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World Class Maintenance for Buildings and Facilities

There are a couple of vital points to make at the outset. They are the *preservation of the physical assets and public and environmental safety*. Well-maintained buildings and facilities are better for the environment and the safety of the public, your employees, tenants, or whoever uses the facility. The second important point that goes hand in hand is that *good maintenance practice is less expensive over the long haul*.



In the maintenance world, you need to spend a little over a long period to save money rather than wait for the more considerable expense of acting when there is a catastrophe. Dealing with a catastrophe will always be more expensive than the day-to-day maintenance costs.

Maintenance management will help *preserve physical assets*. It increases the level of service to clients, whether they are students, manufacturing operations, or tenants. Good maintenance practices increase the level of service. Managing the maintenance frequency (i.e., labor, parts, and supplies) will save money and improve the customer's situation.

Quality of life is another benefit of maintenance management. Maintenance people in an uncontrolled maintenance environment have excessive emergencies, calls in the middle of the night, and interruptions to ongoing jobs because of crises everywhere. I think that promotes a lowered quality of life. A higher quality of life results when you organize your situation; however, emergencies occur, like vandalism, accidental damage, or sabotage, even with well-organized maintenance. No matter how much *preventive maintenance* (PM) you do, you will still have occasional emergencies. The differences could be going from a hundred emergencies to two or three a month, improving the quality of life for yourself and your maintenance crew.

The Excitement Junkie

One battle you are fighting in the maintenance world is that the people who do the work may be "excitement junkies." An "excitement junkie" is someone who *likes* to jump in the ditch and clean out the sewer pipe, especially if it goes through the night because that's exciting. In an otherwise

drab life, they get these exciting situations where they solve big problems and hold up under pressure. A lot of people love that kind of stuff. It would be best if you watched out for that. When you begin to organize, you will make it a monotonous environment for those people or maybe for yourself. We need to figure out a way to channel that energy.

“World Class” Maintenance

What does a *world-class* maintenance department look like? If you were in the best possible shape, in what shape would your department be? How would you stack up if we were to compare you to the best in the business? Look around and see who has the best operation; it won't necessarily be the best funded. Look at universities, for example. Where is the best operation based on cost per square foot or cost per student? What does that operation look like?

A world-class operation is so good at what they do that it improves the underlying organization's effectiveness and contributes to it in a big way. An example of this is UPS (United Parcel Service). It is commonly known that their maintenance department is so good that they contribute to the competitiveness of the entire enterprise. UPS has a level of reliability in its equipment and low maintenance cost to the point where it can deliver a package for less money than anybody else and do it more effectively. That's *world-class*.

Mission Statement and “Constancy of Purpose”

Does your maintenance department have a written statement? This statement should not be stuck up on some boardroom wall. Employees need to know there is a mission statement and what it is. A *mission statement* should be a standard part of the organization's culture.

Do you have *constancy of purpose*? In other words, do you have a maintenance effort that is relatively constantly funded and organized toward getting the job done? In Louisiana, the Army Corps of Engineers has figured the design life of a dam and lock on the Red River to be 175 years. They have component change-out programs with 35- or 40-year cycles.

Can you imagine your maintenance situation being such that you are predicting and planning events for 35 years in the future? That is constancy of purpose. In ideal maintenance management, we have the schedule set up; we know we will need something seven years from now; it's planned, budgeted, and funded.

The most debilitating situation for maintenance is the “flavor of the month club.” That's where management changes its focus entirely every couple of years. One year, their focus might be quality; the following year, it might be the environment; the following year, it might be employee empowerment.

Each time management sets up a new bureaucracy, they stop doing the good stuff they are doing. Then, the organization turns ninety degrees toward another goal. That's debilitating to maintenance because maintenance can't respond to management's style. Buildings and facilities deteriorate like clockwork. If you don't have constancy of purpose, you won't be able to catch the problems that unfold over a long period. Without constancy of purpose, there is no opportunity to get into the groove and keep up with repairs.

Every world-class operation focuses on its customers. You can't have world-class maintenance without a world-class understanding and clear focus on your customers.

Who are some of your customers? In a university or college setting, customers are students, faculty, and the community. In a hospital, customers are patients, nurses, physicians, administration, visitors, and anybody else who walks through. What happens when a visitor walks into a hospital, and something is clearly not maintained? What goes through their head most likely is, "I'll go to a different hospital if I ever need treatment."

The president of Delta Airlines has said, "The passenger gets onto the airplane and pulls down the tray table to do some work, and there's a coffee stain on it, and the first thought is, 'I wonder if they maintain the engines this way too.'" Delta's president said he wants to ensure there are no coffee stains because the next thing is people won't fly Delta because they think the equipment's not being maintained.

When you get into jugular issues like airplanes, hospitals, and housing, people get very fussy about how things look and how they are maintained.

Proactivity

The word "*proactivity*" doesn't appear in the dictionary. Its definition in PM is: Analyze the problems and get out there and fix them *before* -- proactive means before -- they become a problem. Don't wait until you've got water dripping in. You need to look at the roof proactively every so often to predict when there will be a problem. That's part of every world-class maintenance department. Proactivity is the basis for a world-class PM system.

