



# **Domestic Operations GI&S:**

**New Beginnings for the National Guard**

**Brian Cullis**

**NGB GIO (Provisional)  
NGB/J2 Staff Support**



## Points to Ponder...

***The IGI&S community must increase their  
“mission relevance”***

*What are the extents of our ability  
to impact the larger DoD mission?*

*What are the extents of our ability  
to impact the homeland defense mission?*

***“If you don’t like ‘change’, you’ll like ‘relevance’ even less”  
- LTG Flowers, USA (Ret)***



# Briefing Objectives

- ❑ Raise awareness to a new NGB initiative to build a robust, sustainable GI&S capability for the domestic operations mission of the National Guard
- ❑ Share efforts to date in aligning GI&S with NGB mission needs
- ❑ Share notional strategies for addressing the challenge of organizing, implementing and sustaining a GI&S capability across the broad and diverse National Guard team



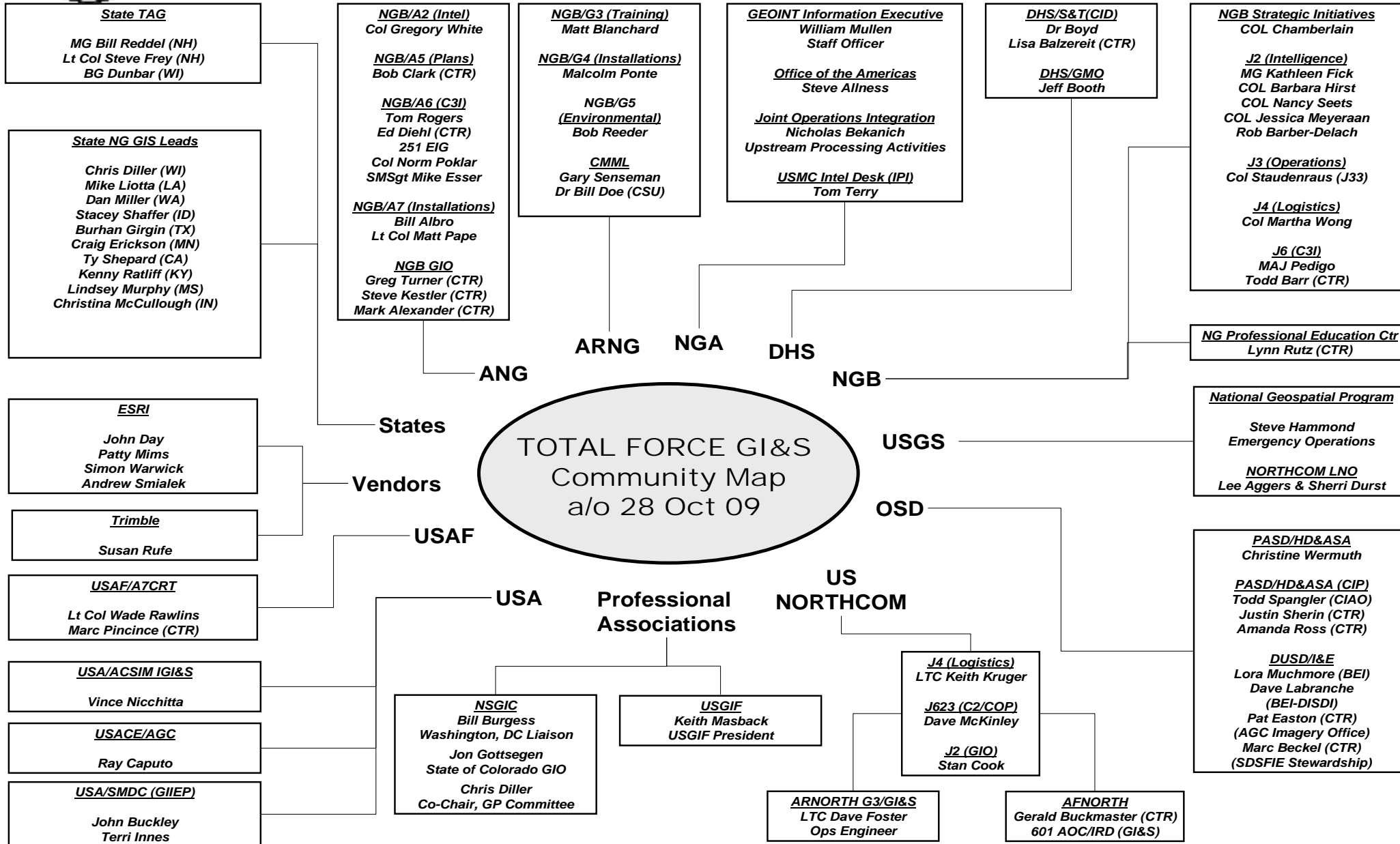


# The NGB GIO Initiative: Background

- ❑ ANG GIO launched Total Force GI&S initiative in March 2009
  - o Brian Cullis assumed role as “Total Force GI&S Lead” in ANG GIO
  
- ❑ ANG proposed a NGB GIO (Provisional) to assess mission needs
  - o NGB GI&S support capabilities have been extremely limited to date
  - o NGB/J2 agreed in late Sep 09 to sponsor this ANG-funded activity
  
- ❑ Activities include outreach to federal, state and professional associations that can enhance the role of GI&S for the domestic operations mission
  
- ❑ Goal is decision by CNGB NLT 31 Mar 10 to stand up a NGB staff function to operate as a focal point for all NGB GI&S activities



# Total Force GI&S Community Outreach





# Understanding the National Guard



Direct descendent of the militias of the 13 English colonies; oldest component of the U.S. military, with units dating back to 1636. (~325,000 soldiers)



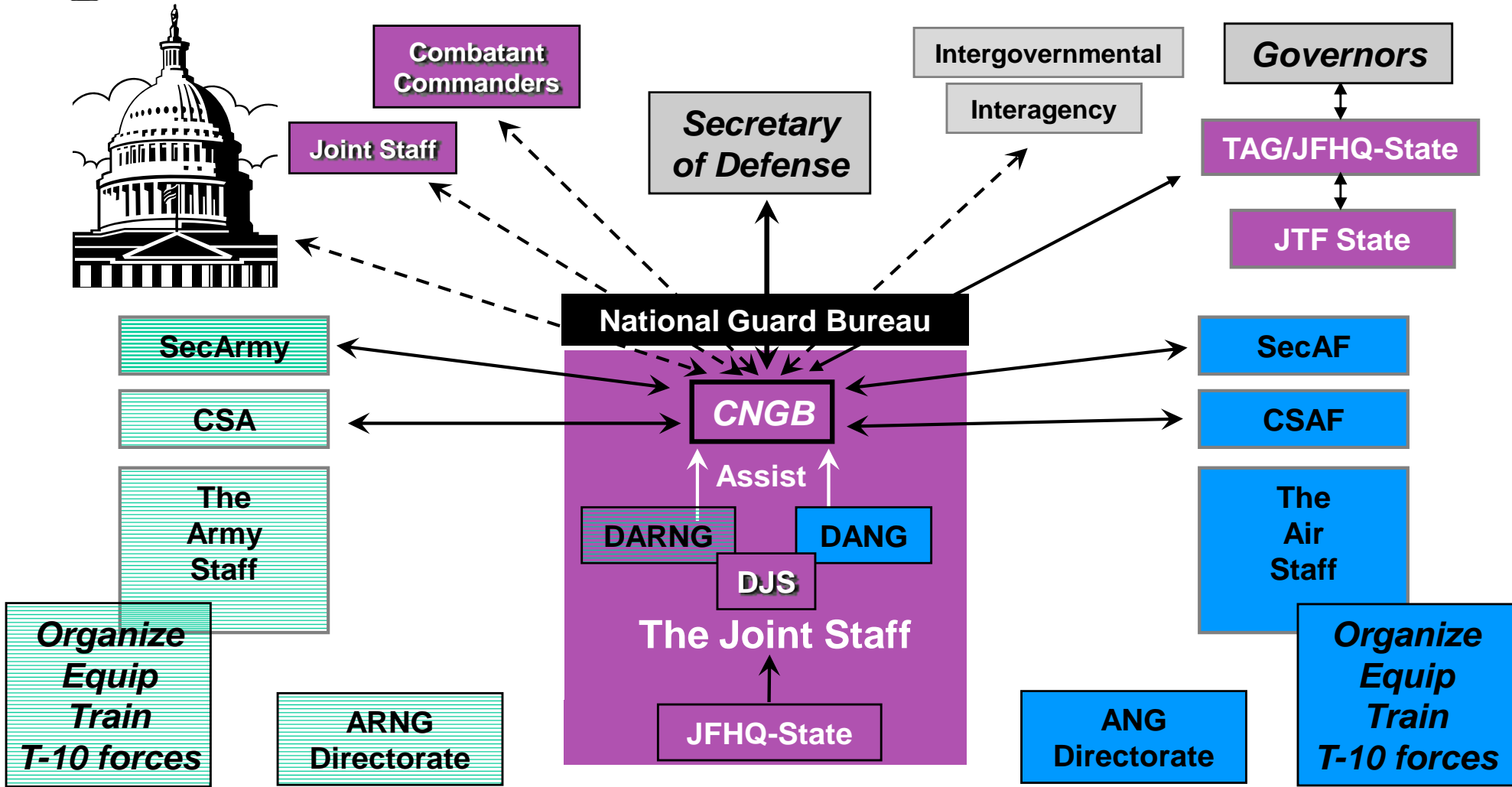
The Air National Guard was established as a separate reserve component in 1947 when the Air Force was created. (~106,000 airmen)

