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# Impaired Driving Tracking System

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**16. Abstract**

This report gives a framework for developing and implementing an impaired driving tracking system (IDTS) that supports timely, accurate, and coordinated data sharing among criminal justice and traffic safety for law enforcement, licensing agencies, courts, and other State stakeholders. IDTS monitors impaired driving offenses and recidivism rates. Through a literature review and discussions with stakeholders, 2M Research identified key strategies and compiled a set of best practices for establishing and managing IDTS. States seeking to create or improve their systems may use these best practices to inform planning, design, and implementation. Overcoming common challenges through central coordination, sustained funding, ongoing training, and interagency collaboration is essential for tracking repeat offenders, enhancing resource allocation, and supporting better-informed policy decisions.

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## Executive Summary

Motor vehicle crashes have consistently ranked among the top three causes of preventable deaths for more than 20 years (Centers for Disease Control, 2024). In 2022 motor vehicle crashes claimed 42,514 lives, according to the Fatality Analysis Reporting System (FARS) (NCSA, 2024). Nearly one-third of those crashes had drivers impaired by alcohol. From 2019 to 2022, impaired driving[1] deaths increased by 15 percent (NHTSA, 2022).[2] Drivers with prior impaired driving convictions are at an elevated risk of reoffending, a pattern known as recidivism. Recidivism refers to people who are arrested, sanctioned, or convicted for impaired driving and later reoffend. Given this heightened risk, tracking impaired driving offenses is essential for identifying repeat offenders and evaluating the effectiveness of policies aimed at reducing recidivism (GAO, 2023).

An impaired driving tracking system (IDTS) plays a crucial role in monitoring impaired driving offenses and recidivism rates. Such a system enables States to identify weaknesses in impaired driving processes, assess the scope of the problem, and allocate resources effectively to implement countermeasures. An IDTS also facilitates seamless communication among the court system, law enforcement agencies, State driver's licensing agencies, and other relevant entities, streamlining processes and enhancing the identification of repeat offenders and implementing effective countermeasures. By integrating data across these agencies, IDTS supports data-driven State investments aimed at reducing alcohol-impaired driving, ultimately saving lives and optimizing the use of State resources.

Figure 1 shows a conceptual flow chart of an ideal IDTS, illustrating the main stakeholders—law enforcement, licensing agencies (e.g., Departments of Motor Vehicles [DMVs]), courts, and other agencies—along with its interactions with a central IDTS repository.

[1] The term impaired driving is used interchangeably throughout this report with driving under the influence (DUI) and "driving while impaired/intoxicated (DWI)."

[2] Calculated from FARS data on alcohol trends.

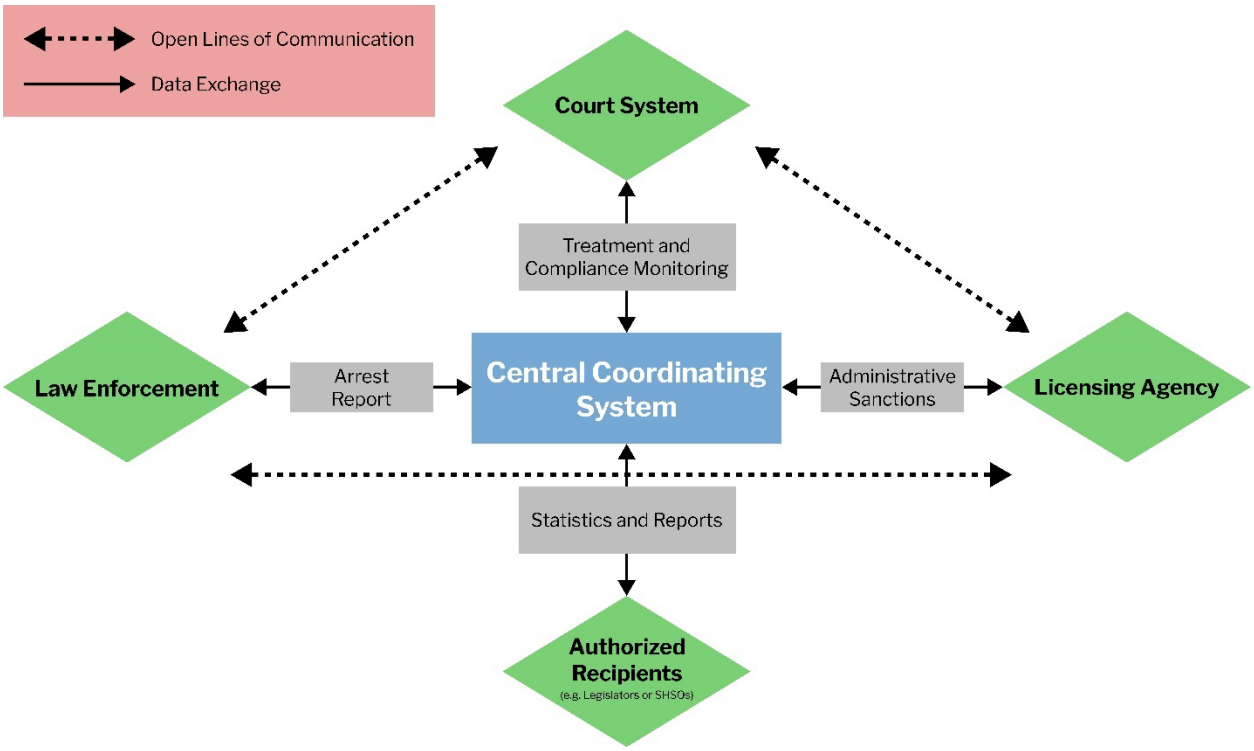


*Figure 1. Conceptual Flowchart of an IDTS*

Despite these benefits, many States struggle to implement impaired driving tracking systems, facing challenges like a lack of staff, training, equipment, technology, and shared data (GAO, 2023). In 2002 NHTSA conducted a demonstration project called Model Impaired Driving Records Information Systems (MIDRIS) and subsequently released several reports offering States guidance on implementing IDTS. However, since then, States have made limited progress in implementing these tracking systems.

To improve the uptake of IDTS, NHTSA contracted with 2M Research to evaluate States' efforts to implement IDTS. The evaluation determined which States have tracking systems, how to maintain them, what challenges are faced, what resources and efforts are needed to deploy and maintain their tracking systems, and how States have used data from their systems. The researchers used the collected information to develop a guide with the tools necessary to successfully plan, implement, and sustain IDTS in their own jurisdictions. The researchers identified 8 States and discussed the establishment of their systems, key partners, data linkages, costs, methods for obtaining buy-in, system maintenance, reporting structures, challenges, and lessons learned. This project used a mixed methods approach of three major components:

1. A literature review that examined national resources, reports published by States and the Federal Government, and published articles to identify States that have developed and implemented IDTS and standards and guidelines, data elements and functional requirements, and benefits associated with developing an IDTS.
2. Discussions with impaired driving stakeholders to understand how each selected State's[3] impaired driving data system works, the resources needed for the development and

upkeep of a comprehensive system, potential roadblocks, and how States have used collected data to better allocate resources and improve impaired driving countermeasures.

3. Synthesis of data from the above sources to identify best practices to inform the development of a guide. This guide is intended to help States implement IDTSs.

## Summary of Findings

States generally fell into three categories in their approach to tracking impaired driving offenders. California and Missouri both have unified and standalone systems that are independent systems specifically designed to track impaired driving offenders from arrest through adjudication. The District of Columbia, Iowa, Nebraska, and Tennessee include impaired driving tracking as part of their overall systems. These States integrate impaired driving tracking in their existing information system architecture rather than maintaining a separate system. Utah and Wisconsin have decentralized tracking systems. These two States have fragmented systems where impaired driving data is tracked through several unconnected systems. Table 1 summarizes the characteristics of these systems across the 8 project States, California, Missouri, Nebraska, Iowa, Tennessee, District of Columbia (treated as a State), Wisconsin, and Utah.

*Table 1. Project States and Characteristics of IDTS*

| Type of States' IDTS | Project States | Pros | Cons |
|---|---|---|---|
| Unified and standalone | California and Missouri | • Ensures seamless tracking of impaired driving cases from arrest through adjudication, integrating data across legal stages to reduce errors and improve case management.<br>• Automates the transfer of data from arrests, charges, court dispositions, and sanctions, ensuring timely updates to driver records and improving enforcement efficiency.<br>• Supported by legal mandates that ensure continuity and stability, maintaining consistent data collection, reporting, and enforcement regardless of administrative changes. | • These systems focus solely on impaired driving cases and do not integrate broader traffic safety or criminal justice data, potentially limiting cross-agency insights.<br>• Establishing support from several agencies can be difficult, as stakeholders may prefer broader systems that serve several purposes.<br>• System maintenance, training, and technological updates require ongoing funding, which may not always be dedicated or consistent. |

| Type of States' IDTS | Project States | Pros | Cons |
|---|---|---|---|
| Impaired driving tracking as part of a larger system | Nebraska, Iowa, Tennessee, and District of Columbia | • Agencies maintain and control of their own records while securely sharing relevant impaired driving data through formalized agreements, fostering trust and accountability.<br>• Reduces redundancy in data entry and maintenance by integrating impaired driving tracking in larger justice systems, streamlining case management and resource allocation.<br>• Captures case details across several stages—from arrest through final disposition—enabling comprehensive case tracking, policy analysis, and system evaluation. | • These systems rely on several agencies for data entry, which can be time-consuming and inconsistent. Limited resources, unclear data request formats, and extensive reporting requirements can lead to backlogs in updating records.<br>• Variations in data-sharing agreements, reluctance to share data, and a lack of communication among agencies can create barriers to seamless data integration.<br>• Differences in data collection across agencies result in gaps, such as missing prosecutorial decisions, treatment program records, or case disposition details. |
| Decentralized tracking system | Wisconsin and Utah | • Relies on strong partnerships among agencies to ensure data accuracy and completeness, even without a single coordinating entity. | • Without a centralized oversight and case management, agencies independently manage their data, potentially leading to uncoordinated reporting and inefficiencies.<br>• Delays in data entry and sharing between key agencies, which can prevent stakeholders from accessing real-time case information. |

| Type of States' IDTS | Project States | Pros | Cons |
|---|---|---|---|
| | | | • Frequent leadership and staff changes may create knowledge gaps and necessitate ongoing training for effective system use.<br>• Limited data-sharing agreements and inconsistent reporting methods may contribute to missing case details. |

Note: The District of Columbia is included in this table and referred to as such for ease of discussion. The pros and cons listed in this table are based on discussions with State stakeholders who participated in the study. These insights reflect experiences with implementing and managing IDTS in their jurisdictions.

Unified and standalone systems, and impaired driving tracking as part of a larger system, are both robust systems allowing stakeholders to easily track data from arrest to adjudication. Decentralized systems, although still facilitating the flow of some data, are not as successful at ensuring all parties have real-time access to impaired driving data. Unified and standalone systems require fewer partnerships and host less data that may simplify data tracking, hosting, querying, and system maintenance. However, stakeholders reported finding it more difficult to establish buy-in for the unified and standalone systems as opposed to a more extensive tracking system developed as a component of a larger system. A larger system also enables additional reporting capabilities because it can query a larger set of traffic and criminal data.

### *Best Practices*

Based on the discussions with stakeholders and findings from the literature review, the researchers compiled a set of best practices for establishing and managing IDTS. States looking to establish IDTS and those looking to improve their existing system may take into consideration these best practices.

- *Partner Collaboration With Central Coordination.* An ideal system should have extensive collaborations formalized through memorandums of understanding (MOUs), with regular meetings to discuss data quality and system improvements. Each agency should have staff responsible for overseeing the project and ensuring data quality. One agency, however, should be responsible for coordinating the tracking system. The role of central coordination is to ensure data validity, data access, and handling system maintenance.
- *Long-Term Funding*. Dedicated funding for the data system, staff, and training at both the individual, organization, and system levels ensures sustainability of the tracking system.

- *Legislative Backing*. Legislation can ensure consistent participation, aid in data privacy, and provide avenues for long-term funding solutions. This element is essential for the admissibility of records in court.
- *Inclusion of Pre-Trial Diversion[4] Data*. Inclusion of this data is crucial for tracking outcomes and understanding program effectiveness.
- *Auto-Integrated Data With Uniform Data Fields*. Citations, court outcomes, and other relevant information should automatically be entered into the IDTS as people complete their tasks in agency systems, eliminating the need for duplicate entries. However, the use of existing data entry should not come at the expense of data uniformity. Stakeholders should agree on data fields to ensure compatibility.
- *Ongoing Training*. New staff require training on how to use the IDTS. States experiencing high staff turnover should consider implementing regular training sessions to ensure the system's sustainability.
- *Accessible Data Systems With Flexible Reporting Capability.* Web-based systems with well-designed interfaces help users efficiently navigate large datasets, reducing information overload and making data more manageable. An accessible system should also support the creation of tailored reports, enabling stakeholders to extract and use relevant data effectively.
- *Identify Key Performance Indicators (KPIs)*. KPIs measure progress toward goals and inform data-driven decisions. Planning for data usage and establishing trends ensure data is effectively used.
- *Multi-State System*. Drivers may possess impaired driving offenses in other States not captured in a single State's system. States with frequent border travel may benefit from multi-state IDTSs.

## *Conclusion*

This report highlights the critical role of IDTSs in improving traffic safety, enforcement, and accountability. While States vary in their approaches, common challenges such as funding, legislative support, and data integration persist. Overcoming these barriers through central coordination, sustained funding, ongoing training, and interagency collaboration is essential for tracking repeat offenders, enhanced resource allocation, and better-informed policy decisions.

The best practices and lessons learned from this study, along with the companion *Guide for Implementing the Impaired Driving Tracking System* (Okyere et al, in press), offer a roadmap for States looking to develop or enhance its IDTS. The findings from this report aids stakeholders with the tools necessary to successfully plan, implement, and sustain an IDTS in their jurisdiction. Ultimately, by strengthening IDTS, States can enhance their ability to prevent repeat offenses, support law enforcement and judicial processes, and ultimately reduce alcohol-impaired driving fatalities, leading to safer roads nationwide.

[4] The term "pre-trial diversion" refers to a legal process that an offender is offered a rehabilitation service (i.e., community service, counseling, educational programs) in lieu of a prosecution. www.justice.gov/usao-dc/diversion-programs

## Introduction

Motor vehicle crashes have consistently been one of the top three causes of preventable deaths for over 20 years (Centers for Disease Control and Prevention, 2024). In 2022 motor vehicle traffic crashes killed 42,514 people, according to the Fatality Analysis Reporting System (FARS) (NCSA, 2024). Of these deaths, 13,524 (32%) people were killed in crashes of an alcohol-impaired driver with a blood alcohol concentration (BAC) over .08 g/dL (NHTSA, 2024). BAC measures the percentage of alcohol in the bloodstream. It is illegal to drive with a BAC of .08 g/dL or higher in most States, except in Utah, where the limit is .05 g/dL. While driving with a BAC of .07 g/dL or lower is illegal only in Utah with its lower BAC limit, 2,337 people were killed in crashes in 2022 because of a driver with a BAC within the range of .01 to .07 g/dL. 2,337 people were killed in crashes in 2022 because of drivers with BACs in that range (NHTSA, n.d.). Tracking impaired driving to evaluate policy effectiveness, including proper sentencing, is key to improving road safety (GAO, 2023). Yet, States face several challenges when trying to track impaired driving, such as lack of staff, training, equipment, technology, and shared data (GAO, 2023).

In 2019 the U.S. experienced 36,355 traffic fatalities, with 28 percent of drivers with BACs of .08 g/dL or higher (NHTSA, 2022). The cost of alcohol-related crashes that year was $69 billion, representing 20 percent of the total crash costs (Blincoe et al., 2023,). Despite a significant reduction in vehicle miles traveled during the first year of the COVID-19 pandemic in 2020, traffic fatalities rose to 38,824, with 30 percent alcohol-impaired drivers (National Center for Statistics and Analysis, 2022). This upward trend continued in 2022 (National Center for Statistics and Analysis, 2024). Overall, the number of alcohol-impaired traffic deaths has increased by 32.6 percent since 2019 (see Figure 2).

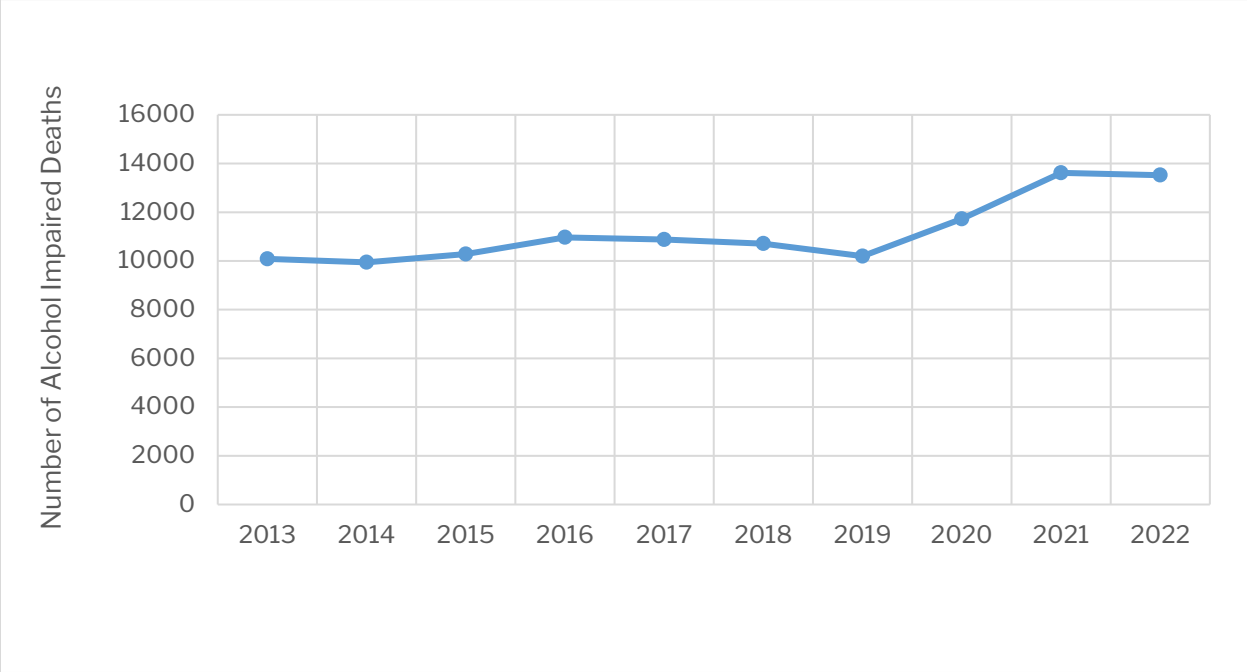


*Figure 2. Alcohol-Impaired Traffic Deaths From 2013 to 2022*

Source: National Center for Statistics and Analysis, 2024, August, Revised.

Despite the rise in alcohol-impaired traffic deaths, reported arrests for impaired-driving have declined to multi-decade lows. A Warren-Kigenyi and Coleman (2014) report noted a decrease in DUI arrest rates from 1995 to 2011, with 1.2 million DUI arrests recorded in 2011. Since then, according to FBI Uniform Crime Reporting data, that number has dropped significantly, with 651,889 arrests for DUIs in 2022 (FBI Uniform Crime Reporting Program, 2023). A quarter of those arrested for impaired driving were also repeat offenders (Warren-Kigenyi & Coleman, 2014). This figure is based on voluntary reporting, and not all law enforcement agencies contribute data. As a result, the actual number of impaired driving arrests is likely higher than reported.

This report focuses on incomplete data sharing among stakeholders responsible for tracking impaired driving offenders. While several agencies are involved in this process, law enforcement, courts, and driving licensing agencies play key roles in handling impaired driving cases. In many States, these agencies do not share information with each other. Agencies may be organized by the county or more local level, preventing information flow across jurisdictions. When agencies do share information, there can be delays or gaps in the information shared (Walden et al., 2017). The lack of shared data, in real time, makes early detection and proper sanctioning of impaired drivers challenging (GAO, 2023). For example, relevant agencies might not know when people receive administrative sanctions on their vehicles, undergo treatment processes, or are prohibited from driving (Walden et al., 2017). In some States, licensing agencies may take months to update a person's record. Furthermore, inadequate tracking also hinders States from evaluating the effectiveness of their impaired driving policies.

An IDTS enables real-time data sharing among agencies and ensures timely updates of citations, sanctions, and prohibitions. Real-time updates ensure agencies and the courts have an offender's complete driving record when making decisions per offense. Such a system helps States identify weaknesses in their impaired driving processes, assess the scope of their impaired driving problem, and allocate resources more effectively, ultimately helping prevent repeat offenders from driving.

