For Educational Purposes Only:

The material within is intended to give the course participant a solid understanding of general principles in the subject area. As such, the material may not necessarily reflect the official procedures and policies of the Georgia Department of Revenue or the Department's official interpretation of the laws of the State of Georgia. The application of applicability to specific situations of the theories, techniques, and approaches discussed herein must be determined on a case-by-case basis.

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INTRODUCTION TO GEORGIA'S

GEOSPATIAL INFORMATION OFFICE

FOR

CAVEAT

Susan Miller, Geospatial Information Officer

A *very* brief history of me…

- Education
- GIS Manager
- Esri, Development Team
- The Nature Conservancy
  - ***Develop*** & ***execute on strategies for a global network*** *of approx. 3,500 GIS Practitioners from dozens or organizations and countries as well as across the U.S.*

Examples: global SDI, Training/Education, Technical Support, Community Development, Data Management, Cartography, Remote Sensing, Application Development, Procurement/Contracts/Site Licenses ~ **Leveraging economies of scale**

A *very* brief history of GIS in Georgia…

- **1970-90**: INNOVATION
  - Georgia is a national leader: Strong GIS Coordination at State-scale
    - Remote Sensing
    - Georgia GIS Data Clearinghouse & statewide data creation (mid 90's)
- **2000's-2013**: STATE FUNDING ELIMINATED
  - GIS Professionals continued to do their work, but on their own
  - Silos, duplication of effort, lack of standards-based data development/maintenance, little data interoperability…
- **2013-present**: COLLABORATIVE PARTNERSHIP BUILDS GIO
  - 2013: *Interagency Task Force* created to assess the need for a Georgia GIO
  - 2014: State commissions a *GIO Sustainability Study*, which outlines the path to success
  - 2015: *Geospatial Information Officer* hired as a *pilot project* (Projects & Programs begin taking shape)
  - 2017: *Office* becomes permanent & legislation passed to establish a *Governance body*

Creating the Georgia Geospatial Information Office

- How did we get here?
  - Has taken many years (concept initiated 2005)
  - Created by a huge stakeholder group
  - Shared vison to better orchestrate GIS at all scales
  - Wide-ranging benefits to cities, counties, regional government, state and federal agencies, educational institutions, private sector & the public

Mission

*….to **coordinate**, **promote** and **enhance** geospatial data development, analysis and standards for the State of Georgia, its **agencies**, **authorities**, **regions** and **local governments**.*

GEORGIA GIO
Geospatial Information Office

Stakeholders & Partners

STATE LEVEL

State Agencies / Authority

- Department of Community Affairs
- Department of Defense
- Environmental Protection Division
- Department of Transportation
- Environmental Finance Authority
- Georgia Technology Authority
- Department of Agriculture
- Department of Economic Development
- Department of Human Service
- Department of Natural Resources
- Department of Public Health
- Forestry Commission
- Georgia Emergency Management Association
- Office of Planning & Budget
- Regional Transportation Authority
- Soil and Water Conservation Commission
- Department of Revenue

State Organizations / Groups

- Georgia Association of Regional Commissions
- Georgia Association of Assessing Officials
- Association County Commissioners of Georgia
- Georgia Geospatial Advisory Council
- GIS Coordinating Committee
- GIS Network
- Georgia Association of Metropolitan Planning Organizations
- Georgia Municipal Association
- Association of 911 Directors
- Carl Vinson Institute of Government

Political Leadership

- Governor's Office
- State Legislature

State Higher Level Education

- Georgia Tech
- Kennesaw
- North Georgia
- UGA

Private Sector

- Software & Services Consultants/Vendors

REGIONAL LEVEL

- Atlanta Regional Commission
- Coastal Regional Commission
- Georgia Mountains Regional Commission
- Northeast Georgia Regional Commission
- Southern Georgia Regional Commission
- Southwest Georgia Regional Commission
- Middle Georgia Regional Commission
- Central Savannah River Area Regional Commission
- Heart of Georgia - Altamaha Regional Commission
- Northwest Georgia Regional Commission
- River Valley Regional Commission
- Three Rivers Regional Commission