The “*National Guard*”  
or  
The “*Bureau*”



The **NGB** is the federal instrument responsible for the administration of the National Guard. It was created by the Militia Act of 1903. The National Guard Empowerment Act of 2006 elevated the NGB to a DoD joint activity. This act also elevated the Chief of the NGB to General.

# The Role of the NGB Joint Staff



*Primary role of the NGB Joint Staff is to coordinate (←→) and communicate (←- - →) on matters related to National Guard Domestic Operations.*



# NGB Joint Staff Mission Statement

*Empowering the 21<sup>st</sup> Century, Full-Spectrum, Global Minutemen*

“The NGB Joint Staff will **integrate** and **synchronize National Guard efforts** to conduct **homeland defense** and **defense support to civil authorities planning and operations**, as well as organize train and equip in support of States and the DoD.

The Joint Staff will **develop** and **maintain situational awareness**, **advocate for capabilities** and assist with planning while **shifting emphasis from DoD-centric approaches toward State and Interagency solutions...**”



# NGB Strategic Priorities: Aligning GI&S to Mission Goals



*Always Ready, Always There*

**PRIORITY 1:**  
**Defend the Homeland: Here and Abroad**



*Always Ready, Always There*

**PRIORITY 2:**  
**Support the War Fighter Anytime, Anywhere**



*Always Ready, Always There*

**PRIORITY 3:**  
**Transform for the 21<sup>st</sup> Century**



# NGB Strategic Priorities: Aligning GI&S to Mission Goals



- Develop processes and pursue technologies to enhance effectiveness and efficiency of the National Guard and the NGB Joint Staff in support of domestic operations.
- Integrate National Guard assessment capabilities into critical infrastructure protection programs.
- Expand interagency collaboration in all activities.

# NGB Strategic Priorities: Aligning GI&S to Mission Goals



*Always Ready, Always There*

**PRIORITY 2:**

**Support the War Fighter Anytime, Anywhere**



- Manage a Joint CONUS Communications Support Environment to provide C4 capabilities for the entire spectrum of the HLS/HLD/DSCA missions to link the NGB and NG to NORTHCOM, PACOM, OSD-HD, STRATCOM and other federal and state stakeholders and to extend communications and interoperability to domestic incident sites
- Pursue Doctrine, Organization, Training, Material, Leadership, and Education, Personnel, and Facilities (DOTMLPF) solutions to defend the homeland.

# NGB Strategic Priorities: Aligning GI&S to Mission Goals



*Always Ready, Always There*

**PRIORITY 1:**

**Defend the Homeland: Here and Abroad**



- Mature NG and NGB relationships at Federal, State and Local Levels
- Develop strategies that formally address *Unity of Effort* between NG under state control and Federal Forces
- Facilitate development of 24/7 Joint Operations Centers in each state, territory and DC with standardized training and mission capabilities
- Explore and develop strategies to break down information barriers among our federal, state and local partners

# NGB Roles and Relationships: Today's GIO Community



**NORTHCOM GIO**  
**ARNORTH GIO**

**Combatant  
Commanders**

*Secretary  
of Defense*

Intergovernmental  
Interagency

*Governors*

**Joint Staff**

**NGA GIO**

**OSD DISDI**

**DHS GIO**

**USGS GIO**

**TAG/JFHQ-State**

**STATE GIO**

**JTF State**

**STATE NG IGI&S**

**National Guard Bureau**

**SecArmy**

**SecAF**

**CSA**

**CSAF**

**CNGB**

**The  
Army  
Staff**

**The  
Air  
Staff**

**USA IGI&S**

**USAF IGI&S**

**DARNG**

**DANG**

**DJS**

**The Joint Staff**

**Organize  
Equip  
Train  
T-10 forces**

**Organize  
Equip  
Train  
T-10 forces**

**ARNG IGI&S**

**ANG GIO**

**ARNG  
Directorate**

**ANG  
Directorate**

*Primary role of the NGB Joint Staff is to coordinate (↔) and communicate (↔↔) on matters related to National Guard Domestic Operations.*



# Title 32 and Civil-Military GI&S Teaming



**Disaster Response** **Homeland Security** **Homeland Defense**  
**Support to Civil Authorities**  
**Counterdrug** **Contingencies**  
**Emergency Preparedness** **Air & Missile Defense**

**Civil**



**Military**





# GI&S Challenges in the National Guard

- **The National Guard community is a “joint staff” blending two different cultures**
  - ARNG GI&S is aligned with Installations, Environmental, Training and Aviation Safety
  - ANG GI&S is managed centrally through the ANG GIO with an enterprise scope
- **The NGB Joint Staff is still adapting to its new role supporting the CNGB**
  - The J2 and J6 directorates are especially challenged
  - NGB/J2 provides a small staff of GIS analysts to support J-3 (Current Operations)
- **National Guard plays a key role in the National Response Framework**
  - Civil Support Teams and Critical Infrastructure Protection missions are but two
  - Numerous missions positioned to exploit GI&S with no NGB focal point
- **Federal Emergency Response/GI&S COI is seeking NGB representation**
  - NGB is the official conduit for communicating between the DoD and States
  - The majority of domestic operations events are addressed at state level
- **Incredible breadth of the National Guard/Domestic Ops community is intimidating**
  - 54 distinct “theaters” led by Adjutants General (States, Territories and District of Columbia)
  - The Title 32 geospatial information ecology is more complex than Title 10 (Active Duty)

