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Establishing a Solid Foundation for an Asset Management Program

Simply buying a CMMS does not constitute asset management. A solid program requires integration of best practices that meet the needs of all aspects of an organization.

By John Fortin, John Colbert, and Ted Regan, Massachusetts Water Resources Authority

Establishing a comprehensive asset management program is not a task that a utility should undertake casually. The process entails integrating new business policies and procedures while simultaneously managing the changes that will affect every operating unit within an organization.

To be successful, a methodical approach must be employed that is based on agreement among all parties. Consensus is reached by fostering among participants a thorough understanding of the organization's needs and the best business practices and technologies currently available to address those needs. To be successful over the long term, an asset management program must be built on a solid foundation that is supported by three pillars—organization, planning, and education.

Organizational requirements

At the outset, there needs to be a dedicated program/project manager assigned to the asset management initiative who will institute organization and facilitate and coordinate education. It is imperative that this individual be involved from the program inception, along with a senior management steering committee (SC) with representatives from all lifecycle departments, including planning, finance, engineering, procurement, construction, operation, and maintenance.

The asset management team needs to grow together along every corner, bump, and stretch of the "improvement highway" on the journey to excellence.

MWRA BACKGROUND

The Massachusetts Water Resources Authority (MWRA) is a large, unionized public utility serving 2.6 million people in the Boston metropolitan area. In 2000, the MWRA embarked on a comprehensive, multi-phased asset management initiative. Its program includes dedicated staff along with a diverse senior management steering committee that organized early, communicated often, and conducted research and cross-industry benchmarking that allowed for a timely implementation of best practices, resultant efficiencies, and cost-saving benefits. MWRA's program is considered to be a model in public sector asset management.

Getting started

A guiding principle for a change management initiative is to treat it like a capital project, with a manager, scope, schedule, and budget. Figure 1 demonstrates how all the aspects of an asset management program work together.

The program manager serves as the responsible party educating and reporting to the SC and is accountable to the SC for program design, implementation, and sustainment.

