Purpose

Discuss TCRP Report 201.

Learning Objectives

At the end of this webinar, you will be able to:

• Determine the breadth of factors that will influence the markets for public transportation over the next decades
• Predict demographics, preferences, and markets to accurately implement long-term transit planning
TCRP Report 201:
Understanding Changes in Demographics, Preferences, and Markets for Public Transportation

Webinar Speakers:
Matthew A. Coogan, Principal Investigator
Nancy McGuckin, Travel Behavior Analyst

Webinar Moderator: Karla H. Karash
Webinar Moderator

Karla H. Karash
Transit Consultant

- Former Principal, Multisystems & TranSystems
- Former Deputy Director of Operations, MBTA
- Former Assistant Secretary of Transportation, Commonwealth of Massachusetts
- Former Chair of the TRB Public Transportation Group
Matthew A. Coogan
Principal Investigator

• Former Director, The New England Transportation Institute
• Former Undersecretary of Transportation, Commonwealth of Massachusetts
• Author of MBTA Program for Mass Transportation, (1977)
• Principal Investigator for 12 CRP Projects
Panel Members, TCRP Report 201

Tim E. Healy, *Sound Transit, Seattle, WA* (Chair)
Gabriella Serrado Arismendi, *City and County of Denver, Denver, CO*
Clinton S. Bench, *University of California, Los Angeles, Los Angeles, CA*
Brent Boyd, *San Diego Metropolitan Transit System, San Diego, CA*
Philip B. Hemily, *Hemily and Associates, Toronto, ON, Canada*
Shyam Kannan, *Washington Metropolitan Area Transportation Authority, Houston–Galveston Area Council, Houston, TX*
Hugh A. Mose, *State College, PA*
Christopher M. Puchalsky, *City of Philadelphia, Philadelphia, PA*
Mindy Rhindress, *Queens College, CUNY, Flushing, NY*
Susan A. Shaheen, *University of California, Berkeley, Berkeley, CA*
Matthew Sibul, *Utah Transit Authority, Salt Lake City, UT*
Katie Sihler, *Moovel (formerly RideScout), Austin, TX*
Sonali Soneji, *Virginia Railway Express, Alexandria, VA*
Franklin L. Spielberg, *Falls Church, VA*
William C. Van Meter, *Regional Transportation District–Denver, Denver, CO*
Peter Mazurek, *FTA Liaison*
James Ryan, *FTA Liaison*
Melissa A. Anderson, *Melissa A. Anderson, LLC, Liaison*
Richard Weaver, *APTA Liaison*
Stephen J. Andrle, *TRB Liaison*
Research Team Composition

- Matthew A. Coogan, Principal Investigator,
- Resource Systems Group (RSG)
  - Greg Spitz
  - Tom Adler
  - Mark Bradley
- Senior Consultant Specialists
  - Nancy McGuckin, demographics
  - Rich Kuzmyak, land use
  - Karla Karash, transit
Structure of this TCRP Webinar

Introduction of the Three Subject Areas - Coogan
- Demographics
- Location
- Preferences and Attitudes
- ‘Age’ as an example of interaction among factors

Demographics: Applied to Information Technology and Transit – McGuckin
- A cross section of demographic factors
- Ethnicity, immigration and gender
- How attitudes towards and use of new transportation technology vary by demographics

How All the Factors Come Together to Influence Transit – Coogan
- How preferences, location and demographics together help us to understand what will happen to Millennial use of transit over the next decade
- Introduction to Generation Z, and project conclusions
Resources used in TCRP Report 201

A new survey of 3,500 persons in 24 transit oriented metropolitan areas (2016)

Newly analyzed survey of 11,000 persons in 43 transit oriented metropolitan areas (2014)


New Structural Equations Model focusing on preferences, attitudes and values

New Multinomial Logit travel demand models focusing on travel times and costs

New Hybrid, Integrated Choice Latent Variable model, integrating both preferences and

A new scenario forecasting process, using the integrated Hybrid models
The focus of the research

• How do they interact to affect transit ridership?
Changes in Demographics, Preferences, and Markets for Public Transportation

Market \textit{interacts with} Supply \textit{resulting in} Ridership

- Demographics
- Location
- Preferences

Travel Times
Costs
Service Characteristics

=
Changes in Demographics, Preferences, and Markets for Public Transportation

Market interacts with Supply resulting in Ridership

The Study Emphasizes Underlying Factors Influencing Transit Markets
How do they interact?

