

Collaboration Opportunities in Safety

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Transportation Industry Manager



Data Basin: Collaborative Biological Research

CONSERVATION BIOLOGY INSTITUTE
Bridging conservation science and practice

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CBI Services

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Data Basin

As environmental conservation problems become more serious and the demand to solve them grows more urgent, building better connections between science, policy, and people is critical. CBI built Data Basin in response to the need to access, interpret, analyze, and communicate using conservation science data. Data Basin is a web-based platform that integrates science, mapping, and people. It supports users with a wide range of technical capabilities. The functionality supports technical specialists, decision makers, and members of the interested public.

Example Projects

FSC-US Controlled Wood Resource
Data Basin Gateway for FSC certificate holders and other stakeholders

Data Integration and Analysis Gateway
The IABIN DIAO is a gateway within Data Basin that is intended to show the information about ecosystems, invasive species, pollinators, protected areas, and species

Yale Mapping Framework
Integrating climate adaptation and landscape conservation planning using the Data Basin platform.

- mapping tools to create beautiful custom maps
- group and personal workspaces for collaborating and getting work done effectively
- powerful search engine including geographic area of interest
- upload/download of biological, physical, and socio-economic geospatial datasets
- privacy controls to limit access to content
- drawing, analysis, and commenting tools

Data Basin offers a range of fee-based consulting services for individuals, multi-stakeholder groups, and organizations who want to take full advantage of Data Basin's mapping, analytical, and collaboration tools to achieve their goals. Our team of scientists and programmers can provide a range of services in: (1) Spatial Dataset Development, Processing, and Uploading; (2) Training and Workshops; and (3) Custom Tool Development

<http://consbio.org/>

DATA BASIN Explore • Create • Share • Learn

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My Workspace | Datasets | Maps | Galleries | People | Groups

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Data Basin Services

About Us

Data Basin Staff

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Data Basin Centers

CBI Services

Contact Us

Data Basin Services

Scientists and technical staff at the Conservation Biology Institute (CBI) are available to answer questions and provide basic Data Basin user support. If you have any questions or want permission to upload datasets, please don't hesitate to Contact Us.

CBI also offers a range of fee-based consulting services to better understand and develop solutions to urgent ecological issues. Our clients include individuals, businesses, and organizations who want to take full advantage of Data Basin's powerful capabilities. Our team of experienced scientists and programmers can provide services in:

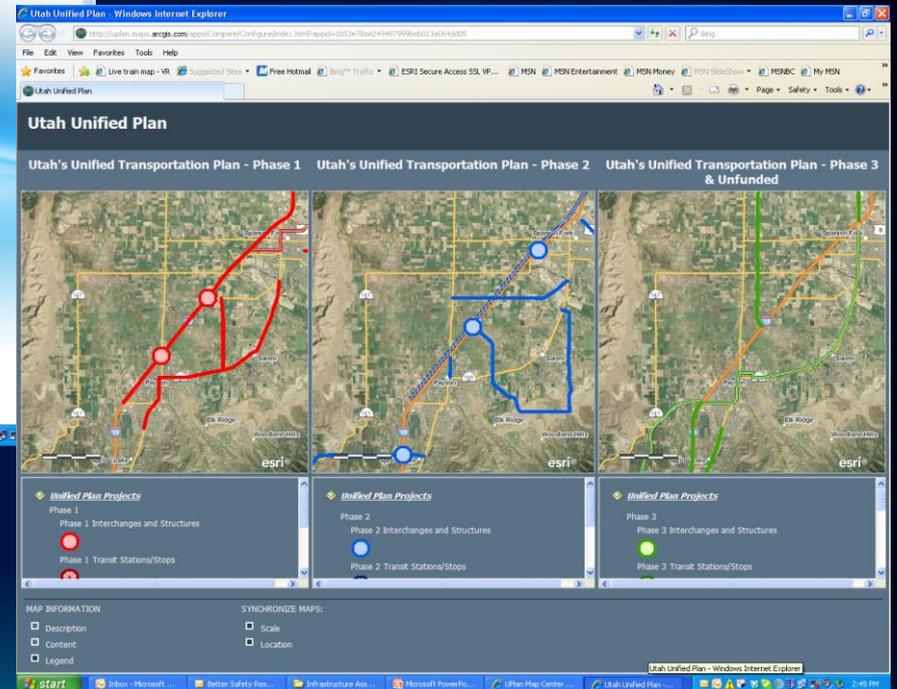
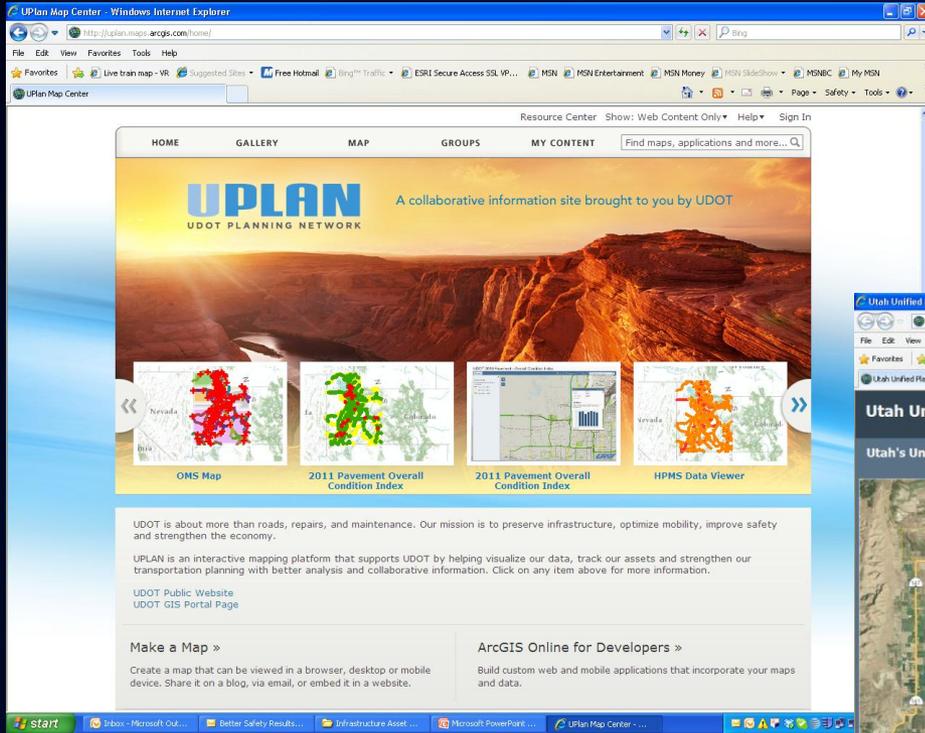
Spatial Dataset Processing and Development

At this point, uploading datasets to Data Basin does require familiarity and access to proprietary ESRI software. To help users populate Data Basin with spatially explicit datasets relevant to their needs, Data Basin staff can provide a range of services. Contact us, if you need assistance in:

- Finding and aggregating relevant datasets
- Formatting and/or uploading datasets
- Organizing large data series into galleries
- Developing or updating datasets

Training & Workshops

Utah DOT UPlan

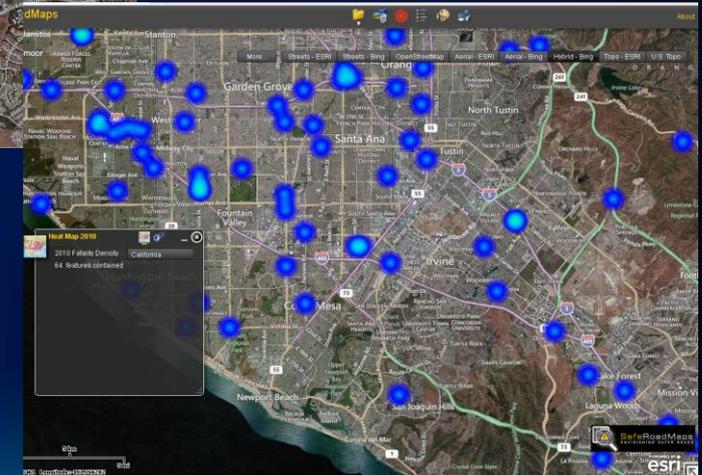
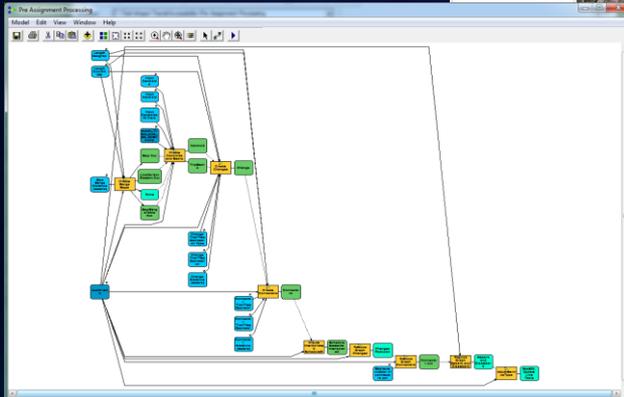


