Building the Geospatial Future Together— The NSDI Strategic Plan 2025–2035

FGDC.GOV

FEDERAL GEOGRAPHIC DATA COMMITTEE

Federal Geographic Data Committee

Federal Geographic Data Committee, Reston, Virginia: 2024

The Federal Geographic Data Committee approved this strategic plan on October 18, 2024.

The National Geospatial Advisory Committee endorsed this strategic plan on October 16, 2024.

Contents

Abbreviations

AI	artificial intelligence
BIM	building information modeling
CAD	computer-aided design
CAP	Cooperative Agreements Program
COGO	Coalition of Geospatial Organizations
FAIR	findable, accessible, interoperable, and reusable
FGDC	Federal Geographic Data Committee
FITARA	Federal Information Technology Acquisition Reform Act
GIS	geographic information systems
IoT	Internet of Things
NSDI	National Spatial Data Infrastructure
PNT	positioning, navigation, and timing
SDI	spatial data infrastructure
Sec.	section
TribalGIS	National Tribal Geographic Information Support Center
U.S.C.	United States Code
UAS	uncrewed aerial system

Executive Summary

This National Spatial Data Infrastructure (NSDI) strategic plan for 2025-2035 is a national plan involving the broad participation of Federal, State, Tribal, and local governments and the private sector, including private industry, academic institutions, and nonprofit organizations. It establishes a vision for the NSDI that will enable it to address the evolving challenges and opportunities in the realm of geospatial data collection or acquisition, management, and use. Recognizing the critical role of location as identified through geospatial information for evidence-based decision making, economic growth, and societal advancement, the NSDI is envisioned as being a seamlessly interconnected national geospatial ecosystem, connected to a larger global geospatial ecosystem, that delivers actionable insights to address local, regional, national, and global challenges across the terrestrial, maritime, and space domains. Successfully addressing these challenges, which span the gamut of environmental, social, and economic concerns, will require inclusive national governance and will best be achieved by filling data gaps, leveraging new and impactful technologies, and developing the workforce.

This NSDI strategic plan is guided by three overarching goals: Governance, Data and Technology, and People. Under the Governance goal, the plan emphasizes the need for nationwide participation, resourcing, and accountability in NSDI decision making, alongside effective national-level oversight and management mechanisms. This includes refining policy and legal frameworks to support data management, sharing, and use, and identifying and meeting financial resource needs for successful implementation.

Under the Data and Technology goal, the plan focuses on modernizing infrastructure and leveraging advanced technology to improve data usability, quality, accessibility, and interoperability. Achieving this goal involves evaluating, improving, and maintaining an integrated national geospatial data foundation; embracing such technological innovations as artificial intelligence (AI), including machine learning; and ensuring adherence to national and international standards.

The People goal underscores the importance of building a skilled and inclusive geospatial workforce that is equipped to advance and leverage the full potential of the NSDI by applying transdisciplinary skills. Achieving this goal includes fostering multisector partnerships, promoting continuous learning within the geospatial community, and actively promoting the use and understanding of geospatial data and technologies.

Looking ahead, the NSDI strategic plan identifies key trends likely to shape the future geospatial landscape, including AI; big data analytics; advancements in technology; open data initiatives; legal, privacy, policy, and security considerations; human-centered design principles; interoperability standards; and collaboration.

The strategic plan also highlights a diverse range of use cases across various sectors and disciplines where the NSDI plays a crucial role, including disaster response and management, smart cities development, precision agriculture, healthcare planning and response, autonomous transportation, supply chain optimization, digital twins, scientific monitoring, infrastructure management, natural resource management, and business intelligence and market analysis.

By embracing the capabilities of Federal, State, local, and Tribal governments and the private sector (including private industry, academic institutions, and nonprofit organizations), the NSDI can realize its potential to drive progress and innovation for the betterment of society. To achieve the vision outlined in the NSDI strategic plan, concerted efforts and collaboration across sectors are essential. Upon fulfillment of the goals outlined in this strategic plan, all sectors will be responsible for developing and resourcing NSDI implementation actions, including coordinating through the Federal Geographic Data Committee (FGDC) and across sectors to achieve the shared vision of the NSDI.

