ITS DEPLOYMENT TRACKING SURVEY 2016-2017: SELECTED RESULTS AND ANALYSIS

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PURPOSE OF TODAY’S WEBINAR

• Provide background on the ITS JPO’s Deployment Evaluation Program and ITS Deployment Tracking Surveys
• Review selected 2016-2017 ITS Deployment Tracking Survey results and trends in ITS deployment
• Q&A
WHO IS PARTICIPATING TODAY?

409 Registered Participants
ITS DEPLOYMENT EVALUATION PROGRAM
OVERVIEW
ITS DEPLOYMENT EVALUATION PROGRAM OVERVIEW

• Provide information to decision makers to help them plan, procure, and assess effectiveness of ITS investments

• Support future deployment by:
  - Tracking extent of ITS deployment
  - Disseminating data on benefits, costs and best practices of deployed ITS
  - Analyzing data for deployment trends and enablers of adoption
ITS DEPLOYMENT EVALUATION PROGRAM

BACKGROUND

• **1996:** Authorized by Congress
• **1997:** First *ITS Deployment Tracking Survey* conducted
• **2000:** *ITS Benefits, Costs and Lessons Learned Databases* online
• **2003:** First *ITS Benefit and Cost Report* published
• **2018:** Revamp Deployment Tracking Survey and *ITS Benefits, Costs and Lessons Learned databases* to reflect new technologies and improve user experience
ITS DEPLOYMENT EVALUATION PROGRAM – PORTFOLIO OF PRODUCTS
ITS DEPLOYMENT EVALUATION PROGRAM
NEAR-TERM FOCUS: NEW TECHNOLOGIES
NEW ITS TECHNOLOGIES ARE CREATING NEW INFORMATION NEEDS: CHANGE IS IMPORTANT

• People need information about new technologies in order to support deployment decision-making

• Update the ITS Deployment Survey and informational databases to reflect new technologies (such as AV, C-AV, and Mobility on Demand (MOD), etc.)

• Need interim results faster

• New audiences are hungry for CV data in any form, especially cost data

• Reorganize how information is presented so audiences can find what they need faster and easier

• New audiences and “new” IT hardware/software encourage new ways of viewing, consuming and searching for digital content
BACKGROUND AND METHODOLOGY

• The ITS JPO Deployment Tracking Survey (DTS) was originally administered yearly to track and manage progress toward a 10-year ITS deployment goal set by the Secretary of Transportation in 1995

• The current DTS is conducted on a three-year cycle and does not track a national deployment goal; it continues to monitor deployment and informs various ITS program assessment and deployment goals

• The online survey targets transportation agencies in 108 metropolitan areas; includes freeway, arterial, and transit management agencies

• The most recent survey, conducted 2016-2017, received responses from 95 freeway management agencies, 274 arterial management agencies, and 99 transit management agencies

• Questions and responses are currently posted along with data files on the Knowledge Resources Portal; final report expected in March 2018
WHERE CAN I FIND THE 2016-2017 ITS DEPLOYMENT TRACKING SURVEY RESULTS?

www.itskrs.its.dot.gov
2016-17 ITS DEPLOYMENT TRACKING SURVEY: NEW RESULTS AND TECHNOLOGY TRENDS
A demonstration of how technologies/solutions can evolve over time: Social Media are rapidly supplanting traditional methods for information dissemination.
Over 16 years, rate of adoption for conventional surveillance technologies has advanced, reached a peak, and has become static or begun to decline.

The technologies currently expanding (reported by more than half of the freeway agencies) are the use of probe readers and crowdsourcing, with Bluetooth and Waze most widely deployed, respectively.
THE USE OF SURVEILLANCE TECHNOLOGIES BY ARTERIAL AGENCIES IS EXPANDING RAPIDLY

Adoption of Loops and Video Image Detectors is approaching market saturation. CCTV and Radar are still expanding, but more slowly in 2016 than before.

