

Business Plan for the Geospatial Platform

September 20, 2012

- REDACTED -



The Geospatial Platform



Federal Geographic Data Committee

The Federal Geographic Data Committee approved the Business Plan for the Geospatial Platform at its September 20, 2012 Steering Committee meeting. This version contains the same content except for the redaction of the pre-decisional funding estimates in the “Costs and Funding Options” section. This document is available from the FGDC website: <http://www.fgdc.gov>

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Executive Summary

The Geospatial Platform **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. The Geospatial Platform is being implemented to help agencies meet their mission needs, including communicating with and publishing data and maps to the public. The Geospatial Platform focuses on web applications that facilitate participatory information sharing, interoperability, user-centered design, and collaboration on the World Wide Web.

The *Business Plan for the Geospatial Platform (Business Plan)* complements the *Modernization Roadmap for the Geospatial Platform (Roadmap)* and the *Value Proposition for the Geospatial Platform (Value Proposition)* by serving as a “what and how” document, providing an overview of the operational elements and the organizational structure of the Geospatial Platform. It addresses important issues such as the governance framework and funding options for the Geospatial Platform. The *Business Plan* aims to provide insight into the proposed operations of the Geospatial Platform so that agency decision makers will commit to its startup, and support its growth and evolution.

The Business Plan includes the following sections:

- **Geospatial Platform Value Proposition:** provides an abridged version of the *Value Proposition* including the value and benefits of the Geospatial Platform.
- **Background:** explains initiatives of the Federal Geographic Data Committee (FGDC) preceding the Geospatial Platform.
- **Concept of Operations (ConOps):** provides an overview of the scope of the Geospatial Platform, its offerings, and how customers and users can interface with and contribute content to the Geospatial Platform.
- **Governance and Organizational Approach:** describes the Geospatial Platform’s proposed governance model and some priority roles and responsibilities for key Geospatial Platform stakeholders.
- **Funding Models and Costs:** provides an overview of anticipated costs associated with the Geospatial Platform and describes the proposed tiered cost sharing model based on usage and other funding models considered along with the advantages and disadvantages of each model. The functionality requirements for the Geospatial Platform continue to evolve, therefore, the costs shown in this section are the best estimates available at this time.
- **Risk Management:** discusses approaches to identifying and managing risk associated with the Geospatial Platform, and reporting on the status of risks identified with startup.
- **Measuring Performance:** describes an approach for performance management and developing performance metrics for the Geospatial Platform and provides an initial set of measures.

Geospatial Platform Value Proposition

Why is the Geospatial Platform Needed?¹

To Address Issues of National Importance: The Geospatial Platform can effectively support problem solving and policy formulation for the complex issues facing our Nation. Issues and events that affect the economy, employment, the environment, public health and welfare, security, and quality of life will benefit from the decision support tools, shared applications, visualization, and trusted geospatial data made available through the Geospatial Platform. Solutions developed once and made accessible through the Geospatial Platform can be reused. For instance, tools and applications developed by one agency to support hurricane response can potentially be applied to responses to floods or other natural disasters. Sharing applications and delivering trusted data through the Geospatial Platform will save time and money, as well as promote consistency. Best practices from organizations across the United States can be brought to bear as agencies address local and national issues.

To Support Decision Making: Federal agencies and their partners invest significant resources in geospatial data, services, technology, and expertise to support their business operations. Data and information resources are among the most valuable assets any agency possesses. However, policymakers and executive managers alike observe that oftentimes the data and tools they need to make decisions are not readily available in useful or intuitive forms. This can result in delayed responses, lost opportunities, and higher costs. In addition, current practices have not yielded consistent data publishing methods, leading to gaps in the availability of current and relevant geospatial data for informed decision making.

To Move Toward Shared Services: The Geospatial Platform enables the sharing of data, services, and applications across the government on a shared cloud infrastructure. This aligns with the government-wide shared services strategy², which is intended to improve return on investments, close productivity gaps, and increase communications with stakeholders.

To Meet Common Business Needs: Geospatial data, shared services, and tools also inform day-to-day Federal agency management activities, including administering grant programs, regulatory oversight, emergency preparedness and response preparations, facilities and asset management, human resource management, and financial and performance management. Data, shared services, and tools to support these cross-government functions frequently exist within multiple agencies, when they should be developed once and shared across agencies and levels of government, thereby saving money and promoting consistent approaches. The Geospatial Platform will leverage existing investments and avoid unnecessary costs associated with duplication of efforts.

¹ See the full Value Proposition for the Geospatial Platform (*Value Proposition*) at <http://resources.geoplatform.gov/documents>.

² See OMB's Shared Services Strategy at http://www.cio.gov/documents/Shared_Services_Strategy.pdf

How Will the Geospatial Platform Promote Effective Management of Federal Geospatial Assets?

Portfolio Management of Federal geospatial assets will be a key aspect in the development of the Geospatial Platform. The Geospatial Platform will leverage the new geospatial Portfolio Management processes being implemented through the *Office of Management and Budget (OMB) Circular A-16 Supplemental Guidance*³ (*A-16 Supplemental Guidance*), which directs Federal agencies to adopt a Portfolio Management approach for geospatial information and defines a recommended Portfolio Management process.

Federal geospatial Portfolio Management is the management and monitoring of geospatial data assets and investments to most effectively and efficiently utilize geospatial data to meet and address the business needs and priorities of the Nation. As part of the Portfolio Management process, geospatial assets across the government will be inventoried and evaluated for strengths and weaknesses. The portfolio will be analyzed to determine asset investment recommendations to support national priorities. Portfolio Management is an action, decision, and goal-based approach to asset management. The Geospatial Platform is the service and delivery mechanism for the Federal geospatial portfolio assets, and the integration point for the shared leveraging of information from, and with, other State, local, Tribal, and non-governmental information sources. The Portfolio Management approach provides:

- An accurate and accountable inventory of Federal geospatial portfolio assets.
- Improved government accountability and transparency, by assessing existing assets and investments to reduce duplication.
- Improved data quality through lifecycle evaluations for content quality and fitness for use.
- Data management practices to ensure national data are high-quality, dependable, consistent, and available to agencies.
- Increased return on existing geospatial investments by promoting the reuse of data, applications, and tools.

What are the Benefits of the Geospatial Platform?

The Geospatial Platform will provide value through improved service capabilities and through operational efficiencies, including:

- Improving mission outcomes.
- Increasing return on existing investments.
- Increasing government efficiency.
- Increasing access to shared data, services, applications, and infrastructure.

³ <http://www.fgdc.gov/policyandplanning/a-16/key-roles-and-responsibilities-a16-supplemental.pdf>

- Reducing redundancy.
- Increasing service delivery.
- Decreasing development and management costs.
- Increasing quality.
- Increasing usability.

Background

In 1990, the OMB established the FGDC, an interagency committee composed of representatives from the Executive Office of the President and Cabinet-level and independent Federal agencies. Over the last two decades, the FGDC led several geospatial initiatives that helped form the vision, and provided the foundational policies, strategies, and content for, the Geospatial Platform.

These FGDC-led initiatives include: 1) The Geospatial Clearinghouse Network⁴; 2) Geospatial One Stop (GOS); and 3) The Geospatial Line of Business (Geospatial LoB). The development of the *Business Plan* and evolution of the operational Geospatial Platform provides an opportunity to document lessons learned from preceding geospatial initiatives and incorporate them into the development of the Geospatial Platform. Descriptions of these preceding initiatives and lessons learned are included in Appendix F. Figure 1 summarizes the progression of the initiatives.



Figure 1. Progression of Geospatial Initiatives Led by the FGDC

The Geospatial Platform: Bringing the Building Blocks Together

In 2010, FGDC member agencies came together to operationalize the planning, policies, and best practices for managing geospatial assets. The need for a comprehensive Geospatial Platform received Executive Office support through the President’s Fiscal Year (FY) 2011 Budget, which called upon Federal geospatial data managers to,

“creat[e] a Geospatial Platform to support...place-based initiatives...facilitated by improving the governance framework to address the requirements of State, local and tribal agencies, Administration policy, and agency mission objectives. The Geospatial Platform will explore opportunities for increased collaboration...with an

⁴ <http://www.fgdc.gov/dataandservices>

emphasis on reuse of architectural standards and technology, ultimately increasing access to geospatial data.”⁵

In December 2010, the U.S. Chief Information Officer and Office of the White House released the “25 Point Implementation Plan to Reform Federal Information Technology Management” (the 25 Point Implementation Plan) that outlined ways that Federal agencies could increase return on investment, eliminate waste and duplication, and improve the effectiveness of IT solutions.

The FGDC, with input from the geospatial community at-large, articulated the high-level “what” vision for the Geospatial Platform in the *Roadmap Version 4*⁶, published in March 2011 and the “why” in the *Value Proposition*, published in November 2011. In November 2011, FGDC also launched the Geospatial Platform Version 1.

Most recently, OMB released the “Federal Information Technology Shared Services Strategy” (May 2012) which reinforced the strategies outlined within the 25 Point Implementation Plan and requires agencies to use a shared approach to IT service delivery. The Geospatial Platform will help agencies meet the requirements and expectations outlined in both of these initiatives.

Finally, on May 25, 2012, OMB released “Digital Government: Building a 21st Century Platform to Better Serve the American People” that requires the Federal government to embrace the opportunity for more innovation with less costs. This publication prescribes a digital strategy that will improve the management and storage of information, leverage government data more effectively, allow customers and users to shape the information they consume, and ensure innovation occurs in a safe and secure environment for digital services.

⁵ President’s Budget, Fiscal Year 2011, “Analytical Perspectives, Special Topics, Information Technology” (p. 325) (www.whitehouse.gov/omb/budget/fy2011/assets/topics.pdf)

⁶ <http://resources.geoplatform.gov/documents>

Concept of Operations

What are the Building Blocks of the Geospatial Platform?

The Geospatial Platform is comprised of two discrete categories with several related components:

Offering: the suite of assets delivered through the Geospatial Platform that comprises the Geospatial Platform Portfolio, including:

- Data, services, and applications.
- Infrastructure.

Supporting Processes: the business controls necessary to ensure the Geospatial Platform offering is delivered, including:

- Segment architecture.
- Governance.
- Portfolio Management.
- Customer service.

Each category and its components are presented in Figure 2 and defined below.

The Geospatial Platform At a Glance

The Geospatial Platform is:

- A “one-stop shop” to deliver trusted, nationally consistent data and services.
- A portal for discovery of geospatial data, services, and applications (www.geoplatform.gov).
- A publishing framework for geospatial assets.
- A place where partners can host data and analytical services.
- A forum for communities to form, collaborate, and share common geospatial assets.
- Built within the Federal cloud computing infrastructure.

The Geospatial Platform Supports:

- Open and interoperable standards to facilitate sharing and use of geospatial assets.
- Organization and maintenance of a federated network of organizations that contribute content.
- OMB Circular A-16 Portfolio Management to ensure trusted content and funding for priority data, services, and applications.
- Brokering of enterprise geospatial acquisitions and service level agreements for the Federal Government.
- Identifying requirements for and encouraging the development of shared geospatial data, services, and applications for the Federal Government.
- Acquisition of standards-based cloud services with Federal Information Security Management Act (FISMA) security accreditation.
- The future tracking of Federal geospatial investments.

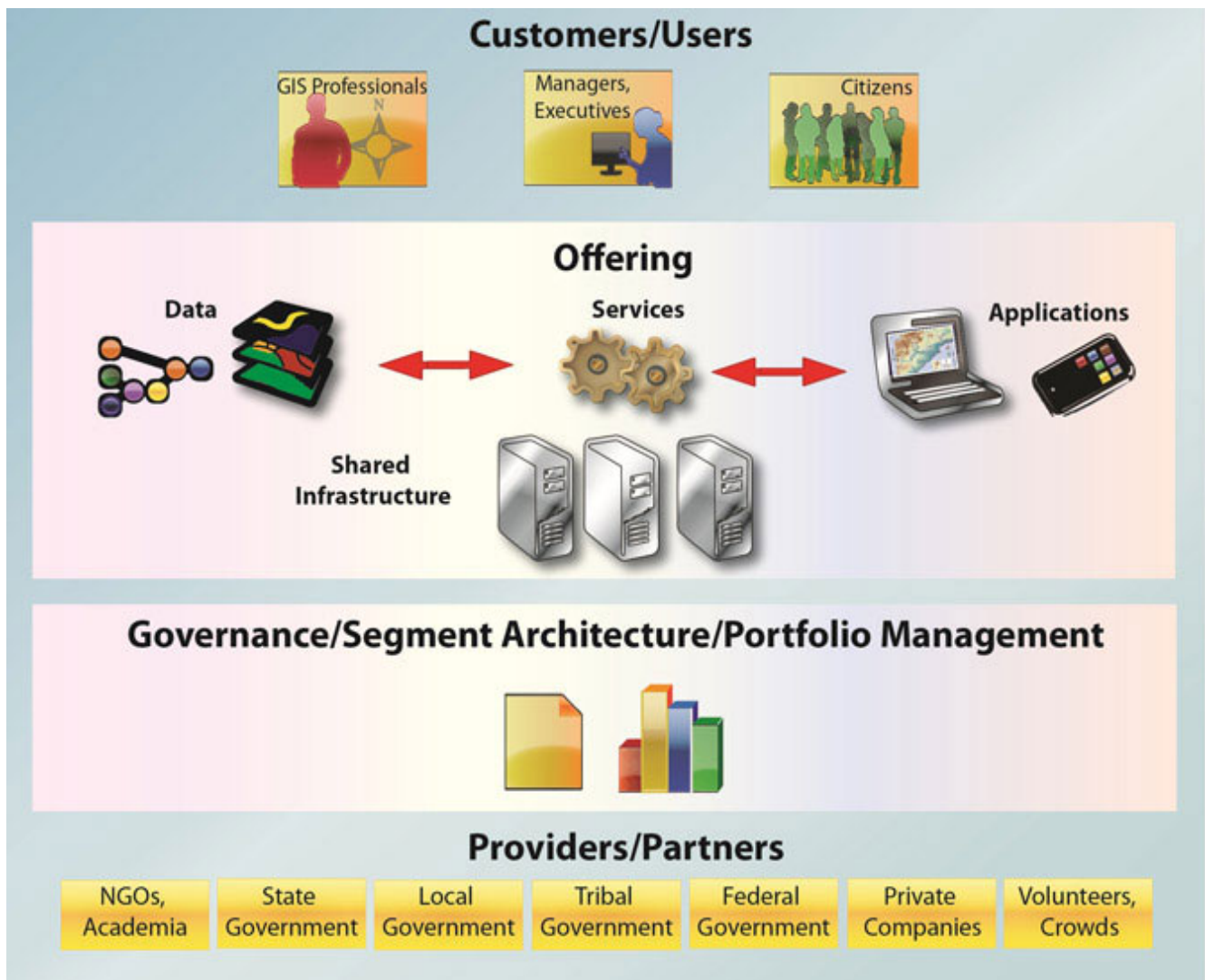


Figure 2. The Geospatial Platform Offering – Conceptual Model

Offering

The Geospatial Platform offering is defined as the suite of geospatial assets delivered to customers, including geospatial data, services, applications, and infrastructure. When viewed together, this suite of assets can be viewed and managed as a set of inter-related portfolios.

Data: includes individual datasets, integrated data (such as base maps), or other products derived from multiple datasets. These assets include foundational geospatial data that can be trusted, used reliably and shared across organizations. Governments at all levels or, in some instances non-governmental organizations, can provide data to the Geospatial Platform.

The Geospatial Platform web-based services will help customers discover desired geospatial data, through an interface with Data.gov.

While all data will be discoverable, the Geospatial Platform will promote only data that meet the Geospatial Platform portfolio inclusion criteria (to be developed). Data that are included in the portfolio will be “tagged” as trusted Geospatial Platform assets. The Geospatial Platform portfolio data, and all its assets, will be managed using lifecycle management practices.

Services: provide a consistent, easily accessible way to access geospatial capabilities (e.g., access to data, geocoding, geoprocessing services, metadata management, etc.). The Geospatial Platform will offer access to services that can be used by multiple agencies as stand-alone capabilities or as building blocks to develop applications.

Applications: consist of a set of tools or capabilities that enable a user to exploit geospatial information through visualization, query, reporting, and spatial analysis to achieve their results. Applications may leverage one or more different services to conduct analysis and return results to the user. The Geospatial Platform will offer access to applications that can be downloaded, customized, and used to meet customer business needs.

Infrastructure: includes both physical and logical technology components that can be leveraged by multiple customers.

The physical shared infrastructure includes (but is not limited to):

- Data centers and data repositories, including the cloud.
- Networks, including Internet and intranets.
- Host platforms for data, services, and applications, including portals and services.

The logical shared infrastructure includes (but is not limited to):

- Network routing services.
- Access control and security.

Supporting Processes

Segment Architecture: provides a process-driven approach to designing and deploying large computing components in the context of a broader enterprise, which results in a design that can be readily deployed in an actionable solution architecture by partners that collaborate on geospatial data and services.

Governance: processes by which parties with a stake in the Geospatial Platform are afforded an opportunity to shape its structure, functions, and capabilities. The ultimate vision is to be a national system with shared governance.

Phased Implementation: The Geospatial Platform will be developed and deployed in phases to maximize limited resources. As an example, the phases might include and be sequenced as follows: (1) focus on Federal agencies, (2) open the Geospatial Platform to other governmental agencies, (3) open the Geospatial Platform to private sector partners. Access by the general public may be possible throughout all phases or it could be a phase 4 priority.