Introduction

As defined in the Geospatial Data Act of 2018 (43 U.S.C. 46), the National Spatial Data Infrastructure (NSDI) is—

> *"… the technology, policies, criteria, standards, and employees necessary to promote geospatial data sharing throughout the Federal Government, State, Tribal, and local governments, and the private sector (including nonprofit organizations and institutions of higher education)."*

During the past three decades, the Nation has made significant strides in establishing and advancing the NSDI to enhance its accessibility and value. Notable accomplishments include the establishment of policy and governance frameworks, coordination mechanisms, and a global standards framework; the development of geospatial datasets across various levels of government (Federal, State, Tribal, and local); and the creation of open data portals, searchable metadata catalogs, and geospatial tools and applications.

The NSDI has evolved from its initial conception as a top-down, federally led infrastructure to a collaborative model involving partnerships with State, Tribal, and local governments, as well as nonprofit and commercial organizations. During this evolution, significant progress was achieved through cost-matching grants from the Federal Geographic Data Committee's (FGDC's) Cooperative Agreements Program (CAP). CAP funding supported the implementation of data standards, training, strategic plans, and the development of geospatial data clearinghouse nodes across the Nation. It also played a vital role in the development of State, Tribal, and local government geospatial implementation plans, leading to the establishment of State-level spatial data infrastructures (SDIs).

The Nation faces serious challenges in the coming decade involving such issue areas as national security; extreme weather events; economic disparity; energy; immigration; infrastructure; community resilience; food, water and environmental security; and public health. Effectively addressing the current and upcoming challenges hinges on timely access to decision-ready geospatial data, information, and knowledge facilitated by the NSDI.

The rapid pace of change, advancements in technology, and the increasing use of geospatial information necessitate a shift in how data and services are delivered. It is no longer sufficient to simply publish data in catalogs. Geospatial data must seamlessly integrate with other applications—including those powered by artificial intelligence (AI)—enabling citizens and government agencies to use the data every day in the tools and applications they are already familiar with, such as digital assistants and smart phones.

The NSDI of 2035 will enable a national ecosystem consisting of trusted and curated geospatial data and services to which other data can be related using location-based attributes to deliver actionable information. This will allow the NSDI to deliver highly responsive, timely, current, and dependable geospatial information, services, and applications using a common foundation of geospatial data. This approach will enable users and providers across multiple sectors to use the NSDI to provide knowledge and actionable insights to address local, regional, national, and global challenges.

This NSDI strategic plan for 2025–2035 is a national plan anticipated to involve the broad participation of Federal, State, Tribal, and local governments and the private sector, including private industry, academic institutions, and nonprofit organizations. It identifies the three goals—Governance, Data and Technology, and People—required to meet the NSDI vision of a seamlessly interconnected national geospatial ecosystem. Progress toward each goal outlined in this plan will depend on growth in multisector partnerships, technological innovation through the execution of pilot projects to improve the national ecosystem of interoperable and interconnected systems, and increased awareness of the importance of geospatial information through the creation of outreach and marketing campaigns with educational organizations and the public at large.

The future of the NSDI will be achieved through a new approach—by transitioning from monolithic systems to an integrated and interoperable geospatial ecosystem. This vision requires renewed commitment from all sectors, increased collaboration, new technologies, and adequate resources.

There are key dependencies between this strategic plan and other laws and policies, including but not limited to the Federal Data Strategy, the Privacy Act, the E-Government Act, the 2020 National Space Policy, National Plan for Civil Earth Observations, the National Spatial Reference System, U.S. Space-Based Positioning, Navigation, and Timing Policy,

the National Cybersecurity Strategy, the National Research and Development Plan for Position, Navigation, and Timing, Federal Information Technology Acquisition Reform Act (FITARA) of 2014, and the Foundations for Evidence-Based Policy Making Act.

The FGDC and its partners have been collaborating to implement the NSDI since 1994. Although substantial progress has been made, further efforts are crucial to meeting the demands of the 21st century and maintaining global leadership in next-generation SDIs. These efforts include forging innovative partnerships, leveraging new technologies, and streamlining the development, maintenance, and integration of geospatial datasets.

Vision

The overarching vision for the NSDI is that, by 2035, the NSDI will be a seamlessly interconnected national geospatial ecosystem.

