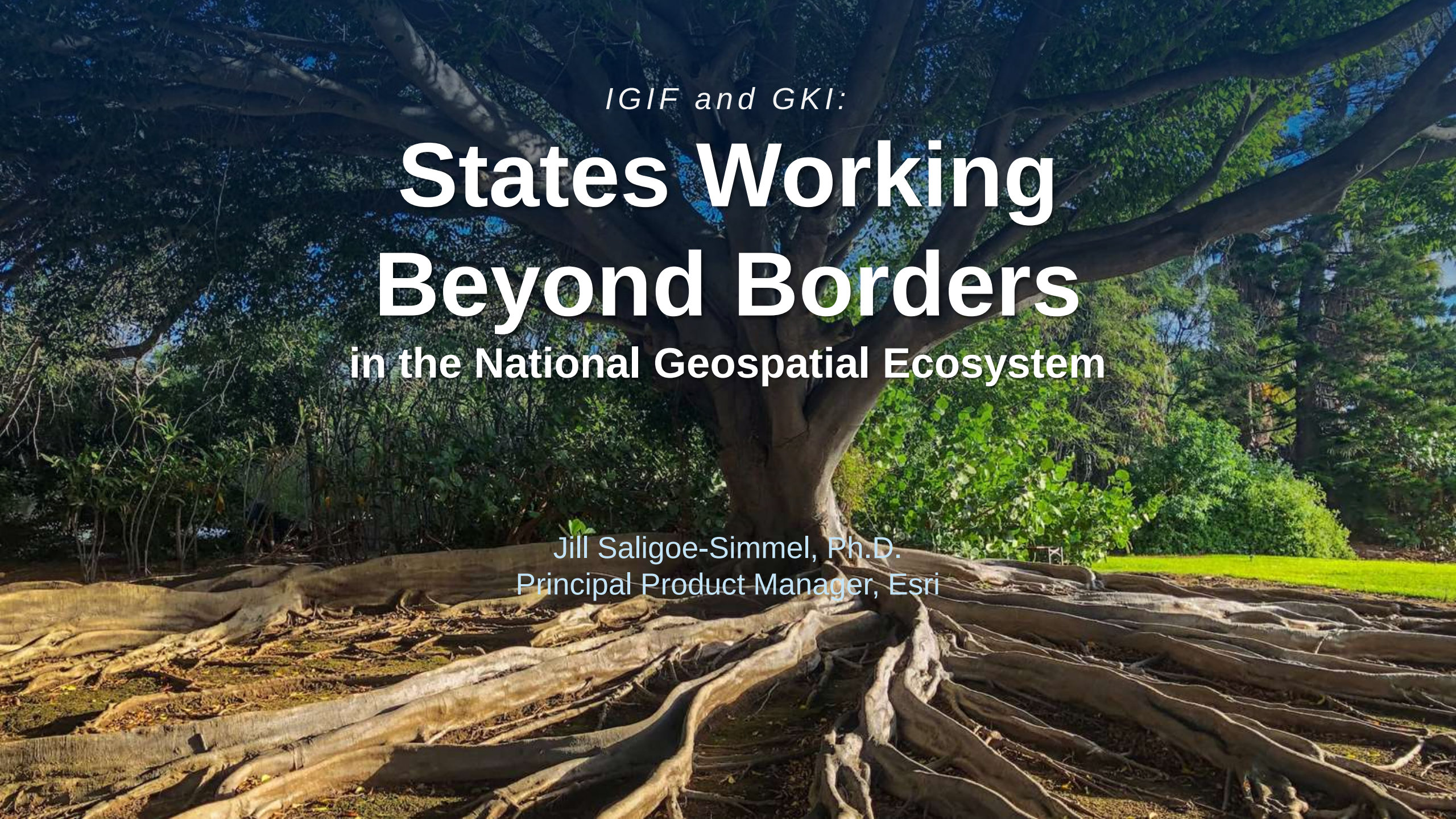


IGIF and GKI:

States Working Beyond Borders

in the National Geospatial Ecosystem

Jill Saligoe-Simmel, Ph.D.
Principal Product Manager, Esri

Everyone wants their community to be…

Geospatial ecosystems

New patterns of GIS are emerging

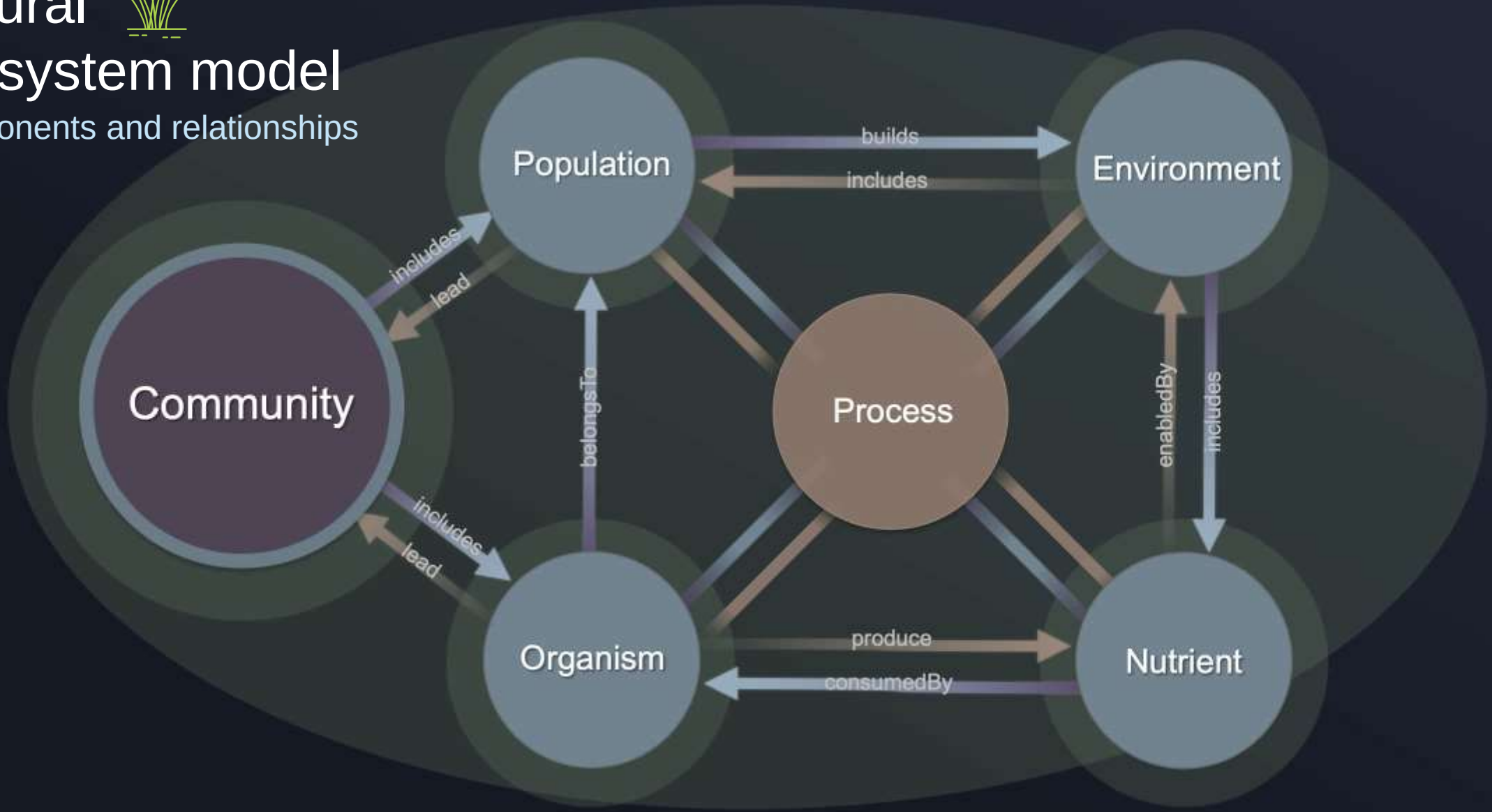
A system of systems

Abstract Concept & Model

Geospatial Ecosystems

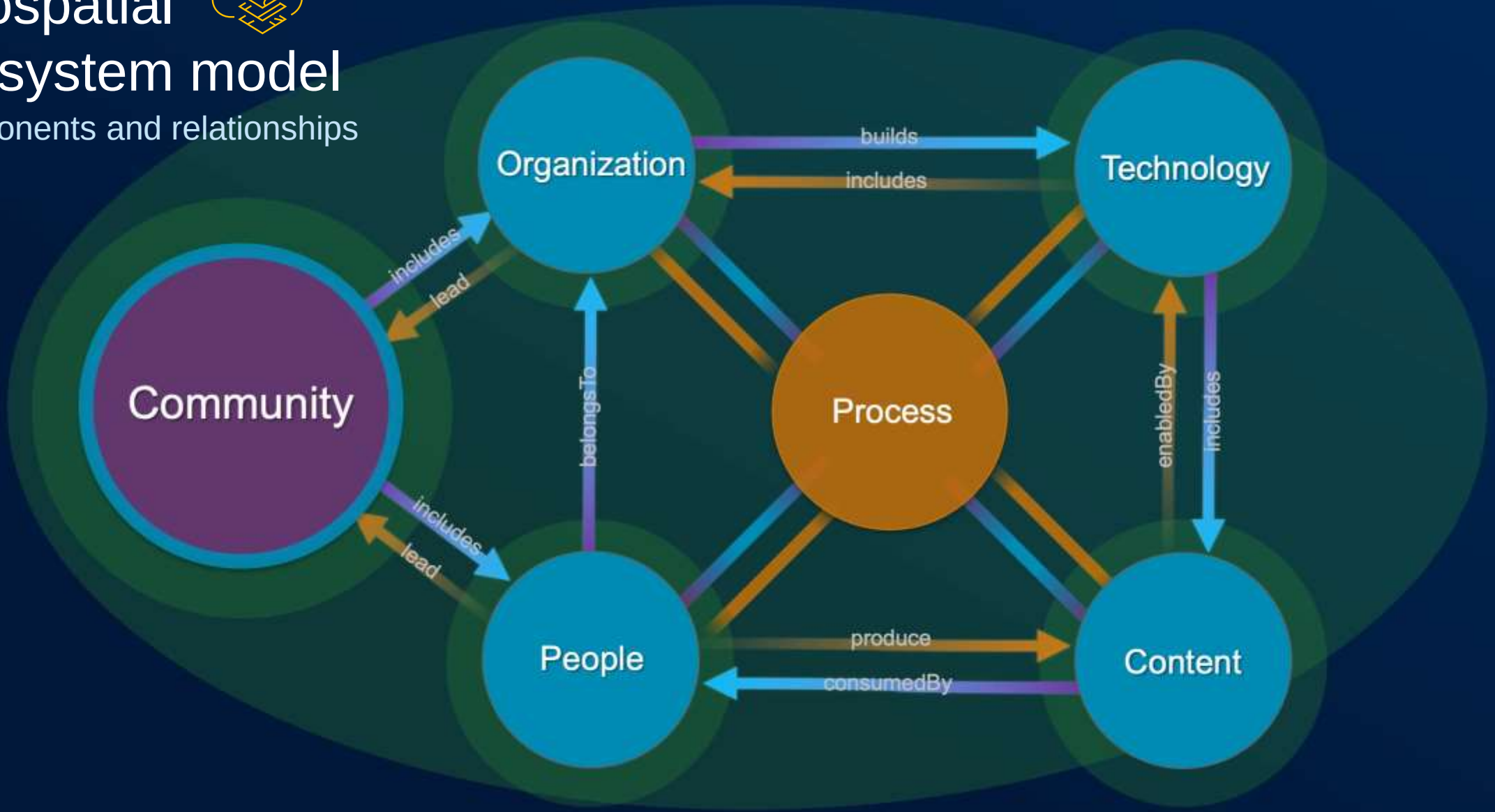
Natural ecosystem model

Components and relationships



Geospatial ecosystem model

Components and relationships



Ecosystem services

The direct and indirect contributions for human well-being and quality of life …

Foundational programs

Topical Programs

Health

Education

Agriculture

Energy

Sustainable Development

Climate Resilience

Broadband Access

Equity

Disaster Management

Infrastructure

Mobility

Biodiversity

*… The **natural capital** of geospatial ecosystems.*

Communities: *Sharing and collaboration are key*

STAKEHOLDERS

Decision-makers

Knowledge Workers

Developers

Engaged Public

ADMINISTRATORS

Director / GIO & Staff

GIS Council

Technical Committees

Executive Sponsors & Champions

PARTNERS

Champions

Stakeholders

Trusted Collaborators / Contributors

States in the National Geospatial Ecosystem

Ecosystems come in many sizes

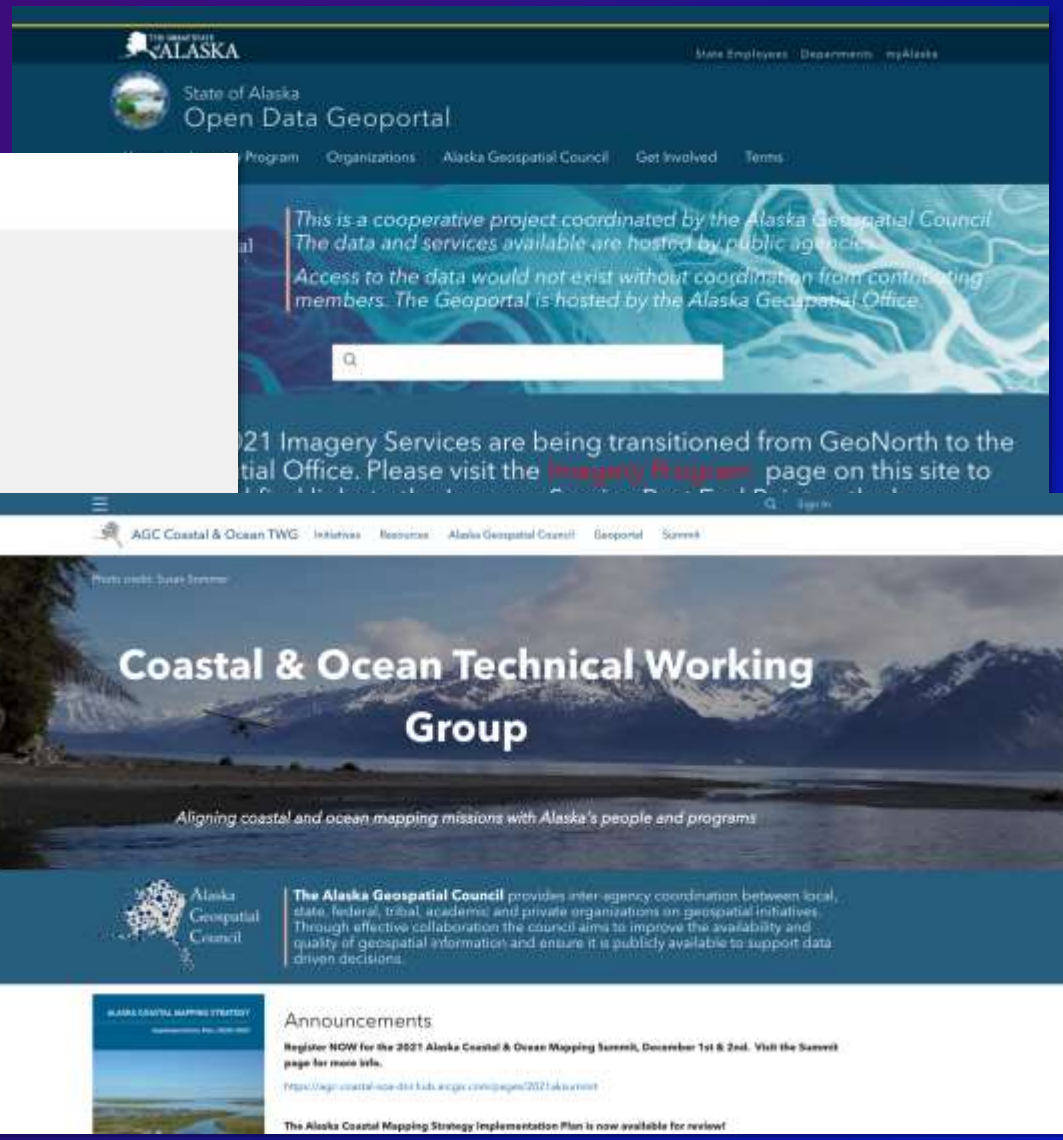
"We have entered a moment in which ***siloed data*** *can* ***become a thing of the past****. The individual work that we all do can be interlaced to form a seamless, uniform* ***geospatial fabric of the world****."*

– *Weaving the Fabric*, Greg Bunce, UGRC Geospatial Data Coordinator

Foundation Data Initiatives

This pattern involves organizations weaving the fabric of geospatial data. They use ArcGIS Hub as a platform for collaborative data initiatives to engage partners and organize framework data workflows.

