



Civil Protection and Emergency Management



Civil Protection and Emergency Management includes activities in sectors that deal with and minimize impacts and risks from natural disasters and human conflict before they occur, such as evacuations before events; quarantines during; and civil order, rescue and rebuilding in the aftermath. Communications and data technology reliant on satellites and aerospace-developed systems are key in increasing timeliness, and ultimately the success of response, before, during and after emergency events. Multiple agencies and responders must rely on accurate data, communications and ways to integrate emergency actions to be successful.

The Market Horizon

Ongoing threats of hurricanes, earthquakes, tornadoes, wildfires, snow storms, terrorism, floods and pest migrations keep emergency management, civil protection and disaster recovery sectors growing, even through economic downturns and periods of few events. FEMA data and private sector sources estimate the emergency management industry will employ 1.6 million people and spend \$65 billion on wages alone by 2012.

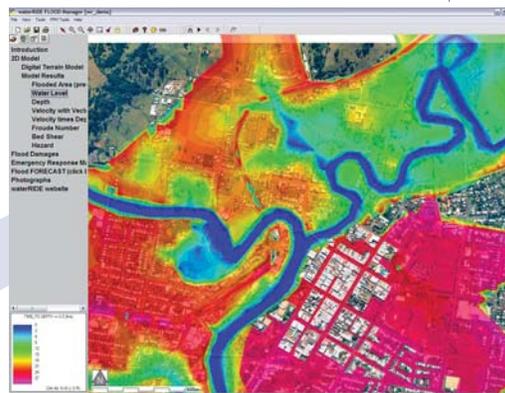
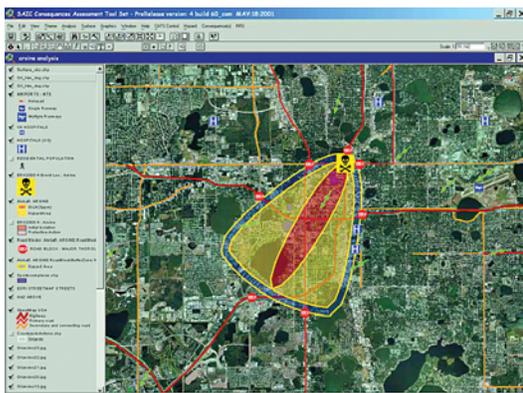
Florida is widely considered to have the Nation's leading emergency management agency and is often cited as the best-prepared state for all hazards thanks to its focus on efficient communication, management and sharing of information by Florida's Emergency Management office, the State Law Enforcement community, federal agencies, local governments and emergency responders. The state's vulnerability to hurricanes, combined with its reputation as an excellent emergency manager, its access to space and the state's research and development assets make it an excellent place to forge the markets forward.

Florida's Edge

- Florida's established leadership in Emergency Management Industry
- Diverse and developing IT and simulation sectors
- Robust communications capabilities
- Launch/processing capabilities
- Strong satellite systems and payloads presence, including pico and nano satellite R&D



UAVs are increasingly used for aerial monitoring of security and disaster zones. NASA's Ikhana is a modified MQ-9 Reaper, seen here assisting in monitoring wildfires. Image credit: NASA



Using Geographic Information Systems, (GIS) software, satellite maps and weather data, planners can identify locations in the greatest danger and take appropriate action. In the image on the left, a chemical plume is modeled to identify its dispersion zone and where roadblocks should be established. On the right is a simulation to determine the time to inundation along a floodplain. This will be used as a guide by emergency personnel to focus efforts on the areas that are expected to flood quickly. Image credits: left - Telvent DTN; right - WorleyParsons

M A R K E T H O R I Z O N



In Sight and Achievable

Florida becomes the global center for industry activities in:

- Pre- and post-assessment/monitoring through satellite imagery and Geographic Information Systems
- Communications systems before, during and after emergency events
- Crisis information management, resource management, emergency notifications and warnings systems
- Prediction of latent or ancillary effects (satellite imagery) processes

State becomes a hub for emergency management industry innovations in technology and processes

Targets for Florida

- Florida Emergency Management industry becomes primary resource for FEMA, state emergency management organizations, county and municipal emergency management organizations, first responders (fire, police, hospitals: mobile command/communications), Red Cross, insurance companies, utility providers and retailers selling to the public
- Emergency management applications of technologies required for satellite and community data acquisition, analysis and integration, and communications systems becomes key to Florida's leadership role

Florida becomes leader in providers of:

- Databases of images and information (before and after)
- Monitoring and recording systems
- Impact prediction tools
- Effect prediction tools
- Quick decision data formats
- Geographic Information Systems (GIS)
- Satellite communications

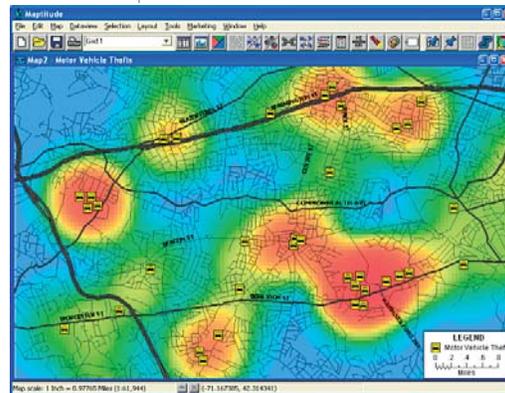
Tactical Development Strategies

Develop Key Partnerships

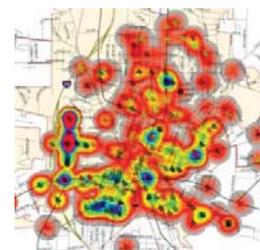
- Develop active partnership with the Florida Emergency Preparedness Association and Division of Emergency Management
- Develop international partnerships and inter-state collaboration with highly effective organizations
- Partner with other states on an emergency management dedicated satellite

Build on Florida R&D Capabilities

- Partner with associations, industry and universities to develop a Florida Board for Emergency Management R&D
- Catalog existing academic and commercial resources
- Support and encourage aerospace-based demonstration programs



Many police departments utilize GIS to map crime and safety data within their precinct. In this image, a "heat" map is generated from car theft locations, which allows officers to recognize hotspots and plan patrols accordingly. By cross-referencing data from multiple sources, such as crime incidents and suspects, it is even possible to prioritize an investigation for a connected series of crimes. Image credit: Caliper Corporation



India is using GIS software to monitor hotspots of conditions favorable for malaria transmission. This allows them to anticipate where to focus preventative efforts. Image credit: India's National Institute of Malaria Research; India's National Vector Borne Disease Control Programme; India's State Health Department

Space Florida was created to strengthen Florida's position as the global leader in aerospace research, investment, exploration and commerce. As Florida's aerospace development organization, Space Florida is dedicated to attracting and expanding the next generation of space industry businesses. Created by the State of Florida as a special district in May 2006, Space Florida serves space-related functions in all three aerospace sectors: civil, military and commercial. Florida's attributes include its superlative workforce, proven infrastructure and unparalleled record of achievement.

