



NATIONAL SPATIAL DATA INFRASTRUCTURE STRATEGIC FRAMEWORK

Federal Geographic Data Committee
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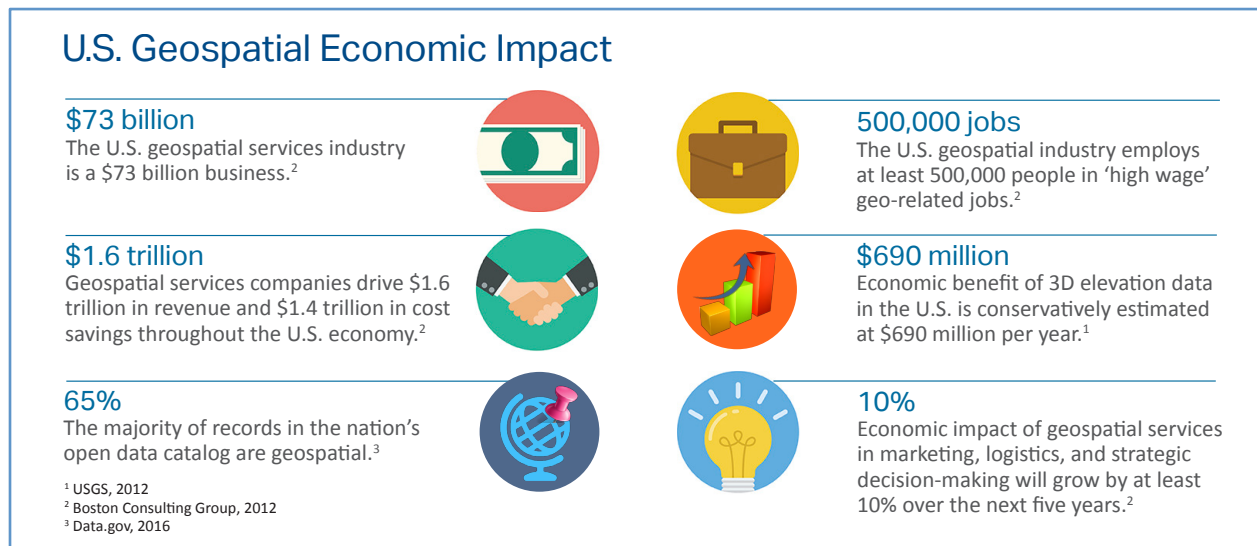
PART I: INTRODUCTION

Overview

Geospatial data is a critical national asset that has increased the value of America’s data resources and underpins key parts of the economy. Dependence on spatial data and services spans all business sectors, levels of government, and public and private investments today. This geographic perspective allows policy and decision makers to bring a wide variety of place-based information together to better understand problems and develop informed solutions. A recent study by the Boston Consulting Group (BCG) estimated that the U.S. geospatial industry generated approximately \$73 billion in annual revenue and comprises at least 500,000 high-wage jobs. BCG also found that geospatial services deliver efficiency gains in the rest of the economy that are valued at many times the size of the sector itself—with geospatial services driving \$1.6 trillion in revenue and \$1.4 trillion in cost savings.¹ These benefits create an important competitive advantage for the U.S. economy, and create a growing number of high-wage technology jobs. Geospatial data and services are now ubiquitous and integrated into almost everything we do, resulting in significant changes in citizen and economic behavior.

Geospatial technology and data make government at all levels more efficient and effective. For example, policymakers are provided tools to monitor conditions associated with the outbreak of the Zika virus and may view predictive models that anticipate its spread from any given occurrence. Interactive flood modeling allows decision makers to more accurately identify populations at risk for flooding due to rising waters from hurricanes or other storm events. Scientific analysis of the impacts of climate change on food production supports the adoption of sustainable practices that increase food security for all citizens.

The National Spatial Data Infrastructure – the NSDI – provides a framework for the collaborative development of this critical digital infrastructure for the Nation. This document provides a high-level plan for the continuing development and expansion of the NSDI.



