Outline

- Survey Overview
- Survey Results
  - Household-level Results
  - Person-level Results
  - Trip-level Results
  - New Modes
  - Attitudinal Questions
## Methods Comparison to 2004 Survey

<table>
<thead>
<tr>
<th>METHOD/DESIGN FEATURE</th>
<th>2004 Survey</th>
<th>2019 Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Area</td>
<td>7 Counties: All of Cass, Clay, Jackson, Johnson, Leavenworth, Platte, and Wyandotte counties</td>
<td>8 Counties: All of Cass, Clay, Jackson, Johnson, Leavenworth, Miami, Platte, and Wyandotte counties</td>
</tr>
<tr>
<td>Survey Method</td>
<td>Random Digit Dial; CATI Telephone Recruitment, CATI Telephone Retrieval, GPS</td>
<td>Address Based Sample; Mailed Invitation for web/CATI recruitment, web/CATI retrieval</td>
</tr>
<tr>
<td>Eligible Participants</td>
<td>All household members regardless of age</td>
<td>All households members age 5 and older</td>
</tr>
<tr>
<td>Survey Administration</td>
<td>Spring 2004</td>
<td>Spring 2019</td>
</tr>
<tr>
<td>Travel Days</td>
<td>Monday through Friday</td>
<td>Monday through Friday</td>
</tr>
<tr>
<td>Sample Size</td>
<td>3,049 (.5%)</td>
<td>3,821 (.5%)</td>
</tr>
<tr>
<td>Data Collection Targets</td>
<td>Geography (density areas), Household Size by Household Vehicles</td>
<td>Geography (region), Distance to transit</td>
</tr>
<tr>
<td>Approach</td>
<td>Place-based Travel Log</td>
<td>Place-based Travel Log / Smartphone Application</td>
</tr>
</tbody>
</table>
Survey Overview

- Aim was to survey 0.5% of the population of interest (~4,000 households)
- Sampled area covered all eight counties with some oversampling
- Target areas for oversampling (Tract) based on:
  - Hard-to-reach populations
    - Large households
    - Low income
    - Zero vehicle
  - Transit users (based on proximity to transit corridors)
~750,000 Households in Model Area
We sent out 70,000 invitations
5,209 agreed to participate
3,821 Completed the Survey
All Sampled, Recruited, and Completed Household Locations
Completed Households

Work Locations
Completed Households
School Locations
Completed HHs
Discretionary Locations
### 1990 vs 2004 vs 2019

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Households</td>
<td>1,221</td>
<td>3,049</td>
<td>3,821*</td>
</tr>
<tr>
<td>Persons</td>
<td>3,397</td>
<td>7,400</td>
<td>8,361*</td>
</tr>
<tr>
<td>Trips</td>
<td>14,610</td>
<td>31,779</td>
<td>28,845*</td>
</tr>
<tr>
<td>Avg HH Trips</td>
<td>12.0</td>
<td>10.4</td>
<td>8.9</td>
</tr>
<tr>
<td>Avg HH Size</td>
<td>2.8</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>% employed (aged 18+)</td>
<td>69%</td>
<td>74%</td>
<td>67%</td>
</tr>
<tr>
<td>0-trip HHs</td>
<td>2.3%</td>
<td>0.9%</td>
<td>4.4%</td>
</tr>
<tr>
<td>0-vehicle HHs</td>
<td>4.0%</td>
<td>5.3%</td>
<td>5.8%</td>
</tr>
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</table>
Completes by Day of Week

![Bar chart showing household frequency by day of week with error bars. The days of the week are Monday, Tuesday, Wednesday, Thursday, and Friday. The chart indicates a relatively even distribution of completes across the days, with no significant variation between them.]
Demographics
Household Size
Household Income
Age Distribution

![Age Distribution Chart](chart.png)
Race
Educational Attainment

- Bar chart showing the distribution of educational attainment levels among a population.
- Categories include Non-Response, Grade 12 or Less, High School Graduate, Some College, No Degree, Associate Technical Degree, Undergraduate Degree, and Graduate Degree.
- The chart displays person frequency with error bars indicating variability.
Vehicle Fleet Body Type
Zero Vehicle Households
County to County Flows for Work Trips

CTPP Flows

2019 HTS
Distribution of Trip Departure Time
All Trip Modes

- **POV** – 87.3%
- **Walk** – 6.1%
- **Transit** – 1.9%
- **Bike** – 0.4%
- **Other** – 4.3%
  - TNC (Uber/Lyft) – 0.23%
  - Scooter (Bird/Lime) – 0.01%
  - BikeShare (BCycle) – 0.00%
Trip Duration by Mode
Primary Trip Purpose

[Graph showing trip frequency by primary purpose, with 'Home' having the highest frequency and 'Other' having the lowest.]
Average Distance by Trip Purpose

