

Understanding Your Client's Risk Management Goals

This Week's Focus: Preventative Maintenance

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The primary focus of the FCA is to develop a defensible budget and set of priorities. An FCA is a broad overview of overall building condition with recommendations for lifecycle and condition-based replacements of building assets. However, there are additional goals that can be integrated with the execution of an FCA. The FCA is typically regarded as a capital planning tool, but with a modest enhancement to the scope of work, the FCA can play a vital role in preventative maintenance.

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Focus on Preventative Maintenance:

If your goal is preventative maintenance and system management, additional steps beyond an FCA are recommended to assist you in taking a deeper dive into your facility management goals.

Step One: Tag your equipment with bar codes that allow you to centralize asset/equipment management. Once equipment is tagged, a hand-held or mobile device can be used to scan the equipment each time it undergoes scheduled preventative or unscheduled reactive maintenance.



Step Two: Establish a preventative maintenance calendar and set of priorities that can be tracked and scheduled.

Step Three: Implement a CMMS (Centralized Maintenance Management Software) system to disseminate the PM calendar and assign scheduled preventative maintenance work orders.

Step Four: Integrate unscheduled reactive maintenance on equipment into the CMMS system using the scannable equipment tags. Where trends exist, they can be leveraged for the purposes of short-term capital planning.

Now you're on your way to building a facility system management and Preventative Maintenance Program (PMP).

Facility Condition Assessment (FCA) and Preventative Maintenance Program (PMP)

Performing preventative maintenance on older equipment can become expensive. As equipment ages and components break down preventative maintenance costs get higher. This can translate to replacing multiple components and actually spending more money over three years on an asset than it would have to cost to fully replace the asset. Keeping outdated or barely functioning equipment, even with a PMP in place, can incur tremendous reactive maintenance costs due to component failures and a higher number of service calls. As any Facility Manager can attest, as equipment ages it becomes

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unreliable and expensive, usually at 4:30 PM on a Friday before a long weekend. It just makes sense to replace and maintain equipment based on an updated lifecycle calendar. It makes much more sense to replace an asset after 25 years than it does to spend half the cost of a replacement to keep it operational for 35 years.

Here's a great example from my time as a Facility Manager, overseeing a large 24-hour industrial warehouse/distribution centre that is associated with an essential service. We experienced an avoidable issue that ended up costing much more to remediate as a reactive event than it would have to complete lifecycle repairs. The facility was tempered and ventilated primarily via one large built-up AHU that was approximately 30 years old. Instead of allocating lifecycle money to replace key components in the built-up system, we relied on preventative maintenance activities to keep the unit operational. One day, during the hottest July in recent history, the very large supply fan threw a bearing, twisting the shaft, destroying the fan, and damaging the cabinet. Not only was the unit down for nearly five weeks while replacement parts were manufactured and priority shipped, but we had to bring in temporary fan units to ventilate the 24/7 warehouse to ensure operations were not disrupted. It resulted in employee complaints and lethargy resulting from interior temperatures in excess of 27 degrees C (80 degrees F). Such a small and preventable thing resulted in a ripple effect that disrupted the entire building, ultimately culminating in incalculable losses. Had we instead looked at the age of the equipment and planned a lifecycle activity it could have been completed during a small, planned shutdown with minimal disruption to operations.

One of the often-overlooked benefits of the FCA in regard to preventative maintenance planning, is that it can provide Facility Managers and Building Owners with the data they need to make informed preventative maintenance choices based on where in the system's lifecycle a piece of equipment is. As the unit ages it's easy to use the BCA data to start adjusting the PM schedules accordingly as it gets closer and closer to the end of its expected useful life, spending less money to maintain the equipment as it nears its planned lifecycle replacement and ultimately life-cycling it before it becomes costly to keep operational.

Combining FCA data with a PMP allows owners to ensure they are maximizing their maintenance budgets on maintaining newer equipment while properly life-cycling older assets. As an analogy, take an older automobile that still functions. Does it make sense to sink increased funds year over year into maintaining that vehicle in good working condition, or does it make more sense to properly lifecycle the car, maintaining it until the value of the car lowers due to age and high mileage, then allocating money to replace it rather than increased costs to maintain it.

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When combined effectively, an FCA alongside a comprehensive PM, can and will save money over the long term by enabling facility managers and portfolio owners the information they need to make informed long- and short-term decisions.

What Next?

Now that we've talked about what an FCA is, and how it can mesh with a PMP, we can see how combining the two elements; properly life-cycling equipment, and reducing preventative maintenance costs over time, can work to save portfolios money. Instead of increased spending year over year to keep older, poorly optimized equipment in use, money can be directed to ensuring equipment is replaced before costly, unplanned failures.

The FCA has long been used as a tool for high level property management, be it sales, acquisitions, or retention, however, the technical maintenance team for facilities have another consequential goal: system maintenance. Having an FCA completed every 5 years allows for a more comprehensive understanding of each facility. It affords Facility Managers and Portfolio Owners a tool that can be leveraged to plan for lifecycle replacements at a granular level with consideration to operational factors that likely are not normally accessible at the very high levels. Things like a sudden spike in operation costs, areas where pipe fitting are beginning to fail, or which equipment is nearing or

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exceeded its expected useful life. An FCA provides operational managers and building owners with an unbiased overview of all building assets and equipment, including mechanical and electrical systems.

The assessment is non-intrusive and is based on what is visible at the time of the assessment and client provided background data. Assessors specializing in mechanical, electrical, and architectural systems will arrive onsite to carry out the FCA. They will take notes and photographs of all visible building systems, including equipment installed on roofs, where safe to do so without fall arrest equipment. The Assessors will compile the information and generate a report detailing each building system and asset. The report will include a general condition assessment of each building asset and piece of equipment, quantities, a 25-year lifecycle replacement calendar, and a Class D replacement cost estimate. Depending on the needs of a client the FCA can also provide location data, equipment technical specifications, or any other data that can be collected. If the client is looking to implement a scannable Asset Tagging. procedure, doing so during a FCA is a great way to reduce mobilization costs.

VISUALIZE YOUR FCA DATA

