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Innovative Mapping Tools Power Your Fiber Project

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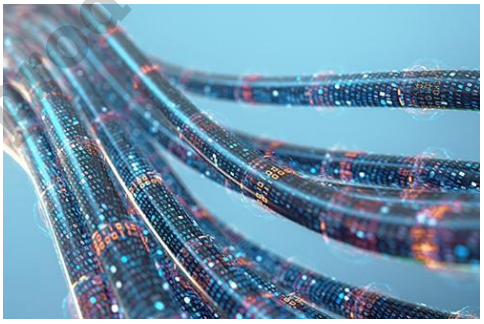


Do you remember what it was like to go on a road trip before the Internet? You planned your route using your fold-out map or road atlas, and you relied on a separate guidebook for suggestions of restaurants, gas stations, and rest areas along the way. What that system couldn't do is tell you if a road was closed for construction, if there was a speed trap coming up, if your favorite eatery had closed, or whether the cost of gas was less expensive at exit 77 or 79.

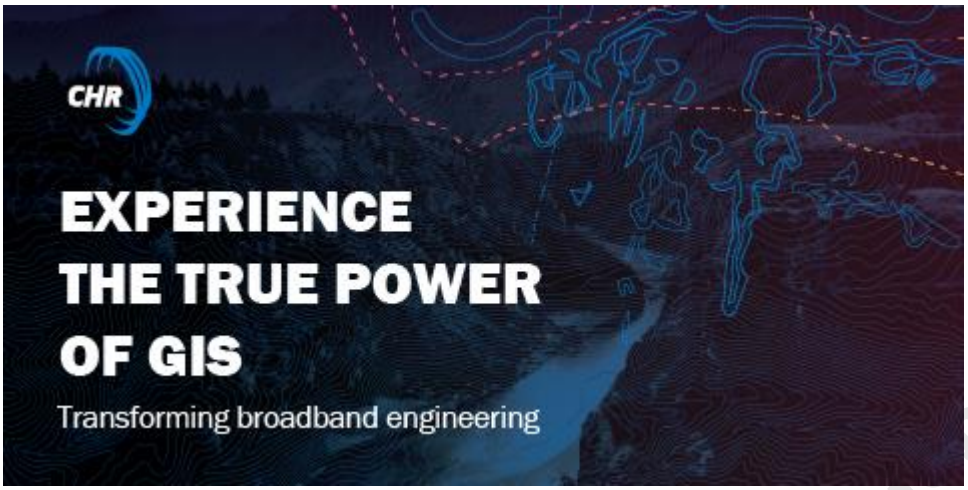
Compare that experience to using an app like Google Maps. Your entire driving route, up-to-the-minute information about driving time and road conditions, details for local businesses and places of interest, and other features are built into a seamless experience. Why would you ever go back to doing it the original way when the new tools we have make the trip so much better?

Fiber broadband deployment planning

This difference between the old way and the new way is what it's like when you use geospatial technology to design and build your fiber broadband deployment. Here's how it used to work: Techs working in the field would enter recent construction and network information—which addresses had been passed with fiber, which areas were ready for the next step—into a spreadsheet. A separate spreadsheet might be kept by design and planning with information about the status of permits. Your finance department had their own spreadsheets. When it was time to assess project status and various key performance indicators (KPI), an employee would painstakingly combine the information from multiple sources—with information that was likely weeks old—into new reports to present to the executive team. Creating KPI reports was time-intensive and offered information of limited usefulness because it was out of date by the time the report was finished. This is the old way, the fold-out map and printed guidebook equivalent of running a fiber project.

Using geographic information system (GIS) technology on a user-friendly platform for your fiber deployment makes a profound difference. The United States Geological Survey defines GIS as "a computer system that analyzes and displays geographically referenced information." In other words, GIS is essentially a digital combination of mapping and data tools. GIS isn't a new concept—what's new is geospatial mapping data combined with accessible digital dashboards on a single platform that

helps you plan and track your broadband deployment.



Applied correctly, geospatial data can increase the efficiency of your fiber project, giving you real-time information about permits, connectivity, construction, and more. As you enter data into the system, KPIs around planning, design, construction, and more are updated automatically based on what field personnel have collected or what has been designed. The result of applying geospatial data to a fiber build is improvements in several areas: user accessibility, efficiency of materials acquisition and budgeting, digital automation, interdepartmental communication, and customer experience. Let's look at each of these in turn.

