

**FINAL BEST PRACTICES REPORT
FOR THE OHIO SPATIAL DATA
COST-BENEFIT ANALYSIS**

(Task 3.1 Deliverable)

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TABLE OF CONTENTS

Title	Page
Section 1: Introduction.....	1-1
Section 2: Methodology.....	2-1
Table 2-1: 50 State Summary	2-2
Section 3: Funding Sources and Approaches.....	3-1
Dedicated Funds	3-1
Advantages	3-2
Disadvantages	3-2
Mission Driven Funding	3-3
Advantages	3-4
Disadvantages	3-5
Assessments on Agencies	3-5
Advantages	3-6
Disadvantages	3-7
Central and Capital Funding.....	3-7
Advantages	3-8
Disadvantages	3-8
Cost Recovery	3-9
Advantages	3-9
Disadvantages	3-10
Section 4: Conclusions	4-1

List of Appendices

Appendix A: References.....	A-1
Appendix B: GI/GIT Expenditures for 13 States	B-1

SECTION 1 INTRODUCTION

The final work plan for the Ohio Spatial Data Management Cost-Benefit Analysis project requires that a “best practices” review of other states be conducted and the results used to help formulate alternatives for review and analysis.

This report is the final submission by GeoManagement Associates, Inc. (GMA) for the Ohio Cost-Benefit Analysis project. This report provides a summary of information from selected states about each of the following statewide geographic information and related technology (GI/GIT) matters:

- Funding sources to support statewide data development, management, and maintenance
- Approaches of merit in supporting a more comprehensive approach to statewide data management, and
- Advantages and disadvantages of each of the basic approaches.

This report is based on raw data from the same selected states about these and additional matters that are not discussed in this report but that were requested by the State of Ohio. They include:

- Data, coordination, assistance, and other roles of statewide GI/GIT efforts
- Sectors served by statewide GI/GIT efforts
- Level of effort of statewide GI/GIT efforts, measured in terms of full-time equivalent positions (FTEs) for data, coordination, and assistance roles
- Level of effort, allocation of funds, and source of funds of statewide GI/GIT efforts, measured in terms of dollars for data, coordination, and assistance roles
- Land base data development and maintenance.

|SECTION 2 METHODOLOGY

A two-phased approach was taken to conduct this project. First, an overall review of existing information about conditions in each of the 50 states was conducted. The 50 states were reviewed regarding their structure, operations, functions and responsibilities, and known existing funding mechanisms. The purpose of this review was to identify 15 states that are similar to Ohio or that have unique and successful approaches to operating and funding spatial data initiatives.

The following “filters” were used to narrow the 50 to 26 and then to 15 states for a more intense review.

1. **Organizational Structure**—The purpose of this filter was to find states with a similar makeup and organizational structure to Ohio. This filter represents the different roles of state government within that state, their relationship with local government, demographic issues, and the geographic area versus population.
2. **Program Operations**—This filter focuses on existing efforts and activities regarding coordination of a statewide GIS program. This looks beyond just a program and includes components of programs and their levels of success.
3. **Functions and Responsibilities**—This filter reviews the varying functions of the states in supporting statewide programs for data development, distribution, and interaction with all levels of government.
4. **Funding**—This reviews the funding approaches to support the varying programs in the states and includes unique approaches. It also looks at existing and planned funding mechanisms.

Many states have unique and successful programs; however, all filters were subjected to a “could it be implemented in Ohio” scenario. Also, narrowing the states to 15 will be significantly more difficult in the coming years. States such as Alabama, California, Indiana, and North Dakota, to name a few, are poised for successful programs in the near future.

Each filter was used as a limiting or a positive factor. For example, if a unique approach to funding was being used in a state that did not have a similar organizational structure, the funding approach took precedence. This initial review along with notes is compiled in Table 2-1.

Table 2-1: 50 State Summary

State	2000 CENSUS	Counties	Notes
1. Alabama	4,447,100	67	Just formalizing coordination, recently passed legislation to create coordinating body.
2. Alaska	626,932	16+11	Limited Statewide coordination efforts, differing demographics and issues, geographic coverage/population.
3. Arizona	5,130,632	15	Operating program, differing demographics and issues, geographic coverage/population.
4. Arkansas	2,673,400	75	Strong coordinating body, legislative funding initiative, strong interaction with local government and academia.
5. California	33,871,648	58	Creative funding, but just created council—coordination aspect in flux, just really getting started.
6. Colorado	4,301,261	64	Limited Statewide coordination efforts, differing demographics and issues, geographic coverage/population.
7. Connecticut	3,405,565	8	Limited Statewide coordination efforts, differing demographics and issues, geographic coverage/population.
8. Delaware	783,600	3	Limited Statewide coordination efforts, differing demographics and issues, geographic coverage/population.
9. Florida	15,982,378	67	Limited operational program, data stewardship initiative, limited interaction with local government.
10. Georgia	8,186,453	159	Strong operating program, coordination of state agencies, strong clearinghouse activities, similar size.
11. Hawaii	1,211,537	4	Differing demographics and issues, geographic coverage/population
12. Idaho	1,293,953	44	Evolving program, differing demographics and issues, geographic coverage/population.
13. Illinois	12,419,293	102	Limited Statewide coordination program, strong local government with limited interaction with state.
14. Indiana	6,080,485	92	Evolving program, recently established council & state contact, formalized coordination in early stages.
15. Iowa	2,926,324	99	New coordinator just assigned, program in flux.

Table 2-1: 50 State Summary (continued)

State	2000 CENSUS	Counties	Notes
16. Kansas	2,688,418	105	Strong operational program with funding approach, interaction with local government, creative partnerships, strong interaction with CIO.
17. Kentucky	4,041,769	120	Strong authorized and operational program with funding approach, strong interaction with CIO.
18. Louisiana	4,468,976	64	Limited Statewide program and interaction with local government.
19. Maine	1,274,923	16	Strong, large, authorized and operational program, creative funding approaches to spatial development.
20. Maryland	5,296,486	24	Reassembling coordinating council to increase interaction with local government
21. Massachusetts	6,349,097	8	Evolving statewide program, Differing demographics and issues, geographic coverage/population.
22. Michigan	9,938,444	83	Strong operational program with executive support and funding approach, similar size.
23. Minnesota	4,919,479	87	Strong, large, authorized and operational program with funding approach, strong interaction with local government.
24. Mississippi	2,844,658	82	Changing program.
25. Missouri	5,595,211	115	Initiating operational program, strong interaction with local government and academia.
26. Montana	902,195	56	Differing demographics and issues, geographic coverage/population.
27. Nebraska	1,711,263	93	Limited program and funding, differing demographics and issues, geographic coverage/population.
28. Nevada	1,998,257	17	Limited Statewide coordination efforts, differing demographics and issues, geographic coverage/population.
29. New Hampshire	1,235,786	10	Differing demographics and issues, geographic coverage/population.
30. New Jersey	8,414,350	21	Evolving program and financing.
31. New Mexico	1,819,046	33	Differing demographics and issues, geographic coverage/population.
32. New York	18,976,457	58	Strong operational program with executive support and creative funding approach, strong interaction with local government and others.

