Supercharge ROI With GIS

Geographic information systems aren't just for network design anymore. Fiber-to-the-home deployers are using GIS to derive important insights and maximize return on investment.

By Tom Brooks / *Mapcom Systems*

How can you achieve a greater return on investment (ROI) from your FTTH network? One way is to use geographic information system (GIS) software – specifically an integrated visual operations system – to combine demographic data and automated design tools. Using GIS software consolidates data and streamlines operations, improving response times for communications service providers (CSPs) and ensuring consistent service delivery.

A key to increasing ROI while limiting risk is to combine tactical sales strategies with smart engineering. Both sales and engineering depend on accurate, reusable data, which GIS software can help provide.

Sales and marketing teams use three steps to efficiently target customers:

1. Collect demographic data.
2. Qualify locations by consulting a GIS map.
3. For any location, determine whether a drop is present and the FTTH system has enough capacity to support a potential customer.

This process is much simpler when sales engineers can leverage existing, georeferenced plant information.

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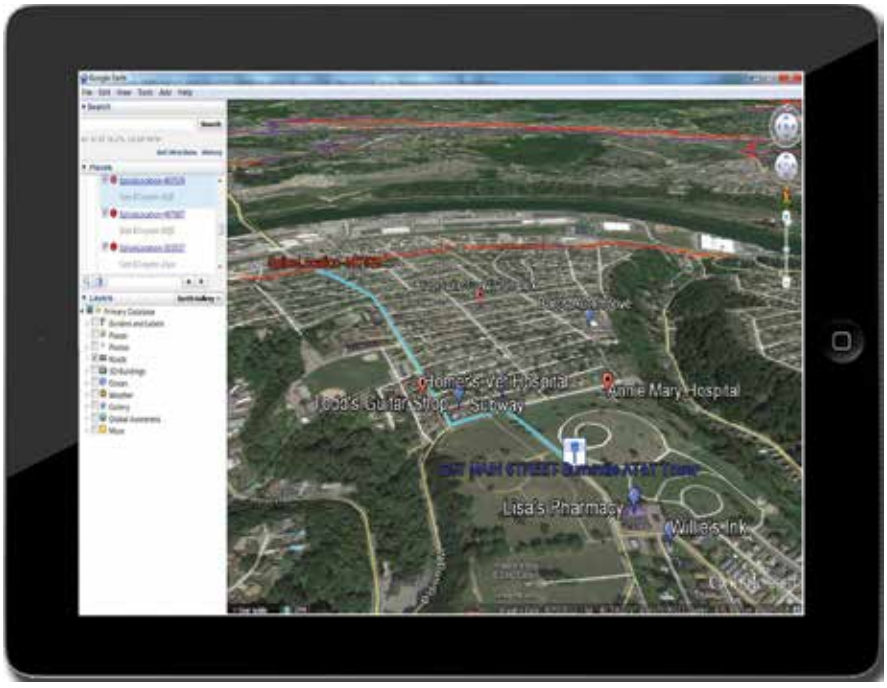
Thanks to integrated, georeferenced information, sales engineers can handle what-if or on-the-fly scenarios. Accessible data generates more accurate ROI estimates and more efficient turnaround on large projects. Recycling data already collected means no wasted effort, time or resources from repeat data entry.

THE ODD COUPLE

Engineering and marketing – an odd couple – need to join together. Data should flow between engineering's prebuild processes and marketing's postbuild processes. This allows prebuild planners to evaluate service areas by performing a spatial analysis of existing customers versus noncustomers and visualizing qualified customers in a potential build area.

Using plant information stored in a GIS database allows quick generation of build estimates. Marketing teams can then move faster than their competitors to launch in areas first or with better targeting strategies. The benefit of joining this odd couple is more confidence in knowing how much builds will cost and their ROI.

By pairing the odd couple, CSPs address the challenges that arise from duplicating or repeating efforts in multiple departments. When the odd couple works from the same GIS system, they can combine the data sets particular to their functions for greater effect. Demographic data about resident income levels and lifestyles can be overlaid with open plant capacity. Buildouts to business premises can be estimated and overlaid



Sales teams can win business by prequalifying targets and creating on-the-spot solutions.

with business size, type and revenue data. Historical network troubles can be georeferenced over existing service area take rates. When engineering staff need data from the marketing domain or marketing staff need data from the engineering domain, they can go straight to the GIS and get what they need. This can save significant amounts of time, eliminate the duplication of efforts and ensure more accuracy in whatever function is performed.