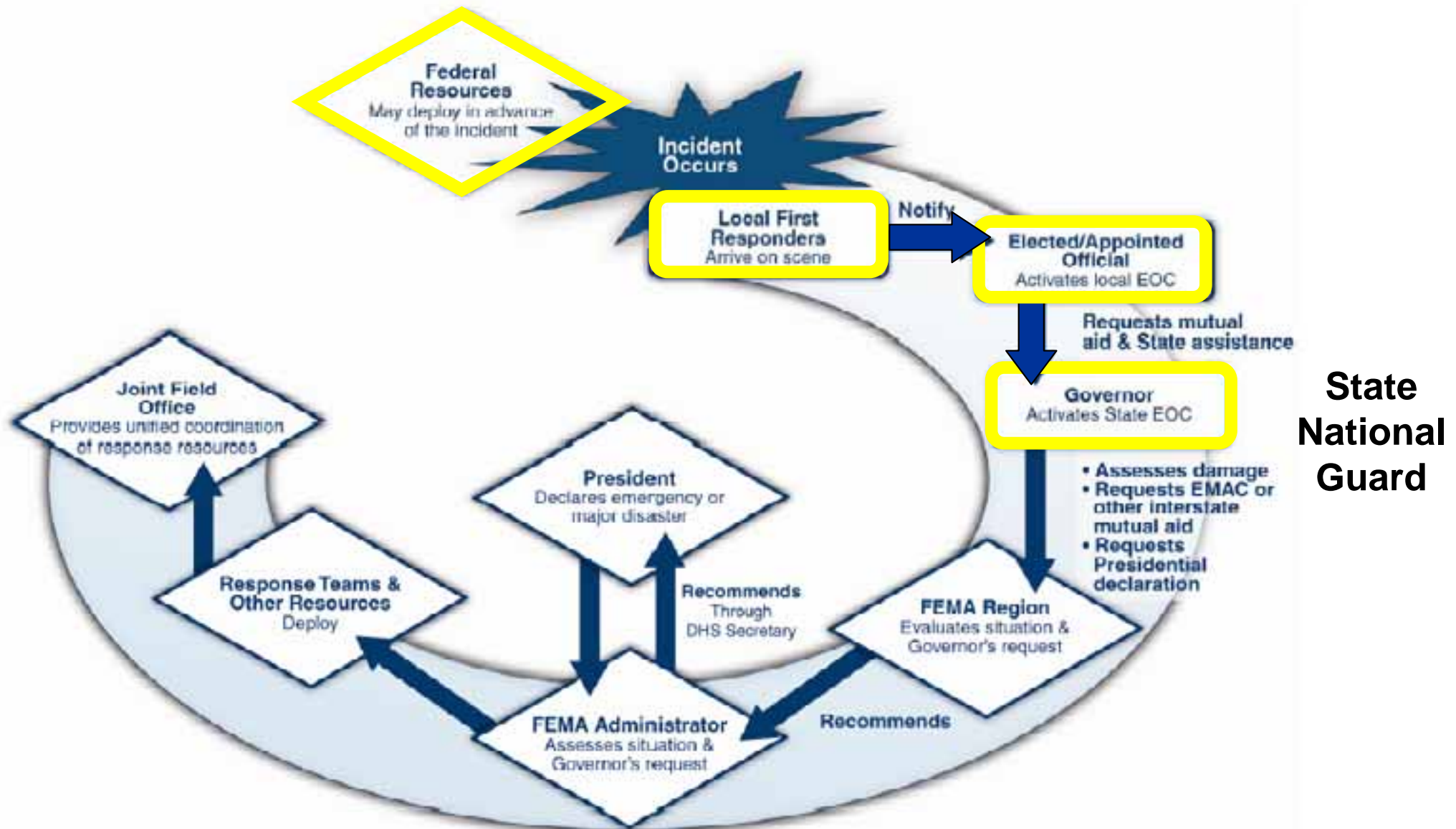


# A Proposed NGB GIO Mission Statement

Facilitate geospatial information resource synergies across federal-state and civil-military interfaces to achieve extraordinary mission outcomes for National Guard domestic operations.



# Pre-Stafford Act Implementation: Emergency Operations Within States





# “Essential 10” NG Missions for the Governor

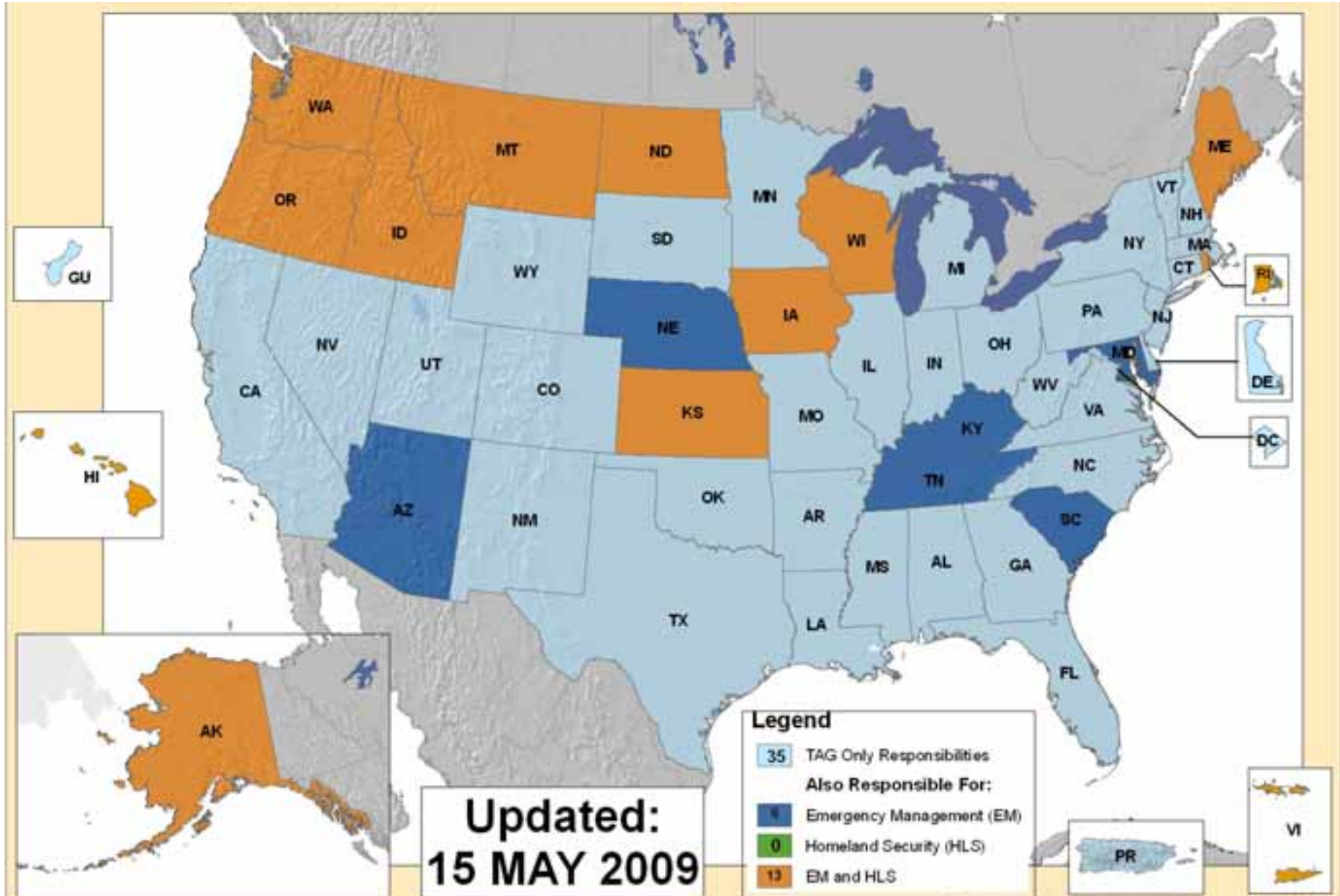
The NGB is committed to the fundamental principle that every governor has 10 core capabilities for homeland readiness.

- A Joint Force Headquarters (JFHQ-State) for command and control
- A Civil Support Team for chemical, biological, and radiological detection
- Engineering assets
- Communications
- Ground transportation
- Aviation
- Medical capability
- Security forces
- Logistics
- Maintenance capability





