, Personal Preferences, and Lifestyle on Perceived Convenience to Amenities Among Calgary Residents

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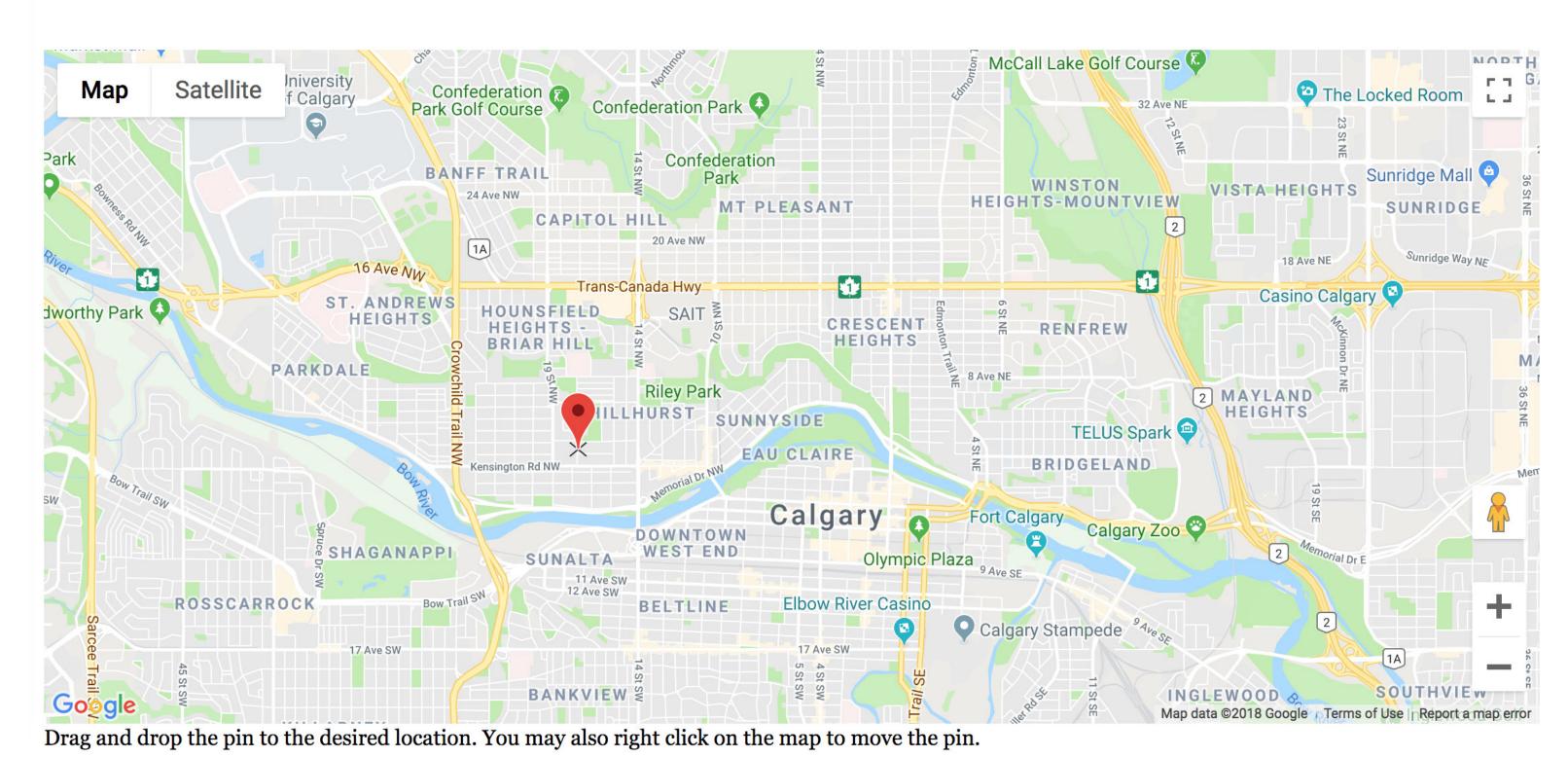T RAM — *Transportation Research at McGill*

