# APPENDIX B

# Survey Questions and Results

NCHRP Synthesis Topic 48-09: Integration of Roadway Safety Data from State and Local Sources

**INTRODUCTION/BACKGROUND**

The purpose of this appendix is to present the survey questions distributed to all fifty states and the District of Columbia through Survey Gizmo® and to present a summary of the results.

Question 1: "Which State DOT office(s) is/are currently collecting and maintaining MIRE FDE information? (Check all that apply.)"
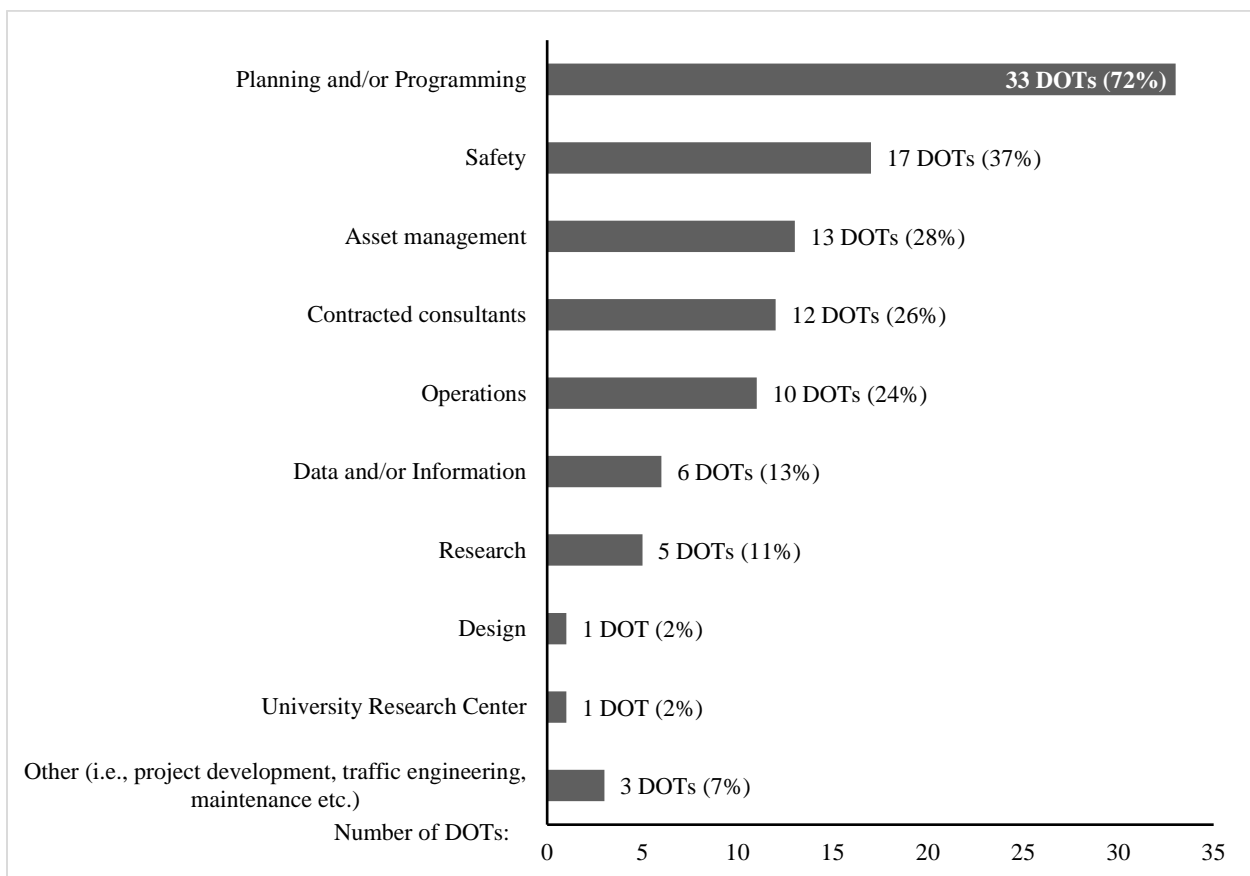


FIGURE B1 Survey response to Question 1: "Which State DOT office(s) is/are currently collecting and maintaining MIRE FDE information? (Check all that apply.)"

Question 2: "What is the title of the office or staff member that oversees the MIRE FDE data collection and maintenance? Please provide a link to the website, if available."

TABLE B1 Survey response to Question 2: "What is the title of the office or staff member that oversees the MIRE FDE data collection and maintenance? Please provide a link to the website, if available."

| DOT | Office or Staff Member Title | Link to Website (when provided) |
|---|---|---|
| Alabama | Data Collection/Data Management Office Surveying and Mapping Section | |
| Alaska | Highway Inventory Manager | dot.alaska.gov/stwdplng/mapping |
| Arizona | (1) Traffic Monitoring Group; (2) MPD-GIS Group, Pavement Management Section; (3) Local Governments | http://www.azdot.gov/planning/DataandAnalysis http://www.azdot.gov/docs/default-source/maps/2016-map-book.pdf?sfvrsn=12 |
| Arkansas | Division of System Information and Research | http://www.arkansashighways.com/System_Info_and_Research/system_information.aspx |
| California | To be determined as: HPMS, Traffic Accident Surveillance and Analysis System (TASAS), and/or Traffic Operations | |
| Colorado | Data Management Unit Manager | |
| Connecticut | Transportation Supervising Planner - Roadway Inventory | |
| Florida | Transportation Data and Analytics | |
| Georgia | Office of Transportation Data (OTD), Division of Permits and Operations | |
| Illinois | Planning and Systems Section Chief | |
| Idaho | Idaho Transportation Department (ITD) does not collect MIRE FDE as part of standard business, except on the state highway system and HPMS local road samples | |
| Iowa | Office of Research and Analytics | |
| Kansas | Bureau of Transportation Planning (GIS Unit, Traffic and Field Operations Unit), Bureau of Transportation Safety and Technology | http://ksdot.maps.arcgis.com/home/index.html |
| Kentucky | Division of Planning - Data Management Branch | http://transportation.ky.gov/Planning/Pages/Roadway-Information-and-Data.aspx |
| Louisiana | Data Collection and Analysis Section Administrator | |
| Maine | Results and Information Office | |

| DOT | Office or Staff Member Title | Link to Website (when provided) |
|---|---|---|
| Maryland | Data Services Division (DSD) | http://roads.maryland.gov/Index.aspx?PageId=125#DSD |
| Massachusetts | Office of Transportation Planning and Highway Safety | |
| Michigan | Safety Analysis Engineer | |
| Minnesota | Office of Transportation System Management | http://www.dot.state.mn.us/tda/ |
| Mississippi | Planning Division | |
| Missouri | Systems Analysis Engineer | |
| Montana | Data and Statistics Bureau Manager | http://www.mdt.mt.gov/mdt/organization/railtran.shtml |
| Nebraska | Roadway Asset Management | |
| Nevada | Roadway Systems | |
| New Hampshire | Bureau of Planning and Community Assistance | http://www.nh.gov/dot/org/projectdevelopment/planning/index.htm |
| New Jersey | Bureau of Data and Safety | |
| New Mexico | Data Management Bureau Chief | |
| New York | Highway Data Service Bureau under Office of Technical Services Of Engineering Division | https://www.dot.ny.gov/divisions/engineering/technical-services/highway-data-services |
| North Carolina | Transportation Asset Analytics | |
| North Dakota | Assistant Planning/Asset Management Engineer | |
| Ohio | Office of Technical Services | |
| Pennsylvania | (1) Bureau of Planning and Research; (2) The Bureau of Maintenance & Operations | |
| Rhode Island | Asset Information Systems | |
| South Carolina | Road Data Services | |
| South Dakota | Transportation Inventory Management | |
| Tennessee | Assistant Director, Long Range Planning Division Office | |
| Texas | Transportation, Planning and Programming Division | |
| Utah | Traffic and Safety | http://www.udot.utah.gov/main/f?p=100:pg:0:::1:T,V:187, |

| DOT | Office or Staff Member Title | Link to Website (when provided) |
|---|---|---|
| Vermont | (1) HPMS Coordinator in VTrans Asset Management and Performance Bureau, Data Section. (2) Traffic Research | |
| Virginia | Roadway Inventory Maintenance, Maintenance Division | |
| Washington | Transportation Data, GIS and Modeling Office | |
| Washington, D.C. | IT/GIS | |
| West Virginia | Geographic Transportation Information Group | http://gis.transportation.wv.gov/arcgis/rest/ |
| Wisconsin | Bureau of State Highways Programs | |

Question 3: "Does this office collect and maintain the local road MIRE FDE data, in addition to the state road data?"

TABLE B2 Survey response to Question 3: "Does this office collect and maintain the local road MIRE FDE data, in addition to the state road data?"

| Response Type | Response Rate |
|---|---|
| Yes | 70.5% (31 DOTs) |
| No | 29.5% (13 DOTs) |

Question 4: "How is local road MIRE FDE data collected and maintained? (Check all that apply.)"
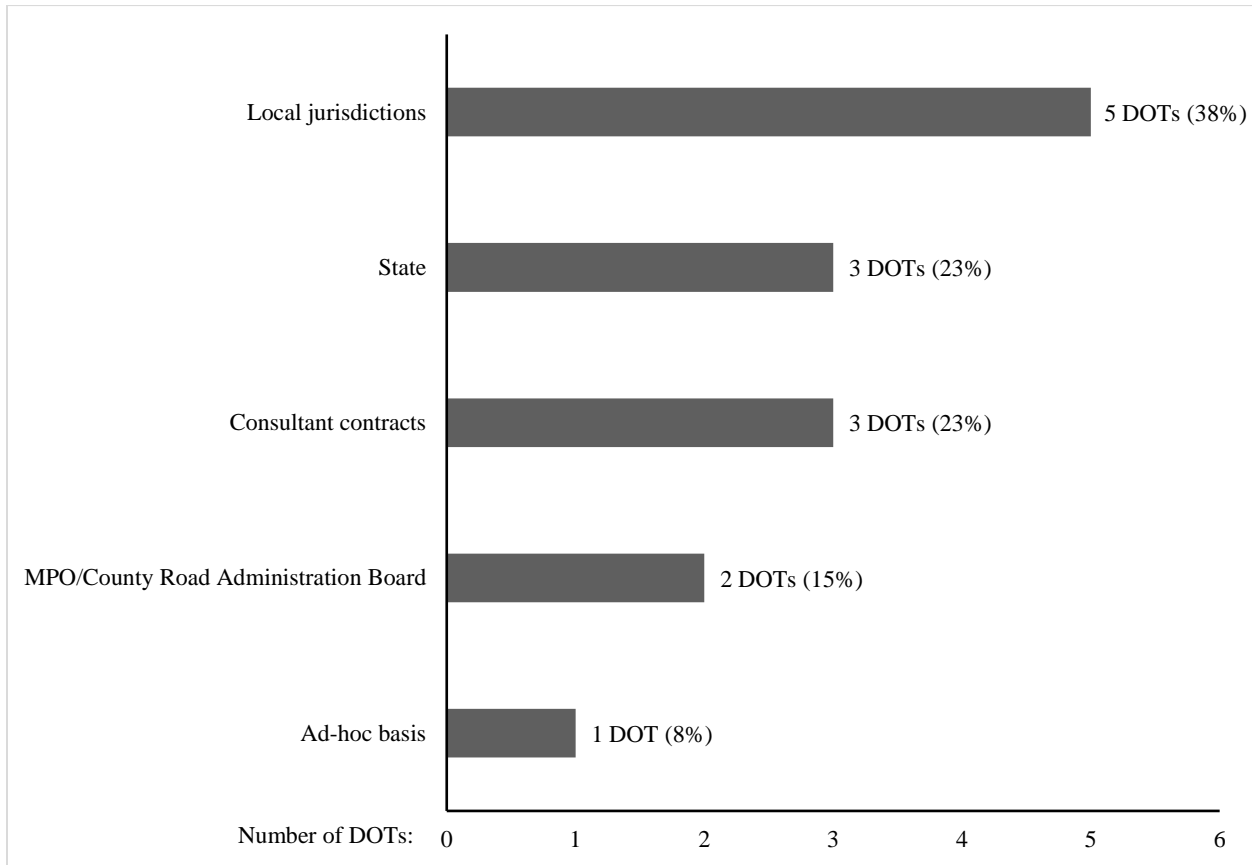


FIGURE B2 Survey response to Question 4: "How is local road MIRE FDE data collected and maintained? (Check all that apply.)"