NATIONAL LEVEL

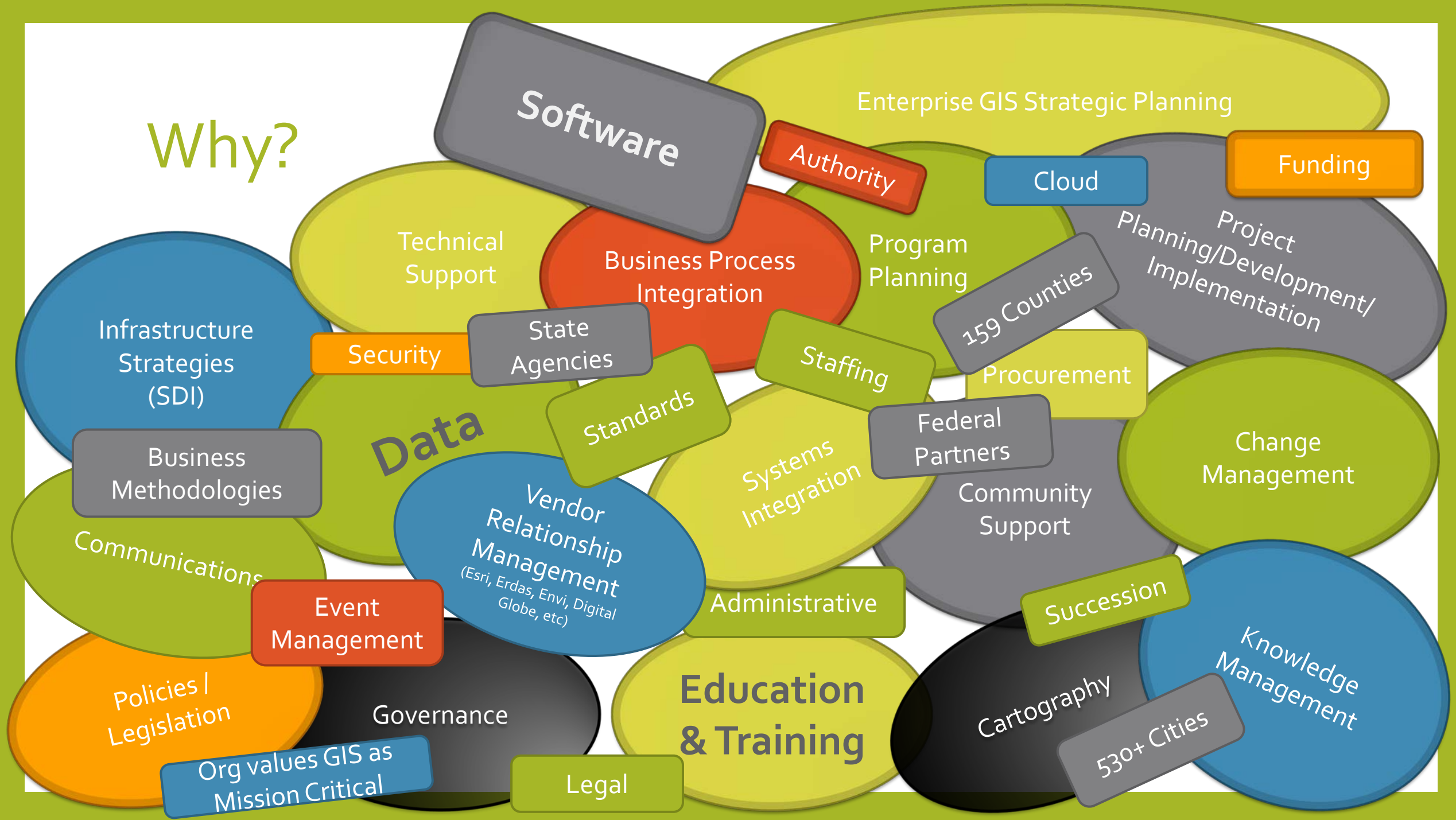
Federal Agencies / Authorities

- FEMA
- USDA / NRCS
- US Census Bureau
- National Oceanic & Atmospheric Administration
- US Geologic Survey
- US Park Service, BLM & USFWS
- US Economic Development Administration

