FACILITY DUDE®

Optimize Your Maintenance Strategy

Do you know your organization's maintenance approach? This area is often overlooked; it lacks glamour and excitement but is incredibly important to the responsible stewardship of your public buildings and assets. Ideally, you want to have the right mix of strategies to ensure your equipment is kept in proper working order for the duration of the operational life expectancy it is designed for. Unfortunately, studies show this is not how a lot of organizations manage their assets. Instead, many wait for component failure and then take action to repair or replace.

All equipment requires some periodic maintenance to run efficiently and ensure the component is able to meet its design life expectancy. Finding the best balance of corrective, preventive, and predictive maintenance is key. The right maintenance strategy will minimize repair costs and downtime plus provide a safe, healthy environment that ensures occupant comfort.

What is a maintenance strategy?

There are three major types of philosophies to consider: reactive, preventive, predictive. The secret is to find the right balance of these which is the most cost-effective to best extend asset life.

- **Reactive Maintenance (Run-to-fail):** You only take action to fix a piece after it breaks. This is a retroactive strategy which can be cost-effective for small, non-critical systems but much more costly for complex, critical systems. This approach may also open the door to health or safety hazards in some cases. Corrective maintenance seems low cost but don't be fooled. Since you don't spend money until something breaks, it appears that you are reducing expenses. In reality, you are shortening the equipment's life and will be faced with larger and more frequent capital costs as equipment breaks down. You may also find yourself paying overtime if a critical piece fails on a night or weekend. These are avoidable costs with a better maintenance strategy.
- **Preventive Maintenance (Time-based):** You inspect equipment regularly to identify repairs and needed servicing before breakdowns occur. Preventive maintenance aims to minimize unplanned downtime and repair costs but may not always catch failures before they happen. Studies indicate that preventive maintenance can save 12% to 18% on average over reactive maintenance. If the facilities are currently being maintained through purely reactive maintenance, then the savings may be much more than 18%. These savings result from ensuring that equipment is running as efficiently as possible which reduces energy use. There's the added benefit of decreased failures, which means maintenance and capital cost savings.
- **Predictive Maintenance (Condition-based):** This refers to evaluating the condition of components of equipment to decide whether it's time for servicing. For example, instead of changing the oil based on a fixed schedule, the oil would be changed when certain properties are noticed, such as a build-up of debris. Predictive maintenance is best used in conjunction with preventive maintenance and is most suited for use on your most critical, complex and expensive equipment. An effectively executed

predictive maintenance plan will all but eliminate catastrophic failures. Independent studies show that breakdowns are reduced by 70% to 75% with a functional predictive maintenance plan. The hitch in starting a predictive maintenance program is that it can be expensive to train personnel and install the appropriate equipment and technologies. The return on investment is shown to be ten times over the costs. This type of program requires a thorough commitment and understanding by facility operations and management members.

How do you optimize your maintenance strategy?

First, consider the mission and vision of your organization. As a local government, you aim to provide the necessary services that contribute to a high quality of life and create a productive environment for your staff and citizens. With that in mind, consider how your public buildings support that goal: they are the backbone of your ability to offer those services. How critical is it that your facilities are comfortable and safe for occupants and your maintenance costs stay at a reasonable level?

Based on this assessment, assign one of the three maintenance approaches to each piece of equipment. As part of this process, it's vital to have a system in place to track your work, preventive maintenance schedules, and to document improvements. Having clear data keeps everyone aware of the progress made and provides justification for future projects. The outcome is an optimized maintenance strategy that will help you reduce costs, increase efficiencies and improve services.

In these times of limited staff and resources, it can be a challenge for a local government to substantially change their maintenance approach. It is important to start by assessing your current method of dealing with repair work to recognize how it can be improved. A phase-in plan of implementation may make the change a little easier. Understand that the results of altering maintenance strategies will be subtle at first; benefits will take time to show up. Be patient and dedicated and in the end you will see the benefits of change through smoothly running facilities and happy citizens.