An IDTS, as defined by NHTSA (1997a), is a system that allows a State to:

- Track impaired driving offenders from arrest through disposition.
- Show impaired driving trends and how well countermeasures are working.
- Store up-to-date and accurate information to allow law enforcement, prosecutors, judges, the DMV, and other key stakeholders to administer the appropriate charges and sanctions.
- Reduce administrative costs for the system stakeholders and increase system efficiencies.

The implementation of an IDTS has varied greatly between States, and NHTSA has continued its efforts to provide guidance on such systems. In 1997 NHTSA published a three-volume report to focus attention on impaired driving data and illustrate the benefits a comprehensive data tracking system could provide to States (Capital Consulting Corporation, 1997a, 1997b, 1997c). In 2002 NHTSA conducted a demonstration project named MIDRIS (Greer, 2011). MIDRIS documented State improvements to and expansion of existing data systems. The 4 States selected for the MIDRIS demonstration project were Alabama, Iowa, Nebraska, and Wisconsin. Connecticut was added in 2004. In 2006 NHTSA issued the *Guidelines for Impaired Driving Records Information Systems* (Guidelines, 71 FR 51665, 2006) that established guidelines on the types and formats of

data that States should collect as related to impaired driving offenders. In 2011 NHTSA released a report to document the experience of the MIDRIS States and highlight best practices (Greer, 2011).

While some States have implemented certain components of the MIDRIS system, only a few have fully integrated the critical data elements from law enforcement, drivers' licensing agencies, and the courts (Walden et al., 2017). According to NHTSA, most States that adopted various types of systems, and particularly those established under the MIDRIS project between 1997 and 2002—Alabama, Iowa, Nebraska, and Wisconsin—have not maintained their systems (Greer, 2011). Discussions with stakeholders from these States during this project confirmed that these systems are no longer actively used or have significantly diminished in functionality.

NHTSA sought to understand why some States have not maintained their IDTSs and what factors contribute to the sustainability of these systems. For States with active IDTSs, NHTSA aimed to assess the strengths and weaknesses of their system, how they are deployed, and what is required for ongoing maintenance. The findings from this project help identify best practices and inform recommendations to support States in establishing, enhancing, or maintaining their IDTSs effectively.

## Objectives and Discussion Questions

To improve the acceptance and implementation of IDTSs among States, the researchers evaluated the status and characteristics of States' efforts to implement IDTSs by addressing the following seven discussion questions.

1. Which States have implemented or currently maintain IDTS?
2. What efforts have States made to deploy these systems?
3. How do States maintain these systems?
4. What challenges do States face in deploying and/or maintaining these systems?
5. What resources (e.g., funding, technology, software, and training) do States need to develop and maintain these systems?
6. What efforts (e.g., necessary legislation, and stakeholder commitment) are necessary for States to develop and maintain these systems?
7. How have States used data from these systems to better allocate resources and/or improve countermeasures?

To address these questions, the researchers identified 8 States for discussion of the establishment of their systems, key partners, data linkages, costs, methods for obtaining buy-in, system maintenance, reporting structures, challenges, and lessons learned. The researchers used the collected information to develop a guide to give stakeholders the tools necessary to successfully plan, implement, and sustain an IDTS in their own jurisdictions (see Guidelines, 71 FR 51665, 2006).

## Project Approach and Methodology

To address the discussion questions, this project used three major components of a mixed methods approach.

1. A literature review examining national resources, reports published by States and the Federal Government, and published articles to identify (1) States that have developed and implemented IDTS and (2) standards and guidelines, data elements and functional requirements, and benefits associated with developing IDTS.
2. Discussions with impaired driving stakeholders to understand how each State's impaired driving data system works, the resources needed for the development and upkeep of a comprehensive system, potential roadblocks, and how States have used collected data to better allocate resources and improve impaired driving countermeasures.
3. Synthesis of data from the above sources to identify best practices to inform the development of the guide that is intended to help States implement IDTSs.

### *Literature Review*

The literature review served two purposes.

1. Insights were given into the standards, guidelines, data elements, functional requirements, and benefits associated with developing an IDTS. The researchers reviewed NHTSA resources and reports, including the Behavioral Traffic Safety Cooperative Research Program 2022 Annual Report (2022). The researchers also reviewed peer-reviewed articles identified through searches of various electronic traffic safety databases, including the Transportation Research Information Services and National Cooperative Highway Research Program, to identify relevant information. The researchers synthesized the information gathered from these sources, focusing on the key aspects of developing and implementing an IDTS in the Overview of Impaired Driving Tracking Systems section.
2. Second, the literature review aimed to identify States' progress toward implementing a comprehensive IDTS and to select States to participate in the subsequent components of the project. The researchers conducted a web scan of all the State Departments of Transportation websites to identify relevant documents or materials with information on its IDTSs. Documents reviewed for each State included traffic records assessments,[5] highway safety plans, and traffic records strategic plans. The next section further details the approach the researchers used to select the States that would participate in this project.

Appendix A provides details of the researchers' approach to identifying relevant resources and materials for the literature review.

### *Selection of States*

NHTSA administers State Highway Programs through its regional offices, serving 57 jurisdictions that include the 50 U.S. States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the U.S. Bureau of Indian Affairs on behalf of the Indian Nations. The researchers used the

[5] One limitation of relying on this source is the lack of more recent publicly available assessments for a portion of the States. Traffic records assessments could not be located for 10 States, including Arkansas, Georgia, Indiana, Maryland, Nevada, Virginia, Washington, West Virginia, or for Indian Nations and American Samoa. For an additional 17 States, the researchers found records of its assessments, but these records were outdated, ranging between 2011 and 2014.

findings from the literature review to narrow the list of 57 jurisdictions to an initial pool of 22 (see Figure 3 and Appendix B), based on whether the States have had or currently have any form of IDTSs. Using the information from the literature review, the researchers categorized the 22 States into 3 categories. These categories are not explicitly defined in any literature or materials, but the States were grouped based on the similarity of the characteristics of the systems used in tracking impaired driving. This classification aimed to facilitate the selection of the final list of States to participate in the project and was defined as follows:

- Part of MIDRIS: States Alabama, Iowa, Nebraska, and Wisconsin were the four selected for the MIDRIS demonstration project. These States could have either of the other two systems, but the researchers classified them this way to ensure fair representation in the final sample.
- Part of a Larger System: These are non-MIDRIS States that have opted to track impaired driving data through their existing information system architecture; it does not maintain a separate IDTS. The 12 States that met this definition are Vermont, New York, Connecticut, New Jersey, North Carolina, Florida, Mississippi, Louisiana, Alaska, New Mexico, Colorado, and Utah.[6]
- Independent Tracking System: These are non-MIDRIS States that have independent systems designed to track impaired driving offenders from arrest through adjudication. The six States that met this definition are California, Kansas, Missouri, Minnesota, Tennessee, and Delaware.

[6]The District of Columbia was not included in the initial list of 12 non-MIDRIS States identified as tracking impaired driving data through broader system architectures. However, during recruitment, several originally identified States were unable to participate. Following a subsequent review of available information and agency input, District of Columbia was identified as meeting the criteria for States that track impaired driving data as part of a larger information system. As a result, District of Columbia was included among the final 8 study sites.

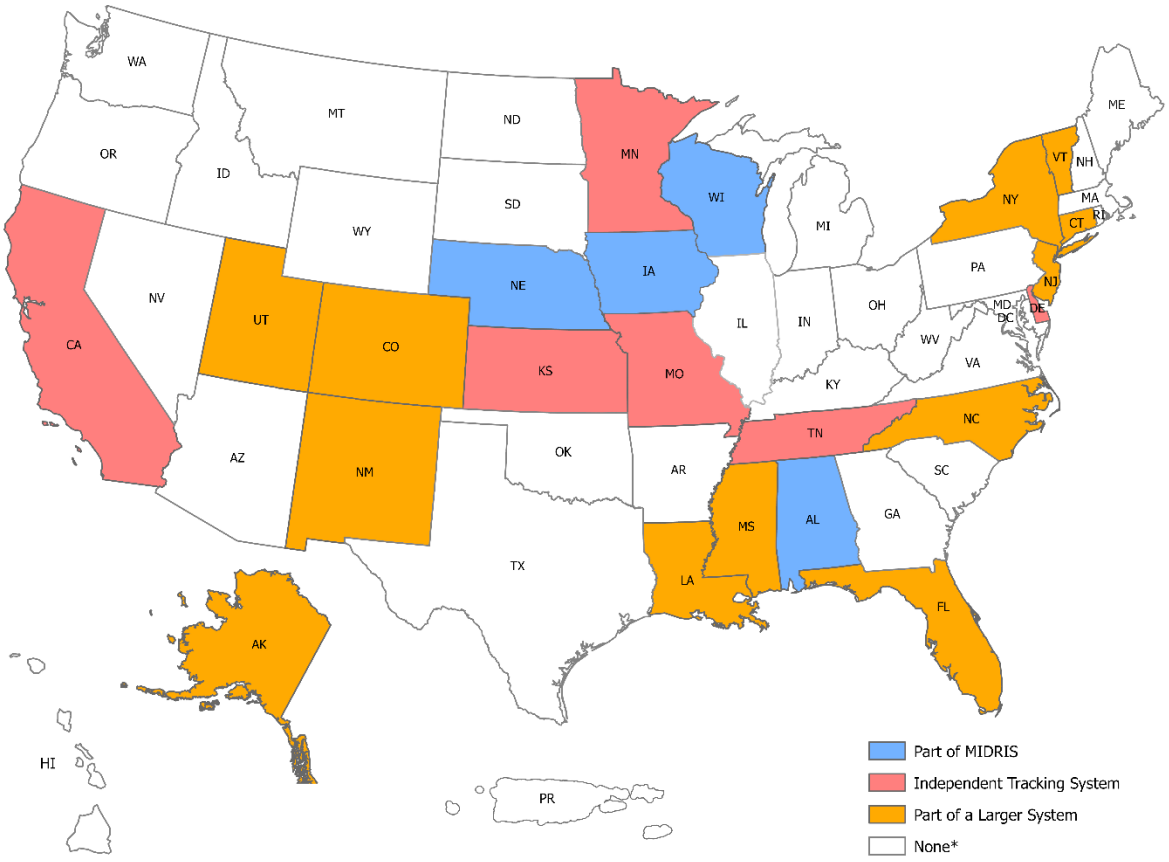


*Figure 3. Location of the 22 Shortlisted States*

*These States do not have any form of IDTS, or the researchers did not find information on how it tracks impaired driving data.

Table 2 shows the inclusion criteria for selecting the final list of States for the project. The researchers aimed to choose a well-balanced mix of States representing each IDTS type and varied geographic distribution (though the sample is not intended to be nationally representative). The researchers also used notes from earlier outreach efforts conducted by NHTSA to identify States that previously showed interest in sharing information about their IDTS.

*Table 2. Three Inclusion Criteria for Selecting the Final List of States for the Project*

| No. | Inclusion Criteria | Description of Criteria |
|---|---|---|
| 1 | Varied IDTS types. | This criterion ensures the selection of a varied list of States with different IDTS types (to the extent possible) to adequately address the project's discussion questions. |
| 2 | Varied geographic/NHTSA regions. | This criterion ensures the project features States from different regions of the country (to the extent possible) as opposed to a cluster in one region of the country. |
| 3 | Internal NHTSA notes indicate interest/important insights. | This criterion ensures the project includes States that have previously showed an interest in sharing insights about their IDTS. |

The researchers intended to include all four MIDRIS States in the project. However, only Iowa, Nebraska, and Wisconsin chose to participate. To maintain a balanced sample, the researchers selected two States with independent IDTSs and three States with tracking mechanisms integrated into larger systems. This approach ensured representation across different IDTS structures while accounting for system variations in data tracking and integration. Table 3 lists the final 8 States that participated in the project, including their IDTS type and NHTSA regional office.

*Table 3. Final List of Eight States Selected for the Project**

| Project States | Type of States' IDTS | NHTSA Region |
|---|---|---|
| **Iowa** | Part of the MIDRIS | Region 7 |
| **Nebraska** | Part of the MIDRIS | Region 7 |
| **Wisconsin** | Part of the MIDRIS | Region 5 |
| **California** | Independent IDTS | Region 9 |
| **Tennessee** | Independent IDTS | Region 4 |
| **District of Columbia** | Impaired driving tracking as part of a larger system | Region 3 |
| **Missouri** | Impaired driving tracking as part of a larger system** | Region 7 |
| **Utah** | Impaired driving tracking as part of a larger system | Region 8 |

Note: *The District of Columbia is not a State; however, it is referred as such in this table and throughout the report for consistency and ease of discussion.

**Missouri was initially classified as an independent IDTS in our preliminary analysis but was later reclassified as part of a larger IDTS system following discussions with stakeholders.

### *Discussions With Impaired Driving Stakeholders*

The discussions sought to gain a complete understanding of each State's impaired driving data system. This review included citations, adjudication, roadblocks to maintain a current and

comprehensive system, resources necessary for the development and maintenance of such a system, and ways the gathered data have been used to better allocate resources and/or improve impaired driving countermeasures. The researchers facilitated several discussions for each selected State using the following approaches:

- *Developing protocols*: Prior to the virtual discussions, the researchers developed a discussion guide for each State based on the review and analysis of the State's impaired driving data system (see Appendix C). The tailored discussion guide detailed the researchers' approach, a protocol, and an agenda for each site. Each of the tailored discussion guides was shared with NHTSA for feedback.
- *Recruiting respondents*: The researchers collaborated with NHTSA's regional offices to identify a point of contact for each State. Participating agencies included: the Department of Transportation, the Department of Public Safety, DMVs, judicial branches, and the Department of Criminal Justice.
- *Facilitating panel discussion sessions*: A senior evaluation expert facilitated the discussions, and a research analyst recorded the sessions and took notes for the purpose of generating transcripts.

### *Qualitative Data Analysis*

After completing discussions with the stakeholders, the researchers conducted an analysis of the data in NVivo, a qualitative data analysis software that facilitates coding, pattern recognition, and thematic analysis.[7] The researchers developed a high-level code book to categorize the data based on the classification of each tracking system, tailoring it to highlight key components and characteristics specific to each system. The transcripts were then grouped by the classified system, and one team member was assigned to code the data for each system. This approach enabled the coder to build familiarity with the nuances of their assigned systems. Following the data coding, the researchers conducted a system-specific thematic analysis to create a comprehensive profile of each system. This analysis summarizes critical components of how each system operates, identifies key stakeholders and data sources, and details the methods for linking such data together. The analysis also highlights the strengths and weaknesses of each system, and the essential factors and efforts required to implement and maintain each IDTS. The researchers present the findings from this analysis in Project Findings section**.**

### *Data Synthesis*

The objective of the final phase was to identify best practices to inform the development of a guide that provides tools necessary to successfully plan, implement, and sustain an IDTS in their own jurisdictions. To achieve this objective, the researchers synthesized data from the prior phases of integrating findings from the focused literature review and discussions with impaired driving stakeholders. The results of this analysis are shared in the Best Practices and States Assessment section of this report as a checklist.

[7] NVivo qualitative data analysis software, Lumivero, Denver, CO. https://lumivero.com/products/nvivo/.

## Structure of the Report

This report has five chapters and three appendices. Following the Introduction, the researchers provide an overview of an IDTS in Overview of Impaired Driving Tracking Systems. Project Findings presents the findings from the analysis of States' IDTSs and discussions with key stakeholders. The researchers present a checklist of best practices that emerged from the analysis in Best Practices and States Assessment. This chapter also provides a self-assessment that States can use to better understand their readiness and capabilities for developing and implementing IDTSs. The Conclusion summarizes key findings and details the next steps for the project. Appendix A details the researchers' approach to identifying relevant resources and materials for the literature review. Appendix B describes the forms of IDTSs used by the 22 participating States in the project. Finally, Appendix C provides the master discussion guide for the project.

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## Overview of Impaired Driving Tracking Systems

This chapter reviews current guidance on IDTSs and has two main sections. The first introduces an IDTS as a critical element in addressing impaired driving, defining its purpose, outlining its key components, and highlighting its benefits. The second section provides an overview of how to establish an IDTS, including NHTSA guidance on implementation, a case study, and potential data sources.

### IDTS as a Critical Method to Address Impaired Driving

States use law enforcement, screening and assessment, and treatment programs to prevent repeat offenses. However, not all States combine data to understand impaired driving. As noted in Kirley et al. (2023), one of the most important actions a State can take to reduce alcohol-impaired driving is conducting a thorough review of their IDTS.

An IDTS is a centralized data management system that collects information directly from other data management systems of various agencies—such as law enforcement, courts, and licensing agencies—to compile common information on impaired driving offenses. These systems contribute specific types of data, including arrest records, court adjudications, license suspensions, crash reports, and treatment program participation. The collected data is integrated into a central repository that serves as a comprehensive database for both current and historical information. Typically, the repository is managed by a lead agency, such as a State Department of Transportation or Highway Safety Office, serving as the data custodian and ensuring the accuracy, security, and accessibility of the information. Analytical tools embedded in the system allow stakeholders to monitor trends, identify areas for improvement, and streamline data-sharing processes, reducing redundancy and inconsistencies. Figure 4 shows an example of California's IDTS process, outlining the relevant agencies, the data shared, and the specific point in the process when the data sharing occurs.

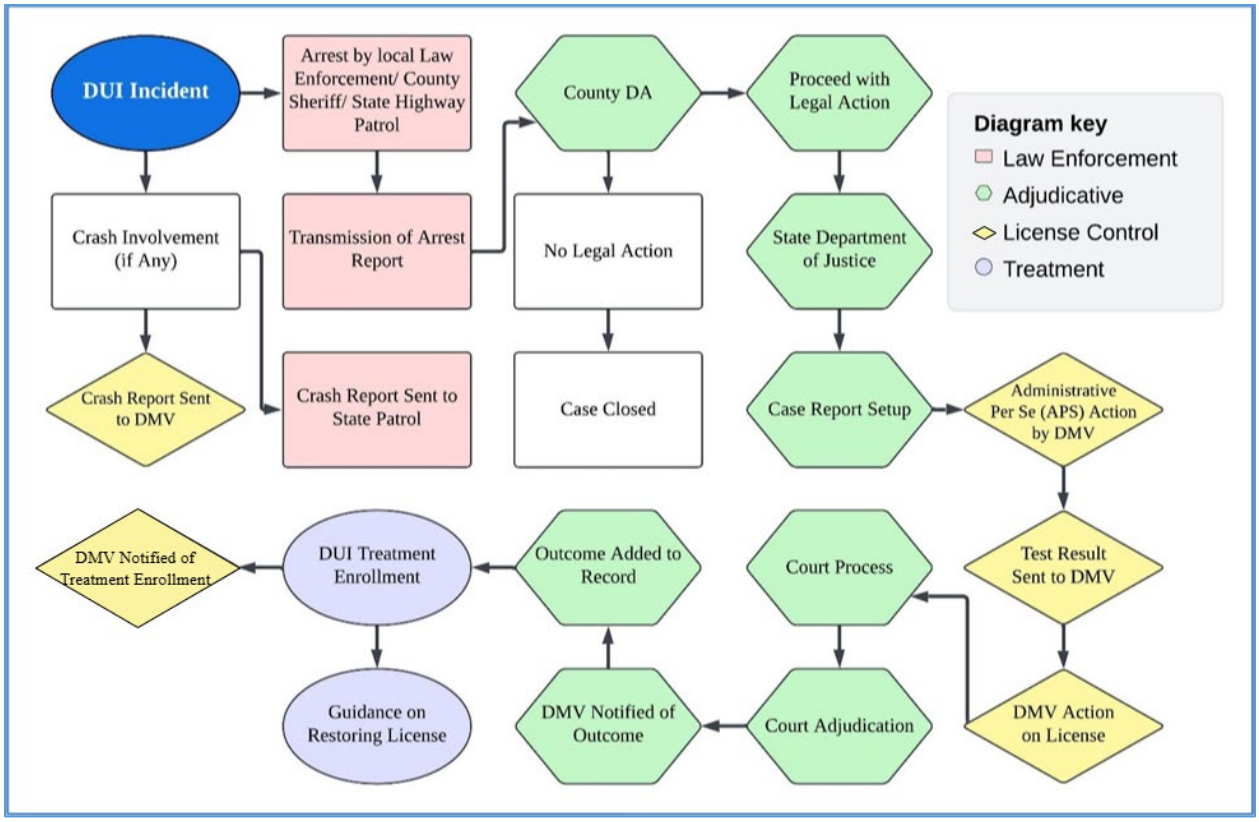


*Figure 4. California's IDTS Process and Data Flow*

Source: Based on a 2021 Annual Report of the California DUI Management Information System (Daoud, 2022).

