navigat*OR*

OREGON'S ONE GOVERNMENT APPROACH TO GEOSPATIAL INFORMATION AND TECHNOLOGY

GEOSPATIAL ENTERPRISE OFFICE

OFFICE OF THE STATE CHIEF INFORMATION OFFICER

JANUARY 19, 2018

NAVIGATOR VISION…

Authoritative GIS data available and accessible when needed.

ONE GOVERNMENT

- Citizens expect government to act as One, but…
- Government is structured as silos
- GIS connects business processes across silos
- Connections between silos happen, but…
  - Unreliable, inconsistent, intermittent
- Data sharing is the most critical element for consistent service provision
- Governance is key to one government approach

HOW DOES GIS HELP

- GIS technology stores & analyzes locational (geographic) data
- Geography connects all things that exist or happen at any location
- Most government databases contain, or can contain, a locational element

HOW DOES GIS HELP

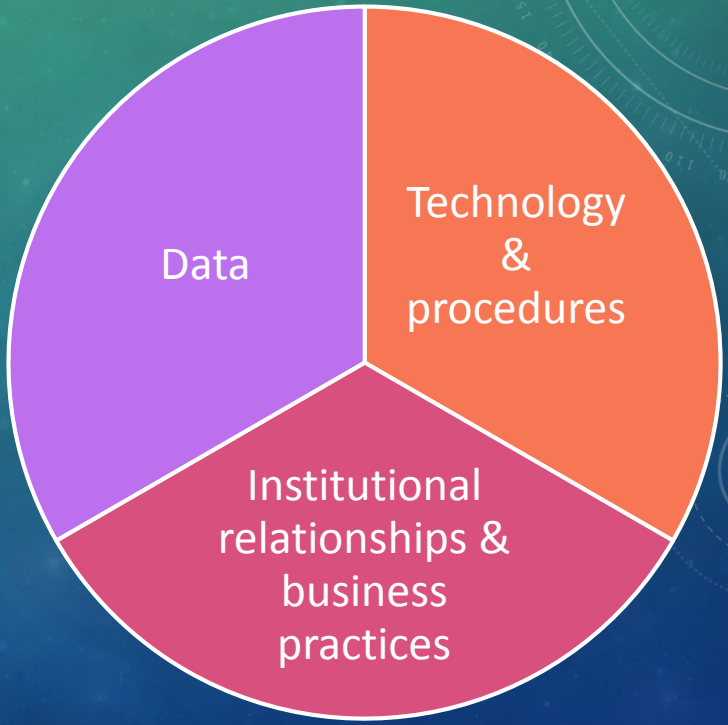
- If you use GIS to combine data from multiple organizations based on location, you can answer questions like these:
  - *How many miles of water-quality limited streams are within an Urban Growth Boundary?*
  - *Where should the boundary for an economic development zone be located to have the greatest impact?*
  - *What percentage of the population in the Salem area now lives within 5 minutes walking distance of public transit?*
  - *Where are the locations that a new fire station could be placed to optimize response time?*
  - *How can foster children be matched with foster homes to keep those children in the same school attendance area?*

CONSISTENT SERVICES

- Consistent government services depend on locational data
- The data to support consistent services doesn’t exist everywhere in the state
- We haven’t yet achieved the navigatOR vision

What is navigat*OR*?