Mission

The mission of the NSDI through 2035 is to deliver highly responsive, timely, dependable, and interoperable geospatial data, applications, and services that provide knowledge on demand and actionable insights to inform decisions; address local, regional, national, and global challenges; and benefit all people.

Goals and Objectives

Goal 1—Governance: Implement National Governance

This goal aims to increase multisector nationwide participation and accountability in NSDI governance and implementation and establish and execute national oversight and management mechanisms for the NSDI. This involves setting up structures, policies, and processes to govern how the NSDI functions; establishing national priorities for geospatial data; establishing NSDI standards; and improving the processes by which geospatial data are collected, managed, shared, and used, in alignment with the NSDI core values.

National governance of the NSDI entails establishing the authority for NSDI decision making; identifying roles and responsibilities; endorsing and promoting the use of open standards, specifications, and practices; ensuring compliance with legal and regulatory frameworks; identifying and securing the investments necessary for successful implementation and maintenance; and collaborating among partners.

> **Objective 1.1. Governance and institutions:** Establish a national governance structure for the NSDI—to include all levels of government and the private sector—to develop, contribute to, and implement the NSDI, with a commitment to working together for the benefit of the Nation.
>
> > **Expected results:** An established collaborative and effective NSDI governance structure with defined authorities, roles, and responsibilities, and with representation from all sectors.
>
> **Objective 1.2. Policy and legal:** Refine the NSDI policy and legal framework to enable future implementation of the NSDI; appropriate use of geospatial technology; public-private-philanthropic partnerships; sharing, preservation, and use of geospatial data; and protection of national security, privacy, and proprietary interests.
>
> > **Expected results:** Public policy that reduces barriers to NSDI implementation, while protecting privacy and proprietary interests, ensuring security, and enabling public-private-philanthropic partnerships to advance the NSDI.

Objective 1.3. Financial: Identify and obtain the financial and other resources necessary for implementing and achieving the goals and objectives of this NSDI strategic plan through multisector investment. Resources are subject to the availability of funding.

>   **Expected results:** A resourced NSDI that is efficient, sustainable, and extensible.

Goal 2—Data and Technology: Modernize the Infrastructure and Leverage Advanced Technology

This goal aims to leverage technological innovations (for example, AI; the broader use of space-based positioning, navigation, and timing [PNT]; and alternative PNT technologies both in space and on the ground) to reduce the level of effort required to acquire, develop, manage, maintain, access, distribute, and use geospatial data through the NSDI. Application of such technologies will strengthen national resilience through responsible use of PNT services and align geospatial data within consistent, accurate, and precise geospatial coordinates defined by the National Spatial Reference System. Furthermore, this goal aims to establish comprehensive and authoritative national geospatial data that empowers informed decision making, promotes economic growth, and enhances national security and resilience.

Objective 2.1. Data: Ensure that the national geospatial data portfolio is accurate, up to date, and accessible to support critical applications for all users.

>   **Expected results:** Critical and trustworthy geospatial data that are readily available to all users, thereby ensuring an opportunity for consistent, equitable, and quality decision making. Priority national datasets include national parcels, address, buildings and structures, hydrography, imagery, utilities, elevation and bathymetry, land use, trails, roads, road electronic navigation charts, and boundary datasets utilizing the necessary framework and standards.

Objective 2.2. Innovation and research: Foster, support, and encourage investment in cutting-edge geospatial research and development. Evaluate, embrace, and enable advancements in technology and promote their rapid and responsible adoption, while ensuring that the resulting data are safe, secure, and in compliance with privacy regulations.

>   **Expected results:** Advancements in geospatial research leading to innovative applications and improved data analysis in the areas of data collection, development, and updates; autonomous mapping; self-updating maps; intelligent global search and discovery; immersive visualization; and legal and policy-compliant AI-driven data capture and decision making, as well as improved access to and use of geospatial data and information in everyday applications (for example, digital assistants, large language models, web browsers, and mobile platforms).

Objective 2.3. Standards: Make use of and participate in the forums that develop national and international consensus standards and maintain open standards, specifications, and best practices that facilitate rapid adoption of technology and data integration as well as promote local to global interoperability, data accuracy, data sharing, and reuse of the Nation's data foundation and Federal geospatial portfolio.

>   **Expected results:** Global interoperability.

