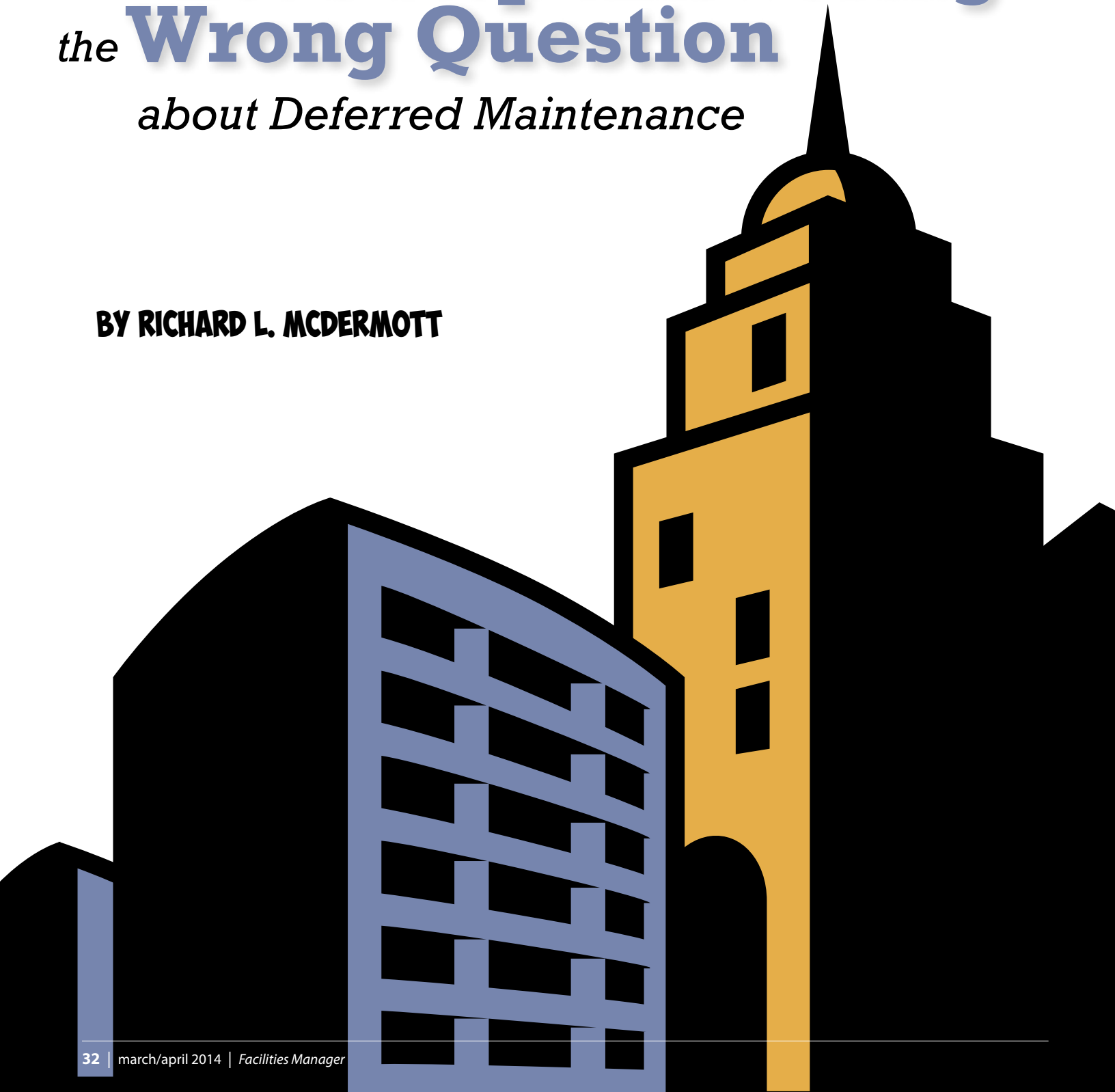


# ALRIGHT ALREADY!

## Let's Stop Answering *the* Wrong Question *about Deferred Maintenance*

BY RICHARD L. MCDERMOTT



don't know about you, but I have grown tired of being caught up in the disconnect between what is actually happening on the campus, and what is reported to system administration. The disconnect shows up when a systems office asks the wrong question about the campus building inventory. Decision makers (e.g., senior administrators, board members) are always looking for that one piece of information that "reveals all" and allows them to make a snap decision.