McGill

INTRODUCTION

- This study created eight distinct travel behaviour typologies using population segmentation analysis to highlight predominant travel preferences in relation to lifestyles, home locations, and sociodemographics in Calgary AB
- Results show that distance negatively affects reported convenience to work, grocery stores, and parks, but reported convenience is also closely related to modes available as well as to transport and home location options that meet individuals' preferences
- This study demonstrates the importance of providing individuals with a variety of affordable options in terms of transport mode and home locations, which can be of interest to researchers and planners concerned with improving convenience of access to local amenities by sustainable modes

LIVEABILTY SURVEY

- 1,524 partial and complete survey responses were collected, where 711 respondents were used in this study, who answered all mandatory and optional questions chosen as inputs for the cluster analysis
- Respondents located several key travel destinations such as their home, work/school and preferred grocery store by placing a pin on a map
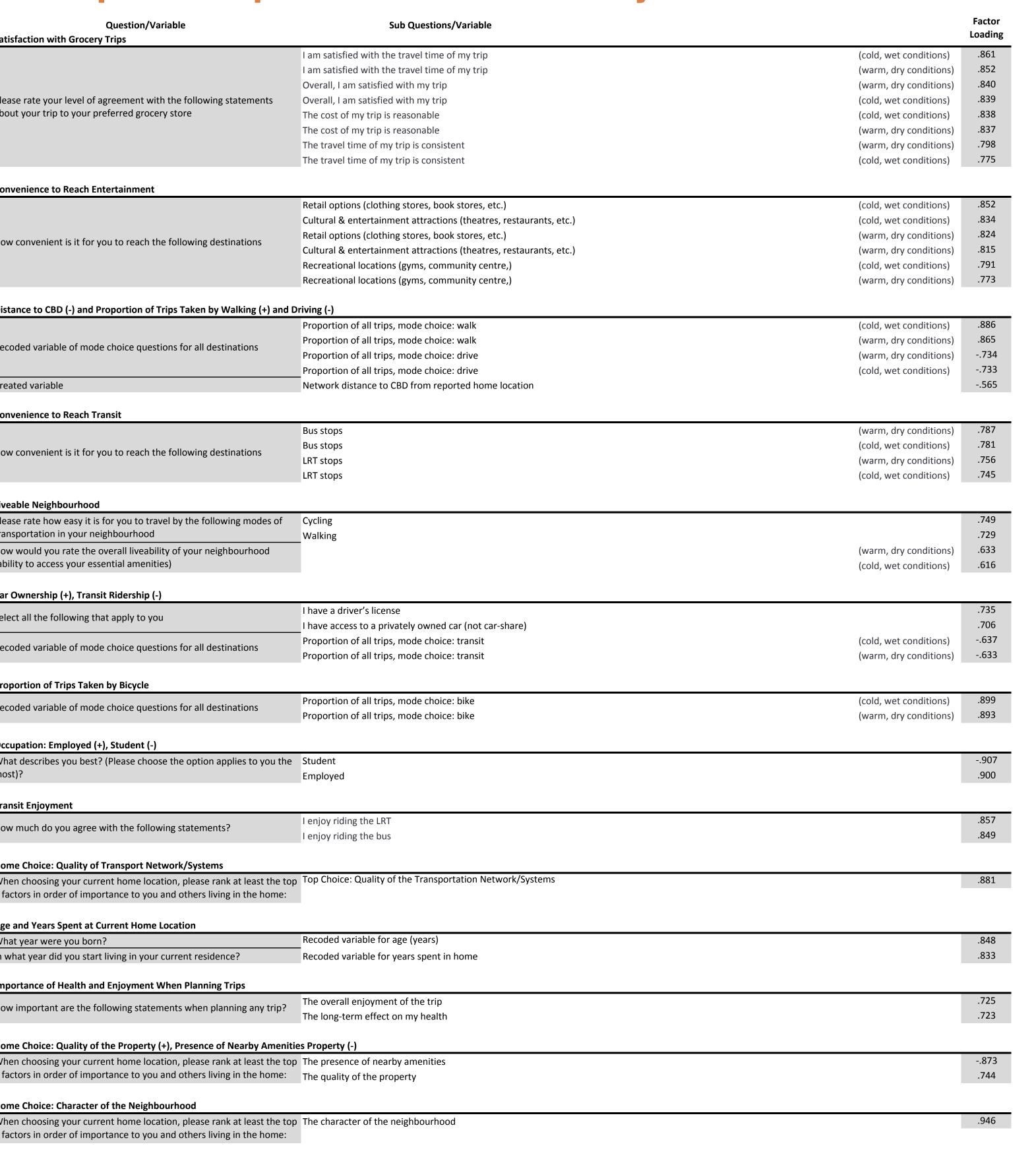
On the following map, please adjust the zoom and drag the pin to the nearest intersection to your current home location:

Drag and drop the pin to the desired location. You may also right click on the map to move the pin.