Table 2-1: 50 State Summary (continued)

State	2000 CENSUS	Counties	Notes
33. North Carolina	8,049,313	100	Strong, large and operational program with funding approach, interaction with local government and others, GIS Center represents an extreme for evaluation purposes.
34. North Dakota	642,200	53	Differing demographics and issues, geographic coverage/population, new coordinator being assigned.
35. Ohio	11,353,140	88	
36. Oklahoma	3,450,654	77	Limited statewide program, Differing demographics and issues, geographic coverage/population
37. Oregon	3,421,399	36	Strong evolving program with creative funding approaches to spatial development
38. Pennsylvania	12,281,054	67	Limited Statewide program, separate levels of coordination at state and local levels
39. Rhode Island	1,048,319	5	Limited Statewide program, differing demographics and issues, geographic coverage/population
40. South Carolina	4,012,012	46	Limited but pending Statewide coordination efforts
41. South Dakota	754,844	66	Differing demographics and issues, geographic coverage/population
42. Tennessee	5,689,283	95	Strong operational program with creative funding approach, interaction with local government, legislative initiative, creative partnerships
43. Texas	20,851,820	254	Strong operational program with creative funding approach, strong interaction with CIO and feds
44. Utah	2,233,169	29	Strong, authorized operational program with funding approach, strong interaction with local government
45. Vermont	608,827	14	Operational program with funding approach, differing demographics and issues, geographic coverage/population
46. Virginia	7,078,515	95	Growing operational program with creative financing, similar size
47. Washington	5,894,121	39	Operational program, strong focus on natural resources, interaction with local government
48. West Virginia	1,808,344	55	Strong academic interaction, differing demographics and issues, geographic coverage/population

Table 2-1: 50 State Summary (continued)

State	2000 CENSUS	Counties	Notes
49. Wisconsin	5,363,675	72	Strong, authorized and operational program with funding approach, interaction with local government
50. Wyoming	493,782	23	Differing demographics and issues, geographic coverage/population

After reviewing all 50 states, the list was reduced to the following 26 states—Arizona, Arkansas, California, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, Oregon, Tennessee, Texas, Utah, Vermont, Washington, West Virginia, and Wisconsin.

This second review continued to focus on similar structure of government, operations, and current funding mechanisms. To get to the 15 states, the final review looked at unique and creative funding mechanisms and the functioning role of the state in implementing and operating a statewide program.

From this process, 15 states were identified that warranted further review to determine the “best practices” to support the Spatial Data Management Cost-Benefit Analysis for Ohio.

The 15 states are listed below:

- | | | |
|-------------|-------------------|---------------|
| 1. Arkansas | 6. Michigan | 11. Tennessee |
| 2. Georgia | 7. Minnesota | 12. Texas |
| 3. Kansas | 8. New York | 13. Utah |
| 4. Kentucky | 9. North Carolina | 14. Virginia |
| 5. Maine | 10. Oregon | 15. Wisconsin |

These 15 states are funding spatial data development in a variety of ways from levied fees to contract services and from general funds to dedicated funds. In some cases, states are using a mix of these approaches, as well as grants. In several of the states, legislative initiatives and support have been instrumental in funding spatial data development.

Following approval of this list, each of the 15 selected states was contacted and queried to obtain information. Contact was made with each of the 15 states to determine the lead contact to work on the project. Three query forms were then distributed via email to these 15 lead individuals after they agreed to serve in the role of responding on behalf of their state. The purpose of these query forms were to obtain detailed information concerning:

1. Overall financial approaches concerning statewide GI/GIT efforts
2. Revenue sources and experiences to support statewide GI/GIT efforts

3. Specific financial approaches for this purpose, such as capital and carry over funding
4. Data, coordination, assistance, and other roles of statewide GI/GIT efforts
5. Sectors served by statewide GI/GIT efforts
6. Level of effort of statewide GI/GIT efforts, measured in terms of full-time equivalent positions (FTEs) for data, coordination, and assistance roles
7. Level of effort, expenditures, and sources of funding for statewide GI/GIT efforts, measured in terms of dollars for data, coordination, and assistance roles
8. Land base data development and maintenance.

Each state provided requested information, but to varying degrees. In addition to repeated email query, each state was contacted by phone, some repeatedly, in order to secure responses. In addition, after responses were received, verbal contact, interviews, and discussions were held with at least one representative of each of the 15 states, and some in-person meetings were held. This procedure was necessary to assure quality control, particularly to explain and modify results presented on the query forms to assure accuracy and consistent assumptions and definitions across all states.

During this process, dramatic changes took place concerning statewide GI/GIT in the State of Georgia, one of the selected states for the project. While the query process was underway, the individual designated to respond for the project left state government service and was not replaced, and planned funding in Georgia for statewide GI/GIT efforts diminished significantly. The Ohio Project Manager decided to move forward by eliminating Georgia and concentrating work on the remaining 14 states. The State of New York, another selected state in the project, provided very useful information but was not able to provide information about actual dollars for statewide GI/GIT efforts due to state budget matters. Therefore, no table of actual dollars was prepared for the State of New York. The Ohio Project Manager also approved excluding the finance table for New York due to extraneous circumstances. Complete funding information was obtained for the remaining 13 states.

SECTION 3 FUNDING SOURCES AND APPROACHES

This section includes a synthesis, observations, and conclusions based on the information provided by the 14 states concerning funding sources and approaches. A one-page summary funding table for each of the 13 states provides information on expenditures and sources of funding that augment this analysis and are presented in Appendix B. Some additional information is also provided in this report to assist in understanding this material.

It is important to note that a wide variety and combination of funding sources are used to support statewide GI/GIT efforts. Many of these funds are derived from individual programs for one or many functions of state government. However, emphasis in this project is on sanctioned statewide GI/GIT coordination programs and the funding used to support these efforts. While additional funding is derived from additional program funding, it is not reflected here. External sources of funding, such as from specific federal grants and other resources, are not explored in this report as well because this was beyond the scope of the project. Another important point, as revealed in the finance tables, is that **virtually all states use a combination of sources and approaches of funding to support statewide GI/GIT coordination.**

In addition to the different funding sources and approaches discussed below, Ohio expressed particular interest in knowing if funds designated for statewide GI/GIT can be carried over from one year to the next regardless of source. Of particular interest was whether other states could take potential advantage of lapsing funds and make them available for data development in future years. The finding regarding this issue is that regardless of the sources and approaches, states have many differing approaches to the use of carry over funds. Some states, like Arizona, went through long process and statutory change in order to carry funds over, while others (e.g., Michigan) were able to do this very easily based on their internal approaches. Others indicated that they have not tried to change conditions in order to be able to carry over funds.

The remainder of Section 3 describes and examines five funding sources used by the states. The five are:

- Dedicated Funds
- Mission Driven Funding
- Assessments on Agencies
- Central and Capital Fundings
- Cost Recovery.

