

GIS Justification: Forget the Intangibles

A common question we get from our utility customers is what is the ROI (return on investment) for GIS. The reason for this question is that most utilities will require a justification for the cost of building, upgrading or enhancing their GIS or improving their GIS data. That justification takes the form of a financial study. What is the payback period? What is the balance and income sheet impact? What is the cash flow for the project? Sure, the implementation of GIS lowers the cost of operations by improving worker productivity. It shortens travel time. It can lower supply chain costs. It increases revenue by organizing billing for joint use poles and streetlights. It increases revenue and lowers costs in hundreds of large and small ways at utilities. Utility financial people call these *hard dollar* savings.

By focusing only on the financials clouds other critical business benefits. But wait, utilities want hard dollar savings. They don't want to hear about *intangibles* or even *soft dollar* savings. There is nothing like the terms intangibles or soft dollar savings to kill a justification for spending money. Yet a company does not thrive by financials alone. This is particularly true of utility companies. In fact, nearly every utility company large or small has a stated mission that includes at least four major stakeholders. These are the investors or owners, the customers, the employees and communities. The financial returns or ROI deals with only one of the key stakeholders, the owners. Utilities are critically aware of customer care, employee development and safety and their reputation within their community. Poor customer service, unhappy employees and bad press gets utility executives fired just as quickly as poor earnings.

The key for a solid justification not based on lowering cost or increasing revenue is to never, ever, ever use the terms intangibles or soft dollars. Hone in on the key performance indices (KPI) and their associated metrics. Find the company's balanced scorecard. Each year, nearly every company builds one. It usually includes the current performance, the desired performance and the difference or gap. The gap in performance is where the company allocates its spending. Most utilities will have less than a dozen critical KPI's, each organized around the four stakeholders. Companies will benchmark their performance against others using this handful of KPI's.

What are the most common complaints from electric customers? High costs, sure. Annoying power failures or lack of communication during power failures ranks right up there. The most common KPI for electric reliability is SAIDI (pronounced Sadie). It stands for System Average Interruption Duration Index. SAIDI measures how many minutes an average customer is out of power during the year. In the US, the average SAIDI is around 120 minutes or 2 hours. As an aside, SAIDI in South Korea is 20 minutes. Let's say that during the annual retreat of the utility senior managers, the C suite targets the SAIDI to improve from say 140 minutes to 120 minutes by the end of the budget year. The reason why they are doing this is probably all the flak they got from the public utility commission, the politicians and the customers themselves. The SAIDI gap is 20 minutes. To reduce SAIDI by 20 minutes is tough. It will take a coordinated effort across many organizations. GIS can contribute to the reduction in SAIDI

Utilities have demonstrated that GIS can have a positive impact on reliability by providing better information for quicker damage assessment, sharper situational awareness and better spatial analysis for targeted vulnerability determination. The key for the justification is to quantify how much contribution a GIS application (a new GIS situational awareness dashboard or tablet based damage assessment app) will have annually to the reduction in SAIDI. This will take some study. Justifiers will certainly have to make some assumptions. That's no different from the financial ROI studies.

Other KPI is OSHA reportable employee accidents. Every gas and electric company posts these metrics on every bulletin board on every floor of every building they own. Justifying a GIS app will include a solid study of how that app can reduce employee accidents. GIS enhances collaboration, helps accident assessment, analysis and reporting. GIS provides unambiguous location data for critical dangerous assets.

Community KPI's are complaints to the regulator or JD Power consumer rankings or environment fines. These often end up being reported in the daily newspaper. When they do, senior management will freak out. These metrics are measurable and thus manageable. GIS can identify where customers are complaining. It can show the relationship of complaints to company actions. It can even show where bad customer tweets are clustered. If the company wants to improve its community image, it will set specific targets around complaints, overall satisfaction indices and even the number of negative social media posts.

Sure, one could translate bad tweets, employee accidents, SAIDI or JD Power Survey results into some kind of financial proxy, but that would miss the point. The point is that utilities like most companies have to concern themselves with more than just financial metrics. These metrics are measurable and manageable. The key to justification of a non-financial based application is to quantify how much the GIS project will close the gap in one or more of the KPI's. It should be based as best as possible on solid research and benchmarking. In effect, the GIS ought to be able to improve those things that are most important to the utility.

Intangible? Soft dollar savings? Hardly.