

GIS Funding Overview

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Certainly one of the more significant and controversial issues facing the GIS community is stable, long-term funding at all government levels - Federal, state, local and tribes. The question is complex. Each government layer relies on other political subdivisions for resources (data and funding) to accomplish their mission. In addition, stable funding is critical not just for data creation, but also for continuing maintenance, for without upkeep, information quickly becomes out of date and useless for most business applications.

Infusing enough additional taxes or fees to cover the investment necessary to fund all the essential spatial initiatives is politically unrealistic. Diverting current, already strained organizational budgets is impractical. Implementing transactional 'value added' fees requires a paradigm shift in how we think about delivering government spatial services. Finally, building spatial tools that are more relevant to organizational business processes is necessary and realistic, but is a long-term endeavor that takes upfront investment. That said, we must find combinations of long-term funding methodologies that improve the effectiveness of GIS investment alternatives.

Background

Passage of the Montana Land Information Act (MLIA) with its \$1 per page recordation fee was certainly a welcomed infusion of investment dollars. However, no one thinks that source will/should fully fund GIS at the state and local levels.

Other proposals have surfaced that champion directing specific taxes or fees to explicit geospatial layers. For example, MLIA to cadastral and critical structures, Gas Tax to the transportation layer, permit fees to wetlands, E911 fees to addressing, etc. There is definite logic to this argument; charge the cost of spatial activities to those sectors that benefit the most from that segment. However, the political practicality of increasing taxpayer burden specifically to fund spatial activities across such a wide spectrum is questionable at best.

Several representative of the GIS professional association (MAGIP), the MLIA Council and the Office of the GIO met to brainstorm potential GIS funding alternatives. Out of that event came some general alternatives that deserve exploration. The major categories include:

- New/Re-distributed taxes and fees
- Funding from external sources
- Sale of GIS goods and services
- Become more relevant to organizational business processes

Funding Options

Taxes and Fees

Some taxes/fees are already in place that could be either re-distributed or increased specifically to support State and local GIS activities. In most cases, this would require legislative action and although that is problematic in the short-run, there may be some longer-term opportunities. However, one relatively straightforward, short-run opportunity is to review the MLIA funding distribution model.

Currently the statute requires 25% remain at the county level and transfers 75% to the State. Of the State's portion, \$240,000 goes for state GIS coordination activities and the remainder back to the GIS community through a granting process. The intent of the grant process is to re-distribute funds from larger State and local government entities to smaller jurisdictions/organizations, especially as they relate to statewide projects concurrently affecting multiple partners (e.g., master addressing).

Modifying the MLIA statute/rules to allow for a phased-in approach (over a biennium) that moves the allocation to 75% local and 25% State with no granting process seems reasonable. However, for a change to work there must be other funding mechanisms for state-level projects (Orthoimagery acquisition, maintenance of the cadastral, transportation and critical structures databases, etc.), and development of regional local government GIS Centers leveraging the 75% for smaller local governments. There also needs to be a mechanism for creating consortiums where Federal, State, local, tribal and private sector entities can participate in and fund projects having statewide implications.

External Sources

With few exceptions, governments at all levels, local, state and federal, are experiencing funding shortages; typically facing increasing demand for services with steady or declining budgets. Any attempts to generate GIS funding using resources that might otherwise have benefited some other entity will be unpopular at best and at worst, intensify the already problematic sense of funding competitiveness.

However, there may be opportunities to use one time funding to build spatial infrastructure. For example, the State might use General Fund one-time-only (OTO) funding to build value added goods and services, where the monies generated from these goods and services (assuming there is a market and the State can "sell" the services) would partially fund the ongoing operations and maintenance of the data and applications. Partnerships between state and local government that invest OTO monies in building mutually beneficial service delivery structures could provide great long-term cost savings. However, to maintain the long-term integrity of this approach, any such partnership requires investing part of the savings back into the operation and maintenance of the spatially enabled support systems.

There is also the opportunity to present requests to move funding for core business level (e.g., Discovery Hub, cadastral and critical structures databases, etc.) initiatives to enterprise-level funding models. The question: Is spatial infrastructure a core business

function and if so, why is it not funded from general appropriations? Although there are notable exceptions such as Butte-Silverbow, Lewis & Clark and Yellowstone counties, and the departments of Natural Resources & Conservation and Revenue, the answer most jurisdictions give today is that GIS is nice to have, a great tool for public presentations, but not really a partner in their core business processes (it is not how they deliver service). Changing this mindset has a lot to do with the relevancy section below, but suffice it to say, it is a considerable shift in how business operations managers and GIS professionals normally think about what they do.

Goods and Services

There are already examples of this approach throughout State government. The FWP ‘convenience fee’ for purchasing a hunting/fishing license online (saving time and fuel), the ability for car dealers to immediately issue automobile temporary license permits (which helps their sale), and several others, are all well documented, successful examples of value added applications for which consumers are willing to pay extra. On the spatial side, short-term opportunities exist within the 50,000 visitors per month real property ownership (cadastral) application; both in terms of providing value added access for banks, title companies, realtors, etc. and as an advertising forum for these same groups. Longer term, applications supported by statewide mastering addressing, land cover, enhanced Orthoimagery, etc. all have potential for development of value added services.

However, this approach does raise issues of social justice, the proper role of government, and competition with the private sector.

The issues arise if we believe that government should only provide services that are necessary for the protection and welfare of all its citizens, and that the private sector will not likely provide. Therefore charging taxpayers an additional increment for any services would be improper. Moreover, if such services were truly needed for the protection and welfare of all citizens (that is, if they were “inherently governmental”), it would be unjust that only those who could afford to pay for them (the “rich”) would have such access. Further, if they were not inherently governmental services, then government providers would be improperly competing with the private sector.

