Geospatial One-Stop

Project Guidance

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I. Project Vision

Vision of Geospatial Information One Stop

To spatially enable the delivery of government services

The achievement of this vision will aid in more effectively addressing economic, social and environmental issues by:

- Simplifying and unifying business processes
- Responding to the information needs of citizens, producers and users of geographic information everywhere by providing easy access 24/7 to current, accurate geospatial information
- Engaging and integrating the efforts of government at all levels, and the private sector
- Facilitate collecting data once and using it many times
- Enabling the use of geospatial information for timely and improved decision making for everything from Homeland Security to economic development to health and public safety

II. Project Goals/Objectives

Goals

1. *To provide fast, low cost, reliable access to Geospatial Data needed for government operations.*
2. *To facilitate G2G interactions needed for vertical missions such as Homeland Security*
3. To facilitate the alignment of roles, responsibilities and resources
4. To establish a methodology for obtaining multi-sector input for coordinating, developing and implementing geographic (data and service) information standards to create the consistency needed for interoperability and to stimulate market development of tools

Objectives: The Objectives of the Geospatial Information One-Stop Project are listed below. These Objectives have also been established as work modules for the Project:

- Develop and implement data standards for NSDI Framework Data.
- Fulfill and maintain an operational inventory (based on standardized documentation, using FGDC Metadata Standard) of NSDI Framework Data from Federal agencies, and publish the metadata records in the NSDI Clearinghouse network.
- Publish metadata of planned acquisition and update activities for NSDI Framework Data from Federal agencies in the NSDI Clearinghouse network.
- Prototype and deploy data access and web mapping services for NSDI Framework Data from Federal agencies.
- Establish a comprehensive Federal portal to the resources described in the first four components (standards, priority data, planning information, and products and services), as a logical extension to the NSDI Clearinghouse network.

III. Project Guidance

- Policy Guidance is provided by OMB Circular A-16 and EO 12906. This and other OMB guidance provides the policy structure for all Federal Agencies.

- The Capital Asset Plan Exhibit 300 for Geospatial One-Stop provides the basic outline for the Project.

- NSDI practices and principles will be followed.

- Federal Partners will not be limited to those identified in the initial versions of the Capital Asset Plan Exhibit 300 for Geospatial One-Stop. New Federal Partnering Agencies will be added.

- All Federal Partners are expected to provide active participation on Standards Development Teams and on other Project activities. Likewise non-federal organizations are requested to provide participation to represent the needs and interests of those sectors. The cost estimates for this participation is not included in the Capital Asset Plan Exhibit 300 for Geospatial One-Stop.

- The Geospatial One-Stop Portal implemented in this Project will be a first phase of the expected growth of the Portal. This growth will be both in number and range of participants and in scope of geospatial data resources and service functions provided.

- The Geospatial One-Stop Portal will provide access and service functions to the distributed network of spatial data resources of the NSDI Clearinghouse Network. Initial deployment for the Project will occur in all of the Federal Partner Agencies.

- Standards development activities:
  - The Data Standards developed as part of this project will be developed to meet a wide set of needs. To achieve this, the development process will incorporate ANSI and FGDC development procedures in order to produce Standards that are applicable on a national basis.
  - Each of the Framework themes has existing or ongoing standards development work, which can provide a starting point for the development of a Framework Standard. This work will be used along with other input in the development of the Standards.
  - The A-16 designated lead agency will provide the federal coordination for respective Standards Development Teams. Each interested and affected federal agency is expected to participate with the Standards Development Teams as appropriate.
  - Standards will be developed in a manner that involves non-federal sectors as full partners. This will include non-federal representation on all Standards Development Teams. It will also include an equal representation from Federal, State and Local governments in determining whether a proposed standard should published for public review and whether the standards should be recommended for endorsement to the FGDC Coordination Group and Steering Committee.
  - All Standards that are endorsed by the FGDC Steering Committee will required for adoption by Federal Agencies as specified by A-16 and EO 12906.
  - National adoption by non-federal organizations will be encouraged by the FGDC and federal agencies.
  - All of the Standards will include content definition, data models and will be focused on defining the intersection of common needs.
  - All standards will be developed on a similar timeline using the same data modeling process.

