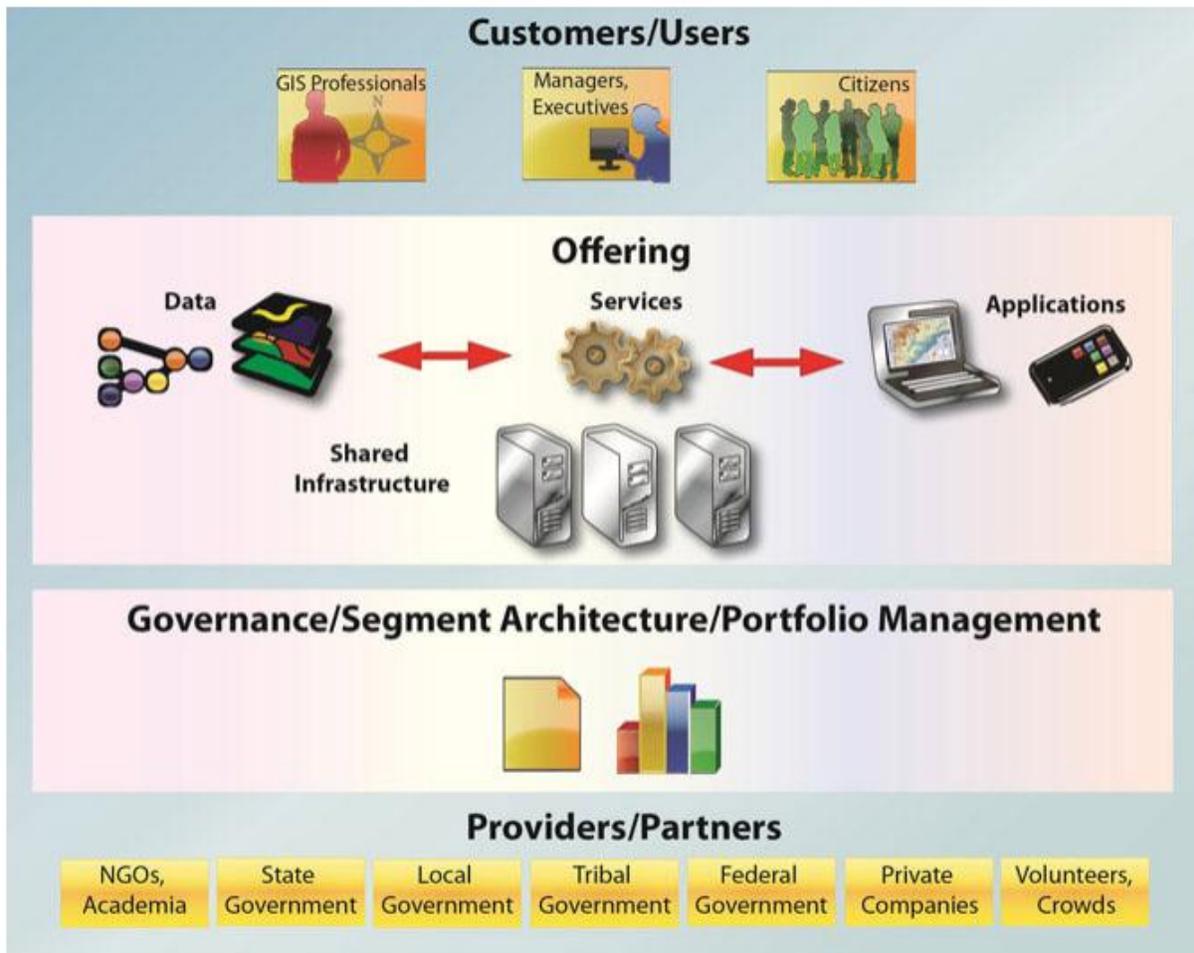


# *Innovative Strategies for Geospatial Programs and Partnerships*



A Report of the  
National Geospatial Advisory Committee

April 2012

## Vision

The Innovative Strategies for Geospatial Programs and Partnerships Report was developed by the National Geospatial Advisory Committee (NGAC) as a response to a request from the Department of the Interior and the Federal Geographic Data Committee (FGDC) to provide feedback and recommendations on how FGDC partner agencies can take the use of geospatial data and technology to a new level in the future by:

- Strategically leveraging and influencing technologies, policies, & trends;
- Fostering a data integration environment that facilitates better decision-making and supports place-based policies, and;
- Utilizing public-private partnerships and other innovative solutions to develop geospatial data, fill critical data gaps, and leverage scarce resources.

