Engaging Non Geospatial Organizations Action Plan

1.0 Mission

The mission of this plan is to have ten non-geospatial organizations actively participating in the National Spatial Data Infrastructure (NSDI) by 2006. Active participation may range from using NSDI resources and the Geospatial One Stop portal to contributing spatial data, recommending spatial data, standards; helping organize a GOS specialty channel or sponsoring Federal Geographic Data Committee (FGDC)-related activities for their members.

1.1 Background

Information influences thousands of decisions made in communities every day about all sorts of questions affecting businesses, citizens and governments. Geospatial information provides a critical component in the decision-making process by combining layers of information from different sources to allow for the analysis of alternatives and encouraging the sharing of information. Given the crucial role of geospatial information for the public and private sector alike, its proliferation among organizations and businesses, and the expense of collecting and sharing it, FGDC and the NSDI encourage partnerships for collecting and maintaining geospatial information and best practices to facilitate those activities. The more organizations that recognize the benefit of geospatial information for their business, agree to share their information with others that need it and follow best practices to ensure its benefit to others, the more it serves the community, strengthens the NSDI and extends resources.

While the goal is to engage organizations and get them involved in the NSDI, there is an awareness of the fact that organizations' levels of involvement may vary.

Presumably, some level of understanding and involvement in spatial information and technology is a pre-requisite to contributing to the vision of the NSDI. "GIS involvement" refers to individual members' involvement in GIS use (understanding, use, promotion), as well as an organization's involvement in GIS dissemination and development (education, publications, special interest groups, involvement in industry activities, committees, etc.)

Caution must be exercised, however, to focus our efforts on NSDI rather than GIS. Organizations' involvement in NSDI may range from: using available NSDI data, creating data, and participating in other activities that develop the NSDI, such as standards.

1.2 What is the National Spatial Data Infrastructure (NSDI)?

The NSDI is a national approach to the development of spatial data that is widely accessible and shared by all producers and users of spatial information.

Presidential Executive Order 12906 defines the NSDI as "the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve utilization of Geospatial data."

As detailed in Office of Management and Budget (OMB) Circular A-16, 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. The A-16 Circular designates the Federal Geographic Data Committee (FGDC) as the coordinating entity responsible for developing and implementing national strategies to advance the goals of the NSDI.   Agencies are expected to develop their international spatial data in compliance with international voluntary standards and make it available and easily accessible.

1.3 Background on the FGDC/NSDI Future Directions Planning Activity

The purpose of the National Spatial Data Infrastructure (NSDI) Future Directions Initiative was "to craft a national Geospatial strategy and implementation plan to further the development of the NSDI." Drawing on the collective insights and contributions of the Geospatial community and non-Geospatial community at-large, the following overarching action areas emerged.

1.3.1 Engaging Non-Traditional Geospatial User Organizations

This action plan calls for a four-phased approach to engage non-traditional Geospatial user organizations. The first phase consists of identifying target organizations, determining their interests and their challenges, and demonstrating the FGDC/NSDI resources and geospatial tools that impact their constituents. Secondly, it calls for developing approaches for engaging each organization, based on Phase One analysis. The third stage requires prioritization of the target organizations for engagement based on their potential benefit to and from FGDC/NSDI participation and use of Geospatial technology. Finally, the action plan calls for the establishment of a comprehensive outreach program that incorporates this action plan and the recommendations from the other FGDC Future Directions action teams' plans.   Please see Figure 1 below:

Non-geospatial Organizations: Outreach Plan and Approach

I: IDENTIFICATION OF ORGANIZATIONAL INTERSTS AND CHARACTERISTICS

| Organizations | Interests | Tools | Challenges |

How to Get Organizations' Attention

II: INTEGRATION

Potential Approach for Working Individual Organizations

III: ANALYSIS & PRIORITIZATION

Benefit/Cost Analysis

Prioritization

Priority

Now: 2006
ID specific orgs & plan

Med: 2007-2010
Refine analysis
ID types

Low: 2011 & beyond
don't invest resources yet

IV: ACTION PLAN

Next Steps
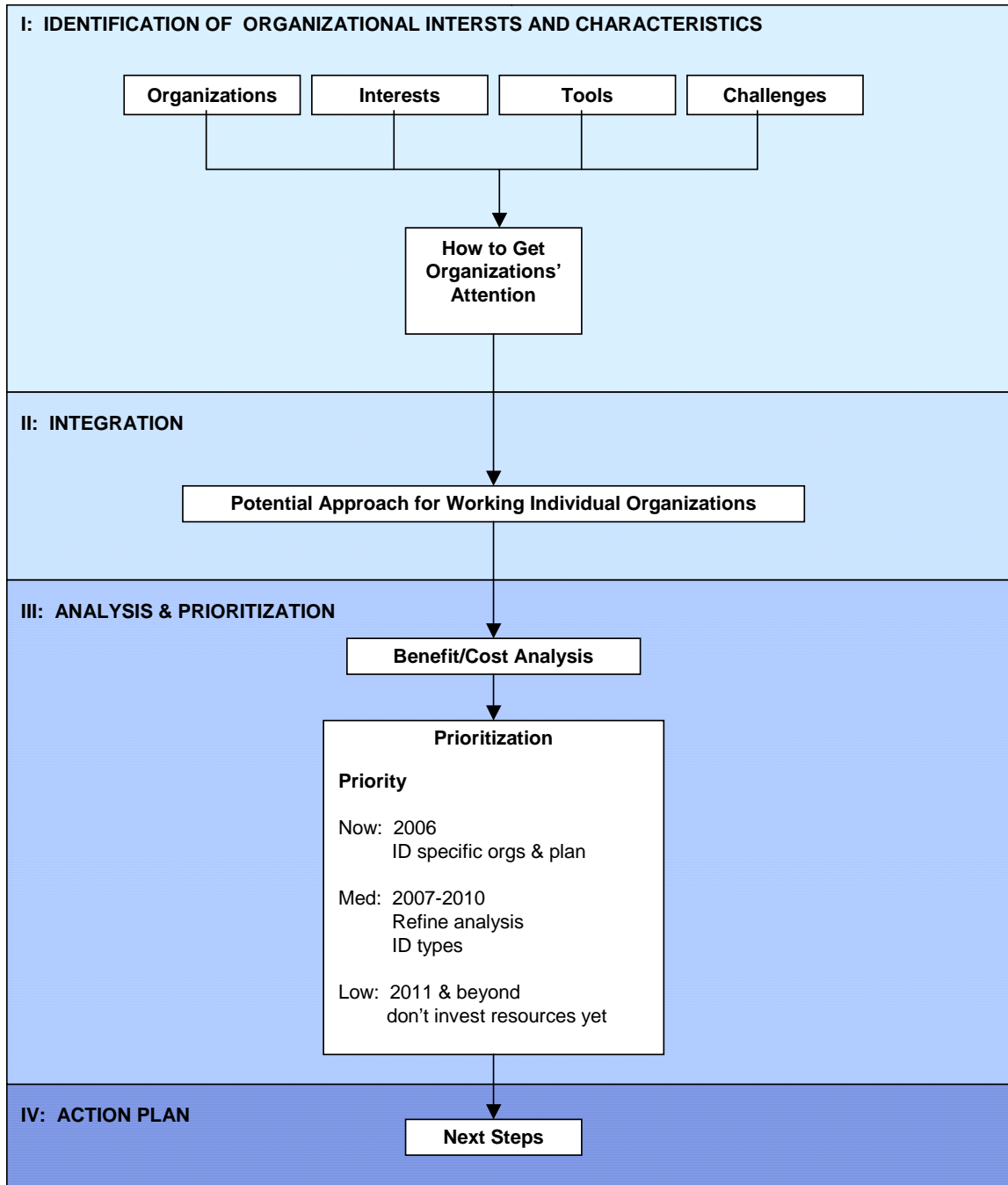
Figure 1

1.3.2 *Communicating the Message: The NSDI is recognized across the nation as the primary mechanism for assuring access to reliable Geospatial data for decision makers, not Geospatial techies.*

The Geospatial community must be able to communicate the benefits and value of the GOS portal and the NSDI beyond the current user and supplier communities to non-traditional users of Geospatial information.

- Everything happens somewhere.
- The ability to see where things happen is priceless.
- Geospatial data and technology aids decision-making by combining information and providing alternatives.   Business and government use these data in their decision to:
    - Locate new businesses, hospitals, and schools.
    - Respond to emergencies.
    - Analyze transportation options for efficient routing and access to services.
- Visualization of demographic data facilitates decision-making.

- Federal Geospatial programs and resources provide valuable information to meet local needs.
- Your local data, combined with national data, aids decision-making.
- Sharing of Geospatial information across boundaries helps improve service delivery and reduces costs.

2.0 Goals and priorities of this Action Plan
Implementation of a national geospatial strategy would enable members of the geospatial community to share and access data together seamlessly. The National Spatial Data Infrastructure envisions a coordinated system that advances the availability and transparency of geospatial data at the federal, state, tribal, local, private and academic levels.

However, to achieve that vision will require the participation of many more users of geospatial information and technologies. The NSDI cannot be maintained and enhanced by a single organization.   As outlined in the FGDC Future Directions report, the goal of this plan is forging partnerships with purpose to include all stakeholders as part of the process that guides the development of the NSDI. An essential element of a well-coordinated, concerted effort is to bring more partners into the process and become engaged in some aspect of development of the NSDI.
Expanded participation is necessary to leverage resources, minimize redundancies and collaboratively solve problems to achieve the NSDI vision.

This action plan is intended to establish a strategy of short term and long-term actions for engaging organizations that do not have geospatial technology as their key mission.   It is intended to reach those organizations whose members have some knowledge and experience with geospatial information to help conduct their business and those who are not currently using geospatial technologies.

For those that already are familiar with geospatial information technology and its value, we recommend a concerted effort by FGDC members to encourage and motivate those entities to engage in geospatial initiatives and contribute to the NSDI by making their information accessible through the Geospatial One -Stop portal and by following FGDC standards.   One of the challenges that face this effort will be the appropriate incentive to invest in and use geospatial information, including following standards and willingness to share their information with other levels of government.   We are aware that many more organizations and individuals are promoting the use of geospatial information in which they exclude themselves as part of the geospatial community.   Our goal is to find the combination of incentives and available resources that will encourage their active participation in developing the NSDI.

In order to fulfill the goal of outreach and engagement of organizations not currently participating in development of the NSDI, we will need to work together with other Future Directions action teams and with the entire NGPO to coordinate a comprehensive plan for outreach and communications, combined with incentives that will encourage additional partnerships. We also anticipate that this plan will evolve as we determine whether some of our suggested activities are effective or need to be modified in response to new situations or opportunities.

3.0 The Outreach Plan

The approach recognizes that there are several key components to developing a plan to engage nongeospatial organizations, one of which is an understanding that involvement in the NSDI will be based on how well it meets their business needs and the needs of their members. Therefore, our approach examines issues specific to the interests of organizations and attempts to identify specific approaches that might be useful to them.   Based on this evaluation of potential organizations, the plan recommends development and implementation of an outreach strategy to encourage the participation of the non-geospatial organization in development of the NSDI.

Definition of Non-Geospatial National Organizations

Non-Geospatial National Organizations are those whose members are primarily users of spatial information and technology, rather than builders or producers of spatial information and systems.