National Organizations / Groups

- National States Geographic Information Council
- Other State GIO's (Utah, Oregon, Arkansas, Alabama, Maryland, etc…)
- Urban and Regional Information Systems Association

Why?


Software
Enterprise GIS Strategic Planning
Authority
Cloud
Funding
Technical Support
Business Process Integration
Program Planning
Project Planning/Development/ Implementation
159 Counties
Infrastructure Strategies (SDI)
Security
State Agencies
Staffing
Procurement
Standards
Data
Federal Partners
Change Management
Business Methodologies
Systems Integration
Community Support
Vendor Relationship Management
(Esri, Erdas, Envi, Digital Globe, etc)
Communications
Event Management
Administrative
Succession
Knowledge Management
Policies / Legislation
Governance
Education & Training
Cartography
530+ Cities
Org values GIS as Mission Critical
Legal

GIS Strategic Plan for the State of Georgia

GIS Strategic Plan

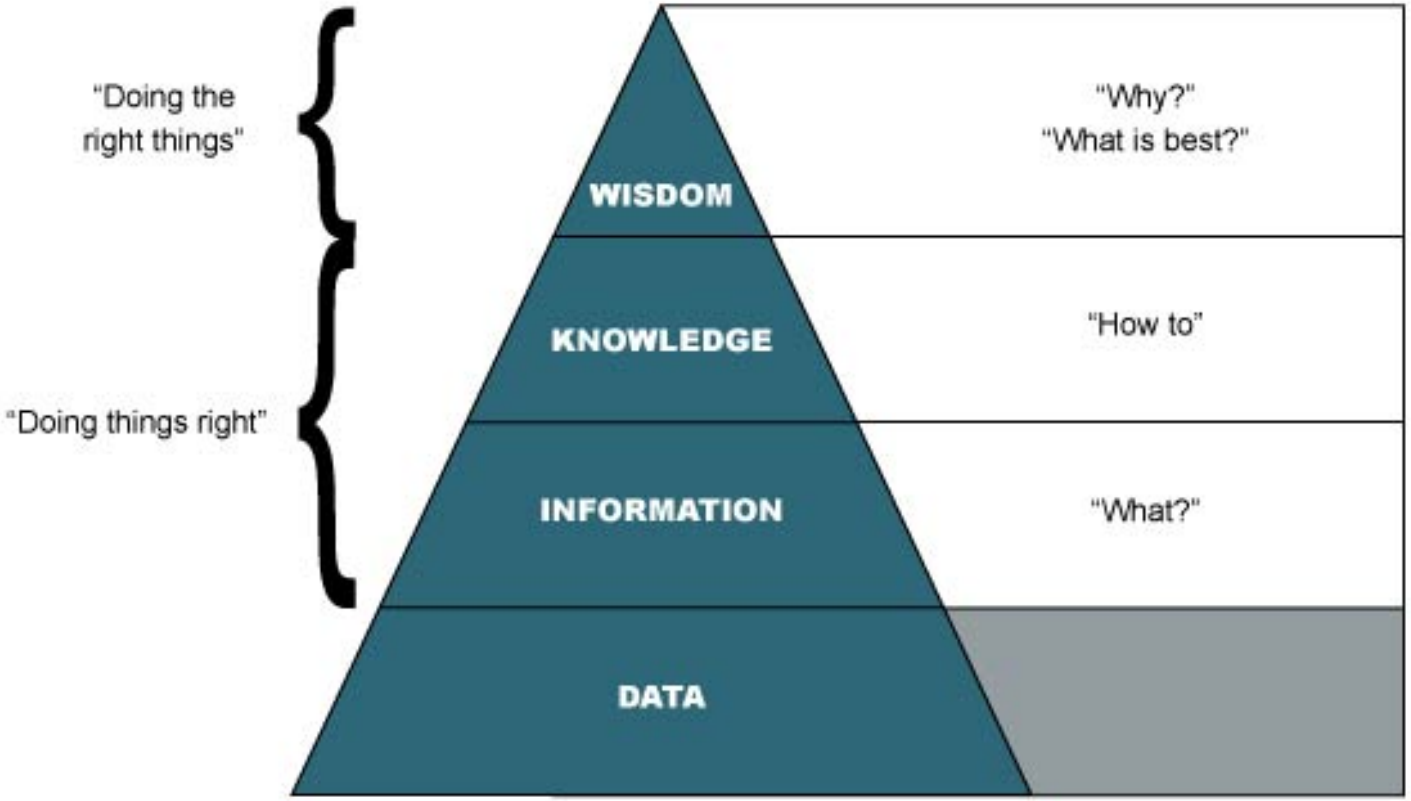
- **Program A**
  - Project 1
  - Project 2
- **Program B**
- … and so on…

