NATIONAL SPATIAL DATA INFRASTRUCTURE STRATEGIC PLAN 2021 - 2024

The purpose of the National Spatial Data Infrastructure is to design, build, maintain, and enhance the value of geospatial resources in conjunction with statistical data and other sources of information. The NSDI coordinates the ever-evolving collection of data, information, technology, standards, services, policies, and people. It enables seamless data development, information sharing, and collaborative decision-making within a trusted, accuracy-assured, and properly protected environment. The NSDI informs decisionmaking at all levels of society with the ability to understand, protect, and promote national and wider global interests.

The National Spatial Data Infrastructure enables citizens, commerce, and all levels of government to contribute to and utilize a national network of geospatial resources. Readily accessible and easy to use geospatial resources – including data, information, applications, and expertise - empower our nation by enabling improved understanding, in-depth insight, and informed decision-making to address a range of economic, social, and environmental challenges. Nearly everything and every event is geographically located and contextually described. The NSDI geo-enables the Nation and world for the benefit of society, economy, and the environment.

Contents

Federal Geographic Data Committee (FGDC)

Vision

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

Mission

To provide a national network of geospatial resources that seamlessly integrates location-based information to serve the needs of the Nation and wider global interests.

Values

Principles: NSDI Guiding Principles - The guiding principles describe a set of values for National Spatial Data Infrastructure actions and decision-making. These principles leverage concepts from relevant laws, policies, and best practices and reflect inputs from diverse geospatial communities. By contextualizing ethical governance, conscious design, and learning culture in developing geospatial resources and empowering place-based decision support, the NSDI guiding principles cultivate partnerships to strengthen our national and global geospatial enterprise.

Insight: 1. Promote the utilization of geospatial resources to improve insight and decision-making

Access: 2. Ensure that geospatial data are current, accurate, open, interoperable, timely, and easy to access

Safeguards: 3. Build trust by safeguarding privacy, confidentiality, and intellectual property and by ensuring ethical practices

Openness: 4. Foster an open, inclusive, and collaborative environment across sectors

Innovation: 5. Encourage innovation and a culture of learning and accountability

Partnership: 6. Leverage resources, expertise, and investments through partnerships

Leadership: 7. Lead, support, and advance spatial data infrastructure globally

1. Policy & Governance

Implement the national geospatial policy and governance framework as defined by the Geospatial Data Act and related statutes and policies

This goal describes what stakeholders in the geospatial community will do to align policies, management, and governance practices with current policy requirements and best practices in order to facilitate the continued development of the NSDI.

1.1. Policies

Align FGDC policies with the GDA, the Federal Data Strategy, the Foundations for Evidence-Based Policymaking Act, and OMB Circular A-16.

Anticipated Outcomes: FGDC policies and procedures are consistent with key statutes, policies, and management best practices to promote a coordinated and integrated approach to using data to deliver on missions, serve the public, and steward resources while safeguarding integrity, privacy, confidentiality, and national security.

1.2. Guidance

Develop FGDC guidance for agencies to implement GDA requirements.

Anticipated Outcomes: Clear, consistent guidance, governance practices, and operating procedures are developed by the agencies, enabling coordinated and effective implementation of the GDA and other related requirements.

1.3. Approaches & Tools

Identify common approaches and tools to meet GDA and related planning and reporting requirements.

Anticipated Outcomes: Common templates and enterprise approaches are developed to enable efficient, consistent fulfillment of planning and reporting requirements; promoting transparency and accountability for results.

1.4. Structure & Processes

Review and update FGDC structure and governance processes to incorporate best practices and to align with the GDA and related statutes and policies.

Anticipated Outcomes: An updated governance process that meets statutory and policy requirements and promotes effective interagency, intergovernmental, and cross-sector collaboration, engagement, and accountability.

2. Data Assets

Advance the maturity, accelerate acquisition, and expand sources of National Geospatial Data Assets to ensure they are findable, accessible, interoperable, and reusable

Through partnerships and understanding user needs, high value core datasets are identified as NGDAs and curated by applying lifecycle management best practices across the data portfolio. The national geospatial community will commit sufficient resources to ensure that quality geospatial data are easily accessible, managed using effective data stewardship practices, and can be integrated with other meaningful non-geospatial data to support a multitude of stakeholder uses.

2.1. Standards & Portfolio Management

Update, validate, and streamline NGDA portfolio management practices and establish standards for NGDA data themes and associated datasets.

Anticipated Outcomes:

- NGDA management practices are effective, efficient, and facilitate reporting of NGDA status information.
- Standards have been established for NGDA data themes and associated datasets.

2.2. Acquisition & Management

Implement data acquisition and lifecycle management strategies through collaboration and ongoing outreach.