Portfolio Management: set of processes by which the Geospatial Platform will manage geospatial assets that are contained within the offering. The Geospatial Platform will strategically manage existing geospatial assets as a portfolio to maximize business value, solve problems and increase accountability and transparency across Federal, State, local, Tribal and private partners.

Customer Service: services offered to customers will include technical geospatial services, as well as support services (e.g. acquisition, requirements development). The Managing Partner will be responsible for collecting and evaluating customer feedback, and providing users with a channel to raise questions or concerns as well as suggestions on how to improve the performance of the Geospatial Platform and its offerings.

Geospatial resources and capabilities delivered through the Geospatial Platform are discoverable at www.geoplatform.gov as seen in Figure 3.

Offering “Trusted” Assets through a Trusted Partner Network

A key differentiating feature of the Geospatial Platform is that it provides customers access to a broad range of geospatial assets, including content from different governments (Federal, State, local, Tribal) and private organizations through the www.geoplatform.gov website. This is distinctly different from Data.gov that provides access to exclusively Federal assets. The Geospatial Platform will embrace open standards and an open architecture to ensure a high level of interoperability across existing platforms, databases, development languages, and applications of all contributing organizations.



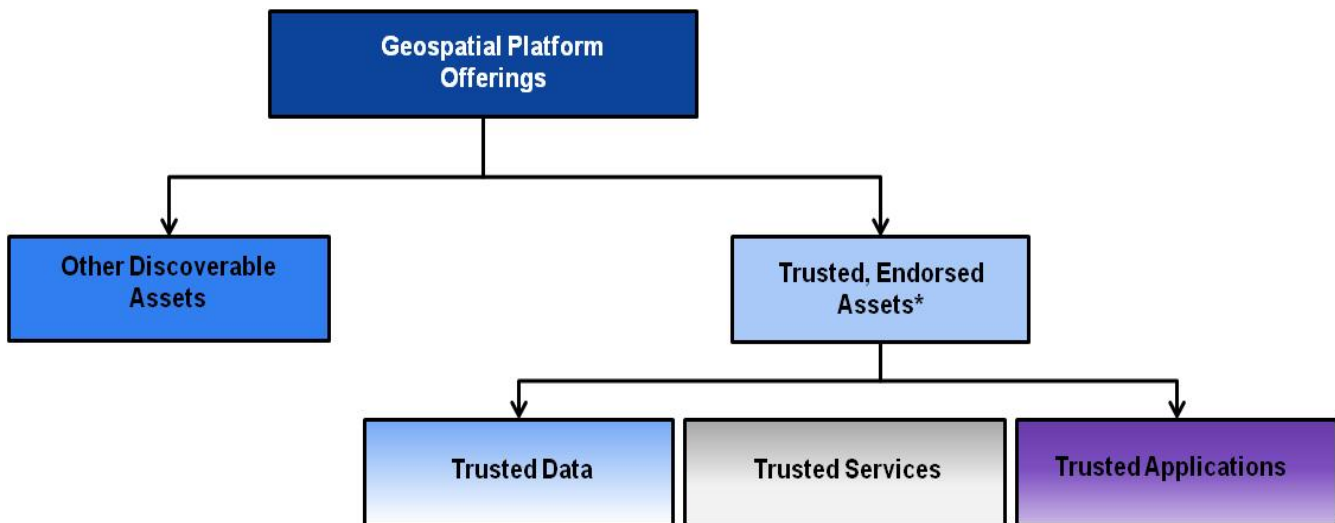
Figure 3. Screen Shot of www.geoplatform.gov Website

The Geospatial Platform’s broad discovery function is a valuable service for Geographic Information System (GIS) professionals who can discern the utility of geospatial resources for specific purposes, but this wealth of content may be overwhelming to users without prior knowledge of GIS, or program managers, who are seeking trusted data, services, or applications. To address this challenge, the Geospatial Platform is organized to highlight a subset of the overall content as “trusted” data, services, and applications. This additional value added by the Geospatial Platform guides users to quality assured offerings that can be used with confidence. These “trusted” offerings would come from existing products, services and collaboration efforts of programs such as *The National Map*, the National Wetlands Inventory, and the National Aerial Imagery Program.

The benefits of highlighting trusted data, services, and applications include the ability to:

1. Provide decision makers with content that they can use with confidence to support daily functions and important issues.
2. Provide consistency of base maps and services that can be used by multiple organizations to address complex issues.
3. Eliminate the need to choose from redundant geospatial resources by providing access to preferred data, maps and services.

The full range of types of Geospatial Platform offerings is depicted in Figure 4.



** These are contributed by the Trusted Partner Network that includes Federal and Non-Federal organizations*

Figure 4. Overview of Geospatial Platform Offerings

To categorize content published to the Geospatial Platform as trusted data requires careful application of quality assurance methods. The Geospatial Platform model will foster the development and growth of a network of “trusted partners” from all levels of government and the private sector that will contribute content. These trusted partners are organizations that meet defined criteria for developing and delivering trusted content. Criteria to ascertain suitable trusted

partner organizations will be developed in concert with key stakeholders working through the FGDC, the National Geospatial Advisory Committee (NGAC), and other partner organizations. Examples of criteria for trusted data might include:

- Availability of a business plan to support maintenance and future development.
- Adequately resourced and refreshed at appropriate intervals.
- Relevant and readily accessible.
- Have completed metadata.
- Meet appropriate FGDC and other applicable standards.
- Established partner with the National Map, Homeland Infrastructure Foundation-Level Data (HIFLD), or other existing interagency collaboration.

Upon completion of the development of criteria to define trusted content, the Geospatial Platform will publish the criteria as guidance on www.geoplatform.gov and interested organizations can take action to become trusted partners of the Platform. As the capabilities of the Geospatial Platform mature, existing services can be added for delivery to end users. An example would be the composite basemap service from The National Map, which could be exposed through the Geospatial Platform and used as a foundational capability for map creation. Any features of the Geospatial Platform are envisioned to be developed using open standards and will be compliant with requirements of the Open Geospatial Consortium (OGC).

User Functionality, Roles, and Access Management

Throughout the summer and fall of 2011, the FGDC member agencies worked collaboratively to develop and launch version 1 of the www.geoplatform.gov website. This site is a key component of the overall Geospatial Platform, and will allow users from across the Federal Government, partner organizations, and the public to discover and use a wide range of geospatial information. The Geospatial Platform offers users data as a service (DaaS), software as a service (SaaS), infrastructure as a service (IaaS), and platform as a service (PaaS) capabilities as depicted in Figure 5 and described in Appendix G.

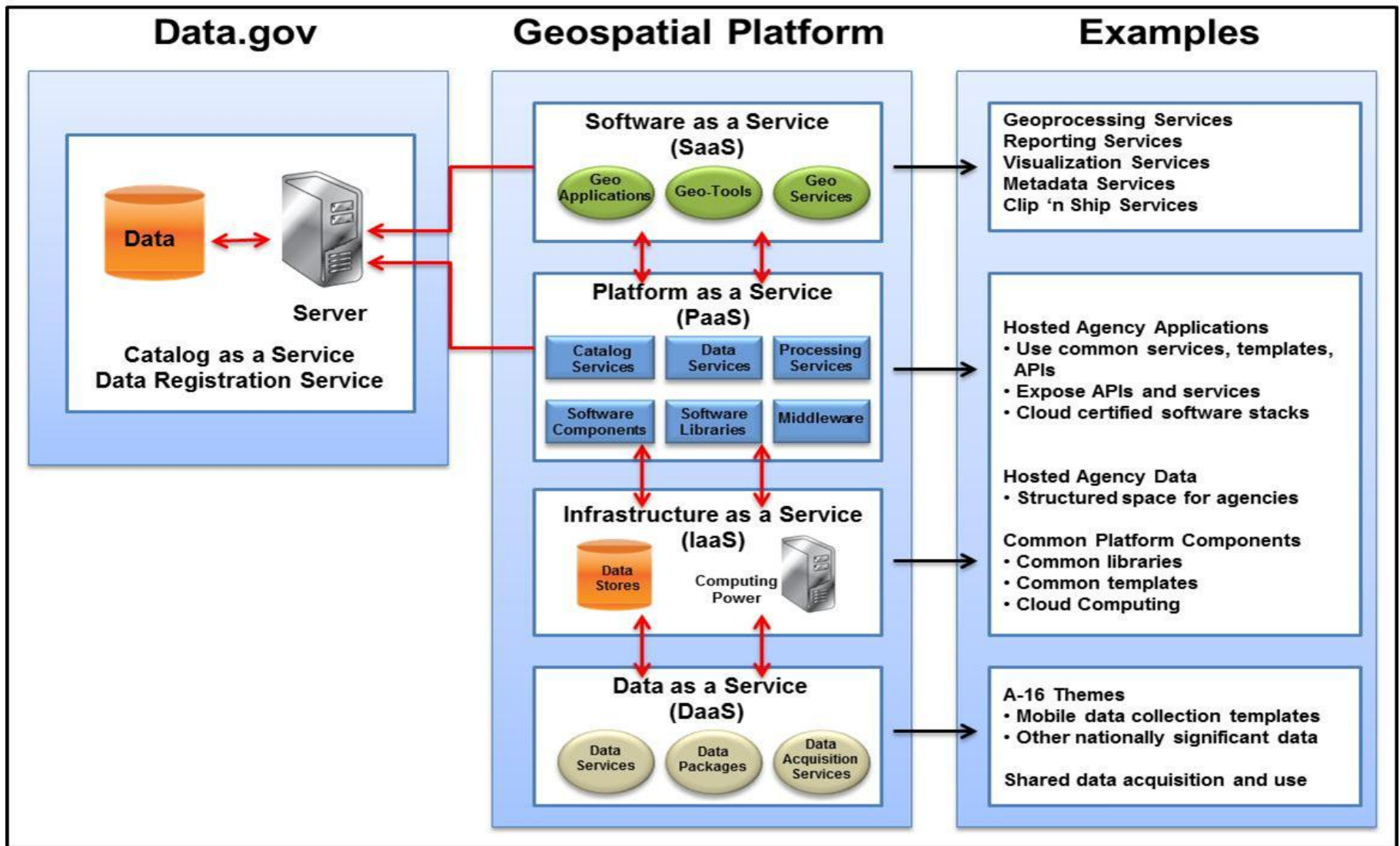


Figure 5. The Geospatial Platform Technical Model

The major functions of www.geoplatform.gov are to:

1. Enable Federal agencies and their partners to publish and catalog interoperable web services for all geospatial data, including data identified as “nationally significant” under the auspices of the *A-16 Supplemental Guidance*;
2. Enable Federal agencies and their partners to develop and share geospatial services and applications through the use of shared application hosting infrastructure and source code sharing capabilities;
3. Offer a mechanism through which Federal agencies can access and/or procure commercially licensed geospatial data and tools by leveraging shared infrastructure and common procurement mechanisms; and
4. Empower a new generation of geospatial collaboration by enabling users of all types to develop and share maps with data from trusted content along with user-contributed data.

To enable these different capabilities fully in the site, a range of user accounts with varying privileges and access rights will be implemented. Additionally, policies and procedures to support the provisioning and use of these accounts will be established and implemented.

The ConOps for User Functionality describes these requirements at a high level and is included in Appendix H.

Governance and Organizational Approach

Governance Framework

The Geospatial Platform is an Executive Branch initiative that requires guidance, oversight, and coordination involving a broad range of Federal organizations and external partners. *OMB Circular A-16* established the FGDC as the coordinating body for Federal geospatial activities. The Geospatial Platform's governance framework utilizes the existing FGDC structure as its foundation. The Geospatial Platform provides a National and Federal operational capability where governmental, non-governmental, private, and public data, services and applications are visualized together to inform and address national and regional issues. The existing FGDC structure requires the establishment of additional coordination, operational oversight, and service execution bodies in order to effectively support the Geospatial Platform's collaborative operational capabilities.

The Geospatial Platform's governance framework outlines the roles and responsibilities of the associated governing bodies, the Managing Partner, and their decision making authorities relative to the operations of the Geospatial Platform. Key functions related to the delivery of the Geospatial Platform capabilities include: management of business and information requirements from Federal and non-Federal governmental agencies; management of data and interoperability standards, design and implementation of the Geospatial Platform interface and services, measurement and management of performance, and the establishment of operational business rules.

The governance framework is designed to address significant drivers that are crucial to the success of the Geospatial Platform:

- Creating an integrated place-based collaborative framework for addressing public policy challenges.
- Improving the framework to address the requirements of Federal, State, local, regional, and Tribal agencies.
- Prioritizing investments based on the most widely shared and most significant business needs of government.
- Enhancing interagency and intergovernmental cooperation.
- Saving taxpayers money through more effective leveraging of intergovernmental activities.
- Increasing transparency and accountability.
- Acknowledging and aligning varying roles, capabilities, and interests of parties with a stake in the Geospatial Platform.

Geospatial Platform Conceptual Governance Model

The conceptual governance model for the Geospatial Platform (depicted in Figure 6) includes two primary components, ***Geospatial Governance and Policy Guidance*** and ***Geospatial Platform Operations***.

The *Geospatial Governance and Policy Guidance* component will utilize the existing FGDC framework for governance and policy development. The FGDC, through the FGDC Steering Committee and Executive Committee, will provide overall policy guidance for operations of the Geospatial Platform. External policy advice and recommendations will be provided through the National Geospatial Advisory Committee (NGAC).

The *Geospatial Platform Operations* component describes the operational management framework for the Geospatial Platform. The daily operational responsibility for the Geospatial Platform will reside with the Managing Partner, which will coordinate and execute interagency and intergovernmental agreements and partnerships at an operational level with appropriate partners. The Managing Partner will provide operational management of the Geospatial Platform and its common data, services, applications, and shared infrastructure on behalf of FGDC member agencies and trusted partners. The Managing Partner will directly oversee any contractor support utilized to operate the Geospatial Platform.

A new Geospatial Platform Oversight Body will serve as the management oversight body and change control board for the Geospatial Platform. The Geospatial Platform Oversight Body will include representatives from the FGDC, Agency Geospatial Information Officers (GIOs), the Federal Chief Information Officers (CIO) Council, and from the Office of Science and Technology Policy. The Oversight Body will also include involvement from State, local, regional, and Tribal governments.

Technical Support Team(s) will be organized as needed to address technical development issues. Event Support Team(s) will be established on as-needed basis to address technical issues related to utilizing the Geospatial Platform to address specific business issues or events.

Existing committees and teams identified within the governance framework are governed by their respective charters. Newly created entities, such as the Managing Partner and Geospatial Platform Oversight Body, will develop charters and operating procedures in consultation with appropriate partners and stakeholders.

Geospatial Platform – Conceptual Governance Model

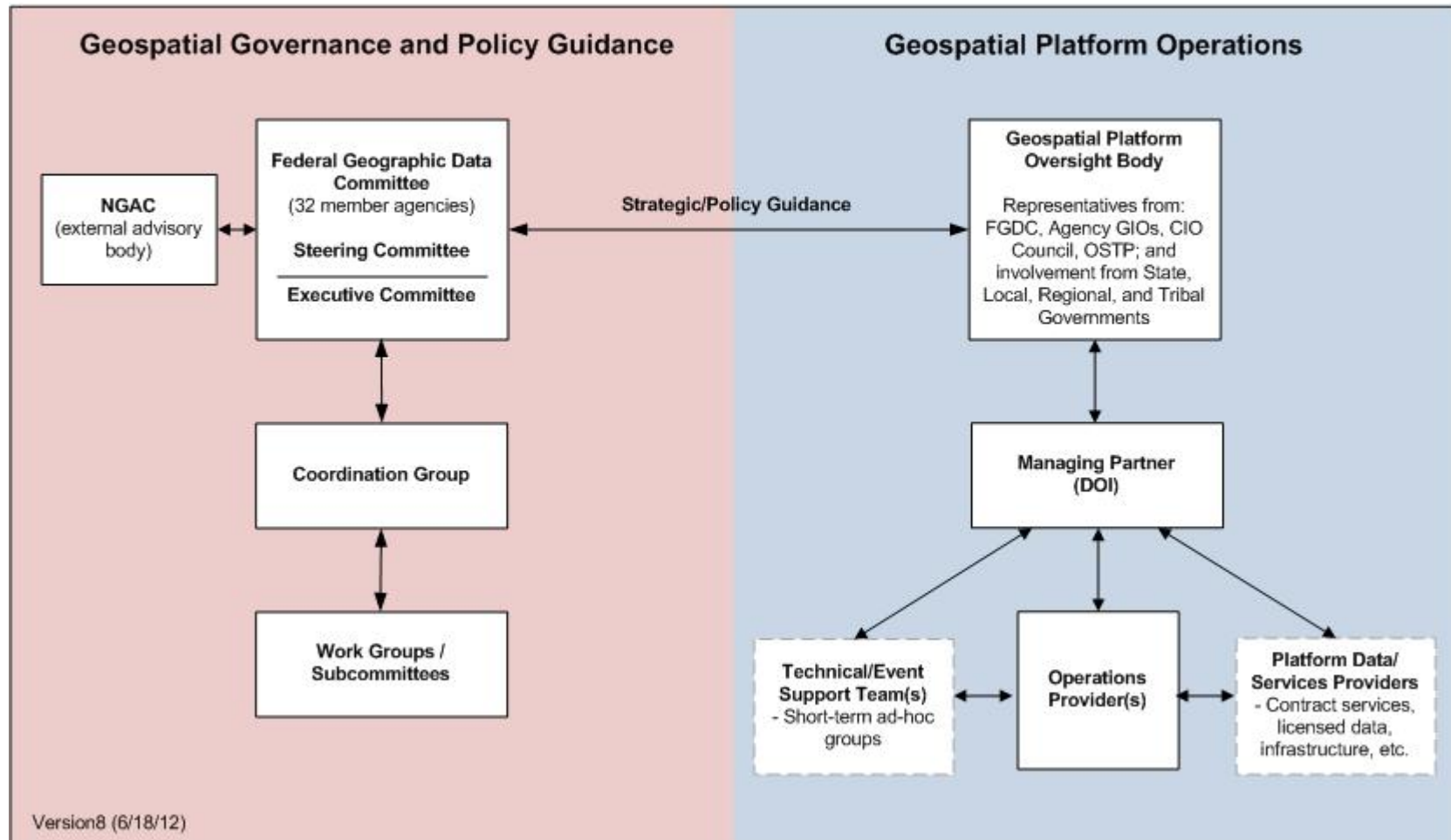


Figure 6. Geospatial Platform Conceptual Governance Model

Roles and Responsibilities Table

Table 1 summarizes the individual entities that comprise the overall Geospatial Platform governance framework.