DEDICATED FUNDS

One of the best sources of funding for any function of government is a dedicated source of revenue that provides a continuing stream of funding, often in perpetuity. For example, local governments operate utilities in this way with dedicated funds based on user charges. State

governments have traditionally more limited use of this approach, although some sales taxes, for example, are approved based on their use for dedicated purposes. Property transfer fees are well acknowledged as the key source of funds for the Wisconsin Land Information Program (WLIP), but statewide GI/GIT efforts are also conducted with general appropriation support. The WLIP's funding mechanism, which is a land-related documents recording fee collected by each County Register of Deeds, has generated over \$70 million statewide since 1991. Oregon's legislature recently authorized the addition of a \$1.00 fee to each land transfer to help develop a statewide property tax map. While not included in this analysis, Vermont is the only other State known to have use of such fees to help support statewide GI/GIT coordination. The Illinois legislature, however, recently authorized counties to adopt a fee structure for filing documents to be used strictly for GIS implementation and maintenance.

Advantages

The advantages of this approach are several, and they are quite obvious. Unless "sunsetted," the long term, "guaranteed" nature of such a source helps to make a state's GI/GIT program truly "official" and institutionalized, and thus, it is considered a real part of state government. State coordinators can develop and implement a long-term strategy, while others can rely on the program and its resulting data products with confidence that the program will be able to continue delivering such results in the long term. This assurance is a key need in order for a statewide coordination program to develop and deliver results when entering into alliances, as well as assisting others over the long term. The benefits of Wisconsin's program are multifold and include—1) land records modernization, 2) accelerated local government GI/GIT activities, 3) leveraging of federal funds, 4) reduction of title insurance costs, and 5) economic development (including the creation and expansion of consulting and software development firms). Such benefits could be replicated in another state.

Disadvantages

A key disadvantage of this approach is that it is very difficult to effectuate at any time, but it will be particularly difficult in today's economic situation. Wisconsin was fortunate because it found the State land transfer fees to be lower than those elsewhere, so the State was able to justify an increase. It is a major undertaking to successfully gain sufficient legislative support for such a program. In the case of Wisconsin, many strong proponents in academia worked successfully with practitioners to achieve success. However, a key aspect from the beginning of the program is that the statute provides that much of the funding is actually retained by the counties who collect the fees, and only a small portion is distributed back to the State. This was necessary to garner support from local officials. As a result, little of the funding is actually used for statewide data, and now the State now faces the challenge of linking up all the county systems to help form a statewide data foundation.

MISSION DRIVEN FUNDING

Several states have benefited from the realization and the policy direction that a state government mission can be aided by alignment with statewide GI/GIT coordination efforts, and at the same time, such funding can help other state missions. The actual existence of some of these missions varies by state depending on policy decisions and state roles in relation to local governments, such as with E-911 and some land use and conservation efforts described below. However, all state governments share other missions, such as state lands and asset management.

E-911 is a key government mission, with data responsibilities sometimes assigned to state government. For example, State government in both Maine and Oregon's decided to develop a data foundation for E-911 at the state level (rather than at a local level as is the case in most states). Directors of E-911 in both states arranged for their Statewide GI/GIT offices to conduct this work. For the Maine Office of Geographic Information Systems (MEGIS), this project has been providing over \$700,000 annually. However, this amount will be less when the project moves to a maintenance level. This work is providing MEGIS with the ability to develop statewide transportation and addressing foundational data for other purposes. Virginia's GI/GIT coordination office is now pursuing funding from the State's Wireless E-911 Fund to help fund data efforts, specifically high-resolution imagery.

Arkansas is another state that has benefited from funding for spatial data development. Arkansas created a GIS Fund that is organized as a trust fund, and funds for the Trust Fund can be obtained from a variety of sources (funding approved by the General Assembly, grants, gifts, state and federal funding, etc.). The funding is not subject to rollback into the General Revenue Fund at the end of a fiscal year. Additionally, a grant of almost \$1.0 million was provided by the Economic Development Fund of Arkansas to assist in data efforts.

South Carolina is another state that has long been recognized for the funding it used for statewide data development to support economic development initiatives.

Conservation of open space and land planning (recently often termed "smart growth") initiatives also have been legislated as a state mission in several urbanized and growing states, and they provide strong drivers for statewide data development. Florida, Maryland, and Massachusetts have used funding for this purpose for statewide data development. Such data is needed for local and statewide land use planning and also to determine and prioritize individual parcels of land that should be acquired or otherwise conserved for public use or open space, often as part of multimillion-dollar land acquisition programs. These states were not included in this project due to their limited or non-existent statewide GI/GIT coordination programs, but these missions have provided significant funding for data development. Massachusetts' formerly defacto lead GI/GIT office has been developing data for the State's local governments to aid in their land planning efforts based on 1998 legislation and is now sanctioned as the official lead office. Florida's and Maryland's GI/GIT development has grown due to such State initiatives, but because the States do not have lead offices for GI/GIT, questions could be raised about the degree to which other functions of government are aided by these efforts.

A state government mission shared by all states that can be aided by spatial data is the management of state lands and other assets. There has been growing interest in the GI/GIT community about the Governmental Accounting Standards Board (GASB) and proposed changes to Statement No. 34 (GASB 34). The revised statement would have a large effect on the way governments do financial reporting concerning infrastructure assets. GI/GIT use would clearly aid in this regard.

State land management is a key function of state governments in any case because states own and manage approximately seven percent of the Nation's land area. Moreover, these lands are sometimes managed to produce revenue for key government functions, such as schools in many western states. In addition, as indicated above, population increases and development growth are increasing the overall interest and perceived value of public lands, many of which are owned by states. This project and others have revealed that most state governments have fragmented and perhaps antiquated land ownership data programs. Individual agencies often maintain independent records of their land holdings, and these agencies have responsibilities that cover natural resources, forestry, wildlife, parks, transportation, prisons, and other state facilities. Moreover, many of these fragmented databases are not well linked to county or other local property records.

As concluded from this query of the 14 states and other related work by GMA, Michigan stands out as unique among the states in its approach to managing state-owned land because it is developing an integrated approach. The approach is known as the Statewide Land Database (SWLDB). It is also unique because it is linked to the Michigan Geographic Framework, the State's GI foundational data for multiple purposes. SWLDB is a cooperative effort of the Michigan Information Center and the Michigan Department of Natural Resources, and it includes core attributes for the state's landholdings, including buildings, parcels, institutions, and roads. This product is currently being used by multiple agencies throughout the State for various purposes and is under continued development, including developing data linkages with local governments. For example, a new project is developing a system to facilitate access to information about individual schools throughout the state.

Advantages

Public safety, conservation, land planning, public lands, and economic development have each proven to be an effective mission that can provide the basis for growing statewide GI/GIT efforts, particularly data development. Both policy makers and voters have shown a strong willingness to support such funding initiatives. While conditions, needs, and policy direction do vary by state, the overall continuing and expected growing public support for these missions is a strong driver for data maintenance over time. Attachment of state GI/GIT coordination and data development efforts to state missions has also been successful in other states not investigated here. As a result, efforts expended to associate GI/GIT to State missions with policy direction and oversight of such missions can be time well spent. It is likely that much less effort would be required for State mission driven funding than some other funding options presented in this report and elsewhere.

