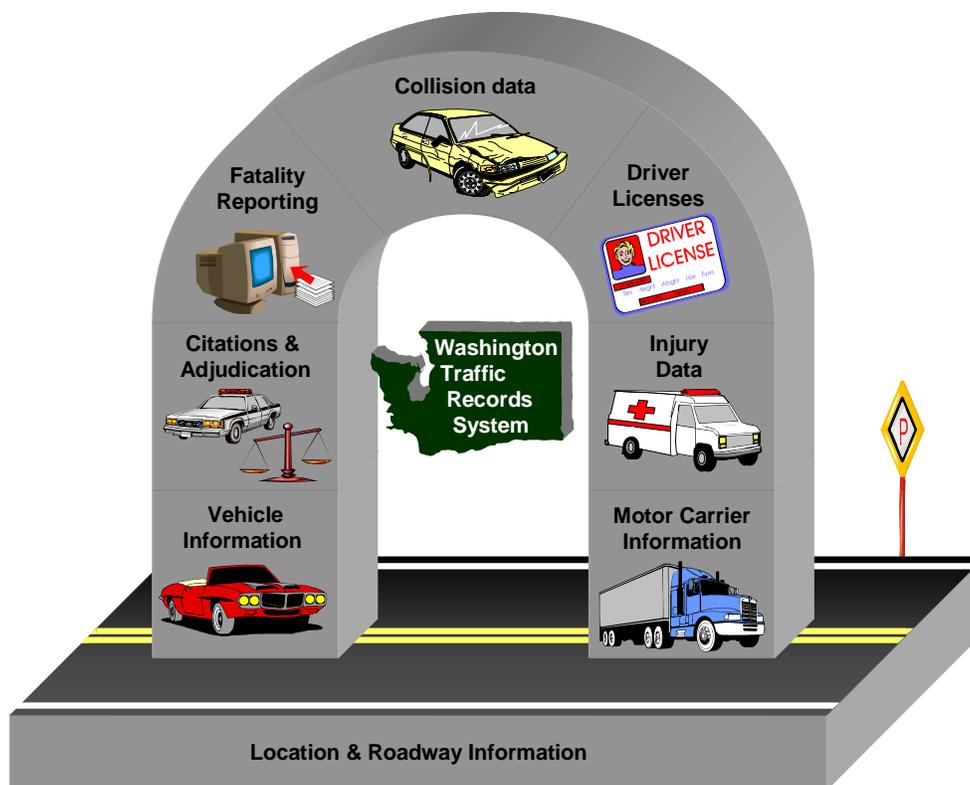


Washington's Traffic Records System – An Overview

Traffic records data is the primary source of knowledge about the quality and safety of our state's transportation environment. Reliable data provides the underpinnings of an effective campaign to reduce injuries and fatalities on the state's roadways. Washington traffic records is a virtual system of the hardware, software and accompanying processes that capture, store, transmit, and analyze the following types of data:

- Collisions
- Citations & Adjudication
- Drivers
- Registered Vehicles
- Traffic Fatalities
- Motor Carriers (Commercial Vehicles)
- Injury Surveillance (Emergency Medical Services, Emergency Department, Trauma, Hospital inpatient, Death Records)
- Roadway (Traffic Volume, Features Inventory, Geometrics, etc.) and Location (Geographic Information Systems)

The following diagram provides a visual illustration of Washington's traffic records system:



Washington's traffic records system provides key information to support decisions regarding public and transportation safety. While these systems were originally developed to satisfy the various business requirements of administrating agencies, these systems also provide critical data for identifying traffic safety problems and for the development of policy and countermeasure programs. Information derived from these systems is equally valuable in evaluating program effectiveness and documenting progress toward key measures of

performance to enhance management and accountability in public service. Timely, accurate, integrated, and accessible traffic records data is crucial to Washington's efforts to improve public safety.

Each component of Washington's traffic records system is maintained by one, or in some cases two, agencies. Likewise, the data derived from each component is provided by one or more agencies. The following table displays the relationship among the agencies involved in Washington's traffic records efforts and each component of the overall system. In addition to identifying data providers and system administrators, this table also illustrates the broad usership of the data produced by each traffic records system component.

Traffic Records Component	Entity										
	Washington State Patrol	Washington State Department of Transportation	Administrative Office of the Courts	Washington State Department of Licensing	U.S. Department of Safety Commission	Local Law Enforcement Department of Health	Hospitals, Emergency Depts, EMS Agencies	County Road Administration Board	County Road Agencies (WASPC)	Washington State Department of Transportation Board	
Collisions	 	 		 	 		 	 	 	 	
Driver License & Vehicle Registration				 				 			
Injury Surveillance (EMS, Trauma, Emerg. Dept., Hospital, Death Records)						 					
Citations & Adjudication			 					 			
Motor Carriers (Commercial Vehicles)	 						 	 			
Fatality Reporting					 		 	 			
Roadway (traffic volume, feature inventories, geometrics) & Location (GIS)		 								 	

The remaining portion of this section of the strategic plan provides a summary of the components that make up Washington's traffic records system. Each summary begins with an advisory box detailing the optimum characteristics for each component. Portions of the advisory may not be supported by current systems within the state but should be incorporated to create a model traffic records system. Component summaries also detail the various on-going or proposed projects intended to improve the data derived from these systems. This section will not supply detailed data system descriptions. In 2004, the TRC produced the Traffic Records Committee Resource Manual which provides an in-depth description of each system within Washington traffic records. The Traffic Records Committee Resource Manual also contains information regarding the agencies involved in the administration and support of the varied data systems.

Collision Component

The collision component is the keystone of the state's traffic records system. The benefits and overall utility derived from the other components are significantly enhanced by valid and reliable statewide collision data. Linking the various other components to collisions provides valuable analysis capabilities of specific event and outcome characteristics such as: location, person, vehicle, time, weather, driver behavior, etc. Collision data drives a state's highway safety and injury prevention programs and has widespread use among all levels of government, private industry, research groups, lawmakers, and the general public. These groups and agencies utilize collision information to:

- *Determine high accident locations and corridors*
- *Guide engineering and construction projects*
- *Establish policing levels and emphasis*
- *Identify high risk drivers*
- *Select and evaluate safety countermeasure programs.*