Sharing the Responsibility

A recent trend is to have routine types of maintenance done by the user or the customer. It goes back to a much older maintenance model where the person using the equipment is partially responsible. The maintenance department becomes a group of "tech specialists" who don't get involved in routine type maintenance -- other people do that. When you get into a public setting, it can be challenging to implement this. Any attempts made can only help because the more people feel responsible for their equipment and the spaces they're in, the better those spaces and that equipment will be maintained. One way to begin sharing the responsibility would be to ask tenants to report small leaks and give them forms to fill out and submit monthly with their rent.

Office workers can become involved in a reporting system in an office building. They would need to know what they're looking for regarding maintenance problems. This is far better than having one of those places where you don't find out the bathroom water is running onto the floor until you happen to slosh in there because nobody mentioned it. There needs to be participation among tenants, users, and customers in the PM system.

Benchmarking

A *benchmark* is a measurement of comparison. It can be how good you are in relation to, possibly, how good you were last year. Or, it can measure how good you are against the best in your business.

For example, the public works department brought in a new public works administrator for their fleet operation in Washington, DC. When he got there, he found that out of 105 garbage trucks in the fleet, were only 49 available on average on any given day. How long would you be in your job if 50% or less of your apartment units, classrooms, or equipment were out of service at any given time?

When asked, "Who's the best in the business," DC's new administrator said he thought it was New York City. Though it doesn't have a good reputation with the public, New York City's services are well respected among public works officials. New York City delivers garbage services less expensively per truck or pickup than any other city in the country, even with their high wages. When asked, "What percentage of garbage trucks would New York City (best reputation for maintenance at that time) have running?" the answer was 80% on any given day.

When asked what percentage of garbage trucks Browning Ferris Industries (BFI) keeps running on the street, the answer was 90%. So, 90% is the benchmark for public works. Ultimately, the competitor will become the private industry.

If you're in the business of picking up garbage, aren't you competing with private contractors who can come in and take over your city's operation? Do you think people are immune from losing their jobs because they work for the city? Are their jobs guaranteed until they retire with a pension? There are no guarantees like that anymore. If you run a competitive operation, you have a shot at it; if you don't, forget it.

Washington, DC, is now deciding whether to go private or keep the public sanitation department. BFI could probably make a ton of money and do it cheaper than it's being done right now. The new administrator was hired from California to bring the District up to the standard. By last accounts, he had 60 trucks on the street, up from 49, and his boss was ecstatic. He felt differently. He felt as if he had failed.

In benchmarking, you pick the best in your industry (like NYC being the best in fleet maintenance among cities) or the best in any industry sector. For example, if you have a telephone complaint handling system, you find out who has the best telephone handling system in the world. One choice could be Federal Express. They can locate a package online anywhere in the world when you call in while on the phone.

If you have a telephone complaint line, and you say, "We'll get back to you," to callers, and then you get back to them a week later, that's certainly not the best in the business.

There are three kinds of benchmarks:

- (1) Best in business or government, which means best of anybody, even outside of your field;
- (2) Best in your industry, which means best of anybody in your field; and
- (3) Your personal best is comparing yourself to yourself in prior periods, prior years, or other plants.

Continuous Improvement

Continuous improvement is another hallmark. Your operation should be continuously improving, and to facilitate this, you should be willing to run controlled experiments. Some experimentation is critical. Experiments can cover everything from floor polish to types of valves in bathrooms. Not that everything is constantly being changed, but you test and adopt methods and products on an ongoing basis.

Perhaps once every two years, floor waxes could be tested in different areas to see how they hold up. You could also test light bulbs or experiment with maintenance strategies. It's a system where people should be doing experiments and recording results. Many people have a problem not with doing experiments but recording them. Tracking what happens is essential, not merely relying on someone's opinion or memory.

One area for experimentation, for example, is fuel additives to improve fuel economy in trucks and buses. Are people keeping track? Are they exhaustively testing products and results? Unfortunately, it's usually a person's opinion that is regarded rather than accurate controlled testing. Controlled tests must be conducted using measurements, readings, notes, and observations.

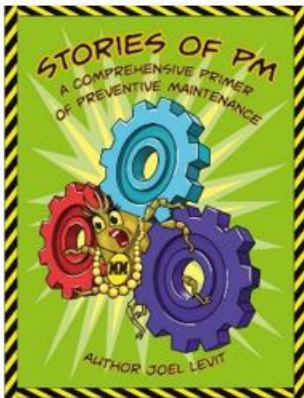
When experiments are recognized as desirable and standard methods have been established, you end up with a self-motivated workforce because they have a place to come to work where (1) they don't have a lot of emergencies, and (2) information is shared. It's a fun and exciting workplace, creating an atmosphere of respect and communication.

Many people have been in situations where going to work is exciting, and you know you will learn something new daily. In that job, you don't feel like you're plodding along. You feel as if you are part of a bigger picture. This culture makes craftspeople and staff want to come to work. That's also a part of the world-class maintenance picture.

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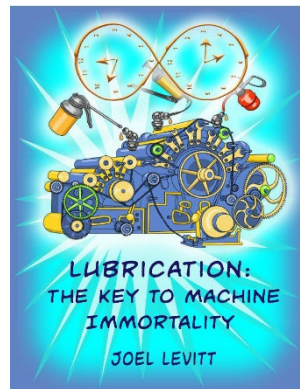
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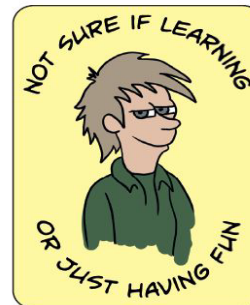
Maintenance quality



Maintenance Planning



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