

Conversations of maintenance

By Joel Levitt, Director of International Projects, Life Cycle Engineering

Can a conversation make a difference? Well sometimes a conversation can change the direction of your life. My father was a mechanical engineer. He had many interests but he ended up in engineering. He related a conversation to me he had had when he started college in 1935. His first advisor cautioned him against engineering because he said there were no jobs for Jews in the engineering field. My father told him (politely) not to worry about his employment prospects but to just sign his forms to take the classes. My father then proceeded to always find employment and spent 50 years as a practicing engineer.

Conversations make a difference. When I was 14 this same engineer father took me aside before I went away to a folk festival. He was giving me the shortened version of the birds and bees talk. He left the details to my mother but hit the high point he wanted me to know. He told me the girl I slept with I might have to live with for the rest of my life. Well for 10 years whenever I was with a girl I made damn sure I didn't fall asleep. So personal conversations we have with people can be powerful. Public conversations can also be powerful. Just think of the power of the speaking of a Jesus, Buddha, Mohammed or Moses. These men's speaking continues to change the present world thousands of years later. More recently the speaking of Jefferson, Lincoln, and Roosevelt changed people's lives. There are hundreds of other people from every country in the world that have spoken in a way that makes a difference.

But what about us little people? Clearly no one I know qualifies as a Buddha or a Lincoln. I often wonder if anything I've said will make a difference with the businesses I work for. I would like to think I am making some difference, but to be sure we would have to follow up quite closely. Many of the people who attend my training classes also hope to go back to their employers and say something that will turn their situation around. So if conversations are important, and we want to make a difference in our organizations how can we speak to make a difference? To look at this we have to look into how people who make a difference speak. An important question is "What stands in the way of us being great people or real leaders in maintenance?" Or if we step down a few notches what is standing in the way of us being even slightly greater than we are now? What distinguishes the great maintenance leaders from the rest of the competent but not great practitioners? Is it intelligence? It is almost a stereotype of the brilliant person not being able to get any traction for their ideas and projects. Some retreat after the first few failures and become cynical, resigned but still brilliantly intelligent.

Is in tenacity? If we were making a greatness stew we would certainly add a good sized dose of tenacity.

The issue is that maintenance people are already tenacious to the point of being bull headed. More tenacity might be a problem for everyone around us.

Is it talent? How many of us have seen talented people fail? Talented people face a serious problem in maintenance. No matter how talented you are there are more problems than a human has resources to cope with them. Talented people frequently excel but not necessarily make it past the hurdle to greatness.

Is it Discipline? We all know people who are extremely disciplined that do good works, that have their jobs and lives organized but they never seem to rise to the level of greatness. Is it opportunity? Much of greatness is thrust upon people. Some of the most effective leaders just happened to be in the right place at the right time. But clearly opportunity may be necessary but it is not all that is necessary.

Is it genetic? Some people are just born with the right combination of intelligence and tenacity to be successes in life. The problem with that is that greatness is predetermined from birth and we can't do anything to change that. We might as well hang it up now since we can't change our genetics.

Is it contacts? It's not who you are it's who you know. How many people have heard that? This is very true. Give me a maintenance professional with a wide range of maintenance and vendor friends and I'll show you someone who can find an expert to help solve problems, quickly. Is knowing more people going to make us great? Better people possibly, but great? Perhaps it is intention. Intentionality is certainly important to producing results. But pure intentionality makes people annoying and engenders resistance. This is the opposite of greatness. With greatness people want to follow.

Of course it might be luck. A famous phrase is "It's better to be lucky than to be smart." That applies to maintenance like any other field. Even a dim manager can look good when the price of their product doubles (like how smart the oil companies looked when the price shot up). But a great maintenance leader will, to some extent, make their own luck. Some of you might be thinking that maybe we could make up a recipe for greatness from the ingredients mentioned above. Even with all that there is something in the way of maintenance people who are reaching for the gold medal. I submit that what stands in the way of greatness might not be personal to us but is something going on below the surface in our companies. To show this mechanism I want to take a little detour. Now how many of you have raised kids? This is kind of a crazy question but how many of you have ever argued with your kids where you argued for their greatness, competence, beauty while they argued back for their smallness, incompetence and plainness.

What is going on here? If you could hear the conversation in the child's mind you would hear a story they tell themselves about themselves that disempowers them. How is it that a conversation they have in their own mind makes them feel incompetent? These conversations that they are stupid, clumsy, or ugly completely inform the limits or edges of what they can do and can't do in the world and even what they will try. The scary thing is that it doesn't matter if the conversation is true or not. Think about it. If a girl thinks she is ugly or a boy thinks he is bad at sports or reading, that thought will regulate how they act and feel

about themselves. She could be beautiful and he can be fast and powerful in reality but that reality makes no difference to the kids.