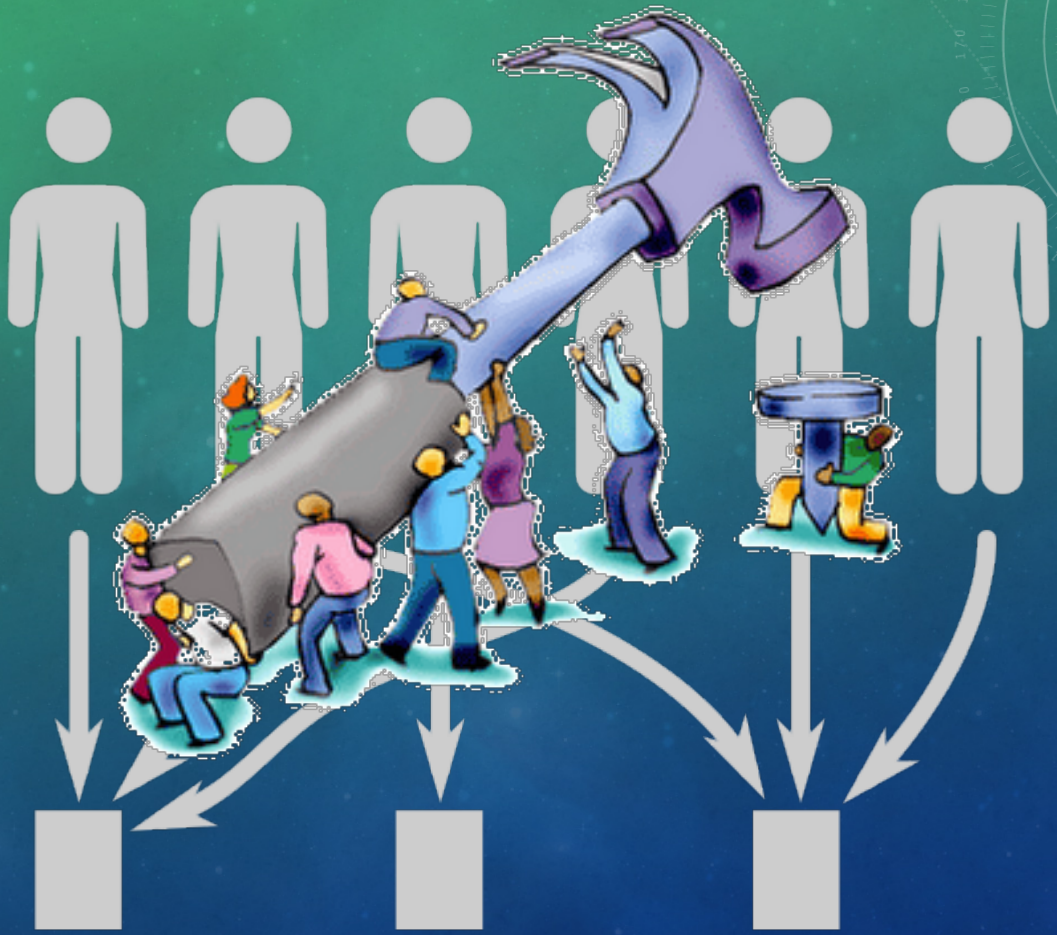
Oregon's
spatial data infrastructure



navigat*OR* GOALS & OBJECTIVES

Develop and maintain technical and organizational structures to support:

- Full statewide maturation of Oregon's geospatial Framework data
- Data sharing and access for a broad user community
- Provide an efficient environment and tools to support Framework data elements throughout the data lifecycle



Life in a Matrix
www.global-integration.com
I'M LOOKING FOR HELP ON THIS, VIRTUAL TEAM...
VIRTUAL TEAM MANAGER
Function
Country
Product Group
IT'S NOT IN MY P & L.
IT'S NOT IN MY OBJECTIVES.
I'D LIKE TO HELP, BUT...
Traditional silos getting in the way?

X

ONE GOVERNMENT APPROACH

- Connect business processes across silos
- Ensure reliable, consistent, and permanent connections
- How?
  - [Geospatial] data sharing
  - Governance
  - Coordination

GIS GOVERNANCE & COORDINATION

Oregon Geographic Information Council

- Authorized under ORS 166 (State Laws of 2017)
- Existed since 1983 under various Executive Orders

GIS GOVERNANCE & COORDINATION

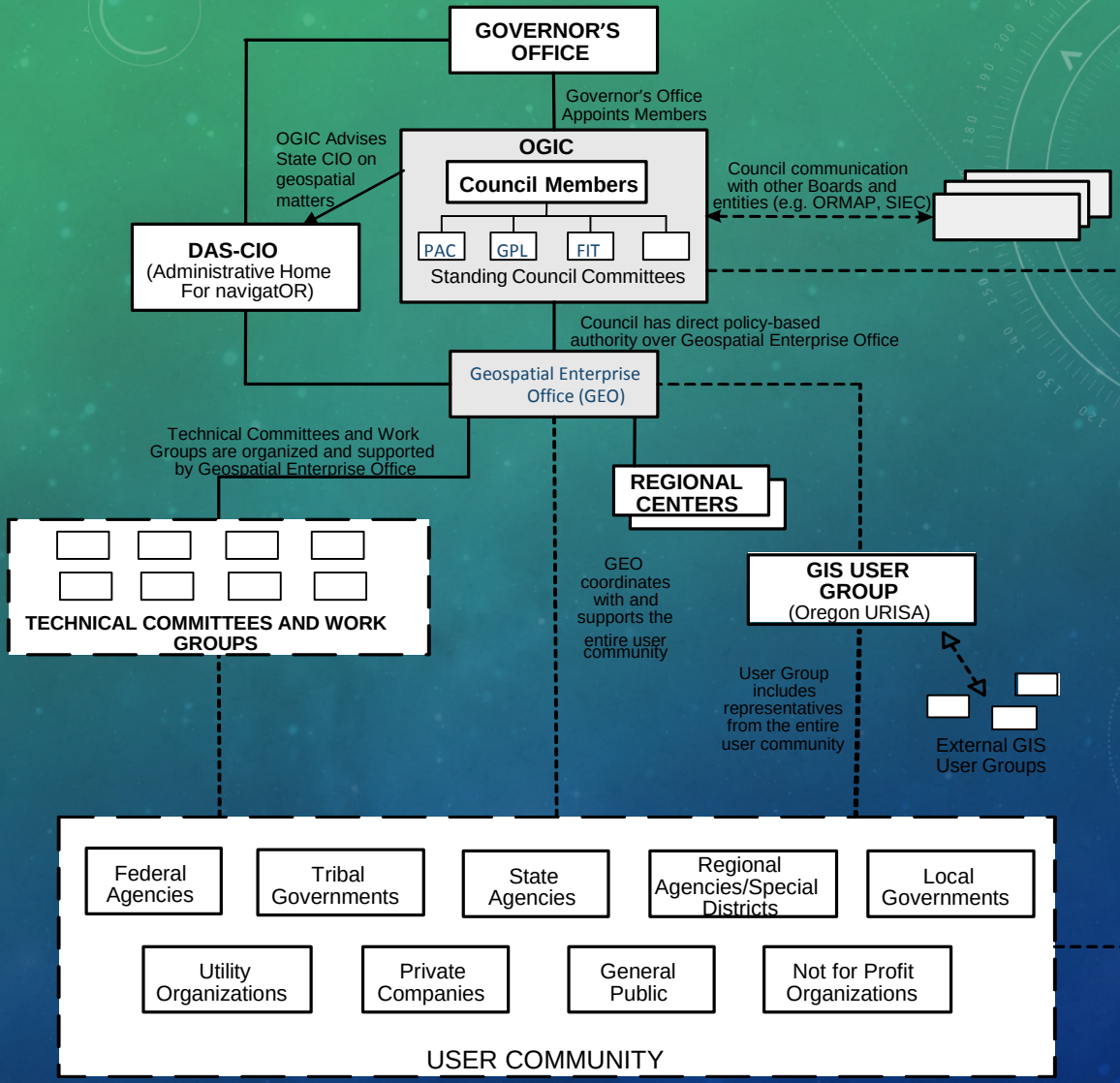
Council has a broad array of responsibilities, including:

1. Statewide governing body for managing/sharing geospatial data
2. Develop and update a strategic plan to manage and share geospatial data
3. Recommend legislation and adopt rules, policies, & standards for improving management and sharing of geospatial data
4. Recommend to the Legislative Assembly strategies for eliminating fees that public bodies charge each other for geospatial Framework data
5. Recommend terms and allocation of responsibilities among public bodies for managing and sharing geospatial Framework data

GIS GOVERNANCE & COORDINATION

Additional Council Responsibilities

- Develop and submit to the State CIO a plan and a budget for managing and sharing geospatial Framework data each biennium
- Coordinate geographic information sharing and management that occurs among public bodies
  - Statewide forum
  - Partnerships among public bodies
  - Best practices
  - Identify geospatial Framework data that public bodies need
  - Information sharing about geospatial projects


GOVERNOR'S OFFICE
Governor's Office Appoints Members
OGIC Advises State CIO on geospatial matters
OGIC
Council Members
PAC
GPL
FIT
Standing Council Committees
Council communication with other Boards and entities (e.g. ORMAP, SIEC)
DAS-CIO (Administrative Home For navigatOR)
Council has direct policy-based authority over Geospatial Enterprise Office
Geospatial Enterprise Office (GEO)
Technical Committees and Work Groups are organized and supported by Geospatial Enterprise Office
REGIONAL CENTERS
TECHNICAL COMMITTEES AND WORK GROUPS
GEO coordinates with and supports the entire user community
GIS USER GROUP (Oregon URISA)
User Group includes representatives from the entire user community
External GIS User Groups
Federal Agencies
Tribal Governments
State Agencies
Regional Agencies/Special Districts
Local Governments
Utility Organizations
Private Companies
General Public
Not for Profit Organizations
USER COMMUNITY

GIS GOVERNANCE & COORDINATION

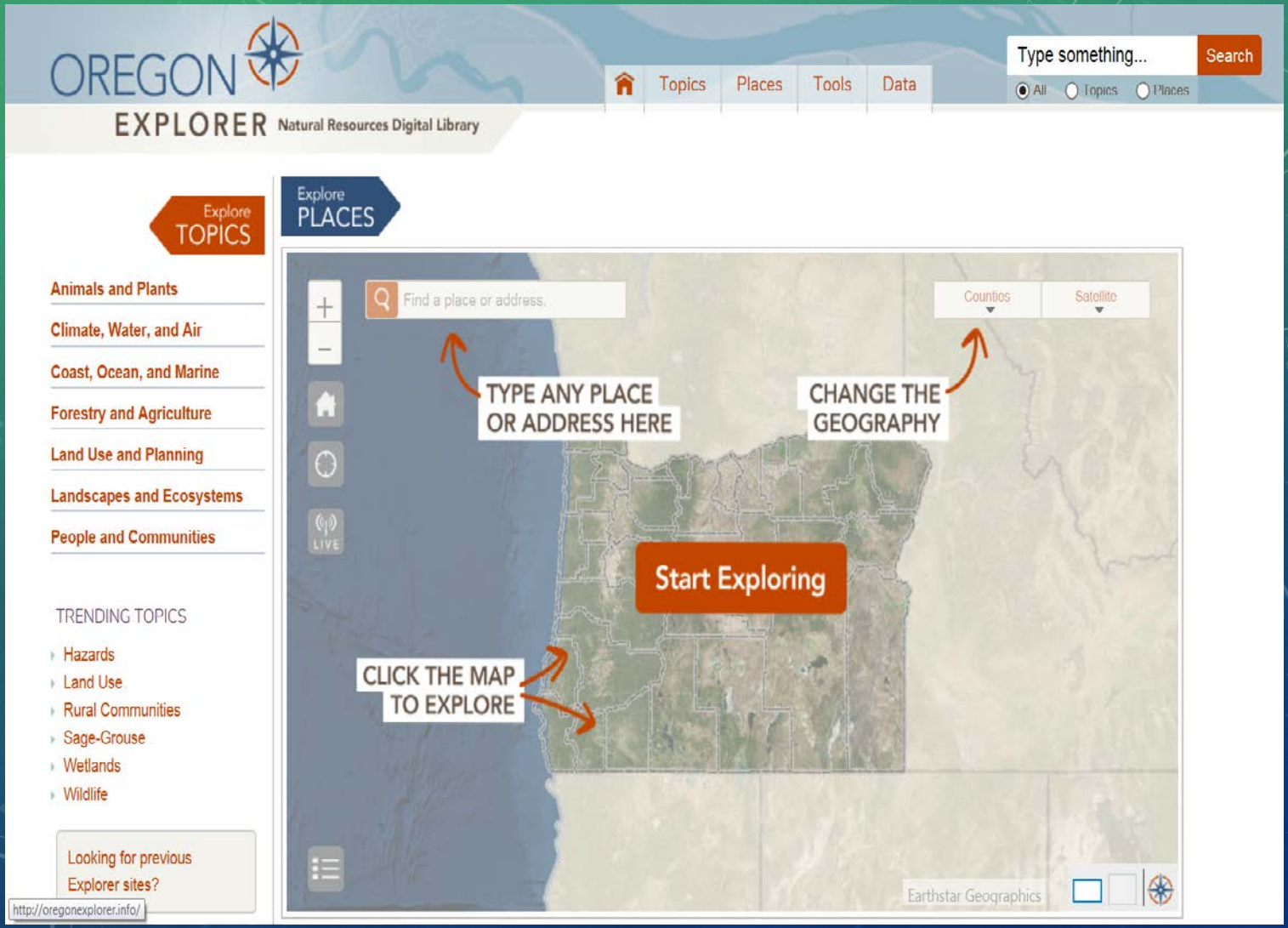
- Geospatial Enterprise Office (GEO)
  - navigatOR program operated by State GIO and 3 staff
  - 2017-19 program budget: $2,500,000
- GEO operates under ORS 166 (State Laws of 2017)
  - Managed by State GIO
  - Coordinates the GIS activities of public bodies in Oregon
  - Provides library of shared geospatial data
  - Provides support to OGIC

