Small Urban and Rural Transit Survey

Welcome to the 2019 ITS Survey of Transit Providers Serving Small Urban and Rural Areas.

The survey collects information on how transit providers are using electronics, communications, or information processing technologies — collectively known as Intelligent Transportation Systems (ITS) — in their operations. The survey should take about 15 to 20 minutes to complete, depending on your responses to the questions. Thank you in advance for your support; your participation is a crucial part of the value of this survey. ITS JPO will not attribute survey responses to individual respondents and will generally present only aggregate survey results in our reports.

If you have any questions or difficulty accessing or completing the online survey, please contact: **TransitProviderSurvey@dot.gov**

<u>**Communication Technologies**</u>

Q1 **Do transit personnel at your organization use any of the following technologies or systems to assist in providing transit services? (*Select one response per row*).**

	Yes	No	Not Applicable
Two-way radios	○	○	○
Mobile data terminals (MDTs)	○	○	○
Wireless local area networks (WLAN)	○	○	○
Cellular telephone communications	○	○	○
Land line telephone networks	○	○	○
Internet	○	○	○
Satellite phones	○	○	○
Other communication technologies	○	○	○

Q1_OTHER
You selected other communication technologies, please provide a brief description.

_____

Q2 **Do transit personnel at your organization use smartphones for any of the following functions?** *(Select one response per row)*

	Yes	No	Not Applicable
Communications, for providing transit services	○	○	○
Vehicle location	○	○	○
Scheduling	○	○	○
Operations management	○	○	○
Other functions	○	○	○

Q2_OTHER **You selected other functions, please provide a brief description.**

_____

ITS Technology Batteries

In this next section, you will be asked to relate your organization's experience with several ITS technologies.

Computer-Aided Dispatch (CAD)
Computer-Aided Dispatch (CAD) technology provides a number of functions, but the key component is automating the scheduling and dispatch function of a transit agency. CAD typically consists of software that incorporates transit routes, schedules, trip orders, and vehicle assignments. Some software packages can assign trips to vehicles and generate routes in real time. CAD is often used with Automatic Vehicle Location.

Q3 **Is your organization currently using Computer-Aided Dispatch (CAD)?** *(Select one)*
- ○ Yes
- ○ No
- ○ I am not familiar with this technology

Q3_1a **For which of the following services does your organization use CAD?**
(Select all that apply)
- ☐ **Bus** *(fixed-route and/or deviated-fixed-route)*
- ☐ **Commuter bus** *(fixed-route bus systems that are primarily connecting outlying areas)*
- ☐ **Demand-Response** *(scheduled in response to calls from passengers; includes paratransit, door-to-door, and curb-to-curb services)*
- ☐ **Vanpool** *(commuting service operating under pre-arranged schedules for previously formed groups of riders in vans)*
- ☐ **Other**

Q3_1a_Other **You selected other (services), please specify.**

_____

Q3_1b **Overall, how useful has CAD been for your organization?** *(Select one)*
- ○ Very useful
- ○ Moderately useful
- ○ Somewhat useful
- ○ Little to no use
- ○ Too soon to tell
- ○ Don't know

Q3_2a **Why is your organization NOT using CAD?** *(Select one response per row)*

	Reason	Not a Reason	Not Applicable
No perceived need	○	○	○
Cost of technology is too great	○	○	○
Lack of funding for operational costs	○	○	○
Lack of support from leadership and/or decision-makers	○	○	○
Lack of technical expertise in workforce	○	○	○
Difficult to integrate technology with current systems	○	○	○
Costs of technology unclear	○	○	○
Benefits of technology unclear	○	○	○
Vendor issues	○	○	○
Other reason (please specify)	○	○	○

Q3_2b **Does your organization currently plan to deploy CAD in the next five years?** *(Select one)*
- ○ Yes
- ○ No
- ○ Don't know

Automatic Vehicle Location
Automatic Vehicle Location is a computer-based vehicle tracking system that uses location technology (typically GPS satellites) and a wireless data communications system to transmit the real-time location from the vehicle to a transit operations center. Automatic Vehicle Location is often used with Computer-Aided Dispatch.