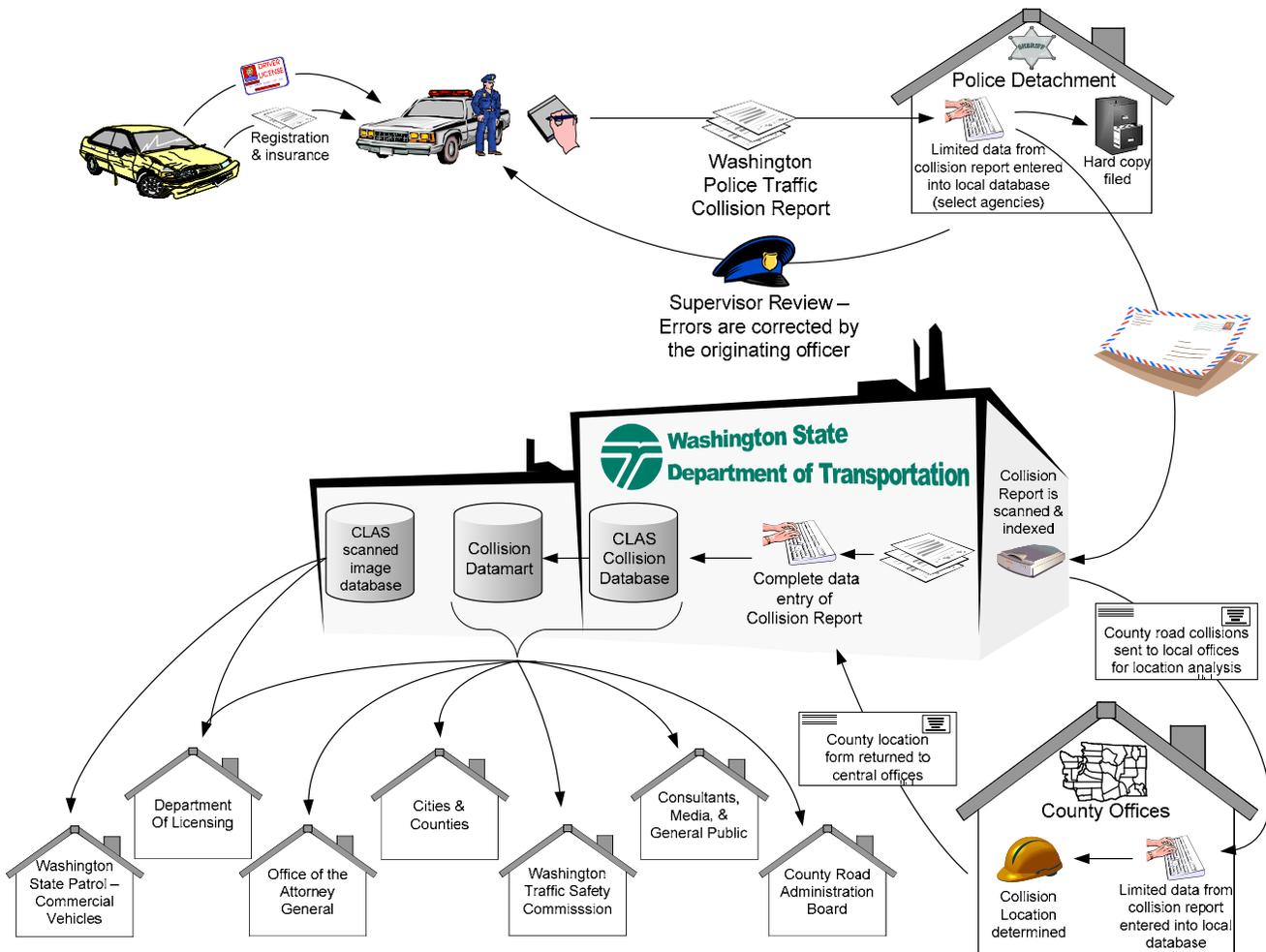
In order to meet the wholesale needs of users, collision data must be timely, complete, accurate, and accessible. Comprehensive data from every reportable collision occurring on a public roadway must be included in the statewide repository. In order to effectively evaluate collision data nationally, the state's repository should adhere closely to the Model Minimum Uniform Crash Criteria (MMUCC) standard.

A timely and accurate collision data component forms the foundation of an effective traffic records system. This provides ready access to information and data used in the development of safety programs. Revised Code of Washington (RCW) 46.52.030 requires that a report be filed for each collision resulting in the injury or death of any person, or damage to property in excess of \$700. Collision data is perhaps the most widely used and depended upon information within the traffic records system. The Washington State Department of Transportation (WSDOT) invests over \$130 million each biennium in safety improvement projects based primarily on collision information. Numerous other agencies, both state and local, use collision data as the basis for spending millions on engineering and behavioral programs to improve the state's roadways and reduce traffic injuries and fatalities.

Under direction from the 2001 state legislature, the Washington State Department of Transportation designed, built and implemented a new statewide collision records system, CLAS (Collision Location and Analysis System). CLAS was deployed in May of 2002, and is used to capture, store and retrieve data derived from all Police Traffic Collision Reports (PTCR) and Citizen Collision Reports filed with the state.

Once CLAS was successfully implemented, the second phase of the effort was to add scanning, electronic imaging and document workflow management capabilities. This second phase, known as CLAS EDWMS (Electronic Document Workflow Management System), was implemented in May of 2003. The advent of CLAS and the EDWMS system have eliminated the need for WSDOT to handle and store more than 130,000 paper collision reports each year. This new system has enabled Washington State to recover from a previous unsuccessful collision system and eliminate over three years of unprocessed collision reports.

The following diagram provides an illustration of the current system for collecting, processing, and disseminating statewide collision information:

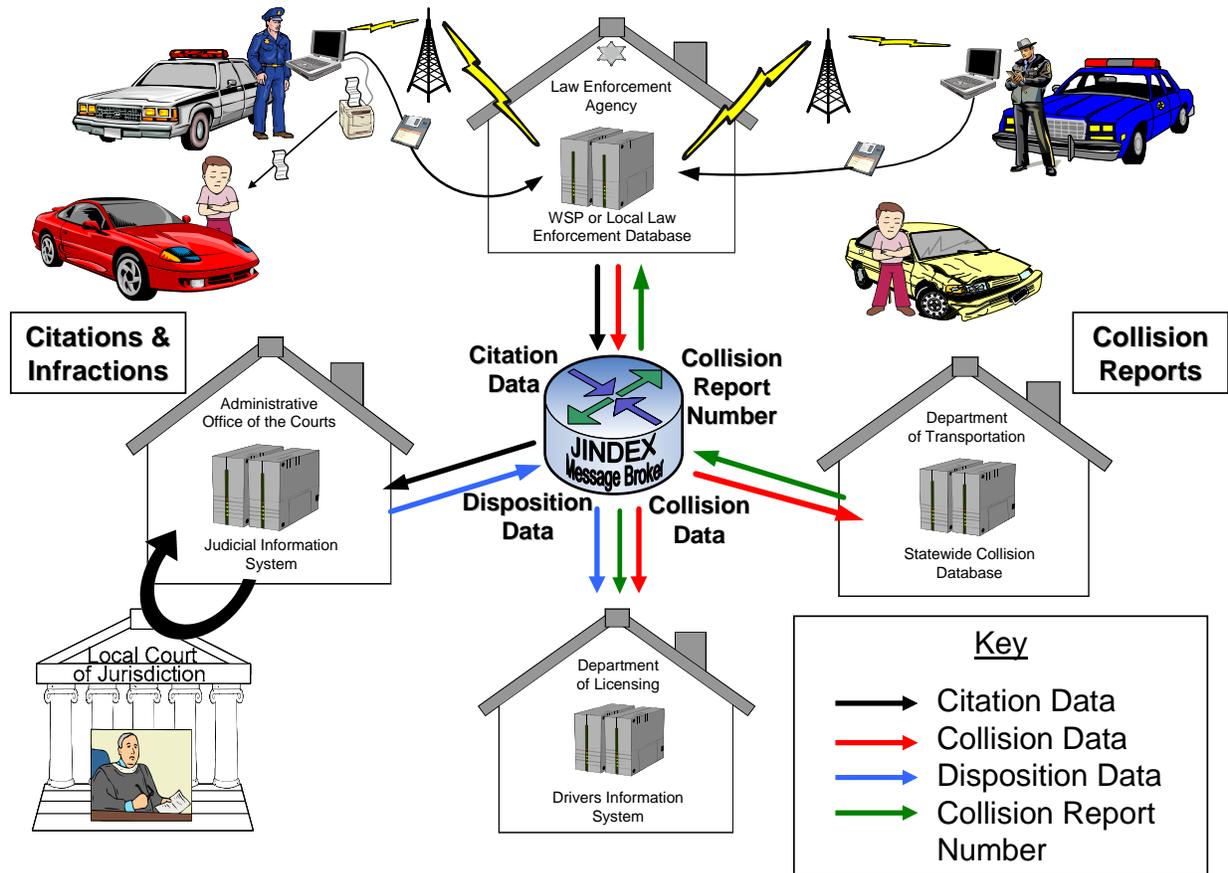


The CLAS EDWMS has proven to be an effective paper-based collision data processing system. Nevertheless, this system centers on a number of paper collection and exchange processes. Current technology provides electronic-based alternatives and many states have successfully implemented such systems. The Washington Traffic Records Committee is currently implementing the Electronic Traffic Information Processing (eTRIP) Initiative. This effort carries out three primary objectives:

- Provide law enforcement officers statewide methods to electronically capture citations, infractions, and collision data
- Develop a statewide data exchange network to allow this data to be transmitted electronically to users
- Prepare agency systems and repositories to receive electronic data

The eTRIP Initiative is a series of orchestrated projects collaboratively implemented by various state and local agencies to create a seamless and integrated system for information travel from the point of collection to its end use and analysis. This Initiative will reduce the numerous inefficiencies of Washington's current paper-based system of collecting and exchanging traffic-

related information. The following diagram provides a conceptual illustration of how the eTRIP Initiative will function.



While the eTRIP Initiative will address the inefficiencies of the current paper-based collision data collection and processing system, a number of other projects aim to improve similar processes related to Washington's traffic records collision component.

In coordination with the eTRIP Initiative, the TRC is revising the statewide collision report (Police Traffic collision Report – PTCR) to improve its compliance with the Model Minimum Uniform Crash Criteria (MMUCC) and to better satisfy the data needs of stakeholders. The newly revised form requires database modification to CLAS. Those modifications will be made in early 2006 and the new form will go into effect in July, 2006.

The Electronic County Location Coding Form (CLCF) project created a web-based system for county engineers to access collision reports and update location information. This project utilized the collision image viewer developed through the Commercial Vehicle Data feed and Image Viewer project to provide county engineers a method for accessing electronic collision report images only days after the incident. Engineers are able to access this image and update location information which is then instantaneously uploaded to the statewide collision database. This process reduces the time and expenses associated with the old paper CLCF process.

WSDOT has planned a similar project for city engineers. These engineers would use the same collision image viewer and use a web-based tool to update location information via the web. The updated information will upload directly to the CLAS system.

In addition to eTRIP and the other previously mentioned projects, WSDOT has planned two projects that will directly affect the accuracy, timeliness, and completeness of statewide collision data. These include:

1. CLAS EDWMS Redesign for efficiencies
This project will improve the current workflow processes associated with paper submitted collision reports. Although the eTRIP Initiative will reduce the volume of paper reports submitted to WSDOT, the agency expects to continue to receive a substantial number of paper reports for the foreseeable future.
2. Web-based Citizen Collision Reporting
This project will improve data from collision reports received by citizens. A web-based, electronic submission process will be developed to improve the accuracy, timeliness, and completeness of the 20,000 annual collision reports submitted by citizens.

Each of the projects listed represent a significant change in how Washington's collision data component operates. These changes promise a considerable improvement in the information derived from this component. Successful implementation of these projects will secure Washington's collision records system as one of the most timely, accurate, and reliable in the nation.

Injury Surveillance Component

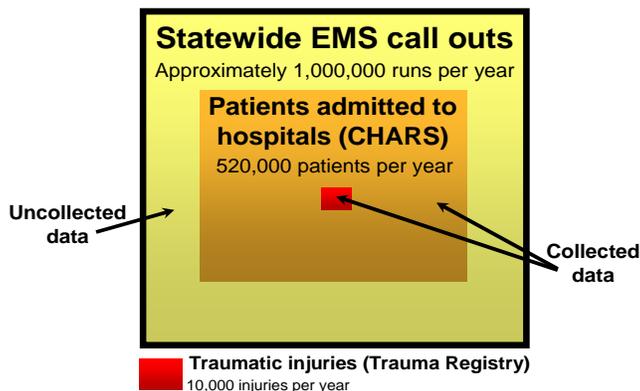
The injury surveillance component tracks injuries from the scene (EMS), to the emergency department (ED), through hospital admittance, treatment, discharge, and rehabilitation. Information on injuries allows for analysis of how person, vehicle, driver behavior, and other event characteristics influence medical outcomes and financial costs. The state's injury surveillance system should support integration with other traffic records system components to facilitate enterprise analysis for research, program decisions, and public policy. This data provides professionals in the health and traffic safety community a critical link to identify problems and manage effective countermeasure programs aimed at reducing the frequency and severity of traffic-related injuries and deaths, as well as the associated costs.

RCW 43.70.050 authorizes the Washington State Department of Health (DOH) to collect, utilize, and access any health-related data in the state. In 1990, the legislature established the Trauma Registry which collects and links major trauma records from verified Emergency Medical Services and designated hospitals and rehabilitation programs. This registry collects various data elements on patients including injury severity providing a valuable resource to those who research and assess the risk of various activities. Among interested groups are traffic and public safety professionals endeavoring to link collisions to injuries and injury severity.

DOH also maintains the Comprehensive Hospital Abstract Reporting System (CHARS). This system contains inpatient discharge records from all of Washington State's licensed acute care hospitals.

The Trauma Registry and the CHARS system collect information on approximately half of the total ambulance service runs in the state each year. Data on the remaining recipients of ambulatory and aid services, comprising about 500,000 individuals, is currently being collected by many EMS units at the scene, but remains unreported to any centralized authority. This Prehospital care is vital to ensuring that patients with acute traumatic and medical conditions are provided medical care outside the hospital and are transported to an appropriate medical facility. The most important aspects of this service include response times, quality of service, and medical care provided for the cost or value of EMS to the patient and community.

Currently, Washington State does not centrally collect information on prehospital patient care. This represents a major portion of the population whose medical and financial outcomes cannot be documented. The graphic below displays the relationship among the patient volumes of differing levels of care and the status of data collection within each level.



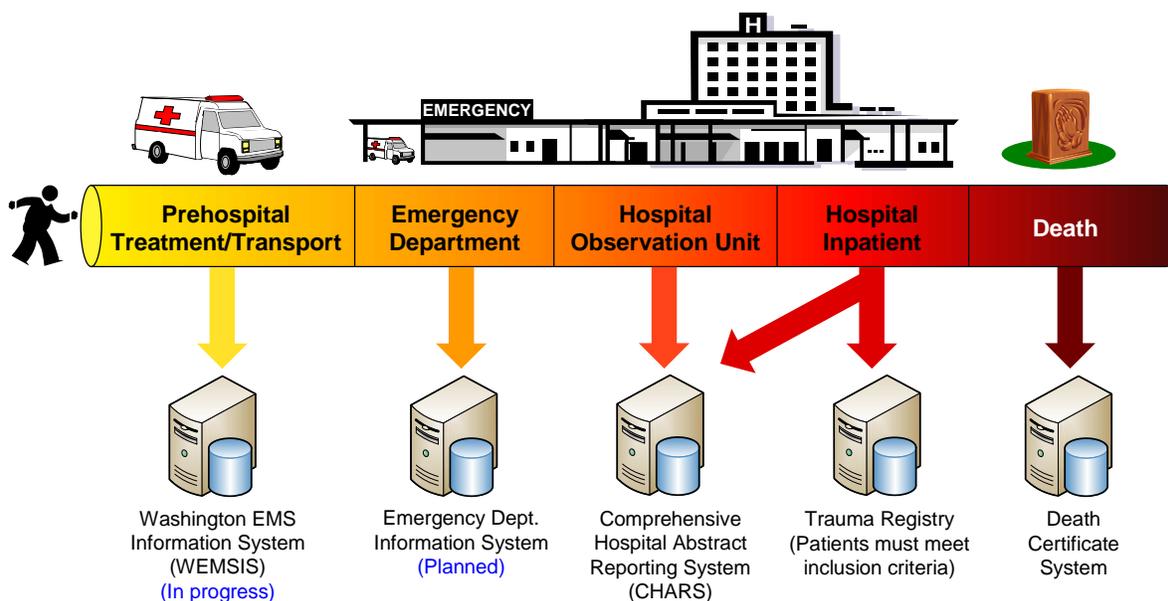
The NHTSA traffic records assessment conducted in November 2003 listed the establishment of an EMS system as one of its most important recommendations. As a result, DOH is implementing the Washington Emergency Medical Services Information System (WEMSIS) to serve as a valuable resource to the state including highway safety and injury control decision makers. Specific elements from WEMSIS will be reported and compiled at the federal level in the National Emergency Medical Services Information System (NEMSIS). These systems will provide valuable information regarding prehospital patient care. A reliable source of EMS data will also allow Washington State to qualify for the Crash Outcome Data Evaluation System (CODES). CODES uses probabilistic linkage to match collision reports to health outcome data (hospital discharge, EMS run) lacking person level identifiers. CODES allows analysis of a variety of factors impacting health outcomes associated with motor vehicle crashes including;