In this report, NGAC identifies opportunities and challenges for development and use of geospatial data. It also offers recommendations that could reestablish the United States as the world leader in the effective use of **Geospatial Information Services for the Nation**. After extensive deliberation, and recognizing that there has been steady improvement of coordination of geospatial information across government, we believe that the existing administrative structure, leadership positioning, lack of resources and authority severely threaten the ability of the Federal Government to successfully implement new strategies. These constraints hinder the ability to capitalize on the new opportunities offered by the Geospatial Platform and Place-Based Initiatives. To seize these opportunities, NGAC strongly believes there is a need to dramatically elevate the stature of geospatial activities across government to enable Geospatial Information Services that can empower the Nation and citizens.

Implementation and deployment of **Geospatial Information Services for the Nation**, as commonly shared data services and applications, necessitate an organizational structure that would cover the functions of program coordination, policy development, and the operational management of the Geospatial Platform. To surmount existing challenges and implement new strategies, the NGAC believes there is a clear need to reconfigure, focus, reposition, empower and authorize the FGDC to a level in the Administration whereby policy, budgetary and procurement activities are more effective than at present.

**Overarching recommendation:** The FGDC responsibilities for leadership, management and coordination of geospatial information and services across government, including continuing management of the Geospatial Platform and its supporting data, must assume a central role in the policy, budgetary, and procurement process related to geospatial programs.

**Outcome:** FGDC has greater authority, a more comprehensive funding strategy, and permanent staffing to implement a more robust, efficient, reliable, cost effective level of **Geospatial Information Services for the Nation** to support decision making.

## Challenges

The current Administration's interest in Place-Based Policy and the Geospatial Platform places the FGDC at an important crossroads. However, it is important to recognize that challenges exist. Since 1994, the FGDC has been charged with building a multi-participant and commonly shared geospatial data environment for the benefit of federal Agencies, their partners, and the general public. Numerous reports by the Government Accountability Office (GAO), National Research Council (NRC) and Congressional Research Service (CRS) and

Congressional hearings have identified problems that the FGDC has encountered in reaching this goal. Although there are many successes of adopted standards and systems, a recent CRS report finds that many challenges still exist. The CRS questions the following:

- Are Federal agencies coordinating their programs that have geospatial assets subject to OMB Circular A-16 requirements?
- Is FGDC effectively fulfilling its mission?
- Has this organizational structure worked?
- Can the Federal government account for the costs of acquiring, coordinating, and managing geospatial information?
- How well is the Federal government coordinating with the state and local entities that have an increasing stake in geospatial information?
- What is the role of the private sector?

(Source: Congressional Research Service Issues and Challenges for Federal Geospatial Information 2011 p. 2)

The NGAC believes that these long-standing issues can only be addressed through the type of administrative changes outlined in our overarching recommendation regarding the repositioning of the FGDC. We also offer the following set of recommendations that address the specific charges in the request for guidance about feedback and recommendations.

### **Specific Recommendations in Support of Overarching Recommendation**

#### **A. Strategically Leverage and Influence Technologies, Policies, and Trends**

**1. Measure and Monitor Progress with the Geospatial Platform.** A comprehensive business plan should guide the management and operation of the Geospatial Platform using the following two components. First, metrics should be used to monitor short, medium, and long-term progress in the adoption of the principles and programs of the National Spatial Data Infrastructure. Second, using an approach similar to the Federal CIO's office's [Information Technology Dashboard](#), the accomplishments and setbacks of the Geospatial Platform should be documented as it is implemented.

**Rationale and Outcome:** Metrics are essential to establish a performance baseline and to measure progress over time. Without such metrics, the Geospatial Platform will be unable to establish and sustain support from government and public. These metrics will help establish return on investment, reduce redundancy, and improve opportunities to repurpose services on the Platform. Documenting accomplishments and setbacks make it easier to share understanding of desired outcomes.

**2. Operating Formula.** Adopt a funding strategy for the Geospatial Platform that includes in-kind services for the purchase, production, and dissemination of critical geospatial data. The strategy should provide resources to participants on a multi-tier basis to encourage seeding, cultivation, and pursuit of ideas that work to achieve expected outcomes. The strategy should encourage a regular review of the Geospatial Line of Business to identify redundant data purchases and opportunities for shared licensing. Early emphasis should be placed on deploying the Geospatial Platform and an incremental deployment of services through pilot initiatives to encourage user interaction and feedback, and establish the Geospatial Platform. Later emphasis could be placed on Framework Data (cadastral, orthoimagery, elevation, geodetic control, governmental units, hydrography, and transportation) with assignment of custodial responsibility based on programmatic needs and resources.

**Rationale and Outcome:** The operating formula provides a mechanism to “get on with implementation of the Geospatial Platform”. It is important to devise innovative resourcing and funding models (for example, pooling of resources vertically and horizontally in government) to achieve capacity greater than any one organization can mobilize; consideration of fee-based levels of service above free access—sources of revenue outside of appropriations. It is important to establish an operating formula so that funding for the Geospatial Platform is clearly visible in budget and critical to public policy formulation and assessment, as this will reinforce accountability. A well-functioning operating formula will help sustain the international competitiveness of the US.