Ohio may have an important related opportunity through the Ohio Conservation and Revitalization Fund, which was approved by the electorate in 2000. It authorized up to \$400 million in state bonds to be distributed through the Clean Ohio Fund. Of this, half is to be spent on cleaning up and redeveloping brownfield sites and half on preserving open space (Stapleton 2001). Both of these applications clearly require spatial data and tools to determine and prioritize projects, including at the parcel level. For example, Wisconsin's brownfields program has developed a Web-based mapping program to assist its efforts.

Disadvantages

An obvious disadvantage of using one or a combination of specific state missions to fund data development is that there is some risk of skewing the otherwise statewide direction and previously determined plans and priorities in order to meet the needs of the specific mission(s). Another disadvantage is that support for some missions, particularly land planning, have always been cyclical and may suffer when supporting politicians leave office. There is also a growing risk today of the reduced availability of funding for such "extra" functions of government as public land acquisition due to the worsening economic situation across the Nation and beyond. However, while these economic conditions exist today, public safety funding is definitely on the rise. Many E911 problems remain to be fixed across the country to support the Nation's defense infrastructure. In addition, funding has been "locked in" by the voters in some states, and successes from these efforts are expected to continue and to be increasingly revealed to the populace. And at the same time, real estate values have not decreased significantly even with the economic decline, and the amount of land available for development continues to decline, both of which increase the importance of land use planning and the value of public lands.

ASSESSMENTS ON AGENCIES

A traditional financing approach for information technology (IT) functions, both in government and industry, is to "charge" user agencies to support central IT functions and facilities. This is, in many respects, a legacy of financing large data processing mainframe operations, but this approach is well institutionalized in state governments. For example, charges for services provided by statewide IT offices are negotiated and incorporated in state agency funding arrangements with their counterpart federal agencies in order to operate many social service programs. These assessments on agencies are sometimes used to support IT policy and planning, as well as IT operations. A similar financing approach has been used by some states to support statewide GI/GIS data development and maintenance efforts and coordination functions. Four states with such approaches were found among the 14 investigated in this project. The four are Kentucky, Maine, Michigan and North Carolina. Details are provided below for two of these states.

Maine receives funding support from approximately 20 state agencies, through Service Level Agreements (SLAs). The Maine Office of Geographic Information Systems (MEGIS) does not

receive any direct appropriation for its operations nor does the State IT office, in which MEGIS is located, provide any direct support. Under the SLA arrangement, each agency annually signs an agreement and contributes a determined amount to support the operations of MEGIS. This predetermined amount is generally determined based on level of GIS activity in each agency, which ranges from \$1,000 to \$45,000. The total level of funding support changes each year, but for FY02, this arrangement is providing MEGIS with almost \$300,000.

Michigan, a state with a much larger population and more comparable in this regard to Ohio, has a similar approach that has also been found to be quite successful. Unique compared to any other state, the Michigan Information Center (MIC) is organizationally located in the Department of Management and Budget (DMB) of the Governor's Office, and the MIC Director reports to the State Budget Director. MIC currently has a budget more than \$4.0 million, of which more than \$3.0 million is for GI/GIT activities. Of the \$3.0 million, \$1.1 million is "directly" committed to support core statewide GI/GIT coordination and data development initiatives. This core funding is derived through assessments on seven state agencies to support the development of core data. This arrangement was made by the Budget Director to ensure adequate funding for these data initiatives. These voluntary assessments are placed in a revolving account and are renewed annually. Three smaller agencies of the seven have their contributions in their base budget to ensure that this amount is available each year. Michigan has been very successful at soliciting and solidifying funding support from other agencies. This success has been significantly aided by the support of the Budget Director and is likely also due, in some part, to the unique location of MIC in the State Budget Office. The need for and potential benefits of garnering support from this important official in state government is a key lesson learned for all states.

Advantages

This approach has the advantage of helping ensure that a statewide GI/GIT coordination entity has developed and maintains support from its constituency; i.e., state agencies. This is an essential element of success for any statewide GI/GIT coordinator or entity, but it is particularly critical for this approach. It serves as an important driver for good management and operating practices for such entities, such as recruiting participants in developing and publicizing annual plans, as well as determining and prioritizing statewide data and other GI/GIT priorities. This process is an important one for any statewide service organization such as a statewide GI/GIT coordination entity. This process also enables state policy and agency leaders to become familiar with the services and capabilities of the coordination entity and GI/GIT more generally. This can, in turn, result in additional work among supporting agencies, as well as involvement by new and often untraditional agencies which can be virtually ignored with other funding approaches. Interagency support inherent in this approach essentially serves as official endorsement for the quality of the statewide coordination entity and its work. Thus, it can be used as a building block to solicit additional funds within state government and from external sources such as federal grants and others.

Disadvantages

A key disadvantage of this approach is that it is very difficult to secure support for and effectuate this arrangement without the support of some key policy officials. The policy officials are usually political appointees, and this situation means that significant work may be required to garner interest and support by both budget officials and leaders of several departments. Such policy level interest and support is a proven key requirement of this approach despite the fact that these officials often change on schedule more frequent than even governors and legislators. While not absolutely essential, the support of the budget director is a key lesson learned from Michigan. Any statewide GI/GIT office with any funding arrangement should recognize this important relationship. Moreover, this approach can require significant planning, record keeping, and logistical work to implement and maintain.

Another disadvantage of this approach is the fact that such support and detailed arrangements must be renewed at least each budget cycle and often annually. Efforts must be made to ensure that funding is available in each supporting agency, including justifying and renegotiating the workload and priorities. Michigan's statewide GI/GIT efforts were aided by the fact that the Budget Director ensured that MIC support is in the base budget of some agencies, but this may not always be the case.

An added problem can be agency competition. Some agencies may feel they are not being treated fairly compared to others. Their argument could be they are not getting enough services for the amount contributed from their budget or that they are not receiving an equitable level of services compared to those given to or the funding provided by others. This potential issue also needs to be addressed on a regular basis, particularly while determining agency assessments.

CENTRAL AND CAPITAL FUNDING

While assessments on agencies has proven useful in some states for GI/GIT and also for many IT offices and functions over time, issues discussed above have, in part, helped lead to the use of central capital or other funding for some IT efforts. For example, it can be argued that policy and planning for statewide needs should not be funded by agency assessments because they then skew results. Accordingly, states sometimes fund and organizationally separate these IT policy and planning functions from IT operations. Traditional information roles, such as that of state records and libraries, are also usually centrally funded and increasingly include automated tools, such as government information locator services (GILS), that may be similarly funded. Most recently, some states have developed special funds for innovative technology (Towns 2001). Massachusetts is well recognized for being the first state to finance IT projects with authorized capital funding in the form of long-term bonds in 1992, and since then, the State has issued more than \$400 million in general obligation bonds to support several large and long-term projects, including those with GI/GIT components.