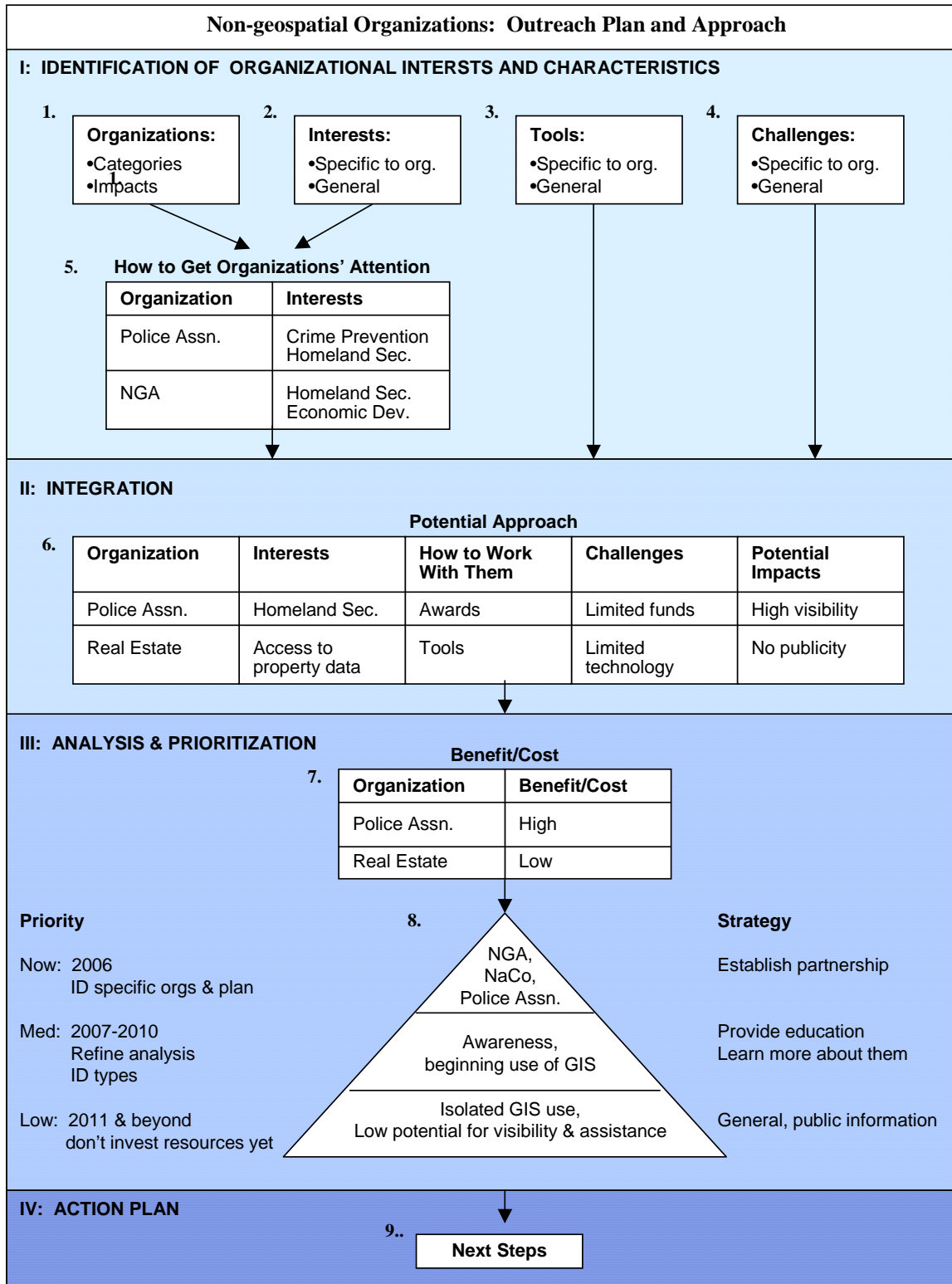**Long Term Plan v. Immediate Identification**

While the immediate strategic objective is to have ten non-geospatial national organizations engaged in and contributing to the NSDI by 2006, there is also a need for a plan for identifying and working with other organizations beyond that milestone. Thus, the approach in this outreach plan is the establishment of a methodology for identifying potential organizations, determining effective ways to get their attention, evaluating the cost/benefit of approaching and working with them, and categorizing them accordingly.

Approach

As discussed earlier, the approach consists of nine steps in four phases. These steps are illustrated in the figure below and discussed in the following text.

Non-geospatial Organizations: Outreach Plan and Approach

I: IDENTIFICATION OF ORGANIZATIONAL INTERSTS AND CHARACTERISTICS

1.
Organizations:
- Categories
- Impacts

2.
Interests:
- Specific to org.
- General

3.
Tools:
- Specific to org.
- General

4.
Challenges:
- Specific to org.
- General

5. How to Get Organizations' Attention

Organization	Interests
Police Assn.	Crime Prevention Homeland Sec.
NGA	Homeland Sec. Economic Dev.

II: INTEGRATION

Potential Approach

6.

Organization	Interests	How to Work With Them	Challenges	Potential Impacts
Police Assn.	Homeland Sec.	Awards	Limited funds	High visibility
Real Estate	Access to property data	Tools	Limited technology	No publicity

III: ANALYSIS & PRIORITIZATION

Benefit/Cost

7.

Organization	Benefit/Cost
Police Assn.	High
Real Estate	Low

Priority

Now: 2006
ID specific orgs & plan

Med: 2007-2010
Refine analysis
ID types

Low: 2011 & beyond
don't invest resources yet

8.

NGA,
NaCo,
Police Assn.

Awareness,
beginning use of GIS

Isolated GIS use,
Low potential for visibility & assistance

Strategy

Establish partnership

Provide education
Learn more about them

General, public information

IV: ACTION PLAN

9..

Next Steps

Phase I: Identification of organizational interests and characteristics.

1) Identify target organizations using the outreach strategy outlined Section 3.1 of this plan.

