State of Kansas
Traffic Records Coordinating Committee

Strategic Plan – Executive Summary

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I. Introduction

The ability of state and local agencies to properly assess and plan for the safety of the motoring public on America's roadways has always been based largely on isolated pockets of knowledge and effort, where individual agencies have ownership of a portion of the total safety arena and work within that portion to define their safety-related efforts.

The term "traffic records" is used in this document to describe all traffic-related data included in the model developed by the National Highway Traffic Safety Administration (NHTSA); this information falls into the following six categories:

- *Crash Information* – Crash-related data, typically recorded on the crash report.
- *Driver Information* – Person-based data that may come in the form of driver history, criminal history, or some other person-based data set.
- *Vehicle Information* – Title and registration data, as well as other relevant data, pertaining to a specific vehicle.
- *Roadway Data* – Data on locations and structures and geometric information about specific locations on the roadway.
- *Citation/Adjudication Information* – Criminal and incident histories, as well as court case data.
- *Injury Surveillance Information* – Data on response, treatment, costs, and outcomes of traffic-related injuries.

The goal of this effort is to plan for the development of a Traffic Records System (TRS) that will provide the ability to bring these data sets together for comparison and statistical analysis. By bringing this information together in a manner that allows comparison of data currently housed in separate, isolated repositories, new analyses can be performed that will allow the state to have a much more complete picture of traffic safety in Kansas.

In December 2005, the Kansas Department of Transportation (KDOT) retained the services of MTG Management Consultants, LLC, to develop a strategic plan for integrating traffic records data within the state of Kansas. This document is the result of the planning process.

II. Project Background

In 2005, the United States Congress passed a transportation reauthorization bill that awards grant monies to states to upgrade and enhance traffic records. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed into law in August 2005. A portion of this bill is Section 408, State Traffic Safety Information System Improvements.

In order to receive these grant funds, KDOT and its partner agencies have undertaken three significant steps to date:

- *Traffic Records Assessment* – Developed in March 2005, the Traffic Records Assessment was performed by KDOT in conjunction with NHTSA and served as the primary step in identifying areas for improvement in each of the six information categories that make up the NHTSA model described in Section I.
- *Traffic Records Coordinating Committee (TRCC) Establishment* – The Kansas TRCC was established with representation from all state and local agencies that collect and maintain traffic records data, as well as NHTSA, for the purposes of interagency communication, as well as steering and approving the strategic planning effort.
- *Strategic Plan Development* – The third step undertaken has been the development of the Strategic Plan. This document is the result of a planning process that began in December 2005.

Completion of these three steps fulfills the requirements for first-year applicants for this grant funding.

III. Situational Assessment

The ability of the various agencies involved in this effort to share traffic records information varies greatly from agency to agency. However, based on previous efforts in the criminal justice community, the ability and expertise required to share data on a large scale exists within the state of Kansas. The following subsections provide strengths, weaknesses, opportunities, and threats identified in the planning process.

A. Strengths

Strengths are the attributes of the current environment that contribute to the success of traffic records operations. The primary strengths identified in the planning process are:

- *Existing Repositories* – The existing crash, driver, vehicle, roadway, and court information repositories are mature and robust applications.
- *Kansas Highway Patrol (KHP) Information Technology (IT) Leadership* – KHP has expressed a willingness to maintain its stature as an IT leader in the law enforcement community throughout Kansas.
- *Expertise in Electronic Forms Submission* – Through the Automated Field Reporting System (AFRS) and Electronic Accident Data Collection and Reporting (EADCR) applications, respectively, KHP and KDOT have developed a significant amount of internal expertise in electronic forms development and submission to a central repository.
- *Expertise in Data Integration* – The success of the Kansas Criminal Justice Information System (KCJIS) integration effort will provide a significant benefit to the TRS project in that the existing infrastructure and expertise can be leveraged to assist TRS-related integration efforts.
- *TRCC Participation* – The agencies asked to participate in this project have shown a high degree of involvement and willingness to contribute to the TRS effort.