The adoption of Bluetooth and crowdsourcing technologies/services is about half that of freeway agencies but is similarly expanding rapidly. This trend may impact the future expansion in use of more established surveillance technologies by arterial agencies.
TRANSIT AGENCIES ARE RAPIDLY ADVANCING THE USE OF TECHNOLOGIES TO IMPROVE SERVICE

The expansion in use of AVL can improve the capability for tracking vehicles as well as support flexible routing and assignment of assets.

Adoption of Electronic Fare Payment (such as Smart Cards) has recently been expanding briskly after starting at very low levels in the 2000 survey.
THE USE OF SOCIAL MEDIA BY FREEWAY AGENCIES IS RAPIDLY EXPANDING

Use of conventional media has reached a saturation point and is being supplanted by the very rapid rise of social media.
Arterial agencies are slightly behind Freeway agencies in use of media to disseminate transportation information but are starting to catch up.

The use of social media by arterial agencies is expanding; this trend will need to be monitored.
Currently, transit agencies rely primarily on the use of websites and email to disseminate information.

As with other agency types, use of social media is very rapidly expanding.
Agency Uses Archived Operations Data to Track System Performance

Agency has Established Targets for the Performance Measures

Widespread deployment of ITS technology may also support expansion of performance management programs. In 2016, freeway agencies showed significant progress in using performance measures to track and analyze performance.

% Freeway Management Agencies 2016 (n=95)  ▪ % Freeway Management Agencies 2013 (n=109)
USE OF PERFORMANCE MEASURES BY FREEWAY AGENCIES IS EXPANDING

The use of key performance measures has more than doubled since the 2010 survey.
A WIDE VARIETY OF TECHNOLOGIES ARE EMPLOYED ON FREEWAYS TO IMPROVE SAFETY AT WORK ZONES

There has been consistent growth in the deployment of sophisticated systems at work zones to improve safety.
OF THE AGENCIES THAT DEPLOY RAMP METERING:

- Dynamic based on traffic conditions near the ramp: 19%
- Time of day: 19%
- Dynamic and integrated based on traffic conditions along a corridor: 16%
- Coordinated with nearby arterial traffic signal timing to manage queues that form on the ramp: 8%

Only about a quarter of agencies report the use of ramp metering. However, those that do employ sophisticated dynamic timing schemes.
Agency reduces transit fares in a particular corridor as congestion or delay on that corridor increases in order to encourage the use of transit to reduce traffic volumes

Agency recognizes schedules and adjust the assignments of assets (e.g., buses) based on real-time demand to cover the most overcrowded sections of the network

Agency employs automated vehicle location, combined with dispatching and reservation technologies to provide flexible routing and scheduling

Agency holds vehicles to facilitate the coordination of passenger transfers between vehicles or between transit systems (e.g., connection protection)

Transit agencies are using a variety of technologies to try to make significant improvements to service.
JOIN US FOR THE NEXT WEBINAR IN THIS SERIES:
CV TECHNOLOGIES AND BEYOND
MARCH 6, 1 – 2:00 PM

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<th>Planning to Deploy CV</th>
<th>Not Planning to Deploy CV</th>
<th>No Response</th>
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<td>% Freeway Agencies (n=95)</td>
<td>62%</td>
<td>35%</td>
<td>3%</td>
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<tr>
<td>%Arterial Agencies (n=274)</td>
<td>35%</td>
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<td>%Transit Agencies (n=99)</td>
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- Advanced Traveler Information Systems are a top CV application for all agency types
- Arterial and transit agencies show greater interest in Pedestrian and Bike CV applications, whereas freeway agencies more interested in road weather, work zone and commercial vehicle applications
FOR MORE INFORMATION

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Webinar #2:
“2016-2017 ITS Deployment Tracking Survey: Connected Vehicle Technologies and Beyond”

Tuesday March 6, 2018 1pm-2pm EST

ITS Deployment Tracking
http://www.itsdeployment.its.dot.gov/
QUESTIONS?