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NGA Integrated Work Group - Readiness, Response, and Recovery (IWG-R3) Hurricane Sandy After Action Report, Technology Initiatives

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Hurricane Sandy After Action Report

- **Hurricane After Action Reports are part of the IWG-R3 business process**
  - **Every NGA hurricane response since 1992**

- **Extensive interviews conducted**
  - **Lead Federal Agency members and customers**
  - **NGA deployers and external support team members supporting the event**
  - **IWG-R3 and internal NGA support providers**

- **A valuable tool to identify opportunities for improvement**
  - **Sixteen issues were identified, characterized into four categories**
    - **Operational capabilities**
    - **Training and tradecraft**
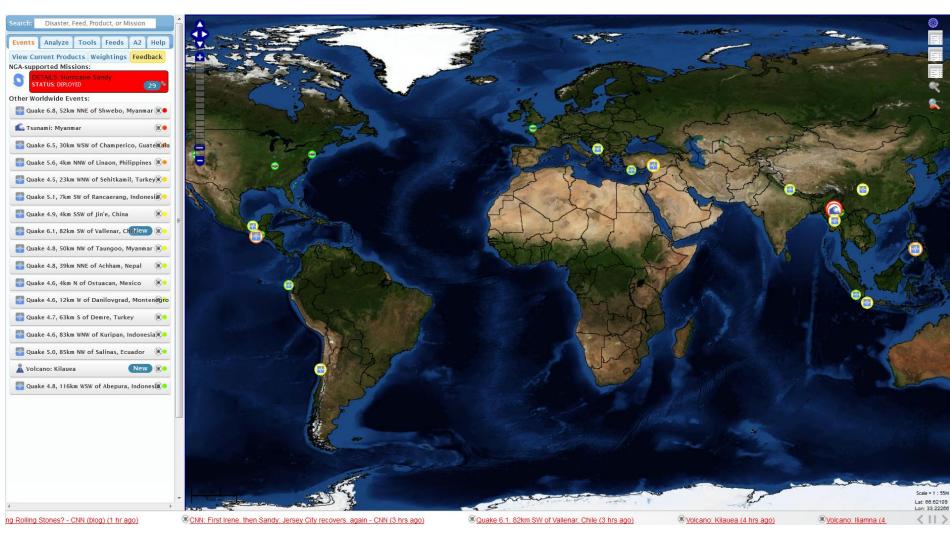   - **Technology**
    - **Policy**

Technology Initiatives

- **Technology improvements are an ongoing pursuit for IWG-R3**
  - **Leverages both embedded and enterprise technology programs and support projects**
  - **Many are ongoing projects and address issues identified in the After Action Report**
  - **Several new development projects will address After Action findings**

- **Accomplishments**
  - **IWG-R3 Dashboard** **– A web based situational awareness tool that characterizes and displays significant natural and man-made events occurring worldwide by consuming dozens of information feeds and applying "sense making" data algorithms against the information. It coveys NGA's level of effort against the events and serves as an access point to NGA supported events**
    - **Impact: Enables customers to answer three questions: 1) What significant events are currently of concern? 2) Is NGA applying resources against any current events? 3) What is the NGA level of effort?**

World-Wide Event Dashboard

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Technology Initiatives

- **Accomplishments**
  - **IWG-R3 Event Pages** – The Event Pages provide services and capabilities for situational awareness and an on-line repository of all of the information related to an event that NGA is working. This information includes an Request for Information (RFI) tool, access to GEOINT data, services and products, links to GEOINT information services, situation assessments, as well as other communication and collaboration tools.
    - Impact: Enables all NGA analysts and customers to maintain situational awareness, post or retrieve RFI's, and improves efficiency