Changes in Demographics, Preferences, and Markets for Public Transportation
Values  ➔ Location ➔ Attitudes ➔ Behavior

- Demographics
- Long Term Values
- Location
- Near Term Attitudes
- Transportation options
How Age Influences Travel Behavior

*Vehicle Miles Traveled (2009) by Age Group*

A critical age period for the transit market

*Between 20-30 dependence on the auto is less dominant*

Source: NHTS, 2009
The data from the NHTS shows the age category of the 30s is a particularly negative period for transit markets.

Source: NHTS Surveys 1995-2017
Age is a powerful explanatory factor in the use of transit.

Data from 43 metropolitan areas only.

Source: TransitCenter Survey, 2014
As we get older, the number of cars around us increases

• This makes the competitive setting for transit more difficult as we age

• Is car ownership changing?

• Yes, but increasing age still explains most

As we get older, we make location decisions that push us away from transit stops and commercial districts.

Distance Home to Transit Stop by Age

Distance, Home to Commercial District

Source: TransitCenter Survey, 2014
Age is important – even controlling for transit availability

For any level of closeness to a transit stop, age explains difference in ridership

Transit Use by Age, for Five Levels of Proximity

Source: TransitCenter Survey, 2014
Age is important – *holding closeness to transit constant*

This shows that the effect of age on transit use is *not simply a function of location*

Source: TransitCenter Survey, 2014
Importance of Age does **not** vary by national region

Source: TransitCenter Survey, 2014
More Demographics, Applied to Transit and ICT*

(*Information Communications Technology”)

Speaker: Nancy McGuckin

- Specializes in data mining + making information out of complex data relationships
- 35 years experience in travel behavior explanation and forecasting
Key Points: Demographics, ICT, and Attitudes

• While there has been a lot of focus on millennials, this research found that transit use also grew in older age cohorts, especially 35-54 year-olds.

• Transit riders are increasingly diverse, and new immigrants are more likely to use transit compared to native-born.

• Legacy markets include commuters, people who don’t drive and/or have no vehicle, and lower-income riders (especially on the bus system).

• New markets include young people, Hispanics, and women--people who want to stay connected and multi-task while travelling.

• Attitudes about future technology and the impact on transit are evolving but we see gender differences.
Legacy markets:
The characteristics of transit riders hasn’t changed much over many decades

Source: NHTS data series
The growth in Hispanic transit riders is notable: Hispanics at all income levels have far higher use of transit than people of other race/ethnicities:

![Use of Transit by Income and Hispanic Origin](chart.png)

Source: TransitCenter Survey, 2014
As new immigrants acculturate they behave more like native born:

Transit Mode Share by Years in the US

Source: 2017 NHTS
Who would chose a smartphone over a private vehicle?

* Half of younger people

* Half of Hispanics (not shown)

* More women than men in each age category (not shown)

88% of native-born Hispanics own a smartphone, compared with 62% of Hispanics born abroad. About three-quarters of whites and blacks own a smartphone.
Transit users especially want to stay connected and multi-task while traveling:

- Being able to freely perform tasks while traveling, including using a laptop, tablet, or smartphone is important to me.
- It would be important to me to receive email or text message updates about my bus or train trip.
- I like to make productive use of my time when I travel.
- It is important for me to have access to communication technology throughout the day.

Source: TCRP Project Survey 2016
This is especially important to younger transit riders
(also women and non-native born, not shown)

Being able to freely perform tasks while traveling, including
using a laptop, tablet, or smartphone is important to me.