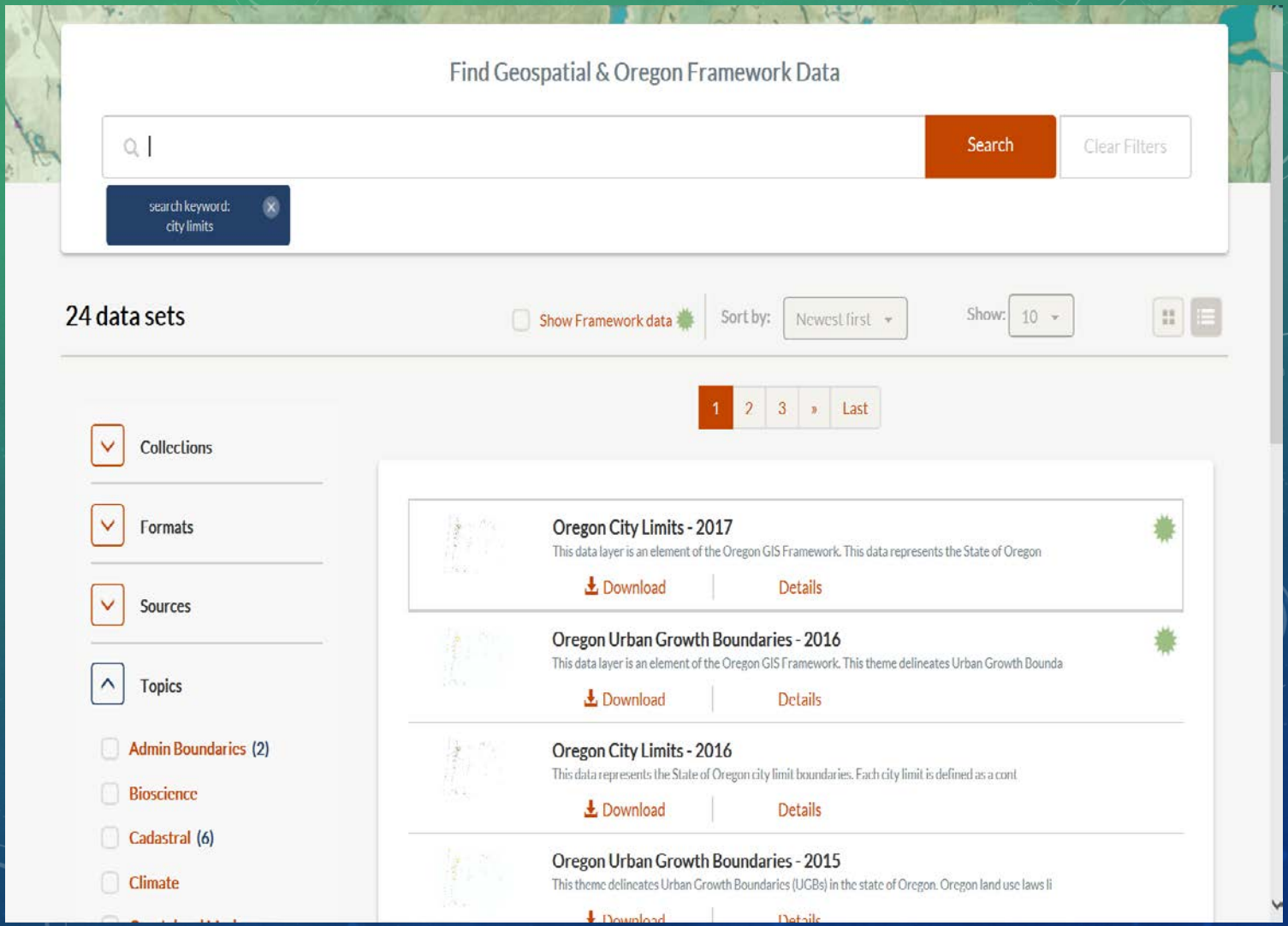
EXAMPLE GEO ACTIVITIES

- Esri Enterprise License for state agencies
- Statewide address points project (OMAR)
- Public safety common operating picture (RAPTOR)
  - http://arcg.is/0Smjq1
  - OEM administers, used by 100s of first responders

EXAMPLE GEO ACTIVITIES (CONT)

- ArcGIS Online for state government
  - http://Geo.maps.arcgis.com
  - State agency entry points
  - Local government seats in exchange for data sharing (8-10 are using)
- Oregon Explorer & Spatial Data Library
  - http://oregonexplorer.info


OREGON
EXPLORER
Natural Resources Digital Library
Topics
Places
Tools
Data
Type something...
Search
All
Topics
Places
Explore
TOPICS
Animals and Plants
Climate, Water, and Air
Coast, Ocean, and Marine
Forestry and Agriculture
Land Use and Planning
Landscapes and Ecosystems
People and Communities
TRENDING TOPICS
Hazards
Land Use
Rural Communities
Sage-Grouse
Wetlands
Wildlife
Looking for previous Explorer sites?
http://oregonexplorer.info/
Explore
PLACES
Find a place or address.
Counties
Satellite
TYPE ANY PLACE OR ADDRESS HERE
CHANGE THE GEOGRAPHY
Start Exploring
CLICK THE MAP TO EXPLORE
LIVE
Earthstar Geographics