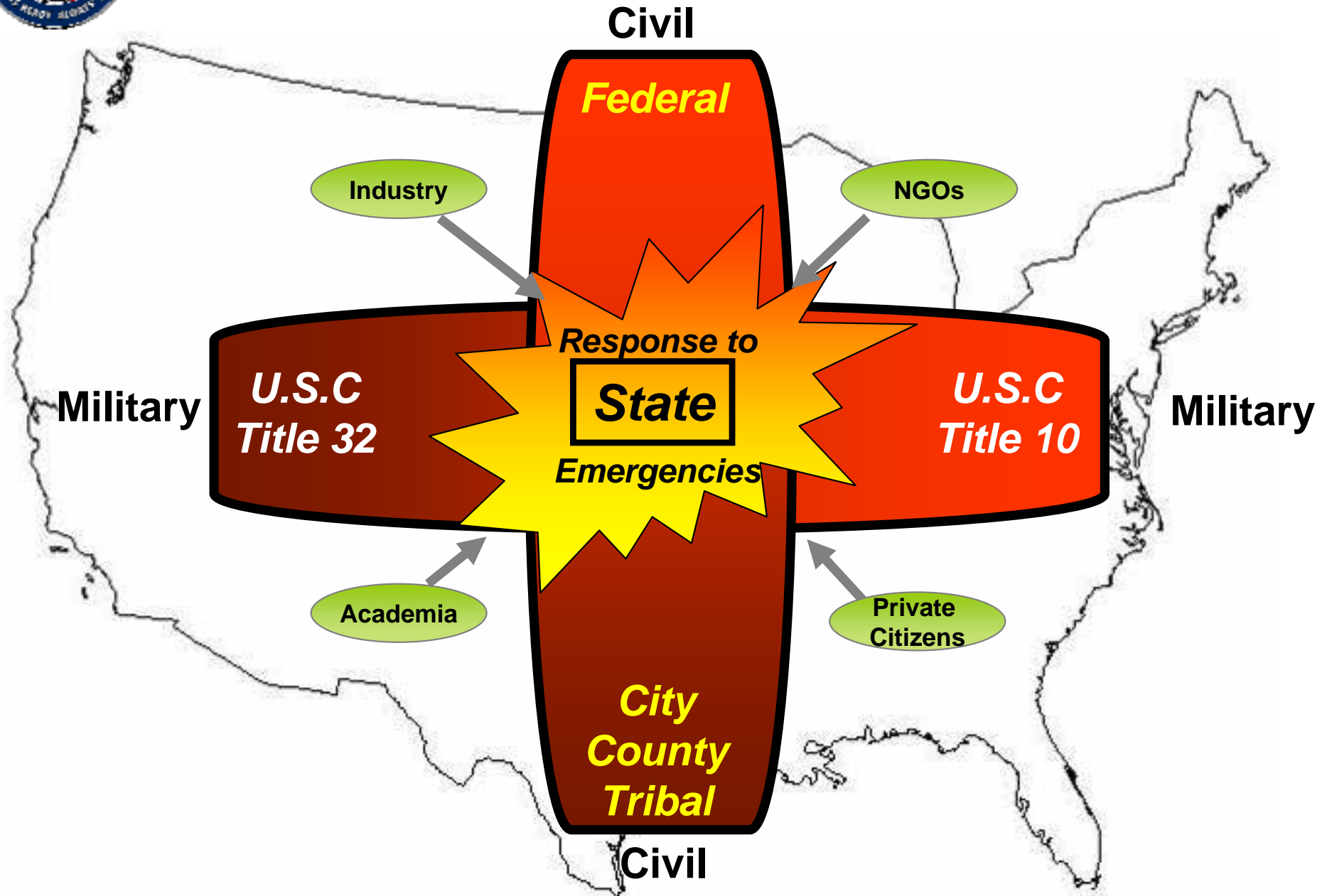
# Role of State Adjutants General in EM/HLS







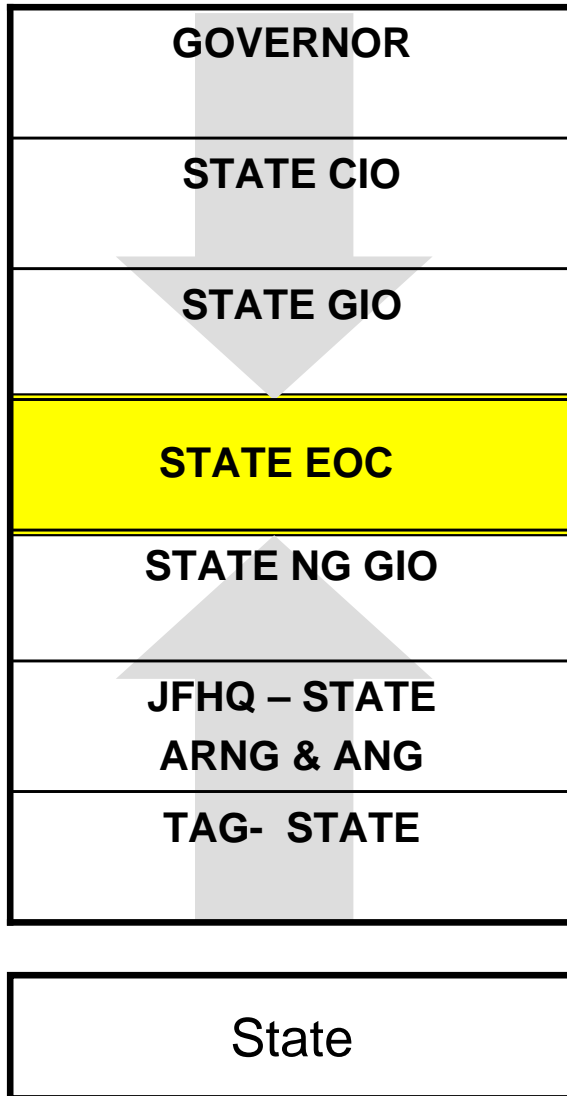
# The Civil-Military Nexus: The State as the Focal Point







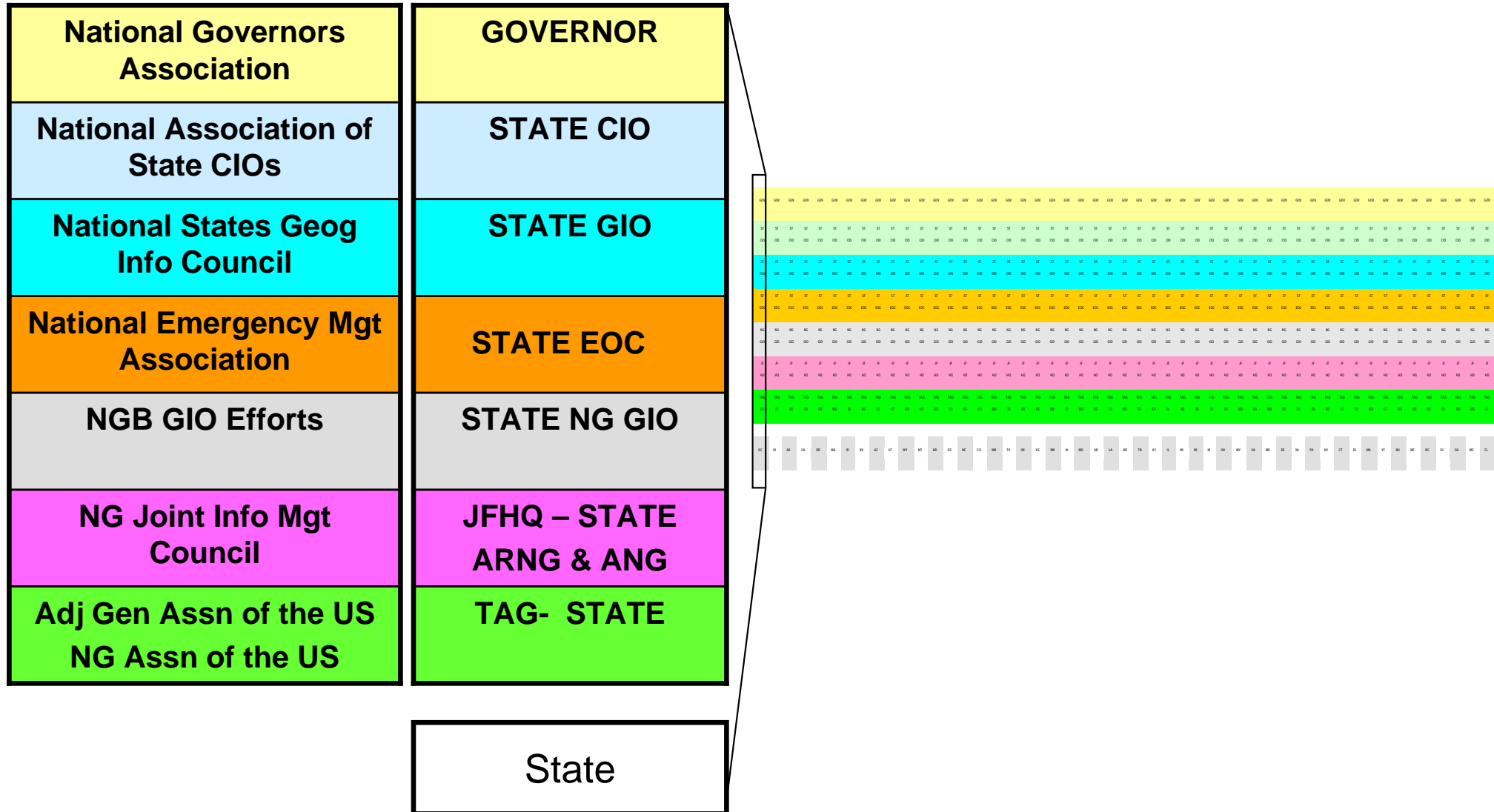
# NGB GIO Challenges: Understanding the “States”



A large grid representing a data table with many columns and rows. The grid is composed of many small cells, each containing a small, illegible text or symbol. The grid is organized into several horizontal sections, with the top section being the largest and the bottom section being the smallest. The grid is connected to the organizational chart by a callout box on the left side.