An IDTS should have both case management and statistical components. The case management component collects relevant and timely information about impaired driving offenders (i.e., from arrest through disposition), leading to more appropriate and consistent sentencing. The statistical component reports historical trends in impaired driving offenses and compiles data on impaired driving arrests, adjudication, sentencing, and treatment outcomes (NHTSA, 2006).

Many States currently lack IDTSs linking critical data elements across law enforcement, State driver's licensing agencies, and the courts. A comprehensive IDTS with shared information and data management from these primary sources is essential for identifying repeat impaired driving offenders and analyzing broader impaired driving trends, such as recidivism rates and impaired driving arrests overtime. Such a system is vital to ensure that a State can (1) track people from arrest through disposition (including historical offenses, charges, and sanction completion in real time) and (2) assess the impact of legislation and policies on impaired driving trends (Walden et al., 2017).

### *Components of an Impaired Driving Tracking System*

NHTSA (2006) recommends collecting key data points at the time of an impaired driving arrest and throughout the adjudication and sanctioning process. Although these recommendations were published in 2006, it remains relevant, as many States participating in this project with an existing IDTS emphasized during the virtual discussion sessions the continued importance of

these data elements and other key components of an effective IDTS, as discussed in the Project Findings section.

Data should include:

- arrest or citation details,
- pre-conviction administrative sanctions,
- prosecution and adjudication data,
- subsequent violations,
- treatment and assessment completion,
- court and administrative sanctions completion,
- penalties for noncompliance, and
- license reinstatement information.

Outside of the data elements, NHTSA (2006) suggests that an ideal IDTS should provide:

- Statewide coverage includes the State's driver's licensing agency, all law enforcement agencies, and all courts that adjudicate impaired driving cases.
- Real-time electronic access to license history, vehicle registration status, criminal history, and warrants for law enforcement and courts.
- An electronic citation system for use by law enforcement officers, with bar codes, magnetic striping, or other automatic data-capture technologies and standard legal consent forms.
- A citation tracking system to accept electronic citation data from law enforcement agencies. The system should provide real-time tracking and accountability starting from when a citation is issued by a law enforcement officer, through the court adjudication process, on to completion of court and administrative sanctions. To make the process more efficient, the system should include an offender citation number or other unique identifier and online access for stakeholders.
- Electronic transmission of data from law enforcement agencies and courts to the driver's State licensing agency that permits immediate and automatic imposition of administrative sanctions (if applicable) and the recording of convictions on the driver's license.
- Electronic reports to the courts and the State licensing agencies by probation, treatment, or correctional agencies, as applicable, including information on compliance or noncompliance with court or administrative sanctions.
- Linkage of information from the incident or case-based tracking system and driver- or offender-based system, including treatment and probation data, to create a complete record for each offender.
- Timely access to statistical reports for all stakeholders to support agency operations, identify issues, inform policy development, and evaluate the impaired-driving program's system and countermeasures.
- Flexibility to include additional data and technological innovations.
- Conformity with national standards such as the American National Standards Institute and National Information Exchange Model.

### *Benefits of an Impaired Driving Tracking System*

Incorporating an IDTS enables seamless communication between the court system, law enforcement agencies, and DMVs, accelerating processes and enhancing the identification of effective countermeasures. This integration supports data-driven State investments aimed at reducing instances of alcohol-impaired driving, ultimately saving lives and conserving finite State resources. Below are some of the benefits to States in developing an IDTS:

- Ensures consistent enforcement of fines and penalties (Fischer, 2019).
- Provides accurate, complete, and timely records, enabling courts to impose appropriate sanctions and monitor compliance (Ennis et al., 2015).
- Facilitates quick access to a driver's history of alcohol and/or drug-related offenses for law enforcement and stakeholders (Daoud et al., 2015).
- Enables evaluation of current impaired driving environments, countermeasure programs, and laws (Greer, 2011; Daoud et al., 2015).
- Reduces administrative burdens and improves efficiency across systems (Capital Consulting Corporation, 1997a).
- Ensures licensing agencies are informed of sanctions, preventing drivers with suspended licenses from returning to the road prematurely (Walden et al., 2017).
- Provides accurate, aggregate data for informed decision-making on impaired driving issues (Daoud et al., 2015).
- Increases transparency in impaired driving court case dispositions (Ennis et al., 2015).
- Improves accuracy in conviction rates by preventing miscounting of amended charges and case dismissals (Ennis et al., 2015).

Investing in IDTS not only enhances operational efficiency but also strengthens the ability to address and mitigate the impacts of impaired driving comprehensively.

## Establishing an Impaired Driving Tracking System

NHTSA has developed guidelines to help States establish IDTSs. While this project seeks to better understand the challenges States face, the recommendations can serve as a starting point when trying to implement IDTS.

### *NHTSA's Recommended Steps for Implementing an Impaired Driving Tracking System*

While every State will have requirements based on factors such as existing systems, data needs, policies, available funding, and goals for its IDTSs, NHTSA provides recommendations for an IDTS implementation (see Table 4). These steps, originally based on the MIDRIS project (Greer, 2011), remain relevant for broader IDTSs implementation efforts. The following section details these steps and their applicability to creating and maintaining an IDTS.

*Table 4. NHTSA's Recommended Steps for Implementing an IDTS Based on the MIDRIS Report (Greer, 2011)*

| | |
|---|---|
| 1. | Form a Traffic Records Coordinating Committee (TRCC) subcommittee |
| 2. | Designate a single lead agency |
| 3. | Establish mechanism for working with the State's information technology offices |
| 4. | Develop stakeholders' roles and responsibilities |
| 5. | Develop a critical path |
| 6. | Conduct assessment of current system |
| 7. | Standardize processes/procedures |
| 8. | Develop a long-range plan |
| 9. | Identify statutory, regulatory, or procedural changes |
| 10. | Formalize interagency agreements |
| 11. | Establish protocols |
| 12. | Identify funding |
| 13. | Work with other States |
| 14. | Formulate an outreach plan |

Greer (2011) outlines a recommended implementation procedure with 14 steps, beginning with the formation of a TRCC subcommittee. A TRCC is a multi-agency group working to improve the collection, management, and analysis of traffic safety data. The TRCC subcommittee should oversee the implementation of IDTS and may include key stakeholders from the courts (i.e., judges, prosecutors, and probation officers), the licensing agency, State and local law enforcement agencies, treatment or correction facilities, and State Highway Safety Offices. This collaborative approach fosters buy-in from the relevant agencies and ensures the new system will meet their needs. The TRCC subcommittee should start by defining each stakeholder's capabilities and controls, assigning member roles and responsibilities, and designating a lead agency responsible for guiding the project through completion.

The State's IT office—or an equivalent group that is knowledgeable about the hardware, software, and system constraints—should collaborate early in the planning stages to facilitate data sharing between agencies. The IT office, in collaboration with other stakeholders, should establish formal procedures for authorizing system users and protecting the privacy of people.

The State should review its step-by-step procedures of an impaired driving case from the point of an impaired driving arrest through disposition. This path should be clearly defined so the IDTS can accurately follow offenders through the process. States should also evaluate current systems

and compare them against IDTS data elements and goals, as established by the TRCC. The evaluation should also include taking stock of hardware and software to ensure cross-system and goal compatibility. Any gaps in the current systems would need to be filled by creating new systems or modifying existing ones. While a traffic records assessment is no longer mandatory, NHTSA can facilitate an assessment to assist with this evaluation.

Once the TRCC has evaluated the current system, members should agree on standardized procedures moving forward. The TRCC may have to revise processes and procedures to prevent system overlap, eliminate data duplication, and ensure uniformity across all systems. Each stakeholder may have its own process, forms, terminology, and data elements that should be made uniform across organizations to integrate the separate data systems. This review may also prompt necessary statutory or regulatory changes.

Next, the TRCC should develop a sustainable, long-range plan that encompasses implementation details, training, and maintenance, and aligns with stakeholder needs and budgetary considerations.

The TRCC subcommittee should identify sources of funding, potentially from the TRCC agencies, fees and fines, or a combination of both. Collaborating with other States could potentially reduce costs and explore other means of funding support.

At this stage, formal agreements between the data owners and data users would need to be established, outlining responsibilities for all involved agencies, including possible funding sources—both for the interim period of starting IDTS and the long-term.

Lastly, the importance of an IDTS should be shared with the public, advocacy groups, and State policy makers to express the importance of having such a system. Understanding an IDTS will help to ensure the necessary funding and policy changes needed to effectively implement and leverage an IDTS, like mandatory data reporting, can be implemented. Systems without legislative backing often have significant gaps in functionality.

### *Texas as a Case Study for States Trying to Implement an IDTS*

In practice, implementing an IDTS can be complicated. NHTSA acknowledges in its impaired driving tracking model that “there will never be sufficient funds to “start from scratch” (Greer, 2011). Instead, States should enhance existing systems to build a comprehensive IDTS model. Each State has different components, constraints, and gaps related to its system, making implementation more challenging. For example, the Texas A&M Transportation Institute, in collaboration with Texas Department of Transportation, conducted a feasibility study in 2017 on developing an IDTS in Texas. Table 5 identifies 11 key gaps in its current system, not including functional elements like data warehouse storage capacity or query features (Walden et al., 2017).

*Table 5. Key Data Gaps in Texas' Current System*

| **Data Quality** |
|---|
| Untimely reporting |
| Coding inaccuracies |
| Missing data |
| **Data Collection and Integration** |
| Incomplete impaired driving histories when alternative sentencing via treatment programs is used |
| Incomplete impaired driving histories when courts cannot prosecute |
| Lack of bond tracking |
| No data integration across courts for shared case management records |
| Non-uniform data collection across the various tracking systems |
| Department of Corrections data not linked to court data |
| **Data Management** |
| Lack of privacy guidelines impacting key stakeholder buy-in |
| Data aggregated at the county level instead of the court level |

Source: DWI tracking system feasibility project final report from Texas Department of Transportation (Walden et al., 2017).

While these gaps pose challenges, they also present opportunities for progress. Identifying these deficiencies helps States focus efforts and develop a clear plan to strengthen their IDTSs. States can improve their system by leveraging existing infrastructure, integrating available data sources, and addressing key weaknesses. Even with limited resources, Texas and other States can take an incremental approach—strategically closing gaps and enhancing system capabilities over time—to build a more effective IDTS.

### *Data Sources and Systems Needed to Establish an IDTS*

States can use various existing data sources to establish an IDTS. These sources, most from Robertson and Holmes, (2011) include:

- Court case management and driver history files help identify drivers with past impaired-driving-related convictions and pending cases.
- A citation tracking system provide a database of traffic-related citations issued.
- Alcohol and drug test results, crash records, and location data support statistics on alcohol-involved crashes and location data, aiding in pinpointing problem areas.

- Corrections/probation data and treatment data provide insight into offenders' substance abuse history and treatment outcomes.
- Injury surveillance records offer details on crash-related injuries and treatments.
- Data analysis systems facilitate the comprehensive analysis of linked data to enhance decision-making in traffic safety and law enforcement.
- Electronic warrants allow courts to rapidly issue warrants for drawing blood or other relevant actions. Some systems like Minnesota's eCharging and eSearch applications connect all law enforcement officers, prosecutors, judges, court personnel, and law enforcement records staff in the State to facilitate the issuance of e-warrants (Fischer, 2019).

National data systems can also be used to pull in relevant data for IDTSs (Robertson & Holmes, 2011):

- The FBI Uniform Crime Reports compile annual statistics on impaired driving arrests from thousands of law enforcement agencies nationwide. Learn more about them on the Uniform Crime Reporting Program web page.
- FARS, maintained by NHTSA, provides data on fatal injuries in motor vehicle traffic crashes, including alcohol-related incidents. For more information, visit the Fatality Analysis Reporting System web page.
- The Driver License Compact, administered by the American Association of Motor Vehicle Administrators (AAMVA), enables States to exchange information about driver license suspensions and traffic violations of non-residents, allowing home States to act based on their laws. More information can be found on the Driver License Compact web page.
- The Non-Resident Violator Compact overseen by AAMVA standardizes the handling of non-resident violators cited in member States (NHTSA et al., 1994).

## Project Findings

This chapter presents the findings from discussions with stakeholders from 8 States regarding implementation of IDTSs. The project aims to improve the uptake and effectiveness of IDTSs by understanding the current landscape, challenges, and best practices of these systems.

The initial classification of States—the MIDRIS demonstration project participants, those with tracking systems integrated into larger systems, and those with independent tracking systems—helped identify a varied sample for this project. However, discussions with stakeholders from the 8 jurisdictions revealed the need to refine these classifications. Many stakeholders from the MIDRIS States were unaware of prior involvement in the demonstration project, likely due to staffing changes since its implementation in 2002. The updated classifications reflect how stakeholders describe their impaired driving tracking methods.

The updated classifications (also see Table 6):

- *States With Unified and Standalone Systems:* These States have independent systems specifically designed to track impaired driving offenders from arrest through adjudication. States operate their systems separately from other information systems.
- *States With IDTS as Component of Larger Systems:* These States integrate impaired driving tracking in their existing information system architecture rather than maintaining a separate system. This approach leverages existing infrastructure to manage impaired driving data.
- *States With Decentralized Tracking Systems:* These States have fragmented systems where impaired driving data is tracked through several unconnected systems. This decentralized approach often requires additional coordination among various stakeholders to compile comprehensive data.

*Table 6. Updated Classification of Participating States**

| Project States | Updated IDTS Classification | Previous IDTS Classification |
|---|---|---|
| **California** | Unified and standalone | Independent IDTS |
| **Missouri** | Unified and standalone | Impaired driving tracking as part of a larger system** |
| **Nebraska** | Impaired driving tracking as part of a larger system | Part of the MIDRIS System |
| **Iowa** | Impaired driving tracking as part of a larger system | Part of the MIDRIS system |
| **Tennessee** | Impaired driving tracking as part of a larger system | Independent IDTS |
| **District of Columbia** | Impaired driving tracking as part of a larger system | Impaired driving tracking as part of a larger system |

| Project States | Updated IDTS Classification | Previous IDTS Classification |
|---|---|---|
| **Wisconsin** | Decentralized tracking system | Part of the MIDRIS System |
| **Utah** | Decentralized tracking system | Impaired driving tracking as part of a larger system |

Note: *The District of Columbia is included in this table and referred to as such for ease of discussion.

**Missouri was initially classified as an independent IDTS in our preliminary analysis but was later reclassified as part of a larger IDTS system following discussions with stakeholders.

This chapter is structured according to these updated classifications. For each classification, a detailed discussion covers:

- Overview of the system: This section includes key stakeholders, data sources, and how the system operates in each State.
- System strengths: This section highlights the benefits of each system based on stakeholder feedback and analysis.
- Challenges when implementing the system: This section discusses the obstacles States have faced in deploying and maintaining their IDTSs, such as funding issues, technological barriers, and stakeholder engagement.
- Recommendations: This section discusses stakeholders' suggestions for improving the effectiveness and uptake of IDTSs.

## States With Unified and Standalone Tracking Systems

### *System Overview*

Unified/standalone systems operate independently of a State's broader traffic records systems and track impaired driving offenders from arrest through adjudication. These systems typically use data from various sources but are managed as standalone entities. The States with systems that researchers classified under this category are California and Missouri.

California. The research and development arm of California's DMV combines data from related State agencies to produce an annual report called *Driving Under the Influence – Management Information System* (DUI-MIS). This report presents comprehensive information on DUI cases, trends, and patterns in California, including the number of DUI incidents each year.

Missouri. Missouri uses the Driving While Intoxicated Tracking System (DWITS) to track impaired driving offenders from arrest through disposition. The State Highway Patrol established and maintained DWITS. Unlike the legislatively mandated systems, DWITS relies on voluntary data input from various agencies, including law enforcement and prosecutors. While the law requires the courts to send disposition data, law enforcement agencies and prosecutors choose whether to report their data to DWITS. As a result, participation rates vary, with stakeholders showing that the system receives only 50 to 60 percent of data across all law enforcement agencies. This incomplete reporting often requires verification from other sources, adding challenges to ensuring data accuracy and completeness.

Both DUI-MIS and DWITS aim to provide up-to-date DUI information. The primary goal is to offer comprehensive data on recent DUI-related cases in the jurisdiction and inform authorities about people with prior DUI arrests. Timely data entry is crucial, with information input immediately after an incident occurs rather than after criminal charges are filed. This timely data is essential for prosecutors when determining how to proceed with a case. As one stakeholder from Missouri noted, *"… If you had someone in your jurisdiction that got arrested on Saturday night you could look into DWITS and found out if they had been arrested in a different county the previous Saturday night."*

These systems ensure law enforcement and judicial authorities have immediate access to critical information, enabling informed decision-making and enhancing public safety.

### Key Stakeholders

The unified/standalone tracking system requires data to be inputted into a centralized repository. This system also has several actors interacting with one another to produce a database of information that can track DUI cases from the point of arrest to adjudication. Below is a comprehensive list of key stakeholders involved in the unified and standalone tracking systems across the two States. Each State includes slightly different stakeholder groups based on the structure of its system. Key stakeholders include:

- law enforcement agencies,
- office of district attorney,
- criminal justice system,
- Department of Motor Vehicles (Department of Revenue [DOR] in Missouri),
- crime labs,
- Department of Healthcare Services, and
- treatment courts.

### Common Data Elements Captured Include:

- *Arrest Report*: Includes the date and time of arrest, location of arrest, and the offender's name, gender, age, and BAC if there was a crash.
- *Offense Details*: Includes information about the offense to be charged, the outcome of the case, and court sentences obtained from the prosecutor's office and criminal justice system and transmitted to the State's driver's licensing office to be added to the offender's driving record.
- *Treatment Information*: Includes data regarding the offender's enrollment for treatment and the completion of treatment that is also transmitted to the driver's license office.

Figure 5 shows the general conceptual design of how the unified/standalone system operates. It shows the flow of the system from the point of arrest to adjudication and the roles that stakeholders play throughout the course of tracking DUI offenders. The system illustrates the processing of offenders through each branch and the relationship between the offender moving through the system and the data collected at each point.

**How California's DUI-MIS Operates:**

- Law enforcement officers arrest offenders and hand the notices of arrest to the county district attorneys responsible for adjudication. They also send the arrest records to the State's Department of Justice Criminal Justice Statistics Center that stores the information.
- Law enforcement officers also notify the DMV using the DS-367 form when offenders test over the legal limit for alcohol or refuses testing. This notice initiates administrative actions such as license suspension or restriction.
- After court proceedings and conviction, courts electronically send abstracts of conviction—a record summarizing the conviction and any court-ordered sanctions—to the DMV, which updates the driver's record. While the abstract includes sentencing details such as ignition interlock device orders or license suspension terms, stakeholders noted that the level of detail varies, and in some cases, only a notation of sentencing is provided.
- Statewide mandates require most offenders to enroll in DUI treatment programs. The DMV receives notifications when offenders enroll and complete these programs that allows them to determine when to reinstate driving privileges. In addition to these mandates, courts may impose specific program lengths or additional requirements, such as an ignition interlock device, based on judicial discretion.
- Officers create crash reports for crash-related incidents and send them to the highway patrol for storage.
- The DUI-MIS report combines and cross-references DUI data from the above sources into an annual report to track impaired driving offenders and analyze trends. While primarily used for monitoring and reporting, the insights the report provides may also support policy development and enforcement strategies aimed at reducing impaired driving.

Unique Aspect: Legislative backing ensures consistent data availability and use, making it a reliable source of information for policymakers. While the DUI-MIS report primarily focuses on DUI cases resulting in convictions, it also includes data on plea bargains to other charges, allowing stakeholders, particularly law enforcement and the courts, to track how DUI-related cases are adjudicated and ensure sanctions are applied appropriately.

**How Missouri's DWITS Operates:**

- *Law Enforcement Reporting:* Local law enforcement agencies document arrests using different vendor systems. Some vendors automatically transmit data to DWITS, while others do not. Officers can manually log into DWITS to enter arrest data. The information captured includes the date, time, location, suspect's personal details, charges, and BAC level, if applicable. If BAC data is missing, it can later be matched and uploaded from DOR records that is a part of Missouri's driver's license bureau.
- *Prosecutor Data Submission:* Prosecutors receive case documentation from law enforcement, including citations, probable cause statements, and the Alcohol Influence Report, a report completed by law enforcement officers during a DUI investigation. Prosecutors then file charges and assign a case number. Historically, the prosecutor case

management vendor submitted prosecutor data directly to DWITS. However, recent changes show the system now transmits data to State courts, then provide DWITS with weekly prosecutor filings.

