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April 4, 2018

To All Prospective Respondents:

The Alameda County Transportation Commission (Alameda CTC) is releasing a Request for Information (RFI) inviting you to submit information on innovative data collection and analytics tools and platforms for Alameda CTC to deploy.

Questions and responses to this RFI should be submitted by email only and directed to transportationdataRFI@alamedactc.org. Questions should be submitted no later than **May 10, 2018**. The deadline for all responses is **May 31, 2018 at 5pm PST**

Sincerely,

A handwritten signature in blue ink, appearing to read "Tess Lengyel". The signature is fluid and cursive, written over a light blue circular watermark.

Tess Lengyel
Deputy Executive Director of Planning and Policy

**INNOVATIVE DATA COLLECTION AND ANALYSIS
REQUEST FOR INFORMATION
FROM ALAMEDA COUNTY TRANSPORTATION COMMISSION**

April 4, 2018

SUMMARY

The Alameda County Transportation Commission (Alameda CTC) is soliciting a Request for Information (RFI) seeking new ideas for purposeful and effective applications of emerging transportation data collection and analytics technologies. Alameda CTC routinely uses various types of transportation data in our multimodal transportation system planning and performance monitoring and reporting. Alameda CTC now seeks information on innovative data technologies and analytics platforms to better shape our understanding of the performance of the county's multimodal infrastructure and enhance our performance monitoring capabilities. In particular, Alameda CTC is interested in tapping into the growing breadth of sensor and mobile-source data and accompanying analytics platforms that have the promise of improving our ability to make data-driven and informed performance evaluations and transportation investment decisions with the most current data possible. This RFI seeks information on data collection and analysis technology that can help investigate and validate new data collection methods that are enabled by emerging technologies and provide robust and current or real time data on the county's multimodal infrastructure performance. Eligible respondents include the private sector, educational and non-profit entities, and public agencies. Collaboration among various entities is encouraged. Responding to this RFI is not a guarantee of a contract award; it is possible that Alameda CTC may engage in a future competitive bidding process.

BACKGROUND

About Alameda CTC

Alameda CTC is a joint powers agency that plans, funds and delivers a broad spectrum of transportation projects and programs to enhance mobility throughout Alameda County. The agency is both the county's congestion management agency and administers the county's transportation sales tax. Alameda CTC is governed by a 22-member Commission with elected officials from each of the 14 cities, all five members of the Alameda County Board of Supervisors, and elected representatives from AC Transit and BART.

As the congestion management agency for Alameda County, Alameda CTC's planning responsibilities include:

- Developing countywide transportation plans every four years
- Annual and biennial performance monitoring of our transportation network

- Identifying near- and long-term improvements through corridor studies and other planning efforts

Alameda CTC administers the 2014 Transportation Expenditure Plan, which voters approved as part of a transportation sales tax measure, Measure BB. The measure provides nearly \$8 billion to fund implementation of a 30-year Expenditure Plan, which focuses on implementing multimodal projects and programs to benefit all users.

Alameda CTC has been a pioneer in promoting innovative transportation solutions. Some the projects include the first Express Lanes in Northern California, and the I-80 Integrated Corridor Management and SMART Corridor project. Continuing in this tradition, the 2014 Measure BB Transportation Expenditure Plan identifies funding for “Technology and Innovation” to enable applications of emerging technologies for improving transportation in the county.

Alameda County Setting

Alameda County is the seventh largest county in California, and is located in the geographic center of the Bay Area region. The County's population of 1.6 million is anticipated to grow significantly, by 31 percent, while the jobs will increase 40 percent by 2040. Alameda County is served by a rich multimodal transportation system, including 23 BART stations, three bus operators serving 190 bus routes, three inter-city rail operators with 10 stations, and three ferry terminals. The county's nearly 4,000 miles of major roads, including 10 freeways, support connecting communities and other travelers to regional and local employment and activity centers. Alameda County is also the goods movement hub of Northern California anchored by the Port of Oakland, which is the seventh busiest port in the United States.

Alameda County's multimodal transportation system accommodates a significant share of the regional commuter travel. Approximately, one-third of the regional commutes involve Alameda County in some way, either traveling within, to, from or through the county.

Transportation Challenges and Opportunities

Given the regionally central location of the county, Alameda County's transportation system experiences a disproportionate share of regional congestion. Fifty percent of the region's top 10 most congested roads have consistently been located in Alameda County, and thirty percent of regional vehicle delay occurs on Alameda County roads. Growing population and a strong regional economy exacerbates the severity of congestion and quality of life of our residents. Given these mobility challenges, it is imperative for Alameda CTC to have a current understanding of the performance and issues of the county's multimodal transportation system and travel patterns so that the agency can address these issues proactively and in a timely manner.

However, current data collection methods on county travel and transportation infrastructure are generally inefficient. They are either resource-intensive or time-consuming, leading to infrequent analysis or analysis based on small sample sizes or outdated data. The agency's ability to quickly respond to emerging needs is limited by existing data collection and evaluation techniques.

With rapidly evolving transportation technologies, public and private entities have developed and are continuing to create many new data collection and analytics opportunities. For example, big data applications have the promise of efficient analysis on significantly larger samples with more detail on why and where people and goods are traveling. Alameda CTC anticipates that these advanced technologies can help in addressing the multimodal performance management needs of the agency.

At the same time, big data applications have only recently started to emerge in the public space. Compared to existing tools and models, new data applications have not been tested over decades of application and refinement among transportation professionals. Innovative data-based analyses and emerging data sets will require careful calibration and validation in a public setting before these new tools can be adopted as standard practice. This RFI is Alameda CTC's first step in the process of incorporating new and advanced data collection and processing technologies in our transportation planning practices or piloting sensor applications in the county.