- Other collected / calculated variables included:
  - Network distances between homes and destinations specified by the respondents
  - Network distances to other common urban amenity locations (bus stops, LRT stops, goods/services locations etc.)
  - Ranking questions related to home location considerations
  - Detailed mode choice and ordinal travel convenience questions for a variety of trip types
  - Optional socioeconomic and household structure questions
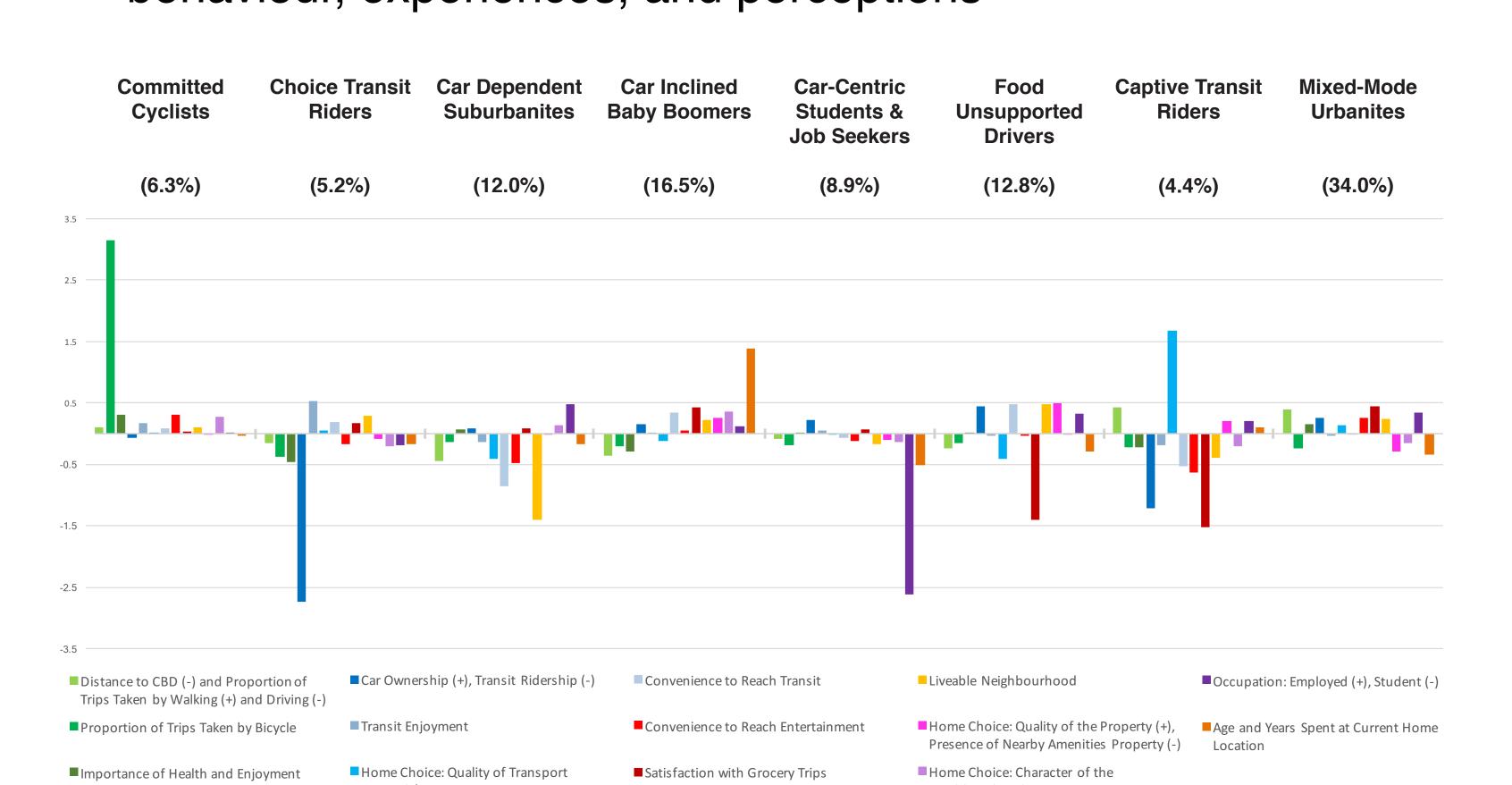
FACTOR-CLUSTER ANALYSIS

