Disaster Preparedness, Response, and Post-Disaster Operations

Shawn D. Smith -- Emergency Visions, Inc.
Emergency Visions provides world class technology for emergency response logistics and incident management, supported by emergency management subject matter expertise, training, and rescue/relief services.

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Solutions must manage the entire process: Supplier to Warehouse to Staging to PODs
Solutions must accommodate different “Suppliers” and cost adjudication processes
Solutions must support the time sensitive decision-making inherent in ERL

Technologies for Emergency Response Logistics

Mitigation

Emergency Management Principles

Preparedness

Response

Recovery

Resource Management

Assessment & Planning

Event Info. & Alert Notification

Situational Awareness & Command/Control

Response & Dev. Logistics

Recovery & Remediation

Presentation Technologies: Mobile Data Collection & Social Networking

Government: Local, State, Regional & National Agencies

Private Sector / Donors: Corporations, Foundations, Churches, Individuals

NGOs: Non-Profit & Faith-based Organizations
Florida Division of Emergency Management

State of Florida Governor Charlie Crist is joined by state officials for the ribbon cutting of the new State Logistics Response Center opened by the Florida Division of Emergency Management in Orlando.
State Emergency Resource Management Network (SERMN) – A Logistics-focused “Hub” for Emergency Management Info.:

- The SERMN combines the capabilities of multiple software solutions into one integrated offering for Catastrophic Event Planning and Response
  - Incident Management
  - Resource Management
  - Personnel Credentialing
  - Situational Awareness and Geo-Mapping
  - Multi-modal Shipping/Transportation
  - Inventory / Warehouse Management
  - eLearning and Training
The SERMN is a solution for Total Asset Visibility (TAV):

- SERMN is a **physical asset catalog** organized by asset category, kind, and type including asset identifiers, description, location, ownership, and status
- SERMN is a **personnel management and credentialing system** designed to track human resources: name, title, organization, role, professional affiliations, all contact detail, current status, licenses, certifications, training, education, language, and more
- Assets can be grouped into functional standing teams and/or strike teams – linking human and physical assets together
The SERMN provides a common operating picture:

- SERMN’s Total Asset Visibility (TAV) functions are integrated with a situational awareness tool for visualizing unified command and control efforts.
- The SERMN is transportable to the field for real-time access by first responders.
- Simultaneous sharing of information among users, departments, and agencies, including suppliers and other third parties.
- Inventory and warehouse management functions are included.
- Logistics tracking via transponders, a web portal, and an Integrated Voice Response System.
Case Study: Hurricane scenario

- 0800: A Category 4 hurricane is expected to make landfall in the Collier county area within the next 72 hours
Case Study: Hurricane scenario

- The Florida State Emergency Operations Center has been activated and a “Mission” has been created requesting 1,000 truckloads of water for distribution to storm victims.
- SERMN’s Resource Database will be used to place the Order and Select Suppliers to fill the Order.
Using the SERMN web-portal, Suppliers can fill the Order by confirming the truckloads of water that can be shipped and by generating the necessary bar-coded freight documentation for checking in the cargo upon delivery.
All new and existing resources in the database can be tracked from a supply chain management perspective. A user can track actions (referred to as “Order Transactions”) such as Quantity Ordered, Quantity Shipped, Quantity Received, Quantity Committed, etc.

SERMN includes a warehouse management applications (with bar coding), and a Logistics/Shipping web-portal (with an Integrated Voice Response System) to track these truckloads of water across the nation to delivery in Florida for disaster victims.
The SERMN’s Geo-spatial Maps track shipments of water from their source location to County PODs.
World Vision
Emergency Response Logistics – Global Rollout

World Vision has selected an Emergency Response Logistics solution for disaster response and daily aid operations across their 98 country program offices. This solution provides the following:

- Disaster-related Situational Awareness
- Supply Chain/Logistics for food and water distribution
- Inventory and warehouse management (18 global locations)
- Donor accountability and cost adjudication
- Daily donated goods distribution
- NGO collaboration
Hurricane Ida 2009 -- Nicaragua:

- Situational awareness
  - National Hurricane Center track
  - Landfall location and Storm Surge effects
  - Infrastructure damage from in-the-field assessment reports
  - Road / bridge closures that affect aid locations

- Local response efforts
  - Evacuations in affected areas and Shelter locations
  - Government/Military response

- NGO / aid operations
  - WV ADPs
  - Other NGOs and a visualization of their operations
  - Locations, Team structures, Assignments, and Activations
  - Types of aid provided and “last mile” tracking and cost adjudication (donor accountability)
Disaster Preparedness, Response, and Post-Disaster Operations are facilitated by Emergency Response Logistics:

- Florida DEM’s SERMN is a state-wide, in-production example of Emergency Response Logistics
- World Vision’s Emergency Response Logistics selection proves the value in both post-disaster and daily humanitarian aid

- What makes ERL different from “traditional” supply chain automation?
  - Time-sensitive decision making
  - “Supplier” Variances -- State Agencies, Counties, Vendors, and NGOs can all provide the same type of resource – Financial management varies greatly among these
  - Need to accommodate and track multiple Team Structures
  - “Last Mile Track and Trace” (Staging to PODs) requires situational awareness and visualization

- Lessons-learned:
  - Local-level adoption is key to the success of the system
  - Accuracy and currency of data from Suppliers facilitates logistical decision-making
  - Technologies must adapt to new social networking tools