NSDI Timeline

- **1994:** Executive Order 12906 established the National Spatial Data Infrastructure (NSDI) as “the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve the utilization of geospatial data.” The Executive Order also created the Federal Geographic Data Committee (FGDC), with responsibility to coordinate the development of the NSDI across government.
- **2002:** The Office of Management and Budget (OMB) issued a revised version of Circular A-16, “Coordination of Geographic Information and Related Spatial Data Activities,” describing FGDC’s responsibilities for the development of the NSDI and detailing agencies’ roles and responsibilities.
- **2003:** Executive Order 13286 amended and reaffirmed Executive Order 12906, incorporating the newly-created Department of Homeland Security.
- **2006:** OMB Memorandum M-06-07 required agencies to designate a Senior Agency Official for Geospatial Information (SAOGI).
- **2008:** The Department of the Interior established the National Geospatial Advisory Committee (NGAC) – composed of representatives from all levels of government, the private sector, non-profits and academia – to provide advice and recommendations on national geospatial policy issues and the development of the NSDI.
- **2010:** OMB issued Supplemental Guidance to Circular A-16, requiring identification of specific datasets that are to be managed as National Geospatial Data Assets (NGDAs) through a geospatial portfolio management process.
- **2013:** FGDC adopted the “NSDI Strategic Plan 2014-2016,” which included an updated Vision:
“The NSDI leverages investments in people, technology, data, and procedures to create and provide the geospatial knowledge required to understand, protect, and promote our national and global interests.”

National Approach to the NSDI

The Federal government has had a pivotal impact across data, technology, and services fronts in advancing our national spatial data infrastructure and in helping to fuel innovation. Since its inception, the development of the NSDI has had bipartisan support across several Administrations. However, the role of government in the geospatial ecosystem has changed significantly since the inception of the NSDI, with the advent of both flexible technologies to enable data access and multiple sources of geospatial data that are not government controlled. Increasingly, tribal, state, local and regional governments, as well as the private sector, non-profits and academia play a critical role in contributing to the national portfolio of geospatial data. Local governments manage some of the richest and highest resolution data, such as local roads, addresses, and parcels. Private firms collect and manage data both for their own use and for use by public entities, while also integrating publicly funded data into commercially-available services.

The NSDI requires a national approach that is coordinated, shared, and comprehensive across governmental, commercial, and academic sectors. Multiple stakeholders are needed to provide the data, services, and supporting framework for an NSDI that is seamless, open, and accessible. Service delivery should be dependable and integrated into existing user devices and services. A

successful, integrated geospatial data infrastructure will fuel smart policy decisions, cost savings, enhanced service delivery, and other efficiencies.

A national approach will also enable the resources needed by U.S. programs such as the U.N. Global Geospatial Information Management (UNGGM), the Arctic Spatial Data Infrastructure (Arctic SDI), and the Group on Earth Observations (GEO), to influence and support international geospatial initiatives and the formation of compatible spatial data infrastructures.

Roles and Responsibilities

The NSDI is based on a complex set of interagency and intergovernmental arrangements and public-private partnerships. This multi-faceted web of relationships enables creative interaction among sectors and collaborative development of new products, approaches, and technologies. However, the complex nature of the NSDI also poses challenges to effective coordination and governance. Roles and responsibilities for the components of the NSDI will vary among data themes and datasets, as they relate to partner organizations. Some National Geospatial Data Asset (NGDA) datasets are most appropriately stewarded from the bottom up, with local governments producing data that can be aggregated at the state or federal level. Other datasets may best be addressed through federal enterprise programs that are informed by and serve the broader public sector mapping ecosystem. In other cases, agencies may collaborate on enterprise acquisitions of commercial data. A primary objective of the NSDI planning process is to define specific approaches – in collaboration with partners – that make sense for different data components and applications of the NSDI. Another key focus for the NSDI is to ensure coordination and alignment with the National System for Geospatial Intelligence (NSG). Executive Order 12333 established the Director of the National Geospatial-Intelligence Agency as the Functional Manager for Geospatial Intelligence (GEOINT). The Director established the NSG to contribute to the overall advancement of the GEOINT function.

