



# Memorandum

**Date:** May 16, 2018  
**To:** Transportation Authority Board  
**From:** Joe Castiglione – Deputy Director for Technology, Data & Analysis  
**Subject:** 06/12/18 Board Meeting: Authorization for the Executive Director to Increase the Funding Agreement with the Metropolitan Transportation Commission by \$150,000, to a Total Amount Not to Exceed \$200,000, for Transportation Network Company Data Collection

<p><b>RECOMMENDATION</b>    <input type="checkbox"/> Information    <input checked="" type="checkbox"/> Action</p> <ul style="list-style-type: none"> <li>• Authorize the Executive Director to increase the funding agreement with the Metropolitan Transportation Commission (MTC) by \$150,000, to a total amount not to exceed \$200,000, for Transportation Network Company (TNC) data collection</li> <li>• Authorize the Executive Director to modify amendment terms and conditions</li> </ul> <p><b>SUMMARY</b></p> <p>The ground-breaking <i>TNCs Today</i> report released by the Transportation Authority in 2017 documented the number, location and timing of TNC trips in San Francisco, but did not provide important information about who uses TNCs, for what purposes, and many other important data items. The Transportation Authority is partnering with MTC to perform a comprehensive data collection effort that will capture this important information. We will provide an update on the data collection results following the completion of the effort. We expect data to be available in early 2019.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Fund Allocation</li> <li><input type="checkbox"/> Fund Programming</li> <li><input type="checkbox"/> Policy/Legislation</li> <li><input type="checkbox"/> Plan/Study</li> <li><input type="checkbox"/> Capital Project Oversight/Delivery</li> <li><input type="checkbox"/> Budget/Finance</li> <li><input checked="" type="checkbox"/> Contract/Agreement</li> <li><input type="checkbox"/> Other:</li> </ul> <hr/>
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**DISCUSSION**

**Background.**

In June 2017, we released the *TNCs Today* report, the first study to document the number, location and timing of TNC trips in San Francisco. While this effort revealed that the majority of TNC trips in San Francisco occur in the most congested locations and at the most congested times of day, the report could not provide information on who uses TNCs, for what purposes people use TNCs, TNC vehicle occupancies, whether TNCs induce additional travel or mode shifts, or on a number of other critical issues.

We seek to continue our partnership with the MTC to coordinate data collection. This collaboration allows both agencies to share fixed costs around survey design and recruitment, and also to collect data from a broader geographic area. On May 2, 2018, we executed a funding agreement with MTC

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in an amount not to exceed \$50,000 to begin the data collection work. Under the terms of the funding agreement, we will contribute 50% of total consultant costs incurred by MTC. Data collection work will be performed by MTC's on-call survey data collection consultant, Resource Systems Group Inc.

### **Data Collection.**

The goal of the TNC data collection effort is to assemble demographic and travel diary survey data for both TNC users and non-users in order to support a broad range of activities, including TNC market analyses, mode choice model estimation, and equity analyses. Data collection will occur in the nine-county San Francisco Bay Area in 2018.

The data collection effort will involve traditional travel diary surveying in order to gather complete travel information on all trips (both TNC trips and non-TNC trips) made by travelers (both TNC users and non-users) including origin, destination, mode, purpose, party size, travel times, travel costs, traveler demographics, and trip path details in order to support transferable model estimation. It is expected that data will be collected at the individual person level, rather than for all members of a household.

The traditional travel diary survey will be augmented to collect some stated preference-type information from travelers. This may include information on induced travel, mode shift, or sensitivities to price and travel times.

Participant data will be collected for a one-week period to capture both frequency and characteristics of TNC use by individual travelers the variation in intensity, timing, and purpose of trips. Data will be collected in two phases: A pilot in spring 2018, and main data collection in fall 2018. It is anticipated that the sample size target will be approximately 4,500 persons region-wide, with approximately half of the data to be collected in San Francisco county. All data collect is anticipated to be completed by December 31, 2018.

### **FINANCIAL IMPACT**

Budget for services identified in this agreement will be provided for by private grant funds from Schmidt Family Foundation/The 11<sup>th</sup> Hour Project, and memoranda of agreements with the San Francisco Planning Department and the San Francisco Municipal Transportation Agency. The proposed Fiscal Year 2018/19 budget includes sufficient funds to accommodate the recommended action.

### **CAC POSITION**

The CAC will consider this item at its May 23, 2018 meeting.

### **SUPPLEMENTAL MATERIALS**

Attachment 1 – Scope of Work

## **ATTACHMENT 1: SCOPE OF WORK**

The goal of the Transportation Network Company (TNC) data collection effort is to assemble demographic and travel diary survey data for both TNC users and non-users in order to support a broad range of activities, including TNC market analyses, mode choice model estimation, and equity analyses. Data collection will occur in the nine-county San Francisco Bay Area in the spring of 2018.