Question 5: "Is there a future program being developed in order to collect MIRE FDE on local roads?"

TABLE B3 Survey response to Question 5: "Is there a future program being developed in order to collect MIRE FDE on local roads?"

| Response Type | Response Rate |
|---|---|
| Yes | 61.5% (8 DOTs) |
| No | 38.5% (5 DOTs) |

Question 6: "What is the title of this program and in which office of the DOT will it be managed? Please provide some details of the program as well."

TABLE B4 Survey response to Question 6: "What is the title of this program and in which office of the DOT will it be managed? Please provide some details of the program as well."

| DOT | Office to Manage Program | Details of Program |
|---|---|---|
| Arkansas | System Information and Research Division | Currently in planning phase. |
| Florida | Unknown at this time | The DOT is redesigning the current roadway Information Management Data. |
| Kansas | (1) Transportation Planning; (2) GIS Database<br>(2) K-Hub (https://www.fhwa.dot.gov/innovation/grants/projects/ks14.cfm) | K-Hub is a project to comply with FHWA's All Road Network of Linear Referenced Data (ARNOLD) requirements for statewide LRS for all public roads, which received Accelerated Innovation Deployment Grant for Geospatial Data Collaboration. The DOT will use NG911 roadway geometry and data along with transportation data sets to be incorporated into a statewide LRS system. Upon completion of the project, Kansas DOT will make its transportation data on the LRS available to other state agencies, cities, counties, and MPO. K-Hub is expected to be complete by the Fall of 2018, which will facilitate data sharing with local government partners and encourage them to share their data with the DOT. Kansas DOT is currently unable to offer incentives to local governments for sharing data with the DOT. |
| Michigan | Unknown at this time | More information will be known upon submission of safety plan to FHWA later in 2017. |
| New Mexico | Data Management Bureau | Currently being coordinated with the Data Management Bureau and HSIP Program. |
| Utah | (1) Traffic & Safety Division; (2) GIS group | A majority of the data for safety analysis efforts are being collected through the usRAP program. This data is being made available to local jurisdictions, who will update and maintain the data. |
| Washington | Unknown at this time | MIRE FDE elements are currently collected on state system and the local system to meet HPMS requirements which is sample-based. |
| Washington, D.C. | Unknown at this time | The program will build a detailed inventory of roadway lane characteristics such as width and directionality type. These additional attributes will be coupled with automated Python scripts to generate the MIRE FDE which are not already captured from HPMS. |

Question 7: "Does the state DOT perform quality assurance/quality control (QA/QC) on collected local data?"

TABLE B5a Survey response to Question 7: "Does the state DOT perform quality assurance/quality control (QA/QC) on collected local data?"

| Response Type | Response Rate |
|---|---|
| Yes | 51.6% (16 DOTs) |
| Partially done. Please explain extent of QA/QC | 45.2% (14 DOTs) |
| No | 3.2% (1 DOT) |

TABLE B5b Survey response to Question 7: "Does the state DOT perform quality assurance/quality control (QA/QC) on collected local data? The extent of QA/QC"

| DOT | Details Provided on the Extent of QA/QC Performed |
|---|---|
| Arkansas | Random spot checking to look for glaring errors. |
| Georgia | Dependent on element and/or stored business rule validations. |
| Illinois | District personnel will review data with locals. |
| Maine | Adjust as needed. |
| Minnesota | Scripts to check for validity. |
| Nebraska | Use aerials as a check. |
| Ohio | Combination of staff and consultant. |
| Tennessee | On trend data. |
| Texas | Spatial extent of roadway. |
| Vermont | Not all data exists for all local roads yet. |
| West Virginia | Questionnaire to locality. |
| Wisconsin | All administrative data and certified miles are validated annually; physical attributes are not QA/QC. |

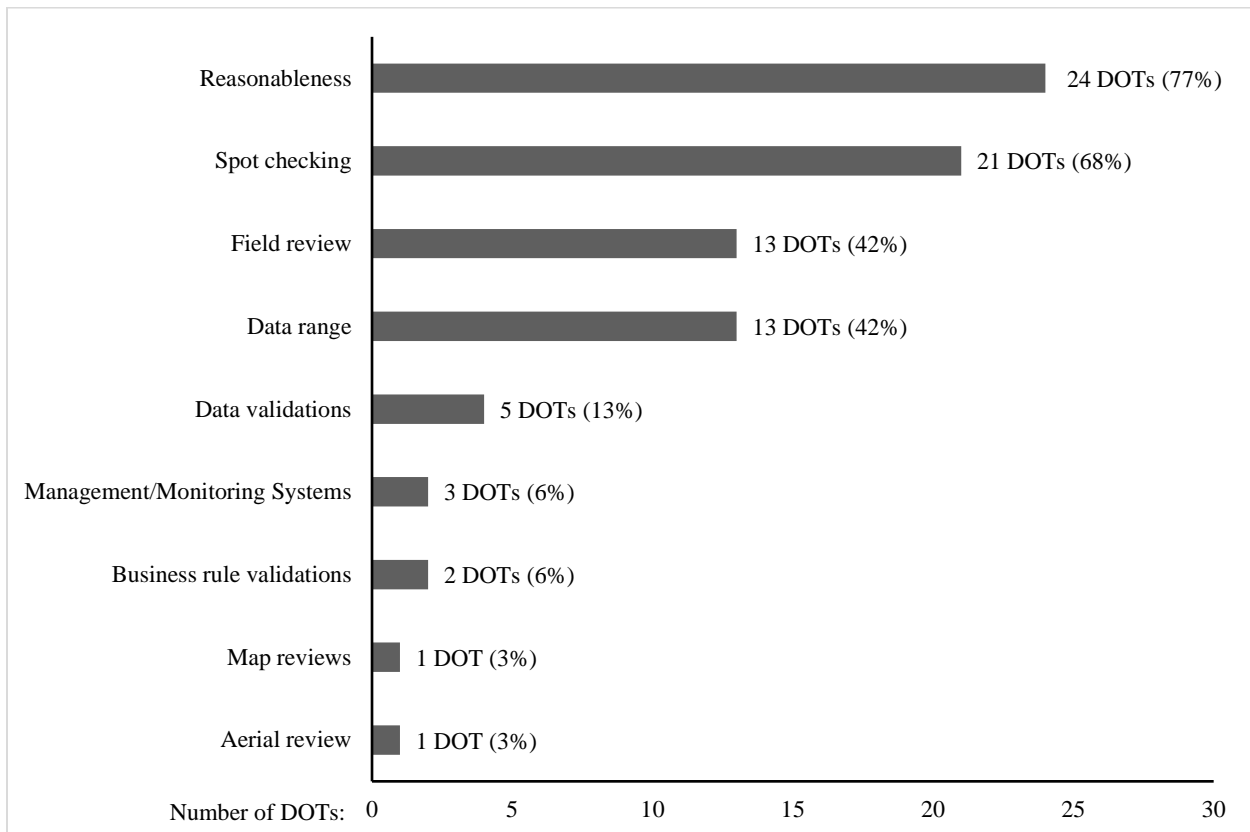Question 8: "What is the level of QA/QC? (Check all that apply.)"



FIGURE B3 Survey response to Question 8: "What is the level of QA/QC? (Check all that apply.)"

Question 9: "The table below represents the relevant items for MIRE Fundamental Data Elements for Non-Local (based on functional classification; Code 1-6) Paved Roads Tell us what MIRE FDE are collected in your state. Check All that Apply"

TABLE B6 Survey response to Question 9: "The table below represents the relevant items for MIRE Fundamental Data Elements for Non-Local (based on functional classification; Code 1-6) Paved Roads Tell us what MIRE FDE are collected in your state. Check All that Apply"

| Segment Element | # of DOTs |
|---|---|
| Segment Identifier | 38 |
| Route Number* | 44 |
| Route/street Name* | 43 |
| Federal Aid/Route Type* | 44 |
| Rural/Urban Designation* | 43 |
| Surface Type* | 42 |
| Begin Point Segment Descriptor* | 42 |
| End Point Segment Descriptor* | 42 |
| Segment Length* | 43 |
| Direction of Inventory | 39 |
| Functional Class* | 44 |
| Median Type | 36 |
| Access Control* | 41 |
| One/Two-Way Operations* | 42 |
| Number of Through Lanes* | 42 |
| Average Annual Daily Traffic (AADT)* | 42 |
| AADT Year* | 42 |
| Type of Government Ownership* | 44 |
| **Intersection Element** | **# of DOTs** |
| Unique Junction Identifier | 24 |
| Location Identifier for Road 1 Crossing Point | 25 |
| Location Identifier for Road 2 Crossing Point | 24 |
| Intersection/Junction Geometry | 23 |
| Intersection/Junction Traffic Control | 21 |
| AADT [for Each Intersecting Road] | 29 |
| AADT Year [for Each Intersecting Road] | 29 |
| Unique Approach Identifier | 18 |
| **Interchange/Ramp Element** | **# of DOTs** |
| Unique Interchange Identifier | 26 |
| Location Identifier for Roadway at Beginning Ramp Terminal | 33 |
| Location Identifier for Roadway at Ending Ramp Terminal | 34 |
| Ramp Length | 38 |
| Roadway Type at Beginning Ramp Terminal | 27 |
| Roadway Type at Ending Ramp Terminal | 27 |
| Interchange Type | 22 |
| Ramp AADT* | 35 |
| Year of Ramp AADT* | 33 |
| Functional Class* | 41 |
| Type of Government Ownership* | 40 |

* Represent the required Highway Performance Monitoring System items.