Table 1. Geospatial Platform Governance Framework

| Group/Role | Summary of Roles and Responsibilities |
|---|--|
| FGDC Chair/Vice Chair | The FGDC Chair (Secretary of the Interior or designee) and FGDC Vice Chair (OMB Deputy Director for Management or designee) provides policy-level leadership and strategic direction for the Geospatial Platform. This includes coordination with appropriate policy-level officials within the Executive Office of the President, within FGDC agencies, and with related Federal Management Councils (CIO Council, etc.). The Chair and Vice Chair will collaborate with the Geospatial Platform Oversight Body to facilitate a shared investment strategy for the continuing operation and support of the Geospatial Platform. |
| FGDC Steering Committee | The FGDC Steering Committee will set overall strategic direction for the Geospatial Platform. The members of the Steering Committee, in their roles as Senior Agency Officials for Geospatial Information ⁷ (SAOGIs) within their agencies, will oversee and coordinate their agencies' participation in the Geospatial Platform. |
| FGDC Executive Committee | The FGDC Executive Committee, a subset of the Steering Committee, which includes agencies with major geospatial responsibilities, will provide guidance and recommendations to the FGDC Chair, Vice-Chair, and broader Steering Committee membership on Geospatial Platform operational issues that require Steering Committee direction. Within the FGDC governance structure, the Executive Committee will serve as the primary point of contact with the Geospatial Platform Oversight Body and the Managing Partner. Members of the Executive Committee may also serve as members of the Oversight Body. The Executive Committee will determine which policy-level issues should be elevated to the FGDC Steering Committee for review and action. |
| National Geospatial Advisory Committee | The NGAC, a Federal Advisory Committee that reports to the FGDC Chair and provides advice on national geospatial policy issues, will be a primary mechanism to obtain external advice and recommendations on policy and management issues related to the Geospatial Platform. NGAC members represent a wide cross-section of organizations across the geospatial community, and can provide feedback representing multiple external perspectives. Requests for feedback or advice on Geospatial Platform issues will be channeled through the FGDC Chair, and managed by the FGDC Secretariat. |
| FGDC Coordination Group | The FGDC Coordination Group will review and help shape the requirements for the Geospatial Platform based on agency-specific needs and priorities and will assess technical feasibility of potential offerings. The Coordination Group will be the primary operational representatives to ensure their agencies are fulfilling their roles. |

⁷ <http://georgewbush-whitehouse.archives.gov/omb/memoranda/fy2006/m06-07.pdf>

| Group/Role | Summary of Roles and Responsibilities |
|--|---|
| Geospatial Platform Oversight Body | <p>The Geospatial Platform Oversight Body will provide management guidance on behalf of FGDC member agencies to the Managing Partner for Geospatial Platform operations. The Oversight Body will include representatives from the FGDC, agency GIOs, members of the Federal CIO Council, and the Office of Science and Technology Policy (OSTP). The Oversight Body will also include involvement from State, local, regional, and Tribal governments. The Geospatial Platform Oversight Body will be the focal point for integrating and providing interagency and intergovernmental requirements and conveying operational guidance to the Managing Partner, based on overall policy guidance provided through the FGDC Steering Committee. The chairmanship of the Oversight Body will rotate among the members. The Managing Partner will rely on the Geospatial Platform Oversight Body to provide timely resolution to management, governance, and coordination issues as they arise. The Geospatial Platform Oversight Body will be responsible for the following:</p> <ul style="list-style-type: none"> • Providing guidance and advice on operational and management issues as required. • Managing a process to collect, integrate, prioritize, and recommend requirements from Federal agencies and non-Federal partners. • Providing requirements, feedback, validation of service effectiveness, and funding guidance to the Managing Partner. • Ensuring that the Geospatial Platform’s business rules are enforced by the Managing Partner through standardized reporting processes. • Receiving and evaluating reports from the Managing Partner on the Geospatial Platform’s usage, costs, capacities, and other operational metrics and providing that information to FGDC committees and partner agencies for consideration in investment and lifecycle decisions. • Collaborating with the CIO Council’s Shared Services Subcommittee and other management bodies as needed. |
| Managing Partner | <p>The Managing Partner will be responsible for managing the operations of the Geospatial Platform, based upon the strategic direction provided by the FGDC Steering Committee and Executive Committee through the Geospatial Platform Oversight Body. The Managing Partner will be responsible for the following functions:</p> <ul style="list-style-type: none"> • Administering and maintaining website infrastructure. • Developing and implementing contracting strategy. • Overseeing and managing service level agreements (SLAs) related to Geospatial Platform services and provision. • Developing and implementing a risk management strategy. • Developing and implementing a communications and outreach strategy. • Establishing a Program Management Office (PMO) function to manage day-to-day operations of the Geospatial Platform, including monitoring and managing all aspects of Capital Planning and Investment Control including cost, schedule, risk, and budget; contract management; preparing required management reports; requirements management; and operational-level interaction with Federal agencies, FGDC bodies, and external partners. |
| National Geospatial Data Asset (NGDA) Theme Leads | <p>The NGDA Theme Leads will coordinate and oversee the strategic planning and implementation of datasets under the purview of the data themes they manage.</p> |

| Group/Role | Summary of Roles and Responsibilities |
|---|---|
| | Portfolio Management for NGDA Themes and associated NGDA Datasets is closely tied to the Geospatial Platform, a primary interagency service delivery mechanism for the NGDA data services. NGDA Theme Leads will develop the requirements for the annual NGDA Theme Report, as described in the <i>A-16 Supplemental Guidance</i> . |
| Technical Support Teams/ Event Support Teams | <p><u>Technical Support Team(s)</u> will be organized as needed to evaluate technical development issues, service capabilities, and other technical issues. These teams may include government staff, agency contract staff, and non-Federal partners. Their purpose is to help evaluate technical capabilities/solutions while minimizing overall Geospatial Platform costs.</p> <p><u>Event Support Team(s)</u> will be established as needed to provide timely provision of Geospatial Platform capabilities and services in response to specific business issues or events. These teams may include government staff, agency contract staff, and non-Federal partners. The teams will help establish collaboration spaces within the Geospatial Platform focused on addressing specific events or issues. These members would be knowledgeable about the Geospatial Platform’s capabilities, operations, and resources and will work with agency subject matter experts to identify and establish connections to data services, base maps, information feeds, and other services as needed.</p> |

Governance Roles and Responsibilities

The following provides additional detail on several key aspects of the Geospatial Platform governance approach.

Managing Partner

The Managing Partner will be responsible for managing the operations of the Geospatial Platform, based upon strategic guidance provided through the Geospatial Platform Oversight Body on behalf of the FGDC Steering Committee. The role of the Managing Partner will be based upon best business practices for interagency project management, and will build upon lessons learned from similar interagency initiatives and partnerships.

The Managing Partner will coordinate the Geospatial Platform’s activities and develop, deploy, operate, and manage the offering. The Managing Partner needs full-time resources to carry out its functions. It is anticipated that the Managing Partner will establish a PMO function to carry out these responsibilities. The Managing Partner will be responsible for establishing and managing relationships with partners, facilitating requirements analyses, customer relationship management, and outreach and marketing efforts. The Managing Partner should have decision making authority on Geospatial Platform content, based upon guidelines developed and approved through FGDC processes.

Significant criteria for a successful Managing Partner should include the following:

- Leadership commitment and support;
- Credibility with the geospatial stakeholder community;
- Technical competency related to geospatial technology and information technology management;
- Project management / Project Management Professional (PMP) capabilities;
- Contracting expertise and capacity, legal authority to accept multi-agency funding;
- Ability to negotiate and manage formal partner relationships (contracts, service level agreements, etc.);
- Customer relationship management capabilities;
- Ability to meet or exceed operational support levels;
- Capability to conduct geospatial requirements analyses; and
- Capacity to scale-up as needed.

Designation of the Managing Partner

The role of the Managing Partner is critical to the successful implementation of the Geospatial Platform. Over the course of the development of this plan, there has been extensive dialogue and analysis of the roles, responsibilities, and options for the designation of the Managing Partner. This dialogue has involved the FGDC Steering Committee, Executive Committee and Coordination Group, senior leadership at the Department of the Interior and OMB, the CIO Council, and external input from the National Geospatial Advisory Committee.

At the January 2012 meeting of the FGDC Steering Committee, the Executive Committee was tasked with developing recommendations for designation of the Managing Partner and a funding strategy for the Geospatial Platform. The FGDC community has engaged in extensive dialogue about the roles, responsibilities and designation of the managing partner.

At the April 2012 meeting of the FGDC Steering Committee, based upon the deliberations that had taken place during the development of this plan, the FGDC Chair and Executive Committee recommended that the Department of the Interior be designated as the operational Managing Partner for the Geospatial Platform. This role would be a follow-on to Interior's role as the Managing Partner for the Geospatial Line of Business initiative. Policy leadership for the Geospatial Platform will be provided through the existing FGDC governance structure, led by the Steering Committee. The new Geospatial Platform Oversight Body, as described earlier in this plan, will provide management oversight of the operations of the Geospatial Platform. The minutes from the April 2012 Steering Committee meeting indicate the following:

“The Steering Committee concurred with the proposed governance model. The governance

model includes a new Geospatial Platform Oversight Body, which will have representatives from the FGDC Executive Committee, Agency Geospatial Information Officers, the CIO Council, and the Office of Science and Technology Policy. The Oversight Body will also include involvement from State/Local/Regional/Tribal Governments.

The Steering Committee recommended that the Department of Interior (DOI) serve as the Geospatial Platform managing partner.”

In addition, as described in the cost and funding section of the plan, FGDC partner agencies may contribute in-kind services and staff (technical expertise, project management, outreach/communications, etc.) to help support the activities of the Managing Partner.

The FGDC Secretariat will continue to coordinate the governance components of the Geospatial Platform. This will include managing the relationships and decision making processes involving the FGDC Chair/Vice Chair, Steering Committee/Executive Committee, Coordination Group, Geospatial Platform Oversight Body, Managing Partner, and external partners/stakeholders (including the NGAC). The FGDC Secretariat will also continue its roles of coordinating Portfolio Management processes and supporting the development of geospatial standards processes.

Agencies

Agencies will be the key partners responsible for populating the Geospatial Platform with high value geospatial data and tools. Agencies’ functional roles related to the Geospatial Platform are described below:

Senior Agency Officials for Geospatial Information (SAOGIs), with the support of agency FGDC Coordination Group members, will ensure that appropriate parts of their organizations jointly coordinate and support Geospatial Platform requirements. Agencies are encouraged to vet Geospatial Platform requirements internally. To accomplish this goal, agencies should involve key mission, business, and organizational areas in assessing potential datasets that can be made available for public dissemination through the Geospatial Platform. Agencies should vet their requirements, as appropriate, through the Geospatial Platform Working Group (once established).

Agencies are the source of the Federal data posted to the Geospatial Platform and are therefore responsible for offering data, services, and applications that are suitable (based on criteria and business rules to be developed) for posting on the Geospatial Platform. As they select datasets for the Geospatial Platform, agencies will need to ensure the data meet required quality standards.

Agencies are responsible for ensuring that the theme leads and dataset managers for particular data assets complete the required metadata for each dataset, service, and application being publicized through the Geospatial Platform. Agencies are responsible for cataloging and understanding their geospatial data assets and ensuring data quality. Agencies are encouraged to engage their enterprise architecture programs to formally catalog their geospatial data assets, determine which sources are authoritative, and evaluate adherence to information quality guidelines.

The FGDC will provide agencies with tools and training on how to catalogue their data properly.

Agencies retain the responsibility for managing their own mission specific data and providing adequate technical and/or metadata documentation. When these data are deemed “nationally significant” this role will be carried out by NGDA Theme Leads and Dataset Managers within the context of their particular missions.

National Geospatial Data Asset (NGDA) Theme Leads and Dataset Managers

As described in the *A-16 Supplemental Guidance*⁸, NGDA Theme Leads provide interdepartmental leadership and coordination at the NGDA Theme level. They work with NGDA Dataset Managers whom have datasets that align to their theme to develop standards and provide guidance related to dataset development, requirements, and relationships. NGDA Themes have datasets that align to them based on close thematic relationships, e.g. wetlands dataset is aligned to the Water-Inland Theme. The NGDA Theme Lead, or designee, chairs the NGDA Theme’s Thematic Committee and manages the annual process of providing NGDA Dataset collaboration and funding recommendations to the FGDC Steering Committee for those NGDA Datasets within their NGDA Theme. Additionally, the NGDA Theme Lead reports to the Executive NGDA Theme Champion and the FGDC Coordination Group on the NGDA Theme’s activities and investments (both current and planned).

NGDA Dataset Managers provide coordination and standards for NGDA Datasets at a national level. NGDA Dataset Managers provide information to their NGDA Theme Lead for management and reporting.

These roles and responsibilities are essential for successful NGDA Portfolio Management and providing trusted data as a service (DaaS) offerings through the Geospatial Platform. For more information on Portfolio Management roles and responsibilities, please see the *A-16 Supplemental Guidance* and Reference Document: Roles and Responsibilities.⁹ The Geospatial Platform is a primary interagency service delivery mechanism for NGDA data services.

Involvement of External Partners

Partnerships with State and local government organizations are integral to the long-term success of the Geospatial Platform because local data are often critical to support sound decisions. Developing mechanisms for non-Federal stakeholders to participate in Geospatial Platform governance, publish resources to the Geospatial Platform, and adopt standards to ensure quality information will require ongoing collaboration. The FGDC and Managing Partner will work with professional associations, such as the National Association of State Chief Information Officers (NASCIO), the National States Geographic Information Council (NSGIC), and the National Association of Counties (NACO) representatives, as well as with the NGAC, to develop partnership support mechanisms for

⁸ <http://www.fgdc.gov/policyandplanning/a-16/omb-circular-a16-supplemental-guidance>

⁹ <http://www.fgdc.gov/policyandplanning/a-16/key-roles-and-responsibilities-a16-supplemental.pdf>

management and technical issues related to State and local government involvement in the Geospatial Platform. It is anticipated that some of these support mechanisms will need to take into account public/private partnerships in relation to data and other service activities that may be performed or supported by private entities. In addition, the Geospatial Platform Working Group will provide a forum for identifying Federal and non-Federal agency requirements for common data, services, applications, and shared infrastructure for the Geospatial Platform.

Governance of Ensuring Trusted Data, Services, and Applications

Relationship to Portfolio Management

Federal geospatial Portfolio Management is the management and monitoring of geospatial data assets and investments to facilitate effective and efficient use of geospatial data to meet and address the business needs and priorities of the Nation. Geospatial Portfolio Management is an essential component of the implementation of the *A-16 Supplemental Guidance*. As part of the Portfolio Management process, geospatial assets across the government will be inventoried and evaluated for strengths and weaknesses utilizing metrics and assessment reporting. The portfolio will be analyzed to determine asset investment recommendations to support national priorities. Portfolio Management is an action, decision, and goal-based approach to asset management. The Geospatial Platform will be a critical service and delivery mechanism for the Federal geospatial portfolio assets, and an integration point for the shared leveraging of information from, and with, other State, local, Tribal, and non-governmental information sources. The Portfolio Management approach provides:

- An accurate and accountable inventory of geospatial portfolio assets.
- Improved government accountability and transparency, by assessing existing assets and investments to reduce duplication and promote interoperability.
- Improved usability because of the increased understanding of what the data are and are not.
- Improved data quality through lifecycle evaluations for content quality and fitness for use as described in the *A-16 Supplemental Guidance*.
- Data management practices to ensure national data are high quality, dependable, consistent, and available to agencies.
- Increased return on existing geospatial investments by promoting the reuse of data, applications, and tools, executed through the Geospatial Platform.

The Geospatial Platform offering (as previously described in the Concept of Operations) is broader than data, and includes services and applications. These additional offerings can also benefit from the use of Portfolio Management. Over time, the FGDC will develop and adopt Portfolio Management techniques and processes addressing the entire suite of offerings for implementation by the Managing Partner.

Costs and Funding Options

Introduction

This section provides information on startup costs that have been expended in FY 2011 and projected through FY 2015. Costs are explained in terms of common cost factors – that is, the functions that need to be performed and the purchases that need to be made over time – to ensure the Geospatial Platform can continue to serve agencies and their partners far into the future.

Equally important to the cost of the Geospatial Platform is the model through which funding will be made available. This section describes three options that have been considered for funding the Geospatial Platform, as well as interim and long-term strategies. This section also describes the preferred alternative that has been identified by the FGDC Steering Committee.

