Commuter Connections
TDM Evaluation Framework Update
FY 2018-2020
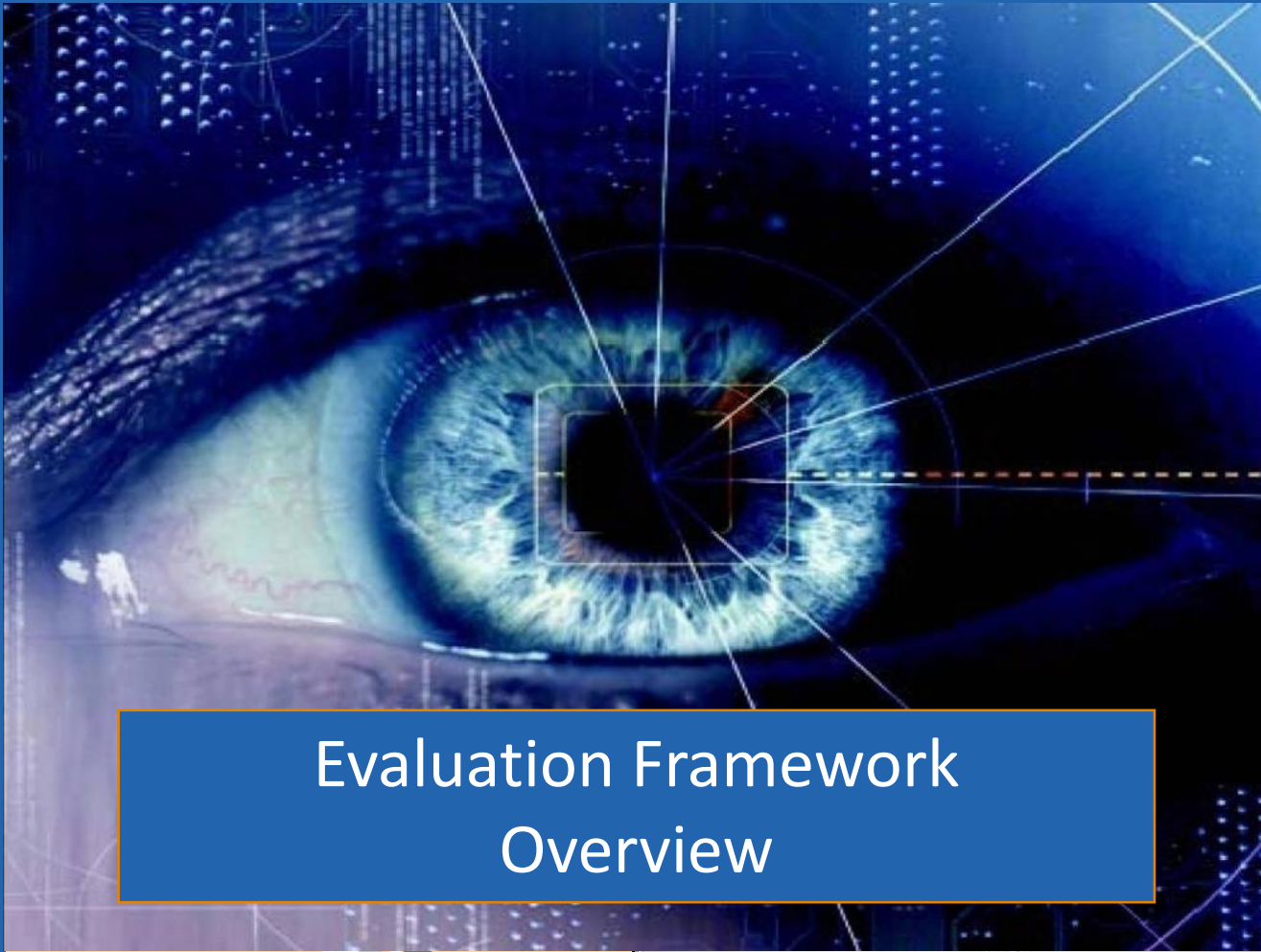