Objective 2.4. Infrastructure: Maintain and evolve an interoperable geospatial ecosystem that connects users with geospatial data, maps, easy-to-use tools, models, solutions, advanced capabilities, and emerging technologies.

>   **Expected results:** A national geospatial ecosystem with a framework of findable, interoperable, standardized, accurate data from many trusted, distributed sources readily available for use by a wide variety of applications and users.

Goal 3—People: Building a Skilled and Inclusive Geospatial Workforce for a Sustainable Future

This goal recognizes that the success of the NSDI depends not only on technological capabilities and data quality but also on raising the overall awareness of the value and use of spatial thinking and analytics beyond the geospatial sector and on developing the skills, expertise, and engagement of the individuals involved in geospatial data management and utilization. This goal aims to build a skilled, engaged, and inclusive geospatial workforce that is equipped to advance and leverage the full potential of the NSDI to address complex challenges, drive innovation, and promote societal advancement.

Objective 3.1. Partnerships: Build multisectoral and multidisciplinary partnerships with Federal, State, Tribal, and local governments and the private sector, including private industry, academic institutions, and nonprofit organizations, as well as international partnerships, all of which contribute to the NSDI. This includes promoting networks and communities of practice where individuals can share knowledge, expertise, and best practices, as well as collaborate on joint projects and initiatives.

Expected results: Public, private, and philanthropic partners working together to deliver the NSDI, engage future stakeholders, and build support for the vision of the NSDI by 2035.

Objective 3.2. Capacity and education: Nurture a skilled geospatial workforce by fostering continuous learning and providing the tools and training needed to advance the NSDI. Cultivate geospatial literacy across all sectors by promoting education and skill development, starting with early exposure in middle and high schools and continuing into undergraduate and graduate education. Champion lifelong learning in the geospatial field, ensuring that the workforce remains equipped with the evolving skills and knowledge necessary to drive NSDI innovation.

Expected results: A skilled workforce capable of advancing the NSDI. A geospatially literate citizenry. Secondary, undergraduate, and graduate curricula to incorporate and include geospatial concepts and technology skills.

Objective 3.3. Communication and engagement: Actively promote the use, understanding, and value of geospatial data and technologies to individuals and businesses beyond the geospatial sector, encourage the exchange of ideas, and strengthen awareness and understanding of the NSDI and its important benefits to our Nation and the world.

Expected results: All sectors have a strong understanding of the value of the NSDI and their role in the NSDI, and are actively contributing to the NSDI. Sectors are engaged through coordinating associations, such as the member and advisory organizations within the Coalition of Geospatial Organizations (COGO), the National Tribal Geographic Information Support Center (TribalGIS), and others. All citizens have a basic understanding and awareness of the NSDI.

Core Values

The following core values and definitions guide the design, implementation, and governance of the NSDI, thus helping to promote the goals of the NSDI and enhance societal well-being:

- **Build once, use many times.** Ensuring that geospatial data are created efficiently and cost-effectively, with a focus on reusability across multiple sectors and applications, thus maximizing the data's impact and value.

- **Findability, accessibility, interoperability and reusability.** Ensuring that spatial data and related information follow the principles of FAIR (findable, accessible, interoperable, and reusable): that is, that they are easy to find; readily accessible to all partners, including government agencies, the private sector, and the public; interoperable with geospatial and statistical data; reusable across systems; and preserved for future reuse.

- **Dependability.** Ensuring highly available, responsive, and consistent services that can be integrated into operational business processes, thus building trust and expanding use.

- **Quality.** Maintaining high standards of data quality, precision, accuracy, reliability, and currency. Quality assurance processes are essential to ensure that spatial data are fit for the intended purpose and meet the needs of users.

- **Collaboration.** Fostering partnerships and collaboration among stakeholders involved in the collection or acquisition, development, management, maintenance, distribution, and use of spatial data and information.

- **Innovation.** Encouraging innovation in the collection, analysis, and application of spatial data to address emerging challenges and opportunities. Innovation drives the development of new technologies, methodologies, and applications that improve decision making, enhance societal benefits, and may save time and effort.

- **Transparency.** Promoting transparency in the management and governance of the spatial data infrastructure, including clear policies, procedures, and decision making processes. Transparency builds trust among partners, garners support, and fosters accountability.