When funding for buildings is the subject, the inevitable question will be, "What is your deferred maintenance backlog?" Answering this question problematic, especially when it comes from an external approving office that has set an arbitrary backlog threshold for deferred maintenance. If the threshold is exceeded, you are in deep weeds, my friend.

So, this is the *wrong* question to ask. It leads to many poor assumptions. It leads to poor decision making. Facilities personnel know this, but, in trying to maneuver around the question, find themselves being accused of hiding the real deferred maintenance backlog figures. Sound familiar? This we need to change. We need to get decision makers to ask us the right question, so we can give them the right answer.

#### NORMAL BUILDING CYCLE

To begin the search for the right question, let's look at a **Normal Building Cycle**.

- **Level 1)** A new building arrives on campus.
- **Level 2)** The building gradually reveals a subsistence level of funding that is unique to that building. This is the level of funding necessary to keep it safe and operating until it fully ages and receives funding for an overall renovation.

- **Level 3)** The building operates successfully for about 20 to 30 years, depending upon its type and use.
- **Level 4)** The building enters an **Elastic Period** in years 30 to 45. The Elastic Period is when the risk of overall failure has not arrived, but it is near enough that you can see its shadow starting to fall on the building.

Why such a wide range? Moving to Level 4 depends upon several variables, including type of usage, hours of operation, and the level of subsistence funding provided.

Level 4 is also where top-flight facility personnel begin to work their magic. They know how to extend the usefulness of building systems and are the unsung heroes in this story. They take subsistence funding and "nip & tuck" the deferred maintenance backlog according to carefully selected priorities. This keeps a building and its systems safe and operating well beyond predicted textbook service lives. These actions allow funding—that would otherwise have gone to fix premature building failures—to go into the academic/research enterprise. Instead of reporting in a manner that tends to hide the valuable work done in Level 4, let's bring it out into the light and celebrate it.

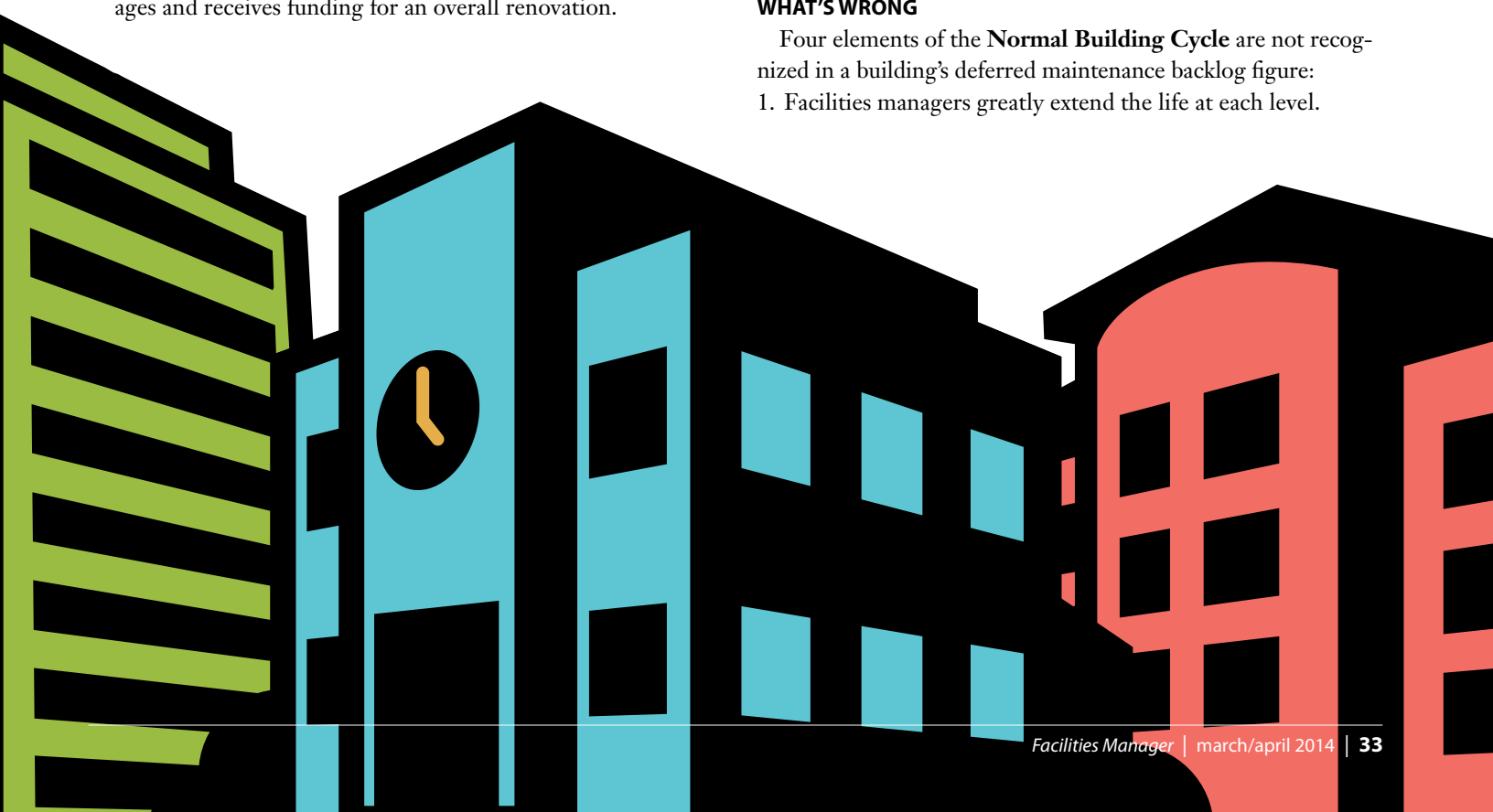
- **Level 5)** The building arrives at the point of needing an overall deferred maintenance renovation or program-change renewal. Funding never arrives the day it is requested, so a request is made, taking into account the interval between request and the likely arrival of funding.

