Myths and Realities

By **Dan O'Neill**, *O'Neill Management Consulting*

LET'S GET REAL. NOT THAT I AM AGAINST MYTHS. SOMETIMES A MYTH CAN BE A GOOD THING for creating positive change. Myths can actually help shape a new reality, as in: the dream of flying (like the mythological Icarus) led to the reality of modern air travel; Jules Verne's fictional Nautilus became the very real submarine; and Isaac Asimov's popular vision of geosynchronous satellites is now real GPS.

So, what are our current myths that are masquerading as visionary thinking? Some would say the Smart Grid. Personally, I think the notion that the Smart Grid is for all customers in all companies is a myth, and I hope we soon see some prioritization of costs and benefits in those programs, so that we can get most of the benefits for a fraction of the cost.

For the last 20 years, I have been a consultant to the utility industry, specializing in T&D asset management. Having done literally dozens of assignments involving reliability assessments, get-well programs, storm audits, project prioritizations and root-cause analyses, I have gleaned a few insights about the myths that too often drive investment in T&D.

Myth 1: Project prioritization tools should be used to decide exactly where to draw the line between projects, including, especially, that handful of projects on the margin of whether or not to be funded.

Myth 2: Asset health indices should be used to determine repair/replace decisions for specific assets.

Myth 3: Asset databases can be populated with enough historical information in the right system, such that key asset decisions can be made by essentially pushing a button.

In each of these cases, utility executives have bought the notion that good decision making can be virtually automated by installing really smart systems. I have personally been involved in many such projects, although I like to think I was the voice of reason trying to tell people that what mattered most was the process, not the computer model/system, and that the latter was only a tool to aid good decision making.

We must engage both analytical and intuitive skills as we seek to make sound asset spend decisions. Asset tools aid in the analysis of hard data. But we can't forget the intuitive side that tells us that an investment in one asset class affects the need for investment in other asset classes.

So, with respect to project prioritization, it is a good idea to use a tool to help you rack and stack projects. In fact, you are probably remiss if you don't. But the real value of the tool is in systematizing the process of separating the 'no-brainers' from the 'no-way-in hell'-ers, and leaving in the middle a group of projects whose rankings are so close that you should really be indifferent about which one to fund.

DRAW A BAND, NOT A LINE

I wince every time a client draws a "cut line" at a benefit/cost ratio of, say, 1.0, as if it were the end of the process. I myself have drawn such a line as a symbol of the zones to the right and the left. Today, I would be more careful to draw the 'line' as a broad 'band.'

Second, with asset health indices, I have seen some very good work done to develop indices that show which transformers and circuit breakers might represent the greatest risk based on the probability of failure and the consequences. I then recommend that these be highlighted for review by true subject matter experts and also the supervisors of field maintenance to see if they agree that the assets need immediate action.

WE NEED SUBJECT MATTER EXPERTS

What I laugh/cry at is when someone says that such an index means that subject matter experts are no longer needed.

Finally, the mother-of-all-databases, the one that will give you all the answers to your asset management questions at the press of a button. Imagine this: Your utility has religiously maintained a certain class of circuit breakers on a three-year cycle for 30 years. And you have a fantastic database that tells you everything the company has ever known about that asset: when it was last maintained, what mechanics worked on it and even what the mechanics had for breakfast. Now I want to query my wonder-database to tell me how my breakers would fare if I extended maintenance cycles to every five years? Of course, the failure rate should be higher, but by how much? Ten percent? Double? Exponentially growing?

In reality, there is no answer available. Not because the system is flawed, but because the logic is flawed. You might gain insight by asking other utilities or vendors what happens when extended maintenance schedules are extended, but your database will not help you here. You have to actually think.

Myths can be very powerful. But we are well-served if we examine the myths we live by, especially those hidden in plain sight. **TDW**

Dan O'Neill (danoneill@oneillmanagementconsulting.com) is president and managing consultant of a specialty consulting firm dedicated to serving the utility industry, especially in asset management and reliability.