Most CSPs have a GIS capable of importing demographic data, and a great place to start to bring in data is www.census.gov. There is a large amount of free census data for CSPs to bring in and visualize with their existing and planned builds.

The next step is to focus on a particular service area. Is there an area that has open capacity and qualified customers and that is relatively inexpensive to deliver service to? Visualizing the existing access points allows the marketing team to target the most profitable prospects.

To determine the profitability of a prospect, a marketing team needs to know the cost of serving that prospect. This is where automated design tools in the GIS come into play. Without involving engineers, marketing staffers can use these tools to generate a quick estimate of the costs to serve a prospect or an area. The engineering department saves time by configuring the system with construction estimates and existing facilities. Bringing everything into one system prevents departments from repeating the efforts of other departments.

Duplicating work is a huge detriment to efficient operations. It wastes time and introduces the risk of inaccuracy. If the second work results differ from the first, which are correct?

In CSPs, different divisions specialize in certain aspects of business operations. When one department duplicates the work of another department, the repeated process is likely to take longer and be less accurate, as the result will be based on data that is not as timely. One way to mitigate this problem is to provide access to the systems a department uses for its data collection to other areas of the organization, but this duplicates work in other ways. For example, it requires training departments to use multiple systems they will not interact with regularly – and when they do access those systems, they will be slow to extract the data and information they need.

Still, the marketing team needs outside plant, capacity and service availability information, and sales engineering needs to know where prospects, campaigns and high-value customers are in reference to the infrastructure.

CUSTOMIZED INTERFACES

The solution is for each department to have access to the other's information through a common system with customized interfaces. A GIS should be able to store all a CSP's records about infrastructure, service area demographics, billing and customer relationship management (CRM). Horizon Network Partners, a southern Ohio telecommunications company, utilized these ideas when completing a three-year-long fiber installation that brought gigabit-speed Internet to Appalachian communities. Having provided service for more than 120 years, Horizon Network Partners capitalized on its previous buildout experience, bringing together fiber management, network equipment management, circuit management, workforce management and CRM for presales processes into one visually powerful GIS.

Like Horizon Network Partners, other CSPs should store all their valuable data in one system. Once the data is in that GIS, each division can visualize or report on that data in the manner that best suits its workflows. For engineering, that could be a report of prospects and the nearest access location for each, with an estimated cost to provide service. For marketing, it might be an open capacity report with service take rates for a service area to aid in campaign planning.

The GIS handles the important integration work, which allows each division to use its current systems and visualize data in the best manner for its processes. Automated design tools

take things to another level; they allow marketing to react to market conditions without engaging or depending on engineering. Because the work is done in a central GIS, engineers can see the results of the design work and tweak it to match the actual design specifications and build process. The automated design tools save engineers time by not involving them in the sales quotation process while still adhering to buildout best practices.

When demographic, plant, customer and prospect data are all housed in a GIS, a team can prequalify service areas. The marketing department can project take rates for different campaigns given income levels and lifestyle habits. It can prequalify business prospects based on location, number of employees and revenue or examine current service areas for trends that can be used elsewhere or to see why take rates are not as high as expected.

As the engineering department builds and upgrades plant, marketing and sales can see newly qualified prospects emerge in real time. And as sales and marketing create build estimates for prospects, engineering can leverage that work for staking sheets and work orders.

The engineering department can benefit in other ways, too. With access to prospects, demographics and customer data, engineering can begin to plan the best way to expand service area and capacity. If some prospects emerge in close proximity to one another, engineering may be able to take advantage of that opportunity. If a capital project is underway in an area, engineering can lay conduit for future outside plant. Being freed from having to produce sales estimates will give engineers more time for prioritizing and executing corporate growth strategies.

The key takeaway for CSPs is to find a way to centralize data and distribute it the way each department needs to see it. A second tip is to visualize demographic, plant, customer and prospect data into the existing workflows of the various departments. When each department has a good picture of what is going on in other departments, the entire CSP can coordinate actions and move faster.

Nearly every aspect of a CSP's business can be georeferenced, and using georeferenced data in a GIS to coordinate workflows among departments will pay massive dividends. ❖

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