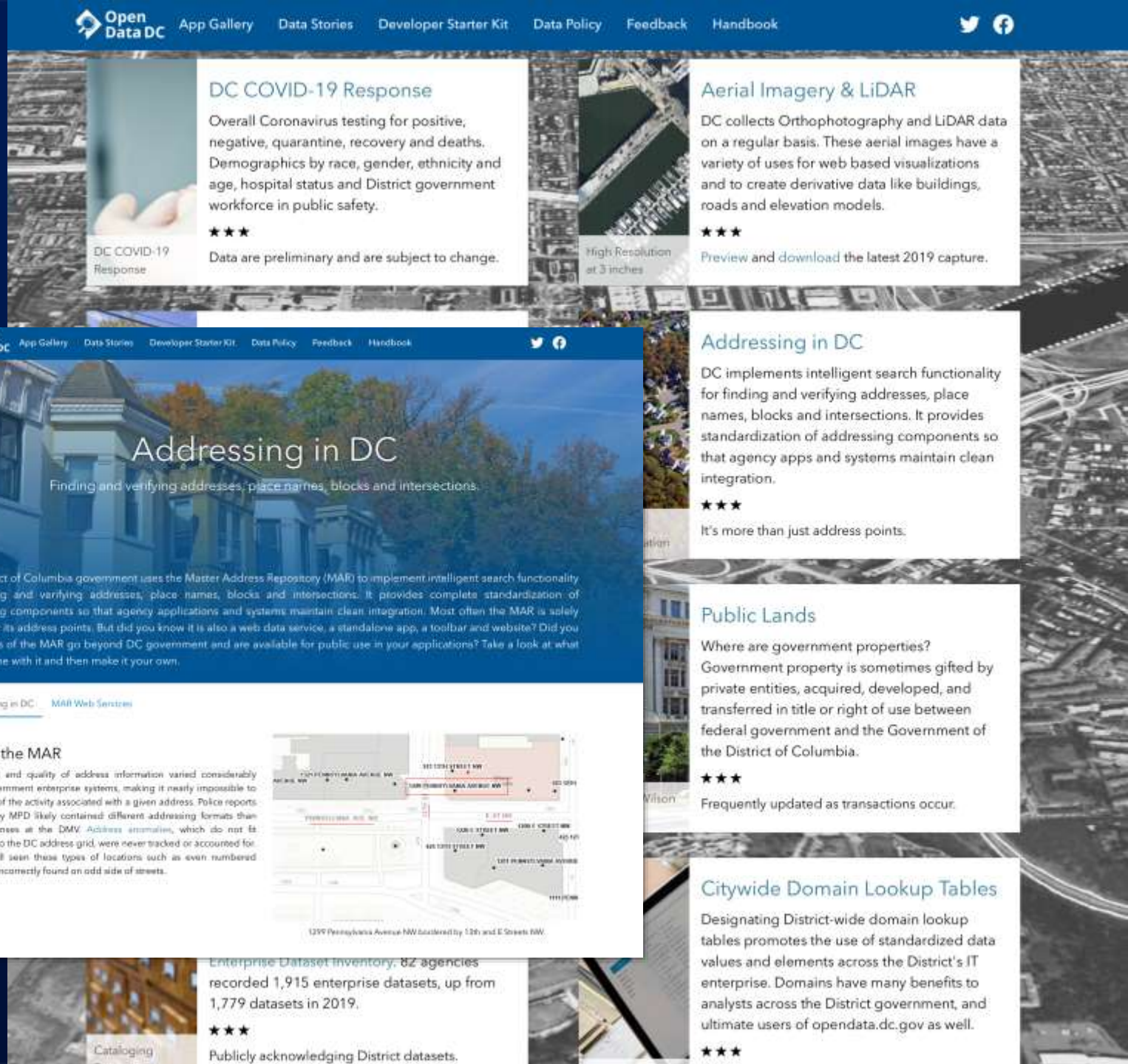
Foundation Data Communities



https://statewide-geoportal-1-soa-dnr.hub.arcgis.com/
https://agc.dnr.alaska.gov/

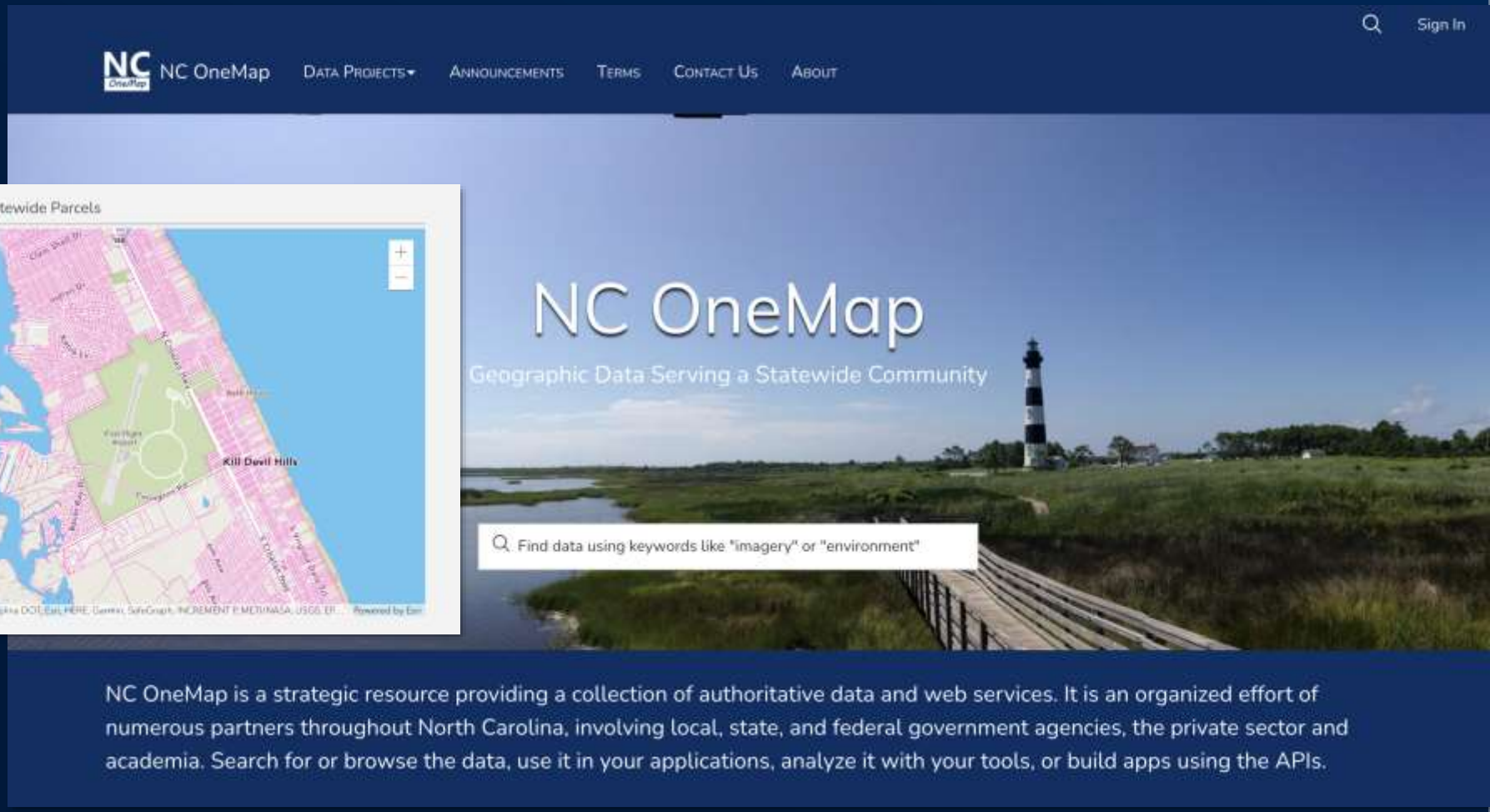
Foundation Data

Hub pages



https://opendata.dc.gov
https://opendata.dc.gov/pages/addressing-in-dc
https://opendata.dc.gov/pages/connect-web-services