- driver behavior
- safety equipment
- vehicle characteristics
- crash configuration

In addition to the WEMSIS project, DOH is seeking to implement a statewide Emergency Department Data Information System. This system will create a central repository at DOH for information about patients treated and released by hospital Emergency Departments (ED). The number of ED visits is approximately 2.5 million per year. Of these admissions, close to 90,000 are attributable to nonfatal traffic injuries. Currently, no information on the care and costs directly associated with these admissions is accessible for analysis purposes. The ED data information system will provide a central collection point to facilitate analysis and research related to the medical outcomes and financial costs associated with traffic collisions.

With the emergence of WEMSIS and the ED Data Information System, the DOH will be capable of providing the necessary information to document the entire continuum of patient care. These systems will provide traffic and public safety officials the necessary tools to better determine the medical outcomes and financial costs associated with motor vehicle collisions.

Continuum of Patient Care



Roadway & Location Component

The roadway component contains information on the location, classification, and identification of the entire roadway system within a state. The state's roadway component should include systems that describe attributes of the state's roadways including:

- *surface type*
- *traffic control devices*
- *ramps*
- *railroad crossings*
- *roadside features*
- *shoulder and surface measurements*
- *roadway type*
- *speed limits*
- *special use lanes*
- *vehicle usage characteristics*
- *number of lanes*
- *traffic volumes*

The roadway component should also include Geographic Information systems (GIS), video logs, and maintenance management systems. Information from the state's roadway component is integrated using a common location referencing system. Roadway information is used in conjunction with traffic and collision data to identify and regulate transportation engineering and construction projects. The effectiveness of the state's overall traffic records system is significantly enhanced by the ability for a particular traffic-related event to be accurately located and analyzed in relation to the location of various other events, features, and geographic characteristics.

Washington's roadway and location component provides critical information on the location and characteristics of the state's transportation system and specific traffic events. This information is central to roadway construction and maintenance projects. It's also vital to public safety agencies in efforts to identify problem areas and design solutions to reduce traffic fatalities and injuries.

The primary system used at the state level to maintain roadway information is the Washington State Department of Transportation's (WSDOT) Transportation Information and Planning Support System (TRIPS). TRIPS is a mainframe database that stores roadway, traffic, and collision data for Washington State Highways. Information from TRIPS is exported to a roadway DataMart for enhanced analysis capabilities and to a separate system for prioritizing selected roads or intersections for maintenance projects.

The ability to precisely locate specific traffic events and features within TRIPS is a crucial element in managing Washington's transportation system. In the case of collisions, Washington currently has three different location methods depending upon the jurisdiction:

- **City Streets** – The names of the primary and intersecting streets are used.
- **County Roads** – Copies of collision reports are mailed to the county engineer along with a County Location Coding Form (CLCF). Based on the original location information provided by investigating officer, engineers provide the county road number and milepost on the CLCF and mail the form to WSDOT. The new Electronic County Location Coding Form process automates this by providing engineers with web-based tools to view and update collisions occurring on county roads.
- **Interstate or State Highways** – State route numbers and mileposts are used.

To add to the problematic nature of the current system for locating traffic events and features is the lack of an accurate base map upon which those events and features can be placed. WSDOT uses a Distance Measuring Instrument (DMI) based Location Referencing System (LRS) within TRIPS. The DMI/LRS is accurate only to within 53 feet and the level of accuracy can be much worse on divided highways. The current system for locating and analyzing collisions, other traffic events, and roadway features does not satisfy the variety of business needs requiring precision and accuracy.

This dilemma is not unique to Washington State. Numerous states throughout the nation are grappling with the issue of creating more accurate methods and systems for location. These states recognize that geospatial data is a vital tool in facilitating decision-making in all aspects of government and industry. The federal government has also recognized the importance of this issue and in 1990 created the Federal Geographic Data Committee (FGDC). The FGDC is an interagency committee that promotes the coordinated development, use, sharing, and dissemination of geospatial data on a national basis. This 19-member committee with representatives from cabinet-level offices and independent agencies is responsible for coordinating standards, policies, technology, education, and outreach for geospatial activities at the national level.

The FGDC's primary goal is the realization of the National Spatial Data Infrastructure (NSDI). Issued in April 1994, Executive Order 12906 outlines a plan to create the NSDI, which is a physical, organizational, and virtual network designed to enable the development and sharing of this nation's digital geographic information resources. This infrastructure utilizes geospatial data and current technology to provide decision support to all levels of government and private sector in such areas as transportation, community development, agriculture, emergency response, environmental management, and information technology.

The activities of the FGDC are administered through the U.S. Geological Survey's National Geospatial Programs Office. Among the responsibilities of this office are The National Map and Geospatial One-Stop. The National Map is a nationwide initiative to provide users with highly accurate content for base mapping operations, including orthoimagery, elevation, hydrography, boundaries, land cover, geographic names, transportation, and structures. Users will have the ability to share and contribute to the data available in The National Map. Geospatial One-Stop provides federal and state agencies with a single point of access to map-related data enabling the sharing of existing data and the identification of potential partners for sharing the cost for future data purchases.

Washington State has been extremely active in geospatial initiatives. These efforts are led by the Washington Geographic Information Council (WAGIC), a multidisciplinary council responsible for coordinating and facilitating the use and development of Washington State's geospatial information. WAGIC and the Department of Transportation are partnering to create a transportation data layer for use in Geographic Information System (GIS) applications. This statewide transportation data layer is known as the Washington Transportation Framework (WA-Trans).

WA-Trans aims to provide a standards based method of location for transportation data by developing and maintaining a seamless statewide dataset for use in GIS. WA-Trans will use the newly developed Global Positioning Satellite Location Referencing System (GPS/LRS) data to represent state routes and develop sharing agreements to utilize the most accurate local jurisdiction (city, county, tribes) data for local roads. WA-Trans will facilitate identification of location based on the various methods used in the state including; state route milepost, county

road number, and milepost, and street address. This dataset will consist of the following elements:

- Centerline geometry for feature such as road segments, railroad segments, ferry routes, and airport runways.
- Location based features representing intersections, beginning and end-points of segments, and multi-modal transfer points.
- Data attributes describing features of each feature such as surface type, number of lanes, special use lanes, route number, street name, and ramps.
- Information for two linear referencing methods including route and milepost and address range.