Presentation to TDM Evaluation Group

October 16, 2018

LDA Consulting

with CIC Research, CUTR, and ESTC

L D A CONSULTING

Evaluation Framework Overview

CC TDM Evaluation Framework and Analysis

- Triennial impact analysis/reporting for Commuter Connections' TDM activities

- Framework report documents evaluation goals, analysis approach, and data collection plan for the coming 3-year evaluation period

- Conducted to estimate impacts and communicate program value to funders and regional policy-makers

- Estimate impacts for:
  - Telework
  - Guaranteed Ride Home
  - Employer Outreach
  - Mass Marketing
  - Commuter Operations Center (Basic Services and Integrated Rideshare Software Upgrades)

2018-2020 Framework Builds on 2015-2017

| Update to reflect 2017 TDM analysis | **+** | Update for new CC TDM services | **+** | Updates to refine analysis/ data collection |

Other 2018 – 2020 changes to <u>enhance relevance and value of CC evaluation data collection and analysis:</u>

- Measure societal benefits and contribution to regional transportation goals

- Expand understanding of technology use/role in travel decision-making

- Support CC messaging and service development

Evaluation Objective – Produce Useful Impact Results

Measure impacts of Commuter Connections' TDM services and communicate information on service performance to stakeholders

Ensure results are useful to decision-making and management:

- Measure performance on indicators related to regional goals for transportation

- Use common, quantitative performance measures to facilitate comparisons among TERM and between TERMs and other strategies

- Facilitate ongoing activity reporting and estimate of benefits for day-to-day program management

- Track both continued (baseline) impacts and new impacts during the analysis period

# Evaluation Principles – Methodologically Sound

Method is efficient and reliable

- Report only impacts <u>directly associated with CC services</u> that can reasonably be measured within project budget

- <u>Avoid double-counting</u> benefits by addressing service overlap

- Follow <u>industry-accepted and recognized</u> evaluation techniques that are compatible with regional, state, and national practices

- Be <u>resource-efficient and unobtrusive</u> for COG partners

- Use <u>locally-collected data</u> that <u>reflect actual travel experience</u>

Performance Measures

- <u>Awareness</u> – modes/programs
- <u>Attitudes</u> – willing to try modes

  - <u>Participation</u> – CC services used
  - <u>Satisfaction</u> – with programs

    - <u>Utilization</u> – Travel change "placements"
    - <u>Influences</u> – motivations for change

      - <u>Impacts</u> of behavior change

Awareness and Attitudes	Participation and Satisfaction	Utilization and Influence	**Impacts**
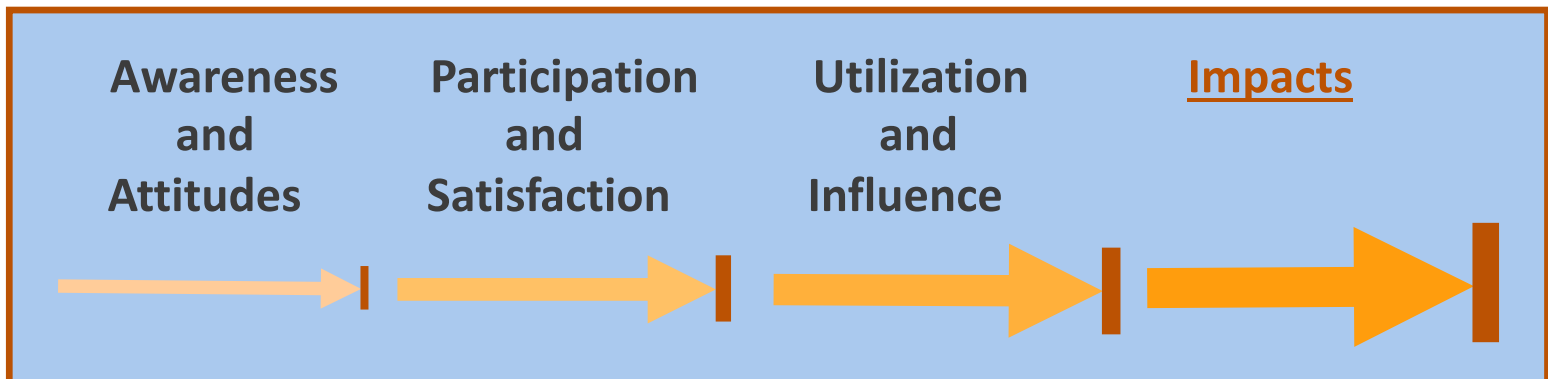
CC TDM Service Impact Indicators