2) Identify interests. These are defined as the problems, operations, issues, etc. that NSDI can help organizations handle. (Section 3.2)

3) Identify tools. These are the methods for approaching and working with organizations. (Section 3.3)

4) Identify challenges that organizations face in participating in the NSDI and implementing GIS. (Section 3.4)

It is important to separate these components to ensure that the lists are complete. That is, if organizations and their interests, challenges and ways to work with them are only talked about together, as in the next two steps, then important organizations, interests, tools, and challenges could be missed.

5) Examine organizations and their interests. This is another approach to identifying organizations, and it is useful because it is a natural way to think about them. So, this may be a beginning point for some people. However, in order for the extended plan to work, organizations and interests identified here must also be added to the earlier lists (Section 3.5).

(In some instances, the easiest way to determine specific organizations' interests may be to discuss organizations and their interests together—in other words, to start at step 5 and reverse-engineer to steps 1 and 2, then proceed to steps 3 and 4.)

Phase II: Integration.

6) For each organization or organization type, determine the interests, tools, and challenges that apply. Also, in light of all four components, determine the potential impact the organization's involvement may have on the further development of the NSDI (Section 3.6). This will provide potential approaches tailored to each organization.

Phase III: Analysis and prioritization.

7) Determine the relative benefits and costs of working with each organization (Section 3.7).

8) Prioritize organizations based on the relative benefits and costs (Section 3.8).

Phase IV: Action plan.

9) Specific next steps grow out of the analysis and prioritization developed in Phase III. These actions involve engaging the selected organizations using the specific approaches developed in Phase II. That is, for each organization:

- Relate NSDI to their interests.
- Employ the tools and methods most applicable to them.
- Mitigate their specific challenges.

Specific recommendations regarding which organizations to approach and how to engage them are provided in Section 4 of this report.

3.1 Strategy for Identifying National Organizations

Target organizations, whose members are primarily users of spatial information and technology, rather than builders or producers of spatial information and systems.

Type of Organizations/Associations

Type of Organization	Examples (Associations for…)
1) Government	NGA, NACo, ICMA, regional commissions, law enforcement, transportation, healthcare providers
2) Education	School administrators, libraries, universities, HBCUs
3) Civic	National Infrastructure for Community Statistics initiative
4) Business	Real estate, telecommunications
5) Public Interest Groups	Environment
6) Professional Groups	Public works, utilities, environmental

Level of Involvement with GIS

We can probably assume that some level of understanding and involvement in spatial information and technology is a pre-requisite to becoming involved in NSDI. However, we must be careful to focus our efforts on NSDI, not GIS.

Level of involvement refers to individual members' involvement in GIS (understanding, use, promotion), as well organizations' involvement in GIS (education, publications, special interest groups, involvement in industry activities—committees, etc.) Hence, we may need two more columns—one for members and the other for the association itself.

Level of Involvement with GIS	Current	Potential
1) Aware of GIS		
2) Recognize potential value of GIS		
3) Understand GIS		
4) Few members use GIS		
5) Many members use GIS		
6) Members' use of GIS is visible/well publicized		

Level of Involvement with NSDI

This is NSDI-specific, beyond GIS.   Again, this refers to individual members' as well as organizations' understanding and involvement in NSDI. Again, it is possible that we need two more columns.

Level of Involvement with NSDI	Current	Potential
1) Aware of NSDI		
2) Recognize potential value of NSDI		
3) Understand issues and value of NSDI		
4) Use NSDI data		
5) Use other NSDI resources (e.g.; standards)		
6) Contribute data to NSDI		
7) Contribute to other components of NSDI		
8) Promote and assist diffusion and adoption of NSDI		

Methods for Identifying Organizations

Individual perspectives broadened to national.

One effective method for identifying potential organizations is to examine individual perspectives—how specific individuals work within their environment—and extend the viewpoint to the national level. For example, the regional planning perspective model identified local groups who may benefit from NSDI and then identified the national organizations with which they may be affiliated. Making use of select individuals from select industries and regions such as the following can expand this method:

- Regional planner
- GIS software vendor
- GIS mapping services vendor
- Utility manager
- Transportation manager

The FGDC, with its experience in the management of the CAP grants, has a wide array of success stories of organizations that have gone through the same struggles as others that are starting to become familiar with the NSDI and considering participation. The FGDC has a plethora of past CAP grant winners who will be utilized to help define various training tools.

3.2 Identification of Interests for Approaching Organizations

FGDC's message must address the issues, concerns and services that the different levels of government and non-governmental organizations provide to their constituents and members, rather than technology. Recent studies of governmental and non-governmental organizations have identified the following programmatic issues and services listed below as important to their constituents:

At the State level: Assistance Eligibility Screening; Child Support Services; Hunting and Fishing Licenses; Driver and Vehicle Services; Education, Election and Voter Services; Employment and Unemployment Services; Economic Development; Healthcare; Travel and Tourism.

At the Local level: Education (school boundaries, student achievement); Economic Development; Public Works (Parks, Street, Sewer, Snow Removal); Tax Information and Payments (Vehicle Decals, Property Tax Payment, Tax Rates, Tax Relief); Health and Human Services (Low Cost Child Healthcare, Foster Care, Immunizations, Mental Health Services); Emergency

Management(Fire and Rescue, Police, Emergency Alert Network); Community and Volunteering (Parks, Library); Voting Information (Locations, Absentee Ballots, Registration); Public Safety (Citizen Complaint, Crime Reporting, Traffic Safety, Lost Animals, Crime Prevention and Fire Safety); Planning and Zoning (Zoning and Noise Ordinances, Comprehensive Plans, Land Use, Historic Preservation); Libraries and Museums (Events, Locations); Parks and Recreation (Facilities and Locations, Senior/Youth Programs, Park Policies, Open Space Preservation); and Licenses and Permits (Businesses, Animals, Construction).

For government, businesses, communities, and policy makers, a demonstration of the geospatial information and technology to organize and visualize information for a more informed decision-making for the services listed above will attract attention and participation in FGDC/NSDI activities.