Their thoughts rule. Those thoughts can become a prison.

Of course, our kids are smart. They intuitively know that if they change the conversation about themselves they will actually change themselves. Did you ever notice how eager some kids are to going to a new school or to going to summer camp. They realize that since they are not known they can create new conversations with new the people they will be meeting. People will take them at face value and start to treat them as a person with this or that attribute. In a way they can be anyone they want to be.

All they have to do is create new conversations to live into and become.

Other kids are scared to go to a new school. They might be scared because the people they know themselves to be might come unanchored. That is a pretty scary prospect if you feel that you have something to lose. It's not so scary if you want to lose the (ugly or clumsy) self you know yourself as.

What does all this have to do with managing maintenance? Is it possible that the limits to our greatness have to do with conversations about maintenance that we and others in our business community believe and repeat to ourselves? What if the reason we are the way we are is because there are disempowering conversations that have been traveling around the organization and we swallowed hook, line and sinker and we repeat?

There are all kinds of conversations in organizations like there are all kinds of conversations in people.

There are out-front or visible conversations that are on everyone's lips and part of the whole structure of the production effort. These can be about the industry, profit levels, who has moved up or down and all of the things about the company that people repeat out loud to each other.

There are also behind the scenes conversations. Another way to get at this is if someone is hired on what stories will they hear during the downtimes when everyone is just hanging out (visible conversations) and what stories will they not hear until they are really considered one of the group (these would be the more invisible conversations)?

The invisible conversations are just as powerful and significantly harder to deal with. They include the personal ones concerning who do you trust or who is incompetent. They also include corporate ones like management speaks with a forked tongue. Is there an impact of these behind the scenes conversations?

These behind the scenes conversations have tremendous impact on the conduct of maintenance and the treatment of maintenance personnel.

One example of a generally below the radar but sometimes explicit conversation is that maintenance is a necessary evil. Let's deconstruct this conversation. What impact does this conversation have? How do you act as a necessary evil? Is this the basis of a long term powerful relationship? How do you contribute as a necessary evil and why would you want to? If you want to be all you can be how far can you go inside the whisperings of being a necessary evil?

This comes from the simple fact that maintenance doesn't contribute directly to the manufacture or delivery of anything. In modern parlance we do not add value to the product. We are an expense only.

How does an expense act or contribute to the success of the enterprise? A good expense is a dead (zero) expense. Do you see the uphill battle implicit in that conversation? We are just talking about a conversation here. There is no personalities, no people and it is not in any way personal.

When we look at other businesses we can see this idea at work. It would be pretty crazy to look at your 40 man football team and tell the defensive players that they don't add value to the product (points on the score board). The owner could save some real money on salaries without all those defensive line men (not to mention the reduction in catering costs).

OK let's admit it would be crazy to run a football team without defense. If we translate the way companies view maintenance to the way football is managed we would want as few defensemen as possible, pay them as little as possible, maybe even be creative and make one defense squad play for 2

different teams. By the way if the team loses we would downsize the defense.

Plays would be handled differently because of course we wouldn't try to design defensive strategies. If there is any defensive design it would be done by the defenders themselves without resources or support from management. From a management point of view when the ball was snapped the whole squad should run howling toward the ball (they are sure the howling would help morale).

Forget training, recruiting (just hire bodies), especially forget respect. These folks don't contribute toward the score on the scoreboard. By the way, as mentioned, if times get tough get rid of them. It seems pretty silly in football. It's not silly in maintenance because it is a way of life for some of us.

We could try out some new conversations. What if the conversation was something like this: We have different groups that support production and each contributes their specific expertise. The only issue is "does that specialized knowledge and skills contribute more to the bottom line then its cost?" Is this expertise is essential to the success and enhanced profitability of the organization?

Let's look at a few of the players in a typical corporation. Lawyers contribute legal expertise.

Accountants contribute accounting expertise. This seems pretty simple. If you have an accounting question you ask that expert. Likewise if you have a process question, and environmental question, or even a question about trash and if your organization is big enough to have all those experts on staff you go to the expert in that area. The trend today is to get rid of the expertise and use outside consultants.

The outcome is the same, you want the specialist advice to be more valuable then what you pay.