The data collection effort will involve traditional travel diary surveying in order to gather complete travel information on all trips (both TNC trips and non-TNC trips) made by travelers (both TNC users and non-users) including origin, destination, mode, purpose, party size, travel times, travel costs, traveler demographics, and trip path details in order to support transferable model estimation. It is expected that data will be collected at the individual person level, rather than for all members of a household.

The traditional travel diary survey will be augmented to collect some stated preference-type information from travelers. This may include information on induced travel, mode shift, or sensitivities to price and travel times.

Participant data will be collected for a one-week period to capture both frequency and characteristics of TNC use by individual travelers the variation in intensity, timing, and purpose of trips. Data will be collected in two phases: A pilot in spring 2018, and main data collection in fall 2018. It is anticipated that the sample size target will be approximately 4500 persons region-wide, with approximately half of the data to be collected in San Francisco county.

### **Task 1. Project Management**

Consultant will perform project management activities such as planning for resources, monitoring progress and rate of expenditures, and invoicing. This task also includes preparation for and participation in regular conference calls with agency staff, as well as management and coordination with any subcontractors.

*Deliverables: Weekly conference calls, project progress updates, project invoices*

### **Task 2. Questionnaire Design & Programming**

Consultant and Agencies will review the traditional travel diary survey instrument to evaluate sufficiency for proposed data collection effort. Consultant will revise and program the survey instrument to include new data items as necessary, such as vehicle occupancy (reflecting both intra-household as well as inter-household ride-sharing) and the presence of any peak or surge multiplier (if applicable). In addition, it is anticipated that the survey instrument will be augmented to include some stated preference-type information from travelers, such as whether they would have made a TNC trip if the TNC alternative was not available (to capture induced travel), or what mode they would have used in the absence of TNC alternatives (to get indications of mode shift).

The Consultant will update / customize the mobile application survey questionnaire to incorporate new items and revise as necessary to reflect the TNC survey design developed in Task 1. The Consultant will develop and provide to Agencies staff a press release or simple FAQs to post on their websites. After the questionnaire is finalized, the Agencies will develop translation of the survey instrument from English to Chinese and Spanish, and the Consultant will code these Chinese and Spanish language versions of the survey instrument into the mobile app. The Consultant will not develop a separate online survey and no project website will be developed for this project.

*Deliverable: Draft survey questionnaire, Final survey questionnaire; Revised survey instrument implemented in mobile platform in English, Chinese and Spanish; Public relations materials*

### **Task 3. Sample Plan & Administration**

The Consultant will develop a recruitment and sampling plan to ensure that sufficient data are collected to support the analysis needs. The sampling plan will address all travel markets of interest, including TNC users and non-users. The sampling plan may also include demographic, geographic or other stratifications to ensure sufficient responses to support equity analyses.

Address-based sampling will be utilized for the entire study area, with more selective utilization within the core urban geographies. The sampling plan will therefore determine the number of addresses to invite by mail across the region. The address-based sampling will be targeted in order to ensure sufficient recruitment of key populations. This targeting will be informed by an analysis of other recent travel diary survey efforts and may incorporate information on measures such as population density, urban form, and other factors.

In addition, direct intercept will also occur in San Francisco and other Bay Area cities (to be determined) at both high intensity TNC locations (as these are known) and other locations such as transit hubs, stations/stops, parking garages, and other locations. The San Francisco County Transportation Authority (SFCTA) will provide the Consultant with TNC hotspot information for San Francisco to inform the sample plan of intercept in the city. The Metropolitan Transportation Council (MTC) will provide the Consultant with a prioritized list of preferred intercept locations for Oakland and Berkeley. The Consultant will use this information along with analysis of TNC users (and non-users) from recent travel diary surveys in California to produce a sampling and recruitment plan. This sampling plan will necessarily seek to balance the two sampling approaches (address-based and intercept) based on anticipated response, types of response, timeline, and budget.

Many types of respondents will result from this sampling plan. The Bay Area has very high smartphone ownership rates, approximately 9 out of 10 adults. Individuals with smartphones will participate by downloading the smartphone app and using it for seven days. Individuals without smartphones will be screened out of the study or if timeline and budget allow be asked a short set of demographic and typical travel behavior questions. Among study participants (smartphone owners), respondents will be classified as TNC users (and frequency of use) and non-TNC users.