Data **Collaborations**

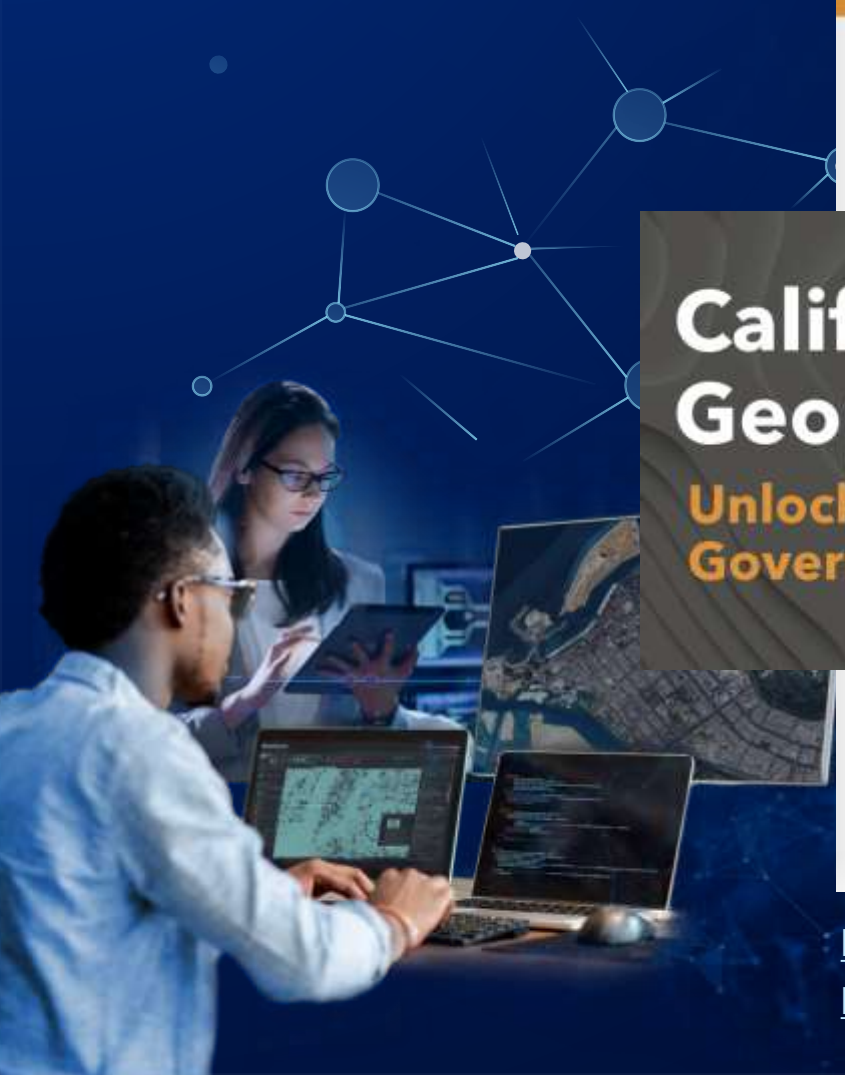


https://www.nconemap.gov/
https://www.nconemap.gov/pages/parcels
https://www.esri.com/en-us/landing-page/product/2020/nc-onemap-case-study

Whole-of-government collaboration

Governmentwide or whole-of-government approaches involve sharing and collaboration among agencies, departments, and bureaus at the same level of government.

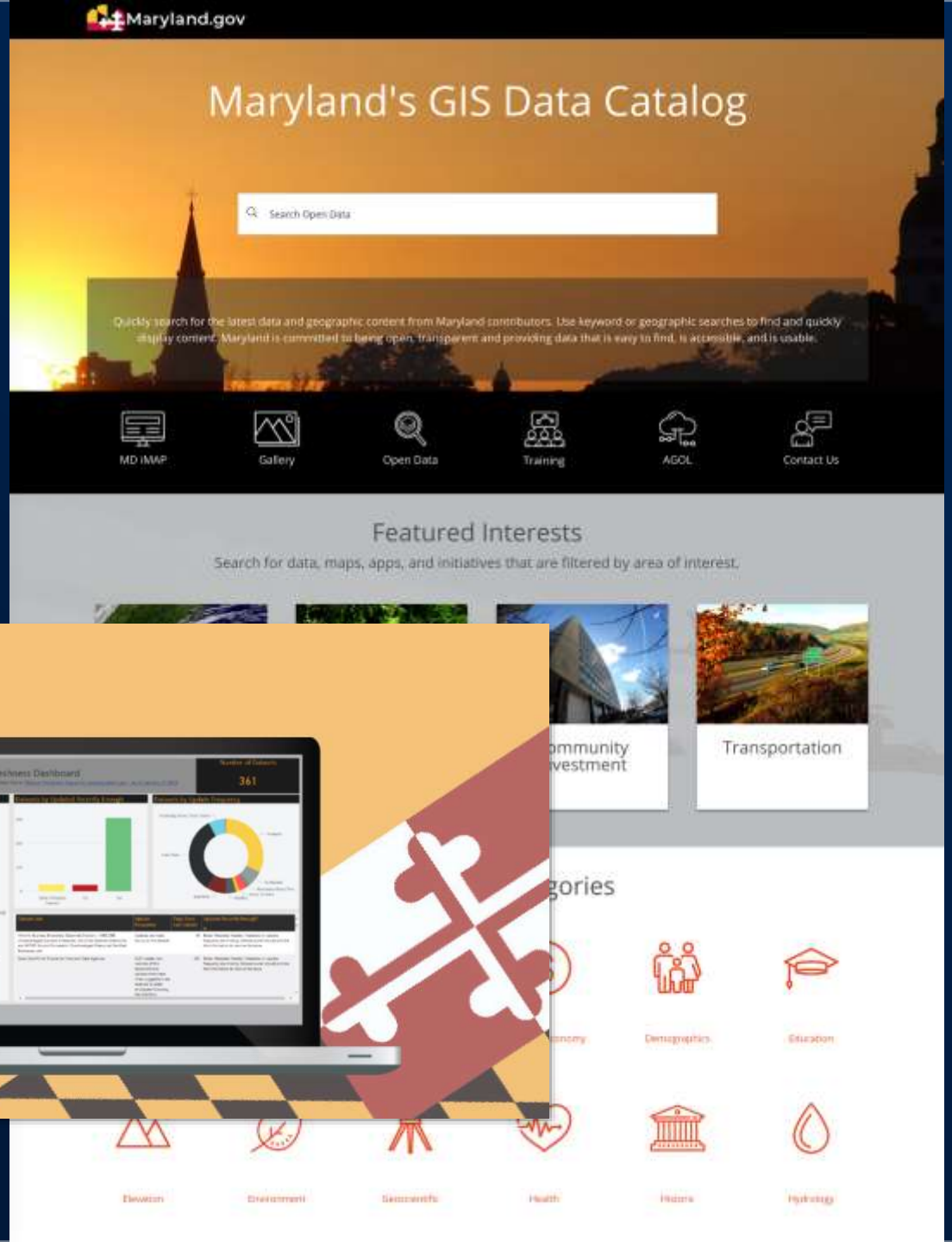
Partnerships and Capacity Building



https://gis.data.ca.gov/pages/organizations

https://www.governing.com/next/ambitious-scheme-to-bring-all-of-a-states-data-together.html

Current and Authoritative



Data Visualizations

Maryland's Dataset Freshness Dashboard

Each dataset on Maryland's Open Data Portal is updated regularly. This dashboard shows how many datasets have been updated, or have not been updated, recently enough. The dashboard is updated on a daily basis.