Find Geospatial & Oregon Framework Data
Search
Clear Filters
search keyword:
city limits
24 data sets
Show Framework data
Sort by:
Newest first
Show:
10
1
2
3
»
Last
Collections
Formats
Sources
Topics
Admin Boundaries (2)
Bioscience
Cadastral (6)
Climate
Oregon City Limits - 2017
This data layer is an element of the Oregon GIS Framework. This data represents the State of Oregon
Download
Details
Oregon Urban Growth Boundaries - 2016
This data layer is an element of the Oregon GIS Framework. This theme delineates Urban Growth Bounda
Download
Details
Oregon City Limits - 2016
This data represents the State of Oregon city limit boundaries. Each city limit is defined as a cont
Download
Details
Oregon Urban Growth Boundaries - 2015
This theme delineates Urban Growth Boundaries (UGBs) in the state of Oregon. Oregon land use laws li

Gallery Map Scene Groups

Sign In

State of Oregon
Geospatial Data, Maps & Applications

Story Maps

Featured Apps

Documentation

Oregon's ArcGIS Online helps make creating, collaborating, and sharing geospatial content easier than ever! You can explore all of this great content by viewing our featured Story Maps, featured applications, or use the links below to see what indivdiual agencies are building. State employees or agencies wanting to join ArcGIS Online can refer to the documentation site for more information.