As the Federal geospatial community is well aware, progress and technology-enabled evolution have been the hallmarks of the discipline since the early 1990's. The high-level emphases placed on geospatial data demonstrates their importance to government work across many organizations, missions, and disciplines, and has led to several initiatives aimed at ensuring community coalescence and data interoperability. As Federal geospatial stewards have learned more, and as new technology has presented new opportunities, the community has responded well and quickly in transitioning to each new initiative and capability.

Figure 7 shows the evolution of initiatives over the last two decades that have helped to organize the geospatial community around common goals. This history of collaboration places the geospatial community squarely at the forefront as the Federal government moves toward a shared services environment, not only for the buying power such a move creates for commodity purchases, but for accomplishment of agency missions. The community has supported each new initiative in its governance, funding, and operation using a variety of models for sharing responsibility. Agencies are currently engaged in activities in support of the Geospatial LoB and the Geospatial Platform, and are well positioned to leverage these activities to move toward Geospatial Shared Services. The options for sharing funding and responsibility presented in this section build upon our experience with previous initiatives and outline the pros and cons of each approach. The funding models being considered are designed to incorporate the best features and lessons learned from previous models. Ultimately, the winner is the American public as duplicative endeavors diminish and developing and providing geospatial data, services, and capabilities become increasingly efficient.



Figure 7. Progress and Evolution of Federal Geospatial Initiatives

Costs

Accurate cost and schedule estimates are as critical to the development, maintenance, and growth of the Geospatial Platform as defining the scope and purpose of the program, as derived from stakeholder requirements and expectations. With this information as a baseline, the Managing Partner is well positioned to develop a full business case and justification for the Geospatial Platform to be introduced as a major investment for Fiscal Year (FY) 2014. The information presented herein provides a high-level summary of costs incurred in FY 2011, budgeted costs for FY 2012 and FY 2013, and projected costs for FY 2014 and FY 2015.

FY 2013 represents a transition period where the Managing Partner, along with a growing partner network, will move from start-up and proof-of-concept to an operational Geospatial Platform. This transition period will see the online Geospatial Platform system move from a relatively small project managed and tracked through the Geospatial Line of Business investment to a major investment in its own right, assuming responsibility and accountability for reporting not only what funds are expended, but *how* they are expended. As with every investment of this magnitude, this will require the strategies, timelines, staffing, and funding needed to evolve and sustain the Geospatial Platform. But unlike many investments, the cross-organizational nature of the Geospatial Platform also requires the input and agreement of many Federal agencies on the critical components of cost, scope, schedule, and level of service.

Ongoing maintenance and expansion of the Geospatial Platform beyond the transition period will rely on estimating long-term costs associated with meeting stakeholder expectations and evolving stakeholder requirements. The Managing Partner will undertake a requirements analysis in FY 2012- FY 2013 to ensure understanding of the necessary core components of the fully implemented Geospatial Platform. Once these expectations and requirements are integrated fully into planned Geospatial Platform enhancements, the Managing Partner will be better positioned to submit a full budget request, including a description of the proposed funding model associated with long-term operations and maintenance.

While funds will not be spent in exactly the same way from year to year, there are broad categories of expenditures that will remain constant. These categories are:

- *Program Management*: This includes the planned and actual non-IT costs associated with organizing, convening, and operating an interagency body that is charged with developing strategies (to be implemented by the Managing Partner and others as required) that ensure the Geospatial Platform meets Federal goals for shared services. In estimating this cost, we have specifically excluded the work provided in-kind by the agency representatives who generously provide their time and expertise to ensure success. We also have excluded the time and efforts of agency employees who, while their work may advance the Geospatial Platform, it also may be said to be just as relevant to their own agency mission. In this way, the Geospatial Platform is not unduly burdened by a sizable price tag, nor are we unrealistic about cost savings and avoidance enabled by the Geospatial Platform for work that would be done regardless of its existence. These in-kind contributions also represent an opportunity for the Geospatial Platform to leverage other work taking place within agencies, leading to a return on this investment that is robust and expected to grow. A full cost-benefit analysis is in progress and will be provided as part of the capital planning (CPIC) process in the FY 2014 budget cycle. Table 2, below, shows a best-available-estimate of the costs to develop a fully functioning Geospatial Platform. This estimate will evolve as requirements are better understood. Included in the cost of program management are the following factors:
 - Administration costs including acquisition/contract support and management;
 - Support to the PMO (documentation and reports, analysis of directives, portfolio management, manage Service Level Agreements);
 - Support for performance accountability;
 - Support for Geospatial Platform Governance (meeting support, logistics, action item tracking);
 - Support partners and stakeholders (strategic planning, outreach and communication, monitor and track requests from partners, develop and conduct training);
 - Service contract costs associated with program management;
 - Other costs for purchase of necessary supplies, travel (including local), and other incidental costs.

- *Information Technology*: Creation of a new technological capability is accomplished in three phases of the life cycle including 1) planning; 2) development / modernization / enhancements (DME); and 3) ongoing operations and maintenance, also called steady state operations. The IT costs of building the Geospatial Platform include the following types of costs in each phase:
 - Cloud storage and infrastructure costs (hardware);
 - Software costs (including purchases, modifications if required, and licenses);
 - Service contract costs (technical support, development, configuration management, Operations & Maintenance (O&M), help desk, documentation, evaluation of new technology, etc.);
 - Business intelligence/analytics (usage statistics, establish and support portfolio management tool/s);

- Rent, communication and utilities (if specific to the Geospatial Platform);
- Other relevant costs;
- Government full time equivalent (FTE) travel (local and non-local); and
- Government FTE costs (technical coordination, security, contract/acquisition costs, user support/help desk (unless supplied under contract), project management tracking and reporting (capital planning support), and other inherently governmental functions as needed.

Table 2. Geospatial Platform Costs (REDACTED)

| GEOSPATIAL PLATFORM PROJECTED COSTS AND SHORTFALLS | | | | | | | | | |
|--|----------|----------|-----------|---------------------|----------|-------------------------|-------|-----------|-----------|
| Fiscal Years | 2011 | 2012 | | | 2013 | | | 2014 | 2015 |
| Cost Elements | Expended | Required | Available | Delta ¹⁰ | Required | Available ¹¹ | Delta | Projected | Projected |
| PROG. MGT. COST¹² | | | | | | | | | |
| FTEs ¹³ | | | | | | | | | |
| Service Contract ¹⁴ | | | | | | | | | |
| Travel | | | | | | | | | |
| Other | | | | | | | | | |
| Subtotal | | | | | | | | | |
| IT COST¹⁵ | | | | | | | | | |
| FTEs ¹⁶ | | | | | | | | | |
| Travel | | | | | | | | | |
| Hardware | | | | | | | | | |
| Software | | | | | | | | | |
| Service Contract ¹⁷ | | | | | | | | | |
| Rent/Comm/Utilities | | | | | | | | | |
| Other | | | | | | | | | |
| Subtotal | | | | | | | | | |
| Total | | | | | | | | | |

¹⁰ Delta columns show the difference between the estimated required cost to perform all tasks and the available budget.

¹¹ Available column represents Geospatial LOB joint funding upon agreement of the agencies.

¹² Program Management Cost refers to the cost of performing programmatic activities required to develop, operate, and maintain the Geospatial Platform.

¹³ Program Management FTEs include those engaged in the overall management of the Geospatial Platform effort including development and coordination of the Trusted Partner Network, PMO, communication and outreach, and management of contracts. Cost represents fully burdened salaries that are covered by the FGDC Secretariat budget, working on Platform activities. This does not include work provided in-kind by partner agencies.

¹⁴ Costs for 2011 and 2012 were funded through the existing Geospatial Line of Business service contract.

¹⁵ IT Cost refers to costs associated with the technical development of the online implementation of the Geospatial Platform (www.geoplatform.gov).

¹⁶ IT FTEs include technical coordination, security, and Capital Planning and Investment Control (CPIC) management. Cost represents fully burdened salaries that are covered by the FGDC Secretariat budget, working on Platform activities. This does not include work provided in-kind by partner agencies.

¹⁷ REDACTED

The lifecycle phases described above often overlap. For example, when initial development of a basic system is completed and is in O&M, the investment team will likely be planning for enhancements to be implemented the following year, and possibly overseeing enhancements defined in the previous year. Such is the case for the Geospatial Platform. Geospatial Platform Version 1 was designed and built as a prototype, and has been used as a proof of concept that demonstrates a keen level of interest and participation across government and beyond. This version went live on November 1, 2011 (FY 2012). To implement enhancement requests, the investment team already is considering how to prioritize stakeholder requirements and the level of effort that can be undertaken in the next year. For this reason, the Geospatial Platform will enter the CPIC process as a mixed life cycle investment in FY 2014.

Establishing the Geospatial Platform Version 1 required leveraging of existing resources and identification of new resources including: executing planned project activities of the Geospatial LoB; engagement of a contractor as developer of the operational Geospatial Platform; and developing a partnership with the General Services Administration (GSA) to execute and manage that contract. With the exception of funding the contract, much of the work done on the Geospatial Platform to date has been enabled through in-kind contributions from FGDC member agencies. Primarily, these in-kind elements have been in the form of FTEs contributing their time and expertise. It is anticipated that leveraging such in-kind contributions will always be a part of the funding strategy for the Geospatial Platform. However, as the Geospatial Platform grows, some of that in-kind support will need to be shifted to funded positions to ensure the sustainability of the investment. Both contracted FTE and Federal agency in-kind FTE (from across the FGDC agencies) will be required and utilized to support the Geospatial Platform operations. Table 3 shows the value of in-kind services (in FTEs) received or expected in each year.

The bottom line Table 3 shows the leveraging ratio for the Geospatial Platform, derived by dividing the value of the in-kind services by the total cost in dollars. This value is being factored into the cost benefit analysis that is now underway, and represents a significant and ongoing portion of the return that will be realized on the Geospatial Platform investment.

The leveraging ratios in Table 3 demonstrate that for every dollar spent to build the Geospatial Platform, additional value is being added without specific cost to the investment. This additional value is projected to decline slightly as budgeted costs increase, providing greater stability to the investment since in-kind services are generally provided on a time-available basis and cannot always be counted upon to remain as projected. **Note that this table and discussion pertain only to in-kind value added by FTEs.** The overall return on investment for the Geospatial Platform is expected to grow over time due to the cost savings and cost avoidance that will be realized by agencies as more services become available through the Geospatial Platform.

Table 3. Anticipated Leveraging Ratio for Each Year Projected through FY 2015 (REDACTED)

| Anticipated leveraging ratio for each year projected through FY 2015* | | | | | |
|---|------|------|------|------|------|
| In-Kind | 2011 | 2012 | 2013 | 2014 | 2015 |
| In-Kind FTEs Value | | | | | |
| FTE Costs | | | | | |
| Leveraged against costs | | | | | |

*Shown in thousands dollars

Funding Options

A number of options exist for providing the funds necessary to build, operate, and maintain the Geospatial Platform to a level of functionality wanted and needed by the agencies. While a large number of models were explored, this section details the three models deemed by the FGDC member agencies to be the most feasible, and describes the option recommended by the FGDC Executive Committee.

Option One: Single Agency Appropriation

Funding the ongoing enhancement, operation and maintenance of the Geospatial Platform by directing appropriated funds to a single agency (most likely the Managing Partner) would authorize a definitive annual budget to be allocated to various baselines and planned activities. Funds may be designated as multi-year or no-year to ensure their availability over time and maximize flexibility in expenditures, or working capital funds may be used to achieve similar ends.

Within the Geospatial Platform governance structure, the Managing Partner would be authorized to expend the funds for the agreed-upon activities and ongoing operations of the Geospatial Platform. Figure 8 outlines the advantages and disadvantages of the Single Agency Appropriation Model.

| SINGLE AGENCY APPROPRIATION | |
|--|--|
| Advantages | Disadvantages |
| <ul style="list-style-type: none"> Agency commitment Dedicated, directed allocation of funding Expedited payment processing and execution of new tasks Least risk in terms of availability of funding when it is needed Facilitates better cost tracking and reporting (i.e., EVM) since all funding will be managed in a single agency's FMS Least expensive option to administer Reduces uncertainties associated with multiple funding sources | <ul style="list-style-type: none"> Stakeholders may perceived they have limited input Continued commitment dependent upon a single agency's priorities Lack of dependency on partner funding may result in lower/slower Managing Partner responsiveness to partners' requirements |

Figure 8. Single Agency Appropriation Pros and Cons

Option Two: Equal Cost Sharing

Under a cost-sharing model, the data, services, and applications available on the Geospatial Platform would be paid for by pooling funds from individual FGDC member agencies. These funds, which would be transferred to the Managing Partner from the other agencies, would be used to pay for agreed-upon, planned activities and ongoing operations of the Geospatial Platform.

Under this model, FGDC member agencies would each provide an equal amount of funds to support the costs, and in return would have unlimited access to the data and technology assets of the Geospatial Platform. Other Federal and non-Federal partners would be invited to provide content and feedback on the Geospatial Platform. Figure 9 provides a list of advantages and disadvantages of the Equal Cost-Sharing Model.

Option Three: Tiered Cost Sharing

As with the Equal Cost Sharing Model, the data, services, and applications available on the Geospatial Platform would be paid for by pooling funds from individual FGDC member agencies, which these agencies would redirect to the Managing Partner. In this model, the amount of funding provided by each agency is based on an algorithm (to be developed) that considers organization size, mission, geospatial investment expenditures, and current geospatial capabilities. The FGDC member agencies will be grouped into multiple tiers, with a reduced funding requirement for each successive tier based on a minimum requirement for the lowest tier. This model was used for Geospatial One Stop.

For example, Tier 1 agencies would pay \$X. Tier 2 through Tier 4 would pay a fraction of \$X based on the algorithm. Collectively, agency contributions comprise the pool of funding for Geospatial Platform ongoing operations. Figure 10 shows the advantages and disadvantages of the Tiered Cost Sharing Model.

FGDC Steering Committee Preferred Option: Tiered Cost Sharing

At the April 2012 meeting of the FGDC Steering Committee, the group reviewed and discussed the funding options. The FGDC Chair and Executive Committee recommended adoption of the tiered cost sharing model (Option Three). Based upon analysis and discussion of the options described above, the Steering Committee concurred with this approach. The minutes from the April 2012 Steering Committee meeting indicate the following:

“The Steering Committee concurred that a tiered, shared funding strategy should be used to fund the Geospatial Platform operations and Program Management Office (PMO) activities,

| EQUAL COST SHARING | |
|---|---|
| Advantages | Disadvantages |
| <ul style="list-style-type: none"> Shared responsibilities – multiple agencies are accountable for progress Generates quantifiable benefits (ROI) of equal value for all agencies | <ul style="list-style-type: none"> Non-funding partner (customer) requirements may never attain priority status Cost-sharing partners may have unequal levels of usage Requirements specific to one cost-sharing partner may be met sooner (through functionality enhancements) than those of another, although their contributions are equal Loss of a partner may substantially increase funding requirements of remaining partners No single point of accountability Risk of Managing Partner not receiving partner funding in a timely manner |

Figure 9. Equal Cost Sharing Pros and Cons

| TIERED COST SHARING | |
|---|---|
| Advantages | Disadvantages |
| <ul style="list-style-type: none"> Partner funding contributions are based on projected usage and benefit to each Generates quantifiable benefits (ROI) equal to the level of each agency's contribution Agency usage can be tracked to ensure assignment to appropriate tier the following year | <ul style="list-style-type: none"> Lower funding or non-funding partner (customer) requirements may never attain priority status No single point of accountability Risk of Managing Partner not receiving partner funding in a timely manner |

Figure 10. Tiered Cost Sharing Pros and Cons

starting in FY 2014. The Steering Committee agreed with a suggestion that the funding allocations include both a primary contribution and a potential reserve contribution to cover unforeseen contingencies.”

Considerations for selecting the tiered cost sharing model include the following:

- Provides a broad level of ownership and participation across the FGDC agencies in the Geospatial Platform;
- Parallels the existing funding model used for the Geospatial Line of Business (although the per-agency costs may change);
- The process for soliciting, collecting, and applying the funds is already in place;
- Reflects the intent of the Shared Services approach.

The planned levels of investment per agency under the preferred model are displayed in Table 2, Geospatial Platform Costs.

Potential Additional Sources of Funding

Additional models or supplementary approaches for funding the Geospatial Platform may be considered in the future to enhance its overall utility and cost effectiveness. These approaches may include the following:

- *Fee-for-Service*: generates revenue by requiring users to pay for access to specific content of the Geospatial Platform.
- *Subscription Program*: charging a lump-sum for accessing the Geospatial Platform offerings.
- *In-Kind Contributions*: voluntary, non-cash contribution that can be assigned a cash value (donated time, space, labor, and materials).
- *Public-Private Partnerships*: cooperative contractual agreements between the Federal Government and one or more private sector companies.

Fees collected from customers for use of the Geospatial Platform through subscription or fee for service might be retained to reduce the overall cost sharing required for the following year’s planned enhancements and operations.

Risk Management

For the purpose of this *Business Plan*, risk is defined herein as **an uncertain event or condition that, if it occurs, has a positive or negative effect on at least one project objective such as time, cost, scope or quality.**¹⁸ The Geospatial Platform has developed this risk management plan to 1) document the organizational approach to risk management; 2) document the objective assessment and evaluation of identified risks; and 3) establish the process for monitoring and control of those risks. The risk register (Appendix B) is a listing of all active risks, their ratings and proposed mitigation strategies. This register is considered to be a living document, which will be updated throughout the lifecycle of the Geospatial Platform with risks that have been identified and assessed. The Geospatial Platform’s risk management approach is consistent with the approach to risk undertaken for all projects and activities and past initiatives of the FGDC. The Managing Partner will consult with the Geospatial Oversight Body when practical prior to implementing the risk management strategy.

