



COMMENTS ON OMB CIRCULAR A-16 AND THE GEOSPATIAL POLICY FRAMEWORK

A Paper of the National Geospatial Advisory Committee
December 2016

I. Introduction and Overview

The National Geospatial Advisory Committee (NGAC) received guidance from the Federal Geographic Data Committee (FGDC) in 2016 to provide perspectives and advice on how OMB Circular A-16 and the geospatial policy framework might be updated to reflect changes in technology, organizational capabilities, partnerships, and the evolution of the geospatial community. The NGAC Policy Framework Subcommittee met with the FGDC team and reviewed OMB Circular A-16 and the A-16 Supplemental Guidance prior to developing this paper.

The NGAC believes OMB Circular A-16 should be updated and revised. The last revision of the Circular was in 2002. The Circular does not adequately address the current geospatial landscape or the essential contributions of partner organizations to the National Spatial Data Infrastructure (NSDI). Advances in technology, crowd-sourced data, and a broader societal implementation of geospatial technologies have fundamentally transformed the use of geospatial technology. Additionally, communications styles have evolved significantly in the past decade.

This paper highlights broad themes that should be addressed when evaluating the relevance of the Circular. In particular, the Subcommittee feels strongly that a complete rewrite of the Circular, rather than minor modifications, is needed at this time. The Appendix provides specific comments from NGAC on the existing A-16, and emphasizes areas that should be revisited during the revision process.

The predominant themes of the NGAC's advice on Circular A-16 focus on:

1. Enhancements that would better accentuate the value of geospatial information to the nation;
2. The need to manage resources to maximize the return from public investments;
3. The need for governance and coordination processes that are inclusive and representative at a national level, not just the federal level.

II. Broad Themes and Suggestions – OMB Circular A-16

Background

OMB Circular A-16, *Coordination of Geographic Information and Related Spatial Activities*, is the primary Federal policy document promoting the coordinated use, sharing, and dissemination of geospatial data and activities supporting the NSDI. OMB Circular A-16 refers to spatial data as information about places or geography that have traditionally been shown on maps that can enhance understanding of our physical and cultural world.

Since 1953, OMB has released several iterations of Circular A-16. These efforts were reinforced in 1994 by Executive Order 12906, *Coordinating Geographic Data Acquisition and Access*. Two subsequent laws further reiterating these responsibilities are the Clinger-Cohen Act of 1996 (in Public Law 104–106) and the E-Government Act of 2002 (Public Law 107–347). In 2010, OMB issued *OMB Circular A-16 Supplemental Guidance*. The Supplemental Guidance requires the identification of specific datasets to be managed in a geospatial portfolio as National Geospatial Data Assets (NGDAs). The Supplemental Guidance also clarifies the roles and responsibilities of FGDC agencies in meeting Circular A-16 requirements. Under the portfolio management process, NGDA theme and dataset managers are responsible for coordinating with partners as appropriate, including state, local, regional, and tribal governments.

The NGAC recognizes that the purpose of OMB Circular A-16 is to provide guidance to federal agencies for the coordination, stewardship, and management of federal geospatial assets. After thorough review, the NGAC encourages the FGDC to consider the following points during their evaluation process.

General Points

- Circular A-16 should be revised through a collaborative and inclusive process, incorporating input from Federal agencies, external partners, and stakeholders. Any Circular A-16 revision should incorporate more participation into the governance process from non-traditional stakeholders who are geospatial consumers.
- The revision process for Circular A-16 should follow successful models such as the process that OMB and the Federal privacy community recently undertook to revise *Circular A-130 Management of Federal Information Resources*. The revision process should also include an evaluation of what worked well, as well as lessons learned from the current A-16.
- OMB should take an active leadership role in the revision of Circular A-16.
- The Circular A-16 Supplemental Guidance, which was issued in 2010, should be incorporated into the revised version of A-16. The content of the Supplemental Guidance, which describes a portfolio management approach for NGDA, should be updated to reflect the recommendations of FGDC's recent NGDA/portfolio management evaluation process.
- Circular A-16 content on data themes and the NGDAs should be updated to include more participation and stewardship from non-federal stakeholders. Some NGAC members feel there needs to be a national conversation and deliberation on which elements of the NSDI are inherently governmental and at which level of government; and which data themes are best suited for the commercial sector.
- Circular A-16 should recognize and specify the role of the NGAC in providing external advice and recommendations to the FGDC on national geospatial policy issues.
- FGDC and the Administration should also consider issuing a new Executive Order (EO) to replace and update Executive Order 12906, "Coordinating Geographic Data Acquisition and Access: The National Spatial Data Infrastructure," which was issued in 1994. A new EO could complement the updated Circular A-16, describe an updated governance process, and describe agency implementation actions and responsibilities.
- The new Administration should consider working with Congress to enact legislation codifying the requirements of Circular A-16 and EO 12906, as well as providing statutory authority for the continued development and maintenance of the NSDI and the supporting activities of the FGDC.
- OMB Circulars have an inherent federal focus and are geared toward providing instructions and guidance to federal agencies on the use of federal resources in support of national interests. However, the NSDI is more a comprehensive objective that requires support and contributions from the other stakeholders.