B. Weaknesses

Weaknesses are the Kansas traffic records community's internal attributes that may negatively impact the TRS effort. The primary weaknesses identified in the planning process are:

- *Citations* – The state does not currently use a Universal Traffic Citation (UTC) and does not have a mechanism for tracking and reporting on all citations issued throughout Kansas, from issuance to resolution.
- *Emergency Medical Services (EMS) Data* – Data collected from EMS providers is limited only to response volumes, which are reported yearly.
- *Court Reporting* – Reporting from the courts to the state criminal history and driver history systems is inconsistent.
- *Trauma Cost Reporting* – The Trauma Registry requests care and cost data on injuries throughout Kansas. While care data is reported regularly and in nearly full compliance, reporting compliance for cost data has been characterized as very poor, making it virtually impossible to perform accurate and meaningful injury cost analysis.
- *Communication* – Prior to the establishment of the TRCC, there were virtually no formal communication channels between the agencies involved in the traffic records community.

C. Internal Opportunities

Internal opportunities are those factors outside of the traffic records community, but within the state, that could positively impact the TRS project. The primary internal opportunities identified in the planning process are:

- *Infrastructure* – As a result of previous integration efforts and continuing infrastructure improvements, the statewide data network provides high-speed, wired access to every county in the state.
- *Spirit of Cooperation* – The current governor's administration has emphasized the need for state agencies to work together and has shown willingness to support cooperative initiatives.

D. Internal Threats

Internal threats are those factors outside of the traffic records community, but within the state, that could negatively impact the TRS project. The primary internal threats identified in the planning process are:

- *Funding* – Many of the projects associated with the TRS effort are not currently funded and are based on a "wish list" developed as part of the Traffic Records Assessment process.
- *Competition for KDOT IT Resources* – The TRS effort may have to compete for IT resources with other KDOT programs.
- *Competing Priorities* – For some agencies, contribution to the TRS provides little real business value. TRS-related initiatives may be difficult to justify when compared with projects that are considered business-essential or that add value to the individual agency.

IV. TRS Mission and Principles

The ultimate goal of this effort is to develop a system through which traffic records data can be collected, aggregated, and distributed. While this system must provide robust and flexible functionality to the participating agencies, implementation of the system must not significantly impact the agencies' primary business functions. The mission and principles of the TRS effort are described in the following subsections.

A. Mission

As part of the planning process, the following mission statement was developed:

The mission of the TRS effort is to improve the quality of life for the traveling public and increase the level of safety on the roads of the state of Kansas by:

- *Supporting law enforcement deployment and enforcement emphasis planning;*
- *Identifying and managing high-risk drivers;*
- *Planning traffic safety initiatives and geometric roadway improvements; and*
- *Improving medical response delivery*

through the improved collection and management of traffic records information.

B. Principles

As part of the planning process, a set of principles was developed through discussion with the participating agencies in interviews and TRCC meetings. The list of principles below provides a set of organizational values that should serve as a guideline for all TRS-related efforts.

- *The state will maintain agency and systems autonomy while building on an integrated information-capture and -sharing approach.* Given the highly disparate business functions, models, and processes of the participating agencies, it would be virtually impossible to gather support for the TRS initiative without maintaining the autonomy of each agency.
- *The state will seek out short-term benefits or improvements to the existing systems while building a long-term integrated system.* In order to build momentum for buy-in for this project, it should be a priority to achieve short-term benefits through small, achievable projects that improve the ability to share data and bring the traffic records community closer to uniformity in data structures and infrastructure.
- *The state will focus equally on high-volume and low-volume agencies in order to meet objectives.* While it is generally accepted that a few high-volume localities deliver a preponderance of business to state agencies, this effort must focus on facilitating data capture and delivery from both low-volume local agencies and high-volume agencies.
- *The state will strive to keep technical complexity to a minimum.* Based upon the large number of systems that will be integrated by the TRS and each system's different point in its life cycle, it is important to minimize the complexity of the TRS so that legacy systems may be supported and updated and new systems will be able to be brought into the TRS with a minimum of modification.

