

A bit of knowledge goes a long way

Electric transmission and distribution utility



Situation

A privately held electric transmission utility in western North America wanted to improve its maintenance management practices and set the stage for an eventual implementation of Asset Management. They already had much of the engineering elements of good AM in place but they were not well coordinated with maintenance field activities.

Finance was driven largely by regulatory hearing results, approved rates and adherence to budget, once set. As it typical in regulated environments, the field and operational activities must line up to support financial goals, even if those goals result in sub-optimal actions and drive future costs upwards.

Maintenance of transmission equipment was largely based on experience, which varied greatly across their relatively large service area (over 300,000 square km) and execution was largely inconsistent. The culture in maintenance was reactive. Much of the work done was in response to failures, with little proactive maintenance. At two “island” operations, remote from the transmission grid, maintenance of plant (generation) and local distribution equipment was based on manufacturers’ recommendations. Execution at the plants was disciplined, largely due to the dedication of the stationary engineers that operated the plants, but elsewhere in the field it was reactive.

The utility wanted to introduce successful practices and cultivate a more proactive mindset, particularly among its newer engineers and field personnel.

Our role

We were engaged to provide training in our “Uptime Pyramid of Excellence” based on our book, “Uptime – Strategies for Excellence in Maintenance Management”. Each of the several courses taught in their head office facility was three days long and included our simulation game to help drive home concepts being taught in the lectures and discussions.

Response to the training was highly positive. The simulation game proved to be a “hit” and from classroom discussions it was evident that it helped a great deal to make the theory more practical. The course ultimately became part of their onboarding process for new engineering hires.

Initially our role was that of trainer. It evolved however, into coaching for managers and eventually into conduct of assessments at their remote, off grid, “island” operations.

Application of the Uptime model in field was largely in the hands of field crews and their managers. At the remote “island” operations we were engaged to carry out detailed assessments, make recommendations for improvements and provide support as needed to the improvement activities as they progressed. We provided advisory services, additional training in Uptime, RCM, RCFA and planning and scheduling. Site based crews were highly competent, motivated and embraced the new materials and information making a number of changes to practices and how they managed their work.

Results and reflection

Resulting from this, the utility saw its availability increase, maintenance costs drop, and forecasts of useful life of its assets increase.

We observed that the motivated and competent personnel who were already present, needed little more than a clear idea of “what good looks like” to spark improvement ideas leading to beneficial change. A formal change program with high cost consulting support and project management wasn’t needed to see improvements occurring.

That observation led us to experiment with our own services delivery model. Assessments have long been the first step in most consulting engagements and we had used them for years. They produce a very good picture of what is happening, provide an evaluation of how well or poorly an organization is doing, and typically a long list of recommendations for action. In many cases they also produce a great deal of resistance to change. The observations are nothing that the subject hasn’t already seen for themselves, the comparison to successful practice is new, but also upsetting, and the recommendations are usually based to a large extent on ideas gleaned in interviews. The old joke about consultants borrowing your watch and then telling you the time is a fairly accurate analogy to what happens.

By providing training however, we noticed a great deal of idea generation and discussion around how to make things better. Armed with the knowledge of what good looks like, people see the errors of their own ways and, in our experience, want to improve. This led to our revised approach to consulting engagements wherein we begin with training sessions, gather ideas and help organize those into improvement plans. Most of the work after that will be in the hands of those already there with some outside support in the form of training, coaching and advisory services. Our learning from this company’s experience has been used to help many others since then, and we are finding that the initial resistance to change is actually reversed, becoming enthusiasm to implement their own ideas.

To learn more

We have a number of training programs including Uptime, Reliability Centered Maintenance, Advanced Reliability, Planning and Scheduling, and more. You began to get where you are today through education and training. We can help you get further.

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