



OPERATE AND MAINTAIN TO PRODUCE HEALTHY SAVINGS AND SERVICE

By Brian Kirk

When the subject is airport health, one could make the argument that facility/utility operation and maintenance (O&M) is the equivalent of diet and exercise. It's not taking the analogy too far to say that by consistently following a well-designed and executed daily regime, the patient (or airport) can run efficiently and reliably, avoiding costly, invasive and unpleasant procedures.

Diligent utility O&M practices are also akin to prevention. Just as there are exercises that can strengthen the body and make it more resilient, so too can an airport facility adopt practices that make the delivery of key utilities more efficient and less prone to failure.

EVALUATE THE HEALTH OF THE O&M ORGANIZATION AND STRUCTURE

Larger enterprises, including airport terminals, that operate facilities to power, heat and cool hundreds of thousands or even several million square feet of space with varying uses often organize their facility and utility O&M complement as just another undifferentiated administrative unit. And, speaking administratively, this organization mode makes sense based on, for example, trade skill similarities. But this model has serious drawbacks, too.

As a practical matter, there is often little or no demarcation between utility supply and demand, so the dynamics and effect of energy usage on energy production are hidden and poorly understood. To paraphrase an old saying: When something is everyone's responsibility, it often degenerates into no one's responsibility.

A legacy O&M organization such as this can be characterized as a "communal" model. To improve performance, one option would be to migrate the facility/utility department to a commercial model. Stretching the health care analogy once again, this is the equivalent of isolating muscle groups in a fitness program.

To explain, a commercial utility transacts with its customers at arm's length, so the onus of efficient use of energy — at the terminal — is placed upon the user. Consumer efficiency is rewarded by lower cost. An airport, campus or medical center isn't structured like a commercial utility and customer base, but imitating such an arrangement can pay off handsomely.

ADOPT A NEW FACILITY FITNESS REGIME

How can this be done? Key aspects involve setting up the airport's utility production and distribution function as a distinct unit with focused management — a service group to the larger overall enterprise. The next step is demarcating user buildings and structures into cost centers that reap the dividends of efficiency they practice — and, conversely, bear the direct consequence of profligate energy use.

Implementation on the ground includes ongoing measurement, or metering, because another old but true saying is that "you can't manage what you can't measure." The value of measurement cannot be understated for best-in-class utility O&M. Without metering, energy or commodity savings are often "stipulated." With metering, both supplier and users have in place the tool to truly understand cause and effect surrounding O&M activities. A comprehensive metering program, coupled with a distinct, core utility personnel functioning in an arms-length relationship between provider and consumer, cultivates discipline in utility production and use.

The benefits can reach beyond energy savings and lower utility costs in the here and now. It's conceivable that, for example, a 2,000-ton chiller/tower combination or new 50-kpph boiler that your consultant is telling you is needed to support airport load can be deferred or put off indefinitely. A high-performing O&M organization, with the right people and systems, can be as valuable as "found money," provided that consistent, ongoing utility demand savings are realized and capital spending is avoided.




LIKE PREVENTION, A RATIONAL MAINTENANCE PROGRAM IS THE BEST MEDICINE

Prevention is a health care principle that has a direct analogy to a professional O&M organization. Simply put, this is the maintenance side of the business.

Various facilities follow a wide variety of approaches, with too many close to one end of the spectrum: run-to-failure or breakdown maintenance. The other end of the spectrum — serving/replacing components too frequently — also is undesirable, though this is seldom seen in the commercial world.

A robust O&M organization will steer a middle course, generally tailoring and adopting a programmatic approach that uses a computerized maintenance management system (CMMS) to meet the specialized needs of the facility. These systems are adamantly not one-size-fits-all. Sophistication of the CMMS should track the complexity of the plant and systems it relates to. Other factors should be taken into consideration; the level of mission-criticality that a facility system serves, for example, will drive things such as inventory of spare parts and maintenance frequency. Once again, a professional approach to operation and maintenance will develop and incorporate the right prescription for programmed, preventive maintenance.

Diligent facility O&M — like diet, exercise and prevention — takes commitment and constant vigilance. It's what happens between the doctor's visits and capital projects. It may not be easy, but if performed well, good operation and maintenance routines will help keep you, and your plant and facility, out of the emergency room or ICU. 

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