Source: TCRP Project Survey 2016
Workers are more interested in staying connected than non-workers:

- Important to use a Laptop or Cell phone during travel
- Need to be able to Receive Text
- Like to be Productive during Travel
- Wants access to ICT all Day

Source: TCRP Project Survey 2016
The growing desire to stay connected is an important message for transit providers:

Would Use Transit More if There Was Reliable Wi-Fi

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>50%</td>
<td>60%</td>
</tr>
<tr>
<td>25-34</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>35-49</td>
<td>30%</td>
<td>40%</td>
</tr>
<tr>
<td>50-64</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td>65+</td>
<td>20%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Source: TransitCenter Survey, 2014
Ride-hailing can be a complement to transit:

Transit Riders in Large Metro Areas by Whether They Also Used Ride-Hailing in the Last 30 Days

- Used Transit but NOT Ride-Hailing
- Used Transit AND Ride-Hailing

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Used Transit but NOT Ride-Hailing</th>
<th>Used Transit AND Ride-Hailing</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>41.9%</td>
<td>58.1%</td>
</tr>
<tr>
<td>25-34</td>
<td>59.4%</td>
<td>40.6%</td>
</tr>
<tr>
<td>35-49</td>
<td>36.7%</td>
<td>63.3%</td>
</tr>
<tr>
<td>50-64</td>
<td>19.7%</td>
<td>80.3%</td>
</tr>
<tr>
<td>65+</td>
<td>10.1%</td>
<td>89.9%</td>
</tr>
</tbody>
</table>

Source: 2017 NHTS
Working mothers showed very different attitudes about car-share and transit compared to working fathers:

Index of Attitudes with Largest Point Differences From Sample Average: Working Parents

<table>
<thead>
<tr>
<th>Less Likely to Agree&lt;-----</th>
<th>More Likely to Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rather than owning a car, I would prefer to borrow/rent when I need it.</td>
<td></td>
</tr>
<tr>
<td>I am a person who likes to participate in programs like carshare and bikeshare.</td>
<td></td>
</tr>
<tr>
<td>I feel I am less dependent on cars than my parents are/were.</td>
<td></td>
</tr>
<tr>
<td>I feel I walk, bike and take transit more than my parents did at my age.</td>
<td></td>
</tr>
<tr>
<td>I enjoy meeting people on the bus or train.</td>
<td></td>
</tr>
</tbody>
</table>

Source: TCRP Project Survey 2016
Future disruptions are a possibility:

If Driverless Cars Were to Become a Reality, I Would Be Less Likely to Travel by Rail or Bus

Source: TransitCenter Survey, 2014

Source: TCRP Project Survey 2016
But again, the differences are nuanced and demographics play a role:

Index of Attitudes with Largest Point Differences From Sample Average: Working Parents

- Because of new services helping me make trips, I feel less need to own a car.
- In a world with driverless cars, I really would not see much role for buses and subways anymore.
- In general, if the shared car allowed me to wait less time than for the bus, I would take the shared car.
- I think I make fewer trips because of the internet (e.g., shopping, visiting friends/family)
- The thought of sharing a car with others for a local trip seems unpleasant to me.

Source: TCRP Project Survey 2016
Information and Communications Technology (ICT) could affect the future market for public transportation in at least these broad areas:

- Enable competing/complementary services such as ride-hail, car-share, and bike-share
- Help riders plan and undertake public transit trips with confidence and added convenience (e.g. with real-time information)
- Change the value of travel time by allowing connected multi-tasking during travel
- Disrupt current transportation paradigms with autonomous vehicles or other yet-to-be identified services
Summary: Demographics, Applied to ICT

• New transit markets include choice riders who want to stay connected and multi-task while travelling.

• Smart phones are more important than cars to about half of young people, women, and Hispanics. More native-born Hispanics own a smart phone that whites*.

• Many in the transit market say they would use transit more if there was reliable wi-fi. Many transit riders use ride-hailing as a complement.