Q4 **Is your organization currently using Automatic Vehicle Location?** *(Select one)*

○ Yes

○ No

○ I am not familiar with this technology

Q4_1a **For which of the following services does your organization use** Automatic Vehicle Location**?** *(Select all that apply)*

☐ **Bus** *(fixed-route and/or deviated-fixed-route)*

☐ **Commuter bus** *(fixed-route bus systems that are primarily connecting outlying areas)*

☐ **Demand-Response** *(scheduled in response to calls from passengers; includes paratransit, door-to-door, and curb-to-curb services)*

☐ **Vanpool** *(commuting service operating under pre-arranged schedules for previously formed groups of riders in vans)*

☐ **Other**

Q4_1a_OTHER **You selected other (services), please specify.**

_____

Q4_1b **Overall, how useful has** Automatic Vehicle Location **been for your organization?** *(Select one)*

○ Very useful

○ Moderately useful

○ Somewhat useful

○ Little to no use

○ Too soon to tell

○ Don't know

Q4_2a **Why is your organization NOT using Automatic Vehicle Location?**
(Select one response per row).

	Reason	**Not a Reason**	**Not Applicable**
No perceived need	○	○	○
Cost of technology is too great	○	○	○
Lack of funding for operational costs	○	○	○
Lack of support from leadership and/or decision-makers	○	○	○
Lack of technical expertise in workforce	○	○	○
Difficult to integrate technology with current systems	○	○	○
Costs of technology unclear	○	○	○
Benefits of technology unclear	○	○	○
Vendor issues	○	○	○
Other reason (please specify)	○	○	○

Q4_2b **Does your organization currently plan to deploy Automatic Vehicle Location in the next five years?** *(Select one)*
- ○ Yes
- ○ No
- ○ Don't know

> **Geographic Information Systems (GIS)**
> GIS is a computer mapping application that displays and analyzes the spatial relationship of different data such as vehicle routes, trip pick-up and drop-off points, transit stops, streets, landmarks, and terrain characteristics. GIS is often used to graphically display Automatic Vehicle Location data.

Q5 Is your organization currently using Geographic Information Systems (GIS)?
(Select one)

- ○ Yes
- ○ No
- ○ I am not familiar with this technology

Q5_1a For which of the following services does your organization use GIS? *(Select all that apply)*

- ☐ **Bus** *(fixed-route and/or deviated-fixed-route)*
- ☐ **Commuter bus** *(fixed-route bus systems that are primarily connecting outlying areas)*
- ☐ **Demand-Response** *(scheduled in response to calls from passengers; includes paratransit, door-to-door, and curb-to-curb services)*
- ☐ **Vanpool** *(commuting service operating under pre-arranged schedules for previously formed groups of riders in vans)*
- ☐ **Other**

Q5_1aOTH **You selected other (services), please specify.**

_____

Q5_1b Overall, how useful has GIS been for your organization? *(Select one)*

- ○ Very useful
- ○ Moderately useful
- ○ Somewhat useful
- ○ Little to no use
- ○ Too soon to tell
- ○ Don't know

Q5_2a **Why is your organization NOT using GIS?** *(Select one response per row)*

	Reason	Not a Reason	Not Applicable
No perceived need	○	○	○
Cost of technology is too great	○	○	○
Lack of funding for operational costs	○	○	○
Lack of support from leadership and/or decision-makers	○	○	○
Lack of technical expertise in workforce	○	○	○
Difficult to integrate technology with current systems	○	○	○
Costs of technology unclear	○	○	○
Benefits of technology unclear	○	○	○
Vendor issues	○	○	○
Other reason (please specify)	○	○	○

Q5_2b **Does your organization currently plan to deploy GIS in the next five years?** *(Select one)*
- ○ Yes
- ○ No
- ○ Don't know

> **Security Cameras and/or Security Systems**
> Security Cameras and Systems are used to enhance the security, and possibly the safety, of transit customers, personnel, and equipment, using technologies such as radio communications, audio surveillance, silent alarms, covert microphones, closed circuit television cameras, and other equipment.