# NGB GIO Solution: Leveraging Communities of Interest





# Collaborating for Change: Executive and Geospatial Spheres



MG Reddel (TAG-NH) ● ————— ● NGB GIO (Provisional)



# Revisiting the Points to Ponder...

***The IGI&S community must increase their  
“mission relevance”***

*What are the extents of our ability  
to impact the larger DoD mission?*

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**Questions?**

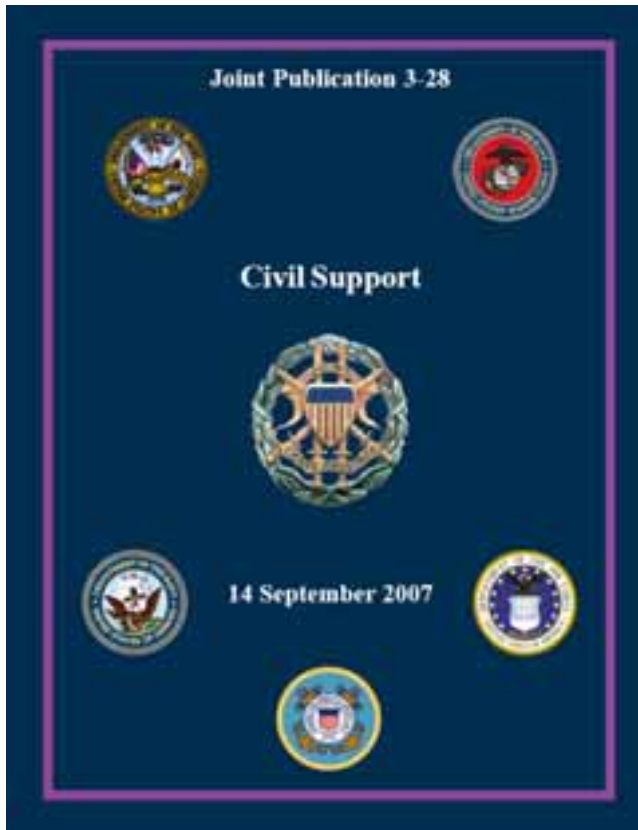
**Brian Cullis**

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# The National Guard Role in Civil Support



The National Guard is transforming... It is vital to recognize the NG capabilities that will be operating in a disaster area during CS operations.

The following NG initiatives highlight the major programs DOD should be familiar with because state and federal military forces will work closely together to coordinate support, minimize the duplication of effort, and establish unity of effort.

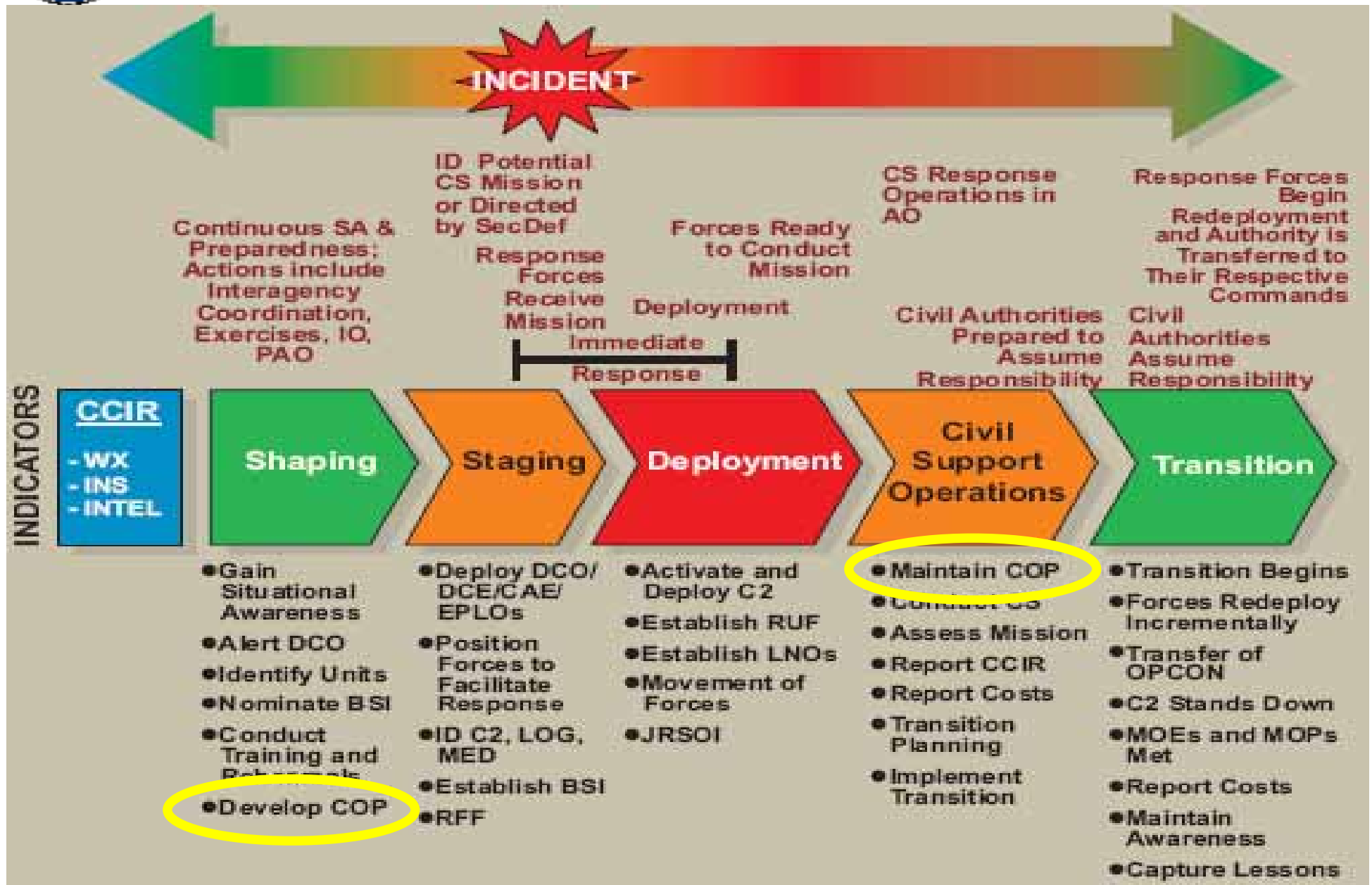
- Joint Force Headquarters State (JFHQ-State).
- Joint Task Force State (JTF-State)
- National Guard Reaction Force (NGRF)
- WMD – Civil Support Team
- CBRNE Enhanced Response Force Package (CERFP)





# Five Phases of a Civil Support Operation

(Figure III-4, JP 3-28)





# Proposed NGB GIO (Provisional) Tasks

- ❑ Collaborate with GI&S elements in the USA, USAF, ARNG, ANG, NGB Joint Staff, OSD, State Adjutants General to build a 3-year NG GI&S Strategic Plan
- ❑ The NG GI&S Strategic Plan will include:
  - the results of an initial survey of GI&S investments across the ARNG, ANG, NGB and State-JFHQs in the states, territories and District of Columbia;
  - a SWOT (**S**trengths/**W**eaknesses/**O**pportunities/**T**hreats) analysis of how GI&S could contribute to Essential 10 Domestic Operation missions;
  - a SWOT analysis of the ability of the NGB to deliver the GI&S capabilities outlined in the DHS Geospatial CONOPS for the National Response Plan;
  - recommended next steps to yield an unprecedented Total Force GI&S capability for the National Guard mission;
  - summary of benefits and investments necessary to establish and sustain a standing NG GIO on the NGB Joint Staff in early FY11