• Future markets will depend on agencies ability to retain riders as they age through their life-stages, and for immigrants as the acculturate.

• Attitudes about ride-hail, car-share, and autonomous vehicles are still evolving

Now, location and preferences...
Looking into the future for transit markets

• *We created tools to understand the influence of age, location and preference – on travel behavior.*

• Let’s use these tools to speculate about the next 15 years for transit markets.

1. With the change in demographic status, what change in transit?
2. Preferences on where they want to live
3. Preferences on car-dependence
4. What do they *expect* will happen as they age?
We examined the effects of age, location and attitudes on key outcomes (example)

- We created five categories of age
- We created five quintiles of neighborhood orientation to transit
- We created four attitude-based market segments

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Willingness to Commute an Extra 45 Minutes to Live in a Larger House</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age group</strong></td>
<td></td>
</tr>
<tr>
<td>18–24</td>
<td>-0.27</td>
</tr>
<tr>
<td>25–34</td>
<td>-0.32</td>
</tr>
<tr>
<td>35–49</td>
<td>-0.87</td>
</tr>
<tr>
<td>50–64</td>
<td>-1.71</td>
</tr>
<tr>
<td>≥65</td>
<td>-2.07</td>
</tr>
<tr>
<td><strong>Neighborhood type</strong></td>
<td></td>
</tr>
<tr>
<td>Most transit-oriented</td>
<td>-1.40</td>
</tr>
<tr>
<td>Transit-oriented</td>
<td>-1.34</td>
</tr>
<tr>
<td>Mid</td>
<td>-1.08</td>
</tr>
<tr>
<td>Highway-oriented</td>
<td>-1.04</td>
</tr>
<tr>
<td>Most highway-oriented</td>
<td>-1.12</td>
</tr>
<tr>
<td><strong>Market segment</strong></td>
<td></td>
</tr>
<tr>
<td>Urban commuters</td>
<td>-1.89</td>
</tr>
<tr>
<td>Single millennials</td>
<td>0.42</td>
</tr>
<tr>
<td>Occasional transit users</td>
<td>-1.26</td>
</tr>
<tr>
<td>Car lovers</td>
<td>1.91</td>
</tr>
</tbody>
</table>

Scale from -3 (Strongly Disagree), to +3 (Strongly Agree)
Five Neighborhood Types

- We created five neighborhood types, based on their comparative transit accessibility
  - Based on EPA Smart Database

<table>
<thead>
<tr>
<th>NEIGHBORHOOD TYPE</th>
<th>AGE</th>
<th>WHITE</th>
<th>SINGLE</th>
<th>STUDENT</th>
<th>% WITHOUT DRIVER’S LICENSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Transit Oriented</td>
<td>40.9</td>
<td>71.1%</td>
<td>43.9%</td>
<td>9.4%</td>
<td>9.6%</td>
</tr>
<tr>
<td>Transit Oriented</td>
<td>45.7</td>
<td>77.5%</td>
<td>34.4%</td>
<td>6.4%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Mid</td>
<td>48.9</td>
<td>78.7%</td>
<td>31.9%</td>
<td>5.5%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Highway Oriented</td>
<td>51.6</td>
<td>80.8%</td>
<td>21.9%</td>
<td>4.1%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Most Highway Oriented</td>
<td>52.7</td>
<td>85.8%</td>
<td>21.7%</td>
<td>3.3%</td>
<td>2.4%</td>
</tr>
</tbody>
</table>

Source: TCRP Project Survey, 2016
Four Attitude-based Market Segments

- We created four market segments, based on their similarities of attitudes and behaviors
- *About 20% showed positive orientation to transit*