The WA-Trans project will develop a translator tool capable of integrating the various formats of location data in use throughout the state. This translator will provide a valuable tool to creating a statewide dataset and allowing that dataset to be utilized by jurisdictions throughout the state. The WA-Trans project consists of a series of pilots to develop the needed tools and to slowly begin compiling data from around the state.

WA-Trans provides a crucial piece in the development of a statewide geospatial framework. This framework will contribute substantially to on-going efforts to create The National Map and the Geospatial One-Stop. The following diagram illustrates the relationship among each of the federal and state initiatives aimed at improving state and national geospatial information.



In addition to the various efforts focused on improving geospatial information, Washington State is engaged in a number of other activities that will enhance the roadway and location component of the traffic records system.

WSDOT is currently in the process of establishing a GPS based LRS for the state highway system. This GPS/LRS system would replace the previously described DMI/LRS and provide a much improved level of accuracy. The new GPS/LRS will be completed in 2007 and will provide a more accurate (3 – 5 feet) base map upon which features and events can be located.

In order for features and events currently stored within the TRIPS application to be associated with the new GPS/LRS, a toolkit must be developed to handle location translation from the previous DMI/LRS. The Enterprise Location Class (ELC) Toolkit will conduct DMI/LRS translations to allow previously collected and processed state highway system location data to be placed upon the newly created GPS location base map. These translations will allow the legacy feature and event data from the previous DMI location referencing system to be associated to and analyzed within the newly created GPS/LRS.

The Electronic Traffic Information Processing (eTRIP) Initiative is a series of orchestrated projects collaboratively implemented by state and local agencies to create a seamless and integrated system for information travel from the point of collection to its end use and analysis. The eTRIP Initiative will establish the necessary infrastructure to allow law enforcement officers statewide to issue citations and infractions and create collision reports electronically.

With this capability, officers will be able to utilize a set of tools to improve the location of traffic-related events. While the use of GPS devices to capture location coordinates may be the desired option for some law enforcement agencies, this method has its shortcomings. Officers often complete reports after-the-fact and may not remember to capture coordinates on-scene. Additionally, some areas may be difficult to receive coordinates and transposing numbers from the device to the application can introduce errors.

The Washington TRC is pursuing alternative solutions for determining location coordinates for traffic-related events. The Incident Location Reference Tool will be a map-based computer application utilizing the GPS/LRS data for state routes and WA-Trans data for local roads to allow point-and-click location capability for officers. The application will compile location coordinates based on the underlying GPS/LRS or WA-Trans data. This location data will be automatically loaded into the electronic collision or citation/infraction record. The tool will also be capable of supporting the input of GPS coordinates from hand-held devices. WSDOT has determined a number of other business areas where this tool will enhance reporting and analysis capabilities.

Successful implementation of the previously described projects will dramatically improve Washington's current roadway and location system. More accurate and timely location information for traffic-related events will significantly improve analysis capabilities to reduce the traffic fatalities and injuries across the state.

Driver Licensing Component

The driver component provides information about every licensed driver in the state as well as convicted traffic violators who are not licensed. Each file contains details such as:

- *personal identification*
- *collision and citation or infraction history*
- *driver improvement and training information*
- *license information*
- *court dismissals or convictions*
- *pending actions*

Law enforcement officers statewide should be capable of accessing driver license information to help with situation assessment during traffic stops. A driver's history is an important element for courts of law when determining sanctions for traffic violations. The driver license component also provides essential information for safety programs aimed at reducing recidivism of problem drivers.

Insurance agencies and private industry use driver history files to help in the evaluation of potential customers and employees.

Washington's driver licensing component provides critical information about the state's traveling population. Timely, accurate, and complete information about drivers guide law enforcement, courts, and various other agencies and groups in their day-to-day business. This data is also vital to government and private agencies seeking to influence driver behavior and improve transportation safety.

The Washington State Department of Licensing (DOL) is responsible for maintaining a driver record for every resident driver in Washington. Currently, there are over 4.5 million licensed drivers in the state. DOL's Driver database maintains various information about each driver including:

- Personal identification
- Traffic citations and infractions
- Collisions
- License and restriction information
- Failures to Appear (FTA)
- Administrative actions

The Driver database is perhaps the most widely used component of Washington's traffic records system. Users of information from the driver database include:

- Statewide law enforcement
- Washington Traffic Safety Commission
- Dept. of Social and Health Services
- Secretary of State
- District, Municipal, Appellate, and Superior Courts
- Insurance industry
- Private employers
- Department of Revenue
- Various Federal agencies

In 2003, DOL secured funds to convert the existing Unisys database to a Microsoft SQL Server relational database. The Unisys system was approaching its end-of-life and the vendor had announced its intention to discontinue support. In addition, this legacy system suffered from its inability to efficiently respond to mandated rule changes and data inquiries from customers. The new SQL server platform allows DOL to provide a more timely response to rule changes and customer requests.

DOL has a number of projects planned to improve the driver system. A recent project implemented in partnership with the Washington State Department of Transportation (WSDOT) created an electronic system for DOL to access collision report images. This project also

established a collision report data feed. While the project provided an important first step in automating aspects of DOL's collision data processing system, a number of changes are needed in order to improve design and efficiency.

DOL is required by law to determine the amount of security an uninsured driver must deposit if there is a reasonable possibility of a judgment resulting from a collision. If the uninsured motorist fails to deposit security or make payments for damages, DOL is required to take administrative action against the driver. DOL will first improve methods for receiving and processing these cases by the Financial Responsibility Unit. DOL will work with WSDOT to add liability insurance fields to indexing and allow easy search capabilities for retrieving pertinent reports. This process will improve the timeliness and accuracy of collision data for DOL's Financial Responsibility Unit.

A similar project will improve the current system utilized by DOL to access collision report data and post that data to individual driver records. This project will provide an improved format and workflow for DOL staff to view and manipulate collision data for update to the driver system. This project will also allow DOL staff to better identify certain unique reports for processing.

In addition to projects aimed at improving systems for accessing and processing collision reports, DOL will initiate two other projects to eliminate separate collision data processing backlogs. The first will address the current backlog within DOL's Financial Responsibility Unit. The recently implemented electronic system for accessing and processing collision reports introduced a significant number of exception reports. Each of these exceptions requires review and action by staff for proper resolution. In addition, administrative action for suspensions continues to be a time-consuming process. The reconciliation of exception reports coupled with the suspension process has resulted in a backlog of nearly 61,000 reports. While the previously described projects will improve current processes to avoid future backlogs, additional resources are required to get the Financial Responsibility Unit up-to-date.

Just as unanticipated exceptions have contributed to a significant backlog for financial responsibility cases, DOL's collision report processing office has accumulated approximately 120,000 backlog records through exception reports. Much of this backlog of exceptions is due to design considerations that were not included in the first implementation of the electronic collision report image access and data feed project. These design considerations are central to the collision workflow improvement project described above. Nevertheless, temporary staff will be needed to eliminate the current backlog of unprocessed collision reports.

These four projects will contribute significantly to the DOL's ability to efficiently fulfill its responsibility as steward of the state's driver system. These projects will improve the timeliness, accuracy, and completeness of driver information. However, the above projects are not seen as long-term solutions to the redundant and time-consuming processes associated with updating the driver system with collision and citation/infraction data. The Electronic Traffic Information Processing (eTRIP) Initiative provides this long-term solution by leveraging common technologies to create a seamless and integrated system for information travel from the point of collection to its end use and analysis. Statewide implementation of the eTRIP Initiative will significantly reduce data entry redundancies and processing inefficiencies associated with posting citation, infraction, and collision information to the driver record. DOL is a major project partner in the eTRIP Initiative and is committed to its successful implementation.