# Sustaining a NGB GI&S Capability: Education & Training



## Lavern E. Weber NGB Professional Education Center Camp Robinson, AR

GIS-300 GIS FOR RANGE STAFF FY10  
GIS-301 ARCGIS DESKTOP II AND III FY10  
GIS-303 SDSFIE  
GIS-304 BUILDING GEODATABASES  
GIS-305 WORKING WITH ARCGIS SPATIAL ANALYST FOR GEOSPATIAL INTELLIGENCE  
GIS-306 CARTOGRAPHY WITH ARCGIS  
GIS-307 ARCGIS SERVER ENTERPRISE CONFIGURATION AND TUNING  
GIS-308 SYSTEM ARCHITECTURE DESIGN STRATEGIES  
GIS-309 INTRODUCTION TO ARCGIS SERVER  
GIS-310 ARCGIS SERVER: WEB ADMIN. USING THE MICROSOFT .NET FRAMEWORK  
GIS-311 DEVELOPING APPLICATIONS WITH ARCGIS SERVER  
GIS-312 DATA PRODUCTION AND EDITING TECHNIQUES  
GIS-313 INTRODUCTION TO PROGRAMMING ARCOBJECTS USING VBA  
GIS-315 ERDAS IMAGINE  
GIS-316 INTRO TO ARCGIS FOR GEOSPATIAL INTELL & LAW ENFORCEMENT FY10  
GIS-317 GIS FOR SUPERVISORS  
GIS-318 INTRODUCTION TO GEOPROCESSING SCRIPTS USING PYTHON  
GIS-319 ADVANCED ANALYSIS WITH ARCGIS  
GIS-321 MAP GRADE GPS DATA COLLECTION  
GIS-322 SURVEY GRADE GPS  
GIS-323 FEATURE ANALYST  
GIS-325 QA/QC FOR GIS DATA  
GIS-326 WORKING WITH ARCGIS SPATIAL ANALYST  
GIS-400 MICROSTATION V8 XM EDITION ESSENTIALS

### PEC mission...

*To provide training and event support that enhances the readiness of the ARNG.*





# The Vagaries of Location-Based Services

File Edit View Favorites Tools Help

Back Search Favorites

Address [http://www.pec.ngb.army.mil/attende\\_info/travel.asp](http://www.pec.ngb.army.mil/attende_info/travel.asp)

Lavern E. Weber  
National Guard Bureau  
Professional Education Center

Home QuickLinks Services Training Conferences About PEC Staff Resources Click For 7 Day Forecast

Last Updated: 9/26/2009 10:49:08 AM  
Weather data provided by NOAA's National Weather Service

### Directions to Camp Robinson Main Gate

**From Little Rock National Airport**  
Exit the airport by turning right and stay in the right-hand lane  
MERGE onto I-440 West toward I-30 Downtown/Hot Springs/Tsarikana (2.3 miles)  
Take EXIT #138A to merge onto I-30 East toward Downtown (4.5 mi)  
Take EXIT #143A to merge onto I-40 West toward Fort Smith  
Stay on I-40 West and take EXIT #150-Military Drive (2.9 mi)  
Make a LEFT onto Charles H. Boyer Drive (at the stop sign)  
Make a RIGHT onto Military Drive, follow approximately 2 miles to Camp Robinson Main Gate

**From I-40 (Traveling East)**  
Travel to Little Rock EXIT #150 (Military Drive)  
Make a LEFT onto Military Drive  
Follow Military Drive approximately 2 miles to Camp Robinson Main Gate

**From I-40 (Traveling West)**  
Travel to Little Rock EXIT #150 (Military Drive)  
Make a LEFT onto Charles H. Boyer Drive (at the stop sign)  
Make a RIGHT onto Military Drive, follow approximately 2 miles to Camp Robinson Main Gate

[Map](#)

Click the link below for a map from the Little Rock National Airport to PEC billeting. Note: Due to technical limitations directions default to the back gate of Camp Robinson which is not available at all times. Directions through the front gate can be obtained by modifying the route in MapQuest. After being directed to the MapQuest page, under the "Directions" section (just above the map image), locate step 11 and click on "Avoid". Then click on the "Get Directions" button in the "Directions" section to get the new route.

[Google Map directions to Camp Robinson](#)  
[Mapquest directions to Camp Robinson](#)

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# NGB GIS Personnel

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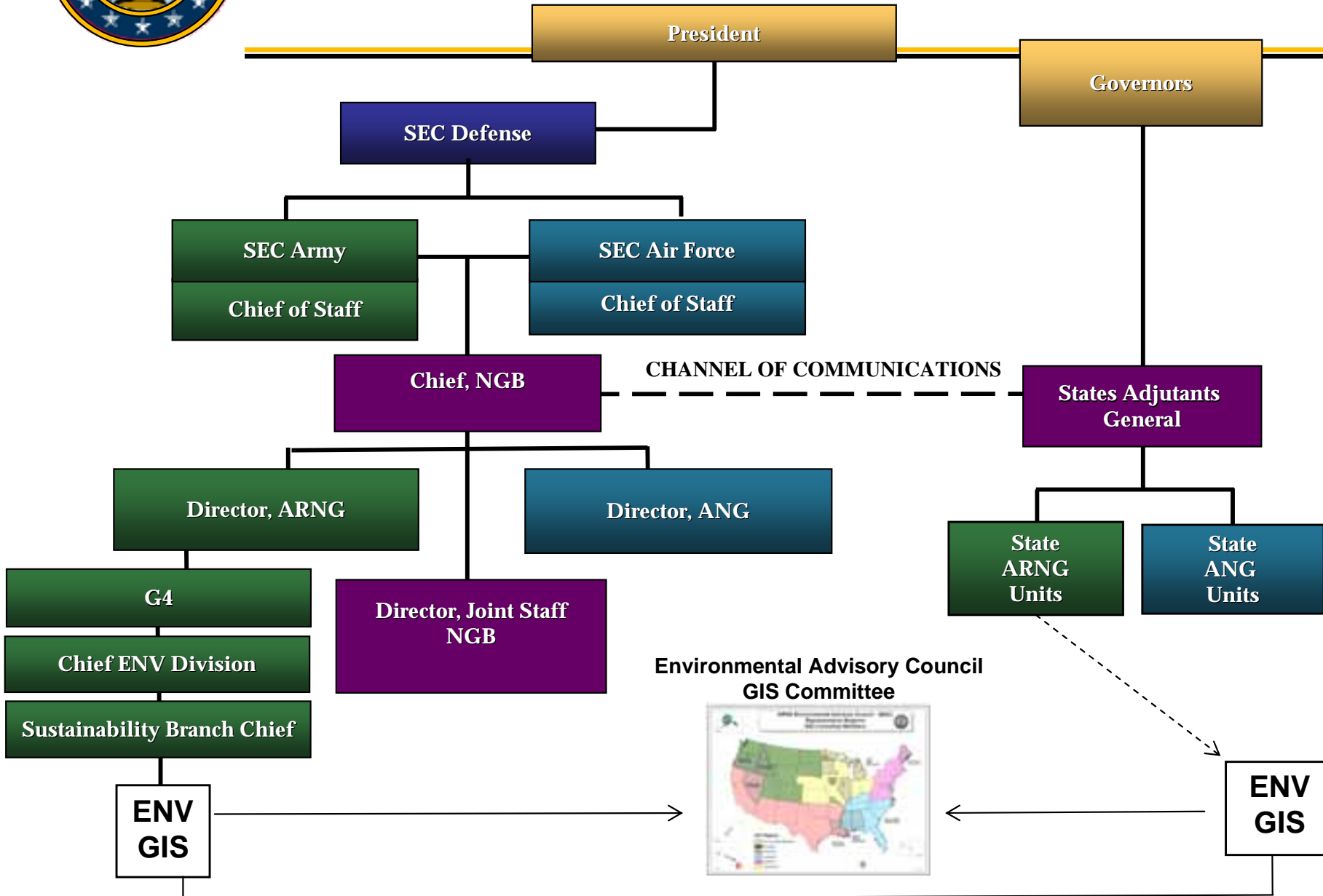
## J2/J3 – Joint Operations