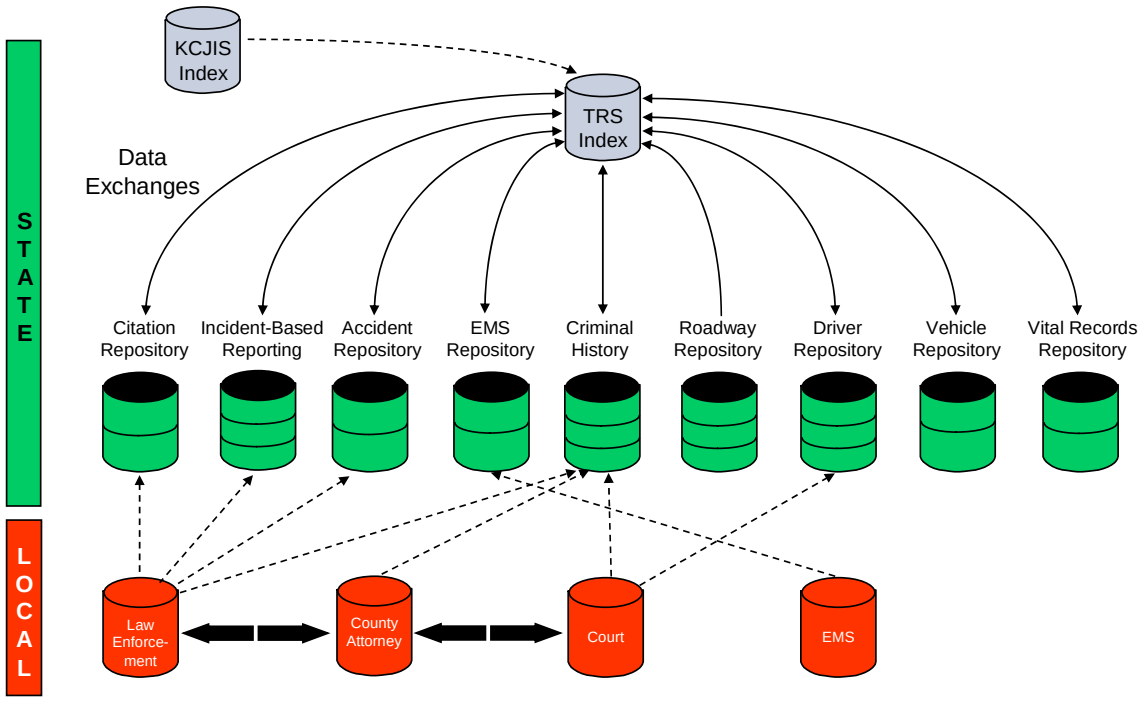
V. Strategic Plan

Through the course of the planning process, the TRCC identified a system architecture that best fits the principles stated above, as well as a set of projects that will fulfill those principles. The TRCC identified projects that are on each agency's near-term time horizon, along with projects that are necessary to realize the TRS vision.

A. System Architecture

As part of the planning process, an architecture for the TRS was developed that will utilize an indexing structure to access data housed in individual repositories, while minimizing the amount of data that must be stored in a central location. The indexing system will contain "pointers" to traffic records data housed in each of the member repositories, allowing for "drill-down" access to data, if desired.

Local business processes will remain virtually unchanged, as the TRS will access only the data that is housed in each agency's central repositories. While the potential for changes to data collection business processes exists, the actual likelihood of such changes being required is somewhat remote. The following graphic provides an illustration of how data will be exchanged through the TRS and in conjunction with the KCJIS index.



The architecture described above will serve as the model for traffic records information sharing.

B. Initiatives and Projects

The projects identified in the planning process have each been grouped into one of eight initiatives. Initiatives 1 through 3 comprise projects meant to get each involved agency on an equal plane in order to begin data-sharing efforts. Initiatives 4 through 6 comprise projects designed to build the system that will collect and distribute traffic data between the various member repositories. Initiatives 7 and 8 are made up of the management and assessment aspects of the TRS program. The initiatives are as follows:

- Initiative 1 – Forms and Specifications.
- Initiative 2 – Data Capture Applications.
- Initiative 3 – Data Repositories.
- Initiative 4 – Data Exchanges and Integration.
- Initiative 5 – Data Index and Inquiry Subsystems.
- Initiative 6 – Internal and External Reporting.
- Initiative 7 – Management and Operations.
- Initiative 8 – Planning and Assessment.

Each of these initiatives comprises several projects that will serve to build the state's capability to collect and share traffic records data.

C. Critical Success Factors

In order to ensure plan success, a premium must be placed on organizational participation and cooperation. The following factors are critical to the success of the TRS program; the TRCC and program manager must ensure that these factors are continually addressed.

