What is the National Spatial Data Infrastructure (NSDI)?

1990

1992

1994

1992

§2801.(13) Definition: NSDI means "the technology, policies, criteria, standards, and employees necessary to promote geospatial data sharing throughout the Tribal, Federal, State, and local governments, and the private sector (including nonprofit organizations and institutions of higher education)."

§2804. The NSDI shall ensure that geospatial data from multiple sources (including the covered agencies, State, local, and tribal governments, the private sector, and institutions of higher education) is available and easily integrated to enhance the understanding of the physical and cultural world.

(b) Goals

(1) ensure—

(A) that geospatial data are reviewed prior to disclosure to ensure—

(i) compliance with section 552a of title 5 (commonly known as the "Privacy Act of 1974"); and

(ii) that personally identifiable information is not disclosed, which shall include an assessment of re-identification risk when determining what data constitute personally identifiable information;

(B) that geospatial data are designed to enhance the accuracy of statistical information, both in raw form and in derived information products;

(C) free and open access for the public to geospatial data, information, and interpretive products, in accordance with Office of Management and Budget Circular A–130, or any successor thereto;

(D) the protection of proprietary interests related to licensed information and data; and

(E) the interoperability and sharing capabilities of Federal information systems and data to enable the drawing of resources from covered agencies and partners of covered agencies; and

(2) support and advance the establishment of a Global Spatial Data Infrastructure, consistent with national security, national defense, national intelligence, and international trade requirements, including ensuring that covered agencies develop international geospatial data in accordance with international voluntary consensus standards, as defined in Office of Management and Budget Circular A–119, or any successor thereto.

Evolution of the U.S. National Spatial Data Infrastructure (NSDI)

Circular A-16 established FGDC and called for the "development of a national digital spatial information resource"

1990

A-16 Circular "establishes the FGDC as the interagency coordinating body for NSDI related activities… responsible for… implementation of the NSDI"

2002

NSDI Strategic Plan (2021 – 2024) published

2021

1994

EO 12906 "ordered… FGDC… [to] coordinate the Federal Government's development of the NSDI

2018

Geospatial Data Act assigns FGDC responsibility to:

• "prepare and maintain a strategic plan for the development and implementation of the National Spatial Data"

• "advise Federal and non-Federal users of geospatial data on their responsibilities relating to implementation of the National Spatial Data Infrastructure"

2023

Initiate NSDI Strategic Plan

Geospatial Data Act of 2018 and the NSDI

§2802. Federal Geographic Data Committee. The Committee shall—

C.(1) lead the development and management of and operational decision making for the National Spatial Data Infrastructure strategic plan and geospatial data policy in accordance with section 2804 of this title;

(8) define roles and responsibilities and promote and guide cooperation and coordination among agencies of the Federal Government, State, tribal, and local governments, institutions of higher education, and the private sector in the collection, production, sharing, and use of geospatial information, the implementation of the National Spatial Data Infrastructure, and the identification of proven practices;

(9) coordinate with international organizations having an interest in the National Spatial Data Infrastructure or global spatial data infrastructures;

(10) make available online and update at least annually—

   (C) a collection of periodic technical publications, management articles, and reports related to the National   Spatial Data Infrastructure;

Geospatial Data Act of 2018 and the NSDI

§2804. National spatial data infrastructure (continued)

(c) Strategic plan

The Committee shall prepare and maintain a strategic plan for the development and implementation of the National Spatial Data Infrastructure in a manner consistent with national security, national defense, and emergency preparedness program policies regarding data accessibility.

(d) Advisory role

The Committee shall advise Federal and non-Federal users of geospatial data on their responsibilities relating to implementation of the National Spatial Data Infrastructure. (Pub. L. 115–254, div. B, title VII, §755, Oct. 5, 2018, 132 Stat. 3420.)

