

Consistent, Defensible Data

Capital Planning has little to offer without consistent and defensible data. What Facility Manager or Asset Manager would make financial decisions without consistent and defensible data. Today, in a conversation with a former facility manager turned facility assessor, I heard the following statement of exasperation of managing complex data involved in facility management. This facility manager/facility assessor stated clearly to me that he knew intuitively the size of the deferred maintenance problem in his previous role as a manager of a large portfolio of facilities but could not set a reasonable set of priorities if asked. The problem he described was based on the lack of comprehensive, consistent, and defensible data.

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

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 is the key and 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 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 in 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 which are refinanced or purchased in the marketplace are required by lenders and Standard and Poors to complete a PCA report. There are approximately 250,000 of

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these reports completed annually. These reports cannot in any way be considered to be reliable for capital planning. Their purpose is to protect lenders from default and to generally 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 management sources is more credible, and likely more successful, if approach 3 is used to its 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 FCA that are required for facility and fund managers to release and prioritize funding for deferred capital investment.

Leg #1: EUL – Expected Useful Life

Leg one of a FCA is known as the EUL – Expected Useful Life. The construction industry has defined 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 such as 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 a 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

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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 is based upon readily verifiable industry cost information that takes into account 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 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 is 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:

Education – training in building sciences

Experience – seasoned by field experience to identify systems and conditions.

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Knowledge – understand EUL and Costs and Uniformat categories that are standard in the industry.

Critical Thinker – capable of making complex judgements.

Diligent – careful to gather and review available information through available documents and data.

Responsible/Reliable – trustworthy to make gather and review data with accuracy.

Persistent – able to complete the task and to ask questions.

Technically Competent – capable of using tools of iPads, software, and cameras to collect and transfer data.

Wordsmith – able to write both to both 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.

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.