<http://uplan.maps.arcgis.com/home/>

Cloud Based Collaboration

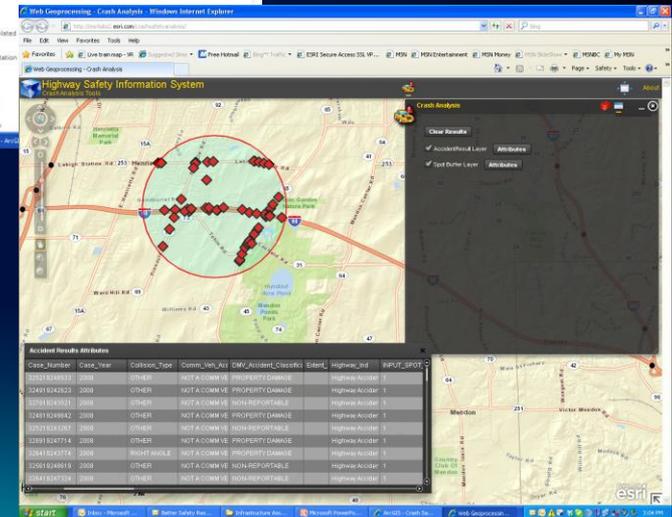
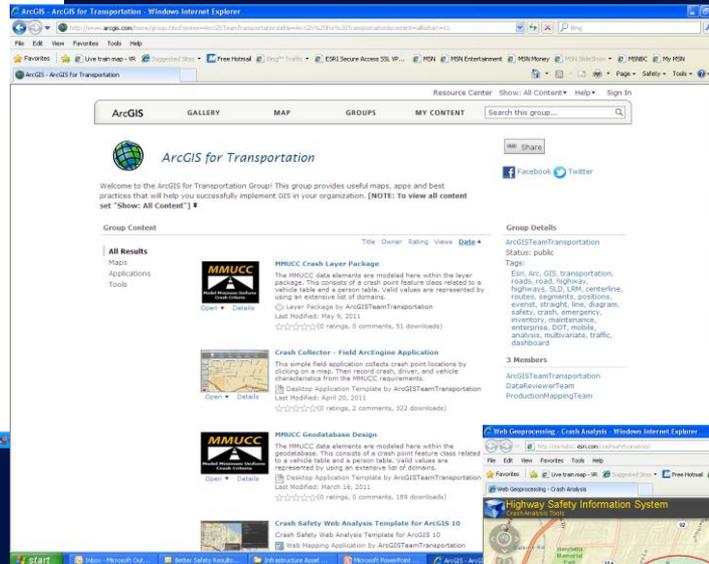
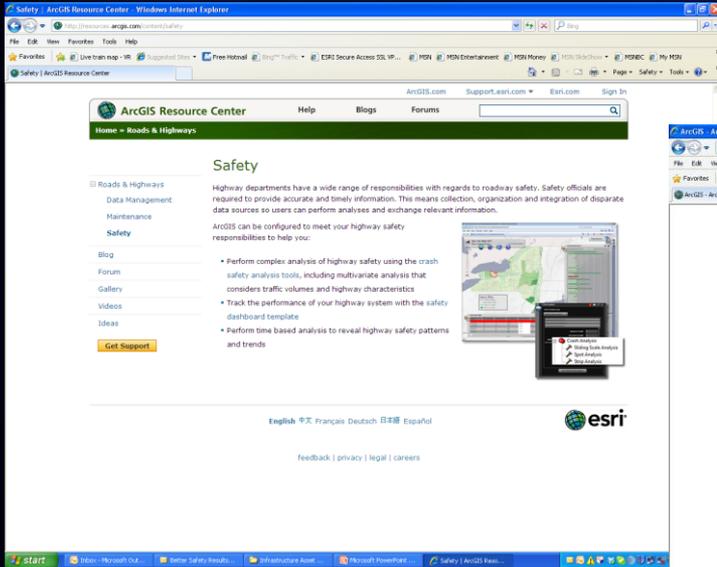
The screenshot shows the ArcGIS Online homepage. At the top, there is a navigation bar with 'ArcGIS', 'GALLERY', 'MAP', 'GROUPS', and 'MY CONTENT'. A search bar contains the text 'Find maps, applications and more...'. Below the navigation bar, the main heading is 'ArcGIS Online' with the Esri logo. A large blue banner on the left says 'Create and Collaborate on Maps and Apps' and 'ArcGIS Online is a cloud-based, collaborative content management system for maps, apps, data, and other geographic information.' Below this banner is a 'Learn More >' button. To the right of the banner is a map of a city area. Below the banner, there is a 'Featured Maps' section with three thumbnails: 'Ocean Basemap', 'Fate of Titanic Passengers', and 'National Geographic Map'.