Separation of GI/GIT policy and planning functions from operations also is becoming the case in some states. These states include Arkansas and Texas of the 14 states investigated here, but other states are included as well. In broad statewide GI/GIT institutional investigations, the states that have two separate organizations and that are both responsible for statewide GI/GIT functions are known as “dual states” (Warnecke 1995). In these states, coordination and, to some degree, policy and planning activities are conducted via central or general funds. Alternatively, operations such as data development, maintenance, and clearinghouse activities are funded by special funding, grants, or cost recovery.

Most states benefit in some way from the use of general appropriations funding, although few have made use of capital funding. Kentucky has benefited from the use of this approach with approximately \$750,000 for each of two years. Additional use of capital funding for a Local Government Geographic Information Partnership Program (LGIP) is now proposed. This program, which would create partnership incentives for Kentucky local governments, will allow state government to take advantage of the high-resolution data that are being created at the local level. While few states have used this approach, several representatives of the 50 states have expressed interest in pursuing this option. In addition, some local governments have utilized this approach.

Advantages

The advantage of this approach is to provide dedicated funds for GI/GIT that can be expended over more than one year. This dedicated funding provides a means to create a viable foundation for future spatial activities to support spatial data development, E-Government applications, and other far reaching initiatives. The use of capital funds is strengthened by the concepts of E-Government and E-Business because many of the “infrastructure” components (hardware/software, communication and distribution, data development data acquisition) necessary to support these concepts are not currently in place. However, the approach requires that budget and management personnel view digital initiatives as physical assets and understand that the digital infrastructure required today to access, distribute, and disseminate information will be in place and have value for longer than five years. For example, the digital version of the USGS 7.5 minute topographic quadrangles (Digital Line Graphs—DLGs) for Ohio are being used by state agencies as the foundation for their spatial initiatives. On average, the base information from which the digital spatial dataset was compiled is more than 25 years out of date.

Disadvantages

A key disadvantage of this approach is that significant effort is required to make the case for the need for capital funding and also to garner policy and political level support in this regard. As described above for mission driven funding and assessments on agencies, this approach requires support of officials who often change. In Kentucky, for example, a business case was prepared for the Secretary of the Finance Cabinet in order to successfully sell the idea of the base map

being a capital item. Since that time, the person who was serving in that capacity has left State employment. Another issue is how to adequately fund data maintenance. Generally, these approaches are employed for data development, so an additional strategy and approach is usually required for such maintenance.

COST RECOVERY

GI/GIT is often viewed as an ancillary role of government, and thus, there has been a hesitancy to fund GI/GIT development and maintenance, particularly to meet interagency and interorganizational needs. Many state GI/GIT service centers have relied on funding received for contractual services and, to a lesser degree, from the sale of hard copy or other products. As revealed in the best practices review, Minnesota, North Carolina, and Utah have three of the leading and largest state GI/GIT service centers, both today and historically. However, the relative portion of funding support from contract work in these states has diminished in recent years. These three states and others have pursued other financing options, such as general appropriation funding in Minnesota and Utah and voluntary assessments on agencies in North Carolina. It is important to note that provisions in state statutes may limit some aspects of this approach. For example, potential changes in the State Data Practices Act in Minnesota may eliminate some cost recovery practices.

However, cost recovery is emerging as an approach to fund some IT services, which is also impacting GI/GIT. Many states are investigating and implementing cost recovery methods to fund electronic government services (including data access) and to conduct transactions, such as paying taxes or acquiring building permits online (Robb 2001). Cost recovery and other non-traditional funding mechanisms are being evaluated to fund other technological enhancements and services. For example, some governments are evaluating the use of advertising on their official Web sites. Several states have established arrangements with private companies to operate their official state Web sites, including some of the states investigated in this project (e.g., Arkansas, Kansas, Maine, Tennessee, Utah, and Virginia). These public/private partnerships mean that the Web portals operate at no financial cost to the state. In these cases, most data is available at no cost on the Web, but charges are authorized for "premium services." As explained in submittals, the GI/GIT coordination entities in both Kansas and Virginia are testing use of such state Web portals to provide access to and use of spatial data. In the future, a charge will likely be associated with such service.

Advantages

The advantages of this approach, once authorized, are that the funds derived are usually under control of those raising them. Also, this approach may ensure that the funds can be carried over from one year to the next, but that may not always be the case. This approach also typically requires less effort to secure and maintain policy and political support than the other

approaches. In Minnesota, this approach has been found useful as an effective mechanism to fund specialized staff.

Disadvantages

Cost recovery for work can mean the best result for those organizations with funding to fund and benefit from the services of the state GI/GIT center. However, in a more general way, this approach may mean that statewide needs cannot be fully met because the priority is placed on paying customers. Moreover, it essentially limits the development of data as well as the access to and availability of data to others. The “digital divide” is increasingly recognized as an emerging issue concerning data, as well as access to technology. This approach essentially reinforces the difference between the “haves” and “have-nots” which in many respects, is contrary to the role of government. As stated by Minnesota, the use and value of available data can be reduced if fees are set too high..

SECTION 4 CONCLUSIONS

Approaches to funding state spatial data development and coordination vary significantly. However, one point that was very clear was the use of multiple funding sources by the majority of states to support their efforts. The majority of states have a primary funding source augmented with several other secondary sources in support of spatial data development and coordination.

The funding sources that were reported demonstrate a reliance on general funds, contract services, grants (primarily federal agency grants), and levied or voluntary agency assessments presented in the order of use. Additional sources being used are mission driven funding, such as E-911 legislated dollars, and, in some cases, dedicated funding, such as an increase in conveyance fees at the local level. Only two states rely solely on the General Revenue Fund, and one state relies exclusively on agency assessments and contacts to support spatial data development and coordination.

A few states have successfully used capital funding to support their efforts, but a significant amount of education was required for state budget personnel. In these states, the funding has been used to pursue framework base map development consistent with the National Spatial Data Infrastructure (NSDI). These capital fund initiatives have also been used successfully to leverage federal funding assistance. Other participating states pointed out that specific state statutes prohibit the use of capital funds to support information technology development. It was noted that local government has been more successful at using capital funds to support spatial data initiatives than state government. However, the use of capital funds continues to be argued in many states and may be necessary to fully support spatial data development in the future.

Several states have established dedicated accounts or trust funds that allow funding to be carried across the end of a fiscal year. This approach, like capital funding, ensures much needed funding continuity for major spatial data collection and management initiatives that span several years.

These 15 states and many others have successful programs because they have a maintained, stable, and reliable funding level. This has been key to the development of their spatial data management and GIS coordination programs.

**APPENDIX A
REFERENCES**

APPENDIX A REFERENCES

References (in addition to State data in Appendix B).

Robb, Drew, "Financing Online Government," egovernment.govtech.net, May 2001, pp. 24-25, 30.

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Towns, Steve, "Dollars Sense," Government Technology, January 2001, pp. 26-29, 66.