Question 10: "The table below represents the relevant items for MIRE Fundamental Data Elements for Local (based on functional classification; Code 7) Paved Roads. Tell us what MIRE FDE are collected in your state. Check All that Apply"

TABLE B7 Survey response to Question 10: "The table below represents the relevant items for MIRE Fundamental Data Elements for Local (based on functional classification; Code 7) Paved Roads. Tell us what MIRE FDE are collected in your state. Check All that Apply"

| No. of DOTs collecting MIRE FDE | MIRE FDE for Local Paved Roads |
|---|---|
| 41 | Functional Class* |
| 40 | Rural/Urban Designation* |
| 39 | Type of Governmental Ownership* |
| 37 | Begin Point Segment Descriptor* |
| 37 | End Point Segment Descriptor* |
| 36 | Segment Identifier |
| 32 | Surface Type* |
| 31 | Average Annual Daily Traffic* |
| 30 | Number of Through Lanes* |

* Represent the required Highway Performance Monitoring System items.

Question 11: "The table below represents the relevant items for MIRE Fundamental Data Elements for Unpaved Roads. Tell us what MIRE FDE are collected in your state. Check All that Apply"

TABLE B8 Survey response to Question 11: "The table below represents the relevant items for MIRE Fundamental Data Elements for Unpaved Roads. Tell us what MIRE FDE are collected in your state. Check All that Apply"

| No. of DOTs collecting MIRE FDE | MIRE FDE for Local Paved Roads |
|---|---|
| 40 | Functional Class* |
| 38 | Type of Governmental Ownership* |
| 36 | Begin Point Segment Descriptor* |
| 36 | End Point Segment Descriptor* |
| 35 | Segment Identifier |

* Represent the required Highway Performance Monitoring System items.

Question 12: "What is the status of the MIRE FDE data collection efforts in your state?"

TABLE B9 Survey response to Question 12: "What is the status of the MIRE FDE data collection efforts in your state?"

| Local (Non-State Owned) Roadway System | State Owned Roadway System | | | | | | Total Number of DOTs |
|---|---|---|---|---|---|---|---|
| | 0% to 19% | 20% to 39% | 40% to 59% | 60% to 79% | 80% to 99% | 100% | |
| 0% to 19% | - | ND | - | - | AZ, CA, MO | AR, FL, NC, NM, PA, UT | 10 |
| 20% to 39% | - | AL | - | - | KS, MN, NJ, WA | - | 5 |
| 40% to 59% | - | - | - | AK | - | NY, TX | 3 |
| 60% to 79% | - | - | - | DC | GA, MI | - | 3 |
| 80% to 99% | - | - | - | VT | CT, IA, ME, SC | MA, OH, SD, WV | 9 |
| 100% | - | - | - | - | - | CO, IL, KY, LA, MT, NE, NH, NV ,RI, TN, WI | 11 |
| Total Number of DOTs | 0 | 3* (include VA) | 1* (include MD) | 3 | 14* (include MS) | 23 | |

Question 13:" Is this data updated and/or maintained?"

TABLE B10 Survey response to Question 13:" Is this data updated and/or maintained?"

| Response Type | Response Rate |
|---|---|
| Yes | 81.8% (36 DOTs) |
| Other. Please provide the details. | 18.2% (8 DOTs) |

| Count | Other Response |
|---|---|
| 1 | On an annual basis |
| 1 | On an as-needed basis-Seldom! |
| 1 | Once a complete data set has been collected, maintenance and update plans will be developed |
| 1 | Only for HPMS Purposes |
| 1 | We are developing a plan to work with Locals to maintain/update this data through an online portal |
| 1 | Partially updated and/or maintained |

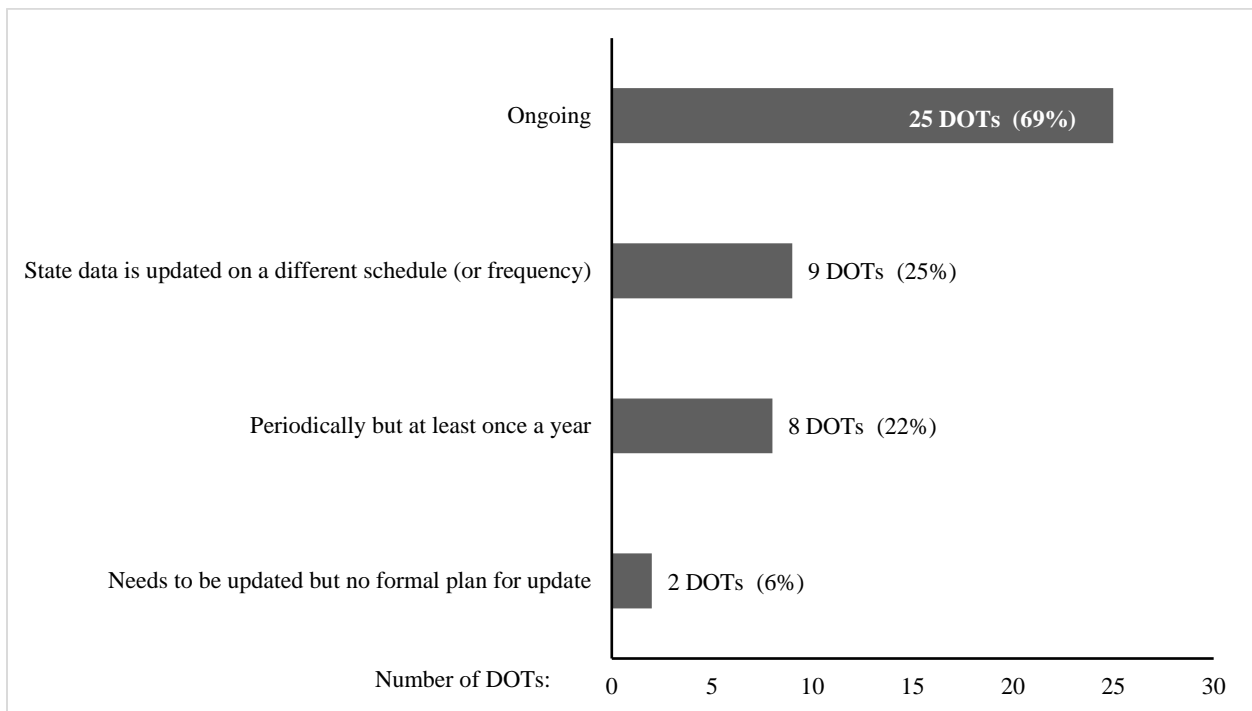Question 14: "How often is the data updated? (Check all that apply.)"



FIGURE B4 Survey response to Question 14: "How often is the data updated? (Check all that apply.)"

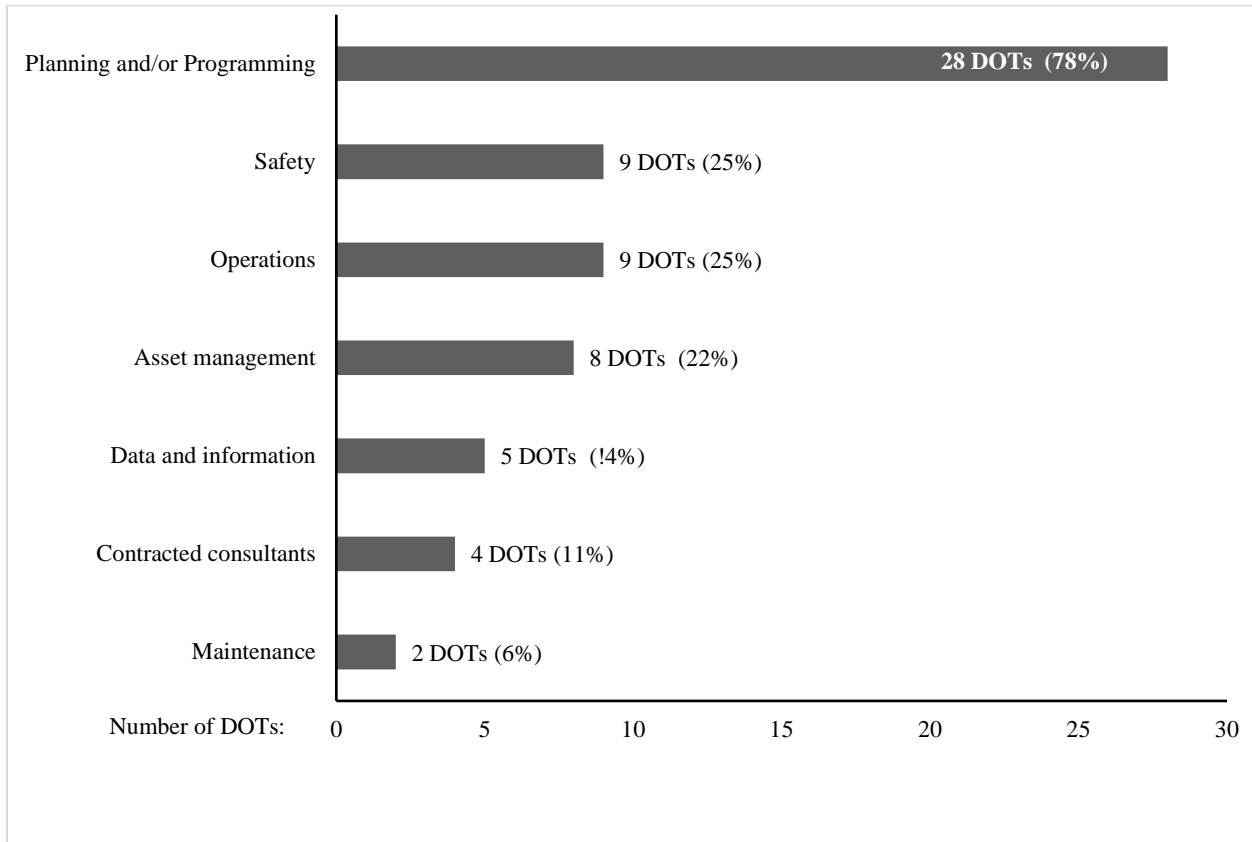Question 15: "Which State DOT office is responsible for the updates of MIRE FDE data? (Check all that apply.)"



FIGURE B5 Survey response to Question 15: "Which State DOT office is responsible for the updates of MIRE FDE data? (Check all that apply.)"

Question 16: "Are there various state DOT databases (planning, operations, safety, etc.)?"

TABLE B11 Survey response to Question 16: "Are there various state DOT databases (planning, operations, safety, etc.)?"

| Response Type | Response Rate |
|---|---|
| Yes | 84.1% (37 DOTs) |
| No | 15.9% (7 DOTs) |

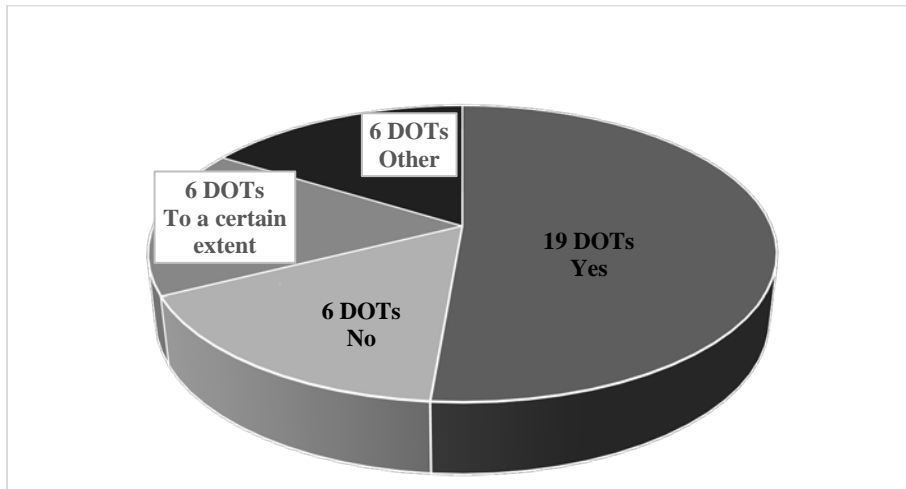Question 17: "Are these databases compatible with each other?"