- Interoperable Technologies and Portal development:

  - All technology components of the Project will be in conformance with open systems and interoperable technologies specifications endorsed for use within the NSDI.

  - The Open GIS Consortium will be a primary mechanism for partnering with geoprocessing industry and for developing and testing geoprocessing technology specifications. Federal Agency activities with OGC will be leveraged to support Geospatial One-Stop to the greatest extent possible.

- The Project will be an Interagency Project:
  - Project Management Team
    - Will consist of personnel who are working full time or substantially on Geospatial One-Stop Initiative
    - Will be virtual team with the possibility of a core set of people who work at a common location

- Will be responsible for leading various modules and work tasks of Geospatial One-Stop and for overall project support
- Existing FGDC and other Structures will be used as much as possible to carry out Project activities.

- The Project Management structure will include:
  - FGDC Staff Personnel - Staff Director, Clearinghouse, Framework, Standards, BDR, OMB Initiatives Coordination
  - Federal and other Partner Personnel who are working on components of the Geospatial One Stop project
  - Framework Standards Team Leaders
  - Other personnel who either lead components of the Initiative or who provide Management or support for the Initiative

IV. Project Milestones and Tasks

The Geospatial One-Stop Initiative consists of 5 Modules of Work. The Modules are:

Module 1: Standards Development and Cost Benefit Analysis
Module 2: Inventory and Document Existing Framework Data
Module 3: Inventory and Document Planned Data Collection Activities
Module 4: Interoperable Web based Clearinghouse Services
Module 5: Deployment of Commercial-grade Portal Services

These Modules, Tasks, Milestones and Performance Goals are more completely described below.

Module 1: Standards Development and Cost Benefit Analysis

- Task 1a - Requirements Analysis: Conduct an assessment of the needs of the different elements of the geospatial data user community for Framework data content. In addition this work activity will include identification of existing data content models that may provide input into the development of the standards.

  - Performance Goal: Common requirements and business needs are defined for Framework Data content on a national basis

- Task 1b – OMB BDR: This task will consist of a Budget Data Request issued by the Office of Management and Budget to gather information about the costs and expenditures of Federal Agencies for Spatial data. In order to be able to collect information that will be beneficial to this Initiative it is anticipated that the BDR will concentrate on collection information for Framework themes of data.

- Performance Goal: Completion of and OMB data call for the identification of Federal agency expenditures and outputs for collection and use of Framework themes of data.

- Task 1c – Draft Cost Benefit Analysis Report: Development of the draft of a detailed cost benefit analysis of the value of shared spatial data infrastructure standards and tools that enable common access and use of Framework data and information. The Draft Report will build upon information gathered through the OMB BDB in Task 1b.

    - Performance Goal: Completion of a Draft Report that identifies specific costs and benefits of common access and shared use of geospatial information

- Task 1d – Final Cost Benefit Analysis Report: Final Report

    - Performance Goal: Final Report

- Task 1e – Working Draft of NSDI Framework Standards: The FGDC Standards Process will be used to guide the development and approval of the Framework data standards. Throughout the process the FGDC will coordinate with ANSI, ISO, and NIST to ensure alignment of FGDC efforts with emerging standards currently being developed Building on information gathered in Task 1a Requirements Analysis. Each of the Standards Development Teams will engage members of the geospatial data community and develop a Working Draft for the proposed standard. Standards will be developed for each of the 7 defined NSDI Framework categories:
    - Elevation
    - Orthoimagery
    - Hydrography
    - Administrative Boundaries
    - Transportation Networks
    - Cadastral
    - Geodetic Control

    - Performance Goal: Completion of a Working Draft for each of the Framework Themes that represents the needs and interests of all segments of the user community.

- Task 1f – Committee Draft of NSDI Framework Standards: After the Working Draft is completed the Standards Development Teams will submit the Working Draft for pre-public review to a wide range of interested users and producers to obtain their input on the Draft. These inputs will be used in preparing drafts for public review.

    - Performance Goal: Completion of an initial review of the Draft standard and development of a committee draft for formal public review.

