

## Old Data Habits Are Hard to Break

There's a well-known saying that goes, "Old habits die hard." All my life, I've struggled to manage my weight. I've probably lost 1,000 pounds in my life, but the problem is I've gained 1,050 pounds. If I really wanted to lose weight permanently, I would kill off my old bad habits for good, not just suspend them for a while during the diet and then bring them back again as soon as I lose enough weight. To really transform, old, negative habits must die.

Electric utilities are going through a huge change. Regulators are telling electric companies to unbundle component parts. The parts are generation, transmission, distribution, and retail services. In the old days of vertical integration, electric companies could make money on the strength of the business diversity. To make matters worse, the delivery part of the business has to deal with lots of unknowns. They are susceptible to weather, theft, vandalism, terrorism, and public scrutiny.

Another problem is the spread of customer self-generation. This is mostly in the form of solar panels. This simply erodes the company's revenue. And it adds an additional complexity.

To survive profitably, electric delivery (transmission and distribution: T&D) companies need to kill old habits and rituals. The ones they have perfected since the time of Edison.

One bad habit of many utilities is a lack of investment in management, processing, and upkeep of good data. Good data is a fundamental requirement for solid operational and financial efficiency. How do many T&D companies deal with incomplete, inaccurate, or out-of-date information about their assets? Easy. They just have folks jump into vehicles and go into the field to check to see if their data is correct. If not, no big deal, they just write down what they see. Maybe later, if they have time, they can correct the information in the office to match reality. This is a costly and time-consuming bad habit.

Utilities do it a lot.

Many T&D companies keep critical facility data in GIS, yet study after study reveals shortcomings in this data. The majority of T&D companies do not have a complete record of T&D facilities in GIS. Most do not have processes to ensure the data is timely. And in all too many cases, the facility location is not even close to GPS accurate. In a study several years ago, Esri asked utilities how long it takes for information from the field to make it into the GIS. In some cases, they measured the time in weeks, not minutes, hours, or even days. The price is lack of efficiency. This equals higher costs, poor customer service and lower reliability. In some cases, the price is an accident. While most now agree that GIS is a fundamental component in every T&D utility's IT portfolio, the simple existence of GIS is not enough.

The data has got to be right.

The reason many companies do not have a complete set of data is of course the cost to migrate, collect, and maintain the data. The T&D utility has an aging work force, aging infrastructure, greater cost exposure, lower margins, and increasing customer expectations. So they believe there isn't money left over to do a better job of completing the data migration and of capturing the more difficult assets such

as underground facilities, substations, or secondary services. Yet today, information drives most modern businesses. Processes are dependent on good data. The smart grid demands it.

Ironically, utilities often capture too much information in GIS. Critical information needed in GIS includes:

- A complete inventory of facility assets
- The location of those assets
- The spatial relationships of assets to each other and to the world around them.

I have seen T&D GIS data models with pages and pages of attributes and relationships. Yet utilities maintain the vast majority of the attribute information elsewhere. At the same time, not all the critical assets even exist in GIS. Companies spend a lot of time and effort synchronizing information among various information systems. They have too much information in one place. And not enough where they need it.

GIS is at its best when it pulls information from a variety of data sources. This information can come from both inside and outside the company. This includes business intelligence, customer information, materials, work management, asset management, SCADA, distribution management, and network analysis systems. Utilities don't have to store and maintain all the data in GIS. They can use GIS to add a spatial context to other business systems.

The good news is that T&D companies are recognizing the critical nature of good data governance. They see that investment in data quality and completeness is just as important as investment in hard resources. Utilities are adopting GIS as a platform. That means that location information can exist where the workers are, in the office, in their vehicles and in the woods if need be. It can exist on any device, anywhere and anytime.

If I ever want to lose weight, my old eating habits must die. Likewise, if T&D utilities want to transform, their old data habits must die. No more defaulting to field checks for data accuracy. No more reliance on GIS as solely a mapmaking machine. Instead, companies must improve integration with corporate systems and invest in modern processes of data governance.