Q6 Is your organization currently using Security Cameras and/or Security Systems?
(Select one)

- ○ Yes
- ○ No
- ○ I am not familiar with this technology

Q6X Which of the following types of Security Cameras and/or Security Systems have you deployed? *(Select all that apply)*

- ☐ Closed circuit television cameras
- ☐ Silent alarms
- ☐ Audio surveillance
- ☐ Object detection sensors
- ☐ Covert microphones
- ☐ Other

Q6X_OTH You selected other (security cameras/systems), please specify.

_____

Q6_1a For which of the following services does your organization use Security Cameras and/or Security Systems? *(Select all that apply)*

- ☐ **Bus** *(fixed-route and/or deviated-fixed-route)*
- ☐ **Commuter bus** *(fixed-route bus systems that are primarily connecting outlying areas)*
- ☐ **Demand-Response** *(scheduled in response to calls from passengers; includes paratransit, door-to-door, and curb-to-curb services)*
- ☐ **Vanpool** *(commuting service operating under pre-arranged schedules for previously formed groups of riders in vans)*
- ☐ **Other**

Q6_1aOTH **You selected other (services), please specify.**

_____

Q6_1b **Overall, how useful have** Security Cameras and/or Security Systems **been for your organization?** *(Select one)*

- ○ Very useful
- ○ Moderately useful
- ○ Somewhat useful
- ○ Little to no use
- ○ Too soon to tell
- ○ Don't know

Q6_2a **Why is your organization NOT using** Security Cameras and/or Security Systems**?**
(Select one response per row)

	Reason	Not a Reason	Not Applicable
No perceived need	○	○	○
Cost of technology is too great	○	○	○
Lack of funding for operational costs	○	○	○
Lack of support from leadership and/or decision-makers	○	○	○
Lack of technical expertise in workforce	○	○	○
Difficult to integrate technology with current systems	○	○	○
Costs of technology unclear	○	○	○
Benefits of technology unclear	○	○	○
Vendor issues	○	○	○
Other reason (please specify)	○	○	○

Q6_2b **Does your organization currently plan to deploy** Security Cameras and/or Security Systems **in the next five years?** *(Select one)*

- ○ Yes
- ○ No
- ○ Don't know

> **Maintenance Management Systems**
> Maintenance Management Systems monitor everything from fuel and other fluid levels to engine temperature using information from other ITS systems, such as Automatic Vehicle Location and CAD. Systems may include engine and drivetrain systems monitoring.

Q7 Is your organization currently using Maintenance Management Systems? *(Select one)*

- ○ Yes
- ○ No
- ○ I am not familiar with this technology

Q7_1a For which of the following services does your organization use Maintenance Management Systems? *(Select all that apply)*

- ☐ **Bus** *(fixed-route and/or deviated-fixed-route)*
- ☐ **Commuter bus** *(fixed-route bus systems that are primarily connecting outlying areas)*
- ☐ **Demand-Response** *(scheduled in response to calls from passengers; includes paratransit, door-to-door, and curb-to-curb services)*
- ☐ **Vanpool** *(commuting service operating under pre-arranged schedules for previously formed groups of riders in vans)*
- ☐ **Other**

Q7_1aOTH **You selected other (services), please specify.**

_____

Q7_1b Overall, how useful have Maintenance Management Systems **been for your organization?** *(Select one)*

- ○ Very useful
- ○ Moderately useful
- ○ Somewhat useful
- ○ Little to no use
- ○ Too soon to tell
- ○ Don't know

Q7_2a **Why is your organization NOT using** Maintenance Management Systems?
(Select one response per row).