Warnecke, Lisa, Geographic Information/GIS Institutionalization in the 50 States: Users and Coordinators, National Center for Geographic Information and Analysis, University of California, Santa Barbara, California, 110 pp.

APPENDIX B
GI/GIT EXPENDITURES FOR 13 STATES

Annual Statewide GI/GIT Coordination Budget for Arkansas

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data	Assistance	Other *	Dollars	Percent
Lead entity	\$77,000	\$698,000	\$28,000	\$0	\$803,000	58.91%
Secondary entity (s)	\$80,000	\$240,000	\$0	\$240,000	\$560,000	41.09%
Dollar Total:	\$157,000	\$938,000	\$28,000	\$240,000	\$1,363,000	100.00%
Percentage:	11.52%	68.82%	2.05%	17.61%		

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$0	\$0	\$0	\$0	\$0	0.00%
2. IT support from state CIO or equivalent	\$77,000	\$28,000	\$28,000	\$0	\$133,000	9.76%
3. Levied or voluntary assessments on agencies	\$0	\$0	\$0	\$0	\$0	0.00%
4. Dedicated funds (i.e. land transfer fees)	\$0	\$0	\$0	\$0	\$0	0.00%
5. State mission-driven funding (i.e. E-911)	\$0	\$0	\$0	\$0	\$0	0.00%
6. Grants	\$0	\$910,000	\$0	\$0	\$910,000	66.76%
7. Contract services	\$80,000	\$0	\$0	\$240,000	\$320,000	23.48%
8. Fees for data or other services	\$0	\$0	\$0	\$0	\$0	0.00%
Total:	\$157,000	\$938,000	\$28,000	\$240,000	\$1,363,000	100.00%

* Funds in this category include GIT service bureau revenue, if any.

Annual Statewide GI/GIT Coordination Budget for Kansas

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data	Assistance	Other *	Dollars	Percent
Lead entity	\$102,822	\$313,880	\$0	\$0	\$416,702	62.50%
Secondary entity (s)	\$0	\$250,000	\$0	\$0	\$250,000	37.50%
Dollar Total:	\$102,822	\$563,880	\$0	\$0	\$666,702	100.00%
Percentage:	15.42%	84.58%	0.00%	0.00%		

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$0	\$0	\$0	\$0	\$0	0.00%
2. IT support from state CIO or equivalent	\$102,822	\$105,107	\$0	\$0	\$207,929	31.19%
3. Levied or voluntary assessments on agencies	\$0	\$0	\$0	\$0	\$0	0.00%
4. Dedicated funds (i.e. land transfer fees)	\$0	\$383,773	\$0	\$0	\$383,773	57.56%
5. State mission-driven funding (i.e. E-911)	\$0	\$0	\$0	\$0	\$0	0.00%
6. Grants	\$0	\$0	\$0	\$0	\$0	0.00%
7. Contract services	\$0	\$75,000	\$0	\$0	\$75,000	11.25%
8. Fees for data or other services	\$0	\$0	\$0	\$0	\$0	0.00%
Total:	\$102,822	\$563,880	\$0	\$0	\$666,702	100.00%

* Funds in this category include GIT service bureau revenue, if any.

Dedicated funds are from the Kansas Water Fund, which funding is reducing in time

Annual Statewide GI/GIT Coordination Budget for Kentucky

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data *	Assistance	Other	Dollars	Percent
Lead entity	\$208,000	\$855,000	\$156,000	\$51,000	\$1,270,000	100.00%
Secondary entity (s)	\$0	\$0	\$0	\$0	\$0	0.00%
Dollar Total:	\$208,000	\$855,000	\$156,000	\$51,000	\$1,270,000	100.00%
Percentage:	16.38%	67.32%	12.28%	4.02%		

* \$750,000 is provided from the general fund for base mapping and support, while the remainder is included in agency assessments

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$0	\$750,000	\$0	\$0	\$750,000	59.06%
2. IT support from state CIO or equivalent	\$0	\$0	\$0	\$0	\$0	0.00%
3. Levied or voluntary assessments on agencies	\$208,000	\$105,000	\$156,000	\$51,000	\$520,000	40.94%
4. Dedicated funds (i.e. land transfer fees)	\$0	\$0	\$0	\$0	\$0	0.00%
5. State mission-driven funding (i.e. E-911)	\$0	\$0	\$0	\$0	\$0	0.00%
6. Grants	\$0	\$0	\$0	\$0	\$0	0.00%
7. Contract services	\$0	\$0	\$0	\$0	\$0	0.00%
8. Fees for data or other services	\$0	\$0	\$0	\$0	\$0	0.00%
Total:	\$208,000	\$855,000	\$156,000	\$51,000	\$1,270,000	100.00%

* Funds in this category include GIT service bureau revenue, if any.

Annual Statewide GI/GIT Coordination Budget for Maine

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data	Assistance	Other *	Dollars	Percent
Lead entity	\$70,400	\$1,104,260	\$53,600	\$107,740	\$1,336,000	100.00%
Secondary entity (s)	\$0	\$0	\$0	\$0	\$0	0.00%
Dollar Total:	\$70,400	\$1,104,260	\$53,600	\$107,740	\$1,336,000	100.00%
Percentage:	5.27%	\$1,336,000	4.01%	8.06%		

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$0	\$0	\$0	\$0	\$0	0.00%
2. IT support from state CIO or equivalent	\$0	\$0	\$0	\$0	\$0	0.00%
3. Levied or voluntary assessments on agencies	\$70,400	\$309,730	\$53,600	\$0	\$433,730	32.46%
4. Dedicated funds (identify source - i.e. land transfer fees)	\$0	\$0	\$0	\$0	\$0	0.00%
5. State mission-driven funding (identify type - E911 growth maint)	\$0	\$700,260	\$0	\$0	\$700,260	52.41%
6. Grants (identify)	\$0	\$80,800	\$0	\$0	\$80,800	6.05%
7. Contract services	\$0	\$0	\$0	\$107,740	\$107,740	8.06%
8. Fees for data or other services	\$0	\$13,470	\$0	\$0	\$13,470	1.01%
Total:	\$70,400	\$1,104,260	\$53,600	\$107,740	\$1,336,000	100.00%

* Funds in this category include GIT service bureau revenue, if any.

Annual Statewide GI/GIT Coordination Budget for Michigan

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data	Assistance	Other *	Dollars	Percent
Lead entity	\$350,000	\$800,000	\$350,000	\$1,500,000	\$3,000,000	100.00%
Secondary entity (s)	\$0	\$0	\$0	\$0	\$0	0.00%
Dollar Total:	\$350,000	\$800,000	\$350,000	\$1,500,000	\$3,000,000	100.00%
Percentage:	11.67%	26.67%	11.67%	50.00%		

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$0	\$0	\$0	\$0	\$0	0.00%
2. IT support from state CIO or equivalent	\$0	\$0	\$0	\$0	\$0	0.00%
3. Levied or voluntary assessments on agencies	\$150,000	\$800,000	\$150,000	\$0	\$1,100,000	36.67%
4. Dedicated funds (i.e. land transfer fees)	\$0	\$0	\$0	\$0	\$0	0.00%
5. State mission-driven funding (i.e. E-911)	\$0	\$0	\$0	\$0	\$0	0.00%
6. Grants	\$0	\$0	\$0	\$0	\$0	0.00%
7. Contract services	\$200,000	\$0	\$200,000	\$1,500,000	\$1,900,000	63.33%
8. Fees for data or other services	\$0	\$0	\$0	\$0	\$0	0.00%
Total:	\$350,000	\$800,000	\$350,000	\$1,500,000	\$3,000,000	100.00%

* Funds in this category include GIT service bureau revenue, if any.