Exceptions to this cycle include buildings such as hospitals, high-level research buildings, and high-profile facilities that have an impact on the image of the institution.

#### WHAT'S WRONG

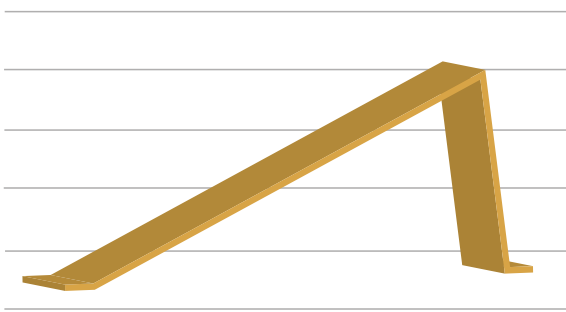
Four elements of the **Normal Building Cycle** are not recognized in a building's deferred maintenance backlog figure:

1. Facilities managers greatly extend the life at each level.



2. Subsistence funding is all that is needed during the run-up to renovation.
3. Renovation funding is the “catch up” time for everything in the building. It would be inefficient and wasteful to “piece meal” this work ahead of an overall renovation.
4. Facilities managers factor the reality of funding timelines into their timing of requests. This, when coupled with 2 and 3 above, is confusing to visiting bureaucrats who walk through a Level 5 building and see it still in a safe and operating state.

The picture that decision makers currently have in mind, created by information we have been providing over the years, looks like the graph below.



There are so many wrong assumptions that come flying off this chart. The first is to assume that the deferred maintenance funding needed, at any point in time, is the curve’s value on the y axis – wrong! This error ignores the importance that timing plays in deferred maintenance funding. The second is to assume that an institution is derelict by not providing funding all along the path – wrong! A campus operating on the **Normal Building Cycle** will concentrate funding requests into a few efficient steps. The third is to assume that deferred maintenance funding could be applied anywhere on the curve—with equal effectiveness—wrong!

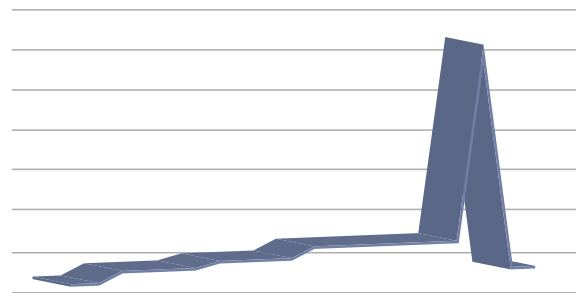
For example, let’s assume subsistence funding is \$1 million for a 100,000 sq ft building, and that a \$20 million deferred maintenance renovation will be necessary at the end of year 20. The building does not need \$10 million at year 10, or \$15 million at the end of year 15. That would be nonsense. Renovation is best done in one, efficient step. A useful report would say, “Fund subsistence at a million a year, and prepare to supply \$20 million, adjusted for inflation, at the end of year 20.”