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robert.barber-delach@us.army.mil  
703-607-3268

**GKO Portal:** <https://gkoportal.ngb.army.mil/sites/GIS/default.aspx>



# National Guard Structure

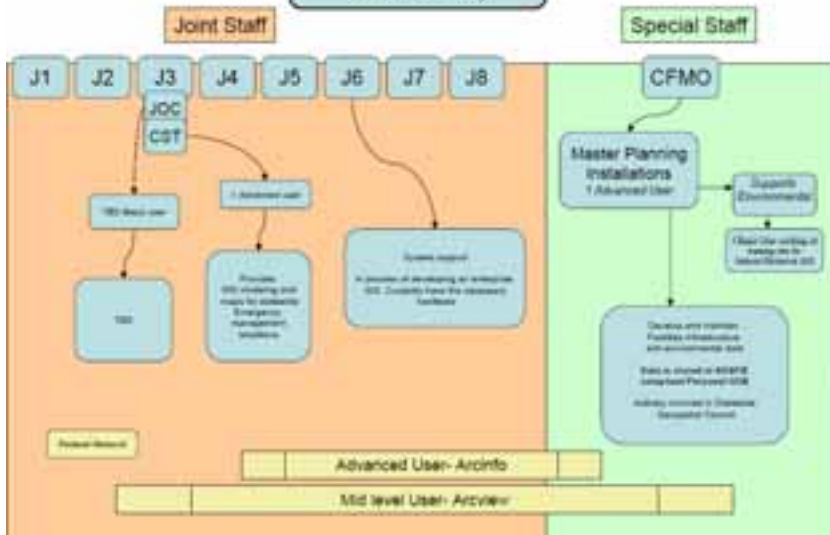




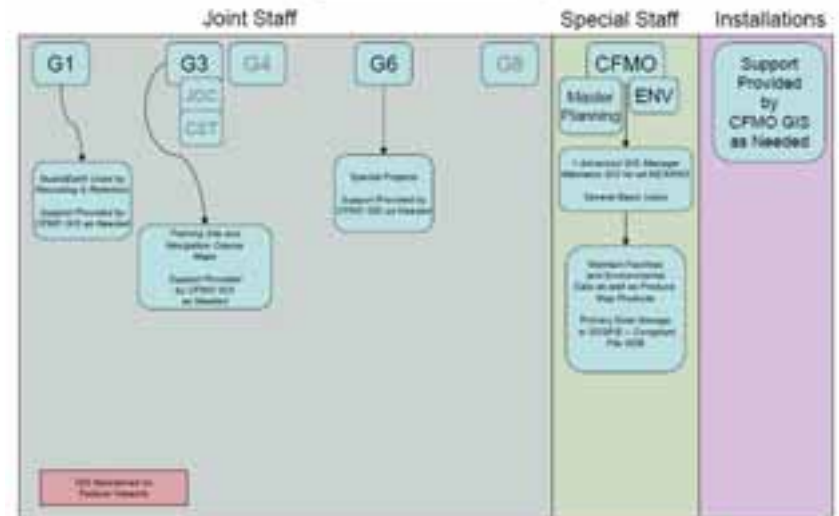


# State Org Structure-Results

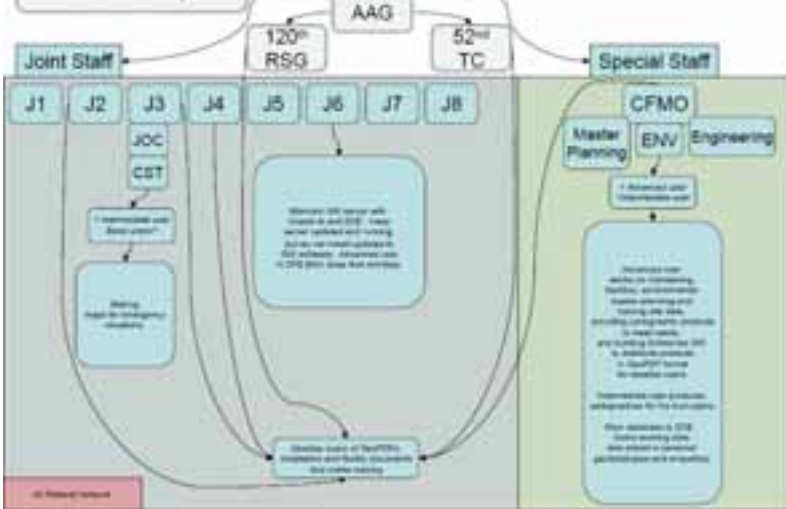
**Connecticut GIS**  
Structure Summary



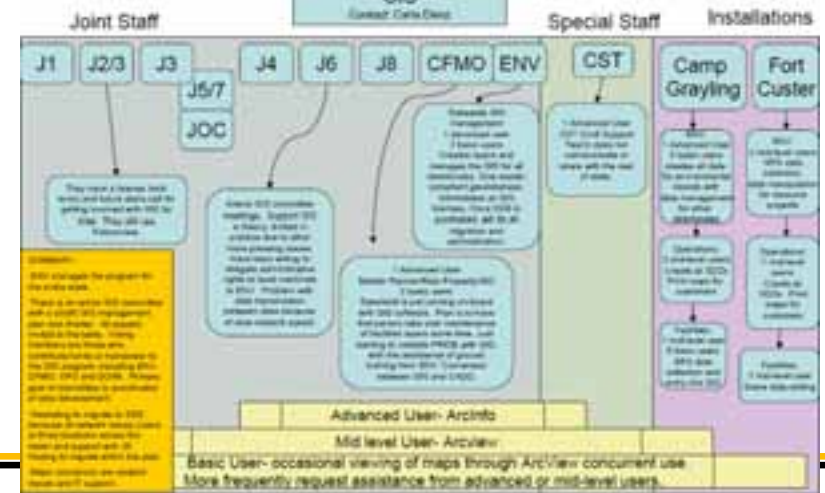
**MDARNG GIS**  
Structure Summary



**Maine GIS**  
Structure Summary



**MICHIGAN Army National Guard GIS**  
Current Org Chart





# GuardMAP Application

## GuardMAP

<https://gis.ngb.army.mil/>

GuardMAP is located in the LINC (Deployment Center) and is available to all NGB personnel who possess a CAC (Client Access Card) via https://gis.ngb.army.mil. When available, users must verify their DOD CA™ certificate and enter their PIN.

GuardMAP is an ArcGIS Server 8.2 system mapping a platform developed with the Arc2D Web browser and allows geospatial data from the National Geospatial Data Repository, including environments, installation basing, Common Installation Features (CIF) layers, and high-resolution installation imagery and 3D imagery of the world.

The Data Queries tool accesses CIF layers, PIVOC, and ASD web spatial databases. Users select an installation, query and retrieve data and display them in a data view. Table data, metadata maps, and environmental data attributes can be printed or exported to Excel.

The Geocoding tool enables users to update pre-formatted address information. Users browse their local PC for the address file, upload it to the server and GuardMAP geocodes and displays their location.

The Find Nearest ANWG Site tool allows users to enter an address location and returns the ten closest ANWG sites, including lat/lon directions.

Users can generate a 200 mile buffer from the starting address, including all sites within the radius or sites of sites within a 1 hour drive, using distance-based attributes to generate actual drive times.

The Generate a Route and Directions tool creates the shortest route between the start user selected addresses. Turn-by-turn directions and distances are included and the route is displayed in the map viewer.

The Export Map to PDF tool was written to enable users to capture their map in an electronic PDF file to be printed, shared, distributed, or used for further analysis.

Developed for: Mark Pothman, ANWG GIS Program Manager  
Designed by: Michael Baker, Jr., Inc.