User accessibility in geospatial technology

Accessibility is one of the most significant advantages of geospatial technology. Your team has access to project information in a visual format—tied to a map showing areas of construction—that is easy to understand. Dashboards can show where the network is fully connected and allow users to drill down to see the status of unconnected areas, including information about the status of permit applications, the materials needed, the construction schedule, and more. Dashboards present a user-friendly graphical interface that lowers the bar of entry for your team. The dashboards and their details are now accessible by anyone in the company who has the permission to view it. A user doesn't need a GIS degree to see how many miles of network were connected this week, and reports don't rely on a GIS manager. Now, the status of your fiber project—overlaid on a map of your construction area—can be seen and understood by nearly anyone.

Efficiency of materials acquisition and budgeting

It used to be that the financial numbers that appeared on reports were last month's numbers, or maybe from just two weeks ago if you were lucky. Dashboards can be created to include financial information that lets you see budget issues and react more quickly. Combined with real-time information about the status of permit applications—including an explanation of each permit's status—it's easier to manage your budget and foresee overages and shortages. Rather than getting dated information that leaves you reacting far too late, you can monitor your expenses and be nimble about making decisions. Permit status is monitored by location, down to the pole level, so you have a better sense of when an area can move forward and can budget accordingly. The time that is saved by having the latest snapshot of your network lets you see budget overages and start planning sooner how to spend that money.

Geospatial data creates overall project efficiency. With better information about permit status and when a specific location will be ready for construction, you can set your schedule and order your materials sooner in your overall deployment to help avoid supply chain issues. In the past, engineering was often the aspect of projects that lagged behind schedule. With geospatial data, we've been involved with projects where the engineering now outpaces the ability to plan construction because the engineering process is much more streamlined.

Digital automation

In the past, CHR worked on projects where a person was paid to scan and upload project documents. Separate spreadsheets were consulted and then compared to a physical map of the network design. We used to joke that we were designing broadband networks to give end users the ability to use powerful digital tools at Gigabit speeds, but we were doing it with paper and pencil. Those days are gone; using GIS technology takes your project information into a fully digital space. Data is entered directly into the system—from a computer, a mobile app, a tablet, or another connected device—and seamlessly integrates with mapping dashboards and other platform tools.

We all know, from our personal and professional lives, that the move to a single digital platform creates efficiencies that don't exist in a non-digital workspace. No one wastes time finding the lost spreadsheet, the latest letter about the permit, or the right map. A geospatial data platform puts up-to-date project data at your fingertips.

Interdepartmental communication

Access to a single digital platform means the whole company is operating from the same information. Gone are the days when departments operated in siloes, with disconnected tasks and methods. Everyone has full visibility into the project with the same interface. The design group, the field team, the finance and marketing departments, the customer service team, and the executive suite are all operating from the same data—and it's the latest, near real-time data.

Once data is entered into a single source, individual dashboards show the relevant data personalized to specific departments and personnel. Business decisions about where and when to build are made more quickly and with greater confidence, and your company can begin producing revenue sooner. GIS dashboards let the entire company work with a single source of truth—everyone from executives to network operations to customer service representatives work from the same information.

Conversations about expenses and budgets and project issues are much easier because everyone is on the same page.

Customer experience

The benefits of GIS technology for your team translate directly into benefits for your end users and a better customer experience. At a basic level, improved efficiencies around planning, budgets, materials, internal communication, and more mean faster speed to market—fiber networks are built more quickly, so customers get access to fiber service sooner. There are also improvements in the details along the way. In the past, we've seen fiber networks with cable in the ground passing houses, but the connection to the network wasn't established so customers still couldn't get service. Imagine being a homeowner and seeing the construction on your block only to find out you'll still be waiting for a connection. With GIS, that kind of oversight can be avoided.

Because the GIS data also offers a truer, more up-to-date picture of when a particular street or neighborhood can expect service to be connected, your marketing department—which has access to the same data as everyone in the company—can promote service at the right time. Marketing can be pinpointed (resulting in a well-timed revenue injection) and you have fewer customers who are frustrated because you didn't deliver on the date you said you would or because you didn't tell them soon enough. With a GIS platform, it's a win-win for you and your customers.

Reaping the benefits of innovative mapping tools

You wouldn't go back to making a road trip with a fold-out map and last year's guidebook—so don't do your fiber projects the old way. Use geospatial data tools on a convenient digital platform to track your projects, design your network, plan your construction schedule, monitor your budget, help your team work more closely together, and improve the customer experience. These tools make the entire process more efficient, combine your data into a single system, and ultimately make broadband deployment far more manageable.