

The APPA TCO Standard—A Major Step in the Right Direction

By Dana K. “Deke” Smith, FAIA

The APPA Total Cost of Ownership (TCO) standard is a major step in the right direction for the facilities and infrastructure industry. For far too long, the industry has focused primarily on the first cost of facilities. Years ago, low bid was the focus, which made things even worse. The concept of TCO brings with it a glimmer of hope that the industry can change positively over time. And the time to begin the change to TCO is now!

Psychologically, people simply do not want to look past the initial cost of a facility and come to grips with how much it will really cost them over its life. They think that if they can afford the first cost, then they will be able to cover the operating and maintenance costs out of existing budgets; but in reality this is often not true, and the brand new building begins to sink into disrepair the moment it is put into service. This may be because the owner now has other issues to focus on as well as a loan and inter-

est to pay, and money goes into those items versus setting aside funds needed for future operating costs and repairs.

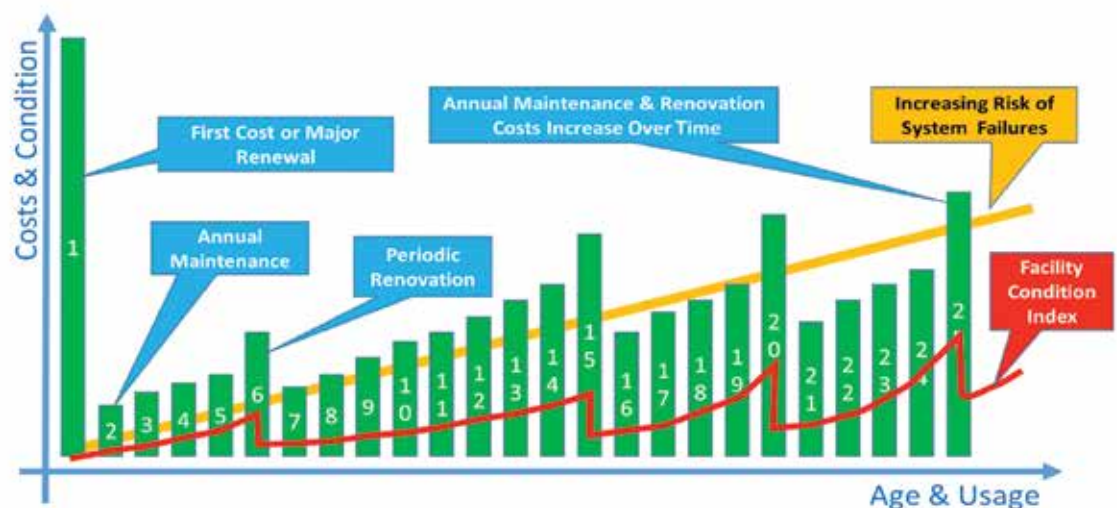
Both operations and maintenance costs are predictable based on the initial level of quality specified, and should be plotted on an annual basis for the life of the facility—ideally before making the decision to construct that facility. The truth is that some facilities need to be removed from the portfolio, in conjunction with adding new ones, in order to meet ongoing budget realities. TCO can help with those decisions as well.

ADOPTING A CULTURE CHANGE

The issue is that until a TCO culture is adopted, we simply do not have the metrics to evaluate the true impact and sustainability of our decisions.

In order to establish a common culture, one needs to first have a standard in place as the foundation on which all can build. TCO is scalable and applicable to

Figure 1: TCO View of Project



every project—from the smallest to the largest—and includes new and existing facilities. Clearly you get what you pay for, and TCO will allow you to plan ahead so you can truly optimize all your resourcing decisions.

A LONG FUTURE VIEW


If you do not procure quality products with low operating costs, allow for long mean times between failure, and account for future maintenance, you will pay dearly over the long future of the facility. If you do not plan ahead to maintain an asset from day one, then that asset will simply not last as long as it was intended, and costs will actually increase due to a need for earlier than expected replacement. The impact will not be felt immediately, but deferred maintenance will ultimately catch up with you, and you will need to do far more to get your facility back to an acceptable and usable condition if you do fail to stay on top of routine maintenance.

Figure 1 provides a hypothetical 25-year snapshot of a project. (The chart could easily look at more years, and as the table is updated over time, it will become more accurate.) The Facility Condition Index (FCI) will be affected with each major renovation, and the owner will need to determine at what point major renovations should take place. This analysis may be guided by multiple reasons, ranging from marketing to the general fit or purpose of the facility. Having this information allows owners to better understand the risk and impact of deferred maintenance or facilities renewal and modernization.


NEW TOOLS

The industry will need a new set of tools built upon the standard to fully appreciate the potential opportunities of TCO. These tools must be able to provide decision makers with the data they need to make better decisions—decisions that will allow them to understand the true long-term impact of not funding maintenance when it is needed. We need to be able to articulate just how much a facility will cost over time. Currently these high-quality and granular standards-based tools do not exist.

SUMMARY

Implementing TCO can be a real game-changer for your organization. Using the APPA standard will help ensure that not only are all costs considered, but also that TCO for each facility is computed based on similar information. Using a national standard built upon international standards, as the APPA TCO standard is, will also allow you to compare your situation with others and validate that you are making the best decisions possible over time, as TCO matures as a key asset and facility management tool. 

Deke Smith has construction, value engineering, life-cycle costing, and building information modeling experience and is an advocate for ensuring a sustainable future for the facilities and infrastructure industry. He is president of DKS Information Consulting, LLC, Herndon, VA, and serves as a co-chair of the APPA Total Cost of Ownership Work Group and Standard Committee. He can be reached at deke@dksic.net.



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