<table>
<thead>
<tr>
<th>Segment</th>
<th>PERCENT OF SAMPLE</th>
<th>USED TRANSIT IN MONTH</th>
<th>UNDER 35</th>
<th>SINGLE</th>
<th>HAVE HAD CHILDREN</th>
<th>NON-WHITE</th>
<th>HISPANIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Commuter Segment</td>
<td>11%</td>
<td>79%</td>
<td>44%</td>
<td>41%</td>
<td>35%</td>
<td>23%</td>
<td>6%</td>
</tr>
<tr>
<td>Single Millennial Segment</td>
<td>8%</td>
<td>73%</td>
<td>68%</td>
<td>46%</td>
<td>40%</td>
<td>33%</td>
<td>10%</td>
</tr>
<tr>
<td>Occasional User Segment</td>
<td>28%</td>
<td>52%</td>
<td>28%</td>
<td>28%</td>
<td>49%</td>
<td>13%</td>
<td>4%</td>
</tr>
<tr>
<td>Car Lover Segment</td>
<td>45%</td>
<td>26%</td>
<td>19%</td>
<td>22%</td>
<td>53%</td>
<td>13%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Source: TCRP Project Survey, 2016
All three sets of categorizes were applied to travel behavior.

<table>
<thead>
<tr>
<th>Age Category</th>
<th>TRANSIT</th>
<th>WALK/ BIKE</th>
<th>TNC</th>
<th>CAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>17%</td>
<td>13%</td>
<td>6%</td>
<td>64%</td>
</tr>
<tr>
<td>25-34</td>
<td>14%</td>
<td>9%</td>
<td>7%</td>
<td>70%</td>
</tr>
<tr>
<td>35-49</td>
<td>8%</td>
<td>5%</td>
<td>2%</td>
<td>84%</td>
</tr>
<tr>
<td>50-64</td>
<td>7%</td>
<td>7%</td>
<td>1%</td>
<td>86%</td>
</tr>
<tr>
<td>65 and up</td>
<td>4%</td>
<td>5%</td>
<td>1%</td>
<td>90%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neighborhood Type</th>
<th>TRANSIT</th>
<th>WALK/ BIKE</th>
<th>TNC</th>
<th>CAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Transit Oriented</td>
<td>27%</td>
<td>21%</td>
<td>6%</td>
<td>46%</td>
</tr>
<tr>
<td>Transit Oriented</td>
<td>14%</td>
<td>9%</td>
<td>4%</td>
<td>73%</td>
</tr>
<tr>
<td>Mid</td>
<td>8%</td>
<td>6%</td>
<td>2%</td>
<td>84%</td>
</tr>
<tr>
<td>Highway Oriented</td>
<td>5%</td>
<td>5%</td>
<td>2%</td>
<td>88%</td>
</tr>
<tr>
<td>Most Highway Oriented</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
<td>93%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitudinal Segment</th>
<th>TRANSIT</th>
<th>WALK/ BIKE</th>
<th>TNC</th>
<th>CAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Commuters</td>
<td>26%</td>
<td>19%</td>
<td>3%</td>
<td>53%</td>
</tr>
<tr>
<td>Single Millennials</td>
<td>13%</td>
<td>11%</td>
<td>5%</td>
<td>71%</td>
</tr>
<tr>
<td>Occasional Transit</td>
<td>9%</td>
<td>7%</td>
<td>2%</td>
<td>82%</td>
</tr>
<tr>
<td>Car Lovers</td>
<td>3%</td>
<td>4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: TCRP Project Survey, 2016
Each attitudinal question was examined in terms of age, location and market segment (examples)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>If I take a trip by transit, I might have to be with people whose behavior I find unpleasant.</th>
<th>The idea of being on a train or a bus with people I do not know is uncomfortable.</th>
<th>It might be unsafe to make a trip by public transportation.</th>
<th>I worry about personal safety/disturbing behavior on a bus or train.</th>
<th>I worry about crime or other disturbing behavior on public forms of transportation.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18–24</td>
<td>0.97</td>
<td>0.12</td>
<td>0.33</td>
<td>0.42</td>
<td>0.55</td>
</tr>
<tr>
<td>25–34</td>
<td>0.97</td>
<td>0.09</td>
<td>0.31</td>
<td>0.46</td>
<td>0.65</td>
</tr>
<tr>
<td>35–49</td>
<td>0.98</td>
<td>-0.06</td>
<td>0.17</td>
<td>0.39</td>
<td>0.65</td>
</tr>
<tr>
<td>50–64</td>
<td>0.74</td>
<td>-0.45</td>
<td>0.05</td>
<td>0.35</td>
<td>0.52</td>
</tr>
<tr>
<td>≥65</td>
<td>0.42</td>
<td>-0.80</td>
<td>-0.23</td>
<td>-0.03</td>
<td>0.14</td>
</tr>
<tr>
<td><strong>Neighborhood type</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most transit-oriented</td>
<td>0.75</td>
<td>-0.70</td>
<td>-0.20</td>
<td>0.01</td>
<td>0.20</td>
</tr>
<tr>
<td>Transit-oriented</td>
<td>0.84</td>
<td>-0.36</td>
<td>-0.07</td>
<td>0.20</td>
<td>0.45</td>
</tr>
<tr>
<td>Mid</td>
<td>0.87</td>
<td>-0.26</td>
<td>0.16</td>
<td>0.39</td>
<td>0.56</td>
</tr>
<tr>
<td>Highway-oriented</td>
<td>0.75</td>
<td>-0.18</td>
<td>0.23</td>
<td>0.39</td>
<td>0.57</td>
</tr>
<tr>
<td>Most highway-oriented</td>
<td>0.70</td>
<td>-0.24</td>
<td>0.11</td>
<td>0.33</td>
<td>0.50</td>
</tr>
<tr>
<td><strong>Market segment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban commuters</td>
<td>0.49</td>
<td>-1.46</td>
<td>-0.93</td>
<td>-0.47</td>
<td>-0.25</td>
</tr>
<tr>
<td>Single millennials</td>
<td>0.84</td>
<td>0.17</td>
<td>0.40</td>
<td>0.42</td>
<td>0.63</td>
</tr>
<tr>
<td>Occasional transit users</td>
<td>0.44</td>
<td>-1.11</td>
<td>-0.55</td>
<td>-0.36</td>
<td>-0.07</td>
</tr>
<tr>
<td>Car lovers</td>
<td>0.82</td>
<td>0.01</td>
<td>0.37</td>
<td>0.60</td>
<td>0.72</td>
</tr>
</tbody>
</table>