The screenshot shows the 'ArcGIS My Map' interface. At the top, there is a navigation bar with 'New Map', 'My Content', and 'Help'. Below the navigation bar, there is a toolbar with 'Details', 'Add', 'Basemap', 'Save', 'Share', 'Print', 'Measure', 'Bookmarks', and 'Find address or place'. The main area is a satellite map of a city. On the left, there is a 'Make your own map' section with a list of steps: 1. Choose an area, 2. Decide what to show, 3. Add more to your map, and 4. Save and share your map.



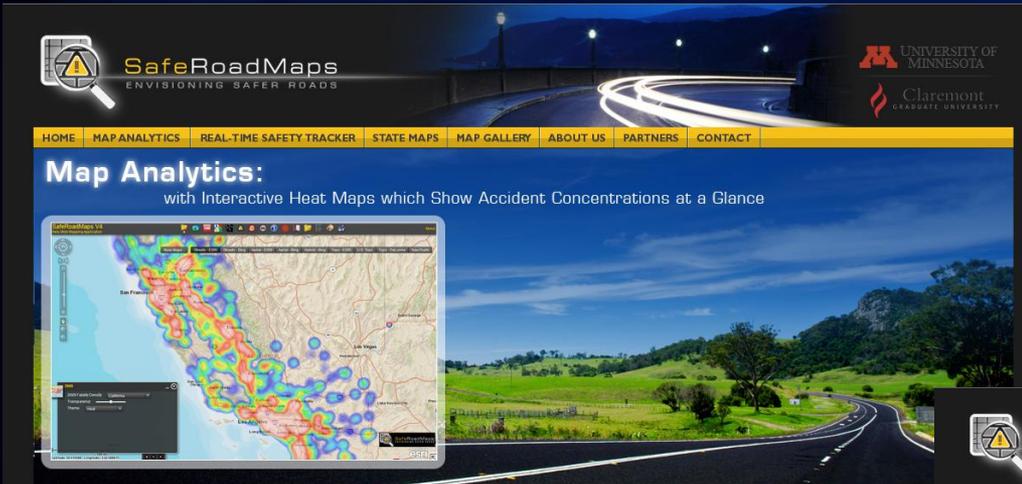
<http://www.arcgis.com/home/>

Esri Safety Resource Center

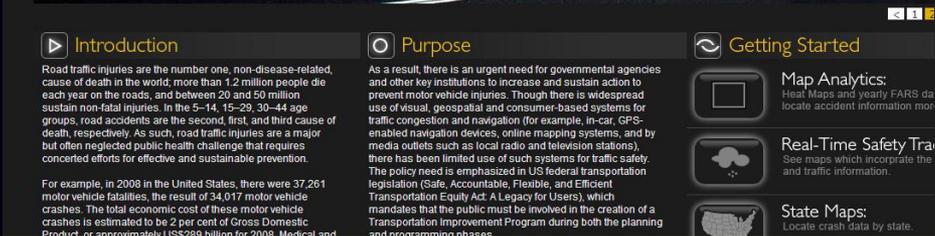


<http://resources.arcgis.com/content/safety>

Safer Road Maps



The header features the SafeRoadMaps logo on the left, the University of Minnesota and Claremont Graduate University logos on the right, and a navigation menu with links: HOME, MAP ANALYTICS, REAL-TIME SAFETY TRACKER, STATE MAPS, MAP GALLERY, ABOUT US, PARTNERS, CONTACT. Below the menu is the heading "Map Analytics: with Interactive Heat Maps which Show Accident Concentrations at a Glance". A small inset map shows a heatmap of California.