Principle Components Factor Analysis

PCA Factor Loadings

K-Means Cluster Analysis

- K-Means Cluster Analysis was used to segment respondents into travel typologies
- By maximizing intergroup differences of PCA factors, while minimizing intragroup differences, the cluster analysis segmented respondents into a specified number of clusters
- The number of chosen clusters was tested iteratively to identify meaningful groups of respondents with similar travel behaviour, experiences, and perceptions

Committed Cyclists	Choice Transit Riders	Car Dependent Suburbanites	Car Inclined Baby Boomers	Car-Centric Students & Job Seekers	Food Unsupported Drivers	Captive Transit Riders	Mixed-Mode Urbanites
(6.3%)	(5.2%)	(12.0%)	(16.5%)	(8.9%)	(12.8%)	(4.4%)	(34.0%)

K-means Travel Behaviour Typology Cluster Centres

TYPOLOGY DATA COMPOSITIONS

- The identified travel typologies were used to extract summary statistics and data specific to each group
- Eight 'data compositions' were created to further understand the lifestyle, socio-demographic, and spatial differences between the travel typologies

Mixed-Mode Urbanites
Committed Cyclists
Captive Transit Riders
Choice Transit Riders
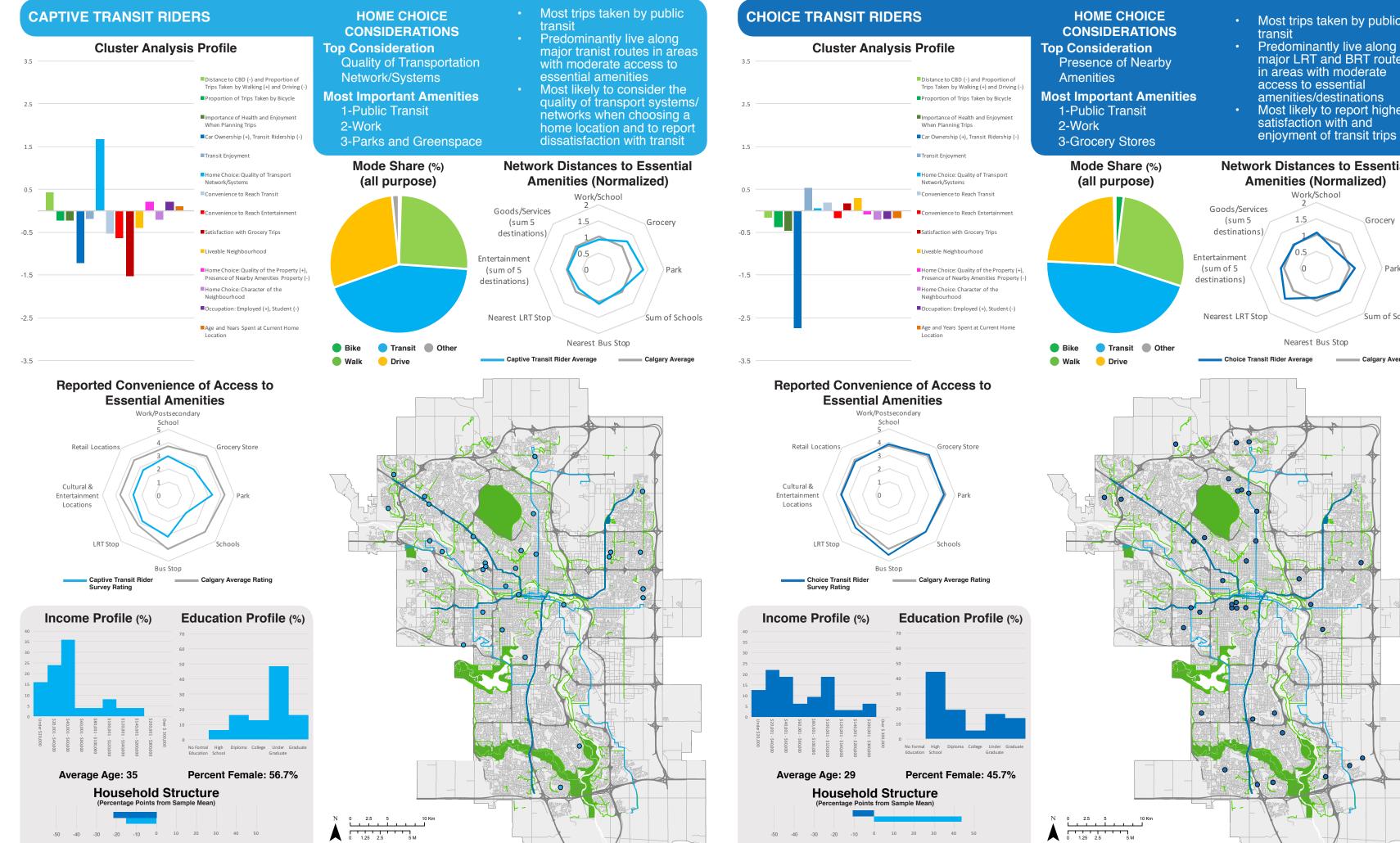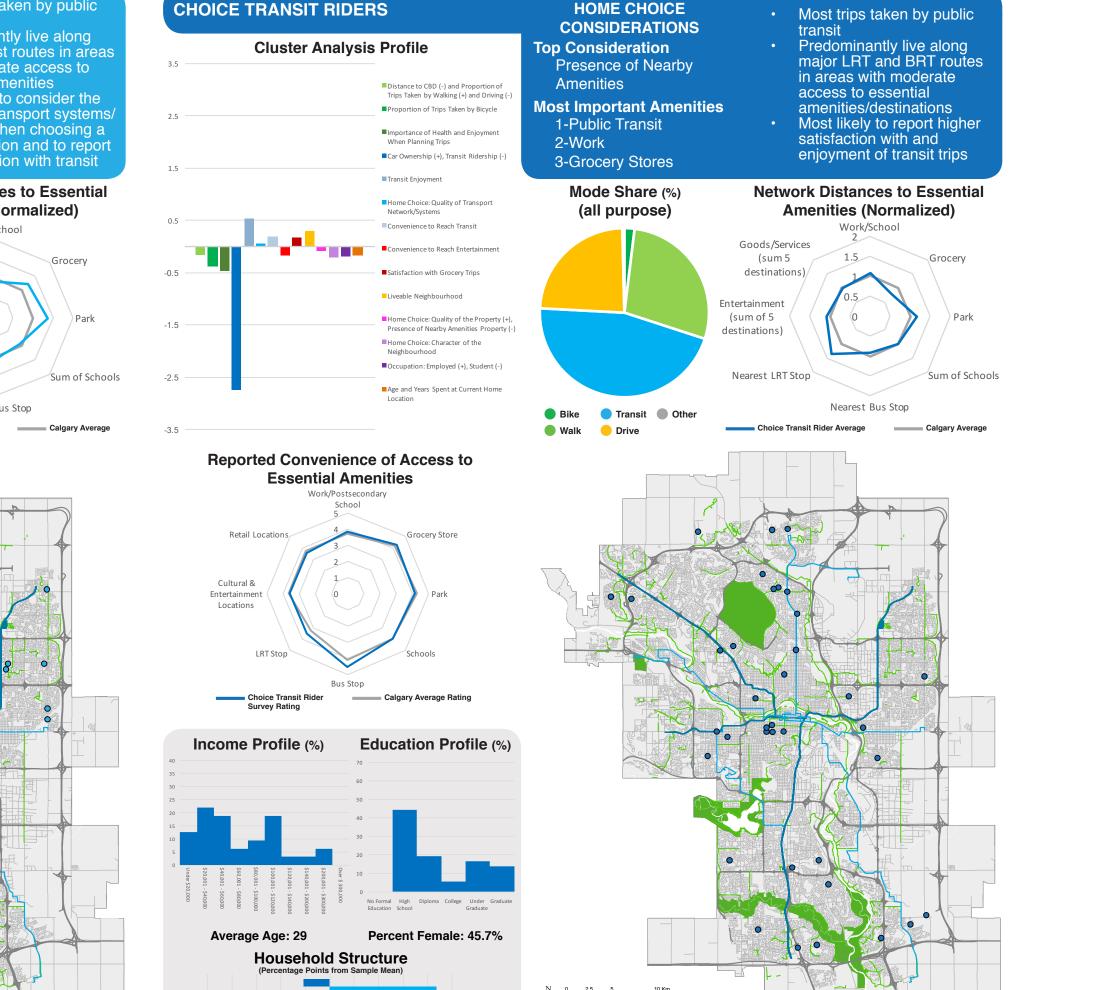
Car Dependent Suburbanites
Car Inclined Baby Boomers
Food Unsupported Drivers
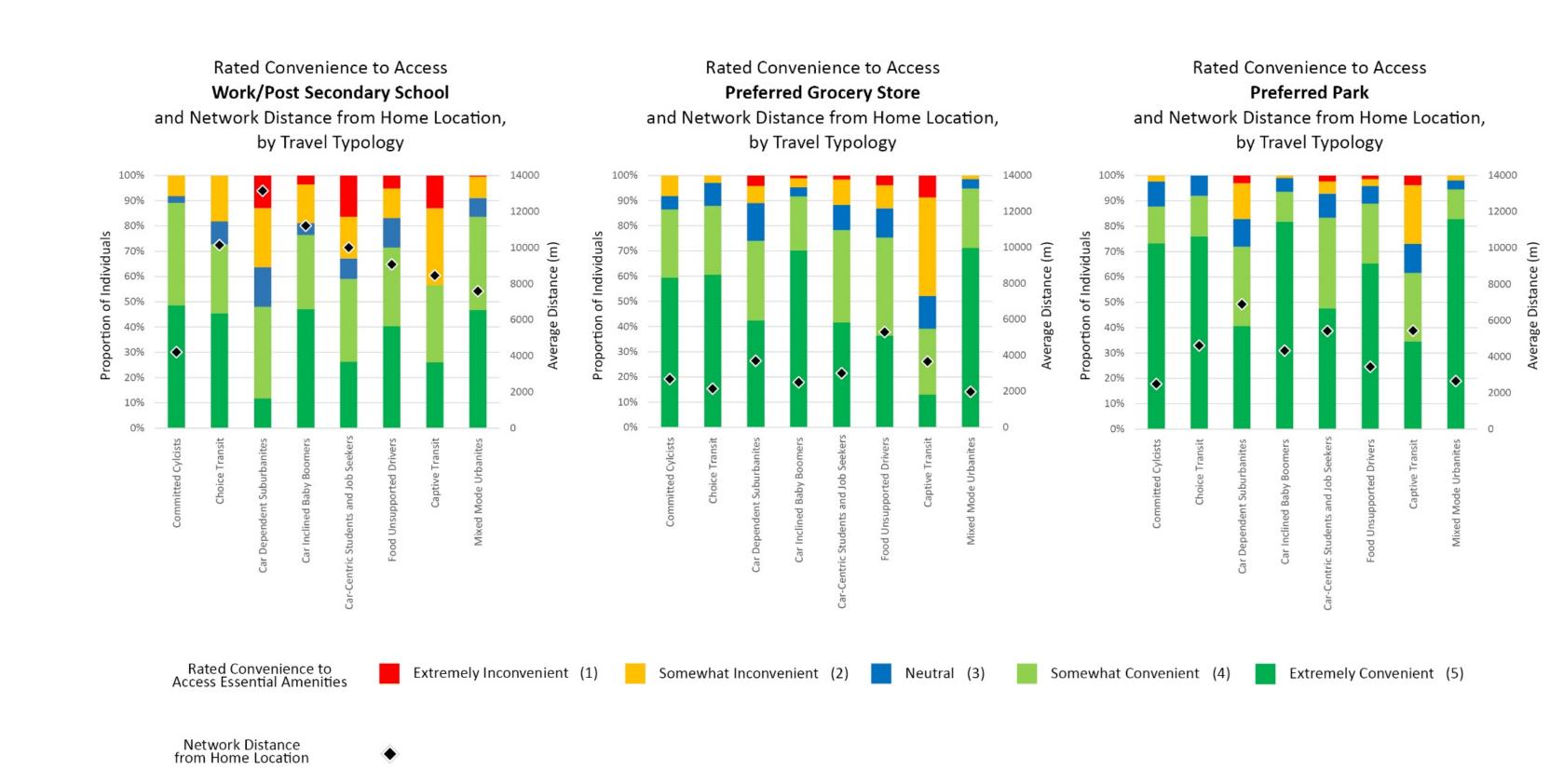### Car-Centric Students & Job Seekers