View Participating Agency Pages

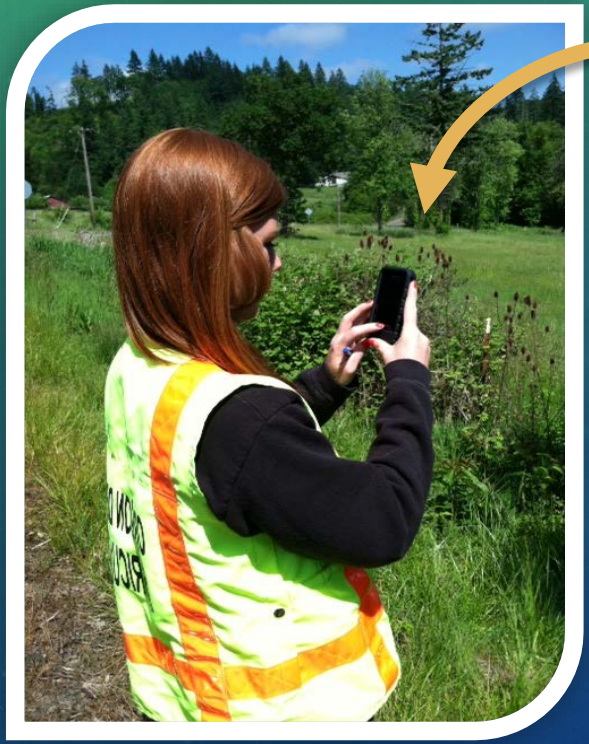
Oregon Geospatial Enterprise Office

Oregon Department of Transportation

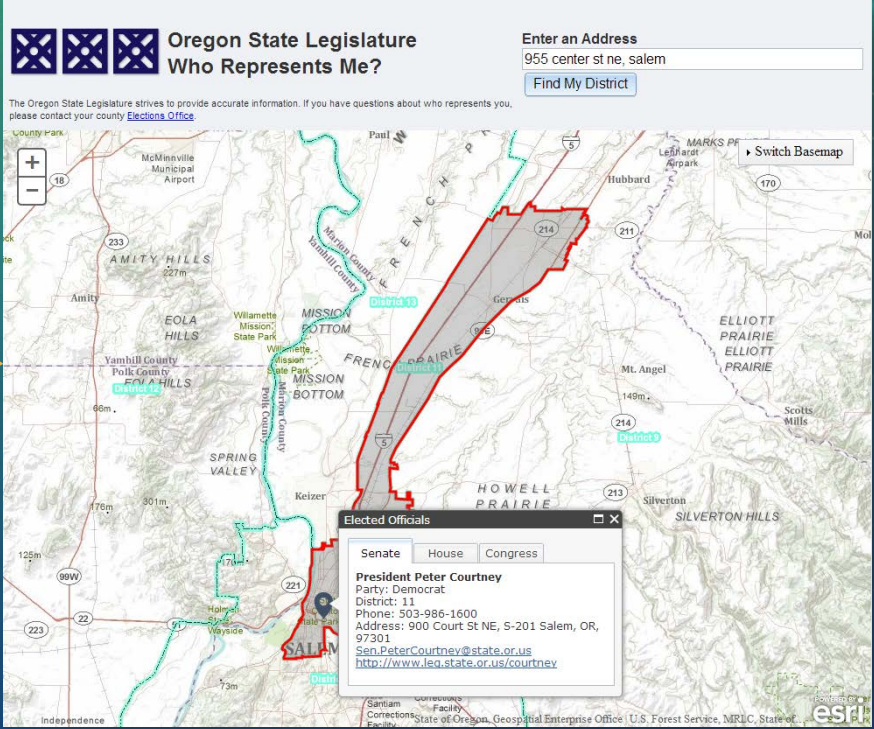
Oregon Department of Forestry

Oregon Chief Financial Office

INSECT PEST PREVENTION AND MANAGEMENT

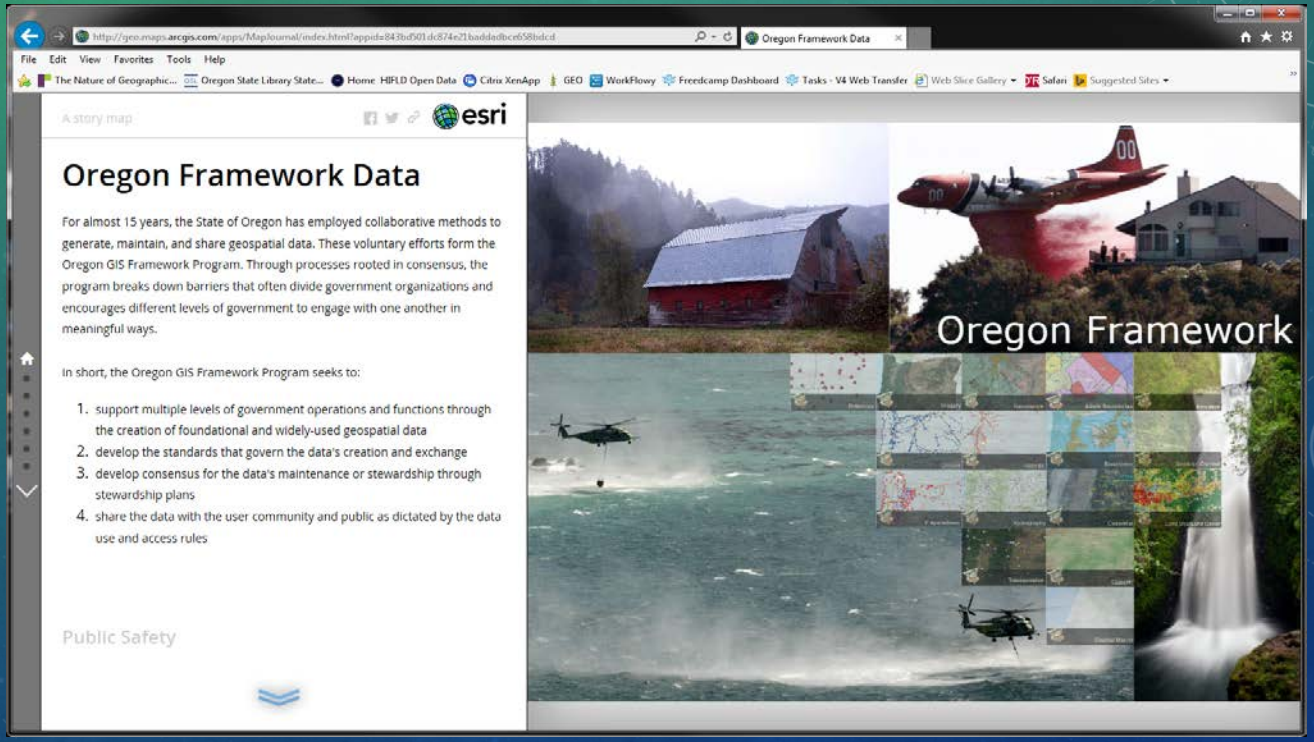


WHO REPRESENTS ME APP



ESRI MAPS FOR OFFICE ROLLOUT

FRAMEWORK STORY MAP



http://arcg.is/1Yf7fCy

STATE/LOCAL GEOSPATIAL INVESTMENT

- Amount Spent Annually on Geospatial Data
  - Use, Management, Collection, Maintenance

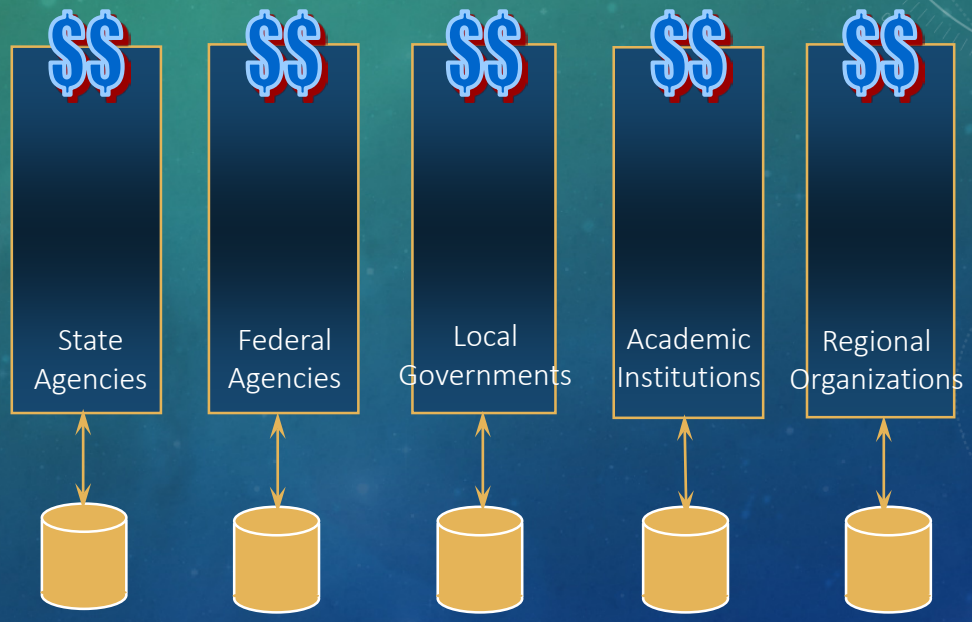
State Government	~ $2,235,576,000
County Government	~ $1,121,239,000
City Government	~ $1,480,729,000
TOTAL	~ $4,837,544,000

