

RD&T Technology Facilitation Strategy

The following provides a framework for items to be included in facilitation strategy action plan. The items should be developed in coordination with appropriate CBU contact. This framework can then be used to finalize the action plan for delivery of research products.

PRODUCT *Describe product and its use*

Description of Product: Geographical Information System (GIS) Safety Analysis Tools

A CD has been produced that contains GIS Safety Analysis Tools. These tools include strip analysis, spot/intersection analysis, cluster analysis, sliding scale analysis, and truck corridor analysis. The actual GIS programs for these tools are included on the CD. This is not a demo CD highlighting the tools but a CD that contains the actual software programs for other agencies to adapt for their use. The programs are a Microsoft Windows adaptation of the North Carolina Department of Transportation Crash Referencing and Analysis System, a UNIX based application. The North Carolina Department of Transportation Traffic Safety Systems Management Unit and the North Carolina Center for Geographic Information and Analysis were primarily responsible for the design and development of the Crash Referencing and Analysis System. Financial support for the project was provided through the Federal Highway Administration (FHWA), Office of Safety R&D. The GIS-Based Crash Referencing and Analysis System was developed using the Highway Safety Information System (HSIS) data for North Carolina for the area of Wake County. It provides the functions needed to edit tabular and spatial crash and roadway data and to perform crash analysis.

Under the current HSIS project, work has recently begun to determine the GIS capabilities within the HSIS States. The GIS base maps and data for those HSIS states that are identified to have complete GIS capabilities which are compatible with the GIS software available in the HSIS lab will be integrated within HSIS. New GIS tools and enhancements will be defined and developed to support HSIS analyses.

Intended User

Highway safety specialists in State and local highway agencies, GIS specialists, and safety researchers. It's important to note the system requirements to run the GIS tools. Users must have the following software: Arcview 3.0a, ARC/INFO 7.2.1, ARC/INFO Network Extension, and Windows NT 4.0. FHWA is interested in seeing State and local highway agencies that are currently using GIS to put these GIS analysis tools to use to study their safety issues. We are also interested in getting feedback from users on the utility and ease of use of the tools.

Distribution methods

The GIS safety analysis tools are being distributed via version 1.0 of the CD "GIS Safety Analysis Tools." Several presentations have been made at recent conferences (ITE, TRB, National Safety Council's Traffic Records Forum) on the GIS tools. Version 2.0 of the CD will be available in July 2000.

Alternative Formats

A core group of approximately 5 field safety specialists ("GIS safety team") need to be identified to serve as champions for this product. These resource center and division safety specialists could market the GIS tools at regional conferences and State meetings.

Delivery Date

Version 1.0 of the CD is available now. Version 2.0 of the CD will have all the tools contained on Version 1.0 plus the safe route to school application, safe bicycle route application, and high pedestrian/bicycle crash zone application. See the write-up under Publications for the announcement of the Version 2.0 product. Version 2.0 will be available in July 2000.

PROGRAM/PRODUCT SUPPORT *List contact information for subject matter experts or resource team*

CBU Contact(s)

Carl Hayden

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Resource Center

Contact(s)

To be determined.

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Division Office

Contact(s)

To be determined.

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Other Contact(s)

To be determined.

OUTREACH *Describe opportunities or planned external outreach*

Conference Presentations (ITE, AASHTO, TRB, etc)

As noted above, presentations have been made at several national conferences. Additional presentations at national conferences are not currently planned.

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Publications (ITE, Public Roads, Transporter, etc.)

A Transporter article announcing the availability of the CD will be published by in July/August 2000. Several reports already exist that describe the tools. These reports include: *GIS-Based Crash Referencing and Analysis System* (HSIS summary report FHWA-RD-99-081), *Using GIS in the Analysis of Truck Crashes* (HSIS summary report FHWA-RD-99-119), *Evaluation of Truck Crashes Using GIS-Based Crash Referencing and Analysis System* (TRB report), and *Development of GIS-Based Crash Referencing and Analysis System* (ITE Compendium: Enhancing Transportation Safety in the 21st Century). *GIS-Based Crash Referencing and Analysis System* has been also been published in the ITE journal as an insert and *Using GIS in the Analysis of Truck Crashes* will be published in the ITE journal within the next few months.

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Other Outreach Activities

A video conference could be held with the “GIS Safety Team” (mentioned under **Alternative Formats**) to present them with the product and to obtain their feedback on outreach mechanisms.

TRAINING *Describe formal training, briefings or workshop developed or needed*

Materials Needed

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Instructor Requirements

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Schedule of Training/

Workshop/Briefing

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Intended Audience

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Alternative Formats

PROGRAM INTEGRATION *Should include discussion of transfer of program activities to appropriate CBU*

CBU Contact

Carl Hayden

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Research Contact

Michael Griffith

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In regards to program integration, it needs to be communicated from the CBU and resource centers to the division specialists that this product complements the *Analytical techniques for identifying locations with the potential for accident reduction* product.

