

Regional Homeland Security GIS Project

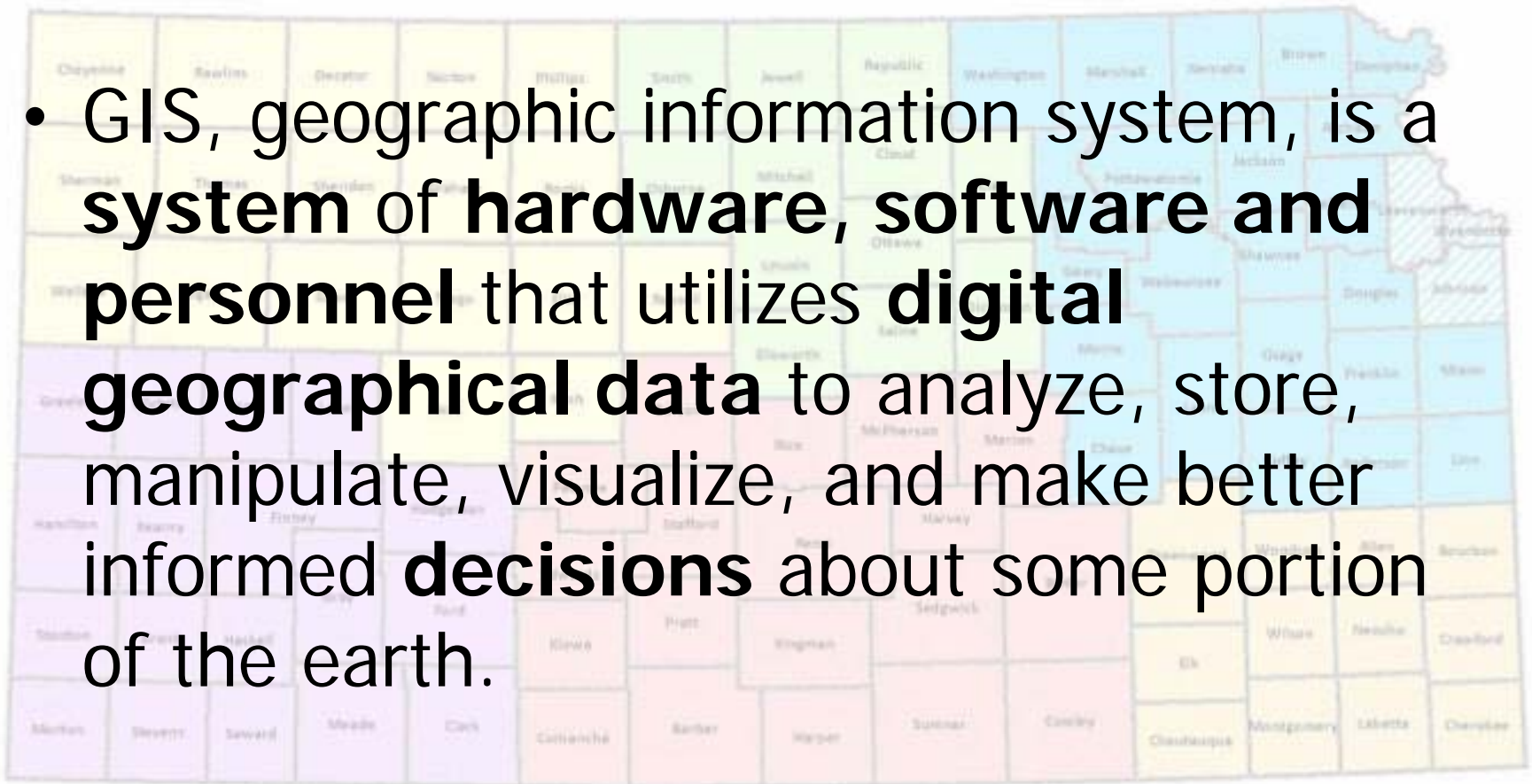
-North Central Region-



GIS – What is it?

GIS – What is it?

- GIS, geographic information system, is a **system of hardware, software and personnel** that utilizes **digital geographical data** to analyze, store, manipulate, visualize, and make better informed **decisions** about some portion of the earth.



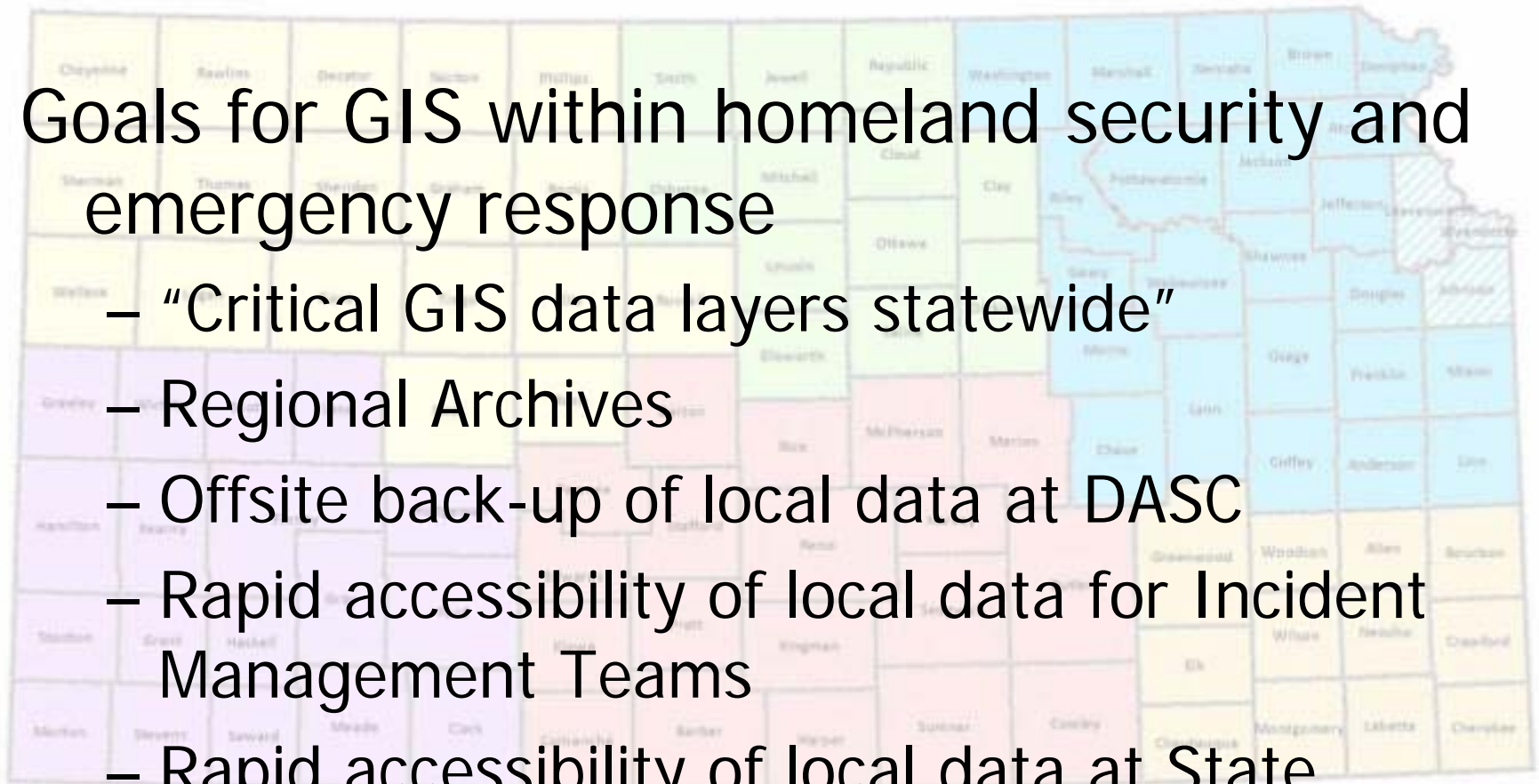
Why a GIS Project?

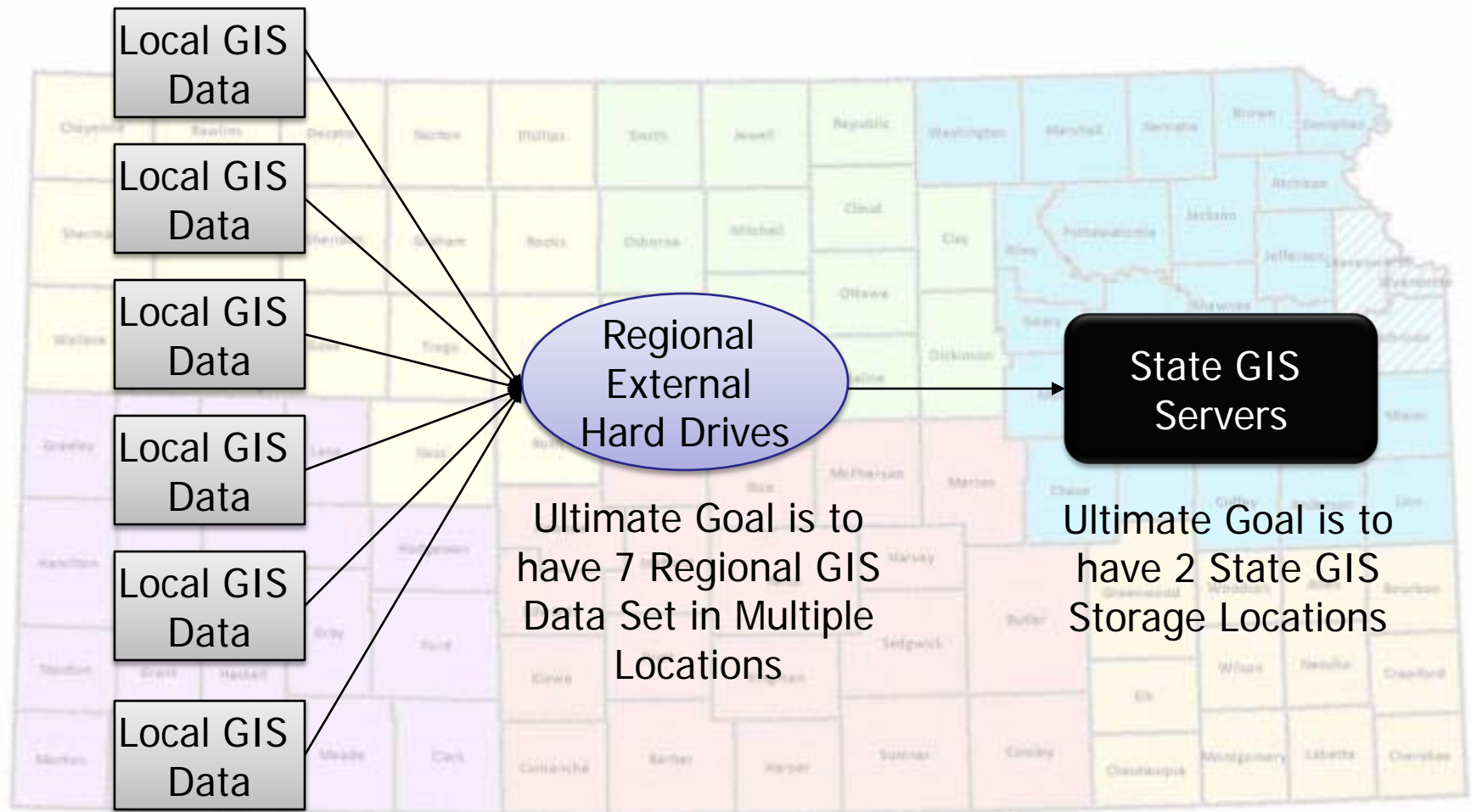
- The Situation
 - 5 Federal Declared Disasters in 2007/2008
 - Winter Storms & Ice (January)
 - Tornado & Flooding (May)
 - Flooding (June)
 - Ice & Snow (December)
 - Tornado & Flooding (May-June)
 - Development of Incident Management Teams
 - GIS – powerful tool for responders