Source: OGIC-sponsored study, 2007

ACTIVITIES MANAGED BY WORK FUNCTION

The Global Perspective

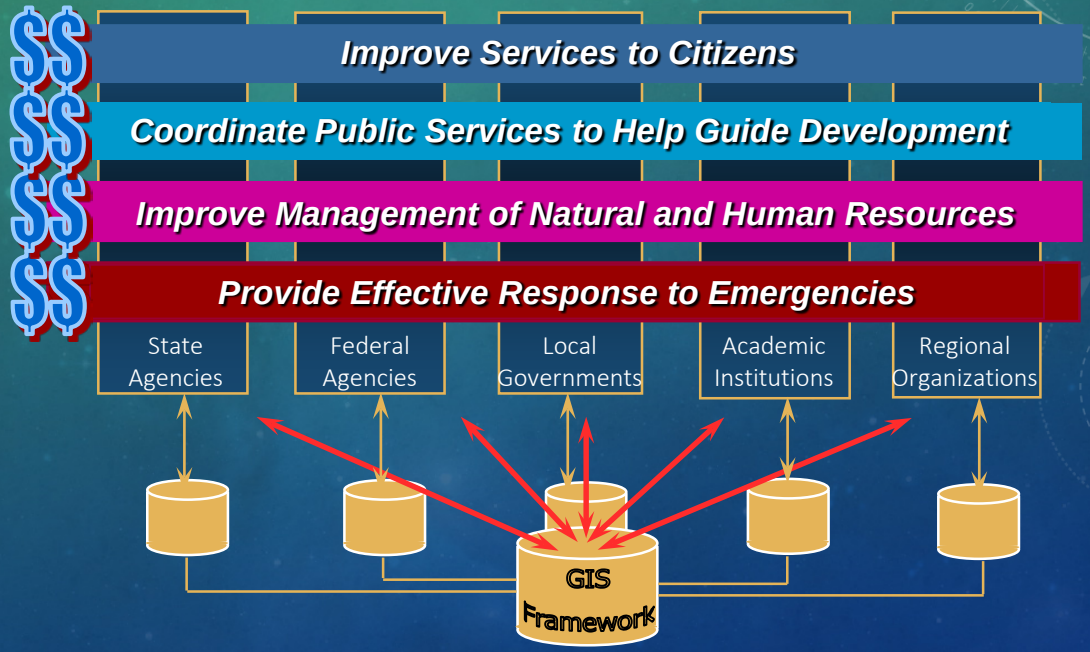
Traditional operating model



ACTIVITIES MANAGED WITH A FOCUS ON OUTCOMES

How One Govt. approach operates

GIS Integrates Information Across the Enterprise



SHARED INFORMATION

Sizable and costly portion of needed data is common to nearly all programs and decisions

Traditional approach

- Each agency develops base data themselves, in slightly different ways – lots of examples
- Result is lack of needed data in lots of places, particularly rural areas, and inconsistent services

One Government approach

- One or more organizations steward each base data set, on behalf of all others, in a coordinated way

ASPECTS OF FRAMEWORK

DATA

- Geospatial data for use in applications
- Base to which users can add or attach information
- Basis for accurate geographic registration and data compilation
- Base data for displaying locations and other information
- 250+ framework data elements identified

ASPECTS OF FRAMEWORK

TECHNOLOGY & PROCEDURES

- Community-designed standards and guidelines for:
  - Building data
  - Integrating data
  - Maintaining data (stewardship)
  - Documenting data (metadata)
- Data access
  - Oregon Spatial Data Library (OSDL)
  - ArcGIS Online

ASPECTS OF FRAMEWORK

INSTITUTIONAL RELATIONSHIPS & BUSINESS PRACTICES

- It's a group effort
  - Collaborative, cooperative community of participants
  - Responsive to needs of the geographic community

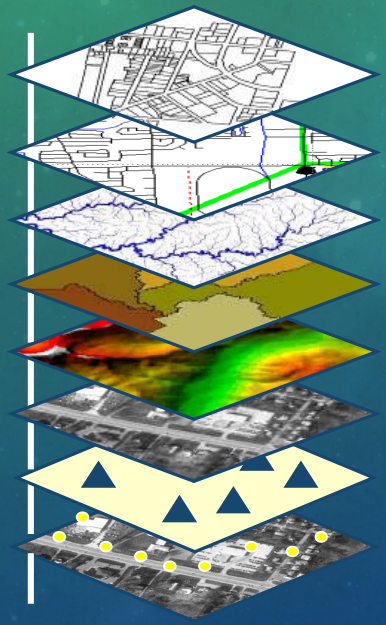
ASPECTS OF FRAMEWORK

INSTITUTIONAL RELATIONSHIPS & BUSINESS PRACTICES

- Benefits wide user base through collaboration and cooperation (e.g., data development)
- Ensures data maintenance by tapping into business needs

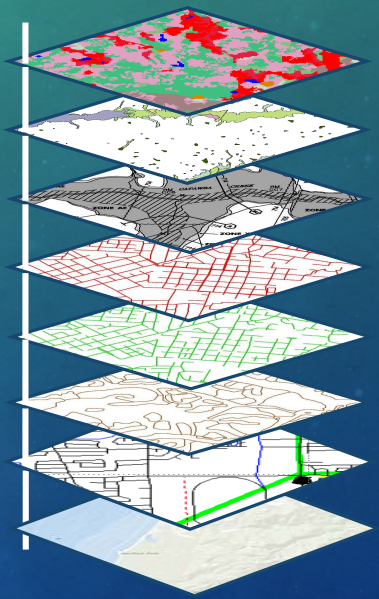
FRAMEWORK DATA THEMES

Nationally recognized



- Cadastral
- Transportation
- Hydrography
- Admin. Boundaries
- Elevation
- Imagery
- Geodetic Control
- Address Points

Oregon-specific



- Land Cover/Use
- Bioscience
- Climate
- Utilities
- Preparedness
- Geoscience
- Hazards
- Coastal/Marine

FRAMEWORK DATA INITIATIVE

- Fifteen working committees – 450+ people
- Operates under auspices of OGIC
- Tasked with implementation plan and standard for each data theme
- Data standards development & adoption
- Certification of authoritative data
- Biggest challenge is communication