FIGURE B6 Survey response to Question 17: "Are these databases compatible with each other?"

Question 18: "Of these databases which are compatible, which databases are being integrated into MIRE FDE? Please provide the details."

TABLE B12 Survey response to Question 18: "Of these databases which are compatible, which databases are being integrated into MIRE FDE? Please provide the details."

| DOT | Details Provided in Survey on Databases Being Integrated |
|---|---|
| Alabama | LRS, HPMS |
| Arkansas | The ones that are used with GIS or LRS |
| Arizona | Only the Multimodal Planning Division GIS's HPMS related databases that are LRS compliant |
| Iowa | Assets, Crash, Maintenance, Pavement Management |
| Illinois | Inventory houses the MIRE FDE data. Safety Engineering houses data that integrates with Inventory. Operations is updating their system which will allow them to be able to integrate with inventory data. |
| Louisiana | Safety, Inventory, Management Systems, Maintenance, Bridge |
| Minnesota | Roadway Characteristics is compatible. Crash, Pavement, Traffic, Bridge are being integrated |
| Massachusetts | LRS, Intersections, Traffic, HPMS, Roadway Inventory, Safety Information Management Systems |
| North Carolina | Most of the databases are kept separately, but can be related back to each other through a common LRS. For example, the crash database is separate from the roadway inventory database, but the systems use the same county / route / milepost location references so they can be easily referenced to each other for analysis purposes. |
| New Hampshire | Planning - Road Inventory; Operation-Traffic volumes; Planning - HPMS |
| New Jersey | Straight Line Diagrams (SLD) Database |
| New Mexico | Roadway Inventory System and Traffic Monitoring system |
| Nevada | Esri Products and the Nevada Citation and Accident Tracking System Data Warehouse |
| New York | Safety Information Management Systems, AgileAssets Inc., Roads and Highways, Office of Planning and Program Management |
| Ohio | Road inventory and traffic monitoring |
| Rhode Island | Traffic counts, LRS, HPMS, Pavement database, etc. |
| South Carolina | Road Inventory Database |
| South Dakota | Both state and non-state road inventories |
| Virginia | Road Inventory Management System, Traffic Management System, Statewide Planning System |
| Vermont | Most, if not all, as they use the same LRS. |
| Washington | Datamarts are SQL compatible |
| West Virginia | Environmental Systems Research Institute Roads and Highways |

Question 19: "Is the DOT currently integrating local roadway MIRE FDE data into the state DOT MIRE FDE system or systems?"

TABLE B13 Survey response to Question 19: "Is the DOT currently integrating local roadway MIRE FDE data into the state DOT MIRE FDE system or systems?"

| Response Type | Response Rate |
|---|---|
| Yes | 45.5% (20 DOTs) |
| No, agency is not integrating the local roadway MIRE FDE data because agency already maintains it as part of the state database | 31.8% (14 DOTs) |
| No, agency is not integrating the local roadway MIRE FDE data into the state DOT system | 22.7% (10 DOTs) |

Question 20: "Please indicate the reasons why your state DOT does not integrate roadway safety MIRE FDE information on non-state owned roads. (Check all that apply.)"



FIGURE B7 Survey response to Question 20: "Please indicate the reasons why your state DOT does not integrate roadway safety MIRE FDE information on non-state owned roads. (Check all that apply.)"
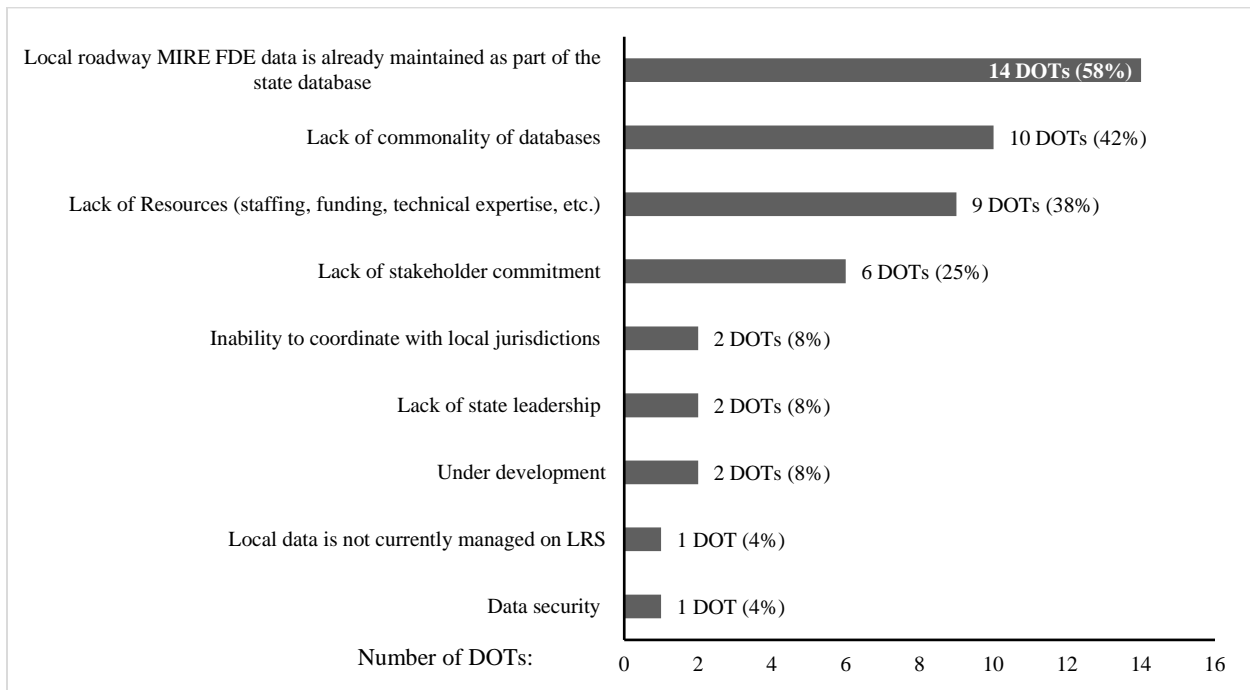
Question 21: "If your state DOT does not integrate MIRE FDE data on local or tribal nation roads, is there a future program being developed in order to do so?"

TABLE B14 Survey response to Question 21: "If your state DOT does not integrate MIRE FDE data on local or tribal nation roads, is there a future program being developed in order to do so?"

| Response Type | Response Rate |
|---|---|
| Yes | 37.5% (9 DOTs) |
| No | 62.5% (15 DOTs) |

Question 22: "What is the title of this program under development? Please provide the name of the program and any details of the program in the space provided below."

TABLE B15 Survey response to Question 22: "What is the title of this program under development? Please provide the name of the program and any details of the program in the space provided below."

| DOT | Response |
|---|---|
| Arizona | MIRE-FDE program There is no title at this point. It is still too early in the planning stage |
| California | Future system that will replace the Transportation System Network (TSN) |
| New Mexico | ARNOLD Phase 3 project Implementation in December 2019 |
| New York | System of engagement |
| Pennsylvania | We have started evaluating the MIRE requirements but we will most likely need some type of program however this may not all be housed in one MIRE System but rather sharing of data through appropriate integrated systems. |
| Virginia | Urban Maintenance Inventory System (UMIS)/ Roadway Inventory Management System (RIMS) integration |
| Washington | We use GIS tools to obtain information from local GIS sources. |
| Wisconsin | ARNOLD Phase 2 |

Question 23: "What tools are being used by the DOT that facilitate better integration of state and local roadway safety data? (Check all that apply.)"
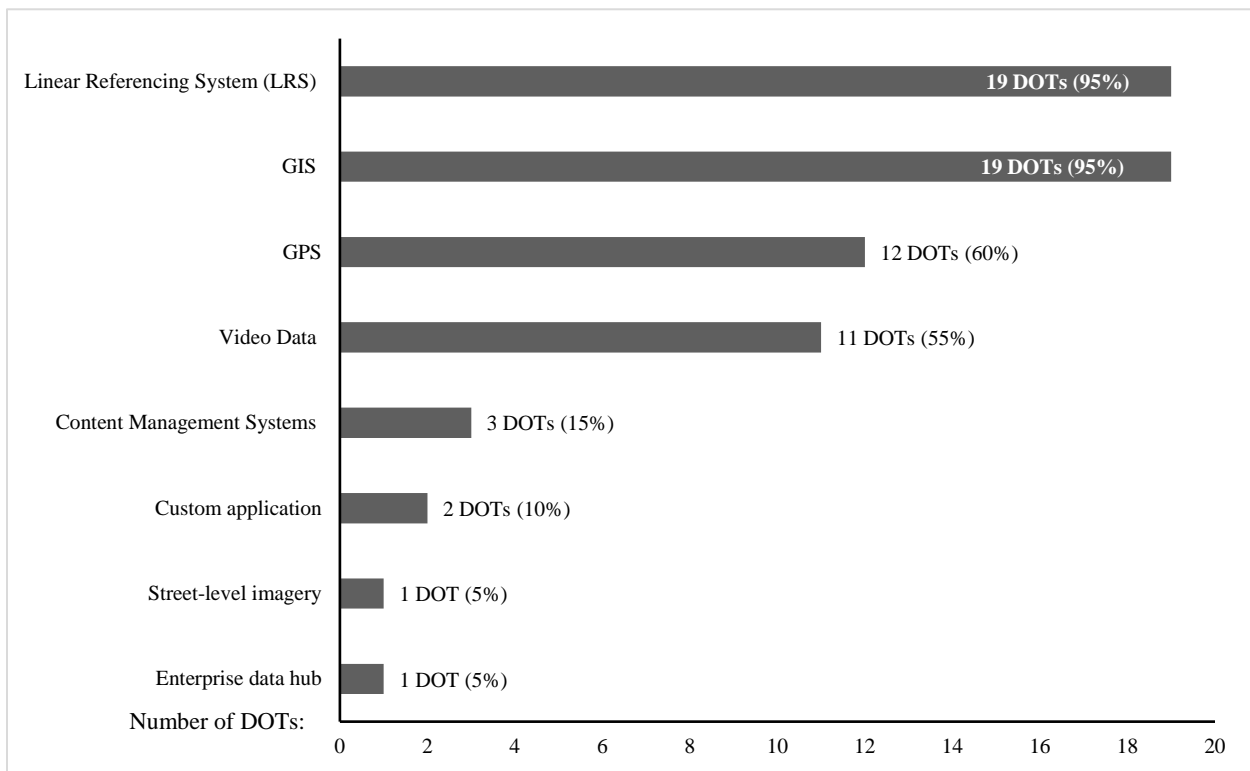


FIGURE B8 Survey response to Question 23: "What tools are being used by the DOT that facilitate better integration of state and local roadway safety data? (Check all that apply.)"