Vehicle Registration Component

The vehicle registration component contains title and registration information on all licensed vehicles in the state. Information contained within this system includes:

- *owner identification*
- *vehicle description*
- *vehicle history*
- *title information*
- *vehicle and owner sanctions*
- *insurance carrier*

Along with driver records, law enforcement officers need access to vehicle information for use during traffic stops. Researchers and safety professionals use this data to determine how vehicle design and operation can impact collision severity and frequency. Other government and private entities use the vehicle registration component for tax analysis and collection, to generate revenue forecasts, and to inform customers of manufacturer recalls.

The Washington State Department of Licensing (DOL) maintains the state's vehicle database. This system contains information on over seven million actively registered vessels. The vehicle system maintains information on the following types of vehicles:

- Motor vehicles
- Campers
- Semi-trailers
- Off-road vehicles
- Trailers
- Mobile homes

The vehicle system provides vital information to law enforcement during routine traffic stops. The Driver and Plate Search (DAPS) is used by law enforcement throughout the state to perform in-field queries, whether by radio or computer, on specific drivers and vehicles. This system allows officers to verify registered vehicle ownership and provides a tool to identify flagged or stolen vehicles. The vehicle system plays an important role in developing revenue forecasts and reports. It also provides important information to researchers and analysts for various traffic safety purposes.

Washington's vehicle system maintains information regarding unpaid parking tickets for each registered vehicle. The Administrative Office of the Courts (AOC) provides DOL with a daily electronic file of all unpaid parking tickets. This information is posted to the vehicle system and blocks registration renewal until those tickets are resolved.

The Washington Traffic Records Committee (TRC) is currently researching various opportunities to improve the information derived from DOL's vehicle system. Although specific projects plans have yet to be developed, the TRC recognizes possibilities to improve the timeliness, accuracy, integration, and accessibility of vehicle data. The TRC will continue to investigate options and if determined appropriate, will develop strategies and projects to carry out these objectives.

Citation & Adjudication Component

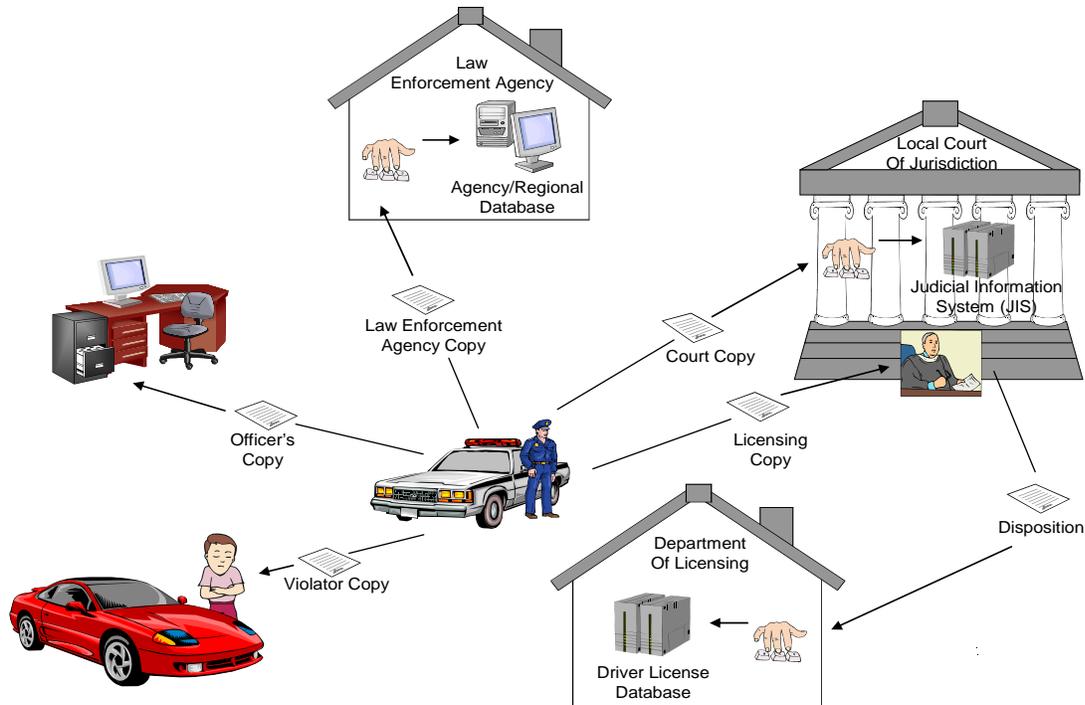
The Citation and Adjudication Component identifies arrest and conviction activity in the state and includes information to track a citation or infraction from its issuance by a law enforcement agency to a violator, through court disposition, and to its posting on the driver history file at the Department of Licensing. The state's citation and adjudication component includes case management and law enforcement records systems to support case and specific violations tracking and disposition reporting. Information provided by these systems should include:

- *Type of violation*
- *Date and Time*
- *Vehicle information*
- *Issuing enforcement agency*
- *Location*
- *Violator information*
- *Court of jurisdiction*
- *Final disposition*

The efficient exchange of data among the various law enforcement and court-related systems is critical to an effective citation and adjudication component. Information from this component facilitates the process of determining appropriate enforcement levels and also provides a mechanism to monitor court proceedings in relation to the disposition of traffic violations. The traffic safety community, private industry, and various government agencies use this information to identify problem drivers, plan prevention programs, and evaluate policy.

The citation and adjudication component of the traffic records system provides valuable information to numerous users regarding traffic-related citations and infractions in the state. The Administrative Office of the Courts (AOC) maintains the Judicial Information System (JIS). The JIS system provides case management automation to appellate, superior, limited jurisdiction, and juvenile courts in Washington. JIS automates and supports the daily operations of the court system and provides a statewide network connecting the courts and partner criminal justice agencies. Each year, Washington courts use the JIS system to process nearly 2 million citations and infractions.

Annually, over one million traffic citations and infractions are handled by the court system in Washington. All of these documents are currently collected and processed on paper, requiring the manual entry of information as many as four times per document. The following diagram illustrates this current paper-based process.