Emerging Geospatial Technology Trends

The National Geospatial Advisory Committee has identified a set of important technology trends that will impact the geospatial community and will require continued collaborative planning and consideration across sectors. These trends include the following:

- **Integration and interaction of real-time data collection and analysis**
The ability to continuously create and interact with real-time spatial and temporal data is transforming the ways in which geographic data are now collected, mapped, modeled, and used, both in geography and in science and society more broadly. This trend is realigning traditional relationships and driving new geospatial applications in governments, businesses, and society.
- **Miniaturization of technologies**
Miniaturization to create small and inexpensive devices and sensors, along with nearly ubiquitous wireless connectivity, is driving an explosion of the Internet of Things. Miniaturized and lower cost sensors are leading to dramatic increases in data collection and quality, and the ability to tailor sensors to specific data collection needs.
- **Proliferation of new mobile geospatial sensor platforms**
The rapid miniaturization of technologies has enabled new platforms for sensor distribution, such as small satellites (smallsats) and unmanned aircraft systems (UAS, or “drones”) that can

be rapidly designed and deployed. These mobile geospatial sensor platforms greatly expand the capability of individuals, businesses, and governments to collect volumes of remotely sensed data for purposes including disaster response, environmental monitoring, and public safety.

- **Expanding wireless and web networks**
The expansion of data collection tools, and the resulting volumes of real-time spatial and temporal data, requires improved methods for data transmission and distribution, including wireless and web networks.
- **Advances in computing speed, visualization tools, and capacity for geospatial data application**
High performance computing networks and cloud computing services provide individuals with access to vast repositories of geospatial data, tools, and services, as well as channels through which they can contribute to these repositories. Visualization tools are being enhanced to include third dimensional and virtual reality techniques to explore and analyze data.

Scope of Strategic Framework

This high-level NSDI Strategic Framework has been developed through an analysis of the 2014-2016 NSDI Strategic Plan and the incorporation of input and requirements from non-federal partners and constituents, including the National Geospatial Advisory Committee and the organizations represented by its members. The FGDC also held a series of outreach meetings and listening sessions to gather input from key partners. These inputs have included forums for leaders of key geospatial organizations, workshops for Federal leaders, sessions at geospatial professional conferences, and public meetings of the FGDC Coordination Group, the FGDC Steering Committee, and the National Geospatial Advisory Committee. The FGDC community has made notable progress over the past three years in driving activities such as the development of the National Geospatial Platform (GeoPlatform.gov), the establishment of the Geospatial Interoperability Reference Architecture (GIRA), and the enhancement of the National Geospatial Data Asset (NGDA) portfolio management process. However, significant work remains to achieve the vision of the NSDI. In order to continue this progress, this Strategic Framework identifies three major goals for the Federal community to address and three strategies to work collaboratively with the broader geospatial community of practice. The FGDC community will engage with the new administration in 2017 to refine this Framework and collaboratively develop implementation approaches to address the goals and strategies included in this document.

PART II: KEY FEDERAL RESPONSIBILITIES

The following goals and objectives are primarily the responsibility of the Federal community but will require tribal, state, local and regional government participation to ensure success.

Goal 1: Expand the National Geospatial Platform

GeoPlatform.gov is the national capability for geospatial data and maps. It currently enables powerful collaboration and sharing of information to support better government and transparency. FGDC will work with partners to build on the success of the GeoPlatform by developing new communities and soliciting participation from tribal, state, local, and regional governments and the private sector to expand opportunities to the broader geospatial community. This includes continued registration of federal and non-federal geospatial data sources and continued alignment with the Department of Homeland Security's Geospatial Information Infrastructure (GII). The GII provides Homeland Security

Enterprise (HSE) users operating in a sensitive environment the ability to seamlessly leverage unclassified geospatial content registered within GeoPlatform.gov for analysis and shared situational awareness.

- **Objective 1.1:** Develop additional interagency communities and solicit mutually beneficial participation from tribal, state, local, and regional governments.
- **Objective 1.2:** Extend the capabilities, expand the services, and enhance the data provided by the GeoPlatform.
- **Objective 1.3:** Increase the number and variety of common analytical services and tools that promote ready access to available National geospatial resources.
- **Objective 1.4:** Ensure the GeoPlatform provides easy-to-use data, applications, and services hosted on a secure cloud infrastructure that maximizes interoperability; allows better managed geospatial data; increases sharing and reuse of resources; and stimulates innovation and entrepreneurship.

