



November 8, 2018

To: Transit Committee

From: Darrell E. Johnson, Chief Executive Officer

Subject: Innovation Update

Overview

The Orange County Transportation Authority continues to explore innovative transportation services and projects for Orange County residents, workers, and visitors. Given past successes, staff is exploring avenues to foster innovation opportunities through expanded team efforts. A status report is provided for review.

Recommendation

Receive and file as an information item.

Background

Recent Orange County Transportation Authority (OCTA) innovation efforts have focused on leveraging technology to spur transformation. Recent examples include: (1) creating systems to provide real-time bus arrival information to passengers; (2) deployment of mobile ticketing to reduce transaction time when purchasing bus passes; and (3) exploration of new transit services such as micro-transit and partnerships with transportation network companies. Many of these new approaches are completed or underway and have proven successful to date.

Deploying new technologies is just one path to innovation. However, innovation is also about developing better solutions for OCTA-related projects and services. Better solutions may include making a process more efficient (e.g., reducing time and/or cost) by technology or other means. Alternatively, innovation may include developing effective strategies to address existing or emerging issues (e.g., new transit service to address changing markets). As a result, innovation is both a process and an outcome that should occur in the context of broader public policy goals.

Innovation requires a diverse set of skills and perspectives to prove successful. To ensure future successes, OCTA has expanded its approach to innovation through creation of an innovation team. At least one staff member from each division has been invited to participate on this team. The team goals will expand beyond data and technology to provide internal group opportunities to transform other organizational areas, as well as review external factors and trends that are complementary to OCTA's mission and vision. In addition to continued computer and software systems innovation through OCTA's Information Services Department, a key goal for the team is to explore innovation from a variety of perspectives. This includes improvements to service and project delivery, as well as new service and project concepts.

Discussion

To provide focus for OCTA's innovation team, a draft qualitative framework has been developed. This framework could be used to consider whether OCTA should monitor, shape, test, or implement specific innovation concepts (Attachment A). Monitoring would entail keeping abreast of new developments through industry forums and meetings. Shaping would include providing feedback and recommended best practices on specific innovation efforts. Testing would involve pilot projects for potential future deployment on a broader scale. Implementation would take shelf-ready efforts to full deployment, considering costs, benefits, risks, and other factors.

To determine whether OCTA should simply monitor or fully deploy a specific innovation, the framework includes a qualitative process that is intended to help define relevance to OCTA. This will include consideration of benefits, costs, complexity, and readiness. For example, innovations with direct relevance to OCTA's authority and responsibilities, and that have high benefits and low costs, may be considered for implementation. Conversely, innovations with low benefits, high costs, complex technology, and unclear institutional arrangements may need more time to mature.

The innovation team is currently exploring the following innovation efforts:

- Monitoring: (1) Potential connected/autonomous vehicle benefits and impacts to the transportation system; (2) vehicle-to-infrastructure communication systems, including dedicated short-range communication and 5G; and (3) other smart city demonstration projects.
- Shaping: (1) Integrated transit route planning and payment apps; (2) transit signal priority using different bus-to-signal communication methods; (3) shared active transportation issues, including electric bikes and electric scooters (Attachment B).

- Testing: (1) On-demand transit through OC Flex service in Huntington Beach and portions of south Orange County; (2) partnerships with transportation network companies that are complementary to public transportation (San Clemente Lyft pilot project, Waze Carpool partnership); (3) new types of signal communications on portions of Anaheim Boulevard (partnership with the City of Anaheim as lead).

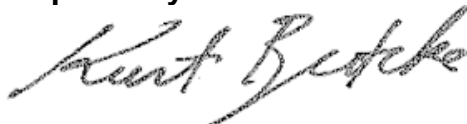
The innovation team will provide periodic updates, or separate status reports, for projects in the testing phase. As ideas mature, recommendations will be brought forward for testing through pilot projects or full deployment, contingent on the process discussed above.

Summary

OCTA has expanded its approach to innovation through creation of an innovation team. A key goal for the team is to explore innovation from a variety of perspectives.

Attachments

- A. Draft Innovation Framework
- B. Draft Shared Active Transportation: Suggested Practices, October 18, 2018, Orange County Transportation Authority

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