Compared to 2004, average distances increased for home, work, and school trips.
Compared to 2004, average travel times increased for home and work trips; School trips are slightly shorter but within the MOE.
Reason for No Trips on Travel Day

![Bar chart showing frequency of reasons for no trips on travel day.](image-url)
## Trip Rates

<table>
<thead>
<tr>
<th></th>
<th>2004 Weighted</th>
<th>2019 Unweighted</th>
<th>2019 Weighted</th>
<th>2019 MOE (95%)</th>
</tr>
</thead>
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<tr>
<td>Household Trip Rate</td>
<td>10.56</td>
<td>7.96</td>
<td>8.85</td>
<td>0.22</td>
</tr>
<tr>
<td>Person Trip Rate</td>
<td>4.26</td>
<td>3.64</td>
<td>3.45</td>
<td>0.09</td>
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Household Trip Rates by Household Size
Household Trip Rates by Household Workers
Household Trip Rates by Household Income
Online purchases in the past 30 days

Count of online purchases in past 30 days
Transit Trips
Transit Use

In a typical week, how often do you take public transportation to work (including a local bus, commuter bus, or streetcar)?

- 96.35% of people report not using transit in a typical week
- 1.83% use it once or twice a week

Count of public transit trips to work in a typical week
Transit Use

After travel day reporting, if no transit was utilized, we asked why?

- People either prefer driving or say transit doesn’t go where they want
- Third highest reason for non-use: Stations/stops are too far
- Fare costs and parking availability at or near stations are not major areas for concern among respondents
Automated and Electric Vehicles
Automated Vehicle Awareness and Future Ownership

- How much do you pay attention?
- How willing are you to buy one?
- For your next vehicle what type of fuel will you consider?
Awareness of Automated Vehicles

![Bar chart showing the frequency of attention paid to advancements in autonomous vehicles. The categories are: I don't know, I don't know how to answer, Very often, Often, Sometimes, Seldom, Never. The chart illustrates a significant difference in关注度 among the categories, with the highest frequency being 'Sometimes'.]
Willingness to buy Automated Vehicle

Willingness to purchase an autonomous vehicle

Person Frequency

- I don't know
- I prefer not to answer
- Extremely
- Very
- Moderately
- Slightly
- Not at all
Attention paid to advancements in autonomous vehicles

Willingness to purchase an autonomous vehicle
- Extremely
- Very
- Moderately
- Slightly
- Not at all
Interest in Electric Vehicle Future Purchase

- For your next vehicle what type of fuel will you consider?
TNC use in the last week

- Only a small share of people (~6.4%) reported using a rideshare service at least once in the past week
- 4.45% used TNC only once or twice
Purpose when using TNC

- About half say they typically use TNCs for personal purposes
- Half mostly use TNC for some or all of their work commute or during the work day
- Most use it for personal trips outside of working hours (~36%)
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**Mode of Travel**

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<th>2004 Survey</th>
<th>2019 Survey</th>
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<tr>
<td>Driver</td>
<td>65.9%</td>
<td>64.1%</td>
<td>69.3%</td>
</tr>
<tr>
<td>Passenger</td>
<td>24.8%</td>
<td>26.1%</td>
<td>18.1%</td>
</tr>
<tr>
<td>Bus</td>
<td>0.9%</td>
<td>1.2%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Taxi</td>
<td>0.1%</td>
<td>0.3%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Uber/Lyft</td>
<td>--</td>
<td>--</td>
<td>0.2%</td>
</tr>
<tr>
<td>School Bus</td>
<td>4.4%</td>
<td>3.7%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Walk/Bike</td>
<td>3.4%</td>
<td>4.3%</td>
<td><strong>6.5%</strong></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td><strong>0.5%</strong></td>
<td><strong>0.3%</strong></td>
<td><strong>1.7%</strong></td>
</tr>
<tr>
<td>Scooter (Bird/Lime)</td>
<td>--</td>
<td>--</td>
<td>0.01%</td>
</tr>
<tr>
<td>Streetcar</td>
<td>--</td>
<td>--</td>
<td>0.14%</td>
</tr>
<tr>
<td>BCycle</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Carpool/Vanpool</td>
<td>--</td>
<td>--</td>
<td>1.10%</td>
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Conclusions

- New modes
- Trip replacement
- Use of TNC
- Trip rates
- Distance/duration
- Transit use
- Mode share

- High visibility but not impactful yet?
- Some evidence of this
- Low use on day; mostly replacing Taxi trips?
- Lower than in 2004; similar to national trends
- Further/longer for key purposes than 2004
- Mode share up; non-use due to inconvenience
- Auto still dominant; walk/bike up; marked decrease in HOV
Further Discussion
Number of Household Vehicles by Household Size
Household Size by Income
Income by Number of Household Workers
Mode by Area Type
Top Trip Purposes by Mode
Household Size by Online Purchase Frequency

[Bar chart showing household size distribution by online purchase frequency]