TRANSPORTATION FRAMEWORK

- Statewide street centerline file
- Updated locally; Oregon Department of Transportation is data steward
- Integrated with state highways and federal resource roads
- E-911 funding mechanism for maintenance
- Coordinated with regional & national models

TRANSPORTATION SUMMARY

- 73,479 miles of public roads in Oregon
- Over 330 Road Authorities
- Federal, State, County and City
- Data through system owner and stewards
  - Counties, 911 data, State and Federal
- Best Available Source
- Oregon Road Centerline Data Standard (ORCDS) approved in 2002
- Update approved in 2014

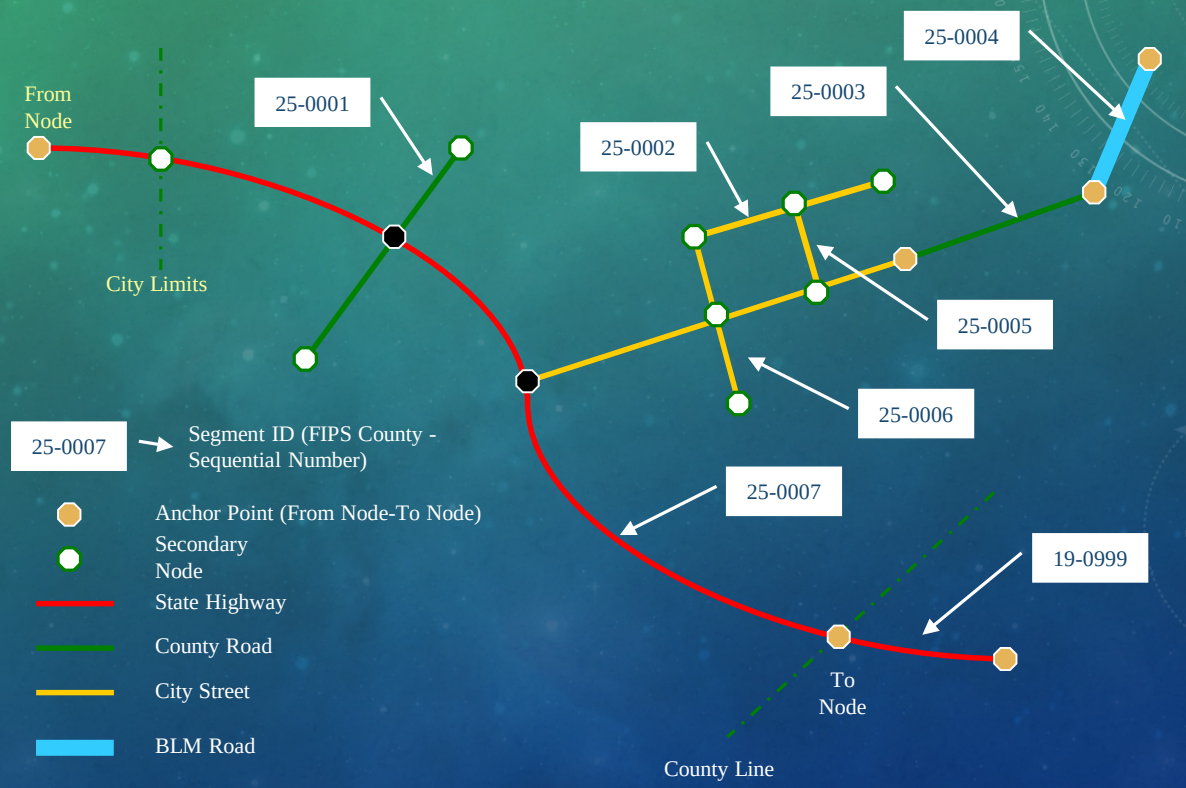
TRANSPORTATION ATTRIBUTES

- Contributor Identifier
- Road Owner and Manager
- Road Name (NE Main St)
- Road Name Alias (US 101)
- Road number
- Address Range
- ZIP Code
- Contributor Road/Route Numbers
- Beginning and Ending Mile Point
- City, County and State Identifiers
- Local Functional Classification
- Mode (road, rail, bike path, etc.)
- Status (Built or Planned)

ODOT STEWARDSHIP

- Annually request data from data contributors
- Don’t ask contributors to submit data in the standard
- Extract only the data necessary to meet the standard
- Adjust data to create connected network
- Link alignments to ODOT-maintained federal network
- Link crash data, traffic counts to combined network
- Provide regular update to GEO for Spatial Data Library

Oregon's Transportation Framework



Revised 4/8/02

http://arcg.is/1Yf7fCy

ROADS DATA USES AND REQUIREMENTS

- Emergency Response and Management
- Traffic Safety
- Federal Funding
- Traffic Management
- Bridge Management
- Environmental Management
- Federal Reporting
- Reporting to contributing agencies (Crash, Traffic Counts, Federal Road Classifications)

MANAGING A SHARED RESOURCE

- How will consistent communications happen?
- How will policies, regulations, and procedures be established?
- How will the distributed data for all the shared themes be updated consistently to ensure that relied-upon capabilities are always available?
- A shared organizational structure with equal representation from all sectors is critical.
- Authority for that structure comes from ORS 166.

AUTHORITATIVE DATA

- Data developed for a particular regulatory, statutory or related purpose by or for the authoritative source
- Authority is the legal responsibility provided by a legislative body to conduct business for the public good

ONE GOVERNMENT SUMMARY

- Citizens expect government to act as One, but…

  …mostly structured as silos

- GIS connects business processes across silos, but…

  …connections are unreliable, inconsistent, and intermittent

TAKE HOME MESSAGE

- Data sharing is the most critical element for consistent service provision
- One Government approach depends on excellent governance