Travel and environmental impacts from behavior change

- Mode split

- Alternative mode placements

- Vehicle trips reduced

- VMT reduced

- Emissions reduced

- Energy saving

- Delay reduction *

- Societal cost savings ($ benefits) *

* New in 2018-2020 Framework

Data Collection Tools - Surveys

Regional / General Population Surveys

- Employee surveys administered by employers (*Employer Outreach*)
- State of the Commute survey (*Telework, Mass Marketing*)

CC Service User Surveys

- Guaranteed Ride Home survey (*GRH*)
- Telework employer survey (*Telework, Employer Outreach*)
- CC applicant placement rate survey (*COC, Software Upgrades*)
- Bike-to-Work Day survey (*Mass Marketing*)
- 'Pool Rewards participant survey *(Mass Marketing)*
- Retention Rate survey *(GRH, COC)*
- CarpoolNow participant survey (NEW)
- incenTrip / Flex Rewards participant survey (NEW)
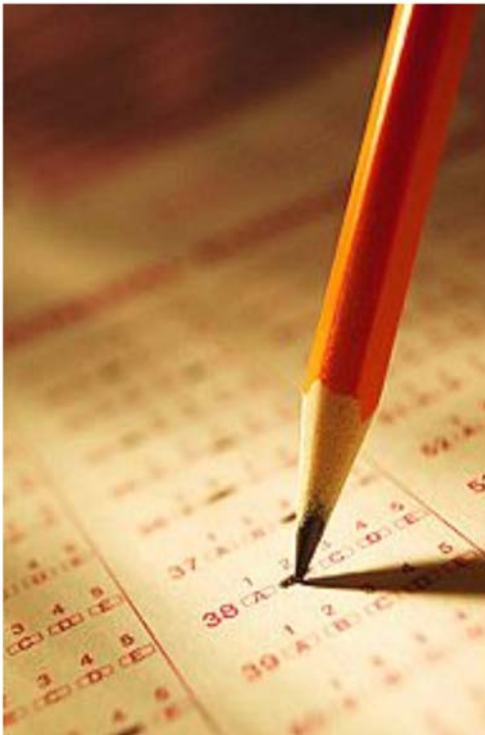
Survey Questions to Assess Commute Travel Change

- How do commuters travel now?

- <u>Did they switch</u> to alt modes after receiving CC service?

- What did they change – mode, frequency, occupancy?

- How did the "switchers" travel before the change?

- Are they still using the new alternative mode? Was it a "trial" or "continued" change?

- Did commuters who made changes say their change was influenced by the service?