Question 24: "Does the state DOT perform quality assurance/quality control (QA/QA) on integrated local data?"

TABLE B16 Survey response to Question 24: "Does the state DOT perform quality assurance/quality control (QA/QA) on integrated local data?"

| Response Type | Response Rate |
|---|---|
| YES, on All of the integrated local data | 35.0% (7 DOTs) |
| YES, on SOME of the integrated local data | 40.0% (8 DOTs) |
| No | 25.0% (5 DOTs) |

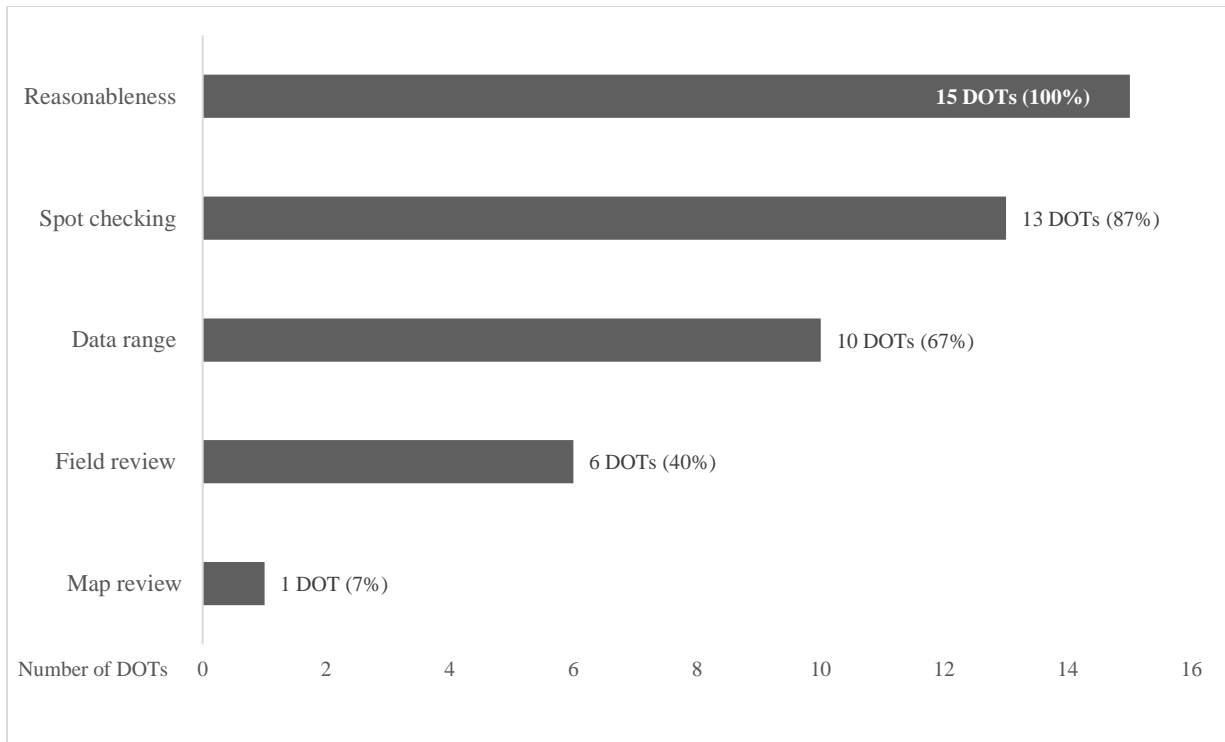Question 25: "What is the level of QA/QC? (Check all that apply.)"



FIGURE B9 Survey response to Question 25: "What is the level of QA/QC? (Check all that apply.)"

Question 26: "Is training that is developed by the DOT made available to local agencies which explains the criteria and process for formatting, collecting, integrating, and maintaining local roadway safety MIRE FDE data?"

TABLE B17 Survey response to Question 26: "Is training that is developed by the DOT made available to local agencies which explains the criteria and process for formatting, collecting, integrating, and maintaining local roadway safety MIRE FDE data?"

| Response Type | Response Rate |
|---|---|
| Yes | 25.0% (5 DOTs) |
| No | 50.0% (10 DOTs) |
| In the process of developing training, but does not yet have it in place | 25.0% (5 DOTs) |

Question 27: "What type and how often is training available? (Check all that apply.)"

TABLE B18 Survey response to Question 27: "What type and how often is training available? (Check all that apply.)"

| Count | Response |
|---|---|
| 2 | Held onsite, upon request from the local agencies |
| 1 | As-needed basis |
| 1 | Considerable training is provided by Michigan Tech in their support of the RoadSoft tool. This tool contains almost all of the data elements identified in the FDE |
| 1 | Training is provided to support the use of the data for local planning |

Question 28: "Please indicate any of the entities below that provide training and technical support to local agencies? (Check all that apply.)"

TABLE B19 Survey response to Question 28: "Please indicate any of the entities below that provide training and technical support to local agencies? (Check all that apply.)"

| Count | Response |
|---|---|
| 1 | State; Division of Planning – Data Management Branch |
| 1 | State; Office of Transportation Planning |
| 1 | State; Project Development – Bureau of planning and community assistance |
| 3 | LTAP/TTAP |
| 1 | RPCs |

Question 29: "What issues (limitations, constraints, etc.) have you observed in implementing the integration of local roadway safety data? (Check all that apply.)
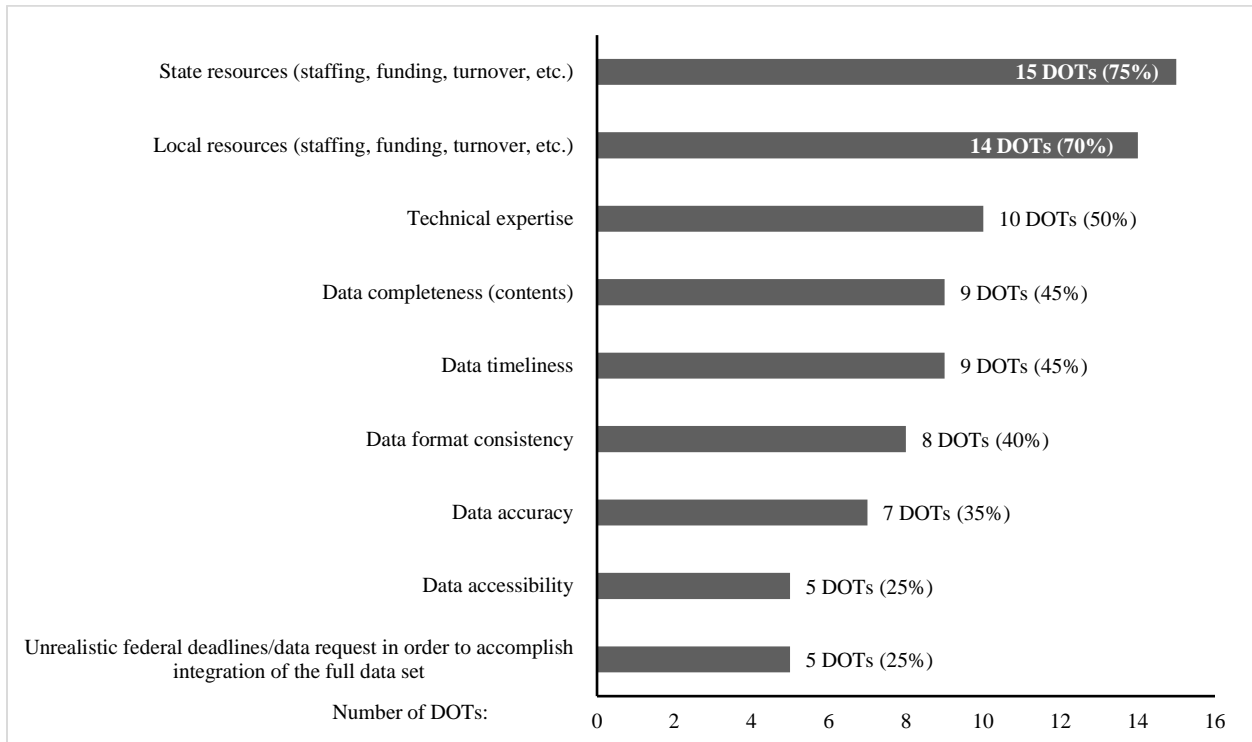


FIGURE B10 Survey response to Question 29: "What issues (limitations, constraints, etc.) have you observed in implementing the integration of local roadway safety data? (Check all that apply.)

Question 30: "In your opinion, does your state DOT have a successful program in place to integrate roadway safety MIRE FDE information from both state and local sources?"

TABLE B20 Survey response to Question 30: "In your opinion, does your state DOT have a successful program in place to integrate roadway safety MIRE FDE information from both state and local sources?"

| Response Type | Response Rate |
|---|---|
| Yes, it is already integrated and working well | 60% (12 DOTs) |
| No | 40% (8 DOTs) |

Question 31: "From a scale of 1 to 5 (1- least effective to 5 – very effective), rate your experience in the integration of local MIRE FDE information into the DOT system)"

TABLE B21 Survey response to Question 31: "From a scale of 1 to 5 (1- least effective to 5 – very effective), rate your experience in the integration of local MIRE FDE information into the DOT system)"

| Response Type | Response Tally |
|---|---|
| 1 – least effective | None |
| 2 | None |
| 3 | 4 DOTs (Nevada, Michigan, Ohio, Rhode Island) |
| 4 | 4 DOTs (Kentucky, Massachusetts, South Dakota, Vermont) |
| 5 – very effective | 4 DOTs (New Hampshire, Illinois, Iowa, Louisiana) |

Question 32: "Please provide details of the program (to integrate roadway safety MIRE FDE information from both state and local sources) and share the weblink (or email an electronic document) which describes the program."

TABLE B22 Survey response to Question 32: "Please provide details of the program (to integrate roadway safety MIRE FDE information from both state and local sources) and share the weblink (or email an electronic document) which describes the program."

| State | Program Details |
|---|---|
| Iowa | Using an LRS we have it all in our Roadway Asset Management System (RAMS) based on Esri Roads and Highways System. |
| Illinois | MIRE FDE is part of the base requirements within the roadway inventory system. |
| Kentucky | KYTC contracts with Area Development Districts (similar to an RPO) to work with local government agencies to collect non-state road locations, surface type, ownership, street name, and one/two way operation. State DOT requires the data collection to fit into the DOT's system using a well-established data dictionary (included in Appendix D). |
| Louisiana | http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Multimodal/Data_Collection/Pages/default.aspx |
| Michigan | We have been working with RoadSoft (www.roadsoft.org) and our local agencies to develop and maintain a single LRS, as well as consistency in the delivery of technical capabilities. This has allowed MI to integrate the state's crash data, and to also comply relatively easily to HPMS reporting requirements. These efforts have been ongoing for well over a decade. Geographic Framework (http://www.michigan.gov/cgi/0,4548,7-158--30811--,00.html) |
| Nevada | NDOT has no written identifiable program. They continuously work with the local governments and RTC's to deliver data and work together. Train as requested and request data as needed. |
| New Hampshire | NH DOT collects and maintains the state and local FDE information. |
| Ohio | ODOT has a few counties that do not want to participate because they feel their data are good. It is difficult to have them maintain their data and submit it to the state for updates.<br>Ohio Geographically Referenced Information Program (http://ogrip.oit.ohio.gov/ProjectsInitiatives/LBRS.aspx) |
| Rhode Island | RIDOT obtains through a vendor selected data collection contract, collected the majority of MIRE elements (180 of 202) on all public roads. RI will be working with the locals in the upcoming months to assist RIDOT with updating/maintaining this data. |
| South Dakota | An action plan was developed that identified missing MIRE-FDE. |
| Vermont | There are several programs, including HPMS, Highway Mapping System, and Traffic Monitoring System that collect MIRE FDE. Integration of the data are possible, but not yet pulled into a central MIRE FDE roadway inventory. |

Question 33: "What have been the key attributes and factors that have led to the success of the data integration effort at your agency? (Check all that apply.)"