Programs

Programs of note for today…

- Spatial Data Program
- Remote Sensing Program
- Software Program

Better Data = Better Decision Making



Framework GIS Data Themes

Cadastral

Cadastral data is information about rights and interest in land (e.g. real estate or parcel information)

Transportation

Transportation data contains multi-jurisdictional roads, ramps, bridge, railways, etc

Administrative Boundaries

Administrative Boundaries are legal/jurisdictional boundaries (eg. city, county, regional and state boundaries; school, fire, tax, voting districts, etc)

Elevation

Elevation data is a digital representation illustrating the elevation of the earth's surface (e.g. Digital Elevation Models (DEM), Digital Surface Models (DSM), Contours, and ancillary elevation products such as shaded relief maps. Source elevation data includes data like LiDAR (Light Detection and Ranging)

Hydrography

Hydrography includes surface water features such as lakes, ponds, streams, rivers, canals, springs, wells and ditches

Orthoimagery

Orthoimagery is an aerial photograph that has been geometrically corrected ("orthorectified") so that the photo has the same lack of distortion as a map. Unlike an uncorrected aerial photograph, an orthophotograph can be used to measure true distances, because it is an accurate representation of the Earth's surface, having been adjusted for topographic releif , lens distortion and camera tilt

Buildings & Structures

Includes primary structures, buildings

Geodetic Controls

A consistent coordinate system that defines latitude, longitude, height, scale, gravity, and orientation throughout the State

Addresses

address points obtained from local, state, federal, and private data providers

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State Remote Sensing Program

Includes, but is not limited to acquisition, sharing/hosting, training…etc

- LiDAR (Light Detection and Ranging) – used to derive Elevation
  - 3D Elevation Program (3DEP) Grant with USGS
    - 2017 - Won
    - 2018 – Under development
- Imagery
  - Custom Flights
  - Pre-Packaged

2017 3DEP Grant: Collaborative Outcomes

Partnership between:

- GA NRCS (=17 - partials on 4)
- GA EPD (=7 + partials on 4)
- GA GIO (=22, via 3DEP w/GANRCS, USGS, EPD as funding partners)
- AL GIO (nearly 100% contiguous coverage along shared border)
- Total = **46 Georgia Counties**