- *Court Disposition Reporting:* The majority of Missouri courts use "Show-Me Courts," a unified case management system, though some municipalities maintain independent electronic systems. Courts send disposition data, including case number, charge code, conviction details, penalties, and other relevant adjudication information, to the Missouri State Courts Administrator. This data is transmitted nightly to the DOR, which processes it before passing it to the Missouri State Highway Patrol for integration into DWITS.
- *Unique Aspect:* The system relies on voluntary participation from various agencies, which can lead to partial data coverage and potential gaps in tracking.

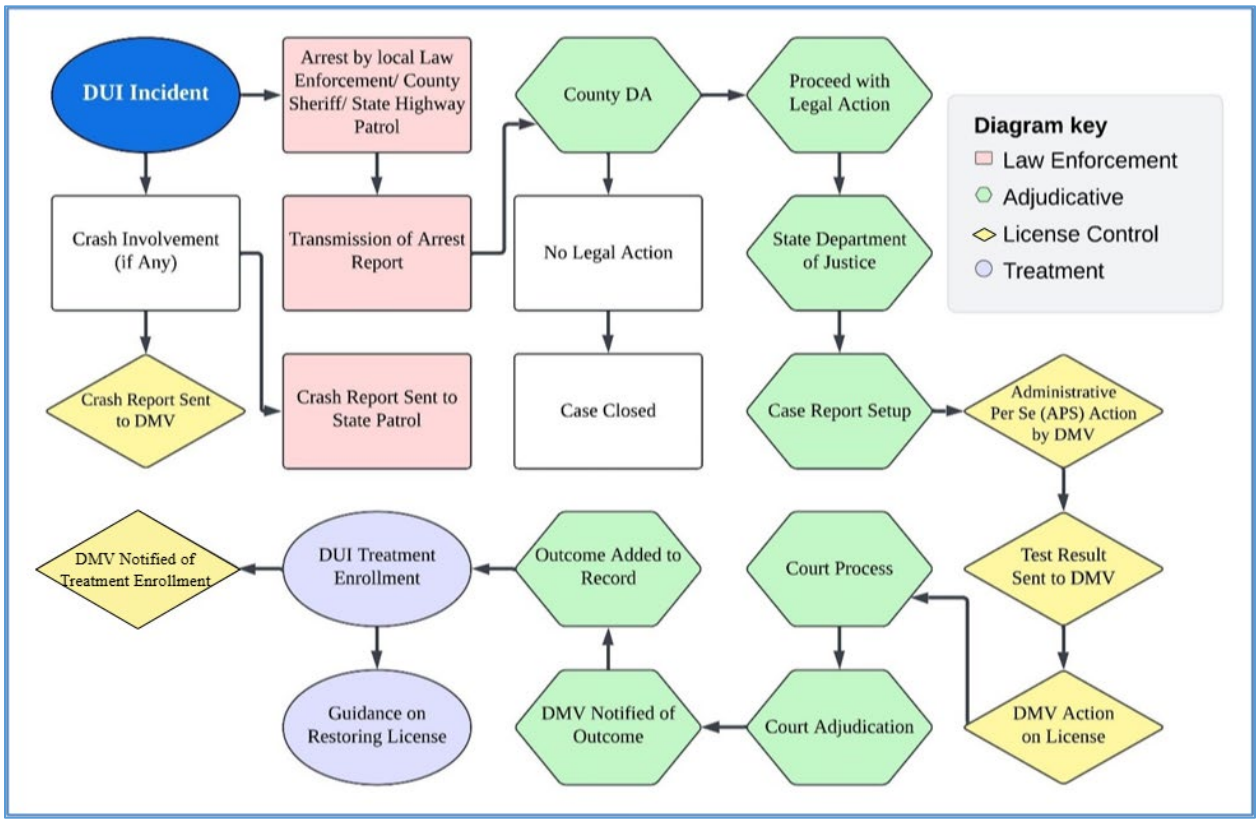


*Figure 5. Process Flow for Unified and Standalone IDTS*

Source: Based on 2021 Annual Report of the California DUI-MIS (Daoud, 2022) and Missouri's DWITS functional specification.

### *System Strengths*

The unified, standalone system for tracking impaired-driving offenses has several strengths identified by stakeholders in California and Missouri. These strengths highlight the system's ability to manage data effectively, ensure legislative compliance, and support judicial and administrative processes.

*Consistent Data Tracking and Integration.* Both California and Missouri benefit from unified case management systems that ensure consistency in tracking DUI cases from arrest through adjudication. For example, in Missouri the Show-Me Courts system (a unified case management system for courts in Missouri) integrates data from various stages of the legal process, reducing errors and ensuring accurate case-tracking.

*Automated Data Integration and Timeliness.* Missouri's system facilitates automated integration of data from arrests, charges, court dispositions, and sanctions, ensuring timely updates to driver records. This daily data submission helps maintain up-to-date records, which is crucial for accurate case management. In California automated processes facilitate data flow from law enforcement and the courts to the DMV, allowing for prompt license actions and enforcement of court-ordered sanctions such as DUI treatment program enrollment and ignition interlock device requirements. However, while California's system efficiently processes and integrates data, real-time access to complete driver records at the point of arrest remains a challenge. Law enforcement may not immediately identify repeat DUI offenders, potentially affecting charge severity and enforcement decisions. Despite this limitation, these streamlined systems improve case tracking and enhance the effectiveness of impaired-driving countermeasures.

*Legislative Backing and Stability.* Both States benefit from legal mandates that provide continuity and stability for their systems. In Missouri, the legislative mandate applies specifically to the courts, ensuring system stability regardless of changes in personnel or priorities.[8] In California, State law requires the development of a data and monitoring system to evaluate intervention programs for DUI offenders (Rees et al., 2023). These legal requirements support consistent annual reporting of DUI-MIS data, enhancing the system's reliability and effectiveness.

*Established Relationships Among Stakeholder Agencies.* California's long-standing data-sharing agreements among the DMV, DOJ, and highway patrol facilitate the annual transfer of necessary DUI data files. These established relationships ensure continuous data transference across State agencies, allowing the DMV to compile comprehensive reports on DUI rates and outcomes.

*Centralized Data Storage and Query Capabilities.* The centralized nature of the unified and standalone system allows for efficient data storage and querying. In both States, the system can store vast amounts of data and run queries to generate reports showing DUI trends and providing up-to-date information. This capability supports informed decision-making by judges, prosecutors, and other key stakeholders.

*Support for Informed Sentencing and Public Safety.* The system's ability to track individual cases from arrest to adjudication is crucial for making informed sentencing decisions. For example, in Missouri, the system enables State attorneys to deny expungement requests for DUI offenders with several arrests, thereby enhancing public safety. In California, the DMV's comprehensive

[8] For more information on Missouri's IDTS legislation, see https://house.mo.gov/bill.aspx?bill=HB1695&year=2010&code=R.

data collection supports the application of administrative sanctions and court-ordered measures, such as DUI treatment programs and ignition interlock devices.

*Web-Based Accessibility and Research Capabilities.* The web-based nature of the unified and standalone system enhances accessibility for stakeholders, allowing them to obtain information efficiently. In California, the DMV research branch acts as the central coordinating entity, conducting research and development to identify relevant DUI data and compile it into comprehensive reports. This capability ensures data is processed and validated effectively, maintaining consistency in report generation over several decades.

*Data Validation and Quality Control.* The California DMV reviews and validates the data, checking for anomalies, inconsistencies, and missing information. This rigorous data validation process helps identify and address potential data quality issues, ensuring the accuracy and reliability of the DUI-MIS reports.

### *Challenges When Implementing the System*

The unified and standalone systems face several challenges limiting their effective deployment, implementation, and maintenance. These challenges stem from various operational, administrative, and legislative issues. Below is a synthesis of the key challenges from the perspective of stakeholders, showing whether it applies to both States and are specific to one.

*Stakeholder Accountability and Turnover.* Stakeholders struggle with ensuring stakeholder accountability amid personnel turnover and shifting priorities. High turnover rates among law enforcement and other stakeholders can lead to data entry discrepancies, resulting in incomplete or delayed information. Additionally, staff turnover in agencies disrupts the continuity of data reporting and knowledge transfer, hindering timely data provision.

*Admissibility of Records in Court*. Stakeholders in one State face a specific challenge with the admissibility of DWITS records in court proceedings. Although there are statutory provisions for establishing prior convictions, these laws do not specifically address the use of DWITS records as admissible evidence. As a result, DWITS records have limited legal use in those cases.

*Technical and Data Integration Barriers.* Both States encounter technical barriers in maintaining consistent data integration. Changes to agency data systems over time create new challenges for accessing and processing necessary data. The lengthy time in processing a DUI case, from arrest to conviction, complicates data integration further due to several players and processes.

*Resource Constraints*. Resource constraints like availability of laptop computers and limited training opportunities for law enforcement impede effective handling and documentation of impaired-driving-related stops in both States. Adequate resources and training are necessary to address these challenges and ensure consistent data entry and management.

*Monitoring and Adapting to Legal Changes*. Both States' systems need to continuously monitor and accommodate changes in DUI laws in their data recording, processing, and reporting. This necessity adds complexity to maintaining the system's effectiveness and relevance.

*Limited Real-Time Access to Driver Records.* While one system facilitates automated data integration, it does not provide real-time driver record at the point of arrest. As a result, law enforcement officers may not have immediate access to a driver's full DUI history, potentially impacting charge severity and enforcement decisions. The DUI-MIS report that compiles and analyzes DUI data is published annually, limiting its use for real-time decision-making.

*Funding Limitations*. One State faces funding limitations, with no dedicated funding allocated to producing the annual DUI-MIS report, despite it being a statutory mandate of the DMV. This lack of funding may limit resources for future report releases and necessary improvements.

*Incomplete Sanction Tracking.* The DMV in one State does not receive information on whether offenders actually serve the sentences issued to them. This gap means the DMV might lift suspensions from offenders' driving records without confirming that sanctions were served, potentially allowing repeat offenses.

*Inability to Track Pretrial Diversion.* Both States struggle with tracking pretrial diversion, where offenders avoid trial and, upon completing court-imposed conditions, do not receive a DUI conviction on their record. If an offender successfully meets the court's requirements, no conviction is recorded, and the case is not reported to the DMV. As a result, DUI tracking systems may lack records of these cases, leading to gaps in data on DUI arrests and sanctions.

### *Stakeholder Recommendations*

Based on stakeholder discussions, several recommendations emerged to improve the DUI tracking systems in both California and Missouri. These suggestions aim to enhance data accuracy, system integration, and the overall effectiveness of the tracking systems.

*Establish a Central Coordinating Entity*. Each State would benefit from a central entity responsible for tracking and maintaining its system. This entity would ensure smooth data flow, identify and address gaps, and maintain compatible data streams for timely and accurate case-tracking. Stakeholders specifically mentioned that having another State entity produce the annual report and manage data from different sources and agencies would be beneficial. This entity would ensure that the data streams are kept open and maintained, facilitating timely and accurate DUI case-tracking.

*Implement Mandatory Data Reporting Requirements*. Introducing mandatory data-reporting requirements for all relevant agencies, not just the courts, is crucial. Legislative mandates could enforce consistent data submission, ensuring comprehensive coverage and timeliness of DUI data.

*Secure Dedicated Funding for Data Entry and System Maintenance*. Securing dedicated funding for data entry and system maintenance is essential. This funding would alleviate resource constraints, ensure consistent data input by providing resources for staff training and hiring, and support the infrastructure and personnel needed to manage the system effectively.

*Integrate Tracker with Relevant Systems*. Integration of the DUI tracking systems with other relevant systems, such as DMV records and probation databases would provide a more comprehensive view of offender information and outcomes, emphasizing real-time data input to ensure reliability and trustworthiness.

*Conduct Ongoing Training and Awareness Programs*. Encouraging ongoing training and awareness programs would enhance understanding of roles and responsibilities across agencies. Continuous education would ensure that all stakeholders remain informed and engaged, promoting a cohesive approach to combating impaired driving.

*Implement Continuous Evaluation and Improvement*. Implementing a process for continuous evaluation and improvement of the tracking systems is recommended. Soliciting feedback from users, monitoring system performance, and making adjustments as needed would optimize functionality and address evolving needs.

*Implement Electronic Data Submission.* Stakeholders suggested investigating existing solutions like Traffic and Criminal Software (TraCS) (GAO, 2023)[9] to facilitate electronic data submission. Transitioning from manual or paper submissions to electronic submissions would streamline data-sharing processes and reduce delays in data entry.

*Conduct Comprehensive Data Monitoring.* Stakeholders highlighted the need to continuously monitor changes in DUI laws and adapt their system to accommodate these changes. Stakeholders emphasized the importance of ensuring complete data despite declining DUI arrests, addressing gaps such as tracking pretrial diversion, and ensuring that offenders serve their sentences.

## States With Tracking Systems as Components of Larger Systems

### *System Overview*

These systems track impaired-driving data in broader State systems that manage various traffic incidents and court proceedings. While each system is configured differently, it all serves as a centralized hub for sharing case information across agencies (see Figure 6). The States with systems in this category are the District of Columbia, Iowa, Nebraska, and Tennessee.

*District of Columbia.* The District of Columbia operates the Justice Information System (JUSTIS), an integrated system managed by the Criminal Justice Coordinating Council (CJCC) under the mayor's office. JUSTIS serves as a centralized hub for secure data sharing among criminal justice agencies, facilitating near real-time and automated exchanges. This system has two primary components, an information portal that lets authorized users view case data from several agencies, and a system-to-system exchange for continuous data transfers. Law enforcement, courts, and corrections contribute to JUSTIS. While the DMV is not fully integrated, it can access relevant driver offense and case disposition data to support licensing sanctions.

*Iowa*. Iowa's tracking system operates in a larger statewide data infrastructure designed to manage criminal and juvenile justice information. At the core of this system is the Justice Data Warehouse, a centralized repository that integrates data from several agencies, including the Judicial Branch Case Management System, the Department of Corrections Offender Network, and the TraCS system used by law enforcement agencies. A key component facilitating data flow into and out of the Justice Data Warehouse is the Criminal Justice Information System (CJIS), a real-time data exchange network transmitting arrest data, citations, and implied consent forms from law enforcement to the courts.

*Nebraska*. Nebraska's Criminal Justice Information System (NCJIS) is the statewide central repository for criminal justice data, integrating information from several agencies, including law

[9] The TraCS program is an initiative by the Iowa Department of Transportation to collect data from law enforcement at the scene of motor vehicle collisions. TraCS collects and manages data related to impaired-driving cases, including charging documents, implied consent forms, and drug recognition evaluation forms. Read more at: https://iowadot.gov/tracs.

enforcement, courts, corrections, and DMV. Various systems feed into NCJIS, such as TraCS, that capture citation and crash data from law enforcement agencies and JUSTICE, the State's unified case management system maintained by the Administrative Office of the Courts (AOC), which tracks court proceedings. NCJIS provides authorized agencies with access to citation records, probation and parole data, jail holds, vehicle records, and driving histories. While Nebraska does not have a separate impaired-driving tracking system, impaired-driving conviction data reported by the courts is maintained in NCJIS and the DMV's driver history system, letting law enforcement and court personnel monitor case outcomes and enforce sanctions effectively.

*Tennessee.* Tennessee tracks impaired-driving cases through the DUI Tracking system, a web-based application housed in the Tennessee Integrated Traffic Analysis Network (TITAN), the State's broader traffic data system primarily used by local law enforcement agencies to collect and record crash data. The TITAN-hosted DUI tracking system captures case details from arrest through adjudication and sentencing. District prosecutors or DUI coordinators enter data from affidavits of complaint, police reports, and court databases. The system records key case details, including arrest date, original charge, case disposition, and date of disposition. Court clerks transmit case outcomes and sanctions to the Department of Safety, which implements license-related penalties. However, participation in the DUI tracking system is not statewide, as only judicial districts with grant-funded DUI coordinator positions submit case data. As a result, the system captures about half the State's DUI cases.

### Key Stakeholders

Below is a comprehensive list of key stakeholders in the four States with tracking systems as component of larger systems, although not every State includes all stakeholders. Expanding stakeholder participation can improve data collection and system effectiveness. For example, only Iowa includes its Department of Public Health, allowing the State to incorporate survey data on impaired-driving trends. This integration provides a more comprehensive understanding of impaired-driving prevalence by capturing self-reported instances, including those that do not result in arrests. Including agencies such as the Department of Corrections lets States track sentencing progress and outcomes more effectively, strengthening data-driven decision-making and policy development. Key stakeholders from the four States include:

- Law enforcement (city, county, and State agencies),
- Department of Corrections,
- Department of Motor Vehicles,
- Department of Transportation,
- Court system (pretrial services; adult probation),
- Department of Public Health, and
- State Highway Safety Office.

**Common Data Elements Captured Include:**

*Arrest Report:* Includes facts about the traffic incident, the officers involved, the statute cited, drugs present, sobriety tests conducted, driver's license information, and vehicle registration.

*Court Information:* Includes judge and defense attorney information, original charge and arraignment, criminal record and driving record of person charged, plea bargains, and disposition and disposition date.

*Post-Conviction Information:* Includes whether a crash occurred, driver behavior, any treatment options, and punishment such as community service, alcohol monitoring system, jail time, or probation.

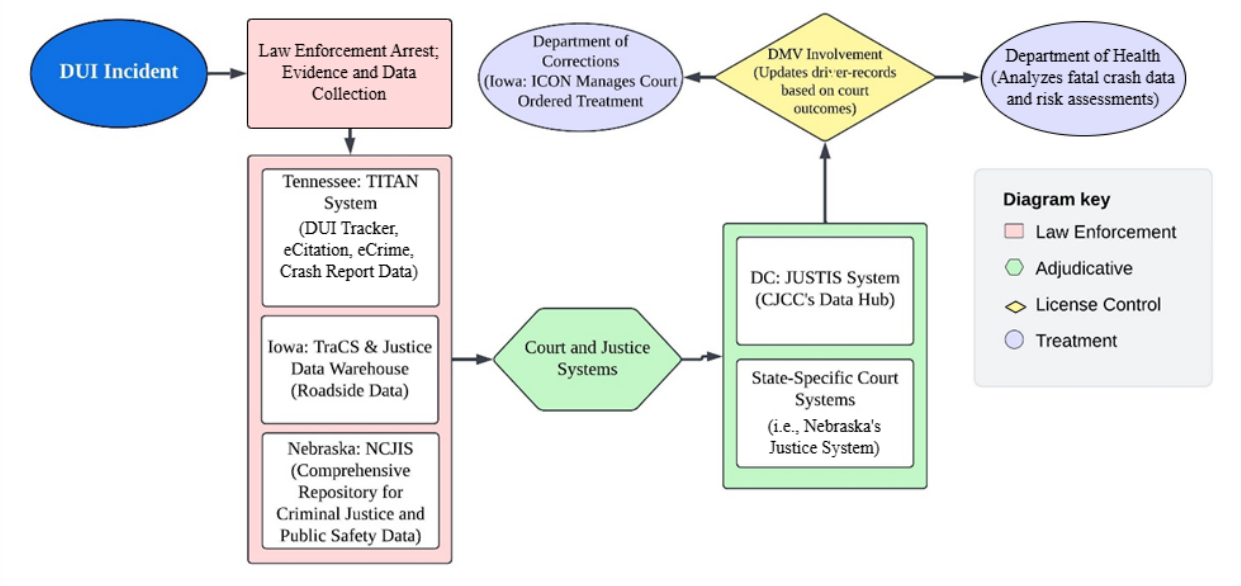


*Figure 6. Process Flow for Tracking System as a Component of a Larger System*

**How District of Columbia JUSTIS Operates**

- JUSTIS has two primary components:
  - Information Portal – A secure, web-based platform where authorized personnel from criminal justice agencies can access information from several sources through one interface.
  - Justice Exchange – A system-to-system data exchange that continuously extracts and pushes case data between agency case management systems in near real-time.
- JUSTIS integrates data from several agencies, including the Metropolitan Police Department (MPD), DOC, and the District of Columbia Superior Court. Each agency determines what information it shares through an MOU, ensuring controlled access.
  - Following an arrest, MPD enters case details into its records management system.
  - MPD data is transmitted to JUSTIS every 30 minutes via the Information Portal and every 10 minutes via the Justice Exchange, making it accessible to partner agencies.