3.3 Tools for Engaging Organizations

Once candidate organizations have been identified by virtue of compelling success stories, various GIS "tools" can then be used to help these organizations climb up the GIS learning curve. Indeed, there are a growing number of tools becoming available to initiate potential users into the world of spatial technology. Several tools are available at low or no cost, such as the GEODE website (maintained by the USGS at http://geode.usgs.gov), the LandView DVD products (available from the Census Bureau at http://landview.census.gov), and, of course, the Geospatial One-Stop Portal (available at http://www.geodata.gov/gos). These tools can be accessed free on the web and allow new users to experience firsthand the power of manipulating spatial data.

Many organizations, however, are new to GIS and the concept of spatial awareness. For these organizations, the option of contracting work to a business that specializes in defining requirements and building systems or applications on a smaller scale are more time- and cost-effective. There are numerous businesses that cater to a wide variety of disciplines, and each business has its specialties. A list of such businesses can be compiled into a reference document for users' consideration.

Pilot Programs

We propose a demonstration or pilot program that focuses on the needs of a specific region with a strong regional government infrastructure and a community college willing to take on this project.   Using an existing product developed cooperatively by several Federal agencies as a training base, we propose development of training materials based on this product based on real issues

faced in the Northern Shenandoah Valley Regional Commission and based at the local community college.   With knowledge of the issues and understanding the tools and information that can support decision-making in the Shenandoah Valley, we believe this would serve as a valuable pilot in encouraging non-geospatial organizations to participate in the NSDI.

An outreach model has been suggested for contacting organizations that are either currently not using spatial technologies or are not using these technologies to their fullest extent. This model envisions an "Outreach Team," consisting of government professionals (from FGDC Coordinating Council) who are familiar with spatial technologies and have a firm understanding of the workings and resources of the FGDC. These people should also have good organizational skills and be comfortable with serving as session moderators in professional conference venues. These government moderators would draw on industry experts to populate the sessions and ultimately provide examples of innovative and cost-effective spatial technology solutions to the audience.

Working from a prioritized list of organizations, a member of the Outreach Team would contact the appropriate person(s) in the target organization responsible for program planning at that organization's next conference or annual event. The Team member would offer to organize and conduct a 60-minute session on "Emerging Spatial Technology Applications for the (target) Industry" at that upcoming event.

The session itself would open with a 10-15 minute overview on the NSDI and the role of the FGDC in implementing the NSDI goals and objectives. Concepts such as framework, standards, partnerships, and other key resources available through the FGDC would be presented, along with a brief demonstration of the Geospatial One Stop. Following the FGDC overview, the three industry representatives would then each provide a 15-minute presentation on a particular "success story" where spatial technology has been applied to the target industry.

Industry participants would be provided with content guidelines for their presentation to minimize the sales pitch and maximize the information transfer. Also, the industry presenters should try, whenever possible, to relate their applications to FGDC resources and standards. Thus, the audience will take away not only a better understanding of what the FGDC is all about, but also be updated on late-breaking spatial technology developments in their field of interest.

Vendor Participation

There are several reasons for enlisting the support of industry presenters. First, these people are aware of the most recent developments in spatial applications because they are typically very market driven. If they don't have first-hand knowledge of developments in a particular industry, they usually have many internal resources within their respective companies to drawn upon for this information. Secondly, these people will most likely be very interested in participating in a session that provides them with exposure to a focused audience. And even though they might be sharing the podium with some of their competitors, as long as the moderator provides a "level playing field," a bit of healthy competition should be of little concern. But perhaps the most compelling reason for inviting industry presenters is simply a matter of leveraging resources. The Team members, having full-time jobs within their own agencies, have only a limited amount of time and funds available for outreach activities. However, by drawing upon the presentation skills and subject matter knowledge of industry representatives, the Outreach team members can still develop very professional and informative sessions that should be very attractive to conference program planners.

The Power of Success Stories

Regardless of the size or the financial resources of the organization, one of the most powerful motivators to action can be "success stories" derived from the GIS industry. These successful and cost-effective applications of spatial technology can be used with both small and large organizations to capture the attention of decision makers and create an "I can do that, too!" mentality.

These success stories will typically reflect a high degree of innovation, either on the part of the GIS provider who discovers a new market, or on the part of the organizational person who has an epiphany and realizes that GIS can help do his or her job more effectively. In either case, these success stories can be the key to identifying significant new groups of "untapped" spatial users. Then it's simply a matter of getting the attention of these new groups and making them aware of the "spatial successes" of their peers.

A slight variation on the success stories formula involves proactive partnering. Examples of this can be seen in the projects promoted by the FGDC at the state level. For example, the successful adoption of GIS by the state of North Carolina served as a model for their neighboring states in developing a comprehensive GIS program.

Gain interests of organizations by:
- Demonstrations of the value of geospatial information to their business.
- Success stories.
- Toolbox of communications mechanisms.
- Business case and value for meeting business needs.
- Government agencies already using data (e.g., Census Information Centers in every state) get into that loop, somehow.
- Potential to base of GIS, while including them in NSDI.
- Get more from the data they already have by visualizing the data in tabular form; the demonstration value of using GIS (NSDI best practices) to visualize it.

3.4 Challenges Facing Organizations

Geospatial information technology provides an efficient and effective tool for organizing and visualizing information from multiple sources and in a variety of formats.   For communities, businesses and policy makers, it can provide a critical component in analyzing information for more informed decision-making. There are many barriers to more widespread awareness and use of geospatial information.   One approach to overcoming some of those barriers is to focus on the issue to be addressed, rather than the power of the technology itself. Matching the issue with the appropriate technology and the potential sources of information that might help provide answers for the particular community, business or policy maker offers the potential to learn about the advantages of using and investing in geospatial information in addition to other sources of information such as graphics, databases and reports.
The costs of investing in GIS for a government organization, even when up to 80% of transactions relate to a land parcel, may seem daunting. Investments such as staff, software and hardware, building and acquiring databases and keeping them current, and the metadata necessary for sharing information might scare away even those communities with some interest in adopting GIS.

