Project #27-03

IT Project Proposal ? »Version Locked

Budget Cycle: 2009-2011 ▼   Agency: 027 - ROADS ▼   Version: AF - AGENCY FINAL REQUEST ▼

IT Project: Accident Records System Rewrite ▼

| • General Section | Financial | Narrative |

▼General Section

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Agency Priority			NITC Priority		NITC Score	

Executive Summary

The Highway Safety document imaging/workflow "CUSTOM CODE" (Accident Records System (ARS)) will be totally rewritten to simplify the routes and make the process more efficient. The core off-the-shelf systems including WorkDesk ™ and the Imaging and Archive Server software will remain as-is. The project will result in a time savings for employees using the system, resulting in quicker entry of crash data and the availability of data for analysis purposes, and a major reduction in the cost of printers, paper, and toner. We will also be applying for some federal grants that would allow us to recover some of the cost to the State.

This project is one of the goals in our Director's Long Range Transportation Plan. The goal to improve safety includes the need to fully develop an automated crash (accident) reporting system so that law enforcement at all levels and other parties can use this technology when they are ready.

The budget for this project was included in the appropriation in fiscal year 2009 therefore no additional funds are needed. This project will most likely fall into fiscal year 2010 in which case we will need to move any remaining funds from 2009 to 2010.

Goals, Objectives, and Outcomes (15 pts)

The objectives of this project are;
1) Evaluate and align the technology with the Highway Safety section business rules and workflow.
2) Improve the turnaround time for Accident Records processing by streamlining processing routes and improving efficiencies.
3) Evaluate the feasibility and migration of the custom code to a simpler web browser user interface.
4) Upgrade software and hardware.
5) Document the new system so that NDOR staff can make future changes.

The beneficiaries of the project are as follows;
Highway Safety Section – Principal user of ARS System, major effect on all operations
Traffic Design Sections – User of ARS System, Consumer of HSI data, more timely and accurate information

DMV (Financial, Hwy Safety) – Consumer of HSI data and Accident documents; more timely and accurate information
State Patrol (Carrier Enforcement) – Consumer of HSI data and Accident documents; more timely and accurate information
HHS (CODES Project) – Consumer of HSI data and Accident documents; more timely and accurate information
Commercial Entities (e.g. Carfax) – Consumer of HSI data; more timely and accurate information

The expected outcome is a new system that eliminates a number of inefficiencies and will aid us in improving our business and workflow processes.

We have developed a project management methodology that will assist us in keeping the project within budget and with the necessary resources for completing the project. Our methodology includes the following phases;
1) Project Initiation

2) Project Planning

3) Project Executing

4) Project Controlling

5) Project Closing

We will be more than happy to provide a copy of our methodology if needed.

Once implementation has been completed, the amount of printing of scanned documents should be drastically reduced or eliminated thus allowing us to either surplus printers or not replace them when they break.

I believe that the more important issue is that it one of our Long Range Transportation goals which is safety. Part of that goal is to fully develop an automated crash (accident) reporting system.

The information we receive and process is utilized by Department of Motor Vehicles, State Patrol and others. It is critical that we have this information available in a timely matter.

Project Justification / Business Case (25 pts)

Supporting Information (unlimited)   **Minimum Characters: 10**

The database server behind the Global 360 WorkDesk ᵗᵐ system will become un-supported soon and a new version of the WorkDesk ᵗᵐ software will be available in the next few months. The current Custom code modules written in an older version of Visual Basic are maintenance intensive and need to be upgraded to work with a newer database, current desktop operating systems and web technologies to make our users more efficient. The workflow/route processing configuration will be addressed, as there are several business processes that would be more efficient and productive if re-written.

Even though it was a goal for the system when it was implemented in August, 2000 we were never able to get to a paperless environment. We had to purchase a number of printers so our data entry personnel could print the scanned documents and then input the metadata into the system. Along with the cost of the printers was the cost of toner used by the systems as well. Highway Safety used extraordinary measures to catch up on data entry and to stay within the required time frame to meet statutory requirements for reporting information to other agencies.

No other solutions were evaluated since we are happy with the off-the-shelf WorkDesk ᵗᵐ software and the Imaging and Archive Server software. It is the custom code portion of the process that needs to be rewritten. Looking at other systems would require a huge increase in cost in our opinion and retraining staff would result in some lost productivity while learning new applications and procedures.

Doing nothing will result in wasting of paper by printing scanned documents and then throwing them away once the metadata is entered into the system. The State may also lose money if accidents that damage State Property are entered wrong and we are unable to recover our costs from the responsible party. We will also need to continue to purchase a number of printers because of the printing needs mentioned in the previous sentence. We would continue "business as usual" with ineffective processes and having to hire additional personnel to catch us up when data entry gets behind and we are faced with not meeting required time frames for reporting information.

The mandate is an agency mandate from our Director stating it as part of our Safety goal in our Long Range Transportation plan.

Technical Impact (20 pts)

Supporting Information (unlimited)   **Minimum Characters: 10**

The current custom code is an older version of Visual Basic and need to be upgraded. We want to take advantage of new web technologies that are easier to maintain, modify and allowing agencies outside of NDOR to easily have access to HSI data and Accident documents. Modification of the current custom code will allow us to eliminate the manual steps and workarounds that our users must do in order to perform their job. We do not see the need for any additional hardware. We still want to utilize the COTS WorkDesk ᵗᵐ software and our imaging software. Going the direction of an entirely new system would increase the cost dramatically in our opinion. The goal is a web based solution ad we do not feel any additional communication requirements will be needed.