The Adjutant General's Vision

Goals for GIS within homeland security and emergency response

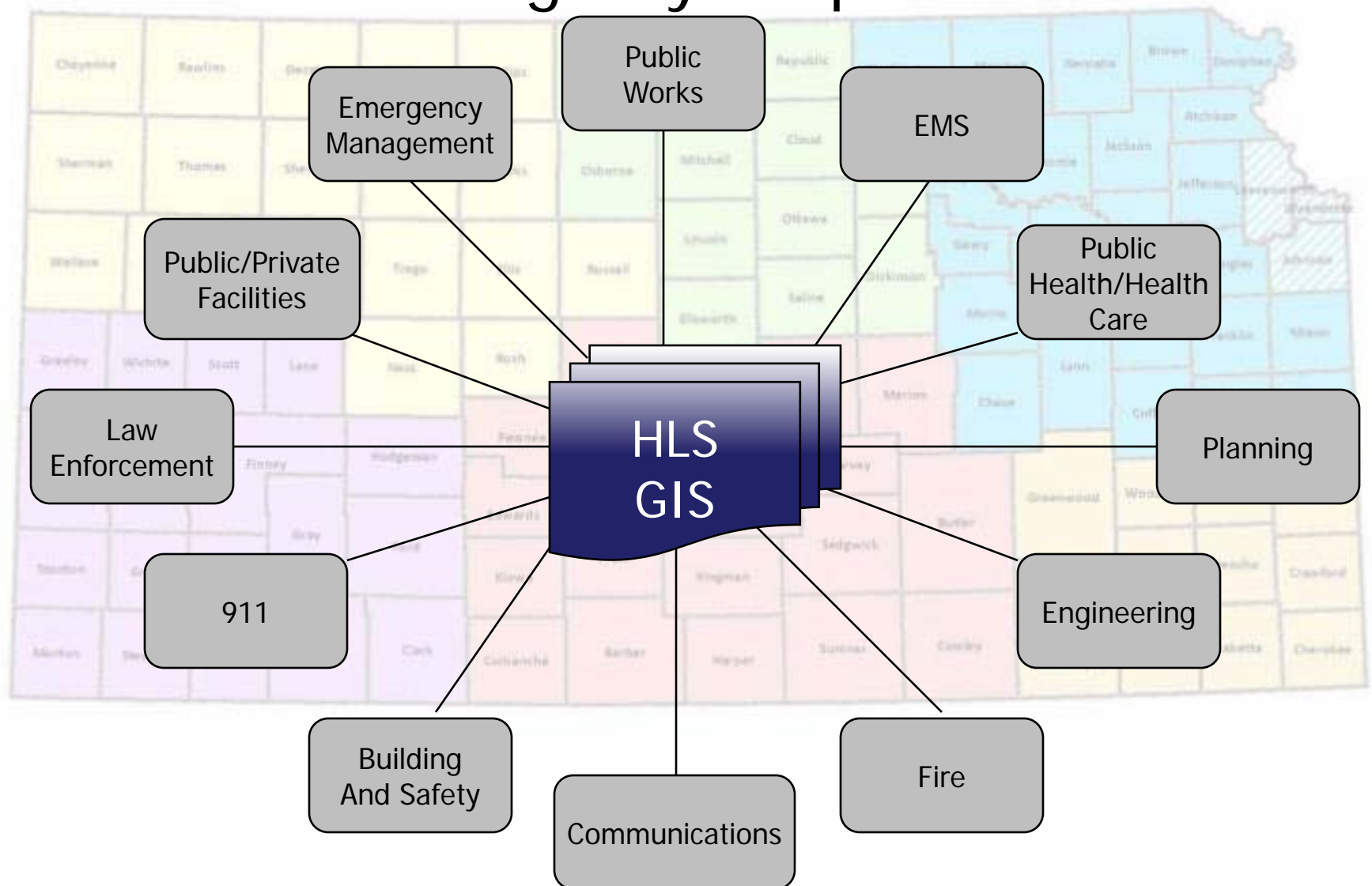
- “Critical GIS data layers statewide”
- Regional Archives
- Offsite back-up of local data at DASC
- Rapid accessibility of local data for Incident Management Teams
- Rapid accessibility of local data at State Emergency Operations Center





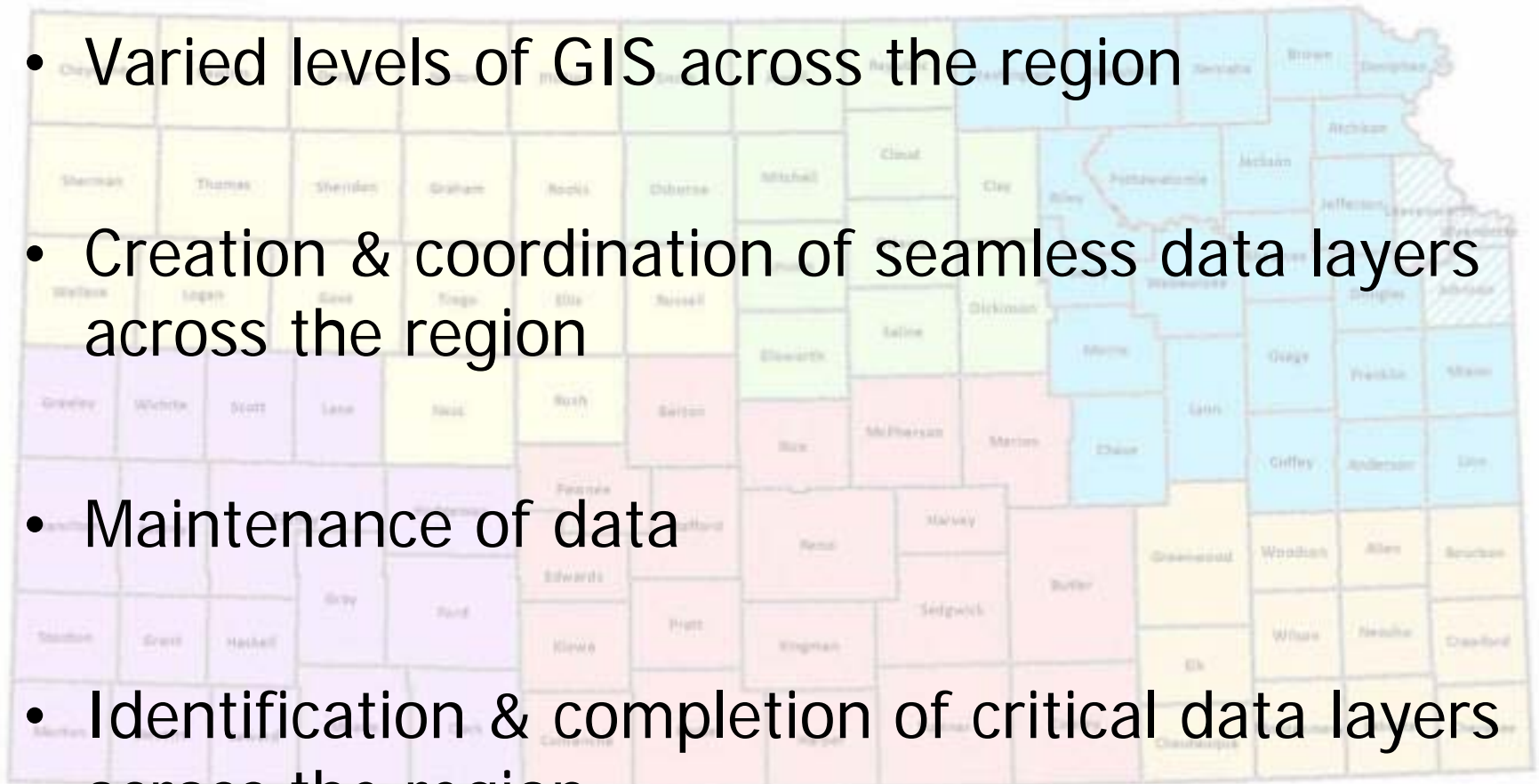
Ultimate Goal is to
have 105 Local GIS
Data Feeds

Robust GIS for Homeland Security and Emergency Response



Pre-Identified Challenges

- Varied levels of GIS across the region
- Creation & coordination of seamless data layers across the region
- Maintenance of data
- Identification & completion of critical data layers across the region

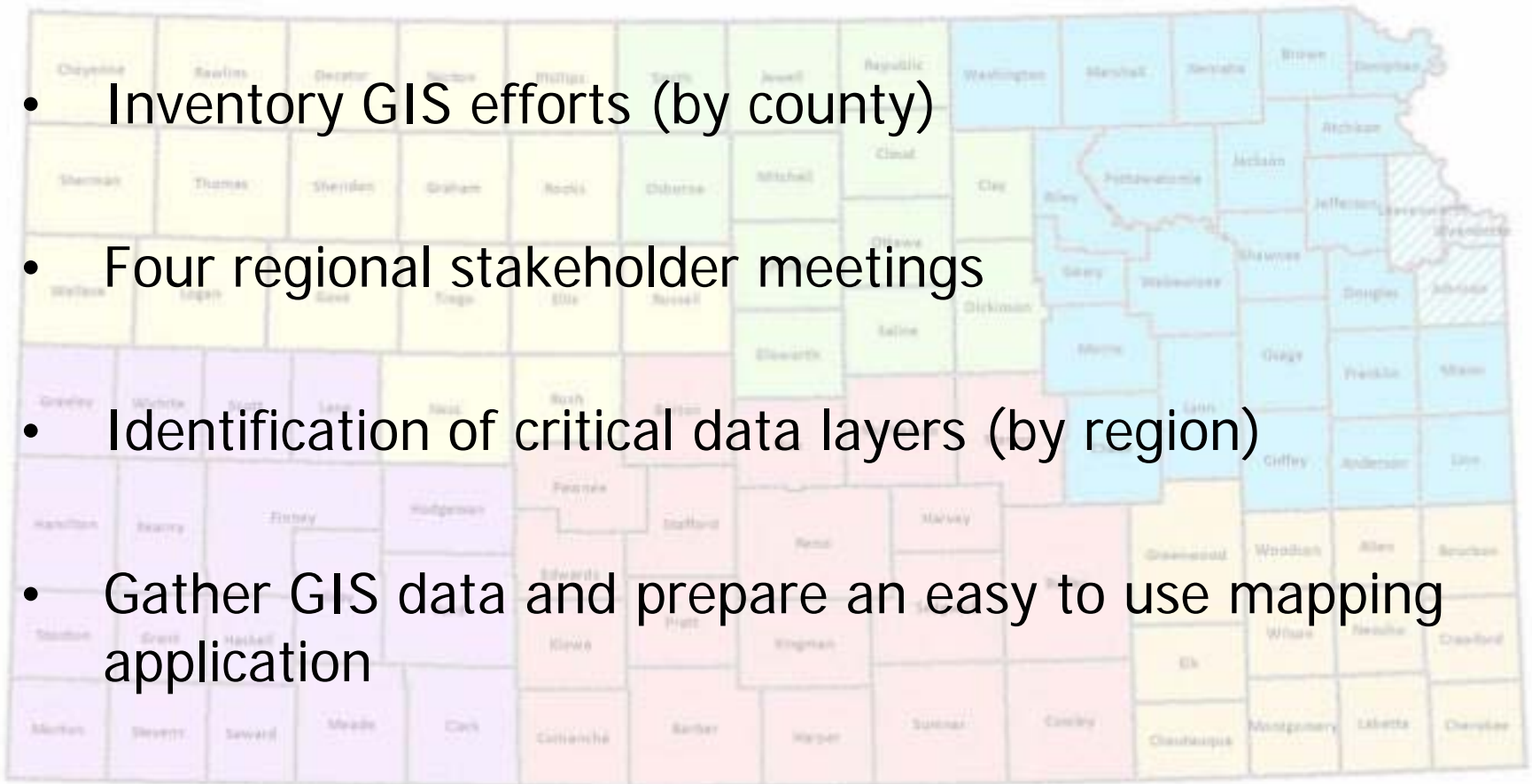


Proposed Plan of Action



Planning Efforts


- Inventory GIS efforts (by county)
- Four regional stakeholder meetings
- Identification of critical data layers (by region)
- Gather GIS data and prepare an easy to use mapping application



