Minnesota

Best Practices Recognition Form

Part 1 - Project Summary

Project Title: The Minnesota Crash Analysis Tool (MnCMAT)

Project Description (three sentences or less): The Minnesota Crash Mapping Analysis Tool (MnCMAT) enables users to analyze crash data based on a number of attributes, including county, city and crash number. The development of this graphical application provides Transportation professionals with a powerful tool for grouping and analyzing crash data. This easy to use web based application produces a map with plotted crash locations, a series of charts and automated crash reports based on selected crash data.

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Lead Agency for Project: Minnesota Department of Transportation, Office of State Aid for Local Transportation

Participating/Cooperating Agencies (if any):
(Additional members of project team and their contact information may be provided as desired.)

Minnesota Association of County Engineers

Minnesota Department of Public Safety, Office of Traffic Safety

Minnesota Association of City Engineers

Which National Agenda goals apply?

1. Involve a leader(s) who promotes the importance of highway safety information systems, used for safety policy and program decision-making?

2. Involve the coordination of the collection, management, and use of highway safety information among various organizations responsible for highway transportation policy?

3. Represent an example of integrating the planning of highway safety programs with highway safety information systems?

5. Represent examples of highway safety professionals being trained in the analytic methods appropriate for evaluation of highway safety information?

Which steps in the management process does the project support?

(3) Plan Programs/Countermeasures

(4) Implement Programs

(5) Monitor Program Operations

Reference the priority in your traffic records strategic plan to which this project applies:

Project Cost: planned $: 200,000   actual $: 162,720

Extent of Project Implementation: As of April 15, 2011, the list of registered users exceeds 270, and continues to grow. The user base has members from the engineering, planning and law enforcement fields at the federal, state and local levels as well as engineering and planning consultants from the public sector.

Summary of Project Benefits:
The application has facilitated the ability to access more up to date and timely crash data, thereby increasing the accuracy of the crash analysis performed by the users of the system. By providing Transportation professionals with crash data access through this application Mn/DOT has reduced staff workload by more than 300 hours/year, allowing reallocation of staff hours. In addition the tool has enabled users by providing valuable crash data accessible through a tool available nearly 24 hours a day, 365 days a year.

Part Two: Project Detail

Project Description: The Minnesota Crash Mapping Analysis Tool (MnCMAT) enables users to analyze crash data based on a number of attributes, including county, city and crash number. The development of this graphical application provides Transportation professionals with a powerful tool for grouping and analyzing crash data. This easy to use web based application produces a map with plotted crash locations, a series of charts and automated crash reports based on selected crash data. The application uses data filters to reduce the number of selected

incidents, allowing users to customize crash data searches to their requirements and is accessible to registered users from any internet connected PC.

National Agenda Goals:

1. Involve a leader(s) who promotes the importance of highway safety information systems, used for safety policy and program decision-making?

> MnCMAT is used by traffic safety professionals from the federal, state and local units of governments and by engineering consulting firms. The tool provides the ability to query and analyze reported crash data for targeted enforcement and traffic safety education as well as engineering studies and roadway improvement projects.

2. Involve the coordination of the collection, management, and use of highway safety information among various organizations responsible for highway transportation policy?

> MnCMAT has been a powerful tool in educating law enforcement agencies that crash data can and is used for more than insurance purposes, thereby increasing the quality of the data being submitted. The graphical nature of the application has also engaged more users to submit corrections to existing crash reports further reducing data errors.

3. Represent an example of integrating the planning of highway safety programs with highway safety information systems?

> Due to MnCMAT's ease of use, accessibility and flexibility it has facilitated the preliminary data selection and analysis for the Minnesota County Roadway Safety Plan project. This project is the nations 1st statewide road safety planning effort at the local level using crash data and roadway risk factors to provide targeted, systemic and low cost roadway safety projects.

3. Represent examples of highway safety professionals being trained in the analytic methods appropriate for evaluation of highway safety information?

> MnCMAT has allowed Mn/DOT to provide additional targeted training and information on, not only the application, but the crash data it contains to more than 270 users. This has facilitated opportunities to enhance the users understanding of the crash data, tools and techniques improving the ability to interpret the results.

Management Approach to Highway Safety:

(3) Plan Programs/Countermeasures:

> Due to MnCMAT's ease of use, accessibility and flexibility it has facilitated the preliminary data selection and analysis for the Minnesota County Roadway Safety Plan project. This project is the nations 1st statewide road safety planning effort at the local level using crash data and roadway risk factors to provide targeted, systemic and low cost roadway safety projects.

(4) Implement Programs

MnCMAT is used by traffic safety professionals from the federal, state and local units of governments as well as engineering consulting firms to query and analyze reported crash data for targeted enforcement and traffic safety education to engineering studies and roadway improvement projects.

(5) Monitor Program Operations

MnCMAT has been a powerful tool in educating law enforcement agencies that crash data can and is used for more than insurance purposes, thereby increasing the quality of the data being submitted. The graphical nature of the application has also engaged more users to submit corrections to existing crash reports further reducing data errors.

Describe the major process steps for your project, including any unique aspects that enhanced success: The Mn/DOT Office of State Aid conducted a request for information (RFI) based on the level of complexity being requested of a web based application. The RFI provided sufficient validation that the required functionality was not beyond the capabilities of a .net environment. As such the project proceeded to a request for proposals (RFP) based on refinements suggested by, and knowledge gained during, the RFI.

The RFP contained 4 major phases 1.Design/Requirements Gathering, 2.Proof of Concept/Prototype, 3. Development and 4. Implementation. A go, no go clause was written into each phase allowing immediate contract termination with the vendor if required. A stakeholder/application review group was formed to service as the advisory board for pre-RFP requirements gathering and application acceptance testing. This stakeholder group had a representative from each of the core user groups.

We believe the staged approach to implementation and strong user involvement throughout application development enabled this project to be successful.

Provide the evidence and reasoning used to determine the success of the project: The current user group is in excess of 270 and growing. After the application was released for use in the production environment (September 2010), we conducted two (2) webinars with over 190 attendees. Mn/DOT Office of State Aid has just completed the first round of detailed 3 hour hands-on training. Feedback has been overwhelmingly positive including many class participants who commented that this tool has made their crash data analysis much easier and has allowed them to access data more easily.

Why should this project be recognized as a best practice in traffic records? The most effective way to make roads safer is to increase the accessibility to the leading metric for measuring its health, crash data. MnCMAT provides the stewards of our roadway network the ability to access and query the data in ways never before possible, providing us with a powerful tool to help reach our goal of Toward Zero Deaths (TZD).