    - The District of Columbia Superior Court imports this arrest data into its case management system and assigns a temporary case number. Prosecutors review the case to determine whether to file formal charges, initiating arraignment, hearings, and other legal proceedings.
    - Agencies with access to JUSTIS retrieve case details relevant to their operations, while their own case management systems remain the authoritative sources of record. JUSTIS mirrors data from agency systems but does not allow direct updates in its platform.
- The DMV is not directly integrated into JUSTIS and does not participate in the Justice Exchange. Instead, the DMV receives daily data files containing offense and disposition information that it matches against driver records. This information allows the DMV to take administrative actions, such as license suspensions, against offenders.

*Unique Aspect:* Although the District of Columbia Superior Court maintains its own independent case management system, CJCC still receives and integrates court data into JUSTIS. This enables cross-agency coordination while allowing courts to retain full control over their internal records management.

#### How the Iowa Justice Data Warehouse Operates

- Iowa's Justice Data Warehouse consolidates data from several sources to track impaired-driving cases and other criminal justice activities. The primary data sources include:
    - TraCS System – Used by law enforcement to electronically capture citation and implied consent data at the roadside and transmit it to the courts.
    - Judicial Branch Case Management System – Collects and manages all traffic and citations and related court records.
    - Department of Corrections Offender Network – Tracks case management data for people in the correctional system.
    - Behavioral Risk Factor Surveillance System – A public health tool that collects self-reported data on impaired-driving behaviors through telephone interviews. This dataset provides population-level prevalence rates, integrating demographic information with behavioral risk factors.
- CJIS, operated by the Department of Public Safety, facilitates the exchange of data between law enforcement, courts, and other agencies, ensuring the proper transmission of citation and case information. Courts electronically receive citations and case details via CJIS and transmit processed case information to the Justice Data Warehouse for long-term storage and analysis.
- Agencies use data from the Justice Data Warehouse to manage case workflows, assess trends, evaluate the impact of impaired-driving legislation, and develop targeted safety programs.

*Unique Aspect:* The Justice Data Warehouse system encompasses many agencies, including the Iowa Judicial Branch, Department of Public Safety, DOC, Department of Transportation, Office of the Attorney General, Department of Natural Resources, Department of Health and Human Services, and the State Public Defender. By leveraging this interconnected data infrastructure,

Iowa enhances its ability to monitor impaired-driving cases across law enforcement, courts, corrections, and public health sectors.

### How Nebraska's NCJIS Operates

- NCJIS functions as the State's primary repository for criminal justice and public safety data. It integrates information from several agencies, allowing law enforcement, courts, and other authorized users to access citation records, probation and parole data, court documents, and DMV records.
- Law enforcement agencies use TraCS, a statewide forms management system, to electronically record citation and crash data. This information is then transmitted to the Nebraska Crime Commission, which processes the data and makes it available through NCJIS. Additionally, citations are forwarded to the DMV for administrative actions, such as license suspensions.
- Nebraska's unified trial court case management system, JUSTICE, tracks cases from citation through final disposition. Data from JUSTICE is integrated into NCJIS, enabling real-time updates on court proceedings, including case filings, trial outcomes, and sentencing.
- The DMV maintains DUI conviction data reported by the courts. While Nebraska does not have a dedicated DUI tracking system, authorized users, including law enforcement and court personnel, can access driver records through NCJIS to monitor offenses and enforce penalties.
- Various agencies, including law enforcement, courts, corrections, and parole boards, access NCJIS to retrieve relevant case details. While the system provides broad access to justice-related data, individual agencies retain control over their records and determine what information can be shared.

*Unique Aspect:* While NCJIS functions as the central repository for criminal justice data, Nebraska maintains a separate, unified court case management system called JUSTICE. This system tracks cases from citation, arrest, and pending trial all the way to court disposition and ultimate sentence, if applicable.

### How Tennessee TITAN DUI Tracker Operates

- The DUI tracking system functions as a module in the TITAN, the State's centralized traffic data system. TITAN supports several law enforcement applications, including crash reporting, e-citations, and DUI case tracking.
- Law enforcement officers collect initial case details at the roadside, complete affidavits for submission to the courts, and, when applicable, document crash-related data in the Tennessee Highway Patrol's crash reporting system. Blood and breath test samples are submitted to the Tennessee Bureau of Investigation for analysis.
- District prosecutors or DUI coordinators enter DUI case data into the system by using information from affidavits of complaint, law enforcement reports, toxicology results, and court databases. Courts transmit case outcomes, including convictions and sentencing details, that are then used to enforce administrative sanctions.

- The system is used to track case progression, conviction rates, and sentencing patterns. Data from the DUI tracker informs resource allocation, policy assessments, and reporting for State and Federal agencies. The Tennessee Highway Safety Office uses the system to generate quarterly reports and evaluate the impact of DUI enforcement programs.

*Unique Aspect:* DUI tracker receives DUI data from other independent sources. For example, the DUI coordinator will review arrest and crash reports to compile driver history and driver license information that are not fully integrated with TITAN.

### *System Strengths*

These systems track impaired-driving cases but do so in larger, multi-purpose data systems rather than as standalone IDTS. This integrated approach enables greater data sharing and coordination across key stakeholders, fostering trust among partner agencies, and streamlining case management. Additionally, these systems create administrative efficiencies by reducing redundancy in data entry and maintenance, while improving accessibility for enforcement and policy evaluation. These systems contribute to a more comprehensive view of impaired-driving case processing in the broader justice system.

*Trust in Data Across Agencies*. Rather than placing sole responsibility for data integrity in one agency, these systems allow each participating agency to serve as its own data steward. This structure enhances trust and accountability, as agencies maintain and control their own records while sharing relevant information through formalized agreements. In the District of Columbia and Nebraska, agencies undergo a formal request and approval process to gain access to data from another agency. This process ensures that data is shared appropriately and used for legitimate purposes. The District of Columbia stakeholders said its system fostered an open line of communication between agencies, allowing them to collaborate effectively and ensure system interoperability.

*Administrative Efficiencies.* Stakeholders in the District of Columbia, Tennessee, and Nebraska emphasized the efficiencies gained from integrating tracking into broader JUSTIS. For example, in the District of Columbia, JUSTIS eliminates the need to provide direct access to individual case management systems, instead acting as a centralized hub for agencies to access relevant records. In Nebraska NCJIS features a personal criminal history page that consolidates demographic data, arrest history, and court findings into a single, comprehensive record. In Tennessee, TITAN supports automated case tracking, reducing manual data entry and expediting data exchange between agencies.

These systems also improve efficiency in data collection at the roadside. In Iowa and Tennessee, law enforcement officers enter impaired-driving arrest and incident details directly into their tracking systems. Officers in Iowa use barcode scanners to capture drivers' licenses or vehicle registration data, contributing to over 97 percent electronic submission rates for citations and crash reports. In Nebraska, collaboration between the Highway Safety Office, courts, and State Patrol resulted in a fully electronic citation process, eliminating paperwork delays. These systems include built-in validation rules that reduce data entry errors and ensure standardized reporting across agencies.

*Improved Data Completeness*. These systems capture case details across several stages—from arrest through final disposition—providing each agency with a full picture of each impaired-driving case. This level of integration supports case tracking, policy analysis, and system

evaluation. Users in Iowa can generate customizable reports with additional data elements from several sources, expanding their ability to analyze case trends. In all four States, tracking impaired-driving cases in a broader justice system provides access to data beyond traditional DUI tracking systems, including court actions, prosecutorial decisions, and sentencing outcomes.

### *Challenges Implementing the System*

These systems face several implementation challenges including delays in data entry and processing, lack of communication or consensus among partner agencies, missing data, the need for user training, and limited analytical tools.

*Delays in Data Entry and Processing*. These systems are reliant on several actors for data entry. Stakeholders noted that data entry can be time-consuming. For example, some States have small law enforcement teams covering large geographical areas and the time to enter data is limited. In some instances, data requests were not clearly written and were too extensive, requiring a lot of time for entry.

*Lack of Communication or Consensus.* These systems are also reliant on communication between systems. Stakeholders mentioned this issue as a particular challenge. Stakeholders in one State said that data-sharing agreements are challenging. Some agencies are protective of their data and not always willing to share the data. Stakeholders in another State also noted that various agencies do not interact with one another, which makes obtaining data from sources difficult. That State does not have a centralized court system for citations and data is segmented across hundreds of courts that exist in the State. Stakeholders also noted the need for clarity on confidential information to share as much data as possible.

*Missing Data.* A major challenge of these systems is missing data, resulting from systems collecting inconsistent data. In one State, a prosecutorial decision to reduce a charge or not to file a charge is not tracked by all systems. In another State, no statute requires courts to submit key data into the DUI tracker, and due to resource constraints, this data may not be collected. For example, some systems do not currently track treatment programs for DUI offenders.

*User Training.* Stakeholders emphasized the need for ongoing training to ensure users can effectively navigate the systems. Proper training enhances data collection and validation efforts, reducing errors and improving overall system reliability.

*Limited Analytical Tools.* Stakeholders from one State noted that while their system captures impaired-driving offenses through various data sources, it lacks comprehensive analytical tools to assess impaired-driving-related trends and outcomes. For example, the system does not generate detailed reports on impaired-driving recidivism, case processing times, or sanction effectiveness. Many of these systems do not incorporate advanced statistical methods for evaluating impaired-driving enforcement and adjudication. While the infrastructure to develop these tools exists, expanding analytical capabilities has not been a key priority for leadership.

### *Stakeholder Recommendations*

Stakeholders familiar with these systems offered several recommendations to improve their functionality, including designing the system for better data capture processes, data integration, and easier navigation.

*Apply Automated Data Capture*. Stakeholders expressed the need to expand automation in data entry processes. Stakeholders in one State discussed ongoing efforts to implement more electronic methods for capturing data, reducing manual input errors. Stakeholders recommended expanding auto-populate functionality and linking data fields across systems to minimize redundant data entry. Automating data capture from primary sources would improve efficiency and data accuracy while reducing the burden on system users.

*Enhance System Integration*. Stakeholders in States with this type of system identified the need for stronger data integration across agencies. In one State, the traffic data system and the software used by court prosecutors do not communicate directly. As a result, staff manually re-enter data across several platforms, increasing workload and the risk of inconsistencies. Stakeholders recommended developing a common application programming interface to streamline data sharing and reduce redundancy. However, stakeholders suggested legislative action may be necessary to mandate data integration.

*Improve Data Navigation.* Stakeholders emphasized the need for more user-friendly navigation tools that prioritize organization of case information. They suggested placing key case details—such as lab results, crash reports, officers' involvement, and disposition dates—on central landing pages, allowing users to find critical information more efficiently. Additional details could be accessible through expandable sections or linked pages.

## States With Decentralized Tracking Systems

### *System Overview*

Decentralized tracking systems rely on several independent case management systems managed by different agencies (see Figure 7). These systems have the potential to track impaired-driving offenses effectively once data is integrated into a centralized system and create a more collaborative process among stakeholders (e.g., establishing a communication framework, benefitting from existing stakeholder systems, and improving the data-sharing process). States with decentralized systems are actively working toward unifying their data sources to create a more cohesive tracking process. The States with systems in this category are Utah and Wisconsin.

*Utah*. Utah employs a decentralized approach to impaired-driving tracking, with various agencies maintaining independent data systems. "Traffic" is the primary system for managing traffic-related data, including crash reports, citations, and DUIs, which collects data through either a web-based application or through vendor-provided systems. While Traffic serves as a central data repository for law enforcement, it does not integrate driver's license records or court case management systems. Instead, DUI case data is transferred through batch processing, where Traffic exports daily data files to the courts' Informex system for case processing. Similarly, courts send disposition data back to Traffic each night for broader accessibility. The DMV and the Bureau of Criminal Identification access Traffic data but maintain independent systems for driver records and criminal history. Utah legislation mandates electronic DUI reporting in 5 days

of arrest, ensuring structured data submission across agencies. However, gaps remain in data integration, particularly with toxicology results and corrections data that operate on independent workflows.

*Wisconsin*. While the Wisconsin Traffic Analysis Reporting System (WiSTAR) enables agencies to interact and access certain transportation-related data, including impaired-driving data, this information is not systematically shared across agencies. This results in inconsistent data collection and missing key information. Stakeholders collaborate through State-level traffic safety commissions, where county-level data is presented. However, additional critical information, such as toxicology reports, breath test results, and drug recognition expert assessments, is occasionally shared through interaction rather than through an integrated system. This decentralized approach limits the ability to comprehensively track impaired-driving cases across agencies.

### Key Stakeholders for Decentralized Tracking Systems

Below is a comprehensive list of key stakeholders in the decentralized tracking systems across the two States. Each State includes slightly different stakeholder groups based on the structure of its system. The key difference between the stakeholders included in this system and the others is the inclusion of the University of Utah that handles statewide system analysis. Key stakeholders from these two States include:

- Law enforcement,
- Toxicology labs,
- Universities (e.g., University of Utah),
- Department of Technology,
- Department of Transportation/Department of Motor Vehicles,
- Highway Safety Office,
- Department of Corrections,
- Department of Public Health, and
- State courts.

### Common Data Elements Captured Include:

- *Arrest Report*: Includes the date and time of arrest, location of arrest, and the offender's name, gender, age, and BAC if a crash occurred.
- *Offense Details*: Includes information about the offense to be charged, the outcome of the case, and court sentences obtained from the prosecutor's office and criminal justice system and transmitted to the State's driver's licensing office to be added to the offender's driving record.

### How Utah's Traffic Database Operates

- Law enforcement agencies submit their crash, citation, and DUI data electronically into Traffic through a web-based application or vendor-provided systems. Submissions undergo validation to flag inconsistencies, such as missing driver information or errors in charge documentation. Officers then review and correct any errors before finalizing the submission.
- Traffic exports a data file containing DUI-related records to the Informex system used by the courts each night. The courts import this data for case processing, including arraignment, hearings, and sentencing.
- Law enforcement agencies submit blood and breath test requests to the State toxicology lab for chemical analysis. Toxicology results are sent separately to law enforcement but are not automatically integrated into Traffic. Officers manually upload these reports into the system for case tracking.
- The DMV, under Utah's Department of Public Safety, receives DUI-related data from several sources, including Traffic, electronic court data submitted daily, and arrest paperwork that is manually entered into Traffic. The DMV uses this information to determine administrative actions, such as license suspension or revocation.
- Courts send disposition file to Traffic each night, updating case outcomes such as dismissals, convictions, and sentencing to ensure agencies relying on Traffic have access to final case statuses.
- The University of Utah manages the Utah Transportation and Public Safety–Crash Data Initiative that compiles traffic safety data, roadway GIS data, and crash reports. This initiative supports statewide safety analysis but does not contribute to real-time DUI tracking.

### How Wisconsin's WiSTAR Operates

- Law enforcement officers conduct breathalyzer tests and collect blood samples from drivers suspected of impaired driving. The officers immediately record breath test results and send blood samples to the State hygiene lab for analysis. If the tests confirm BACs over the legal limit, officers enter details into TraCS, automatically notifying the courts of the cases. Officers must also submit paper forms to the DMV in 5 days to initiate administrative action.
- The State hygiene lab conducts BAC testing and electronically sends results to law enforcement and the DMV. The DMV takes administrative action only after receiving formal notice from law enforcement.
- The DMV that manages driver records and enforces administrative sanctions, matches law enforcement reports with lab test results before suspending or revoking licenses. Courts also notify the DMV electronically of adjudicated sanctions requiring license actions.
- The courts use information law enforcement entered into TraCS to create case files. The prosecutor may request additional information from law enforcement about the offender's previous driving or criminal history. The court will issue a sanction that may include an

order for the DMV to suspend the offender's license. Courts may also mandate probation, ignition interlock installation, or participation in treatment programs. In some States, treatment programs are voluntary alternatives to mandated sentencing. Probation officers oversee compliance.

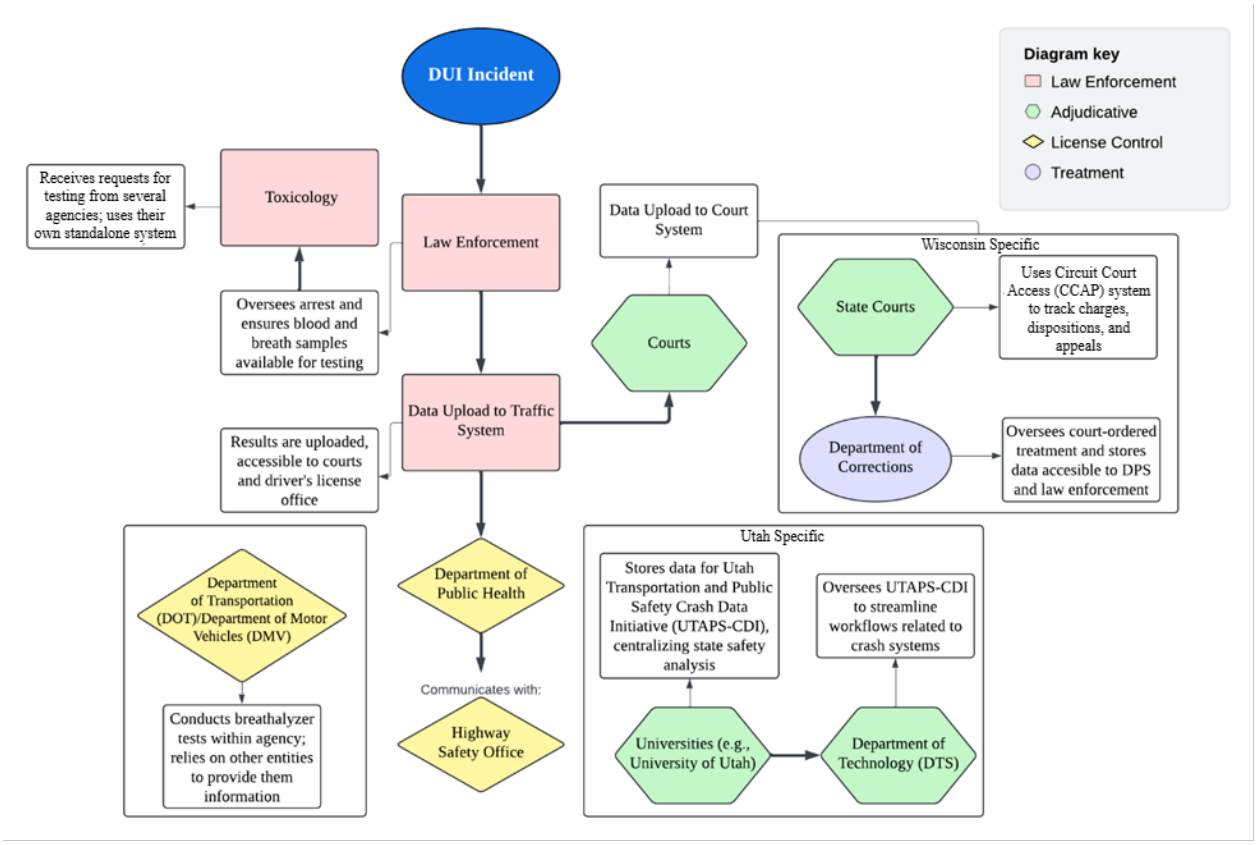


*Figure 7. Process Flow for Decentralized Tracking Systems*

### *System Strengths*

Stakeholders in Utah highlighted several key strengths in their approach.

*Collaborative Effort Ensures Accurate Data Collection*. Utah emphasized the strength of maintaining its system through a collaborative effort among various stakeholders. This collaboration ensures thorough and accurate data collection. A stakeholder noted, *"I think our data is there. We're pretty collaborative. This is an area that we usually have good success with our data."*

*Stakeholder Commitment and Innovative Solutions*. Utah's commitment from stakeholders is another strength. For example, its partnership with the University of Utah has led to the development of innovative web-based data query systems, improving data accessibility and usability for agencies.

*Emphasis on Complete and Available Data*. Utah also stresses the importance of ensuring all data is complete and available for analysis and reporting. This commitment to comprehensive data collection and accessibility supports better analysis and more informed decision-making.

### *Challenges Implementing the System*

Stakeholders from States with decentralized systems discussed several key challenges in deploying, implementing, and maintaining their IDTS. These weaknesses impact the effectiveness and reliability of the systems in various ways.

*Communication Delays*. One significant weakness of decentralized systems is the delay in data communication and processing. Delays between the initial offense and its entry into the system can lead to discrepancies and errors. Stakeholders highlighted this issue, noting that it may allow offenders to avoid immediate consequences. The lack of a unified system causes stakeholders (for example, law enforcement, the DMV, and the courts) to operate without the full case knowledge and understanding.