What “We” Will Provide

- Vendor standards
- GIS Data Memorandum of Agreement
- Creation of seamless regional layers (from local data)
- Data model for local GIS professional

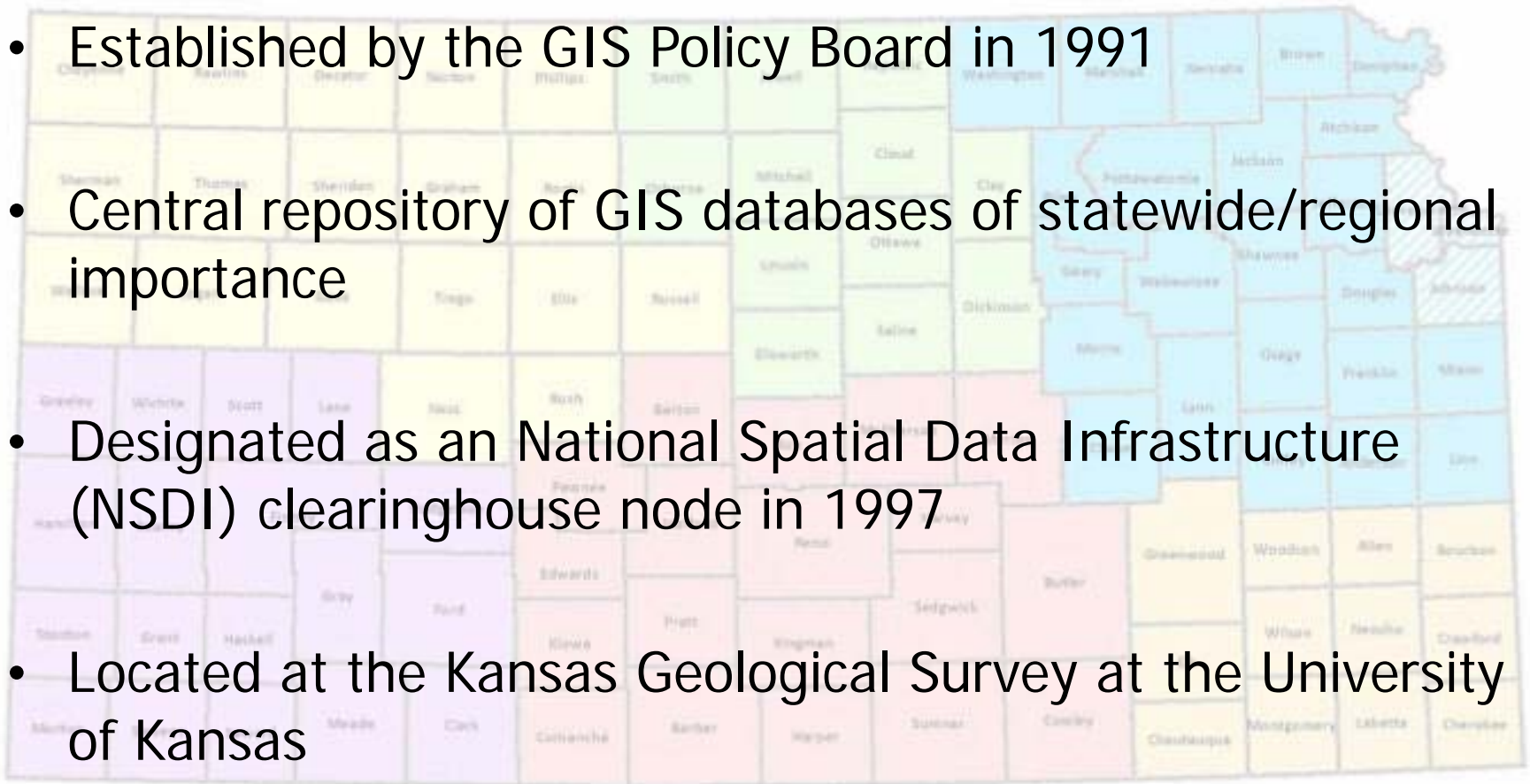




The State of Kansas Data Access and Support Center (DASC)

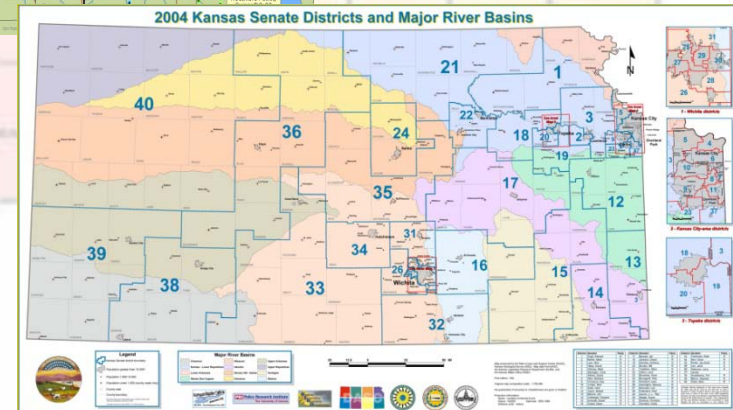
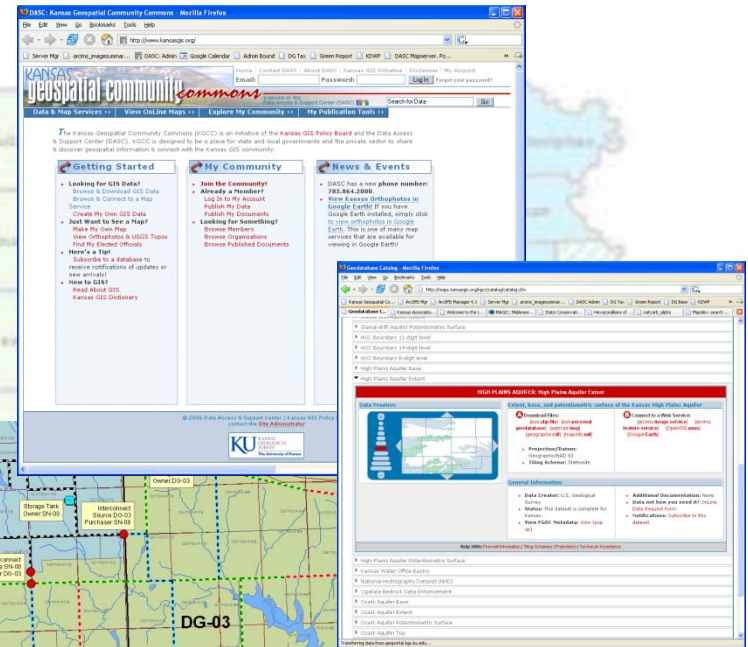
Data Access & Support Center DASC

- Established by the GIS Policy Board in 1991
- Central repository of GIS databases of statewide/regional importance
- Designated as an National Spatial Data Infrastructure (NSDI) clearinghouse node in 1997
- Located at the Kansas Geological Survey at the University of Kansas
- Web site – **<http://www.kansasgis.org>**



DASC Services

- Database archival and distribution
- Database quality assurance/quality control (QA/QC)
- Technical assistance
- Geospatial metadata development assistance
- Web application development and hosting
- Database development & integration
- State & Local Government Coordination
- Cartographic development
- Promotion of the Kansas GIS Initiative
- Development and maintenance of the DASC web site – www.kansasgis.org



[illegible]

Inventory

"get local data catalogued and archived"

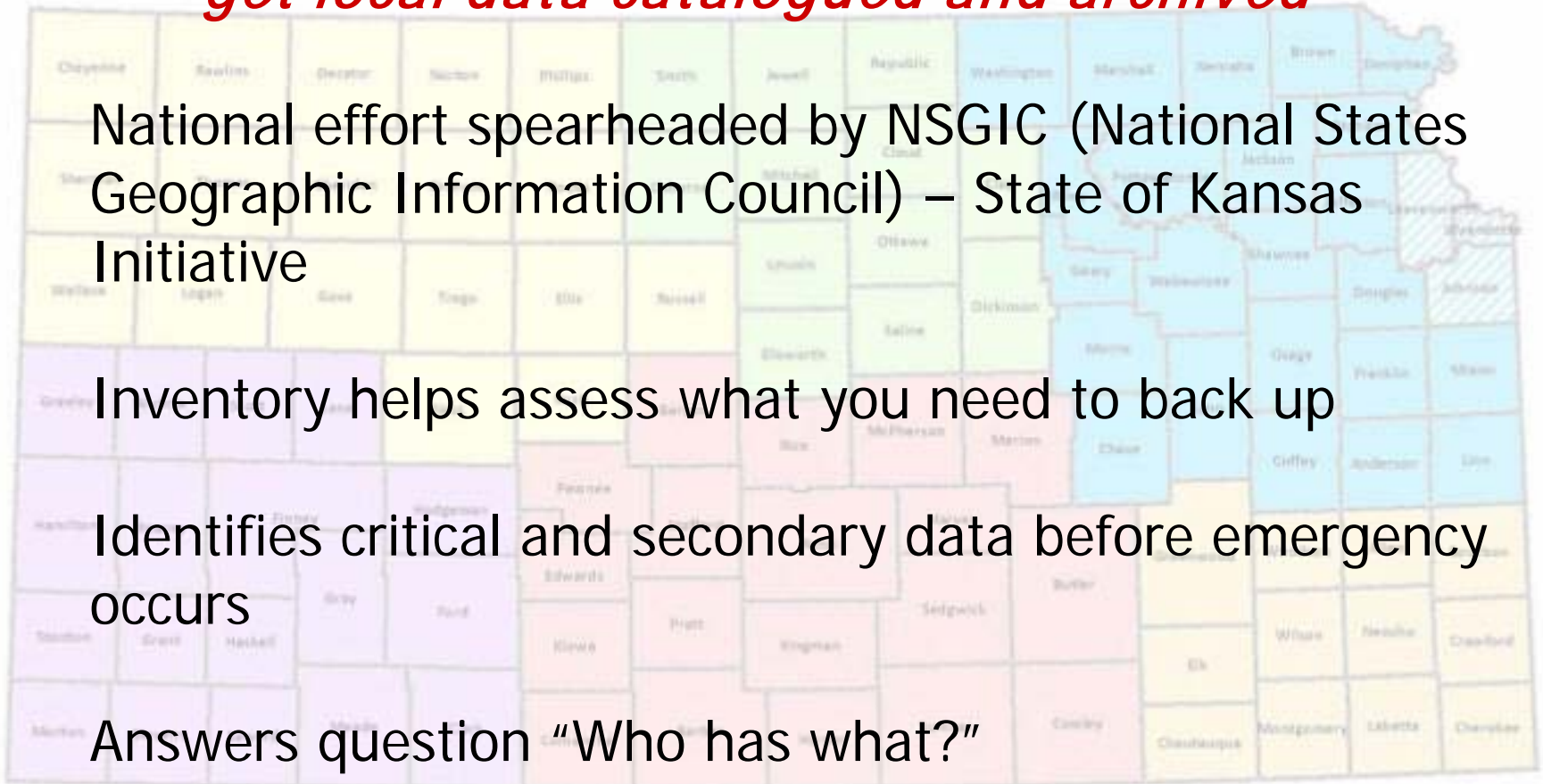
National effort spearheaded by NSGIC (National States Geographic Information Council) – State of Kansas Initiative

Inventory helps assess what you need to back up

Identifies critical and secondary data before emergency occurs

Answers question "Who has what?"

