April 16, 2015

TO: UNIFIED DISASTER COUNCIL

FROM: REGIONAL TECHNOLOGY PARTNERSHIP
MICHAEL SCOTT, PROGRAM MANAGER

SUBJECT: SITUATIONAL AWARENESS MAP ASSESSMENT REPORT

RECOMMENDATION:

That the Unified Disaster Council;

1. Review and discuss the recommendations in the Situational Awareness Map Assessment Report.
2. Adopt the recommendations in the report as the San Diego Urban Areas' approved regional approach to situational awareness mapping.

BACKGROUND:

In 2013, the San Diego Regional Strategic Technology Plan identified the need to evaluate technology solutions that support a regional common operating picture or situational awareness mapping solution. This report was generated to inform the San Diego Urban Area on where agencies should focus their efforts to achieve the highest possible level of effectiveness and interoperability when it comes to a geographic information systems (GIS) solution to support a regional common operating picture. The report focused on evaluating the software applications currently deployed in the region that support the concept of regional situational awareness mapping. The intent of this approach is to seek opportunities to leverage existing capabilities in technology solutions already in use in the San Diego Urban Area.

The report recommendations are:

1. Continue to develop the ArcGIS Online solution for creating a shared library of common operational data.

The foundation for an accurate, reliable situational awareness map is a good data source. The San Diego region has developed a group in the ArcGIS Online application called SanMAPS.

The ArcGIS Online SanMaps Group is a cloud-based mapping platform. From anywhere on any device, Web browser, or desktop application, users get access to dynamic, authoritative content to create, collaborate, catalog, and share maps, data and applications with members of their organization, other organizations or the general public. Organizations can subscribe to this secure platform and use it to manage, create, store and access hosted services, maps and applications.

This solution offers a very high level of interoperable GIS data sharing and leverages the existing licensing and capability available in the region.

2. Continue to utilize the NICS application for tactical situational awareness.

The NICS is a Web-based command and control environment for small to large to extreme scale incidents that facilitates collaboration across federal, tribal, military, state, county and local/municipal levels of preparedness, planning, response, and recovery for all-risk/all-hazard events. The NICS facilitates situational awareness for widely dispersed responders.

The NICS has been utilized multiple times in the San Diego region to support first responders and emergency operations centers during wildland incidents and special events. The NICS application has a well-developed set of data sources and several tools that support field operations and can provide emergency operations centers with important information for decision making.

This solution is an established solution in the region and offers an easy to use tool for tactical situational awareness.

3. Develop an ArcGIS based regional situational awareness map solution to support emergency operations centers and public information sharing.

ArcGIS has a suite of solutions that offer the highest level of interoperability, redundancy, portability, scalability and reliability. The suite of software solutions support the Web-based ArcGIS Online solution that can be accessed anywhere, anytime, on any device where an Internet connection is available. The ArcGIS Online solution is designed for use by the GIS aware and non-GIS aware users.

ArcGIS is an established software application utilized by most local government agencies and other interested parties in the San Diego region. Developing this solution leverages existing software licensing and does not require significant new financial investment. The ArcGIS solution currently plays an important role in support of incident management teams and emergency operations centers.

An ArcGIS based solution may include the use of a partner application like Geocortex. An application like Geocortex provides additional functionality to the ArcGIS application for creating user friendly applications that are designed for mobile applications, custom workflows and non-GIS users.

This solution offers the highest level of capability for GIS services. This increased capability provides critical support for and a high level of interoperability for emergency operations centers.

4. Support a high level of collaboration between the all appropriate solutions to make sure all parties have access to common operational data.

Many agencies have adopted solutions that serve their discipline or agency needs. The San Diego region should continue to support a high level of collaboration with these other solutions. The primary vehicle for that collaboration is the use of open geospatial standards and the use of the SanMAPS group to share common operational data. This commitment to collaboration will support other efforts deployed such as CalCOP, TouchShare, WebEOC , Google and other specialized map applications.