Typology Data Compositions

RESULTS

- The graphs below show each typology's proportion of individuals for each ordinal-ranked ratings of convenience of access to the three locations, with average network distances indicated on a second axis

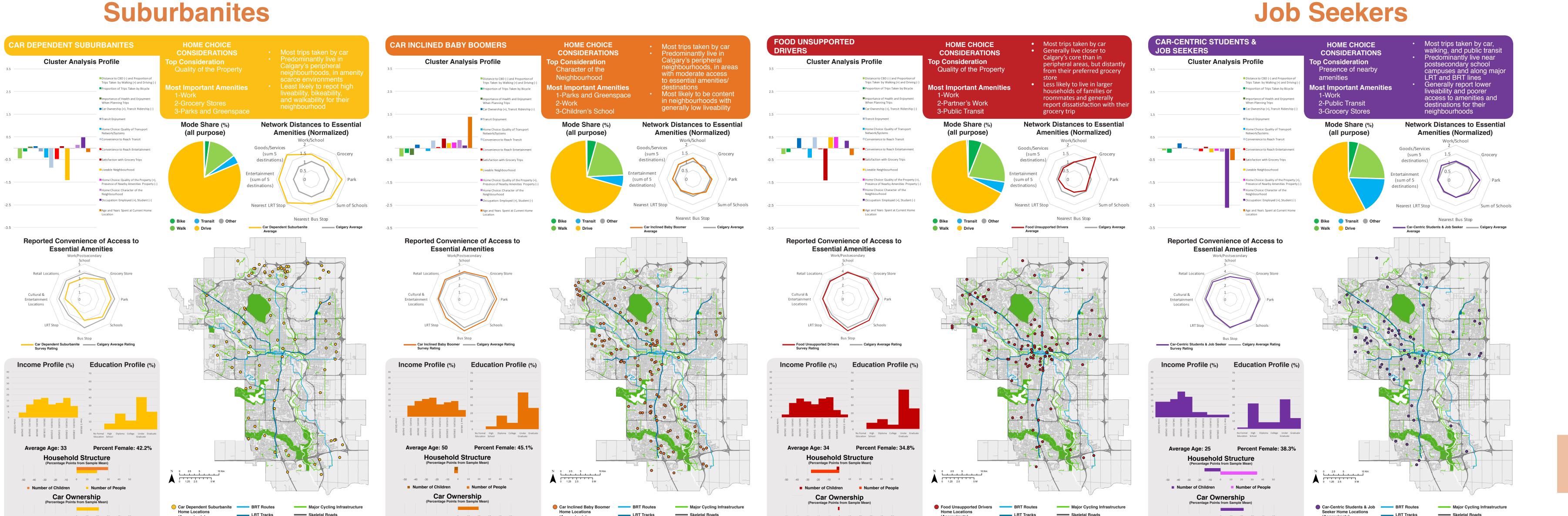Rated Convenience of Access and Average Distance by Typology Membership

- Consistent with other research, typologies that travel shorter average distances tend to report higher convenience
- Interestingly, Choice Transit Riders travel longer average distances to work than Captive Transit Riders, yet report higher convenience of access

CONCLUSIONS

- Typologies are not merely characterized by their mode choice, but rather by many socio-economic and lifestyle specific factors
- Individuals who live in areas supportive of their travel preferences may perceive their convenience of access as higher than those who must travel similar distances by less ideal options
- Perceived convenience of accessing local amenities varies widely across the eight typologies, which has profound implications for how land use and transport can support sustainable modes as well as a higher sense of neighbourhood liveabilty

ACKNOWLEDGMENTS