- Circular A-16 must articulate the value to the nation of geospatial resources as information capabilities, content, and competencies, rather than data and processes of the historically “IT” view of geospatial technologies. The Circular should recognize the importance of the necessary infrastructure in the NSDI that supports geospatial content such as GPS, CORS stations, and Earth Observing Systems.
- Circular A-16 must recognize and differentiate the different roles of the federal government in the geospatial ecosystem. The first role is an aggregator and consumer that leverages content and capabilities from other levels of government and the private sector. This is a shift from the traditional producer role. Along those lines, recognize that some NGDA layers are inherently best stewarded from the local government level up. The second role is that of data creator and steward—recognizing that some NGDA layers are best stewarded through federal level enterprise programs that serve and receive feedback from the entire public sector mapping community where possible.
- Circular A-16 should clarify how the FGDC will determine priorities for federal investment activity in support of the NSDI in collaboration with partners and stakeholders including state, local, regional, and tribal governments. The Circular should acknowledge the pervasive benefits of smart, coordinated investment in geospatial information and technology across agencies and levels of government. It should also specify how partner agencies and organizations can participate in and contribute to NSDI activities and resources. This process should include a mechanism for resolving conflicting requirements.
- In addition, the new document should:
 - Update the geospatial governance structure and process to ensure that the interests of the natural, built, and social environments are represented.
 - Focus on measuring progress and managing resources to maximize outcomes rather than merely articulating strategy or building a resource quantified by size.
 - Be concise and as engaging as possible to appeal to the broad geospatial community beyond the main intended federal audience.
 - Consider aligning stewardship of national datasets to existing and forthcoming requirements of essential government functions at all levels of government.
 - Align federal resources and programs with local level programs and resources to ensure success. Many other federal-led initiatives (health/social services, transportation funding, etc.) employ primacy to create a national program. Geography and the NSDI, which relies upon data that is inherently local, should not be different.

III. Summary

OMB Circular A-16, last updated in 2002, requires a thorough update and revision. Circular A-16 does not adequately address the current geospatial landscape or all of the Federal geospatial players. The Circular should incorporate Circular A-16 Supplemental Guidance (issued in 2010) and have a contemporary, concise style. Any inclusion of the Supplemental Guidance should ensure the ability to make modifications to account for future developments in geospatial information and content without requiring formal rewrite. The document must be clearly relevant not only to the federal government but the national geospatial community as well. Additionally, it should offer more detail on the role of the broader geospatial community in developing and maintaining the NSDI. It should recognize the

significant role non-federal stakeholders play in the national geospatial community from both a provider and stewardship perspective – especially state, local, tribal, territorial governments, and the commercial sector. The new Circular should also articulate the value of geospatial resources as information content rather than data and acknowledge the pervasive benefits of smart, coordinated investment in geospatial information and technology across agencies and all levels of government. OMB should take an active leadership role in the development of the new document through a collaborative and inclusive process, incorporating input from Federal agencies, external partners, and stakeholders. The new Circular should provide the incoming Administration with an opportunity to not only strengthen the NSDI, but also provide a blueprint for providing statutory authority for the continuing development and maintenance of the NSDI and supporting activities of the Federal government and the FGDC.

This paper was prepared by a subcommittee of the NGAC that included the following members: Tony Spicci (Co-Chair), Molly Vogt (Co-Chair), David Alexander, Bert Granberg, Kevin Pomfret, Laxmi Ramasubramanian, Amber Reynolds, and David Wyatt.

Appendix

NGAC Comments Specific to the Current OMB Circular A-16

Subcommittee member comments on the **current** Circular A-16 language according to the following categories:

1. What is working well, and should be preserved?

- The committee believes that the rationale for the creation of the current A-16 Circular is sound and a new effort should be undertaken in the spirit of the original.
- The spirit of the document and general concepts can be preserved but they need to be presented in a more contemporary format.