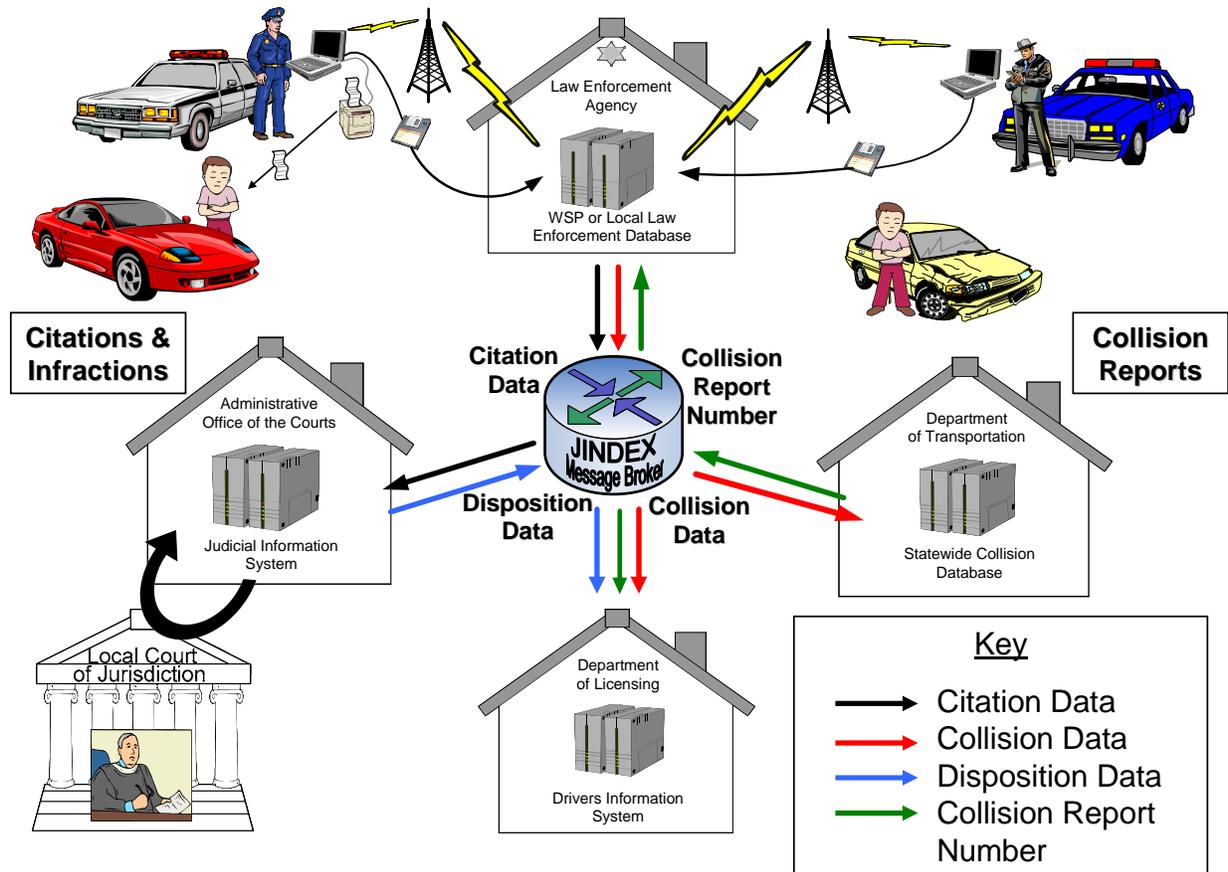
Each of the agencies responsible for portions of the citation and adjudication process recognizes the inherent inefficiencies and inaccuracies of this paper system. A study by the University of Pittsburgh concluded that approximately ten percent of citations received by courts contained at least one error. These inaccuracies and the paper processing burden for courts and law enforcement in Washington has motivated the state to evaluate options for issuing and processing citations and infractions electronically.

One of the efforts that have made this option possible is the Global Justice Information Sharing Initiative sponsored by the U.S. Department of Justice. This initiative is aimed at increasing the efficient sharing of data among justice agencies. One of the major milestones of the Global Justice Information Sharing Initiative has been the creation of the Global Justice XML Data Model. This model has been endorsed as the national standard for the electronic exchange of justice information among users.

Washington State has been very active in pursuing options to facilitate the electronic exchange of justice information. RCW 10.98 created the Washington Integrated Justice Information Board (WIJIB) which is a diverse mix of state and local representatives of the justice community, including law enforcement and corrections officers, judges and prosecutors. Among the aims of this body are efforts to maximize the standardization of data and communications technology to reduce redundant data collection and input efforts throughout the criminal justice community.

WIJIB has recently established the Justice Information Network Data Exchange (JINDEX) platform to facilitate the exchange of XML based documents throughout the state. JINDEX serves as a message broker in a systems integration model built on Service Oriented Architecture (SOA), an integration architecture whose goal is to achieve loose coupling among interacting software agents. SOA eliminates the need for point-to-point connections by utilizing a central broker and web services at the data provider and data consumer.

The Integrated Justice Information Board and Washington's Traffic Records Committee are committed to leveraging respective resources in a way that best serves the state. This commitment has led to the design and implementation of the Electronic Traffic Information Processing (eTRIP) Initiative. The eTRIP Initiative eliminates data entry redundancies and inaccuracies by creating a seamless and integrated system for information travel from its point of collection to its end use and analysis. eTRIP utilizes the JINDEX to disseminate electronically created citations, infractions, and collision reports to user agencies. The diagram below provides a conceptual illustration of eTRIP.



In addition to the eTRIP Initiative, AOC is planning a major software redesign for the JIS system. The current system is a 15 year old mainframe application that is limited in its capability to take advantage of a variety of new technologies that can:
 Improve data sharing with other justice and traffic data oriented agencies,
 Speed up judicial decision making, and
 Provide improved coordination/consolidation of new and existing data

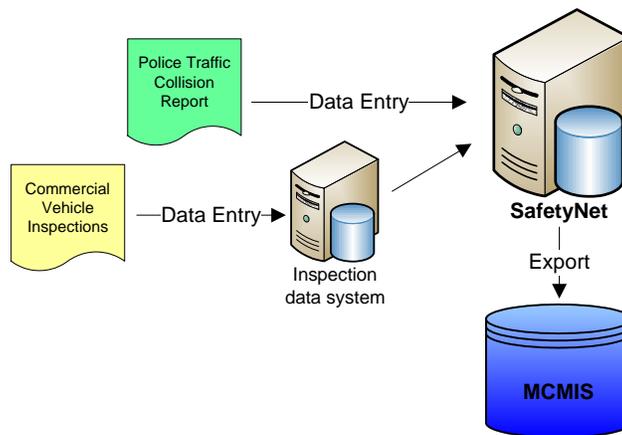
Redesigning the JIS application will create efficiencies in the processing of traffic related cases while improving the accuracy, accessibility, and completeness of statewide citation and infraction data. Together with the eTRIP Initiative, these projects will create a more accurate, efficient, and timely citation and adjudication system for Washington.

Motor Carrier Component

The motor carrier component tracks licensed carrier companies operating any of the varied classes of commercial vehicles within the state. The data within this system is collected during the registration process required for all commercial carriers. This system also contains collision and inspection data in order to properly identify problematic carriers and operators. Each carrier is issued a United States Department of Transportation (USDOT) operating number which serves as the key identifier for motor carrier data. All levels of government utilize commercial motor carrier information to facilitate regulation and ensure carrier compliance with safety standards. In order for a state's motor carrier component to be effective, these systems should be interoperable with other state systems and the various nationally operated systems maintained by the USDOT.

Washington State's economy is one of the most trade dependent in the nation. This trade activity depends heavily upon freight mobility and commercial vehicle transportation. Washington State University researchers estimate that more than three hundred thousand tons of cargo is transported on Washington highways everyday.

To support and facilitate this tremendous volume of freight, the state's major transportation agencies have been legislatively mandated to ensure public safety, preserve transportation infrastructure, and foster regulatory compliance of motor carrier companies. One of the primary tools used to monitor motor carriers is a group of data systems that track carrier registration, collision involvement, and safety standards compliance. The Washington State Patrol (WSP) maintains the SafetyNet system, an automated management system that centrally collects statewide motor carrier inspection and collision data. SafetyNet serves as the state's primary resource for monitoring motor carriers. Data from SafetyNet and other related systems update the federally maintained Motor Carrier Management Information System (MCMIS).



In addition to SafetyNet and MCMIS, two other systems facilitate the tracking of carrier registration and commercial vehicle driver licenses. The Performance and Registration Information Systems Management (PRISM) is a federal and state partnership to identify motor carriers with deficient safety records and to tie a carrier's safety fitness to the ability to register trucks. The Commercial Driver License Information System (CDLIS) enables states to exchange information about the driving records and licenses of commercial vehicle operators.