- *Executive Sponsorship* – Effective system implementation requires the commitment of the organizations involved from the highest levels of leadership. This commitment must come from executive-level staff, who must believe in the importance and benefits of the projects identified and communicate throughout the organization that the initiatives and projects identified in the Strategic Plan are an organizational priority.
- *Agency Involvement (State and Local)* – To be successful, the functionality and design of a new application must be driven by the people responsible for performing the business functions being addressed. These individuals are police officers, prosecutors, judges, clerks, and corrections officers at the state and local level.

- *Community-of-Interest View* – As integration and data-sharing efforts increase in state and local agencies, the organization's view of its operations must shift from an isolationist focus to one where the agency is a member of a community of interest—a community including other state and local agencies whose business impacts their partner agencies in a general field of effort.
- *Shared Vision* – Stakeholders in the change process must all hold a shared view of the future; failure to have a common sense of purpose will result in differing objectives, desired outcomes, and expectations.
- *Resource Commitment* – Each organization must be willing to commit the resources necessary to achieve success. It is particularly important to devote human resources to implementing the plan whom senior executives and process owners are willing to empower with the detailed design and implementation of new business processes and systems.
- *Pace of Change* – This plan impacts some of the largest agencies in the state of Kansas. In order for the plan to be successful, the pace of change must be one that starts with small, manageable projects meant to build momentum and prepare the involved organizations for the larger changes ahead.
- *Communication* – Deliberate and frequent communication with all stakeholders is required to ensure that personnel are kept informed of plan implementation progress and intentions. Stakeholder organizations and personnel should expect no surprises.

D. Governance Model

In order for a project of such broad scope to succeed, a governance model must be in place that will maintain executive interest and involvement, while ensuring communications between the various operating technological managers involved in the TRS program. The proposed governance model comprises three levels: an executive level where major decisions are approved, a management level where general operations are overseen and strategy is developed, and an operational level where teams of experts provide input to the program development process.

- *Traffic Records Executive Committee* – Will meet semi-regularly and approve all major decisions made by the TRCC.
- *TRCC* – Will meet regularly and serve as the TRS program's steering committee. The program manager will work closely with, and report directly to, the TRCC.
- *Task Forces* – Will comprise subject matter experts and be established on a temporary, as-needed basis for specific tasks (e.g., field reporting system [FRS] analysis).

- *Standing Subcommittees* – Will comprise subject matter experts and be established for the length of the program for the purposes of examining and providing recommendations to the TRCC on issues that will exist for the life of the program (e.g., data exchange standards).
- *KCJIS Committee* – Will serve as a peer agency to the TRCC and offer input where applicable.

VI. Budget Estimates

This section provides a budget estimate for the total cost of the TRS project. The numbers are based upon estimates provided by individual agencies and upon similar efforts performed in agencies around the country. It is important to note that noncritical path items are front-loaded in the budget, based largely upon agency input gathered in the Traffic Records Assessment development process. These projects may be performed at later dates, as funding becomes available.

Highlights from the program budget are as follows:

- The total estimated program cost is $25,724,119 through 2010.
- $13,895,320 is for Vehicle Information Processing System (VIPS) replacement and Performance and Registration Information Systems Management (PRISM) functionality through 2010. These programs are already funded or in the planning stages; VIPS implementation will likely continue beyond 2010.
- $1,434,200 is for a new law enforcement FRS.
- $2,346,000 is for data exchanges and integration through 2010. This effort will likely continue beyond 2010.
- $1,990,040 is for data index and inquiry subsystems development and implementation.

A table detailing total project costs and cash flow by year is provided below.

Year	2006	2007	2008	2009	2010
Yearly Costs (est.)	$2,374,160	$5,464,734	$3,052,937	$11,696,044	$3,136,244
Current Funding (est.)	2,170,000	1,993,024	721,044	9,428,644	2,450,844
Additional Funding Required (est.)	$ 204,160	$3,471,710	$2,331,893	$ 2,267,400	$ 685,400

Total additional funding required for full plan implementation is $8,960,563.

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The actions identified in the Strategic Plan will be a significant challenge to all traffic records stakeholders and IT support functions within the state of Kansas. The plan provides for prudent and practical investment in technology infrastructure, departmental and enterprise applications, comprehensive information-sharing technology, and IT support. Many of these investments will provide infrastructure and support solutions that can extend beyond the individual agencies and benefit the entire traffic records community.