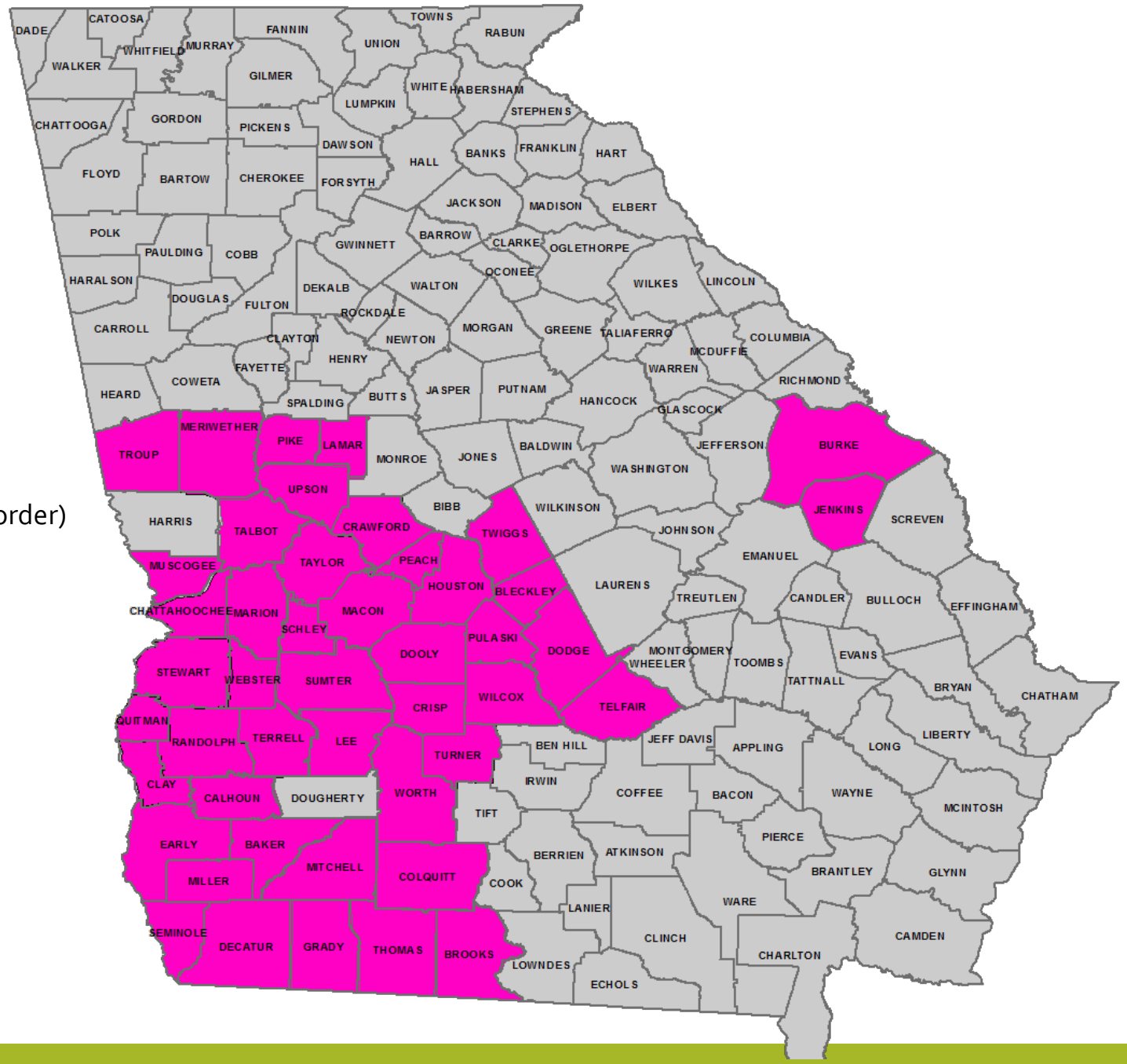
Contracting Partners:

- NOAA
- USGS

USGS/NOAA Contractors:

- Atlantic / Platinum Geomatics
- Quantum Spatial

Will result in QL2 LiDAR for nearly $^{1}/_{3}$ of the State



Conservative **benefits estimates** for the top 10 business uses of LiDAR for Georgia (Dewberry, 2011)