The other side of that argument is that government has adopted many ‘fees for service’ in order to “fairly” allocate the cost of delivering a benefit to the consumers of that service. For example, permit fees, gas tax, driver’s license fees, hunting/fishing license cost, etc. The question taxpayers who do not benefit from the service ask is ‘why they should pay for something they do not use’.

Relevancy

Relevancy has to do with the application of spatial services to the organizational core business function. That is, as spatial operations become more pertinent to the organization’s mission, funding for their underlining data and tools will be more readily available as a normal part of the entities’ mission critical service delivery processes. As noted above, many such efforts are already underway and that trend will undoubtedly continue.

However, this is not a short-term solution. Core business systems are complex and have evolved over years of growth and changing technology. Practitioners must find opportunities (e.g., major replacement of a legacy system) and business champions who support implementation of spatial tools that deliver core business functions cheaper, faster and better.

If done properly, there should be multiple opportunities for funding. First, because the spatial assets are part of the core business function, general appropriation dollars will be available just as they are available to support the manual and automated core business functions of today. A second alternative is to develop incentive-based funding methodologies that split real dollar cost savings between agency general budget categories and support for spatial activities. Interestingly, artificially limiting these incentive-based approaches to intra-organizational or even intra-divisional boundaries is not necessary; cross organizational (i.e., agency to agency, division to division) cooperation/sharing, including funding, are not just possible, but should be encouraged.

Funding

There is no doubt that any funding proposal must contain several alternative approaches; a funding package that fairly and reasonably allocates the burden across the benefactors. Given that conclusion, the proposal must contain elements of the four general mechanisms - taxes and fees, external sources, goods and services, and relevancy. What portion of the spatial investment will come from each source will vary over time. However, it is critical to understand that each funding instrument should contribute to some part of the package and funding distribution should be over the entire governmental GIS community.

With this perspective and with the understanding that some proposals will influence other levels of government, the rest of the paper analyzes short and long-term funding proposals for the State of Montana government.

However, as a final thought on multi-jurisdictional funding, I recommend that MAGIP and the GIO work jointly to develop and advocate for some very specific short and long-term funding proposals that cross various governmental authority layers.

Short-term

The State's 2010-2011 Biennium EPP (Executive Planning Process) budget cycle has already begun. Agencies are drafting their funding requests. The GIO has submitted an EPP request to fund the Base Map Service Center using State General Funds and the MLIA \$240,000 coordination funds; if adopted, no additional MLIA grant funding will be required. Further, the Base Map Service Center will continue developing transaction-based tools that have the potential to generate long-term funding mechanisms.

Estimates for the State match for the 2009/2010 National Agricultural Imagery Program (NAIP) is between \$1,000,000 and \$1,500,000 (2005 NAIP was \$750,000). A request by the Base Map Service Center (BMSC) to the MLIA Council for a recommendation on setting aside approximately \$300,000 in MLIA funds for the 2009/2010 NAIP is pending. The GIO has also met with several agencies on funding for the NAIP and requested that they: 1) accrue FY2008 and/or FY2009 year end funds via a Service Level Agreement (SLA) with ITSD, and/or 2) submit FY2010/2011 EPP requests for NAIP funding. The GIO will continue contacting state and federal partners, private sector organizations and local governments to pursue other potential funding sources.

Long-term

In addition to the above funding mechanisms, the more likely opportunities for improved funding at the State level include 1) General Fund – Ongoing and OTO, 2) Transaction-based revenue, 3) Relevancy of spatial applications to core business functions.

On-going General Fund support requires accepting that certain base spatial data and functionality is the responsibility of the State of Montana. For example, if knowledge about the critical infrastructure (e.g., location of hospitals, police stations, key bridges) is necessary to the welfare and safety of all Montana citizens, then funding for collecting/maintaining that data in a manner that provides decision-makers with critical facts and analytical tools is a necessary core government function, and funding should be commensurate with that value.

Transaction-based revenue is a new way of thinking about how we distribute and pay for spatial-based information. It does not assume that the State ‘sells’ the data - the data is public and should be treated as such. However, it does assume the State can charge for certain ‘value-added’ services related to that information. For example, the State’s Cadastral (parcel) information gets over 50,000 visitors per month, most of which are banks, title companies and real estate agents. They might be very willing to pay for faster, more directly focused (to their business needs), and more convenient tools. In addition, allowing paid advertising on the Cadastral site could be a mechanism for these same private sector organizations to reach a target-audience of person’s interested in the real estate industry.

One responsibility of the GIO is to advocate for implementation of GIS within the State of Montana Government community. This entails an active marketing campaign to educate agency decision-makers and funding authorities on the value of spatially enabling business operations and reviewing opportunities to incorporate spatial analysis into legacy systems replacements. This is necessarily a project-by-project approach, where evaluating the cost-benefit of assimilating spatial tools into State of Montana business operations is inherent in every major technological undertaking. Fundamentally, tying the future of GIS to agency business operations is the only way to ensure long-term sustainability.

Long-term, there is the possibility of adding ‘GIS fees’ to existing government service fees/taxes (e.g., gas tax) but in reality, if this happens it will not come about as a

dedicated tax base, but more likely as an increase to existing fees/taxes that agencies lobby for because they are necessary to support their business operations. It is rather simple, when spatial tools become an essential part of their everyday work, organizations will view GIS funding as crucial to what they do. How to make that happen is the challenge.