One approach to overcome the barriers faced by smaller communities not having sufficient resources to invest in GIS technology would be pooling resources among multiple communities. The opportunity to share information and investments provides a low-cost approach in rural areas where human and capital resources are limited and working with them as a group.

The community college setting offers a prime opportunity to bring together members of the community to teach them about the value of GIS and to provide training with respect to taking advantage of this tool.   Furthermore, working within the community college setting helps build the networks necessary to pool

resources.   Since the community college-- by definition-- serves as a central focus of the community, it provides a central place to begin discussions about how to take advantage of GIS and discussions on how to partner to make it a reality.

In identifying potential organizations, one should try and understand some of the underlying reasons why these organizations are not yet using spatial technology (i.e., software and data) or participating in the NSDI. Two key factors affect many organizations: insufficient funding and lack of awareness.

- **Insufficient Funding**. If a "nonspatial" organization is relatively small, such as a neighborhood business, a community bank, or a rural local government, there is a good possibility that there are simply not enough funds readily available to allow that organization to invest in spatial technology. Even the purchase of a $500 GIS software package can be a major obstacle in a small organization, particularly when the costs of the associated learning curve and data acquisition are included. These types of organizations will adopt spatial technology only when it can be proven to them that it is cost-effective to do so.

- **Lack of Awareness**. Larger organizations that are currently not employing spatial technology are often simply unaware of the benefits of using GIS. They may be in a business sector where the application of spatial information is not immediately obvious, such as in a large insurance firm. With these types of organizations, the challenge is educational, not financial.

In addition, specific organizations face challenges unique to their situation.

3.5 How to Get Organizations' Attention

Spatial data and technology and NSDI are tools to help organizations do their work and solve their problems. Therefore, in order to get organizations' attention and interest in participating in NSDI, the technology must be shown to be a tool that applies directly to their situations.

Engaging Non-Geospatial National Organizations

Federal Geographic Data Committee (FGDC)

So, in order to work with specific organizations, their specific interests must be identified. Examples are indicated in the table below.

Organization	Interests
Police Assn. (Nat'l Sheriffs Assn.)	Crime prevention Homeland security
NGA	Homeland security & public safety Economic development Public health
NACo (no new taxes)	Economic development Transportation Public health Govt efficiency – more efficient service delivery
APWA	Facility management and maintenance Asset tracking Operational efficiency
State auditors/treasurers National Association of State auditors, comptrollers and treasurers NASACT	Public investment (where & what) [e.g., transportation, infrastructure] and justification of (why) protection of public investments
National Association of Secretaries of State	Voter access (HAVA)
Environmental groups Public and private	Environmental protection Public health

3.6 Integration

All of the previous elements must be put together for each specific organization in order to get a complete picture and develop potential approaches for working with the organization. For example:

Organization	Interests	How to Work with Them (Tools)	Challenges to Participation	Potential Impacts
Police assn.	Public safety.	Success stories; Showcase Best Practices Awards.	Independent operations; Immediate/pressing needs.	High visibility; Saved lives and property.
APWA	Activities management.	Hands-on demos and tools; Relate to CAD.	Stuck in CAD; Focus on engineering.	Lots of needed data [infrastructure].
NACo	No new taxes.	Awards; Work at regional level (active region); Things that can be replicated at other places.	Lack of $; 2900 – 38000 population; Technical capability.	Good ties to higher levels of elected officials.

3.7 Determine relative costs and benefits

The costs and benefits of engaging different organizations will differ.

In terms of benefits, gaining the participation of certain organizations may be very beneficial to the NSDI. Benefits may include:

- What they contribute to NSDI (data, input on standards, etc.)
- Their value in promoting NSDI (serving as an example, natural visibility, willingness to invest resources in helping members participate in NSDI, willingness to invest resources in promoting NSDI, etc.)

In terms of costs, some organizations may require much more effort and greater resources to engage. Costs may include:

- Time (calendar time to bring to fruition).

- Staff time.
- Money (FGDC expenses, grants, consultants, etc.)
- Other costs (tools, software, data, etc.)

The essence of the benefit-cost analysis is to determine these costs and benefits in very general terms. In other words, how does the cost of reaching and working with an organization compare to the benefits of having that organization participate in NSDI?

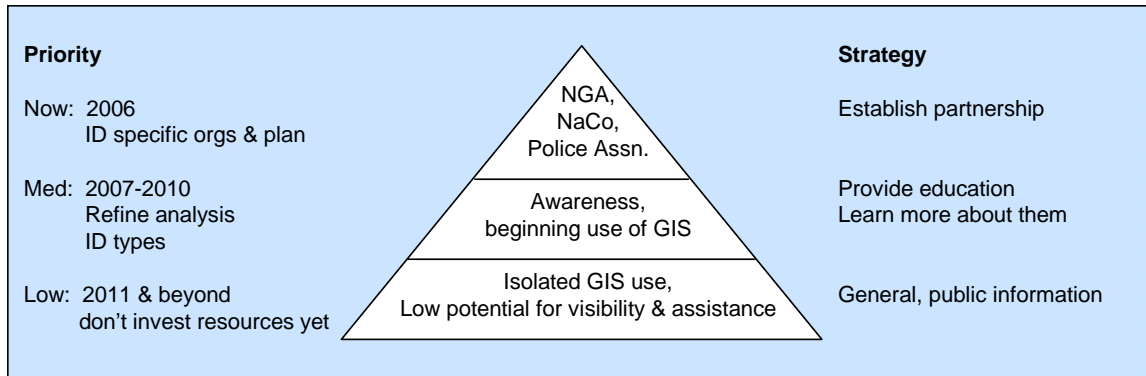| Organization	Impact	Level of investment
NACo	High: Good ties to higher levels of elected officials; High visibility.	Little required increase (FGDC is already working with them and they are very interested).
APWA	High: They have a lot of the required infrastructure data.	Moderate to low (they can be reached through the currently planned outreach activities).
Treasurers and Auditors	Value of financial data; Regional compilation; Validation of investment in NSDI data.	Moderate to low (they can be reached through the National Infrastructure for Community Statistics community of practice).
Police	High: High visibility—public and political; Saved lives and property.	Moderate to low. (they can be reached through the currently planned outreach activities).