Goal 2: Enhance the Management of Federal Geospatial Assets

Promote the development, management, and accessibility of consistently documented spatial data across the geospatial community. FGDC will work with data stewards and partners to refine the National Geospatial Data Asset (NGDA) portfolio management initiative based on best practices and lessons learned.

- **Objective 2.1:** Enhance NGDA portfolio management capabilities through activities including:
 - Continued enhancement of dataset maturity assessments.
 - Development of implementation plans for NGDA Data Themes, including milestones and performance indicators.
 - Coordination with the Coalition of Geospatial Organization (COGO) to align the NGDA portfolio management process with COGO's NSDI Report Card process, with a particular focus on development and tracking of NSDI framework layers.
 - Support and training for NGDA Theme Leads and Dataset Managers.
- **Objective 2.2:** Promote development and utilization of national and international standards applicable to the geospatial community through activities including the following:
 - Continue and broaden Federal participation in voluntary standards organizations to support development of key geospatial standards.
 - Support and enhance agency implementation of applicable geospatial standards.
 - Consider recommendations of the NGAC Standards Coordination Subcommittee.
- **Objective 2.3:** Promote increased access to geospatial data and services utilizing enterprise approaches when appropriate.

Goal 3: Update the National Geospatial Policy Framework

The policy framework guiding national geospatial programs and activities needs to be updated to reflect significant changes in technology, the expanded use and value of geospatial information, and the evolving roles of partner organizations. Executive Order 12906, "Coordinating Geographic Data

Acquisition And Access: The National Spatial Data Infrastructure,” was issued in 1994. OMB Circular A-16, “Coordination of Geographic Information and Related Spatial Data Activities,” was last updated in 2002. Revisions to the NSDI policy framework and funding/partnership model are needed to more effectively support and enable Federal geospatial programs and the broader geospatial community.

- **Objective 3.1:** Review and revise OMB Circular A-16 in collaboration with OMB and stakeholders to update the guidance to federal agencies for collection and management of geospatial assets to support national priorities.
- **Objective 3.2:** Incorporate the OMB Circular A-16 Supplemental Guidance, which was issued in 2010, into the revised version of A-16. The content of the Supplemental Guidance, which describes a portfolio management approach for National Geospatial Data Assets (NGDAs), should be updated to reflect the recommendations of FGDC’s recent NGDA/portfolio management evaluation process.
- **Objective 3.3:** Consider developing new policy direction through an updated Executive Order or through working with Congress on enabling legislation to codify NSDI requirements.

PART III: OPPORTUNITIES FOR THE GREATER GEOSPATIAL COMMUNITY

The strategic opportunities identified for the national geospatial community in furthering the development of the NSDI cannot be the sole responsibility of the Federal community. These strategies and supporting actions will require the engagement and participation of all levels of government, academia, and the private sector in order to achieve maximum impact. The Federal geospatial community, under the leadership of the Federal Geographic Data Committee, can serve a catalyst for the success of these initiatives. Developing strategies and actions for the greater geospatial community may most effectively be achieved through collaboration among stakeholders and partners. As a starting point, this Strategic Framework identifies strategies and possible actions to address these opportunities.

Strategy 1: Focus on National Priority Data Initiatives

Engage with the greater geospatial community to collaboratively develop identified national priority data sets, which may include: Address Data, 3D Elevation, Imagery, Transportation, and Open Water Data. Document best practices and lessons learned from the collaboration and partnerships to replicate for future initiatives. Key players include data stewards, data providers, stakeholders, and users for each of the priority data sets.

- **Action 1.1: Designate and empower executive champions to lead and coordinate the development of the priority datasets with appropriate partners.** Collaborate with appropriate partners and utilize project management strategies to coordinate implementation of priority datasets.
- **Action 1.2: Develop national partnerships and governance models for priority data initiatives.** Build formal relationships and define roles and responsibilities for geospatial community stakeholders.