Introduction
Road traffic injuries are the number one, non-disease-related, cause of death in the world; more than 1.2 million people die each year on the roads, and between 20 and 50 million sustain non-fatal injuries. In the 5-14, 15-29, 30-44 age groups, road accidents are the second, first, and third cause of death, respectively. As such, road traffic injuries are a major but often neglected public health challenge that requires concerted efforts for effective and sustainable prevention.

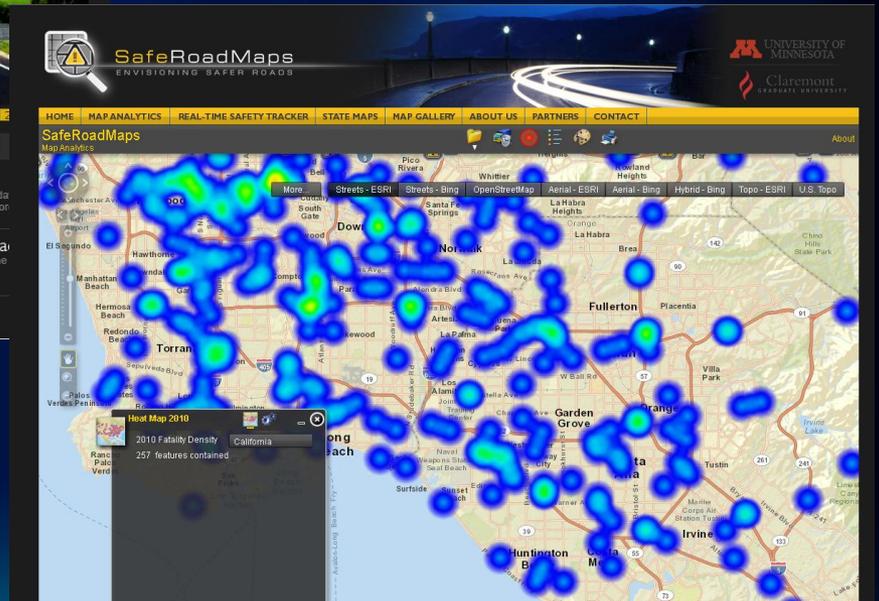
For example, in 2009 in the United States, there were 37,261 motor vehicle fatalities, the result of 34,017 motor vehicle crashes. The total economic cost of these motor vehicle crashes is estimated to be 2 per cent of Gross Domestic Product, or approximately US\$289 billion for 2008. Medical and

Purpose
As a result, there is an urgent need for governmental agencies and other key institutions to increase and sustain action to prevent motor vehicle injuries. Though there is widespread use of visual, geospatial and consumer-based systems for traffic congestion and navigation (for example, in-car, GPS-enabled navigation devices, online mapping systems, and by media outlets such as local radio and television stations), there has been limited use of such systems for traffic safety. The policy need is emphasized in US federal transportation legislation (Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users), which mandates that the public must be involved in the creation of a Transportation Improvement Program during both the planning and programming phases.

Getting Started

- Map Analytics:** Heat Maps and yearly FARS data locate accident information more
- Real-Time Safety Tra**: See maps which incorporate the and traffic information.
- State Maps:** Locate crash data by state.

<http://www.saferoadmaps.org/>



The heatmap shows accident concentrations in Southern California, with high-density areas (red and yellow) in the Los Angeles basin, Orange County, and the San Diego area. A pop-up window titled "Heat Map 2010" shows "2010 Fatality Density California" with "257 features contained". The map interface includes the same navigation menu as the top image and various map controls.