Databases / Analysis Tools
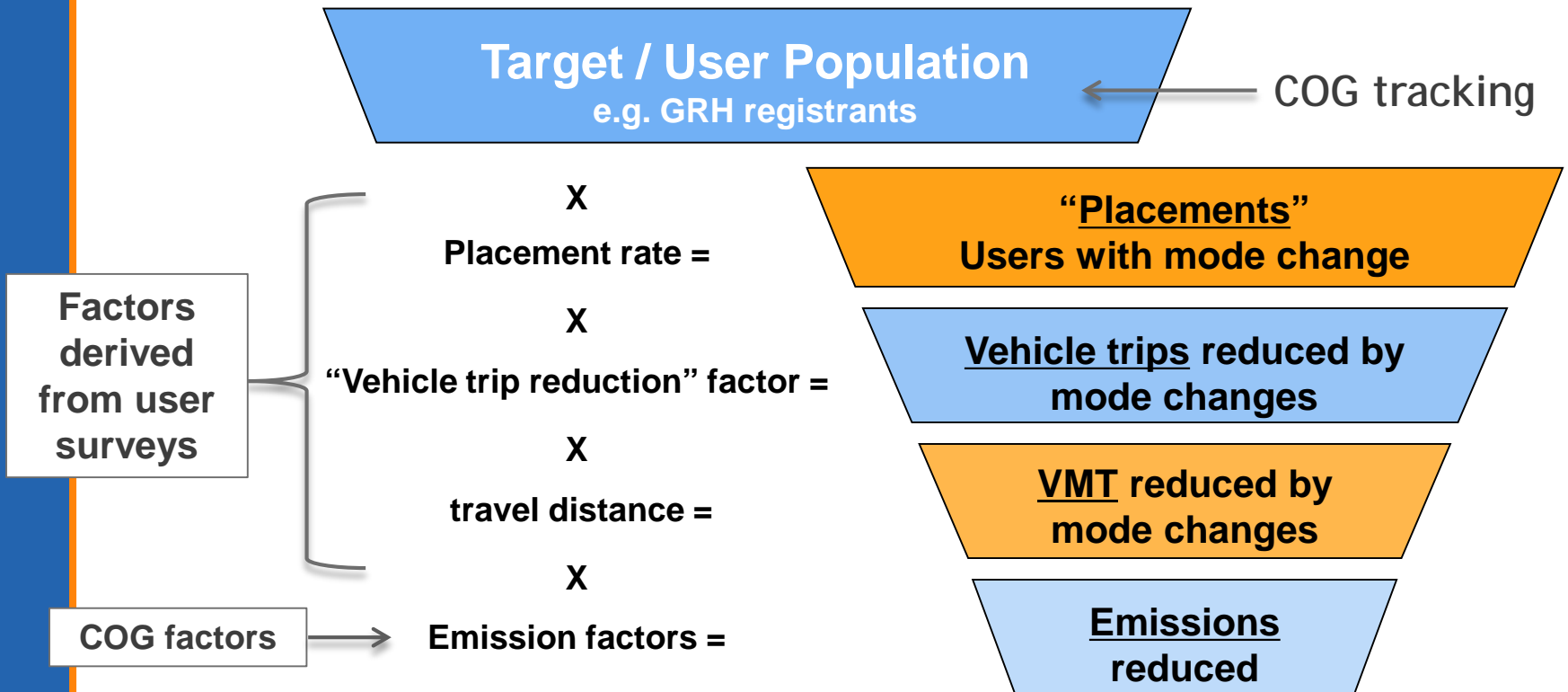

Databases/other tracking data

- ACT! Employer Contact database (*Employer Outreach*)

- Telework Assistance database (*Telework*)

- Online service users database (*COC*)

- Online GRH registrant database (*GRH*)

- COC website and call volume tracking (*Mass Marketing*)

- Documentation of marketing activities (*Mass Marketing*)

- Event participation tracking (*Mass Marketing*)

- 'Pool Rewards participant data (*Mass Marketing*)

- CarpoolNow, incenTrip participant data (*Mass Marketing*)

Analysis tools

- EPA COMMUTER model v2.0 (*Employer Outreach*)

- TDM-ROI Calculator (Overall calculation)

Impact Calculation Approach

Impact calculation approach uses series of "multiplier" factors, applied to user population

Target / User Population
e.g. GRH registrants

COG tracking

Factors derived from user surveys

X
Placement rate =

X
"Vehicle trip reduction" factor =

X
travel distance =

X

COG factors

Emission factors =

"Placements"
Users with mode change

Vehicle trips reduced by mode changes

VMT reduced by mode changes

Emissions reduced

Questions?

Evaluation Framework Update

Possible Framework Enhancements

Overall objective of updates is to make the evaluation:

- Relevant and valuable to CC and to local TDM partners
- Relevant and valuable to MWCOG/TPB's regional activities
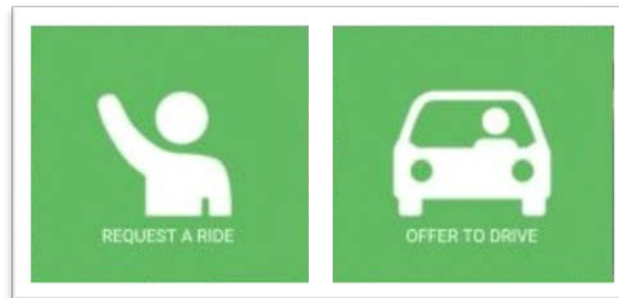- Reliable and cost-effective