- Task 1g – FGDC Final Draft of NSDI Framework Standards: After the formal public review period the Standards Development Teams will review all comments and prepare a Final Draft of the Standards. The proposed standard and public response document will be reviewed by the FGDC Standards Working Group and will constitute the completion of the Final Draft. As with all previous Tasks the process will include broad representation of all sectors.

    - Performance Goal: Completion of a Final Draft for each Framework Data Theme that represents the needs of all sectors.

- 1h – FGDC Standards Endorsement of NSDI Framework Standards: The FGDC Coordination Group reviews the recommendations of the Standards Working Group and forwards them for the endorsement of the FGDC Steering Committee.

    - Performance Goal: Endorsement of the Framework Data Content Standards for each of the 7 NSDI Framework Themes.

Module 2: Inventory and Document Existing Framework Data

- Task 2 - Inventory Existing Data: Complete an inventory and document all existing Agency Framework category data holdings using the FGDC Metadata Standard and publish the Metadata Records in an NSDI Clearinghouse.

    - Performance Goal: All Framework category data has completed Metadata, which is accessible and searchable in the NSDI Clearinghouse Network.

Module 3: Inventory and Document Planned Data Collection Activities

- Task 3 – Inventory Planned Data: Complete an inventory and document all planned Agency Framework category data collection activities using the FGDC Metadata Standard. Publish the Metadata Records in the NSDI Clearinghouse Network.

    - Performance Goal: All planned data collection activities for Framework category data are documented and the completed Metadata is accessible and searchable in the NSDI Clearinghouse Network.

Module 4: Interoperable Web based Clearinghouse Services:

- Task 4a – Interoperability Tools: Working with Industry organizations develop tools to facilitate the use of data content standards and models and semantic translation of legacy data sets to assist in sharing and integration of data from different sources.

    - Performance Goal: Interoperability tools and semantic translator that facilitate the implementation and use of data content standards and models.

- Task 4b – Web and Data Services Protocols: Identify and develop the needed protocols and specification for providing Web based data services that improve the ability to access and use the NSDI Clearinghouse Network.

    - Performance Goal: Specific packaging of standards based protocols and specifications are developed that expand the NSDI Clearinghouse Network capabilities

- Task 4c - Prototype Services Integration: Prototype and test the access and service protocols developed for use on the Geospatial One-Stop Portal

    - Performance Goal: Prototype is completed and a specific set of standards based protocols is established to ensure that the Geospatial One-Stop Portal uses replicable dependable commercial products.

Module 5: Deployment of Commercial-grade Portal Services

- Task 5 – Reusable commercial replication services for Web Portal: Each of the Federal Partners will install and deploy standards based data access capability to establish a Geospatial One-Stop Portal for geospatial data and services that is a virtual network which enhances and extends the NSDI Clearinghouse Network.

    - Performance Goal: The establishment of a comprehensive Federal Portal for geospatial data and services.

VI. Critical success factors

- Cooperation is received from all relevant federal, state, and local entities to develop standards and to participate in interagency and intergovernmental data acquisition partnerships.
- All relevant Federal, state, and local entities adopt the standards to help eliminate redundant, non-standard data collection.
- All relevant geospatial data, as well as planned Federal data collection, is incorporated and updated into the NSDI Clearinghouse network including a significant documentation of non-Federal data collection plans;
- Interoperability tools are utilized to leverage existing business processes;
- Project processes and systems are developed with flexible approaches to account for the diverse and changing roles of various stakeholders;
- Joint project management office with representatives from partners and stakeholders;
- Funding is allocated; and
- Participation and support from OMB.

VII. Geospatial One-Stop Design

Initial design concepts for the portal are depicted below. The scope of the initial Geospatial One Stop Portal is envisioned as focusing on two areas, one that provides the library/clearinghouse/discovery and retrieval of geospatial information and a second area that provides geospatial web services that can be used by other applications including other eGov applications. The Portal will build upon FGDC/NSDI standards and specifications for data, data documentation and access and on industry standards and specifications for geoprocessing and services. It will extend the capabilities of the existing NSDI Clearinghouse Network and provide the opportunity for multi vendor commercial implementation os common standards.