Anticipated Outcomes: NGDA lifecycle management practices are consistent and maintained through data stewardship, resource planning, and support.

2.3. Integration

Advance the practice of integrating government and non-government data into national datasets.

Anticipated Outcomes: Roles, responsibilities, agreements, acquisition strategies, and funding approaches are developed for sustainable methods to integrate geospatial data.

2.4. Best Practices

Identify, validate, and advance best practices to ensure geospatial and other meaningful data can be easily integrated and used.

Anticipated Outcomes: Geospatial data are designed to enhance the utility of statistical information and other non-geospatial data by linking them to a place.

3. Interoperability

Promote open standards-based interoperability to enable geospatial shared services

This goal describes how activities associated with the GeoPlatform and other shared services will accelerate the development and use of geospatial information. Shared services are web-accessible standards-based tools, applications, and services that enable the discovery, access, integration and application of geospatial data. They offer an all-inclusive collaborative environment for improved decision-making.

3.1. Awareness & Use

Increase awareness and broaden use of national shared services, including the GeoPlatform, to publish, discover, integrate, promote, visualize, analyze, and disseminate national geospatial data.

Anticipated Outcomes: As a key Federal information system, the GeoPlatform and other shared services provide accessible, high-value geospatial data and services, while reducing duplication and improve services.

3.1a. Standards

Apply open standards to ensure that shared services can be improved and expanded at minimal effort and cost.

3.2. Sources & Technologies

Improve national geospatial shared services capabilities, identify and test innovative information sources and technologies including real-time data from fixed and mobile sensors, social media, the Internet of Things.

Anticipated Outcomes: The value and use of national data and services is increased through a culture of experimentation and innovation.

3.3. Shared Services

Update shared services policies and practices to improve the ability of users to discover, qualify, access, combine, and use geospatial services with geospatial data, spatial analytics, and non-spatial data.

Anticipated Outcomes:

- Metadata policies are updated, and processes are improved and simplified by incorporating new technologies and by providing tools to assist in metadata creation, conversion, and efficient management practices.
- Metadata about geospatial data and services are aligned, resulting in improved discoverability and use, compliance with licensing terms, interoperability, and user confidence.

4. Partnerships

Enable and promote collaborative partnerships to meet national needs, priorities, and circumstances

All stakeholders benefit from a mature NSDI built, maintained, and championed through robust partnerships that engage the operational expertise of multiple sectors and users to address priority issues and business needs. This goal describes how the national geospatial community can work collaboratively to use geospatial data, assets, technologies, communications approaches, and services to advance the NSDI and meet the goals and requirements of the GDA.

4.1. Priorities, Roles & Responsibilities

Collaboratively define priorities, roles, and responsibilities for the development of the NSDI as described in the GDA.

Anticipated Outcomes: A broad consensus among partners and stakeholders on achievable goals, priorities, roles, and responsibilities.

4.2. Processes & Tools

Develop processes and tools, in collaboration with partners, to promote effective communication and exchange knowledge about the benefits and utilization of geospatial data, technology, and the NSDI.

Anticipated Outcomes: Greater communication, awareness, and understanding of collaborative approaches to leverage geospatial and geospatially-referenced information to enable informed and effective decision-making.

4.3. Data

Develop innovative partnerships across sectors to pilot-test scalable and replicable approaches to improve geospatial data creation and maintenance for national use.

Anticipated Outcomes:

- Development of successful pilot partnership initiatives that share risk and reward for all involved, and that can be emulated or expanded by other cooperating public and private sector organizations.
- Improved availability, affordability, maintenance, and use of geospatial data.

4.4. Workforce

Promote partnerships among academia, the private sector, professional organizations, and government to ensure that the emerging workforce has the skills needed to meet the growing needs of the geospatial community.

Anticipated Outcomes: A diverse and adaptable geospatial workforce trained with the critical technology, problem-solving, and management skills required to adapt to emerging user requirements, organizational challenges, and technological advances. Objective 4.5 Partner with international organizations to ensure the continued development of a robust, interoperable, global spatial data infrastructure in accordance with requirements in the GDA. Anticipated Outcomes: U.S. interests and NSDI practices lead and influence the global spatial ecosystem through interoperability, data sharing, and collaboration; and the U.S. continues its leading role in the global geospatial marketplace.

Stakeholder(s):

Academia   **Professional Organizations**

The Private Sector   **Government Agencies**

Administrative Information
Start Date: 2020-08-27
End Date:

Publication Date: 2020-11-02
Source: https://www.fgdc.gov/nsdi-plan/nsdi-strategic-plan-draft-public-comment-version.pdf

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