Launch

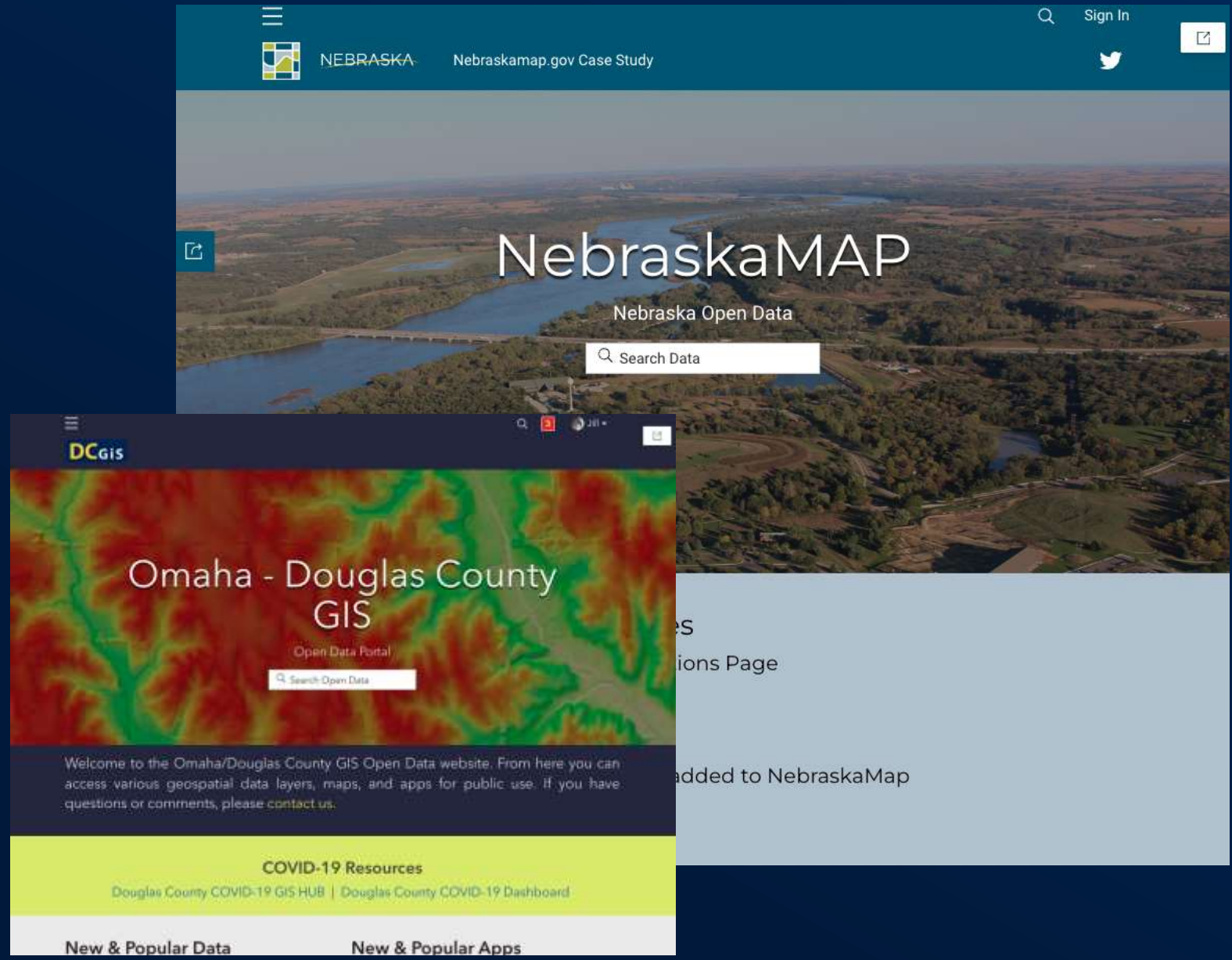
https://data.imap.maryland.gov/

Multi-level collaboration

Multi-level collaboration involves sharing and collaboration among partners from different jurisdictional levels, often combined with WoG approaches.

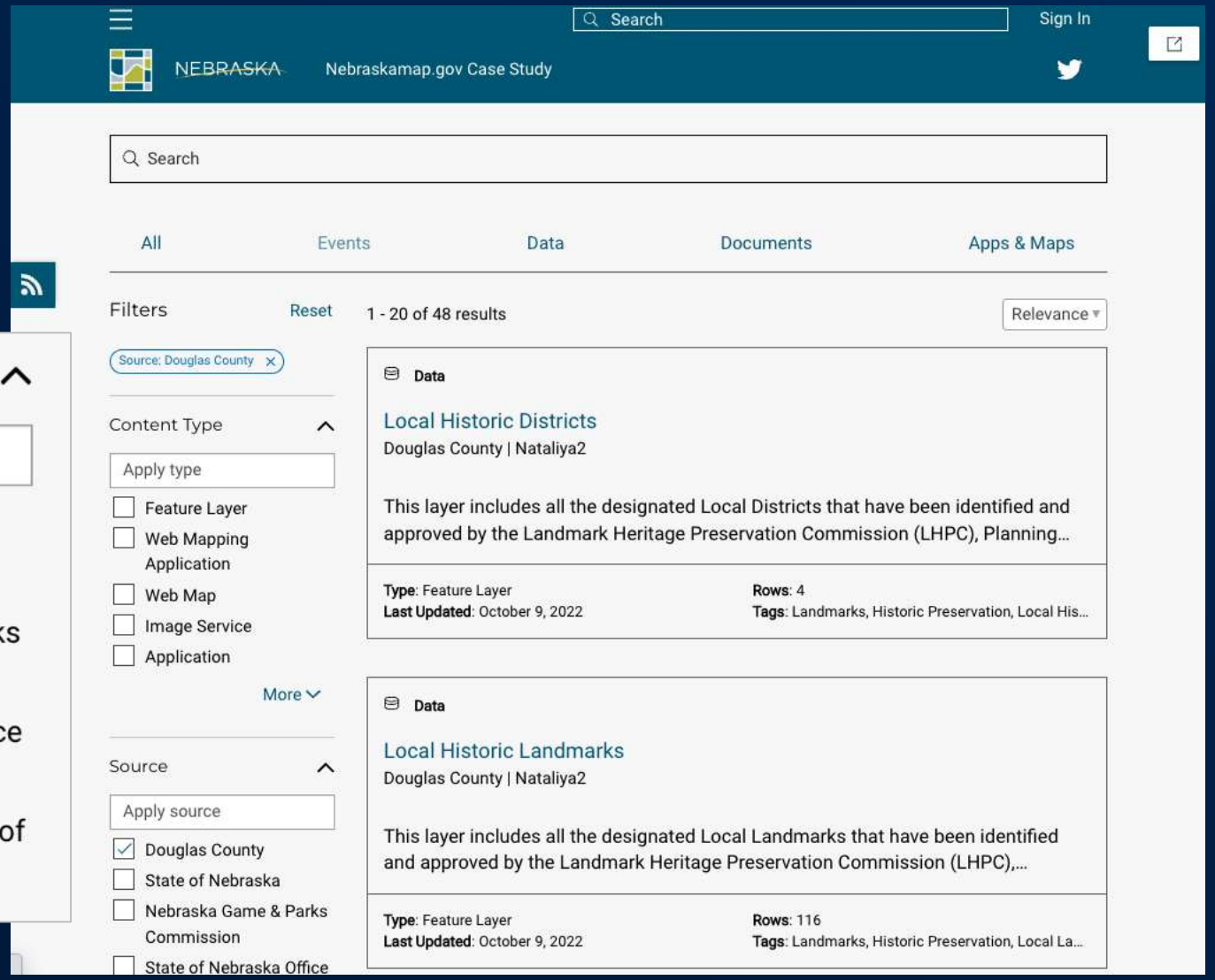
NebraskaMap and Omaha, NB

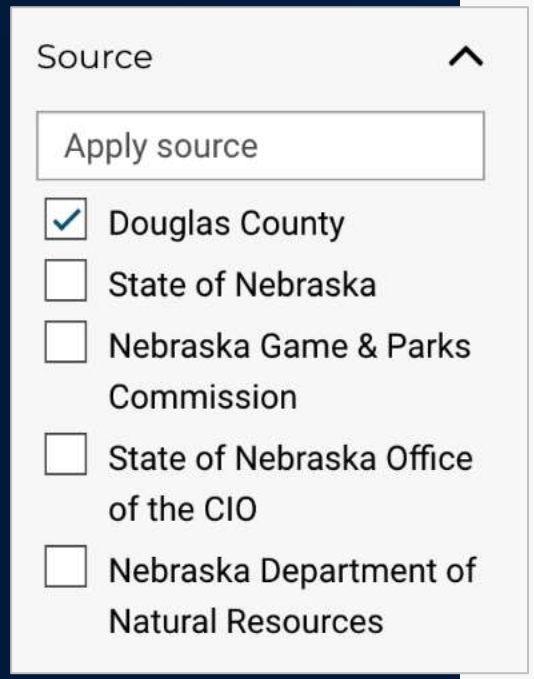
The state and its largest local government partner, Omaha-Douglas County, wanted to create a **collaboration space** to share authoritative data.