5 Proposed enhancement areas:

1. Incorporate methods applied in 2017 TDM analysis and new CC services

2. Implement methods to enhance survey response rates and minimize data collection costs

3. Collect data to help Commuter Connections position its contribution to congestion mitigation, performance-based planning, and other regional transportation goals

4. Collect data to examine use and influence of new technologies on commute decisions and role in Commuter Connections program

5. Collect data to support messaging to business/employers and to commuters and development of new CC services

1 - Updates to Reflect 2017 TDM Analysis and Incorporate New CC Services

TDM Framework <u>evolves</u> to accommodate CC program changes and incorporate new/improved methods:

- Update <u>participation, VT, VMT, emissions goals</u> – consistent with CC/COG regional analysis

- Document <u>societal benefits/ROI</u> calculation method

- Document <u>new survey methodologies</u> (e.g., SOC Internet/phone follow-up components)

- Develop methods to estimate impacts of new CC services: <u>CarpoolNow, incenTrip, Flex Rewards, other services</u>

2 – Reliable and Cost-Effective Data Collection

Background: Past TDM data collected primarily through telephone and Internet surveys. Survey response rates have dropped substantially in recent years, resulting in higher data collection costs and potentially less reliable data.

Recommendation: Examine/implement new data collection options to minimize costs while ensuring continued high quality data:

- Address-based sampling with Internet survey for SOC – wider coverage

- Telephone (landline and cell phone) follow-up for SOC non-respondents

- $ incentives to increase response rates for CC user surveys

- Smart phone text polls and social media feedback for very brief surveys – e.g., event participants, mobile app users

- Panel surveys to track service users' travel pattern changes over time

- Market segmentation questions in SOC/user surveys to tailor products and messages to priority groups
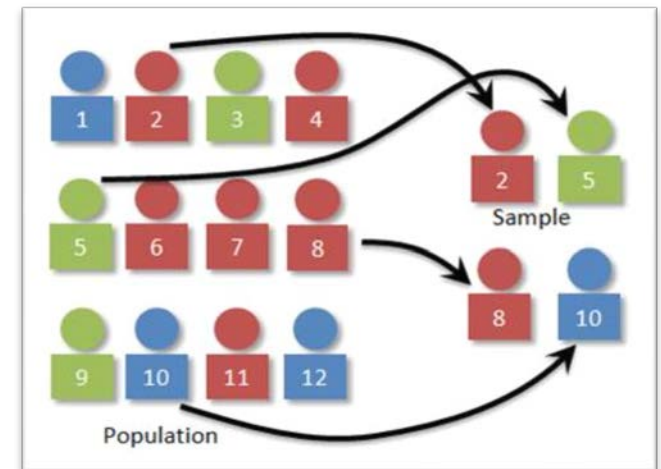
3 – CC Services' Contributions to Regional Goals

Background: Transportation decisions are increasingly driven by sustainability, livability, system performance, and health/ safety objectives. TDM data could demonstrate how CC services contribute to fulfillment of regional plan objectives, support management of the regional transportation system, and generate a wide range of societal benefits.

Recommendation: Continue process to measure societal benefits and contribution to regional transportation goals:

- Explore new data collection and analysis to estimate CC contribution toward TPB's 7 initiatives in <u>Visualize 2045</u>

- Collect data in SOC and user surveys to define <u>societal benefits and ROI</u>

- Explore if new CC data could be useful for <u>regional system-performance</u> assessment