Web-based tool to enter inventory



http://ks.gisinventory.net

GIS Inventory - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://ks.gisinventory.net/

Most Visited DASC: Admin Google Calendar Map - FreedomWebDa... Kansas Association of ... ftp://backup.kansasgi... Send a File Metadata Validation 5...

GIS Inventory

GIS INVENTORY
POWERED BY RAMONA

State of Kansas
DASC
Data Access & Support Center

LOG IN CREATE ACCOUNT

Status Map Data Layers My Profile Directory Getting Started About Support Home

Status Map
Download This Image ▶

PLACES THAT PRODUCE

- ☐ Framework Data Layers
- ☐ Other Data Layers
- ☒ Registered Users with Data of Any Type

LEGEND

| | |
|--|---------------------------------|
| | <input type="radio"/> City/Town |
| | <input type="radio"/> County |
| | <input type="radio"/> Statewide |
| | <input type="radio"/> Tribal |
| | No Response |

Status Map

| | | | |
|---|---|--------|--|
| ON OFF | <input checked="" type="radio"/> State Names | ON OFF | <input checked="" type="radio"/> Tribe Names |
| <input checked="" type="radio"/> County Names | <input checked="" type="radio"/> Tribe Outlines | | |
| <input checked="" type="radio"/> City Names | <input checked="" type="radio"/> City Outlines | | |

javascript:;

Now: Thunderstorm, 67 °F Mon: 86 °F Tue: 87 °F

http://ks.gisinventory.net

GIS Inventory - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://ks.gisinventory.net/profile/index.html?layer_type=6

Most Visited DASC: Admin Google Calendar Kansas Association of ... ftp://backup.kansasgi... Send a File GIS Metadata Validation S... Ramona GIS Inventor...

GIS Inventory

State of Kansas
DASC
Data Access & Support Center

LOG OUT

Status Map Data Layers **My Profile** Directory Getting Started About Support Home

User Profile
Organization
Systems
Policies
State Questions
My Geography
Framework Data

Boundaries
Location
Elevation
Planning/Cadastre
Inland Waters
Imagery/Base Maps/Earth Cover
Transportation

Other Data
Reports
Log Out

Framework Data

[Download the complete layer list](#)

Orthophotography | [HELP](#) | [MORE OF THIS LAYER TYPE](#)

Save

Digital Orthophotography/Orthoimagery [+ DUPLICATE](#) [DELETE](#) [SAVE CHANGES](#)

Progress Source Production Date

Scale [what is this?](#) Update Frequency

Layer Description (max 255 chars)

Geography
[default geography](#) | [change geography](#)

Metadata
☒ [publish to GOS](#)

[full metadata web address/URL \(max 255 chars\)](#)

What is the approximate ground resolution of this product?

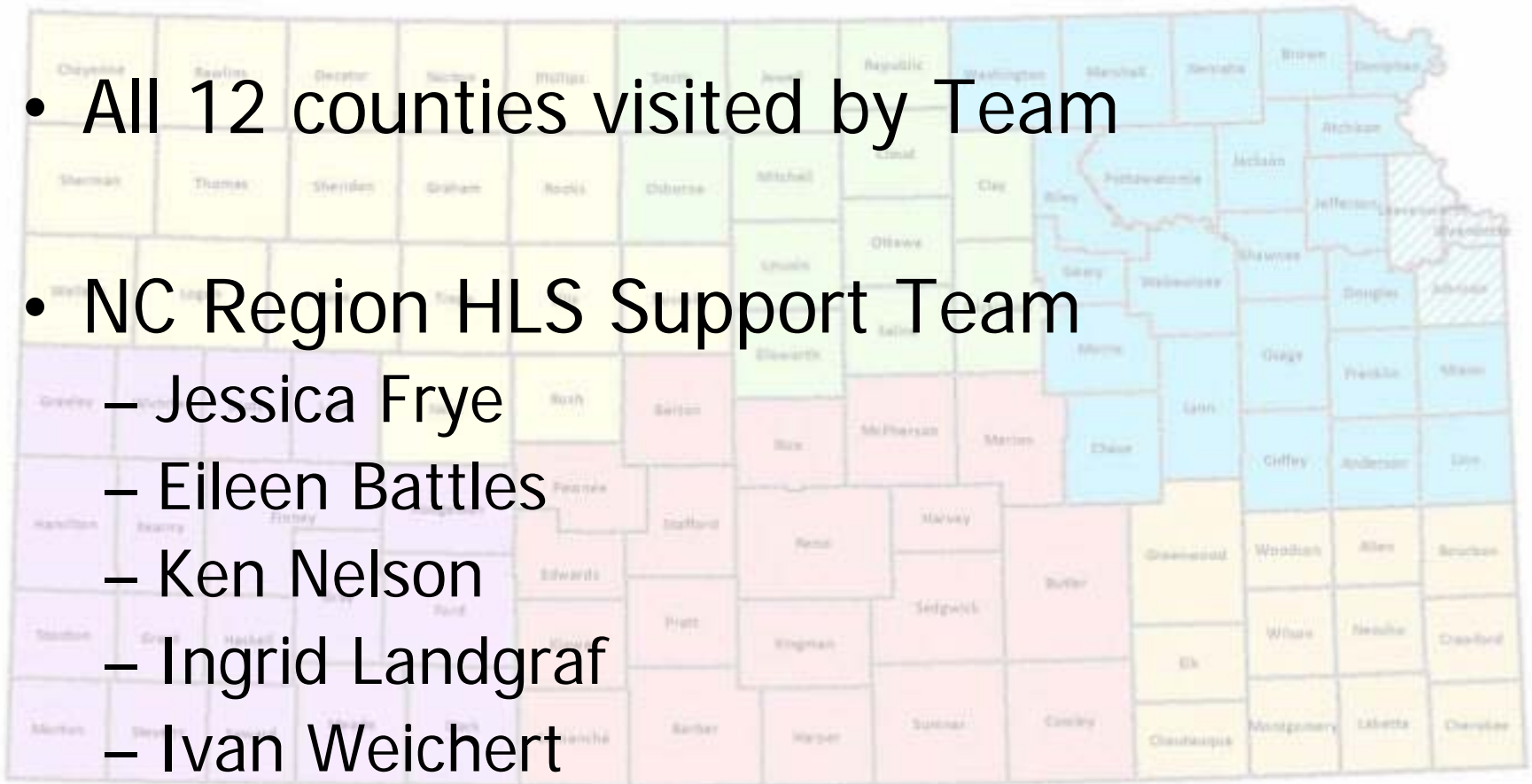
What is the horizontal accuracy?

Done

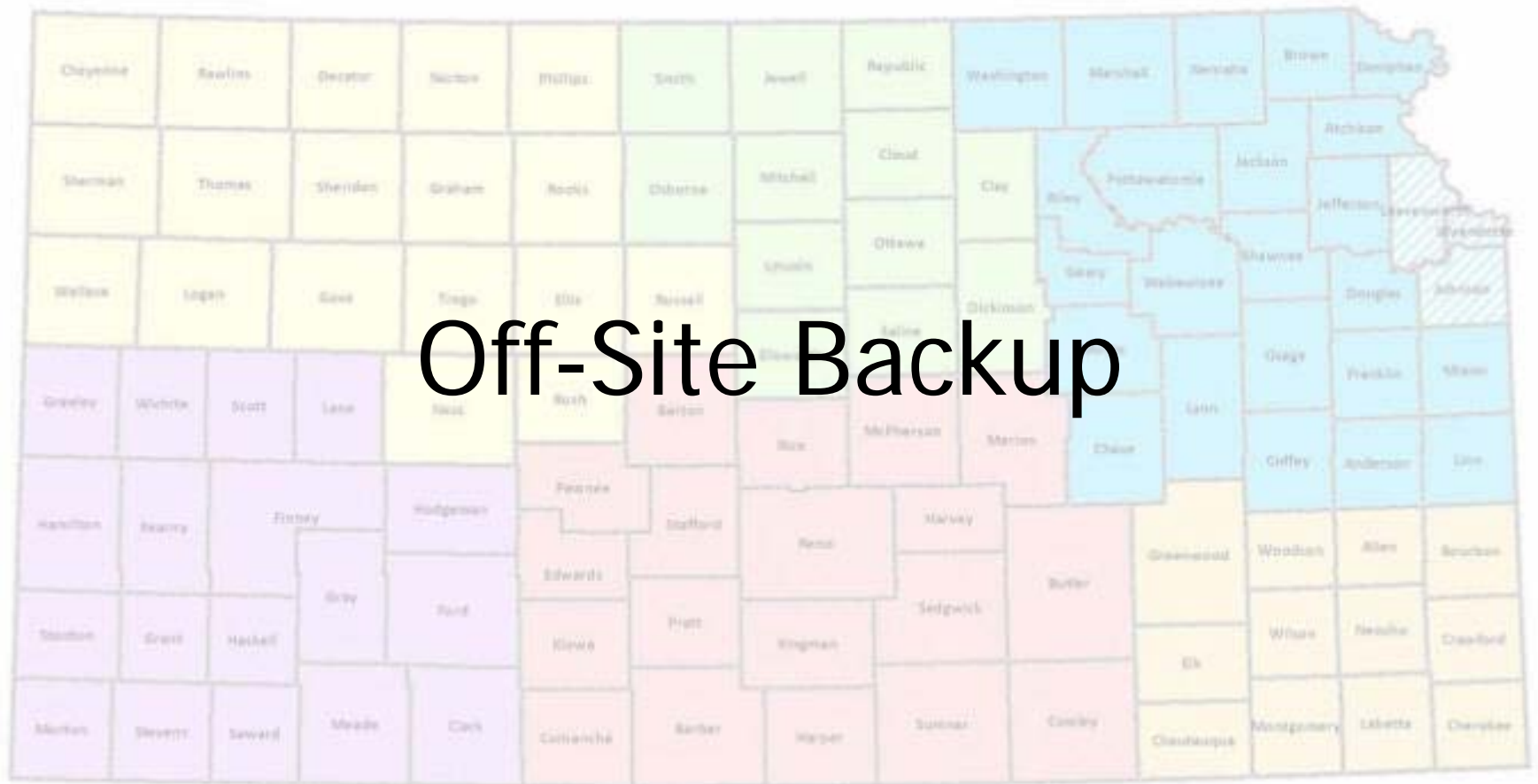
Now: Sunny, 46° F Mon: 61° F Tue: 47° F

Inventory

- All 12 counties visited by Team
- NC Region HLS Support Team
 - Jessica Frye
 - Eileen Battles
 - Ken Nelson
 - Ingrid Landgraf
 - Ivan Weichert
 - Nicholas Graf



Off-Site Backup



Off-Site Backup

Data housed at DASC and backed up 3 ways:

- 1 – Redundant Storage Area Network (SAN)**
- 2 – On-site external hard drive**
- 3 – DASC backup system hosted at the Arkansas Geographic Information Office (AGIO)**