*Limited Understanding of the System's Functionality.* Stakeholders noted they may not fully understand the system's functions and limitations, leading to potential misunderstandings and inconsistencies in data results. The phased deployment approach, which can span several years, causes dissatisfaction among stakeholders who expect immediate implementation. As one stakeholder expressed, *"There is always concern about how long it takes. People want to see things built yesterday. Building a data warehouse this complex takes a while and people get frustrated with the phased approach."*

*Leadership and Staff Turnover*. Frequent changes in leadership and staff turnover disrupt system continuity, requiring continuous onboarding and training to ensure effective use of IDTS. Stakeholders in one State highlighted that staff turnover across agencies creates gaps in institutional knowledge and necessitates ongoing training to ensure smooth execution of tasks and proper interaction with tracking systems. These challenges, compounded by funding limitations, can delay system enhancements and impede data consistency across agencies.

*Inaccurate or Incomplete Data*. Maintaining accurate and complete data is challenging with decentralized systems. Differentiating data, such as distinguishing drug-impaired-drivers from alcohol-impaired ones, remains difficult due to limited testing and reporting procedures. For instance, some States lack a reliable system to track drug-impaired offenders, leading to inaccuracies or missing data. Stakeholders also reported inaccuracies and incomplete data stemming from various data systems being used by different stakeholders that rely on their own sources and prevent access to data needed across platforms.

*Absence of Unified Case Management.* Stakeholders in one State raised concerns about the absence of a unified case management system for several agencies. These agencies upload their data to individual systems without structured supervision, causing delays in communication and data organization. A stakeholder pointed out, *"Another potential challenge is who manages this tracking system. Multiple agencies feed data into a single system, but it's unclear who would be responsible for it."*

*Data Privacy Concerns*. Maintaining these systems is also challenging due to data privacy concerns. Legal restrictions such as the Health Insurance Portability and Accountability Act can obscure the integration of comprehensive data from various sources, limiting a system's ability to provide a complete depiction of offenders' treatment and arrest processes. Although these concerns are not unique to decentralized systems, it may be more pronounced due to the lack of formalized data sharing agreements and data sharing protocols that more centralized systems

might have in place. Data privacy concerns affect the ability to maintain comprehensive data integration.

### *Stakeholder Recommendations*

Stakeholders had recommendations on how to successfully link the different systems to effectively track impaired-driving offenders that aim to enhance communication, leverage existing resources, improve data sharing, and ensure thorough training for all parties.

*Streamline Communication.* States with decentralized systems recommend increasing communication throughout the tracking process by establishing a framework and maintaining regular interactions among stakeholders. This approach includes:

- conducting regular meetings,
- strengthening existing stakeholder partnerships,
- discussing tracking system progress, and
- planning collaboratively with data collection methodologies.

*Leverage Existing Systems*. Stakeholders suggest leveraging existing systems already in use by law enforcement and the courts. For instance, stakeholders from Utah highlighted their reliable communication system and recommended continuing to use it to share data between stakeholders. Avoiding the creation of new systems when effective ones already exist saves time and resources, enhancing efficiency.

*Improve Data-Sharing Processes.* Stakeholders discussed the need to improve data-sharing processes to reduce time and resource expenditure. They suggested developing a clean, integrated system for data-sharing between law enforcement, the Department of Health, and the DMV. This system would ensure toxicology test results are quickly reported to law enforcement and shared with the DMV to track repeat offenders. Implementing this recommendation in establishing an electronic system for law enforcement to use when submitting data to relevant stakeholders. Clear timeframes with law enforcement can ensure accurate data entry into driving records, enabling timely action by the DMV.

*Train Stakeholders.* Stakeholders identified the need for training across all roles. Training ensures that everyone in the process understands the system's purpose and the significance of the data, leading to fewer errors.

## Universally Identified Resources and Efforts Needed for Effective Tracking

Across all three types of IDTSs, stakeholders identified similar needs to maintain and improve their systems.

*Funding*. Tracking systems require substantial infrastructure and staff investment to develop and maintain. Stakeholders emphasized funding for ongoing maintenance is equally important to securing initial funding for system development. Planning for long-term maintenance costs ensures the system remains operational. Agencies must account for software vendor expenses and other related costs, as well as sustain funding to uphold contracts and ensure the system's effectiveness over time.

*Legislation*. States have different legal support in place. All States identified legal support as important so that contributing partners participate. Legislation should outline which records will be collected, how quickly it needs to be reported and stored, and the method of reporting.

*Technology*. Tracking systems rely on technology to capture, transfer, store, and query the necessary data. Some States rely on manual data entry that has the potential for error and increases processing times. For instance, one stakeholder said, *"I would like to see, in the future, that once those reports are signed off on, that it would be a possibility to electronically submit those through. There's always going to be that human manual portion of having to even enter it for it to be sent electronically. The chances of errors happening in the keying process to the record and all of those things...it would be a lot more consistent, the less human intervention we have in entering that information."* One State recently installed laptops into its squad cars to scan drivers' licenses and vehicle registrations for improved efficiency. Technology is constantly improving and requires constant software and hardware updates to remain effective.

## Summary of Chapter

The three classifications discussed in this chapter represent distinct approaches that States pursued to establish a statewide impaired-driving tracking system. This discussion highlighted how each type of system operates and the resources required to build and maintain these systems. The researchers also identified strengths and weaknesses and recommendations from stakeholders associated with each type of system.

*States with unified and standalone tracking systems that use centralized locations or repositories to store impaired-driving data.* The strengths of this type of system are that it effectively establishes relationships between stakeholder agencies, provides evidence to inform sentencing guidelines, and offers research and development opportunities with the data. Stakeholders in these systems also noted several challenges, including the lag in processing DUI cases, high staff turnover among those working with the system, and difficulty accounting for pretrial diversions when tracking the actual number of DUI cases. One recommendation from stakeholders for these types of systems was to set up a national electronic system to help assist States with their tracking activities.

*States with tracking systems as components of large systems.* This type of system creates a centralized hub where a host of different case information is shared among agency partners. The benefits of this system include fostering trustworthiness in the data based on agreements between agencies, offering a depth of information on various aspects of impaired driving, and featuring several opportunities for data collection and validation. Given the complexity of these systems, there are challenges in addressing missing data, a lack of coordination in decision-making, and limited communication between partner agencies. Stakeholders from these types of systems recommended the use of better and more automated data-capturing techniques, the establishment of more data integrations between partner agencies, and the development of better navigation tools to view the data.

*States with decentralized tracking systems for impaired driving.* This type of system uses various independent systems managed by different agencies to track impaired-driving offenses. Given the under-development of these systems, stakeholders did not offer many strengths. In terms of weaknesses, these systems often come with communication delays between partner agencies, inaccurate or incomplete data, and lack of knowledge of what is required to maintain these

systems. Recommendations to improve these systems include streamlining communication between agencies, leveraging existing systems to develop better tracking systems, and improving the data-sharing process between State actors.

Despite these different approaches, stakeholders shared similar recommendations from their experience in building and maintaining these systems, including:

- Communication and collaboration between partners in these systems is integral in all three types of systems. This communication may take different forms because of the level of coordination required between partner agencies and the responsibilities assigned to each agency participating in these systems.
- Data quality is a common issue in all three systems. Each must contend with missing, incomplete, or inaccurate data when tracking information. However, the level of ownership in data validation among stakeholders also depends on the system design.
- Legislation plays a crucial role in defining the records that must be collected, the timeframe for reporting, storage requirements, and reporting methods. It can also provide necessary funding to support the development and maintenance of these systems.
- Each type of system must cope with cases and information from outside of its jurisdiction. States could more closely work together to address how to easily share their data and to build a more comprehensive system for tracking this information among States.

The analysis of these different classifications also uncovered some specific challenges with each system. For example, given the narrow scope and effort establishing a unified and standalone tracking system, it appears that more legislative support is required for systems that are more decentralized or broader in breadth. The complexity of a system also affects when and how data is captured in these systems. Those systems with more agencies likely demand more strategies for collecting and validating data. Another factor that can vary from system to system is the time devoted to forming integrations between different data systems. States with tracking systems within larger systems and a more decentralized tracking system must spend more time building and maintaining these integrations.

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## Best Practices and States Assessment

This chapter serves as the foundation for the companion document, *Guide for Implementing Impaired Driving Tracking System* (Okyere et al, in press), providing an overview of best practices and recommendations for the implementation of an IDTS. By leveraging the lessons learned from the States in this report, the guide aims to equip stakeholders with the tools necessary to successfully plan, implement, and sustain an IDTS in their own jurisdictions. This chapter summarizes the accompanying guide.

The guide will have three key purposes.

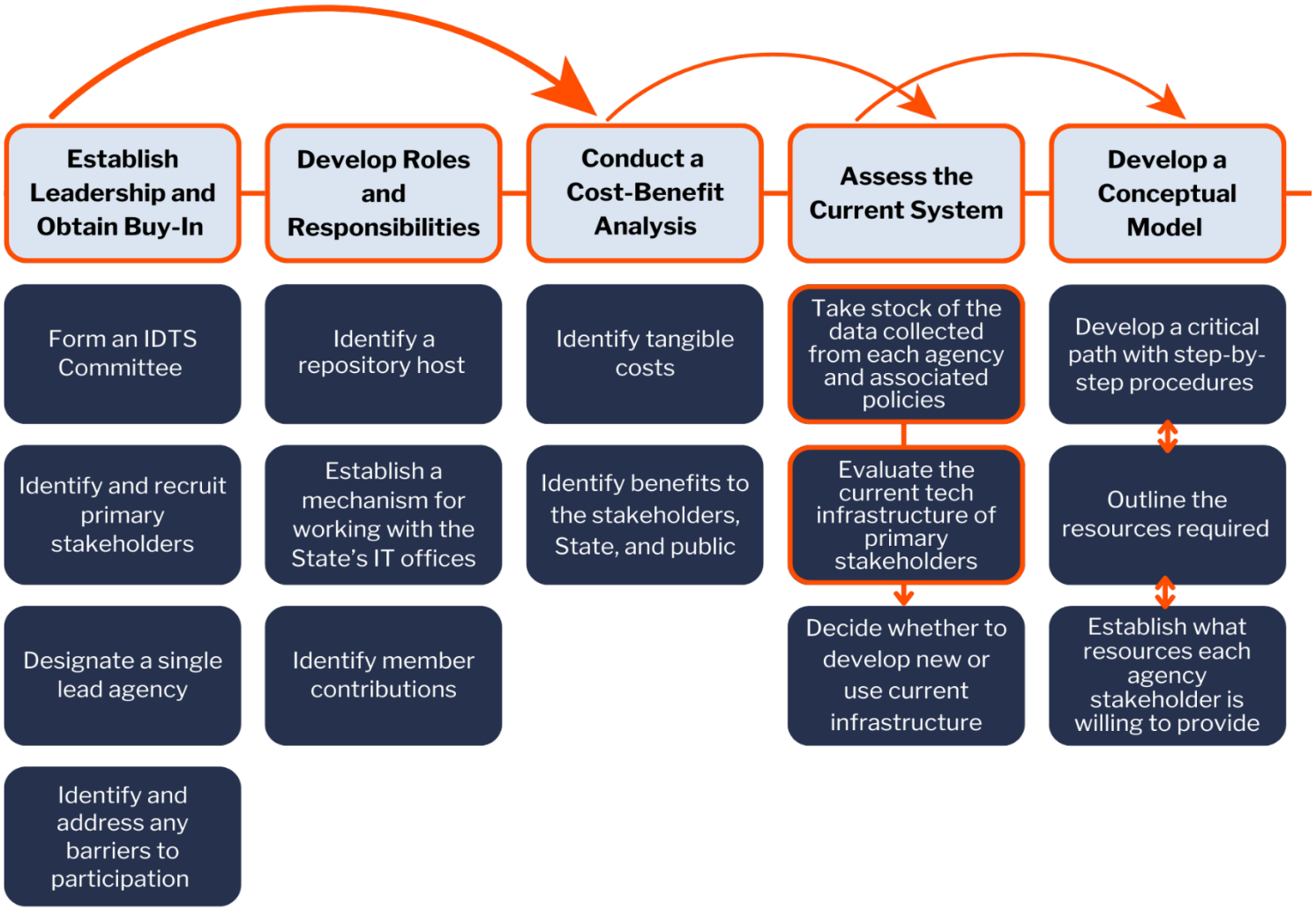
1. Introduce and explain the benefits of an IDTS.
2. Provide a clear, actionable roadmap for implementing an IDTS from planning and procurement to deployment and maintenance, as implementing an IDTS has several critical steps. The guide will outline a structured process for stakeholders to follow. A checklist will ensure all necessary components are addressed during implementation. The guide will also include example resources to aid States in their implementation of IDTSs.
3. Identify potential barriers and solutions, with the understanding that every State or jurisdiction may face unique challenges when adopting an IDTS. These challenges could include legal, technical, operational, or financial barriers. The guide addresses common obstacles and provides potential solutions to help overcome them.

This chapter focuses on the second and third purposes of the guide—to provide an actionable roadmap for implementing an IDTS and identify potential barriers and solutions.

### Recommended Steps for Building an IDTS

States interested in building an IDTS can use the suggested best practices to develop their own systems. These steps are informed by the best practices identified in the stakeholder discussions and insights from the prior MIDRIS report. Recognizing variation in IDTS implementation across States, the recommended steps are designed to accommodate different levels of progress. While some States have implemented components of an IDTS, only a few have fully integrated critical data elements from law enforcement, driver licensing agencies, and the courts. This guidance emphasizes the importance of assessing existing systems to identify gaps and plan for full integration. For a State in the early stages of this process it can use a readiness checklist to help evaluate its current capabilities and prepare for implementation.

While the steps are presented in a recommended sequence, States may adjust the order based on their unique circumstances and system dependencies. This summary gives an accessible overview of the actionable steps States can take to effectively establish or enhance their IDTSs, with details of each step presented in the guide. Figure 8 shows a process chart for implementing IDTS, outlining each step's dependencies.




Note: Orange boxes and arrows represent dependencies.

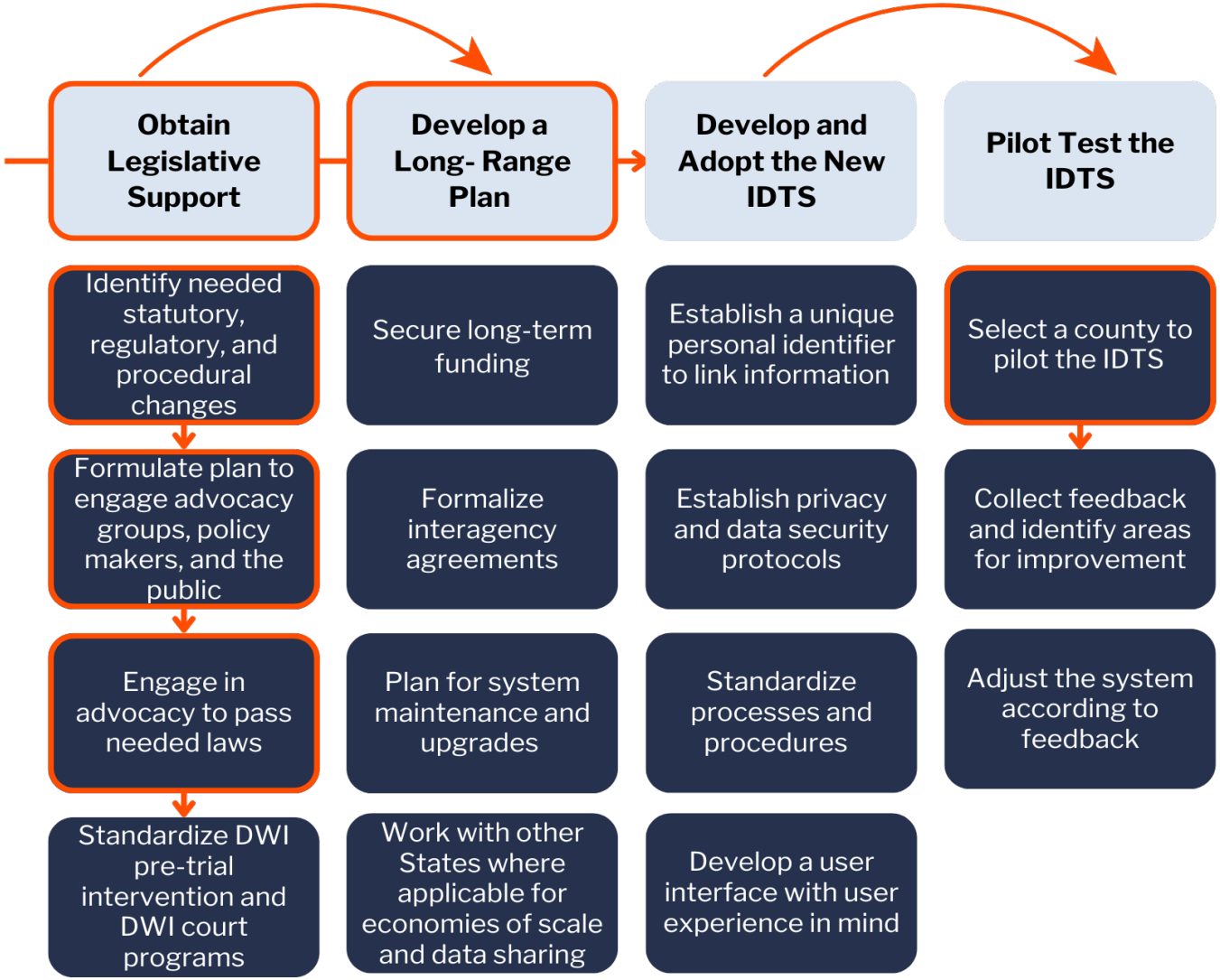



*Figure 8. Process Chart for Implementing an IDTS*

Note: Orange boxes and arrows represent dependencies.

## State Assessment

The guide will outline a detailed checklist for a State to assess its readiness to implement an IDTS.

Each State is different and should orient its activities based on its local contexts and needs. Since each State is starting from a different place, a self-assessment can be useful to determine how to pursue the best practices included in this report. The self-assessment in Table 7 is based on best practices identified through stakeholder discussions and the literature review. A State responding "Yes" to the checklist items aligns with these practices and readiness to implement—or has already implemented—an effective IDTS. Consistently, responding "No" highlights key gaps and challenges to be addressed before implementation. Responses of "Partially" mean that some foundational elements are in place and further development is needed in specific areas to achieve full system effectiveness. Each component is important, and there is no hierarchy in the checklist. To further assess IDTS readiness, a State may request a NHTSA Traffic Records Assessment by sending a formal request to its NHTSA regional office. Additional details can be found in the guide.

*Table 7. Self-Assessment Checklist for Implementing IDTS*

| **Buy-In Assessment** | **Yes** | **No** | **Partially** |
|---|---|---|---|
| Does your tracking system have buy-in from law enforcement? | | | |
| Does your tracking system have buy-in from prosecutors? | | | |
| Does your tracking system have buy-in from courts? | | | |
| Does your tracking system have buy-in from licensing agencies? | | | |
| Does your tracking system have buy-in from your State legislators? | | | |
| Does your tracking system have buy-in from advocacy groups? | | | |
| Have partner agencies formalized roles and responsibilities using an MOU? | | | |
| **Funding Assessment** | **Yes** | **No** | **Partially** |
| Does your tracking system have a short-term funding solution? | | | |
| Does your tracking system have a long-term funding solution? | | | |
| Is there funding to cover staff dedicated to data entry, processing, and system maintenance? | | | |
| Is there funding to cover future system updates and improvements? | | | |

| **Legislative Assessment** | **Yes** | **No** | **Partially** |
|---|---|---|---|
| Does your State have mandatory participation in the tracking system? | | | |
| Has your State established a minimum time frame for reporting data? | | | |
| Does your State allocate funding or permit user fees to fund the tracking system? | | | |
| Has your State standardized how reductions in charges and expungements are handled for impaired-driving offenses, ensuring that it still counts as a first-time offense in the tracking system? | | | |
| **Data Assessment** | **Yes** | **No** | **Partially** |
| Does your tracking system have a unique personal identifier? | | | |
| Do you have protocols for data security and privacy? | | | |
| Do you have standardized data elements, forms, and terminology across all partner agencies? | | | |
| Do agencies have to double-enter data? Or are records automatically sent to the tracking system as personnel complete their normal record-keeping duties? | | | |
| Are alternative sentencing programs (such as drug or alcohol treatment or rehabilitation, DUI schools, community service, dismissals, a reduction to lesser charges, or plea bargains) included in your data? | | | |
| Can all stakeholders easily access the data they are looking for? | | | |
| **Miscellaneous Assessment** | **Yes** | **No** | **Partially** |
| Can your tracking system interface with other States' DUI data? | | | |
| Can your tracking system build customizable reports rather than fixed reports? | | | |

## Potential Barriers and Solutions

The guide concludes with a review of the potential barriers that may impede the implementation of an IDTS and proposes actionable solutions to mitigate these challenges. Identifying and addressing these barriers is key for States to stay on track and achieve their objectives while building their IDTSs. The guide discusses barriers and potential solutions below.