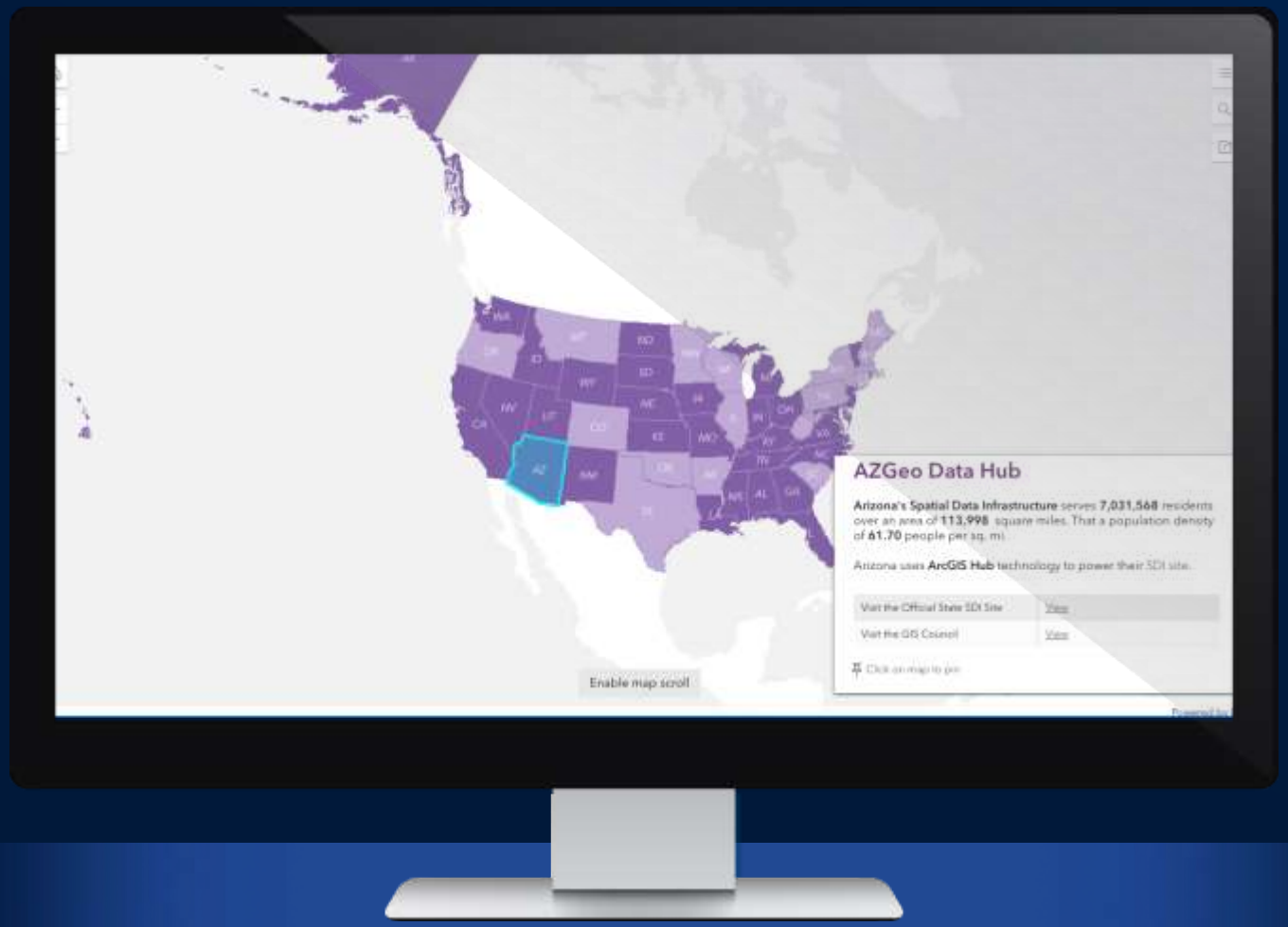
https://www.nebraskamap.gov/
https://data-dogis.opendata.arcgis.com/
https://www.esri.com/en-us/landing-page/product/2019/nebraska-office-cio-case-study

Result: Local-State Collaboration



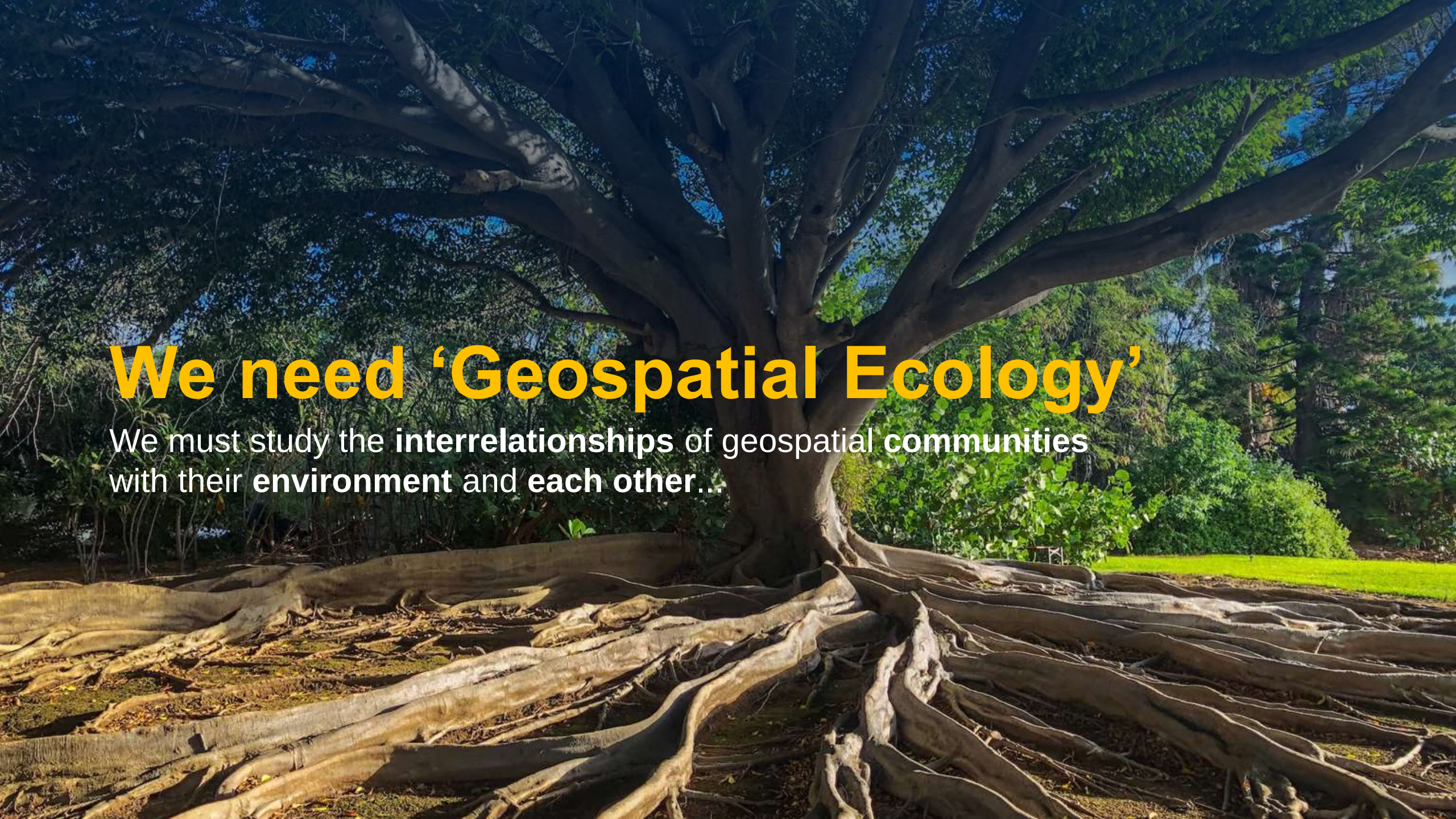


New patterns are emerging



It begs an exciting question:

What **new capabilities** might this enable?



We need ‘Geospatial Ecology’

We must study the **interrelationships** of geospatial **communities** with their **environment** and **each other**...