	Reason	Not a Reason	Not Applicable
No perceived need	○	○	○
Cost of technology is too great	○	○	○
Lack of funding for operational costs	○	○	○
Lack of support from leadership and/or decision-makers	○	○	○
Lack of technical expertise in workforce	○	○	○
Difficult to integrate technology with current systems	○	○	○
Costs of technology unclear	○	○	○
Benefits of technology unclear	○	○	○
Vendor issues	○	○	○
Other reason (please specify)	○	○	○

Q7_2b **Does your organization currently plan to deploy** Maintenance Management Systems **in the next five years?** *(Select one)*

- ○ Yes
- ○ No
- ○ Don't know

> **Traveler Information Systems**
> Traveler Information Systems enable transit customers to receive travel information regarding various modes of transit or other types of transportation that the traveler may take. Systems may include any of the following:
> - Onboard internet access
> - Text messaging/email
> - Variable message signs
> - Automated phone service (such as interactive voice response, 511)
> - Audible annunciators
> - In-vehicle displays
> - Trip planners
> - Smartphone applications (transit-agency owned, third party owned)
> - Websites (transit-agency owned, third party owned)
> - Social media (e.g., Facebook, Twitter, etc.)

Q8 **Is your organization currently using Traveler Information Systems?**
(Select one)

- ○ Yes
- ○ No
- ○ I am not familiar with this technology

Q8X **Which of the following types of Traveler Information Systems have you deployed?**
(Select all that apply)

- ☐ Onboard internet access
- ☐ Text messaging/email
- ☐ Variable message signs
- ☐ Automated phone service (such as interactive voice response, 511)
- ☐ Audible annunciators
- ☐ In-vehicle displays
- ☐ Trip planners
- ☐ Smartphone applications (transit-agency owned, third party owned)
- ☐ Websites (transit-agency owned, third party owned)
- ☐ Social media (e.g, Facebook, Twitter, etc.)
- ☐ Other

Q8XOTH You selected other (traveler information systems), please specify.

_____

Q8_1a **For which of the following services does your organization use Traveler Information Systems?** *(Select all that apply)*

☐ **Bus** *(fixed-route and/or deviated-fixed-route)*

☐ **Commuter bus** *(fixed-route bus systems that are primarily connecting outlying areas)*

☐ **Demand-Response** *(scheduled in response to calls from passengers; includes paratransit, door-to-door, and curb-to-curb services)*

☐ **Vanpool** *(commuting service operating under pre-arranged schedules for previously formed groups of riders in vans)*

☐ **Other**

Q8_1aOTH **You selected other (services), please specify.**

_____

Q8_1b **Overall, how useful have Traveler Information Systems been for your organization?** *(Select one)*

○ Very useful
○ Moderately useful
○ Somewhat useful
○ Little to no use
○ Too soon to tell
○ Don't know

Q8_2a **Why is your organization NOT using Traveler Information Systems?**
(Select one response per row)

	Reason	Not a Reason	Not Applicable
No perceived need	○	○	○
Cost of technology is too great	○	○	○
Lack of funding for operational costs	○	○	○
Lack of support from leadership and/or decision-makers	○	○	○
Lack of technical expertise in workforce	○	○	○
Difficult to integrate technology with current systems	○	○	○
Costs of technology unclear	○	○	○
Benefits of technology unclear	○	○	○
Vendor issues	○	○	○
Other reason (please specify)	○	○	○

Q8_2b **Does your organization currently plan to deploy Traveler Information Systems in the next five years?** *(Select one)*

- ○ Yes
- ○ No
- ○ Don't know

Automatic Passenger Counters
Automatic Passenger Counters are electronic devices installed on transit vehicles that are used to count the number of passengers boarding and alighting.