Question 34: "What have been the key attributes and factors that have led to the success of the data maintenance effort at your agency? (Check all that apply.)"
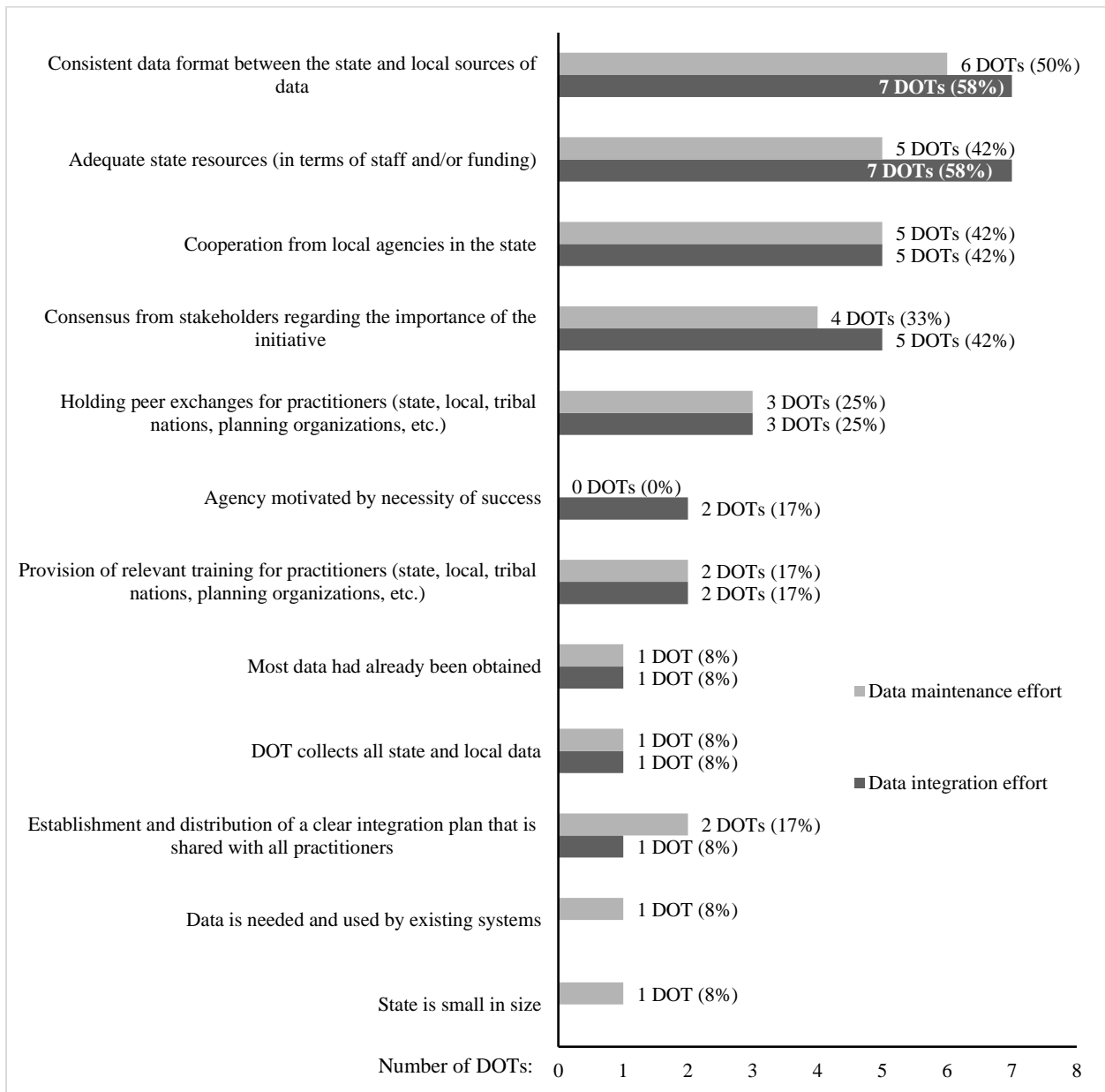


FIGURE B11 Survey response to Questions 34 & 35: "What have been the key attributes and factors that have led to the success of the data integration and maintenance effort at your agency? (Check all that apply.)"

Question 35: "How well is your process functioning (i.e., measuring its performance) in terms of the integration of MIRE FDEs that relates to your agency's roadway safety database? (Select one choice)"

TABLE B23 Survey response to Question 35: "How well is your process functioning (i.e., measuring its performance) in terms of the integration of MIRE FDEs that relates to your agency's roadway safety database? (Select one choice)"

| Response Type | Response Rate |
|---|---|
| No integration efforts underway | 10.0% (2 DOTs) |
| Initial efforts underway but process not fully coordinated | 30.0% (6 DOTs) |
| Process newly in place and data routinely integrated | 10.0 % (2 DOTs) |
| Process in place for multiple years and data routinely integrated | 30.0% (6 DOTs) |
| Process in place for multiple years, data routinely integrated, and performance of system and data quality are being monitored | 20.0% (4 DOTs) |

Question 36: "What methods are used to facilitate the integration of roadway safety MIRE FDE on non-state owned roads? (Check all that apply.)"

TABLE B24 Survey response to Question 36: "What methods are used to facilitate the integration of roadway safety MIRE FDE on non-state owned roads? (Check all that apply.)"

| Number of DOTs | Method Used |
|---|---|
| 5 | Joint funding for data collection and maintenance efforts |
| 5 | Use of local universities to assist in managing safety data |
| 4 | Involvement from the FHWA Division office or other FHWA assistance |
| 3 | Frequent coordination meetings among the stakeholders |
| 3 | Committee established that oversees and contributes to safety data integration initiatives |
| 3 | Workshops developed and delivered to practitioners (through LTAP or TTAP) |
| 2 | Peer exchanges held with other states |
| 2 | HPMS |
| 2 | Management by DOT |
| 1 | Highway safety grant for initial build-out |
| 1 | No methods yet, due to integration being in early stages |
| 1 | Outreach to municipalities |
| 1 | Completed RDIP evaluation |
| 1 | Coordinating GIS resources with state governments (i.e., state of Utah's Automated Geographic Reference Center https://gis.utah.gov/) |
| 1 | The process is incorporated in the roadway inventory process |
| 1 | Conversion to Esri's Roads and Highways system |

Question 37: "Do local agencies or other practitioners (tribal nations etc.) have access to the state DOT roadway safety MIRE FDE database?"

TABLE B25 Survey response to Question 37: "Do local agencies or other practitioners (tribal nations etc.) have access to the state DOT roadway safety MIRE FDE database?"

| Response Type | Response Rate |
|---|---|
| Yes | 65.9% (29 DOTs) |
| No | 34.1% (15 DOTs) |

Question 38: "Please provide some insight on the degree to which local agencies or other practitioners have the access to state's MIRE FDE database."

TABLE B26 Survey response to Question 38: "Please provide some insight on the degree to which local agencies or other practitioners have the access to state's MIRE FDE database."

| State | Response | Data Portal/Website | Upon Request |
|-------|----------|---------------------|--------------|
| Alabama | At this time, there is no specific MIRE FDE within roadway inventory. The common features collected thru HPMS and LRS are made available to local entities upon request. | | X |
| Arkansas | Directly from the web under System Information and Research Division's web page, for traffic and inventory data; No restrictions to local agencies. | X | |
| Colorado | The MIRE FDE elements that we collect are a part of our current Roadway data sets. The data are published out to a public facing portal that allows for downloading of shape files or tables. | X | |
| Connecticut | State DOT has developed web based GIS mapping for a limited set of attributes which will be expanded. | X | |
| District of Columbia | After the initial inventory, we intend to publish all inventory (MIRE FDE plus all other roadway attribution) with the public via DC's Open Data portal. | X | |
| Florida | Roadway data from the DOT System "RCI" is available upon request to anyone. | | X |
| Georgia | All of the data this office stores, maintains, collects, etc., is available for public inspection and made available to the general public as part of standard business process. Our database and official records are posted at least annually and coincide with our official federal and state mileage and statistic reporting obligations. | X | |
| Iowa | The state is currently working to give them a view into our database and the ability to perform their own edits. | X | |
| Illinois | IDOT provides a year end GIS file to the IDOT internet site for anyone to access. | X | |
| Louisiana | Local agencies have access to the data upon request. | | X |
| Maine | Anyone can ask for data extracts and we will provide them with whatever context (metadata) necessary. | | X |
| Massachusetts | Available online. | X | |
| Michigan | To the extent data are available through Michigan's Michigan Geographic Framework (MGF) or from HPMS reports. | X | |
| Missouri | MPOs and planning partners are able to access MoDOT's Transportation Management Systems (applications and tables). | X | |
| Minnesota | All data published free of charge. | | X |
| Montana | Most general roadway elements are available to the public, other elements are available upon request. | X | X |
| New Hampshire | 1) GRANIT (State GIS Data clearinghouse); 2) Web map viewers; 3) paper maps. | X | |
| New York | NYSDOT GIS clearing house, Data Exports, web-based GIS application. | X | |
| North Carolina | The data are publicly available through a website, but local agencies do not have access to the database in order to enter data. | X | X |
| Ohio | Data are publicly available at http://gis3.oit.ohio.gov/geodatadownload/lbrs.aspx | X | |
| Pennsylvania | Some of the components are publically available while others can be accessed through restricted access to certain systems by our business partners. This access is limited though based on the data that is currently integrated. | | X |
| South Carolina | Currently SC DOT only has shapefiles available for download. The shapefiles have some attributes, but not all the attributes available within our Road Inventory database (RIMS). State DOT will provide other data as requested. | X | |
| Tennessee | Request to data their E-TRIMS application; Only those who are granted access to the safety database based on their relationship to TDOT and needs. | | X |
| Texas | Public website. | X | |
| Utah | Much of the data is directly available through various online applications. They do not have direct access to all MIRE FDE, but we provide anything that is requested on an as-needed basis. | X | X |
| Vermont | Multiple databases that the MIRE FDEs can be pulled from. No single database exist yet. ArcGIS Services exist in REST and ArcGIS Online, and at VCGI Geodata portal. | X | |
| Washington | Upon request, we make all data available to our customers. | | X |
| West Virginia | Generally unrestricted access to Esri ArcServer Spatial Database Engine (SDE) web service. | X | |
| Wisconsin | WISLR has over 4000 external users from local agencies with view privileges. User IDs are granted upon request. Of those, over 3000 have edit privileges. Edit privileges are granted upon request. | X (for viewing) | X |

Question 39: "Please provide some insight in terms of the reasons for such access restrictions to local agencies and other practitioners (e.g., data security, etc.)?"