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# GuardMAP Objective

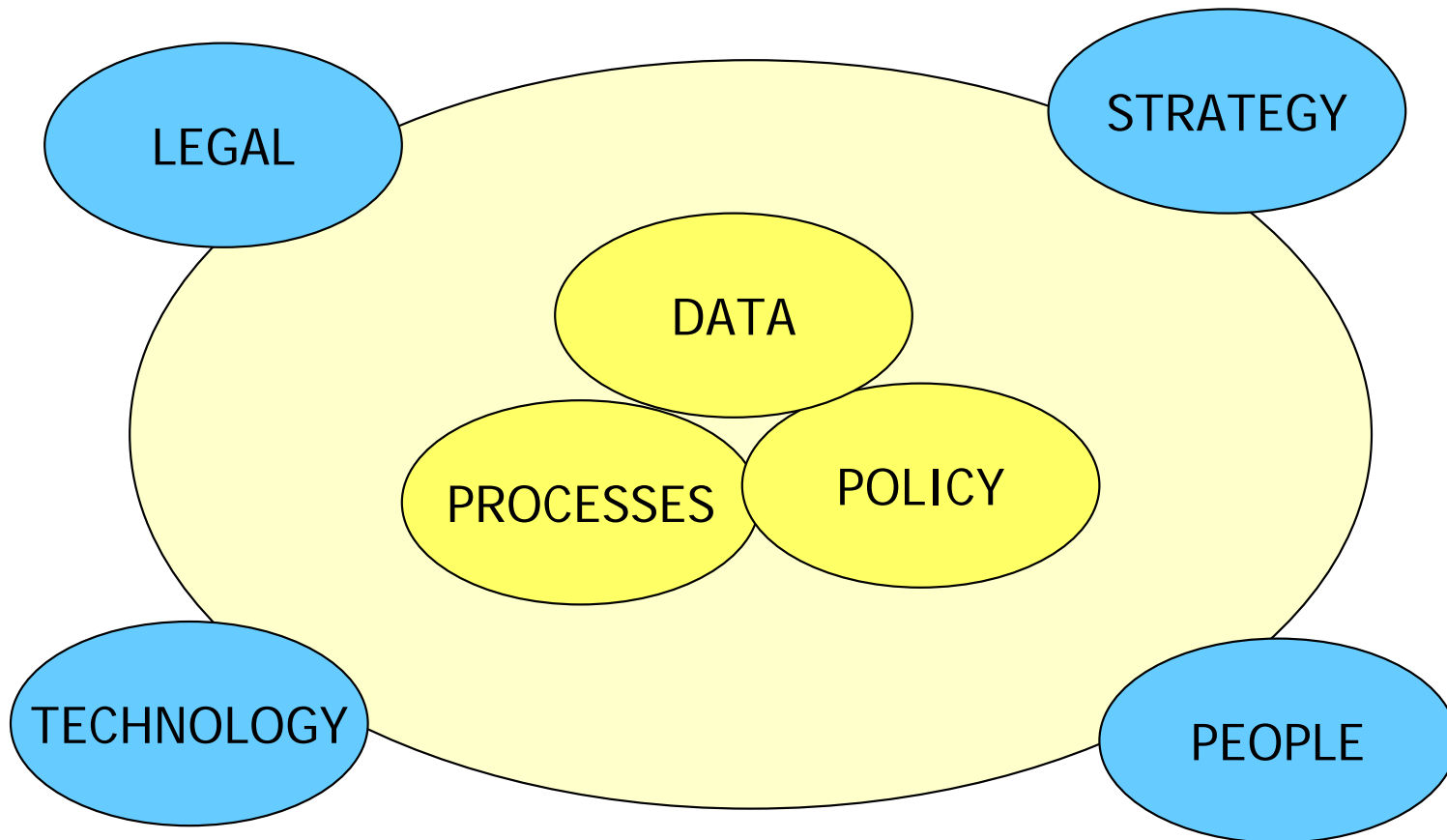
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- Support NGB-ARE's GIS Program and its shareholders in support of its overall CIP initiative
- Provide a web-based solution to augment NGB-ARE's online mapping, data management, and geospatial capabilities
- Provide custom functions to enable web-based data maintenance, online editing, and data reporting capability
- Read/Write data from their geospatial data repository

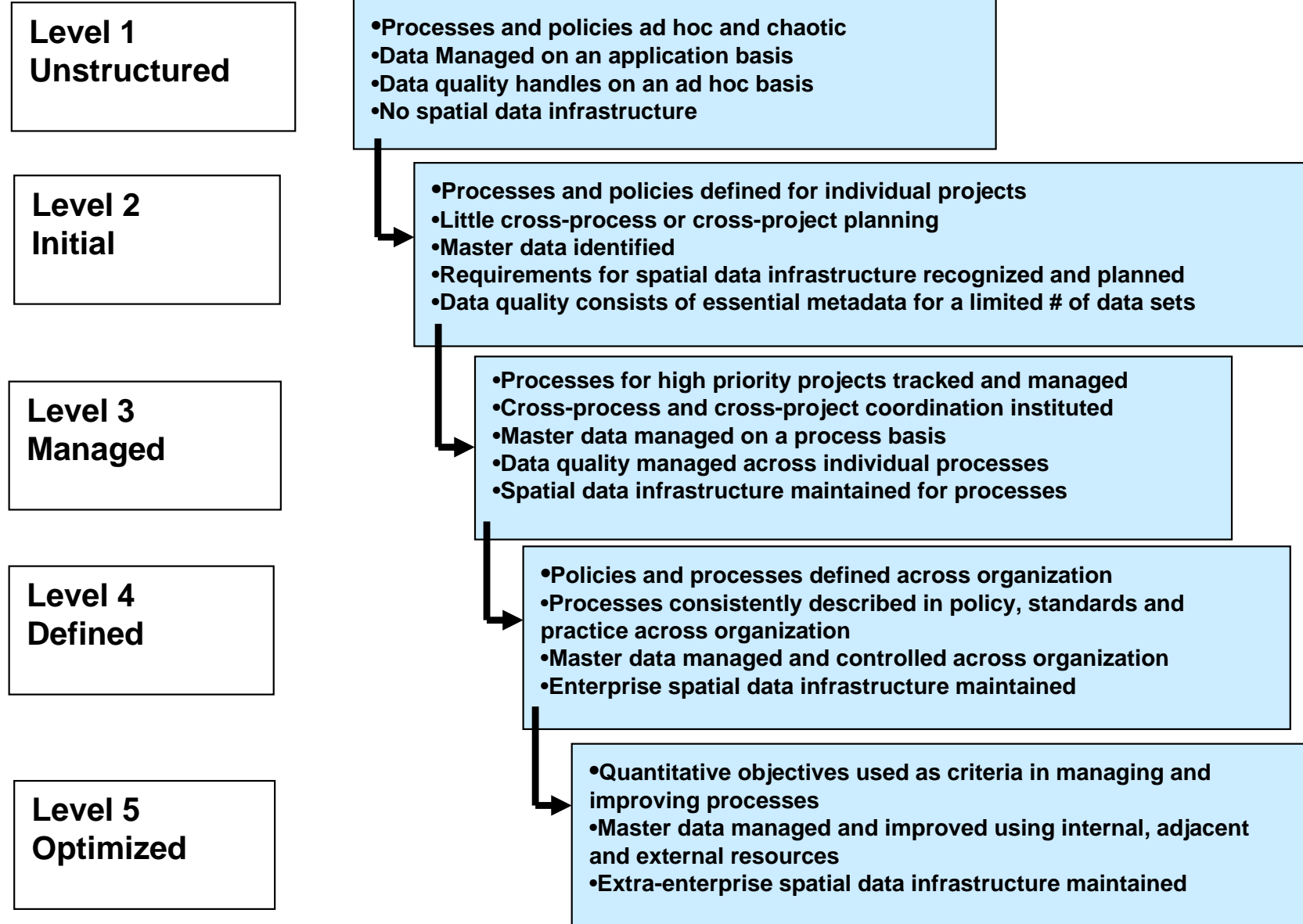
# Management of the Enterprise

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## Components of Organizational Management



# Geospatial Integration Maturity Model – Five Levels



Each level in the model builds upon the previous level. There are costs and benefits but there is a positive return for reaching higher maturity levels