### *Barrier: Stakeholder Accountability and Turnover*

**High turnover among stakeholders disrupts data entry and reporting, leading to incomplete or delayed information.**

### *Solutions:*

- Capture data entry practices and establish ongoing training programs to improve understanding and roles across agencies.
- Implement continuous evaluation and improvement processes, including regular feedback and data quality monitoring.

### *Barrier: Data Management and Integration*

Challenges in maintaining consistent data integration arise from technical limitations, lengthy case processing times, and data availability gaps.

### *Solutions:*

- Establish a central coordinating entity to oversee data flow and compatibility.
- Implement mandatory reporting requirements to enforce comprehensive data submission.
- Integrate DUI systems with other relevant databases for real-time data input.
- Leverage existing systems to avoid duplicating efforts and enhance efficiency.

### *Barrier: Funding and Resources*

Lack of dedicated funding for IDTS limits resources for annual reports, system maintenance, and training.

### *Solutions:*

- Secure dedicated funding from agency fees or fines to ensure system sustainability.
- Advocate education to ensure system sustainability.
- Leverage Federal grants, such as NHTSA's State and Community Safety Grants Program, Impaired-driving Countermeasures, and State Traffic Safety Information System Improvements, while pursuing long-term funding solutions.

### *Barrier: Quality Control in Data Tracking*

Data quality issues, such as gaps, errors, and inconsistencies, compromise the reliability of tracking systems.

***Solutions:***

- Establish comprehensive monitoring practices to track changes in impaired-driving laws and ensure accurate, up-to-date data collection.
- Transition from manual or paper-based reporting to electronic submission to improve efficiency, accuracy, and accessibility.

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## Conclusion

This project provides key insights into the implementation efforts and outcomes of IDTSs across 7 States and Washington, DC. This report details the status and characteristics of the systems used by the participating States to track impaired-driving offenders. States generally fell into three different categories in their approach to tracking impaired-driving offenders: having unified and standalone systems, having systems as part of a larger system, or having a decentralized system. The report also describes the efforts these States made to deploy and maintain their systems, the challenges faced in deploying and maintaining their systems, and perspectives on the resources necessary for deploying and maintaining an effective IDTS. Finally, the report includes best practices and a checklist for States to assess their readiness to implement an IDTS. This chapter summarizes the project's key findings and discusses lessons learned.

### Key Project Findings

Despite the varied approaches adopted by States (e.g., unified and standalone systems, systems as part of a larger system or decentralized systems), stakeholders shared common recommendations based on experiences in deploying and maintaining these systems. Based on this information and the findings from the literature review, the researchers compiled a set of best practices for implementing an IDTS, including:

- *Partner Collaboration With Central Coordination*. An ideal system should have extensive collaborations formalized through an MOU, with regular meetings to discuss data quality and system improvements. Each agency should have staff responsible for overseeing the system and ensuring data quality. One agency, however, should be responsible for coordinating the tracking system. The role of central coordination is to ensure data validity and data access, and handle system maintenance.
- *Long-Term Funding*. Dedicated funding for the data system, staff, and training at both the entity and system levels ensures sustainability of the tracking system.
- *Legislative Backing*. Legislation can ensure consistent participation, aid in data privacy, and provide avenues for long-term funding solutions. This element is essential for the admissibility of records in court.
- *Inclusion of Pre-Trial Diversion Data*. Inclusion of this data is crucial for tracking outcomes and understanding program effectiveness.
- *Auto-Integrated Data With Uniform Data Fields*. Citations, court outcomes, and other relevant information should be automatically entered into the IDTS as people complete their daily tasks in their agency systems, eliminating the need for duplicate entries. However, the use of existing data entry should not come at the expense of data uniformity. Stakeholders should agree on data fields to ensure compatibility.

*Ongoing Training*. New staff should be trained on how to use the tracking system. States experiencing high staff turnover should implement regular training sessions to ensure the system's sustainability.

- *Accessible Data Systems With Flexible Reporting Capability.* Web-based systems and well-designed interfaces prevent data overwhelm and enhance access to information. An

accessible system should also allow the creation of tailored reports, enhancing stakeholder data use.

- *Identify Key Performance Indicators (KPIs)*. KPIs help to measure progress towards goals and inform data-driven decisions. Planning for data usage and establishing trends ensures that data is used effectively.
- *Multi-State System*. Drivers may possess DUIs in other States that are not captured in a single State's system. States with frequent border travel may benefit from a multi-state IDTS.

## Lessons Learned

Stakeholders shared insights into the key elements needed to develop and maintain effective IDTSs based on the lessons learned from implementing their own systems. These lessons offer essential elements for ensuring accuracy and efficiency in IDTSs.

*Importance of Legislative Mandates.* One critical insight is the importance of legal requirements to support system development. Legislative mandates provide the necessary strength and continuity to maintain system functionality and compliance, regardless of changes in personnel or priorities. Stakeholders emphasized that having legislative backing ensures long-term commitment and resource allocation.

*Articulating the Benefits of an IDTS.* Effectively communicating the benefits of an IDTS from various perspectives is crucial for securing stakeholder buy-in. Stakeholders need to understand the KPIs that mark progress. For instance, discussing how the system can track recidivism rates provides a clear indicator of the impact of DUI laws. A longitudinal system tracking individual-level data over time is necessary to measure such improvements. Highlighting the effectiveness of laws by pointing to specific KPIs, like recidivism rates, can illustrate a system's value.

*Identifying Key Performance Indicators.* Stakeholders suggested that providing guidance on key performance indicators would be highly beneficial. These KPIs could include metrics such as alcohol-involved crash rates, recidivism rates, and other elements that contribute to a comprehensive understanding of DUI trends. By setting up a system to track these indicators, States can effectively measure progress and make data-driven decisions.

*Continuously Evaluating Data*. One consistent theme voiced by all stakeholders in all States was the importance of continuously evaluating the data in these systems. This process starts with appraising the quality of the data and then identifying data elements that are missing or incomplete, then targeting improvements to the system based on any identified data quality issues. Training law enforcement, prosecutors, and anyone else who enters data on accuracy would also improve data quality.

*When to Validate Data*. Another data consideration is identifying the best time to enter and validate data in these various systems. For example, when a law enforcement officer pulls over an impaired driver, the officer is often in a dangerous situation on the side of the road without time to verify the information. Systems maintenance personnel should determine the best time to verify information because incorrect information could impact the outcome for cases.

*Need for a Long-term Implementation Timeline*. Stakeholders emphasized the importance of a long-term timeline for system development. This timeline could outline when and how to integrate State systems that remain outside the existing framework and identify critical system

updates. Given the resources required to meet these objectives, aligning the implementation plan with existing State priorities can help secure necessary support and funding.

*Importance of Consistent Funding*. Stakeholders recognized the significance of consistent funding, citing Tennessee's TITAN system as an exemplary model. The TITAN system, which includes a DUI tracking module, benefits from reliable funding from Tennessee's Highway Safety Office. This consistent funding ensures the system's sustainability and effective maintenance. Fines, fees, taxes, and grants are all potential funding mechanisms.

*Integration of Citation Data*. Stakeholders highlighted the importance of integrating citation data to provide a comprehensive understanding of traffic safety and the impact of enforcement measures. Additionally, analyzing citation data alongside crash patterns can help States identify enforcement inconsistencies or regulatory gaps—such as inadequate penalties, lack of enforcement, or insufficient countermeasures in high-risk areas—allowing them to refine policies that address the root causes of crashes and improve overall traffic safety.

*Analyzing Crash Location Patterns*. Understanding when and where crashes occur helps develop timely preventive measures and policies. This analysis can highlight high-risk areas and inform targeted interventions.

*Targeted Interventions and Policy Development*. Stakeholders recognized that, by identifying high-risk areas through analyzing crash location patterns and integrating various data elements such as instances of DUI arrest, States can develop targeted interventions and effective policies. This approach ensures that preventive measures are based on comprehensive data, leading to improved traffic safety outcomes.

## Conclusion

A well-implemented IDTS enhances the ability of agencies to track repeat offenders, improve data accuracy, and support data-driven policy decisions. This project provides a comprehensive assessment of IDTSs across 8 States, examining their structures, challenges, and implementation strategies. The findings highlight three current primary approaches to tackling impaired-driving offenses: unified standalone systems, tracking systems in larger frameworks, and decentralized tracking systems. While these systems differ in structure, all participating States share some common challenges, including funding limitations, legislative constraints, data integration issues, and staff turnover.

Additional findings from this study emphasize key best practices for IDTS implementation, including establishing central coordination, securing sustained funding, leveraging existing data systems, and ensuring legislative support. Addressing all these factors is critical for overcoming system fragmentation and ensuring impaired-driving cases are accurately tracked from arrest through adjudication and sanctioning.

To support States in strengthening their IDTS, the companion *Guide for Implementing an Impaired Driving Tracking System* (Okyere et al, in press) equips stakeholders with the tools necessary to successfully plan, implement, and sustain such systems in their own jurisdictions. The guide provides actionable recommendations tailored to different system models, ensuring flexibility in adapting best practices to each State's unique needs. Leveraging the insights from this project and applying the guide enhances States' data coordination, streamlines enforcement efforts, and improves impaired-driving prevention strategies—ultimately reducing recidivism and enhancing public safety.

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# Appendix A: Resources for Focused Literature Review

## Inclusion Criteria for Literature Review

The researchers conducted a literature review to identify current literature on IDTSs. This process involved searching the Transportation Research Information Services, the National Cooperative Highway Research Program, Google Scholar, and State Departments of Transportation databases and websites for relevant resources. To ensure relevance, the researchers focused on sources published from 2000 onward. However, foundational reports from 1991 and 1997 were included to provide historical context and build upon existing research. Search terms included IDTS, Impaired Driving Tracking System, Model Impaired Driving Tracking System, as well as variations and combinations of terms such as DUI, DWI, Driving Under the Influence, and Driving with Impairment, paired with data, tracking, system, and information system.

The researchers conducted an initial screening of search results by reviewing abstracts and, when necessary, scanning full texts at a high level. The screened results were categorized by relevancy according to the following inclusion criteria:

1. Any published report or peer-reviewed article that:
    - has background information on IDTS,
    - has benefits associated with developing IDTS,
    - identifies States with developed IDTS,
    - identifies "best practices" for States and key stakeholders, and
    - discusses standards, guidelines, data elements, and functional requirements to successfully implement and maintain an IDTS.
2. Seminal literature resources recommended by NHTSA.
3. Literature resources recommended by the researchers' subject matter expert, Dr. Troy Walden.

After collecting the resources and evaluating them at a high-level by their relevancy, the researchers refined the list to review only those that appeared to be "definitely related" to the project as recommended by the Transportation Research Board (2015).

### *List of Resources*

The application of the criteria above to the resources identified in the researchers' initial searches resulted in a final list of 26 resources, which included NHTSA published reports, States' strategic plans, a book, presentations, journal articles, and a guidebook and manual.

*Table 8. List of Resources*

| Name | Type | Author | Year Published | URL | Inclusion Criteria Met |
|---|---|---|---|---|---|
| *DWI Tracking System Volume 1: Design & Operation* | Report | Capital Consulting Corporation | 1997 | www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjNwYnAlN6BAxWgk2oFHfb6AgoQFnoECA8QAQ&url=https%3A%2F%2Frosap.ntl.bts.gov%2Fview%2Fdot%2F1621%2Fdot_1621_DS1.pdf&usg=AOvVaw3COQeWuLGnxcU4mk_bp4e3&opi=89978449 | 2&3 |
| *DWI Tracking System Volume 2: State Tracking System Descriptions* | Report | Capital Consulting Corporation | 1997 | https://rosap.ntl.bts.gov/view/dot/1042 | 2&3 |
| *DWI Tracking System Volume 3: DWI Estimates for the United States. Methodology section* | Report | Capital Consulting Corporation | 1997 | https://rosap.ntl.bts.gov/view/dot/1618/dot_1618_DS1.pdf | 1, 2&3 |
| *Impaired Driving Information on Data Used to Identify Repeat Offenders* | Report | Government Accountability Office | 2023 | https://www.gao.gov/assets/gao-23-105859.pdf | 1, 2&3 |
| *Strategies to Improve State Traffic Citation and Adjudication Outcomes* | Book | Justin M. Owens; Transportation Research Board | 2023 | https://nap.nationalacademies.org/download/26875 | 1,2&3 |
| *State Challenges to Improving Traffic Safety Coordination* | Report | NHTSA | 2023 | https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813486 | 2 |

| Name | Type | Author | Year Published | URL | Inclusion Criteria Met |
|---|---|---|---|---|---|
| *2021 Annual Report of the California DUI Management Information System* | Report | Sladjana Oulad Daoud | 2022 | https://trid.trb.org/view/2072010 | 1, 2&3 |
| A Letter to the Honorable Robert C. Byrd | Official Correspondence | Jeffrey W. Runge, NHTSA Administrator | 2004 | www.nhtsa.gov/sites/nhtsa.gov/files/documents/repeatoffendertracking.pdf | 3 |
| California DUI Management Information System Dashboards | Dashboards | California Department of Motor Vehicles | n.d. | www.dmv.ca.gov/portal/dmv-research-reports/research-development-data-dashboards/dui-management-information-system-dashboards/ | 1&3 |
| *Connecticut Impaired Driving Records Information System* | Report | Office of Policy and Management | 2009 | https://portal.ct.gov/-/media/opm/cjppd-main/cjppd/cjcjis/cjispublications/nhtsafinal/cidrisdemopart1pdf.pdf?rev=c6034337e9cd48ae9b90da7fe898fc0b | 1&3 |
| *Development of a Statewide DUI Statistical Tracking System* | Journal Article | R. C. Peck | 1991 | https://trid.trb.org/view/365069 | 3 |
| *DWI Dashboard Strategic Guide: Addressing Gaps in the DWI System* | Guidebook | Robertson, Robyn D. Robertson & Devon Valentine, Traffic Injury | 2017 | https://trid.trb.org/view/1501662 | 3 |

| Name | Type | Author | Year Published | URL | Inclusion Criteria Met |
|---|---|---|---|---|---|
| | | Research Foundation | | | |
| *DWI Tracking System Feasibility Project* | Report | Troy Walden, Cody Steward, Cinthya Roberto Soares, and Paige Ericson-Graber | 2017 | www.texasimpaireddrivingtaskforce.org/wp-content/uploads/2017/10/DWI-Tracking-System-Feasibility-Final-Report-9.21.17.pdf | 3 |
| *Effective Strategies to Reduce Drunk Driving: Alcohol Monitoring Technologies: Screening Assessment, and Treatment* | Report | R. D. Robertson & E. A. Holmes | 2011 | https://trid.trb.org/view/1149222 | 3 |
| Guidelines for Impaired Driving Records Information Systems | Federal Regulation | 71 FR 51665 | 2006 | www.federalregister.gov/documents/2006/08/30/E6-14463/guidelines-for-impaired-driving-records-information-systems | 3 |
| *High-Risk Impaired Drivers: Combating a Critical Threat* | Report | Pam Shadel Fischer | 2019 | www.ghsa.org/resource-hub/high-risk-impaired-drivers-combating-critical-threat | 3 |

| Name | Type | Author | Year Published | URL | Inclusion Criteria Met |
|---|---|---|---|---|---|
| Integration of Kansas DUI Tracking System Report and Police Impaired Drivers (RAPID) | Electronic Court Disposition/ Filing Interface Implemen-tation Description Document | Analysts International Corporation | 2013 | https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.kansas.gov%2Fkbi%2Finfo%2Fdocs%2FElectronic%2520Court%2520Disposition%2520Filing%2520Interface%2520Implementation%2520Description%2520Document%2520v1.2.3.docx&wdOrigin=BROWSELINK | 1&3 |
| *Investigation – Kansas DUI Tracking System Record and Police Impaired Drivers (RAPID) III* | Web page | Kansas Department of Administra-tion | 2016 | www.ebit.ks.gov/home/showpublisheddocument/252/638313093837600000 | 1&3 |
| Model Impaired Driving Records Information Systems – Tying Together Data Systems to Manage Impaired Drivers | Report | Pamela Greer | 2011 | www.nhtsa.gov/sites/nhtsa.gov/files/811489.pdf | 1&3 |
| RFP HSS-22-023 – Driving Under the Influence (DUI) Screening and Referral Program (DSARP): Questions and Answers | Q &A Document | Barr, 2022 | 2022 | https://bidcondocs.delaware.gov/HSS/HSS_22023Duidsarp_qa.pdf | 3 |
| *Safety Data and Analysis in Developing Emphasis Area Plans* (See | Report | Council et al. | 2008 | https://mdotjboss.state.mi.us/TSSD/getTSDocument.htm?docGuid=c5cee791-1bf8-472e-b5ad-1af39c02eb92&fileName=14170.pdf | 3 |

| Name | Type | Author | Year Published | URL | Inclusion Criteria Met |
|---|---|---|---|---|---|
| Citation Tracking and DUI Tracking Files on Page 14.) | | | | | |
| State of Missouri Substance-Impaired Driving Strategic Plan | Strategic Plan | Missouri Coalition for Roadway Safety's Substance-Impaired Driving Subcommittee | 2020 | www.modot.org/sites/default/files/documents/Substance%20-%20Impaired%20Driving%20Strategic%20Plan%20June%202020%20-%20FINAL.pdf | 1&3 |
| *State of North Carolina Traffic Records Assessment* | Report | Austin et al. | 2017 | https://connect.ncdot.gov/groups/NCTRCC/Documents/2017%20NC%20Traffic%20Records%20Assessment.pdf | 1&3 |
| 2017-2020 Impaired Driving Task Force Strategic Plan | Strategic Plan | Tennessee Department of Safety & Homeland Security | 2021 | https://tntrafficsafety.org/sites/default/files/idtf_strategic_plan_revised_7-21-19.pdf | 1&3 |
| The National Agenda: A System to Fight Hardcore DWI | Sourcebook | National Hardcore Drunk Driver Project | 2003 | https://popcenter.asu.edu/sites/default/files/problems/drunk_driving/PDFs/CenturyCouncil_2003.pdf | 3 |

| Name | Type | Author | Year Published | URL | Inclusion Criteria Met |
|---|---|---|---|---|---|
| *Value of a Web Based Tracking of Driving Under the Influence (DUI) Offenders to Increase Convictions in a State Traffic Records System* | Report | Richard McCowen, Bob Richie, and Erick Moran | 2006 | | 3 |

# Appendix B: Overview of States' Impaired-Driving Tracking Systems

Table 9 summarizes the different forms of IDTS used by the 22 States from which the researcher selected the States to participate in the project.