- **Sustainability.** Ensuring the long-term sustainability of the NSDI by considering environmental, social, and economic factors in its planning, development, and operations and promoting resilience, stability, and reliability.

- **Equitable access.** Reducing barriers for underrepresented or underserved communities to use geospatial data and services that empower these communities to fully leverage geospatial information and knowledge for their health, well-being, and equity.

- **User-centric design.** Prioritizing the needs and experiences of users by developing intuitive, accessible, and user-friendly geospatial tools and services. User-centric design leads to higher adoption rates and satisfaction, ensuring that tools are continuously improved based on user feedback.

- **Data security.** Ensuring robust security measures are in place to protect geospatial data from unauthorized access, breaches, and cyber threats, thus maintaining the integrity and confidentiality of the data. Data security protects against threats, ensures compliance with legal standards, and maintains stakeholder confidence in the NSDI.

- **Data sovereignty.** Upholding the right of individuals, communities, and nations to govern their own data, thus fostering transparency, fairness, and equity in data sharing and collaboration while ensuring compliance with applicable laws, regulations, and ethical considerations.

Outlook and Trends

In the next decade, as this plan is implemented, evolving technologies and shifting priorities will demand ongoing adjustments to work plans and objectives. It will be necessary to proactively monitor and adapt to key trends across all NSDI use cases, including in the following areas:

- **Big data and analytics.** With the proliferation of sensors, satellites, and Internet of Things (IoT) devices, the volume and variety of geospatial data will continue to grow exponentially. Advanced analytics techniques that provide trusted results will be crucial for extracting actionable insights from large and complex datasets, as well as large volumes of interactions on authoritative datasets, and will be a driver for innovation in such fields as urban planning, environmental monitoring, and disaster response.

- **Advancements in technology.** Technologies such as AI, machine learning, cloud computing, and big data analytics continue to transform the way geospatial data are collected, processed, analyzed, and used. These technologies enable more accurate and timely insights from geospatial information, thus fostering innovation across various sectors.

- **Open data and collaboration.** There is a growing emphasis on open data initiatives and collaboration among government agencies and the private sector, including private industry, academic institutions, and nonprofit organizations. Open data policies and platforms will promote transparency, innovation, and knowledge sharing, and collaborative partnerships will foster the development of integrated solutions to address complex societal challenges.

- **Integration of location intelligence.** Location intelligence, which combines spatial data with traditional business data, is becoming increasingly important for informed decision making across government and industry. The NSDI will support the integration of location intelligence into business processes and decision support systems.

- **Privacy and security.** As the volume and sensitivity of geospatial data increase, ensuring privacy protection and data security will be paramount. Governments and organizations will need to implement robust cybersecurity measures, data encryption techniques, and privacy and anonymity-preserving policies and technologies to safeguard sensitive information and data integrity and to comply with regulatory and policy requirements. In addition, both training and oversight must be in place to preclude inappropriate or incorrect use of the data and information.

- **User-centric design.** There is a shift towards more human-centered design principles in the development of geospatial applications and services. This emphasis will grow and continue to be focused on enhancing user experience, accessibility, integration with generative AI, and usability to ensure that geospatial data and tools are trusted, accessible and useful to a diverse range of partners, including policymakers, researchers, businesses, and the general public.

- **Interoperability and standards.** Interoperability standards, specifications, and protocols will continue to play a crucial role in facilitating seamless data exchange and integration across national and global systems and platforms. Efforts to harmonize data formats, metadata standards, and geospatial interoperability frameworks will enhance the usability and accessibility of geospatial data, driving greater collaboration and innovation globally.

- **Geospatial data marketplaces.** The NSDI establishes a framework and technical standards for geospatial data marketplaces, allowing data providers to sell or share their geospatial datasets securely. The framework and standards facilitate access to diverse geospatial data, provide incentives for data sharing, and ensure data quality and ownership transparency.

Overall, the future of the NSDI is characterized by greater data integration, innovation, collaboration, and data-driven decision making, with technology serving as a key enabler for addressing complex societal challenges. Embracing these trends and adapting to them can help to ensure that the NSDI will continue to remain relevant to the needs of its diverse users in an increasingly interconnected and evolving world.