- **Action 1.3: Align with the National System for Geospatial Intelligence (NSG).** Engage with the National Geospatial-Intelligence Agency and the Department of Homeland Security to harmonize and coordinate NSDI, NSG, and Homeland Security Enterprise (HSE) activities.
- **Action 1.4: Expand FGDC subcommittee/working group membership.** Subcommittee and work group chairs will evaluate membership and reach out to include underrepresented geospatial community participants.
- **Action 1.5: Host forums to enable participation by the greater geospatial community.** Use geospatial community and industry forums to supplement subcommittee and working group activities on national priority data initiatives.
- **Action 1.6: Promote/highlight existing partnerships.** Share information about successful collaborations.

FGDC and its partners should also consider additional activities, including the following:

- Increase communication and outreach to key geospatial community participants.
- Incentivize and promote partnerships and participation by non-federal entities.
- Establish and enable data exchange models and partnerships.
- Create partnerships and models to fund national datasets.

Strategy 2: Rebrand the NSDI to Broaden Awareness and Understanding of the Geospatial Community

Raise awareness and understanding of the impact of geospatial information and its role as part of critical national infrastructure. Develop an NSDI community communications effort that engages a broad range of partners in building and conveying the NSDI message. Engage current and emerging partners to address national issues and priorities and demonstrate the value of geospatial information to quality of life, economic development and jobs, security and public safety, and global competitiveness.

- **Action 2.1: Establish partnerships.** Reach out to key geospatial organizations to form a partnership/joint effort to lead the initiative to explore the rebranding of the NSDI and further the discussion.
- **Action 2.2: Create a communications network.** Identify Points of Contact with professional organizations to share information and solicit ideas & feedback.
- **Action 2.3: Conduct a Geospatial Leaders Summit.** Invite geospatial professional organizations and industry leaders to a Summit meeting to explore new ideas, build consensus on rebranding the NSDI, and improve ongoing communication and engagement efforts.
- **Action 2.4: Conduct user forums at industry conferences.** Identify 3 - 5 industries dependent on geospatial information in order to conduct business. Attend, present, and facilitate sessions at identified conferences.
- **Action 2.5: Launch a public engagement campaign.** Develop and execute a communications/marketing strategy in collaboration with partners. Focus on social media to build awareness and understanding of the power of geospatial technology. Consider podcasts,

web videos, and blogs. Include infographics, compelling examples of geospatial technology at work, and social media utilizing guest postings, etc.

Strategy 3: Address Emerging Topics

Collaborate with the greater geospatial community and other partners to address key emerging issues, including cyber infrastructure protection, geospatial privacy, and education and training for the 21st century geospatial workforce.

- **Action 3.1: Address Emerging Technologies.** The NSDI community needs to assess and plan for emerging technology trends and their impacts on the geospatial landscape. These trends include:
 - **Data collection and generation** utilizing new technologies and platforms.
 - **Data analytics** supporting analysis of big data, multi-dimensional data, and spatiotemporal data.
 - **Infrastructure** to support growing needs for collection, processing, storage, delivery, and protection of data and systems.
 - **Access to technology and data** through changes in wireless systems and internet access, and how we protect sensitive information.
- **Action 3.2: Engage with partners to address national priorities.** Expand and leverage partnerships with governmental, private sector, and academic stakeholders to address critical national issues. Explore development of a matrix approach in addressing national issues.
- **Action 3.3: Build workforce development strategies.** Collaborate with partners to develop skills training for the next generation of spatial analysts, as well as consideration for how we broaden and diversify the spatial workforce.
- **Action 3.4: Utilize the NGAC to reach out to emerging partners.** Collaborate with the organizations represented on the National Geospatial Advisory Committee to build new partnerships with industry groups, other levels of government, and other organizations to address emerging issues that will impact the geospatial community.