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National Spatial Data Infrastructure (NSDI)

National

- National | Federal

Spatial Data

- Completeness | Accuracy | Coverage | Interoperable

Infrastructure (System)

- Findable | Accessible | (Re) Usable | Tools

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USGS
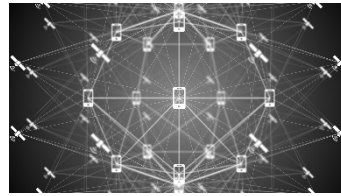science for a changing world

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NSDI?

Can you access the NSDI today?

Have you ever used it?

Could you explain how to use it or access it to a high school class?

What does it include?

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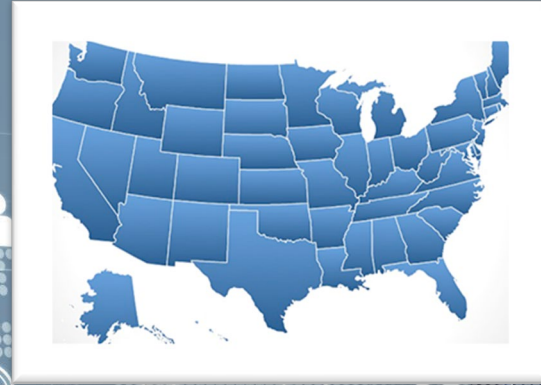
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Where are we today?

- Critical need for data and information (knowledge) to address National (Is there such a thing?) issues including climate, disaster response, drought, health, and infrastructure

- State SDIs

- GeoPlatform

- Data and services available online (free and paid)

- Inconsistent coverage, capability and investment

- Lack national capability

Today

8

http://nsdi.??

State

State

State

State

County

County

County
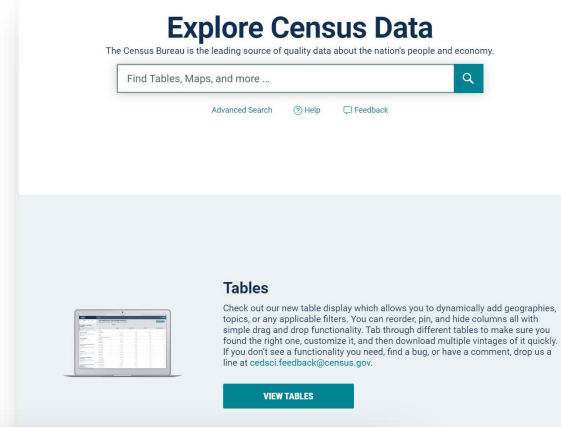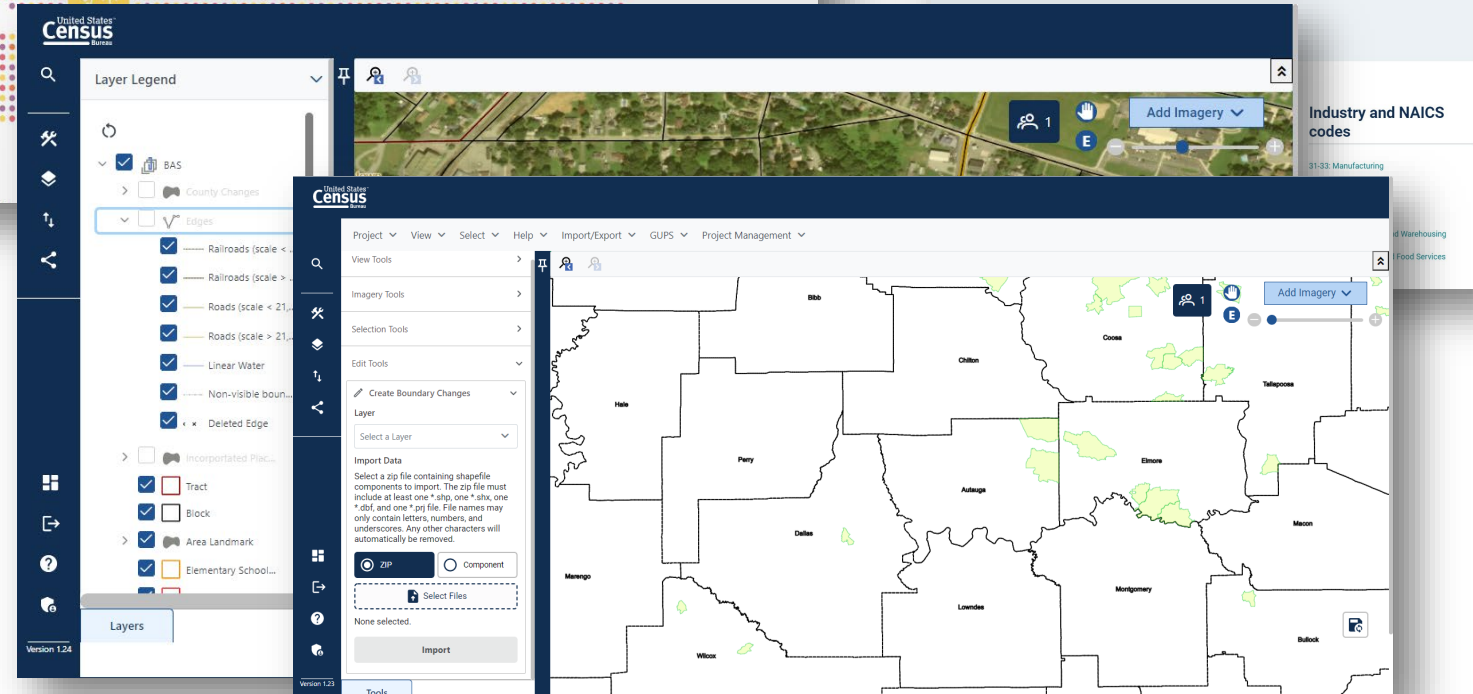
County

