How to Navigate the Facility Condition Assessment Industry. Consistent and Defensible Data - Why it Matters.

Most Facility Managers know intuitively what their facilities need. However, the problem is providing documentation, prioritization, and costs that are both reliable and defensible.

Asset managers or board members who are allocating funding want more than an opinion to base their budget funding allocations on. At a campus or school system level, various facilities are vying for the same dollars. On the state level, various institutions are vying for the same dollars as well. Facility managers must make clear defensible capital plans if they hope to secure necessary funding from those that hold the purse strings.

In the early 1990's, Washington DC was an early adopter of Facility Condition Reporting to help clarify, prioritize, and legitimize funding requests. As such, DC has long enjoyed a high level of bond rating due to regulatory confidence that they are appropriating funding in the proper amounts to the right priorities. Dog parks requested by council members now take a back seat to roads and sidewalks that show up in a defensible database of clearly documented priorities. Defensible data is best collected by a team of professionals that is armed with accurate industry costs, consistent data gathering processes, and good judgement that is predicated on building sciences rather than personal preferences.

The foundation for successful Facility condition Assessment (FCA) reporting is consistent costs assigned to system replacement, standard industry-based useful life projections, and reliable judgements made by on-site assessments completed by trained professionals. Data used in FCA reporting is used for establishing budgets and funding. With defensible and consistent data in-hand, a facility manager is more prepared to present their priorities for project funding.

Today, in a conversation with a former facility manager turned facility assessor, I heard the following statement of exasperation aimed at the management of complex data involved in facility management. This facility manager/facility assessor stated clearly to me that as a facility manager he knew intuitively the size of the deferred maintenance problems but could not set a reasonable set of priorities if asked. The problem he described was the lack of comprehensive, consistent, and defensible data about the condition of the systems within the facilities he managed. Facility managers should understand the role of defensible and consistent data in their capital planning. Choosing an FCA consultant should focus on how the data is collected and reported. The following is a summary of how to navigate the FCA industry:

So, how do we get consistent and defensible data in the capital planning world?

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Approach 1: Modeling - based on Uniformat without visual assessment.

Some FCA consultants have decided to model data based on a drive-by view of properties. Their base-line data is based primarily on size, usage, and age. Assumptions of what is inside are the key and the fallacy in this methodology. Data gathered by modeling is schematic at best. Little of the data created by a modeling approach to capital planning is based on or supported by investigation, observation, or research. Those who use this modeling approach to capital planning attempt to call this methodology a Facility Condition Report, but the value and accuracy is a long way off from the FCA approach that uses a visual assessment of individual systems to more carefully and accurately identify the exact systems used within a particular building.

Approach 2: ASTM E2008-15 – based on Property Condition Assessment

Another approach to capital planning for commercial facilities is based upon a narrative description of building systems. It is a reporting system that is based on the Property Condition Assessment protocol used for commercial property reserve studies, based on ASTM E2008-15 costs included in this approach. This system is based on visually gathered data, an industry standard set of EULs (expected useful life), and a loosely agreed upon set of costs. Costs for debt, or refinancing reports are typically set at 70% below market rate. The purpose of these reports is not to replace systems but rather to protect lenders with a small pot of money in case the property enters default or foreclosure. This small pot of money, known as reserves, is also used to incentivize the general maintenance of the property. In general, the pot of money is 70% below the real cost of capital investment necessary to replace failing systems. Commercial properties that are refinanced or purchased in the marketplace are required by lenders and Standard and Poors to complete a Property Condition Assessment (PCA) report. There are approximately 250,000 of these reports completed annually. These reports cannot in any way be considered reliable for capital planning. Their purpose is to protect lenders from default and to postulate on property condition.

Approach 3: FCA – based on Uniformat with visual assessment.

A third approach to capital planning is used by institutional properties. The FCA methodology is primarily used for institutional properties that are not sold or refinanced in the marketplace. The standard FCA approach is based on three key methodologies. These three methodologies support the proverbial stool seat, with three legs, that must be equally in place for the stool (FCA) to be supported. FCA data must be accurate for capital planning to be reliable and defensible. Asking for money from funding or asset

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management sources is more credible, and likely more successful, if approach 3 is used to the fullest.

Approach 1 and 2, described above, are both far from reliable or credible - based on the lack of defensible data, the lack of credible cost basis, and lack of credible visual assessment. Here are the three legs of the proverbial FCA stool that are required for facility and fund managers to prioritize funding for deferred capital investment.