<u>Visualize 2045 Aspirational Initiatives</u>

1. Bring jobs and housing closer together

2. Expand <u>bus rapid transit</u> regionwide

3. Move more people on <u>Metrorail</u>

4. Increase <u>TW and other options for commuting</u>

5. Expand <u>express highway network</u>

6. Improve <u>walk/bike access to transit</u>

7. Complete National Capital Trail
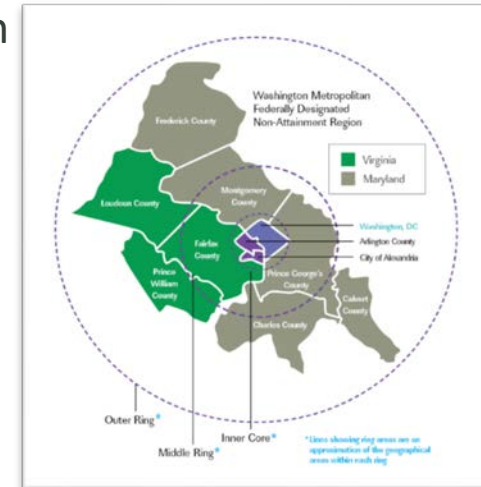
4 – Technology Role: High Tech and Soft Touch

Background: Technology is expected to reinvent travel patterns (e.g., automated vehicles, real-time access to travel options). Commuters will be facing more travel choices, new modes (e.g., scooters), and new ways of delivering existing services via Mobility as a Service (MaaS). How technology implementation is structured will play a key role in determining the influence of technology programs on travel decisions and the degree to which they could impact congestion.

Recommendation: Seek opportunities through SOC/other user surveys to examine commuter attitudes and adoption practices of new transportation technology and services. This data could help the region address questions such as:

- What information/reward systems would encourage greater use of non-driving modes?

- Who is willing to shift from vehicle <u>ownership</u> to vehicle <u>usership</u>?

- Who is willing to rent their cars to others via peer-to-peer car rental platform?

- What are motivations to subscribe to MaaS?

- What combinations of travel options would be most popular in a MaaS plan?

- How will economic characteristics and demographic trends affect demand for and use of TDM service?
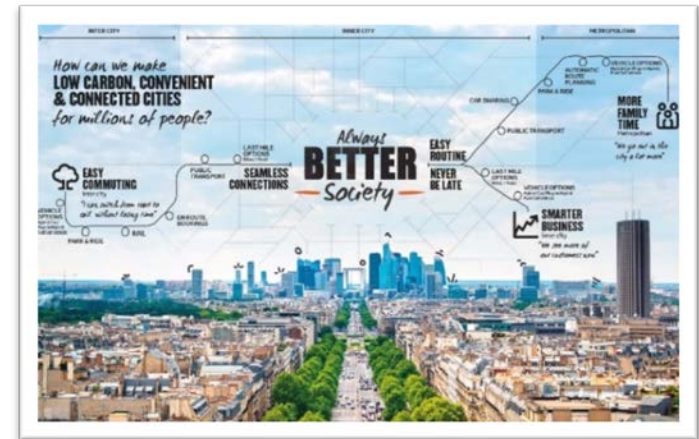
5 – Messaging and Service Development

Background: Commuter/employer outreach is a central element of CC/local partner programs. CC also implements services to appeal and respond to commuters' travel needs and interests. Data produced during the evaluation could help to inform outreach efforts and explore service feasibility.

Recommendation: Seek opportunities through SOC/CC user surveys to collect data on CC service benefits to commuters/employers and potential interest in new service ideas. Provide data for talking points and service analysis:

- Employer benefits when employees use commute services/alternative modes – absenteeism/tardiness, recruitment, productivity, parking/facility use

- Commuters' perceptions of personal benefits of alt modes and barriers to use

- Commuters' interest in mobile apps/incentives/shared use services

- Commuter populations with greatest interest in services
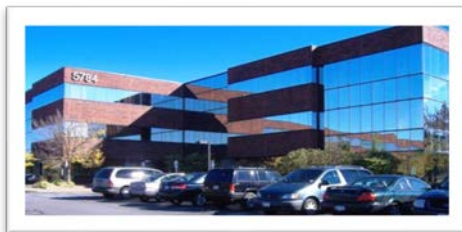
2018-2020 TDM Evaluation Schedule

Methodology Update

- Input from Evaluation Group   Oct-Dec 2018
- Draft report   Dec 2018
- Final report   Spring 2019

Surveys

- CC applicant placement   Nov 2017
- State of Commute   Jan-Jun 2019
- GRH   Apr-Jun 2019
- Employer satisfaction   Jan-Mar 2019
- Bike to Work Day   Fall 2019
- Telework employer   Spring 2020
- Retention Rate   Spring 2021