PART IV: CHALLENGES

The geospatial technology field is at a remarkable point in its evolution, presenting an opportunity to rethink the deployment and use of these resources across the geospatial community. The revolutionary changes in geospatial technology and applications and the growing visibility of geospatial technology across all sectors of the economy are leading public sector agencies to realign geospatial strategies and investments to meet the needs of newly geospatial-savvy information consumers. More and more, citizens expect government to provide geospatial data and services to them in their specific areas of interest. While these dynamic changes provide significant opportunities, the geospatial community will also need to address barriers and challenges, including the following:

- **Coordinating within the Federal geospatial community.** Congress authorizes and provides appropriations for agencies to fulfill their mission responsibilities, and collaborative interagency projects and initiatives are sometimes regarded as of secondary importance. In addition, multi-

agency approaches can face funding and authorization constraints. Geospatial activities must be coordinated across civilian agency, intelligence community, and military domains. In this context, the challenge for the FGDC community is to develop and utilize effective and reliable multi-agency partnerships to achieve common geospatial goals. One example, the Biggert-Waters Flood Insurance Reform Act, authorizes shared resources across federal agencies.

- **Building effective partnerships with non-Federal partners.** As the NSDI has evolved, non-Federal organizations and governments have taken a greater role in geospatial data production and have developed new levels of capability and expertise. This changing landscape requires similar changes in partnership arrangements. Partnerships and agreements should be tailored based on the nature of the relationship – some will be formal service-level agreements and others will be more informal collaborative partnerships to better serve the public.
- **Acquiring and aligning resources.** As geospatial data and technology have become growing components of the Nation’s critical digital infrastructure, ensuring an appropriate and reliable level of resources has become an issue of increasing importance. The challenge for the FGDC community is to align financial and human resources to support changing and evolving technologies, priorities, and partnership opportunities.

PART V: CONCLUSION

The role of government in the geospatial ecosystem has changed significantly since the inception of the NSDI. State and local governments now manage some of the richest and highest resolution data, such as local roads, addresses, and parcels. While significant progress has been made, new and improved partnerships must be established to enhance the NSDI, spur innovation, help protect lives and resources, build the economy, and help ensure that the U.S. retains its global leadership in spatial data infrastructures. Continued investment in and establishment of shared data resources and services, increased development of national data collections, and a national approach to strategic direction are required to achieve this vision. This NSDI Strategic Framework provides a coordinated approach for the continued and sustainable development of the national spatial data infrastructure.

¹ The Boston Consulting Group, June 2012, Geospatial Services: A \$1.6 Trillion Growth Engine for the U.S. Economy, accessed December 6, 2016, at <https://www.bcg.com/documents/file109372.pdf>

PART VI: APPENDICES

FGDC Member Agencies

The Federal Geographic Data Committee is organized under the authority of OMB Circular A–16 (revised 2002) and Executive Order 12906. In accordance with Circular A–16, the FGDC is chaired by the Secretary of the Interior (or designee), and the OMB Deputy Director for Management (or designee) serves as Vice Chair. The FGDC includes the following member agencies:

- Federal Communications Commission*
- General Services Administration
- Library of Congress
- National Aeronautics and Space Administration
- National Archives and Records Administration
- National Capital Planning Commission*
- National Science Foundation
- Office of Management and Budget
- Office of Personnel Management
- Small Business Administration
- Smithsonian Institution
- Social Security Administration
- Tennessee Valley Authority
- U.S. Agency for International Development
- U.S. Army Corps of Engineers*
- U.S. Department of Agriculture
- U.S. Department of Commerce
- U.S. Department of Defense
- U.S. Department of Education
- U.S. Department of Energy
- U.S. Department of Health and Human Services
- U.S. Department of Homeland Security
- U.S. Department of Housing and Urban Development
- U.S. Department of the Interior
- U.S. Department of Justice
- U.S. Department of Labor
- U.S. Department of State
- U.S. Department of Transportation
- U.S. Department of the Treasury
- U.S. Department of Veterans Affairs
- U.S. Environmental Protection Agency
- U.S. Nuclear Regulatory Commission

**Non-voting members*

National Geospatial Advisory Committee

The National Geospatial Advisory Committee (NGAC) is a Federal Advisory Committee established by the Department of the Interior to provide advice and recommendations related to management of Federal and national geospatial programs, development of the NSDI, and implementation of OMB Circular A-16 and Executive Order 12906. The Committee reviews and comments on geospatial policy and management issues and provides a forum to convey views representative of non-Federal stakeholders in the geospatial community. The NGAC includes representatives from all levels of government, the private sector, nonprofit organizations, and academia. Additional information about the NGAC, including a list of committee members, is available at www.fgdc.gov/ngac.