## **B. A Data Integration Environment that Facilitates Better Decision-Making and Supports Place-Based Policies**

The NGAC believes the ultimate success of the Geospatial Platform depends on the strength of the data foundation. It should be noted that new OMB Circular A-16 data themes are currently under review by the FGDC. Therefore, the NGAC stands ready to provide advice about how the themes should be represented, collected and integrated.

**3. Identification of Shared Interests in Data and Services.** A critical component of the Geospatial Platform should be a mechanism to identify redundant data creation, data gaps and common application needs. The FGDC was established to identify shared interests in geospatial data and services across the government and avoid duplication of effort. With the interest in the Geospatial Platform the FGDC needs to realize potential cost savings, create funding programs that are shared across all levels of government, facilitate cooperative agreements, act as a broker to establish less restrictive licensing arrangements, and reposition applications as shared services. Such an examination could reduce federal expenditures on geospatial data; improve the quality of the data without new funds. This effort should deploy state of the art technology to establish an easy to use executive dashboard that would use semantic linkages to identify common interests, funding, data buys and licensing opportunities. The FGDC should proactively reach out to the National States Geographic Information Council, the National Association of Counties, and other organizations representing local, state and tribal government interests to help identify opportunities that will enhance the Nation’s level of geospatial preparedness.

**Rationale and Outcome:** Identifying shared interests in data and services fosters an opportunity for team building that can reduce duplication, generate cost savings and improve product effectiveness. An application that tracks data use (like an application on Amazon.com that tracks books people purchase and view) can be used to generate information about opportunities for common data interests. Such an application can promote sharing insights about data use. Enhanced knowledge of data use provides deeper insights about the data and can foster data reuse. Improved insights will foster efficient (saving time or money) and effective (getting more out of the use) outcomes.

## **C. Public-Private Partnerships and Other Innovative Solutions to Develop Geospatial Data, Fill Critical Data Gaps, and Leverage Scarce Resources**

**4. Broader View of FGDC Partnership Programs.** Future partnership programs initiated by the FGDC should consider all other existing and relevant partnership programs, and should be designed to augment and leverage them to achieve maximum impact. Partnership activities should focus on Geospatial Platform activities that can be measured. This recommendation connects with those in recommendation section A to strategically leverage and influence technologies, policies, and trends.

**Rationale and Outcome:** Coordinating the innovative programs and partnerships will build synergy among the programs and partnerships, enabling FGDC can get more out of the effort. Coordination of efforts can result in cost savings by reducing duplicity among programs and partnerships.

**5. Assessment of Federal Interagency Partnerships.** A continuous program for assessment of partnership coordination should be implemented to promote relationships with government-wide data-providing agencies. The assessment should be based on metrics that would be used to create a report card that summarizes progress toward defined goals. Memorandums of Understanding (MOU) and Agreement (MOA) should be used to solidify common perspectives about Interagency Partnerships.

**Rationale and Outcome:** Metric based assessment and report cards would enable OMB to determine whether the FGDC is meeting its mission. Solidification of partnerships is needed to more actively engage in geospatial data issues. Formal agreements such as MOUs and MOAs provide a mechanism to do that. Follow-through on projects is more likely with solidified partnerships. For example, NGAC believes there is an urgent need for the FGDC to reach out to those federal agencies most directly involved with financial and housing issues. This should include the FBI, FDIC and SBA that license parcel data and the Consumer financial Protection Bureau that operates a geocoding service to support reporting requirements under the Home Mortgage Disclosure Act. Following an NGAC recommendation, the FGDC cadastral subcommittee conducted a highly successful 2009 workshop on the Mortgage Crisis; however, follow-up must still occur to implement an integrated geospatial approach that addresses the place-based crisis continuing to thwart the Nation's economic recovery.

**6. Outreach and Education Program.** FGDC should establish an on-going education and outreach program that develops a plan to inform agency executives on decision making, cost savings, and quality benefits of leveraging geospatial information services in their operations. The plan will assist decision makers who are in a position to demonstrate how geospatial information services can improve government's ability to meet policy objectives, address everyday mission priorities, improve quality of decision making, connect with citizens, track spending, set priorities and allocate resources.

**Rationale and Outcome:** While the general public has embraced and is dependent on mapping, routing, and location-based services, a gap exists in terms of adoption of geospatial technology to support policy level decision support. Until Agency executives grasp the value of geospatial information services technology and how it will help their agencies perform better, they will remain distant observers rather than active supporters. Once executives understand how this technology can help them they will be supporters. As more informed supporters they will be more informed to direct resources about place-based policy at all levels of government.

**Note – This paper was adopted by the NGAC on April 17, 2012**