Identifying and Assessing Risk

The Managing Partner will engage participants in a continuous risk identification and assessment process in order to minimize the risk – and the cost – of the investment to the American public. When not properly managed, the risk of IT projects can have significant impact on performance.

Conscientious application of a consistent approach to risk management will minimize risk by identifying risks as early as possible, analyzing them based on an honest assessment, developing a risk management strategy with specific mitigations, and controlling and reporting risks.

The Geospatial Platform’s risk management approach includes the following core processes

- Identification of potential risks.
- Assessment/evaluation of potential risks.
- Continuous monitoring and controlling of risks.
- Strategies for managing risk.

“40 percent or more of endeavors with significant IT components are cancelled before completion. Of the remaining projects, **33 percent** are challenged by time and cost **overruns**, some due to changes in scope. Overall, **failed and challenged projects cost an estimated \$1.2 trillion annually** in the United States alone.”

¹⁸ American National Standards Institute. (2011, August 30). Retrieved from ANSI eStandards Store: <http://webstore.ansi.org/RecordDetail.aspx?sku=ANSI%2fPMI+99%2f001%2f2008>

Crane, G. (2011). *Annual Cost of Project Failure*. Retrieved November 7, 2011, from The Papercut Project Manager: <http://edge.papercutpm.com/annual-cost-of-project-failure/>

Identification of Potential Risks. The risk identification process is continuous and will proceed over the lifetime of the project, considering risks in a number of categories as they become relevant in each phase of the system development lifecycle. Some risks identified by the Managing Partner are characteristic of development efforts in general, but some are specific to the Geospatial Platform. As a risk becomes irrelevant due to progress through the lifecycle or other circumstance, it will be moved from the active register to an historic record.

Assessment/Evaluation of Potential Risks. Once the Managing Partner identifies risk factors, those risks are documented in a risk assessment worksheet (Appendix C) then grouped by category. The risk assessment worksheet serves as a mechanism for assigning a quantitative score that assists in balancing the overall project risk burden and is updated at least quarterly as part of the risk monitoring and control process. A Program Evaluation Review Technique (PERT) Analysis is one common technique for determining and quantifying risk scores.

Continuous Monitoring and Control of Risks. Risk monitoring and control will be an ongoing process throughout the life of the Geospatial Platform development project. The purpose of this process is to determine if initial risks are still valid, whether assessments are accurate, whether mitigation and/or avoidance strategies have been effective, and to track risk trends. This monitoring and control process will help to validate the efficiency of this risk management approach.

Development of Strategies for Managing Risk. There are four valid and generally accepted methods for managing and responding to risk. At least one of following strategies will be implemented for each risk. These strategies are

- *Avoid:* the process of determining if there is a feasible way to change a method or activity to eliminate the potential pitfall or risk; this is the preferred strategy. The rationale for this decision is that a risk that does not occur cannot influence the project. It is important to note that many if not most risks cannot be avoided, or at least cannot be avoided without unreasonably raising costs or creating new, more critical risks.
- *Transfer:* the process of ensuring that if a risk factor occurs, the impact of that factor will be absorbed by a party outside of the project organization. This can be thought of as an insurance policy for the project, and is used if risk cannot be avoided. It is not feasible, however, to transfer all risks and some risks can be costly to transfer.
- *Mitigate:* the process of developing a plan that minimizes the negative impacts of a risk if the risk were to occur. Mitigation strategies may be simple or complex, costly or free, depending upon the risk. One thing that makes a risk mitigation strategy stand out from the other acceptable responses to risk is that it is implemented in real-time, and outlines a plan for action when the risk factor actually occurs¹⁹. Because mitigation strategies often carry a cost,

¹⁹ Although all risk response strategies must be planned in advance of the risk occurring to be effective, avoidance and transference are actually executed in advance of the risk occurring through implementation of some process or other change, or through a contractual strategy.

it becomes important to ensure that the mitigation strategy is right-sized to the level of the risk itself.

- *Accept*: the process of accepting certain risks is a valid method of risk management. For risks with an extremely low likelihood of occurrence, or those for which any attempt to avoid, transfer or mitigate is deemed infeasible, too costly or too time consuming, acceptance will be considered as a strategy.

Regardless of the risk mitigation strategy employed, the prerogative to implement the strategy – that is, to turn on “Plan B” – is the responsibility of the Managing Partner, who should be in the best position to determine that the risk actually has occurred. When a risk event occurs, the Managing Partner will inform the governance structure of the Geospatial Platform that the pre-determined and pre-approved mitigation strategy is being implemented. Since mitigation strategies are planned in advance and the cost is known by all relevant parties, the Managing Partner will be in a position to begin immediately implementing the strategy, minimizing potential further damages and costs associated with the risk. To facilitate the risk response process, the Managing Partner will address risk as a standing agenda item at the Executive Committee level.

The urgency of the decision to implement will be determined by the Managing Partner, who will consider the potential impact of the risk and the cost of implementation. For this reason, the Managing Partner must ensure that costs associated with risk mitigation are understood by the Geospatial Platform’s hierarchy and included in the project’s risk-adjusted baseline.

Risk Management Approach

Each component of this approach to assessing and managing risk is considered critical to the overall success of the project, and is not optional. For clarity, each component is described as a stand-alone, linear step. However, the components of the risk management process actually are quite dynamic and interactive, and must be combined with other effective management techniques to maximize the chances of project success.

Risk identification. Risk identification is discovering, defining, describing, documenting, and communicating risks before they become problems and adversely affect a project²⁰. The Managing Partner will be responsible for identifying and capturing new risks and for maintaining the risk register, which shows risks that previously have been identified and assessed. Any involved party or stakeholder may submit risks for inclusion on the register.

In conducting risk identification sessions, the Managing Partner will employ a number of techniques including brainstorming, surveys, and experiential reports. In later phases of development, the historical record also will be useful in identifying and anticipating risks. Risk identification items will be included on the agendas of regular meetings conducted by the Managing Partner.

²⁰ Defense Acquisition University, 2008

At present, risks are being characterized and categorized consistent with OMB's guidance on capital planning, as follows:

- *Strategic*: project does not tie to mission or strategic goals; project is not managed in a manner consistent with Federal standards and processes for IT project management; data quality standards are not defined; data acquisition and or conversion costs are unknown; data quality is not defined; and data quality is impossible or difficult to determine.
- *Lifecycle Costs*: business process re-engineering; acceptance by users and management; time and commitment from managers to overseeing the changes. lack of participation of business owners in the re-engineering process; necessary change in manuals and handbooks; personnel management issues; labor unions.
- *Management of Project Schedule, Scope and Resources*: uncertain and or changing requirements; inability of stakeholders to agree on requirements; failure to comprehensively gather requirements; misunderstood or miscommunicated requirements; addition of new requirements after the development phase in which the requirement occurs has been priced, scheduled, or begun; lack of understanding of requirements that may be considered to be outside of the scope of this project; insufficient or unavailable resources; overly optimistic task durations; unnecessary activities within the schedule; and critical deliverables or reviews not planned into the schedule.
- *Reliability of Systems and Technology*: lack of expertise; software and hardware maturity or immaturity; installation complexities; customization requirements for Government off the Shelf (GOTS) or Commercial off the Shelf (COTS) software; O&M requirements; component delivery schedules availability; design/programming errors and or omissions; technical obsolescence; and overall system reliability. This category also includes risks associated with dependencies and interoperability including poorly written contracts; market or industry changes; new competitive products become available; creating a monopoly for future procurements; failure to recognize critical interactions and relationships with other systems.
- *Security / Security of Systems and Data*: project does not conform to the security and/or privacy requirements of *OMB Circular A-130*.

Risk evaluation. The goals of the risk evaluation activity are to arrive at a most likely scenario for the probability and impact associated with each risk factor; determine an overall project risk score; and, identify and plan for those risks requiring mitigation. A realistic assessment of risks increases the chances of program success, provides a disciplined process for internal communication of status, allows for a demonstration of project control, and helps maximize the use of time and other resources. To manage the Geospatial Platform's risk, periodic evaluations of risk impact and probability will be performed. The robust process for risk evaluation, as described below, is fully compliant with industry best practices. The benefits of this process include 1) objectivity and focus during assessment; 2) consensus risk analysis and prioritization; 3) informed decision making; 4) improved ability to plan, track, and control risks; and 5) improved ability to manage investment costs by understanding the cost of unmanaged risks.

Risks are scored using the PERT Analysis technique, which is used as a way to determine and quantify each risk. The formula for a risk score is considered to be **PROBABILITY X IMPACT**; that is, a quantitative expression of the likelihood that the risk will occur, multiplied by a quantitative expression of the level of impact if the risk should occur.

In this context, impact and probability are defined as follows:

- *Probability*: the statistical chance that the risk will occur. It is expressed in terms of likelihood on a scale where 1 = improbable; 2 = moderately probably; 3= highly probably; and 4 = definite.
- *Impact*: the loss or effect if the risk occurs. Impact is assessed on a scale where 1 = no impact; 2 = low impact; 3 = moderate impact; and 4 = high impact.

Risk evaluation is a five-step process consisting of:

1. Scoring.
2. Consolidating.
3. Assessment/review.
4. Analysis/prioritization.
5. Response planning.

Step 1 (Scoring): In this step, each participant, referred to as assessors or raters, independently assigns a numerical score to the risks by completing a risk survey. Raters use a scoring template containing instructions and drop-down menus. Numerical scores are input then automatically calculated via embedded formulas. A sample risk scoring template can be seen in Appendix C.

Step 2 (Consolidating): Here, the Managing Partner compiles all scores from individual raters' worksheets for all risk factors and performs a PERT Analysis.

- Rater Worksheets – these worksheets illustrate the range of responses provided by risk team participants while preserving the anonymity of the responses provided by each risk rater. These statistics provide content for the risk factor probability assessments and the risk factor impact assessments.
- PERT Analysis – this worksheet consolidates the individual risk assessments into a single assessment. Results of the PERT Analysis will be provided to appropriate parties highlighted in the governance framework, as appropriate, and other government management, as necessary and appropriate. Results will be displayed in a table such as the following shown in Table 4.

Table 4. Sample PERT Analysis Results Table (using dummy data)

| Geospatial Platform Sample Risk Analysis Report | | | | |
|---|-----------------|-------------|--------------------|-------------|
| Raw Scores | | PERT Data | | |
| Raters | Composite Score | Optimistic | Most Likely | Pessimistic |
| 1 | 291 | | | |
| 2 | 260 | 260 | | |
| 3 | 306 | | | |
| 4 | 268 | | | |
| 5 | 385 | | | 385 |
| etc. | 307 | | | |
| Average Score | | 303 | | |
| PERT Analysis | | 309 | MEDIUM RISK | |
| Quantitative to Qualitative Crosswalk | | | | |
| | Under 200 | Low Risk | | |
| | 200-350 | Medium Risk | | |
| | 350-500 | High Risk | | |

Composite scores were derived as follows:

- Consolidated probability assessments – averaged, rounding up to the next highest whole number.
- Consolidated impact assessments – averaged, rounding up to the next highest whole number.

The overall risk value is calculated by summing the result of the consolidated rater scores to determine the optimistic (O), most likely (ML) and pessimistic (P) scores, then applying the PERT formula:

$$\text{PERT Formula} = \frac{O + (4ML) + P}{6}$$

Step 3 (Assessment/review): At least annually, the Managing Partner will host a risk assessment meeting with the goal of updating the assessment of the identified risks and developing a single assessment that represents a consensus of the entire project’s level of risk. These two assessments provide the input to risk analysis and prioritization.

In the assessment review meeting, participants evaluate the results of the independent risk assessments to ensure agreement and determine priorities. A major function of this review comes into play when the work being done is managed as more than one project. In this case, this group is asked to perform a portfolio-wide assessment of risks, determining any common risk areas and noting whether planned mitigation strategies can be used across the board.

Step 4 (Analysis/prioritization): The risk assessment provides the input to development of the Probability and Impact Matrix (Figure 11), which is used to prioritize risks for subsequent analysis or action by assessing and combining each risk’s probability of occurrence and impact. This combination of probability and impact is used to classify risks as high risk (“red”), moderate risk (“yellow”), or low risk (“green”). This tool allows for quick identification of risks that need attention or monitoring. In practice, the formulas in Figure 11 would be replaced with the number of risks that fall into each square of the matrix, providing a risk dashboard. The Probability and impact matrix provides a visual representation of the classification of each risk by illustrating how individually scored risks would plot out in relation to one another and by showing how they form a picture of the overall risk for the investment. Assessed probability rating appears on the x-axis and the impact rating on the y-axis of Figure 11.

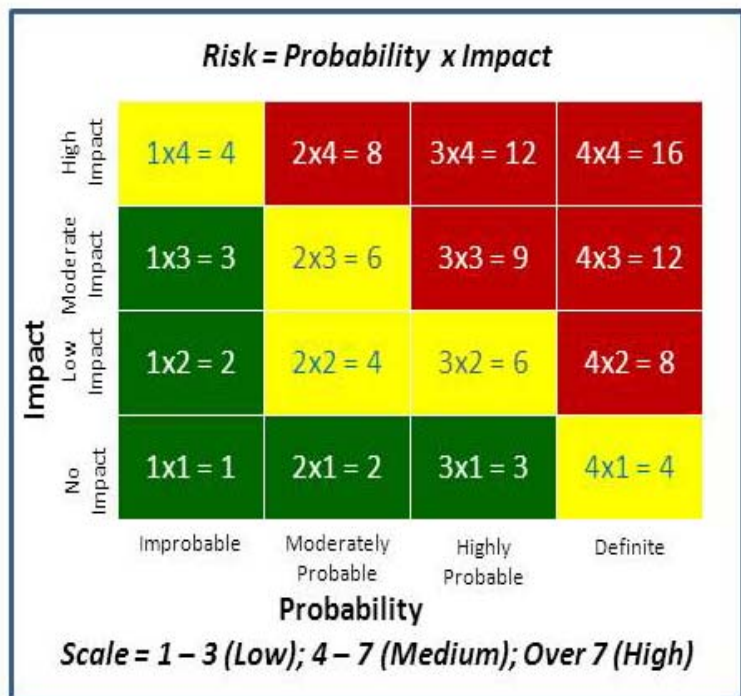


Figure 111. Probability and Impact Matrix of Project Risk

Assessed probability rating appears on the x-axis and the impact rating on the y-axis of Figure 11.

Step 5 (Response Planning): In this step, the Managing Partner, and other participants as appropriate, determines which of the four valid risk response strategies should be assigned to each risk then develops a plan for responding to each risk. The results of analysis and prioritization are used to identify risk factors for which 1) preventive measures should be defined in order to reduce risk and 2) countermeasures should be identified in order to successfully address these risks when they develop. In addition, each tracked risk is assigned to an individual, referred to as the risk owner, who becomes responsible for monitoring that particular risk and ensuring one of the following response planning activities will be performed:

- High-level risks (Red). Must be actively managed. Create a response plan for each high-level risk to ensure the risk is managed successfully. This plan should include activities to manage the risk, as well as the people assigned, completion dates and periodic dates to monitor progress.
- Moderate-level risks (Yellow). May warrant additional evaluation and close monitoring. Evaluate the medium-level risks to determine if the impact is severe enough that they should have a risk response plan created for them as well. If so, prepare high-level risk mitigation strategies. If not, continue to monitor these risks to see if the initial evaluation should be maintained, raised to red, or lowered to green and take appropriate action.

- Low-level risks (Green). Evaluate annually. Assess low-risk items to determine whether they should be listed as assumptions. In this way, the risk is recognized as a potential source of problems, but because the risk is low, it is assumed' that the condition will not occur.

Risk Register

Creation and maintenance of a risk register, sometimes referred to as “risk monitoring and control,” aids managers in tracking identified risks, identifying new risks, implementing response plans as needed, and ensuring overall risk management effectiveness. The Managing Partner will maintain a risk register using the fields identified in Figure 12. This figure also shows how these fields equate to the steps of the risk management process described earlier. Guidance on how to identify risks in each category is provided in Appendix D.

| IDENTIFY | | | EVALUATE/ASSESS/REVIEW | | | RESPONSE | CONTROL | |
|----------|-------------|-------------------|------------------------|--------|----------------|---------------------|---------|------------------|
| Risk ID | Risk Factor | OMB Risk Category | Probability | Impact | Analysis Score | Risk Mgmt. Strategy | Status | Mitigation Owner |

Figure 12. Relationship of Risk Register Fields to the Phases of the Risk Management Process

Measuring Performance

Government operates more effectively when it focuses on outcomes, when leaders set clear and measurable goals, and when agencies use measurement to reinforce priorities, motivate action, and illuminate a path to improvement. This outcome-focused performance management approach has proved a powerful way to achieve large performance gains in other countries, several States, an increasing number of local governments, and a growing number of Federal programs. The performance measurement process provides a foundation for the quantitative assessment for determining the effectiveness of activities. Through systematic measurement, managers can readily determine the benefits of the effort being put forth as well as the value of those benefits in the return on the investment. This performance measurement approach will provide quantified results to support the viability and sustainability of the Geospatial Platform initiative, and determine where or when adjustments are needed.