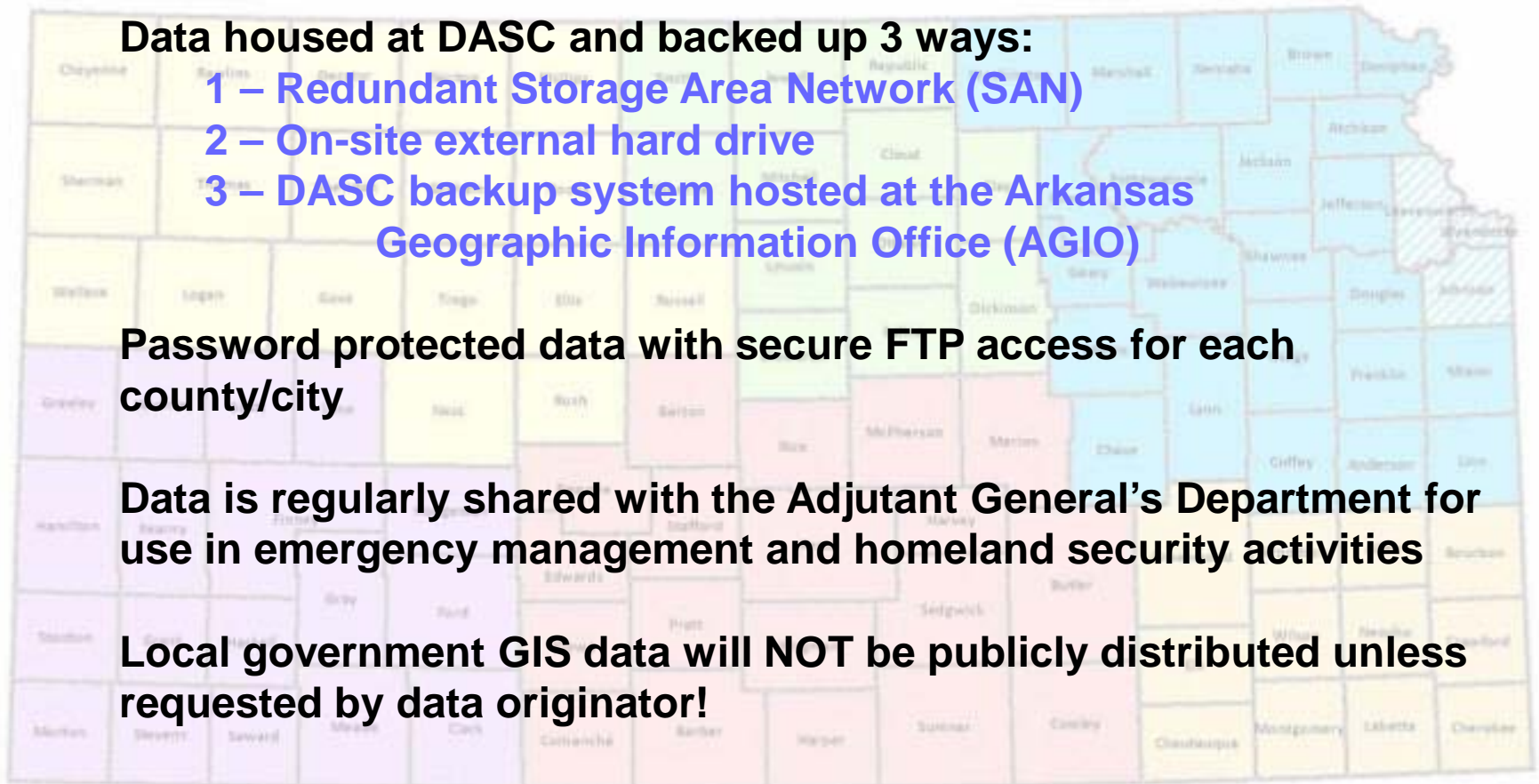
Password protected data with secure FTP access for each county/city

Data is regularly shared with the Adjutant General's Department for use in emergency management and homeland security activities

Local government GIS data will NOT be publicly distributed unless requested by data originator!

No charge for backup service

No metadata required for data backup (although it is encouraged!)



Off-Site Backup

Maintenance:

- **User Accounts:**

- unique user names and passwords

- **<ftp://backup.kansasgis.org>**

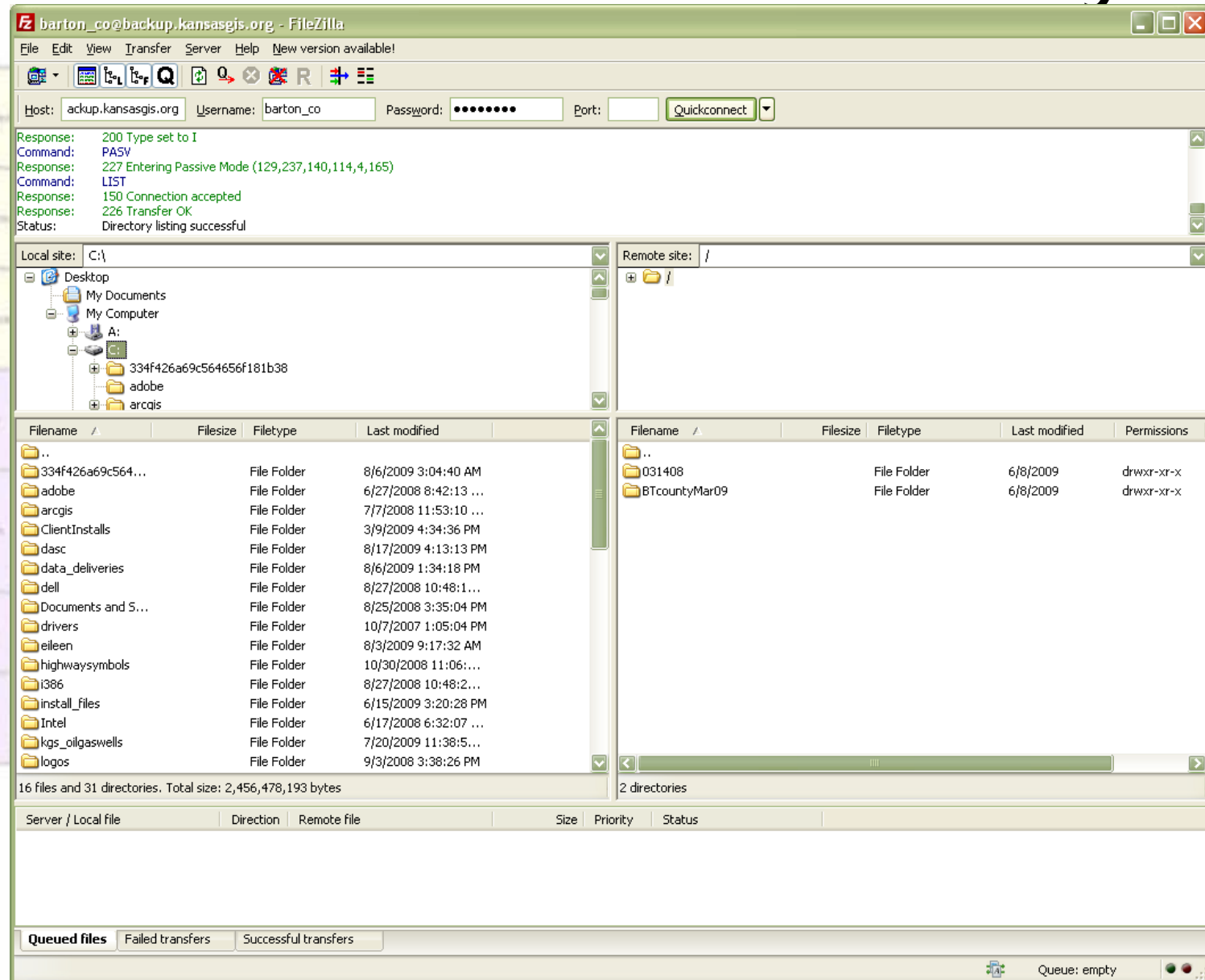
- **Email reminders to update data**

- **Download and install free FTP Utility to transfer data (FileZilla)**

- **Maintenance Guidelines & Tips handout and maintenance instructions available on DASC website**




WWW.KANSASGIS.ORG

FileZilla – free FTP Utility



County Status

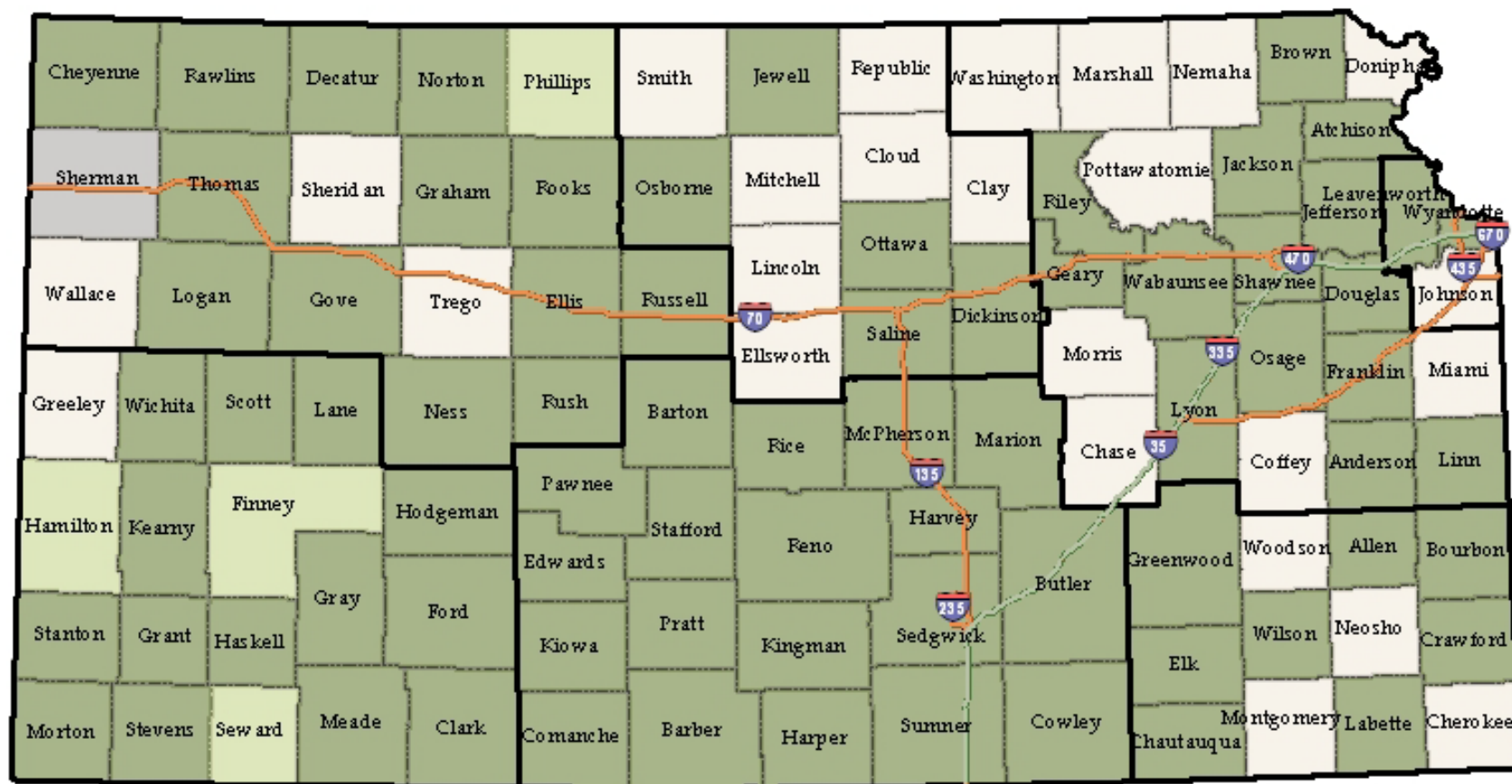
Data Backup Status

-  No data at this time
 Data stored at DASC
 Data to be delivered to DASC



DASC GIS Data Backup Initiative

County Status



Data Backup Status

- No GIS data
- Data stored at DASC
- Data to be delivered to DASC
- Flooded Security Regions