Data collection in Task 4 will be completed in two phases: a pretest in spring 2018, and the main data collection in fall 2018. The Consultant will develop all recruitment materials. For both the pretest and the main data collection, the consultant, in conjunction with the agencies, will select sites for direct intercepts, provide intercept postcards, and develop an intercept plan. The Consultant will schedule and train staff who will conduct the intercept work. At this time, it is expected that the direct intercept work will be conducted by both Agencies staff/interns and staff hired from a temporary staffing firm. The Agencies will work the Consultant to obtain any required permissions and provide introductions to a contact person for intercept staff to work in the identified recruitment areas or other locations, based on the sampling plan. The Consultant will acquire all data and prepare all materials required for the address-based sampling for both the pre-test and the main data collection. As much as possible the invitation postcard is expected to be the same regardless of sampling method (address-based or intercept). The Consultant will work closely with the Agencies to determine the “brand” for the study as well as the appeal for response (extent to which there will be a focus on TNC behavior in recruit materials).

Agencies and Consultant will coordinate with to develop data sharing and privacy policies. It is expected that these policies will be aligned with currently-in-use policies being used on MTC's other active survey projects.

*Deliverables: Sampling and recruitment plans for pilot and main data collection; Study logo, branding and public relations materials; Pre-test site selection and handout plan; Intercept postcards; Address-based sampling postcards; Staffing plans for pilot and main data collection; Recruitment training materials; Data sharing and privacy policies*

#### **Task 4. Data Collection (Pilot & Main)**

Consultant will implement a pilot data collection as soon as possible, but estimated to be in May 2018 at a limited number of locations in order to hone the recruitment methods, inform likely response rates, and refine the survey instrument. Recruitment in the field (for both the pilot and the main survey data collection effort) will be performed by both Agencies staff and field staff provided by Consultant (e.g., temporary workers supporting this project), based on guidance provided by Consultant. Recruitment locations will be selected to ensure data collection captures all markets of interest identified in Task 2. It is anticipated that Intercept staff will either hand out a postcard with study info or work with recruits to download and launch the app as part of the intercept. It is anticipated that there will be a relatively low response rate from postcards, and the Consultant will ensure that extra postcards are available if needed. The Consultant will lead the address-based sample approach in order to ensure a sufficient response. It is anticipated that recruitment will continue for approximately one month, as it's less expensive to spread out fewer intercept staff over a longer time-period, and also to allow for adjustment of methods if response isn't on track to meet goals.

All essential data will be collected within the mobile app. After launching the app and agreeing to the terms and conditions, study participants then complete a very short initial recruit survey within the app. This initial recruit survey will collect all essential data to customize the trip diary, and data collection will automatically begin. Additional data will be collected as part of the daily summary surveys in the app. The Consultant will collect seven (7) days of data for each participant in (estimated to be) September 2018. Although the Consultant will provide data in the resulting dataset for any respondent who has one or more complete days of data, it is expected most participants will have completed all seven days. Data collection will begin the day after the participant downloads the app and initiates their participation. An incentive of \$15 per respondent will be provided to participants who complete the full one week period. Note that no call center support is assumed in this project budget. Rather, the Consultant will provide support via email and via in-app support only.

Individual and household attributes to be collected includes (but is not limited to) the following. Where possible, data will be passively collected and derived rather than explicitly asked to help minimize burden

- Home location (lat long)
- Gender
- Age
- Race / Ethnicity
- Income (define so useful for mode choice modeling)
- Employment / Student Status / Employment or School Location

- HH size
- Marital status
- Presence of children status
- Auto ownership / availability / drivers license
- Car-sharing membership
- Bike ownership / availability
- Transit pass-holding
- How often use transit
- How often use TNCs (self-reported)
- Education level
- Disability
- If visitor to region (as screening question)

Passenger trip data to be collected includes (but is not limited to):

- Mode
- Origin time?
- Origin location?
- Pickup time
- Pickup location
- Drop-off time
- Drop-off location
- Destination time?
- Destination location?
- Fare paid (including tip)
- Peak/Surge multiplier (if applicable) likely needs a don't know answer choice
- Destination purpose
- Vehicle occupancy (excl? / incl? driver)
- Would have made trip if no TNC?
- If would have made trip, if no TNC, what mode use?
- Would have used TNC at different prices and travel times?
- Service used (UberX, UberPool, Lyft, Lyft Line, etc)

*Deliverables: Conduct of pilot. Technical memo summarizing pilot and any adjustments. Conduct of main survey effort, including regular provision of status of response.*

### **Task 5. Data Processing and Analysis**

Upon reaching the target samples for each market segment, the Consultant will clean all data to ensure consistency of survey results and provide all data files to Agencies staff including but not limited to person files, trip files, location/GPS files. The Consultant will prepare a data dictionary. In addition, the Consultant will develop expansion weights that will allow the Agencies to develop aggregate statistics describing existing travel patterns. It is initially expected that the Consultant will utilize the 2016-2017 state of California add-on sample NHTS purchase for this purpose. The Consultant will provide summary descriptives of both unexpanded and expanded survey results.

*Deliverable: Data files, expansion weights and data dictionary*

### **Task 6. Documentation**

The Consultant will prepare documentation of data collection methods, instruments, and results.

*Deliverables: Report documenting all aspects of data collection*