County

City

City

City

What does the NSDI enable?

- Rapid tool development

- Applications and innovative open data tools supporting data integration

- Partnerships with Tribal, Federal, State, and local governments, international organizations, academia and the private sector.

What has the NSDI enabled?

Partnerships

Department of Education (ED)
ED relies on **data provided by states** to develop geospatial data for Elementary/Secondary schools and school districts, and **it partners with the Census Bureau and state education departments** to develop annually updated school district boundaries, which are an input to Title I allocations for each school district.

Department of Homeland Security (DHS)
DHS **partners with other Tribal, Federal, State, local, territorial, non-profit, and some private sector partners** to develop and share Homeland Security Infrastructure Program (HSIP) data. HSIP is a compilation of **over 600 geospatial data sets** that represents several themes across the NSDI. Portions of HSIP – named HIFLD Open – are **publicly available via the GeoPlatform.**

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What has the NSDI enabled?

Partnerships

The Census Bureau's Geographic Support Program fosters **partnerships with approximately 40,000 Tribal, Federal, State, and local governments,** international organizations and commercial partners.

Innovative tools and applications provided to partners facilitate the review and update of the Census Bureau's geospatial data.

The Census Bureau **updates** the MAF/TIGER System annually with geospatial data updates provided by partners.
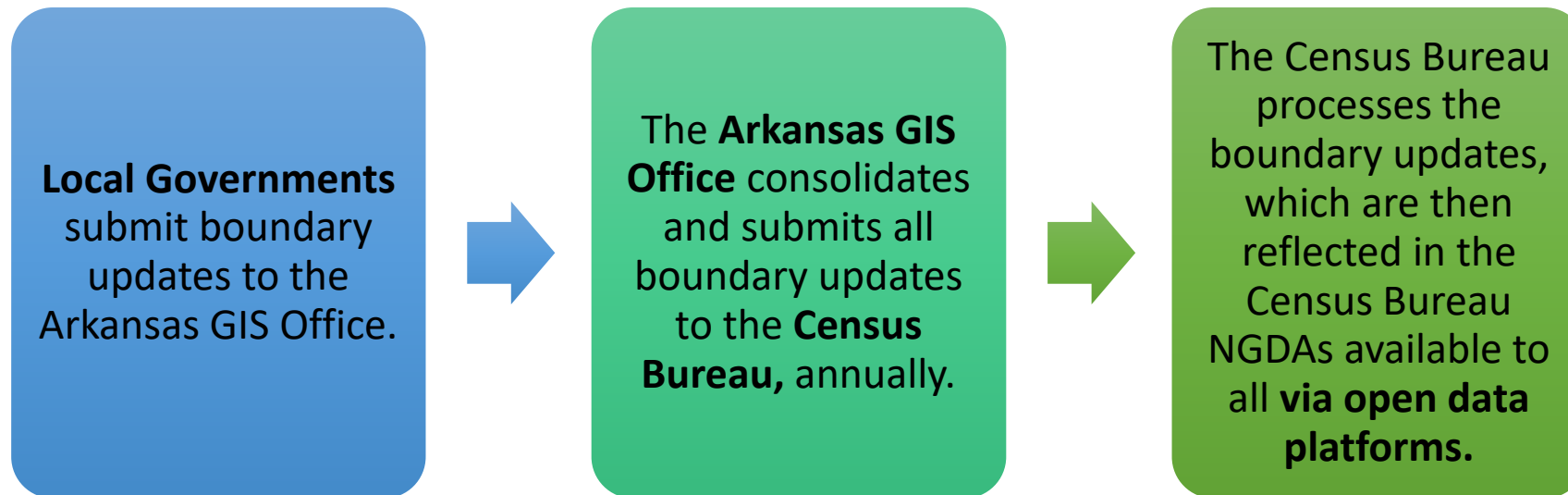
These geospatial data updates are then reflected in the Census Bureau's National Geospatial Data Assets available to all **in open data platforms, such as the GeoPlatform**.

The Census Bureau's Geographic Support Program

What has the NSDI enabled?

Partnerships

The State of Arkansas and Census Bureau Boundary and Annexation Survey State Agreement supports coordination and partnership, data sharing, data integration, and continuity of datasets across many levels of government.

Local Governments submit boundary updates to the Arkansas GIS Office.

→

The **Arkansas GIS Office** consolidates and submits all boundary updates to the **Census Bureau,** annually.

→

The Census Bureau processes the boundary updates, which are then reflected in the Census Bureau NGDAs available to all **via open data platforms.**

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What's Next?

- Data is foundation not the end state

- Information/knowledge is goal

- What do we need to enable advances technologies (AI/ML, AR/VR, 3D)

- How can we do better?

- What is the NSDI in 2030?

- How do we get there?
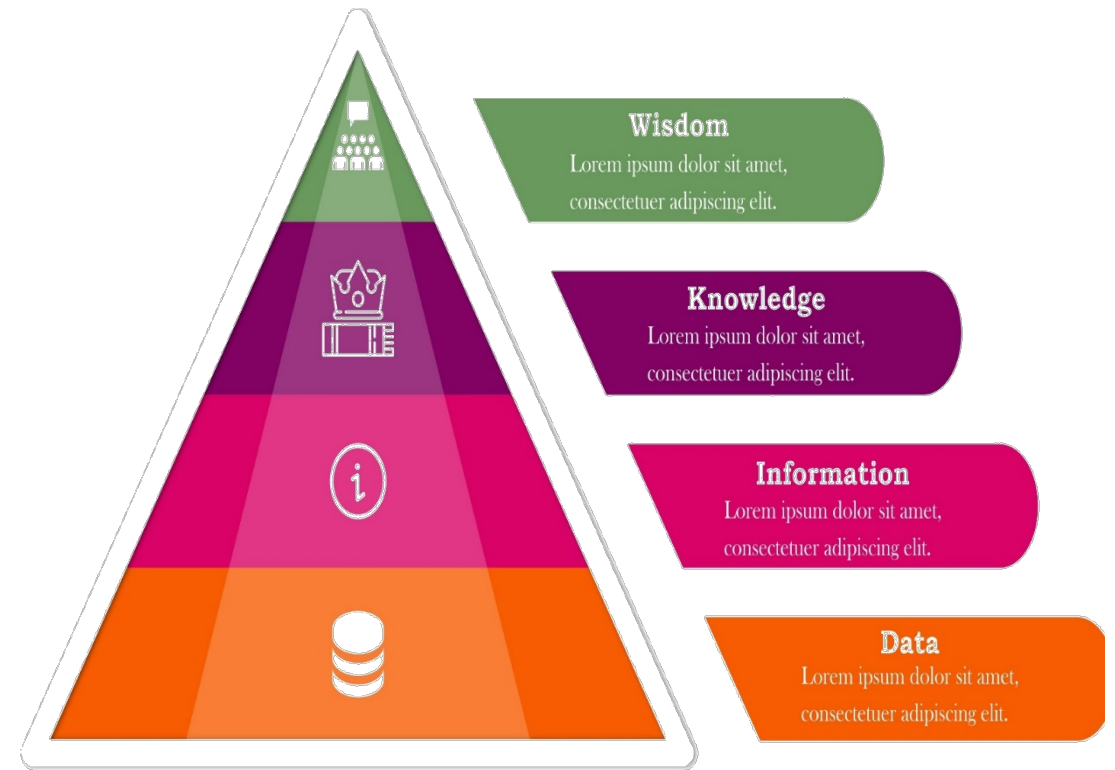
Knowledge Management Cognitive Pyramid