WSP and the Washington State Department of Transportation have recently been working in coordination to improve the process of identifying and processing commercial vehicle collision reports. This project utilized grant funds from the Federal Motor Carrier Safety Administration (FMCSA) to develop an electronic collision image viewer. This image viewer allows processors at WSP's Commercial Vehicle Division to view electronic images of commercial vehicle involved

collision reports within a few days of the incident. In addition, the project creates an electronic data feed to send data for a commercial vehicle involved collision to WSP to auto populate the commercial vehicle collision tracking system. The initial project has been completed and proven successful. WSP has identified a series of enhancements that would make the system even more beneficial and these enhancements will be implemented in a subsequent phase of the project.

The Electronic Traffic Information Processing (eTRIP) Initiative provides an important opportunity to improve commercial vehicle information. The eTRIP Initiative will develop the necessary infrastructure to allow law enforcement officers to electronically issue citations and infractions and create collision reports. These electronically created documents will facilitate the process of identifying and processing commercial vehicle involved collisions. This innovation will vastly improve the accuracy, timeliness, and completeness of the commercial vehicle data feeding the various state and federal carrier tracking systems.

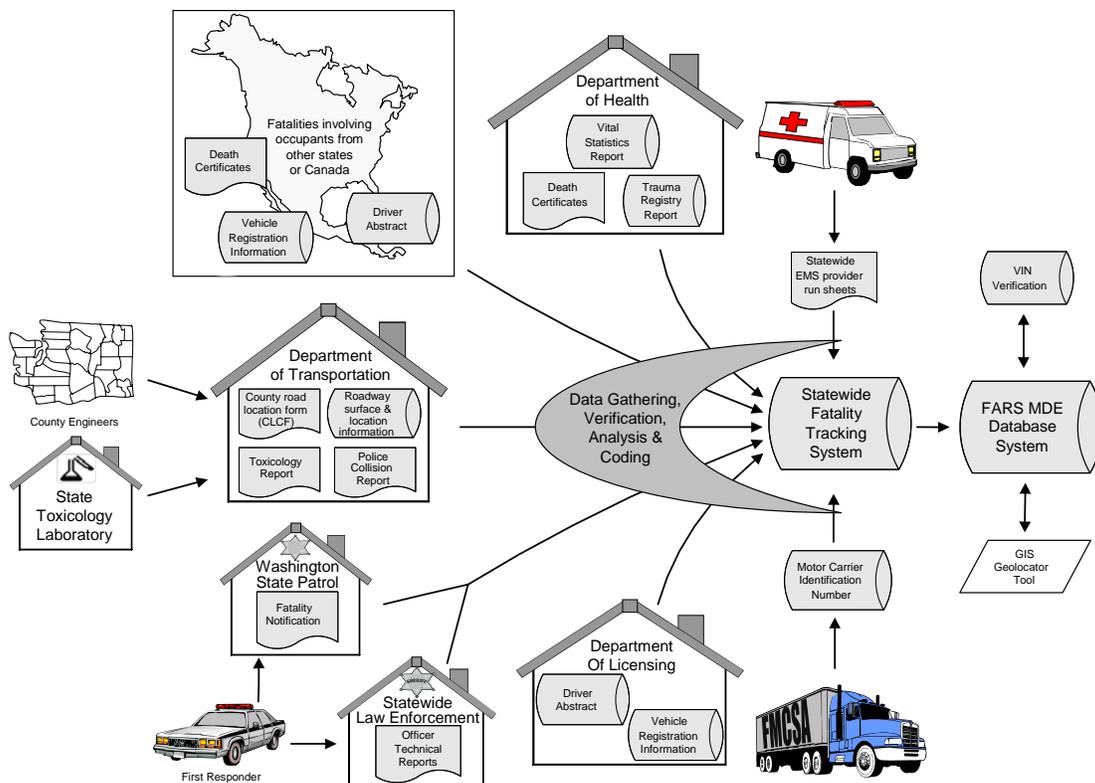
Fatality Reporting Component

The fatality reporting component compiles detailed information on each traffic death occurring within the state. Traffic fatality data is the most frequently used indicator of the effectiveness of a state's overall traffic safety program. Information on statewide fatalities is gathered from a variety of sources including:

- Collision reports
- Toxicology reports
- EMS provider reports
- Vehicle registration records
- Death Certificates
- Vital statistics information
- Driver records
- Roadway surface & location information

Fatality rates derived from these sources, when analyzed in relation to vehicle miles traveled, provide a standard for comparison among states and other geographical areas. The Fatality Analysis Reporting System (FARS) is the national database that aggregates data from all 50 states, the District of Columbia, and Puerto Rico.

FARS analysts, working at the Washington Traffic Safety Commission, enter data directly into the national FARS MDE database. These analysts also maintain a companion database that tracks many additional data elements on the state's fatal collisions. This in-house tracking system produces a variety of reports for fatality data users. The information used to compile both databases is gathered from a number of source documents as illustrated in the following diagram.



As shown above, the FARS system collects and processes information from a variety of sources. The current process of gathering the necessary source documents is extremely cumbersome and labor intensive. FARS analysts send out over 600 written requests for information to EMS departments throughout the state. They send out an additional 400 solicitations to law enforcement officers for technical reports and other supplemental documents. Analysts must also wait for the release of death certificates to be filed and sent to the FARS unit.

There are a number of projects occurring at both the national and state level that will improve the timeliness, accuracy, and completeness of Washington's fatality data.

The FastFARS program is sponsored by the National Highway Traffic Safety Administration that is designed to capture data from states more rapidly and in real-time in order to improve decision-making. The FastFARS program consists of a Case Management System (CMS) and an Electronic Data Transfer (EDT). The CMS provides an improved user-interface for analysts and allows for the initiation of cases as crash information for fatalities is sent electronically from the statewide collision database FARS analysts can then create a case providing early notification of fatalities to FARS headquarters. Washington State has been selected as one of four pilot states and continues working with FARS headquarters to implement the FastFARS program.

The Washington State Department of Health is currently implementing the Electronic Death Registration System (EDRS). EDRS will provide an online, web-based system to capture, store, and initiate creation of death certificates. This project will significantly improve the timeliness of death records in the state. FARS analysts will be able to perform case verification in a much more timely manner.

The Washington State Patrol is implementing a system to improve the process of managing case information for death investigations. The State Toxicology Laboratory will be working with County Coroners and Medical Examiners to implement a statewide, web-based case management system to enable the electronic exchange of death investigation and toxicology information. Washington's fatality reporting system will benefit greatly from this system by receiving more timely and accurate toxicology information for statewide roadway fatalities.

The Washington Emergency Medical Services Information System (WEMSIS) will establish a statewide repository for the central reporting of EMS data. WEMSIS will provide valuable information regarding more than one million ambulance call-outs in the state. The EMS database will provide a much improved system for accessing statewide EMS information including response times for fatality records.

The project with perhaps the largest long-term impact on Washington's fatality reporting component is the Electronic Traffic Information Processing (eTRIP) Initiative. This Initiative will establish the standards and required infrastructure to allow law enforcement agencies statewide to begin creating collision reports electronically. Creating collision reports electronically in the field will drastically improve the quality and completeness of collision data. Business edits for particular data elements are embedded in the field reporting software (SECTOR) requiring the entry of correct information while proceeding through the report. This process will also improve the timeliness of collision data, allowing agencies to transmit the data electronically to the Washington State Department of Transportation (WSDOT).

In addition to these projects, the Washington Traffic Records Committee continues to devise strategies aimed at improving the process of compiling fatality information in Washington. Given the breadth of information gathered by FARS analysts, any subsequent projects will evaluate potential opportunities for providing benefit to Washington's fatality reporting system.