Kansas Turnpike
Statewide

0 25 50 100 Miles

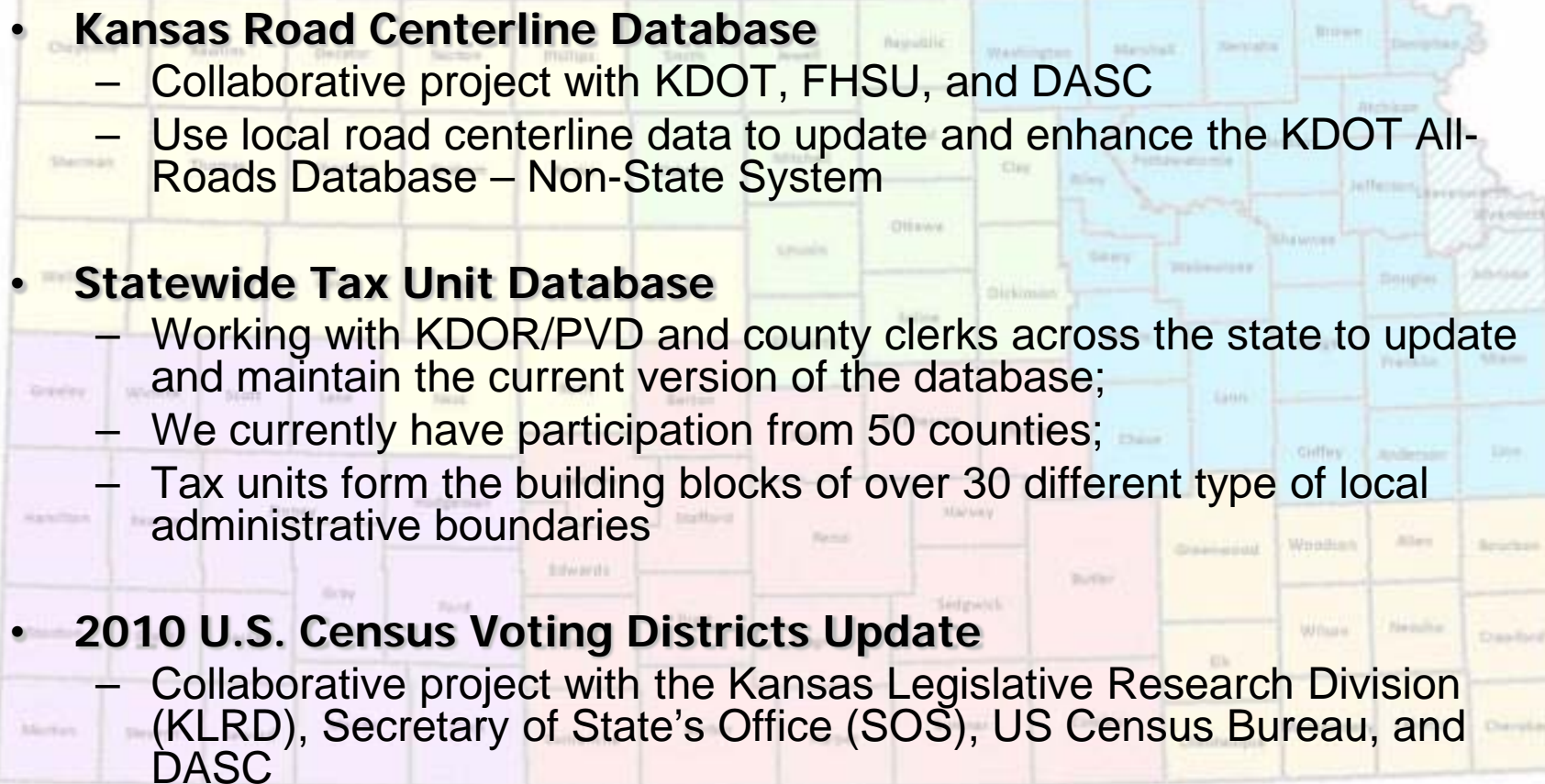
KU
KANSAS
UNIVERSITY
The Learning Experience



Prepared by: W. J. Davis
Data Access and Support Center
Aug 20, 2009

A map of Kansas showing its 105 counties. The counties are color-coded in a repeating pattern of yellow, light green, light blue, and light purple. The text "DASC Initiatives" is overlaid in the center of the map in a large, black, sans-serif font. The counties labeled include: Cherokee, Rawlins, Decatur, Norton, Phillips, Sedgwick, Jewell, Republic, Washington, Marshall, Stevens, Brown, Douglas, Sherman, Thomas, Sheridan, Graham, Rock, Osborne, Mitchell, Cloud, Riley, Pottawatomie, Jackson, Atchison, Wallace, Logan, Gove, Trego, Ellis, Russell, Lincoln, Dickinson, Kearney, Jefferson, Lawrence, Wyandotte, York, Lincoln, Douglas, Johnson, Adams, Greeley, Wichita, Scott, Lane, LeFlore, Barton, Rice, McPherson, Marion, Chase, Lyon, Gray, Franklin, Shaw, Hamilton, Kearny, Finney, Hodgeman, Perkins, Stafford, Reno, Harvey, Grant, Haskell, Gray, Ford, Edwards, Pratt, Kingman, Sedgwick, Butler, Greenwood, Woodson, Allen, Bourbon, Norton, Grant, Haskell, Gray, Ford, Edwards, Pratt, Kingman, Sedgwick, Butler, Greenwood, Woodson, Allen, Bourbon, Morton, Stevens, Seward, Meade, Clark, Comanche, Barber, Harper, Sumner, Cowley, Chautauque, Elk, Wheeler, Ness, Cheyenne, and Cheyenne.

DASC Local Data Integration Initiatives

- 
- **Kansas Road Centerline Database**
 - Collaborative project with KDOT, FHSU, and DASC
 - Use local road centerline data to update and enhance the KDOT All-Roads Database – Non-State System
 - **Statewide Tax Unit Database**
 - Working with KDOR/PVD and county clerks across the state to update and maintain the current version of the database;
 - We currently have participation from 50 counties;
 - Tax units form the building blocks of over 30 different type of local administrative boundaries
 - **2010 U.S. Census Voting Districts Update**
 - Collaborative project with the Kansas Legislative Research Division (KLRD), Secretary of State's Office (SOS), US Census Bureau, and DASC
 - Update the Voting Districts at the county level as part of the US Census Bureau's redistricting program

A map of Nebraska with its 93 counties labeled. The counties are color-coded into several groups: yellow (e.g., Cheyenne, Rawlins, Decatur), green (e.g., Smith, Jewell, Republic), blue (e.g., Washington, Marshall, Nemaha), purple (e.g., Greeley, Wichita, Scott), pink (e.g., Barton, Morrill, Sherman), and orange (e.g., Kearney, Lincoln, Lancaster). A large black text overlay is centered on the map, reading "Sub-Regional MVP Meetings (Most Valuable Professionals)".

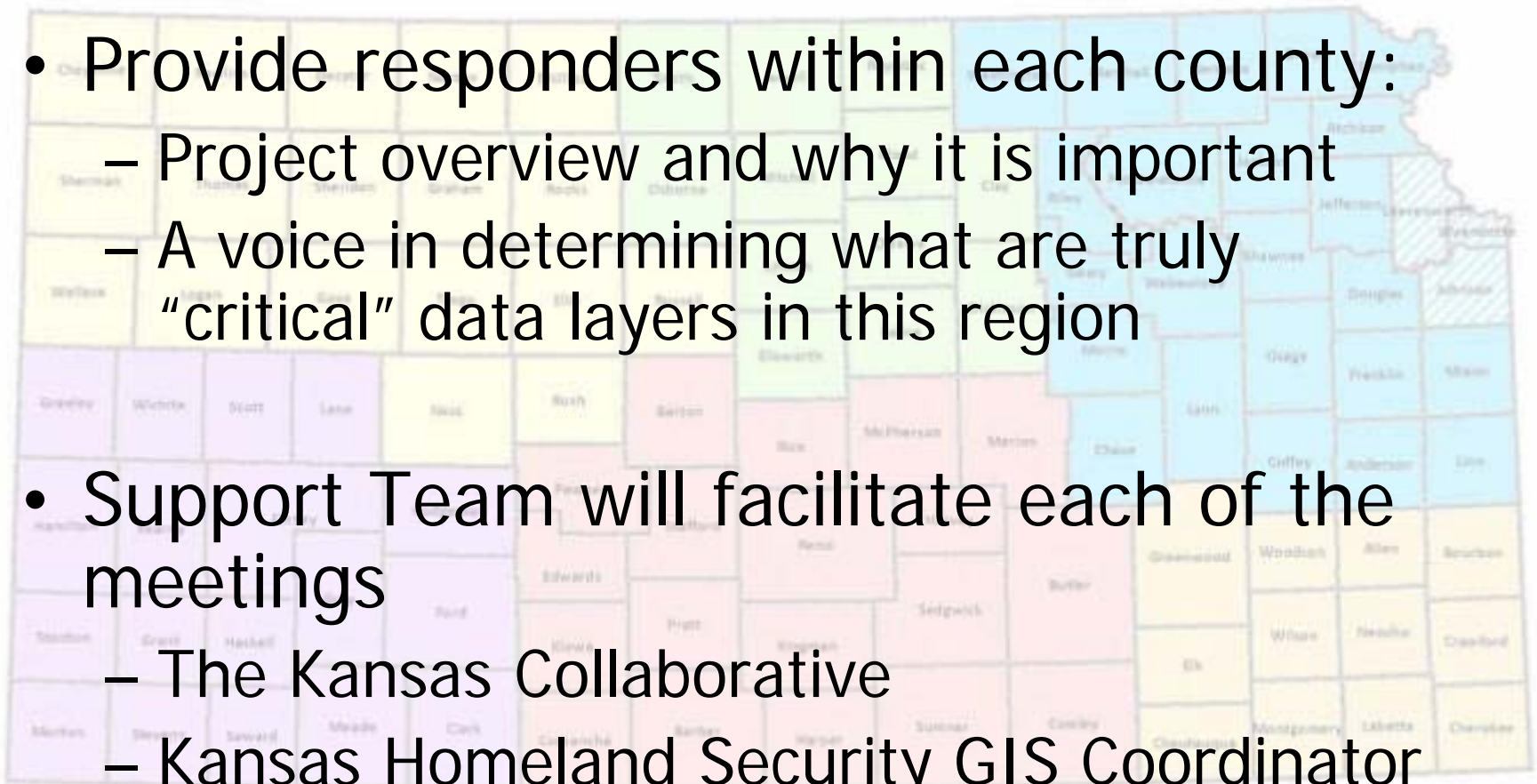
Sub-Regional MVP Meetings

- 3 Locations (Abilene, Salina, Beloit)
- Two Days
 - Letter from the Regional Council Chair to each of the 12 counties
- Length of Time: 2.5 hours




Why Sub-Regional Meetings?

- Provide responders within each county:
 - Project overview and why it is important
 - A voice in determining what are truly “critical” data layers in this region
- Support Team will facilitate each of the meetings
 - The Kansas Collaborative
 - Kansas Homeland Security GIS Coordinator
 - DASC Representative



Who is a MVP?