Current NSDI Strategic Plan 2021 - 2024

Vision

Empowering a geo-enabled Nation and world for place-based decision making.

Mission

The NSDI provides a national network of geospatial resources that seamlessly integrates location-based information to serve the needs of the Nation and wider global interests.
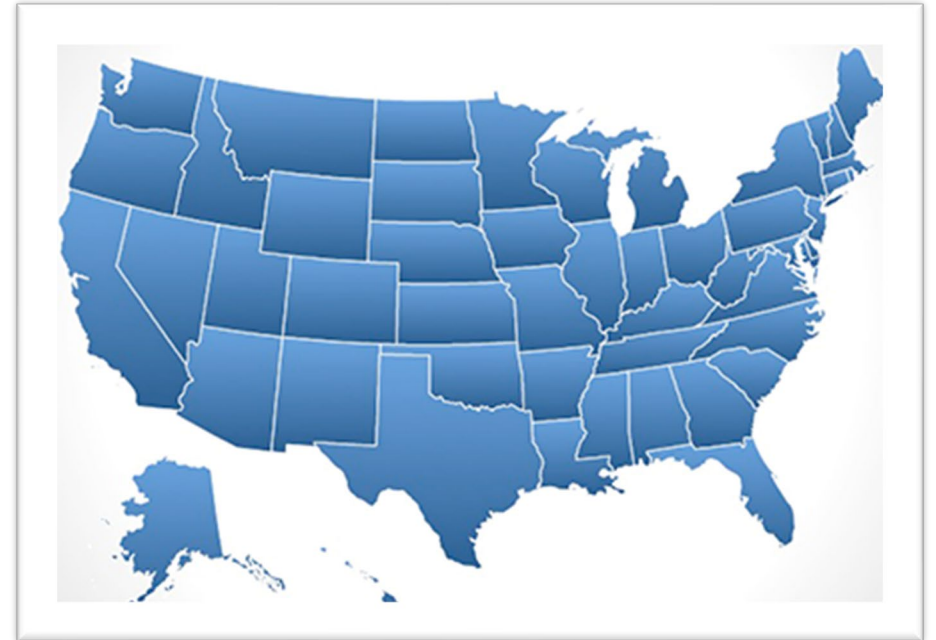
Goals