The Geospatial Platform will employ a framework for performance measurement built upon common metric definitions agreed upon by the Managing Partner, stakeholders, and governing bodies involved in the creation, deployment, and management of the initiative in accordance with the governance framework. Agreement on performance metric definitions will be documented and made available. Appendix E contains a sample performance measures definition template that can facilitate this process. Effective performance frameworks improve management of the initiative at a strategic level by providing a means for using the Federal enterprise architecture (FEA) to measure the impact and success of governance, workflows, and specific activities on strategic outcomes.

Performance Strategy

To evaluate the performance of the Federal effort aimed at creating geospatial shared services in the coming fiscal years, the Managing Partner will pursue three performance management strategies:

- **Use performance information to lead, learn, and improve Geospatial Platform outcomes.** The Managing Partner will set high-priority goals and use constructive evidence-based reviews to keep the Geospatial Platform on track to deliver on strategic goals, collecting lessons learned along the way.
- **Communicate performance coherently and concisely to improve results and transparency.** Using the Geospatial Platform governance framework, the Managing Partner will communicate the priorities, problems, and progress of the Geospatial Platform, explaining trends, the impact of past actions, and future plans.
- **Strengthen problem-solving networks.** The Managing Partner will tap into and encourage geospatial practitioner communities, inside and outside the Government, to work together to improve outcomes and performance management practices.

The ultimate test of an effective performance management system is how effectively it is used, not the number of goals and measures produced. Therefore, by following the structure of the Federal

Performance Reference Model (PRM) the Geospatial Platform Managing Partner will act as a performance steward to objectively measure and report on the Geospatial Platform's actual performance and effectiveness against targets, strategic goals, and operational plans. As development of the Geospatial Platform enterprise progresses, metrics aimed at measuring and evaluating the maturity of Portfolio Management process will be developed and implemented. The Managing Partner will put in place constructive quarterly feedback and review related to the entire performance measurement effort.

National Outcomes

Outcome-focused policies, management practices, and capacity building for the Geospatial Platform should support the needs of all stakeholders, both users and contributors. Implementation of the Geospatial Platform should incrementally provide geospatial assets to governing entities across the country. In light of the fiscal challenges faced by the Nation, the Geospatial Platform must help decision makers eliminate unnecessary spending, spend taxpayer dollars wisely, and focus Federal resources on effectively addressing clear needs or problems. By coordinating their programs within the Geospatial Platform, Federal agencies can promote collaboration and place-based outcomes to link, leverage, and align Federal, State, local, and regional resources through shared services, and to catalyze private and philanthropic investment, increasing the resources available to stakeholders.

In creating a virtual environment that enables efficient and effective access to geospatial assets for decision making, initiatives like the Geospatial Platform show special promise for achieving comprehensive, extensible outcomes. Opportunities and options for improving the intra- or inter-agency coordination and effectiveness in policy and administrative services can be highlighted through Geospatial Platform participation. In addition, joint innovation across diverse communities of citizens, industry, academic, and non-governmental organizations can foster stakeholder innovation, and create capacity for preemptive and rapid response to complex public problems.

Measurement

The Geospatial Platform will employ a performance measurement system that facilitates end-to-end visibility for optimizing the Geospatial Platform implementation as well as the management structure, processes, and content on three levels: strategic, tactical, and operational. The Managing Partner will develop the measurement system with concurrence from the Geospatial Platform Oversight Body. The Managing Partner will then be responsible for reporting to the Geospatial Platform Oversight Body that will conduct ongoing performance evaluation.

At a strategic level, this framework leverages the FEA to measure the success of the geospatial community production, governance, workflow, and specific activities, as well as their successful implementation of planned strategic outcomes.

At a tactical level, the framework helps to articulate the linkages and dependencies among internal business components and the achievement of business and customer-centric outputs and outcomes. Additionally, it facilitates resource-allocation decisions based on comparative determinations of the overall effectiveness of the Geospatial Platform.

At the operational level, performance measurement activities emphasize tangible management of the deployment and delivery of shared geospatial data, services, and applications. These measures and metrics help determine actual contributions associated with Geospatial Platform workflow, process, business rules, roles and responsibilities, and other direct and/or indirect factors.

To be successful, the Geospatial Platform must result in eliminating duplication of services, ensuring interoperability of remaining assets, and helping rationalize program investment. Commodity technology services are often duplicative and sub-scale, including services such as: IT infrastructure (e.g., data centers, networks, desktop computers, and mobile devices); enterprise IT systems (e.g., collaboration tools, identity and access management, security, and web infrastructure); and, GIS systems (e.g., geocoding, geoprocessing, and cartography functions). As an implementation of the “Shared First” methodology, the Managing Partner will establish tools to improve participating agency purchasing power to drive down costs and improve service for commodity solutions.

Performance Management

Alignment with the Geospatial Platform’s Strategic Goals

Performance measurement systems succeed when an initiative’s strategy and performance measures are in alignment, and when senior leadership conveys the mission, vision, values and strategic direction to internal and external stakeholders. Performance measures give life to the mission, vision, and strategy by providing a focus that lets each stakeholder know how he or she contributes to the success of the effort and its stakeholders’ measurable expectations.

Integration makes it possible for performance measures to be effective agents for change. If the measures quantify results of an activity, one can compare the measured data with the desired goals to understand what actions, if any, are needed; the measures should carry the message. The strategic goals of the Geospatial Platform are shown in the left column in Table 5. For each of the Geospatial Platform goals, we can define a series of Critical Success Factors (CSFs) to help define what constitutes “success” within the appropriate context. CSFs, shown in the right column in Table 5 are statements that embody how we will know when we are succeeding.

Table 5. Goals and Critical Success Factors (CSF)

| Goal | Critical Success Factors |
|---|---|
| Enhance the availability of geospatial information by providing a centralized access point. | <ul style="list-style-type: none"> • Steadily increasing use of the Geospatial Platform at the Federal, State, and local levels. • General satisfaction from the user community related to the ability of the Geospatial Platform to meet their data access needs. • The inclusion of representative data, services, and applications from each of the framework themes outlined in OMB Circular A-16. |

| Goal | Critical Success Factors |
|---|--|
| Promote information sharing and collaboration across multiple levels of government and with partners in the private sector. | <ul style="list-style-type: none"> • Participation and contribution from all Federal agencies with geospatial business interests. • General satisfaction from contributors related to the ability of the Geospatial Platform to meet their needs. • An increased awareness of agency geospatial activities and associated decrease in potential duplications of effort. • Partnerships developed whereby the geospatial information obtained from the Geospatial Platform is helping organizations identify overlapping missions, goals, and objectives through a spatial context. |
| Provide a shared cloud computing infrastructure. | <ul style="list-style-type: none"> • An overall decrease in agency expenditures related to geospatial information infrastructure or the ability to reallocate funds to further their own missions by not having to build what the Geospatial Platform provides. • High availability of Geospatial Platform infrastructure. |
| Facilitate the use and application of geospatial information. | <ul style="list-style-type: none"> • Users are leveraging the Geospatial Platform to develop maps that inform the decision making process. • Outcomes from the application of geospatial information to issue areas are highlighted within the Geospatial Platform. |

These Geospatial Platform performance goals are intended to promote public services that result in transparent, accountable, and participatory governance. As an enabler of transformation, the Geospatial Platform’s performance will be managed to increase its capability to invigorate problem-solving partnerships, and grow capacity to focus on place-based solutions. The Geospatial Platform must help break down Federal “silos” and create, provision, and consume geospatial assets in such a way that encourages coordination. To make the Federal government a more effective and nimble partner, the Geospatial Platform should demonstrate a model for developing opportunities to engage State, local, and Tribal governments, faith institutions, nonprofit organizations, businesses, and the public as collaborators. Effective collaboration rests on developing shared agendas for action, smart strategies, logical and relevant success measures, and results-focused implementation.

The Geospatial Platform should also promote geospatial data and service planning as well as collaboration across jurisdictional boundaries. Programs in neighboring zones and within larger regions -- some of which connect rural communities to metropolitan regions -- should complement each other. Geospatial Platform performance management should reflect stewardship for the Nation’s economic and social diversity and allow communities to identify distinct needs and address them in appropriate, strategic ways.

Data derived from measuring performance supports decision makers by providing a direct link between the Nation’s investment in geospatially-relevant resources and the Federal government’s strategic goals that effectively demonstrate how this investment is closing a critical gap in the required National capacity.

Performance Measures

The performance measurement framework for the Geospatial Platform will be fully compliant with OMB requirements for capital investments to ensure compatibility with the Federal Information Technology Dashboard. These requirements stipulate that at least two measurements be results-specific, with one of these results-specific metrics measuring quality of service. In addition, at least three metrics must be specific to activities and technology, designed to measure actual performance against defined process standards or technical service level agreements.

Results-specific measures

- *Support Delivery of Services:* number of Federal geospatial datasets and map services accessed through the Geospatial Platform.
- *Service Quality:* percent of Geospatial Platform users who report satisfaction with the quality of information received through Geospatial Platform.
- *Customer Benefit:* percent of Geospatial Platform users who report satisfaction with data, services, applications or other scientific, technical and data products and increased effectiveness because of Geospatial Platform accessibility. Percent of users that indicate increased knowledge and understanding of the Geospatial Platform.

Activities and Technology-specific measures

- *Quality:* percent of Geospatial datasets available through the Platform coordinated by a recognized national steward per OMB Circular A-16.
- *Financial:* percent of cost savings associated with the use of the NGDA through the Geospatial Platform for partner agencies.
- *Management and Innovation:* number of partnerships developed whereby the geospatial information obtained from the Geospatial Platform is helping organizations identify overlapping missions, goals, and objectives through a spatial context.

Descriptive Example

To illustrate the definition of success as it relates to the Geospatial Platform, we will use the “Assessing Impacts of Sea Level Rise and Coastal Flooding” use case from the *Value Proposition*. Climate change adaptation is multi-faceted and place-based, requiring a large amount of data and information to develop comprehensive adaptation strategies. Coastal communities could use the Geospatial Platform to obtain data, services, and applications that would help them determine their risk and vulnerability from a changing climate. Success in this case would be defined through an increasing number of coastal communities as users of the Geospatial Platform. This, in turn, would directly relate to the number and quality of local-level data and services made available through the Geospatial Platform.

As the use case matures, an inventory of existing Federal data holdings related to community risk and vulnerability will be compiled and gaps identified; key Federal agency contributors would be identified, convened, and encouraged to contribute. Here, success would be defined by the increased participation of these identified Federal agencies as contributors to the Geospatial Platform. Additional success would be realized through increased collaboration between the contributors and users, resulting in the identification of common activities and outputs across agencies. It is important to note that agency participation will be limited initially to those who possess the technical capability to provide data and services to the Geospatial Platform. However, it is anticipated that additional Federal agencies will manage critical data and information that could be used to examine further the risk and vulnerability issue. The provision of a shared infrastructure for data management and access would greatly benefit these agencies and further contribute to the success of the Geospatial Platform as a collaborative medium. Over time, all Federal agencies contributing data and services to this use case would benefit from the migration of their geospatial data holdings to the shared infrastructure, which would result in a net decrease in the IT infrastructure investments that the organizations would incur.

With this new wealth of distributed geospatial data consolidated into a single access point, coastal communities could leverage the mapping and visualization capabilities that the Geospatial Platform provides to derive information that would direct local-level adaptation planning. New maps would be created, managed, and served through the Geospatial Platform, integrating Federal agency data with local datasets. The outcomes related to the application of these maps to the decision making process would be highlighted through the Geospatial Platform, demonstrating its utility as a mechanism for sharing best practices and lessons learned.

Appendix A: Benefits of the Geospatial Platform

The following is a summary of the benefits, positive returns, and operational efficiencies that can be expected through the implementation of the Geospatial Platform.

Increasing Return on Existing Investments

- Increases the return on government investment in geospatial data, applications, services, and shared infrastructure by enabling discovery, access, and multiple uses of existing assets.
- Increases transparency of government geospatial investments.
- Decreases the cost of geospatial data and services to agencies by leveraging large scale purchasing.
- Increases the utility of administrative and statistical data by putting it into a spatial context where additional analyses can be run quickly at little or no additional cost.
- Decreases the time required to get information on existing geospatial assets to decision makers for determining an appropriate course of action.

Increasing Government Efficiency

- Decreases the time required to determine the data, tools, services, and infrastructure available to address and understand national issues and events.
- Increases agency resources that can be refocused on core mission requirements by establishing responsible, trusted data sources for multiple agency use so they do not have to create and manage separate datasets.
- Increases the tools and analysis techniques available to decision makers with little to no new investment in hardware, software, or staff.
- Increases the amount of useful information available to decision makers.
- Decreases the time spent by agencies on data calls, data discovery, data reformatting and processing.

Reducing Redundancy

- Increases the ability of Federal programs to provide their geospatial data, services, and applications for use and reuse by other agencies.

- Increases the ability of agencies to make the data and or services available by reducing their costs and management requirements through use of cloud computing.
- Increases the discoverability of assets available to address agency mission requirements.
- Decreases government expenditures on duplicative data creation and management efforts.

Increasing Service Delivery

- Increases the government's ability to utilize high-value geospatial tools, data, services, and applications to support agencies and decision makers.
- Increases the Federal government's ability to interact with and leverage the high-value data assets of State, Tribal, regional, local, and non-governmental organizations.
- Decreases the time and resources required to locate, obtain, and use data managed and available from non-Federal agencies.
- Decreases the cost of service management to agencies through shared services and infrastructure.
- Decreases the time required to leverage existing data and investments to solve problems, answer questions, and respond to the public.

Decreasing Development and Management Costs

- Reduces application or services development investments by making existing services available for reuse and avoiding duplicative development.
- Reduces time-to-market by reducing service and application development cycles.
- Decreases the time and resources expended by agencies by reducing the number of data calls.
- Increases usability by enabling deployment in a cloud computing environment designed to handle surges in use without requiring additional hardware investments.
- Decreases the cost and burden to agencies to host services or build infrastructure.
- Reduces significantly the cost to agencies to meet the Federal Information Security Management Act (FISMA) and the National Institute of Standards and Technology (NIST) Certification and Accreditation (C&A) requirements while ensuring appropriate security protocols are enforced.

Increasing Quality

- Increases transparency of available data, their value, and authority.
- Increases the consistency, documentation, and provenance of data used for decision making by enabling efficient access and use of validated data sources.

Increasing Usability

- Increases usability of data by making them available beyond a single agency or program.
- Increases usability of data by making them available within a number of shared mapping and analytical tools designed to meet specific mission requirements.
- Increases data consistency, usability, and clarity by providing single format, validated data sources.
- Decreases the complexities of using shared data and tools by enabling discovery and use through a single Web portal, minimizing the need to learn where and how to find the information across multiple sites.
- Increases access to geospatial applications and services to agencies that cannot afford to manage geospatial programs or data development efforts.

The FGDC will coordinate with FedStats (for subject matter and statistical expertise) so that data are used correctly and ethically.

Appendix B: Risk Register

The risk register shows those risks that currently have been identified and assessed. As to be expected during the Geospatial Platform’s initiation, many are business-type risks rather than technical, which will become predominant later in the project’s lifecycle.

| Risk ID | Risk Factor | OMB Risk Category | Probability | Impact | Analysis Score | Risk Mgmt. Strategy | Status | Mitigation Owner |
|---------|---|-------------------|-------------|--------|----------------|---------------------|--------|------------------|
| 1.1 | Agency participants do not include one or more important Federal agencies | Agency capability | | | | | | |
| 1.2 | Project fails to fill a performance gap; project not driven by requirements. | Strategic | | | | | | |
| 1.3 | Managing Partner fails to communicate well with stakeholders. | Strategic | | | | | | |
| 1.4 | Project has insufficient measurable objectives to determine status. | Business | | | | | | |
| 1.5 | Project schedule and course is driven by non-business or technical agendas. | Strategic | | | | | | |
| 1.6 | Managers lack up to date data about status of project. | Business | | | | | | |
| 1.7 | Agencies cannot agree on common standards, processes, practices, or solutions. | Strategic | | | | | | |
| 2.1 | Costs do not remain within budget. | Lifecycle costs | | | | | | |
| 2.2 | Inadequate funding stream to continue development and operation of the Geospatial Platform. | Initial costs | | | | | | |
| 2.3 | Earned value is difficult to track. | Lifecycle costs | | | | | | |

| Risk ID | Risk Factor | OMB Risk Category | Probability | Impact | Analysis Score | Risk Mgmt. Strategy | Status | Mitigation Owner |
|---------|---|---------------------------|-------------|--------|----------------|---------------------|--------|------------------|
| 2.4 | Return on investment is not defined, low, or inadequate to justify expenditure. | Lifecycle costs | | | | | | |
| 2.5 | Unbalanced allocation of resources between development and operations/maintenance. | Lifecycle costs | | | | | | |
| 3.1 | Project lacks resources with appropriate skill mix. | Project resources | | | | | | |
| 3.2 | Business partners do not take the time to define the scope. | Agency capability | | | | | | |
| 3.3 | Development is subject to repeated delays due to inefficiency in the decision making process. | Schedule | | | | | | |
| 3.4 | Development contractor is unable to retain experienced/trained personnel familiar with the project. | Project resources | | | | | | |
| 3.5 | Project team is undermined by unreasonable deadlines. | Agency capability | | | | | | |
| 3.6 | Project manager fails to effectively manage changes to technology, scope, or schedule. | Change management | | | | | | |
| 3.7 | Project schedules are incomplete (not detailed enough). | Schedule | | | | | | |
| 3.8 | Inadequate quality control processes are developed to ensure quality of data. | Data / info | | | | | | |
| 4.1 | System crashes due to inability to implement recovery strategies following natural disaster. | Surety (asset protection) | | | | | | |

| Risk ID | Risk Factor | OMB Risk Category | Probability | Impact | Analysis Score | Risk Mgmt. Strategy | Status | Mitigation Owner |
|---------|--|---------------------------------|-------------|--------|----------------|---------------------|--------|------------------|
| 4.2 | System becomes vulnerable due to lack of maintenance. | Project resources | | | | | | |
| 4.3 | Architecture is too rigid to accommodate new opportunities. | Reliability of systems | | | | | | |
| 4.4 | Catastrophic system failure occurs. | Reliability of systems | | | | | | |
| 4.5 | Development activities are not well documented. | Lifecycle costs | | | | | | |
| 4.6 | System upgrades are not performed due to lack of resources. | Project resources | | | | | | |
| 5.1 | Infrastructure security is compromised due to inability to perform maintenance on schedule. | Security | | | | | | |
| 5.2 | Portfolio manager fails to see dependencies in time to prevent adverse impacts. | Dependencies & interoperability | | | | | | |
| 5.3 | Other systems or programs are dependent on this investment's success. | Dependencies & interoperability | | | | | | |
| 5.4 | System is hacked and critical data are lost or manipulated. | Security | | | | | | |
| 5.5 | System crashes due to failure to perform adequate mitigation planning and contingency testing. | Security | | | | | | |

Appendix C: Risk Worksheet

Instructions: For each risk factor, please determine how **likely** you think it is to occur (**Column B - Probability**) and, if it should occur, what level of **impact** it will have on the Geospatial Platform (**Column C - Impact**). When you click on the cell, a drop-down menu icon will appear. Click on the down arrow to select your choices. The spreadsheet will automatically tally the results for you.