*Table 9. Summary Description of Impaired Driving Tracking Systems in 22 States*

| Category | State | NHTSA Region | Description of IDTS |
|---|---|---|---|
| Part of MIDRIS | Alabama | 4 | Alabama's impaired driving tracking system, the Model Impaired Driving Access System (MIDAS), remains part of the larger Law Enforcement Tactical System (LETS). The system is part of a secure, web-based search engine that accesses Alabama's State databases with one query. The system provides law enforcement with critical information including vehicle, driver, and violation data though traditional and mobile data terminals in patrol units by using internet connectivity. LETSGo is an improved version of LETS and is the fourth iteration of the system integrated into the mobile officer virtual environment (MOVE). The system has a built-in text-to-speech search-and-report engine that provides a voice readout of summary information from over thirty State databases. The LETSGo system is managed through the Alabama Criminal Justice Information Center and the University of Alabama Center for Advanced Public Safety (University of Alabama, 2023). |
| Part of MIDRIS | Iowa | 7 | Iowa's Traffic and Criminal Software (TraCS) system stores all traffic citations in the State and electronically transmits the information to the Criminal Justice Information System (CJIS) (Greer, 2011). Improvements to the Iowa TraCS include the integration of the State's mobile accident report system (MARS) information. This information includes crash event data for persons, vehicles, and roadways. Improvements in crash location plotting enhance specificity in lieu of traditional latitude/longitude coordinates that are captured via patrol car location. Electronic Citation Component (ECC) information can be queried through TraCS, which provides traffic infraction information tied to the impaired driving offense. Mobile operating while intoxication breath test results are auto-populated, and vehicle towing and release reports are part of TraCS. However, the information must be printed and then entered into TraCS separately (Iowa DOT, 2023). |

| Category | State | NHTSA Region | Description of IDTS |
|---|---|---|---|
| Part of MIDRIS | Nebraska | 7 | Impaired driving cases are not currently being tracked in Nebraska. However, the State is considering re-examination of the MIDRIS impaired driving tracking system for changes. The Nebraska Traffic Records Coordinating Committee (TRCC) is reviewing the use and utility of the MIDRIS impaired driving tracking system to determine if changes are needed and to determine if the system is being used to its fullest capacity. If the MIDRIS impaired driving tracking system were reinstated, captured information would include linking variables associated with the Electronic Citation System. Variables would include Computer Aided Dispatch (CAD) record numbers, citation/arrest/incident numbers, court case numbers, locations, personal identifiers (name, address, driver license number), vehicle license plate numbers, and vehicle identification numbers (Nebraska DOT Highway Safety Office, 2023). |
| Part of MIDRIS | Wisconsin | 5 | Wisconsin already had components of a MIDRIS before beginning the demonstration project. With MIDRIS, Wisconsin enhanced its online driver/offender history by adding data to aid in the identification, arrest, and sanctioning of offenders; improving data accuracy through electronic transfers of legal forms; developing enhanced reporting capabilities for identifying target populations and trends; and providing stakeholders with faster record updates and online data access (Greer, 2011). |
| Independent IDTS | California | 9 | The "California Driving Under the Influence Management Information System (DUI-MIS)" was developed in California in 1989 as a result of the legislative mandate that required the development of a data and monitoring system to evaluate the efficacy of intervention programs for persons convicted of impaired driving in California. The DMV oversees this system with partnerships with the Department of Justice. Data sources include impaired driving arrest data (felony, misdemeanor, or juvenile arrest), age, gender, ethnicity, county information, impaired driving conviction data (blood alcohol concentration levels, number of previous arrests, related traffic infractions, subsequent convictions, and adjudication time lags ), post-conviction sanctions (probation, jail, impaired driving programs, post-conviction |

| Category | State | NHTSA Region | Description of IDTS |
|---|---|---|---|
| | | | sanctions, license suspensions or revocations, administrative per se sanctions, test refusals, and ignition interlock assignment), and alcohol- and drug-involved crash data (impaired driving reported with crash, impairment type as either alcohol or drug, prior impaired charges or convictions (California Department of Motor Vehicles, 2022). |
| Independent IDTS | Kansas | 7 | The Kansas Bureau of Investigation (KBI) and the Kansas Department of Transportation utilized the Kansas Criminal Justice Information System (KCJIS) to improve electronic disposition reporting for impaired driving offenses. State and local agencies use KCJIS to submit and store public safety information electronically, including impaired driving dispositions (NIEMGitHub, 2015). Information that is mandated by Kansas statute includes the issue of arrest warrants, arrests, release of a person after arrest without filing a charge, filing of a charge, dismissal of indictment or criminal information, acquittal, conviction or other case disposition at or following trial (including a finding of probation before judgement), imposition of sentence, commitment to correctional facility, release from detention or confinement, escape from confinement, pardon or reprieve of sentence, and judgement of an appellate court that modifies or a reverses lower court decision (Kansas Office of Revisor of Statutes, 2022). |
| Independent IDTS | Minnesota | 5 | Minnesota utilizes an electronic platform, eCharging, to process all impaired driving incidents. Within eCharging, law enforcement officers are able to use data from multiple databases within Minnesota. The eCharging platform connects with Driver and Vehicle Services databases to provide driving record data for suspected impaired drivers. Since 2012, data from all DWI arrests processed in eCharging are routed in near real-time to the DWI Dashboard. The DWI dashboard is an important tool for tracking DWI arrests across the State, and identifying areas with high concentrations of DWI arrests and/or impairment-related crashes, in addition to providing data about DWI arrest demographics, liquor establishment locations, and more. This tool is available to all of law enforcement (Minnesota Department of Public Safety, 2021). |

| Category | State | NHTSA Region | Description of IDTS |
|---|---|---|---|
| Independent IDTS | Missouri | 7 | Missouri's IDTS is a statewide initiative that allows for near real-time sharing of impaired driving incident data (Missouri Department of Public Safety, 2023). The Missouri State Highway Patrol has been designated as the State agency responsible for managing and maintaining the system. The system draws data from the Fatality Analysis Reporting System, State Traffic Accident Record System, Traffic Management System, Department of Revenue Driver License Bureau, Judicial Information System, "Show-Me Courts," other disposition reporting vendors, and the Department of Mental Health. Reporting to the system is not currently mandatory, and universal participation is lacking (Missouri Coalition for Roadway Safety's Substance-Impaired Driving Subcommittee, 2020). |
| Independent IDTS | Tennessee | 4 | In 2002, researchers at the University of Memphis developed improvements to the "DUI Behavioral Tracking System" that included details of the impaired driving prosecution chain that were missing from the State's first system. The result was an exhaustive collection of data from which the State could identify issues, draw conclusions, and recommend safety and offender treatment options. Users of the system have access to arrestee demographics, vehicle information, arresting agencies, sobriety tests, pre- and post-stop behavior, court information, charges, and treatment information. The current DUI Behavioral Tracking System is a web-driven, enterprise-level application that provides real-time updates and reports that improve timely data access for law enforcement officials and the judiciary. On average, eight thousand to ten thousand impaired driving cases are entered annually. The Highway Safety Office continues to fund the State's impaired driving data-tracking system. Currently, there are 57 active users of the Tennessee Integrated Traffic Analysis Network (TITAN) DUI Tracker system across the State (Tennessee Department of Safety & Homeland Security, 2021). |

| Category | State | NHTSA Region | Description of IDTS |
|---|---|---|---|
| Impaired driving tracking as part of a larger system | Alaska | 10 | Alaska does not operate a standalone impaired driving tracking system. Instead, the State integrates impaired driving data collection and management in its broader traffic safety and law enforcement systems. Key components include the TraCS application, which enables law enforcement officers to electronically record and retrieve incident information, including DUI arrests, directly from the field. The Alaska Highway Safety Office coordinates highway safety programming and administers Federal funding for projects aimed at reducing impaired driving. It collaborates with various agencies, including the Alaska Court System, Department of Public Safety, and Division of Motor Vehicles, to manage and utilize impaired driving data effectively. Additionally, the Department of Transportation and Public Facilities maintains the Spatially Integrated Roadway Information System (SIRIS), which includes the Crash Data System collecting data on traffic fatalities and injuries, including those related to impaired driving incidents. |
| Impaired driving tracking as part of a larger system | Colorado | 8 | The State's driver, vehicle, and crash data are integrated into the DRIVES system. This data include DUI-related driver information, such as DUI convictions, DUI arrests, etc. However, Colorado does not have a separate DUI-tracking system that is integrated with the driver system (Action Staffing Solutions, 2012). |
| Impaired driving tracking as part of a larger system | Connecticut | 1 | The State does not have a separate impaired driving tracking system. The DMV administers and collects data required for impaired drivers on the DUI system, which is integrated with the driver history records system. There is no integration or interface, however, with the judicial records. Judicial personnel have access to all DMV records. If this data were to be interfaced or integrated, it would be more useful to all those who deal with impaired drivers in the State. The infrastructure and data for a comprehensive DUI-tracking system exist, but there does not appear to be a DUI-tracking system that the driver data system interfaces with (Archibeque et al., 2021). |

| Category | State | NHTSA Region | Description of IDTS |
|---|---|---|---|
| Independent IDTS | Delaware | 3 | The Delaware Justice Information System (DELJIS) follows the progress of impaired driving offenders from the point of interaction with the court through the completion of their mandated education or treatment program. The State's Department of Technology and Information manages the DELJIS system. In January 2019, the DELJIS program was moved from the Office of Highway Safety (OHS) to the Division of Public Health - Division of Substance Abuse and Mental Health. OHS agreed to continuing funding the tracking system until the end of the calendar year 2019 (Delaware Office of Highway Safety, 2018). Although OHS does not house any data systems, extensive partnerships have been established with numerous highway safety partners that provide access to raw data which is key to the State's problem-identification process (Delaware Office of Highway Safety, 2019). |
| Impaired driving tracking as part of a larger system | D.C. | 3 | The District of Columbia has a DUI system that is interactive, but does not appear to be available to all appropriate parties, particularly the Department of Motor Vehicles. D.C. does not have a separate DUI system linked to the driver data system; DUI citations may be tracked in the Prolaw system used by prosecutors. |
| Impaired driving tracking as part of a larger system | Florida | 4 | Florida is supported by a DUI Client Data System (CDS) tracking system that records the education, enforcement actions, and treatment of a DUI offender. Additionally, the State's Traffic Citation Accounting and Transmission System (TCATS) allows tracking of all DUI citations and dispositions. Dispositions from TCATS are processed electronically, and the dispositions are added to the Florida records. The Florida DUI citation number is included in all files and serves to link these entries in the CDS, TCATS, and the driver system. As of 2020, the Florida Department of Highway Safety and Motor Vehicles (FLHSMV) secured grant funds to start working toward creating such a system, but one does not currently exist (Benac et al., 2020). |
| Impaired driving tracking as part of a larger system | Louisiana | 6 | Louisiana's impaired driving tracking system is a component of the Integrated Criminal Justice Information System (ICJIS), which is designed to provide accurate, complete, and reliable information |

| Category | State | NHTSA Region | Description of IDTS |
|---|---|---|---|
| | | | regarding the arrest of impaired drivers. The system includes information on impaired driving, such as case prosecution, dismissal, conviction, disposition, and completion of sentence. Data points that must be submitted by users include information about the arrested individual (name, address, driver license number, date of birth, and physical characteristics including eye color, hair color, and gender); pertinent arrest information such as the date and location of offense, arresting officer, violation charged, submission or refusal to submit to an alcohol or drug test and the results of that test. (LA Rev Stat § 15:1228.9 [2015]) |
| Impaired driving tracking as part of a larger system | Mississippi | 4 | Mississippi's impaired driving tracking system is part of a broader traffic records system maintained by the Mississippi Department of Public Safety, specifically the Driver Services Bureau (DSB). It tracks individual driving records in the State, storing impaired driving citations for 5-6 years. The system includes arrest details, license information, arresting agency, conviction points, severity, disposition, suspension date, arraignment, fine amount, jail time, community service hours, BAC information, drug test information, officer badge number, and Law Enforcement Agency (LEA) identifiers. Data collection is through hardcopy exchange and electronic transfer and includes information on out-of-State drivers who may be arrested for impaired driving in Mississippi (Capital Consulting Corporation, 1997b).<br>A DUI tracking system operates through the driver history file. It is generally useful and comprehensive, but two factors limit its effectiveness. One limitation is the failure to receive adjudications of the third DUI offense from the circuit court. The other is the inability to complete the processing of DUI offenders when BAC results are not obtained. |
| Impaired driving tracking as part of a larger system | New Jersey | 2 | New Jersey's impaired driving tracking system is part of the Automated Traffic System (ATS) operated by the Administrative Office of the Courts, Municipal Court Services Division (Capital Consulting Corporation, 1997b). ATS was designed for non-court users who access the system from remote sites. The information includes violations, sentences, payments, bail, and warrant information |

| Category | State | NHTSA Region | Description of IDTS |
|---|---|---|---|
| | | | when applicable. ATS automates case management and financial procedures while facilitating the direct electronic exchange of information between the Motor Vehicle Commission and the municipal courts (New Jersey Administrative Office of the Courts, 2011). Information on DWI violations is stored in the Automated Compliant System (ATS/ACS). There is no separate database to track DWI offenders. |
| Impaired driving tracking as part of a larger system | New Mexico | 6 | There is not a separate DUI-tracking system in the State of New Mexico. New Mexico's Department of Taxation and Revenue, Motor Vehicle Division's (MVD) Tapestry system serves as the statewide tracking system as well as the statewide DUI-tracking system. Currently, DUI arrest and court dispositions are received by MVD staff in paper form and entered into the Tapestry system. New Mexico maintains an impaired driving data-tracking system within the Tapestry data system. The statewide DUI-tracking system provides a central point of access for DUI Driver information from the time of a stop/arrest through adjudication, sanctions, rehabilitation, prosecution, and posting to the driver history file (Riley et al., 2021). |
| Impaired driving tracking as part of a larger system | New York | 2 | The Traffic Safety Statistical Repository (TSSR) provides access to New York State's traffic safety data. The TSSR is comprised of three ticket-reporting systems, including the Traffic Safety Law Enforcement and Disposition (TSLED) and the Traffic Violations Bureau (TVB). The third system is maintained by the New York City Police Department, and it captures data about tickets issued for impaired driving in New York City. All information included in these systems is updated twice annually as part of the TSSR system. For selected types of tickets, a variety of information is displayed, including adjudication status and conviction rates, enforcement agencies that issued the tickets, driver age and gender, region, dates, tickets issued for companion violations, driver license jurisdiction, driver penalties, sanctions, and fines. The TSSR project was designed and implemented by the University at Albany's Institute for Traffic Safety Management and Research (New York State Department of Motor Vehicles, 2017). |

| Category | State | NHTSA Region | Description of IDTS |
|---|---|---|---|
| Impaired driving tracking as part of a larger system | North Carolina | 4 | North Carolina tracks impaired driving cases within their Automated Criminal Infraction System (ACIS) managed by their Administrative Office of the Courts (AOC) (NHTSA, 2017b). ACIS provides a framework for criminal cases and infraction case data such as citations and criminal summons. Criminal case data is entered from documents (e.g., warrants for arrest, orders for arrest, magistrate orders) or received electronically. Infraction case data is entered from case-initiating documents (e.g., citations and criminal summons) and updated as needed, or received electronically from eCitation. Criminal and infraction cases are tracked from initiation through disposition. Inquiry access is available to court officials, law enforcement, and others, and cases are tracked through both district and superior courts. The ACIS system is able to be accessed through the Department of Motor Vehicles to add driver license data for automated entry into system fields (North Carolina Administrative Office of the Courts, 2013). |
| Impaired driving tracking as part of a larger system | Utah | 8 | Utah has an IDTS as a subset of the Department of Public Safety, Driver License Division (DLD) Driver Records System, working in collaboration with the Management Information Systems Division. The IDTS tracks impaired driving arrests, charges, pleas, dispositions, etc., and driver records are updated with notations of judicial proceedings related to impaired driving cases received from the courts. Data is collected from LEAs, courts, and other State agencies, with regular reports from the courts allowing the DLD to update driver records on impaired driving judicial proceedings. The system also maintains records of traffic violations for drivers with out-of-State licenses when they commit offenses in Utah (Capital Consulting Corporation, 1997b). |
| Impaired driving tracking as part of a larger system | Vermont | 1 | The State does not maintain a separate DUI-tracking system, but there are established procedures with the courts to obtain DUI conviction data via a paper process that is then updated to the driver records and used to impose driver license actions as needed (Archibeque et al., 2022). |

# Appendix C: Master Discussion Guide

## Introduction

Hello, and thank you for joining us today!  My name is [name]. I am a researcher with 2M Research, the policy research firm conducting this project. I will be facilitating our conversation today. We are also joined by [anyone from 2M who may be joining], who will support this conversation by taking notes and possibly asking clarifying questions.

I will start by briefly introducing the project, the purpose of our conversation, and making sure we cover any questions you have before beginning the discussion.

The National Highway Traffic Safety Administration (NHTSA) is interested in learning more about how States are working to reduce the impaired driving problem through law enforcement efforts and other countermeasures. The objectives of the project are to (a) conduct an analysis of the current state of impaired driving tracking systems (IDTSs) and (b) develop a guide for the development, implementation, and evaluation of IDTSs. The guide is intended to help States interested in implementing IDTSs.

We have invited you to join this discussion about IDTS in your State. The purpose of the discussion is to learn more about the status and characteristics of your State's IDTS. Specifically, we would like to understand the efforts made to deploy and maintain such a system, the challenges faced in deploying and maintaining the system, resources necessary to develop and maintain the system, and any notable successes and lessons learned from implementing the system.

Our discussion will last approximately 90 minutes.

## Consent

Your participation in the discussion today is voluntary. You may decline to discuss any questions you do not wish to speak to, and you may leave the conversation at any time with no negative consequences.

To ensure we capture your comments and suggestions accurately, our discussion today is being audio-recorded, and our research team is taking notes.

We will not include your name, or attribute your name to quotes, in documents that summarize these discussions.

Do you have any questions that I might answer before we proceed?

**Opening:** Let's begin with learning more about you and your role.

1. Can you tell us a bit about yourself and your role?

Probe:

- Can you briefly describe your experiences with IDTS and your involvement in its implementation and maintenance?

## Section I. Efforts to Deploy the System

These next few questions focus on the overview of your State's IDTS, and the efforts made to deploy the tracking system. By NHTSA standards, an IDTS, as defined in the Driving While Intoxicated Tracking Systems, Volume 1 report (Capital Consulting Corporation, 1997a), is a system that allows States to accomplish the following goals—

a. Track impaired driving offenders from arrest through disposition (and through the completion of court and administrative sanctions).

b. Show impaired driving trends and how well countermeasures are working.

c. Contain up-to-date and accurate information to allow law enforcement, prosecutors, judges, the DMV, and other key stakeholders to help ensure the appropriate charges and penalties are administered.

d. Reduce administrative costs for the system stakeholders and increase system efficiencies.

An IDTS involves a conglomerate of data management systems from various agencies that share common information about a desired goal.

2. Please provide a high-level overview of the current impaired driving tracking system used in your State.

Probes:

- When was the system established?
- Is the system a standalone/independent system or part of larger data system?
- Can you please clarify if your State's impaired driving tracking system is currently functional?
- Can you describe the primary data sources used in your impaired driving tracking system?
- How are data from the different sources integrated in your system?
- How do you ensure that the systems do not overlap, data entry is not duplicated, and all involved systems are standardized?

3. Please describe the specific steps or process involved in designing or deploying your State's tracking system.

Probes:

- What considerations were taken into account during the design phase to ensure effective data linkage across agencies?
- Can you elaborate on the technological infrastructure supporting the system?
- Were there any collaboration efforts with other agencies during the design and deployment phase?
- How is the system designed to track people from arrest through disposition?

4. Could you share insights into the efforts undertaken by your State during the development phase to ensure the system's effectiveness?

Probe:

- Are there legislative, leadership, or stakeholder commitments that were crucial to the successful development of the system?

5. What resources are required for the development of your State's impaired driving tracking systems?

Probes:

- Specifically, can you discuss what resources—including funding, technology, and training—are necessary for the development of the system?
- How do you allocate these resources to ensure the sustainability of the system?

6. What were the key successes in deploying the tracking system?

Probes:

- Why do you think these strategies or approaches worked for your State?

7. What challenges did you experience during the design and deployment process?

Probes:

- Were there any unexpected obstacles that required unique solutions?
- How did you address and work around these challenges?
- What areas related to the design and deployment of your system do you think would benefit from further improvement?

## Section II. Strategies to Maintain the System

The next questions relate to how your tracking system is maintained.

8. Can you describe your approach to maintaining the functionality and relevance of your State's impaired driving tracking system?

Probes:

- How is the responsibility for system maintenance distributed among the relevant partners or stakeholders?
- Are there specific roles or teams dedicated to different aspects of maintenance?
- How do you ensure the system remains up to date with evolving technologies and data standards?

9. What resources are required for the ongoing maintenance of your State's impaired driving tracking systems?

Probes:

- Specifically, can you discuss what resources—including funding, technology, and training—are necessary for the maintenance of the system?
- How do you allocate these resources to ensure the sustainability of the system?

10. What challenges have you encountered in maintaining the system over time?

Probes:

- Are there specific legal or regulatory challenges that impact the maintenance of the system?
- How did you address and work around these challenges?
- How do you address privacy considerations when collecting and utilizing data in the system?
- How do you address issues related to data accuracy, completeness, and timeliness in the system?
- What areas related to the maintenance of your system do you think would benefit from further improvement?

## Section III. Data Utilization and Impact on Countermeasures

Our last topic relates to ways you have used data from the system to better allocate resources and/or improve countermeasures related to impaired driving.

11. How is data from the impaired driving tracking system utilized to allocate resources effectively?

Probe:

- Can you provide examples of instances where data-driven decisions were made?

12. In what ways has the system's data contributed to the improvement of countermeasures or preventative strategies?

Probe:

- Can you provide specific outcomes or success stories related to countermeasure effectiveness resulting from the data in the system?

13. In your opinion, what are the key success factors for an effective IDTS?

## Closing

Those are all the questions we have for you today.

**Are there any comments you would like to add regarding the deployment, maintenance, or utilization of the system?**

Thank you for taking time out of your busy day to talk with us today. Your answers have provided us with valuable insights into your State's IDTS. Should you have any additional thoughts to share, please feel free to contact us.

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