Q9 Is your organization currently using Automatic Passenger Counters? *(Select one)*

○ Yes

○ No

○ I am not familiar with this technology

Q9_1 For which of the following services does your organization use Automatic Passenger Counters? *(Select all that apply)*

☐ **Bus** *(fixed-route and/or deviated-fixed-route)*

☐ **Commuter bus** *(fixed-route bus systems that are primarily connecting outlying areas)*

☐ **Demand-Response** *(scheduled in response to calls from passengers; includes paratransit, door-to-door, and curb-to-curb services)*

☐ **Vanpool** *(commuting service operating under pre-arranged schedules for previously formed groups of riders in vans)*

☐ **Other**

Q9_1aOTH **You selected other (services), please specify.** _____

Q9_1b Overall, how useful have Automatic Passenger Counters been for your organization? *(Select one)*

○ Very useful

○ Moderately useful

○ Somewhat useful

○ Little to no use

○ Too soon to tell

○ Don't know

Q9_2a **Why is your organization NOT using Automatic Passenger Counters?**
(Select one response per row)

	Reason	Not a Reason	Not Applicable
No perceived need	○	○	○
Cost of technology is too great	○	○	○
Lack of funding for operational costs	○	○	○
Lack of support from leadership and/or decision-makers	○	○	○
Lack of technical expertise in workforce	○	○	○
Difficult to integrate technology with current systems	○	○	○
Costs of technology unclear	○	○	○
Benefits of technology unclear	○	○	○
Vendor issues	○	○	○
Other reason (please specify)	○	○	○

Q9_2b **Does your organization currently plan to deploy Automatic Passenger Counters in the next five years?** *(Select one)*
- ○ Yes
- ○ No
- ○ Don't know

> **Electronic Fare Payment**
> Electronic Fare Payment provides an automated means of collecting and processing fares for public transportation services such as bus, rail, ferry and other modes. Systems may include magnetic stripe cards, smart cards, contactless credit cards, mobile payment or mobile tickets, and automated fareboxes and faregates.

Q10 **Is your organization currently using Electronic Fare Payment?** *(Select one)*

- ○ Yes
- ○ No
- ○ I am not familiar with this technology

Q10_1a **For which of the following services does your organization use Electronic Fare Payment?** *(Select all that apply)*

- ☐ **Bus** *(fixed-route and/or deviated-fixed-route)*
- ☐ **Commuter bus** *(fixed-route bus systems that are primarily connecting outlying areas)*
- ☐ **Demand-Response** *(scheduled in response to calls from passengers; includes paratransit, door-to-door, and curb-to-curb services)*
- ☐ **Vanpool** *(commuting service operating under pre-arranged schedules for previously formed groups of riders in vans)*
- ☐ **Other**

Q10_1aOTH **You selected other (services), please specify.**

_____

Q10_1b **Overall, how useful has** Electronic Fare Payment **been for your organization?** *(Select one)*

- ○ Very useful
- ○ Moderately useful
- ○ Somewhat useful
- ○ Little to no use
- ○ Too soon to tell
- ○ Don't know

Q10_2a Why is your organization NOT using Electronic Fare Payment**?**
(Select one response per row).

	Reason	Not a Reason	Not Applicable
No perceived need	○	○	○
Cost of technology is too great	○	○	○
Lack of funding for operational costs	○	○	○
Lack of support from leadership and/or decision-makers	○	○	○
Lack of technical expertise in workforce	○	○	○
Difficult to integrate technology with current systems	○	○	○
Costs of technology unclear	○	○	○
Benefits of technology unclear	○	○	○
Vendor issues	○	○	○
Other reason (please specify)	○	○	○

Q10_2b Does your organization currently plan to deploy Electronic Fare Payment **in the next five years?** *(Select one)*

- ○ Yes
- ○ No
- ○ Don't know

> **Transit Signal Priority**
> Transit Signal Priority includes the use of sensors and/or traffic signal timing to detect approaching transit vehicles and grant them priority passage at an intersection.