Analysis / Report

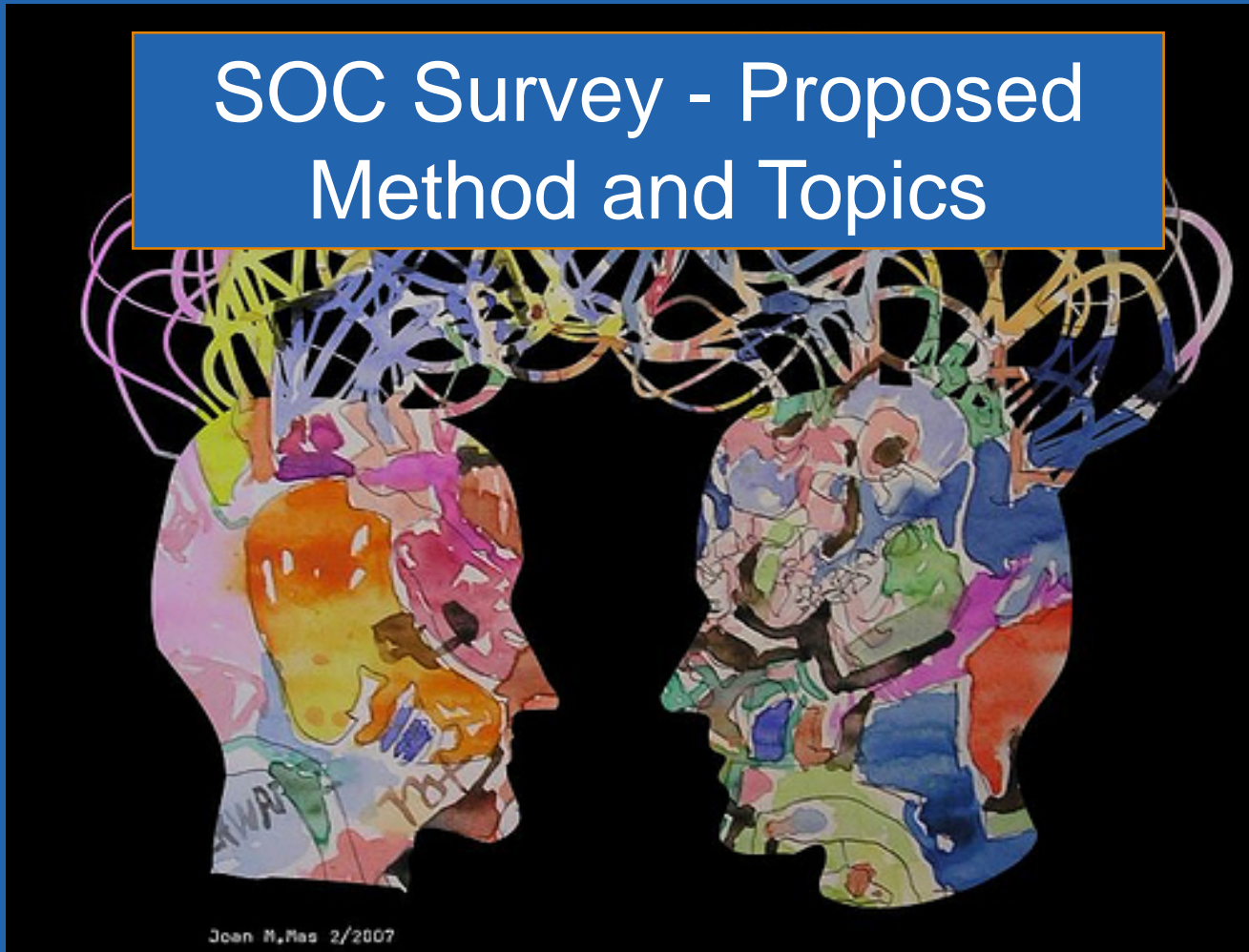- TDM analysis – draft   Jun 2020
- TDM analysis – final   Dec 2020

Questions?