Anywhere along the way, reporting up an instantaneous backlog figure would give the erroneous impression

that deferred maintenance is ideally funded gradually along the way, rather than in concentrated amounts. And, the institution is derelict in not providing, at all times, that level of funding. Wrong! Reporting in this manner puts facilities managers in the awkward position of trying to explain why they reported manageable numbers during the Levels 1 – 4 of the **Normal Building Cycle**—and a short time later are revealing large figures when a building crosses over into Level 5. This is wrong! We need to change it.

#### CHANGING THE FOCUS OF THE DISCUSSION

The picture that reflects operating reality—the **Normal Building Cycle**—follows the graph below.



This graph displays funding levels in sync with what is needed to efficiently manage a building over its normal life cycle. Subsistence funding increases gradually over the run-up to renovation. Auditing at regular intervals is necessary to confirm both the subsistence level of funding and the eventual renovation budget request. Too little subsistence funding, and a building will experience accelerated deterioration. Too much subsistence funding, and institutional resources are being taken away from its primary mission.

The chart points up the uselessness, to system decision makers, of an instantaneous deferred maintenance figure in the run-up to renovation. We need to stress that audits are not a measure of funding needed at that particular point in time. Everything decision makers need to know, in order to do their job, is provided by communicating both the level of subsistence funding needed, and the estimated cost and timing of an overall building renovation.

We need to add one more step before we have the answer to the question that we want decision makers to ask. We need to merge the **Normal Building Cycle** for each building on campus and create a **Campus Facilities Timeline** that displays the big picture—placing estimates on a long-term timeline identifying the following.

1. Subsistence level funding. An annual subsistence level of funding is requested in the annual budget. Without funding of the subsistence level, the building will go into accelerated deterioration.
2. When buildings are projected to reach the renovation state.
3. Estimated cost for renovations. If a building is a historic treasure, this cycle is repeated. If not historic, then the sec-



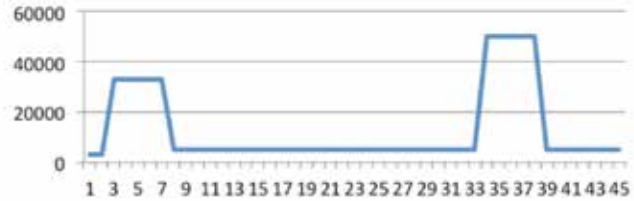
ond stop is not another renovation, but rather a razing.  
 4. Timing and estimated cost for replacements—when renovation is no longer effective.

**THE RIGHT QUESTION FOR OUR ANSWER**

We have arrived! The question that leads to good decision making is, “What does the **Campus Facilities Timeline** reveal about the levels and timing for deferred maintenance funding, both subsistence and renovation?” Within an accurate Campus Facilities Timeline in hand, if someone asks, “What is the deferred maintenance backlog?,” the response should be, “I have another piece of information that is even more helpful in seeing the overall campus condition. Let’s look at the Campus Facilities Timeline.”

Any discussion of a “snap shot” deferred maintenance backlog figure should be banned from the Board room. Auditing buildings with a deferred maintenance backlog figure as the goal—to be networked off campus—needs to be stopped. Auditing ought to be focused on validating a subsistence budget and to assist in setting a renovation date for a building. This discussion applies to building physical needs only. Programmatic needs are another layer that goes into a final Overall Timeline.

My particular institution’s Campus Facilities Timeline looks like this:



Significant funding is needed to renovate a set of 1970s buildings, while the rest of the inventory is fairly new. The peaks in the chart have flat tops because it is always an extended timeline associated with the renovation of occupied buildings. If the current renovation need is funded, in planning years 2 – 8, then the next major renovations don’t begin until planning year 33. As the renovation dates draw closer, they will be adjusted by an “every five years” audit of actual field conditions. ☞

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