Q11 **Is your organization currently using Transit Signal Priority?** *(Select one)*
- ○ Yes
- ○ No
- ○ I am not familiar with this technology

Q11_1a **For which of the following services does your organization use** Transit Signal Priority**?** *(Select all that apply)*
- ☐ **Bus** *(fixed-route and/or deviated-fixed-route)*
- ☐ **Commuter bus** *(fixed-route bus systems that are primarily connecting outlying areas)*
- ☐ **Demand-Response** *(scheduled in response to calls from passengers; includes paratransit, door-to-door, and curb-to-curb services)*
- ☐ **Vanpool** *(commuting service operating under pre-arranged schedules for previously formed groups of riders in vans)*
- ☐ **Other**

Q11_1aOTH **You selected other (services), please specify.**

_____

Q11_1b **Overall, how useful has** Transit Signal Priority **been for your organization?** *(Select one)*
- ○ Very useful
- ○ Moderately useful
- ○ Somewhat useful
- ○ Little to no use
- ○ Too soon to tell
- ○ Don't know

Q11_2a **Why is your organization NOT using** Transit Signal Priority? *(Select one response per row)*
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	Reason	Not a Reason	Not Applicable
No perceived need	○	○	○
Cost of technology is too great	○	○	○
Lack of funding for operational costs	○	○	○
Lack of support from leadership and/or decision-makers	○	○	○
Lack of technical expertise in workforce	○	○	○
Difficult to integrate technology with current systems	○	○	○
Costs of technology unclear	○	○	○
Benefits of technology unclear	○	○	○
Vendor issues	○	○	○
Other reason (please specify)	○	○	○

Q11_2b **Does your organization currently plan to deploy Transit Signal Priority in the next five years?** *(Select one)*

○ Yes
○ No
○ Don't know

Emerging Technologies

In this next section, you will see questions about emerging technologies such as Connected Vehicles and Automated Vehicles.

Connected Vehicles
Connected vehicles (CV) are vehicles that communicate wirelessly with each other, infrastructure, and wireless devices to share vital transportation information. Vehicles use wireless, sensor, or other communication systems to attain 360-degree awareness of nearby vehicles and infrastructure. This communication enables safety, mobility, environmental, and road weather benefits.

Q12 **Is your agency currently deploying connected vehicle (CV) technology?** *(Select one)*
- ○ Yes
- ○ No, but plan to deploy in the future
- ○ No plans to deploy
- ○ Don't know

Q12a **Please briefly describe your agency's CV deployments.** _____

Q13 **When do you expect to deploy connected vehicle technology?** *(Select one)*
- ○ Within the next 3 years
- ○ In 3 to 6 years
- ○ In 7 or more years
- ○ Don't know

Automated Vehicles/Automated Driving Systems
Automated Driving Systems (ADS) are a set of vehicle features that, when engaged, do not require a human to drive the vehicle. ADS refers to the Society of Automotive Engineers (SAE) International Automation Levels 3, 4, or 5, which are described as Automated Vehicles (AV) in this survey. Most of the AV/ADS testing done to date would be categorized as Level 3 or Level 4. For more information on SAE Levels of Automation see:
 https://www.sae.org/news/press-room/2018/12/sae-international-releases-updated-visual-chart-for-its-%E2%80%9Clevels-of-driving-automation%E2%80%9D-standard-for-self-driving-vehicles

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Q14 **Are there any automated vehicle tests or deployments that are being conducted or have been conducted in your region/state?** *(Select one)*
- ○ Yes (completed or in progress)
- ○ No
- ○ Don't know

Q15 What is your agency's primary role in the automated vehicle testing or deployment? *(Select one)*

- ○ Agency is/was leading the automated vehicle testing/deployment
- ○ Agency is/was supporting the planning or execution of the automated vehicle testing/deployment
- ○ Agency is not involved in the automated vehicle testing/deployment
- ○ Other *(please specify below)* _____

Q15a Please describe your agency's activities with respect to automated vehicle testing or deployment._____

Q16 Are there plans for your agency to participate in automated vehicle testing or deployment in the future? *(Select one)*

- ○ Yes
- ○ No
- ○ Don't know

Q16a When does your agency expect to participate in automated vehicle testing or deployment? (Select one)