3.8 Prioritization and Strategy

Finally, the potential organizations must be prioritized according to the ranking of the relative costs and benefits. We recommend a three-tier approach that groups the organizations into three priority groups and has a general strategy that corresponds to each level.

Priority		Strategy
	NGA, NaCo, Police Assn.	Establish partnership
Now: 2006 ID specific orgs & plan		
Med: 2007-2010 Refine analysis ID types	Awareness, beginning use of GIS	Provide education Learn more about them
Low: 2011 & beyond don't invest resources yet	Isolated GIS use, Low potential for visibility & assistance	General, public information

Additional factors may come into play in the prioritization of organizations. These include:

- Attempting to catch organizations before they make big investments in non-compatible NSDI programs.
- Contacting organizations that would benefit the most from the use of GOS, the National Map and the NSDI; and those with the greatest potential to contribute to GOS, National Map and NSDI.

4.0 Action Plan: Next Steps

The basic plan for approaching Non-Geospatial Organizations is based on the identification, integration, analysis, and the prioritization process discussed in Section 3. The basic approach is to establish a follow-on Future Directions' advisory outreach committee/subcommittee that would:

- Contact organizations to discuss their issues and provide specific examples of ways GIS contributes to their mission and innovative approaches used by others. Provide background information or publications written specifically for their members based on their issues.

- Based on their interests, identify potential sources of information, technical assistance, available technologies, funding or in-kind contributions and others facing similar issues that might help them. Identify point–of-contact within NGPO that will continue to work with them and develop plans to educate and train their members. Working with them, outline short and medium range plan for working together.

4.1   Identify an interagency outreach team or teams to showcase the utility of Geospatial data for everyday problems and challenges that government and private sector managers and leaders face.

4.2   Target and participate in a select number of professional management association conferences and forums over the next 18 months consistent with the FGDC Future Directions Strategic Communications Plan and recommendations from the other future direction action teams.

4.3   Implement the outreach model proposed in Section 3.3, enlisting and leveraging private sector companies. This model envisions an "Outreach Team" consisting of government professionals (FGDC members) who are familiar with spatial technologies and have a firm understanding of the workings and resources of the FGDC. Working from a prioritized list of organizations, a member of the Outreach Team would contact the appropriate person(s) in the target organization responsible for program planning at that organization's next conference or annual event. The Team member would offer to organize and conduct a 60-minute session on "Emerging Spatial Technology Applications for the (target) Industry" at that upcoming event. The session itself would open with a 10-15 minute overview on the NSDI and the role of the FGDC in implementing the NSDI goals and objectives. Concepts such as framework, standards, partnerships, and other key resources available through the FGDC would be presented, along with a brief demonstration of the Geospatial One Stop. Following the FGDC overview, the three industry representatives would then each provide a 15-minute presentation on a particular "success story" where spatial technology has been applied to the target industry/organization.

4.4   The following conferences/events should be considered for an initial outreach program:
- o   American Association of Airport Executives
- o   American Association of Railroads
- o   American Association of State Highway & Transportation Officials
- o   American Public Transportation Association
- o   American Red Cross
- o   Government Management Information Systems
- o   International City/County Management Association
- o   National Governors Association
- o   National Association of Counties
- o   National Association of State Auditors, Controllers, and Treasurers
- o   National Association of State Purchasing Officers
- o   National Association of State Chief Information Officers

- o National Association of Regional Councils
- o National Emergency Management Association
- o National Association of Flood Plain Managers
- o Public Technologies, Inc

 4.5 Partner with GSA's Office of Intergovernmental Solutions to publish an Intergovernmental Solutions Newsletter on the FGDC Future Activities by April 2005. Collect articles and success stories from federal, state, local and private organizations highlighting the recent use of the GOS portal and the NSDI to respond to the impact of natural and manmade disasters (e.g., California Wildfires, four hurricanes hitting the east coast).

4.6 Identification of Target Organizations

The Action Team for Non-Geospatial Organizations recommends that the FGDC consider an aggressive interagency outreach effort with the national associations cited in Section 4.4 of this Action Plan.

In addition, FGDC should consider prototyping the Regional Intensive Geo-spatial Training Approach Proposal cited in Appendix A of this Action Plan.
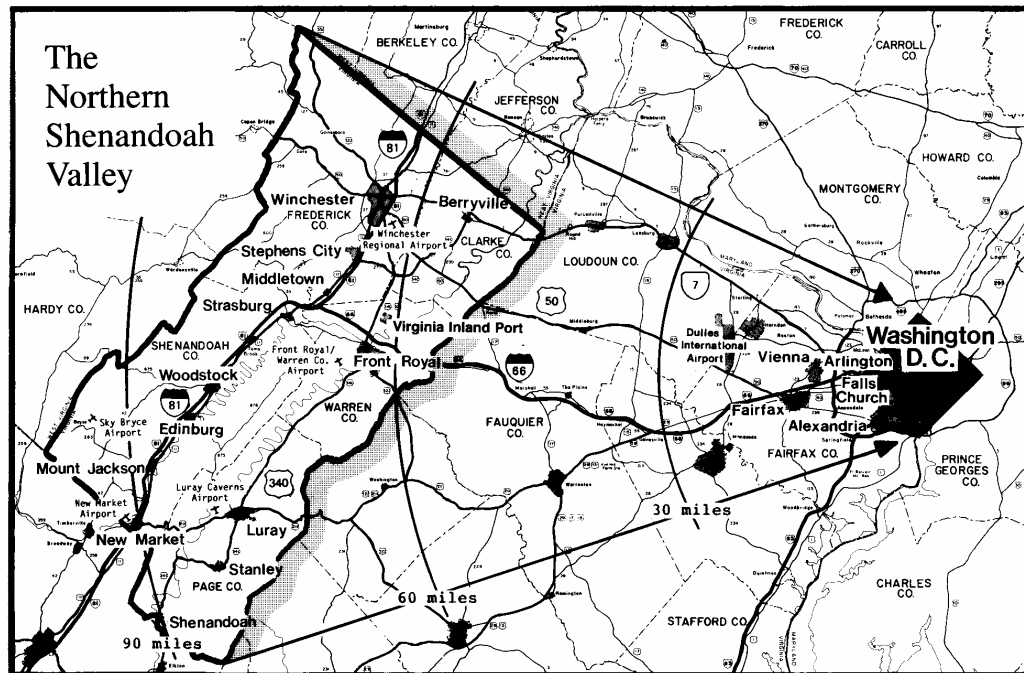
Appendix A