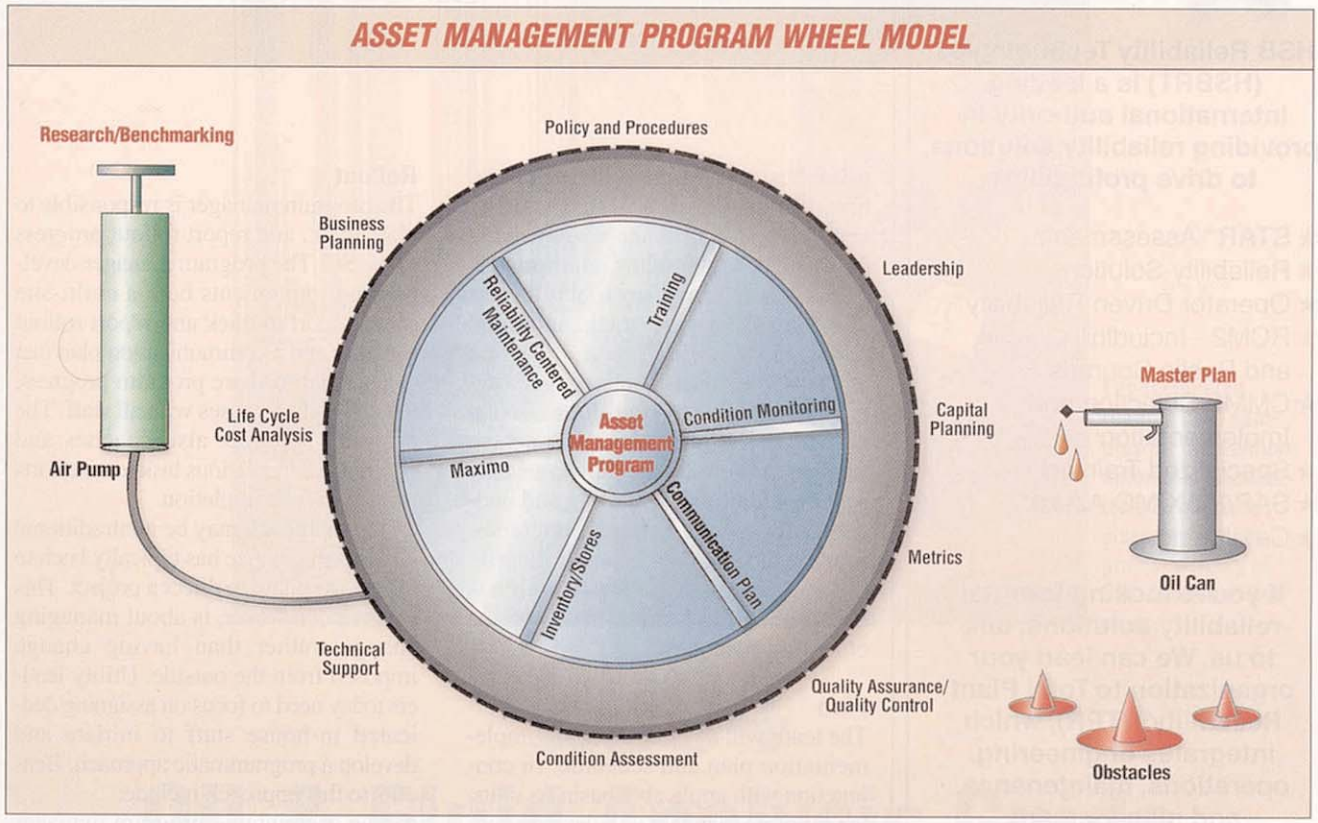

Fig. 1. This wheel model demonstrates how in any asset management program, research and benchmarking should provide life, and a master plan is necessary to keep all aspects of the program functioning properly.

The program manager is assigned to work on the process, where the focus is to facilitate process changes, such as adopting best business practices, while other staff at all levels and disciplines are still focused on normal duties, and so they are considered working in the process.

During the implementation period, the SC members—and eventually in-house implementation task teams—will need to devote some portion of their time *on* the process. The program manager ensures a timely and effective implementation of key program elements and associated efficiencies.

An asset management initiative is a far-reaching endeavor that involves all asset lifecycle management departments. Initially, it is imperative that all business units reach consensus on program goals and objectives. To be successful, the program needs to be integrated with all applicable departments and programs.

The program manager should ensure that all business unit needs have been solicited and that issues have been resolved and accounted for. The program manager also will need to document all decisions and efforts and secure concurrence among SC members for program elements, budgets, and schedules.

Based on research, cross-industry benchmarking, and implementation at a complex public utility (see accompanying section, "MWRA Background"), the following program progression is recommended.

Education

It is imperative that the asset management team understands all business-unit needs and how they fit within the program. The "Education" step is critical, focusing on the theme that everyone's asset management knowledge progresses uniformly. The program manager will facilitate and coordinate events required to educate the team (referred to as "technology transfer"), including the following:

- Consultant presentations
- Vendor presentations covering maintenance, computerized maintenance management system (CMMS), software, condition monitoring tools, warehouse
- Case studies
- Site visits to organizations of similar size and complexity that implement asset management programs
- Documentation of results/findings and recommendations for incorporation into the asset management program, including reports and meeting minutes

Many organizations believe that asset management is the purchase of a CMMS; however, a CMMS is only one tool in the asset management toolbox. The education process will allow senior staff to recognize the available best practices and their interrelationship—and that *when combined* into an asset management effort, best practices offer a cost-effective approach to the management of assets.

Gap analysis

Upon conclusion of the Education step, the team will have assembled a list of best practices available to them. The team will need to select appro-

priate business practices for their organization. In addition, future staffing and training requirements will need to be analyzed and funding appropriated.

For example, one key tool is the use of a CMMS to assign, track, and trend maintenance work. The daily use of a CMMS will require a manager and several planner/scheduler positions. Existing staff will require initial and ongoing training. Also, software purchases may require additional IT staffing and budgeting for regular software upgrades. Finally, the gap analysis will identify the need for a budget for consultants required to implement many of the other best practices.

Plan

The team will develop a phased implementation plan and schedule. In conjunction with applicable business units, the program manager will develop consultant/service/software Request for Proposals/Qualifications (RFP/Q) documents based on the plan to "fill the gap."

Instead of a consultant or vendor selling the team a one-size-fits-all program (such as a CMMS), the team will now have a customized program to meet its requirements. This approach ensures that all stakeholders have made educated decisions, which leads to a smoother and more efficient implementation of program elements.

Pilot

Most new business initiatives include the piloting of new practices to ensure applicability and identification of problems before investing in the full cost of implementation, or rollout. Pilot results also allow the team time to make any necessary adjustments in the program.

The program manager will work with other business units through piloting programs. Once pilot programs are completed, the asset management program schedule will be adjusted to accommodate findings. The pilot should be treated as a confirmation of a well-developed plan, not as a test for various options.

Rollout

The program manager is responsible to plan, track, and report rollout progress to the SC. The program manager develops and implements both a multi-site status report to track and report rollout progress and a communication plan that is designed to share program progress, results, and successes with all staff. The program manager also coaches and coordinates the various task team efforts to successful completion.

This approach may be nontraditional where past practice has typically been to hire a consultant to direct a project. This program, however, is about managing change, rather than having change imposed from the outside. Utility leaders today need to focus on assigning dedicated in-house staff to initiate and develop a programmatic approach. Benefits to this approach include:

- The accountable program manager ensures a consistent, organization-wide implementation
- The program is developed and implemented in a timely and efficient manner
- Team member technology transfer occurs harmoniously
- The program is built on educated decisions
- Benefits are tracked, documented, and communicated—early and often
- The program is supported by all stakeholders prior to purchasing costly services and software
- The vision and direction are set by the owner, not by a consultant

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