Geospatial Platform Risk Register and Worksheet

Project:

Rater:

Date:

Overall Risk Score:

| | | Probability | Impact | Raw Score |
|-------------------------------|---|-------------|--------|-----------------------------------|
| 1.0 Strategic Risks | | | | |
| Risk Factor 1.1: | Agency participants do not include one or more important Federal agencies. | | | |
| | <input type="text" value="How likely is it the event will occur?"/> <input type="text" value="If event occurs, what is the impact?"/> | 0 | 0 | 0 |
| Risk Factor 1.2: | Project fails to fill a performance gap; project not driven by requirements. | | | |
| | <input type="text" value="How likely is it the event will occur?"/> <input type="text" value="If event occurs, what is the impact?"/> | 0 | 0 | 0 |
| Risk Factor 1.3: | Managing Partner fails to communicate well with stakeholders. | | | |
| | <input type="text" value="How likely is it the event will occur?"/> <input type="text" value="If event occurs, what is the impact?"/> | 0 | 0 | 0 |
| Risk Factor 1.4: | Project has insufficient measurable objectives to determine status. | | | |
| | <input type="text" value="How likely is it the event will occur?"/> <input type="text" value="If event occurs, what is the impact?"/> | 0 | 0 | 0 |
| Risk Factor 1.5: | Project schedule and course is driven by non-business or technical agendas. | | | |
| | <input type="text" value="How likely is it the event will occur?"/> <input type="text" value="If event occurs, what is the impact?"/> | 0 | 0 | 0 |
| Risk Factor 1.6: | Managers lack up to date data about status of project. | | | |
| | <input type="text" value="How likely is it the event will occur?"/> <input type="text" value="If event occurs, what is the impact?"/> | 0 | 0 | 0 |
| Risk Factor 1.7: | Agencies cannot agree on common standards, processes, practices, or solutions. | | | |
| | <input type="text" value="How likely is it the event will occur?"/> <input type="text" value="If event occurs, what is the impact?"/> | 0 | 0 | 0 |
| Overall Strategic Risk Score: | | | | <input type="text" value="0.00"/> |

2.0 Cost Risks

| | | | | | | |
|------------------|---|--|--------------------------------------|---|---------------------------------|------|
| Risk Factor 2.1: | Costs do not remain within budget. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 2.2: | Inadequate funding stream to continue development and operation of the Geospatial Platform. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 2.3: | Earned value is difficult to track. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 2.4: | Return on investment is not defined, low, or inadequate to justify expenditure. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 2.5: | Unbalanced allocation of resources between development and operations/maintenance. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| | | | | | Overall Cost Risk Score: | 0.00 |

3.0 Management Risks

| | | | | | | |
|------------------|---|--|--------------------------------------|---|---------------------------------------|------|
| Risk Factor 3.1: | Project lacks resources with appropriate skill mix. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 3.2: | Business partners do not take the time to define the scope. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 3.3: | Development is subject to repeated delays due to inefficiency in the decision making process. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 3.4: | Development contractor is unable to retain experienced/trained personnel familiar with the project. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 3.5: | Project team is undermined by unreasonable deadlines. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 3.6: | Project manager fails to effectively manage changes to technology, scope, or schedule. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 3.7: | Project schedules are incomplete (not detailed enough). | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 3.8: | Inadequate quality control processes are developed to ensure quality of data. | How likely is it the event will occur? | If event occurs, what is the impact? | | | |
| | | | | | Overall Management Risk Score: | 0.00 |

4.0 Systems/Technology Risks

| | | | | | | |
|------------------|---|--|--------------------------------------|---|---|---|
| Risk Factor 4.1: | System crashes due to inability to implement recovery strategies following natural disaster | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
|------------------|---|--|--------------------------------------|---|---|---|

| | | | | | | |
|------------------|---|--|--------------------------------------|---|---|---|
| Risk Factor 4.2: | System becomes vulnerable due to lack of maintenance | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 4.3: | Architecture is too rigid to accommodate new opportunities. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 4.4: | Catastrophic system failure occurs | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 4.5: | Development activities are not well documented. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 4.6: | System upgrades are not performed due to lack of resources | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |

**Overall
Systems/Technology
Risk Score:** 0.00

5.0 Systems and Data Security and Controls Risks

| | | | | | | |
|------------------|---|--|--------------------------------------|---|---|---|
| Risk Factor 5.1: | Infrastructure security is compromised due to inability to perform maintenance on schedule | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 5.2: | Portfolio manager fails to see dependencies in time to prevent adverse impacts | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 5.3: | Other systems or programs are dependent on this investment's success. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 5.4: | System is hacked and critical data are lost or manipulated. | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |
| Risk Factor 5.5: | System crashes due to failure to perform adequate mitigation planning and contingency testing | How likely is it the event will occur? | If event occurs, what is the impact? | 0 | 0 | 0 |

Overall Systems / Data Security and Controls Risk Score: 0.00

**Overall Project
Risk** 0

Appendix D: Guide to Risk Identification and Assessment

| Risk Type | Questions to Guide Risk Identification and Assessment | Keys to Success |
|--|--|--|
| Strategic | <ul style="list-style-type: none"> Is there a clear understanding of how the project supports the organization's strategic goals? Is there a clear understanding of the relationship of the Geospatial Platform to Data.gov and other related systems? | Spend time planning the details before investing development money |
| Lifecycle Costs | <ul style="list-style-type: none"> Have or are project costs or schedule likely to vary greater than 10% from the baseline? What is the sensitivity of cost estimates for selected alternative? Are costs risk adjusted? Are there a contingency reserve fund and a management reserve fund in place? Does the project uses cost reimbursement contracts for acquisition or maintenance and support? | <p>Assign an experienced project manager</p> <p>Write contracts with requirements for earned value reporting</p> |
| Management of Project Schedule, Scope and Resources | <ul style="list-style-type: none"> Does the management team have skills in budgeting, finance, planning, procurement, user requirements, and earned value management? Can contract staff be brought on board in adequate numbers, with adequate skills in a reasonable timeframe? | Understand and manage requirements |
| Reliability of Systems and Technology | <ul style="list-style-type: none"> Does the technical design include features that ensure availability, reduce failure, and reduce repair time? Is the project designed for maintainability? Has the project undergone usability testing (or is it planned)? Does the project have an adequate inventory of spares and a clearly defined supply chain? Is there a current contingency plan in place and approved? Are restorations tested frequently? Is this project heavily dependent on other modernization projects or steady state systems? Does this project conform to the Federal Enterprise Architecture? Is this a collaborative project with partners from other government organizations? | Wherever possible, use proven technology; Ensure coordination among partners and systems |
| Surety / Security of Systems and Data | <ul style="list-style-type: none"> Will the hardware be located in government facilities? What physical security problems are anticipated? Is the disaster recovery process in place, tested and approved? Is security plan in place with mitigation strategies for risk associated with integrity, unauthorized use of assets, etc.? | Implement FISMA best practices |

Appendix E: Performance Measure Definition Template

| | |
|----------------------------------|--------------------------------|
| End Outcome Goal | [Strategic goal] |
| Intermediate Outcome Goal | [Sub- or interim goal, if any] |

| | |
|---------------------------|--|
| Full Measure Name | [Wording of the measure] |
| Short Measure Name | [The way you want to refer to the measure] |
| Beginning Year | |
| End Year | |

| | |
|----------------------|---|
| Measure Scope | [Statement of exactly what is being measured. If useful, you could even talk about what is NOT within the scope of this measure.] |
|----------------------|---|

| | |
|----------------------------|--|
| Measurement Process | [Describe how you will get the data for this measure.] |
|----------------------------|--|

| | |
|---|---|
| Data Validation and Verification | [Describe any calculations, algorithms, or other mechanisms you will use to provide data for this measure. How will you know your data are accurate.] |
|---|---|

| | |
|--------------------|---------------------|
| Data Source | [Related to above.] |
| | |
| | |
| | |
| | |
| | |
| | |

| Submitted By | Date | Comments |
|--------------|------|----------|
| | | |
| | | |

| | | |
|--------------------------|--|--|
| Finalized Date | | |
| Last Updated Date | | |

Data Point A (Numerator when applicable)

| | |
|------------------------|--|
| Short Name | |
| Definition | |
| Unit of Measure | |

Data Point B (Denominator when applicable)

| | |
|------------------------|--|
| Short Name | |
| Definition | |
| Unit of Measure | |

Data Point C

| | |
|------------------------|--|
| Short Name | |
| Definition | |
| Unit of Measure | |

Data Point D

| | |
|------------------------|--|
| Short Name | |
| Definition | |
| Unit of Measure | |

Definition of Key Terms

| | | | | | |
|------------------------------------|----------|----------|----------|----------|----------|
| | | | | | |
| | | | | | |
| | | | | | |
| Bureaus Reporting | 1 | 2 | 3 | 4 | 5 |
| Bureau Contact Name | | | | | |
| Bureau Contact Email | | | | | |
| Bureau Contact Phone Number | | | | | |
| Data Contact Name | | | | | |
| Data Contact Email | | | | | |

| | | | | | |
|---|--|--|--|--|--|
| Data Contact Phone Number | | | | | |
| Responsible Manager Name | | | | | |
| Responsible Manager Email | | | | | |
| Responsible Manager Phone Number | | | | | |

Appendix F: Past Geospatial Initiatives and Lessons Learned

Geospatial Clearinghouse Network

The Federal Geographic Data Committee (FGDC) promotes the coordinated development, use, sharing, and dissemination of geospatial data on a national basis; this nationwide data publishing effort is known as the National Spatial Data Infrastructure²¹ (NSDI). The NSDI is a physical, organizational, and virtual network designed to enable the development and sharing of the Nation's digital geographic information resources. Early FGDC geospatial initiatives focused on developing core functions and roles of the FGDC and its member agencies, refining the vision and for the NSDI, identifying framework data, and developing geospatial policies and standards. In 1992, the FGDC established the Geospatial Clearinghouse Network²², a community of distributed data providers who publish collections of metadata that describe their map and data resources within their areas of responsibility, documenting data quality, characteristics, and accessibility.

Lessons Learned

- **Metadata matters.** Metadata standards, a common set of terms and definitions about data in a structured format, allow humans and machines alike to use data more effectively.
- **Be patient.** Developing standards, guidelines, and making things “operational” takes time and progress is incremental. Partners need to be committed for the long-term and need to work together toward the common vision and goals (sometimes one at a time).
- **Incentives help.** Finding the right incentives inspires participation and helps partners find value in participation.

Key Building Blocks of the Geospatial Platform

In 2002, the "Electronic Government" (E-Government) Act fostered the development of government initiatives focused on using web-based Internet applications and other information technologies to enhance the access to and delivery of government information and services and bring about improvements in government operations. Geospatial One-Stop (GOS) and the Geospatial Line of Business (LoB) are two E-Government initiatives that helped pave the way for the development of the Geospatial Platform. In 2009, the White House introduced Data.gov, a third initiative that became a key building block for the Geospatial Platform.

²¹ <http://www.fgdc.gov/nsdi/nsdi.html>

²² <http://www.fgdc.gov/dataandservices>

Geospatial One-Stop

The intergovernmental GOS project, launched in 2001, promoted the coordination and alignment of geospatial data collection, maintenance, and access among all levels of government. The project provided one-stop access to the Nation's geospatial information through development of a data discovery portal populated by hundreds of Federal, State, local, and Tribal organizations. GOS leveraged geospatial resources and best practices and made it easier, faster, and less expensive for all levels of government and the public to access national geospatial data coverage, providing the tools for finding and analyzing multiple sources of information.

Lessons Learned

- **Invest in people.** Leadership needs to invest in staff and resources to support operations and outreach; using a “volunteer only” approach does not provide the consistency needed to sustain momentum.
- **Share the vision.** Outreach and education are important to sharing the vision and garnering the support of key partners and stakeholders and for building user communities.
- **Invite people to contribute in a meaningful way.** Educate the broader community about what the initiative needs (e.g., data, leaders for user communities or interest groups, etc.) and then tell people how to get involved. By setting expectations and being specific about needs, the initiative can target key groups and focus energy to obtain the best return, make contributors feel their contribution really counts, and to fulfill the needs of the stakeholder by strategically increasing or addressing gaps in content.

Geospatial Line of Business

Established in 2006, the Geospatial LoB aimed to further refine opportunities for optimizing and consolidating Federal geospatial-related investments, to reduce the cost of government, and improve services to citizens. Cross-agency coordination of geospatial activities helped identify, consolidate, and reduce or eliminate redundant geospatial investments. Developing the Geospatial LoB resulted in a more coordinated approach to producing, maintaining, and using geospatial data, and created a collaborative framework for participation from Federal partners around geospatial-related activities. These activities included Enterprise Geospatial Programs, Common Business Requirements and Common Services, Data Lifecycle Management, and Geospatial Segment Architecture.

Lessons Learned

- **Shared Responsibility.** Funding and governance models need to be established that actively involve member agencies to take ownership for success and to ensure sustainability of efforts.
- **Practice Stewardship.** Agencies and partners need to be good stewards of their data by making strategic investments in staffing and maintenance to help ensure data are high quality and managed according to best practices.

- **Take a seat at the table.** Agencies and partners need a willingness and commitment to participate in the governance, decision making, and problem-solving processes.
- **Don't just talk about it, do it.** Planning and developing guidance and strategies are all good, however if too much time is spent on these topics it takes away from the ability to operationalize or implement initiatives. There needs to be a balance in time spent on planning and strategy, operationalization and implementation, and evaluation and assessment.

Data.gov/Geo.Data.gov

Data.gov²³, launched in 2009, was designed to facilitate access to Federal datasets that 1) increase public understanding of Federal agencies and their operations; 2) advance the missions of Federal agencies; 3) create economic opportunity; and 4) increase transparency, accountability, and responsiveness across the Federal Government – i.e., "high-value" datasets. A primary goal of Data.gov is to improve access to Federal data and expand creative use of those data beyond the walls of government by encouraging innovative ideas (e.g., web applications). As an Open Government²⁴ initiative, the public was encouraged to participate in government by not only downloading Federal datasets found on Data.gov to build applications, conduct analyses, and perform research, but also by offering feedback on the data available through the website. On October 1, 2011, Federal geospatial datasets from GOS moved to Geo.Data.gov, within the Data.gov infrastructure; this merger brought together over 400,000 maps, datasets, and services. While Geo.Data.gov, only accounts for Federal geospatial assets, the Geospatial Platform will ultimately expose Federal and non-Federal data, services, and applications, and offer shared infrastructure for hosting data, services, and applications through cloud computing capabilities.

Lessons Learned

- **Quality is better than quantity.** Having a large quantity of data and services available is great, but just as—if not more—important is high-quality data and services. Making sure data and services come from (or are hosted on) trusted and reliable sources and making sure they are of highest possible quality will improve customer satisfaction and the credibility of the initiative.
- **Give contributors criteria to follow.** When organizations provide specific parameters or criteria for what is considered acceptable or high-quality data, services, and applications, contributors understand what is expected of them and can strive to meet the standards of "quality". In addition, users can see the product they are receiving and know they can trust the data, services, and applications made available to them.
- **Ask for user feedback.** Open participation and feedback channels provide valuable information for evaluating progress and assessing the relative value of government data

²³ <http://geo.data.gov/geoportal/catalog/main/home.page>

²⁴ <http://www.whitehouse.gov/open/about>

sources. The more feedback available, the more effectively leadership can address concerns, make improvements or investments, and manage expectations.