1. **Policy and Governance.** Implement the National Geospatial Policy and Governance Frameworks as Defined by the Geospatial Data Act and Related Statutes and Policies.
2. **Data.** Advance the Maturity of, Accelerate the Acquisition of, and Expand the Sources of National Geospatial Data Assets (NGDA) to Ensure they are Findable, Accessible, Interoperable, and Reusable.
3. **Interoperability.** Ensure Open Standards-Based Interoperability to Enable Geospatial Shared Services.
4. **Partnerships.** Enable and Promote Collaborative Governance and Partnerships to Meet National Needs, Priorities, and Circumstances.
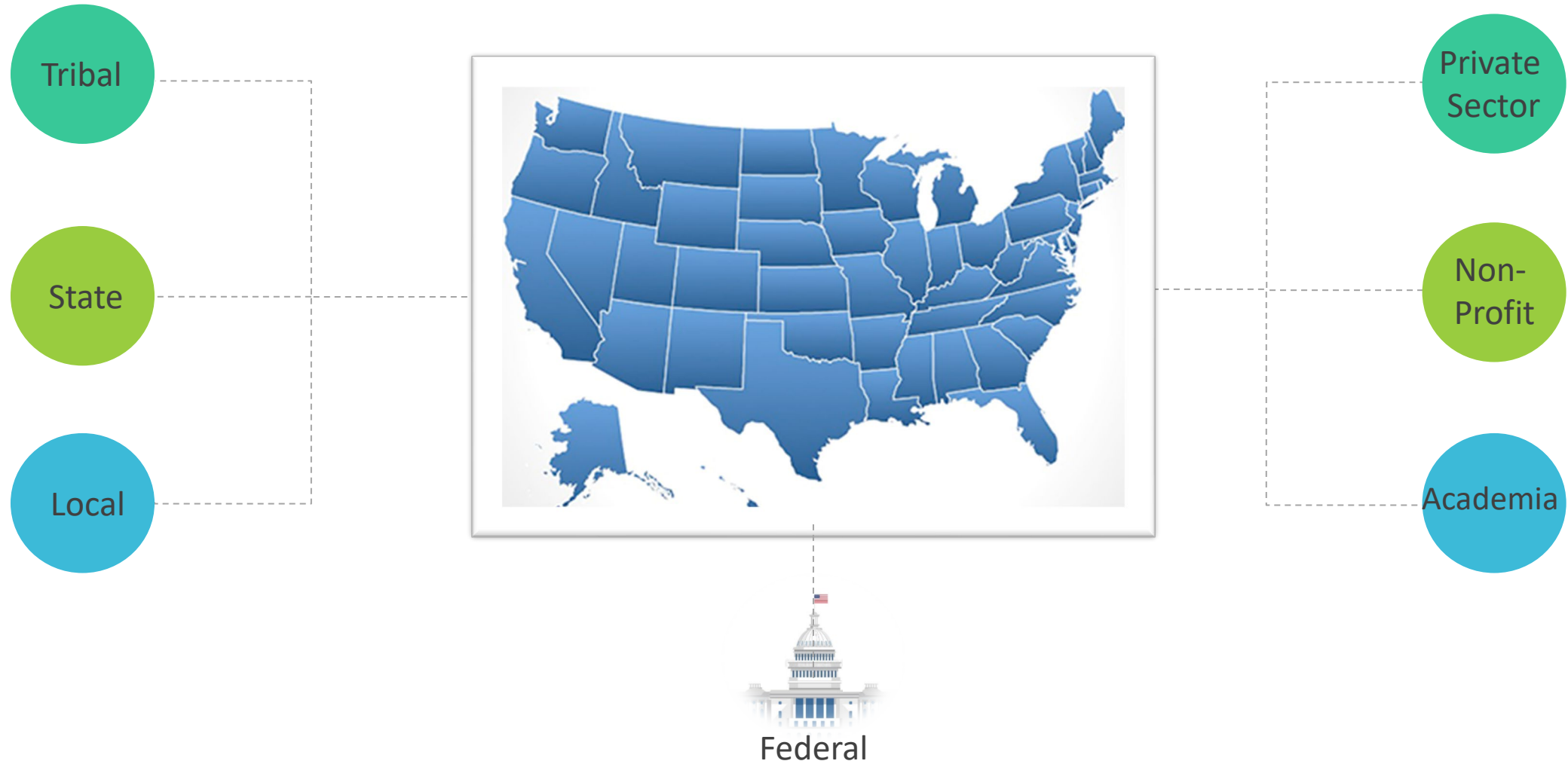
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Federal vs National?

VS

A coordinated National Approach to the NSDI...