DATA.GOV

An Official Website of the United States Government

Tuesday, July 10, 2012 | Text: A-A-A | [Show](#)

DATA.GOV / SAFETY

WELCOME TO THE SAFETY COMMUNITY

The Safety Community is where data and insight are combined to facilitate a discussion around and awareness of our Nation's public safety activities. Whether you are interested in crime, roadway safety, or safety in the workplace, we have something for you. Check out the data, browse and use the apps, and join the conversation!

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SPECIAL FEATURES WELCOME

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Blogs/News Challenges Forum

Safety.data.gov is a new open government initiative to increase awareness of and deepening insights into our Nation's public safety activities. Check out the blog section for our newest information.

To maximize opportunities for education and entrepreneurship across a diverse set of public safety subjects, safety.data.gov has challenges, prizes, and competitions that encourage the application of public safety data in meaningful ways. Looking for different safety challenges? Start here to learn more!

An early focus of safety.data.gov are bringing together all roadway safety, occupational safety, and transportation operator data and information. What other data and information do you have? Join our future!

HOME GALLERY MAP GROUPS MY CONTENT Find maps, applications and more...

SAFETY FIRST

Featured Safety Maps

- [SafeRoadMaps Real-Time Safety](#)
- [Hazardous Materials Routes](#)
- [Animation of NHTSA Fatality Analysis](#)

Safety Data Mash-Ups - No Programming Required!

There is a need for the general user to be able to create "intelligent maps" regarding their personal safety. This is not always straightforward. We propose that the creation of these maps can be more easily supported by geospatial tools such as Google Fusion Tables and Maps, ArcGIS Online.com, and GeoCommons.com.

As such, we will utilize the data currently available on the Safety.Data.Gov website to showcase how these platforms provide a comprehensive, cloud-based, collaborative environment for working with geospatial data on-demand, secure, open infrastructure for the creation of intelligent web maps and for the sharing of these.

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Make a Map » ArcGIS Online for Developers

Create a map that can be viewed in a browser, desktop or mobile device. Share it on a blog, via email, or embed it in a website. Build custom web and mobile app and data.

HOME GALLERY MAP GROUPS MY CONTENT Search this group...

SafeRoadMaps - Analytics

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No summary was provided for this group.

Group Content

Title	Owner	Rating	Views	Date
SRM FARS Data 2010	bhilton	★☆☆☆☆	0 ratings, 0 comments, 51 views	June 19, 2012
SafeRoadMaps Map Analytics	bhilton	★☆☆☆☆	0 ratings, 0 comments, 21 views	April 15, 2012
SafeRoadMaps Real-Time Safety Tracker	bhilton	★☆☆☆☆	0 ratings, 0 comments, 28 views	April 15, 2012
SoCal IES11	bhilton	★☆☆☆☆	0 ratings, 0 comments, 16 views	March 20, 2012
SRM Crash Analysis	bhilton	★☆☆☆☆	0 ratings, 0 comments, 14 views	March 20, 2012
Commuter Stress Index				

Group Details

bhilton
Status: public
Tags: Rural Road Safety, SRM
2 Members
bhilton
jgraves

Data

Apps

Real-Time

Tools

Transportation Safety Data Services

Today's Transportation Safety Data Services	Future Transportation Safety Data Services
Limited selection	Data ubiquity
Out-of-date	Near real-time
Not Transparent	Transparent
Primarily government oriented	Vast data exposure and access
Closed access	Cross-organization sharing
Collection and platform centric	Interoperable data collection, access, and analysis
Not Scalable	Cloud-based

Courtesy: Tom Horan and Brian Hilton, Claremont Graduate University

Acquire

- In-field, GPS-enabled, real-time data collection
- Model Minimum Uniform Crash Criteria (MMUCC)

Identify

- Live, Historic, and Predictive Data Mining
- Fused data for special analysis – Pedestrian, Drunk Driving, Teenager, ...

Integrate

- Transformation of spatial and non-spatial data, i.e., restructuring and reformatting
- Data integration and interoperability

Analyze

- Crash Safety Analysis - sliding scale, spot, and strip
- Hot Spot / Heat Map
- Spatial Statistics – Exploratory Regression, ...

Disseminate

- Internal - Crash Safety Dashboard, Analytic tools...
- External – Transportation Safety Data Portal – Data, Tools, Apps

Preserve

- Cloud-based
- Data cleansing – checks for redundancy, indexing for efficient cataloging and retrieval, security, ...