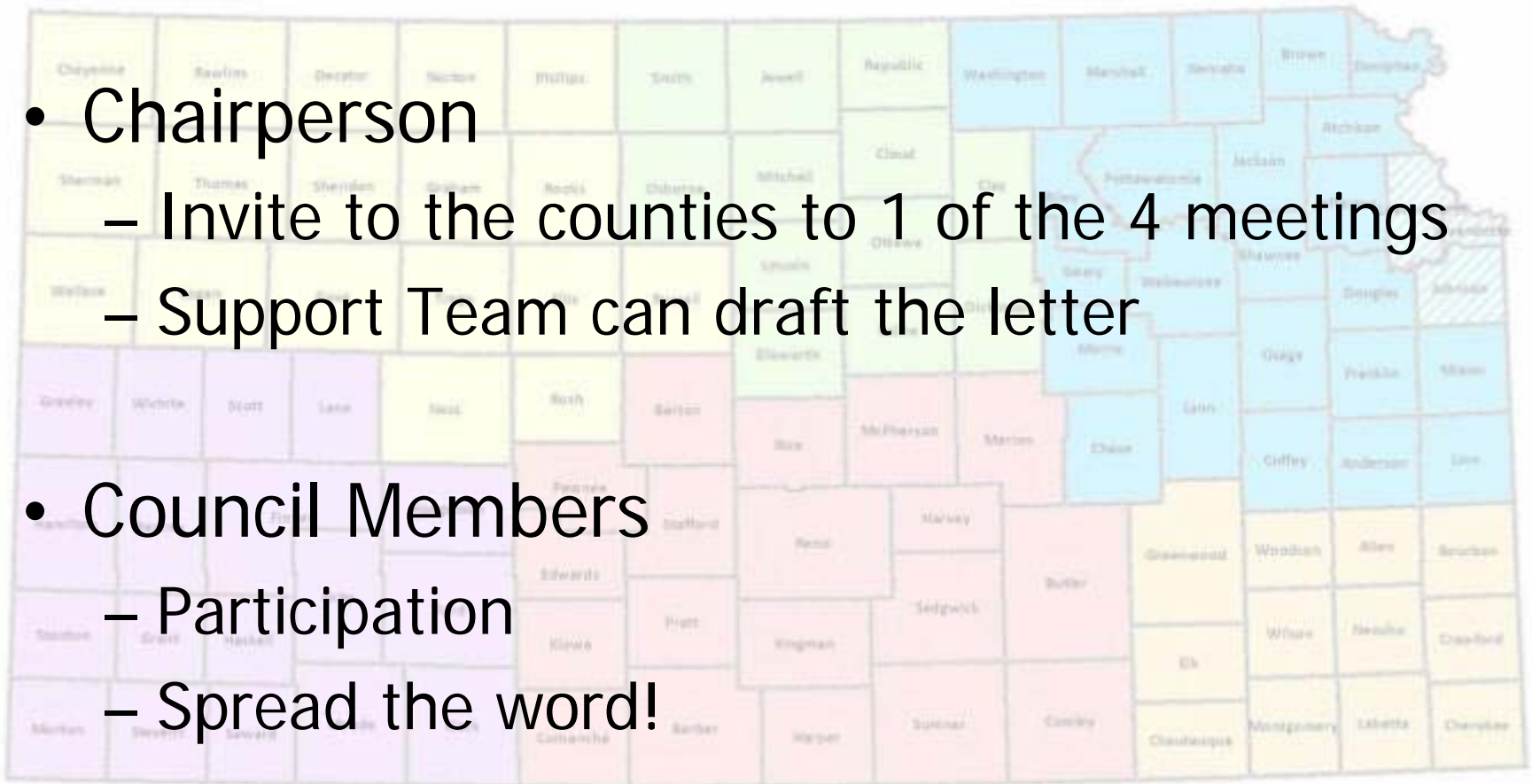
- Members of the response community
 - Emergency Management
 - 911
 - Communications
 - Law Enforcement
 - Fire
 - Emergency Medical Services
 - Health
 - County Extension Agent
 - GIS Personnel



Anyone who is
or has been
involved in disaster
situations

Sub-Regional MVP Meetings

- Chairperson
 - Invite to the counties to 1 of the 4 meetings
 - Support Team can draft the letter
- Council Members
 - Participation
 - Spread the word!





GIS Training

- Salina – December 6 & 7
- 2 day hands-on training for emergency responders
- Contracted (GISEdge)





GPS Training

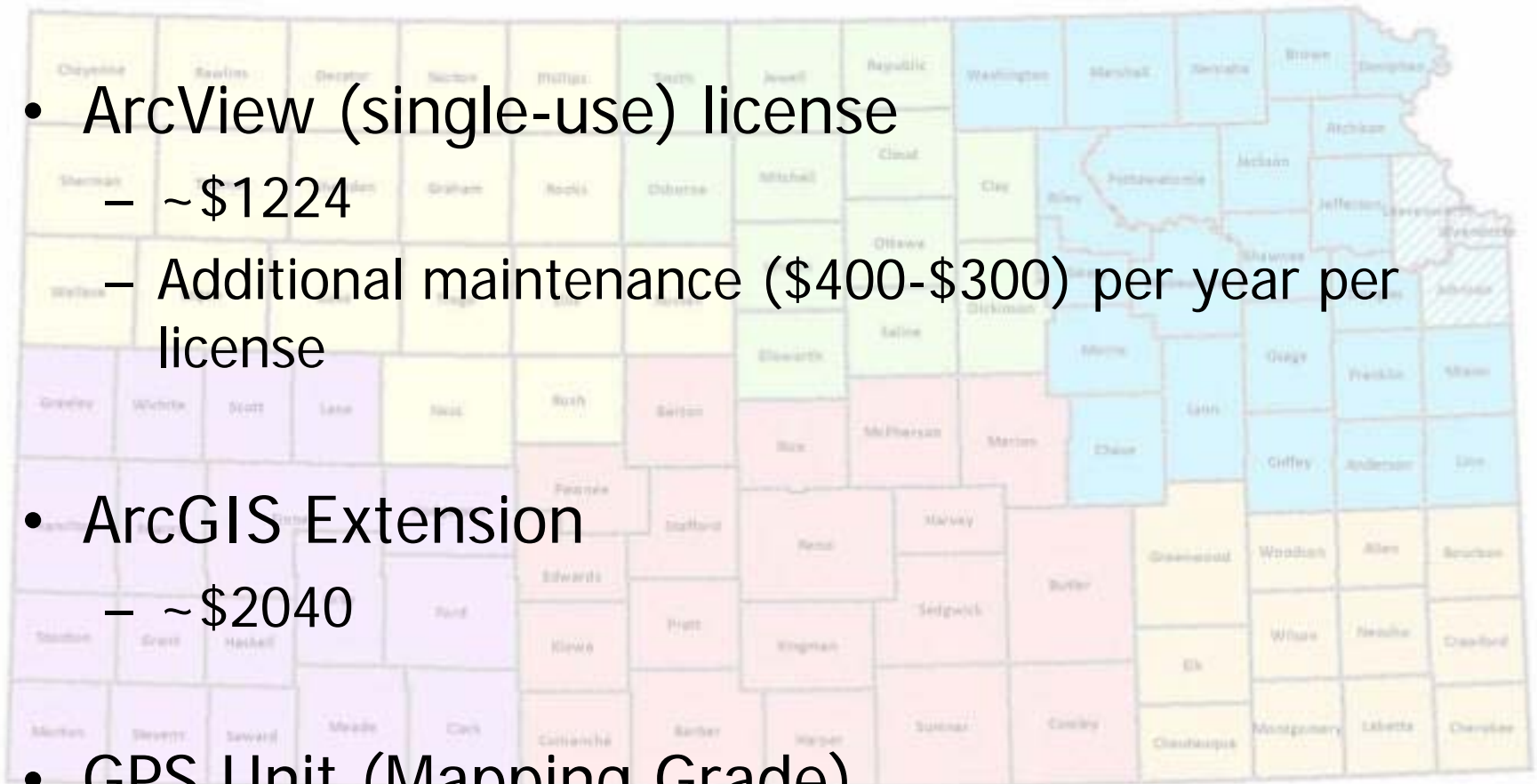
- 3 Location (Salina, Beloit, Abilene)
- 1 day hands-on training for emergency responders
- Contracted (Steve Thompson)





Equipment and Software

- ArcView (single-use) license
 - ~\$1224
 - Additional maintenance (\$400-\$300) per year per license
- ArcGIS Extension
 - ~\$2040
- GPS Unit (Mapping Grade)
 - ~\$2749



Equipment and Software

- GPS Enabled Camera (Ricoh 500SE-B)

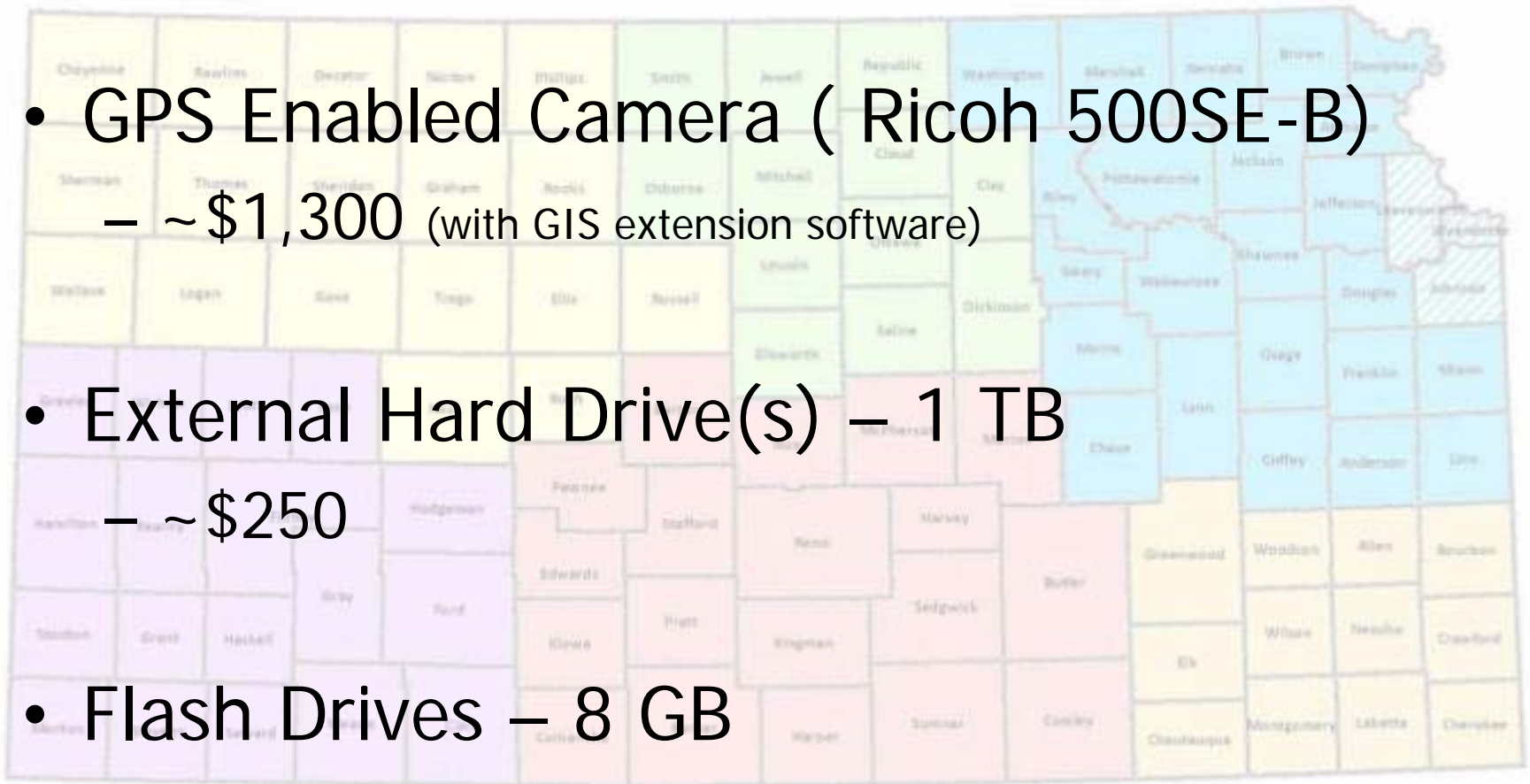
- ~\$1,300 (with GIS extension software)