TABLE B27 Survey response to Question 39: "Please provide some insight in terms of the reasons for such access restrictions to local agencies and other practitioners (e.g., data security, etc.)?"

| State | Response | Program Details | | |
|---|---|---|---|---|
| | | Data security and complexity | Program under development | Other |
| Alaska | Currently available by request or through Alaska DOT intranet. | | | X |
| Arizona | These local agencies can request HPMS related data from MPD, ADOT. | | | X (request) |
| California | The plan is still being developed and at this time we don't much info to share. But data security is one of the reasons. | X | X | |
| Kansas | Local agencies or other practitioners will have ability to edit data elements in their jurisdiction when K-Hub project is implemented. | | X | |
| Kentucky | Local agencies don't have direct access to the database because of data security, database license costs, and database complexity. But, they do have access to weekly extracts of the database information via public websites. | X | | X (License cost) |
| Maryland | This would be implemented as part of the data integration along with Roads and Highways. | | X | |
| Mississippi | There has not been a need. | | | X (No necessity) |
| North Dakota | Data security. | X | | |
| Nebraska | Current data are stored in mainframe DB2 tables and no public assess is allowed. Advanced knowledge of the table structure would be required to query useful data. | X | | |
| New Jersey | Resources and data security. | X | | X (Limited resources) |
| New Mexico | We are currently working to develop the databases that will be accessible to the local agencies and practitioners. | | X | |
| Nevada | Server safety, other data stored in same location, not all local governments staffed with trained individuals, knowledge of our systems, DOT systems lock out all except internal users. | X | | |
| Rhode Island | They do not have access at this time, as the Esri Roads and Highways database to house this data has not been completed. This effort is expected to be completed in 2017. | | X | |
| South Dakota | Available through an interactive web application where dynamic data can be viewed and downloaded. | | | X |
| Virginia | Data security. | X | | |

Question 40: "Does the MIRE FDE data compare and compliment the Highway Performance Monitoring System (HPMS) data requirements? Please provide details of your answer (e.g., If not, please explain why)"

TABLE B28 Survey response to Question 40: "Does the MIRE FDE data compare and compliment the Highway Performance Monitoring System (HPMS) data requirements? Please provide details of your answer (e.g., If not, please explain why)"

| Count | Response |
|---|---|
| 3 | Yes |
| 1 | As 93-96% of roads are owned by the State, HPMS and MIRE data are parallel programs. |
| 1 | As MIRE data coverage is much more than HPMS required extents, it really adds to already stretched resources such as staff and funding to collect and maintain those data. The HPMS Surface types are much more detailed/technical than most people can understand (paved/unpaved). So assigning that as MIRE FDE surface type makes it difficult to collect |
| 1 | At this time the local data is comprised of our HPMS segments. |
| 1 | For MIRE FDE elements from HPMS the data elements are the same. |
| 1 | HPMS does not require MIRE FDE on local roads. The DOT converts its data to HPMS. |
| 1 | MIRE FDE are part of the inventory system that generates the HPMS submittal |
| 1 | Many of the FDE elements were originally collected for HPMS and also satisfy the MIRE requirements. The overlapping elements seem to match each other well with few small inconsistencies (e.g. median type values) |
| 1 | My impression (may not be reality) is that MIRE FDE represent an extension to HPMS data items, providing full-network information on some items that are only reported on samples in HPMS |
| 1 | No MIRE FDE specific database currently exists. The only MIRE FDE data elements that exist are those that can culled from the HPMS data. The ADOT 2016 Safety Analyst implementation project mapped available HPMS data elements for the state highway system, but that is not the same thing as having a MIRE FDE specific database |
| 1 | The MIRE FDE data compare and compliment the HPMS data requirements |
| 1 | The data elements that we already collect are generally collected because it is required for HPMS. The elements that are currently not collected are not collected because they have not been required for reporting or by other CDOT business units. |
| 1 | The only MIRE FDE data the state collects and maintains is the data required for HPMS |
| 1 | There are few common elements between the MIRE FDE and the HPMS data requirements. Those common elements comprise our current MIRE FDE data holdings |
| 1 | This is not my area of expertise. Overall, I think the level that we maintain data is more than is required for HPMS/ |
| 1 | We have the portions of the MIRE FDE data that is part of Highway Performance Monitoring System (HPMS) We currently do not have intersection and ramp data |
| 1 | Yes, HPMS obtains data from both State and local road inventories for the annual Federal submittal |
| 1 | Yes, Much of the MIRE data is derived from our efforts to complete HPMS reporting. In addition, much of the MIRE data for the intersection responses is captured for reporting process and used daily |
| 1 | Yes, the Roadway Inventory Section is responsible for both HPMS and MIRE data collection. However we are currently assessing data gaps that exist between MIRE and HPMS, which need to be addressed |
| 1 | Yes, all MIRE data is submitted to HPMS |
| 1 | Yes, but it just happen to be so |
| 1 | Yes, it helps that a lot of the attributes are shared across both requirements |
| 1 | Yes, many of the MIRE FDE are pulled form our HPMS database |
| 1 | Yes, most MIRE FDE data is based on HPMS data elements |
| 1 | Yes, much of the data is being pulled from HPMS for MIRE |
| 1 | Yes, pretty closely tied |
| 1 | Yes, same database is used for both. HPMS is the priority when conflicts in definitions occur |
| 1 | Yes, there was HPMS integration up front with the MIRE collection. Additional elements collected will be used to update HPMS |
| 1 | Yes, we thoroughly reviewed HPMS with the MIRE FDE and have worked to develop the database in order to house these requirements |
| 1 | Yes- HPMS and MIRE FDE share many similar data fields giving us a head start on MIRE requirements |
| 1 | Yes. All of this data is stored in the same system |
| 1 | Yes. Much of the MIRE FDE are already in-place due to HPMS requirements for so many years |
| 1 | Yes. The structure of the roadway information database OTD maintains and is responsible for, is to support and meet the federal reporting elements of the HPMS requirement. Therefore our data and business practices are already aligned to have this information on all public roads. |
| 1 | Yes. There is overlap of data |
| 1 | Yes. Many of the data elements are similar |
| 1 | Yes. Most of the MIRE FDEs coincides with HPMS data requirement (i.e., Functional Class, Surface Type, Access Control, AADT, Median Type . . . etc.). |
| 1 | Yes, it is based on the TRIMS data and HPMS submission |
| 1 | Yes. These match |

Question 41: "What is the cost of implementing the roadway safety MIRE FDE program in your state?"
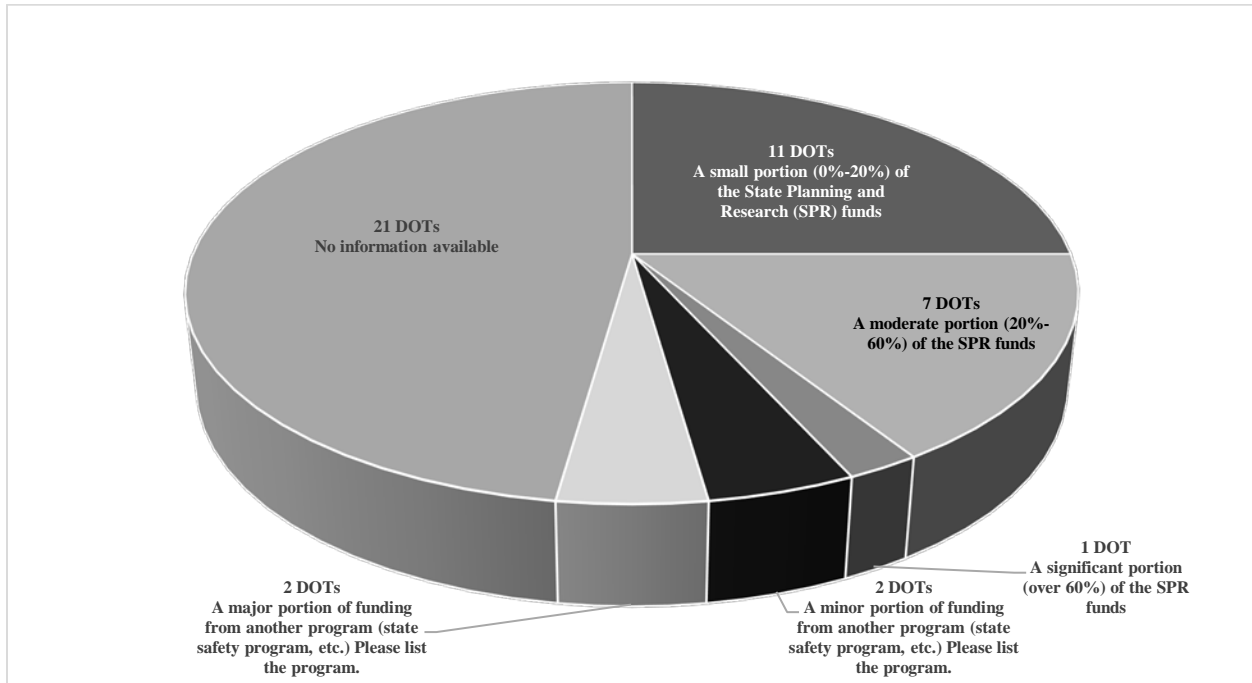


FIGURE B12 Survey response to Question 41: "What is the cost of implementing the roadway safety MIRE FDE program in your state?"

Question 42: "What would you estimate to be the apportionment from each of the various funding sources for the collection, integration, and maintenance of the roadway safety FDE program in your state?"