2035 Use Cases

By 2035, a matured and sustainable NSDI will serve a wider range of land, water, and space use cases across various sectors and disciplines that share and reuse data and services. As the NSDI advances, and new users engage and contribute, the number of use cases will expand. While new use cases will continue to emerge and some will decrease in importance, the NSDI will need to be able to support a broad range of applications. Achieving this strategic plan's objectives will improve service delivery and create opportunities for innovation in communities and businesses in current and evolving application areas, including the following:

- **Disaster response and management:** The NSDI integrates real-time satellite imagery, situational data services (for example, traffic condition or road closures), drone data, and on-ground, on-water, and within atmosphere sensors for resiliency and sustainability planning, disaster response and management, and public safety and emergency response. By providing instant updates during disasters, emergency responders can access accurate maps that highlight affected areas, thus helping to efficiently allocate response and recovery resources and plan evacuation routes effectively. Geospatial sensors and data are used to provide earthquake early warning, predict and track flooding, monitor volcanic activity, sense tsunamis, identify potential and active landslide areas, and support search and rescue missions.

- **Smart cities development:** The NSDI facilitates the development of smart cities by integrating data from various sources, such as IoT devices, urban sensors, and citizen feedback. City planners use these comprehensive data to optimize infrastructure, lighting, and water usage; manage traffic flow; and enhance public services, such as waste management, emergency response, and recreation.

- **Precision agriculture:** The NSDI enables precision agriculture by providing farmers with detailed maps of soil composition, moisture levels, crop health, and other data. By integrating satellite imagery and IoT sensor data, farmers can make data-driven decisions, optimize resource usage, and increase crop yields while minimizing environmental impact.

- **Healthcare planning and response:** The NSDI aids healthcare planning and response by mapping population demographics, healthcare facilities, and disease and pandemic outbreaks. Health authorities and governments use this information to identify high-risk areas, allocate resources, provide healthcare services availability information to citizens, and implement targeted interventions in real time, ultimately improving public health outcomes. Geospatial information supports epidemiological research, disease surveillance, water quality and quantity monitoring, and healthcare resource allocation, particularly during public health emergencies.

- **Autonomous transportation.** The NSDI supports the development of autonomous transportation systems (for example, autonomous vehicles and drones) by providing high-resolution maps enriched with real-time traffic data, road conditions, and infrastructure updates. Autonomous vehicles use these maps to navigate safely and efficiently, thus reducing crashes and congestion while enhancing mobility for all. Uncrewed aerial systems (UASs), or drones, perform high-risk tasks, such as powerline inspections, monitoring of cliff-side habitats, or high-resolution aerial mapping for infrastructure projects with reduced cost, environmental impact, and risk to human life or health.

- **Supply chain optimization.** The NSDI optimizes supply chain management by providing real-time visibility into multimodal transportation routes, transportation hubs, warehouse locations, inventory levels, and weather conditions. Companies use this information to streamline logistics, reduce transportation costs, and improve delivery efficiency, thus leading to faster and more reliable product distribution.

- **Digital twins.** The NSDI enables the development of highly detailed digital twins for the natural and built environments. Examples include digital twins of infrastructure (for example, buildings, bridges, roads, and utility networks) and the environment (for example, rivers and forests). These digital twins are virtual replicas that mirror the physical world in real-time, integrating data from IoT sensors, satellite imagery, and maintenance records and enabling real-time monitoring and predictive maintenance.

- **Scientific research and monitoring.** The NSDI enables scientists to monitor real-time land use, track changes in land cover, assess biodiversity, and manage natural resources. Geospatial information supports habitat and watershed management, and climate resilience.

- **Public and commercial development.** The NSDI supports public and commercial development by providing access to geospatial data and advanced analytics tools to design, build, and maintain infrastructure, including transportation networks, roads and bridges, solar and wind farms, environmental restoration projects, ports, subdivisions, commercial developments, public buildings, and parks. From technical engineering tools, such as computer-aided design (CAD); to location, spatial analysis, and mapping tools, such as geographic information systems (GIS); to building information modeling (BIM) systems for space modeling and management, the NSDI connects spatial technologies used throughout the project stages, including the design, build, and operate stages.