- External Hard Drive(s) – 1 TB

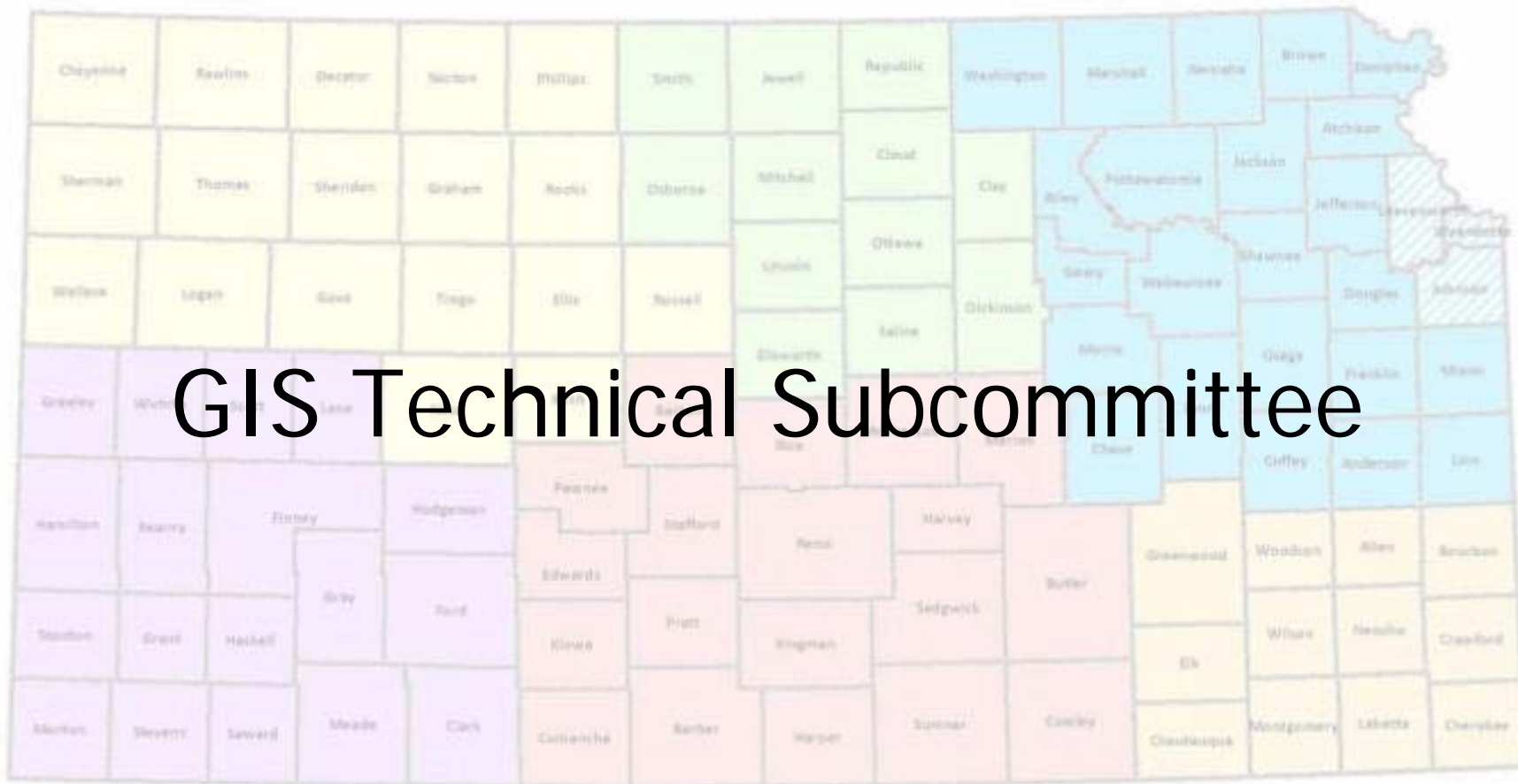
- ~\$250

- Flash Drives – 8 GB

- ~\$65

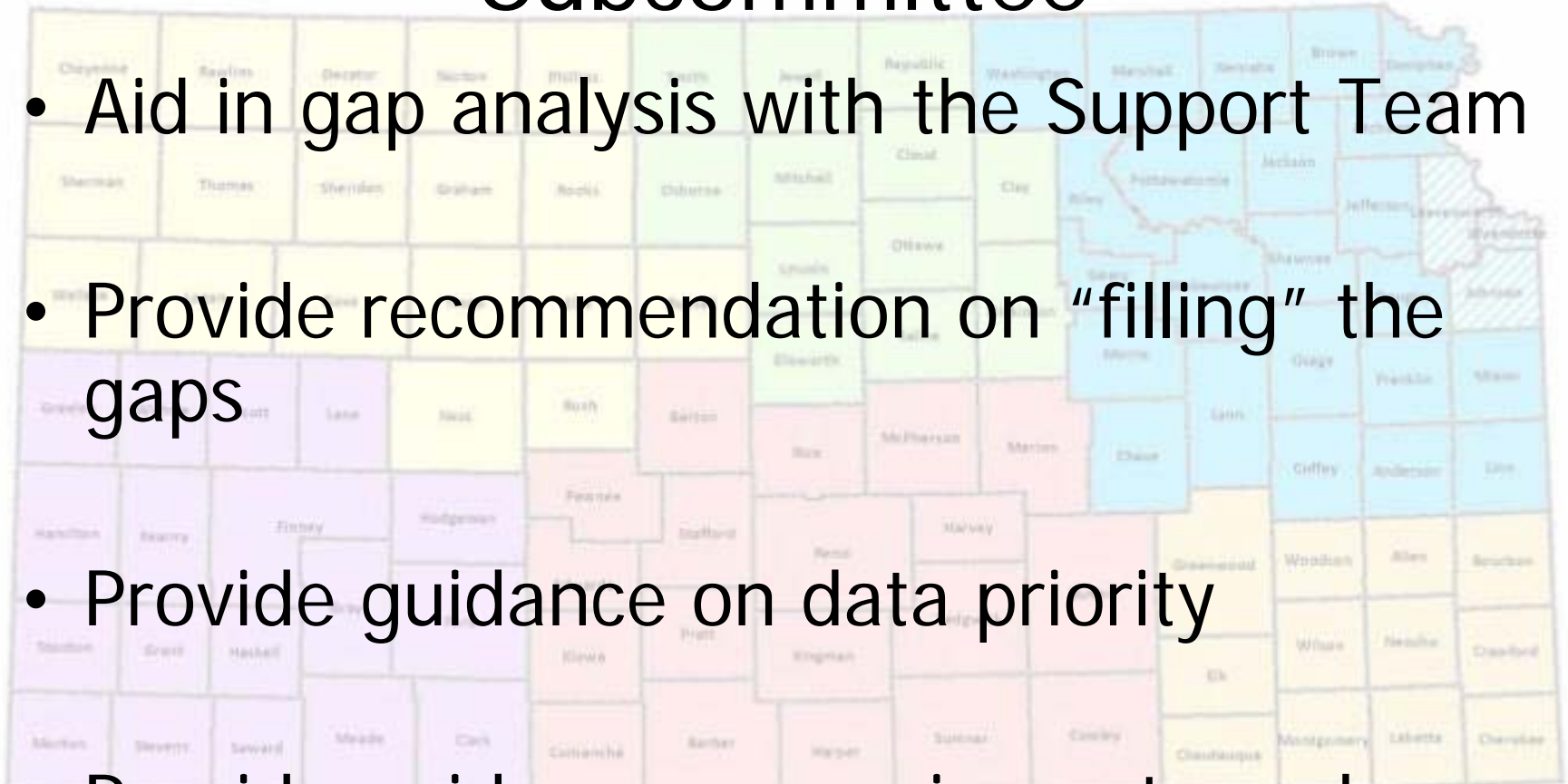


GIS Technical Subcommittee



Regional GIS Technical Subcommittee

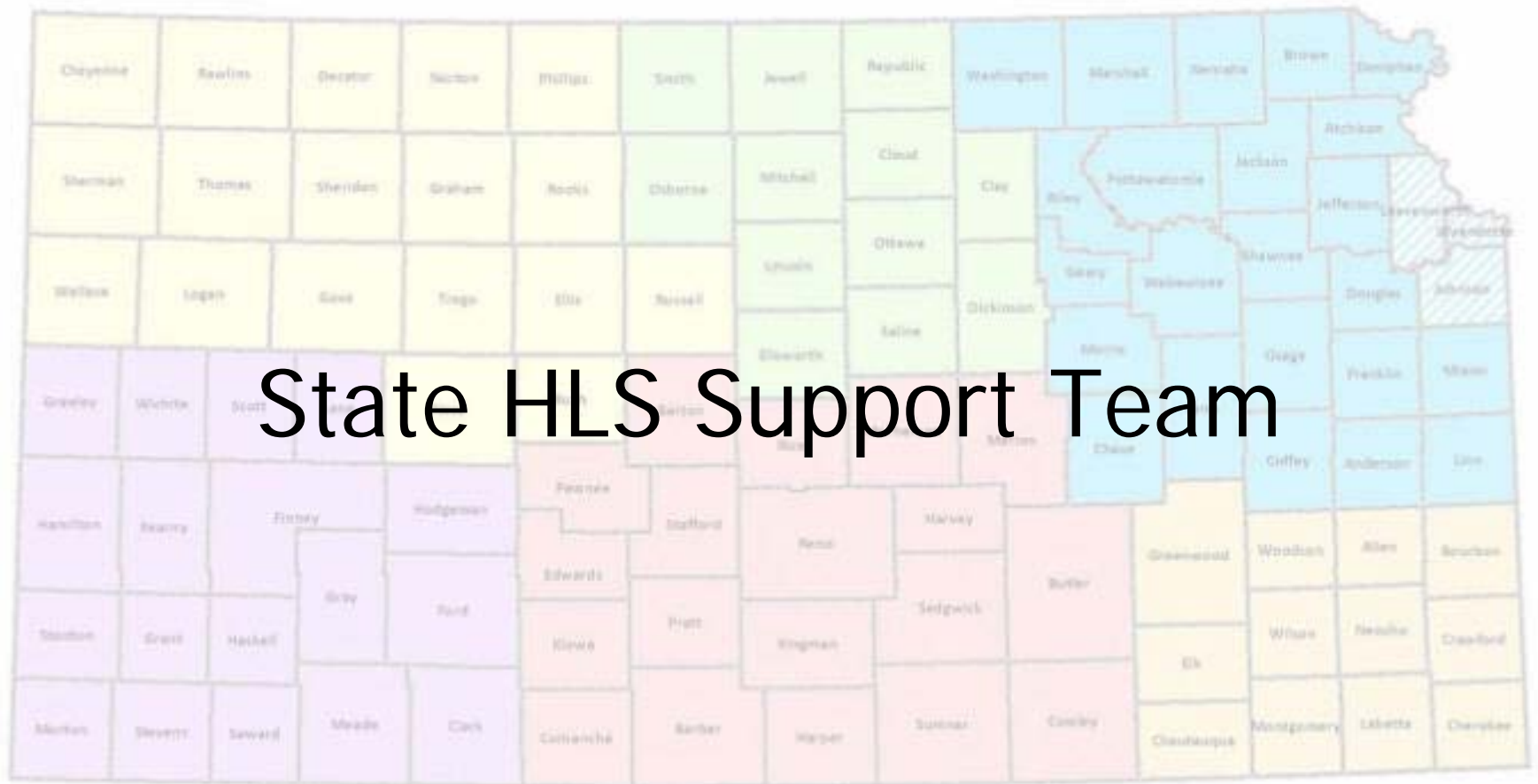
- Aid in gap analysis with the Support Team
- Provide recommendation on “filling” the gaps
- Provide guidance on data priority
- Provide guidance on equipment purchases



GIS “Champions”

- Your support is the success of this project





Support Team

- **Jessica Frye**, Kansas Homeland Security GIS Coordinator
- **Ivan Weichert**, Kansas GIS Coordinator
- **Ken Nelson**, Data Access and Support Center
- **Eileen Battles**, Data Access and Support Center
- **Ingrid Landgraf**, U.S. Geological Survey
- **Kathleen Harnish-Doucet**, The Kansas Collaborative
- **Joel Wright**, The Kansas Collaborative

Questions?

Thank you!

Jessica Frye

Kansas Homeland Security GIS Coordinator

jessica.frye@tag.ks.gov

785-274-1610