Source: TCRP Project Survey, 2016
Importance of Preferences

Example: How ‘preference’ interacts with ‘age’ on the choice of location
Preference for ‘big city’ varies by age

If all else were equal, which type of area would you prefer to live in?
Percent "Big City" Preference

Options: big city, small city, suburb, small/rural

Source: TCRP Project Survey, 2016
Preference for ‘big city’ increased over 12 years (2004 -2016)

Options: big city, small city, suburb, small/rural

Source: TCRP Report 123, 2014
TCRP Project Survey, 2016
But, most Millennials would prefer to live somewhere *other* than the most urban setting.

Source: TransitCenter Survey, 2014

Preferences of Five Age Groups for Three Residential Types

Source: TransitCenter Survey, 2014
Millennials feel less auto dependence, as do residents of transit-oriented neighborhoods

On a scale from -3 (Strongly Disagree), to +3 (Strongly Agree)

I feel I am less dependent on cars than my parents are/were
Millennials feel less auto dependence, as do residents of transit-oriented neighborhoods.

On a scale from -3 (Strongly Disagree) to +3 (Strongly Agree):

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Series1</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>0.66</td>
</tr>
<tr>
<td>25-34</td>
<td>-0.16</td>
</tr>
<tr>
<td>35-49</td>
<td>-0.46</td>
</tr>
<tr>
<td>49</td>
<td>-0.97</td>
</tr>
<tr>
<td>50-64</td>
<td>-1.03</td>
</tr>
<tr>
<td>65+</td>
<td>-1.31</td>
</tr>
</tbody>
</table>
Millennials do NOT prefer to share a car, but less strongly than older groups

Rather than owning a car, I would prefer to borrow, share or rent a car just for when I need it.