Appendix G: Geospatial Platform Service Offerings Described

Platform as a Service (PaaS)

Description: PaaS offerings facilitate deployment of applications without the cost and complexity of buying and managing the underlying hardware, software, and hosting capabilities. PaaS provides all of the facilities required to support the **complete lifecycle of building and delivering web applications** and services entirely through the Internet. PaaS offerings typically provide some level of support to **ease the creation of user interfaces**, either based on standards such as HTML, JavaScript, PHP, or rich Internet Application technologies like Microsoft Silverlight, Adobe Flex, Flash, and AIR. **PaaS offerings typically attempt to support use of the application by many concurrent users by providing concurrency management, scalability, fail-over, and security.**

Relationship to the Geospatial Platform: Many Federal agencies develop and deploy public geospatial applications using the same underlying technologies, application libraries, and software. The current process for deployment is not efficient, and is often stymied by a complex and lengthy security review process and expensive hosting costs. A single platform that streamlines the application development, deployment, and security review processes can greatly aid agencies' abilities to deploy their own applications and make use of common Geospatial Platform offerings. This approach aligns directly with the Administration's *25-Point Implementation Plan to Reform Federal Information Technology (IT) Management*²⁵. The plan states,

"A government-wide risk and authorization program for cloud computing will allow agencies to rely on the authorization completed by another agency or to use an existing authorization, so that only additional, agency-specific requirements need to be separately certified. Our aim is to drive to a set of common services across the government supported by a community, rather than an agency-specific risk model. This will allow the Federal Government to 'approve once and use often.'"

The Geospatial Platform environment can be provisioned to accommodate separate **Federal-only, non-Federal governmental, and general public** spaces to support varying access and security requirements. Additionally, the Geospatial Platform can allow for different access levels and control by different providers, depending on their preferences. Implementation options may range from direct user access to and control of their shared space on the server to a much lighter approach through open standards compliant web interfaces.

Benefits:

- Consolidate services and infrastructure used by agencies to build their applications.

²⁵ <http://www.cio.gov/documents/25-Point-Implementation-Plan-to-Reform-Federal%20IT.pdf>

- Provide common libraries and middleware that can be used across multiple groups.
- Reduce deployment costs and streamline operational processes.
- Enable agencies to deploy their products as reusable services.
- Align with the Administration’s 25-point implementation plan for reforming Federal IT.

Infrastructure as a Service (IaaS)

Description: IaaS is the **delivery of computer infrastructure** as a service. It is a provision model in which **an organization outsources the equipment used to support operations**, including storage, hardware, servers, and networking components. The service provider owns the equipment and is responsible for housing, running, and maintaining it.

Relationship to the Geospatial Platform: Many Federal agencies would like to make their resources available to the public more efficiently and effectively. In many instances, identifying technology infrastructure from which to deploy their data or applications is not easy. The Geospatial Platform will leverage General Services Administration’s (GSA) contract vehicles for secure IaaS solutions and streamline the provision of a location that allows Federal agencies to load and manage their geospatial content without the need for procuring separate servers or software. By reducing their own costs and burden, this environment will provide a great incentive for contributors to make their resources available to others through the Geospatial Platform. This approach not only aligns with the philosophy of Open Government and transparency, but it also aligns with the Administration’s call for Federal agency data center consolidation and supports the recently announced “Cloud First” policy from OMB.

Utilizing IaaS offerings through the Geospatial Platform will allow agencies to rely on the authorization completed by another agency or to use an existing authorization, so that only additional, agency-specific requirements need to be separately certified. Additionally, today’s growing cloud infrastructure provides an opportunity for the Geospatial Platform to:

- Deploy a well-designed environment that can solve many common Federal business needs;
- Be scalable to offer services to other geospatial organizations in the future; and
- Provide better and more timely resources and services to agency staff, their partners, and the public.

Benefits:

- Support Federal agency resource delivery to customers.
- Consolidate servers, infrastructure, and avoid redundancy.
- Streamline the deployment process by avoiding individual security review.

Data as a Service (DaaS)

Description: DaaS is the provisioning of ‘on demand’ data to users regardless of geographic or organizational separation of provider and consumer.

Relationship to the Geospatial Platform: The Geospatial Platform can offer a mechanism and focal point for delivering trusted DaaS. The Federal portfolio of National Geospatial Data Assets (NGDAs), designated under the OMB Circular A-16, will constitute the Federal data contribution to the Geospatial Platform Portfolio. These NGDAs are actively managed and reviewed for reliability and quality, so they may be used by other agencies, non-Federal governments, and the public as trusted resources to support decision making. The availability and designation of trusted, high-quality data will result in increased use of the data and decreased redundant investment. Architecting an environment that supports the deployment of the NGDA Themes (A-16 Themes) will be a critical component of Geospatial Platform offerings. This environment can be made available to consumers as a managed portfolio of data products that are provided as highly available, on-demand services.

Benefits:

- Deliver trusted geospatial assets (i.e., NGDA) consistently to all levels of government and the public.
- Increase stewardship and accountability for data management across all levels of government, starting with Federal data.
- Increase consistency in the use and delivery of NGDAs and “trusted” data from Federal and non-Federal Partners.

Software as a Service (SaaS)

Description: SaaS is a software delivery model in which software and its associated data are hosted centrally (typically in the Internet cloud) and accessed by users using a thin client, normally using a web browser over the Internet. SaaS has become a common delivery model for most business applications, including accounting, collaboration, customer relationship management (CRM), enterprise resource planning (ERP), invoicing, human resource management (HRM), content management (CM), and service desk management. SaaS has been incorporated into the strategy of most, if not all, leading enterprise software companies.

Relationship to the Geospatial Platform: Many government business functions are common across agencies; problem-solving applications that are developed once can be made available for continued use through the Geospatial Platform. These applications, developed by Federal agencies, could be deployed as services through the Geospatial Platform and used as-is by other agencies with similar business requirements. Likewise, many of these services could have far greater value as a set of building blocks that others could utilize to build their own applications and tools. Some examples of services that could be deployed are listed below:

- Reporting and aggregation services.
- Common geoprocessing services.
- Common visualization processes.
- ‘Metadata as a service’ components.

Additionally, the first implementation of the www.geoplatform.gov website is in and of itself a SaaS offering. Agencies can re-use the infrastructure made available through this website to create and share their own interactive web maps, and develop completely hosted applications using reusable templates.

Benefits:

- Build software and applications once and offer them as shared services.
- Leverage existing tools for efficiency of development and quick response.
- Decrease redundant development and investment.

The Geospatial Platform: Bringing the Building Blocks Together

A key differentiating feature of the Geospatial Platform is that it provides customers access to a broad range of geospatial assets, including content from different governments (Federal, State, local, Tribal) and private organizations through the www.geoplatform.gov website. This is distinctly different from Data.Gov and GeoData.Gov, which provide access to exclusively Federal assets.

Providing trusted content through the Geospatial Platform: The Geospatial Platform’s broad discovery function is a valuable service for Geographic Information System (GIS) professionals who can discern the utility of geospatial resources for specific purposes, but this wealth of content may be overwhelming to more casual users, or program managers, who are seeking trusted data, services, or applications. To address this challenge, the Geospatial Platform is organized to highlight a subset of the overall content as “trusted” data, services, and applications. This additional value added by the Geospatial Platform guides users to quality assured offerings that are promoted as trusted resources and can be used with confidence. Trusted content is:

- *Discoverable:* published and available;
- *Reliable:* coordinated by a recognized national steward and available when needed;
- *Consistent:* supported by defined schema, standards and understood content definitions to ensure their integrity (including conformance with FGDC Standards as applicable);
- *Of known quality:* reviewed and maintained according to sound Portfolio Management practices;
- *Current and applicable:* maintained regularly and adaptable to current needs;
- *Resourced:* established and recognized as an enterprise investment; and

- *User-friendly*: easily used, understandable and readily accessible and re-purposed through downloads or by using available services and applications.

When trusted data, applications, and services are discoverable and accessible through a one-stop government Portal – the Geospatial Platform – there are multiple benefits to users. These include:

1. The Geospatial Platform provides decision makers with content that they can use with confidence to support daily functions and important issues.
2. The Geospatial Platform provides consistency of base maps and services that can be used by multiple organizations to address complex issues.
3. The Geospatial Platform eliminates the need to choose among redundant geospatial resources by providing access to trusted data, maps and services.

Appendix H: Concept of Operations for User Functionality

This Concept of Operations (ConOps) for User Functionality describes initial Geospatial Platform requirements at a high level and has served as initial guidance for both technical development on the geoplatform.gov website and as the basis for further development of policies and procedures needed to support the technical implementation.

Functionality Matrix

Table 1 serves as a conceptual overview depicting the different classes of geoplatform.gov users and the functions that will be accessible to each user class in the site. In the text that follows, each of these capabilities is described in further detail. Beginning with a set of definitions, information is provided on each capability or requirement by its functional category as shown below.

NOTE: This document does not describe the intended workflow for integrating the metadata catalogs and associated workflows for publishing records to Geo.Data.gov and geoplatform.gov. This ConOps will continue to be refined as Geospatial Platform is further developed.

Table 1. Overview of Functionality by User Class

| Functional Category | Capability / Requirement | Public User | Authorized Government User | Government Publisher | Commercial Publisher |
|----------------------------------|---|-------------|----------------------------|----------------------|----------------------|
| Account | External Authentication geoplatform.gov LDAP ²⁶ | x | x | x | X |
| Data | Register in “My Content” | x | x | x | |
| | Share with Community Groups | x | x | x | X |
| | Share with Government Groups | | x | x | |
| | Share with Public Groups | | | x | |
| Services and Applications | Register in “My Content” | x | x | x | X |
| | Share with Community Groups | x | x | x | X |
| | Share with Government Groups | | x | x | |
| | Share with Public Groups | | | x | |
| | Upload Source Code | | | x | |
| Maps | Register in “My Content” | x | x | x | |
| | Share with Community Groups | x | x | x | x |
| | Share with Government Groups | | | x | |

²⁶ Lightweight Directory Access Protocol, a set of protocols for accessing information directories.

| Functional Category | Capability / Requirement | Public User | Authorized Government User | Government Publisher | Commercial Publisher |
|---------------------|--------------------------------|-------------|----------------------------|----------------------|----------------------|
| | Share with Public Groups | | | X | |
| | Publish Hosted Applications | | X | X | |
| | Promote maps to Gallery | | | X | |
| Groups | Create new Community Groups | X | X | X | X |
| | Create new Government Groups | | X | X | |
| | Create new Public Groups | | | X | |
| | Create External Gallery Groups | | | X | |

Definitions

- **Public User:** Public Users are authenticated users of geoplatform.gov who have not been vetted or authorized for special access to the site.
- **Authorized Government User:** Authenticated users of geoplatform.gov who have been identified by their agency as being authorized to access restricted content on geoplatform.gov.
- **Government Publisher:** Authenticated users of geoplatform.gov who have been identified by their agency as having the authority to publish web services, applications, metadata records, etc. on geoplatform.gov. These users additionally have the authority to access restricted content on geoplatform.gov.
- **Commercial Publisher:** Authenticated users of geoplatform.gov who have entered into a partnership agreement with the FGDC, and have access rights to maintain the metadata records for their private sector data on geoplatform.gov.
- **Community Content:** geoplatform.gov content (datasets, web services, web maps, applications) that has not been contributed by Government Publishers.
- **Trusted Content:** Trusted Content is geoplatform.gov content (datasets, web services, web maps, applications) that has been contributed by trusted partners who are registered as Government Publishers. This includes datasets and associated services under A-16 as well as featured maps to be included in map galleries on Geo.Data.gov and eventually elsewhere. The Geospatial Platform model will foster the development and growth of a network of trusted partner organizations from all levels of government and the private sector that will contribute content. These trusted Partners are organizations that meet defined criteria for developing and delivering trusted content.
- **Community Group:** A Community Group is a group created by a user who is not a Government Publisher or an Authorized Government User. These groups are available to users of geoplatform.gov by invitation only, and are not discoverable as Public Groups on the site.
- **Government Group:** A Government Group is a group created by a user who is either a Government Publisher or an Authorized Government User. These groups are available to

users of geoplatform.gov by invitation only, and are not discoverable as Public Groups on the site.

- *Public Group*: A Public Group is a group created by a Government Publisher. These groups are available to all users of geoplatform.gov and are discoverable as Public Groups on the site. These include the existing A-16 theme groups currently available to all users.

Function Category: Account

External Authentication

Public users of geoplatform.gov will ultimately be authenticated via external mechanisms as determined by OMB²⁷. The National Institute of Health (NIH) site “PubMed” currently allows public users to authenticate to their application using credentials from Google and other external providers, and this model will be followed for the geoplatform.gov website using a growing list of approved authentication providers as it becomes available from OMB and the Federal CIO Council.

Geoplatform LDAP

Users of geoplatform.gov who are either Government Authorized or Publishers of any type will require an account in the geoplatform.gov directory system. A user interface will be made available on geoplatform.gov that allows these users to create their own accounts for use in the Geospatial Platform, or alternatively, to request that their existing accounts for publishing to Geo.Data.gov are granted access rights in the Platform. Account requests will be placed into an approval queue for the geoplatform.gov operations team who will determine whether the requests shall be approved and take the appropriate action.

Function Category: Data

Register in “My Content”

All users of geoplatform.gov will have the ability to manage content in the “My Content” section of geoplatform.gov. This includes the ability to register web services, web maps and applications, and to upload supported content types to the site including CSV, KML, and Shapefiles. Public Users will have an initial quota of 100MB of storage space allocated for their use, while all other users of the site will be given the default quota of 2GB.

Share with Community Groups

All users of the site will be able to share content (as registered in their “My Content” space on geoplatform.gov) with Community Groups. These private groups are discoverable in searches on the

²⁷ see 10/6/11 memo on “Requirements for Accepting Externally-Issued Identity Credentials” at http://www.cio.gov/documents/OMBReqforAcceptingExternally_IssuedIdCred10-6-2011.pdf

site, however content in these groups are accessible only to group members. Members can either be invited to join by group administrators or to can request to join a group allowing an administrator to accept or reject the request. This will enable Public Users in particular to share content with individuals of their choosing without giving them the ability to expose content on the site that might reasonably be construed as being trusted government content.

Share with Government Groups

Authorized Government Users and Government Publishers will be able to share content with Government Groups. These private groups are not discoverable in searches on the site, and accessible via invitation to specific users only. These groups are intended to enable Government Authorized Users to share content with individuals of their choosing in a trusted group of government collaborators and partners. Examples of this type of group include the currently implemented “Emergency Management” group on the site, where only government-vetted users of geoplatform.gov are given access to group contents.

Share with Public Groups

Government Publishers will be able to share content with Public Groups. Contents of these groups are discoverable by all users in searches of the site, and accessible without invitation to the group. The content in these groups will predominantly be datasets that correspond to the A-16 themes (with those groups ultimately being managed by the appropriate Theme Lead when designated by FGDC). Government Publishers will also have the ability to set flags on metadata records in the site that identify whether or not content is “consistent with Data.gov policies,” and therefore marked with the Data.gov globe logo. Additionally, public groups on current themes that are of interest (ongoing emergency responses, topics of cross-government special interest, etc.) will be created and made available for use by Government Publishers when the need arises. Requests for the creation of new Public Groups shall be approved by the geoplatform.gov operations team.

Function Category: Applications and Services

Register in “My Content”

Refer to description for this function in the Function Category “Data.”

Share with Community Groups

Refer to description for this function in the Function Category “Data.”

Share with Government Groups

Refer to description for this function in the Function Category “Data.”

Share with Public Groups

Refer to description for this function in the Function Category “Data.”

Upload Source Code

When registering an application, Government Authorized Users and Government Publishers will optionally be able to upload a zip file containing source code for the application to the geoplatform.gov site. As a part of the upload process, the zip file shall be scanned for viruses and other malware before being stored on the site. Users shall include appropriate documentation for the source code in their archive so that others can understand how the code is written and can be used to suit their specific needs.

Function Category: Maps

Register in “My Content”

Refer to description for this function in the Function Category “Data.”

Share with Community Groups

Refer to description for this function in the Function Category “Data.”

Share with Government Groups

Refer to description for this function in the Function Category “Data.”

Share with Public Groups

Refer to description for this function in the Function Category “Data.”

Publish Hosted Applications

One of the most powerful features of the geoplatform.gov website is the ability for users to turn their web maps into completely hosted web applications using reusable templates that are made available by Administrators of the site. Government Authorized Users and Government Publishers will both have the appropriate access privileges to publish their web maps as applications, and to share those applications with groups for which they are authorized.

Promote Maps to Gallery

Geoplatform.gov features a number of different “Gallery” groups. These groups allow for map content to be exposed on other websites as a series of thumbnails. This currently includes the Map Gallery available to users of Geo.Data.gov. Discussions are underway about including similar capabilities on ocean.data.gov and on other sites. Initially, only Government Publishers will have the ability to add maps to these gallery groups. As time goes on, it may be the case that Government Authorized Users need to be given these rights as well.

Function Category: Groups

Create new Community Groups

Any authenticated user of geoplatform.gov will have the capability of creating new Community Groups on the site. Community Groups contain non-vetted, non-trusted content on the site, and are intended to enable collaboration among users without creating the appearance of exposing user-generated content as being from government source.

Create new Government Groups

Government Authorized Users and Government Publishers will be able to create Government Groups on the site. Government Groups are intended to enable Government Authorized Users and Publishers to share content with individuals of their choosing in a trusted group of government collaborators and partners.

Create New Public Groups

Government Publishers will be able to create Public Groups. These groups and their contents are discoverable by all users in searches of the site, and accessible without invitation to the group. Requests for the creation of new Public Groups shall be approved by the geoplatform.gov operations team.

Create External Gallery Groups

Government Publishers will be able to create External Gallery Groups. These groups are designed to organize maps so that they are easily able to be shared with external websites as a series of thumbnail images. Requests for the creation of new External Gallery Groups shall be approved by the geoplatform.gov operations team.