- ○ Within the next 3 years
- ○ In 3 to 6 years
- ○ In 7 or more years
- ○ Don't know

Mobility Service Provider Partnerships (Mobility on Demand)

Q17 Does your agency partner with private transportation service providers? *(Select all that apply)*

- ☐ Yes, for paratransit services
- ☐ Yes, for other services
- ☐ No
- ☐ Don't know

Q17a With which of the following transportation providers does your agency partner for paratransit service? *(Select all that apply)*

- ☐ Human services providers
- ☐ Ridesourcing (Uber/Lyft)
- ☐ Microtransit
- ☐ Taxis
- ☐ Other (please specify below) _____
- ☐ Don't know

Q17b **With which of the following transportation providers does your agency partner to provide other services (i.e., not including paratransit)?** *(Select all that apply)*

☐ Ridesourcing (Uber/Lyft)

☐ Bikesharing

☐ Microtransit

☐ Taxis

☐ Other (please specify below) _____

☐ Don't know

Costs

Q18 **Did your organization experience any unexpected costs when deploying, operating, or maintaining any of the technologies listed in this survey?** *(Select one)*

○ Yes

○ No

○ Don't Know

Q19 **If yes, what types of unexpected costs did your organization incur?** _____

Benefits

Q20. **In your opinion, to what extent has your organization realized any of the following benefits from deploying any of the ITS technologies listed in this survey?** *(Select one response per row)*.

	Great benefit	Slight benefit	No benefit	Too soon to tell	Not Applicable
Reduced travel times	○	○	○	○	○
Reduced wait times	○	○	○	○	○
Cost savings	○	○	○	○	○
Enhanced safety	○	○	○	○	○
Increased ridership	○	○	○	○	○
Improvement in on-time performance and schedule adherence	○	○	○	○	○
More efficient scheduling and routing	○	○	○	○	○
More efficient staffing	○	○	○	○	○
Improvements in record-keeping, reporting, or data analysis	○	○	○	○	○
Increased operator satisfaction	○	○	○	○	○
Increased customer satisfaction	○	○	○	○	○
Other benefits *(please specify below)*	○	○	○	○	○

Q21 **Has your organization been able to quantitatively measure any benefits received from any of the technologies listed in this survey?** *(Select one)*
○ Yes
○ No
○ Don't know

Q22 **If yes, please describe the steps your organization took to measure these benefits.**

_____

Challenges

Q23 **How much of a challenge, if at all, were each of the following issues in your organization's deployment of any of the technologies listed in this survey?** *(Select one response per row)*.

	Very great challenge	A great challenge	A moderate challenge	Somewhat of a challenge	Little or no challenge	Not applicable
Limited funding opportunities to pay for technology deployment	○	○	○	○	○	○
Operational costs	○	○	○	○	○	○
Maintenance costs	○	○	○	○	○	○
Competition for funding with other transportation projects outside your organization	○	○	○	○	○	○
Obtaining support for technologies from leadership and decision makers	○	○	○	○	○	○
Lack of technical expertise in workforce	○	○	○	○	○	○
Workforce apprehension to introduction of technology	○	○	○	○	○	○
Costs and/or benefits of technology are unclear	○	○	○	○	○	○
Integrating new technologies with current systems	○	○	○	○	○	○
Limited vendor support	○	○	○	○	○	○
Vendor technology solutions designed for larger-scale transit operations	○	○	○	○	○	○
Cybersecurity issues	○	○	○	○	○	○
Data management	○	○	○	○	○	○
Other issues *(please specify below)*	○	○	○	○	○	○

Funding

Q24 **Has your organization used any of the following funding sources for the deployment, operation, and/or maintenance of any of the technologies listed in this survey?** *(Select one response per row)*

Please note: Federal funding sources may include MAP-21 formula programs (e.g., §5309, §5310, §5311, §5312, §5314, §5316, §5317, §5320, §5337, §5339), MAP-21 Discretionary Programs (e.g., Mobility Services for All Americans, Veterans Transportation and Community Living Initiative, and Tribal Transit Program), and funds from the American Recovery and Reinvestment Act (ARRA).