On a scale from -3 (Strongly Disagree), to +3 (Strongly Agree)
Car-love and car-dependence?

• Millennials feel they have lower car dependence than older groups

• But, high on “love freedom and independence” and high on difficult to live with fewer cars, or reduce mileage
Some key ways in which millennials differ from previous generations can affect transportation choices.

- Value being connected and able to multi-task during travel (1)
- More likely to be urban renters, and rent for longer than previous generations. (4)
- Delay family formation (3)
- More educated than previous generations (2)
- Live in higher-density areas (5)

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(1) TransitCenter 2014
(2) BLS July 2018
(3) TABLE MS-2, U.S. Census Economic and Social Supplement
(4) National Association of Realtors, 2018
(5) NHTS 2009 and 2017
By looking at age, location and attitude together – what did we learn?

• The Millennials are the largest single cohort in the United States, about 68 million persons.
• At time of study, the oldest members were around 35 years of age.
• Over the next 15 years, they all will have left the best age category for transit and entered a very difficult age category for transit.
• What will happen?
The Millennials are now the largest cohort: More than the ‘Boomers’ and more than ‘Generation Z’.

Source
US Census Bureau
© Statista 2018

Additional information:
United States; As of July 1, 2017
In the next 15 years, this group will populate the pro transit 20-34 age category.
In the next 15 years, this group will populate the pro transit 20-34 age category.
Transit trips per capita, NHTS

The ‘Good’ Decades for Transit

The ‘Bad’ Decades for Transit

The years between 30 and 40 are a difficult time for transit
What’s next for the Millennials?

• We examined the preferences of the Millennials for where they want to live
  • Fully 40% of them prefer the urban setting – highest among the age groups
  • Some 60% would prefer some less dense setting ... suburban or rural/small town

• We examined the influence of where they live on their transit behavior
  • Moving away from transit-rich areas will lower their transit use

• Their basically pro-urban values make them a market worth fighting for
What will happen to the Millennial Cohort?

*What they told us in the 2016 survey*

- They expect to move to less dense locations
- They would prefer to live in less dense locations
- They expect to drive more than they do now
- They value private car ownership
  - (Even with slightly lower ownership)
- They expect to live a lifestyle more similar to that of their parents
As I get older, I expect I’ll have to drive more than I do now.

As I get older, I think that I will eventually want to settle in the kind of house and neighborhood that my parents had.

A cohort that expects to change....

In ten years I expect to

- Be Married: 75%
- Have Children: 67%

Older Millenials, ages 25-34
And what about ‘Generation Z?’

- Report 201 calls for continued monitoring of the newest cohort to join the labor market – "Generation Z"
- Transit industry needs to understand their needs

- Central to new research
So, what is important for transit managers?

Market
- Demographics
- Location
- Preferences

Supply
- Travel Times
- Costs
- Service Characteristics

Ridership
Results from Integrated Modeling

• Integrated travel demand modeling showed that the “softer variables” were less impacting than the traditional quality of service variables.

  • Best combination of demographics and attitudes resulted in a 13% increase in transit.
  • Best combination of service characteristics from transit compared with competing modes resulted in a 35% increase in transit.
Conclusion: Know your market

• The market for transit is going through a demographic shift
• A very loyal market group will shift to lower density locations – *challenging for the transit provider*
• We need to understand the needs of the *next* prime market group now entering the most transit-oriented age category
• Advanced modeling concludes that *improvements to service* could be more important than impact from market demographics.
Special thanks to

• The Project Panel
• The TCRP Senior Program Officer, Dianne Schwager
• TransitCenter, Inc. for their continuing work in support of the transit community, including the survey work included in this project.
Today’s Speakers

• Karla Karash, karla@karash.com
• Matt Coogan, cooganmatt@aol.com
• Nancy McGuckin, n_mcguckin@rocketmail.com
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