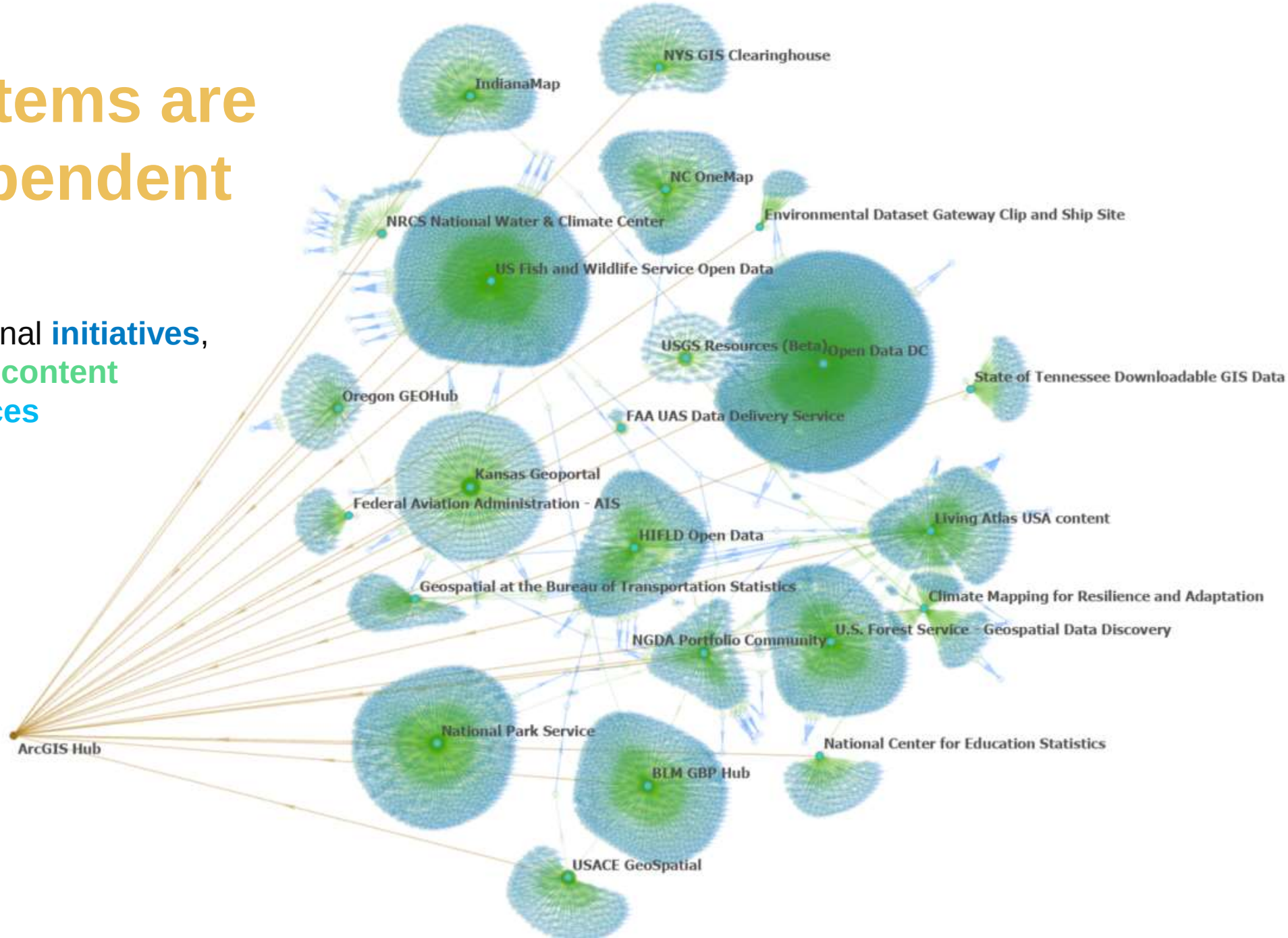
Geospatial Ecology

to **improve ecosystem health** and **sustainability**.

https://homework.study.com/explanation/explain-ecology.html
https://www.britannica.com/science/ecology

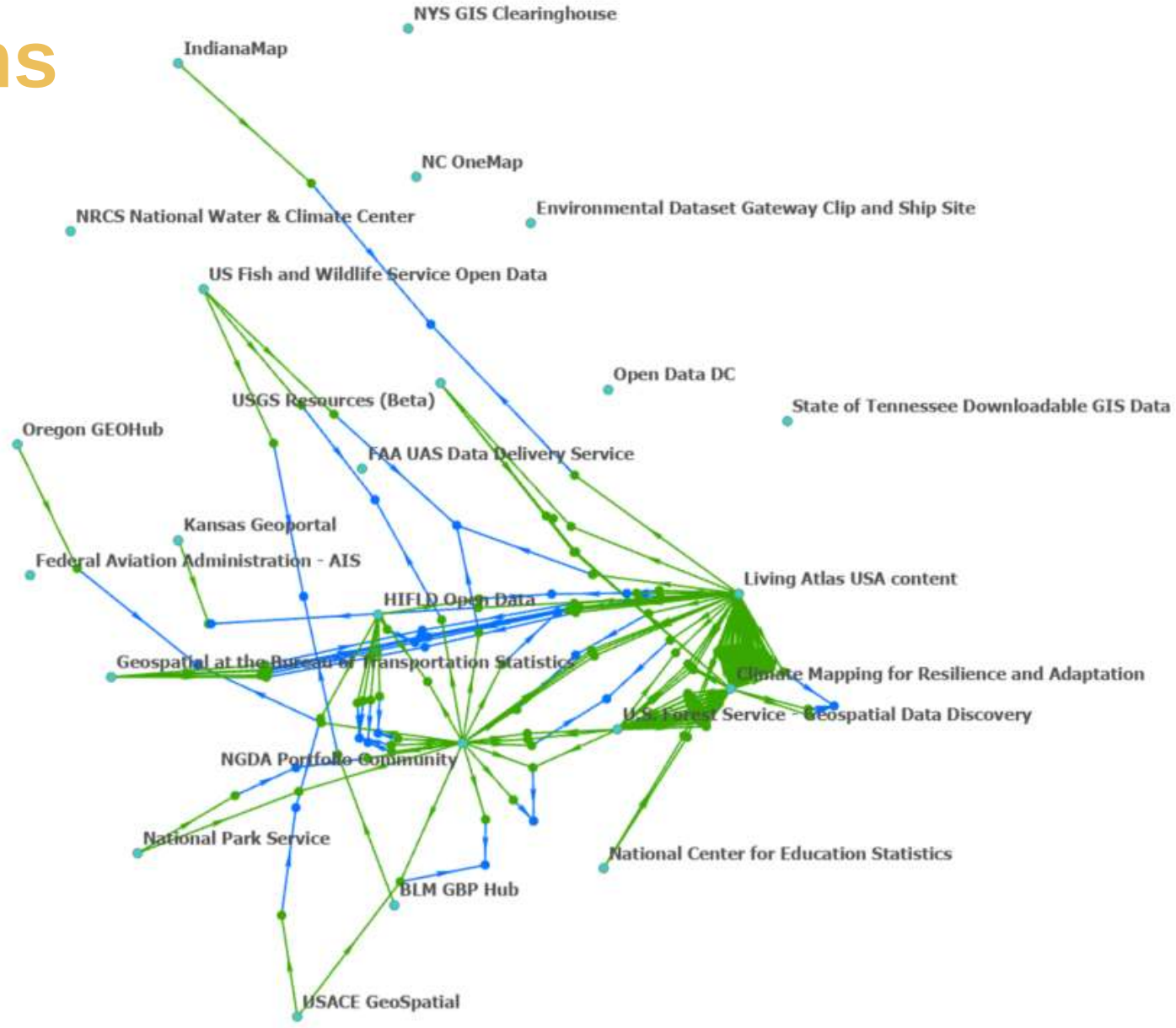
Ecosystems are interdependent

State and National **initiatives**, connected with **content** and **web services**