Annual Statewide GI/GIT Coordination Budget for Minnesota

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data	Assistance	Other *	Dollars	Percent
Lead entity	\$300,000	\$450,000	\$177,000	\$548,000	\$1,475,000	100.00%
Secondary entity (s)	\$0	\$0	\$0	\$0	\$0	0.00%
Dollar Total:	\$300,000	\$450,000	\$177,000	\$548,000	\$1,475,000	100.00%
Percentage:	20.34%	30.51%	12.00%	37.15%		

NOTE 1: The budgeted amounts shown are for the Minnesota Land Management Information Center only, which is the only agency with staff devoted to coordination and assistance to other organizations. LMIC's budget also supports the work of the Minnesota Governor's Council on Geographic Information. Many other agencies, especially the Departments of Transportation, Natural Resources, Health, Agriculture, and the Minnesota Pollution Control Agency, maintain GIS programs to support their functional needs.

NOTE 2: The data function includes data delivery and metadata training.

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$300,000	\$450,000	\$147,500	\$74,000	\$971,500	65.86%
2. IT support from state CIO or equivalent	\$0	\$0	\$0	\$0	\$0	0.00%
3. Levied or voluntary assessments on agencies	\$0	\$0	\$0	\$0	\$0	0.00%
4. Dedicated funds (i.e. land transfer fees)	\$0	\$0	\$0	\$0	\$0	0.00%
5. State mission-driven funding (i.e. E-911)	\$0	\$0	\$0	\$0	\$0	0.00%
6. Grants	\$0	\$0	\$0	\$0	\$0	0.00%
7. Contract services	\$0	\$0	\$0	\$474,000	\$474,000	32.14%
8. Fees for data or other services	\$0	\$0	\$29,500	\$0	\$29,500	2.00%
Total:	\$300,000	\$450,000	\$177,000	\$548,000	\$1,475,000	100.00%

NOTE: The budgeted amounts shown are for the Minnesota Land Management Information Center only, which is the only agency with staff devoted to coordination and assistance to other organizations. LMIC's budget also supports the work of the Minnesota Governor's Council on Geographic Information. Many other agencies, especially the Departments of Transportation, Natural Resources, Health, Agriculture, and the Minnesota Pollution Control Agency, maintain GIS programs to support their functional needs.

* Funds in this category include GIT service bureau revenue, if any.

Annual Statewide GI/GIT Coordination Budget for North Carolina

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data	Assistance	Other *	Dollars	Percent
Lead entity	\$606,000	\$782,000	\$0	\$612,000	\$2,000,000	100.00%
Secondary entity (s)	\$0	\$0	\$0	\$0	\$0	0.00%
Dollar Total:	\$606,000	\$782,000	\$0	\$612,000	\$2,000,000	100.00%
Percentage:	30.30%	39.10%	0.00%	30.60%		

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$0	\$0	\$0	\$0	\$0	0.00%
2. IT support from state CIO or equivalent	\$0	\$0	\$0	\$0	\$0	0.00%
3. Levied or voluntary assessments on agencies	\$0	\$580,000	\$0	\$0	\$580,000	29.00%
4. Dedicated funds (i.e. land transfer fees)	\$0	\$0	\$0	\$0	\$0	0.00%
5. State mission-driven funding (i.e. E-911)	\$120,000	\$68,000	\$0	\$0	\$188,000	9.40%
6. Grants	\$0	\$134,000	\$0	\$0	\$134,000	6.70%
7. Contract services	\$486,000	\$0	\$0	\$612,000	\$1,098,000	54.90%
8. Fees for data or other services	\$0	\$0	\$0	\$0	\$0	0.00%
Total:	\$606,000	\$782,000	\$0	\$612,000	\$2,000,000	100.00%

* Funds in this category include GIT service bureau revenue, if any.

The Cooperative Floodplain Mapping Program with FEMA provides more than \$488,000 in revenue.

Annual Statewide GI/GIT Coordination Budget for Oregon

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data	Assistance	Other *	Dollars	Percent
Lead entity	\$200,000	\$465,000	\$35,000	\$0	\$700,000	30.43%
Secondary entity(s)	\$140,000	\$1,300,000	\$160,000	\$0	\$1,600,000	69.57%
Dollar Total:	\$340,000	\$1,765,000	\$195,000	\$0	\$2,300,000	100.00%
Percentage:	14.78%	76.74%	8.48%	0.00%		

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$0	\$0	\$0	\$0	\$0	0.00%
2. IT support from state CIO or equivalent	\$0	\$0	\$0	\$0	\$0	0.00%
3. Levied or voluntary assessments on agencies	\$200,000	\$465,000	\$35,000	\$0	\$700,000	30.43%
4. Dedicated funds (land transfer fees)	\$70,000	\$700,000	\$130,000	\$0	\$900,000	39.13%
5. State mission-driven funding (E-911)	\$70,000	\$600,000	\$30,000	\$0	\$700,000	30.43%
6. Grants	\$0	\$0	\$0	\$0	\$0	0.00%
7. Contract services	\$0	\$0	\$0	\$0	\$0	0.00%
8. Fees for data or other services	\$0	\$0	\$0	\$0	\$0	0.00%
Total:	\$340,000	\$1,765,000	\$195,000	\$0	\$2,300,000	100.00%

* Funds in this category include GIT service bureau revenue, if any.

Annual Statewide GI/GIT Coordination Budget for Tennessee

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data	Assistance	Other *	Dollars	Percent
Lead entity	\$250,000	\$4,500,000	\$150,000	\$100,000	\$5,000,000	100.00%
Secondary entity (s)	\$0	\$0	\$0	\$0	\$0	0.00%
Dollar Total:	\$250,000	\$4,500,000	\$150,000	\$100,000	\$5,000,000	100.00%
Percentage:	5.00%	90.00%	3.00%	2.00%		

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$250,000	\$4,500,000	\$150,000	\$100,000	\$5,000,000	100.00%
2. IT support from state CIO or equivalent	\$0	\$0	\$0	\$0	\$0	0.00%
3. Levied or voluntary assessments on agencies	\$0	\$0	\$0	\$0	\$0	0.00%
4. Dedicated funds (i.e. land transfer fees)	\$0	\$0	\$0	\$0	\$0	0.00%
5. State mission-driven funding (i.e. E-911)	\$0	\$0	\$0	\$0	\$0	0.00%
6. Grants	\$0	\$0	\$0	\$0	\$0	0.00%
7. Contract services	\$0	\$0	\$0	\$0	\$0	0.00%
8. Fees for data or other services	\$0	\$0	\$0	\$0	\$0	0.00%
Total:	\$250,000	\$4,500,000	\$150,000	\$100,000	\$5,000,000	100.00%

* Funds in this category include GIT service bureau revenue, if any.