TABLE B29 Survey response to Question 42: "What would you estimate to be the apportionment from each of the various funding sources for the collection, integration, and maintenance of the roadway safety FDE program in your state?"

| Range (%) | Federal Count | State Count | Local Count | Other |
|-----------|---------------|-------------|-------------|-------|
| 0%-19% | 9 | 15 | 41 | 13 |
| 20%-39% | 3 | 23 | 2 | - |
| 40%-59% | 2 | 1 | 1 | - |
| 60%-79% | 1 | 1 | 0 | - |
| 80%-99% | 27 | 1 | 0 | - |
| 100% | 2 | 3 | 0 | - |

Question 43: "Do you require a funding match from local agencies and, if so, how much? (Select one choice)"
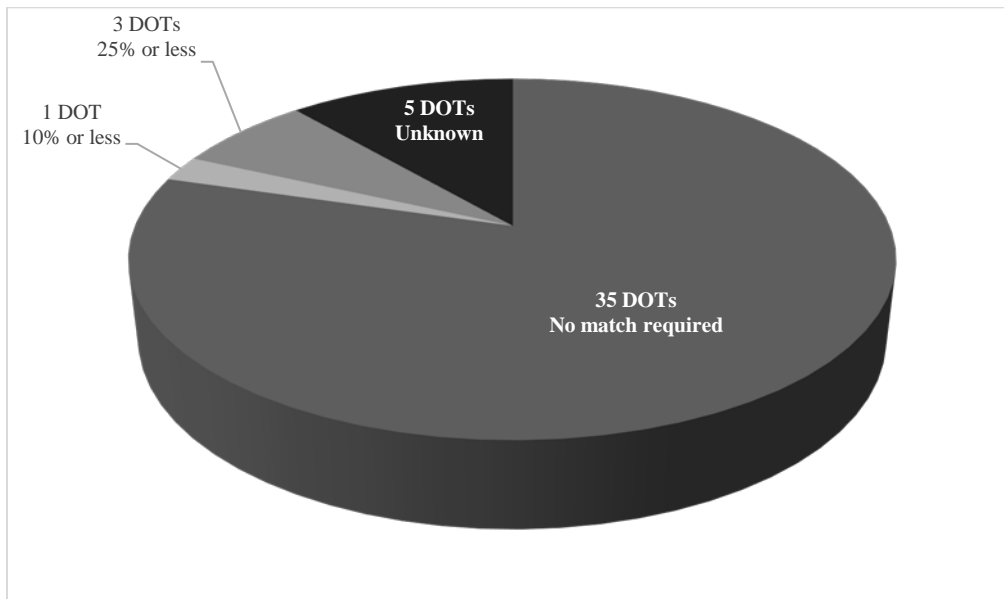


FIGURE B13 Survey response to Question 43: "Do you require a funding match from local agencies and, if so, how much? (Select one choice)"

Question 44: "What are the benefits that your agency has observed regarding the integration of state roadway data within your state DOT? (Check all that apply.)"

TABLE B30 Survey response to Question 44: "What are the benefits that your agency has observed regarding the integration of state roadway data within your state DOT? (Check all that apply.)"

| Number of DOTs | Observed Benefits |
|---|---|
| 25 | Improved project identification and priority setting with a more informed decision making approach (informed and defensible decisions). |
| 25 | Improved levels of roadway safety through the application of a data-driven approach. |
| 23 | Implementation of various safety analysis tools (e.g., SafetyAnalyst, Highway Safety Manual, etc.) and enhanced program development. |
| 22 | Improved accuracy and integrity of roadway data. |
| 18 | Improved cooperation among DOT departments or divisions and reduction in duplication of efforts. |
| 15 | Consensus on common databases that improve data sharing and facilitate data integrity, consistency, and clarity. |
| 15 | More accurate updates on DOT-specific safety performance functions (SPFs) and crash modification factors (CMFs). |
| 15 | Improved performance measures in other roadway divisions such as asset management or maintenance office (e.g., sign inventory, pavement inspection process, etc.). |
| 14 | Improved funding allocations and/or greater fiscal accountability. |
| 11 | Improved cooperation among key practitioners (local agencies, tribal nations, etc.) or other stakeholders that results in data completeness. |
| 9 | Improved or enhanced crash site treatments (by allowing dispatchers and EMS to locate exact crash locations). |
| 5 | Improved project delivery times (including faster processing and turnaround times for data elements). |
| 5 | Decreased costs for project data collection (e.g., lower data acquisition and storage costs). |
| 6 | Benefits not yet observed. |

Question 45: "What are the observed benefits of having local roadway data integrated and maintained in your DOT's system? (Check all that apply.)"

TABLE B31 Survey response to Question 45: "What are the observed benefits of having local roadway data integrated and maintained in your DOT's system? (Check all that apply.)"

| Number of DOTs | Observed Benefits |
|---|---|
| 24 | Improved project identification and priority setting. |
| 23 | Common database reduces duplication of effort and issues with data accuracy or reliability. |
| 16 | Improved cooperation with DOT on joint projects. |
| 16 | Improved access to DOT's MIRE FDE within roadway inventory. |
| 13 | Improved funding allocation. |
| 9 | Benefits not yet observed. |
| 1 | Improved identification of potentially hazardous locations on roads. |
| 1 | Improved crash locating. |
| 1 | More efficient HPMS reporting. |

Question 46: "What have you observed to be some of the difficulties in terms of the integration and maintenance of roadway safety data in your state? (Check all that apply.)"

TABLE B32 Survey response to Question 46: "What have you observed to be some of the difficulties in terms of the integration and maintenance of roadway safety data in your state? (Check all that apply.)"

| Number of DOTs | Observed Difficulty |
|---|---|
| 34 | Limited resources (e.g., number of staff dedicated to data integration or maintenance efforts). |
| 32 | Lack of data completeness. |
| 22 | Lack of funding for data integration effort, maintenance updates, or staff training. |
| 19 | Lack of data accuracy. |
| 17 | Lack of compatible databases. |
| 14 | Inconsistencies in terms of the status of latest data uploads (e.g., timeframe in which data are collected, etc.). |
| 14 | Inconsistencies in data referencing system (e.g., different projection and coordinated system). |
| 10 | Data security issues (e.g., protected server, access by consultants or other agencies, etc.). |
| 8 | Lack of leadership support, in terms of understanding the importance of data integration and maintenance. |
| 3 | No difficulties or minimal difficulties have been observed. |
| 1 | Lack of data understanding and maturity. |

Question 47: "What are some of the challenges or lessons learned that your agency has faced in terms of achieving a successful local roadway MIRE FDE data integration in your state? (Check all that apply.)"

TABLE B33 Survey response to Question 47: "What are some of the challenges or lessons learned that your agency has faced in terms of achieving a successful local roadway MIRE FDE data integration in your state? (Check all that apply.)"

| Number of DOTs | Challenge or Lesson Learned |
|---|---|
| 34 | Limitations of DOT staff (in terms of number of staff, technical capabilities of staff, etc.). |
| 30 | Limitations of local agency resources (e.g., staff, funding, technical capabilities of staff, etc.). |
| 24 | Funding limitations for the integration of the data, or inconsistent funding for the ongoing maintenance of the data once it is integrated. |
| 20 | Importance of IT (e.g., relationships with agency, vision, architecture, etc.). |
| 18 | Accountability for maintaining the data once it is integrated. |
| 15 | State agency staff turnover. |
| 10 | Local agency staff turnover. |
| 10 | Support from DOT leadership in terms of mandating emphasis on moving data integration forward. |

Question 48: "What plans or initiatives does your State DOT have to address and overcome these challenges? Please describe some of the details in the space provided below"

TABLE B34 Survey response to Question 48: "What plans or initiatives does your State DOT have to address and overcome these challenges? Please describe some of the details in the space provided below"

| Count | Response |
|---|---|
| 1 | ADOT currently does not have an official plan for MIRE FDE data. A comprehensive plan is needed |
| 3 | No plans at the moment |
| 1 | Acquire adequate funding and resources |
| 1 | Continue to work with Local Gov. and provide reasoning to develop an integration plan. Setting up peer exchanges to develop the data and capture data and discuss issues |
| 1 | Current study to develop AADT estimates on local roads where no actual value is collected |
| 1 | Currently working through the MIRE plan |
| 1 | Data and Systems Governance |
| 1 | Establish Data Governance Committee. Meet with locals and stakeholders to educate importance of maintaining/integrating data. Educate/train on how to maintain and update data. |
| 1 | Even prior to the MAP-21 MIRE/FDE requirements, Georgia DOT had a very robust and comprehensive roadway data collection and data maintenance program. This program included both state owned and local owned roadways in our state and was structured to meet both our federal data reporting obligations. This office- The Office of Transportation Data (OTD) – has served as GDOTs central data location and housed the database for all public roads in Georgia in order to meet and deliver requirements mandated under Georgia State code for keeping accurate and up-to-date mileage for local governments as well as a state code mandate for the production of County Transportation maps for all 159 counties in Georgia. Therefore we have had a need to not only keep and maintain local road data but also the GIS representation of those local roadways. This has placed our state in a very good perhaps unique position that a benefits from those requirements. |
| 1 | Implement business plan resulting from RDIP recommendations. Requesting technical assistance from FHWA to help develop achievable plan |
| 1 | Implementation of Roads and Highways, Unified coordination with all the local agencies. |
| 1 | KDOT is one of the pilot states developing a Safety Data Business Plan and Data Governance Program. KDOT also is implementing K-Hub project, that received Accelerated Innovation Deployment Grant for Geospatial Data Collaboration: https://www.fhwa.dot.gov/innovation/grants/projects/ks14.cfm The above efforts are expected to help KDOT overcome or mitigate many challenges |
| 1 | NCDOT will be developing a plan for how to incorporate MIRE data on local roads. This may involve NCDOT collecting this data for local roads, or working with municipalities to collect this data and store it in to an enterprise system. |
| 1 | NDOR is in the process of creating a BICC which will house all data in a data warehouse. This data will then be available to all customer |
| 1 | None specific. We are stepping up to provide the initial data collection on the hope that locals will be willing to maintain it |
| 1 | Online tools to allow locals to enter suggested updates |
| 1 | Project underway for technical assistance grant with FHWA to assess gaps in MIRE FDEs. TRCC project for extract of curve data on local roads in process. |
| 1 | Restructuring, new DOT staff and identification of sources |
| 1 | Shared Centerlines project for LRS centerlines. Cooperative local Safety Plans, Tribal Transportation Advocacy Council |
| 1 | State DOT Coordination with local agencies |
| 1 | The LADOTD met with local agencies prior to the data collection effort to obtain support for this effort. The level of commitment from the local agencies is unknown at this time |
| 1 | The MIRE FED data collection plain is currently developed by an interdisciplinary team, will address these issues. Details have not yet been worked out |
| 1 | There is a refocus of organizing the data collection and management that has allowed |
| 1 | We are currently working on submitting an application for the FHWA technical assistance program to evaluate the gaps between the traffic monitoring system database, roadway inventory system database and crash database so we can identify issues that would prevent data to integrate into a safety analyst system |
| 1 | We are still developing an idea on how to move forward in that direction |
| 1 | We are working on a project to collect and integrate the remaining counties that have not participated in the state program. |
| 1 | We have added the missing MIRE-FDE data elements and are currently in the process of attributing the data with expected completion in the next 2-4 years |
| 1 | We have had meetings with County (Local) groups to discuss the integration and sharing of data. At this time, the primary challenge is the format and type data collected at the local level. This data is not compatible with the State system, and the counties are not collecting MIRE FDE data |
| 1 | We have just begun discussions to plan and document the needs for this effort to ensure compliance with the initial July 1, 2017 TRCC requirement |
| 1 | We have overcome most of these challenges and are in pretty good shape currently. With many lessons learned |
| 1 | We need to develop a plan of how local data will be captured. Once the plan is developed, other issues such as accessibility and maintenance of local data will need to be addressed |
| 1 | We plan to integrate our transportation project software (ProTrack+) with our LRS roadway inventory, which will include the MIRE FDE. Once projects are marked complete, part of the integration will provide notification to GIS data maintainers. We hope that this will remove some of the communication challenges between groups at DDOT |
| 1 | Hiring more personnel |
| 1 | This topic has been lightly discussed but no meetings have been scheduled at this time |