Rank	Business use	Annual benefits (millions)
1	Infrastructure and construction management	$2.23
2	Natural resources conservation	$2.08
3	Flood risk management	$1.84
4	Agriculture and precision farming	$1.20
5	Forest resources management	$0.46
6	Water supply and quality	$0.29
7	Aviation navigation and safety	$0.15
8	Geologic resource assessment and hazard mitigation	$0.11
9	Coastal zone management	$0.08
10	Sea level rise and subsidence	$0.06
	Total	**$8.50 million**

State Remote Sensing Program

Includes, but is not limited to acquisition, sharing/hosting, training…etc

- LiDAR
  - 3D Elevation Program (3DEP) Grant with USGS
    - 2017 - Won
    - 2018 – Under development
      - Interested in joining the grant application to cost share acquisition?
        - **Susan Miller**
        - **Regional Commissions**
          - Georgia Mountains Regional Commission: **Faith Bryan**
          - Coastal Regional Commission: **Hunter Key**
- Imagery
  - Custom Flights
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    - 2017 - Won
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- Imagery
  - Custom Flights
    - **When you need *exactly what you need***… such as:
      - Leaf-on vs leaf-off
      - Sun angles / shadows
      - Specific spatial resolution
    - Interested in joining a consortium to acquire?
      - **Regional Commissions**
        - Georgia Mountains Regional Commission: **Faith Bryan**
        - Coastal Regional Commission: **Hunter Key**
  - Pre-Packaged

State Remote Sensing Program

Includes, but is not limited to acquisition, sharing/hosting, training…etc

- LiDAR
  - 3D Elevation Program (3DEP) Grant with USGS
    - 2017 - Won
    - 2018 – Under development
- Imagery
  - Custom Flights
  - Pre-Packaged
    - Pilot Project Coming Soon ~ goal is to provide:
      - 6-inch &/or 12-inch imagery statewide
      - True Color (RGB)
      - Collected in random intervals over the past three years
      - Mix of leaf-on & leaf-on conditions
      - Licensing: available to all governmental entities for use in not-for-profit work; can be used locally, or as streaming web-service on internal and external facing applications
      - Anticipated time-line: available early fall 2017

(all of the above is NOT guaranteed, and is subject to change)

State **Geospatial Software Program**

- New Statewide Contract w/Esri ("MPA" or Master Purchasing Agreement)
  - Procurement vehicle that **streamlines the purchasing of Esri software and services** (includes a new sole source)
  - Impacts **Georgia Governmental Entities Only** (sorry to anyone else in the meeting)
    - Does NOT negatively impact any existing ELA's or other contracts between Esri and a governmental entity
  - Provides **15% price discount** on all **new software purchases**
  - MPA will **last seven (7) years** and be managed by GIO & DOAS
    - Includes provision to add new, and remove deprecated products

Full Rollout & Implementation Plan is under development, so stay tuned for a series of webinars to get you all up to speed….

State **Geospatial Software Program**

- New Statewide Contract w/Esri ("MPA" or Master Purchasing Agreement)

Roles	Resources	Contact
Account Managers	**Robert Hathcock,** Local Gov't Team Robert Rike, State Team	rhathcock@esri.com rrike@esri.com
TeleBusiness		telebusiness@esri.com 1-800-447-9778
Customer Service	Maria Perez	maria_perez@esri.com service@esri.com
Training	Tamara Adamson Tosca Hoffmann	tadamson@esri.com thoffmann@esri.com http://www.esri.com/training/main
Tech Support		888-377-4575 http://support.esri.com