FGDC Collaborating Partners

Many organizations throughout the United States have a stake in building the National Spatial Data Infrastructure (NSDI) together. The FGDC welcomes participation by state, local and tribal governments, the academic community, and the private and non-profit sectors in building the NSDI. Non-federal organizations may serve as Collaborating Partners by requesting official stakeholder status in writing to the Chair of the FGDC. Collaborating Partners are encouraged to participate on subcommittees and working groups and provide input into all decisions. The current Collaborating Partners are the following:

- American Society of Civil Engineers
- Association of American Geographers
- Cartographic Users Advisory Council
- Geospatial Information & Technology Association
- International City/County Management Association
- National Association of State Chief Information Officers
- National Association of Counties
- National League of Cities
- National Society of Professional Surveyors
- National States Geographic Information Council
- Open Geospatial Consortium
- University Consortium for Geographic Information Science
- Urban and Regional Information Systems Association
- Western Governors' Association

In addition to these formally-recognized Collaborating Partner organizations, FGDC member agencies work with a wide variety of partners and stakeholders on data and technology initiatives and other common issues.

GLOSSARY

Federal Geographic Data Committee (FGDC): Executive Order 12906 created the Federal Geographic Data Committee (FGDC), with responsibility to coordinate the development of the NSDI across government.

Geospatial Information Infrastructure (GII): The Department of Homeland Security GII is operated by HSE users nationwide as a Secure But Unclassified, reliable platform for geospatial visualization, analysis, and collaboration on diverse sets of mission-critical geospatial information. The GII is federated with Geoplatform.gov to provide HSE users the ability to seamlessly leverage unclassified geospatial content registered within Geoplatform.gov for analysis and shared situational awareness. Together, Geoplatform.gov and the DHS GII are core components of the NSDI, enabling national geospatial information sharing required to plan, rehearse, and execute missions to protect and secure the Homeland.

Geospatial Interoperability Reference Architecture (GIRA): An oversight framework for executive leadership to manage geospatial program and acquisition decisions and to provide technical architecture guidance on the design and implementation of interoperable geospatial solutions.

Geospatial Platform (GeoPlatform.gov): A strategic national resource that provides a suite of well-managed, highly available, and trusted geospatial data, services, and applications for use by Federal agencies—and their State, local, Tribal, and regional partners to meet their mission needs and the broader needs of the Nation.

Homeland Security Enterprise (HSE): The Department of Homeland Security’s effort to align the disparate elements of the Department with integrated results-based operations to gain wide-ranging efficiencies that leverage the economies of scale into a single enterprise.

National Geospatial Data Assets (NGDA): OMB Circular A -16 Supplemental Guidance established the concept that geospatial data is a capital asset and laid the foundation for a portfolio management approach. NGDA Datasets are assets that have been designated by the Federal Geographic Data Committee (FGDC) Steering Committee and meet at least one of the following criteria: (1) supports mission goals of multiple Federal agencies; (2) statutorily mandated; or (3) supports Presidential priorities as expressed by Executive Order or by OMB.

National Spatial Data Infrastructure (NSDI): Executive Order 12906 established the National Spatial Data Infrastructure (NSDI) as “the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve the utilization of geospatial data.”

National System of Geospatial-Intelligence (NSG): Executive Order 12333 established the Director of the National Geospatial-Intelligence Agency as the Functional Manager for Geospatial Intelligence (GEOINT). The Director established the NSG to contribute to the overall advancement of the GEOINT function. The NSG can be viewed as an integrated, collaborative community of GEOINT professionals embedded with our operational and national partners to meet their warfighting and intelligence needs.

OMB Circular A-16: The Executive Branch guidance document that provides direction for federal agencies that produce, maintain, or use spatial data either directly or indirectly in the fulfillment of their mission and provides for improvements in the coordination and use of spatial data. The Circular also describes effective and economical use and management of spatial data assets in the digital environment for the benefit of the Federal Government and the Nation. OMB issued Supplemental Guidance to A-16 in 2010 that established the concept that geospatial data is a capital asset and outlined a portfolio management approach.