Note: The above percentages represent a "snapshot" of current budgeting percentages. Our \$5M General Funds allocation is envisioned as a short term funding solution through completion of the TNBMP and will eventually be sunset out of the general State budget. It is part of the strategic plan that eventually OIR GIS Services will be 100 percent self-funded. As a result, Budget Sources 2-8 will eventually become the source of all OIR GIS Services funding. Within the next budget cycle, Item 8 will become a reality when we begin delivering TNBMP data to local government partners, and they begin fulfilling their financial obligations to OIR GIS Services for the TNBMP.

Annual Statewide GI/GIT Coordination Budget for Texas

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data	Assistance	Other *	Dollars	Percent
Lead entity**	\$200,000	\$0	\$20,000	\$0	\$220,000	6.43%
Secondary entity (s)	\$250,000	\$2,650,000	\$200,000	\$100,000	\$3,200,000	93.57%
Dollar Total:	\$450,000	\$2,650,000	\$220,000	\$100,000	\$3,420,000	100.00%
Percentage:	13.16%	77.49%	6.43%	2.92%		

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$250,000	\$2,500,000	\$0	\$0	\$2,750,000	80.41%
2. IT support from state CIO or equivalent	\$200,000	\$0	\$20,000	\$0	\$220,000	6.43%
3. Levied or voluntary assessments on agencies	\$0	\$0	\$0	\$0	\$0	0.00%
4. Dedicated funds (i.e. land transfer fees)	\$0	\$0	\$0	\$0	\$0	0.00%
5. State mission-driven funding (i.e. E-911)	\$0	\$0	\$0	\$0	\$0	0.00%
6. Grants	\$0	\$150,000	\$100,000	\$0	\$250,000	7.31%
7. Contract services	\$0	\$0	\$0	\$0	\$0	0.00%
8. Fees for data or other services	\$0	\$0	\$100,000	\$100,000	\$200,000	5.85%
Total:	\$450,000	\$2,650,000	\$220,000	\$100,000	\$3,420,000	100.00%

* Funds in this category include GIT service bureau revenue, if any.

** Funds for DIR as the lead entity are approximated.

1. Data funds from GR are for FY2001 StratMap Program

Annual Statewide GI/GIT Coordination Budget for Utah

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data	Assistance	Other *	Dollars	Percent
Lead entity	\$100,000	\$950,000	\$1,200,000	\$300,000	\$2,550,000	96.23%
Secondary entity (s)	\$100,000	\$0	\$0	\$0	\$100,000	3.77%
Dollar Total:	\$200,000	\$950,000	\$1,200,000	\$300,000	\$2,650,000	100.00%
Percentage:	7.55%	35.85%	45.28%	11.32%		

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$200,000	\$600,000	\$500,000	\$0	\$1,300,000	49.06%
2. IT support from state CIO or equivalent	\$0	\$0	\$0	\$0	\$0	0.00%
3. Levied or voluntary assessments on agencies	\$0	\$0	\$0	\$0	\$0	0.00%
4. Dedicated funds (i.e. land transfer fees)	\$0	\$0	\$0	\$0	\$0	0.00%
5. State mission-driven funding (i.e. E-911)	\$0	\$0	\$0	\$0	\$0	0.00%
6. Grants	\$0	\$350,000	\$700,000	\$0	\$1,050,000	39.62%
7. Contract services	\$0	\$0	\$0	\$300,000	\$300,000	11.32%
8. Fees for data or other services	\$0	\$0	\$0	\$0	\$0	0.00%
Total:	\$200,000	\$950,000	\$1,200,000	\$300,000	\$2,650,000	100.00%

* Funds in this category include GIT service bureau revenue, if any.

Annual Statewide GI/GIT Coordination Budget for Virginia

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data	Assistance	Other *	Dollars	Percent
Lead entity	\$305,000	\$245,000	\$85,000	\$0	\$635,000	100.00%
Secondary entity (s)	\$0	\$0	\$0	\$0	\$0	0.00%
Dollar Total:	\$305,000	\$245,000	\$85,000	\$0	\$635,000	100.00%
Percentage:	48.03%	38.58%	13.39%	0.00%		

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$305,000	\$245,000	\$85,000	\$0	\$635,000	100.00%
2. IT support from state CIO or equivalent	\$0	\$0	\$0	\$0	\$0	0.00%
3. Levied or voluntary assessments on agencies	\$0	\$0	\$0	\$0	\$0	0.00%
4. Dedicated funds (i.e. land transfer fees)	\$0	\$0	\$0	\$0	\$0	0.00%
5. State mission-driven funding (i.e. E-911)	\$0	\$0	\$0	\$0	\$0	0.00%
6. Grants	\$0	\$0	\$0	\$0	\$0	0.00%
7. Contract services	\$0	\$0	\$0	\$0	\$0	0.00%
8. Fees for data or other services	\$0	\$0	\$0	\$0	\$0	0.00%
Total:	\$305,000	\$245,000	\$85,000	\$0	\$635,000	100.00%

* Funds in this category include GIT service bureau revenue, if any.

Annual Statewide GI/GIT Coordination Budget for Wisconsin

Expenditures	Functional Use of Funds				Totals	
	Coordination	Data	Assistance	Other *	Dollars	Percent
Lead entity	\$240,000	\$550,000	\$1,950,000	\$50,000	\$2,790,000	88.85%
Secondary entity (s)	\$250,000	\$50,000	\$50,000	\$0	\$350,000	11.15%
Dollar Total:	\$490,000	\$600,000	\$2,000,000	\$50,000	\$3,140,000	100.00%
Percentage:	15.61%	19.11%	63.69%	1.59%		

Revenue Sources	Coordination	Data	Assistance	Other *	Dollars	Percent
1. General Appropriations (general revenue)	\$290,000	\$90,000	\$70,000	\$25,000	\$475,000	15.13%
2. IT support from state CIO or equivalent	\$0	\$0	\$0	\$0	\$0	0.00%
3. Levied or voluntary assessments on agencies	\$0	\$0	\$0	\$0	\$0	0.00%
4. Dedicated funds (i.e. land transfer fees)	\$200,000	\$510,000	\$1,900,000	\$0	\$2,610,000	83.12%
5. State mission-driven funding (i.e. E-911)	\$0	\$0	\$0	\$0	\$0	0.00%
6. Grants	\$0	\$0	\$30,000	\$0	\$30,000	0.96%
7. Contract services	\$0	\$0	\$0	\$25,000	\$25,000	0.80%
8. Fees for data or other services	\$0	\$0	\$0	\$0	\$0	0.00%
Total:	\$490,000	\$600,000	\$2,000,000	\$50,000	\$3,140,000	100.00%

* Funds in this category include GIT service bureau revenue, if any.