RailReady:
A Mobile Risk Assessment Tool

Center for Transportation Analysis (CTA) Research Areas

Aviation Safety
Air Traffic Management Analysis
Data, Statistical Analysis
Geo-Spatial Information Tools
Defense Transportation
Energy Policy Analysis
Environmental Policy Analysis
Highway Safety
Intelligent Transportation Systems
Logistics Management
Supply Chain Management
Modeling and Simulation
Transportation Operations
Planning and Systems Analysis
Transportation Security

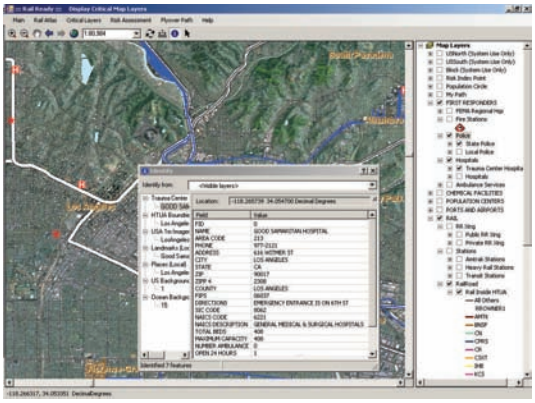
RailReady is a mobile risk assessment tool that allows security managers, rail security inspectors, and first responders to assess and prepare for risks from acts of terrorism. It can also be used by first responders to assess the initial impacts of a transportation security incident. *RailReady* focuses on rail infrastructure and assets within high-threat urban areas.

U.S. map showing the FY 2006 46 high-threat urban areas as defined by the U.S. Department of Homeland Security's Urban Areas Security Initiative (UASI) Program.

Functionalities

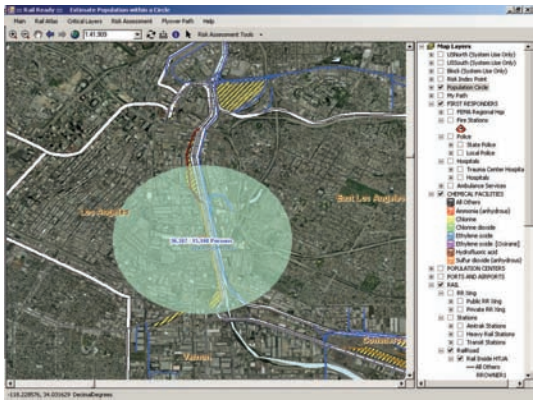
For each of the high-threat urban areas, *RailReady* provides four unique capabilities:

1. provides domain awareness with up-to-date digital maps of each area–equipped with more than twenty geo-spatial data layers with zoom-in and zoom-out features;
2. pinpoints location, attributes and emergency contact information for any critical infrastructure, population center, national icon, hazardous material facility, or incident recovery unit;



An example of pinpointing location attributes and contact information for the Good Samaritan Hospital in Los Angeles, CA.

3. calculates the population at risk (both day-time and night-time) and a consequence index for the area within a one- (or two and half) mile radius of any location within the United States; and



An example of a population at risk for the area within a user-specified one-mile radius of the Alameda Corridor located in Los Angeles, CA.

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4. plays user-specified Google Earth tours with any combination of geo-spatial data layers displayed.

An example of playing a user-specified Google Earth Tour along the Alameda Corridor in Los Angeles, CA.

Geospatial Data Layers

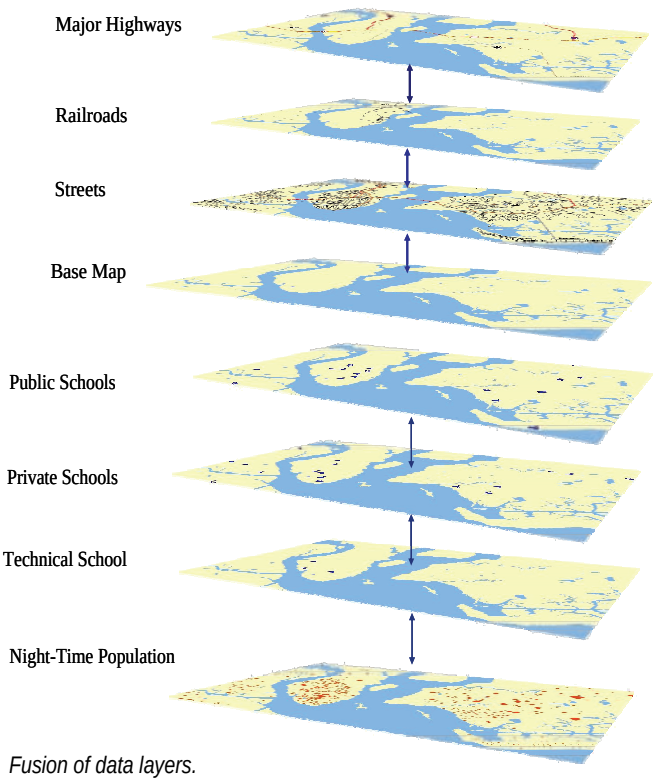
1. Transportation Infrastructure
   - A. Rail (freight & passenger)
     - Railroad network (with a 1:100,000 geo-spatial representation) within a 1-mile corridor on either side of the track)
     - Owner/operator of the line and the railroad name designation
     - Industrial spurs and railroad crossings
     - Yards and stations
     - Bridges and tunnels
   - B. Highway network within the High Threat Urban Area (HTUA)
   - C. Major ports and airports
   - D. Waterways and lakes
2. Defense Significance
   - A. Military installations
3. Population Centers
   - A. Schools
   - B. Major league stadiums
   - C. Shopping malls
   - D. Hospitals and nursing homes
4. Major incident recovery units
   - A. Police and fire departments
   - B. FEMA Regional headquarters
5. National icons and monuments
6. Hazardous material facilities

Chlorine supply chain and volume shipped by rail.

7. Critical commodity flow

Other Applications

1. Evaluating the spatial accessibility of transit vehicles to evacuate special-needs populations
2. Preparing and responding to hazardous material spills



Fusion of data layers.

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