



INTEGRITY INTO EVERYTHING

GIS MONEYBALL:

How GIS Can Help Lay the Foundation for an Effective Broadband Launch

INTRODUCTION

When decisions need to be made, the importance of having quality data cannot be understated. However, quality data alone may not be enough. In an environment where the abundance of data becomes overwhelming, there needs to be a way to get at the information that can intelligently inform your decisions.

Using quality and readily-available data in conjunction with Geographic Information System (GIS) analytics can help uncover new opportunities, and assist in planning and building out infrastructure with greater efficiency, providing visibility into who the people are in a given service area, what they need, and what it would take to get it to them.

By creating custom-tailored, purpose-built maps to develop reliable and accurate assessments, GIS analytics presents the relevant fact-based information you need in an easily digestible format, allowing you to discard the frequently unreliable cookie-cutter estimates that get in the way of good decision-making.

This whitepaper reviews and discusses the availability of data, its sources, and the benefits that can be derived by converting it into detailed geographic representations—layered maps—that enable aggressive and forward-looking companies to visualize, discover, and accurately evaluate new opportunities and convert them into working projects by eliminating guesswork from the decision-making process.



FUTURE
GROWTH

All the information you need is available—and that’s the challenge:

Understanding the geographic areas to which you have access is essential for locating new opportunities and developing effective strategies for imminent builds, as well as future projects. Drilling down into the granular details required to advance a project with confidence frequently requires collecting and managing large amounts of data. Historically, this has involved the time-consuming and cost-intensive tasks of gathering physical data and working out the details with a pen and pencil or a complex spreadsheet.

Today, much of this data is available digitally—often for free or at a very low cost from public sources, such as city, state, county, and federal offices. Grant studies and 911 databases at the state or county level can also supply enormous amounts of information, and utilities often have helpful data in their databases. Within billing software, many companies have great amounts of usable data that never gets effectively utilized. All of this data is available and waiting to be harnessed.

Over the last five years, the increase in available data has been phenomenal. The primary challenges arise in locating and accessing the data that’s needed—and then, managing and parsing the data without being overwhelmed by it. Simply put, it can be difficult to separate the signal from the noise—and this has been a stumbling block for many.

Learning to key in on the right information and to scale it to a size that’s both manageable and useful is essential. This is where having a strong GIS solution can be important.

Using GIS analytics to get the lay of the land:

GIS is a system that connects geospatial data to a map, integrating location data with descriptive information. In short, it can take enormous amounts of data to create clear and understandable custom maps that allow for the visualization of opportunities that exist and choices that are available in a selected region.

And the visual component is crucial, as it reveals patterns, relationships, and geographic context clearly; it turns georeferenced data sets into visualized databases that allow you to focus instantly on what can—and can’t—be done. Furthermore, the information can be presented in a way that’s understandable and digestible, even to board members who may not be well-versed in the significance of what the detailed data represents.

For example, GIS can be used to create easy-to-read custom color-coded maps that plainly indicate county lines overlaid by grids that illustrate areas already served by existing fiber. Superimposed over that map, areas that were won in competing RDOF auctions, for instance, can be shown, along with road maps that help assess route miles that need to be built, with address points that exist within the area. Additional information can be included, such as territory marked for endangered species and wetlands, that may affect planning decisions. The details and data are granular, but they can be composed quickly, layer by layer, into a robust visual map that reveals, at a quick glance, information that could take days or weeks to tease out from the raw data alone.

GIS MONEYBALL

“With today’s mapping resources and analytics, we can prepare a shovel-ready budget in a fraction of the time it used to take,” says Dean Mischke, Finley Engineering Vice President and Project Engineer. “GIS allows a company to proactively study a specific area at a fairly low cost and have that information, with a budget already worked out and in their pocket before a program is even announced. It can turn what might otherwise have been an unworkable task of gathering enough information to make a meaningful submission to a grant authority into a situation where they’ve been able to cost-effectively study a particular area in advance and are ready to run when the opportunity arises.”

Roughly an hour and a half of preparation and analysis of data from readily available sources can yield enough information to make a solid cost estimate in many cases. In fact, creating area maps simply using the tools that are currently available can represent time savings of up to 95% over attempting to manage the data manually—and this can result in substantial savings in terms of traditional investigation costs.

Using quality and readily-available data in conjunction with (GIS) analytics can help uncover new opportunities, and assist in planning and building out infrastructure with greater efficiency, providing visibility into who the people are in a given service area, what they need, and what it would take to get it to them.



GIS represents opportunity and efficiency at a much lower cost:

For counties and municipalities looking to foster broadband programs, GIS mapping can be performed when assessing feasibility, taking guesswork out of financial estimates and helping to assign a hard number to projected costs. With these numbers in place, it becomes possible to work backwards to determine how much assistance will be needed to build out a project, while providing enough detail to encourage telcos and electric co-ops to engage.

“We can take areas that are not currently shovel-ready and create models that have reliable cost values assigned to them,” says Mischke. “So, when an opportunity for funding becomes available, we can submit our GIS research to the applicable grant agency, and our models can be considered sufficient to qualify as shovel-ready. And this analysis can now be performed at roughly 25% of the cost that would have been needed in the past.”

It’s now possible to determine a number of critical factors that could affect the cost of construction without ever needing to put feet on the ground, while being far more accurate than competing methods would allow. Uncertainties that can delay a project or lead to cost overruns are reduced by having key information earlier in the development process, such as how much aerial vs. buried fiber will be required, how many poles need to be touched, or how many poles are at risk.

And the value of this work is not lost once funding has been received or the construction phase has been entered. For instance, preliminary orders for fiber can be based on the data that’s been collected and the maps that have been created. As projects and developments grow and change over time, the maps can be easily updated to assist in future project development.

GIS represents opportunity and efficiency at a much lower cost (cont)

- Additional benefits include:
- **Reporting:** As FCC reporting requirements are updated, the type of granular details that are requested will be much more accessible. And with data that's compiled down to a granular address level, reporting becomes much easier.
- **Funding:** When evaluating various funding programs, such as NCIA, RDOF, ARPA, Treasury, State, and so on, GIS information can provide both clarity and perspective.
- **Marketing:** Even after projects have been completed, the maps and data put together for specific projects can be used to perform targeted marketing campaigns.

Finally, the data that's been collected and managed through GIS analytics becomes a living document. If a project has been put on hold for an extended period of time, nothing is lost; the information and maps can be updated quickly—usually in a matter of minutes, rather than days—as new data is simply integrated into the existing structure.

CONCLUSION

From gathering and managing data to creating detailed area maps that deliver the information you need to move forward with confidence, GIS offers an efficient, reliable, and low-cost option, especially when compared to gathering data and parsing it manually.

Timelines on many projects are incredibly short and the need to move fast is essential. Intelligent GIS mapping offers the ability to identify and act on opportunities quickly. Additional benefits that arise from bringing GIS mapping into the picture affect planning, budgeting, efficiency, and reporting, and can also lead to improved management and decision making.

Finley Engineering are experts in working with data and GIS analytics in developing successful broadband and telecommunications projects. They know how to get at the data you need, often at little or no cost, and they know how to manage and manipulate the data to create the maps and visual representation that will help you make the choices that are critical for your company.



For more information contact expert Chris Konechne at 507-777-2000 or c.konechne@finleyusa.com.