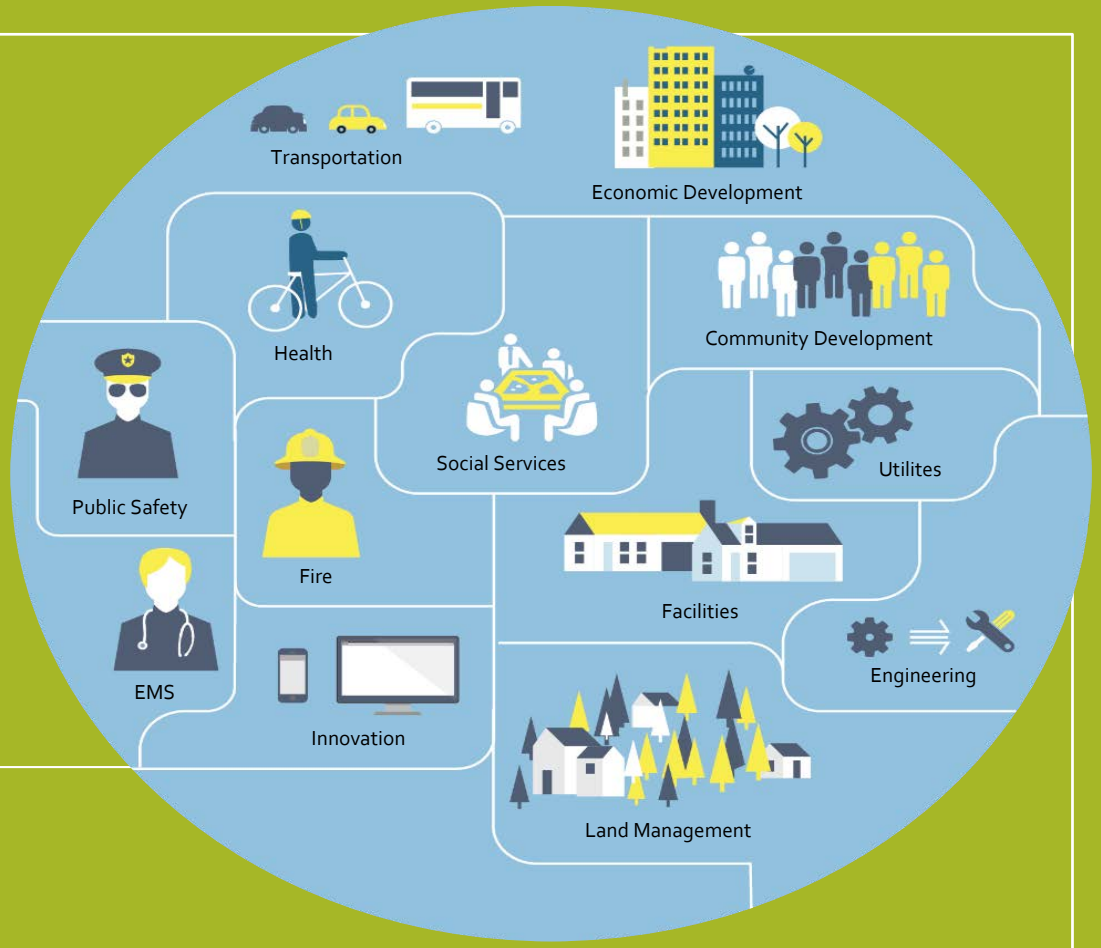
Governance Body
(aka 'H.B. 183' or the 'Geospatial Advisory Council')

- Its Purpose: Enable the GIO to do what is necessary to advance the use of geospatial sciences/technology throughout Georgia's
- **Roles** and **Responsibilities**
  - **Governance Body**: secure funding, identify synergies & economies of scale, act as SMEs of the State's business needs – Pave the way to develop & execute on a state strategic plan; enable GIO to build all necessary Programs; implement necessary legislation… identify and remove obstacles…
  - **GIS Coordinating Committee**: SME's of GIS/RS, technical advisors, the "do-ers" and "implementers" – where the rubber meets the road!
  - … other communities of practice and SMEs…

THANK YOU,

FOR ALL THAT YOU DO &
FOR HAVING ME HERE TODAY

SPATIALLY ENABLING GOVERNMENT



Seeing is believing. That's why visualization technologies – particularly geospatial tools – are indispensable components of government services. Leveraging these technologies opens the door to better planning, decision-making, economic development, citizen services and public safety.