PURPOSE OF THE RFI

The need for robust data on the county's transportation infrastructure is paramount to better understand performance and improvement needs and support informed and effective investment decisions. New funding opportunities have brought an increased need for multimodal performance measurement for the countywide transportation system and at the same time there is a new generation of technologies that enable dynamic data collection and analysis. With advances in sensor technology and computing capacity, there is a significant opportunity for Alameda CTC to understand infrastructure performance in near real-time and to respond to any questions on transportation issues with much more detail than in the past, at a much faster rate, and in a cost-effective manner. Alameda CTC anticipates that this RFI would lead to a state of the art data-analytics tool to better understand infrastructure performance and travel patterns to enable the agency to understand and effectively address transportation issues in the county.

The purpose for the RFI is to address existing data collection and analysis deficiencies. Currently, there is no single place or tool that includes a comprehensive real-time understanding of multimodal infrastructure performance. Alameda CTC has a critical need for:

- Data analytics platform or tool that can provide a dashboard of the county's multimodal transportation system's current or near real-time performance.

- Understanding of origins and destinations of travelers on major transportation corridors.
- Understanding of travel mode share on major freeway and arterial corridors.

The ultimate intent is for Alameda CTC to be able to use this data analytics platform or tool to make informed and data driven planning, funding and project development decisions that best utilize the county's rich multimodal infrastructure to enable greater multimodal mobility and improved throughput of people and goods in Alameda County.

Some of the example applications from the anticipated data collection and analytics tool are:

- Before and After or Project Impact Evaluation Studies to evaluate investment decisions
- Existing conditions data for planning studies and project development
- Replacing the existing on-going resource intensive data collection and monitoring programs (LOS Monitoring of major roadways and transit network and Bike counts) with cost effective, more robust and near real time for all countywide transportation infrastructure performance monitoring
- Traffic volume counts to understand the usage of the infrastructure in a more current, if not near real time
- More accurate estimates of county-to-county flow and volume data to calibrate and validate the county's travel demand model.
- More detailed data for evaluating project benefits and dis-benefits
- Answering periodic questions on the transportation system quickly with more current data
- Ability to use more comprehensive data coverage of needs and gaps to inform investment decisions
- Better understanding of the root causes of congestion and bottlenecks based on more complete information on trip patterns, spatial data of trip ends, and estimates of trip purpose

RFI GUIDELINES

Respondents looking to implement or pilot a data collection and a data analytics platform in a public setting, in partnership with Alameda CTC, should respond to this RFI with a conceptual project idea.

At a minimum, responses must be:

- a) Pragmatic and ready for a pilot or full implementation (within 18 months)
- b) Related to innovative data collection and analytics platforms
- c) Sufficiently detailed to enable Alameda CTC to evaluate the need and feasibility of the idea
- d) Independently originated and developed by the proposer.

Entities eligible to apply

Any private, public, non-profit, research, or academic institution with experience in acquiring, collecting, and sharing data and/or an analysis platform applying advanced technologies that can be used to address transportation issues and improve multimodal mobility for all users and goods in the county.

RFI submittal requirements

Interested parties should submit a conceptual project idea to Alameda CTC. The response should be concise and **not to exceed 10 pages**. Submissions should provide only information needed for Alameda CTC to make an assessment of the conceptual project idea. Web links to demonstration tools and validation reports are encouraged.

The conceptual project ideas should contain the following components:

- a) Description of the data collection and analysis technology or potential application being offered and how it would be implemented in Alameda County (e.g. pilot or full implementation; extent of geographic area such as one or more corridors, specific geographic area or county-wide)
- b) Description of the data analysis need or gap that the conceptual project idea proposes to address
- c) Identification of risks and limitations
- d) Information on the respondent and their related demonstrated work experience
- e) Names and professional information of key personnel related to the project
- f) Key support needed from Alameda CTC or member jurisdictions and agencies to be able to implement the project, including any key assumptions that were made regarding access to facilities/infrastructure or data
- g) Information on future steps for (1) continued use and maintenance of the platform or tool, and (2) expanding to other parts of the county for projects that are not countywide
- h) Any other key assumptions that were made in developing the concept

Proposals should not be offers to replace an existing contract or service already in effect.

RFI process

This RFI is for Alameda CTC's information and planning purposes only and shall not be construed as a solicitation or as an obligation on the part of Alameda CTC to issue any competitive procurement or award a contract. Alameda CTC will not award a contract on the basis of responses to this RFI nor otherwise pay for the preparation of any information submitted, for any vendor presentation. Responses to this RFI submitted to Alameda CTC are potentially subject to public information requests.

Alameda CTC staff may request additional information, if needed. It is possible that Alameda CTC may develop and release a future competitive bidding process using information obtained through this RFI; however, any decision to do so is at the sole discretion of Alameda CTC. Responding to this RFI is not a guarantee of a contract award.

Please send RFI responses and inquiries to: transportationdatarfi@alamedactc.org

RFI Schedule:

- Release date: **April 4, 2018**
- Last date for questions on the RFI: **May 10, 2018**
- Responses due to Alameda CTC by email: **May 31, 2018 before 5 p.m. PST**
- Decision by Alameda CTC on evaluations of RFIs: **June 2018**

There will be a workshop/webinar at Alameda CTC to respond to questions **on May 1, 2018 at 1 p.m.** Specific information on call-in access will be posted prior to the webinar.

Please check the web page below for any updates:

https://www.alamedactc.org/app_pages/view/22781