Of course at different sizes different expertise becomes important. In the 1980's I worked on a project to computerize the fleet maintenance operation of Federal Express. At the time FedEx operated 47,000 light trucks. They bought software by COSTROL designed by Jay Butler and it was the most advanced

package of its day. Yet FedEx spent the money and time to completely rewrite the package to wring out a few more percent of benefit. A few more percent of benefit for 47,000 vehicles was quite a bit of money so the specialized knowledge was worth it since the population was so large. A medium sized company in that era would just buy the package and be happy. The small firms of that time just pined for the tools of the big boys.

The whole issue of having experts is not black and white. Business needs may trump expertise. For example the lawyers say that this is the way to structure an acquisition deal. The president or CEO, having looked at all the options decides to structure the deal differently. His or her instruction to the lawyers is to make it work this way. The lawyers go off and make it so. As long as the decision is within the law, the lawyers support the CEO.

We have to answer the question what do we contribute to the success of the organization? Once we identify the contribution are we positioned to make a maximal contribution based on our present skills, knowledge and attitudes? We also return to the question “does this specialized knowledge and skills contribute more to the bottom line than its cost?” Some departments represented in this room are experts in repairing breakdowns. They can fix just about anything. This is the historical role of maintenance. They have deep and subtle expertise in broken things, how things break and how to put them back together. And especially they know how to do that in the shortest time and with the least cost. There is no dishonor in contributing this expertise to the success of the organization. Fixing breakdowns is a real, valuable and even essential expertise that is duplicated nowhere else in the company. Consider most doctors are also experts in breakdowns. They troubleshoot the problem and if it is possible, propose a fix. They are done their work (you are discharged) when the disease is gone from your system. Some Doctors specialize in the instrumentation and controls –the neurologists, others are plumbers –the cardiologists and urologists and still others are the carpenters – such as the Orthopedists.

In truth very little of a Doctor’s training or practice is concerned with health. Mostly they wrestle with and hopefully cure disease. And believe me when you are sick you don’t want a lecture that you should have given up smoking 10 years ago, but want action now. Medicine is changing and so is maintenance.

The new conversation might be that the contribution of maintenance to the success of the company is expertise in asset, machine and unit health. We know how fast and how long to run the equipment to maximize profit. We are the folks who know what should be done for maximum life, minimize long term cost. In short we are the priests of the balance between production and equipment integrity. In fact part of this is already happening. In maintenance there is a burgeoning sub-field in machinery health. Even the word maintenance means keeping an asset in a steady state and not allowing it to deteriorate (unlike the word repair which means to fix something and return it to operational condition). Health oriented sub-fields include TPM, PM, PdM, RCM. Our conference rooms are full when the focus of the talk is on detecting failure before it happens and how to extend the life of the asset.

Advanced maintenance departments are becoming experts in machinery health.

Imagine that over the door is “Department of Equipment Health.” What is missing for us to expand into this role? There is an easy part a medium part and a hard part. The easy part is that

we continue to build expertise in machine health and push to change the focus from reactive to proactive maintenance.

Get really good at predicting what will happen based on data. Several things being discussed here are important to master including the alphabet soup: CMMS, RCM, FMEA, RCA, PM, PdM and CBM. Really the knowledge stored in our PM and PdM systems are part of our contribution to the company.

The medium difficulty part of this new expertise is to master the operating modes and conditions of the equipment. In this we know what is happening in the operation and how it is likely to impact the life of the equipment. We must be able to answer the question “what will happen if we double the capacity of the feeder” or if we “speed up the conveyor”.

The most difficult and most remote expertise is in accounting. We want to be experts in economic models that include run to failure, run with shutdown, run with PM or run with whatever scenarios.

Right now the decision to run to failure is made in most organizations without data, comparisons and without expert input from the Department of Equipment Health.

If that is the conversation we want to create how do we do this? Why is it hard to change behaviors of an organization or an individual? It is hard it is to change a company culture (or even a families’ culture).

The reason it is difficult is that the fundamental conversations have not been distinguished and dealt with. They are running the show and any new cultural changes are smeared over top. What is the point? In order to start to permanently change maintenance we have to distinguish the existing conversations. The old culture is anchored in place by structures, incentives, memory and custom. As such it takes no extra energy to keep the old culture in place. The next thing is to disassemble the structures that hold those conversations in place while at the same time creating new ones.

Joel Levitt, Director International Projects JLEVITT@LCE.COM

Life Cycle Engineering | 4360 Corporate Road Office | Charleston, SC 29405

843.744.7110

Mobile +1-267-254-0061

www.LCE.com