- **Infrastructure management.** The NSDI is used by civil engineers and infrastructure managers to design, maintain, and upgrade transportation networks, utilities, and public facilities. Geospatial data aid in asset inventory, condition assessment, maintenance scheduling, and infrastructure planning to ensure the reliability and resilience of critical infrastructure systems. It provides visibility into unseen areas (such as underground utility locations), and geologic information (such as for assessing building suitability, mapping mineral deposits, and evaluating underwater natural and humanmade infrastructure).

- **Natural resource management.** NSDI data are used by foresters, agriculturists, and land managers to monitor land productivity; assess soil erosion; optimize resource allocation for forestry, agriculture, and mining activities; and protect natural resources. Geospatial information aids in land-use planning, conservation planning, and sustainable resource management practices.

- **Business intelligence and market analysis.** The NSDI enhances business intelligence and market analysis, thus improving the ability of companies to make informed decisions, optimize expansion strategies, and maximize return on investment in a dynamic and competitive marketplace. Geospatial information provides insights into consumer behavior, market trends, and market analysis.

- **Next generation 9-1-1.** As envisioned, the NSDI of 2035 will enhance emergency response by enabling precise caller location tracking, even indoors or in remote areas, and providing first responders with real-time geospatial data on traffic conditions, building layouts, and nearby hazards. This capability will facilitate faster and more effective emergency response, potentially saving lives.

- **Recreation.** The NSDI provides location-based information on access, trails, and water levels; and on hiking, hunting, fishing, boating, biking, and camp sites, thus helping to ensure a safe and enjoyable experience for all outdoor enthusiasts. By integrating diverse geospatial datasets and leveraging advanced technologies, the NSDI provides citizens with the information and tools they need to make informed decisions about outdoor recreation, and helps promote safety, environmental stewardship, and enjoyment of the Nation's natural resources.

- **Commercial shipping and transshipment of cargo.** Merchant shipping entering U.S. ports underpins a great deal of the U.S. economy. These ships must safely navigate over shoals, under bridges, and past other shipping vessels and facilities to arrive alongside a pier on time. The cargo must be offloaded to precise locations to ensure that it can be onloaded to trains and trucks for further delivery throughout the country. Ensuring that all these elements are integrated into a seamless whole is key to safety of life and property while ensuring maximum efficiency and profitability.

These use case examples, although not exhaustive, demonstrate the breadth and diversity of the potential impacts that the successful implementation of this NSDI strategic plan will have. Every use case of the NSDI is entwined with the activities and needs of multiple government agencies, businesses, nongovernmental organizations, and communities and will result in shared outcomes and successes.

Next Steps

The objectives outlined in this strategic plan are ambitious. It is imperative that the Nation leverages the capabilities of all Federal, State, Tribal, and local government agencies and the private sector (including private industry, academic institutions, and nonprofit organizations) to achieve the NSDI vision. The Nation's security and economic well-being depend on the effective use of geospatial technologies, cutting-edge innovation, expert knowledge, strategic partnerships, and a dynamic workforce.

Achieving the NSDI vision is dependent on all sectors, because each one brings unique expertise, strengths, and capabilities to the NSDI. All sectors are key participants in the implementation of the NSDI and must actively participate in its implementation planning and execution. Successfully achieving the vision relies on the broad participation of all sectors to plan, program, and implement the NSDI.

Upon the approval of this strategic plan, the FGDC will begin developing an implementation plan that will include metrics and timelines for the completion of the goals and objectives outlined herein.

In compliance with Sec. 753 (c)(8) of the Geospatial Data Act of 2018, the FGDC will meet its obligations to promote and guide cooperation, by coordinating with all sectors to—

- Identify roles and responsibilities for implementing the NSDI.

- Develop a plan to identify the specific actions needed to achieve the goals and objectives outlined in the plan.

- Work with Federal agencies to develop an implementation plan that identifies the actions Federal agencies will take and the metrics and measures needed to track progress to achieve the vision of this plan.

- Collaborate with all sectors on developing implementation plan(s) for the NSDI that will include the development of metrics and measures to track progress.

- Coordinate implementation across sectors to achieve the NSDI vision.

This strategic plan provides a framework for agencies, organizations, and individuals to use when developing the specific actions they plan to take to achieve the plan's goals and objectives. These specific actions will be monitored, measured, and documented by each and become part of the collaborative implementation of the NSDI.

FGDC.GOV
FEDERAL GEOGRAPHIC DATA COMMITTEE