	Yes	No	Don't Know
Federal funding	○	○	○
State funding	○	○	○
Local funding	○	○	○
Private funding	○	○	○
Other funding *(If yes, please specify)*	○	○	○

Technical Support

Q25. **Has your organization received technical support for the planning, deployment, operation, and/or maintenance of any of the technologies listed in this survey from any of the following entities?** *(Select one response per row)*

	Yes	No	Don't Know
Federal Transit Administration (FTA)	○	○	○
National Rural Transit Assistance Program (RTAP)	○	○	○
US Department of Transportation ITS Joint Program Office (JPO)	○	○	○
State Department of Transportation	○	○	○
Metropolitan planning organization (MPO)	○	○	○
ITS transit consultants	○	○	○
ITS transit vendors	○	○	○
Industry groups	○	○	○
Other transit agencies	○	○	○
University centers	○	○	○
Other organizations (If yes, please specify)	○	○	○

This section of the survey asks your agency's use of training, technical assistance, or knowledge resources programs offered by the US Department of Transportation's ITS Joint Program Office (ITS JPO).

The **ITS JPO's Professional Capacity Building (PCB) Program** provides the ITS workforce with ITS learning through **training** (offered by ITS PCB and its partners, such as National Transit Institute) and **technical assistance** (Peer-to-Peer exchanges and webinars).

The **ITS JPO's Deployment Evaluation Program** provides **knowledge resources** including **databases** (collections of reports, studies, technical documents, and instructional guides).

Training

ITS training offered by ITS PCB Program and its partners, including Center for ITS Training and Education (CITE), National Transit Institute (NTI), Institute of Transportation Engineers (ITE), and FHWA.

Q26 Are you aware of the training provided by the ITS PCB Program and/or its partners? *(Select one)*

- ○ Yes
- ○ No
- ○ Don't know

Q26_1 Has your organization used training provided by the ITS PCB Program and/or its partners? *(Select one)*

- ○ Yes
- ○ No
- ○ Don't know

Q26_2 How helpful was this training? *(Select one)*

- ○ Very helpful
- ○ Moderately helpful
- ○ Somewhat helpful
- ○ A little or not at all helpful
- ○ Don't know

Technical assistance

The ITS PCB Program provides technical assistance in the form of the ITS Peer-to-Peer Program and Talking Technology Transportation (T3) Webinars.

Q27 **Are you aware of the technical assistance provided by the ITS PCB Program?** *(Select one)*
- ○ Yes
- ○ No
- ○ Don't Know

Q27_1 **Has your organization used the technical assistance program provided by the ITS PCB Program?** *(Select one)*
- ○ Yes
- ○ No
- ○ Don't Know

Q27_2 **How helpful was the technical assistance?** *(Select one)*
- ○ Very helpful
- ○ Moderately helpful
- ○ Somewhat helpful
- ○ A little or not at all helpful
- ○ Don't know

<u>Knowledge Resources</u>

ITS JPO Knowledge Resources include databases that offer a unique collection of reports, studies, technical documents, and instructional guides for planning, procuring, and deploying ITS. Four databases are available focused on ITS costs, benefits, lessons learned, and deployment statistics.

Q28 **Are you aware of the knowledge resources provided by the ITS JPO?** *(Select one)*
- ○ Yes
- ○ No
- ○ Don't Know

Q28_1 **Has your organization used the knowledge resources provided by the ITS JPO?** *(Select one)*
- ○ Yes
- ○ No
- ○ Don't know

Q28_2 **How helpful were these knowledge resources?** *(Select one)*
- ○ Very helpful
- ○ Moderately helpful
- ○ Somewhat helpful
- ○ A little or not at all helpful
- ○ Don't know

Q29 **You have completed all the questions.**

If you have any additional comments regarding this survey or your organization's experience with technology please enter below?

Please click CONTINUE to submit your survey.