The Path Forward

Core Team to evaluate future goals/objectives

Executive Champions: Deirdre Bishop (Census) Josh Delmonico (FGDC)

Project Manager: Nathan Jones (Census)

Currently identifying other team members

National Priorities and Circumstances

National priorities and circumstances will be considered to guide development of the new NSDI Strategic Plan.

Broad Stakeholder Engagement

FGDC, NGAC, Private Sector, Non-profits, Academia, International Organizations, and other stakeholders will be engaged and encouraged to participate in the planning and implementation process.

New NSDI Strategic Plan 2025 – 2034

Utilizing advanced technologies (e.g., AI/ML) to address national priorities such as disaster response, infrastructure management, climate change and sustainable development.

NSDI Implementation Plan

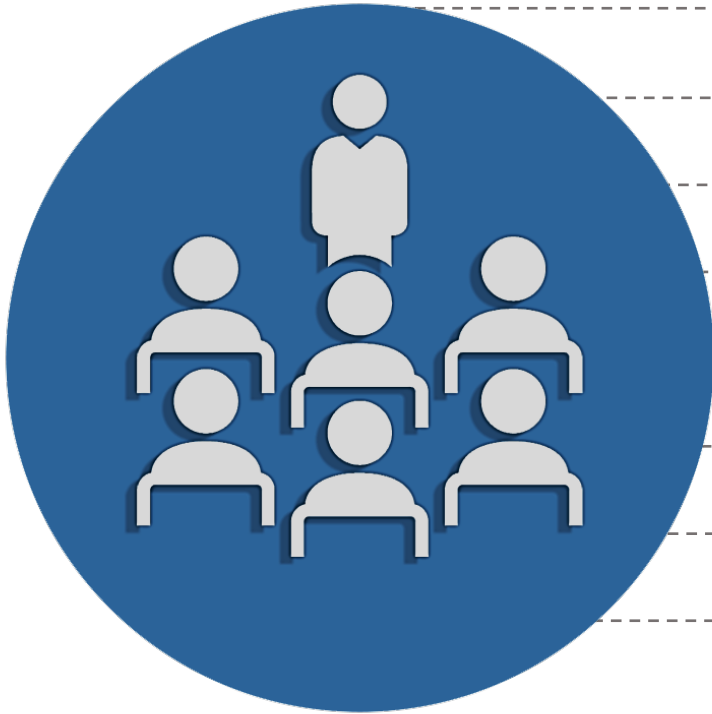Federal action plan with each sector (State, Tribal, Local Governments, Academia, non-profits and Private Industry) responsible for developing their own implementation plans.

Partnerships

Policy and Governance

Existing NSDI Strategic Plan

Interoperability

Data

The Road Ahead - Activities and Timeline

February 2023
NSDI Kick off Meeting

February 2023
Form NSDI Core Team

February-September 2023
Promote awareness and solicit initial stakeholder feedback

December 2023
First draft of NSDI Strategic Plan

January-February 2024
Solicit comments from stakeholders

March 2024
Incorporate Comments

April 2024
Solicit final round of formal comments from stakeholders

May 2024
Incorporate comments and issue final version for signature

July 2024
Publish final version of NSDI Strategic Plan

Stakeholder Engagement Opportunities

1. GeoGov Engage Conference, Reston, VA – January 19, 2023
2. Esri Fed User Conference, Washington D.C. – February 7, 2023
3. National States Geographic Information Council – Pittsburgh, PA - March 2, 2023
4. GeoBuiz Summit - Monterey, CA – March 6 – 8, 2023
5. National Geospatial Advisory Committee – Virtual – April 11-12, 2023
6. Esri User Conference – San Diego, CA – July 10-14, 2023
7. GeoGov Summit – Washington D.C. – September 2023
8. NSGIC Annual Conference – New Orleans, LA – September 24-29, 2023

Discussion Questions

1. How do we set up this planning process for success?

2. How can we most effectively utilize the NGAC in the development of the NSDI plan?

3. How can we establish support and consensus from the sectors represented on the NGAC on the national strategy?

4. Are there other strategic planning models we should examine or follow?

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Questions

Thank You!

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