Non-Geospatial Organization Analysis –
Virginia's Northern Shenandoah Valley
and
Proposed "Regional Intensive Geo-spatial Training"

The Northern Shenandoah Valley: Living Towns, Balanced Growth Counties,

Regional Community.
Building a more accessible regional community in the 21st century.

The Northern Shenandoah Valley Disability Services Board has been a catalyst in the regional community by proactively networking with agencies and organizations. The following networking strategy outlines the links and relationships that the Board pursues though its limited resources. In conjunction with regionally networked community organizations, benefits are shared in this growing, yet sparsely populated region.

The networking strategy matrix below has been analyzed to highlight non-geospatial organizations, i.e., those that are data users, but are not utilizing geo-referencing in their databases to enable mapping and GIS.

Need Area	Network with Regional Community Organizations and Agencies
Aging and Disability	Shenandoah Area Agency on Aging
Disability	Department of Rehabilitative Services; Access Independence
Education	Public School Systems; Lord Fairfax Community College, Shenandoah University; Christendom College, Cooperative Extension
Employment	Northern Shenandoah Valley Workforce Investment Board
Handicapped Parking	Department of Motor Vehicles; Local Law Enforcement Agencies; NSV-DSB Parking Committee
Housing	Housing Action - Northern Shenandoah Valley
Isolation of Individuals	Faith In Action - Northern Shenandoah Valley
Mental Health	Northwestern Community Services Board
Personal Assistance	Department of Rehabilitative Services; Access Independence
Physical Accessibility in Communities	Living Towns Program – Northern Shenandoah Valley Regional Commission - Walk able Communities tools; Local Building Inspection Offices
Public Safety	Special Needs Registry; Local Law Enforcement, Fire and Rescue Agencies
Recreation	Local Parks & Recreation Departments, State and Federal facilities
Regional Community Networking	Regional Community Networking Breakfasts – NSV-DSB sponsor with Valley Health System and Faith In Action – Northern Shenandoah Valley
Technology	CAIT - Community Applied Information Technology – Lord Fairfax Community College; Occupational Therapy – Shenandoah University SETNET - Northern Shenandoah Valley Regional Commission
Transportation and Mobility	Northern Shenandoah Valley Public Mobility Project and all participating agencies; Living Towns utilizing Walk able Communities tools

Regional Intensive for Geo-spatial Training

Providing LandView6 data compiled for Virginia Planning District 7 – and relating data of surrounding regions and Mid-Atlantic States would serve these local/regional entities and be examples to their respective national and international organizations. Education in LandView could be conducted through the Community Applied Information Technology program at the Community College. The Virginia Geospatial Extension Program (http://www.cnr.vt.edu/gep) is an available partner. Orientation to GIS use raises the issue of database design, use, and maintenance. Information sharing among agencies requires common data standards. Getting organizations to use geospatial techniques requires that they have rudimentary knowledge of database and GIS applications, and trained users who are networked for maintenance and development of skills. Other educational institutions such as Shenandoah University, James Madison University, and the public schools systems are likely partners for this regional pilot.

This analysis has been expanded to other public, private non-profit and for-profit organizations. The Virginia Inland Port, for example, is a quasi-state agency that operates in the region based on the logistical advantages of the I-81/I-66 corridors, as well as other key elements of the National Highway System. Business and industry in the region are located there for the market relationships. Staff at the Inland Port indicates that there is limited use of GIS in the logistics industry.

The following table relates Non-Geospatial organizations and agencies, which would benefit from greater access and use of geo-spatial tools. Each has one or more National Associations, which could showcase the benefits of geo-spatial technologies to small members utilizing GIS in parallel and cross- organization in a region located near national headquarters.

Non-Geospatial –in Region	Association – National /International which would learn from Local/Regional Use of Geo-spatial tools by members
Local Governments	American Planning Association American Society for Public Administration National Association of Counties NACO International City/County Management Association ICMA International Economic Development Council
Northern Shenandoah Valley Regional Commission – Public Mobility	Association of Metropolitan Planning Organizations (AMPO) Community Transportation Association National Association of Regional Councils (NARC) National Association of Development Organizations (NADO)
Lord Fairfax Community College	American Association of Community Colleges
Shenandoah University	NAICU: National Association of Independent Colleges and Universities
Lord Fairfax Small Business Development Center	Association of Small Business Development Centers
Valley Health System – Regional Hospital	American Hospital Association
Traffic Club - Virginia Inland Port -	American Society of Transportation and Logistics
Access Independence	Independent Living USA Association of Programs for Rural Independent Living (APRIL)
Area Agency On Aging	National Association of Area Agencies on Aging
Lord Fairfax Health District	American Public Health Association - APHA
Cooperative Extension	National Association of State Universities and Land-Grant Colleges (NASULGC)
Rotary	Rotary International