While the system needs to be reliable it is not critical that it meets a 99.99% up-time or higher but we will make that as a goal. With NCJIS requesting access to accident reports via their website, meaning that their site is used 24/7.

We do foresee the number of users growing from 50 to possibly over 1000 Statewide once this project has been completed. This will mean either purchasing more licenses from the vendor or possibly a license pool.

We have implemented all NITC security policies and data standards throughout the NDOR as well as any industry standards that have been identified by our network and/or data administrators. Data from this system is then moved from our mainframe Highway Safety Information (HSI) system where it is stored and accessed by other agencies through direct access to our Accident Records System. Mainframe security is determined by OCIO staff and based off of NITC policies and guidelines.

The application will receive data from our Electronic Accident Form and then push data to our HSI system on the mainframe and then pushed to the ARS Database on the LAN. We will be able to create reports on the data using our Crystal Reports Portal if our customers feel it is required.

Preliminary Plan for Implementation (10 pts)

Supporting Information (unlimited)   **Minimum Characters: 10**

A business assessment will be conducted for the Highway Safety Office. This assessment will result in a report/document that describes the current business process as well as the future direction of the business processes. This business assessment is currently focused on the ARS Rewrite but may extend to processes connected to the ARS application.

This project will involve efforts in two specific areas of the ARS: 1) The configuration to the current Workdesk^{tm} software, and 2) a rewrite of the Custom Code. The Workdesk^{tm} software will be configured to streamline routes and other processes within the off-the-shelf product. The Custom Code that extends the capabilities of the Workdesk^{tm} software will be re-written and enhanced. Both of these will involve significant use of vendor supplied resources. Members of the project team will need to perform enough testing to ensure that the data is complete and metadata is accurate before we can complete our development phase.

Once development has been completed we will begin the training of our staff. This could involve using the vendor as the trainer. User documentation must be developed before the project is completed for reference by future users of the system so we do not have to hire the vendor to train new people.

Project Organization / Chart

Executive Sponsor:	State Director and Deputy Directors
Project Sponsor:	Traffic Engineer
BTSD Project manager:	Responsible for ensuring the project follows the methodology
Business Team Leader:	Responsible for business requirements and deliverables
Technical Team Leader:	Responsible for implementing the approved deliverables
Data Team Leader:	Responsible for data design and standards/policy adherence
Project team members:	WorkDesk User Group to test system and check data

Project Stakeholders:

Name	Division	Interest in Project
Highway Safety Section	Traffic	Users of the system.
Traffic Engineering Division	Traffic	Users of the system.
DMV (Financial, Highway Safety)	External	Users of the system.
State Patrol (Carrier Enforcement)	External	Users of the system.
HHS (CODES Project)	External	Users of the system.

Law Enforcement Community	External	Users of the system.

The deliverables identified by our team are;
    Deliverable 1: Report of findings from review of Highway Safety business rules, workflow
    Deliverable 2: Written plan (requirements document) for rebuild of ARS System
    Deliverable 3: ARS code delivered and tested for all modules/functions
    Deliverable 4: Completion of training for Highway Safety staff
    Deliverable 5: Completion of documentation for revised ARS System

A high-level project timeline the team developed;

Milestone	Date completed	Deliverable(s) completed
Project planning	10/01/2008	· Schedule, Scope, Resources
Business Requirements Completed	11/01/2008	· Requirements Document

Vendor Agreement Completed	02/31/2009	·	Specifications, Agreements, SOW
Implementation	09/01/2009	·	Software Delivered & Tested
Go Live	10/01/2009	·	Go-live
Project Completed	02/01/2010	·	Acceptance criteria met and documentation completed

Once the team completes their business requirements document and it has been approved by the sponsors a more definitive timeline will be developed.

User documentation will be developed and approved by the team before any training will begin. The training may be conducted by the vendor. Only staff within the Traffic Division will need to go through this training since they will be the only stakeholders who deal with the information directly. In the review of business processes various stakeholders may have some changes and we will need to be sure to document those processes as well.

NDOR technical staff will be responsible for maintaining the system once it is implemented and Highway Safety staff will be responsible for how the system is used and the sharing of information with other agencies.

Risk Assessment (10 pts)

Supporting Information (unlimited)   **Minimum Characters: 10**

Risk Area	Level (H/M/L)	Risk Plan
1. Equipment breakdowns.	H	Repair or replace as soon as possible. See if more resources can be assigned to the project to push up the delivery date.
2. Parts of the original Source code cannot be found.	M	Determine the additional time required to reverse engineer the code and adjust the schedule. Notify stakeholders and get the approval.
3. Legislative / Statute Changes	M	Review changes and determine what effect they have on the project. Notify stakeholders and make any necessary changes to deliverables and timelines as per their guidance.

Financial Analysis and Budget (20 pts)

Supporting Information (unlimited)   **Minimum Characters: 10**

Contractual services – Account 4419
Design - $50,000
Programming - $300,000
Other - $50,000