Leg #1: EUL – Expected Useful Life

Leg one of the FCA is known as the EUL – Expected Useful Life. The construction industry has defined the EUL's for every type of building system. Every building system is judged in relationship to the EUL of the system. The EUL is the basis of the assessment of all building systems. For instance, an asphalt shingle roof is typically estimated to have an average EUL of 15 years. This average EUL can be modified by a variety of variables of environmental conditions such as rain, snow, heat, and ultraviolet light; quality of materials; quality of installation; and quality of maintenance. An assessor uses the EUL and knowledge of these variables to determine the RUL (remaining useful life). This process requires basic calculations and an experienced eye that can appropriate modifications to the standard EUL and establish a RUL.

Leg #2: UniFormat System ID and Cost

Leg 2 of the FCA is known as UniFormat, which is a cost estimating methodology, used for decades in the construction industry. UniFormat is used to identify and cost building systems. The UniFormat system includes an expansive library of costs based on 16 categories of building systems with a detailed framework used to apply accurate industry-based costs. Costs are applied to systems ranging from broad to specific categories that are useful for schematic to construction ready costing. The uniFormat ID and Cost system is intended to be used by the construction estimating and construction specification industry to carefully identify, quantify, and cost building systems with a high degree of accuracy. It is imperative that the costs included in the UniFormat library are based upon readily verifiable industry cost information that considers current costs as well as intangible costs such as inflation, difficulty, and region-based factors. The PCA methodology, noted above, does not rely upon credible or defensible costs. The modeling methodology, noted above, does not rely upon credible identification of building systems or condition.

"UniFormat is a standard for classifying building specifications, cost estimating, and cost analysis in the U.S. and Canada. The elements are major components common to most

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buildings. The system can be used to provide consistency in the economic evaluation of building projects." Wikipedia

Leg #3: Trained and Experienced Assessor

Leg 3 of the FCA is known as the Assessor. As noted above, the modeling methodology does not include an on-site assessor and does not include defensible information about system IDs or condition.

Many of the assessments required by the FCA process are based upon educated and experienced judgement. Everything from age of installation, variables of condition, and antidotal information about maintenance history is necessary for an assessor to include in judgement–based recommendations. Many of the capital planning-based judgements and recommendations must be made by a visual assessment and document review that may require as many as ten essential qualities from a qualified assessor – listed below. This past week I was contacted by an assessor in the US who is currently involved in a PCA-based lawsuit. He wanted my opinion for his legal defense. I advise him that the ASTM standard E2018-15, Baseline Guideline for Property Condition Assessments clearly states that the PCA assessment protocol is not an architectural or engineering service. The scope of work is visual and requires experience that can be trusted by the client. In my experience, having hired and trained over 100 assessors, the following attributes are necessary for a qualified assessor:

1. Education – training in building sciences
2. Experience – seasoned by field experience to identify systems and conditions.
3. Knowledge – understand EUL and Costs and Uniformat categories that are standard in the industry.
4. Critical Thinker – capable of making complex judgements.
5. Diligent – careful to gather and review available information through available documents and data.
6. Responsible/Reliable – trustworthy to gather and review data with accuracy.
7. Persistent – able to complete the task and to ask questions.
8. Technically Competent – capable of using tools - iPad, software, and camaras to collect and transfer data.
9. Wordsmith – able to write both for technical and lay readers to explain systems and conditions.

Credible – capable of supporting judgements with a log of data, photographs, notes, as well as making accurate quantity take-offs using visual skills and understanding of system measurements and units of measure.

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The FCA three-legged stool requires an industry standard EUL and RUL, industry standard credible and accurate costs, and a trained and experienced assessor. Modeling and PCA – based assessments are not based on a 3-legged support. Modeling is often done by groups that have limited assessment skills. PCAs are often done by groups that have limited costing data or skills. FCAs must be completed by consultants that have accurate costs, reliable EUL- based standards, as well as trained and experienced assessors that can make educated decisions. Judgements and recommendations required by assessors include correctly assessing the variables affecting condition, historical information affecting maintenance, and cost variables affecting difficulty and regional-based costs. Consistent and defensible data is based upon consistent application of these three legs for the FCA stool to stand strong. The end goal of an FCA is to tell a credible and defensible story of the condition and capital costs requiring investment and funding. Funding sources such as school boards, boards of regents, cities councils, school boards, boards of directors, states, and federal agencies are comparing the quality and reliability of your data with stories from others competing for the same pot of money.

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