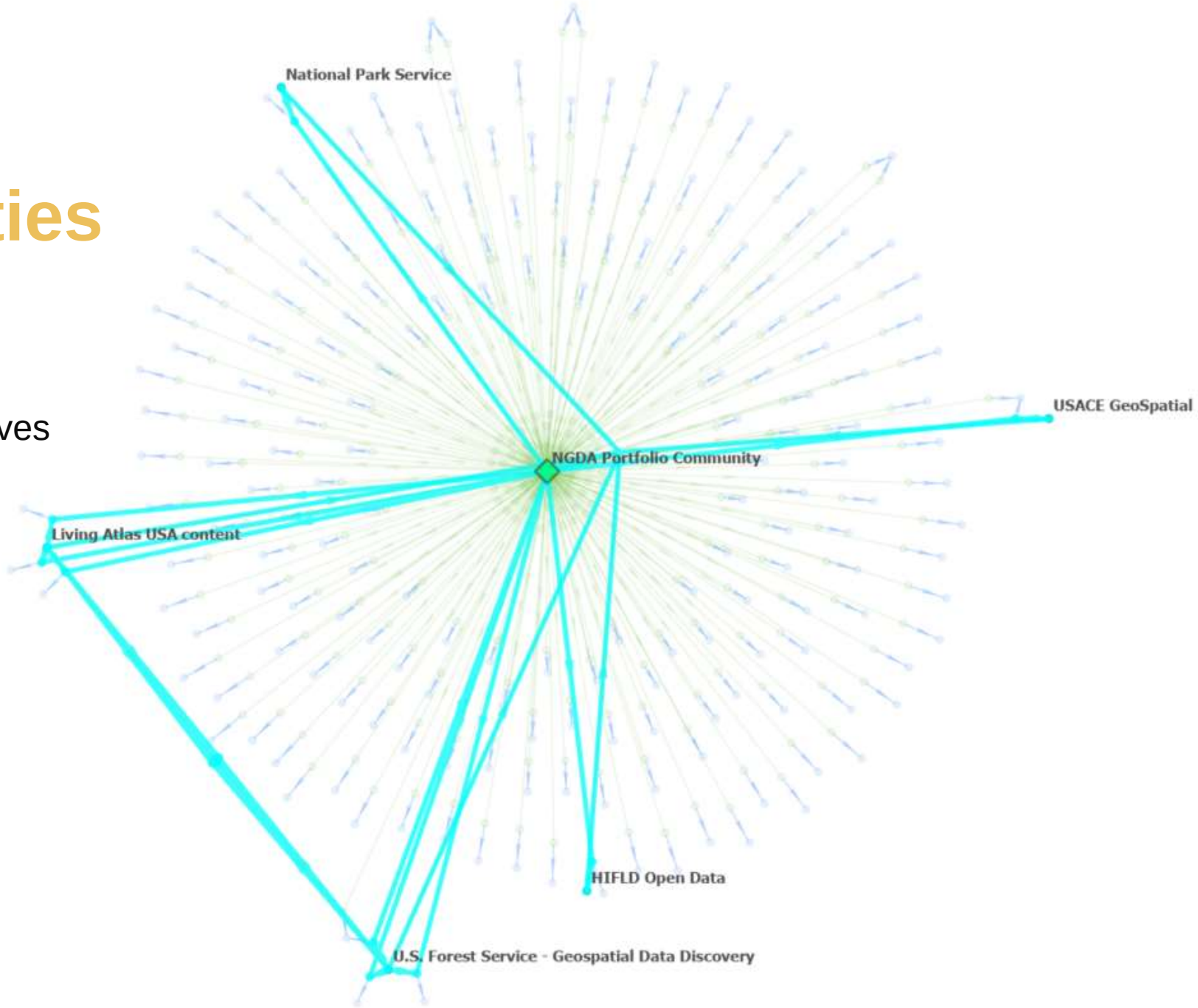
System of systems emerges

Interconnected **content** and **web services**



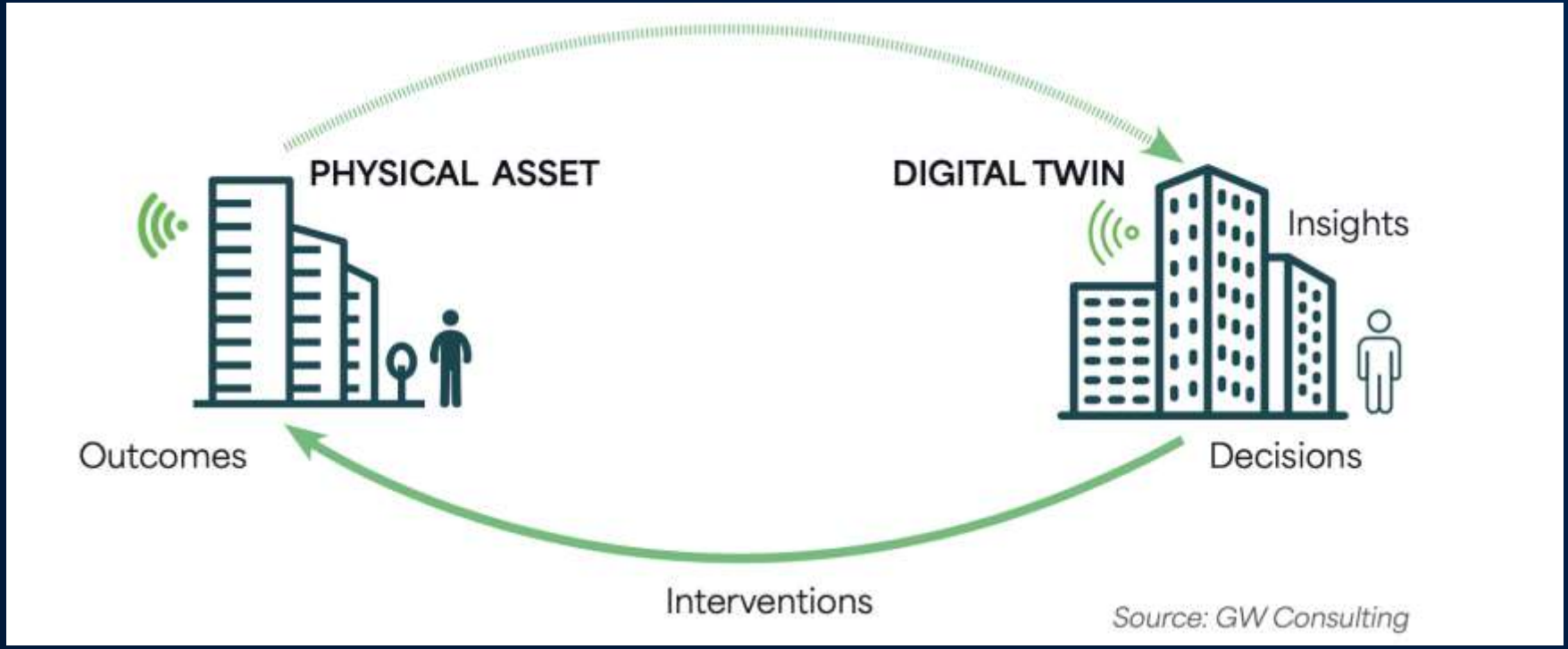
NGDA Communities

Interconnected
programs and initiatives



Key takeaways

1. Healthy geospatial ecosystems are **important**



UNLOCKING THE POTENTIAL OF DIGITAL TWINS FOR THE AEC INDUSTRY, 2023

2. Understanding geospatial ecology can **help us evolve**

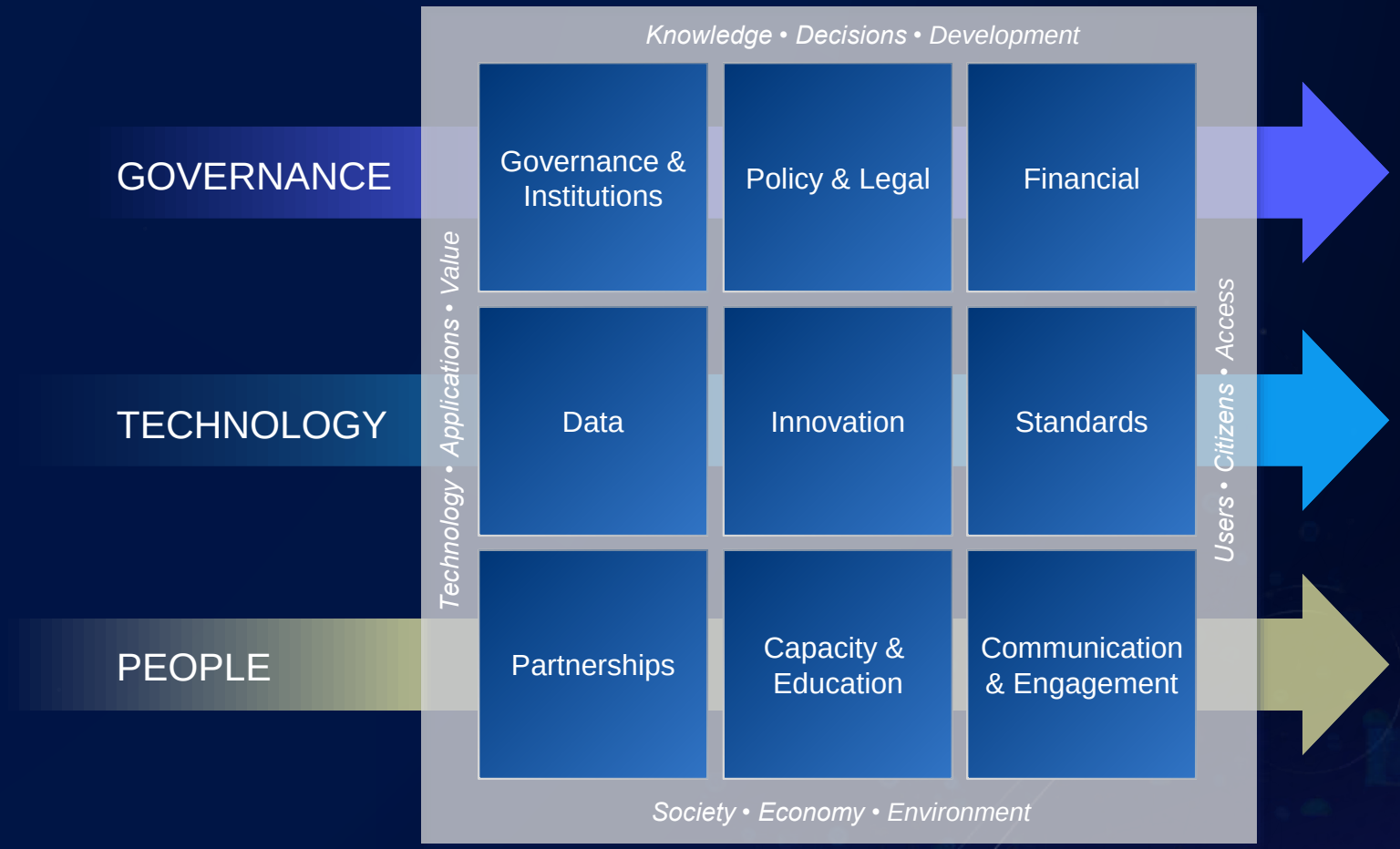
> *"To move from the present to **the future desired state**, the national geospatial information ecosystem will **need to undergo a shift** in its future geospatial, technological, and human resource arrangements."*
>
> – UN-GGIM Secretariat, July 2022

… envision and model ideal scenarios, identify gaps, and seek opportunities for intervention.

3. An **integrated and holistic** approach is needed

- The IGIF is an adaptable implementation framework

The Integrated Geospatial Information Framework provides a basis and guide for developing, integrating, and strengthening geospatial information management.



Explore the story…

https://storymaps.arcgis.com/stories/f9bf7c7e80f447e194f33a20b6fe46c2

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