Hurricane Sandy Landing Page

Image courtesy of Digital Globe

Technology Initiatives
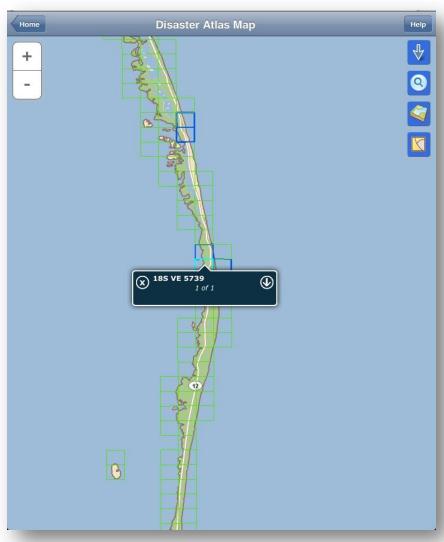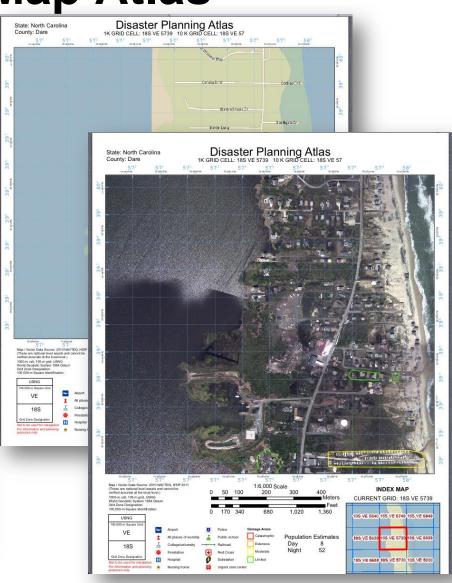
- **Accomplishments**
  - **IWG-R3 RFI Tool – The RFI tool was developed for our mission partners to leverage the use of the www domain to request GEOINT support during a HADR event or SSE**
    – Impact: Allows the user to enter in requests to R3 analysts and provides R3 with a method to track production requirements and provide status to the user
  - **On Line Map Atlas – By hosting the Map Atlas pages on line, NGA enables first responders to quickly access only the pages needed, vice waiting for a book to be bound and shipped. R3 damage assessments are overlaid with infrastructure and population data to provide an online gridded reference document over the entire disaster area**
    – Impact: FEMA was able to use the atlas pages to quickly declare large areas as disasters and speed the reimbursement process from months to days

Disaster Map Atlas

Technology Initiatives

- **Accomplishments**
  - **SAR Flood Tool – The SAR Flood tool developed by the NGA InnoVision R&D office helps analysts quickly detect flooded areas using automated algorithms**
    - **Impact: Flooded areas can be assessed in minutes per image vice up to 30 minutes using manual extraction methods**
  - **Rapid R3 – NGA contracted with DigitalGlobe for rapid commercial imagery services for direct support to disaster events. Three levels of service available depending on severity of the event, imagery available within hours of acquisition**
    - **Impact: Tremendous time savings and improved access to commercial and third party imagery for analyst exploitation.**

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Technology Initiatives

- **Projects in Work**
  - **Unclassified Integrated Analytic Environment (IAE) – An online analytic capability that integrates data, tools, workflows, and product templates allowing analysts to work effectively on line**
    - Impact: Improved collaboration and coordination between R3 and LFA analysts
  - **Indentity Management Program – Centralized access control program that manages user access to NGA on line services**
    - Impact: Eliminates multiple login and access problems for both internal and external customers of NGA data, products and services
  - **Cross Domain Transfer – Enterprise automated and semi-automated capability to transfer information across all networks and classification levels**
    - Impact: Tremendous time savings and improved access to data, products and information for analyst exploitation

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Technology Initiatives

- **Projects in Work**
  - **Apple B2B iTunes Service – Working to establish Business to Business service that would allow access to NGA apps via iTunes vice NGA App Store**
    - **Impact: Improved access to NGA iOS apps for LFA and USAR responders**
  - **SAR Flood Tool Improvements – R3 and InnoVision R&D working to identify augmentative processes to integrate with SAR Tool and overcome problems using the tool in urban areas**
    - **Impact: Improved analytic results and extended utility of the tool into urban areas**
  - **Photo Phenomonology – Work with InnoVision R&D to develop a capability to harvest, georeference, and visualize panoramas of hand held photography available from social media, commercial websites, and other sources**
    - **Impact: Taps into underutilized sources of imagery for improved analytic capability for damage assessments and predictive analysis**