SUBMITTED BY:

Michael Scott

MKE SCOTT

REGIONAL TECHNOLOGY PARTNERSHIP, PROGRAM MANAGER

Situational Awareness Map Assessment

Common Operating Picture

Purpose

- Evaluate GIS technology solutions that support a common operating picture
- Inform San Diego region on where agencies should focus effort
- Provide recommendations that support a multi-jurisdictional, multi-discipline regional approach
- Leverage existing resources

Applications Evaluated

- ESRI-ArcGIS
- Next Generation Incident Command System
- Latitude – Geocortex
- Intermedix- WebEOC
- Google Maps
- TouchShare
- Haystax-CalCOP Watchboard

Scope of Work–Process

- Desirable functional capabilities
- Current functional capabilities of each application
- Desirable essential elements of information
- Current capabilities of applications to display essential elements of information

Recommendation #1

Continue to develop the ArcGIS Online solution for creating a shared library of common operating data (SanMAPS).

ArcGIS Online–SanMAPS

- Source for dynamic, authoritative content, collaboration, catalog and share maps
- Available anywhere, anytime with internet
- Access can be restricted to members only
- Leverages existing licensing capability for most local government
- High level of interoperability
- SanMAP group hosted by County of San Diego

ArcGIS Online–SanMAPS

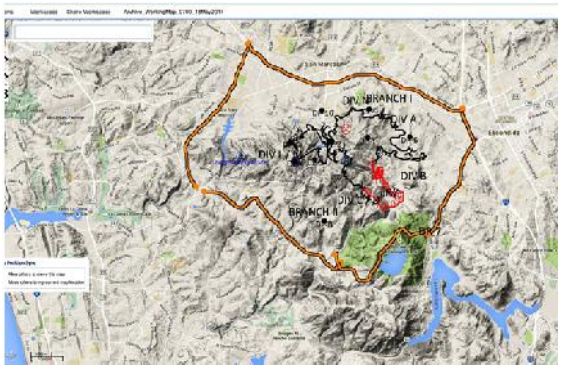
- County Emergency Map–Public Information
- Target Hazard Plans
- Wildland Plans
- Cameras
- Traffic
- Schools
- Hospitals
- Critical Infrastructure
- Natural Hazard Risks
- Jurisdictional Boundaries
- Census data
- Local NIMS Resources
- Oil by Rail

Recommendation #2

Continue to utilize the NICS application for tactical situational awareness.

NICS

- Web-based command and control map
- Currently used by several agencies in San Diego region
- User friendly design, easy to learn and use
- Well developed set of useful data, features
- No cost currently
- Future governance and sustainment concern



Recommendation #3

Develop an ArcGIS based regional situational awareness map solution to support emergency operations centers and public information sharing.

ArcGIS

- Highest level of interoperability, redundancy, portability and scalability
- Available anywhere, anytime with internet
- Additional functionality – not available in NICS
- Leverage existing licensing in use by local government –small cost for additional user licensing
- Consider partner application like Geocortex for additional functionality

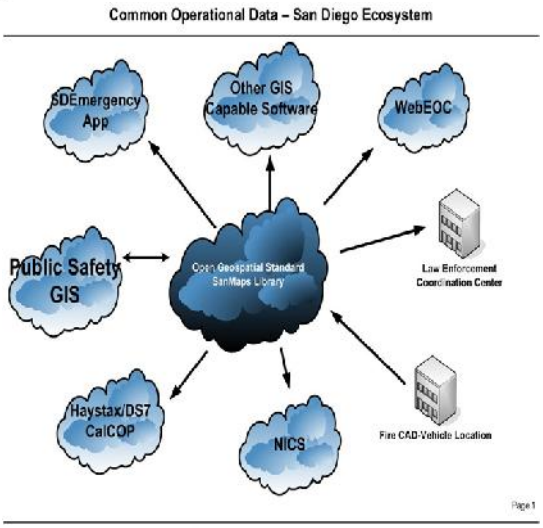
ArcGIS

Recommendation #4

Support a high level of collaboration and interoperability between all appropriate solutions to make sure all parties have access to common operating data.

Data Interoperability and Collaboration

- Serve existing or specialized applications with minimal interface effort
- Open Geospatial Consortium standard
- Access supported by SanMAPS
- Reinforced through procurement processes



Recommendation:

- Review and discuss recommendations
- Adopt the recommendations as the San Diego Urban Areas' approved regional solution