2. What is worth keeping but with revisions to make it more effective or successful in implementation?

- The information and concepts in the current A-16 are good, but a revised document should be presented in a more engaging and compelling way.
- The role of federal agencies needs to be reconsidered in light of a geospatial ecosystem (government application areas, activities at other levels of government, industry, the “crowd”).
- The Circular needs to better explain the NSDI and how federal resources will be coordinated, managed, and prioritized in support of NSDI as one of the many stakeholders not the sole proprietor.
- The current A-16 is tightly organized and logical in structure. The next iteration should be even tighter, crisper, clear in direction, and focused on action. The document should be designed so it can be presented as a digital document (hypertext, as opposed to traditional white paper) offering an overview that can be expanded into additional levels of detail.
- The concept of a 'Clearinghouse' should be adapted to describe the current and future capabilities offered by the Geoplatform, including registering distributed data services designed for enterprise use, 2-way communication, and workflow tracking between users and stewards on data issues.
- The document references NSDI support for the building of a Global Spatial Data Infrastructure (GSDI), consistent with national security, national defense, national intelligence, and international trade requirements. Reference to a GSDI could create confusion and needs further explanation. A well-designed NSDI should be the focus and will in all likelihood translate well to meet nation-level contributions of a GSDI.
- More attention needs to be paid to the importance and practicality of metadata within the document. Note that for many people location is "metadata" when in reality it is much more.
- The document frequently uses the term 'partnerships' which may create confusion, particularly in a formal or legal context. We suggest acknowledging that with current technology every organization is a potential spatial data collector and user, often simultaneously, and the goal of the NSDI is to organize funding and work processes to leverage this most effectively.

- The document references that ‘the NSDI assures that spatial data from multiple sources (federal, state, local, and tribal governments, academia, and the private sector) are available and easily integrated to enhance the understanding of our physical and cultural world.’ However, it falls short in describing the roles of any organization or sector other than federal government agencies. It must clarify how other entities contribute and participate. More detail should be offered on how to leverage the capabilities and resources of the non-federal community to maximize the value of cooperation and coordination in the collection, production, sharing and use of spatial information, the implementation of the NSDI, and the identification of proven practices. The ‘Requirements’ section could detail the requirements for partners that contribute to the NSDI.
- While implementation of the Circular is essential to help federal agencies build the best, most accessible information resources possible in a cost-efficient manner, it should also state that this is the means to achieve a more fundamental goal and public benefit: to unleash the tremendous societal, governmental and economic benefits of a location-enabled society.
- The document references that the FGDC will establish procedures and committee structures as are necessary. This is, however, a federal-based approach to address a "national" issue. A national approach would be best to solve a national issue.
- Definitions should be easy to find, and not relegated to Appendix D. Typically definitions are offered up front or at the very end or may be embedded hover/hyperlinks in a digital product. The definitions also need to be updated based on the final content of the document, which is likely to reference "crowdsourcing" and the "cloud".
- The document would benefit from modern publishing capabilities that embed links to maps, videos, and more in the way of examples. The current document is flat and does not represent the visual nature of the technological and communications resources that it promotes.
- The ‘Does this Circular apply to my agency?’ section should be thoroughly rewritten; this Circular should apply to every agency in some form.
- ‘Agency Responsibilities and Reporting Requirements’ should align with the supplemental guidance.
- ‘What is the Federal Geographic Data Committee (FGDC)?’ and ‘What are the benefits of the NSDI?’ should be combined with the introduction, background and purpose.
- ‘What are the components of the NSDI?’ should be bulleted and made as concise as possible and should reference the appendix for additional detail.
- Add an executive summary to draw readers in and trim material throughout to make it more concise without losing significant content. Consider what level of detail is appropriate for current audiences who have a better understanding of spatial technology than those in 2002.
- Consider a stronger directive rather than a minimal compliance checklist.
- A number of specific references need to be updated; e.g., LRS (satellite resolution issues).
- All of the Appendices will require updates.

3. What is no longer relevant or should be removed?

- Many of the terms are no longer relevant.
- The Circular doesn’t adequately reflect the current geospatial landscape or the Federal geospatial players.

4. What is missing? What are the gaps or additions needed?

- Make the document more thorough and inclusive by expanding the list of participants and their corresponding roles beyond the federal agencies.
- Incorporate geospatial consumers into the governance rather than just relying on geospatial information (data) producers.
- Include a plan for future document updates.
- Describe how new technologies/new applications should be handled between updates in the Circular.
- Consider incorporating material from NGAC's Transition Recommendations paper to reinforce consistent messages. This document should reiterate the value proposition for geospatial investment, and then provide a framework for doing it better with the NSDI.
- Acknowledge crowdsourcing and citizen science as new channels for data development and public engagement.
- Provide examples to illustrate concepts and demonstrate potential for success.
- Reference existing public law and gaps.
- Reference more existing policies and include examples of policies from other countries.
- Clearly articulate why it is relevant to the greater geospatial community rather than just federal agencies. Language from the Supplemental Guidance may be useful.
- Reference related policies and Presidential Directives - such as National Open Data - where appropriate.
- Consider addressing privacy within the realm of what is appropriate with respect to OMB guidance and FGDC guidelines.
- Acknowledge that geography is inherently local. For many of the most important geospatial information resources, local government is constructing the most-detailed, best quality, and most current data. This makes sense at local government is 'closest' to geography that is changing and therein, able to connect to change processes and to verify reported changes. Federal agencies should be required to align their business processes to, where appropriate (and, where individual states are willing), source geospatial data from local government and aggregate this information at the state level. Many federal programs predicated on connecting with local communities are administered through states through block grant programs; this is also a model for services and information products related to local geography.