SOC Survey - Proposed Method and Topics

Joan M.Mas 2/2007

SOC Survey Method

- 7th triennial survey (2001, 2004, 2007, 2010, 2013, 2016, 2019)

- Combination **telephone/Internet** survey of 6,400 randomly-selected residents of 11-jurisdiction COG region (95% + 1.2%)

- Jurisdiction counts of 500 or more each (95% + 4.3%)

  - Employed residents 18+ years old

  - Include cell phone interviews to ensure "cell phone only" households are surveyed

  - Offer financial incentive (drawing?) for participating

  - Spanish language option available

  - County level results will be expanded to the regional population of workers

  - Data also will be weighted to adjust sample for cell phone / landline availability, race/ethnicity, and age
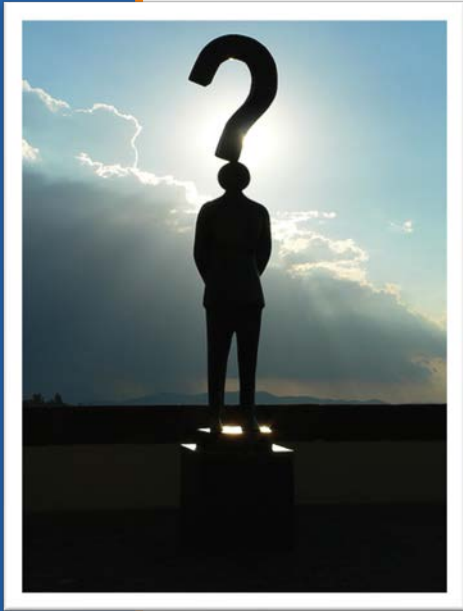
Internet / Telephone Differences

Internet Survey	Telephone Survey
Households randomly selected within each jurisdiction; receive postal mail postcard with survey website URL and 2 passcodes	Households include Wave 1 Internet non-respondents whose telephone numbers can be matched to address
Target completes – 5,400 - 450 or more per jurisdiction	Target completes – 1,000 - 50% cell phone, 50% landline
Survey postcards sent to 300,000 to 360,000 households - estimate regional response of 1.8%, varying by jurisdiction	Estimate a starting sample of about 100,000 phone numbers – 3% to 3% response rate for employed residents
Postcards to be mailed in 2 waves: - Wave 1 – equal distribution - Wave 2 – rebalanced to boost counts in W1 areas with low response	Calls made randomly within phone numbers; targets set to ensure sufficient completes for low Internet response areas
Postcards sent to "Outer ring" county residents will name counties, not just "Washington metro region," to increase response rate	Call introduction to "Outer ring" residents also might use this approach

SOC Schedule

- Survey preparation – Sept-Dec 2018
    - Questionnaire, sample plan, postcard design, mailing prep

- Data collection – Jan-Mar 2019
    - Internet survey Wave 1 mailing – mid Jan 2019
    - Check W1 response rates; define W2 sample – late Jan 2019
    - Internet survey Wave 2 mailing – mid Feb 2019
    - Telephone follow-up survey – mid Feb 2019
    - Complete data collection – mid/late Mar 2019

- Analysis and reports – Apr-Jun 2019
    - Data cleaning and analysis – Apr-May 2019
    - Highlights to Evaluation Group – mid Jun 2019
    - Draft report to CC – Jun 30, 2019

SOC Survey Topics

Continued tracking questions

- Current/past commute patterns
- Current and potential telework
- Awareness/access to transit, HOV/Express lanes, P&R
- Transportation satisfaction, benefits of alternative mode use
- Mass marketing awareness and influence
- Awareness of CC, regional and local commute services
- Employer commute assistance

Possible new topics in 2019

- Follow-up questions for commuters who use Uber/Lyft
- Past use of transit among transit non-riders; why stopped
- Ratings on travel attributes (e.g., cost, time, flexibility) and ratings for transit
- Work-related benefits of working during commute, commute services
- Use of travel technology, influence on commute decisions
- Travel Behavior and Automated Vehicles

Questions?

Contact:

Lori Diggins

LDA Consulting

202-657-3752

LDACWDC@aol.com

LDA CONSULTING