

## [Part 2: Why do buildings need commissioning?](#)

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### Sustainability Desk

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Last month we covered the big picture of what building commissioning is and why it's able to significantly brighten your bottom line. This month, we'll explore a few of the practical details that will help you "git 'er done."

For a new building, commissioning follows a three-step process.

First, perform a thorough and complete review of each piece of equipment by the contractor before it's placed in operation.

Second, conduct a comprehensive test of entire systems while they are in operation to make sure that everything works together and that there are no unanticipated "holes" or other glitches. Finally, monitor building operation during each weather season with the intention of identifying additional areas for improvement.

Commissioning an existing building employs the same principles as for a new building, but plays out quite differently. It sure is amazing how many buildings do not even have drawings or other records of how they are supposed to work. Thus, our three steps in an existing building look like this:

Step 1 consists of serious detective work, testing and a lot of interviews to figure out how the building is used and how its equipment is actually working.

Step 2 involves brainstorming and analysis of ways to improve the current state of affairs. For "no-brainers" you follow the Nike philosophy and "just do it."

Step 3 is a combination of monitoring building operations so they don't degrade along with further investigation of new opportunities, including those which require some investment.

You're probably aware that there are some very sophisticated digital building management systems available today. The number one system by far, however, has not changed in 100 years. It's a knowledgeable, involved person. The supposedly "brainiac" controls that govern operation

and energy use in a building only do what they're programmed to do. They cannot observe and creatively take advantage of new or unforeseen opportunities.

You may say, "I can't do that either, because I know very little about the way my building's heating, cooling and lighting systems work." So what? You expect excellence from all of your employees and vendors already; why not apply that to your HVAC and lighting people?

If you are like many, you have contracts for what is called "preventive maintenance." You know that you need technical assistance for those systems, so you competitively bid those services and someone stops by twice a year to give a quick once-over of whatever's under contract. The problem here is that, essentially, you've asked for "band-aid" maintenance only, i.e., you expect your service person to invest minimum effort, wait until things break, and then fix them as inexpensively as possible.

I recommend something quite different, something we'll call "proactive maintenance." This concept acknowledges that your heating, cooling and lighting systems are important assets that affect your profitability, as well as the quality of work life and productivity of employees.

Proactive maintenance encourages you to:

- Treat your maintenance trades people as team members who have valuable expertise. (Really!)
- Encourage maintenance people to become intimately familiar with equipment and building use patterns (Twice a year visits do not qualify as "intimate.")
- Challenge them to discover better ways to operate the facility, including the flexibility to bring in other experts as appropriate.

Follow through

When someone knows you rely on him or her as an important contributor to your success, they typically respond with much more commitment than when you treat them as a necessary evil. Over the years, I have met many incredibly talented and knowledgeable trades' people who were given little credit and less opportunity to show what they knew. That's a bad situation. In closing, I offer two points for your consideration:

- You can never "set it and forget it." The 40 percent savings, which can result from newly implemented operating strategies, evaporate within one year if they're not followed up and thoughtfully maintained.
- Excellence pays. Make a practice of encouraging all of your staff, vendors and service contractors to create part of your success. You will be pleasantly surprised, even amazed, by the results.

The U.S. Green Building Council is a coalition of building industry leaders working to promote environmentally responsible, profitable and healthy places to live and work. The West Michigan Chapter provides and develops leadership through affiliations and education at all levels. Please send comments and column proposals to [chuck.otto1@gmail.com](mailto:chuck.otto1@gmail.com).

